

082-0005

082-0005

08-25-95

18

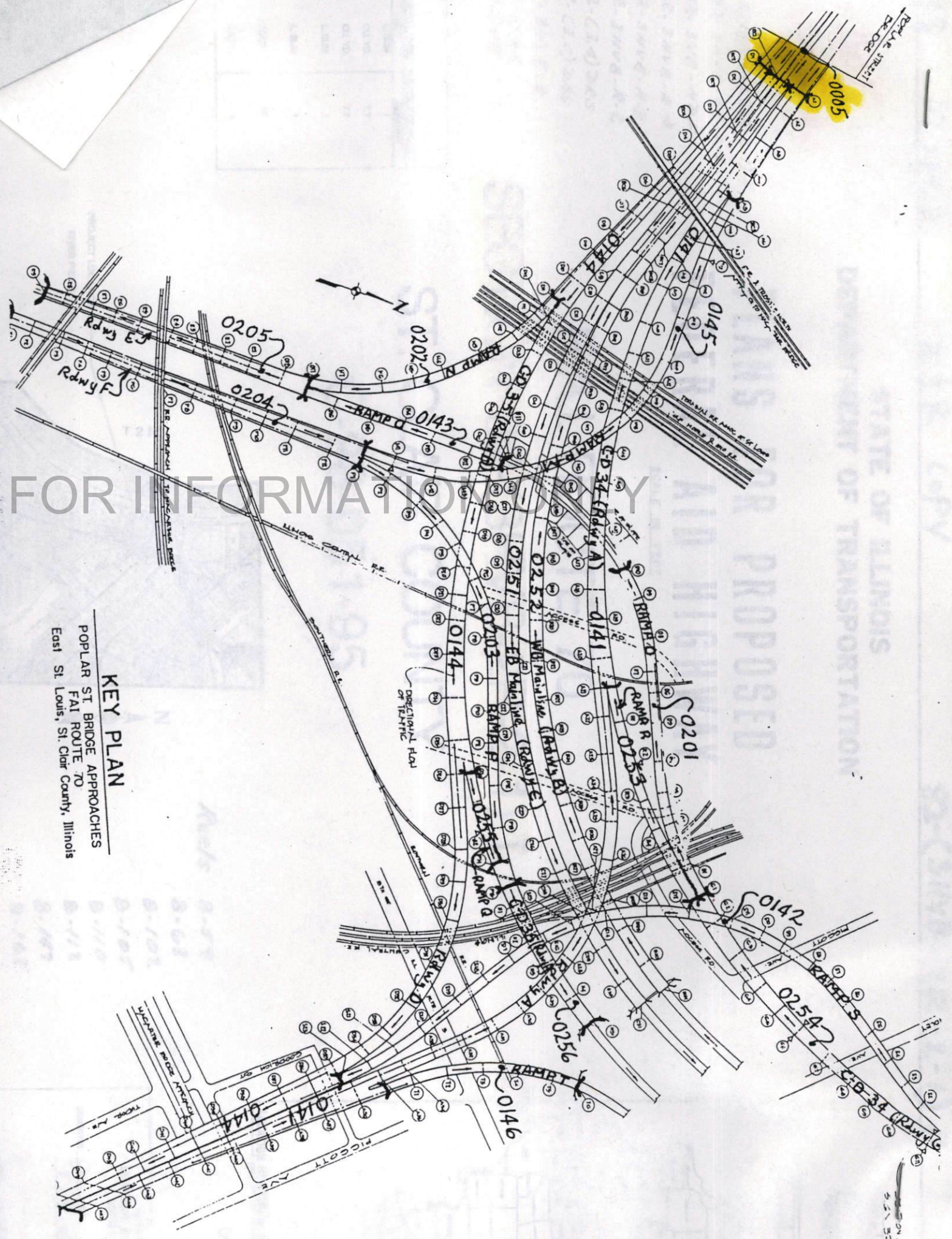
PROJECT ENGINEER: BILL ULIVI (618)346-3180
SQUAD LEADER STEVE JINES (618)346-3194

- 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

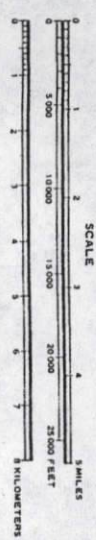
CODE NO.	ITEM
50501901	STRUCTURAL STEEL REPAIR
5030025	CONCRETE SUPERSTRUCTURE
5010040	CONCRETE REMOVAL
5010180	TRAFFIC CONTROL AND PROTECTION (SPECIAL)
5010030	TRAFFIC AND PROTECTION STANDARD 2316
5040105	TEMPORARY CONCRETE BARRIER (STATE OWNED)
5040125	TEMPORARY CONCRETE BARRIER, TERMINAL SECTION (STATE OWNED)

UNPROFILING
SEAL NUMBER _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS



KEY PLAN
POPLAR ST BRIDGE APPROACHES
FAI ROUTE TO
East St. Louis, St. Clair County, Illinois

LOCATION MAP



R 10 W

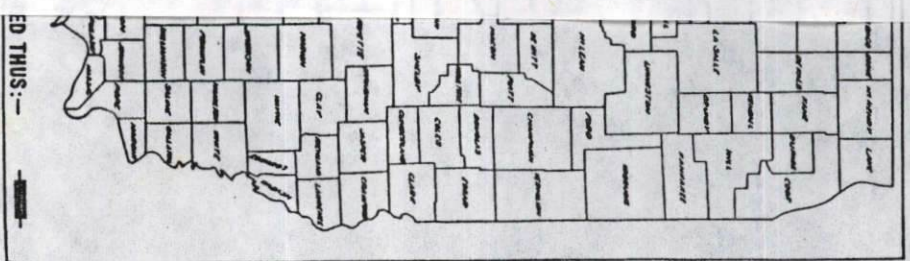
ENGINEER OF DESIGN AND ENVIRONMENT
JULY 28, 1995
DIRECTOR, DIVISION OF HIGHWAYS

082-0005 CONTRACT NO. 96882

ST. CLAIR COUNTY SECTION 82 (3-11-82) F. A. ROUTE 70

8-219

COUNTY	ST. CLAIR
SECTION	9
RANGE	1
PROJECT	2-1-I



37-95

B-217
B-136

M3-M6
pers

DISTRICT ENGINEER
AGENT AND IMPLEMENTATION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	SHEET NO.	TOTAL SHEETS
82-1448-2R-2-11	ST. CLAIR	9	7

SHEET NO. 1
3 SHEETS

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.

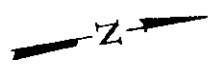
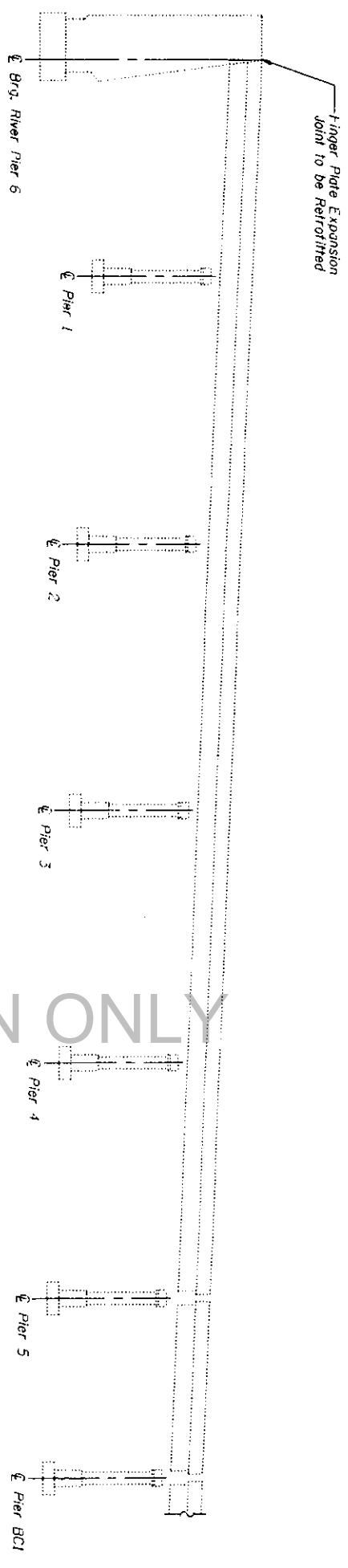
Removal of all damaged members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be considered incidental to "Structural Steel Repair".

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".

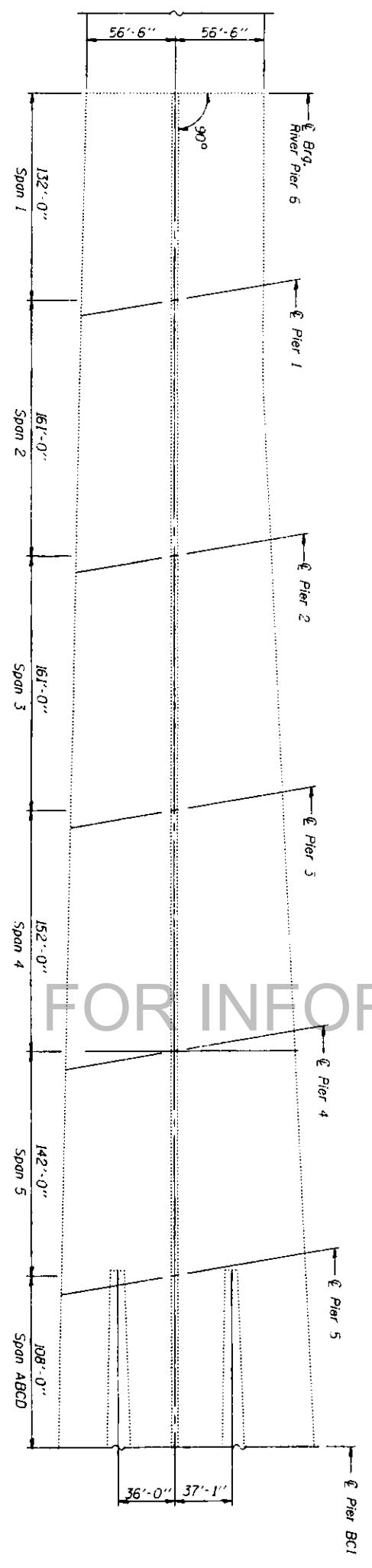
Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".

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

ELEVATION



PLAN



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: *[Signature]*
CHECKED: *[Signature]*
DRAWN: J. MARCH
CHECKED: CHM TTB RTZ

EXAMINED: _____
PASSED: _____
DATE: _____

19

JOINT REPAIR - PIER 6

ROUTE F.A.I. 70

SECTION 82-1448-2R-2-11

ST. CLAIR COUNTY

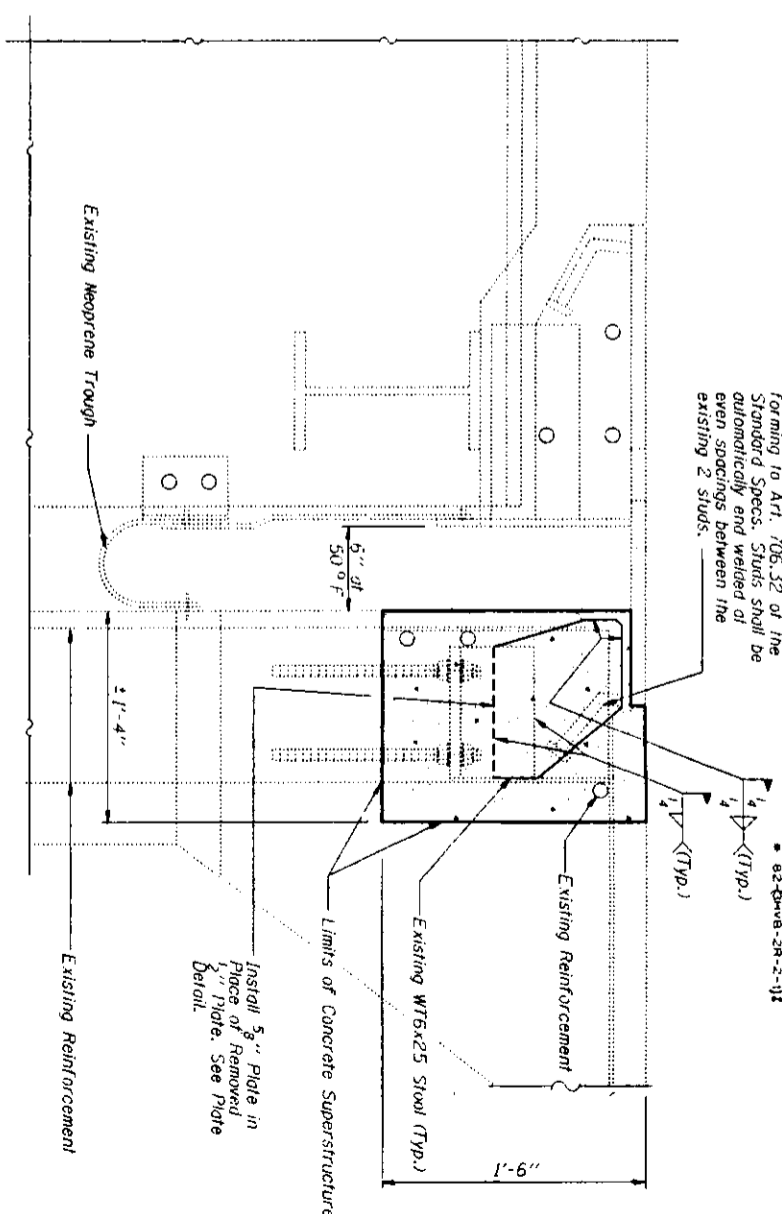
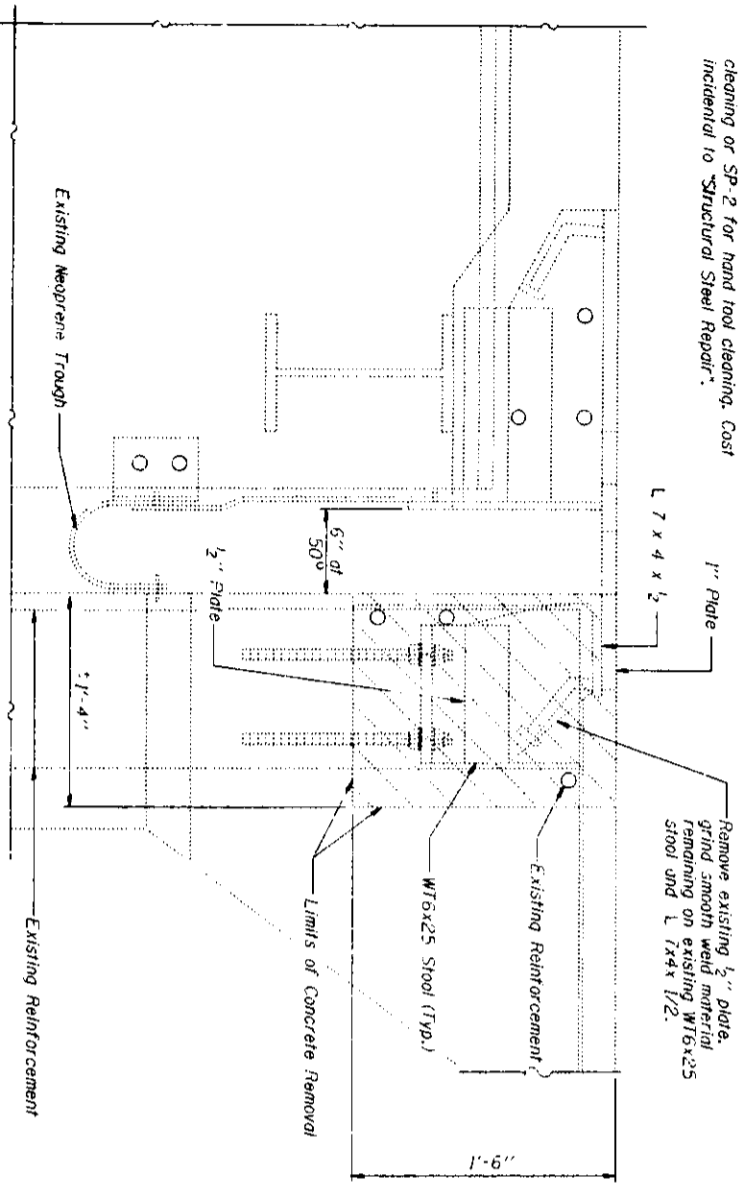
S.N. 082-0005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

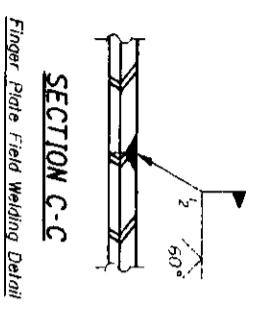
NO.	DESCRIPTION	DATE	BY	CHKD.
1	F.A.I.		ST. CLAIR	9
2	ST. CLAIR			9

SHEET NO. 3
3 SHEETS

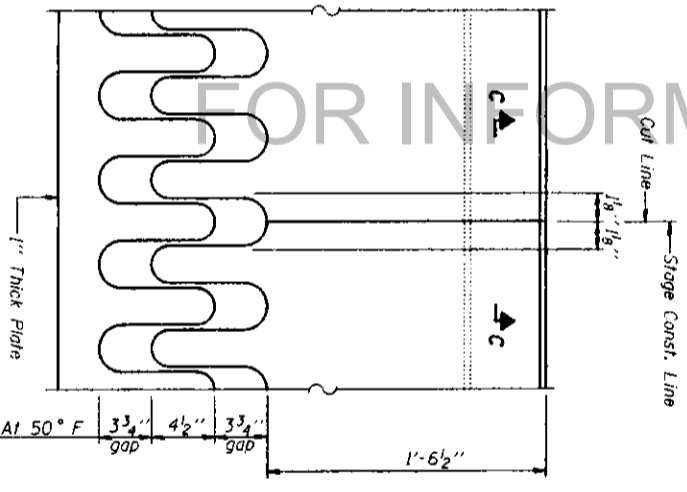
Notes: The existing neoprene trough shall be kept free of debris at all times. The trough may have to be unbolted and removed during the course of the repair work and re-installed after the repair work is completed. Cast incidental to "Concrete Removal" Prior to installing the new plates the existing 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. Cast incidental to "Structural Steel Repair".



In each space between studs, add 3 more 3/4" x 8" granular or flux filled headed studs conforming to Art. 706.32 of the Standard Specs. Studs shall be distributed and welded at even spacings between the existing 2 studs.



SECTION C-C
Finger Plate Field Welding Detail



FINGER PLATE CUTTING DETAIL A

Increase gap 1/8" for each 5° fall in temperature.
Decrease gap 1/8" for each 5° rise in temperature.

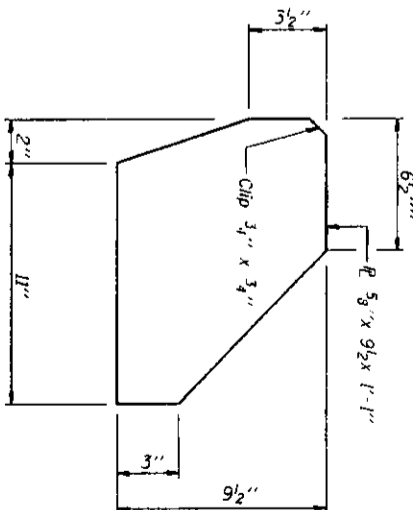


PLATE DETAIL
(46 Required)
(Calculated weight = 1,030 lbs.)

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

DESIGNED	C.H.W.
CHECKED	T.T.B.
DRAWN	J. MARCH
CHECKED C.H.W.	T.T.B. R.T.S.

JULY 19
EXAMINED *Frank S. Hill*
PASSED
ENGINEER OF STRUCTURAL SERVICES
MEMBER OF ILLINOIS ENGINEERS AND ARCHITECTS

ST. CLAIR 82-3HVB-2R-2-1 IFR 151992

FOR INDEX OF SHEETS, SEE SHEET NO. 2

100%
6-11-93

THE STRUCTURES REHABILITATED IN THIS PROJECT WERE BUILT AS SECTIONS:

- 82-3VB
- 82-3HVB-1

MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____

AS BUILT CHANGES WERE MADE ON THE FOLLOWING SHEETS:

DESIGN DESIGNATION

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

F.A.I. ROUTE 70
 SECTION 82-3HVB-2R-2-1
 PROJECT IR-70-1(16)1
 ST. CLAIR COUNTY
 C-98-001-90

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 = 50 FEET
 VERTICAL 1 INCH = 5 FEET



0000 0 1000 2000 3000

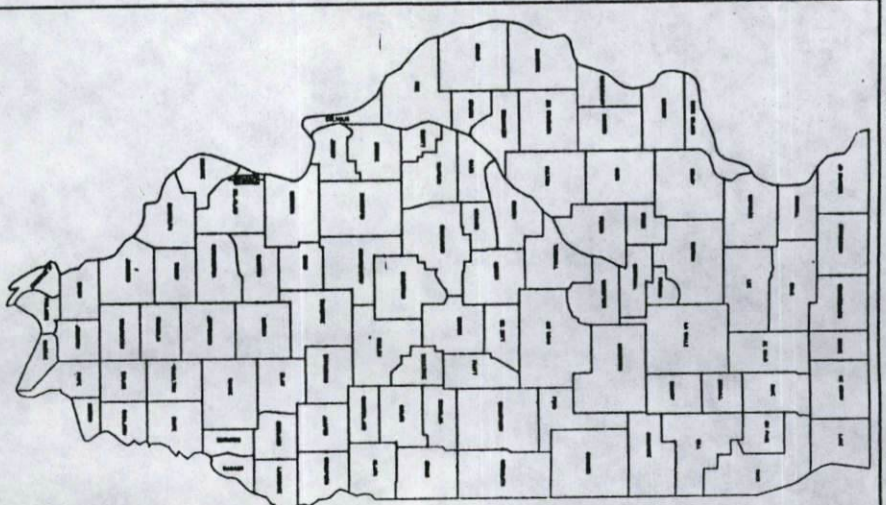
NET LENGTH OF PROJECT - 180014 FT. - 0.341 MILES

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

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

DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ST. CLAIR COUNTY
 PROJECT: _____
 DATE: _____

PREPARED BY:
 SYENDRUP CORPORATION
 ST. LOUIS, MISSOURI



P-98-021-85

SHEET NO.	SEC.	COUNTY	TOWNSHIP	RANGE
70		ST. CLAIR	105	1

82-3HVB-2R-2-1

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

APPROVED: _____
 EXAMINED: _____
 PASSED: _____

ANTHONY E. NEELER
 NO. 82-30027

CARLOS A. LIZAMA-FRANKS
 NO. 82-3956

082-0005
 CONTRACT NO. 96168

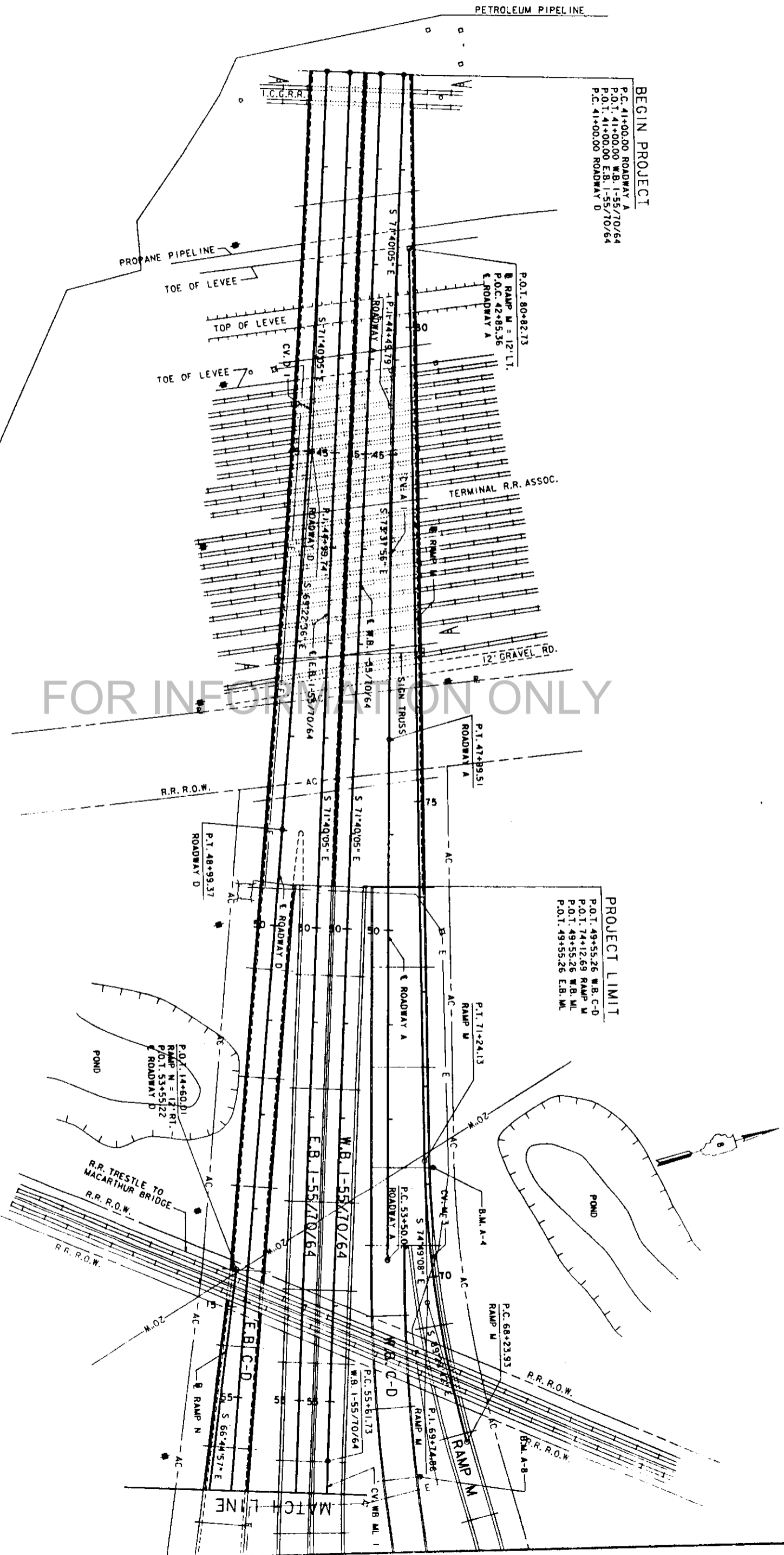
8-181

10487 FILE: 1557OPLN LEVELS PLOTTED DATE: APRIL 27, 1990
 90C042 PRF: ILLPLN

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+12.59 RAMP M
 P.O.T. 49+55.26 E.B. ML
 P.O.T. 49+55.26 E.B. ML

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



FOR INFORMATION ONLY

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

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



DATE	REV.	BY	CHKD.	APP'D.
70	•	ST. CLAIR	105	11

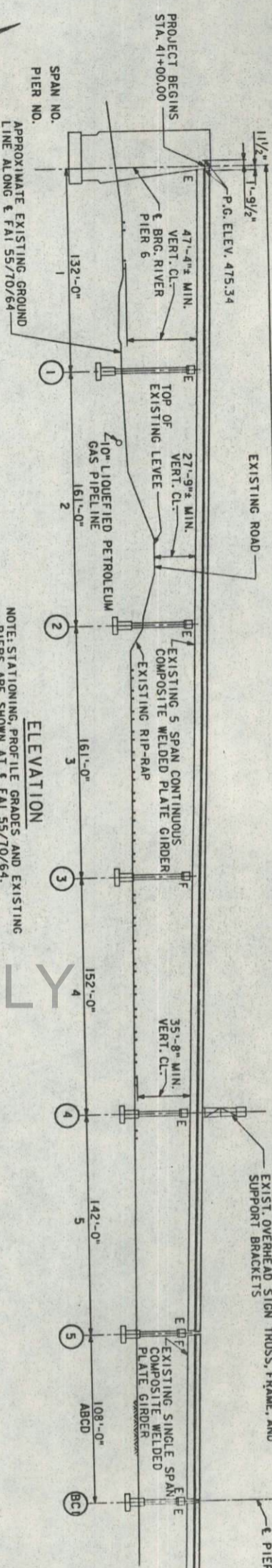
82-3HVB-2R-2-1

BENCH MARK A-4

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIMITS OF DECK REPLACEMENT = 856'-0" ALONG & FAI 55/70/64



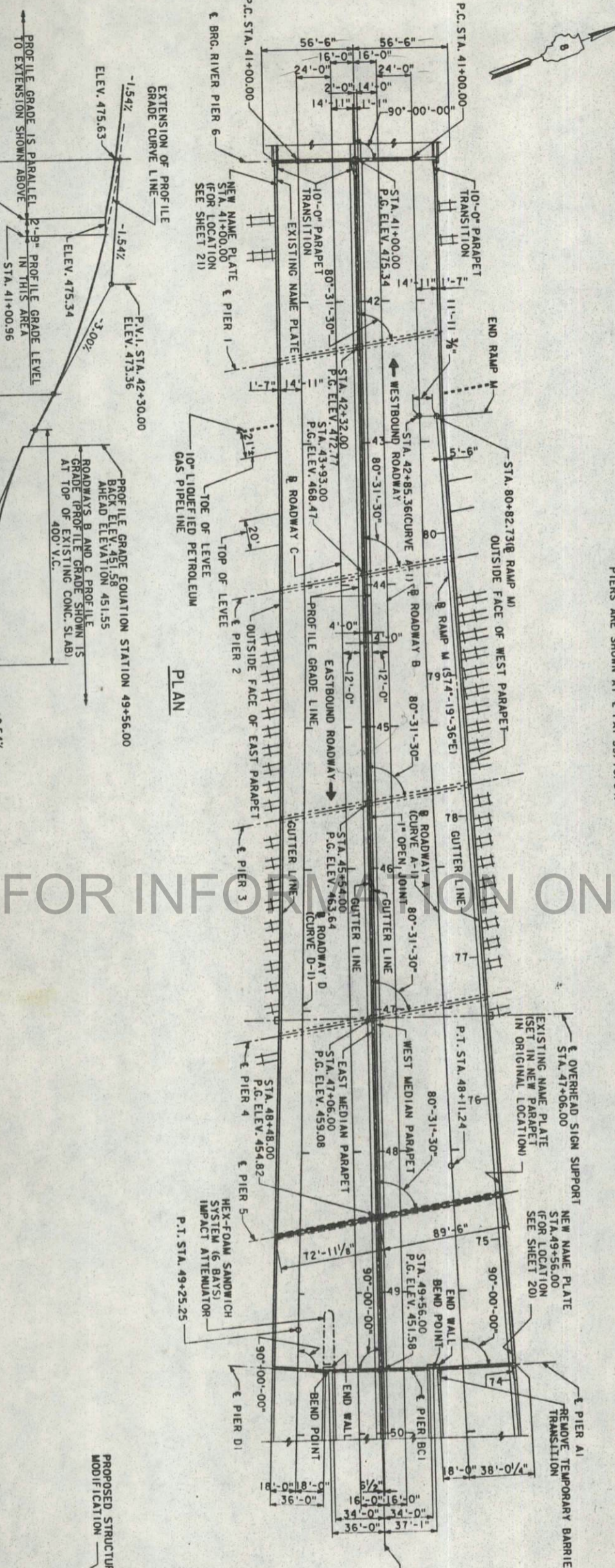
ELEVATION

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

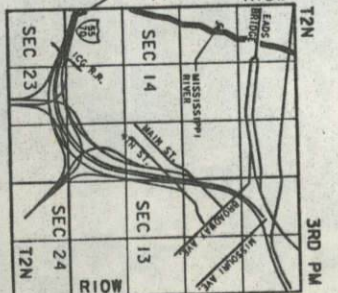
NAME PLATES
(SEE ILL. STD. 2113)

STATION (SEE NOTES) REBUILT 1999 BY STATE OF ILLINOIS F.A.I. 70 SEC. 82-34VB-2R-2-1 PROJ. 1R-70-11611) LOADING HS20 AND ALT. STR. NO. 082-0005

DATE	SECTION	COUNT	BY	DATE
F.A.I. 70	ST. CLAIR	105	45	



PLAN



LOCATION SKETCH

REHABILITATION FOR

FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPULAR STREET BRIDGE
GENERAL PLAN AND ELEVATION

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

SHEET NO. 1 OF 45

10487	FILE: ZF3:110,13885274.DGN	LEVELS PLOTTED	DATE: APRIL 27, 1990
885274	PRF: 885274	2 3 20 26 38 55 63	

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

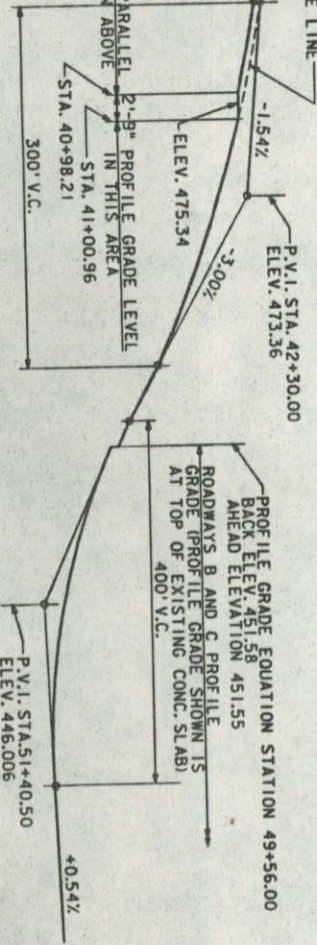
CURVE DATA - A-1

P.I. STA. = 44+49.79
Δ = 1°-57'-51" LT.
D = 0°-16'-51"
R = 20,405.00'
T = 349.79'
L = 699.51'
E = 3.00"
S.E. = 3/8" PER FT.
P.C. STA. = 41+00.00
P.T. STA. = 47+99.51

CURVE DATA - D-1

P.I. STA. = 44+99.74
Δ = 2°-17'-29" RT.
D = 0°-17'-12"
R = 19,988.00'
T = 399.74'
L = 799.37'
E = 4.00"
S.E. = 3/8" PER FT.
P.C. STA. = 41+00.00
P.T. STA. = 48+99.37

PROFILE GRADE



EXISTING STRUCTURES

DESIGN SPECIFICATIONS: AASHTO 1961 AND APPLICABLE 1962 AND 1963 INTERIMS.
HS20-44 AND ALTERNATE

NEW CONSTRUCTION

DESIGN SPECIFICATIONS: AASHTO 1983 AND APPLICABLE 1984, 1985, 1986, 1987 AND 1988 INTERIMS.
HS20-44 AND ALTERNATE

LOADING:
REINFORCED CONCRETE:
DECK SLAB
SUBSTRUCTURE

REINFORCING:
REINFORCED CONCRETE:
DECK SLAB
SUBSTRUCTURE

LOADING:
REINFORCED CONCRETE:
DECK SLAB
SUBSTRUCTURE

REINFORCING:
REINFORCED CONCRETE:
DECK SLAB
SUBSTRUCTURE

STRUCTURAL STEEL:
REINFORCED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

GENERAL NOTES

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

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 TOP 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 ALYD 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. ▲

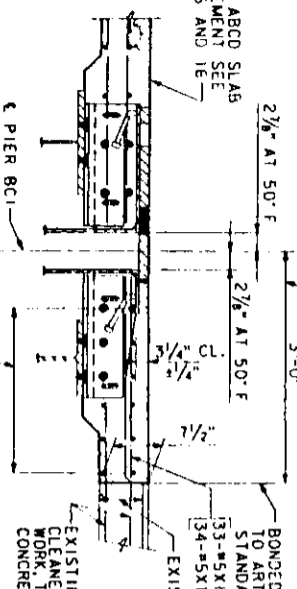
ALL CONTACT SURFACE AREAS OF NEW AND EXISTING STRUCTURAL STEEL SHALL BE FREE OF PAINT OR LACQUER.

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 wetting.*

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

LIMITS OF CONCRETE REMOVAL CLASS X CONCRETE REPLACEMENT

FOR SPAN ABCD SLAB REINFORCEMENT SEE SHEETS 15 AND 16



SECTION A-A

NOTE: A: BAR SPLICERS REQUIRED FOR A407E(1) AND A408E(1) OR A510E(1) REIN. BARS, PLACE SPLICERS DURING STAGE IV CONSTRUCTION. SEE SHEET 44 FOR DETAILS.

INDEX OF DRAWINGS

NO.	DESCRIPTION
1	GENERAL PLAN AND ELEVATION.
2	GENERAL NOTES, INDEX OF DRAWINGS AND ESTIMATED QUANTITIES
3	CONSTRUCTION STAGING - STAGE I AND II
4	CONSTRUCTION STAGING - STAGE III
5	CONSTRUCTION STAGING - STAGE IV
6	CONSTRUCTION STAGING - STAGE V
7	SLAB - STAGE II
8	SLAB - STAGE III
9	SLAB - STAGE IV
10	SLAB - STAGE V
11	SLAB - STAGE VI
12	SLAB - STAGE VII
13	SLAB - STAGE VIII
14	SLAB - STAGE IX
15	SLAB - STAGE X
16	SLAB - STAGE XI
17	SLAB - STAGE XII
18	PARAPETS - SPANS I THRU 5
19	MEDIAN PARAPETS - SPANS I THRU 5
20	PARAPETS - SPAN ABCD
21	PARAPET TRANSITION DETAILS
22	PARAPET TRANSITION - TRIANGULAR
23	SLAB AND END WALL DETAILS - SPAN ABCD
24	TOP OF SLAB ELEVATIONS - PLAN - SPANS 1 THRU 3
25	TOP OF SLAB ELEVATIONS - PLAN - SPANS 4, 5 AND ABCD
26	TOP OF SLAB ELEVATIONS
27	TOP OF SLAB ELEVATIONS
28	TOP OF SLAB ELEVATIONS
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 BI, 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

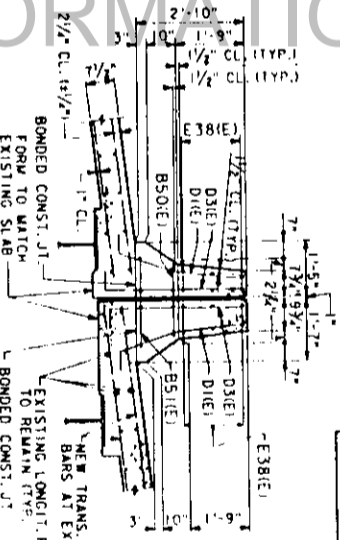
▲ *Monitor Sd. No. 75 6/4/8.*

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INFORMATION ONLY

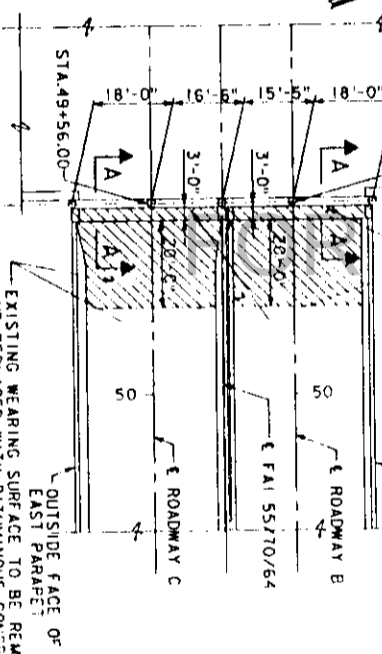
TOTAL BILL OF MATERIAL			
ITEM	UNIT	SUBSTR.	TOTAL
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	3132.0	3132.0
CLASS X CONCRETE	CU. YD.	7.5	7.5
REINFORCEMENT BARS, EPOXY COATED	LB.	959,000	959,500
NEOPRENE EXPANSION JOINT (4")	LIN. FT.	161	161
REINFORCED NEOPRENE EXPANSION JOINT TREATMENT	LIN. FT.	154	154
PREFORMED 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
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 (1/2")	SQ. YD.	131	131
BITUMINOUS SURFACE COURSE MIXTURE E. CLASS I, TYPE I, (1 1/2")	TON	11.0	11.0
BITUMINOUS 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 = 2,966.4 CU.YDS. OF CONCRETE.



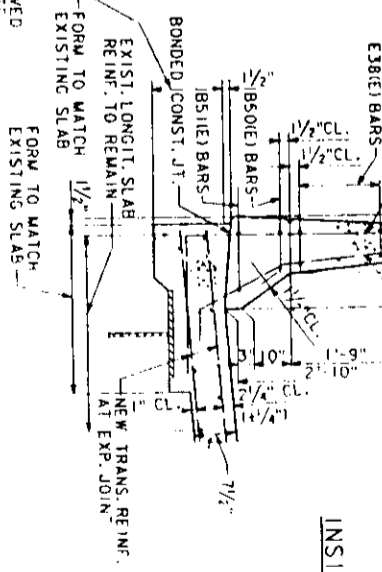
SECTION THRU MEDIAN PARAPET

NEAR EXPANSION JOINTS - SPAN BCI

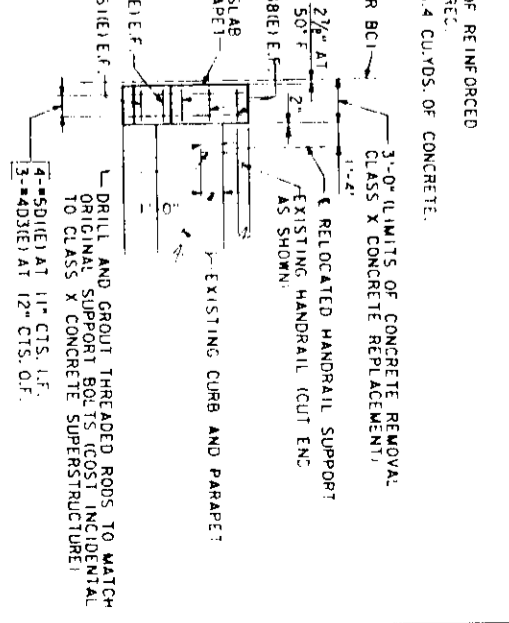


ROADWAYS B AND C

EXISTING WEARING SURFACE TO BE REMOVED AND REPLACED WITH BITUMINOUS CONCRETE SURFACE COURSE. TOP OF EXIST. CONC. SLAB TO BE SCARIFIED SEE DETAIL SHEET 22.



SECTION THRU PARAPET NEAR EXPANSION JOINT - 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.

REHABILITATION FOR

FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPULAR 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.

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

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.

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 ALKYLID 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.

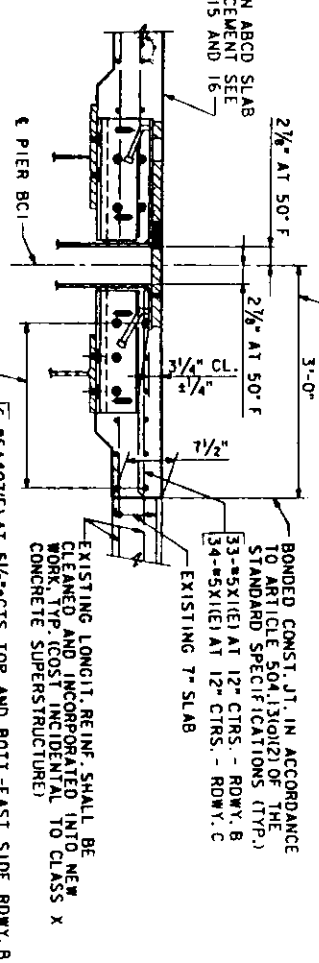
ALL CONTACT SURFACE AREAS OF NEW AND EXISTING STRUCTURAL STEEL SHALL BE FREE OF PAINT OR LACQUER.

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.

LIMITS OF CONCRETE REMOVAL CLASS X CONCRETE REPLACEMENT

FOR SPAN ABCD SLAB REINFORCEMENT SEE SHEETS 15 AND 16



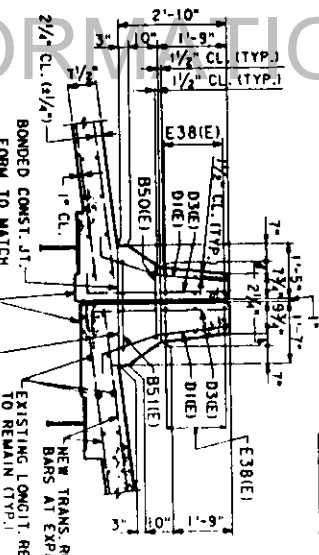
SECTION A-A

NOTE: A: BAR SPLICERS REQUIRED FOR A407E AND A408E OR A510E REINFORCING BARS. PLACE SPLICERS DURING STAGE IV CONSTRUCTION. SEE SHEET 44 FOR DETAILS.

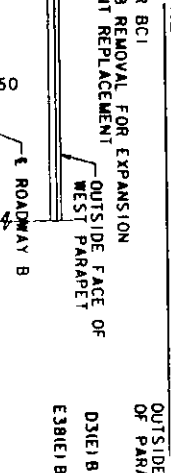
INDEX OF DRAWINGS

- 1 GENERAL PLAN AND ELEVATION
- 2 GENERAL NOTES, INDEX OF DRAWINGS AND ESTIMATED QUANTITIES
- 3 CONSTRUCTION STAGING - STAGE I AND II
- 4 CONSTRUCTION STAGING - STAGE III
- 5 CONSTRUCTION STAGING - STAGE IV
- 6 CONSTRUCTION STAGING - STAGE V
- 7 SLAB - STAGE II
- 8 SLAB - STAGE II
- 9 SLAB - STAGE II
- 10 SLAB - STAGE II
- 11 SLAB - STAGE III
- 12 SLAB - STAGE III
- 13 SLAB - STAGE III
- 14 SLAB - STAGE III
- 15 SLAB - STAGE IV
- 16 SLAB - STAGE IV
- 17 SLAB - STAGE V
- 18 PARAPETS - SPANS I THRU 5
- 19 MEDIAN PARAPETS - SPANS I THRU 5
- 20 PARAPETS - SPAN ABCD
- 21 PARAPET TRANSITION DETAILS
- 22 PARAPET TRANSITION - TRIMETRIC
- 23 SLAB AND END WALL DETAILS - SPAN ABCD
- 24 TOP OF SLAB ELEVATIONS - PLAN - SPANS 1 THRU 3
- 25 TOP OF SLAB ELEVATIONS - PLAN - SPANS 4, 5 AND ABCD
- 26 TOP OF SLAB ELEVATIONS
- 27 TOP OF SLAB ELEVATIONS
- 28 TOP OF SLAB ELEVATIONS
- 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 (COUPLED) DETAILS AT STAGE CONSTRUCTION
- 45 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

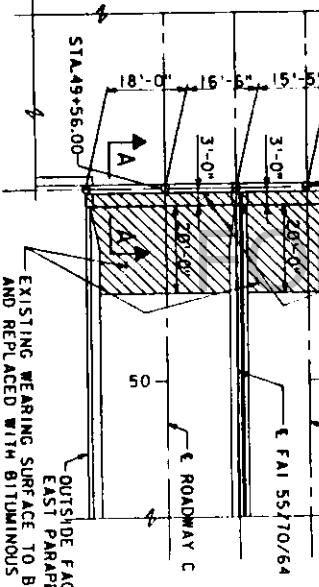
FOR INFORMATION ONLY



SECTION THRU MEDIAN PARAPET

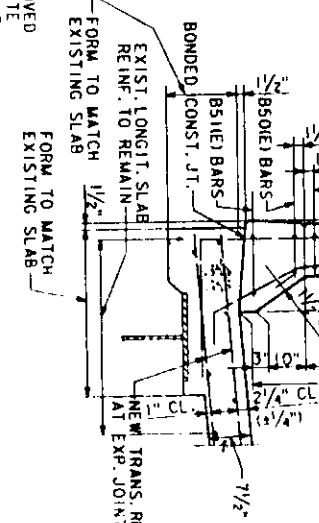


NEAR EXPANSION JOINTS - SPAN BCI



PLAN - SLAB AND PARAPET

REDESIGNED BY:
SYNERGIC CORPORATION
ST. LOUIS, MISSOURI



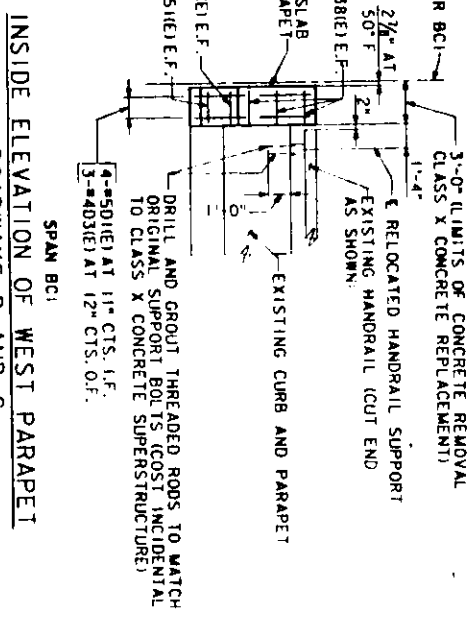
SECTION THRU PARAPET NEAR EXPANSION JOINT - SPAN BCI

REHABILITATION FOR
ILLINOIS APPROACH TO
POPULAR STREET BRIDGE
GENERAL NOTES, INDEX OF DRAWINGS
AND ESTIMATED QUANTITIES
STRUCTURE NO. 087-0005
STA. 41+00.00 TO STA. 49+56.00 (R.I.-70) ST. CLAIR CO.

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 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	LUMP SUM	2,680		2,680
BRIDGE DRAINAGE SYSTEM	EACH	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	5		5
REMOVAL OF EXISTING LIGHTING UNIT	EACH	1		1
CLEANING AND PAINTING STEEL BRIDGE	LUMP SUM	131		131
CONCRETE BRIDGE DECK SCARIFICATION (1/2")	SQ. YD.	131		131
BITUMINOUS SURFACE COURSE, MIXTURE E, CLASS I, TYPE 1, (1 1/2")	SQ. YD.	11.0		11.0
BITUMINOUS CONCRETE SURFACE REMOVAL (BRIDGE DECK)	SQ. YD.	131		131

● INCLUDES DECK SLAB SURFACE
● APPROXIMATELY 3700 LINEAR FEET OF REINFORCED THERMOSETTING PLASTIC PIPE IS REQUIRED.
●● REMOVAL OF EXISTING DECK = 2,996.4 CU.YDS. OF CONCRETE.



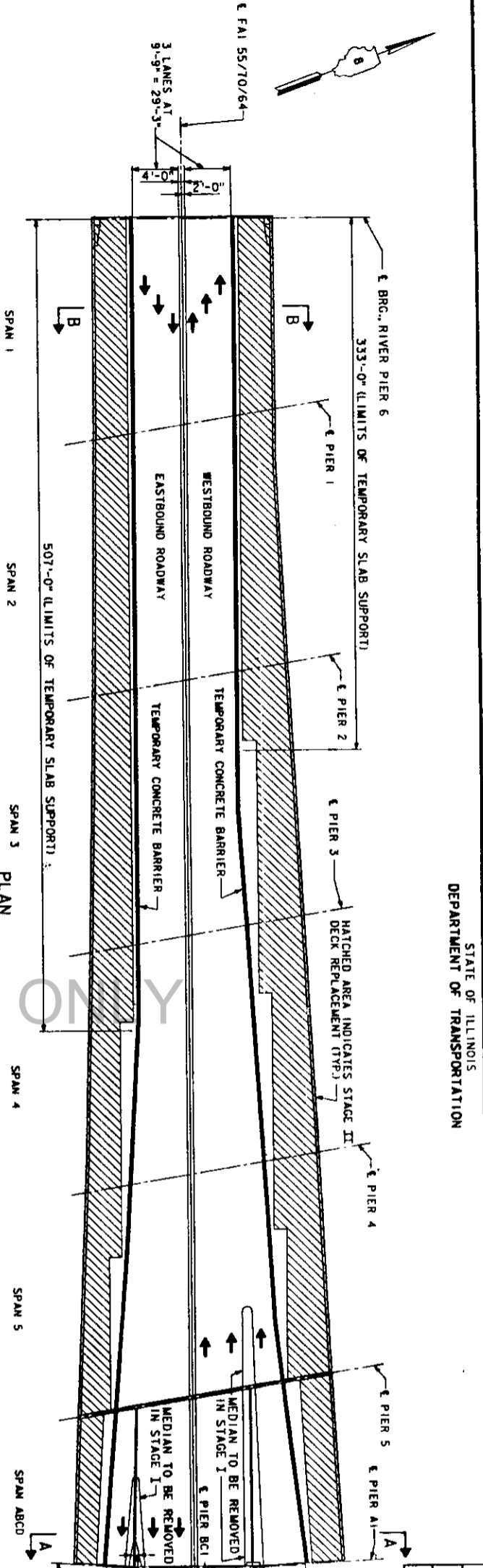
INSIDE ELEVATION OF WEST PARAPET

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

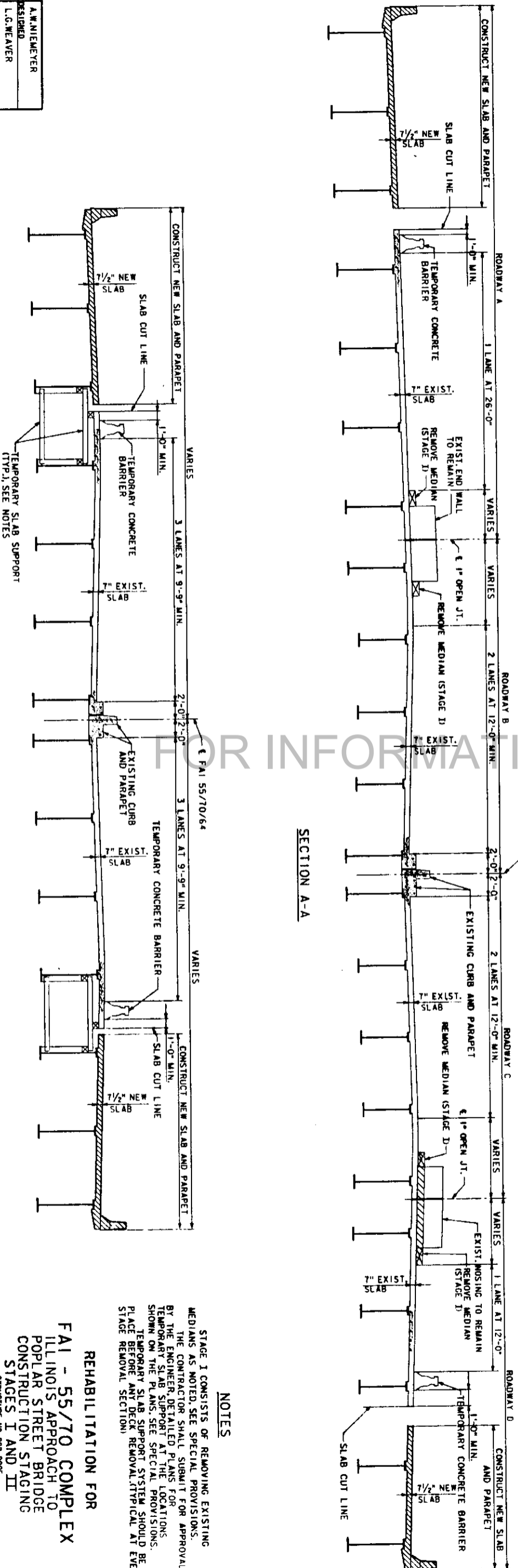
REHABILITATION FOR

ILLINOIS APPROACH TO
POPULAR STREET BRIDGE
GENERAL NOTES, INDEX OF DRAWINGS
AND ESTIMATED QUANTITIES
STRUCTURE NO. 087-0005
STA. 41+00.00 TO STA. 49+56.00 (R.I.-70) ST. CLAIR CO.

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



STAGES I AND II PLAN



SECTION A-A

SECTION B-B

BILL OF MATERIAL

CONCRETE REMOVAL STAGE I	CU. YDS.	50.4
CONCRETE REMOVAL STAGE II	CU. YDS.	1184.8

DATE	STATION	POINT	MARK	NO.
F.A. 70	•	ST. CLAIR	105	47
DATE	STATION	POINT	MARK	NO.

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

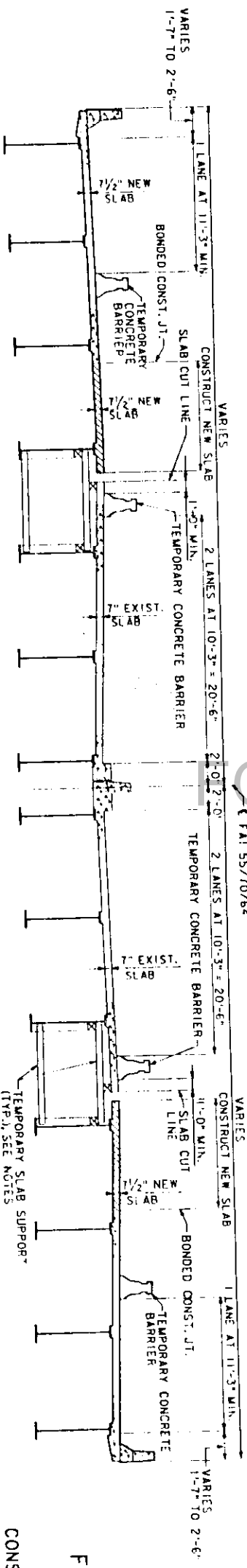
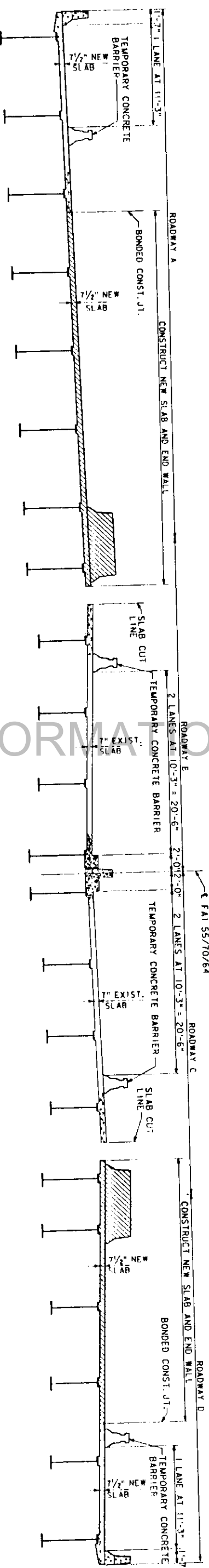
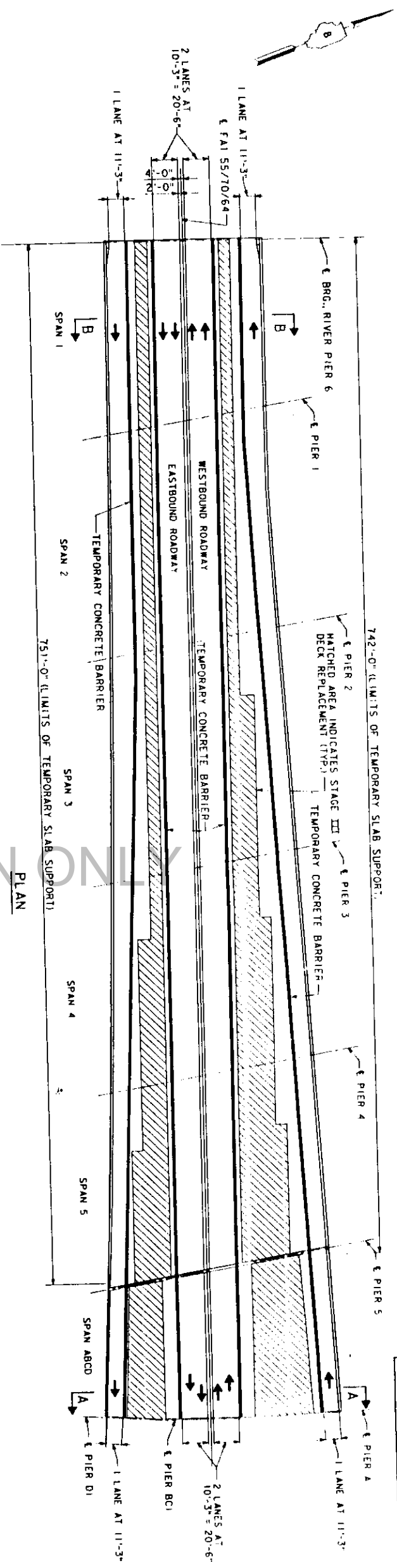
FAI - 55/70 COMPLEX
 ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 CONSTRUCTION STAGING
 STAGES I AND II

PREPARED BY:
SVENDRUP CORPORATION
 ST. LOUIS, MISSOURI

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

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL	
CONCRETE REMOVAL - STAGE III	CU. YDS. 632.6
ST. CLAIR	105
ST. CLAIR	48



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.

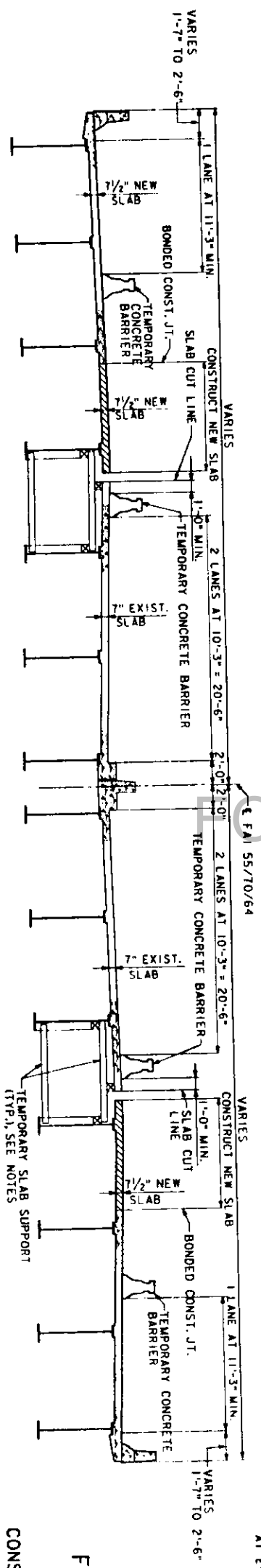
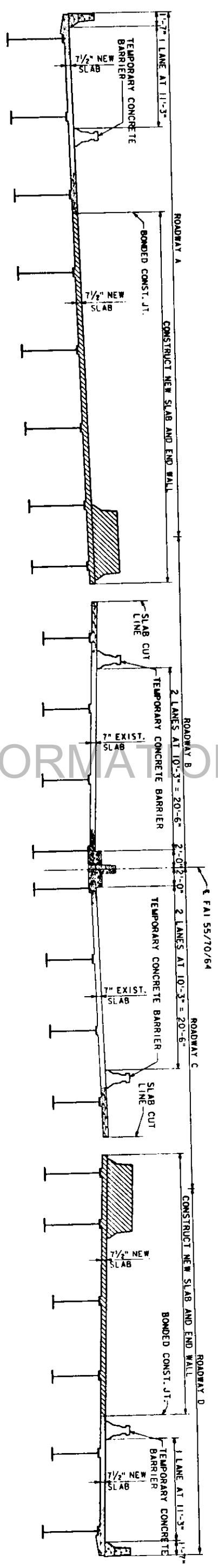
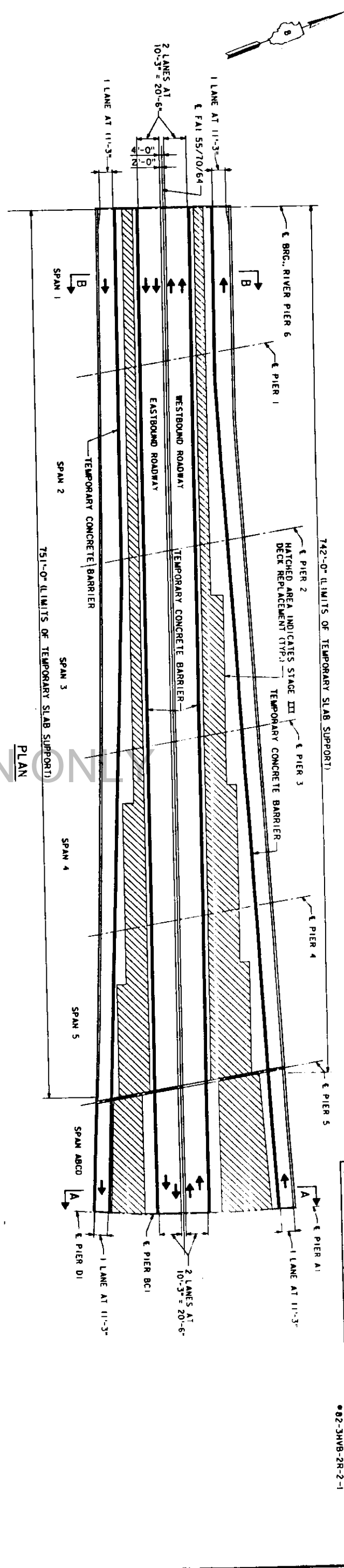
**REHABILITATION FOR
 FAI - 55/70 COMPLEX
 ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 CONSTRUCTION STAGING - STAGE III**

PREPARED BY
 SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

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

STRUCTURE NO. 082-0005
 STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.
 SHEET NO. 4 OF 45

DESIGNED	A.M. NIEMEYER
CHECKED	L.G. WEAVER
DRWN	D.C. SPINK
CHECKED	F.A. CAMBA



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL
 CONCRETE REMOVAL STAGE III

CU. YDS.	632.6
----------	-------

NO.	SECTION	QTY	UNIT	PRICE
1	FAI TO ST. CLAIR	105	48	

82-3WB-2R-2-1

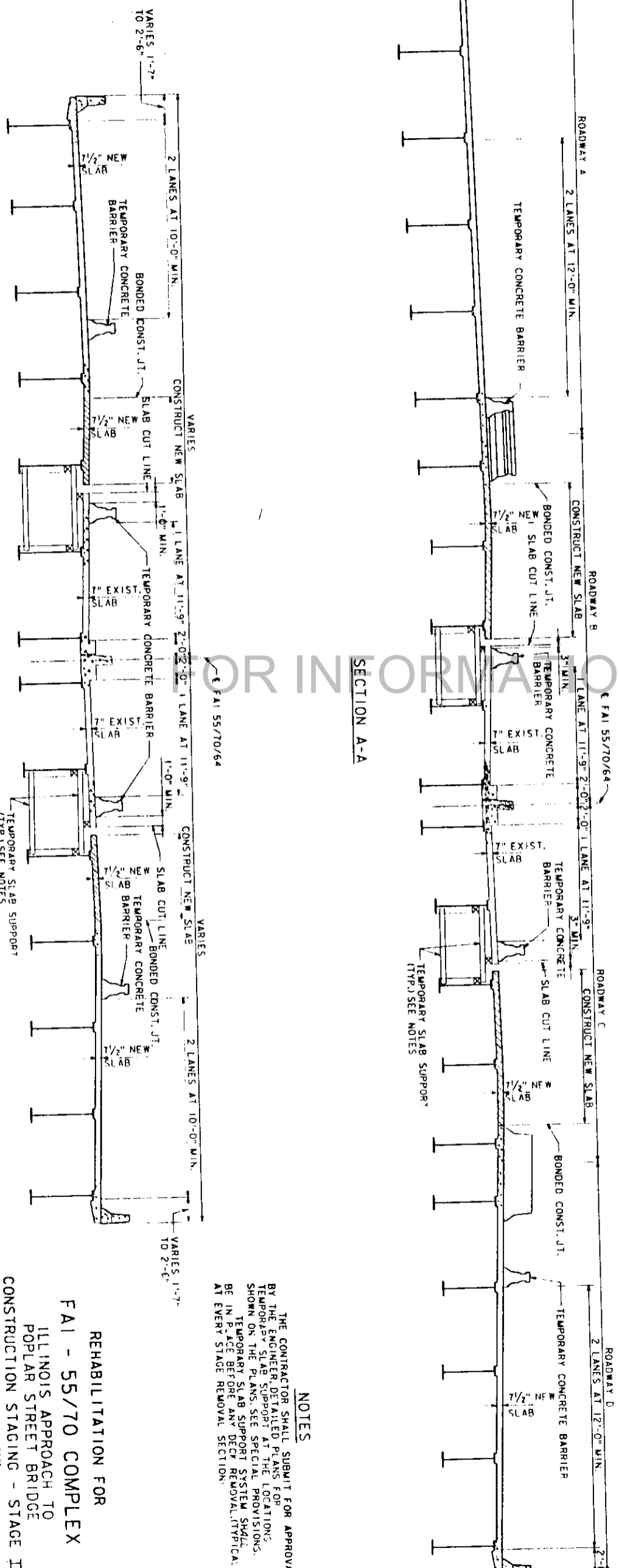
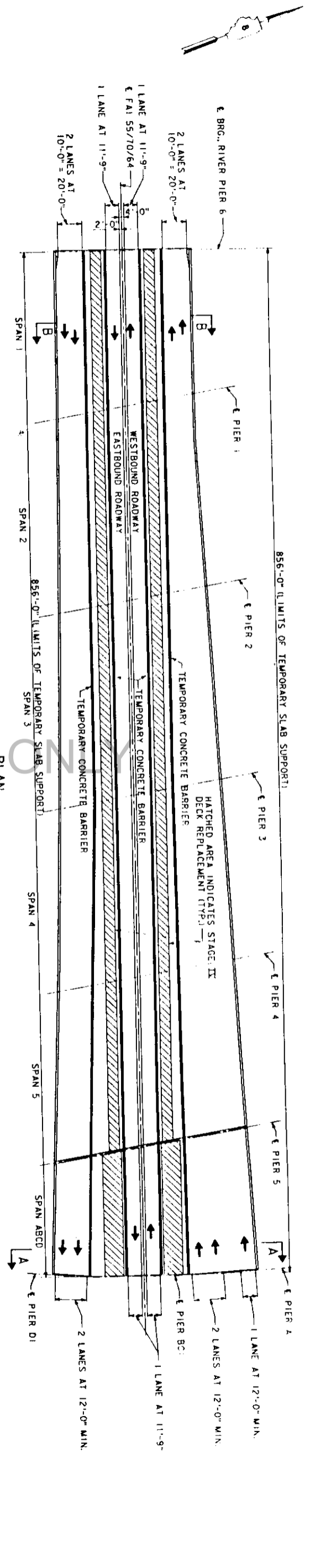
NOTES

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 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.
 SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

DESIGNED	A. W. NIEMEYER
CHECKED	L. C. WEAYER
DRAWN	D. C. SPIN
CORRECTED	F. A. CABA



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL	
CONCRETE REMOVAL	CU. YDS. 355.2
ST. CLAIR	105
49	

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.

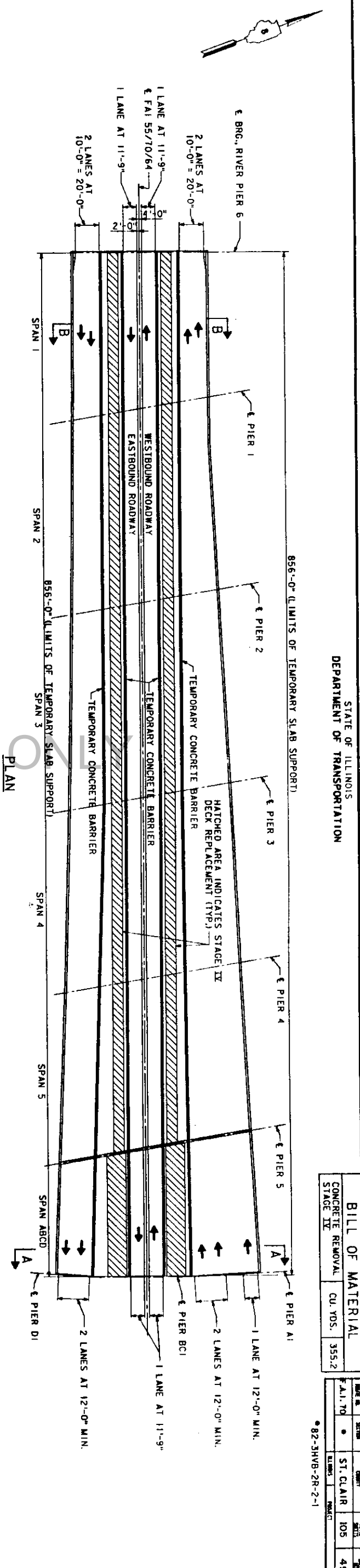
**REHABILITATION FOR
 FAI - 55/70 COMPLEX**
 ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 CONSTRUCTION STAGING - STAGE IV

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

SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

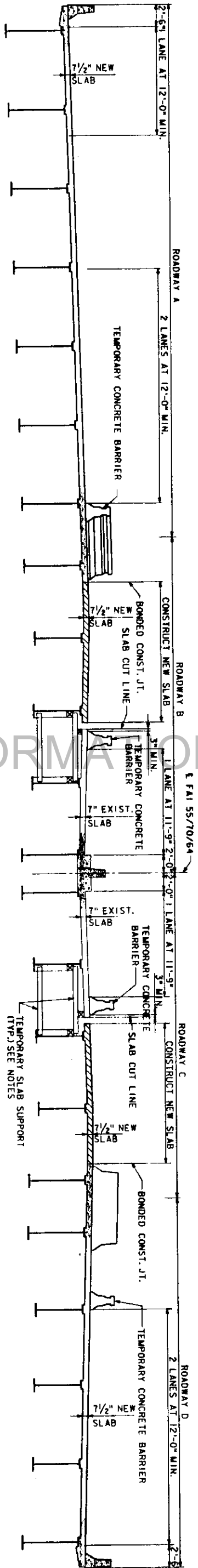
SHEET NO. 5 OF 45

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

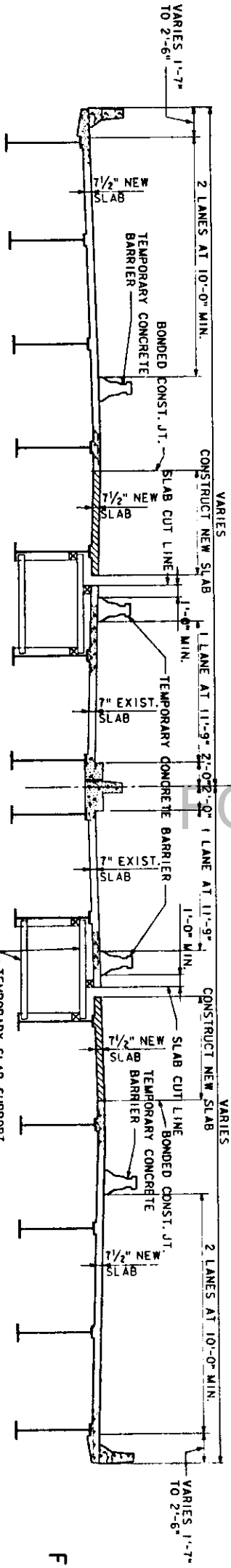


STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

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



SECTION A-A



SECTION B-B

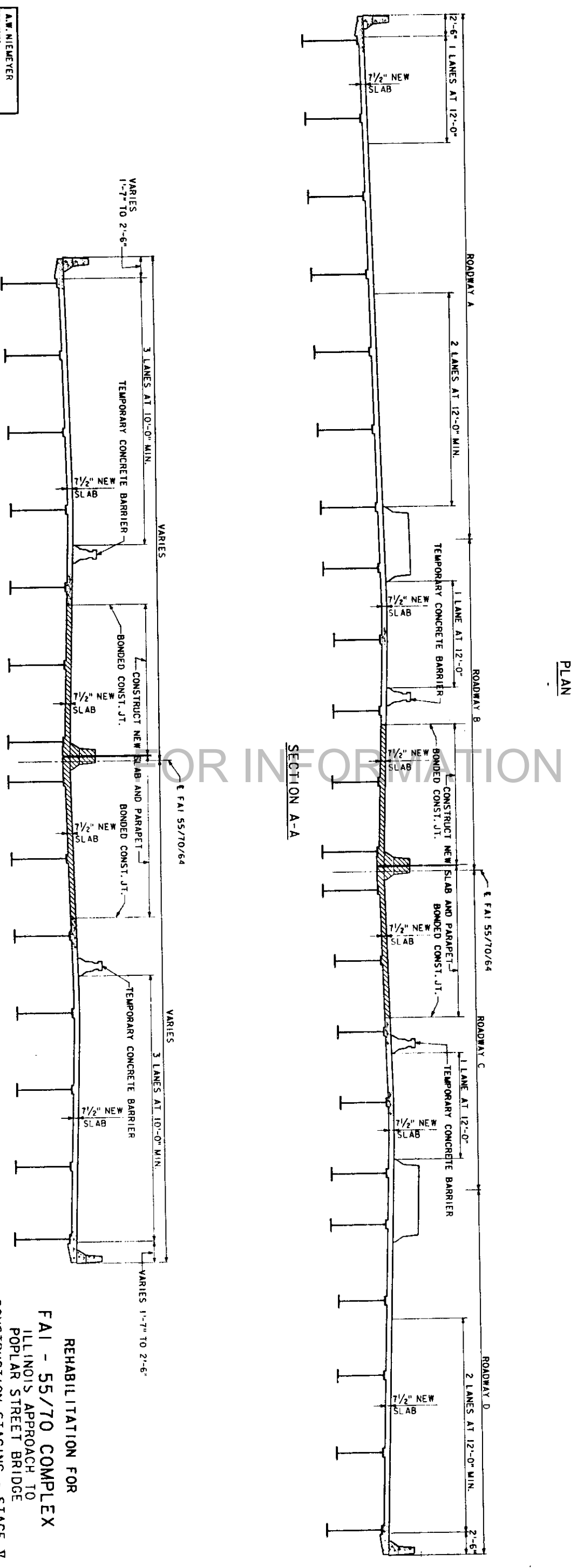
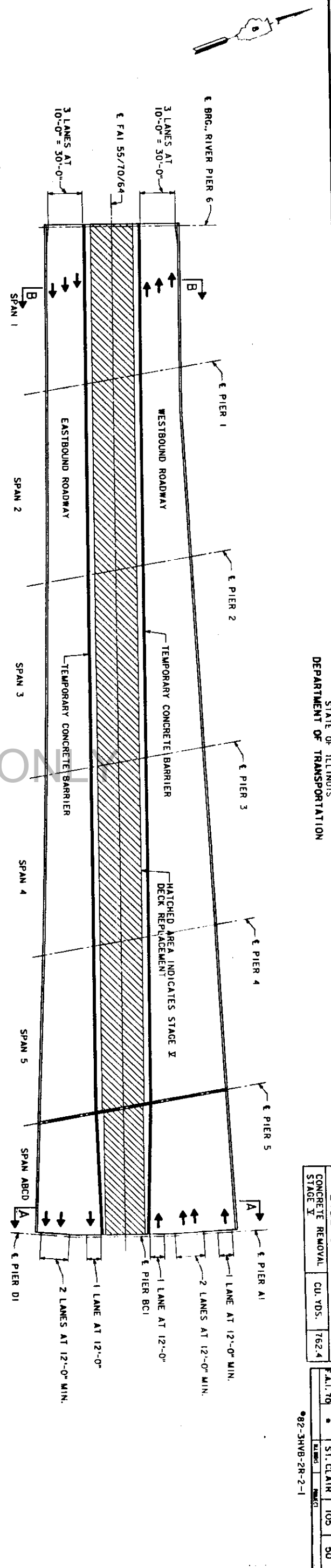
NOTES
 THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE ENGINEER DETAILED PLANS FOR TEMPORARY SLAB SUPPORT AT THE LOCATIONS SHOWN ON THE PLANS. SEE SPECIAL PROVISIONS. TEMPORARY SLAB SUPPORT SYSTEM SHOULD BE IN PLACE BEFORE ANY DECK REMOVAL (TYPICAL AT EVERY STAGE REMOVAL SECTION).

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

DESIGNED BY:
 SVEDRUP CORPORATION
 ST. LOUIS, MISSOURI

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.
 STRUCTURE NO. 082-0005
 SHEET NO. 5 OF 6

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



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL	
CONCRETE REMOVAL	CU YDS. 762.4
STAGE II	

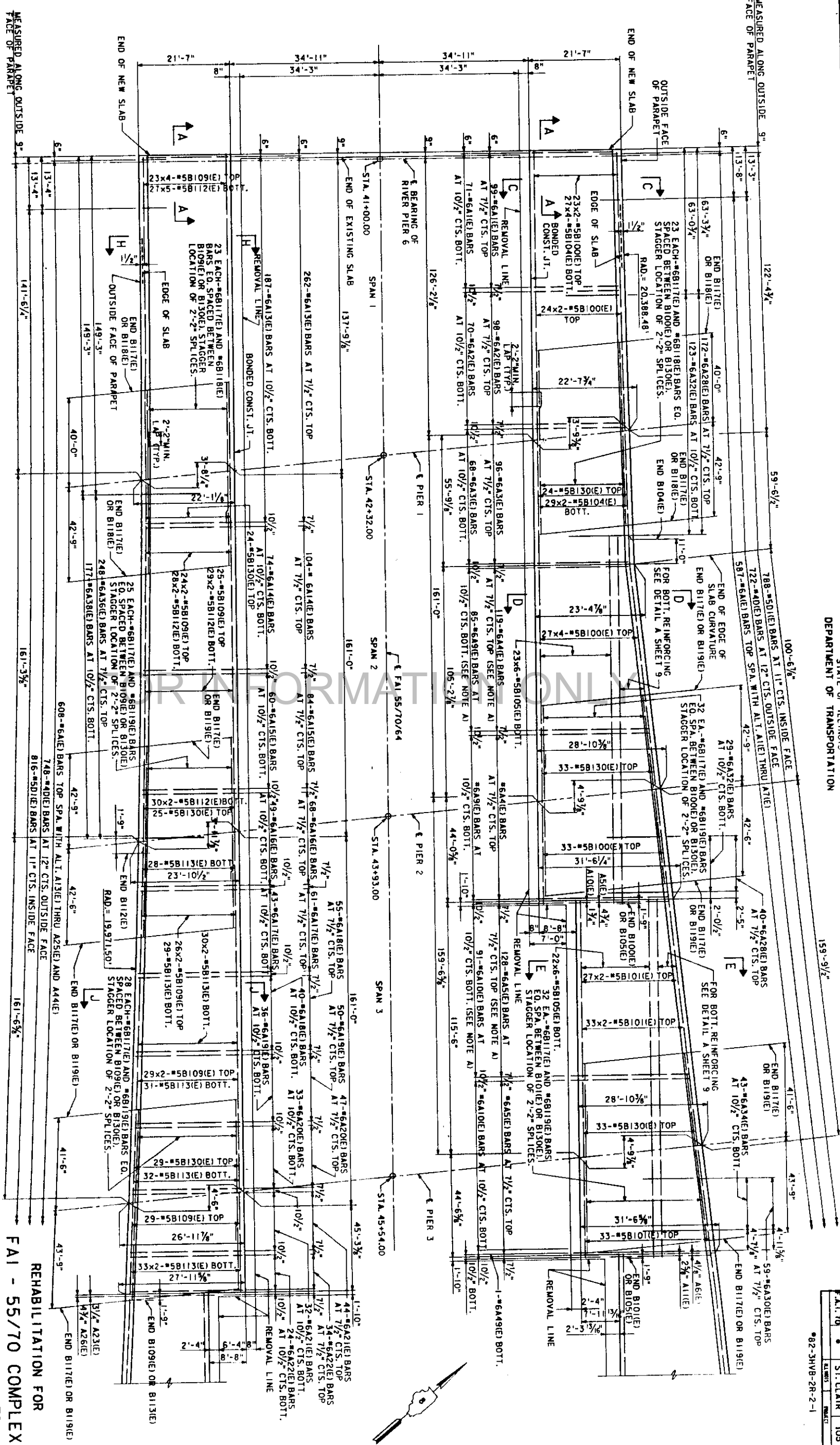
82-SHWB-2R-2-1

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

PREPARED BY:
 SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

SHEET NO. 6 OF 45

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



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PLAN - SPANS 1 THRU 3
 NOTE A: CUT BARS A4(E), A5(E), A8(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
 ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 SLAB-STAGE II

SYNERGYP CORPORATION
 ST. LOUIS, MISSOURI

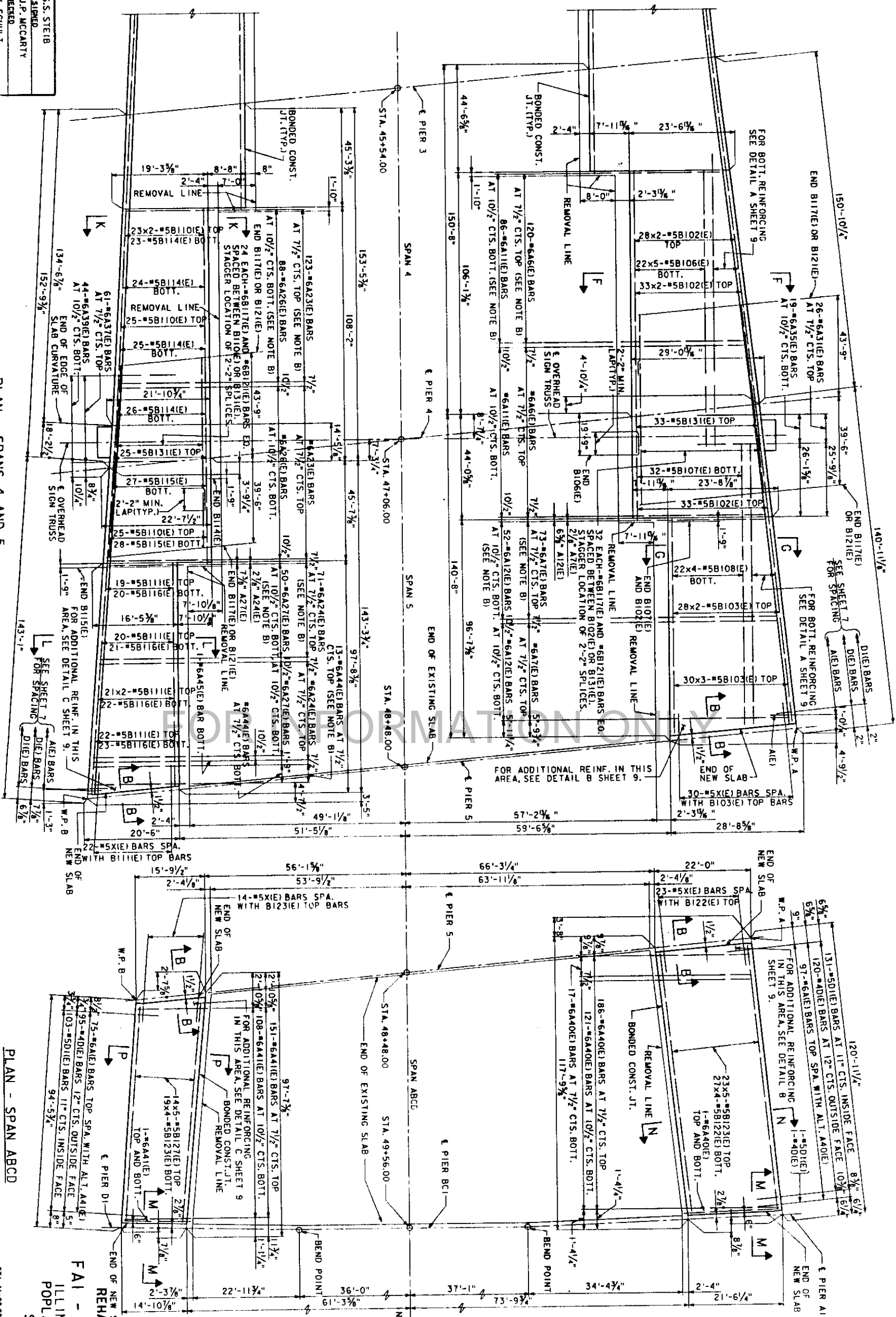
STRUCTURE NO. 082-0005
 STA. 41+00.00 TO STA. 49+50.00 FAI-70/ST. CLAIR CO.
 SHEET NO. 1 OF 45

DATE	SCALE	NO.	BY	CHK
F.A.I. 70	•	ST. CLAIR	105	51
REVISION				

82-3HVB-2R-2-1

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

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION



PLAN - SPANS 4 AND 5

PLAN - SPAN ABCD

NOTE: B: CUT BARS A3(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.

SYNERGURP CORPORATION
 ST. LOUIS, MISSOURI

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

STA. 41+00.00 TO STA. 49+56.00 FAI-70 ST. CLAIR CO.
 STRUCTURE NO. 087-0005
 SHEET NO. 8 OF 45

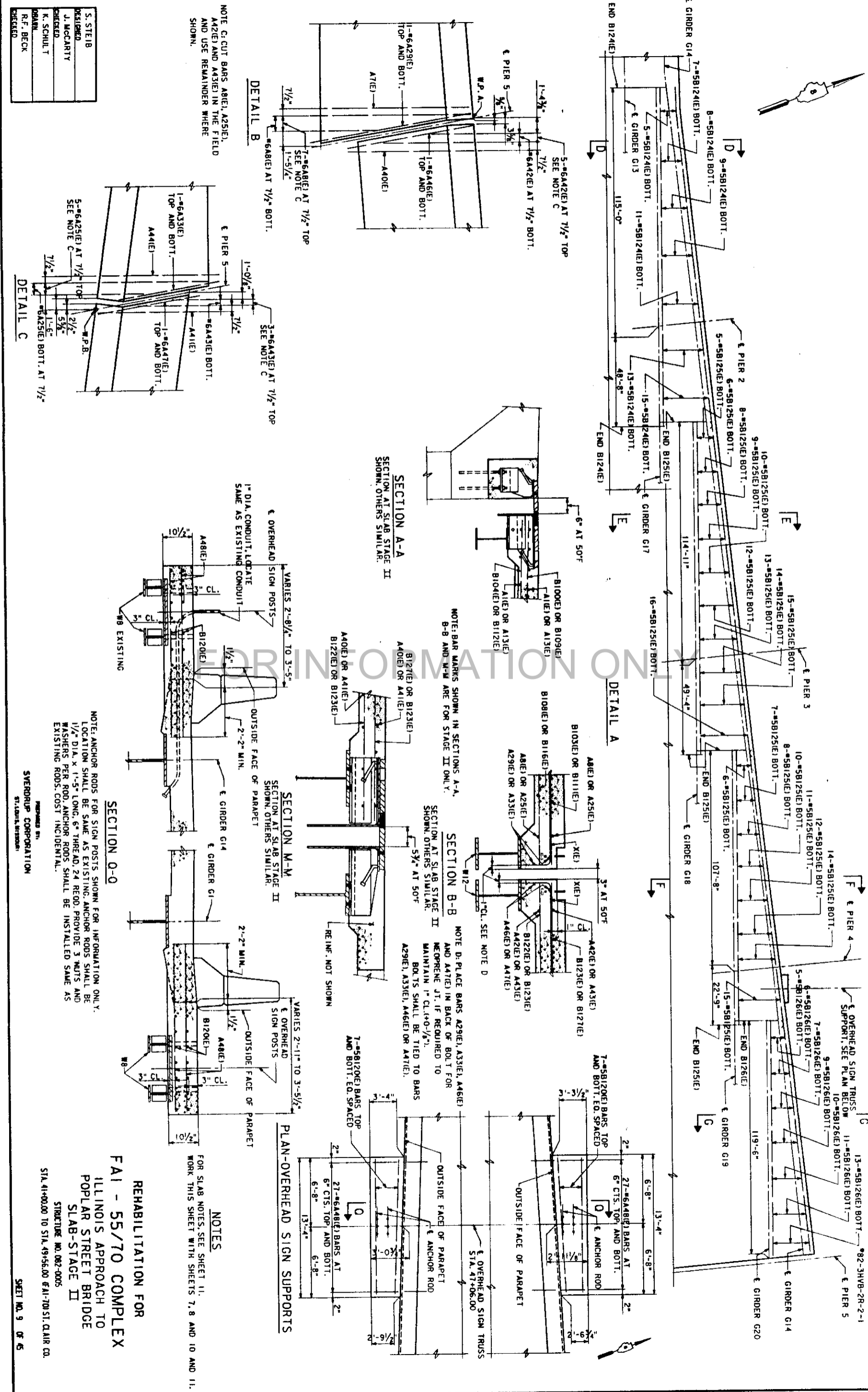
NOTES
 FOR SLAB NOTES, SEE SHEET 11,
 9 AND 10.
 NOTE: TRANSVERSE BARS NEAR EAST END
 OF SLAB SHALL BE SHIFTED SLIGHTLY
 TO MAINTAIN A DISTANCE OF 3" CLEAR
 BETWEEN BARS AT EDGE OF SLAB.

DATE	8/10/89	SHEET	8	OF	45
PROJECT	FAI-55/70	ST. CLAIR	105		52
CLIENT	ILLINOIS				
PROJECT					

82-SHWB-2R-2-1

DATE	REVISED	BY	CHKD
A.I. 70		ST. CLAIR	105
DATE	REVISED	BY	CHKD
			53

10487 FILE: ZF3:110,188S316.DGN LEVELS PLOTTED DATE: AUG. 10, 1989
88S316 PRF: 88S316 35 56 57 63



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

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

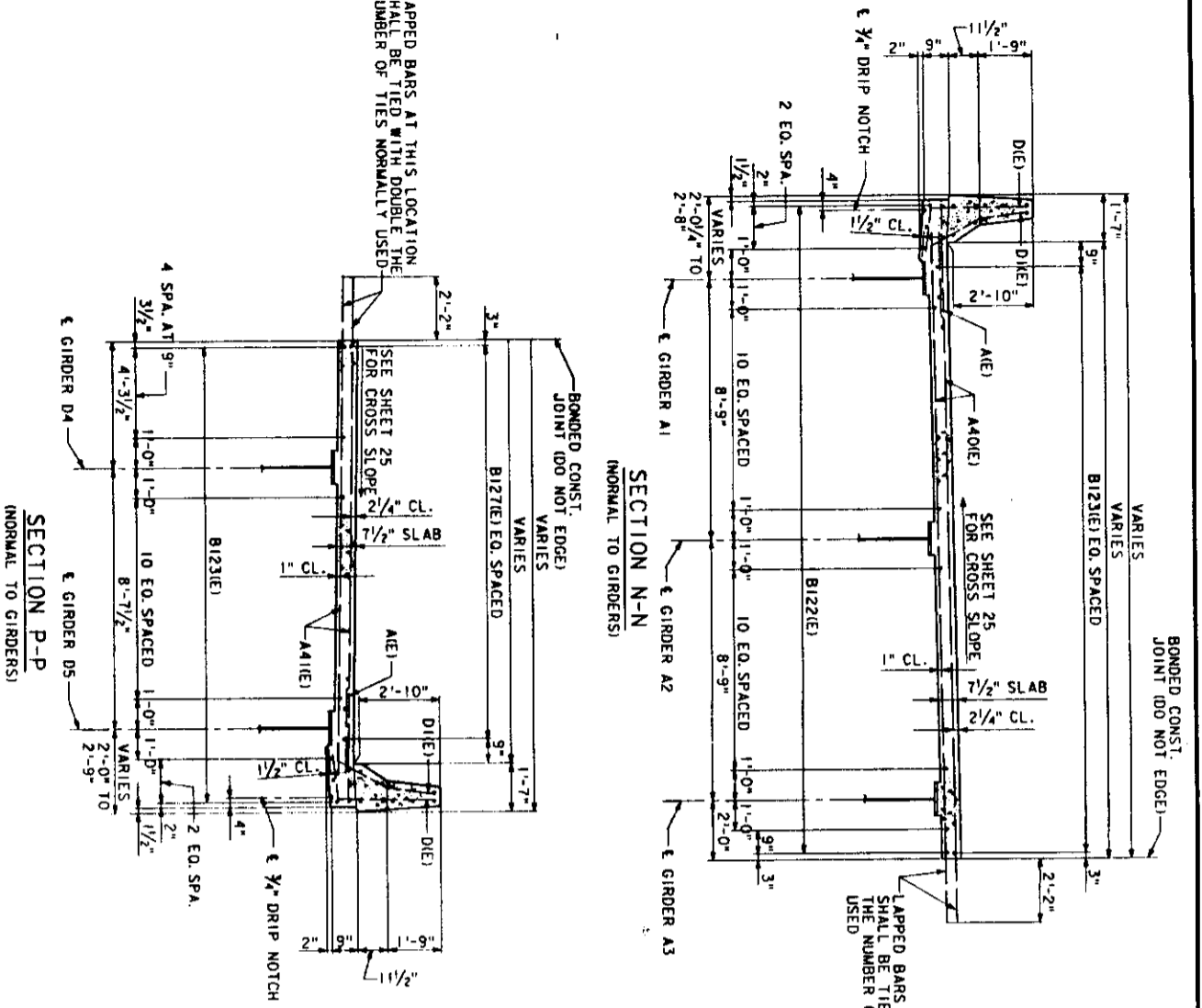
NOTE: ANCHOR RODS FOR SIGN POSTS SHOWN FOR INFORMATION ONLY. LOCATION SHALL BE SAME AS EXISTING. ANCHOR RODS SHALL BE 1/2" DIA. x 1'-5" LONG, 6" THREAD, 24 REOD. PROVIDE 3 WAGTS AND WASHERS PER ROD. ANCHOR RODS SHALL BE INSTALLED SAME AS EXISTING RODS. COST INCIDENTAL.

NOTE: PLACE BARS A29(E), A33(E), A46(E) AND A47(E) IN BACK OF BOLT FOR NEOPENE JT. IF REQUIRED TO MAINTAIN 1" CL. (1+0-1/2") BARS SHALL BE TIED TO BARS A29(E), A33(E), A46(E) OR A47(E).

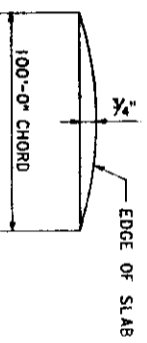
REHABILITATION FOR
ILLINOIS APPROACH TO
POPULAR STREET BRIDGE
SLAB-STAGE II

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 6A1-701 ST. CLAIR CO.
SHEET NO. 9 OF 6

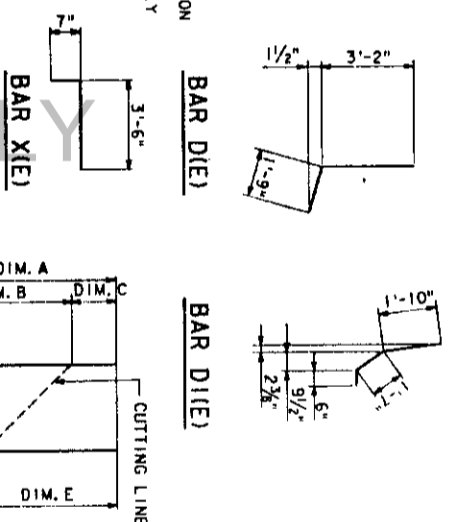
DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
DRAWN	K. SCHULT
CHECKED	R.F. BECK



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION



EDGE OF SLAB ORDINATES
 FOR CURVED PORTION OF STRUCTURE



FIELD CUTTING DIAGRAM
 NOTE: ORDER BARS FULL LENGTH

BAR NO.	REOD.	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E
A1(E)	119	52'-8"	30'-5"	22'-3"	26'-4 1/2"	26'-3 3/4"
A2(E)	128	56'-7"	32'-8"	23'-11"	28'-3 3/4"	28'-3 3/4"
A3(E)	120	57'-6"	32'-10"	24'-8"	28'-9 1/2"	28'-8 3/4"
A4(E)	73	54'-8"	29'-10"	24'-10"	27'-4 1/2"	27'-3 3/4"
A5(E)	7	37'-0"	29'-9"	7'-3"	29'-9"	29'-9"
A6(E)	85	52'-8"	30'-5"	22'-3"	26'-4 1/2"	26'-3 3/4"
A7(E)	91	56'-7"	32'-8"	23'-11"	28'-3 3/4"	28'-3 3/4"
A8(E)	52	54'-8"	29'-10"	24'-10"	27'-4 1/2"	27'-3 3/4"
A9(E)	123	45'-10"	25'-5"	20'-5"	22'-11"	22'-11"
A10(E)	71	38'-6"	20'-11"	17'-7"	19'-3 1/4"	19'-2 3/4"
A11(E)	5	23'-0"	19'-0"	4'-0"	4'-0"	19'-0"
A12(E)	88	45'-10"	25'-5"	20'-5"	22'-11"	22'-11"
A13(E)	50	38'-6"	20'-11"	17'-7"	19'-3 1/4"	19'-2 3/4"
A14(E)	5	21'-0"	18'-0"	3'-0"	3'-0"	18'-0"
A15(E)	3	15'-6"	11'-6"	4'-0"	4'-0"	11'-6"
A16(E)	13	42'-6"	21'-7"	20'-11"	20'-11"	21'-7"

SLAB - SPANS 1 THRU 5 AND SPAN ABCD
 BILL OF MATERIAL

BAR NO.	SIZE	LENGTH	SHAPE	BAR NO.	NO.	SIZE	LENGTH	SHAPE
A1(E)	1367	#6	4'-0"	A17(E)	104	#6	25'-11"	
A2(E)	170	#6	20'-11"	A18(E)	95	#6	26'-7"	
A3(E)	168	#6	21'-7"	A19(E)	86	#6	27'-3"	
A4(E)	164	#6	22'-3"	A20(E)	80	#6	27'-11"	
A5(E)	119	#6	52'-8"	A21(E)	76	#6	28'-6"	
A6(E)	128	#6	56'-7"	A22(E)	58	#6	29'-1"	
A7(E)	120	#6	57'-6"	A23(E)	123	#6	45'-10"	
A8(E)	73	#6	54'-8"	A24(E)	71	#6	38'-6"	
A9(E)	7	#6	37'-0"	A25(E)	5	#6	23'-0"	
A10(E)	85	#6	52'-8"	A26(E)	88	#6	45'-10"	
A11(E)	91	#6	56'-7"	A27(E)	50	#6	38'-6"	
A12(E)	52	#6	54'-8"	A28(E)	212	#6	15'-4"	
A13(E)	123	#6	45'-10"	A29(E)	2	#6	30'-3"	
A14(E)	71	#6	38'-6"	A30(E)	59	#6	16'-0"	
A15(E)	5	#6	23'-0"	A31(E)	26	#6	14'-10"	
A16(E)	88	#6	45'-10"	A32(E)	152	#6	13'-2"	
A17(E)	50	#6	38'-6"	A33(E)	2	#6	22'-0"	
A18(E)	5	#6	21'-0"	A34(E)	43	#6	13'-10"	
A19(E)	3	#6	15'-6"	A35(E)	19	#6	12'-8"	
A20(E)	13	#6	42'-6"	A36(E)	248	#6	15'-10"	
A21(E)	2	#6	23'-5"	A37(E)	61	#6	15'-4"	
A22(E)	58	#6	29'-1"	A38(E)	177	#6	13'-8"	
A23(E)	123	#6	45'-10"	A39(E)	44	#6	13'-2"	
A24(E)	71	#6	38'-6"	A40(E)	326	#6	23'-1"	
A25(E)	5	#6	23'-0"	A41(E)	261	#6	16'-10"	
A26(E)	88	#6	45'-10"	A42(E)	5	#6	21'-0"	
A27(E)	50	#6	38'-6"	A43(E)	3	#6	15'-6"	
A28(E)	212	#6	15'-4"	A44(E)	13	#6	42'-6"	
A29(E)	2	#6	30'-3"	A45(E)	1	#6	21'-0"	
A30(E)	59	#6	16'-0"	A46(E)	2	#6	23'-5"	
A31(E)	26	#6	14'-10"					
A32(E)	152	#6	13'-2"					
A33(E)	2	#6	22'-0"					
A34(E)	43	#6	13'-10"					
A35(E)	19	#6	12'-8"					
A36(E)	248	#6	15'-10"					
A37(E)	61	#6	15'-4"					
A38(E)	177	#6	13'-8"					
A39(E)	44	#6	13'-2"					
A40(E)	326	#6	23'-1"					
A41(E)	261	#6	16'-10"					
A42(E)	5	#6	21'-0"					
A43(E)	3	#6	15'-6"					
A44(E)	13	#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.
 DIE(B) BARS LOCATED NEAR ENDS OF PARAPET SHALL BE SET BACK TO CLEAR BLOCKOUT FOR EXPANSION JOINT BY 1".
 LONGITUDINAL BARS SHALL BE LAPPED SPICED 1'-9" MIN. BARS SHALL BE CUT TO CLEAR DRAINS AND EXPANSION JOINT STEEL WHERE NECESSARY.
 BAR SPICERS ARE TO BE USED WITH BARS A1(E) THRU A4(E), A9(E), A13(E) THRU A22(E) IN STAGE II (2297 REOD.).
 BAR SPICERS ARE TO BE USED WITH BARS A6(E) THRU A8(E) AND A8(E) IN STAGE III (4175 REOD.).
 BAR SPICERS ARE TO BE USED WITH BARS A40(E) THRU A46(E) IN STAGE IV (4712 REOD.).

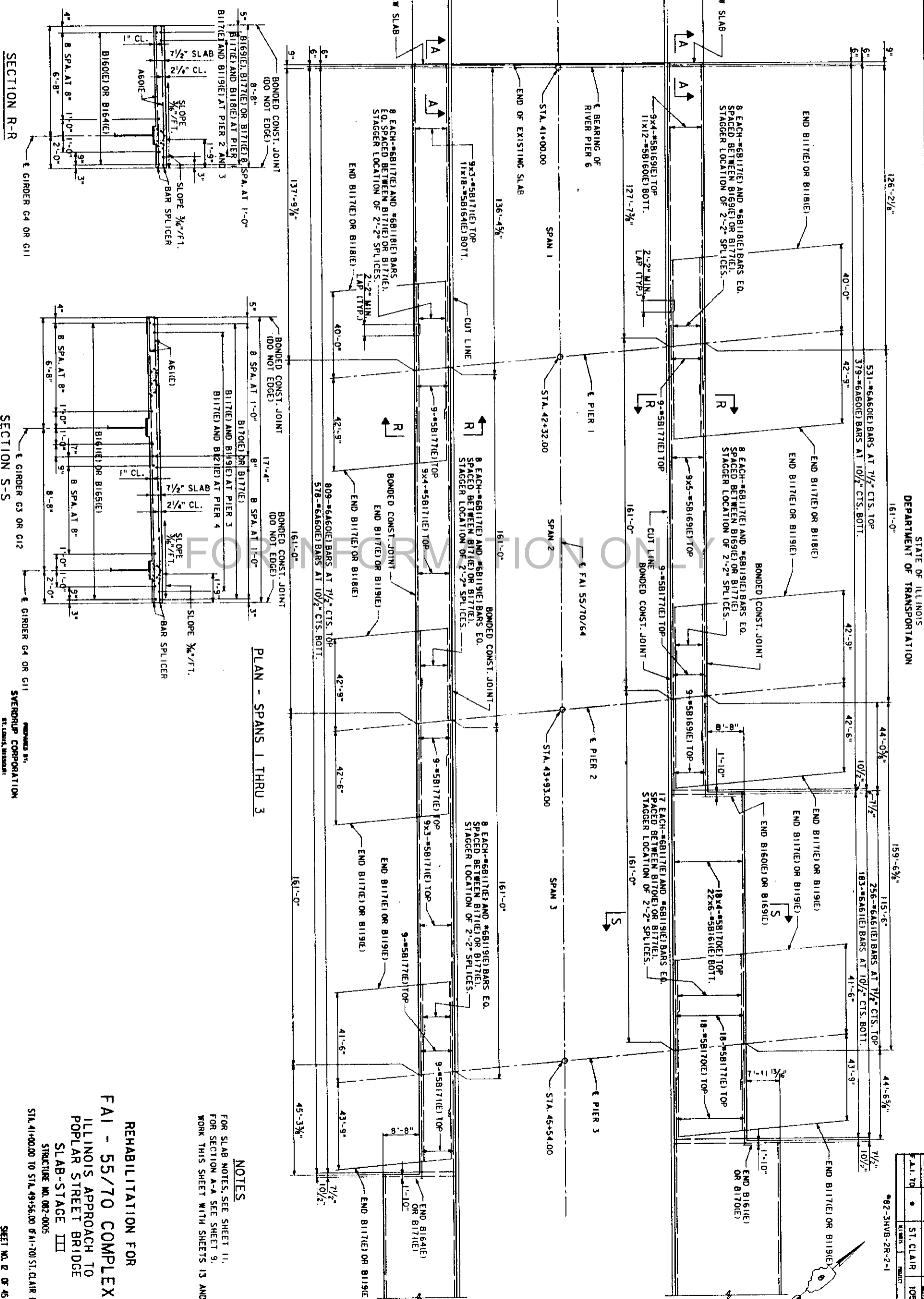
REHABILITATION FOR
 FAI - 55/70 COMPLEX

ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 SLAB-STAGE II

DESIGNED BY:
 EVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

STRUCTURE NO. 082-0005
 STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.
 SHEET NO. 1 OF 45

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



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

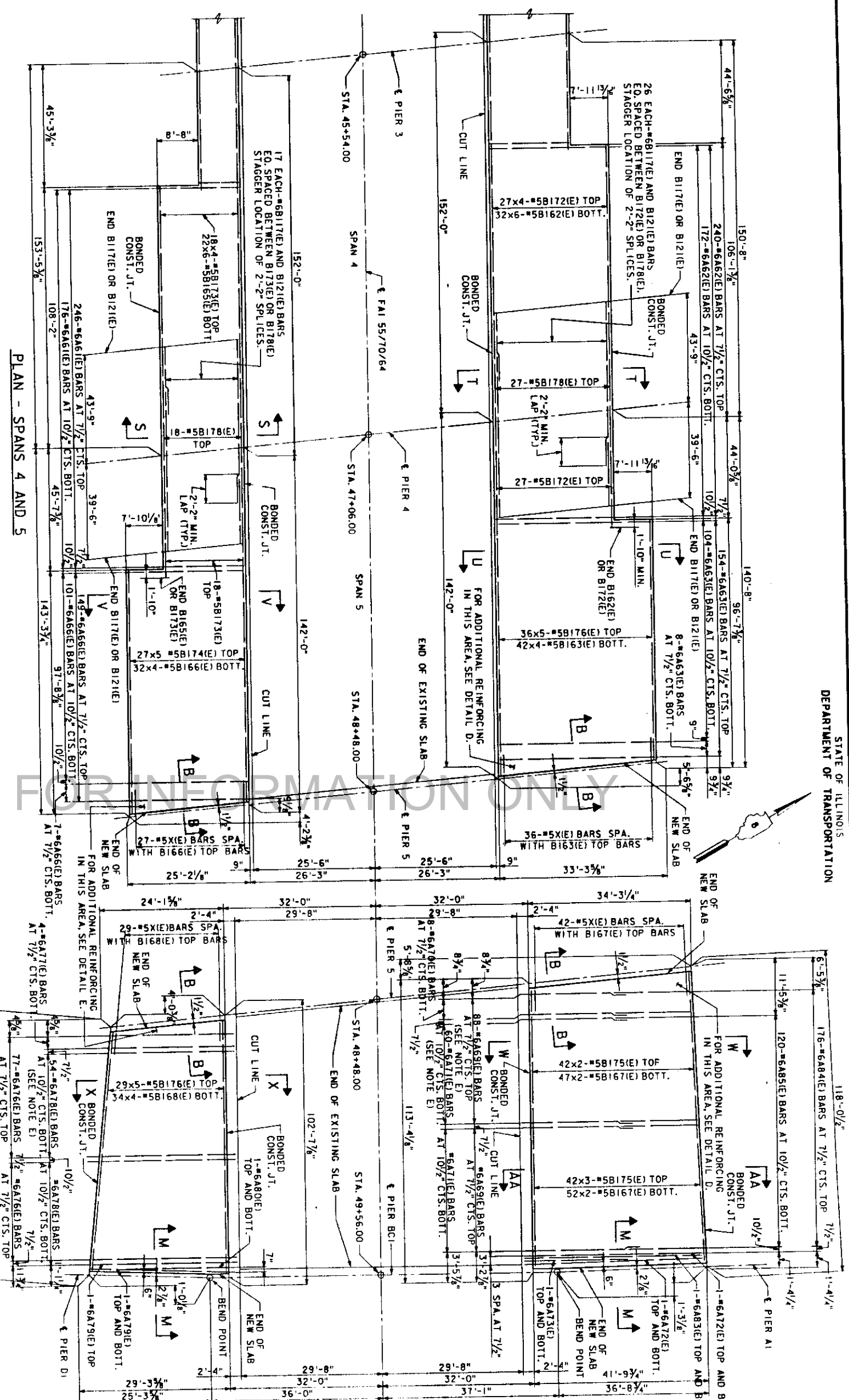
DATE	SECTION	QUANTITY	SCALE	NO.
AUG. 10, 1989	ST. CLAIR	105	1/8"	56

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

REHABILITATION FOR
 ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 SLAB-STAGE III
 STRUCTURE NO. 082-0005
 STA. 41+00.00 TO STA. 49+55.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 2 OF 45

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



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY

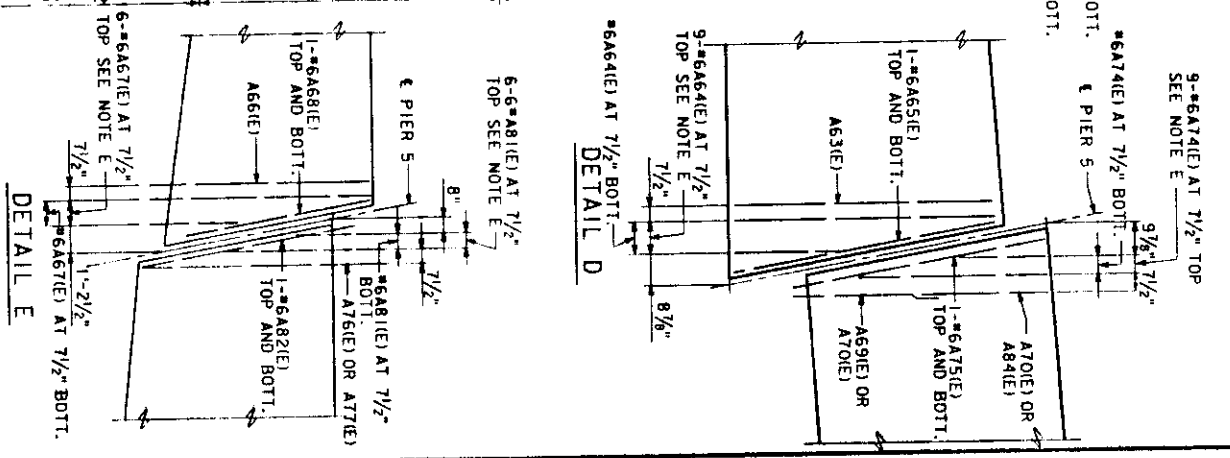
PLAN - SPAN ABCD

NOTE E: CUT BARS #6A72(E), #6A71(E), #6A70(E), #6A72(E), #6A71(E), #6A70(E) AND #6A71(E) AT 10 1/2" CTS. BOT. (SEE NOTE E) IN THE FIELD AND USE REMAINDER WHERE SHOWN.

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.

82-3HYB-2R-2-1				
SHEET NO.	SECTION	DATE	BY	CHECKED
FAI TO 9	ST. CLAIR	105	57	

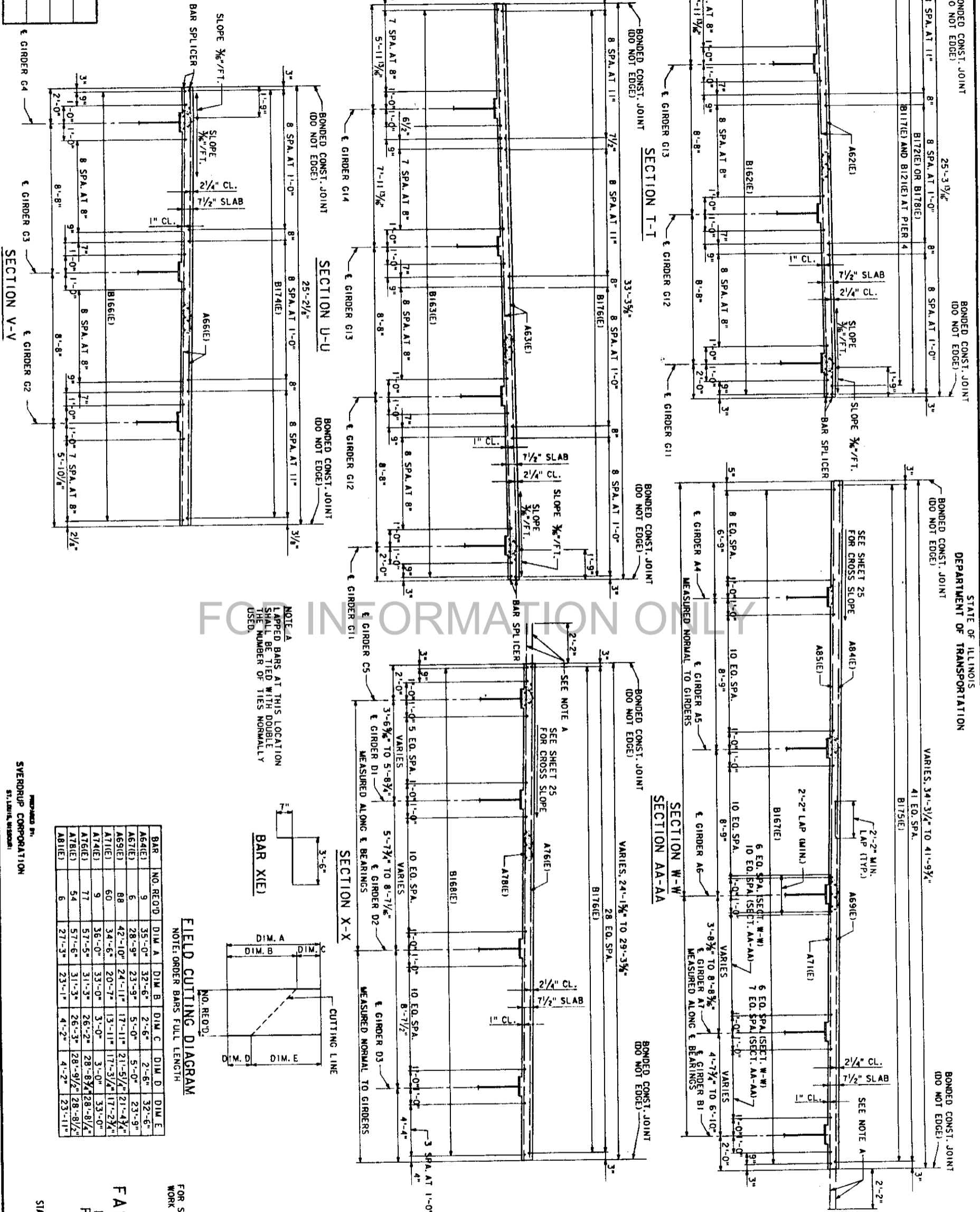


NOTES

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

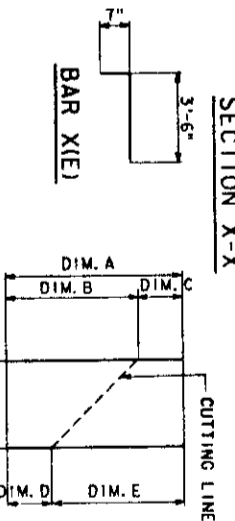
DESIGNED BY
 SYNERDUP CORPORATION
 ST. LOUIS, MISSOURI

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



FOR INFORMATION ONLY

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
A641E	9	35'-0"	32'-6"	2'-6"	2'-6"	32'-6"
A642E	9	28'-9"	23'-9"	5'-0"	5'-0"	23'-9"
A643E	88	42'-10"	24'-11"	17'-11"	21'-5 1/2"	21'-4 1/2"
A644E	60	34'-6"	20'-7"	13'-11"	17'-3 1/2"	17'-2 1/2"
A645E	9	36'-0"	33'-0"	3'-0"	33'-0"	33'-0"
A646E	77	57'-5"	31'-3"	26'-2"	28'-8 1/2"	28'-8 1/2"
A647E	54	57'-6"	31'-3"	26'-3"	28'-9 1/2"	28'-8 1/2"
A648E	6	27'-3"	23'-1"	4'-2"	4'-2"	23'-1"

FIELD CUTTING DIAGRAM
 NOTE: ORDER BARS FULL LENGTH

PREPARED BY:
 SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

ITEM NO.	SECTION	QUANTITY	UNIT	PRICE	TOTAL
1	ST. CLAIR	105	58		

BILL OF MATERIAL
 SPANS 1 THRU 5 AND
 SPAN ABCD

BAR	NO.	SIZE	LENGTH	SHAPE
A601E	2,297	#6	8'-4"	
A602E	861	#6	17'-0"	
A603E	412	#6	25'-0"	
A604E	266	#6	33'-0"	
A605E	9	#6	35'-0"	
A606E	2	#6	33'-4"	
A607E	257	#6	24'-10"	
A608E	6	#6	28'-9"	
A609E	2	#6	25'-2"	
A610E	88	#6	42'-10"	
A611E	8	#6	36'-9"	
A612E	60	#6	34'-6"	
A613E	4	#6	43'-10"	
A614E	2	#6	24'-0"	
A615E	2	#6	36'-0"	
A616E	2	#6	36'-7"	
A617E	77	#6	57'-5"	
A618E	4	#6	26'-2"	
A619E	54	#6	57'-6"	
A620E	3	#6	31'-3"	
A621E	2	#6	22'-5"	
A622E	6	#6	27'-3"	
A623E	2	#6	26'-6"	
A624E	2	#6	42'-0"	
A625E	176	#6	21'-0"	
A626E	120	#6	25'-4"	
A627E	100	#6	60'-0"	
A628E	16	#6	24'-11"	
A629E	41	#6	27'-5"	
A630E	43	#6	25'-5"	
A631E	132	#5	29'-6"	
A632E	132	#5	28'-6"	
A633E	192	#5	26'-10"	
A634E	168	#5	27'-0"	
A635E	198	#5	30'-0"	
A636E	132	#5	27'-5"	
A637E	128	#5	25'-8"	
A638E	136	#5	30'-9"	
A639E	90	#5	27'-0"	
A640E	90	#5	24'-10"	
A641E	90	#5	23'-3"	
A642E	99	#5	34'-0"	
A643E	189	#5	23'-3"	
A644E	90	#5	22'-4"	
A645E	135	#5	20'-11"	
A646E	210	#5	24'-11"	
A647E	325	#5	21'-11"	
A648E	63	#5	53'-0"	
A649E	45	#5	53'-0"	
A650E	134	#5	4'-1"	

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.

82-3HWB-2R-2-1

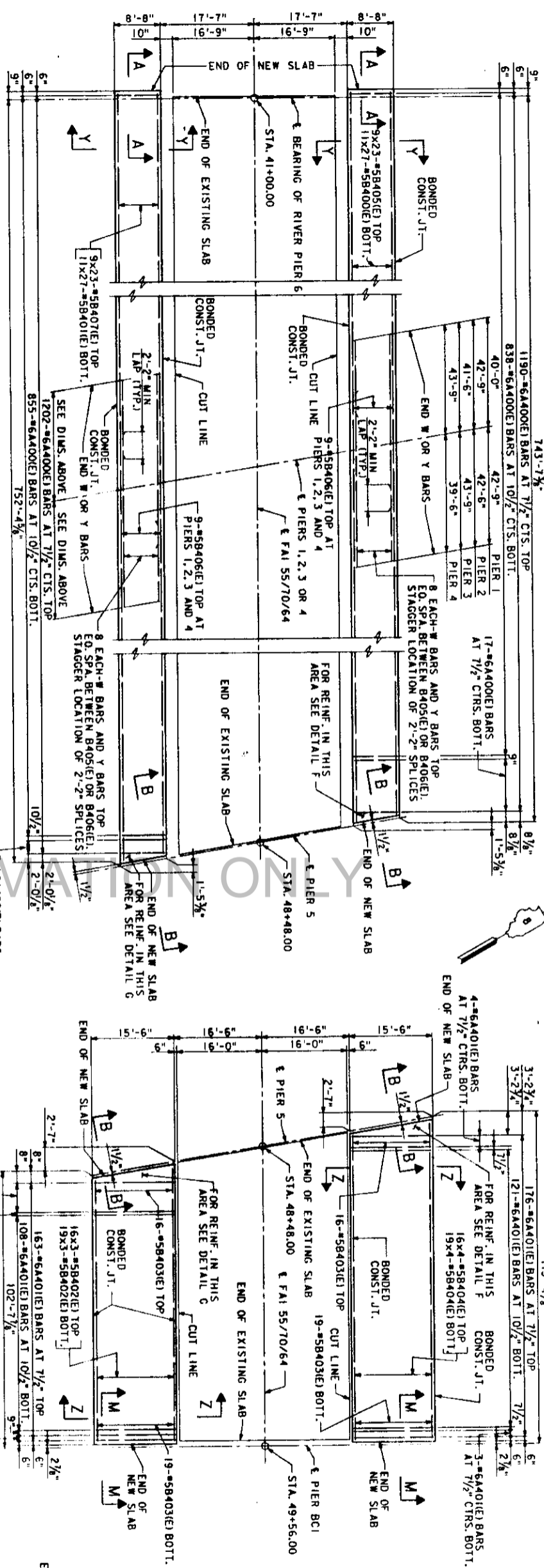
NO.	SECTION	WIDTH	DEPTH	AREA
F.A.I. TO	ST. CLAIR	105	59	

BILL OF MATERIAL

SLAB - SPANS 1 THRU 5 AND SPAN ABCD				
BAR NO.	SIZE	LENGTH	SHAPE	
A4001E	4107	#6	8'-5"	
A4001E	587	#6	15'-3"	
A4002E	4	#6	7'-6"	
A4003E	4	#6	3'-9"	
A4004E	4	#6	8'-6"	
A4005E	8	#6	15'-9"	
A4006E	4	#6	15'-6"	
B117E	64	#6	60'-0"	
B118E	16	#6	24'-11"	
B119E	32	#6	27'-5"	
B121E	16	#6	25'-5"	
B4001E	297	#5	29'-4"	
B4002E	105	#5	29'-7"	
B4003E	140	#5	20'-0"	
B4004E	207	#5	25'-0"	
B4005E	207	#5	55'-0"	
B4006E	72	#5	55'-0"	
B4007E	207	#5	25'-2"	

CLASS X CONCRETE SUPERSUBSTRUCTURE REINFORCEMENT BARS (EPOXY COATED) CUL. YDS. 386.3 LBS. 115,630

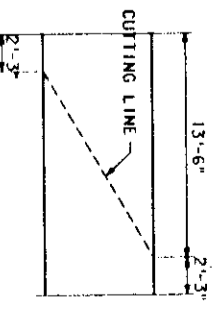
REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.



PLAN-SPANS 1 THRU 5

LOCATION	# BARS	Y BARS
PIER 1	*6B117E	*6B118E
PIER 2	*6B117E	*6B119E
PIER 3	*6B117E	*6B119E
PIER 4	*6B117E	*6B121E

PLAN-SPAN ABCD



FIELD CUTTING DIAGRAM
NOTE: ORDER BARS FULL LENGTH.
CUT 2 SETS OF 4-A4005E) 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

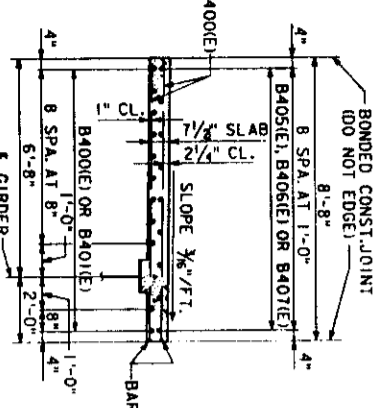
ILLINOIS APPROACH TO

POPLAR STREET BRIDGE

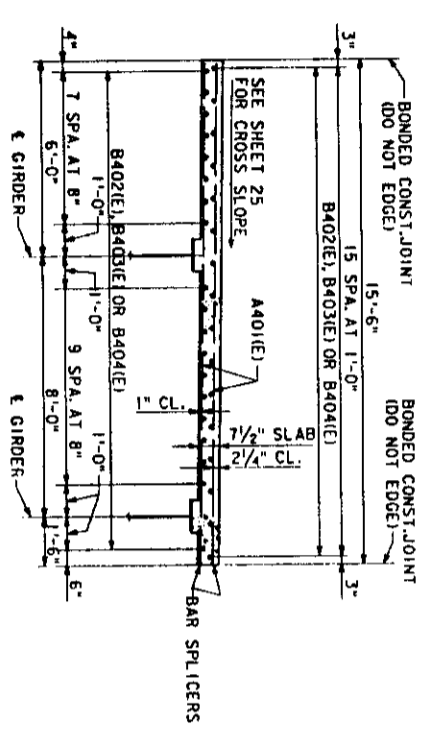
SLAB-STAGE IV

SHEET NO. 5 OF 45

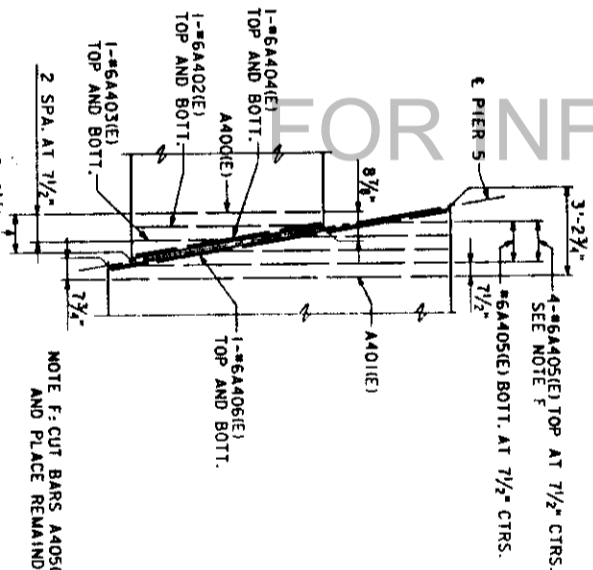
SECTION Y-Y



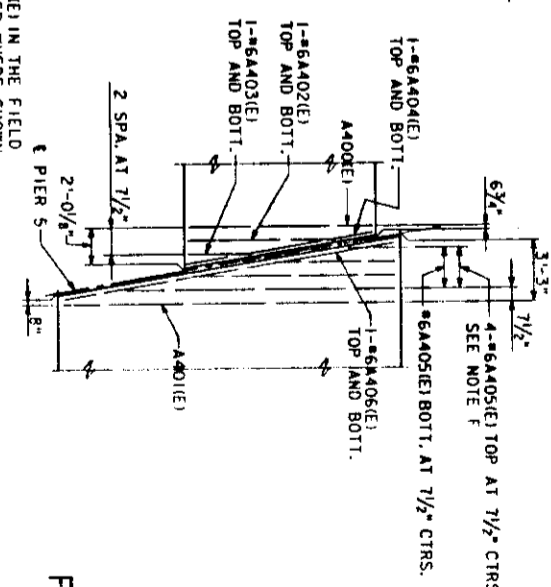
SECTION Z-Z



DETAIL F



DETAIL G



10487	FILE: ZF3:110,1388323.DGN	LEVELS PLOTTED	DATE: AUG. 10, 1989
885323	PRF: 885323	35 56 57 58 63	

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

DESIGNED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

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

82-3HV-2R-2-1

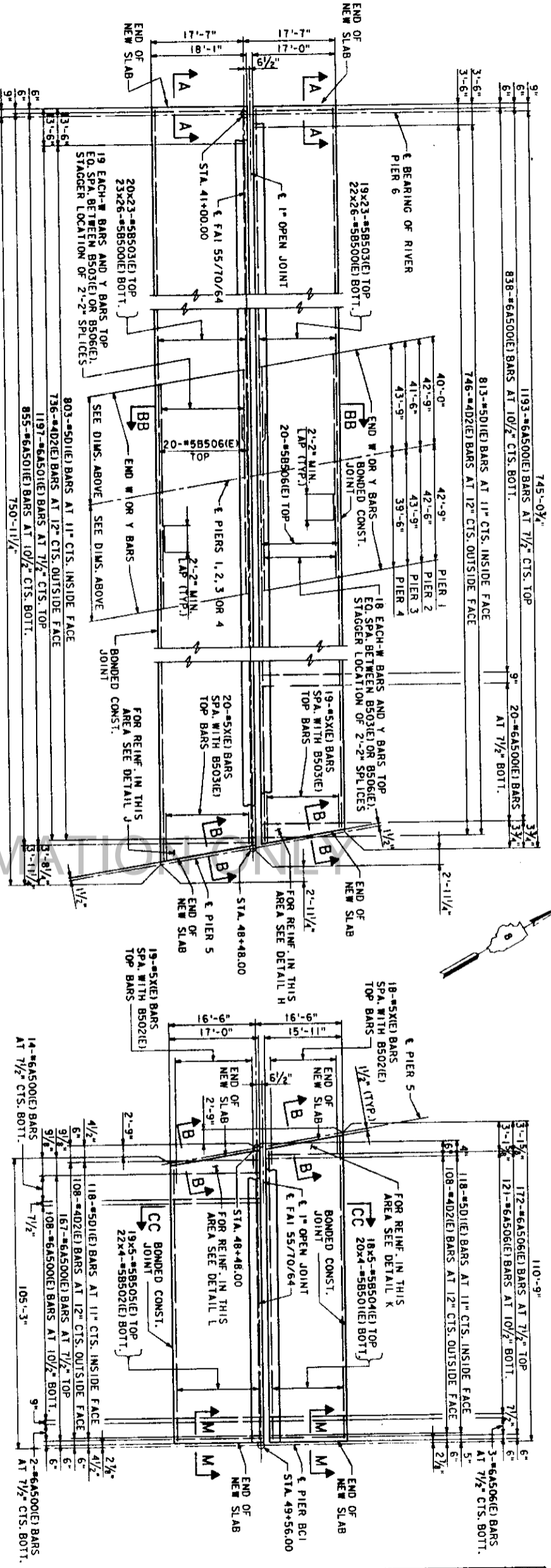
NO.	SECTION	QUANTITY	UNIT	PRICE
A.1.10	ST. CLAIR	105	60	

BILL OF MATERIAL

SLAB - SPANS I 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"	
B11(E)	148	#6	60'-0"	
B11(E)	37	#6	24'-11"	
B11(E)	74	#6	27'-5"	
B12(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				LBS. 232,630
EPOXY COATED				

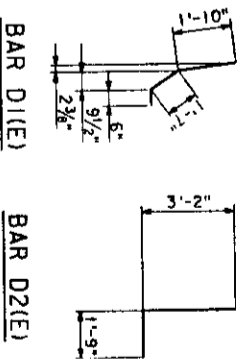
REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.



PLAN-SPANS I 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



FIELD CUTTING DIAGRAM
NOTE: ORDER BARS FULL LENGTH

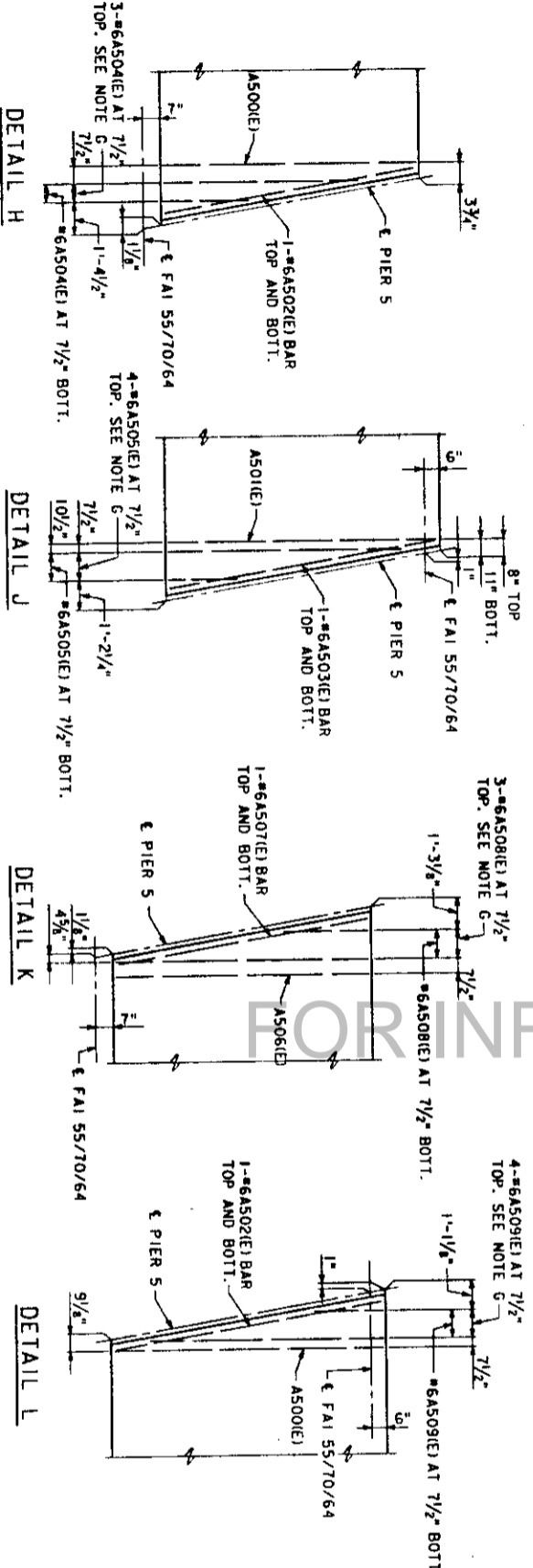
BAR	NO. REQ'D.	DIM. A	DIM. B	DIM. C
A504(E)	3	18'-10"	13'-2"	5'-8"
A505(E)	4	21'-7"	16'-5"	5'-2"
A508(E)	3	18'-3"	12'-10"	5'-5"
A509(E)	4	20'-0"	15'-7"	4'-5"

REHABILITATION FOR

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

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

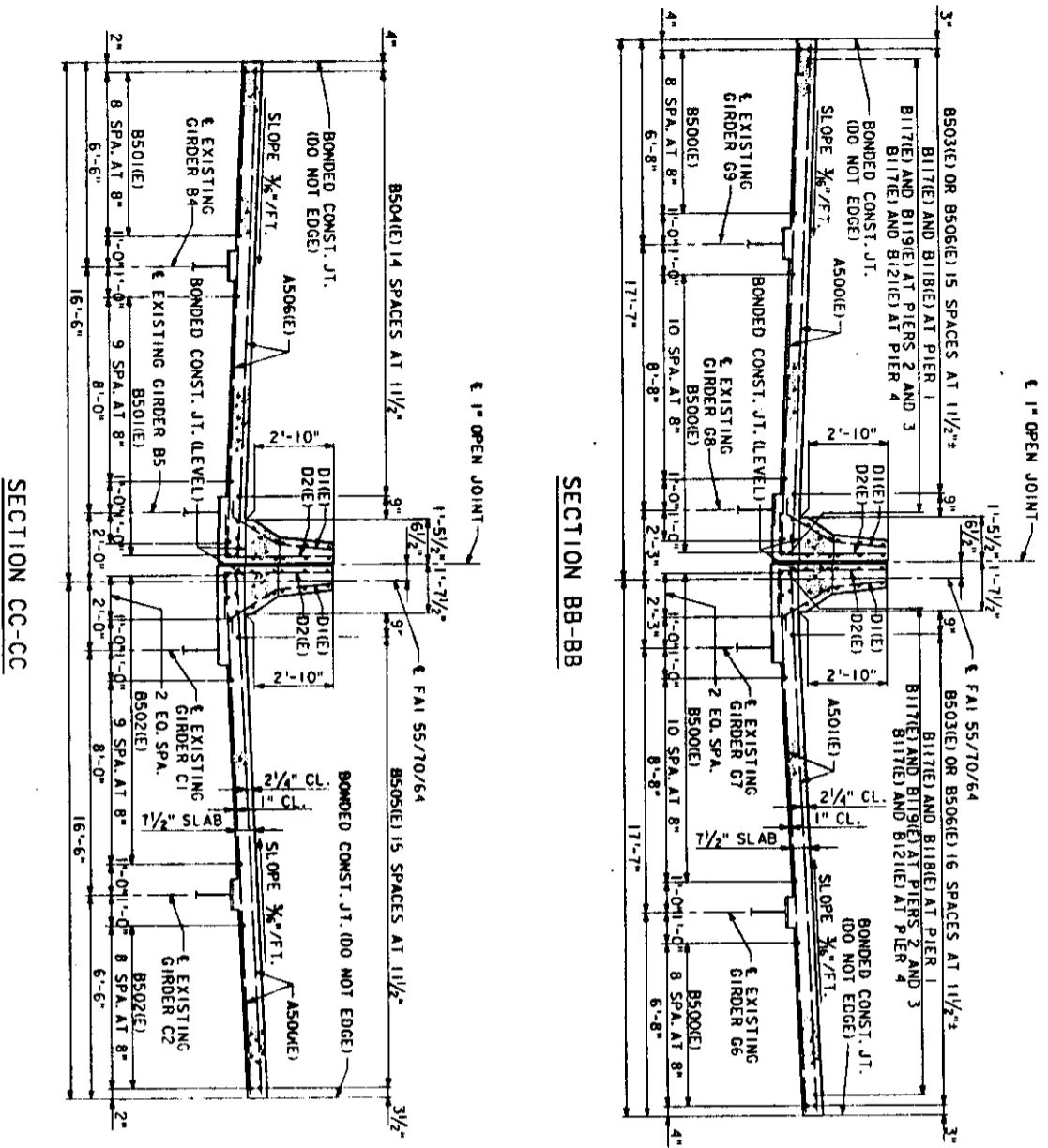
NOTES
FOR SLAB NOTES, SEE SHEET 11.
FOR SECTIONS A-A, B-B AND M-M, SEE SHEET 9.
FOR SECTIONS BB-BB AND CC-CC, SEE SHEET 17.



DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
APPROVED	C. DEED
DATE	
BY	R.F. BECK
CHECKED	

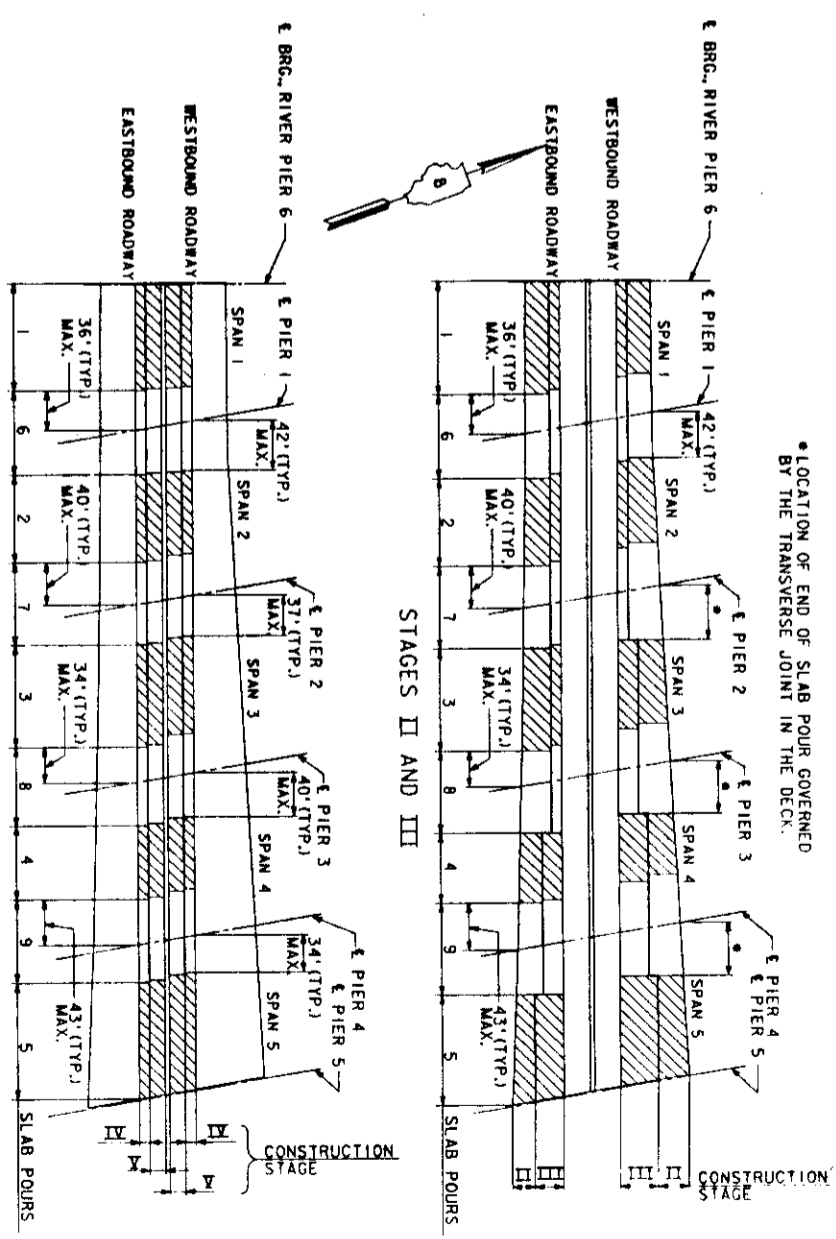
SPYERDUP CORPORATION
ST. LOUIS, MISSOURI

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



FOR INFORMATION ONLY

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION



* LOCATION OF END OF SLAB POUR COVERED BY THE TRANSVERSE JOINT IN THE DECK.

SLAB POURING SEQUENCE - SPANS 1 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

PREPARED BY
 SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

STRUCTURE NO. 087-0005
 STA. 41+00.00 TO STA. 49+55.00 (FAI-70) ST. CLAIR CO.

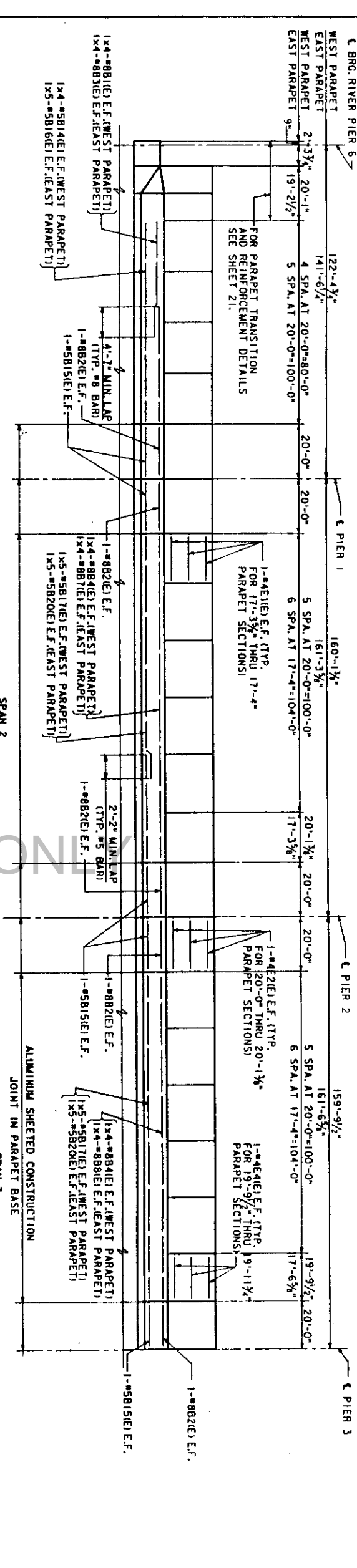
SHEET NO. 17 OF 45

DATE	SECTION	QUANTITY	NO.	DATE
F.A.I. 70	ST. CLAIR	105	61	
REVISED				

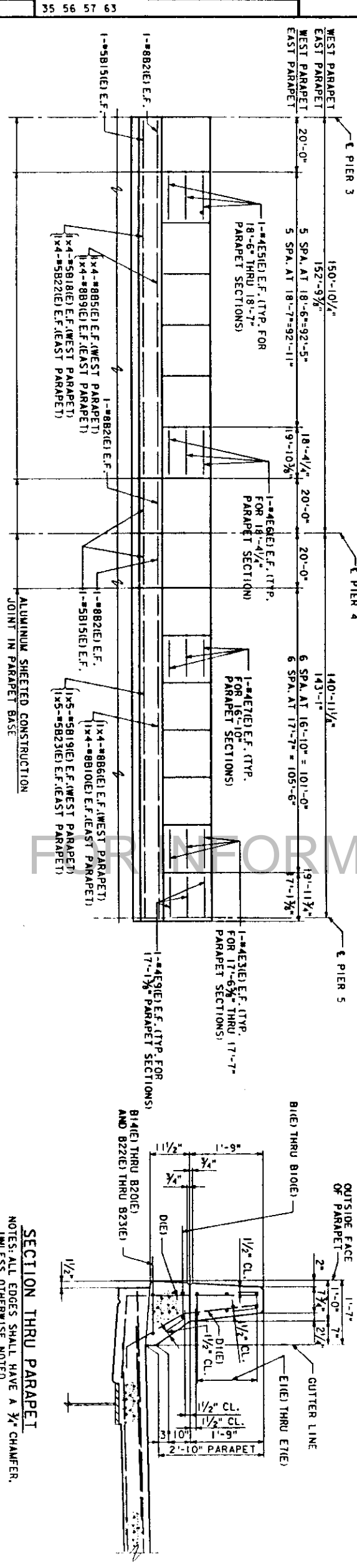
82-3HVB-2R-2-1

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

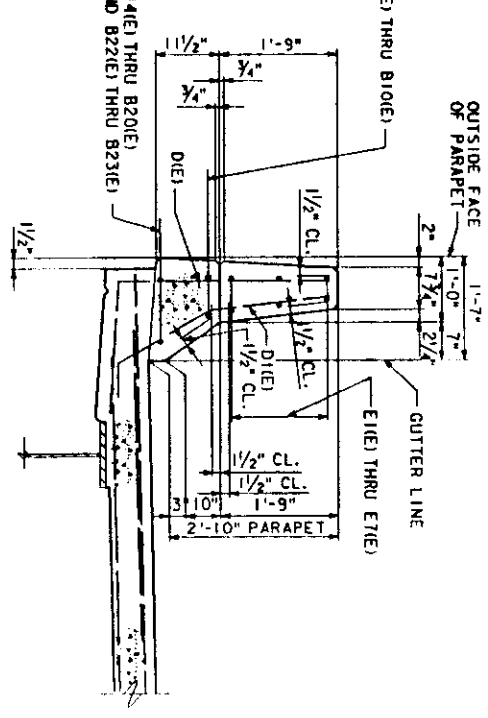
SPANS 1 THRU 5	BAR NO.	SIZE	LENGTH	SHAPE
	B1(E)	#8	23'-6"	
	B2(E)	#8	19'-9"	
	B3(E)	#8	28'-6"	
	B4(E)	#8	33'-5"	
	B5(E)	#8	31'-1"	
	B6(E)	#8	33'-8"	
	B7(E)	#8	33'-9"	
	B8(E)	#8	33'-10"	
	B9(E)	#8	31'-7"	
	B10(E)	#8	34'-1"	
	B11(E)	#8	30'-10"	
	B12(E)	#8	31'-6"	
	B13(E)	#8	33'-11"	
	B14(E)	#8	21'-8"	
	B15(E)	#5	19'-9"	
	B16(E)	#5	21'-9"	
	B17(E)	#5	25'-8"	
	B18(E)	#5	29'-3"	
	B19(E)	#5	25'-11"	
	B20(E)	#5	26'-0"	
	B21(E)	#5	29'-9"	
	B22(E)	#5	26'-3"	
	B23(E)	#5	29'-4"	
	B24(E)	#5	25'-0"	
	B25(E)	#5	24'-2"	
	B26(E)	#5	24'-2"	
	E1(E)	#4	17'-0"	
	E2(E)	#4	19'-9"	
	E3(E)	#4	17'-3"	
	E4(E)	#4	19'-7"	
	E5(E)	#4	18'-3"	
	E6(E)	#4	18'-1"	
	E7(E)	#4	16'-7"	
	E8(E)	#4	16'-4"	
	E9(E)	#4	16'-10"	
	E10(E)	#4	16'-2"	



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 200f45.
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

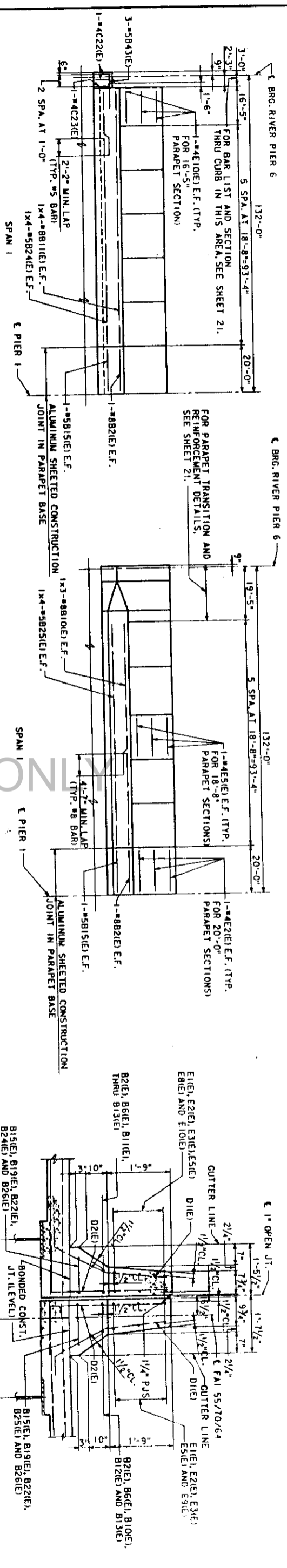
10487	FILE: ZF3:1110.138751107.DGN	LEVELS PLOTTED	DATE: AUG. 10, 1989
8751107	PRF: 8751107	35 56 57 63	

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

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STRUCTURE NO. 082-3095
STA. 41+00.00 TO STA. 49+56.00 FAI-70 ST. CLAIR CO.
SHEET NO. 8 OF 45

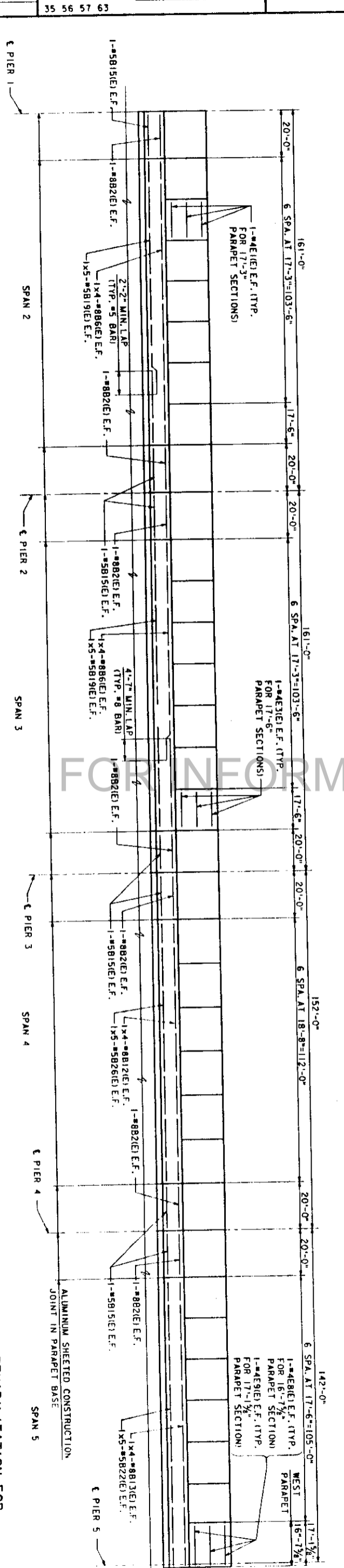
SHEET NO.	SECTION	DATE	BY	CHKD.
105	ST. CLAIR	105	63	



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

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

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

10487	FILE: ZF3:110,138751109.DGN	LEVELS PLOTTED	DATE: AUG. 10, 1989
8751109	PRF: 8751109	35 56 57 63	

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

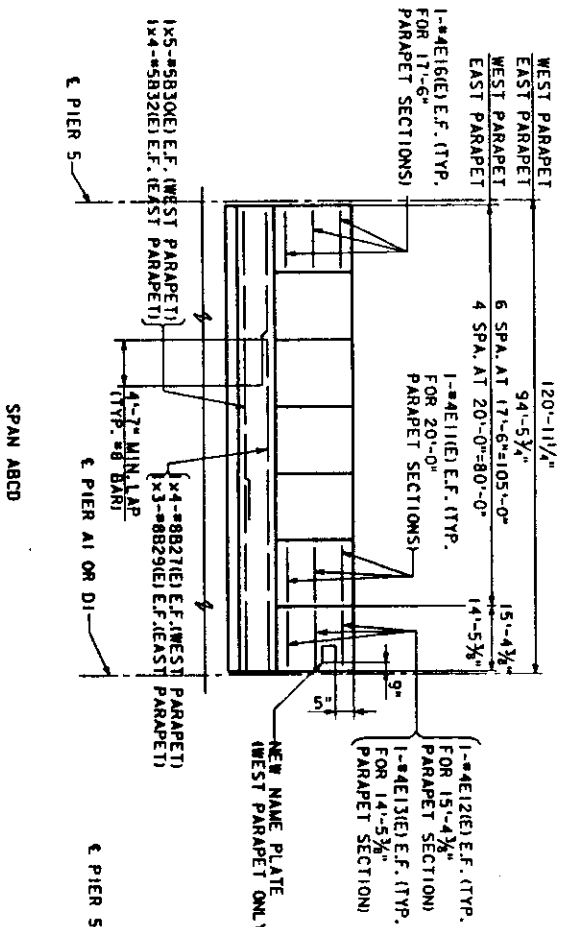
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00
FAI-70 ST. CLAIR CO.
SHEET NO. 19 OF 45

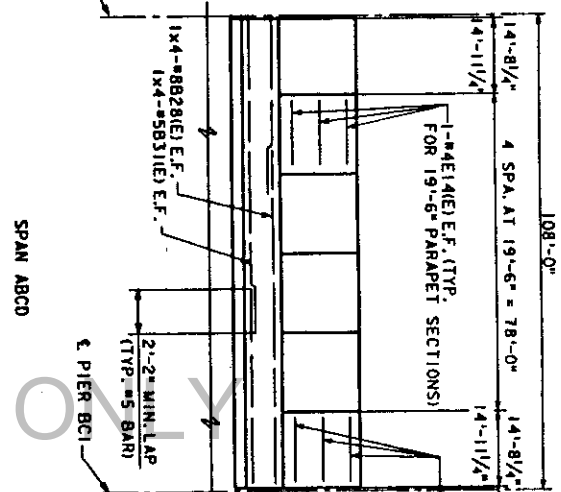
WORK THIS SHEET WITH SHEET 184/45

10487 FILE: ZF3\1110.13875\1110.DGN LEVELS PLOTTED DATE: AUG. 10, 1989
B7S1110 PRF: B7S1110 35 56 57 58 63

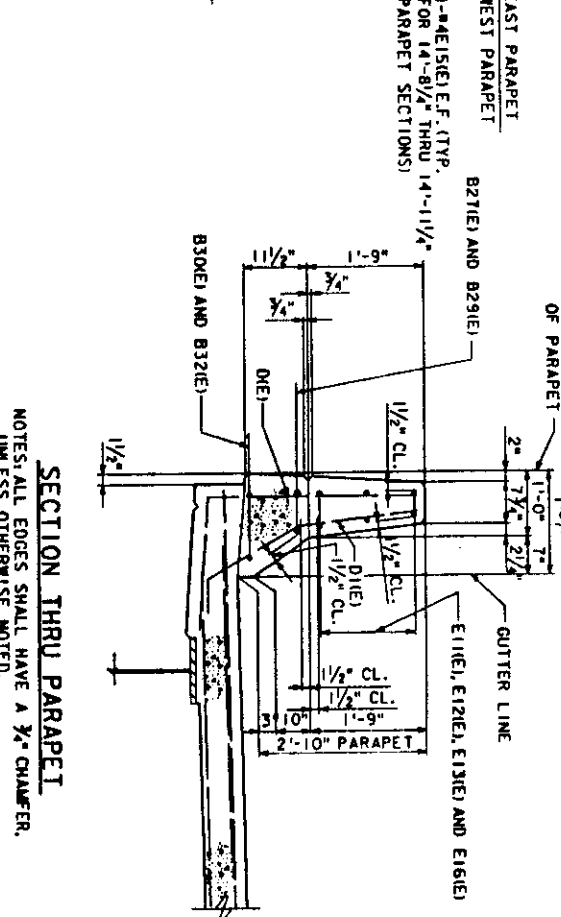
S.S. STEIB
DESIGNED
J.P. MCARTY
CHECKED
M.J. JALINSKY
DRAWN
R.D. WIKELMANN
CHECKED



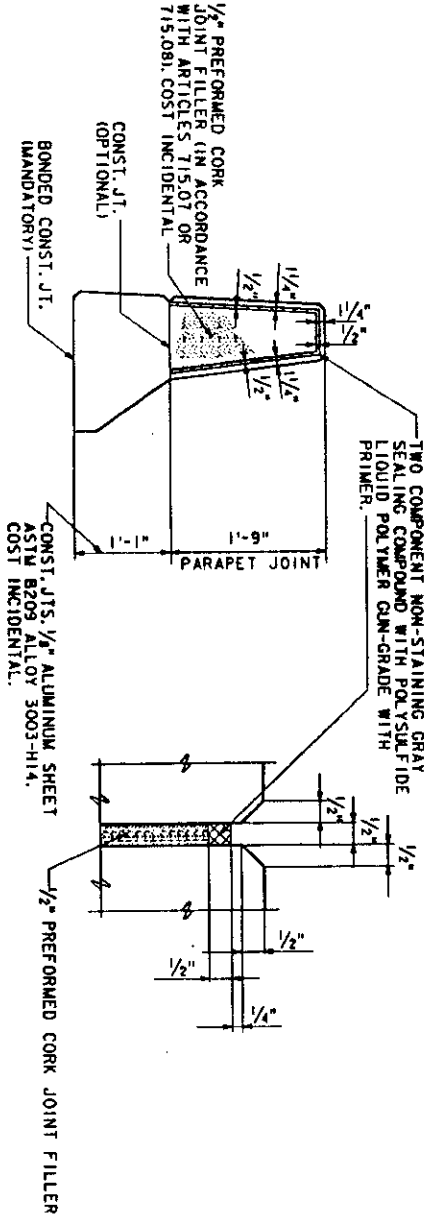
ELEVATION OF WEST PARAPET
NOTES: EAST PARAPET SIMILAR, EXCEPT AS NOTED.
ALL DIMENSIONS ARE MEASURED ALONG
OUTSIDE FACE OF PARAPETS.



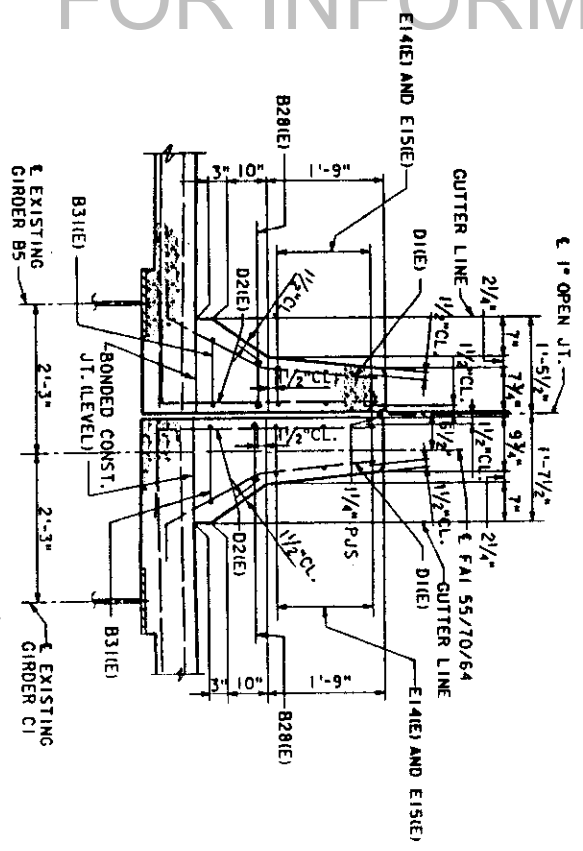
ELEVATION OF EAST MEDIAN PARAPET
NOTES: WEST MEDIAN PARAPET SIMILAR, EXCEPT AS NOTED.
ALL DIMENSIONS ARE MEASURED ALONG
E.F. 55/70/64



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



PARAPET JOINT DETAILS



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

BILL OF MATERIAL

SPAN ABCD				ST. CLAIR	
BAR NO.	SIZE	LENGTH	SHAPE	QTY	WT.
B27(E)	#8	33'-7"		105	64
B28(E)	#8	30'-4"			
B29(E)	#8	34'-6"			
B30(E)	#5	25'-10"			
B31(E)	#5	28'-6"			
B32(E)	#5	25'-2"			
E11(E)	#4	19'-9"			
E12(E)	#4	15'-1"			
E13(E)	#4	14'-2"			
E14(E)	#4	19'-3"			
E15(E)	#4	14'-5"			
E16(E)	#4	17'-3"			
CLASS X CONCRETE SUPERSTRUCTURE (EPOXY COATED)				CU. YDS.	44.0
REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.				LBS.	5,220

NOTES
E.F. INDICATES EACH FACE.

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

DESIGNED BY
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STRUCTURE NO. 082-0005
STL 41+00.00 TO STL 49+56.00 FAI-170 ST. CLAIR CO.
SHEET NO. 20 OF 45

FOR INFORMATION ONLY

BILL OF MATERIAL

*82-3HBV-28-2-1
SPAN 1 (PARAPET TRANSITIONS)

BAR NO.	NO.	SIZE	LENGTH	SHAPE
B40(E)	2	#8	24'-7"	J
B41(E)	2	#8	23'-8"	J
B42(E)	2	#8	23'-10"	J
B43(E)	13	#5	5'-1"	J
B44(E)	3	#5	9'-9"	J
B45(E)	2	#5	24'-7"	J
B46(E)	2	#5	23'-8"	J
B47(E)	2	#5	18'-5"	J
C10(E)	6	#4	4'-5"	J
C11(E)	3	#4	3'-8"	J
C12(E)	3	#4	3'-7"	J
C13(E)	3	#4	3'-7"	J
C14(E)	3	#4	3'-6"	J
C15(E)	3	#4	3'-6"	J
C16(E)	3	#4	3'-5"	J
C17(E)	3	#4	3'-5"	J
C18(E)	3	#4	3'-4"	J
C19(E)	3	#4	3'-3"	J
C20(E)	3	#4	3'-3"	J
C21(E)	3	#4	5'-7"	J
C22(E)	2	#4	4'-6"	J
C23(E)	1	#4	4'-3"	J
D1E	20	#4	4'-11"	J
D2(E)	13	#4	4'-11"	J
D3(E)	36	#5	4'-8"	J
E20(E)	6	#4	19'-10"	J
E21(E)	6	#4	18'-11"	J
E22(E)	6	#4	19'-2"	J

CLASS X CONCRETE
SUPERSTRUCTURE
REINFORCEMENT BARS
EPOXY COATED
REINFORCEMENT BARS (E) SHALL BE EPOXY COATED.

BARS C21(E),
AND D1(E)

BARS D2(E)
AND D1(E)

BAR D1(E)

BAR C10(E)

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"	5/4"
C15(E)	1'-0"	7"
C16(E)	1'-0"	8 1/2"
C17(E)	1'-0"	10 1/4"
C18(E)	1'-0"	11 3/4"
C19(E)	9"	1'-3"
C20(E)		

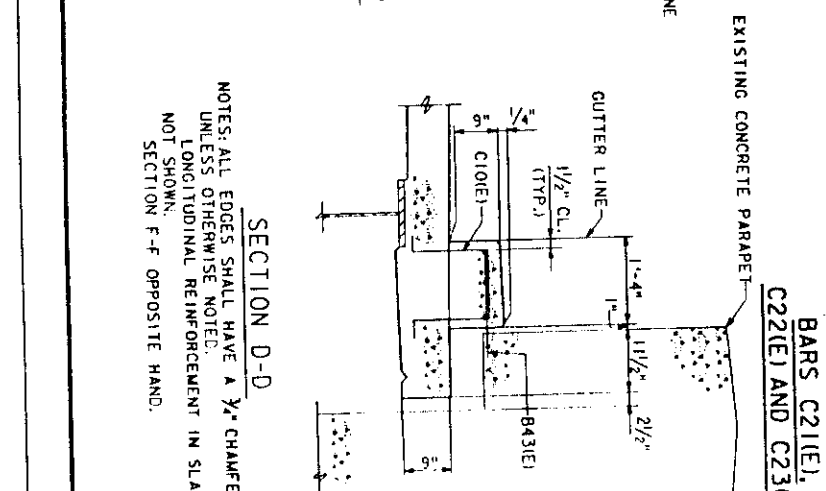
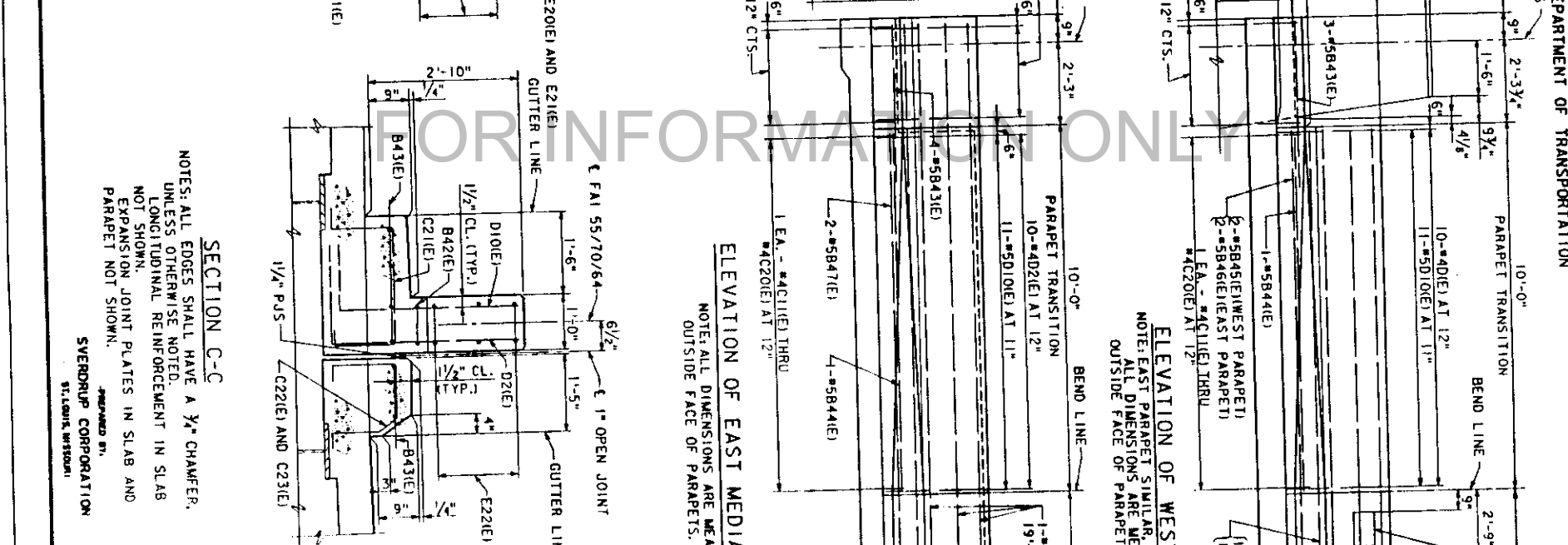
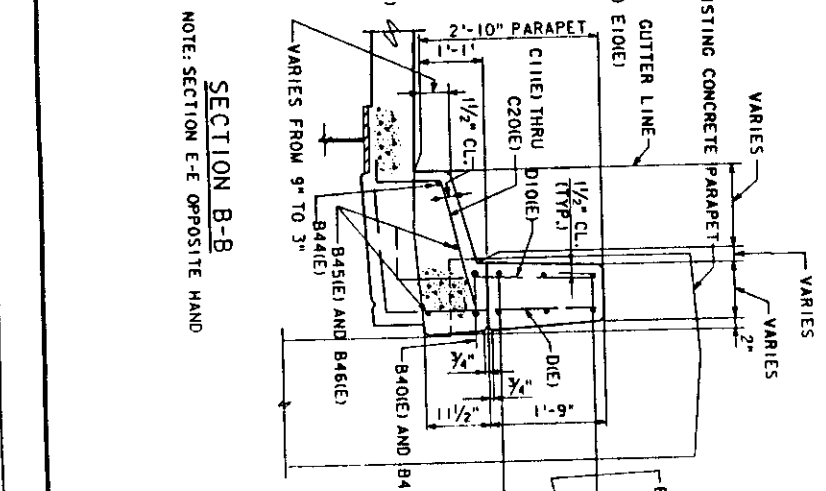
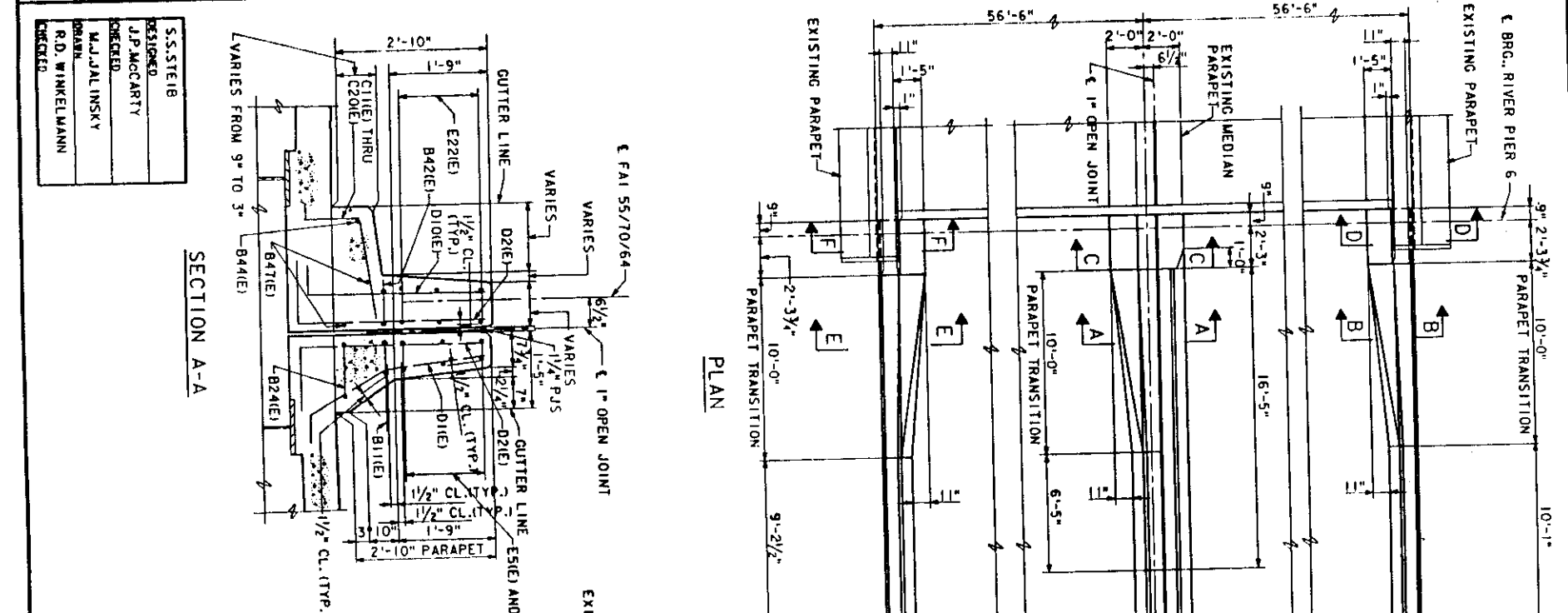
NOTES
WORK THIS SHEET WITH SHEETS 18, 19 AND 22.
FOR PARAPET JOINT DETAILS SEE SHEET 20.
E.F. INDICATES EACH FACE.

REHABILITATION FOR
FAI - 55/70 COMPLEX

ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
PARAPET TRANSITION DETAILS

STRUCTURE NO. 082-0005
ST. LOUIS, MISSOURI
SHEET NO. 20 OF 45

10487 FILE: ZF3:110.138BS306.DGN LEVELS PLOTTED DATE: AUG. 10, 1989
885306 PRF: 885306 35,56,57,58



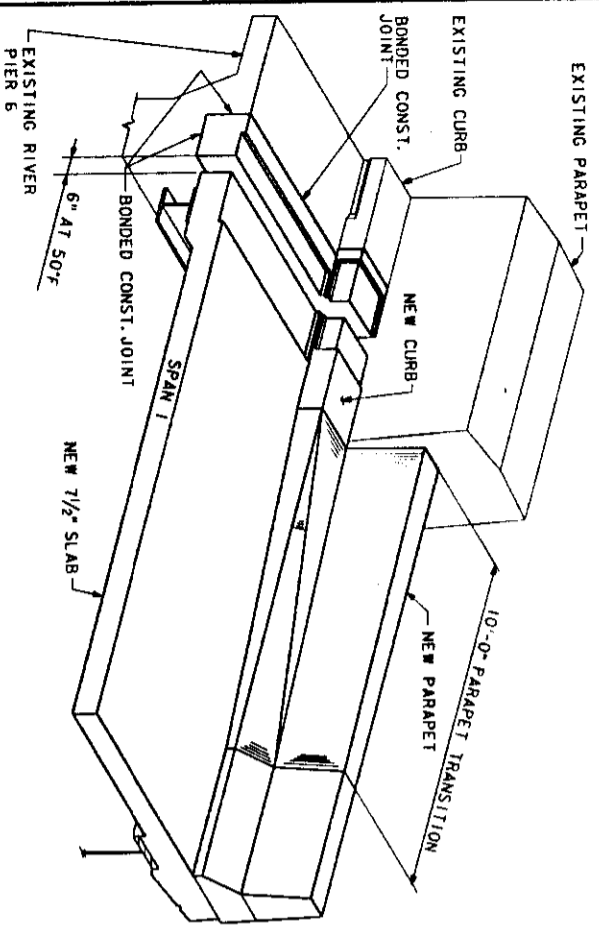
NOTES:
SECTION C-C
SECTION D-D
SECTION E-E OPPOSITE HAND
SECTION F-F OPPOSITE HAND

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

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

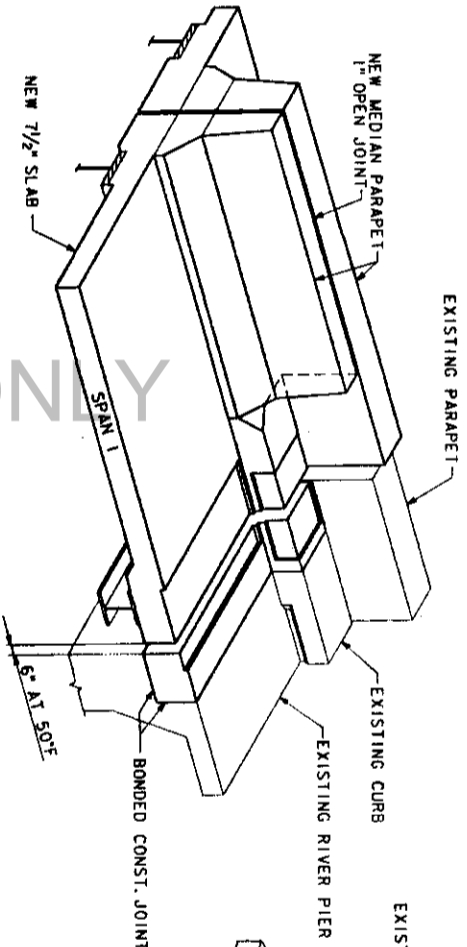
NOTES: ALL EDGES SHALL HAVE A 3/4" CHAMFER, UNLESS OTHERWISE NOTED.
LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN.
EXPANSION JOINT PLATES IN SLAB AND PARAPET NOT SHOWN.
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

NO.	SECTION	QUANTITY	UNIT	PRICE
FAI-10	ST. CLAIR	105	66	

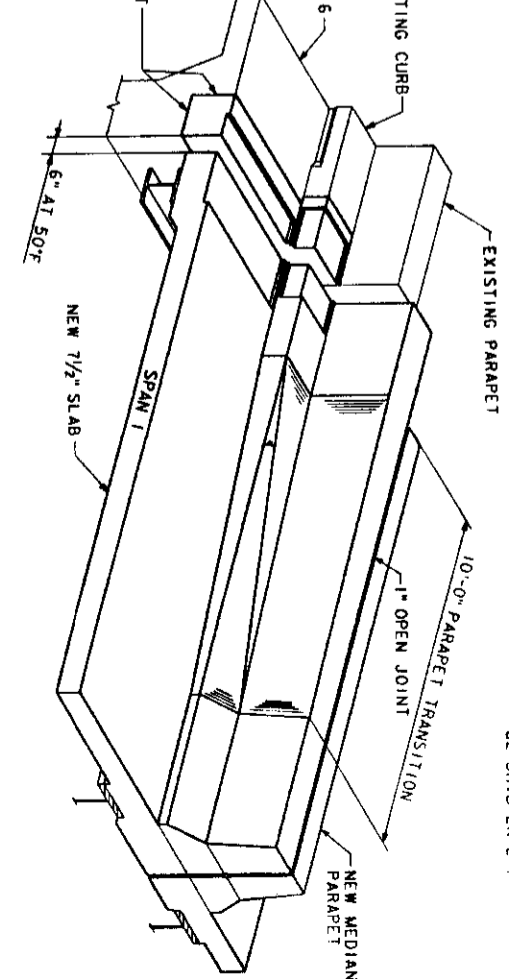


TRIMETRIC - WEST PARAPET TRANSITION
AT RIVER PIER 6

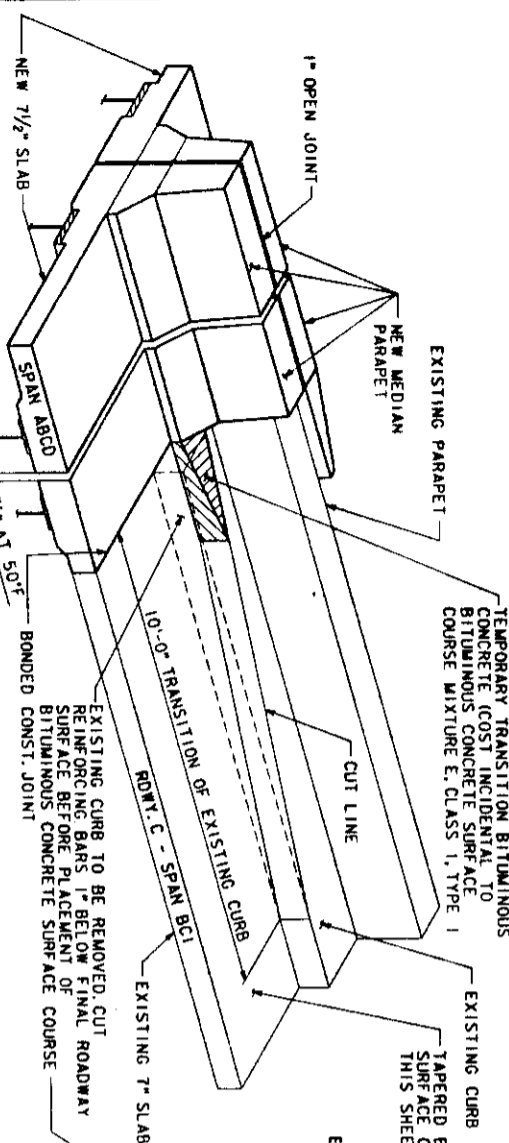
NOTE: EAST PARAPET TRANSITION SIMILAR.



TRIMETRIC - WEST MEDIAN PARAPET
AT RIVER PIER 6

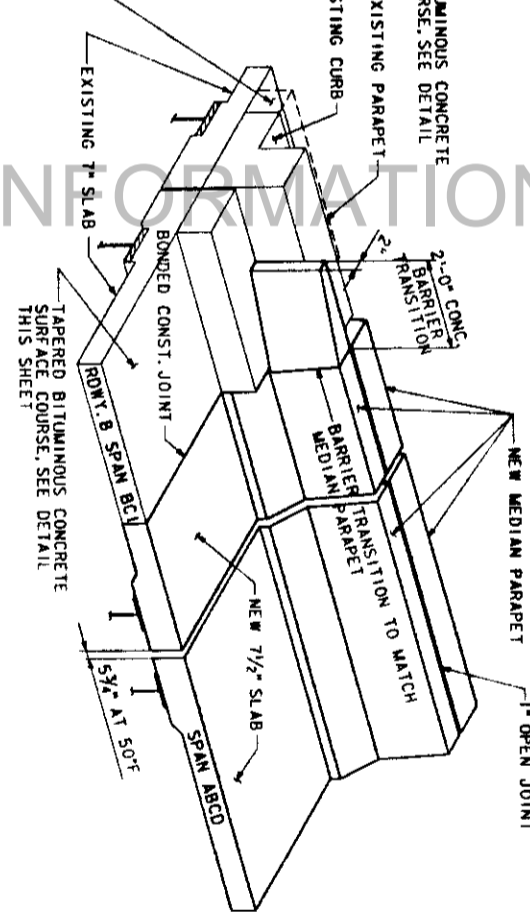


TRIMETRIC - EAST MEDIAN PARAPET TRANSITION
AT RIVER PIER 6



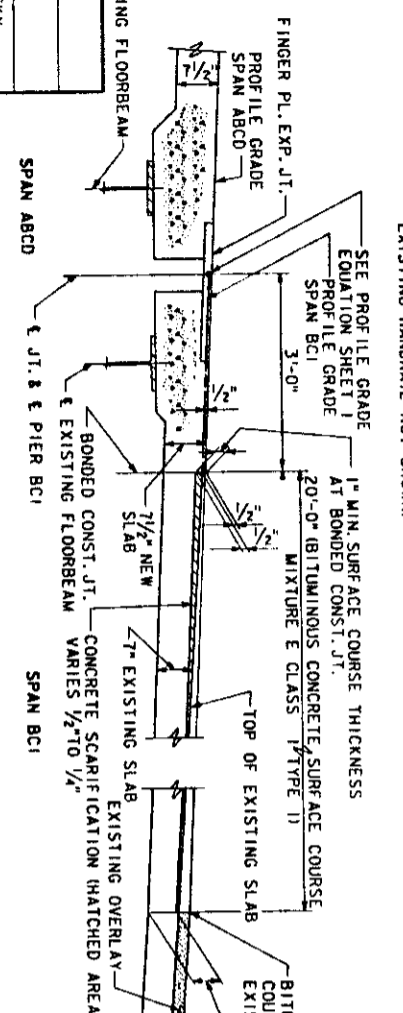
TRIMETRIC - EAST MEDIAN PARAPET - ROADWAY C
AT PIER BCI

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

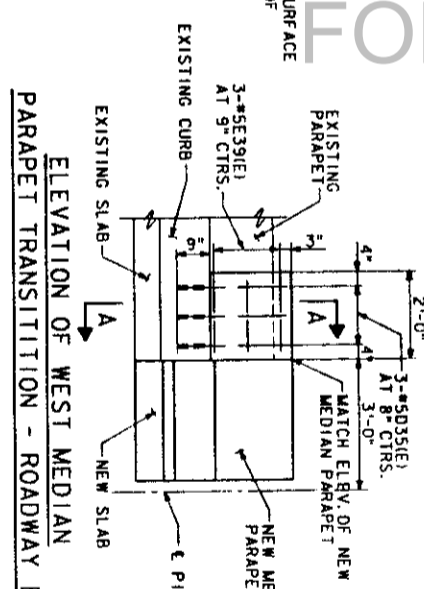


TRIMETRIC - WEST MEDIAN PARAPET - ROADWAY B
AT PIER BCI

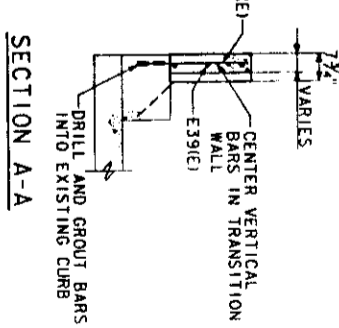
EXISTING HANDRAIL NOT SHOWN.



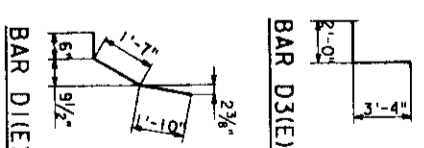
LONGITUDINAL SECTION SHOWING TAPER OF BITUMINOUS
CONCRETE SURFACE COURSE IN SPAN BCI



ELEVATION OF WEST MEDIAN
PARAPET TRANSITION - ROADWAY B



SECTION A-A



BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE	SPAN BCI	
					CU. YD.	LBS.
A40(E)	12	#5	15'-8"		5.9	
A40B(E)	12	#5	16'-10"			
A510(E)	24	#5	17'-4"			
B50(E)	8	#8	2'-6"			
B51(E)	8	#5	2'-6"			
D1(E)	16	#5	3'-11"			
D3(E)	12	#4	5'-4"			
D3S(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

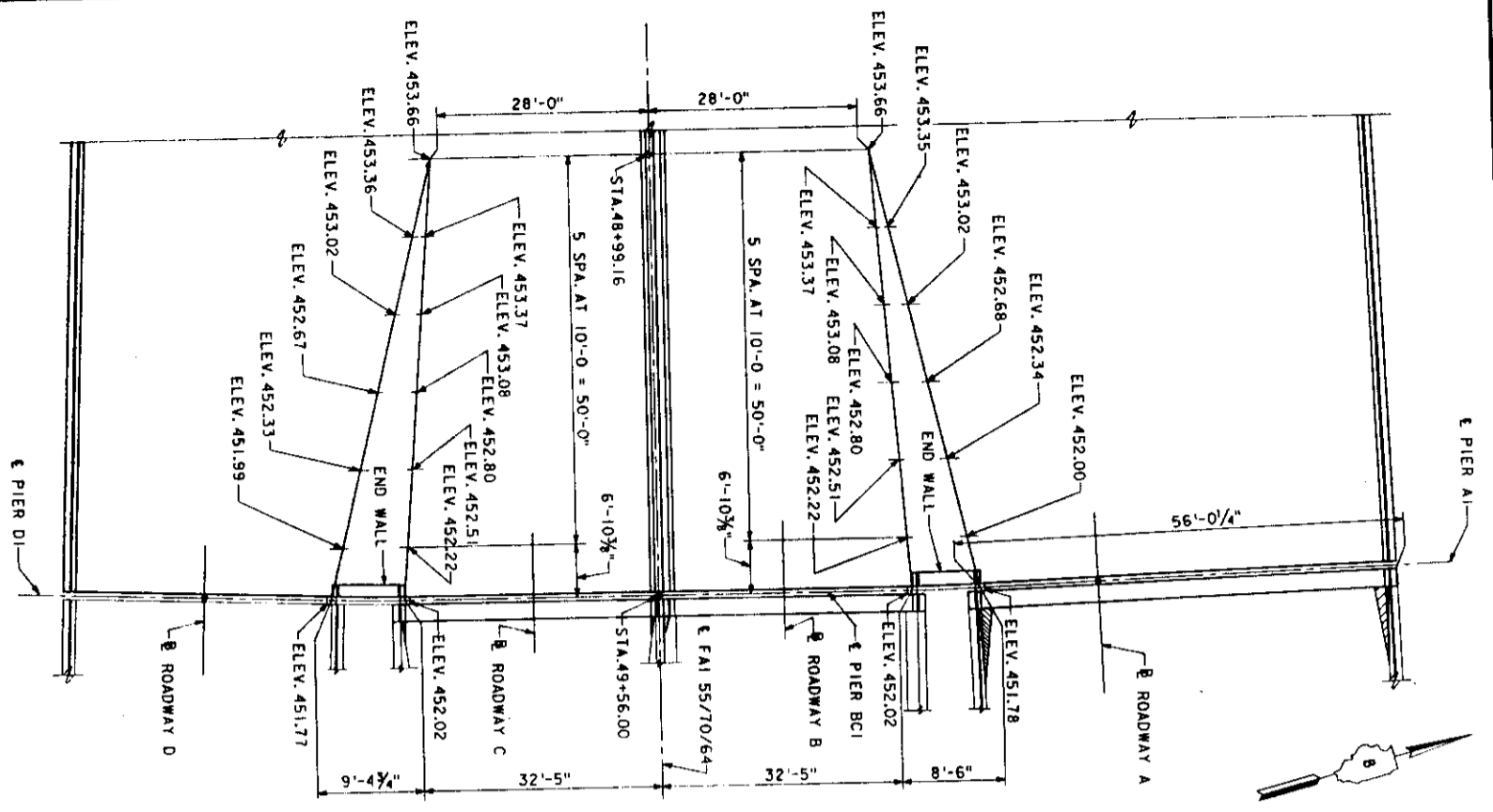
DESIGNED BY: F.A. CAMBA
CHECKED BY: R.F. BECK
DRAWN BY: M.J. JALINSKY
PROJECTED BY: R.D. WINKELMANN

DESIGNED BY: SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.
SHEET NO. 22 OF 45

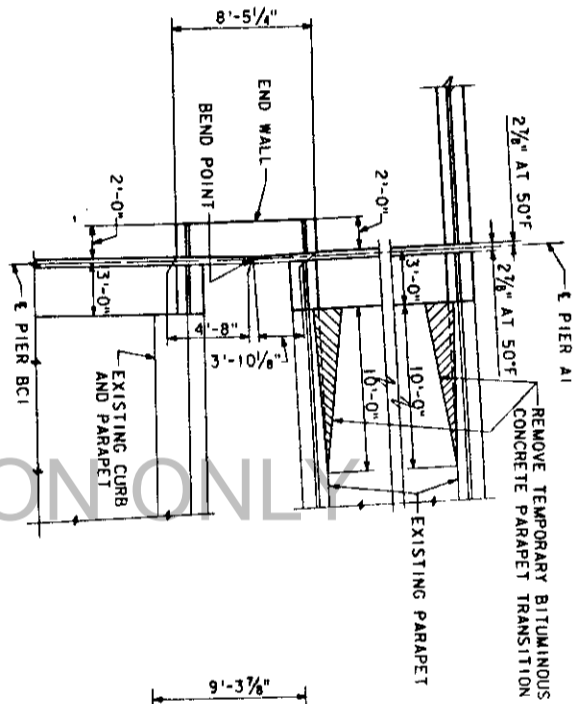
DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
DESKED	M.J. JALINSKY
CHECKED	R.D. WINKELMANN

PLAN - TOP OF SLAB ELEVATIONS
IN WARPING AREAS

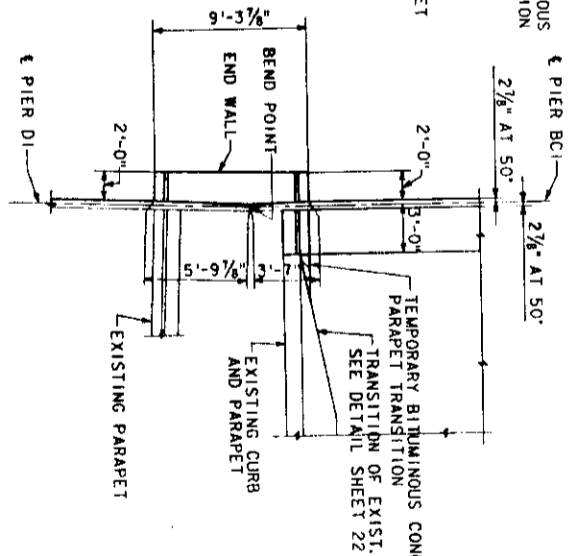


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

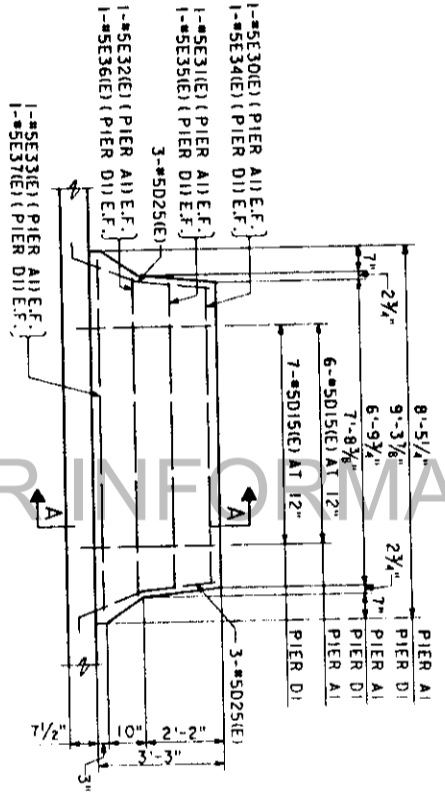
PLAN AT END WALL - PIER AI



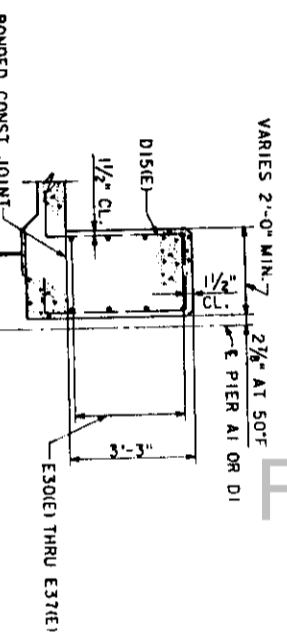
PLAN AT END WALL - PIER DI



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

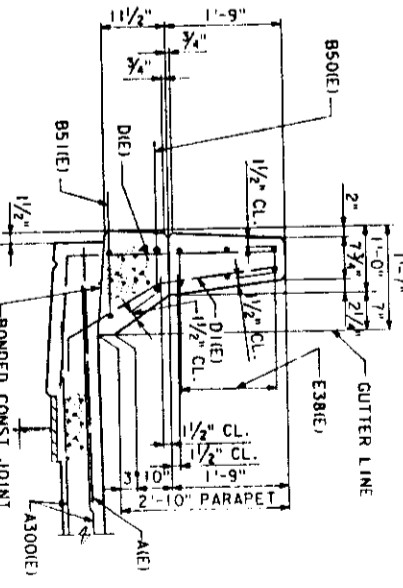


SECTION A-A



NOTE: ALL EDGES SHALL HAVE A 1/2" CHAMFER, UNLESS OTHERWISE NOTED.
LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN.

SECTION B-B



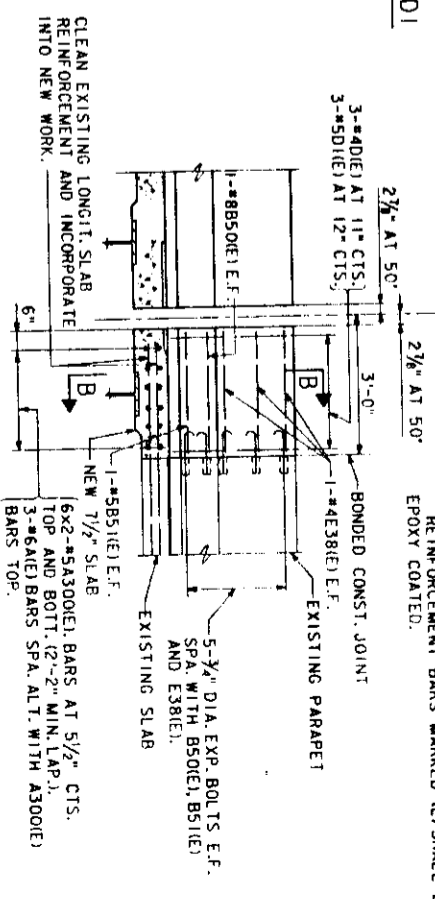
NOTE: EAST PARAPET ROADWAY A SIMILAR. ALL EDGES SHALL HAVE A 1/2" CHAMFER, UNLESS OTHERWISE NOTED.
LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN.

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
A1(E)	6	#6	4'-0"	
A300(E)	24	#5	30'-0"	
B50(E)	4	#8	2'-6"	
B11(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"	
D1(E)	6	#5	3'-11"	
D1(E)	13	#5	10'-11"	
D2(E)	12	#5	4'-4"	
CLASS X CONCRETE SUPERSTRUCTURE				
REINFORCEMENT BARS				
EPOXY COATED				
				LBS.
				1,230

REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.

ELEVATION OF WEST PARAPET - ROADWAY A



NOTE: EAST PARAPET ROADWAY A SIMILAR.

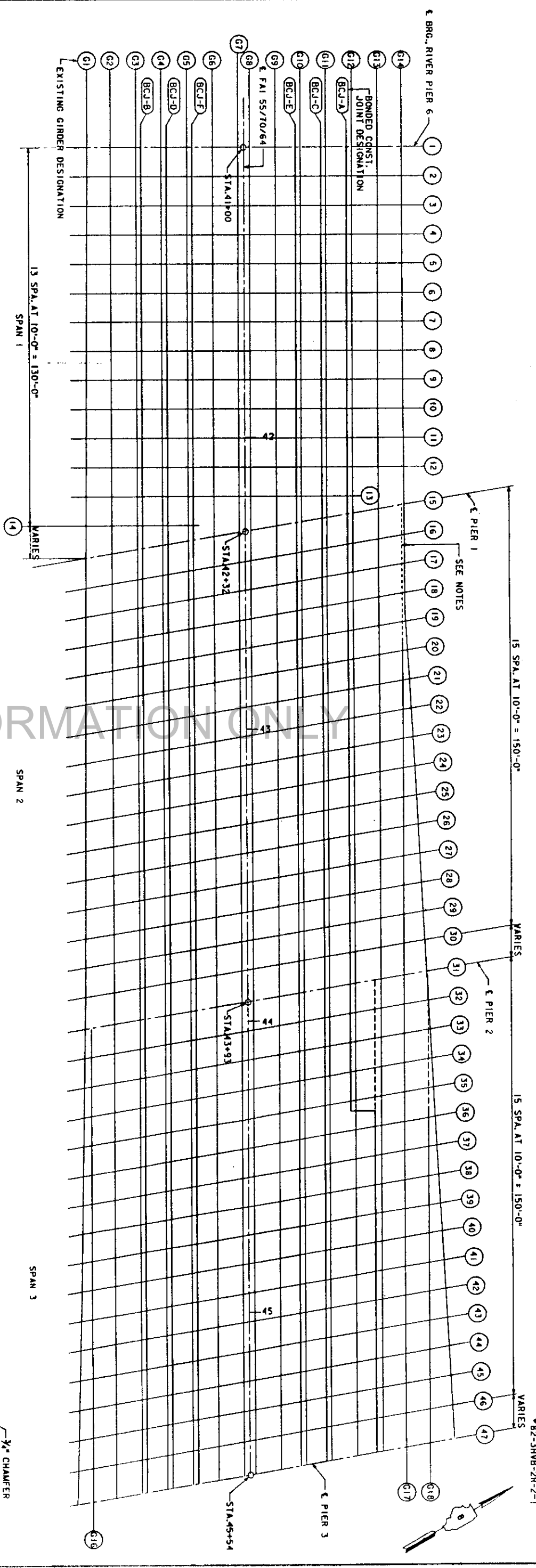
NOTES

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
POPULAR STREET BRIDGE
SLAB AND END WALL DETAILS
SPAN ABCD

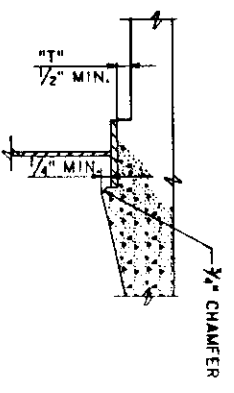
STRUCTURE NO. 082-0005
S1A 41+00.00 TO S1A 49+56.00 (FAI-70) ST. CLAIR CO.
SHEET NO. 23 OF 45



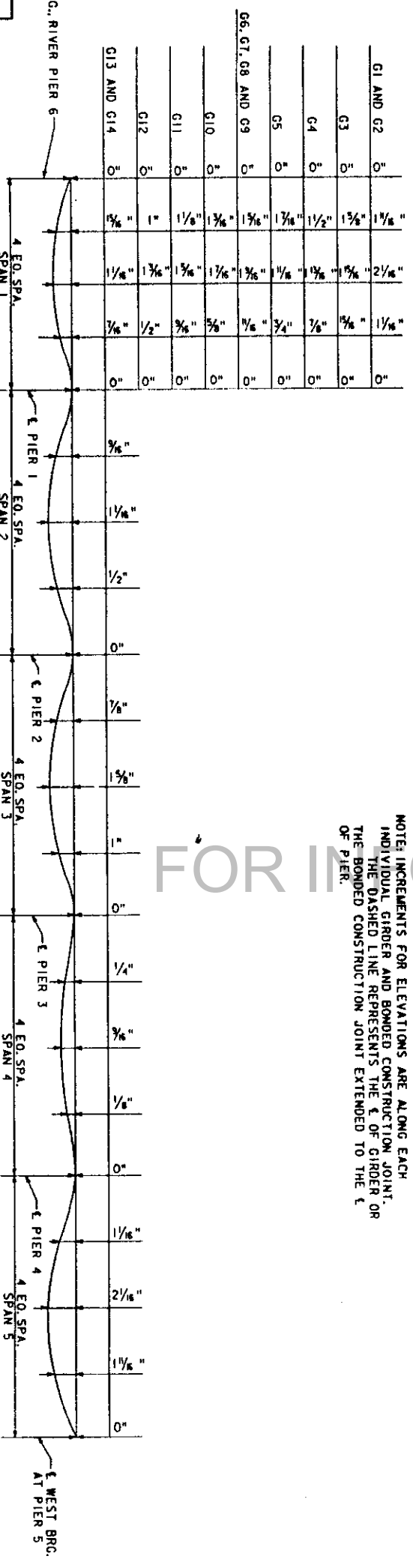
NOTE: INCREMENTS FOR ELEVATIONS ARE ALONG EACH INDIVIDUAL GIRDER AND BONDED CONSTRUCTION JOINT. THE DASHED LINE REPRESENTS THE ϵ OF GIRDER OR THE BONDED CONSTRUCTION JOINT EXTENDED TO THE ϵ OF PIER.

PLAN

FILLET HEIGHTS



TO DETERMINE ϵ 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 PLUS THE SLAB THICKNESS EQUALS THE FILLET HEIGHT ϵ ABOVE THE TOP FLANGE OF GIRDERS.



DEAD LOAD DEFLECTION DIAGRAM

NOTE: 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".

**REHABILITATION FOR
FAI - 55/70 COMPLEX**

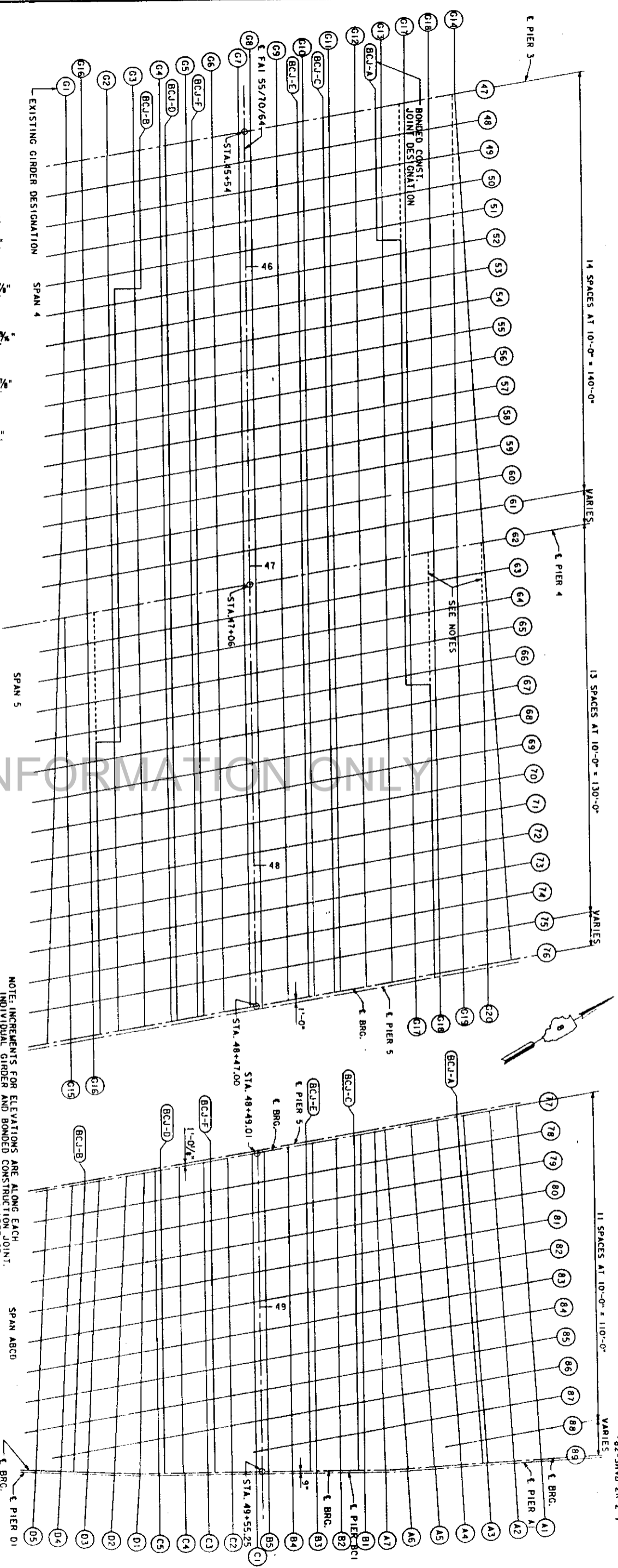
ILLINOIS APPROACH TO
POPULAR STREET BRIDGE
TOP OF SLAB ELEVATIONS
PLAN - SPANS 1 THRU 3
STRUCTURE NO. 002-0005

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

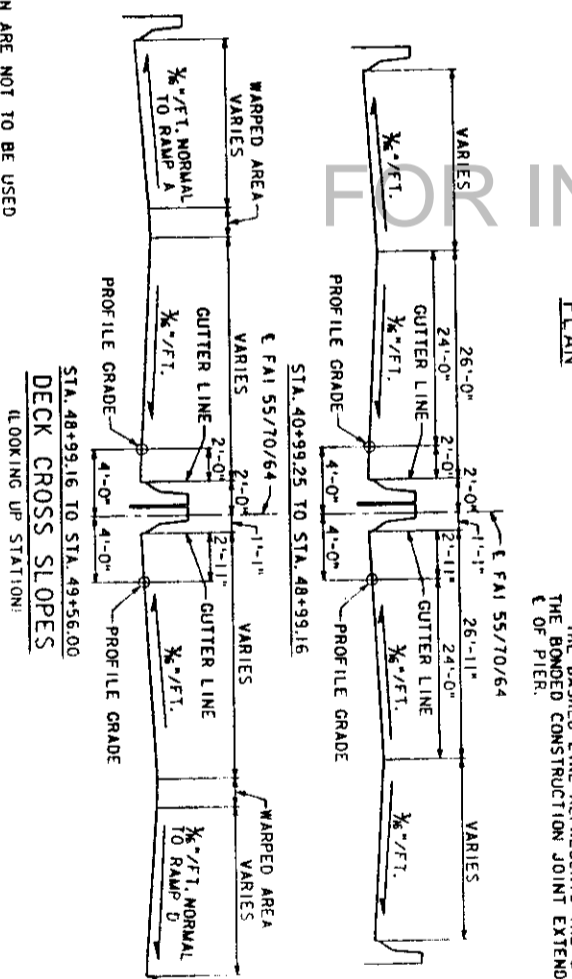
SHEET NO. 24 OF 45

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

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI



EXISTING GIRDER DESIGNATION	SPAN	SPAN 4	SPAN 5
A1 to A5	5	1 1/2"	2"
A6 to A7	5	3 3/4"	2 1/4"
B1 to B5	5	2 1/2"	3 3/8"
B6 to B7	5	1 1/2"	2 1/8"
B8 to B9	5	1 1/2"	2 1/8"
C1 to C5	5	1 1/2"	1 1/2"
C6 to C7	5	1 1/2"	1 1/2"
C8 to C9	5	1 1/2"	1 1/2"
C10 to C11	5	1 1/2"	1 1/2"
C12 to C13	5	1 1/2"	1 1/2"
C14 to C15	5	1 1/2"	1 1/2"
C16 to C17	5	1 1/2"	1 1/2"
C18 to C19	5	1 1/2"	1 1/2"
C20 to C21	5	1 1/2"	1 1/2"
C22 to C23	5	1 1/2"	1 1/2"
C24 to C25	5	1 1/2"	1 1/2"
C26 to C27	5	1 1/2"	1 1/2"
C28 to C29	5	1 1/2"	1 1/2"
C30 to C31	5	1 1/2"	1 1/2"
C32 to C33	5	1 1/2"	1 1/2"
C34 to C35	5	1 1/2"	1 1/2"
C36 to C37	5	1 1/2"	1 1/2"
C38 to C39	5	1 1/2"	1 1/2"
C40 to C41	5	1 1/2"	1 1/2"
C42 to C43	5	1 1/2"	1 1/2"
C44 to C45	5	1 1/2"	1 1/2"
C46 to C47	5	1 1/2"	1 1/2"
C48 to C49	5	1 1/2"	1 1/2"
C50 to C51	5	1 1/2"	1 1/2"
C52 to C53	5	1 1/2"	1 1/2"
C54 to C55	5	1 1/2"	1 1/2"
C56 to C57	5	1 1/2"	1 1/2"
C58 to C59	5	1 1/2"	1 1/2"
C60 to C61	5	1 1/2"	1 1/2"
C62 to C63	5	1 1/2"	1 1/2"
C64 to C65	5	1 1/2"	1 1/2"
C66 to C67	5	1 1/2"	1 1/2"
C68 to C69	5	1 1/2"	1 1/2"
C70 to C71	5	1 1/2"	1 1/2"
C72 to C73	5	1 1/2"	1 1/2"
C74 to C75	5	1 1/2"	1 1/2"
C76 to C77	5	1 1/2"	1 1/2"
C78 to C79	5	1 1/2"	1 1/2"
C80 to C81	5	1 1/2"	1 1/2"
C82 to C83	5	1 1/2"	1 1/2"
C84 to C85	5	1 1/2"	1 1/2"
C86 to C87	5	1 1/2"	1 1/2"
C88 to C89	5	1 1/2"	1 1/2"
C90 to C91	5	1 1/2"	1 1/2"
C92 to C93	5	1 1/2"	1 1/2"
C94 to C95	5	1 1/2"	1 1/2"
C96 to C97	5	1 1/2"	1 1/2"
C98 to C99	5	1 1/2"	1 1/2"
C100 to C101	5	1 1/2"	1 1/2"



NOTES
 FOR FILLET HEIGHT DETAILS SEE SHEET 24.
 REHABILITATION FOR
 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 #A1-10/ST. CLAIR CO.
 PREPARED BY:
 SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

DESIGNED BY: R.F. BECK
CHECKED BY: R. WINKELMANN
DRAWN BY: M.J. JALINSKY
APPROVED BY: R.F. BECK

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

82-SHV-2R-2-1

FAI-701

ST. CLAIR

105

73

LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAG LOAS DEFLECTION	THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAG LOAS DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAG LOAS DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAG LOAS DEFLECTION
51	01	46+03.869	63.111	462.017	462.038	462.017	462.038	59	01	46+83.898	62.331	462.276	462.296	64	01	47+36.591	64.282	457.970	458.009
52	01	46+03.869	63.111	462.017	462.038	462.017	462.038	60	01	46+83.898	62.331	462.276	462.296	65	01	47+36.591	64.282	457.970	458.009
53	01	46+03.869	63.111	462.017	462.038	462.017	462.038	61	01	46+83.898	62.331	462.276	462.296	66	01	47+36.591	64.282	457.970	458.009
54	01	46+03.869	63.111	462.017	462.038	462.017	462.038	62	01	46+83.898	62.331	462.276	462.296	67	01	47+36.591	64.282	457.970	458.009
55	01	46+03.869	63.111	462.017	462.038	462.017	462.038	63	01	46+83.898	62.331	462.276	462.296	68	01	47+36.591	64.282	457.970	458.009
56	01	46+03.869	63.111	462.017	462.038	462.017	462.038	64	01	46+83.898	62.331	462.276	462.296	69	01	47+36.591	64.282	457.970	458.009
57	01	46+03.869	63.111	462.017	462.038	462.017	462.038	70	01	46+83.898	62.331	462.276	462.296	70	01	47+36.591	64.282	457.970	458.009
58	01	46+03.869	63.111	462.017	462.038	462.017	462.038	71	01	46+83.898	62.331	462.276	462.296	71	01	47+36.591	64.282	457.970	458.009
59	01	46+03.869	63.111	462.017	462.038	462.017	462.038	72	01	46+83.898	62.331	462.276	462.296	72	01	47+36.591	64.282	457.970	458.009
60	01	46+03.869	63.111	462.017	462.038	462.017	462.038	73	01	46+83.898	62.331	462.276	462.296	73	01	47+36.591	64.282	457.970	458.009
61	01	46+03.869	63.111	462.017	462.038	462.017	462.038	74	01	46+83.898	62.331	462.276	462.296	74	01	47+36.591	64.282	457.970	458.009
62	01	46+03.869	63.111	462.017	462.038	462.017	462.038	75	01	46+83.898	62.331	462.276	462.296	75	01	47+36.591	64.282	457.970	458.009
63	01	46+03.869	63.111	462.017	462.038	462.017	462.038	76	01	46+83.898	62.331	462.276	462.296	76	01	47+36.591	64.282	457.970	458.009
64	01	46+03.869	63.111	462.017	462.038	462.017	462.038	77	01	46+83.898	62.331	462.276	462.296	77	01	47+36.591	64.282	457.970	458.009
65	01	46+03.869	63.111	462.017	462.038	462.017	462.038	78	01	46+83.898	62.331	462.276	462.296	78	01	47+36.591	64.282	457.970	458.009
66	01	46+03.869	63.111	462.017	462.038	462.017	462.038	79	01	46+83.898	62.331	462.276	462.296	79	01	47+36.591	64.282	457.970	458.009
67	01	46+03.869	63.111	462.017	462.038	462.017	462.038	80	01	46+83.898	62.331	462.276	462.296	80	01	47+36.591	64.282	457.970	458.009
68	01	46+03.869	63.111	462.017	462.038	462.017	462.038	81	01	46+83.898	62.331	462.276	462.296	81	01	47+36.591	64.282	457.970	458.009
69	01	46+03.869	63.111	462.017	462.038	462.017	462.038	82	01	46+83.898	62.331	462.276	462.296	82	01	47+36.591	64.282	457.970	458.009
70	01	46+03.869	63.111	462.017	462.038	462.017	462.038	83	01	46+83.898	62.331	462.276	462.296	83	01	47+36.591	64.282	457.970	458.009
71	01	46+03.869	63.111	462.017	462.038	462.017	462.038	84	01	46+83.898	62.331	462.276	462.296	84	01	47+36.591	64.282	457.970	458.009
72	01	46+03.869	63.111	462.017	462.038	462.017	462.038	85	01	46+83.898	62.331	462.276	462.296	85	01	47+36.591	64.282	457.970	458.009
73	01	46+03.869	63.111	462.017	462.038	462.017	462.038	86	01	46+83.898	62.331	462.276	462.296	86	01	47+36.591	64.282	457.970	458.009
74	01	46+03.869	63.111	462.017	462.038	462.017	462.038	87	01	46+83.898	62.331	462.276	462.296	87	01	47+36.591	64.282	457.970	458.009
75	01	46+03.869	63.111	462.017	462.038	462.017	462.038	88	01	46+83.898	62.331	462.276	462.296	88	01	47+36.591	64.282	457.970	458.009
76	01	46+03.869	63.111	462.017	462.038	462.017	462.038	89	01	46+83.898	62.331	462.276	462.296	89	01	47+36.591	64.282	457.970	458.009
77	01	46+03.869	63.111	462.017	462.038	462.017	462.038	90	01	46+83.898	62.331	462.276	462.296	90	01	47+36.591	64.282	457.970	458.009
78	01	46+03.869	63.111	462.017	462.038	462.017	462.038	91	01	46+83.898	62.331	462.276	462.296	91	01	47+36.591	64.282	457.970	458.009
79	01	46+03.869	63.111	462.017	462.038	462.017	462.038	92	01	46+83.898	62.331	462.276	462.296	92	01	47+36.591	64.282	457.970	458.009
80	01	46+03.869	63.111	462.017	462.038	462.017	462.038	93	01	46+83.898	62.331	462.276	462.296	93	01	47+36.591	64.282	457.970	458.009
81	01	46+03.869	63.111	462.017	462.038	462.017	462.038	94	01	46+83.898	62.331	462.276	462.296	94	01	47+36.591	64.282	457.970	458.009
82	01	46+03.869	63.111	462.017	462.038	462.017	462.038	95	01	46+83.898	62.331	462.276	462.296	95	01	47+36.591	64.282	457.970	458.009
83	01	46+03.869	63.111	462.017	462.038	462.017	462.038	96	01	46+83.898	62.331	462.276	462.296	96	01	47+36.591	64.282	457.970	458.009
84	01	46+03.869	63.111	462.017	462.038	462.017	462.038	97	01	46+83.898	62.331	462.276	462.296	97	01	47+36.591	64.282	457.970	458.009
85	01	46+03.869	63.111	462.017	462.038	462.017	462.038	98	01	46+83.898	62.331	462.276	462.296	98	01	47+36.591	64.282	457.970	458.009
86	01	46+03.869	63.111	462.017	462.038	462.017	462.038	99	01	46+83.898	62.331	462.276	462.296	99	01	47+36.591	64.282	457.970	458.009
87	01	46+03.869	63.111	462.017	462.038	462.017	462.038	100	01	46+83.898	62.331	462.276	462.296	100	01	47+36.591	64.282	457.970	458.009

FOR INFORMATION ONLY

REHABILITATION FOR
ILLINOIS APPROACH TO
POPULAR STREET BRIDGE
TOP OF SLAB ELEVATIONS

STRUCTURE NO. 082-0002
SHERIDAN CORPORATION
ST. LOUIS, MISSOURI

SIA 41-000.00 TO STA. 49+56.00 (FAI-701) ST. CLAIR CO.
SHEET NO. 29 OF 45

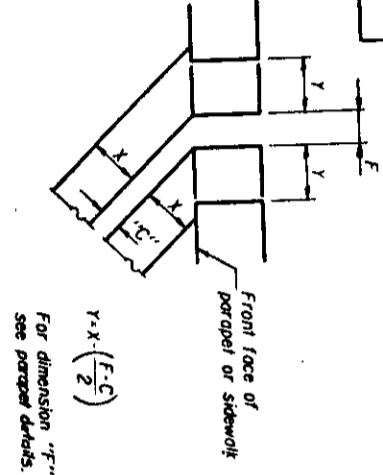
DESIGNED	R.F. BECK
CHECKED	R.D. WINKELMANN
DRAWN	M.J. JALINSKY
CHECKED	S.S. STEIB

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

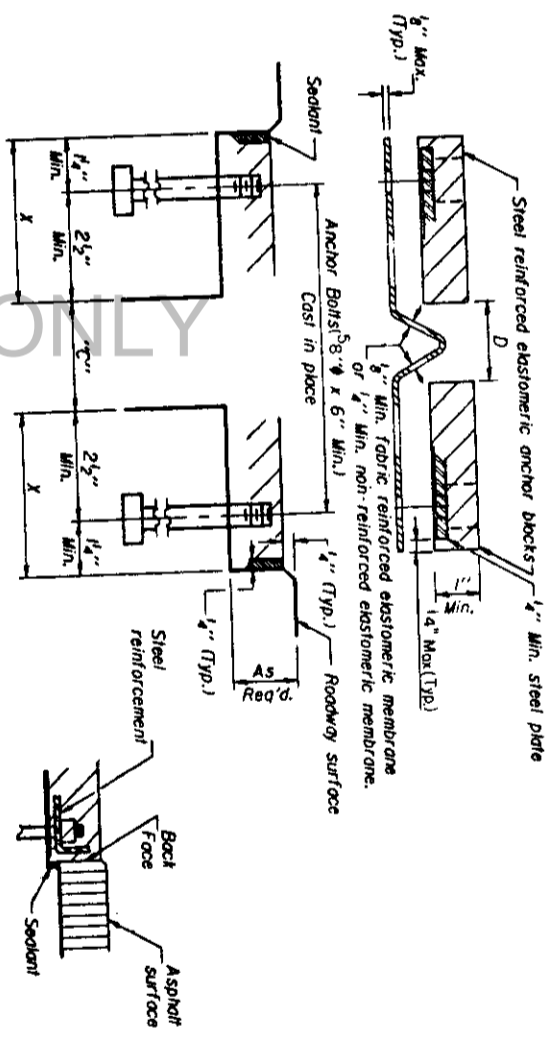
INSTALLATION NOTES

- ① Install sponge mandrels into positions shown to form flap convolution.
- ② Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
- ③ Install continuous seal in roadway.
- ④ Install anchor blocks as indicated.

FORMING BLOCKOUT SKETCH



CROSS SECTION



ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES

Continuous Seal Weepstone 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 preformed 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.

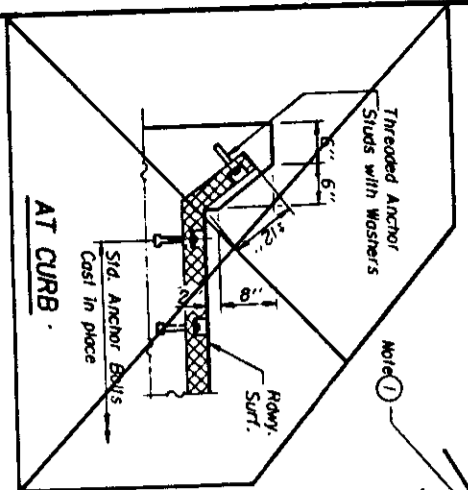
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

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.

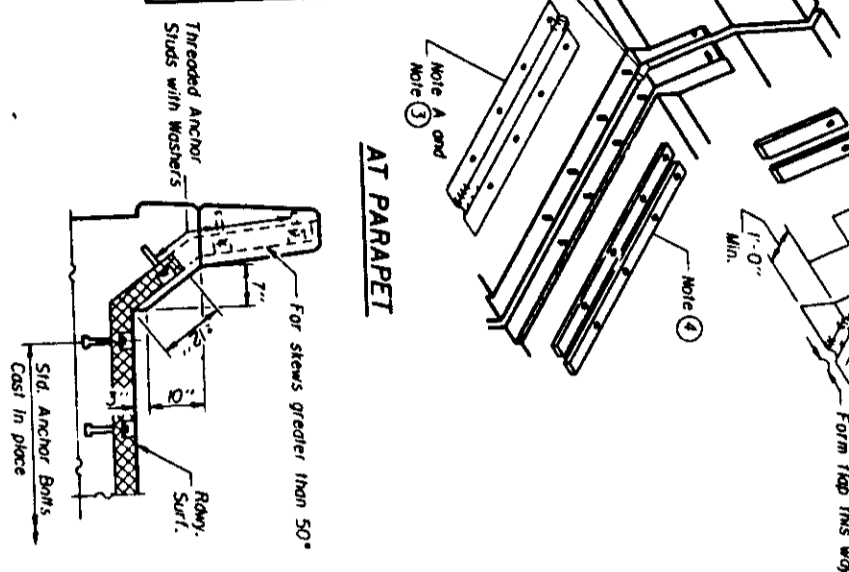
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

SKIEW LIMITATIONS

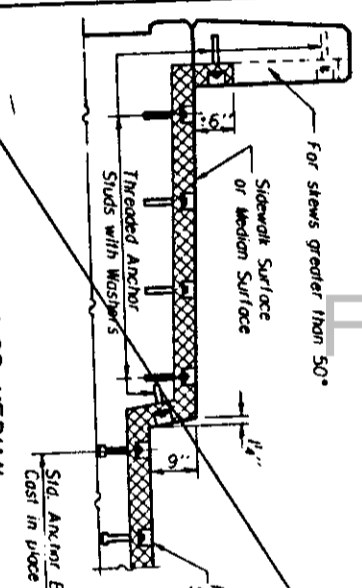
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skew. For skews greater than 50° the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from 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.



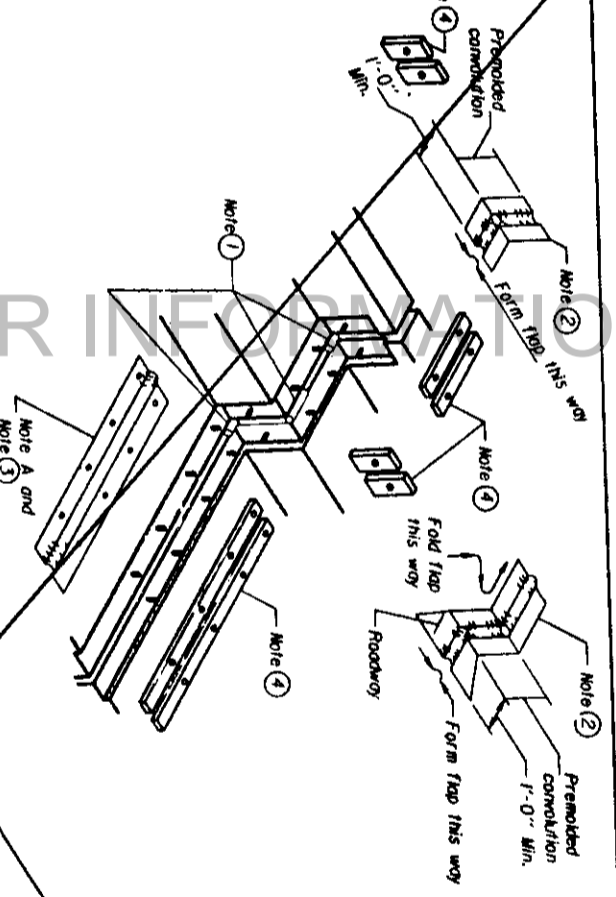
AT PARAPET



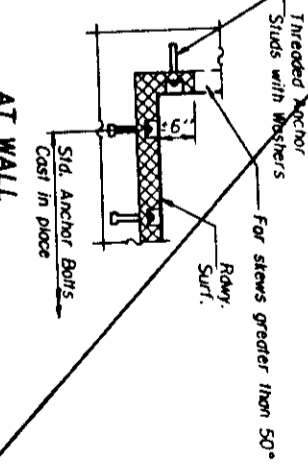
AT PARAPET



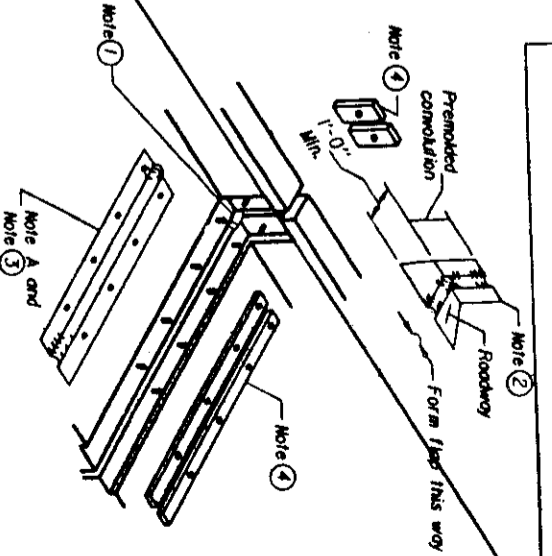
AT SIDEWALK OR MEDIAN



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL



DESIGNED	
CHECKED	
DRAWN	F. A. Combs
CHECKED	

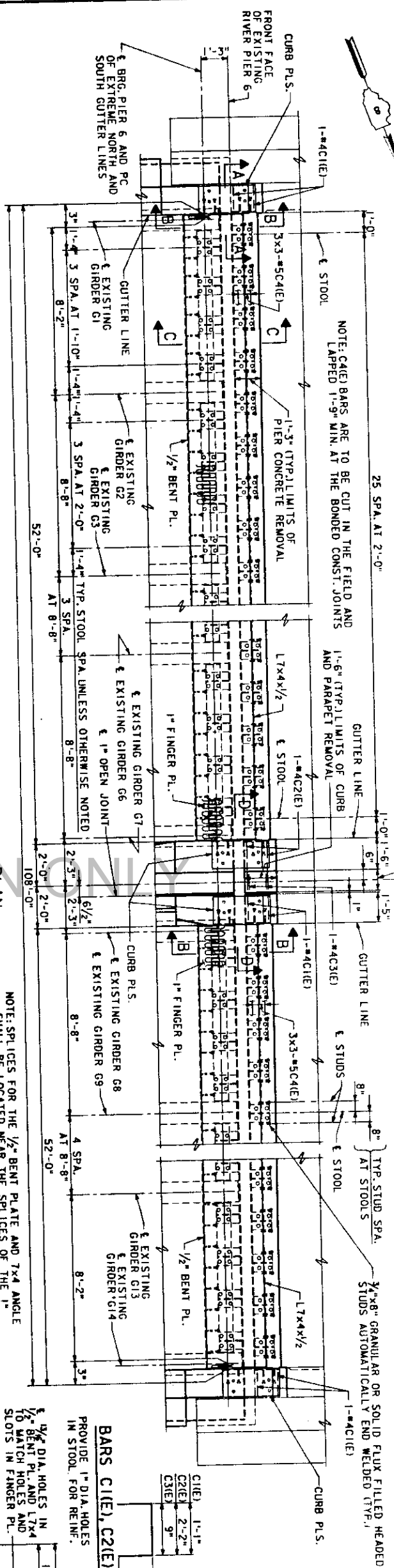
EJ-CS 12-1-83

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
STL 41-00.00 TO STL 49-55.00 FAI-701 ST. CLAIR CO.

SHEET NO. 32 OF 45

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SYMM. A.B.T. & FAI 55/70/64 EXCEPT FOR 1" OPEN JOINT

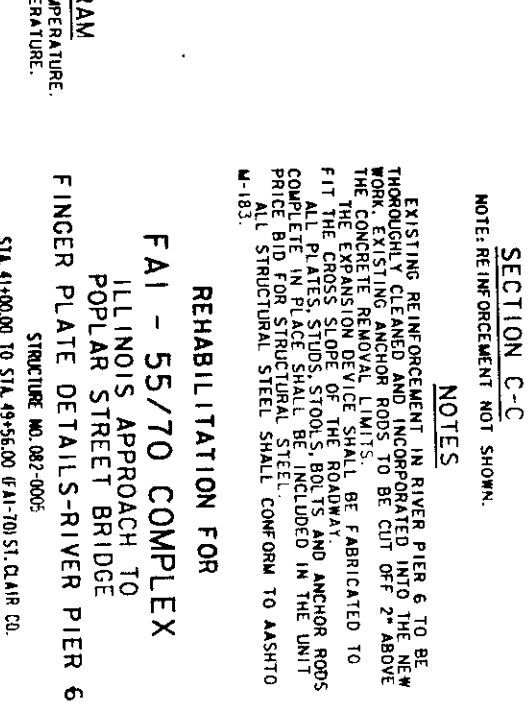
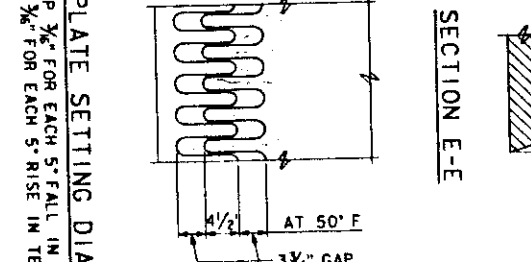
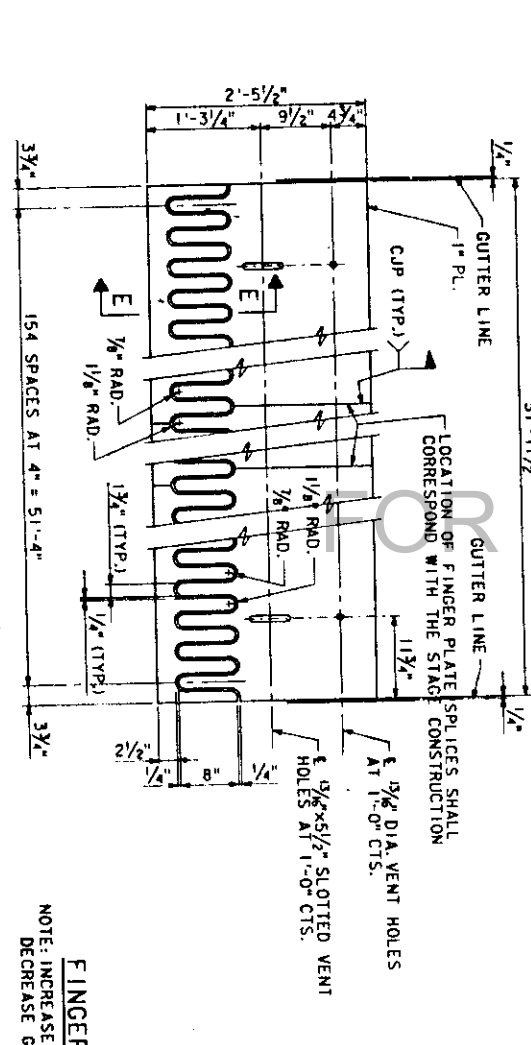
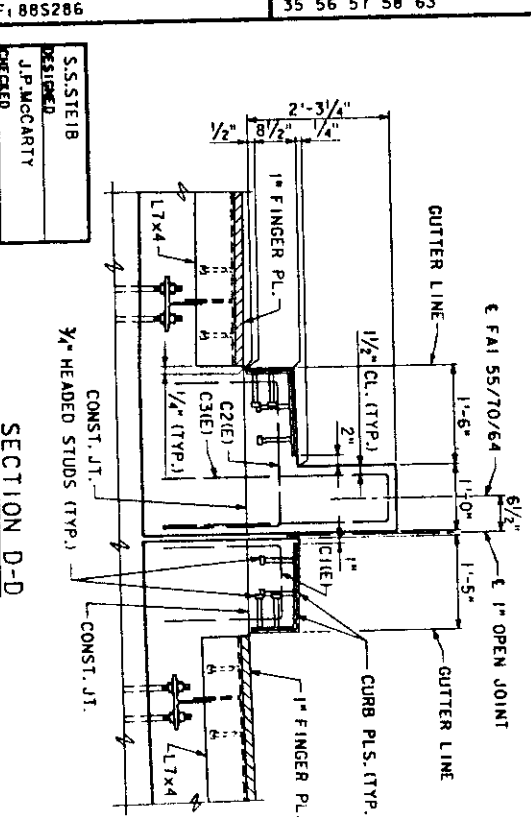
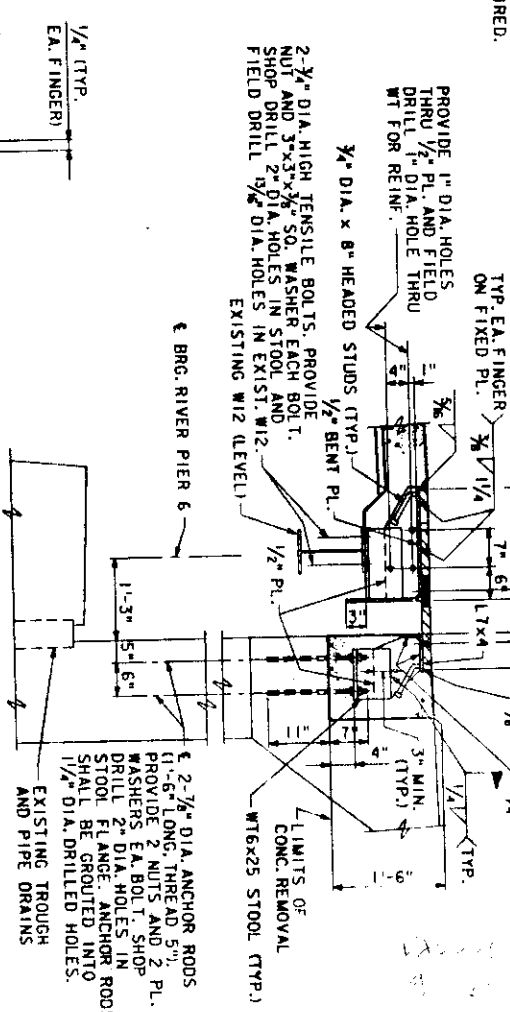
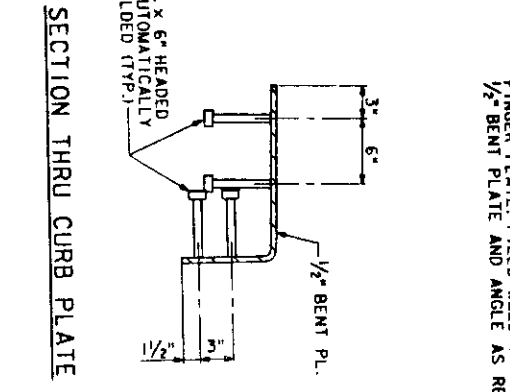
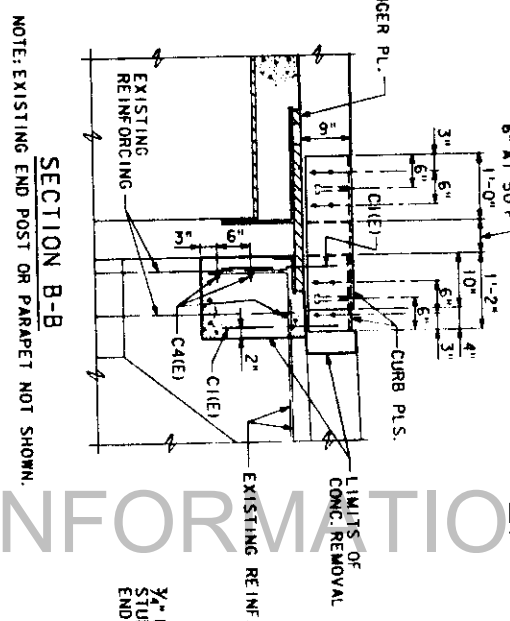
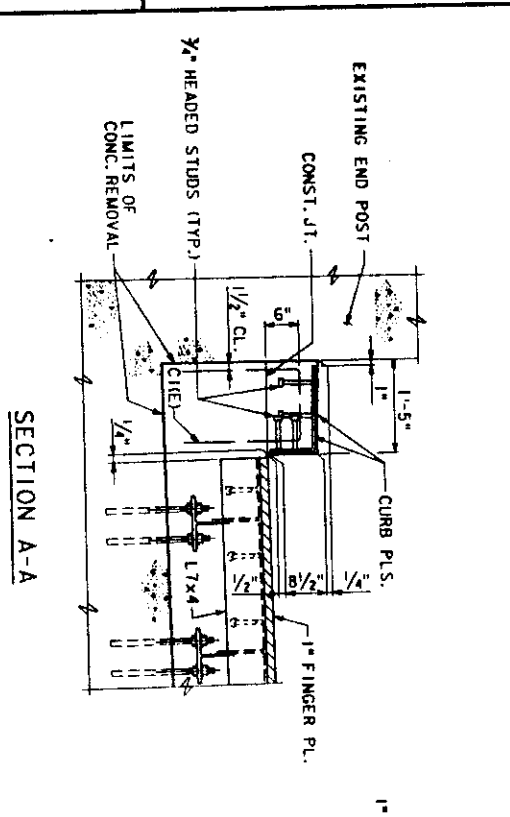


BILL OF MATERIAL

BAR NO.	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.
REINFORCEMENT BARS (EPOXY COATED)	500
CONCRETE REMOVAL	7.5

REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.



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 WORK. CONCRETE REMOVAL LIMITS:
 THE EXPANSION DEVICE SHALL BE FABRICATED TO FIT THE CROSS SLOPE OF THE ROADWAY.
 FIT ALL PLATES, STUOLS, 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

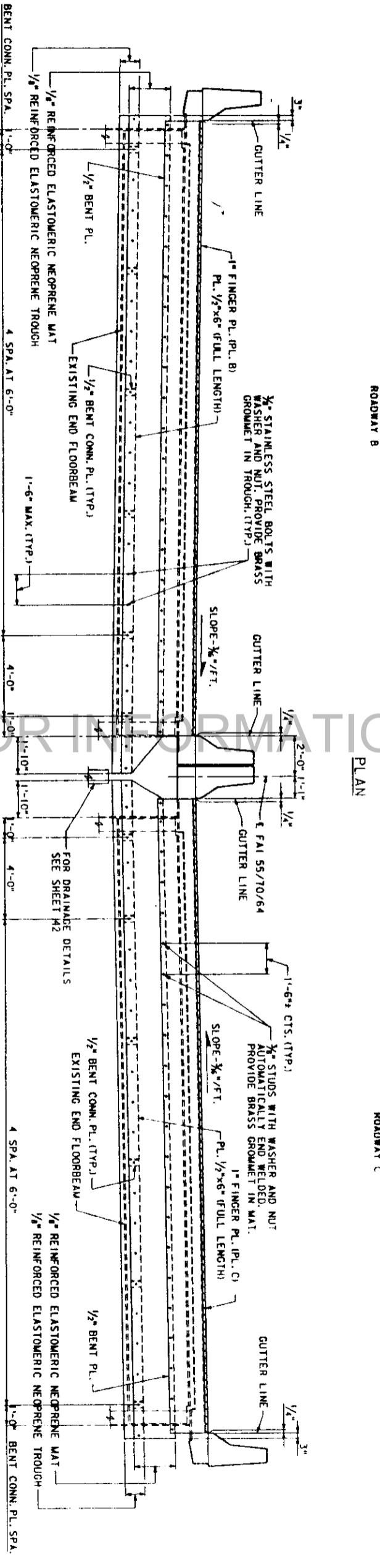
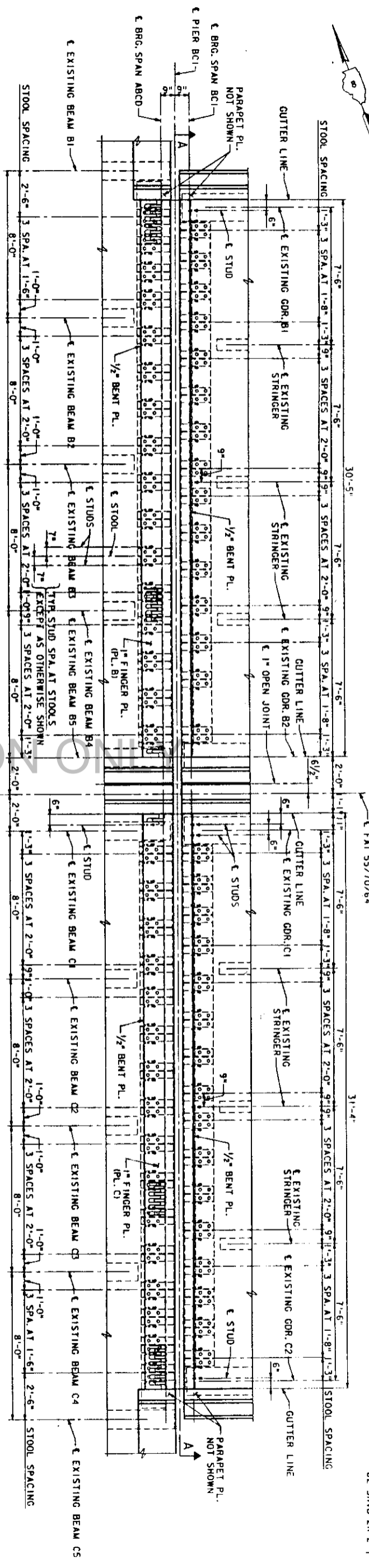
FAI - 55/70 COMPLEX
 ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 FINGER PLATE DETAILS-RIVER PIER 6

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

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

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

SHEET NO.	SECTION	DATE	SCALE	SHEET NO.
78	ST. CLAIR	105		78



NOTE: CONN. PLATE SPA. SHOWN IS FOR SPAN BCI 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, STUOLS 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.

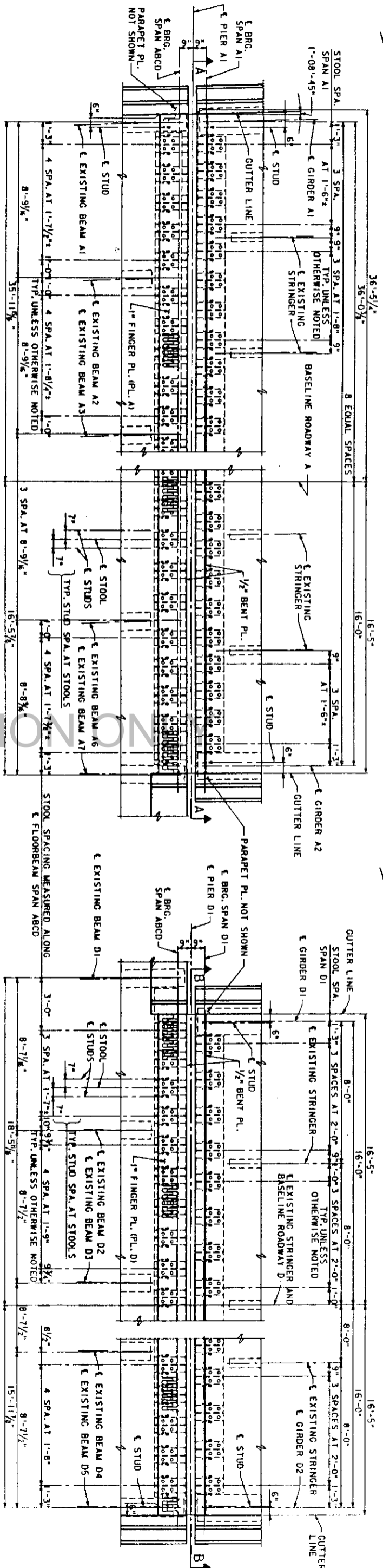
REHABILITATION FOR
 FAI - 55/70 COMPLEX
 ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 FINGER PLATE DETAILS-PIER BCI

DESIGNED BY:
 SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

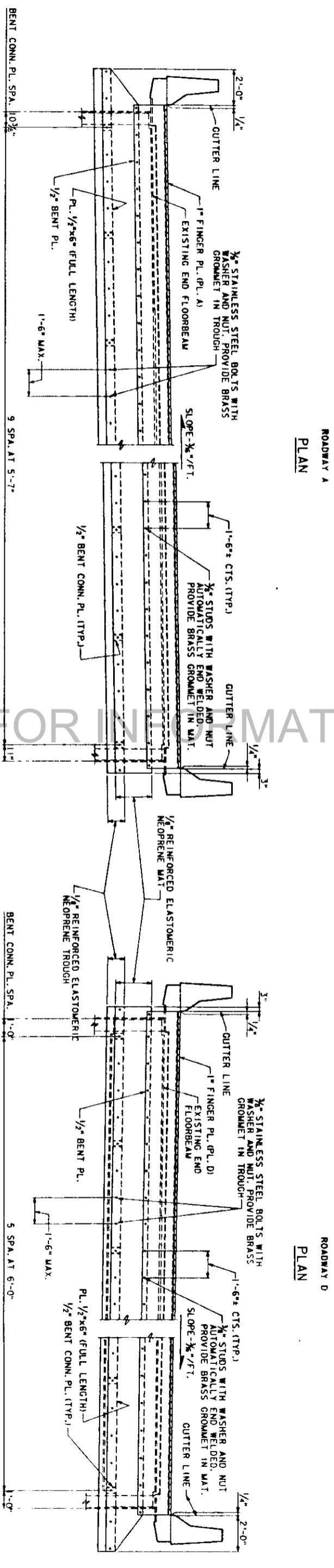
SHEET NO. 34 OF 45

PROJECT NO.	ST. CLAIR	105	SHEET NO.	79
DATE				
DESIGNER				
CHECKED				
APPROVED				

82-3HV8-2R-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" 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, STUOLS 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 THROUGH 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
POPULAR 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.

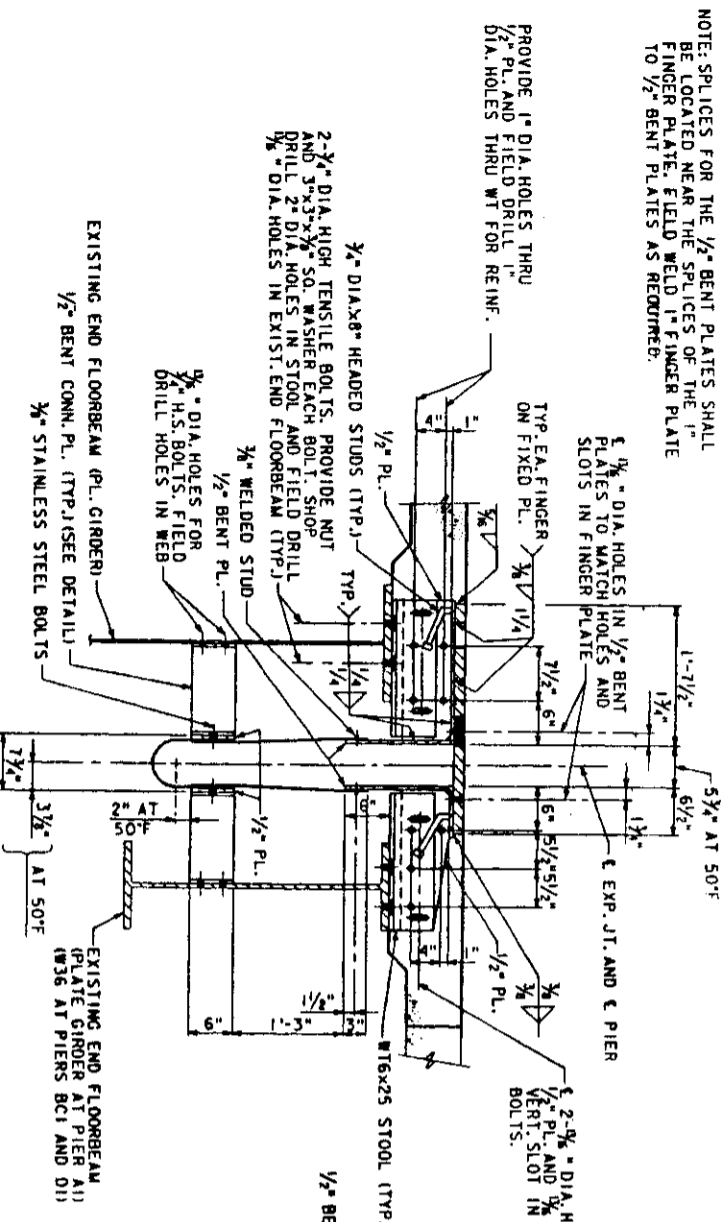
SHEET NO. 35 OF 45

10487	FILE: ZF3:1110.13885298.DGN	LEVELS PLOTTED	DATE: AUG. 10, 1989
885298	PRF: 885298	35 56 58 63	

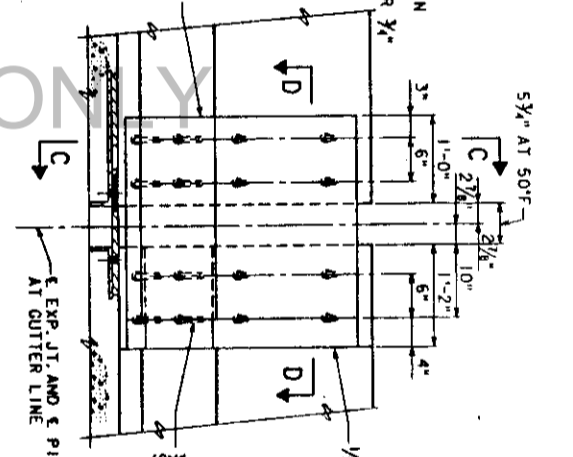
DESIGNED	S.S. STEIB
CHECKED	J. MCCARTY
DRAWN	C. DEED
CHECKED	R.F. BECK

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

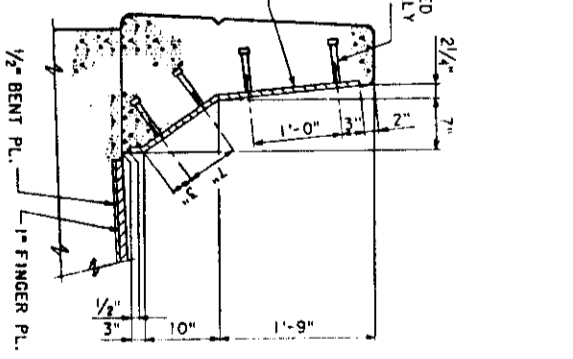
NOTE: SPLICES FOR THE 1/2" BENT PLATES SHALL BE LOCATED NEAR THE SPLICES OF THE 1" FINGER PLATE. FIELD WELD IN FINGER PLATE TO 1/2" BENT PLATES AS REQUIRED.



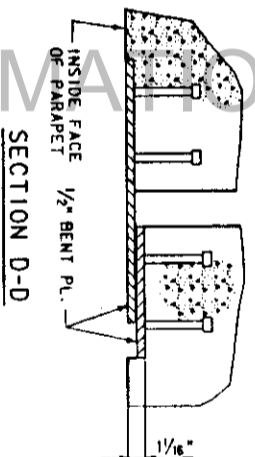
TYPICAL SECTION AT PIERS
(SECTION SHOWN IS NORMAL TO E PIER)
NOTE: CUT EXISTING EXTERIOR GIRDERS OR BEAMS WHERE REQUIRED TO CLEAR 1/2" BENT PLATES AND TROUGH.



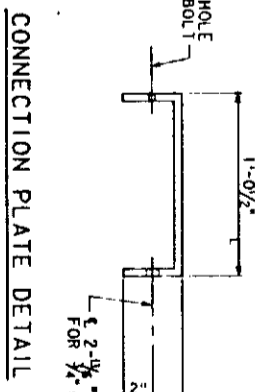
PARAPET SLIDING PLATE DETAIL



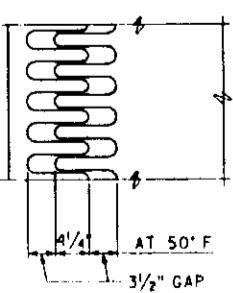
SECTION C-C



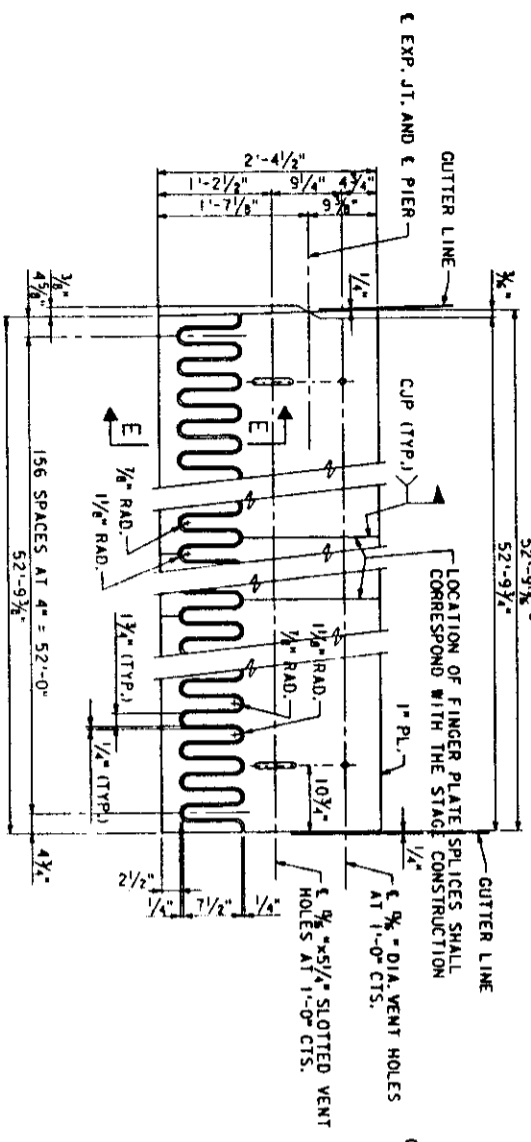
SECTION D-D



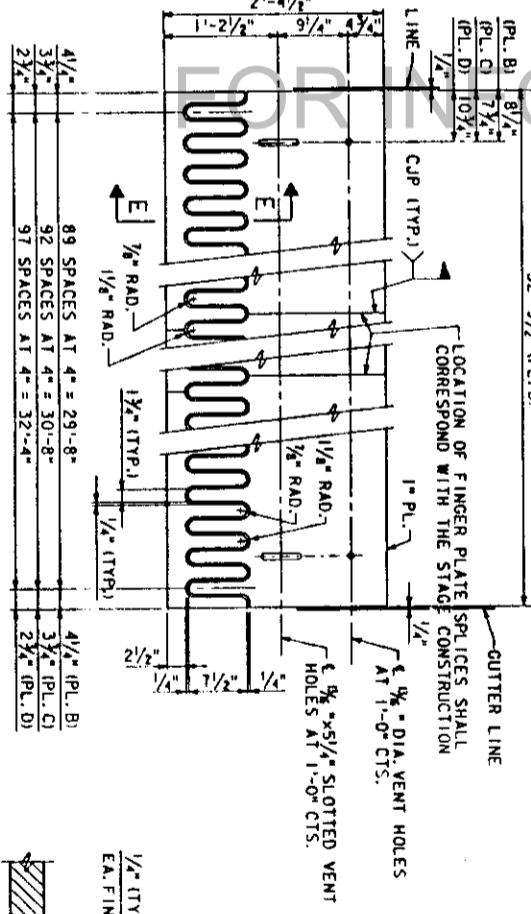
CONNECTION PLATE DETAIL



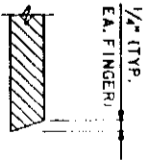
FINGER PLATE SETTING DIAGRAM
NOTE: INCREASE GAP 1/8" FOR EACH 5' FALL IN TEMPERATURE.
DECREASE GAP 1/8" FOR EACH 5' RISE IN TEMPERATURE.



FINGER PLATE CUTTING DETAIL-PL.A
NOTE: FINGER PLATE SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 507.04(C) OF THE STANDARD SPECIFICATION USING A 1/2" WIDE CUT.



FINGER PLATE CUTTING DETAIL-PLS. B, C AND D
NOTE: FINGER PLATE SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 507.04(C) OF THE STANDARD SPECIFICATION USING A 1/2" WIDE CUT.



SECTION E-E

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

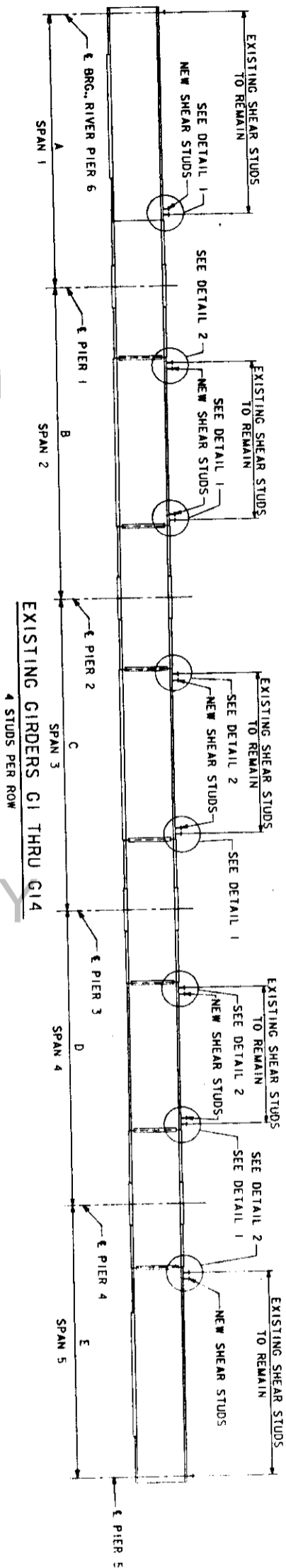
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPULAR STREET BRIDGE
FINGER PLATE DETAILS
PIERS A1, B1 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

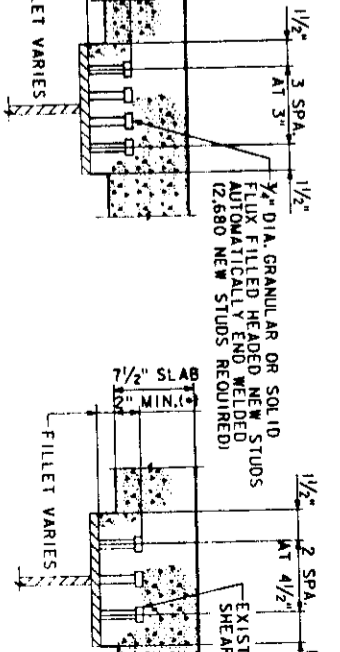
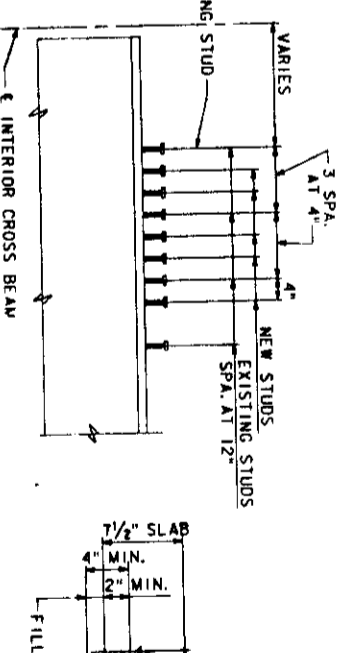
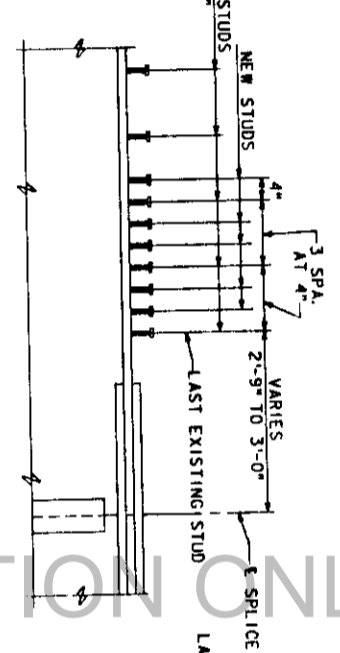
DATE	NO.	BY	CHKD.
7.1.79	1	ST. CLAIR	105
8.10.89	2	ST. CLAIR	105
8.10.89	3	ST. CLAIR	105

82-SHVB-2R-2-1

DATE	SECTION	OWNER	SHEET
F.A.I. 70	*	ST. CLAIR	105
ILLINOIS	PROJECT		81

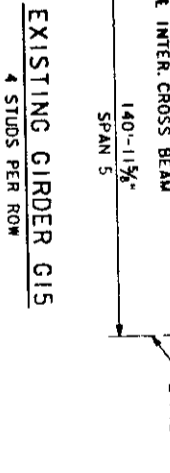
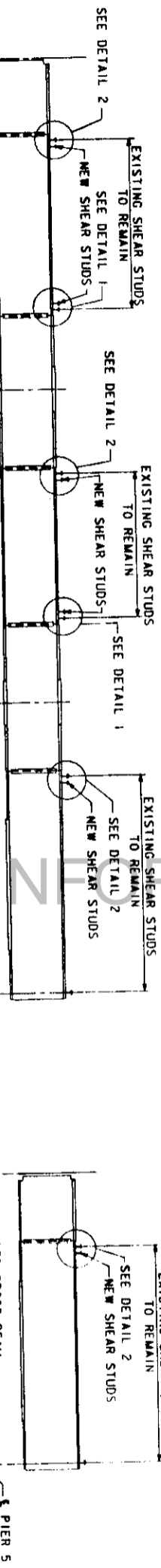


GIRDER	A	B	C	D	E
G1	141'-0 3/4"	161'-3 3/4"	161'-6 3/4"	152'-9 1/2"	142'-0 1/2"
G2	139'-7 3/4"	161'-0"	161'-0"	152'-0"	141'-0"
G3	138'-1 9/16"	161'-0"	161'-0"	152'-0"	141'-0"
G4	136'-8 3/4"	161'-0"	161'-0"	152'-0"	141'-0"
G5	135'-3 3/4"	161'-0"	161'-0"	152'-0"	141'-0"
G6	133'-9 1/2"	161'-0"	161'-0"	152'-0"	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 1/4"	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 1/4"	161'-0"	161'-0"	152'-0"	141'-0"
G13	124'-4 1/2"	161'-0"	161'-0"	152'-0"	141'-0"
G14	122'-10 1/4"	160'-1 3/4"	159'-9 3/8"	150'-10 1/4"	139'-11 1/4"



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

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 PAVEMENT SEE SPECIAL PROVISIONS.



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 AND THE DAMAGED SHEAR CONNECTOR SHALL BE REMOVED AND THE FLANGE SURFACE SHALL BE GRIND SMOOTH AND FLUSH. IN CASE OF A PULLOUT METAL USING THE SHIELDED METAL-ARC PROCESS WITH LOW HYDROGEN ELECTRODES AND THEN GROUND FLUSH. REPLACEMENT TYPE AND SIZE CONNECTOR SHALL BE OF THE SAME TYPE AND SIZE AS THE DAMAGED SHEAR CONNECTOR. IT REPLACES AND SHALL BE PLACED IN THE SAME LOCATION.

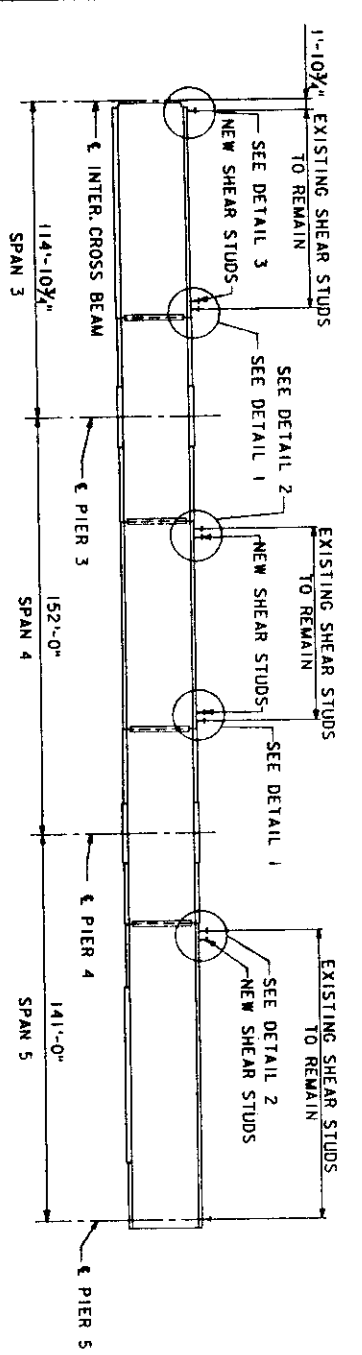
REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
STEEL DETAILS

ST. LOUIS, MISSOURI
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

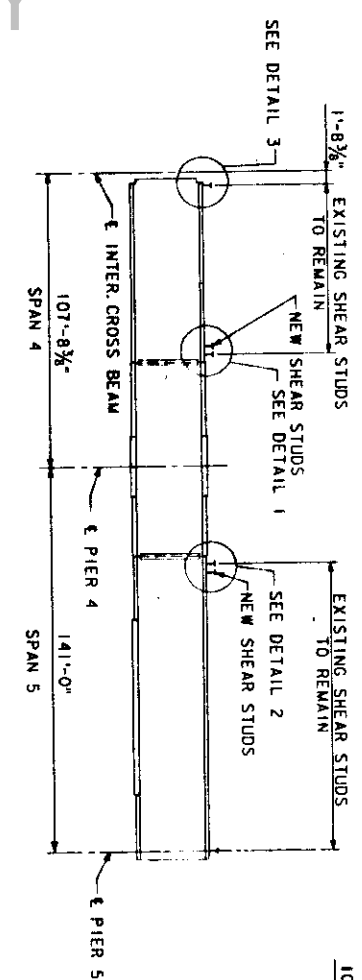
DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
DRAWN	M.J. MALINSKY
CHECKED	C. LIZANA

DATE	REVISED	BY	NO.
F.A.I. 70	ST. CLAIR	105	B2
REVISIONS	PROJECT		

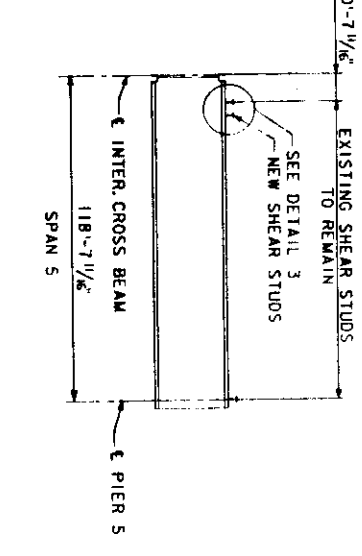
92-3HWB-2R-2-1



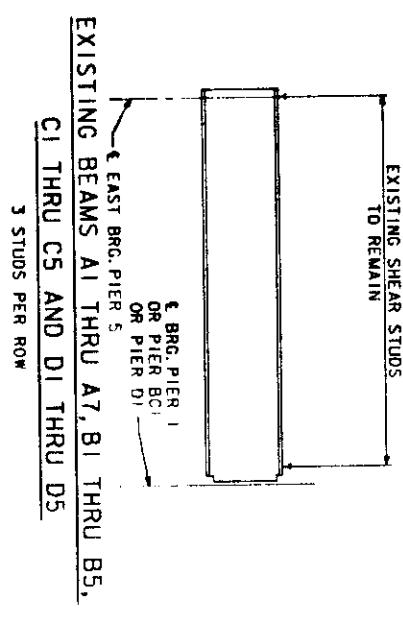
EXISTING GIRDER G18
4 STUDS PER ROW



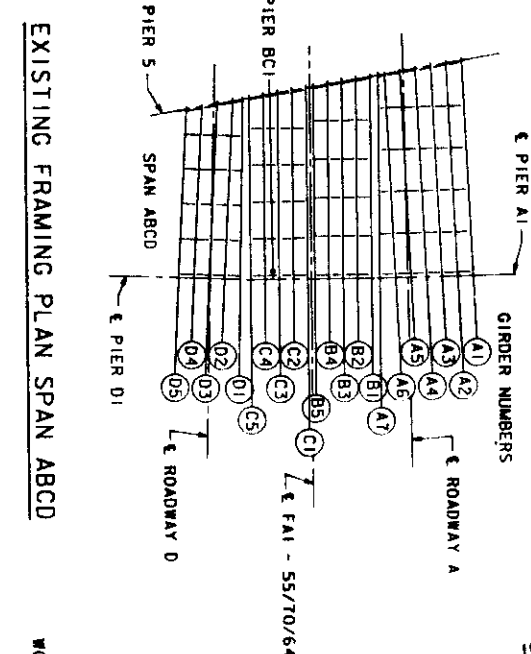
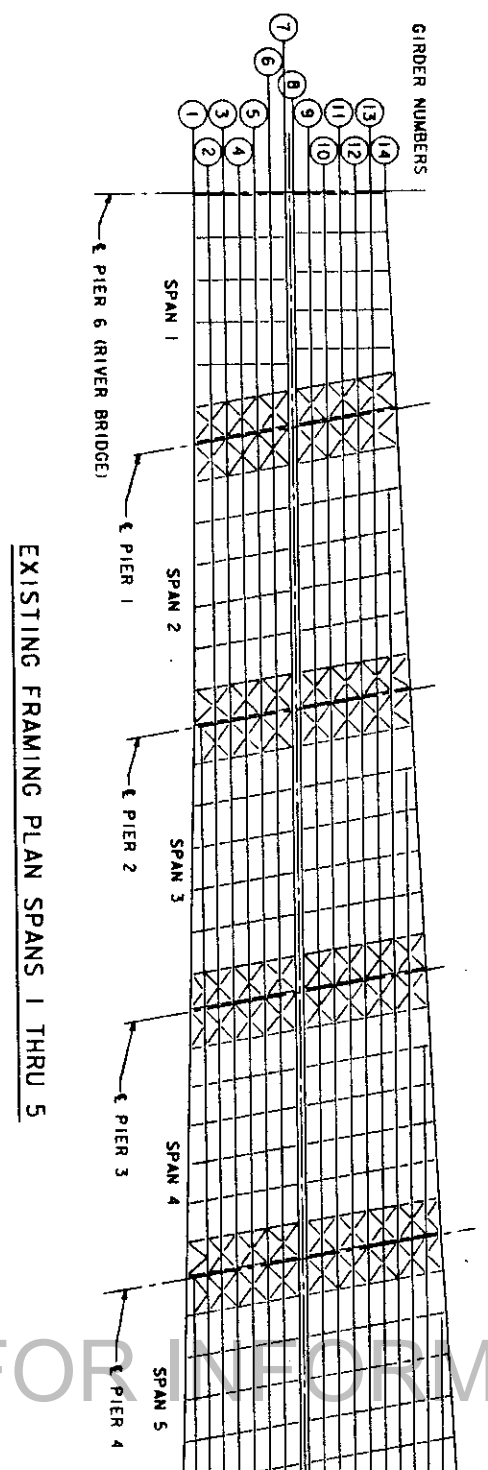
EXISTING GIRDER G19
4 STUDS PER ROW



EXISTING GIRDER G20
4 STUDS PER ROW



EXISTING BEAMS A1 THRU A7, B1 THRU B5,
C1 THRU C5 AND D1 THRU D5
3 STUDS PER ROW



NOTES
WORK THIS SHEET WITH SHEET 37.

10487	FILE: ZF3:110,13885292.DGN	LEVELS PLOTTED	DATE: AUG. 10, 1989
885292	PRF: 885292	35 56 58 63	

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

DESIGNED BY
SYNDORUP CORPORATION
ST. LOUIS, MISSOURI

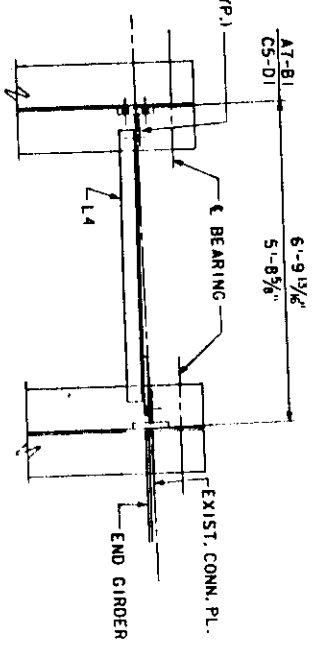
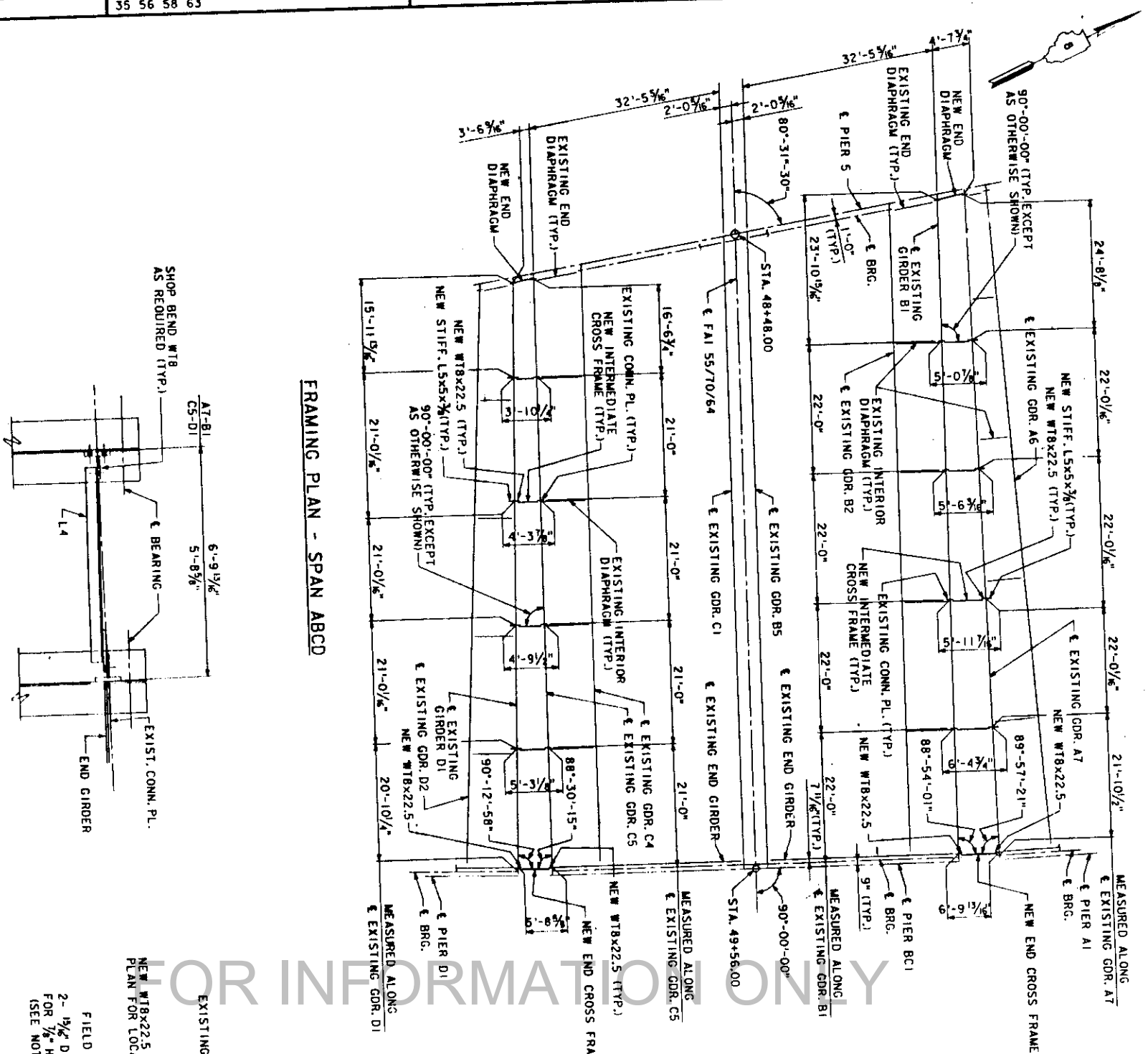
REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
STEEL DETAILS
STRUCTURE NO. 082-0005
STL 41-000.00 TO STL 49-55.00 FAI-70 ST. CLAIR CO.
SHEET NO. 38 OF 45

FOR INFORMATION ONLY

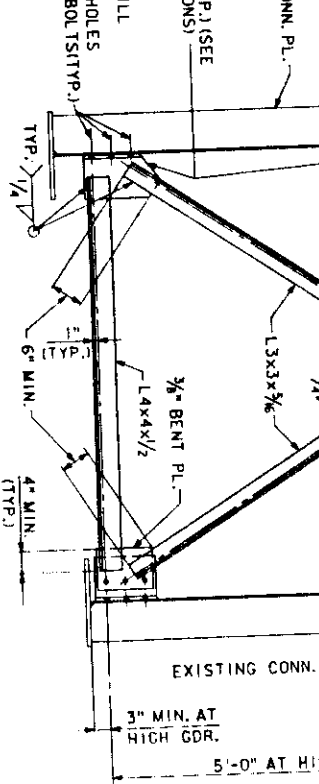
DATE	SECTION	COMMIT	DATE	SCALE
F.A.I. 70	ST. CLAIR	NO5	83	
FILE NO.	PROJECT			

10487	FILE: ZF3:1110,13885315.DGN	LEVELS PLOTTED	DATE: AUG. 10, 1989
885315	PRF: 885315	35 56 58 63	

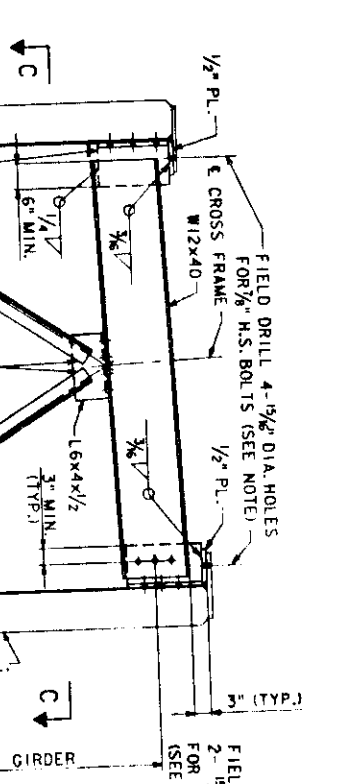
DESIGNED	S.S. STEIB
CHECKED	J. MCCARTY
APPROVED	C. DEED
DATE	8/10/89
CHECKED	S.S. STEIB



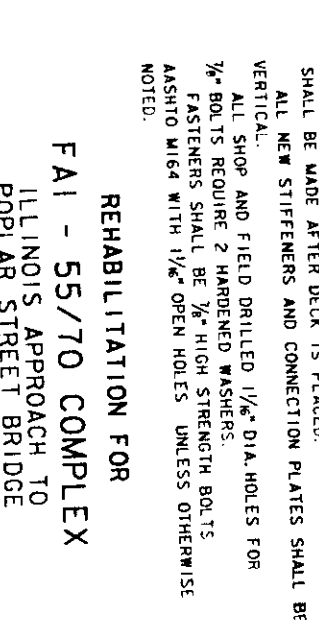
SECTION C-C



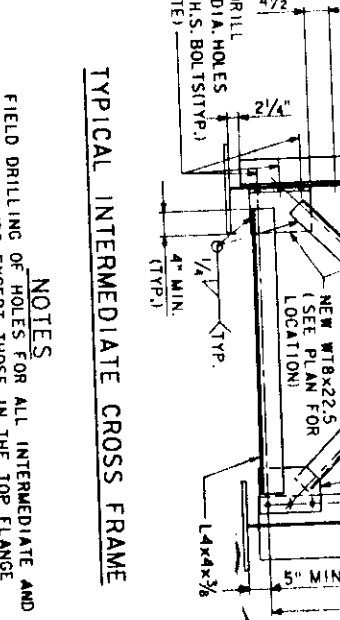
TYPICAL END DIAPHRAGM



SECTION B-B



TYPICAL END CROSS FRAME



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 1/4" DIA. HOLES FOR 3/8" BOLTS REQUIRE 2 HARDENED WASHERS.
3/8" BOLTS REQUIRE 2 HIGH STRENGTH BOLTS FASTENERS SHALL BE 1/4" HIGH STRENGTH 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-10) ST. CLAIR CO.

DESIGNED BY
SVENDRUP CORPORATION
ST. LOUIS, MISSOURI

SHEET NO. 39 OF 45

S.S. STEIB
 DESIGNED
 J.P. MCCARTY
 CHECKED
 D.C. SPINW
 DBA
 R.D. WINKELMANN
 CHECKED

MOMENT TABLE
 TYPICAL INTERIOR 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	SPAN ABCD	0.5 SPAN ABCD
LS	(IN 4)	51,776	92,898	47,634	99,289	49,773	92,898	42,877	92,898	55,427	66,519	42,856
1C	(IN 4)	133,180	---	114,653	---	121,620	---	100,042	---	141,304	145,686	101,293
SS	(IN 3)	1,763	2,469	1,519	2,630	1,641	2,469	1,272	2,469	2,005	2,156	1,736
SC	(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	10.1	10.0
FS (NON-COMP.)	(KSI)	9.5	12.8	6.8	11.1	7.7	10.8	6.3	12.0	9.0	3.38	2.85
S Q	(KIPS/FT)	.338	.338	.338	.338	.338	.338	.338	.338	.338	.338	.338
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	2,277	2,301	2,357	2,299	1,938
FS (COMP.)	(KSI)	11.4	11.8	12.7	11.4	12.4	11.6	13.4	11.2	10.6	10.3	10.6
FS (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

REACTION TABLE

	TYPICAL INTERIOR GIRDER					72" GIRDER SPAN ABCD		60" GIRDER SPAN ABCD		END GIRDER L1-A END GIRDER L1-A END GIRDER L1-D	
	PIER 6	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 5, ABCI OR D1	PIER 5, BCI OR D1	AT GIRDERS D1 AND D5	AT GIRDERS D1 AND D5	AT GIRDERS D1 AND D5
R Q	(K)	72.0	231.7	223.5	213.1	226.6	75.5	78.1	67.5	189.3	93.8
R L	(K)	56.3	112.6	115.5	113.0	110.9	57.1	52.8	47.5	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

MOMENT TABLE

	END GIRDER L1-A	END GIRDER L1-D
1	(IN 4)	110,526
S	(IN 3)	2,902
Q	(KIPS/FT)	7,119
M Q	(FT-KIPS)	1,847
M L	(FT-KIPS)	2,451
M SQ	(FT-KIPS)	636
M IMP	(FT-KIPS)	1,659
M (TOTAL)	(FT-KIPS)	345
FS (TOTAL)	(KSI)	5,091
VR	(KIPS)	21.1

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

- 1S AND SS ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION USED IN COMPUTING FS (TOTAL).
- 1C AND SC ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING FS (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 SECTION.
- M IMP - LIVE LOAD IMPACT.
- VR IS THE MAXIMUM $\frac{1}{4}$ + IMP SHEAR RANGE IN SPAN.
- SECTION PROPERTIES ARE COMPUTED BASED ON EXISTING GIRDER DETAILS.

FOR INFORMATION ONLY

PREPARED BY:
 SYERDRUP CORPORATION
 ST. LOUIS, MISSOURI

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

Revised: pmp 5-24-90

SHEET NO. 40 OF 45

MOMENT TABLE
TYPICAL INTERIOR GIRDER

	TYPICAL INTERIOR GIRDER										72" GIRDER		60" GIRDER	
	SPAN 1 THRU 5					SPAN ABCD					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	SPAN ABCD		SPAN ABCD	
1S	51,776	92,898	47,634	99,289	49,773	92,898	42,877	92,898	55,427	66,519	42,858		42,858	
1C	133,180	---	114,653	---	121,620	---	100,042	---	141,304	145,686	101,293		101,293	
SS	1,763	2,469	1,519	2,630	1,641	2,469	1,272	2,469	2,005	2,156	1,736		1,736	
SC	2,414	---	2,044	---	2,202	---	1,728	---	2,675	2,680	2,189		2,189	
Q	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046		1,443	
M U	1,395	2,628	855	2,439	1,059	2,222	670	2,479	1,504	1,810	10.0		10.0	
FS (NON-COMP.)	9.5	12.8	6.8	11.1	7.7	10.8	3.38	12.0	9.0	10.1	.290		.285	
S Q	.338	.338	.338	.338	.338	.338	.338	.338	.338	.338	512		436	
M SQ	1,487	678	425	662	456	617	352	632	553	512	1,483		1,239	
M U	281	270	280	273	271	266	241	259	285	304	263		263	
M IMP	2,287	2,432	2,168	2,495	2,277	2,379	1,926	2,301	2,357	2,299	1,938		1,938	
M (TOTOL)	11.4	11.8	12.7	11.4	12.4	11.6	13.4	11.2	10.6	10.3	10.6		10.6	
FS (COMP.)	20.9	24.6	19.5	22.5	20.1	22.4	19.7	23.2	19.6	20.4	20.6		20.6	
FS (TOTOL)	68.6	---	61.5	---	62.7	---	61.1	---	68.8	63.6	58.1		58.1	

REACTION TABLE

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

NOTES

1S AND SS ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION USED IN COMPUTING FS (TOTOL).
1C AND SQ ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING FS (TOTOL).
M U - MOMENT DUE TO DEAD LOADS ON NON-COMPOSITE SECTION.
M SQ - MOMENT DUE TO DEAD LOADS ON COMPOSITE SECTION.
M U - MOMENT DUE TO LIVE LOAD ON NON-COMPOSITE SECTION.
M SQ - MOMENT DUE TO LIVE LOAD ON 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.

MOMENT TABLE

	END GIRDER LI-A	END GIRDER LI-O
0.5 PT.	0.5 PT.	0.5 PT.
1	110,526	40,380
5	2,902	1,297
Q	7,119	5,767
S Q	1,847	1,698
M U	2,451	856
M SQ	636	252
M U	1,659	798
M IMP	345	179
M (TOTOL)	5,091	2,085
FS (TOTOL)	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.

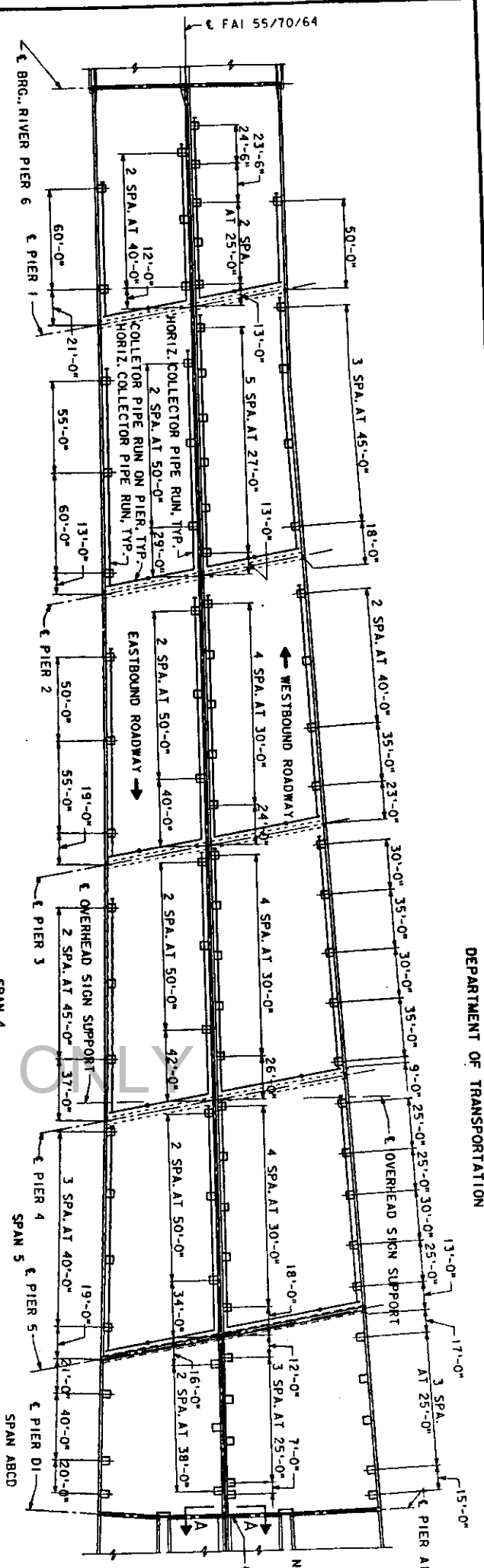
DESIGNED: S.S. STEIB
CHECKED: J.P. MCCARTY
DRAWN: D.C. SPINK
R.D. WINNEMANN
CHECKED:

FOR INFORMATION ONLY

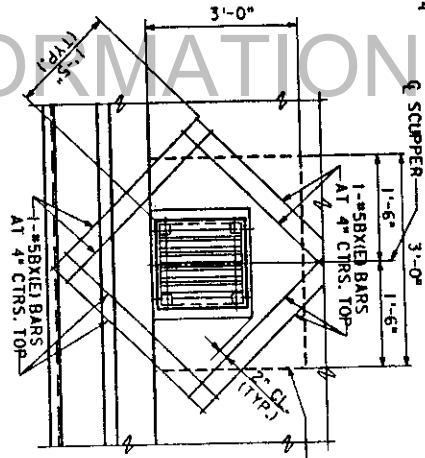
DESIGNED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

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.

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



□ INDICATES DRAINAGE SCUPPER. DRAIN SPACING IS MEASURED ALONG GUTTER LINES. DRAINS MAY BE SHIFTED SLIGHTLY FROM THE LOCATION SHOWN TO CLEAR EXISTING OBSTRUCTIONS.



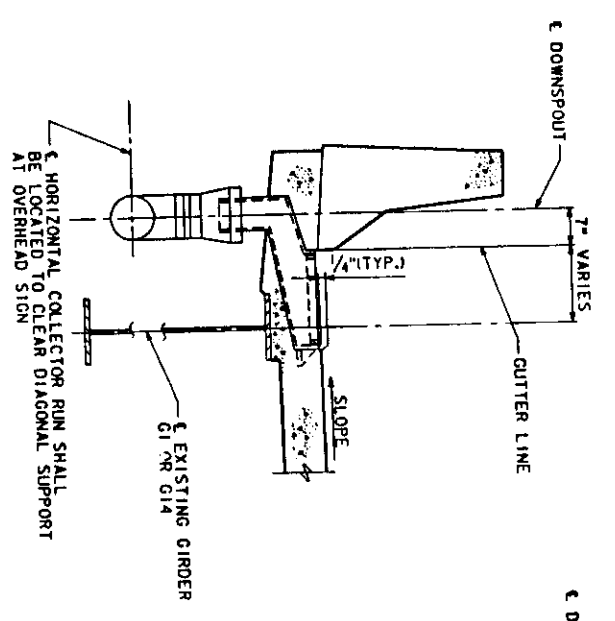
PLAN - SCUPPER REINFORCEMENT

NOTES

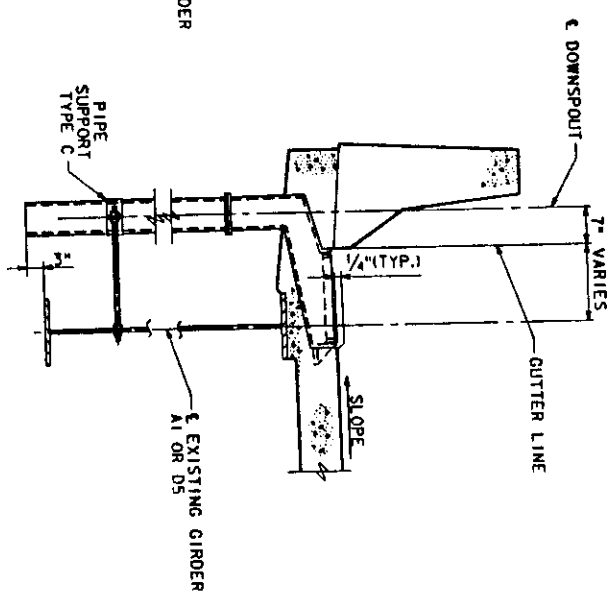
- WORK THIS SHEET WITH SHEET 42.
- FOR SCUPPER DETAILS SEE SHEET 43.
- BILL OF MATERIAL FOR BXE1 BARS IS ON THE SLAB DETAIL SHEETS PER EACH ROADWAY SECTION.
- HORIZONTAL COLLECTOR PIPE RUNS SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT.
- 3/4" DIA. STUD BOLTS SHALL CONFORM TO AASHTO M164 AND SHALL HAVE 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.

DESIGNED BY:
 SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

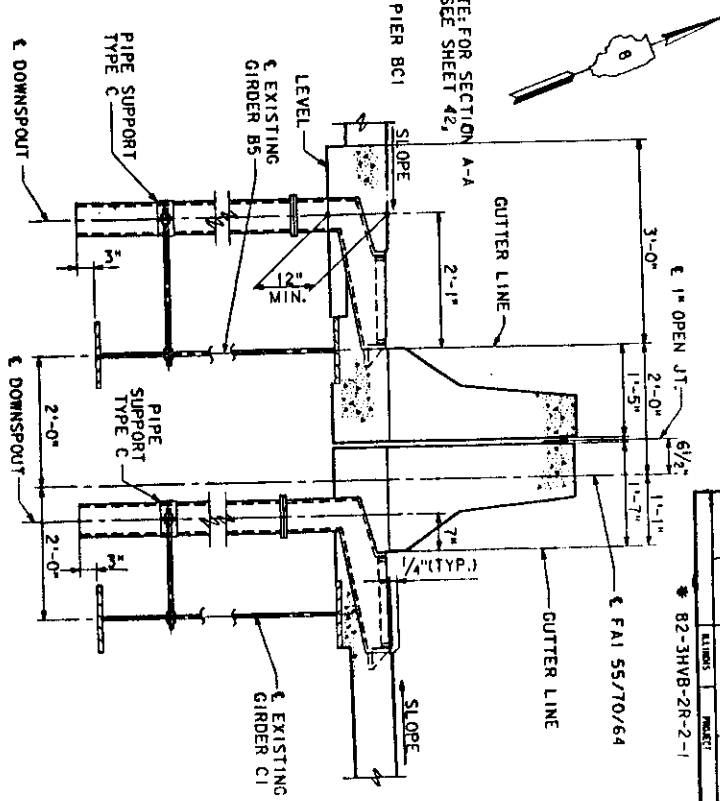
SECTION AT OUTSIDE PARAPETS
 IN SPANS 1 THRU 5



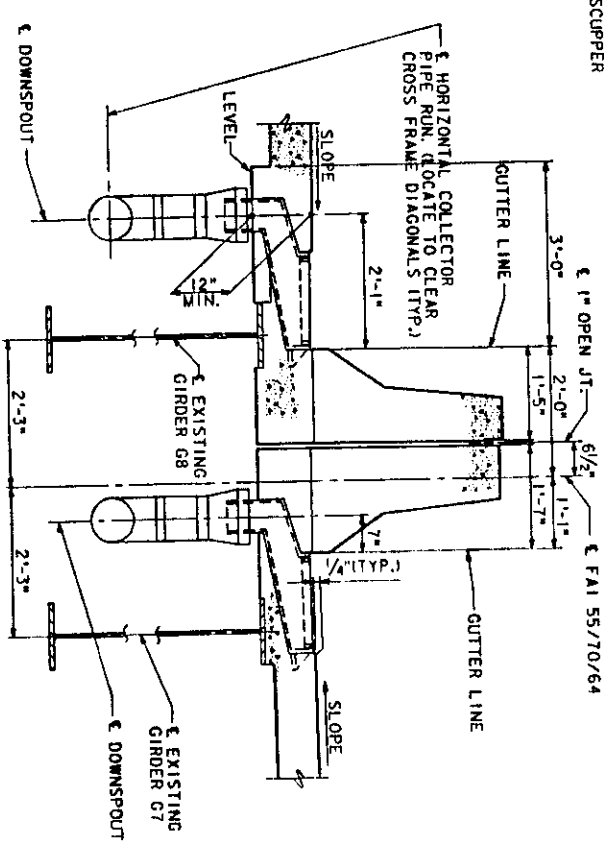
SECTION AT OUTSIDE PARAPETS
 IN SPANS ABCD



SECTION AT MEDIAN PARAPETS
 IN SPAN ABCD



SECTION AT MEDIAN PARAPETS
 IN SPANS 1 THRU 5

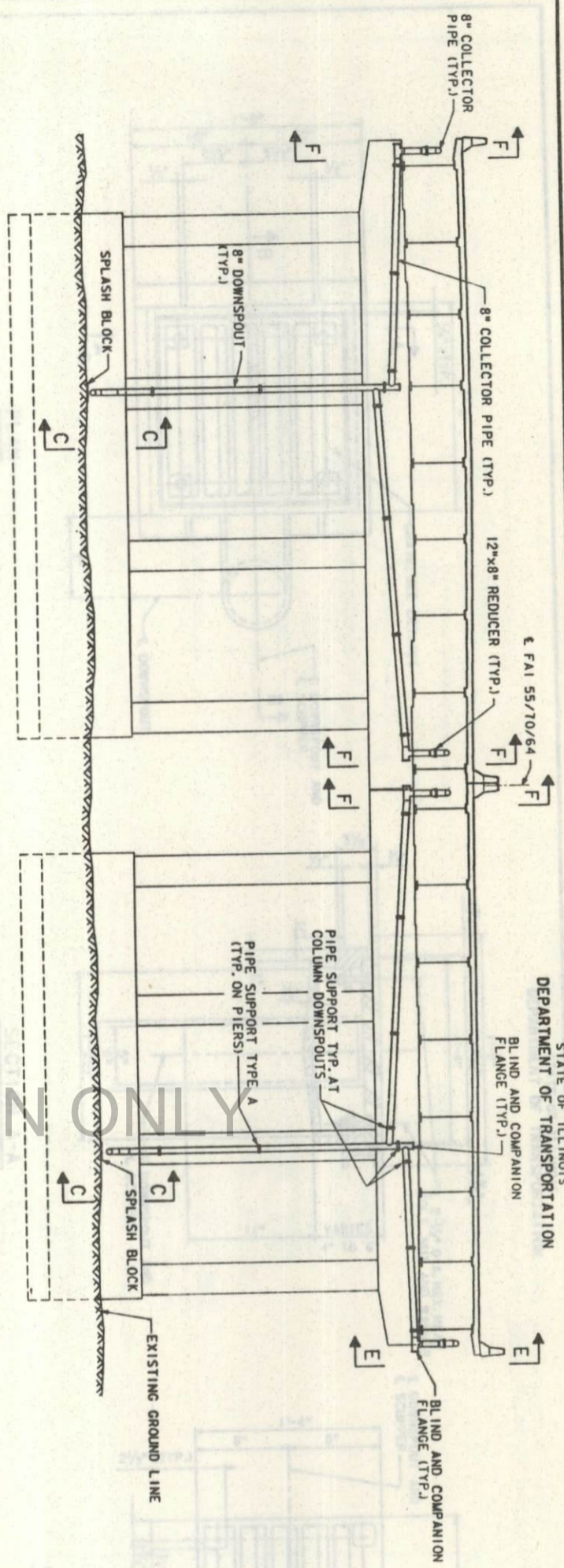


REHABILITATION FOR
 FAI - 55/70 COMPLEX

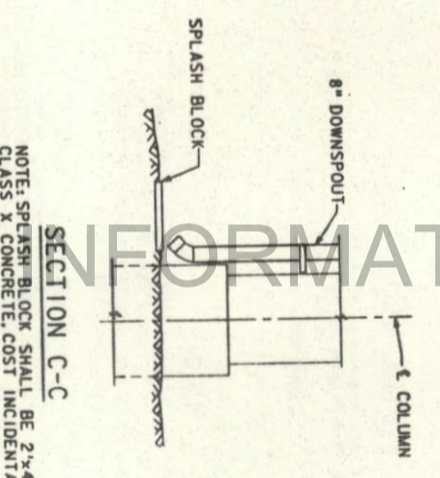
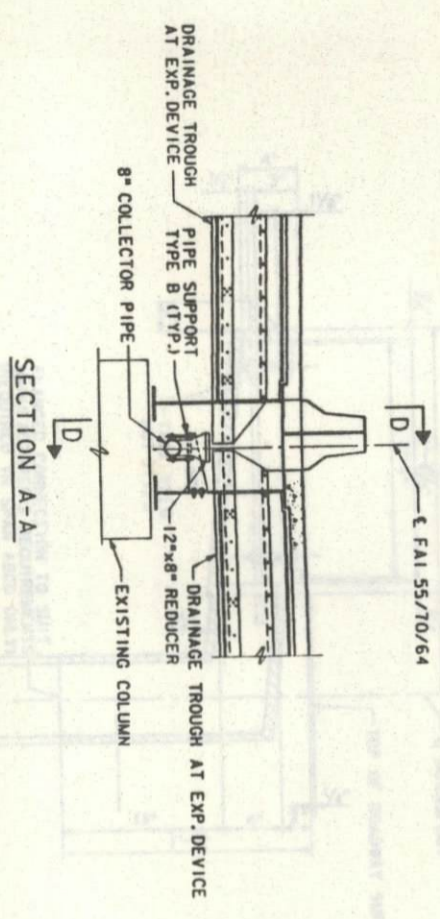
ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 DRAINAGE LOCATION PLAN
 AND DETAILS
 STRUCTURE NO. 087-0005
 STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

DATE	8/10/89	BY	ST. CLAIR	NO.	105	SHEET	85	
PROJECT	82-3HVB-2R-2-1							

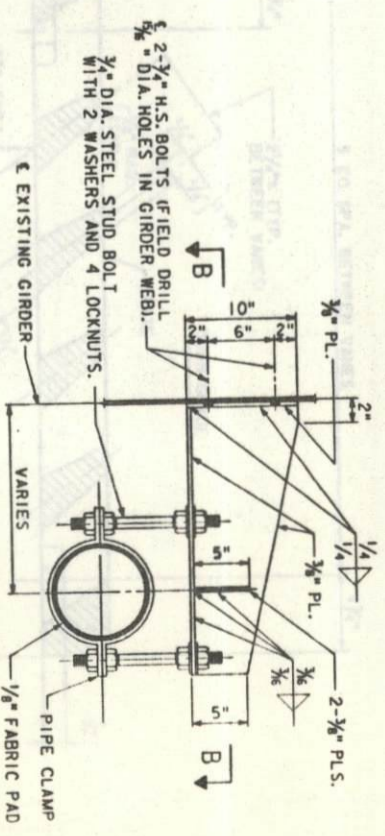
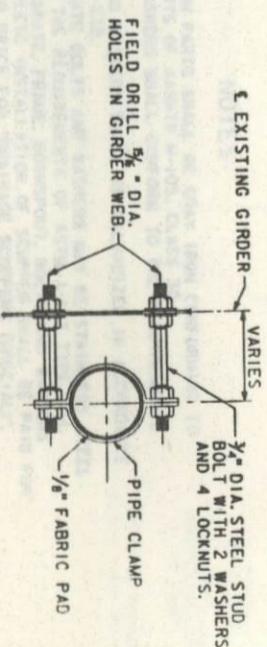
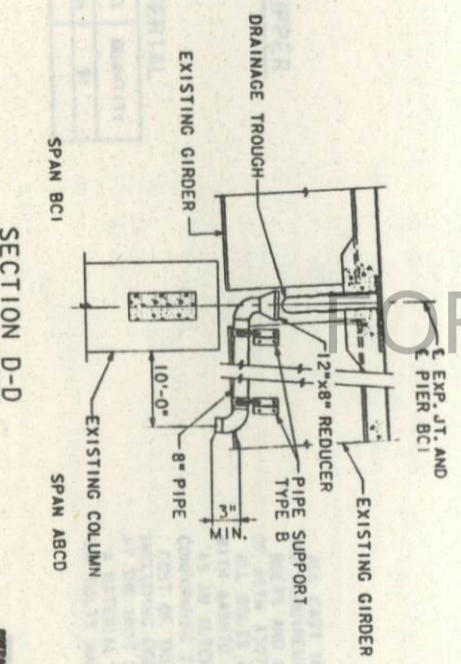
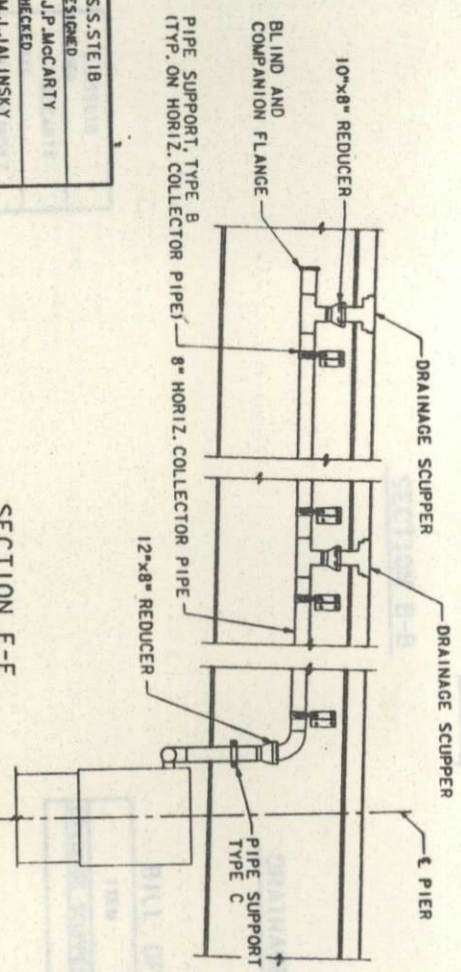
DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
DESIGNED	M.J. JALINSKY
CHECKED	R.F. BECK
DESIGNED	
CHECKED	



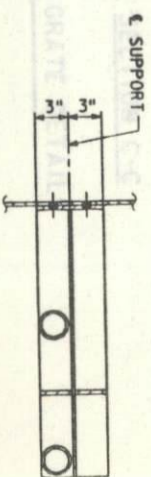
TYPICAL DRAINAGE COLLECTION SYSTEM AND DOWNSPOUTS AT PIERS 1 THRU 5



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



NOTE: BEND PLATE AS REQUIRED FOR ATTACHMENT TO COLUMN.

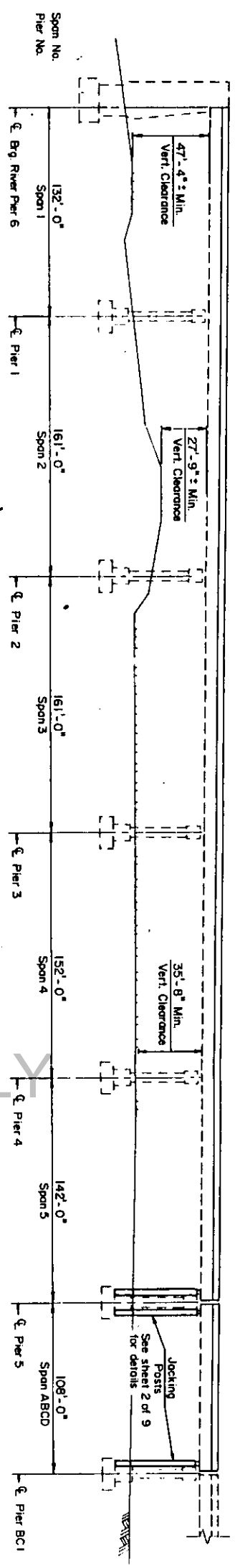


WORK THIS SHEET WITH SHEET 41.

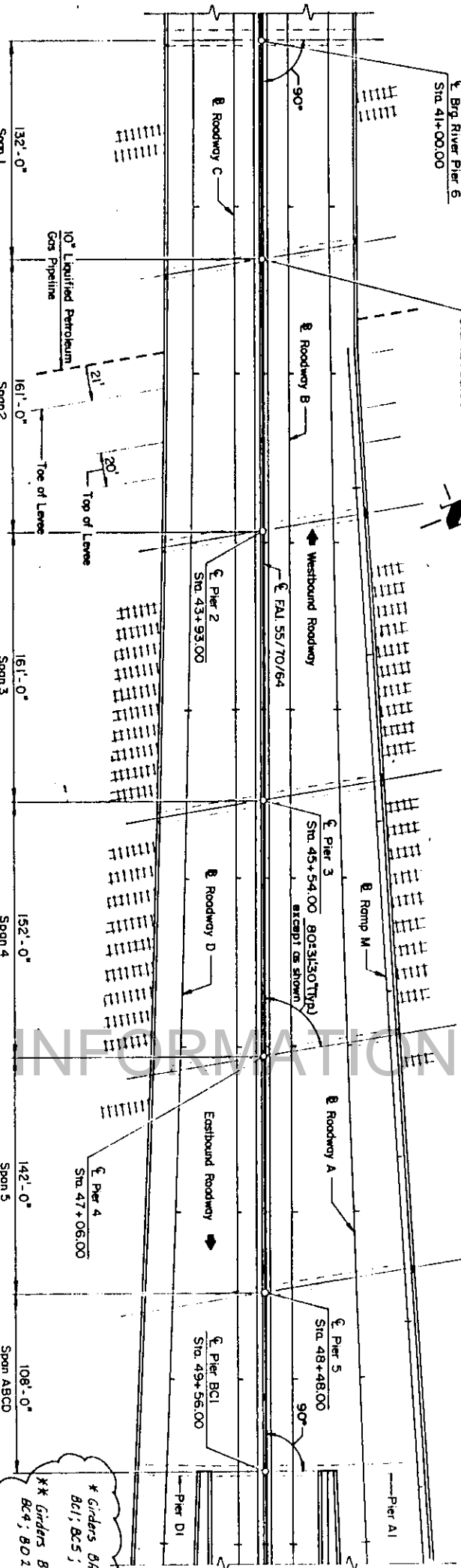
REHABILITATION FOR
 FAI - 55/70 COMPLEX
 ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 DRAINAGE COLLECTION DETAILS

STRA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.
 STRUCTURE NO. 082-0005
 SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

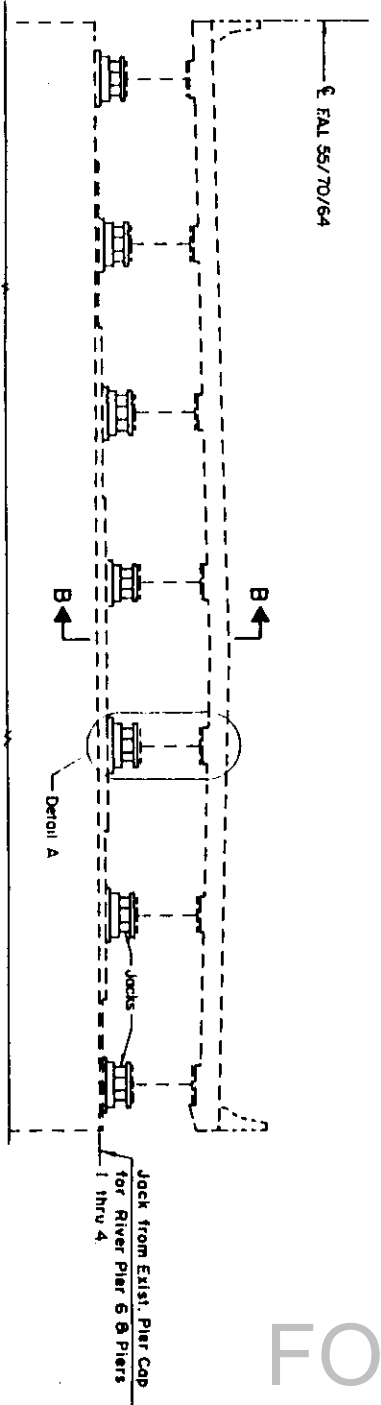
SHEET NO.	SECTION	QUANTITY	SCALE	DATE
FAI-70	9	ST. CLAIR	105	86
082-3HB-2R-2-1				



ELEVATION



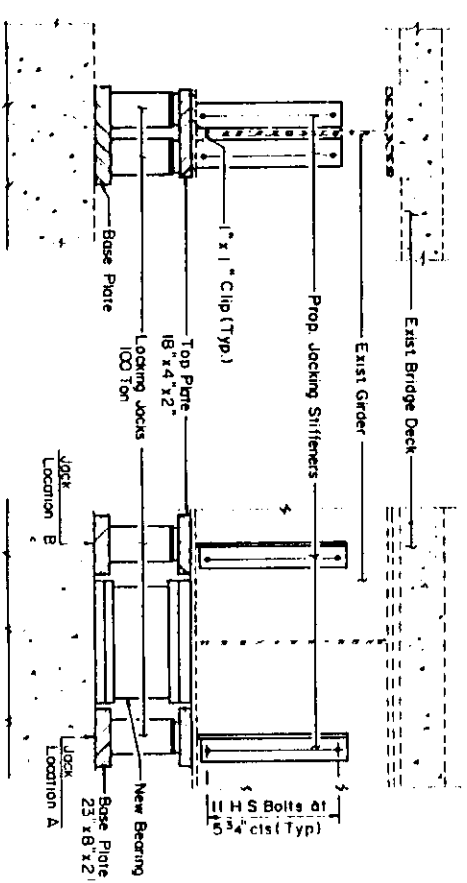
PLAN



TYPICAL HALF-CROSS SECTION

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

AS REVISED



DETAIL A

SECTION B-B

See Table A for additional information

Typical section of Pier 1, 2, 3, 4, 5, 6

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

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



APPROVED FOR STRUCTURE CONSTRUCTION

** Girders B81 thru B87, B85, B81, B85, B01, B05
** Girders B82 thru B84, B82 thru B84, B02 thru B04

Pier	Jacking Location	No. of Jacks	Stiffeners at Each Jack Location and Length
River	A	2	2-L8x8x12 5-4"
Pier #1	AB	2	2-L8x8x12 5-4"
Pier #5	A	1	2-L8x8x12 5-4"
Pier #5	B	1	2-L6x6x12 5-4"
Span ABCD	A	1	2-L8x8x12 5-4"
Pier A1	A	1	2-L8x8x12 5-4"
Pier A1	B	2	2-L8x8x12 5-10"
Pier BCI	A	1	2-L8x8x12 5-4"
Pier BCI	B	2	2-L8x8x12 4-10"
Pier D1	A	1	2-L8x8x12 5-4"
Pier D1	B	2	2-L8x8x12 4-10"

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 ensure against hydraulic failure of the jacks.

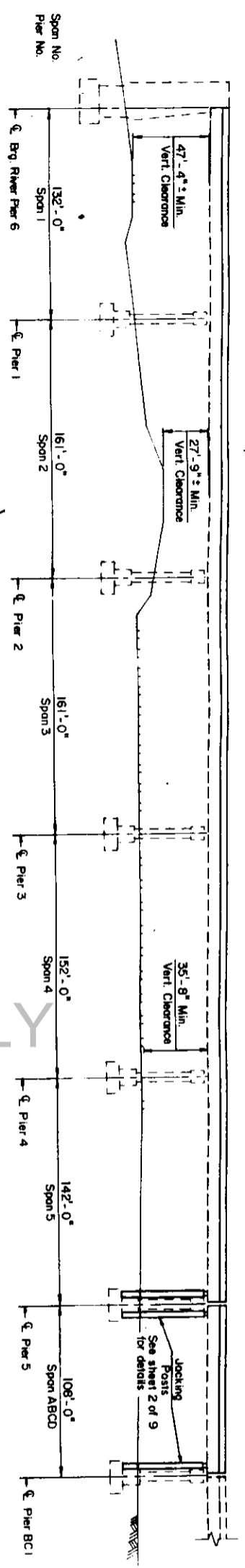
The existing fixed bearings shall be replaced last. Not two adjacent bearings, either longitudinally or transversely, shall be removed or replaced at the same time.

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

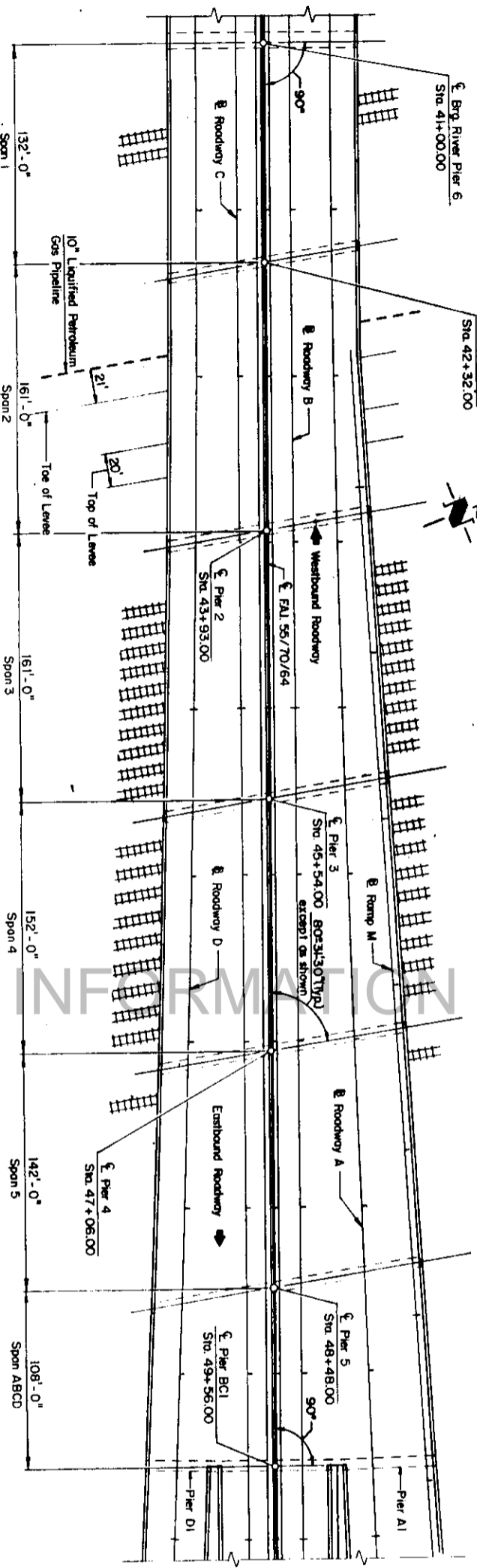
All jacking stiffeners shall be milled to bear on the bottom girder flange. Jacking stiffeners shall be left in place after construction.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS
FAL 70	*	ST. CLAIR	105
PROJECT NO.	PROJECT		
* 82-3HVB-2R(2-1)			
			Sheet 1 of 9

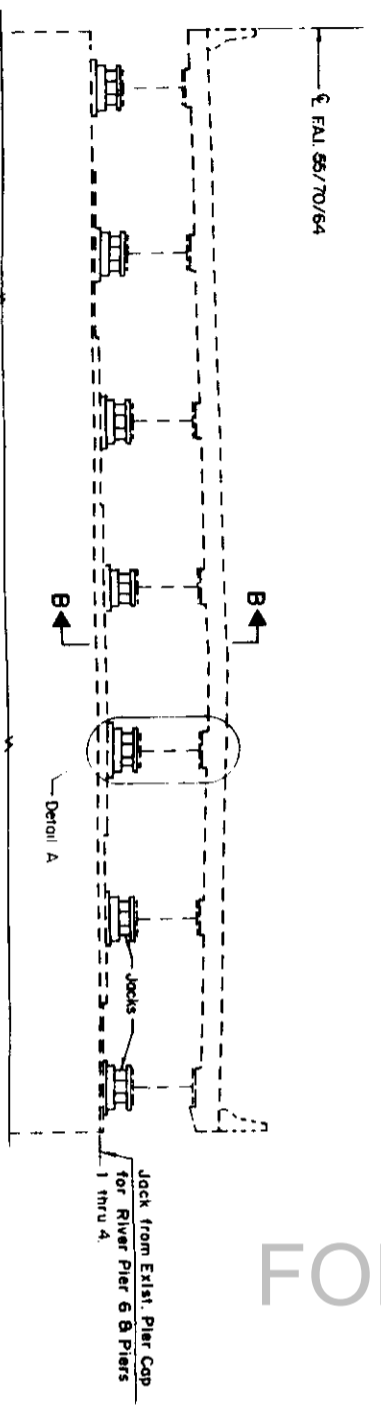
#246



ELEVATION



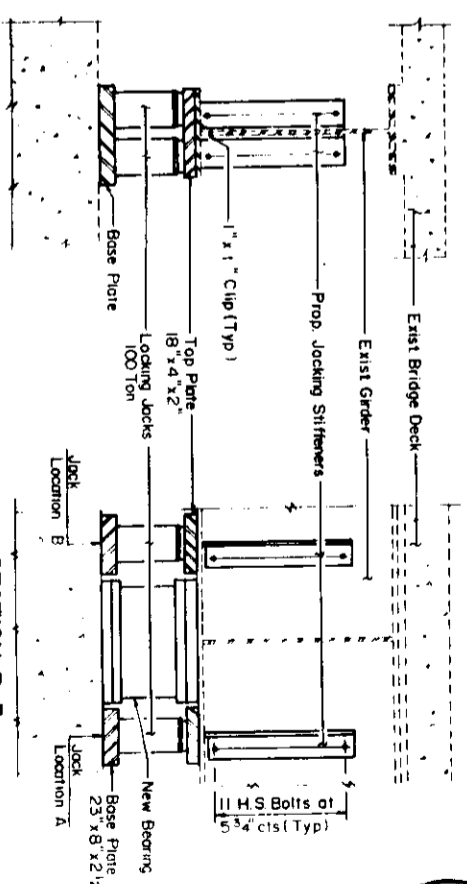
PLAN



TYPICAL HALF-CROSS SECTION

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

AS REVISED



DETAIL A

SECTION B-B

See Table A for additional information.

Typical section of Piers 1, 2, 3, 4, 5
Similar section of River Pier 6

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

Added 5-15-91

TABLE A

Pier	Jack Location	No. of Jacks	Each Jack Location	Stiffeners at Each Jack Location and Length
River	A	2		2-L5 x 8 x 12
Pier	AB	2		2-L5 x 8 x 12
Pier #1	A	1		2-L5 x 8 x 12
Pier #3	A	1		2-L5 x 8 x 12
Span 5	B	1		2-L5 x 8 x 12
Span	ABCD	1		2-L5 x 8 x 12
Pier A1	A	1		2-L5 x 8 x 12
Pier B1	B	2		2-L5 x 8 x 12
Pier A1	A	1		2-L5 x 8 x 12
Pier B1	B	2		2-L5 x 8 x 12
Pier D1	A	1		2-L5 x 8 x 12
Pier D1	B	2		2-L5 x 8 x 12

APPROVED



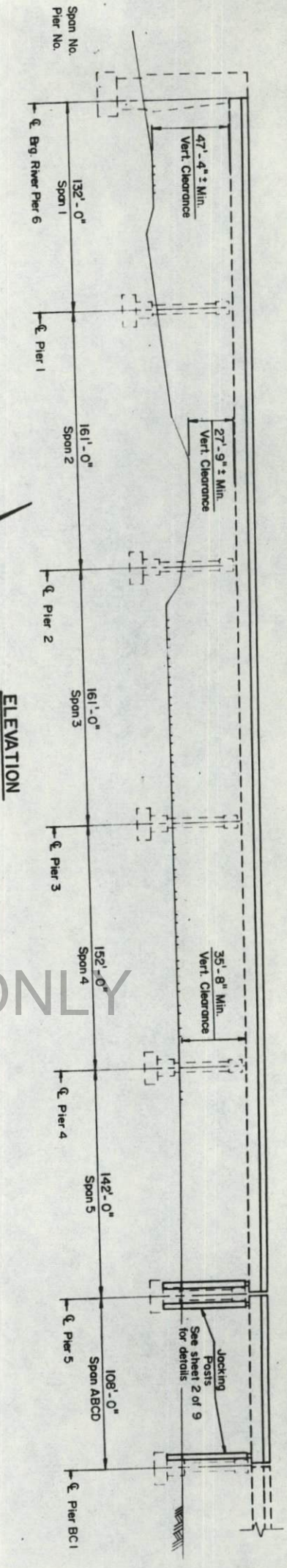
8-30-91
Exp. 11-30-92

GENERAL PLAN & ELEVATION
FAL 55/70/64
SEC. 82-3HVB-2R-2-1
ST. CLAIR COUNTY
STRUCTURE NUMBER 082-0006

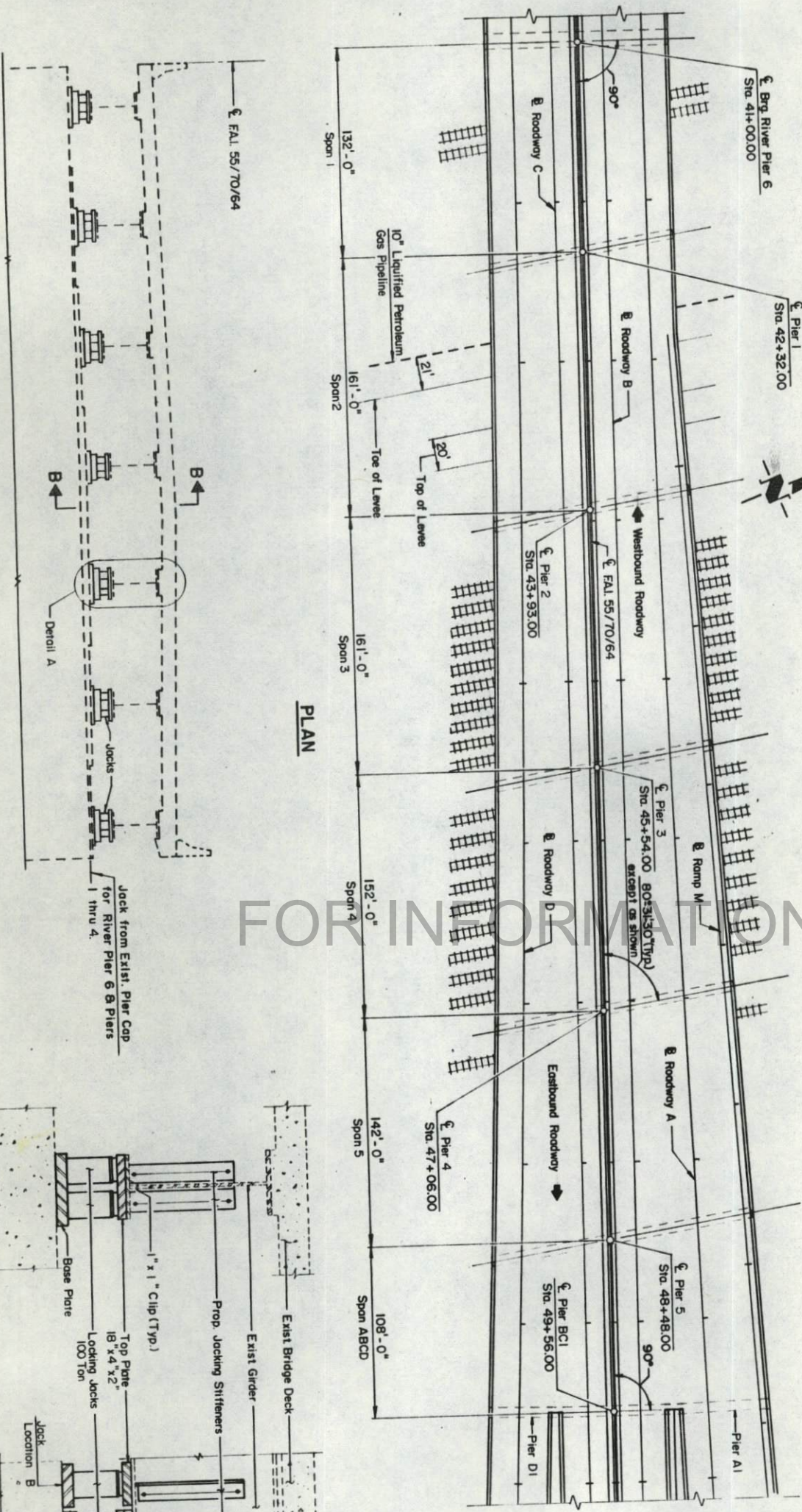
HSIONG ASSOCIATES LTD.
DESIGNED: S.K.L. CHECKED: G.J.G.
DRAWN: M. MOSSMAN. DATE: NO. H-120

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	Back Location	No. of Jacks Each	Location	Stiffeners at Each Jack and Length
River Pier	A	2		2-L5"x6"x12" 5'-4"
Pier #1	AB	2		2-L5"x6"x34" 5'-4"
Pier #2,3,4	A	1		2-L5"x6"x34" 5'-4"
Pier #5	A	1		2-L5"x6"x34" 5'-4"
Span	B	1		2-L5"x6"x34" 5'-4"
Span ABCD	A	1		2-L5"x6"x34" 5'-4"
Pier A1	B	2		2-L8"x8"x18" 5'-10"
Pier BCI	A	1		2-L5"x6"x34" 5'-4"
Pier BCI	B	2		2-L8"x8"x1" 5'-4"
Pier D1	A	1		2-L5"x6"x34" 5'-4"
Pier D1	B	2		2-L8"x8"x1" 5'-4"



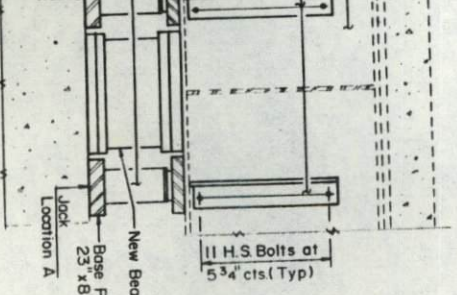
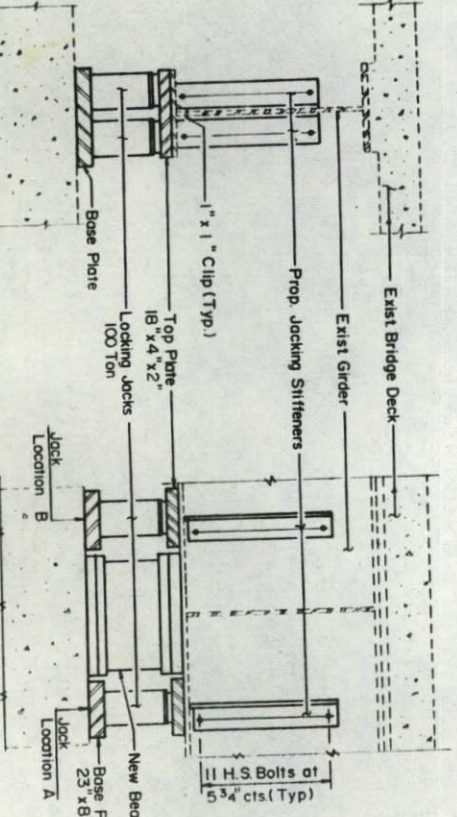
APPROVED
FOR STRUCTURAL ADOPTION ON

GENERAL PLAN & ELEVATION
 FAI 55/70/64
 SEC. 82-3HVB-2R-2
 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

TYPICAL HALF - CROSS SECTION

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



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 Restainers	Each	42
Concrete Barrier, Special	Ln. Ft.	712.3
Langitudinal Joint Seal	Ln. Ft.	712.3
Seismic Isolation Brg. Assembly: 13"x13"	Each	22
Seismic Isolation Brg. Assembly: 14"x14"	Each	34
Seismic Isolation Brg. Assembly: 18"x18"	Each	58
Seismic Isolation Brg. Assembly: 20"x20"	Each	6
Seismic Isolation Brg. Assembly: 21"x14"	Each	4
Seismic Isolation Brg. Assembly: 22"x13"	Each	4

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" & open holes 1 1/8" & 1 1/4" unless otherwise noted.
 The color of the vinyl finish coat shall be Munsell No. 7.5 G 4/8 Intermediate 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 primed 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 Electric 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 structures have been taken from existing plans and are subject to normal 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 seal 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 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.

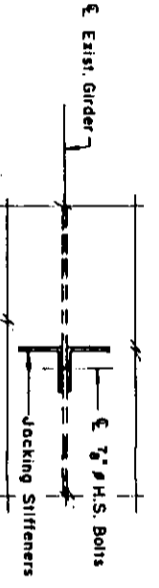
DESIGN STRESSES

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)

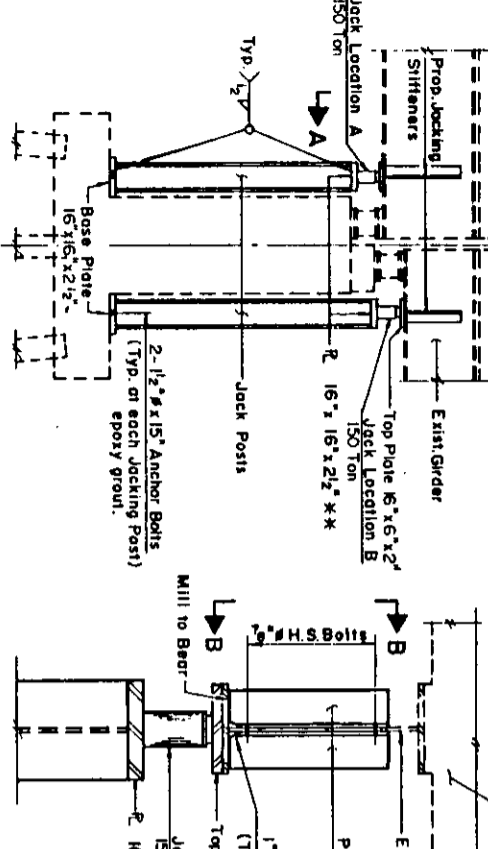
DESIGN SPECIFICATIONS

AASHTO 1989 Spec with 1990 B 1991 Interims.
 FHWA Report No. FHWA/RD-83/007
 Seismic Retrofitting Guidelines for Highway Bridges, December, 1983.

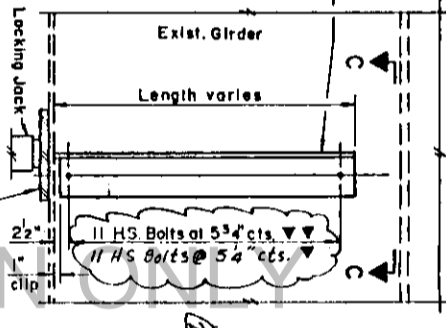
VIEW C-C



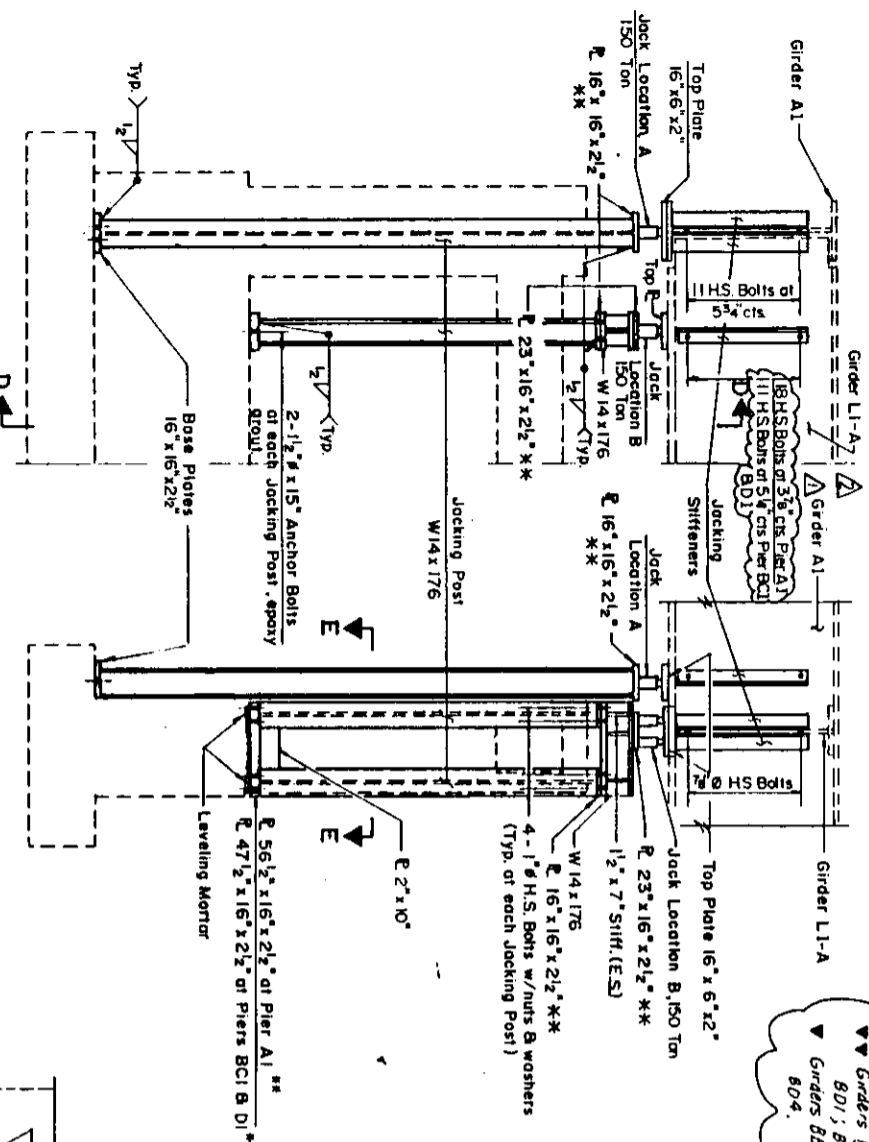
SECTION A-A



SECTION B-B



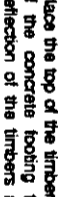
VIEW D-D



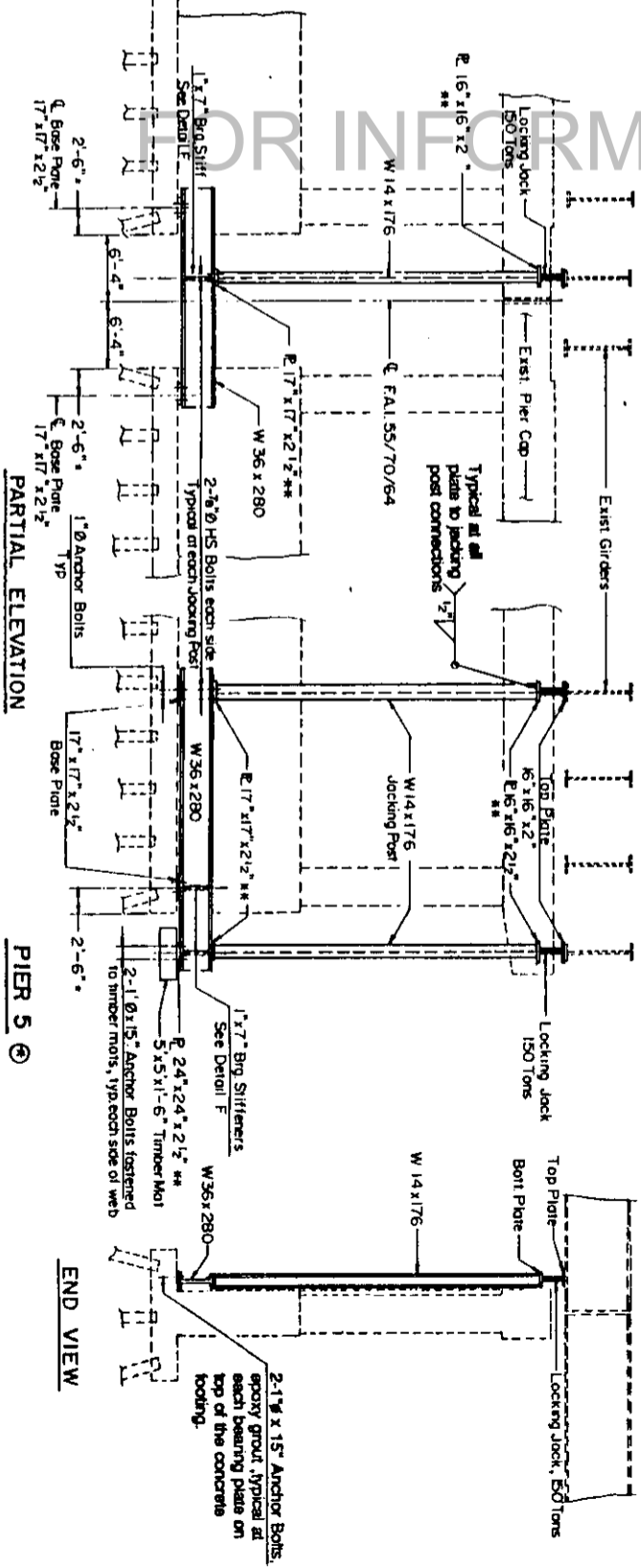
VIEW E-E



SECTION E-E



PARTIAL ELEVATION



PIER 5

END VIEW



GENERAL NOTES & BILL OF MATERIALS

FAI 55/70/64
 SEC. 82-3HV8-2R-2-1
 ST. CLAIR COUNTY

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 base 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 290 beam and the 17" x 17" x 2 1/2" plates after the minimum soil pressure under the mat is obtained.

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

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

HSIONG ASSOCIATES LTD
 DESIGNED SKL. CHECKED GJG.
 :SLAW RHH D.T.E. NO. H-120

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.

AS REVISED

Revised 5-2-92 GJG
 A Revised 5-2-92 PMF

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 Marsteel 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 the Elastic Bearing Assembly shall conform to the requirements of AASHTO M 223 Grade 50 Reinforcement bars shall conform to the requirements of AASHTO M-51, M-42, or M-53 Grade 60.
 Plan dimensions and details relative to existing structures have been taken from existing plans and are subject to normal 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 prices 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 pads, shall be provided for each bearing in addition to all other pads 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 Restainers	Lm Ft	712.3
Concrete Barrier, Special	Lm Ft	712.3
Longitudinal Joint Seal	Lm Ft	22
Seismic Isolation Brg. Assembly: 13" x 15"	Each	34
Seismic Isolation Brg. Assembly: 14" x 14"	Each	58
Seismic Isolation Brg. Assembly: 18" x 18"	Each	6
Seismic Isolation Brg. Assembly: 20" x 20"	Each	4
Seismic Isolation Brg. Assembly: 21" x 14"	Each	4
Seismic Isolation Brg. Assembly: 22" x 13"	Each	4

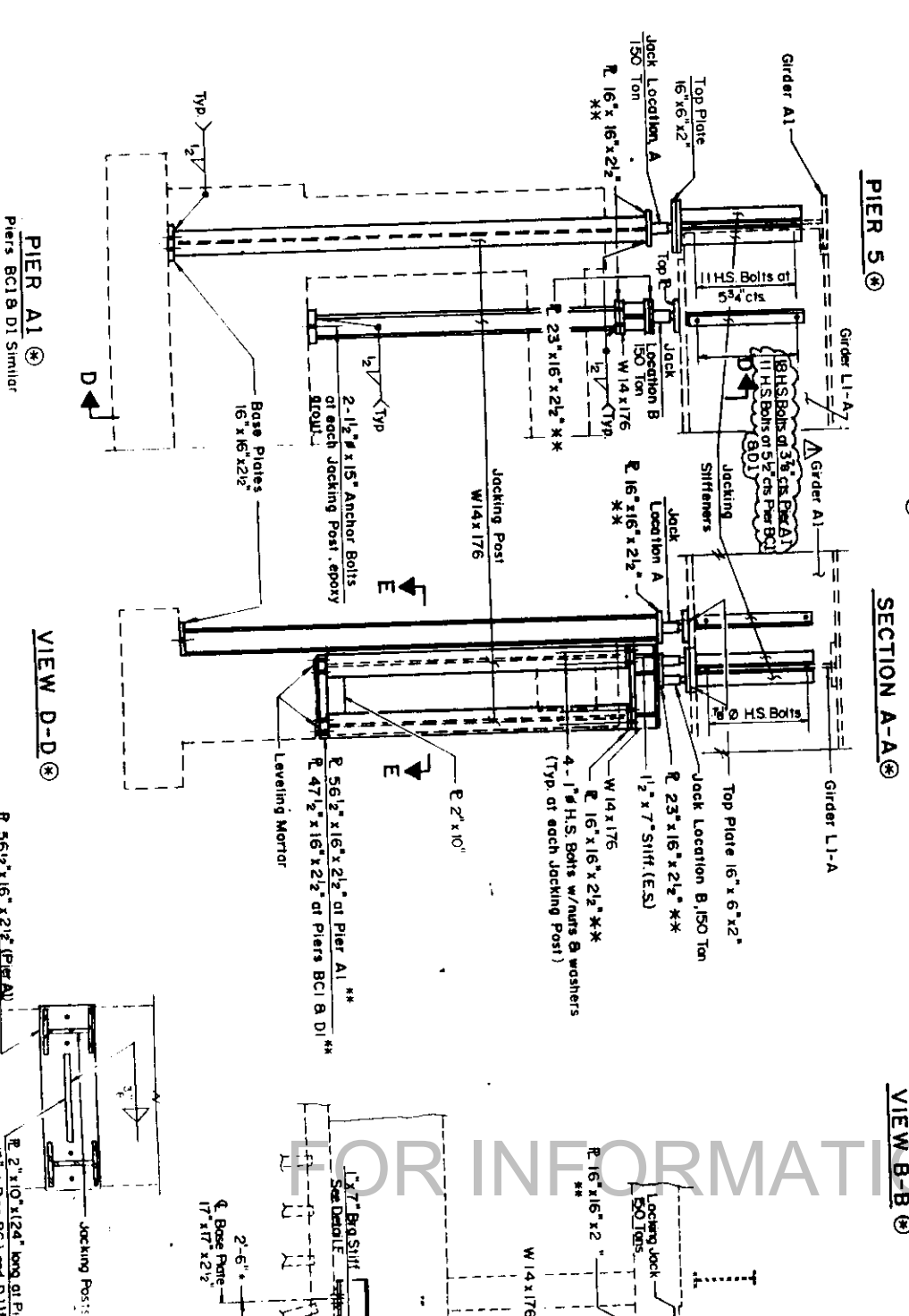
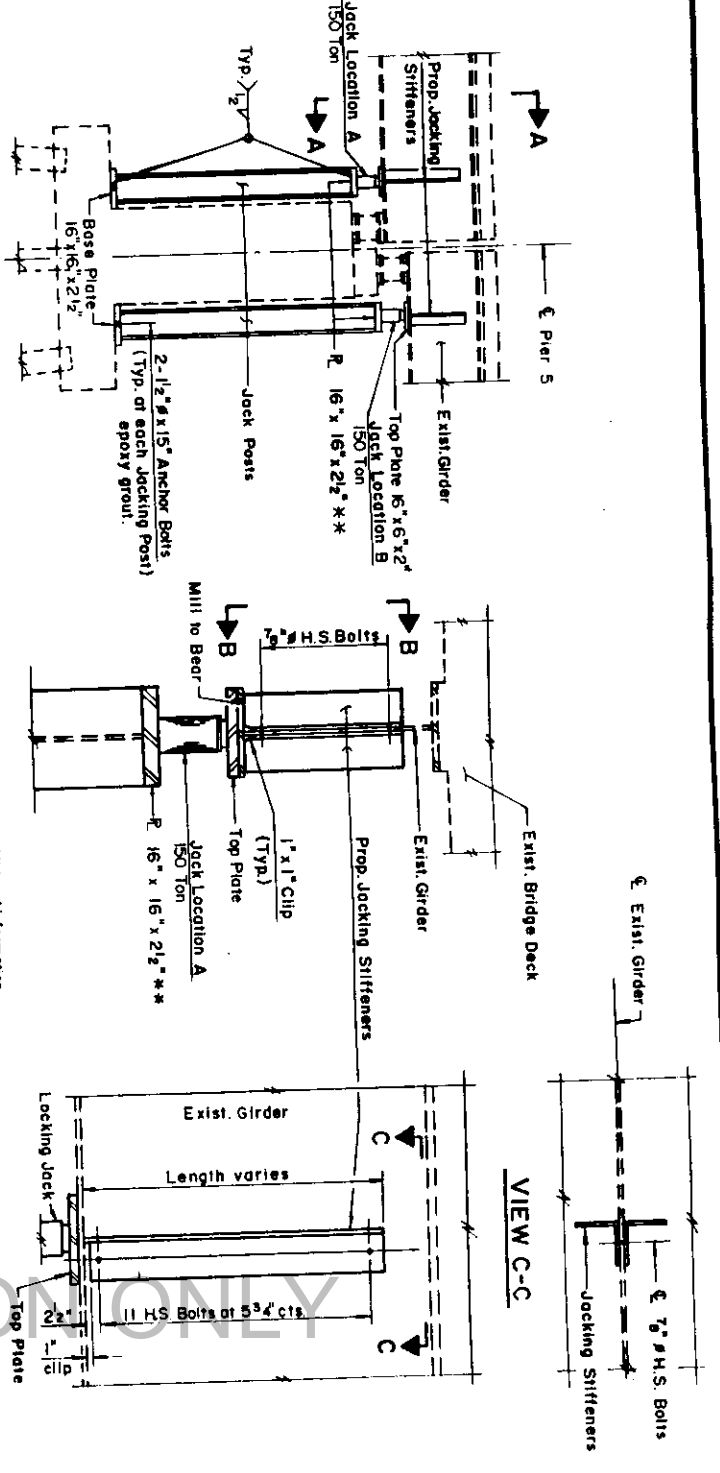
DESIGN STRESSES

$f_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 35,000$ 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.



PARTIAL ELEVATION

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 ensure 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 mats is obtained.

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

GENERAL NOTES & BILL OF MATERIALS

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

HSIONG ASSOCIATES LTD.
 DESIGNED: SKL CHECKED: GJG
 DRAWN: RHH DATE NO. H-120

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.

AS REVISED

Revised 5-12-92 on JG
 Add'd 9-15-91 WMP

PROJECT NO.	SECTION	QUANTITY	TOTAL
FAL 70	*	ST CLAIR	50 / 50.2
NO. SHEETS	NO. 1	TOTALS	INCHES
*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". The color of the paint or lacquer. 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 of 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. Assembly shall conform to the requirements of AASHTO M 31, M-42, or M-53 Grade 60. 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 structures have been taken from existing plans and are subject to normal 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

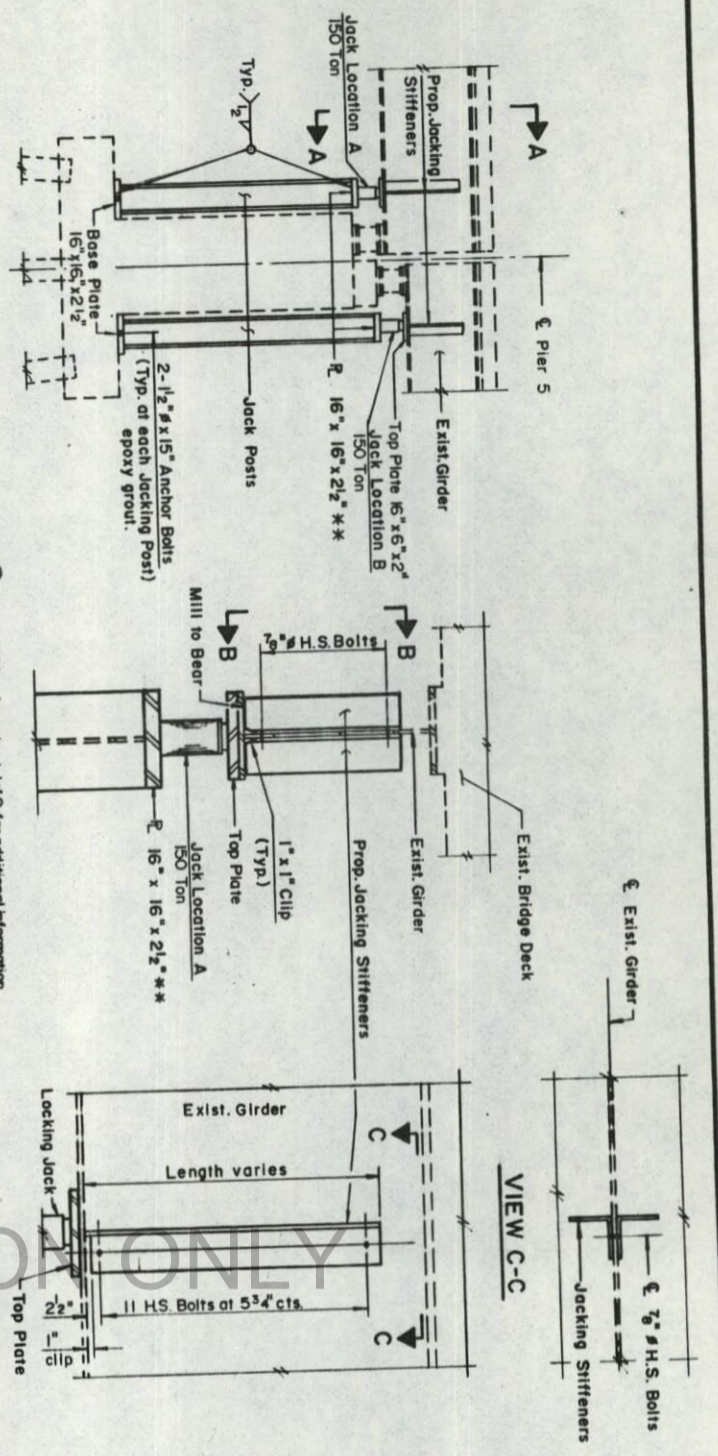
ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Lbs.	88,160
Jack and Remove Existing Bearings	Each	128
Protective Coat	Sq Yds	615
Girder Restainers	Each	42
Concrete Barrier, Special	Ln. Ft.	712.3
Longitudinal Joint Seal	Ln. Ft.	712.3
Seismic Isolation Brg. Assembly: 13" x 13"	Each	22
Seismic 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

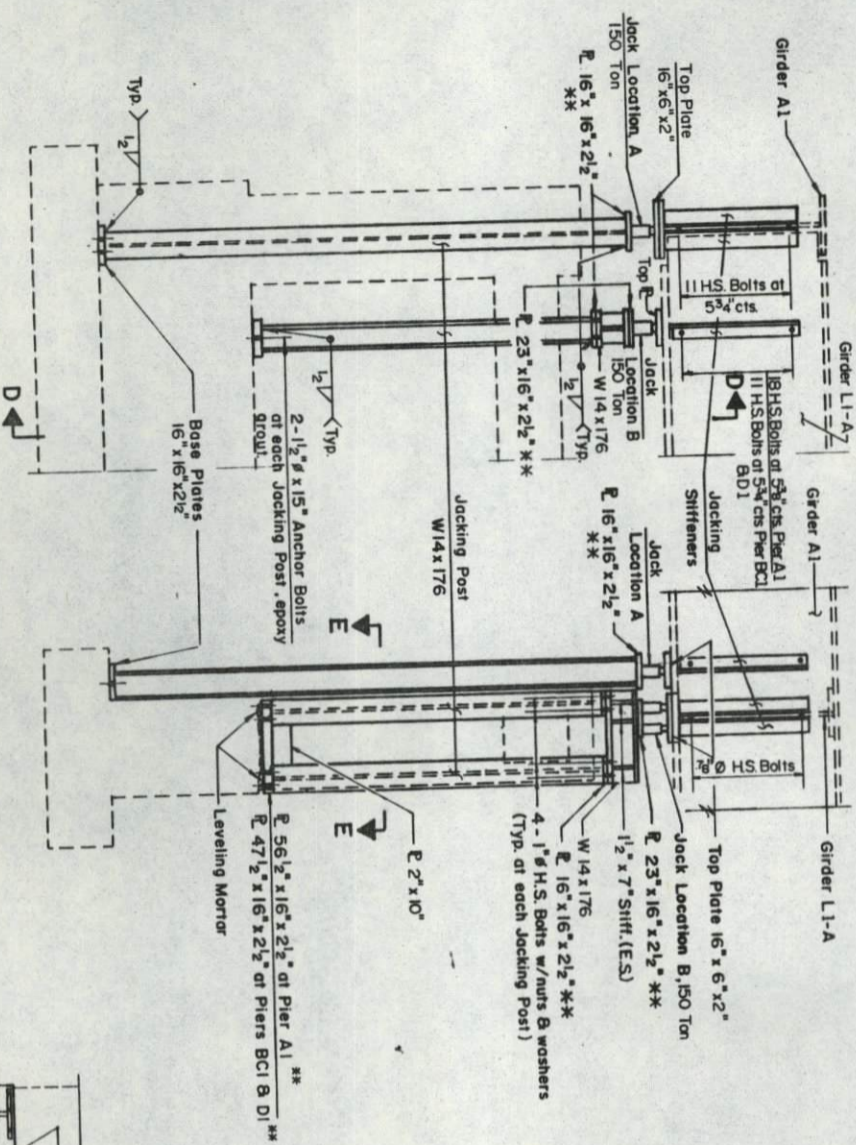
$f_c = 3,500$ psi (Reinforcement)
 $f_y = 60,000$ psi (M 183)
 $f_y = 36,000$ psi (M 223)
 $f_y = 50,000$ psi (M 223)

DESIGN SPECIFICATIONS

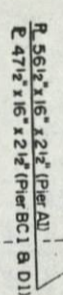
AASHTO 1989 Specs. with 1990 & 1991 Interims.
 FHWA Report No. FHWA/RD-83/007
 Seismic Retrofitting Guidelines for Highway Bridges, December, 1983.



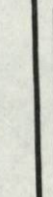
PIER 5



VIEW D-D



SECTION E-E



PARTIAL ELEVATION

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 1/4 in. 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 mats is obtained.

PIER 5

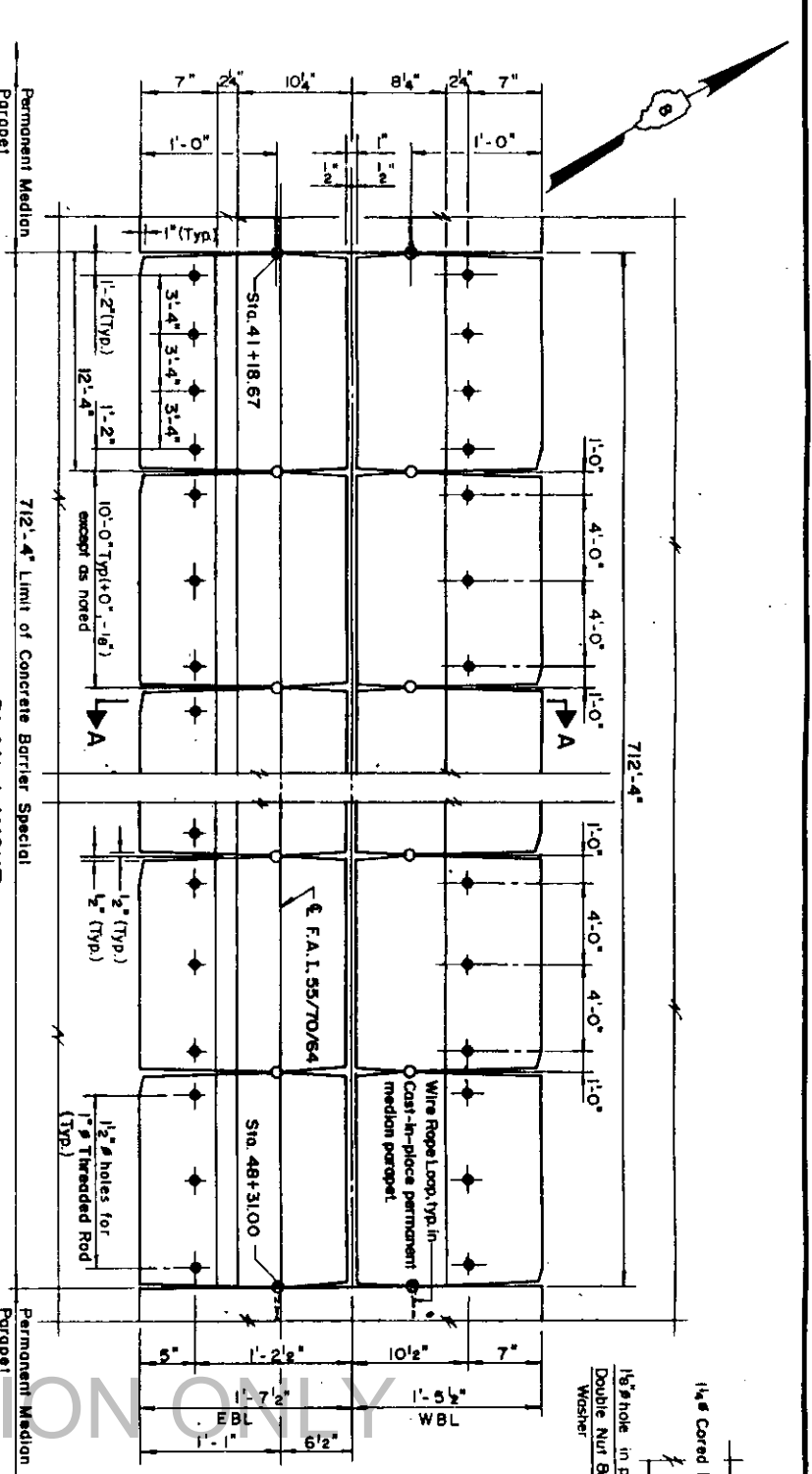
Showing jacking of girders on contoured portion of Pier Cap. For Jacking Stiffeners see Sec. A-A.

GENERAL NOTES & BILL OF MATERIALS
 FAL 55/70/64
 SEC. 82-3HVB-2R-2-3-1
 ST. CLAIR COUNTY

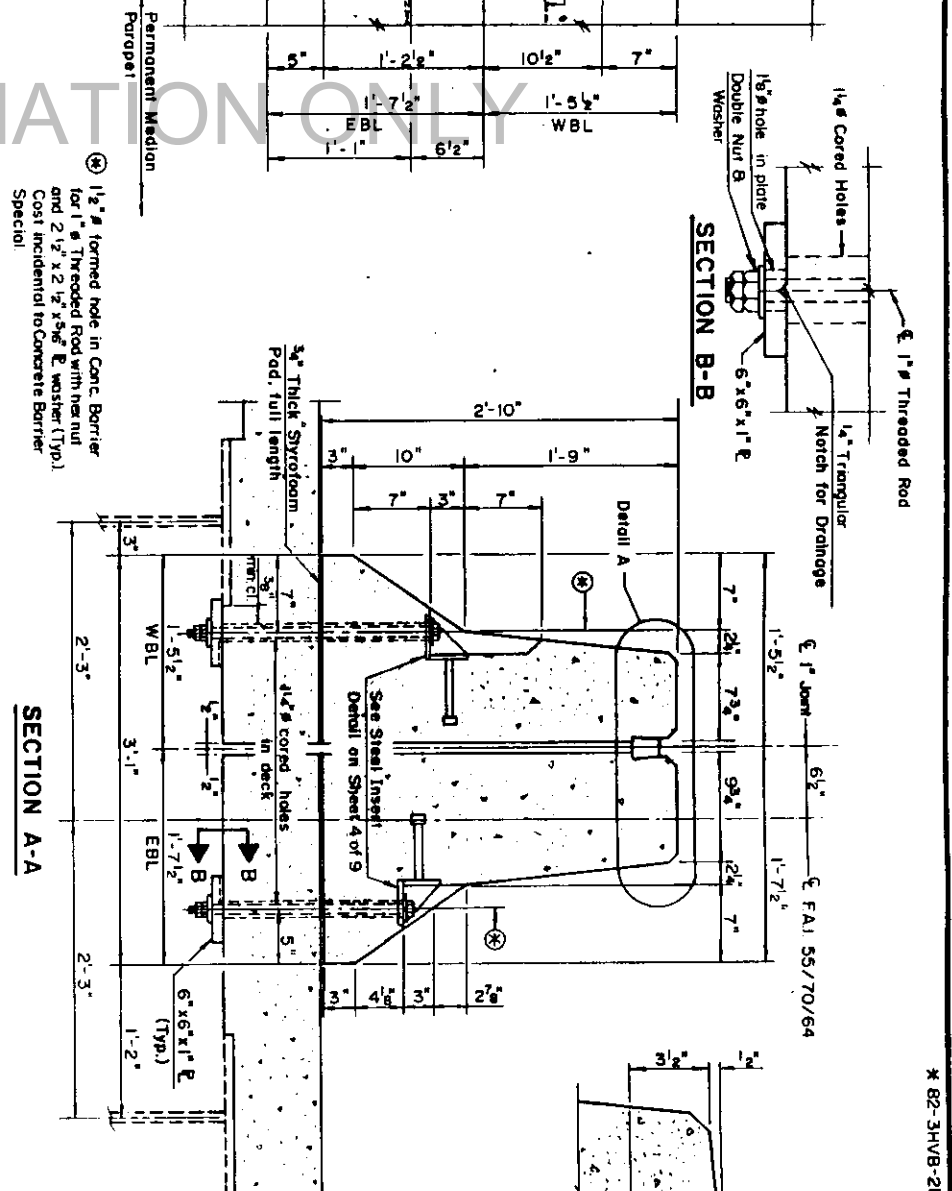
HSIONG ASSOCIATES LTD.
 DESIGNED: SKL. CHECKED: GJS.
 DRAWN: RHH. DATE: NO. H-120

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.

PROJECT NO.	82-3HVB-2R-2-1
SECTION	ST. CLAIR
DATE	105/105.34
SHEET NO.	3 OF 9



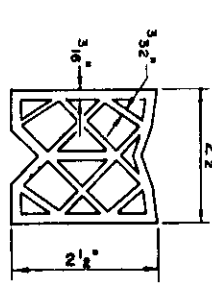
PLAN LAYOUT



SECTION A-A

SECTION B-B

① 1/2" formed hole in Conc. Barrier for 1" # Threaded Rod with nut and 2 1/2" x 2 1/2" #5E Washer (Typ.) Cost incidental to Concrete Barrier Special.

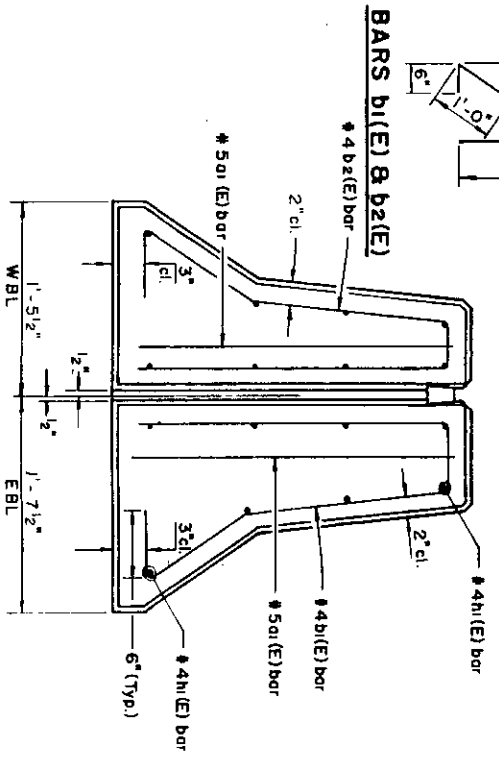


DETAIL A

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

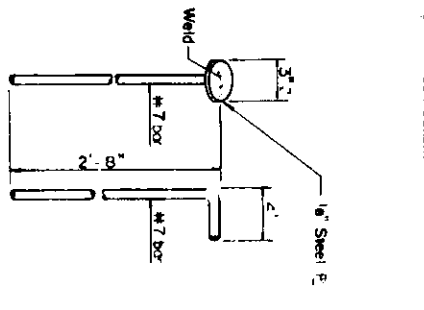
GENERAL NOTES

- The threaded rods, nuts, washers, and plates shall be mechanically galvanized in accordance with the requirement of AASHTO M 296, 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 accordance 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 500 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 joined 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.

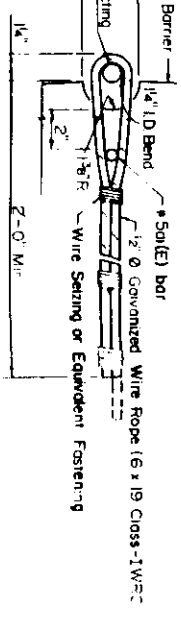


SECTION A-A Showing Bar Reinforcement

ELEVATION (Showing Pin Connection)

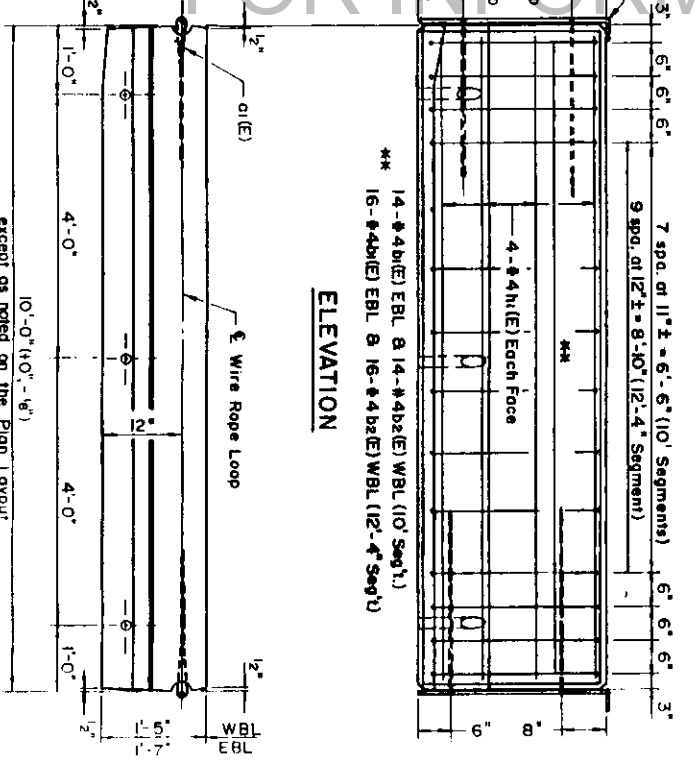


ALTERNATE CONNECTING PIN



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

PLAN



ELEVATION

BILL OF MATERIAL

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

AS REVISE

CONCRETE BARRIER SPECIAL

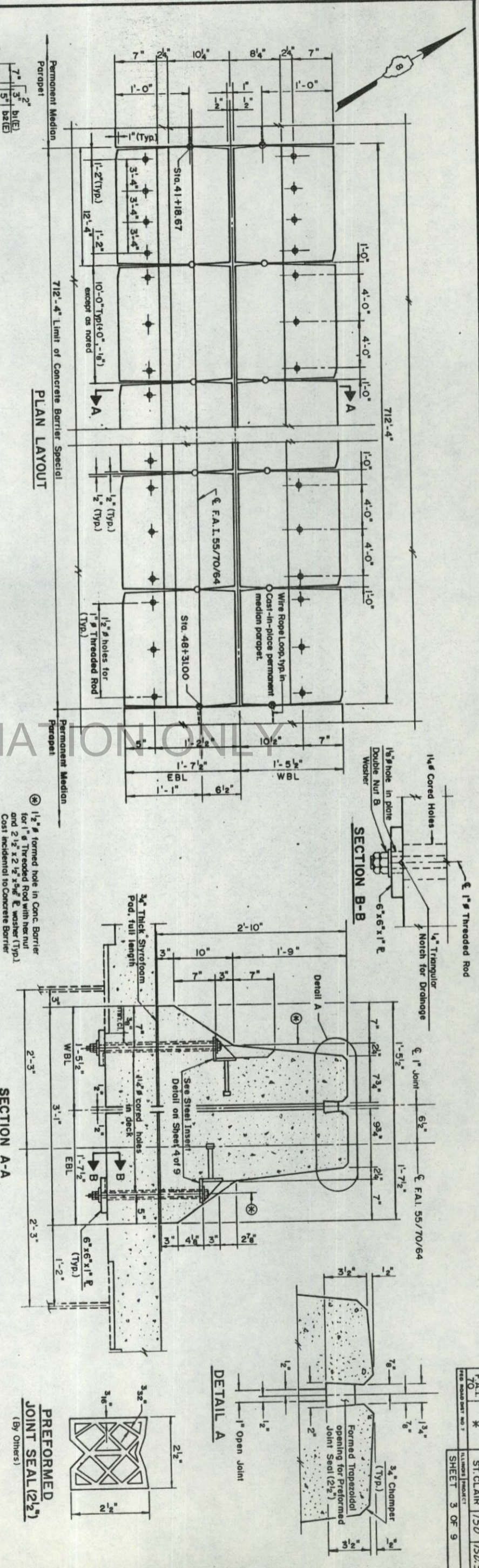
FA.I. 50/70/64
SEC. 82-3HVB-2R-2-1
ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD.
DESIGNED SKL. CHECKED G.L.G.
DRAWN R.H.H. DATE NO. H-120

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

Add 3-5-91 mmt

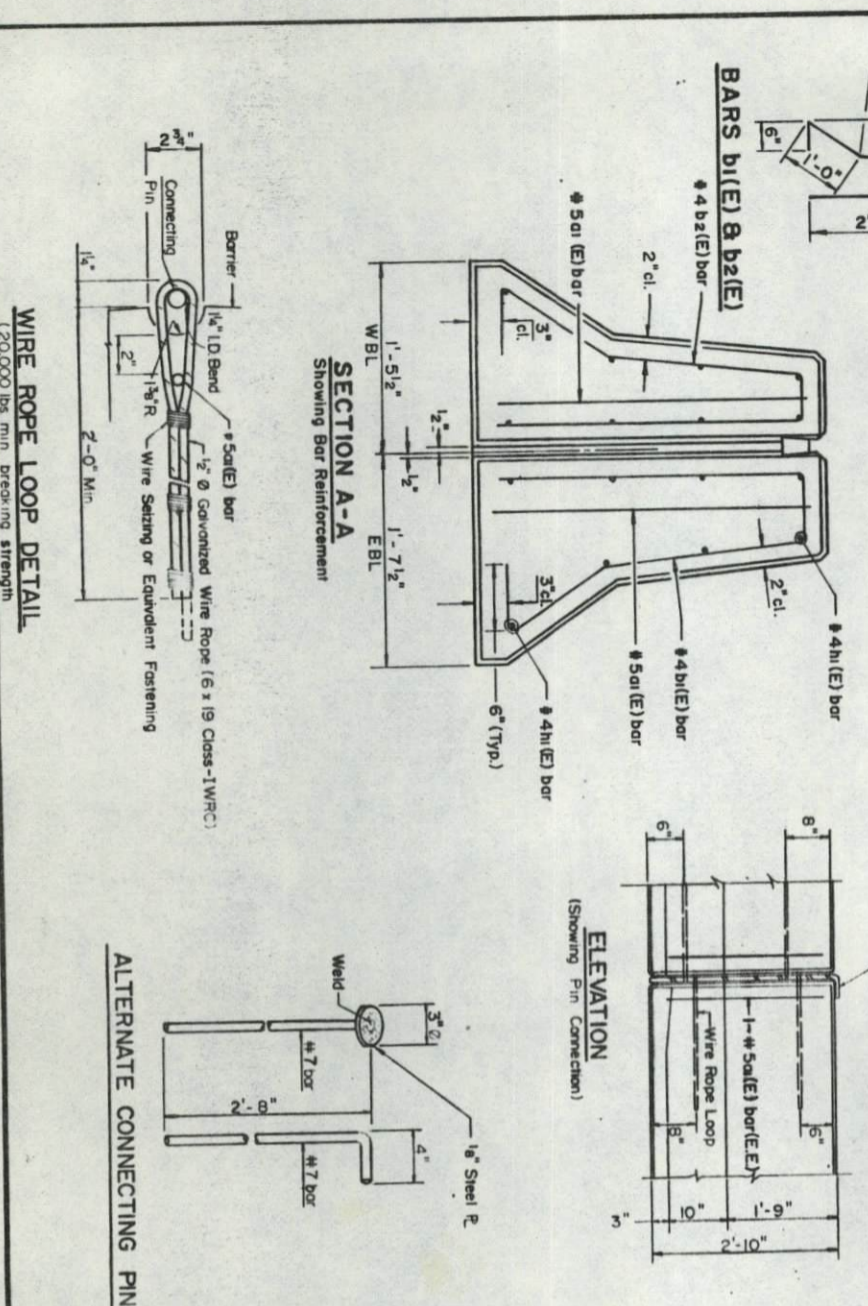
PROJECT NO.	82-3HVB-2R-2-3
SECTION	K
DATE	F.A.I. 50/70/64
DESIGNED BY	SKL
CHECKED BY	G.J.G.
DATE	
NO.	H-120
COMPANY	ST. CLAIR
SCALE	1/50
TULSA PRODUCT	150.3
SHEET	3 OF 9



⊗ 1/2" formed hole in Conc. Barrier for 1" Threaded Rod with nut and 2 1/2" x 2 1/2" x 5/8" E washer (Typ.) Cost incidental to Concrete Barrier Special.

GENERAL NOTES

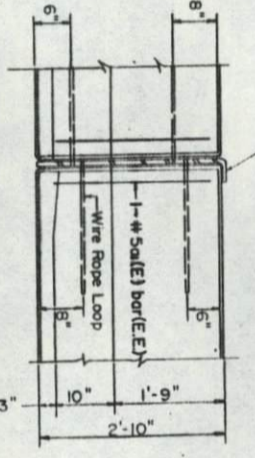
1. The threaded rods, nuts, washers, and plates shall be mechanically galvanized in accordance with the requirement of AASHTO M 296, Class 50.
2. The nut and threaded rod shall not protrude above the surface of the barrier. Cover the top of the threaded rod and nut with mastic to exclude contaminants.
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 Coat shall be applied to all surfaces as specified in Section 500 of the Standard Specifications.
6. 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.
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.



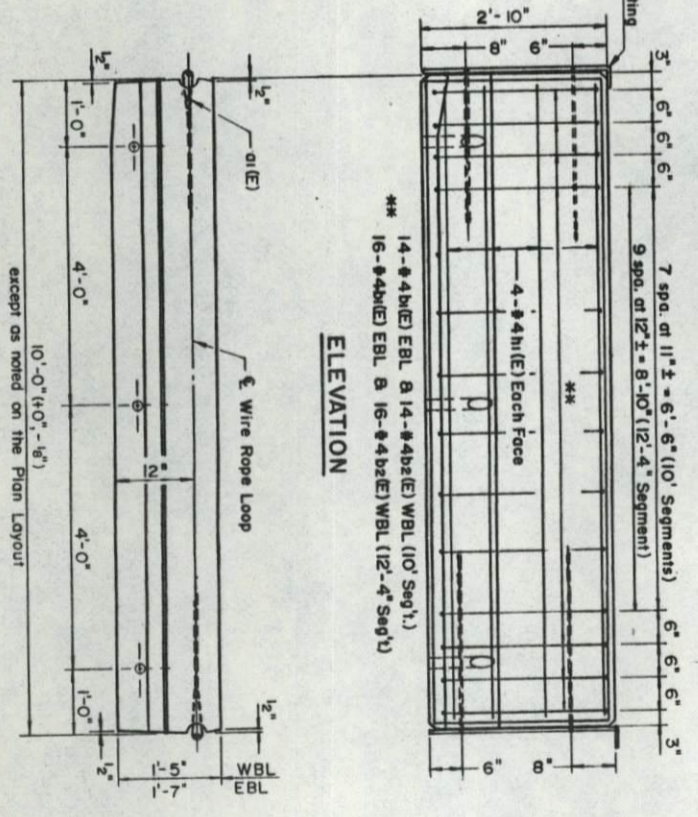
WIRE ROPE LOOP DETAIL

(20,000 lbs min breaking strength)

ELEVATION



ELEVATION



BILL OF MATERIAL

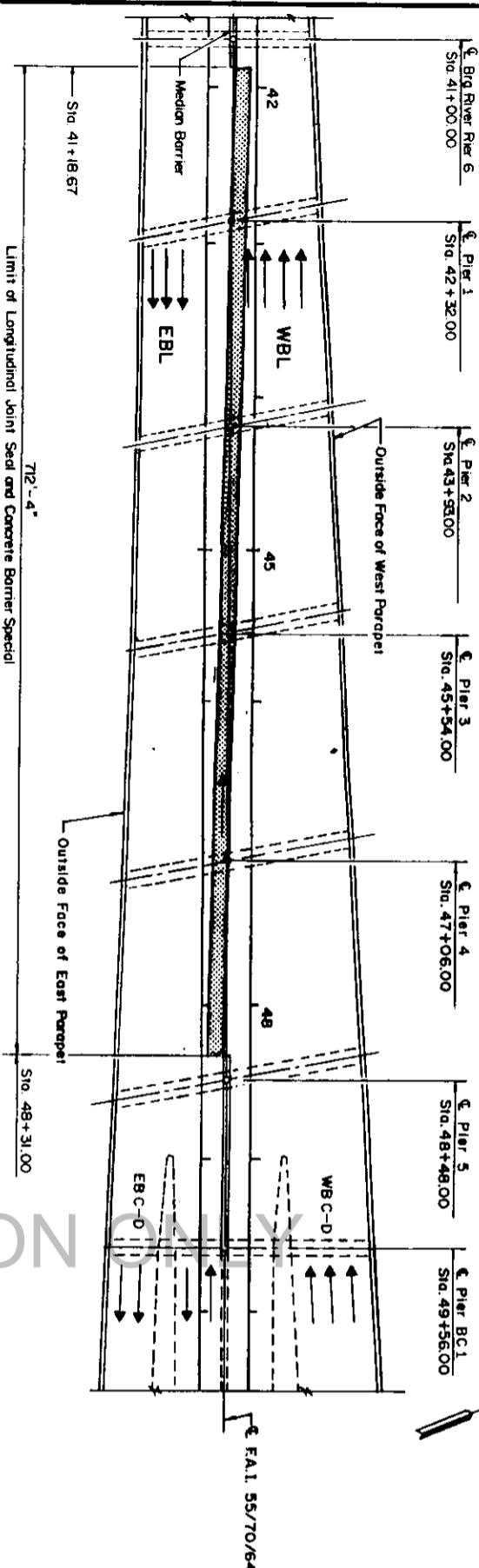
ITEM	UNIT	QUANTITY
Concrete Barrier Special ①	Lin Ft	712.3

CONCRETE BARRIER SPECIAL

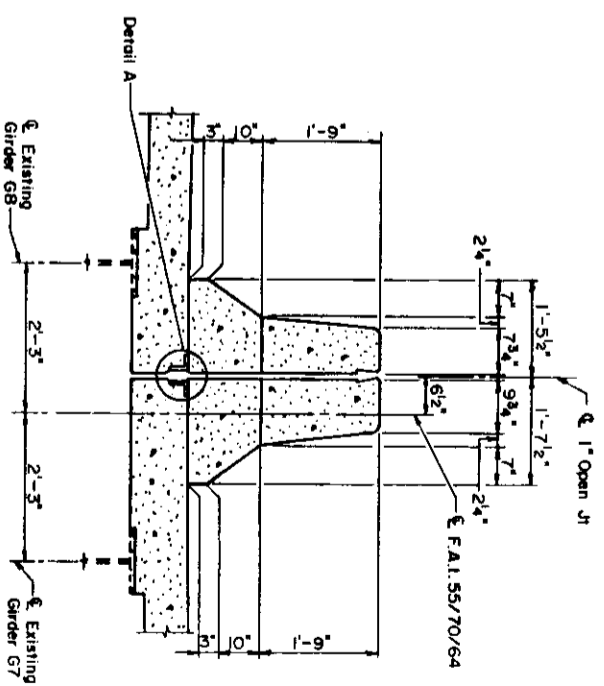
F.A.I. 50/70/64
SEC. 82-3HVB-2R-2-3-1
ST. CLAIR COUNTY

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

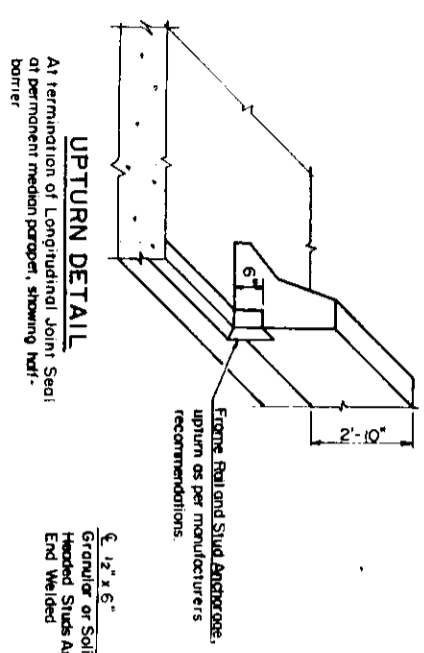
FOR INFORMATION ONLY



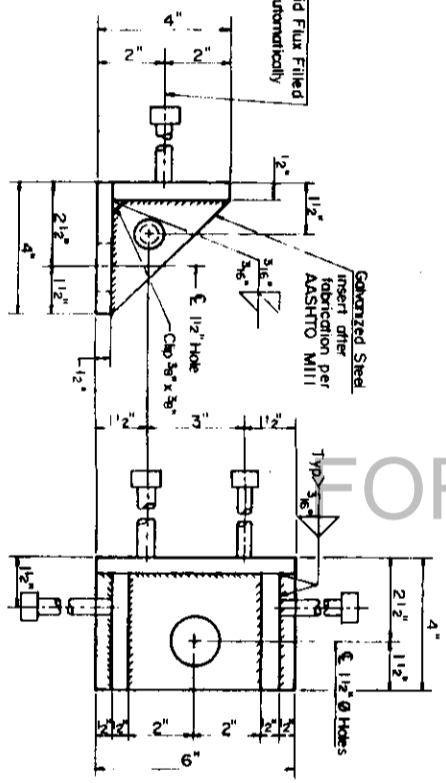
DECK PLAN



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.

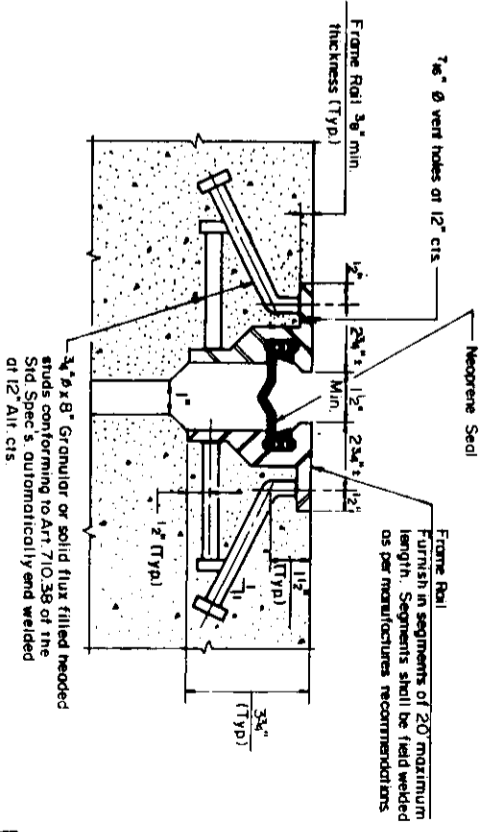


END VIEW

STEEL INSERT DETAIL

PLAN VIEW

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.

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

AS REVISED

ITEM	UNIT	QUANTITY
Longitudinal Joint Seal	Ln Ft	72.3

BILL OF MATERIAL

LONGITUDINAL JOINT SEAL
FA.1 55/70/64
SEC. 82-3HVB-2R-2(1)
ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD
DESIGNED SKL
DRAWN R.H.H.
DATE
NO. H-120

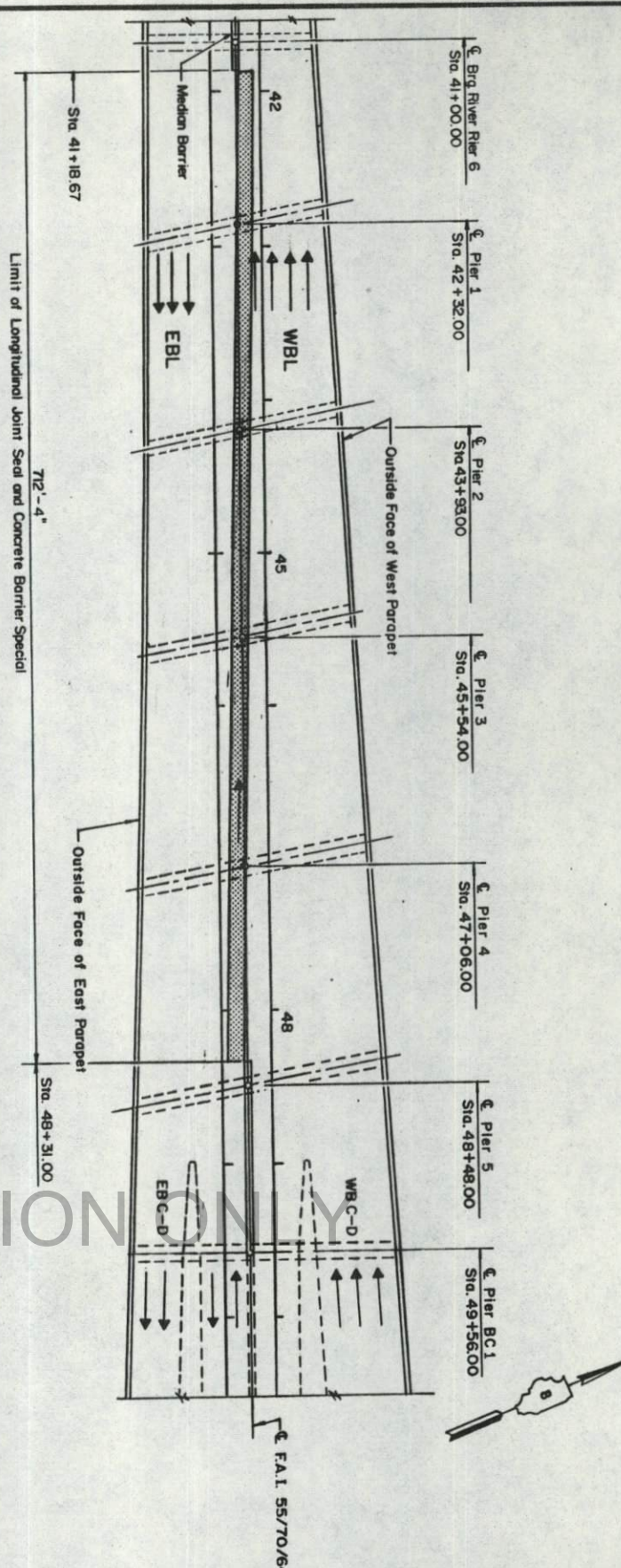
Revised 5-12-92 G.J.G

PROJECT NO.	SECTION	COUNTY	SHEET
FA.1	*	ST. CLAIR	4 OF 9
DATE	PROJECT	NO.	
	105	10541A	

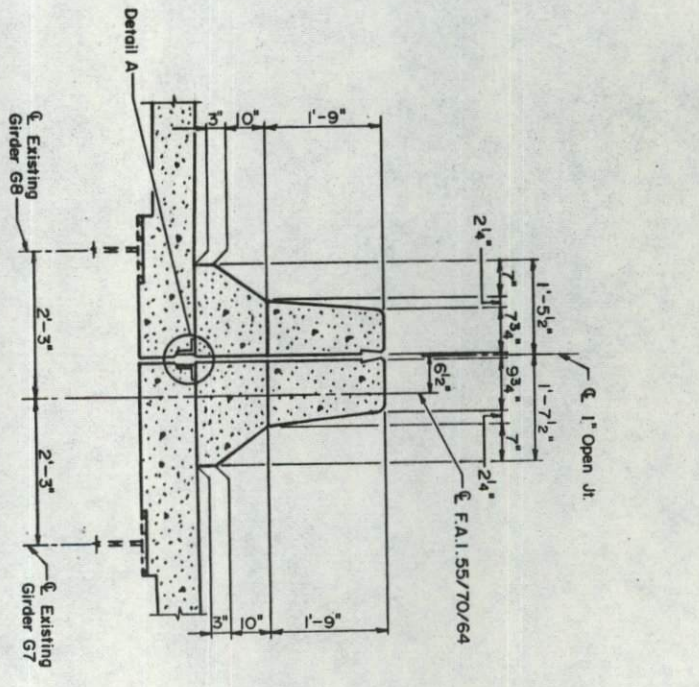
* 82-3HVB-2R-2-3

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAI	*	ST. CLAIR	150	150/4
PROJECT NO. 1	SHEET 4 OF 9			

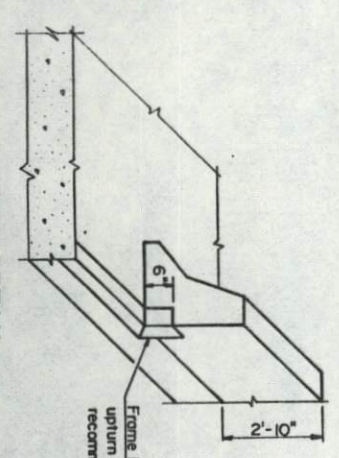
105-105.1



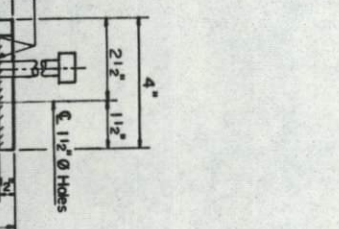
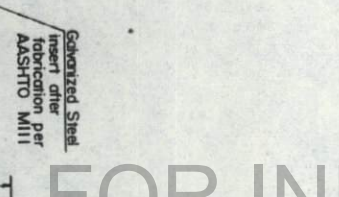
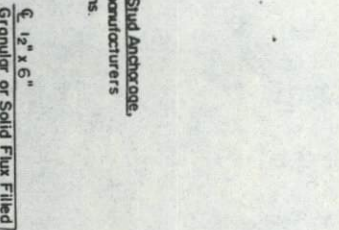
DECK PLAN



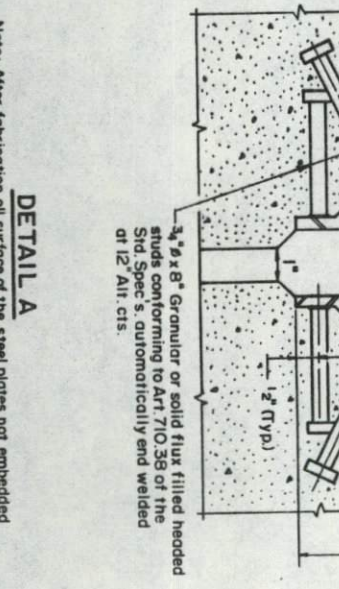
SECTION THRU MEDIAN
(Between Sta. 41+18.67 to Sta. 48+31.00)



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



END VIEW STEEL INSERT DETAIL
PLAN VIEW



DETAIL A
Note: After fabrication all surfaces 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	Ln. Ft.	712.3

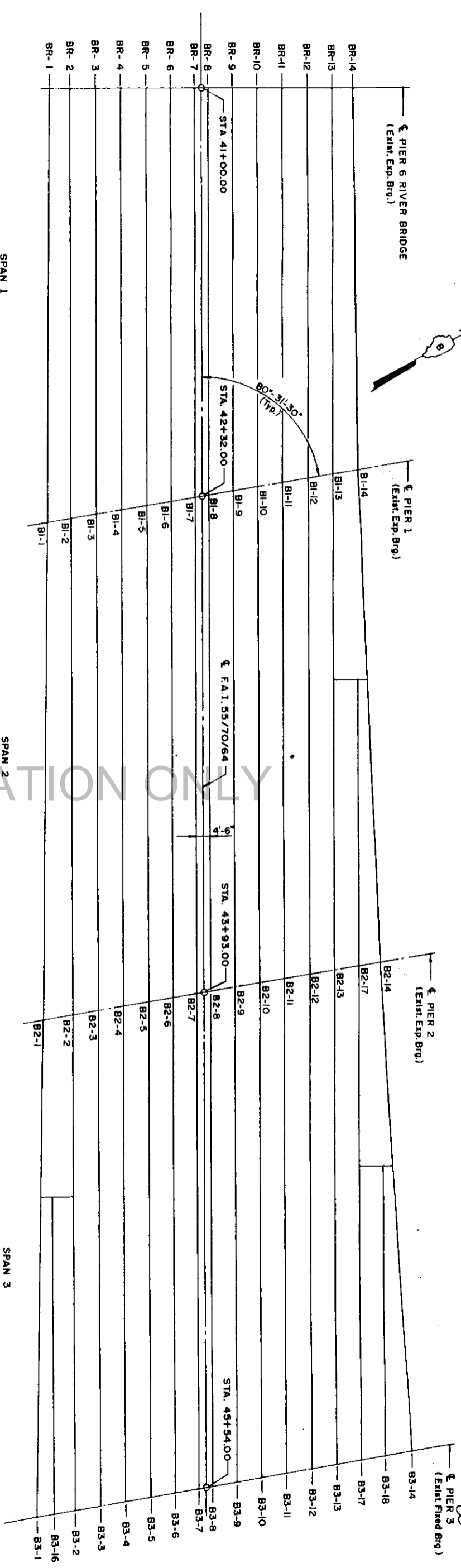
MANUFACTURE	FRAME RAIL	SEAL TYPE
D.S. Brown	SSCM	L-300
Watson Bowman, Inc.	Type M Extrusion	SE-300

LONGITUDINAL JOINT SEAL
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.
DATE: NO. H-120
DRAWN: R.H.H.

FOR INFORMATION ONLY

PROJECT NO.	SECTION	COUNTY	SHEET NO.
FAI 105	ST. CLAIR	MISSA	105
PROJECT NO.	PROJECT	PROJECT	PROJECT
*82-3HV/B-2R-2(1)			SHEET 5 OF 9



BEARING REACTION TABLE

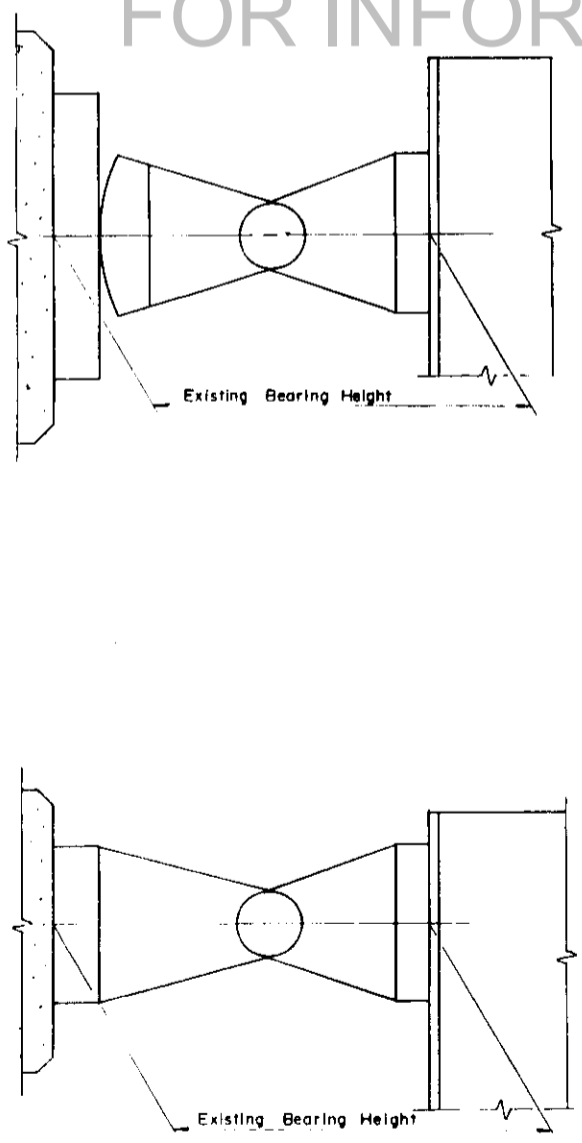
	BR-1 to BR-14	BI-1 to BI-12	BI-13	BI-14	B2-1	B2-2	B2-3 to B2-12	B2-13	B2-14	B3-1 to B3-13	B3-14
Exist. Brg. Height	1'-6 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-4 3/8"	1'-4 3/8"
DL(K)	76	244	254	274	312	254	237	241	288	223	283
LL(K)	53	109	116	130	166	124	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)18-11-3.25 (1)	(S)20-11-3.00 (1)	(S)18-11-3.00 (1)	(S)18-11-3.00 (5)	(S)18-11-3.00 (1)	(S)20-11-3.25 (1)	(S)18-11-4.50 (8)	(S)20-11-4.50 (1)
											E.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

BEARING LOCATION PLAN



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

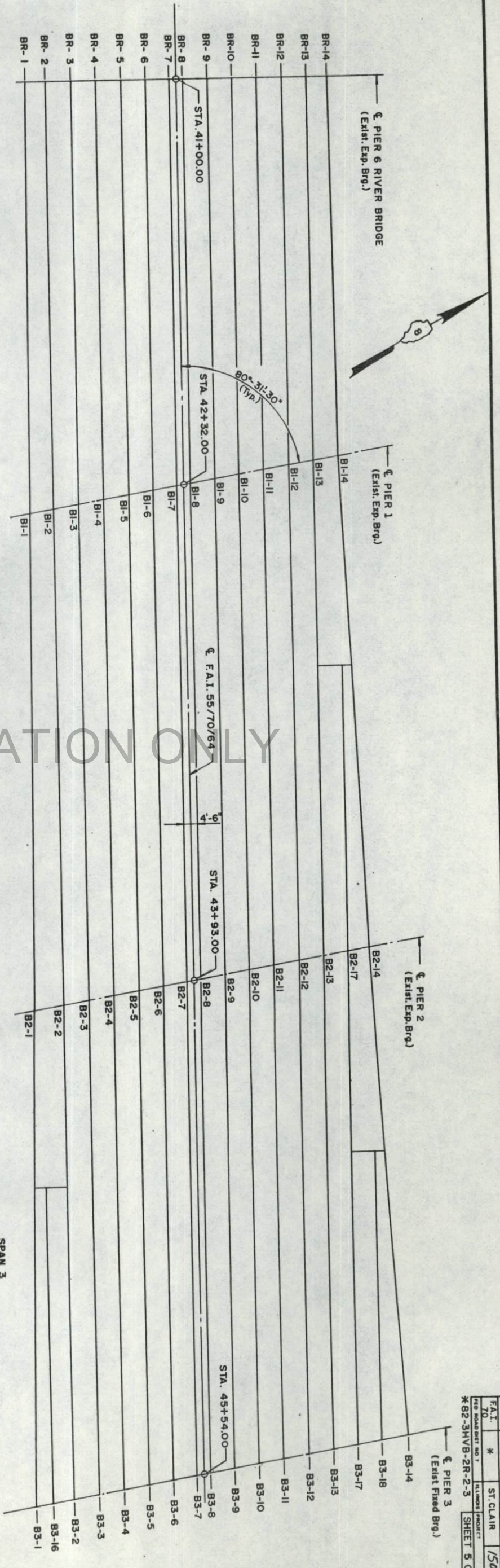
EXISTING FIXED BRG.
Pier 3

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

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

HSIONG ASSOCIATES LTD.
DESIGNED S.K.L. CHECKED G.J.G. NO. H-120
DRAWN R.H.H. DATE
Revised 5-12-92 G.J.G.
Added 9-15-91 Jmp

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET NO.
FAI 70	#	ST. CLAIR	150
FILE NO. 82-3HV-B-2R-2-3	PROJECT	SHEET	5 OF 9



BEARING REACTION TABLE

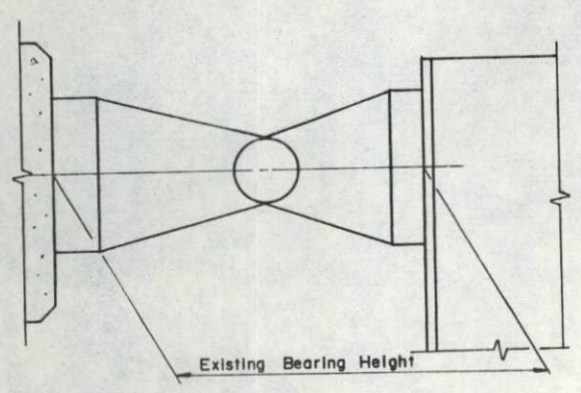
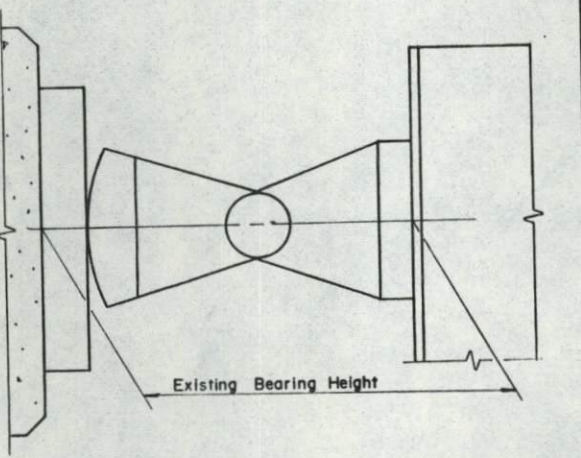
EXIST. BRG. HEIGHT	BR-1 to BR-14	BI-1 to BI-12	BI-13	BI-14	B2-1	B2-2	B2-3 to B2-12 & B2-17	B2-13	B2-14	B3-1 to B3-13 & B3-16 to B3-18	B3-14
1'-6 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-4 7/8"	1'-4 7/8"
DL (k)	76	244	254	274	312	254	237	241	288	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) 18-11-3.25 (7)	(S) 20-11-3.00 (7)	(S) 18-11-3.00 (7)	(S) 18-11-3.00 (7)	(S) 18-11-3.00 (7)	(S) 20-11-3.25 (7)	(S) 18-11-4.50 (8)	(S) 20-11-4.50 (8)

** To Be Verified in Field before Ordering Materials

Definition of Bearing Type Designation (S) 14-11-2.75 (7)

- (3) : Square Bearing, (R) Rectangle
- 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

BEARING LOCATION PLAN

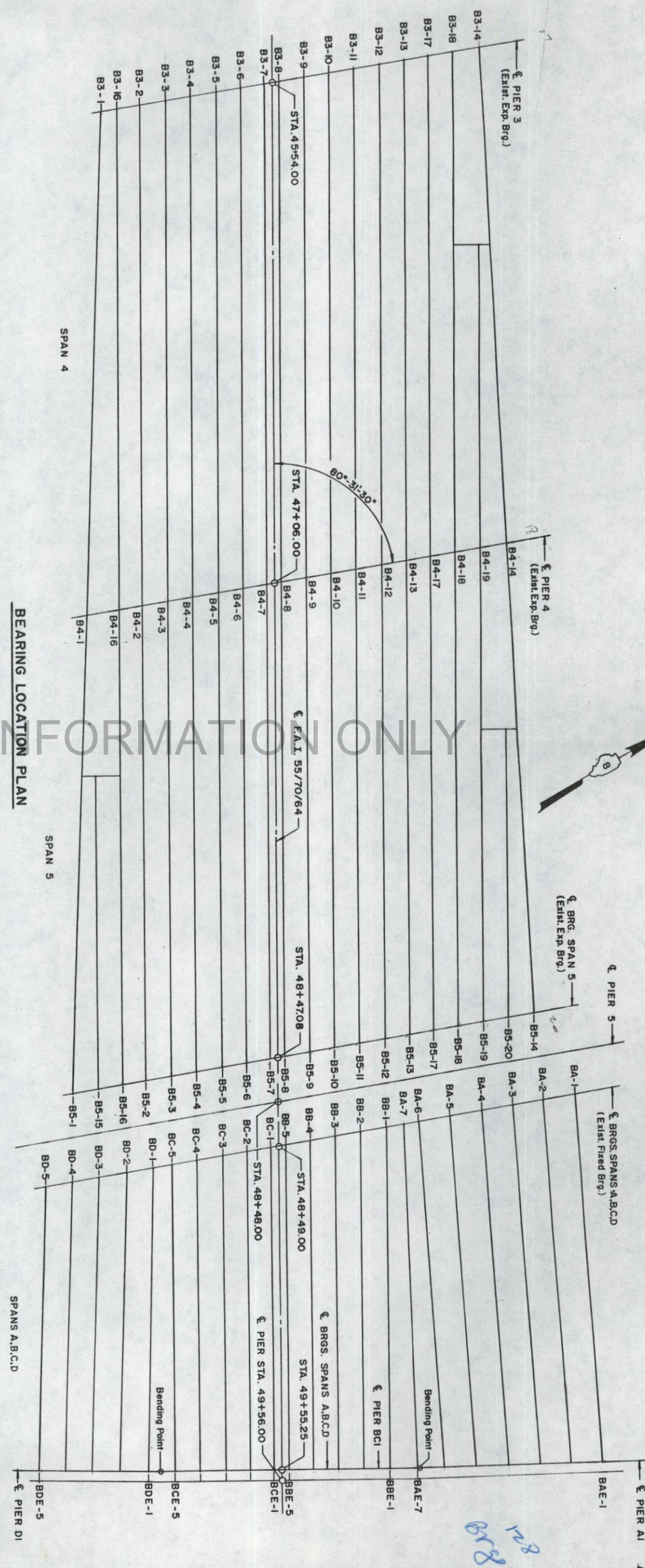


BEARING REACTION

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

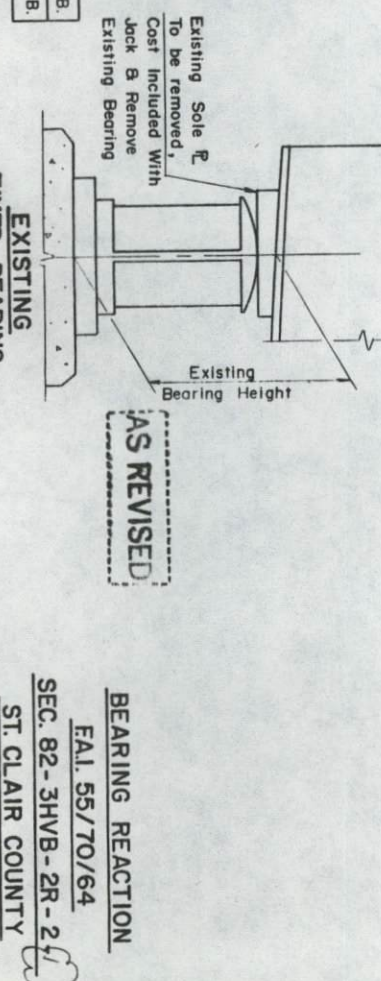
HSIONG ASSOCIATES LTD.
DESIGNED: S.K.L. CHECKED: G.J.G. NO. H-120
DRAWN: R.H.H. DATE

FOR INFORMATION ONLY



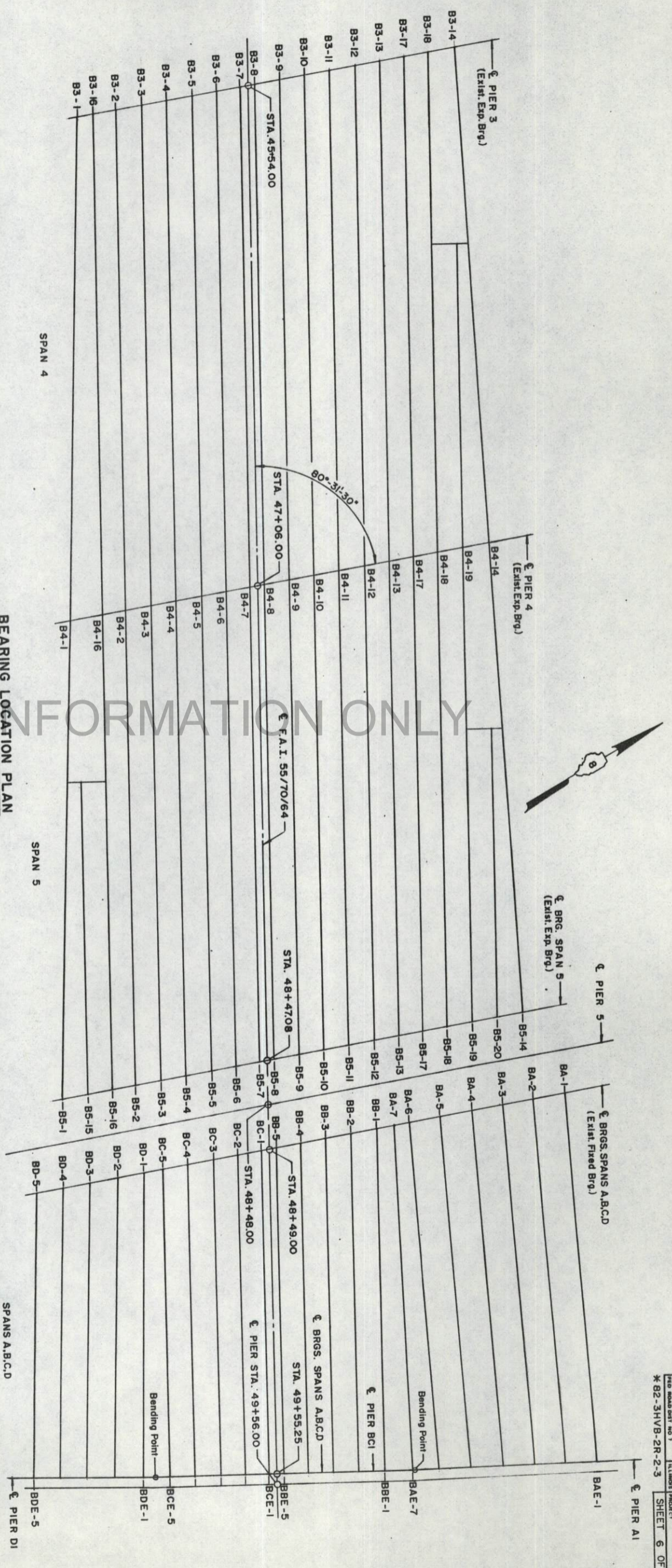
BEARING REACTION TABLE

EXIST. Brg. Height	B4-1	B4-2 to B4-13	B4-14	B4-16	B5-1 to B5-13	B5-14 to B5-20	B5-14	BA-1 to BA-7	BBI to BBS	BCEI to BCS	BDI to BDS	BAEI / BAET	BBEI / BBES	BCEI / BCES	BDEI / BDES
1'-7 3/4"	301	239	321	252	79	90	87	53	48	72	71	303	194	179	178
151	108	165	117	54	62	53	48	48	48	51	185	120	119	128	
452	346	486	370	133	152	140	125	119	119	123	488	314	298	306	
27	20	29	21	10	12	11	10	10	10	11	38	25	26	28	



*** To be Verified in Field Before Ordering Materials.

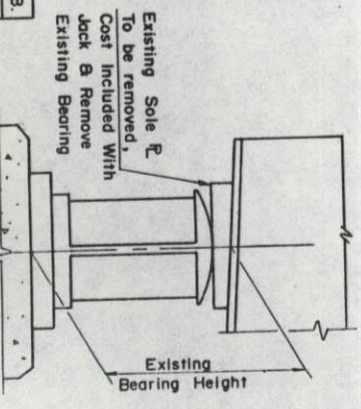
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
82-3HVB-2R-2-3	ST. CLAIR	ST. CLAIR	50	150.6
DATE	DESIGNED BY	CHECKED BY	SHEET 6 OF 9	
	ST. CLAIR	ST. CLAIR		



BEARING REACTION TABLE

Exist. Brg. Height	B4-1	B4-2 to B4-13	B4-14	B4-16	B5-1 to B5-13	B5-14	BA-1 to BA-7	BB-1 to BB-5	BC-1 to BC-5	BD-1 to BD-5	BAE-1 / BAE-7	BBE-1 / BBE-5	BCE-1 / BCE-5	BDE-1 / BDE-5
1'-7 3/8"	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)18-1-3.25 (S)18-1-3.00 (S)	(S)18-1-3.25 (S)18-1-3.00 (S)	(S)18-1-3.25 (S)18-1-3.00 (S)	(S)18-1-3.25 (S)18-1-3.00 (S)	(S)14-1-2.25 (S)14-1-2.25 (S)	(S)14-1-2.25 (S)14-1-2.25 (S)	(S)13-10-2.00 (S)13-10-2.00 (S)	(S)13-10-2.00 (S)13-10-2.00 (S)	(S)13-10-2.25 (S)13-10-2.25 (S)	(S)13-10-2.25 (S)13-10-2.25 (S)	(R)21-14-7-3.50 (R)21-14-7-3.50 (2)	(R)21-14-7-3.50 (R)21-14-7-3.50 (2)	(R)22-13-7-3.50 (R)22-13-7-3.50 (2)	(R)22-13-7-3.50 (R)22-13-7-3.50 (2)

BEARING LOCATION PLAN



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

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

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

*** To be Verified in Field Before Ordering Materials.

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

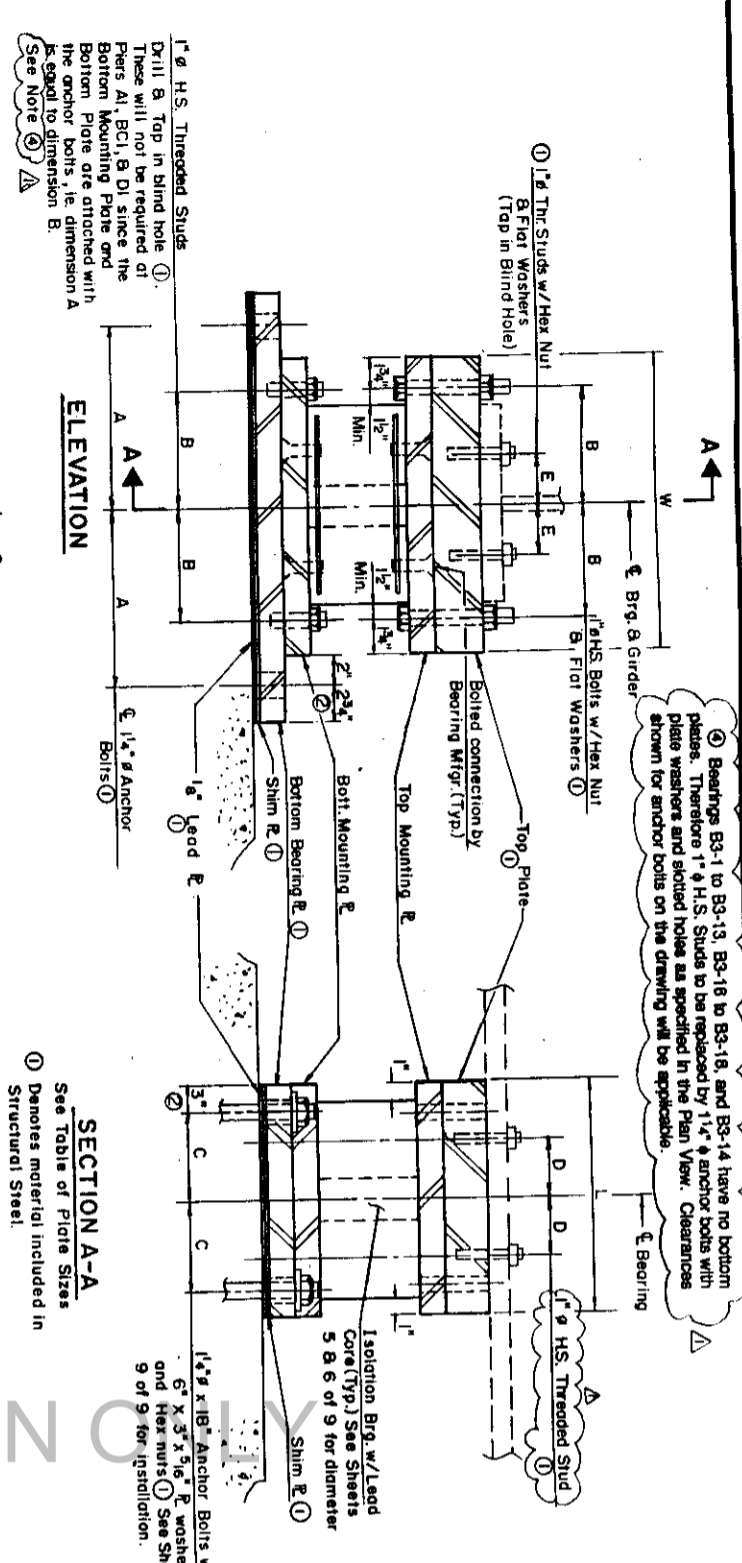
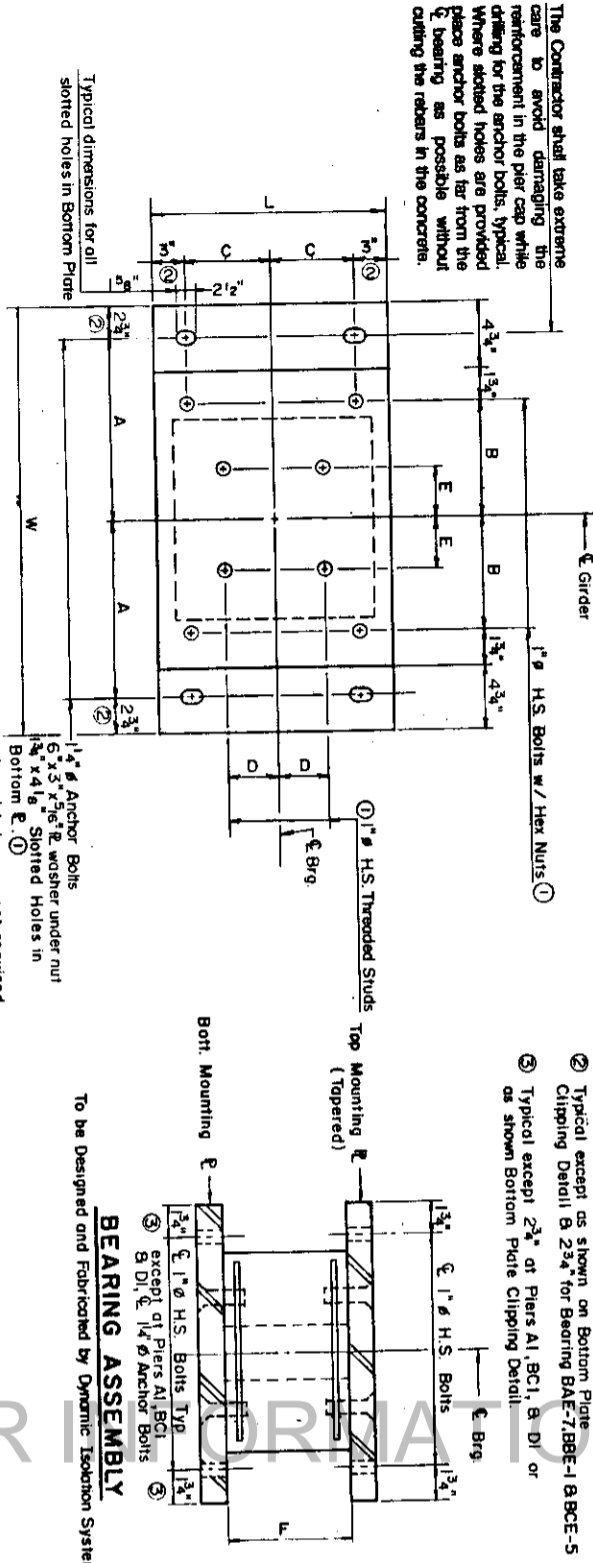


TABLE OF PLATES SIZES

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"x16-1/2"	24-1/2"x16"x1-1/2"	24-1/2"x16"x1-1/2"	34"x16"x2-3/8"
BR-1 to BR-13	18"x18"	24-1/2"x20"x3-9/8"	24-1/2"x20"x1-1/2"	24-1/2"x20"x1-1/2"	34"x20"x2-3/8"
BR-14	20"x20"	26-1/2"x22"x3-9/8"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x2-1/8"
BR-1 & BR-14	20"x20"	26-1/2"x22"x3-9/8"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x1-7/8"
BR-2 to BR-13	18"x18"	24-1/2"x20"x3-9/8"	24-1/2"x20"x1-1/2"	24-1/2"x20"x1-1/2"	34"x20"x2"
BR-16 to BR-18	18"x18"	24-1/2"x20"x3-9/8"	24-1/2"x20"x1-1/2"	27-1/2"x20"x1-1/2"	-
BR-14	20"x20"	26-1/2"x22"x3-9/8"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x2"
BR-14	20"x20"	26-1/2"x22"x3-9/8"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x2-1/8"
BR-2 to BR-13	18"x18"	24-1/2"x20"x3-9/8"	24-1/2"x20"x1-1/2"	24-1/2"x20"x1-1/2"	34"x20"x2"
BR-16 to BR-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"
BR-15 to BR-20	13"x13"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1"
BR-1 to BR-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"x1-3/8"
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	21"x14"	27-1/2"x16"x4-7/8"	27-1/2"x16"x3"	27-1/2"x16"x3"	34"x16"x3"
BAE-1, BAE-7	21"x14"	27-1/2"x16"x3-3/4"	27-1/2"x16"x2"	27-1/2"x16"x2"	34"x14"x2"
BBE-1, BBE-5	21"x14"	27-1/2"x16"x3-3/4"	28-1/2"x15"x2"	28-1/2"x15"x2"	34"x14"x2"
BCE-1, BCE-5	22"x13"	28-1/2"x15"x3-3/4"	28-1/2"x15"x2"	28-1/2"x15"x2"	34"x14"x2"
BDE-1, BDE-5	22"x13"	28-1/2"x15"x3-3/4"	28-1/2"x15"x2"	28-1/2"x15"x2"	34"x14"x2"

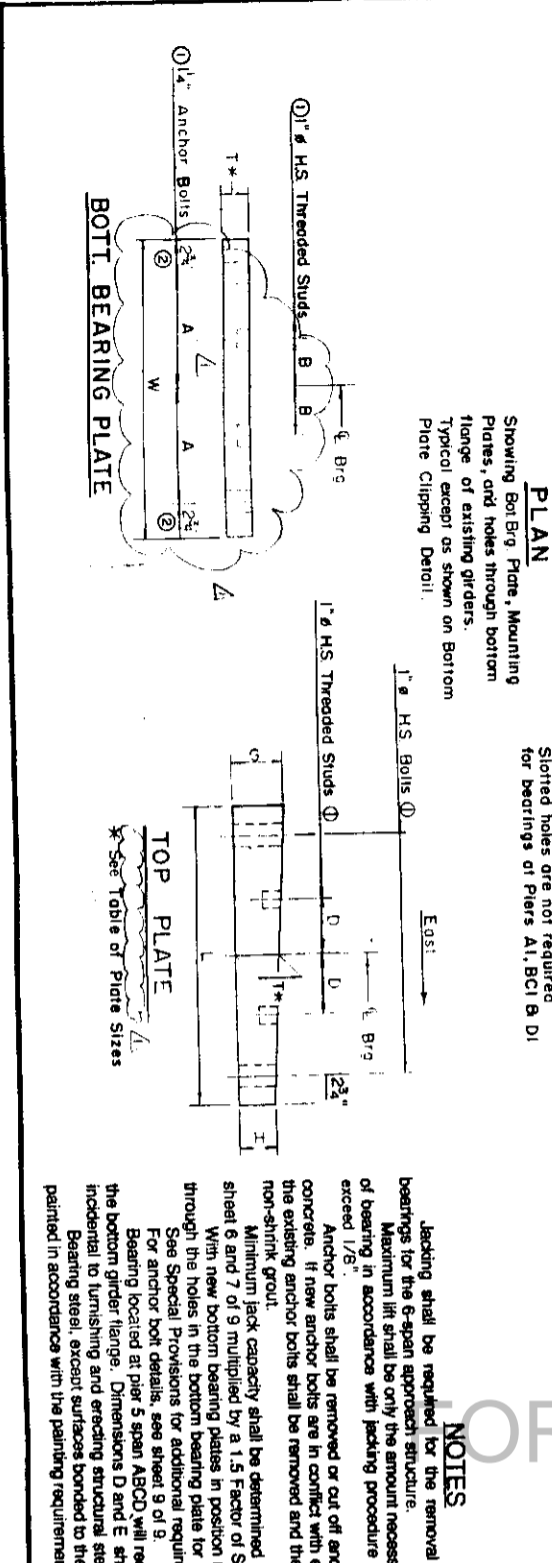
*Bottom Bearing Plate and Bottom Mounting Plate to be clipped at edges as shown.



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"
BR-1 to BR-13	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-9/16"	3-9/16"
BR-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-3/4"	3-1/4"
BR-2 to BR-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	4-1/16"	2-15/16"
BR-2 to BR-13	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-7/8"	2-7/8"
BR-1 to BR-13	11"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	2-7/8"	1-7/8"
BR-16 to BR-18	12"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	2-15/16"	1-13/16"
BR-1	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-15/16"	2-13/16"
BR-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-13/16"	2-11/16"
BR-2 to BR-14	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-7/8"	2-7/8"
BR-16 to BR-19	14-1/4"	10-1/2"	5"	4-1/2"	4-1/2"	10-7/8"	2-13/16"	1-15/16"
BR-1 to BR-14	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	10-1/8"	1-1/4"	3/4"
BR-15 to BR-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"
BA-7 to BA-5	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	9-7/8"	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"	13"	2-5/8"	4-1/16"	4-1/16"	6-3/4"	5-1/8"	4-5/8"
BAE-1	14-1/4"	12"	5"	4-1/16"	4-1/16"	6-3/4"	5-1/8"	4-5/8"
BAE-7	14-1/4"	12"	5"	4-1/16"	4-1/16"	6-3/4"	5-1/8"	4-5/8"
BBE-1	13-1/2"	12"	5"	4-1/16"	4-1/16"	6-3/4"	4"	3-1/2"
BBE-5	13-1/2"	12"	5"	4-1/16"	4-1/16"	6-3/4"	4"	3-1/2"
BCE-1	13-1/2"	12-1/2"	2-5/8"	4-1/16"	4-1/16"	6-7/8"	4"	3-1/2"
BCE-5	14-1/4"	12-1/2"	2-5/8"	4-1/16"	4-1/16"	6-7/8"	4"	3-1/2"
BDE-1, BDE-5	13-1/2"	12-1/2"	2-5/8"	4-1/16"	4-1/16"	6-7/8"	4"	3-1/2"

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



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.

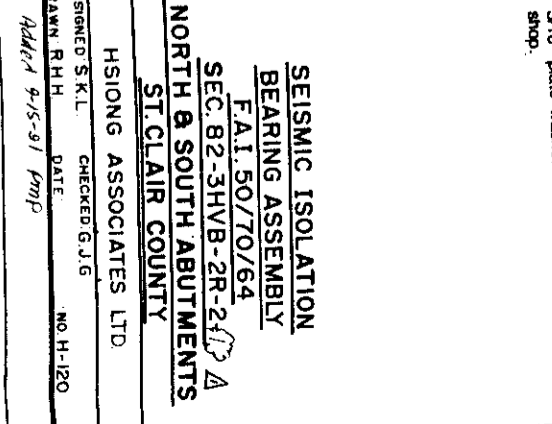
With new bottom bearing plates in position new holes shall be drilled through the holes in the bottom bearing plate for the new anchor bolts.

See Special Provisions for additional requirements.

For anchor bolt details, see sheet 9 of 9.

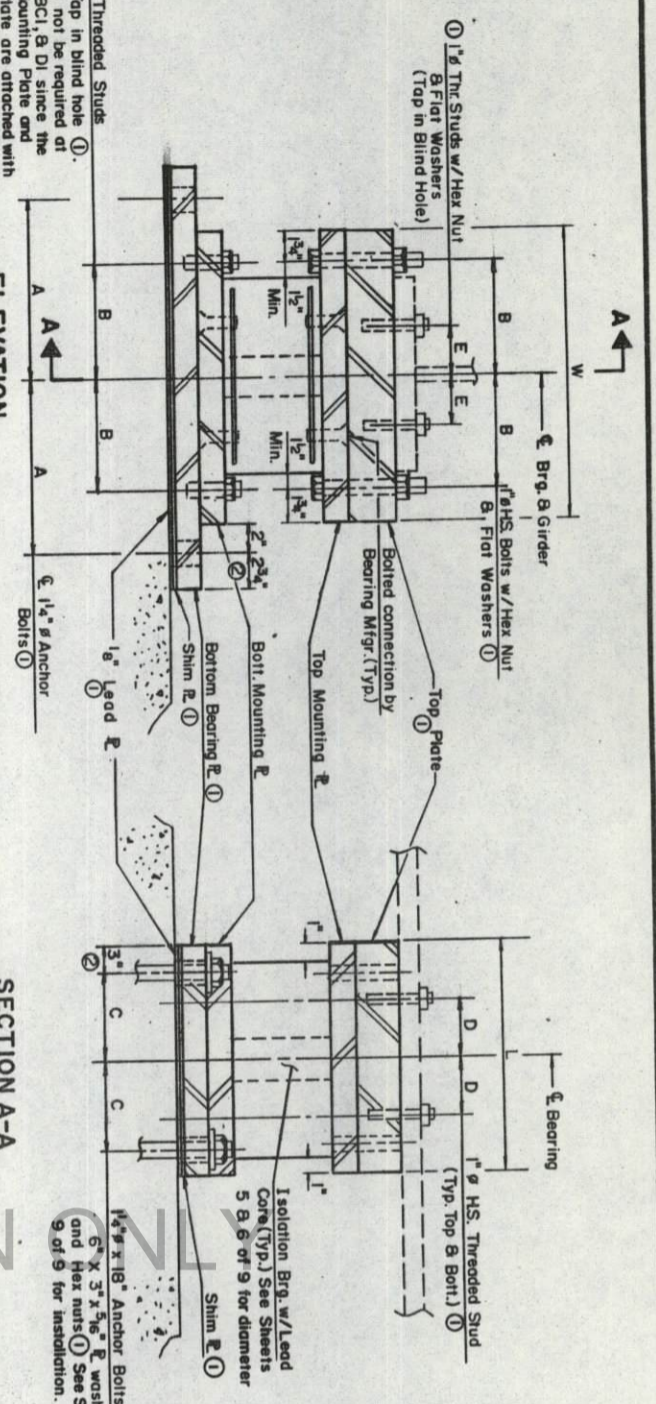
Bearing located at pier 5 span ABCD will require holes drilled through the bottom girder flange. Dimensions D and E shall be equal to 4". Cost incidental to furnishing and erecting structural steel.

Bearing steel, except surfaces bonded to the elastomeric pad, shall be painted in accordance with the painting requirements for new structural steel.



SEISMIC ISOLATION BEARING ASSEMBLY
 FAI.50/70/64
 SEC.82-3HYB-2R-2
 NORTH & SOUTH ABUTMENTS
 ST. CLAIR COUNTY
 HSIONG ASSOCIATES LTD
 DESIGNED S.K.L. CHECKED G.J.G.
 DRAWN R.H.H. DATE
 Added 9-5-91 pmj

NO. 1	SECTION	COUNT	TOTAL SHEETS	BEST NO.
FAI	**	ST. CLAIR	150	1507
REV. NO.	DATE	PROJECT	SHEET 7 OF 9	



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

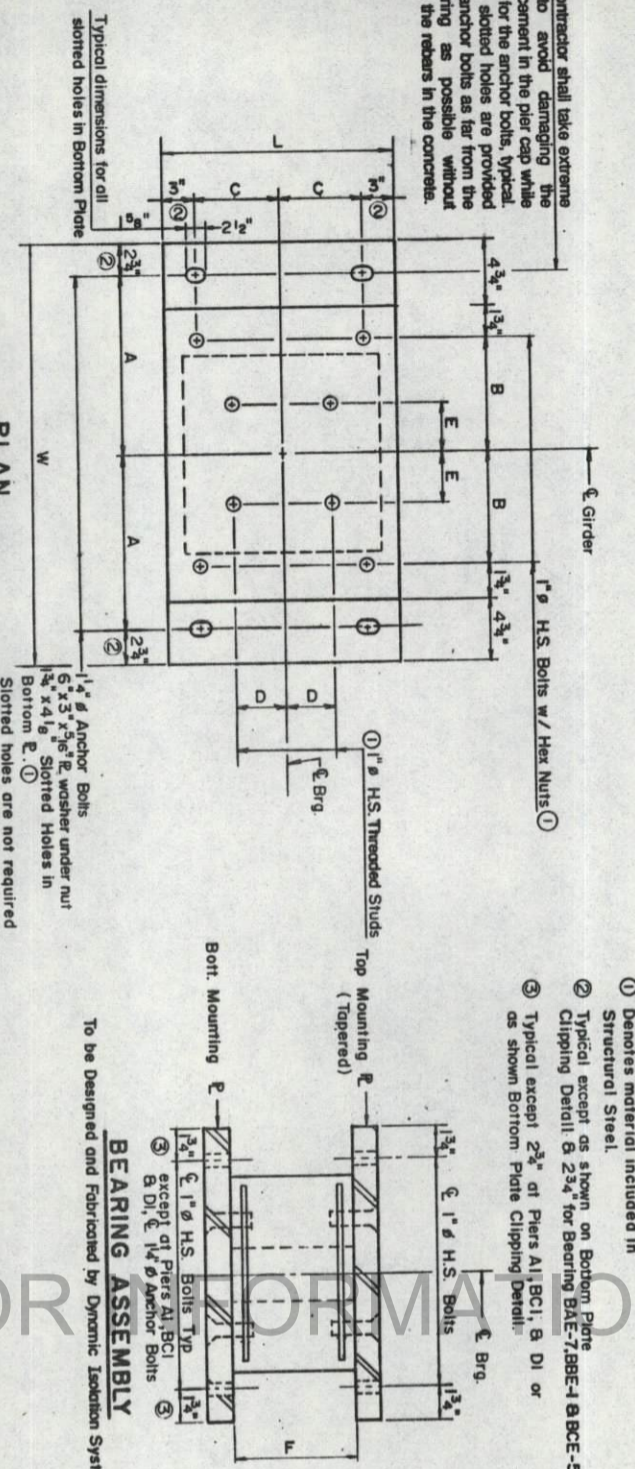
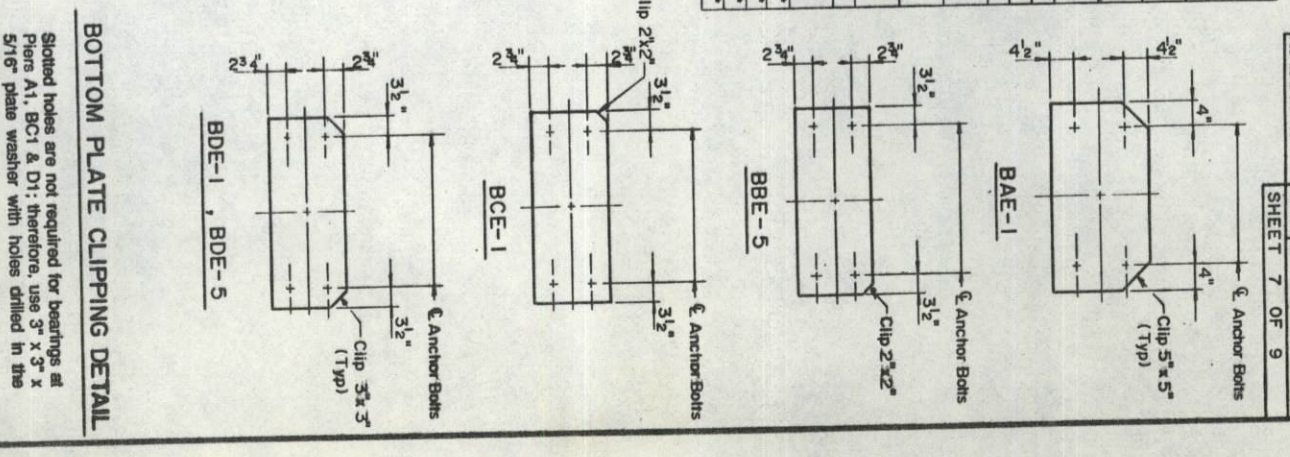


TABLE OF PLATES SIZES

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"	28-1/2"x22"x3-1/2"	28-1/2"x22"x1-1/2"	28-1/2"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"	24-1/2"x20"x1-1/2"	34"x20"x2"
B2-17	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"
B3-1 to B3-13	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"
B3-14	20"x20"	28-1/2"x22"x3-3/8"	28-1/2"x22"x1-1/2"	28-1/2"x22"x1-1/2"	36"x22"x2-1/8"
B4-1	20"x20"	28-1/2"x22"x3-3/8"	28-1/2"x22"x1-1/2"	28-1/2"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"	22-1/2"x15"x1-1/4"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1"
B5-15 to B5-20	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-1 to BA-6	13"x13"	27-1/2"x16"x3-3/4"	27-1/2"x16"x3"	27-1/2"x16"x3"	34"x16"x4-5/8"
BA-7	21"x14"	27-1/2"x16"x3-3/4"	27-1/2"x16"x3"	27-1/2"x16"x3"	34"x16"x4-1/2"
BC-1 to BC-5	22"x13"	28-1/2"x15"x3-3/4"	28-1/2"x15"x2"	28-1/2"x15"x2"	34"x14"x4-3/8"
BD-1 to BD-5	22"x13"	28-1/2"x15"x3-3/4"	28-1/2"x15"x2"	28-1/2"x15"x2"	34"x14"x4-3/8"

VALUES A THROUGH H

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



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 jacking 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.

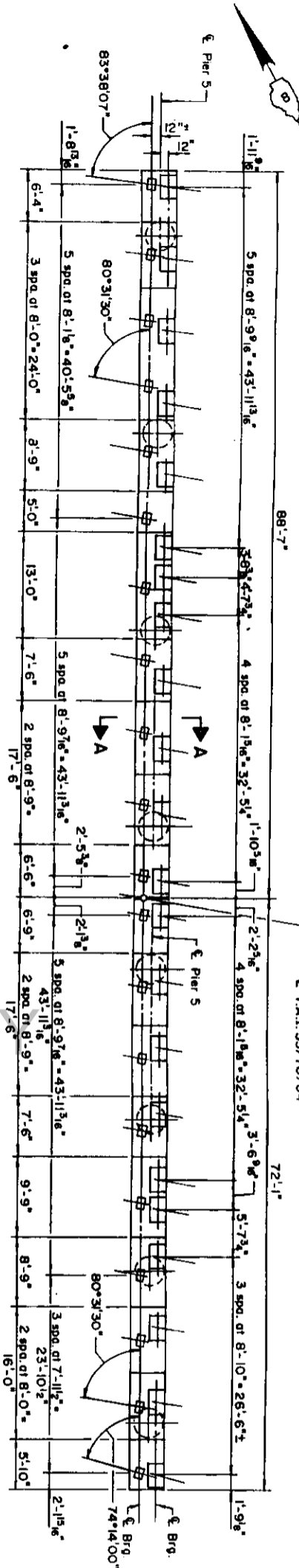
Bearing located at pier 5 span ABCD will require holes drilled through the bottom girder flange. Dimensions D and E shall be equal to 4 1/2". Cast bearing steel, except surfaces bonded to the elastomeric pad, shall be painted in accordance with the painting requirements for new structural steel.

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.

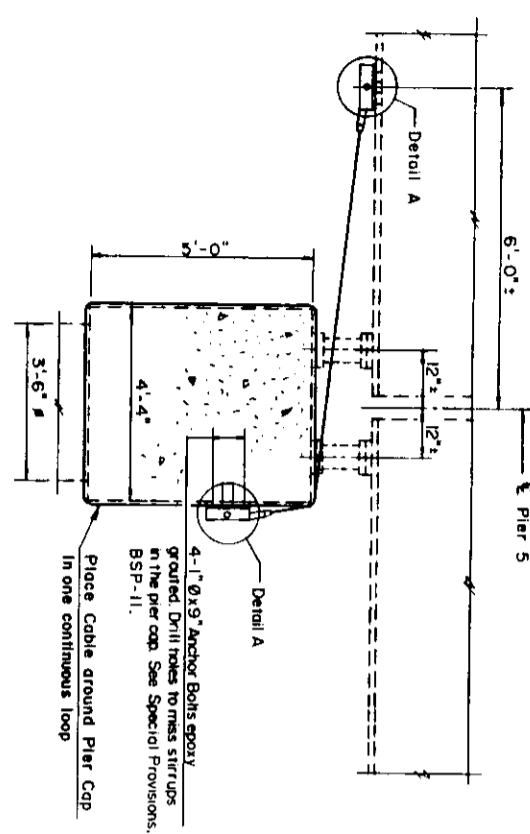
All plates shall be AASHTO M 223, Grade 50 structural steel. The Contractor shall set the center of the bearing on existing pier plans. The top plates shall be jacked horizontally so that the center of the top plates are aligned with the center of the existing bearing stiffeners and existing holes through 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.

SEISMIC ISOLATION BEARING ASSEMBLY
FAI. 50/70/64
SEC. 82-3HVB-2R-2-3
NORTH & SOUTH ABUTMENTS
ST. CLAIR COUNTY
HSIONG ASSOCIATES LTD
 DESIGNED: S.K.L. CHECKED: G.J.G. NO. H-120
 DRAWN: R.H.H. DATE:

PROJECT NO.	82-3HV8-2R-21	COUNTY	ST. CLAIR
DATE	F.A.I. 10/5/64	PROJECT	105/105.84
SHEET NO.	8 OF 9		

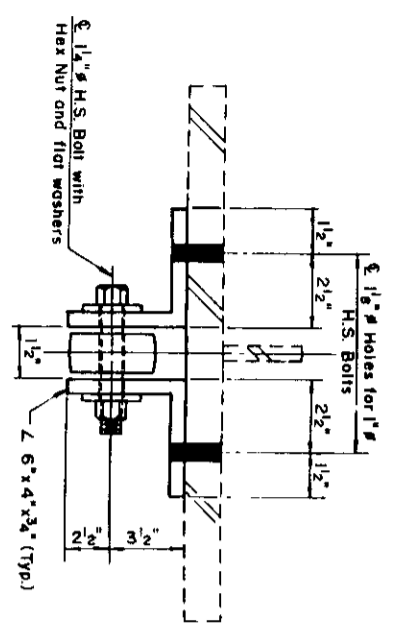


TOP PLAN OF PIER 5
(Existing)

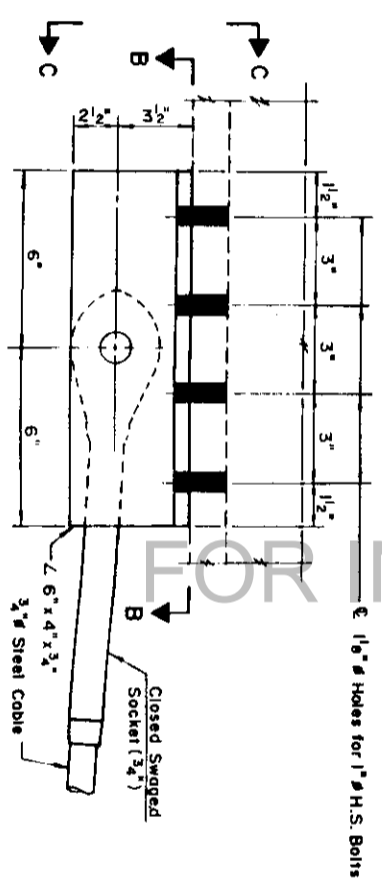


SECTION A-A

Showing Girder Restrainer attached to piers of spans ABCD, Girder Restrainers shall be attached similarly to piers of Span 5, 42 Head.

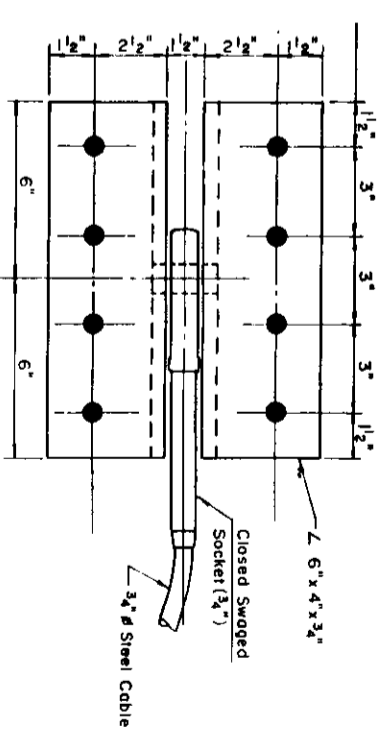


VIEW C-C



DETAIL A

Shown in connection to girder connection to pier cap similar.



SECTION B-B
(Bottom Flange not shown)

NOTES
Install Girder Restrainers after the isolation bearings are in place. The location of the cable to girder connection shall be determined by marking off 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.

AS REVISED

GIRDER RESTRAINER
AT PIER 5
F.A.I. 55/70/64
SEC. 82-3HV8-2R-21
ST. CLAIR COUNTY

All Structural Steel shall be AASHTO M 223 Grade 50

Revised 5-12-92 S.T.C.

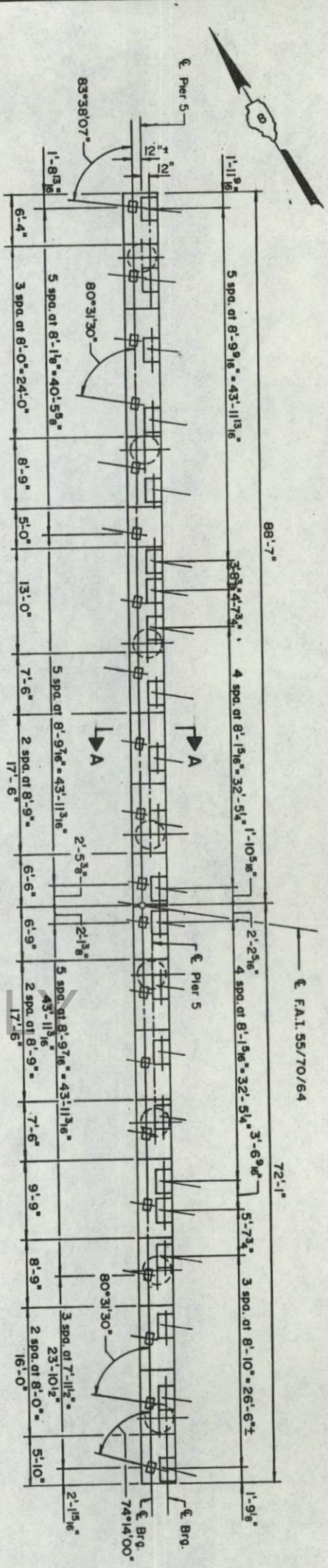
HSIONG ASSOCIATES LTD.
DESIGNED S.K.L.
CHECKED G.J.T.
DATE
DRAWN R.H.H.
NO. H-120

FOR INFORMATION ONLY

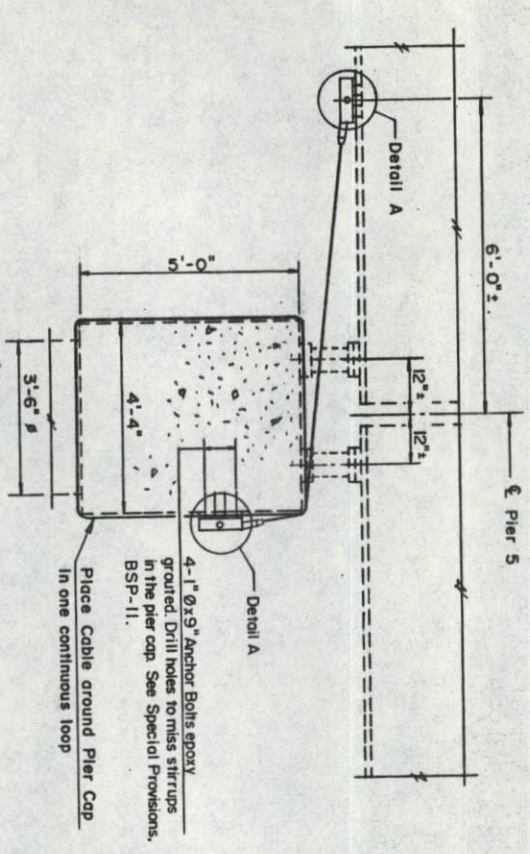
* 82-3HVB-2R-2-3

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	150	150A
DRAWING NO.	DATE	PROJECT		
			SHEET 8	OF 9

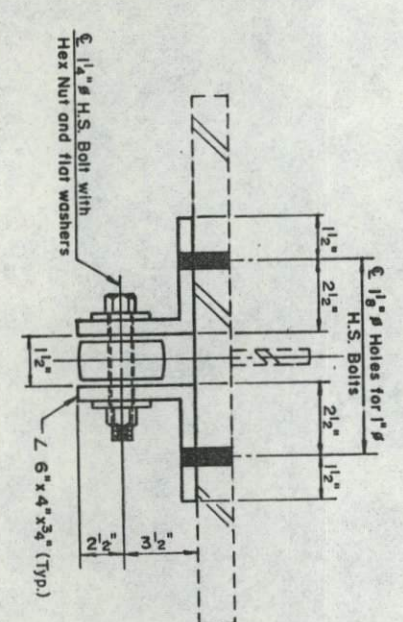
105-105.1



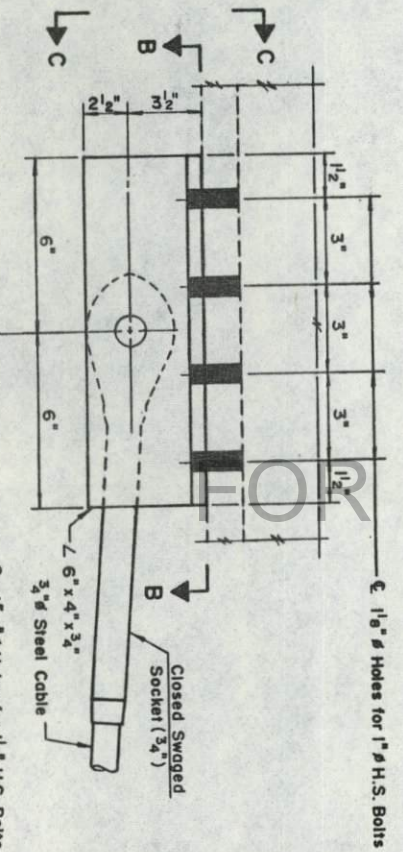
TOP PLAN OF PIER 5 (Existing)



SECTION A-A
Showing Girder Restrainer attached to girders of spans ABCD. Girder Restrainers shall be attached similarly to girders of Span 5, 42 Reqd.

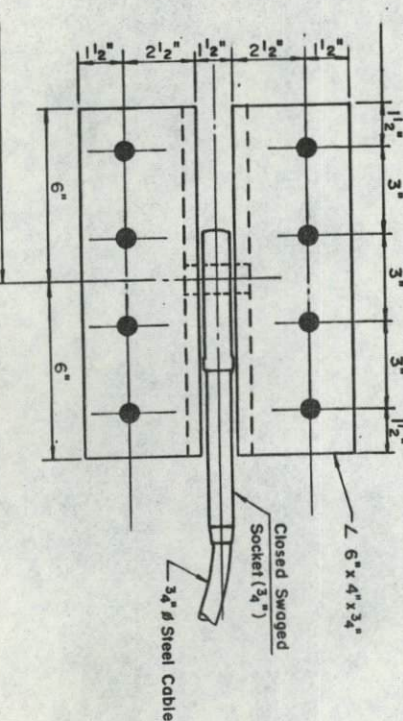


VIEW C-C



DETAIL A

Shown as connection to girder connection to pier cap similar.



SECTION B-B (Bottom Flange not shown)

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. Coat 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. Cast shall be incidental to Girder Restrainer.

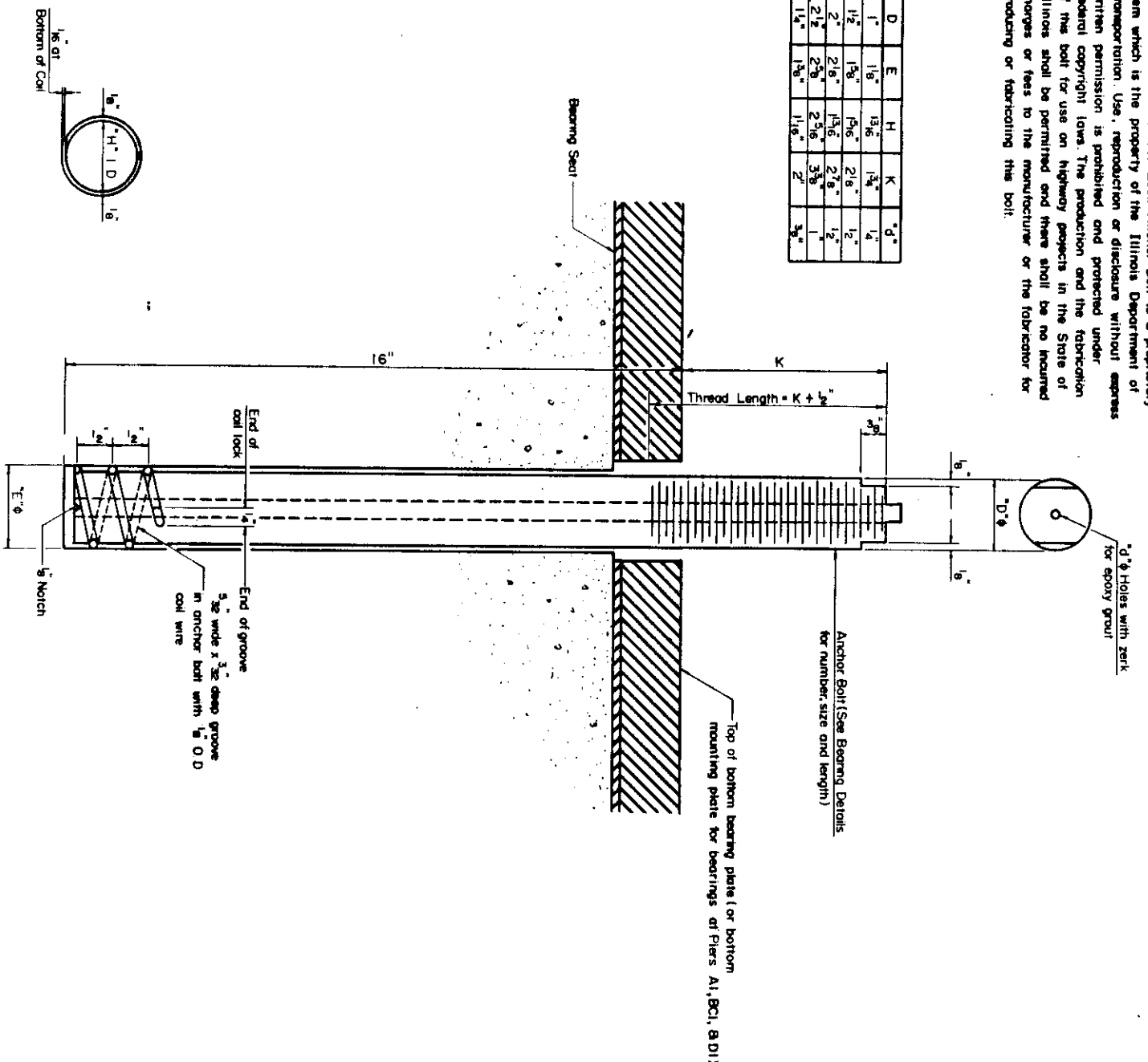
All Structural Steel shall be AASHTO M 223 Grade 50

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

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

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	P
1"	1 1/8"	1 3/8"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/8"	2 1/8"	1/2"
2"	2 1/8"	1 3/4"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/8"	3 5/8"	1"
1 1/4"	1 3/8"	1 1/8"	2"	3/8"



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 K25 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, general 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."

PROJECT NO.	SECTION	COUNTY
F.A.I. 70	*	ST. CLAIR
DATE		105 105/94
SHEET NO.		9 OF 9

AS REVISED

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

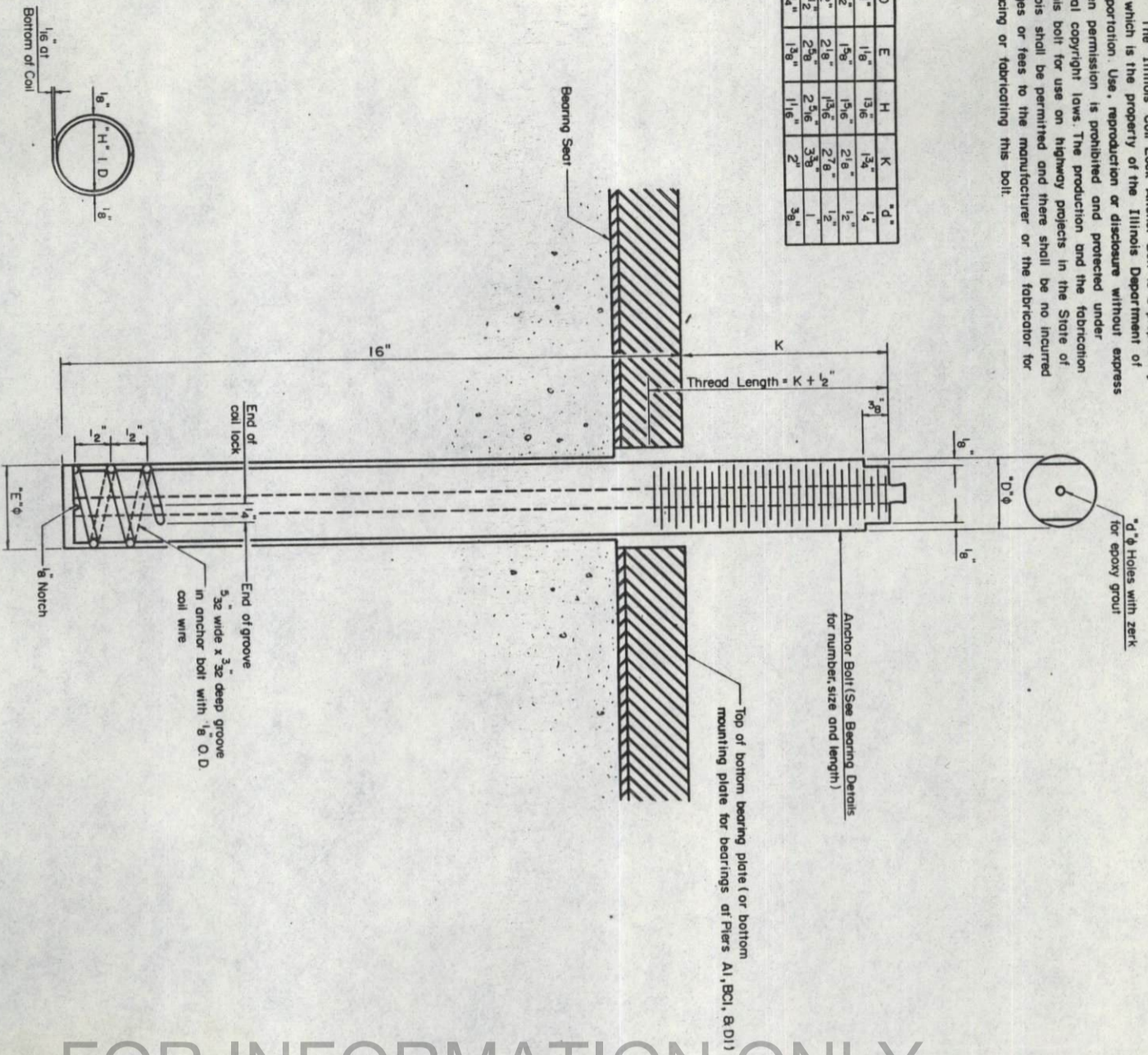
HSIONG ASSOCIATES LTD
 DRAWN: R.H.H. DATE: M.H-120
 CHECKED: G.J.G.

Revised 5-17-92 G.J.G. Added 9-15-91 Pmp

FOR INFORMATION ONLY

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 3/8"	1 3/8"	1/4"
1 1/2"	1 5/8"	1 5/8"	2 1/8"	1/2"
2"	2 1/8"	1 3/4"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/8"	3 3/8"	1"
1 1/4"	1 3/8"	1 1/8"	2"	3/8"



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 K026 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 and of a Class suitable for the temperature of 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 sac.
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 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."

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

PROJECT NO.	SECTION	COMMITTEE	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	150	150/150
DES. NO. (REV. NO.)	REVISION	DATE		

105-105.1

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. NO. H-120
 DRAWN: R.H.H. DATE

FOR INFORMATION ONLY

ST. CLAIR CO.

Sec. 82-3VB-HDF

I & R 2-5-87

57

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

STRUCTURE NO. 082-0005

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

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
 FEDERAL AID HIGHWAY

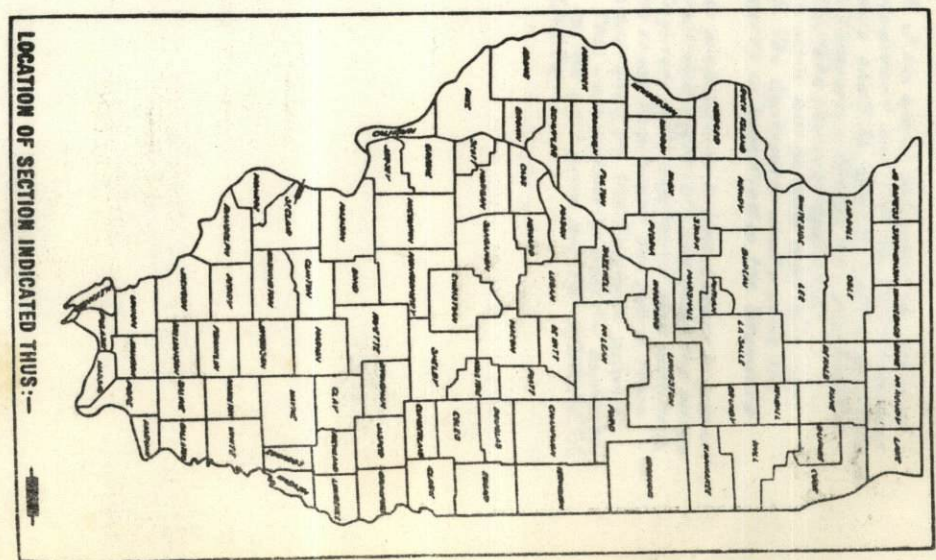
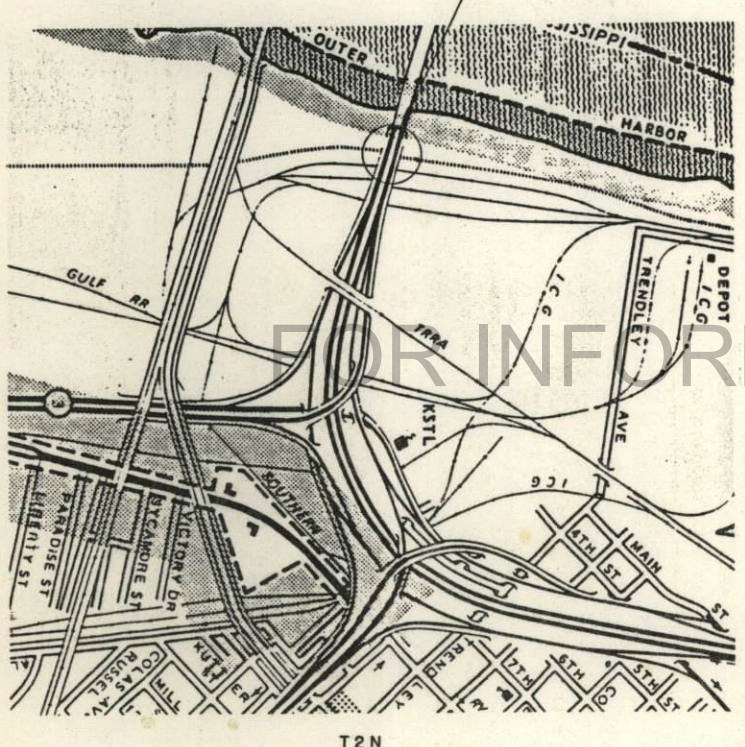
FAI ROUTE 70

SECTION 82-3VB-HDF

ST. CLAIR COUNTY

C-98-084-86

PROJECT LOCATION
 STATION 44+25



SECTION NO.	SEC.	COUNTY	TOWNSHIP	RANGE
70	#	ST. CLAIR	7	1

P-98-053-86 # 82-3VB-HDF

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DESIGNED BY: *[Signature]*
 DRAWN BY: *[Signature]*
 CHECKED BY: *[Signature]*
 DATE: 12-29-86
 APPROVED BY: *[Signature]*
 DISTRICT DIRECTOR OF HIGHWAYS

082-0005

CONTRACT NO. 42241

8-162

49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

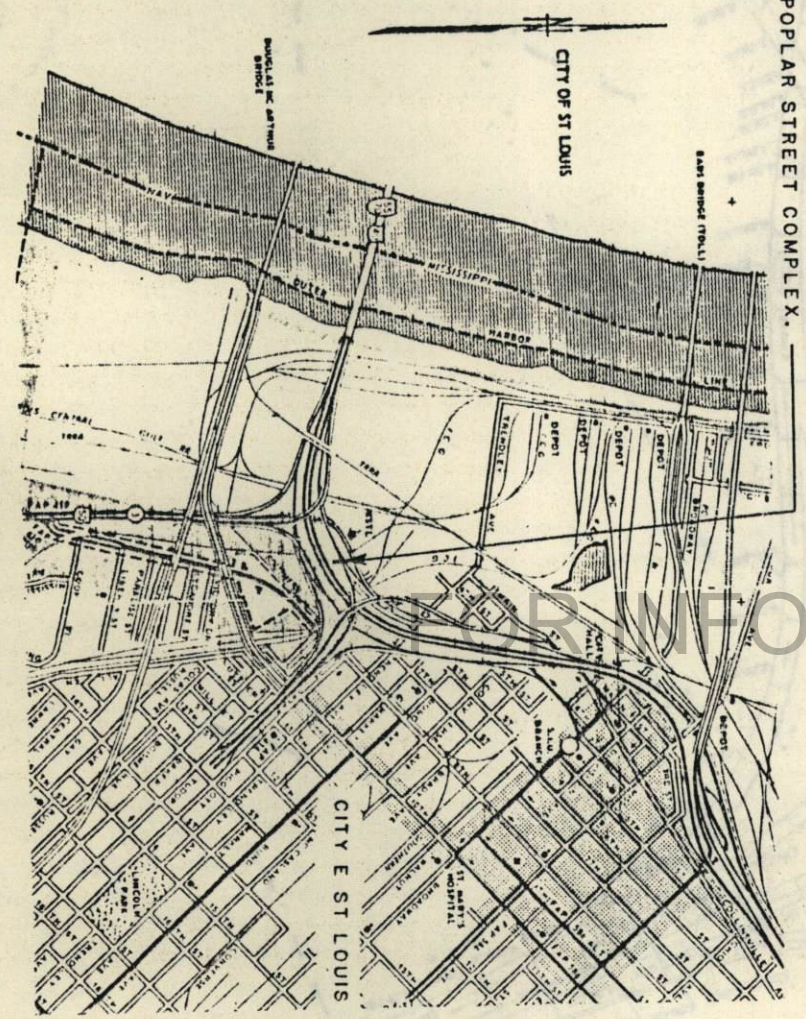
THIS SHEET AND SUMMARY OF QUANTITIES
GENERAL PLAN
POST-TENSIONING SYSTEM AND GENERAL NOTES
END CONNECTION BRACKET

STANDARDS:
2298-1
2299-10
2300-3
2307-6

SUMMARY OF QUANTITIES

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

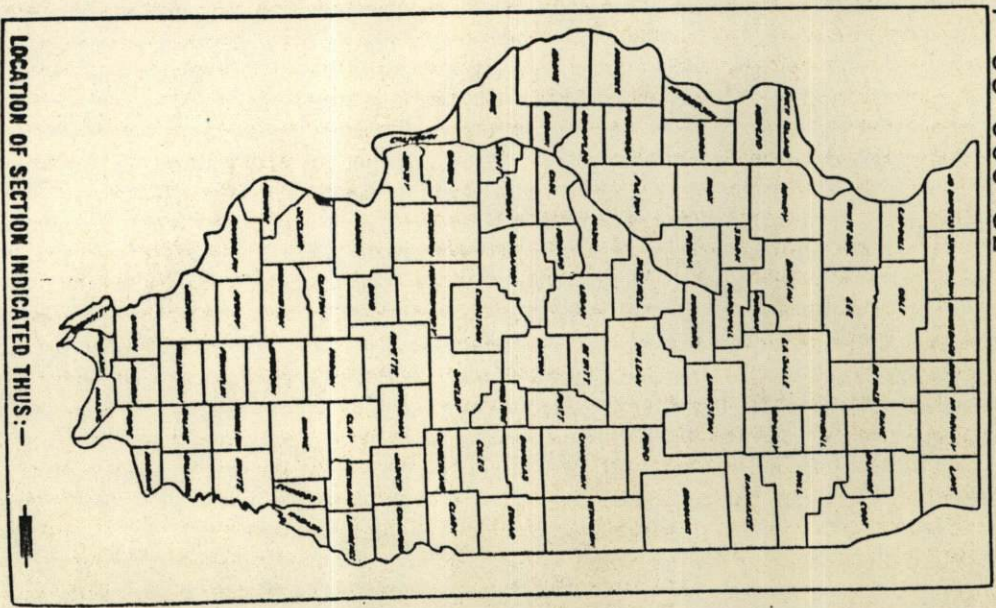
THIS PROJECT CONSISTS OF THE PIER
CAP REPAIR AT VARIOUS LOCATIONS
IN THE POPLAR STREET COMPLEX.



SECTION NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
70		St. Clair	4	1

P-98-066-82

82-3HVB-R-4



LOCATION OF SECTION INDICATED THUS:—

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED BY: Bob Hill

EXAMINED BY: [Signature]

APPROVED BY: [Signature]

DIRECTOR OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

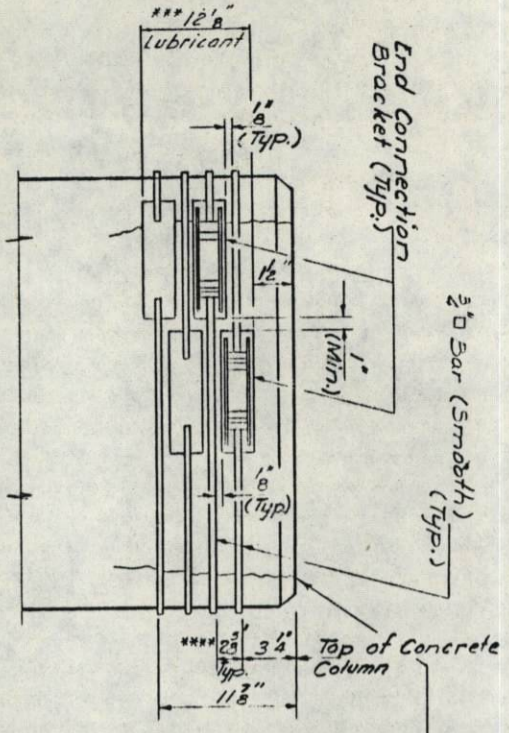
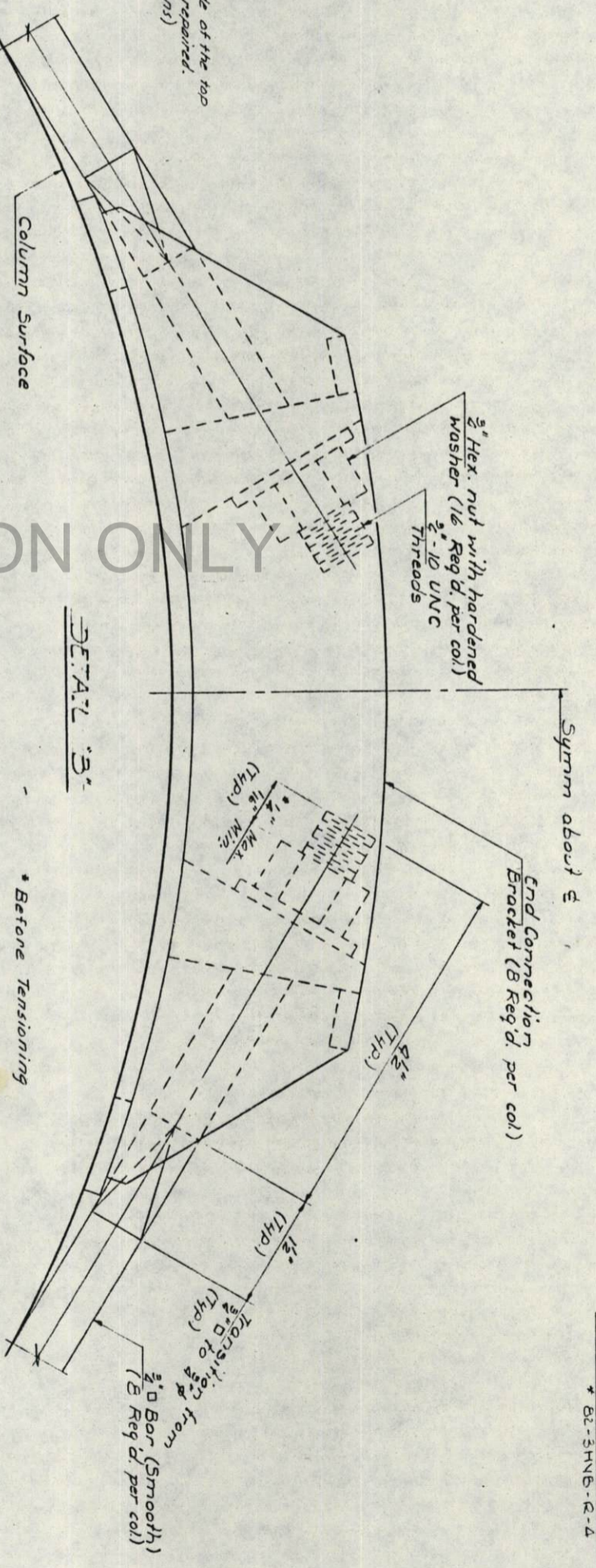
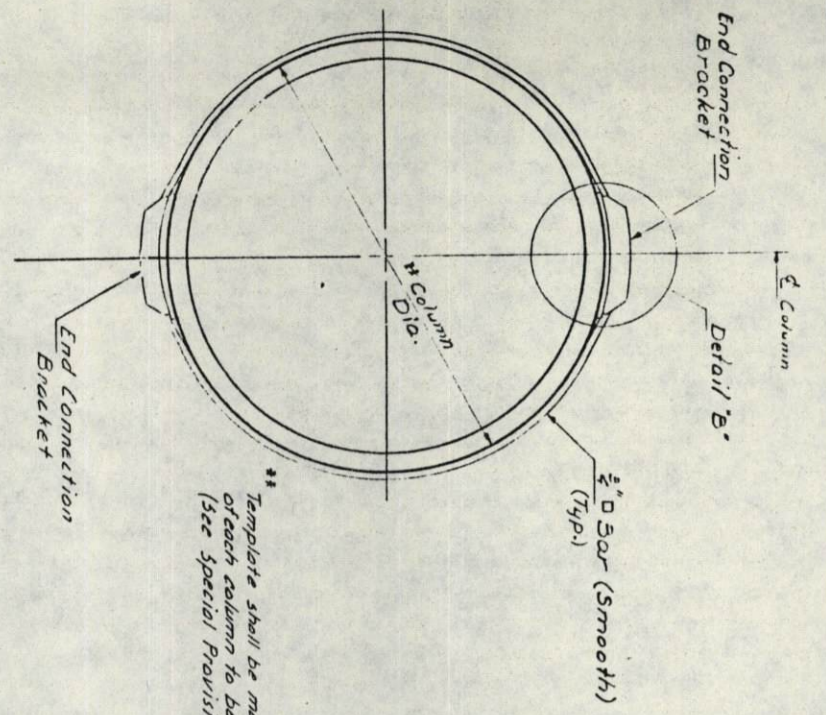
APPROVED: _____

DIVISION ADMINISTRATOR

DATE: _____

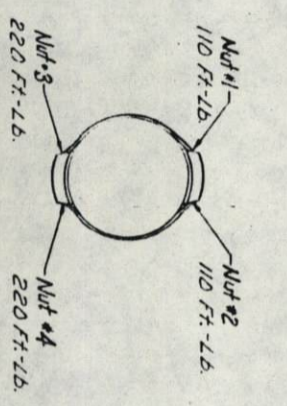
8-147

SHEET NO.	SECTION	QUANTITY	AMOUNT	DATE
10	ST. CLAIR	4		3



TOP OF PIER COLUMNS
For locations see Special Provisions

BAR TENSIONING PROCEDURE
The 3/4" diameter 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:



*** A petroleum base lubricant approved by the Engineer shall cover the entire surface area between the 3/4" diameter bars and the concrete surface. This shall be accomplished by using 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.

GENERAL NOTES

Concrete surfaces to receive Post-Tensioning system shall be smoothed by stoning or grinding as required to eliminate projections. End Connection Bracket shall conform to the requirements of A.A.S.H.T.O. M 223 Grade 50.
The 3/4" diameter bar shall conform to the requirements of A151 4140, quenched and tempered to a minimum yield strength of 100,000 psi.
The hardened washer shall conform to the requirements of A. S. T. M. F. - 436.

The end connection brackets, 3/4" diameter bars, nuts and washers shall receive one shop coat of red lead paint and two shop coats of aluminum paint.

The 3/4" 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.

QUANTITY OF STRUCTURAL STEEL PER COLUMN IN LBS.

COL. DIA.	ARSHTO M-223	AISI 4140	TOTAL
4'-0"	115	96	214
4'-6"	116	108	226
5'-0"	116	120	236
5'-6"	116	132	250
6'-0"	116	144	262
6'-6"	116	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.

POST-TENSIONING SYSTEM
PIER COLUMNS REPAIR
F.A.: R.T. 7D
SEC. BE-3HVB-R-4
ST. CLAIR COUNTY

DESIGNED BY: F. K. KELLY
CHECKED BY: R. L. WILSON
DRAWN BY: COLLINS R. SOMMER
CHECKED BY: P. S. WILSON
APPROVED BY: [Signature]
DIRECTOR OF HIGHWAYS

August 4, 1963

PROJECT NO.	SECTION	SHEET	TOTAL SHEETS
11-170	*	ST. CLAIR	4
			4

* B.L. SHUB-RC-4

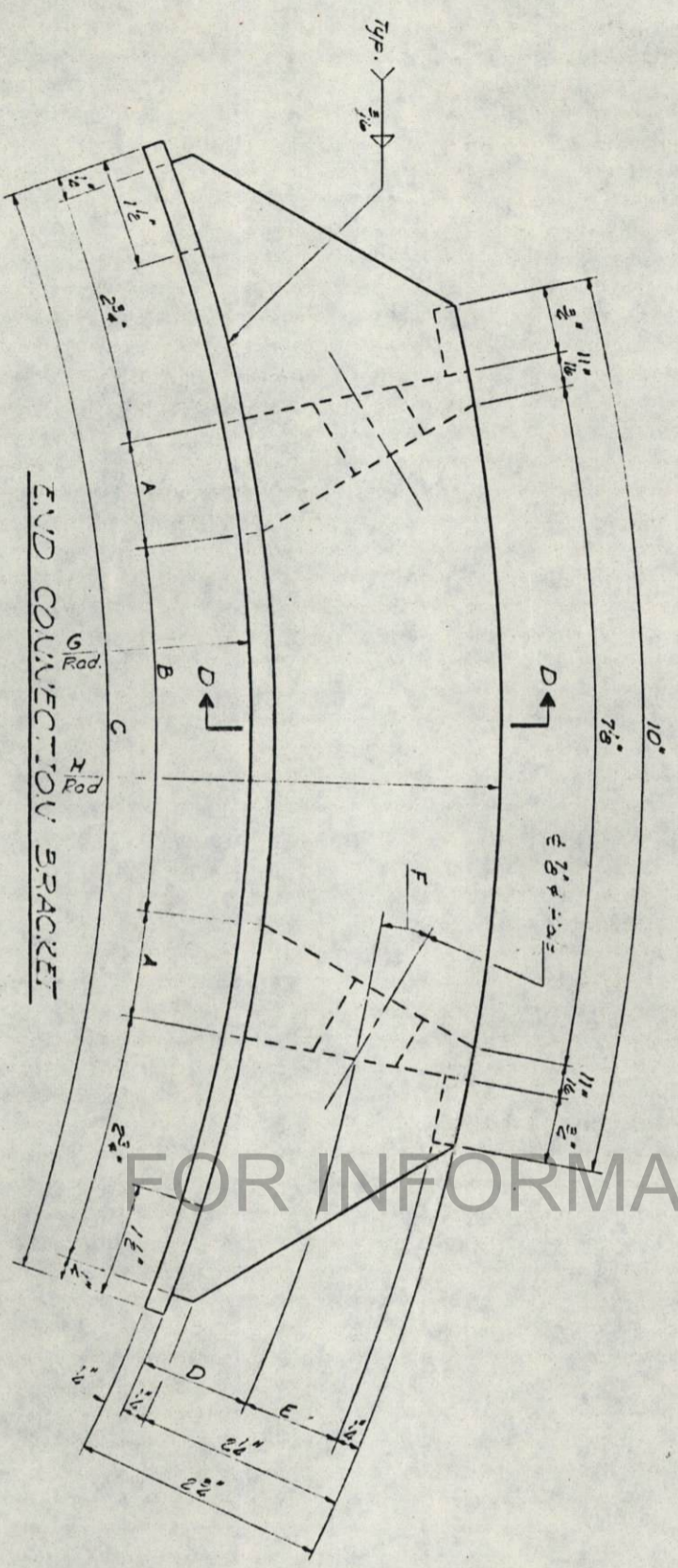
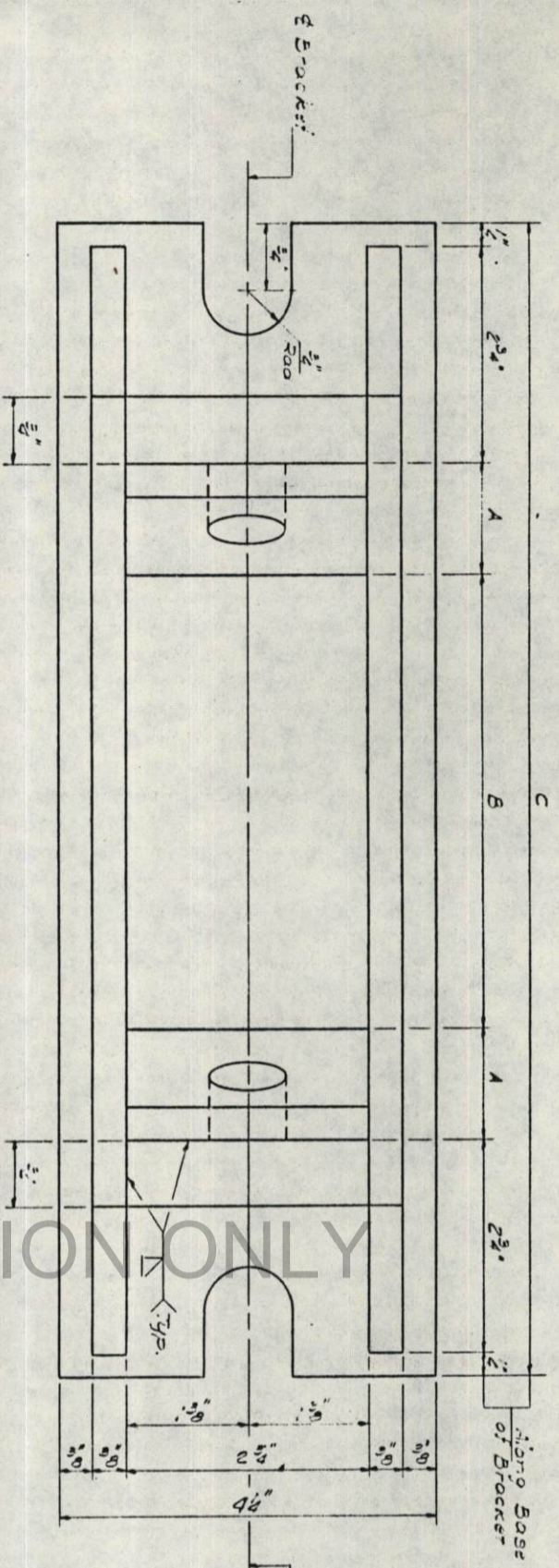
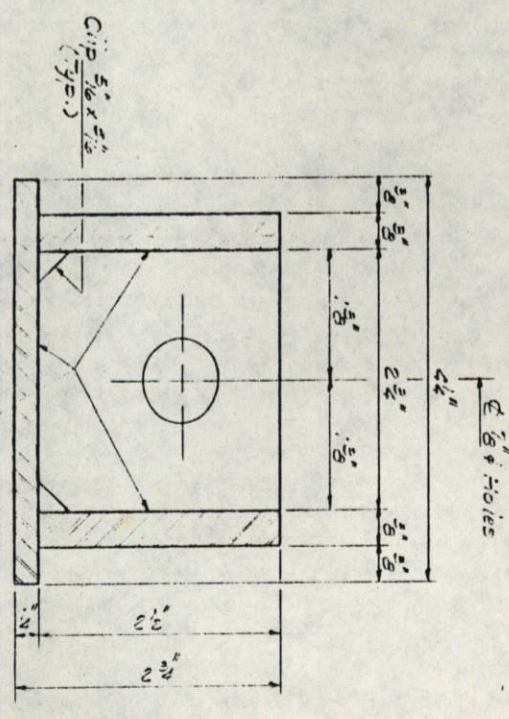


TABLE OF DIMENSIONS

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



DESIGNED R. F. [unclear]
CHECKED Paul S. M. [unclear]
DRAWN J. SCHWELTZER
CHECKED RSM [unclear]

August 4, 1983
EXAMINED [unclear]
PASSED [unclear]
APPROVED [unclear]
DIRECTOR OF HIGHWAYS

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

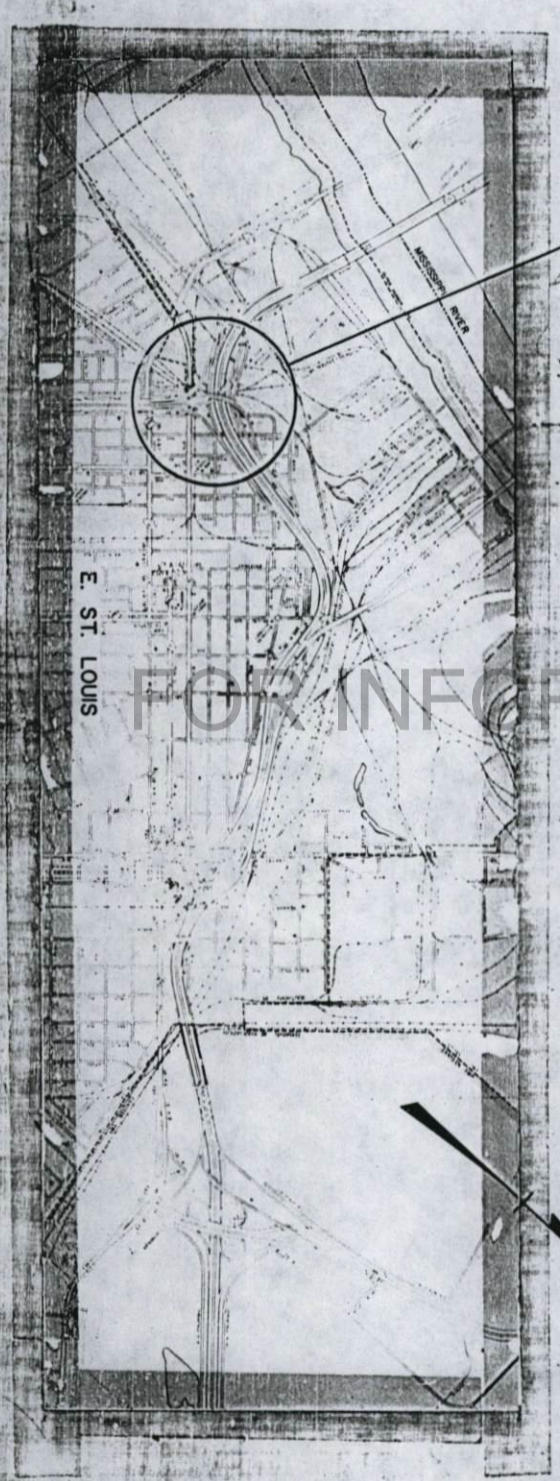
INDEX OF SHEETS

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

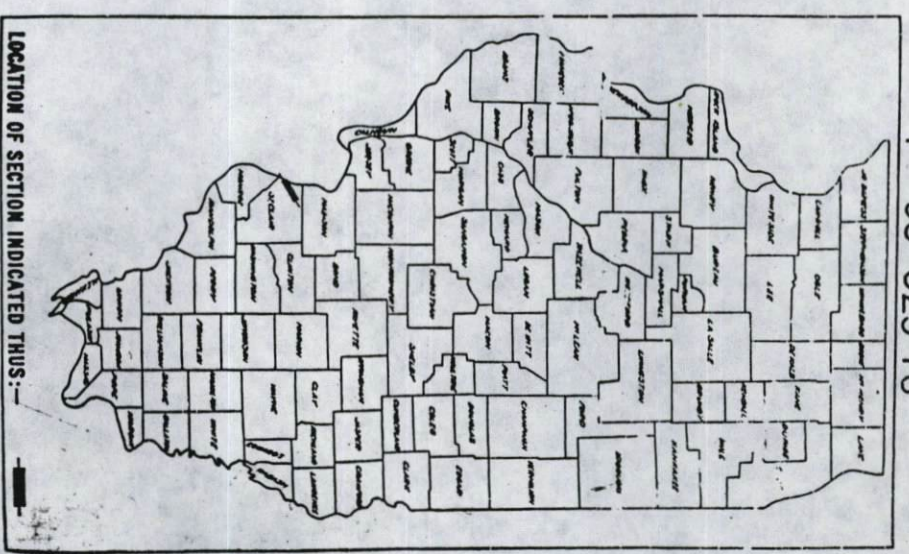
STANDARDS

- 2298-5 2314-4
- 2295-9 2315-5
- 2300-2

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



LOCATION MAP
SCALE 1" = 1500 FEET



P-98-025-76

* 82-3HVB-R-3		SECTION	COUNTY	TOWNSHIP	RANGE
PROJECT NO.	82-3HVB-R-3	ST. CLAIR	4		
DATE					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED: *[Signature]*
DATE: Feb 8 82

AWARDED: *[Signature]*
DATE: Feb 8 82

RESIDENT ENGINEER: *[Signature]*
DATE: Feb 8 82

DEPARTMENT OF TRANSPORTATION
APPROVED: _____
DIVISION ENGINEER

CONTRACT NO. 35391

REEL 8-136

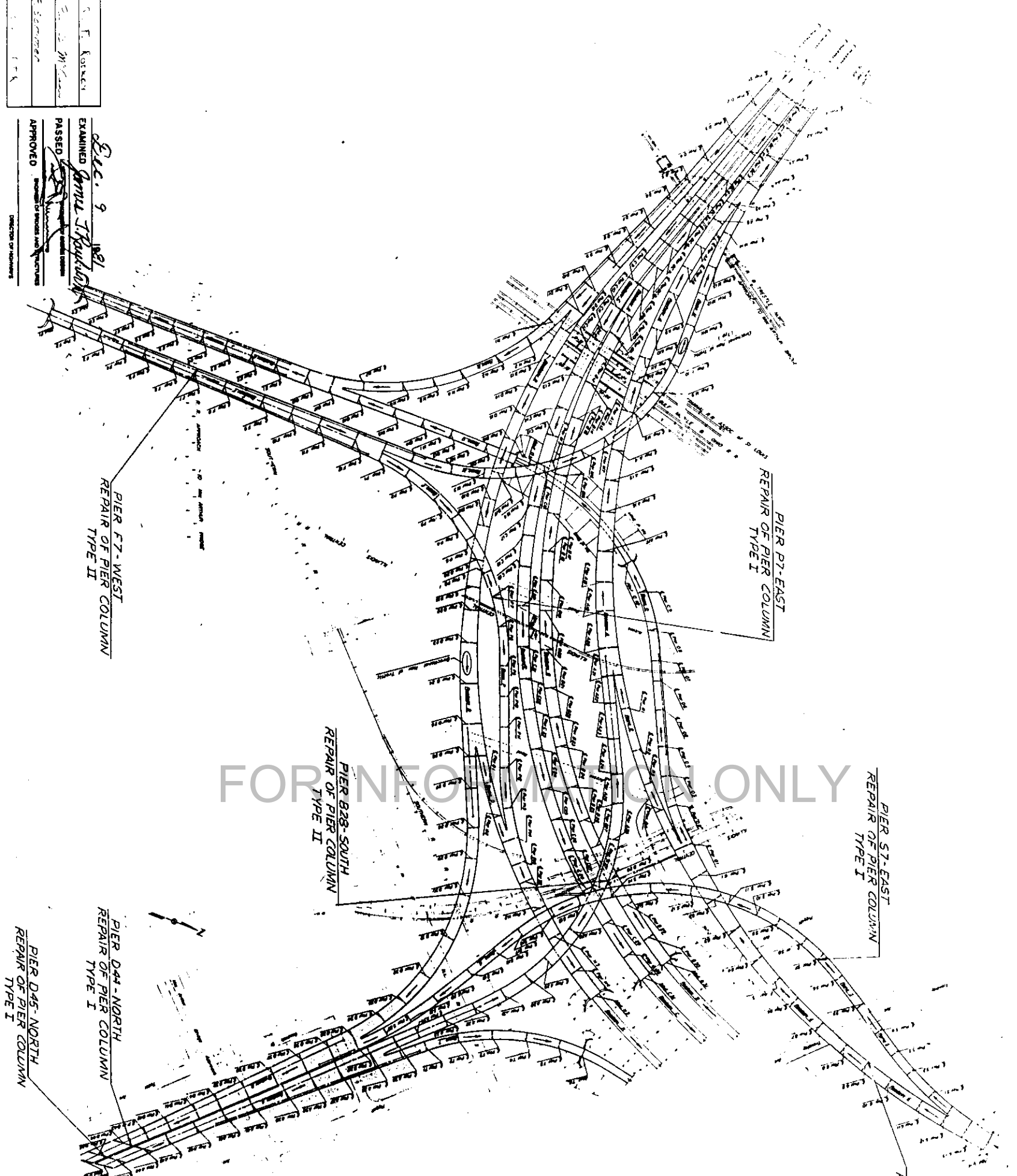
0005

ST. CLAIR COUNTY



DESIGNED S. F. KOSKOFF
 CHECKED [Signature]
 DRAWN [Signature]
 CHECKED [Signature]

EXAMINED [Signature]
 PASSED [Signature]
 APPROVED [Signature]
 DIRECTOR OF HIGHWAYS



FOR INFORMATION ONLY

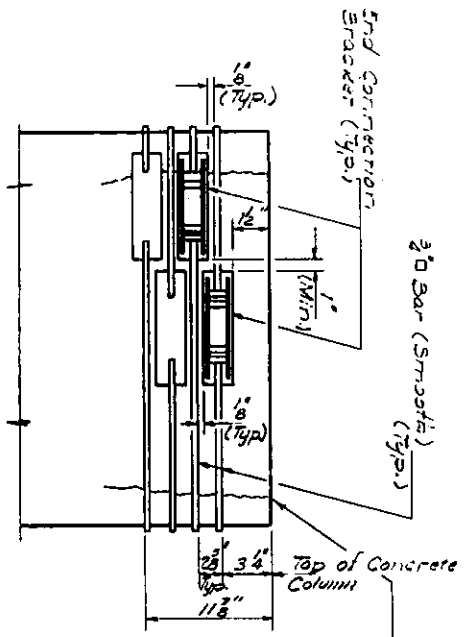
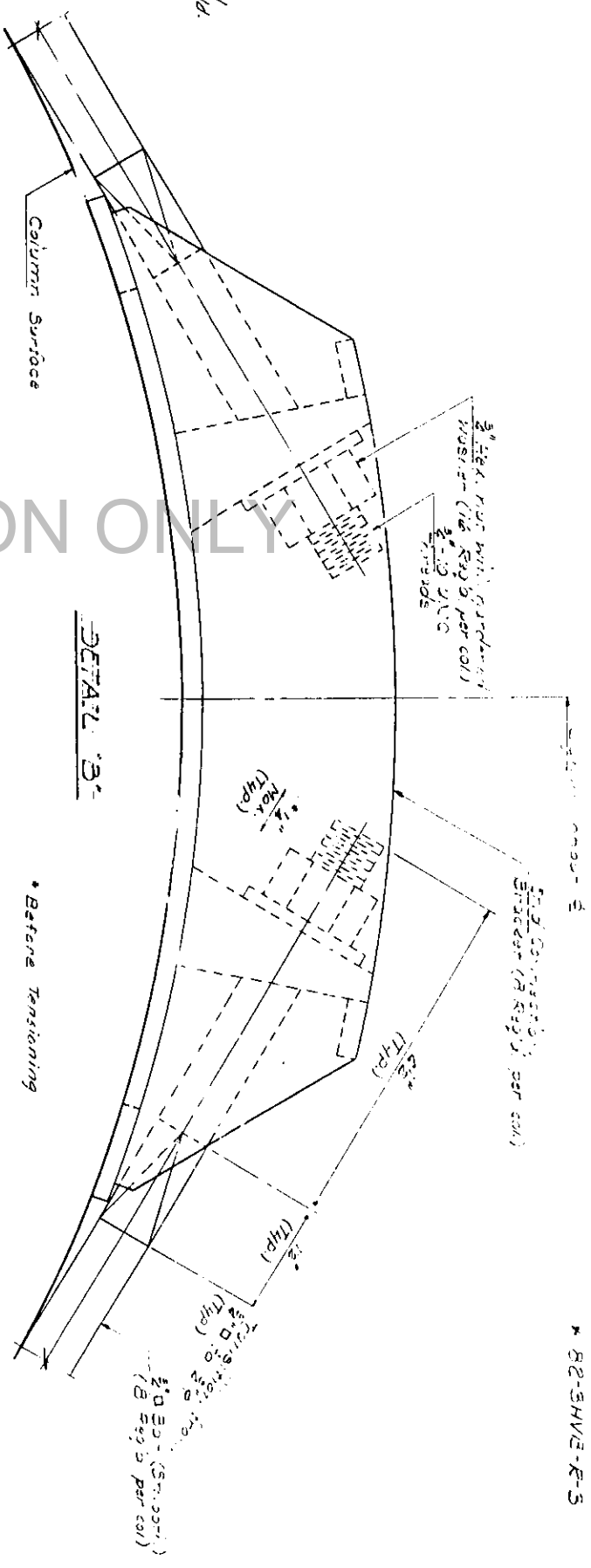
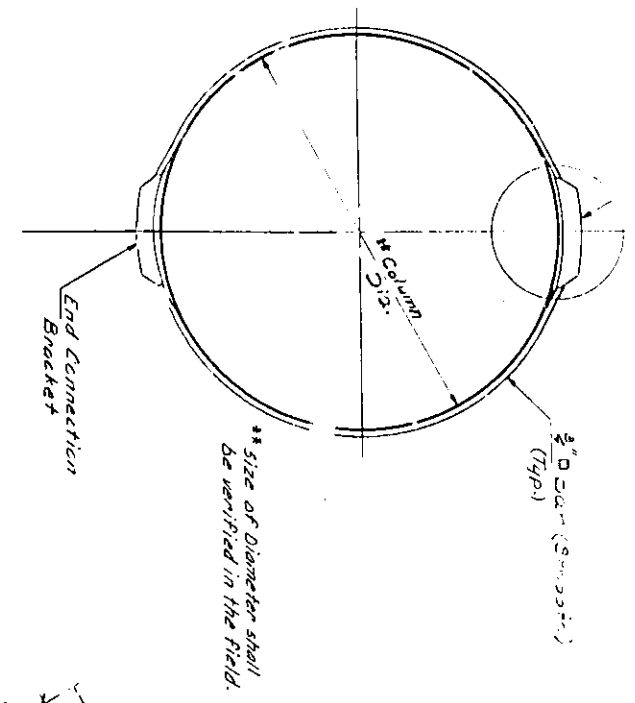
CODE NO	ITEM	UNIT
X07123	Repair of Pier Columns - Type I	Each
X07124	Repair of Pier Columns - Type II	Each
648007	Traffic Control and Signation, Standard 215	LSM
X04728	Signation	LSM

of Type I and Type II Repair.

Y007

GENERAL
 FAI RT 70 SEC 82-31E
 ST CLAIR COUNTY

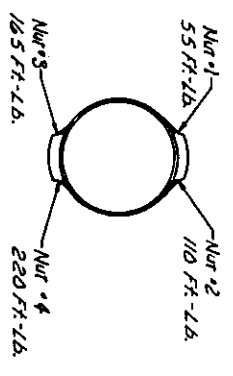
82-SHVE-R-3



TOP OF PIER COLUMNS
for locations see Special Provisions

BAR TENSIONING PROCEDURE

The 3/8" 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 set.

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

FOR INFORMATION ONLY

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. M-223 Grade 50.
- The 3/8" bar shall conform to the requirements of AISI 4140 (Rockwell C Hardness of 25 to 30).
- The 3/8" nut shall conform to the requirements of A.S.T.M. A-490.
- A lubricant approved by the Engineer shall be used between the 3/8" bars and the concrete surface.
- The end connection bracket and 3/8" bar shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 and A.S.T.M. A-985.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to normal construction conditions. 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. Steel 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.

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.

DESIGNED R. F. ROBERT
CHECKED R. A. S. MURPHY
DRAWN J. SCHNEIDER
CHECKED P. S. M. RTR

EXAMINED [Signature]
APPROVED [Signature]

POST-TENSIONING SYSTEM
PIER COLUMNS REPAIR
F.A. RT-10 SEC. 82-SHVE-R-3
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	DATE	SCALE	NO.
70	ST. CLAIR		4	4

3 SHEETS

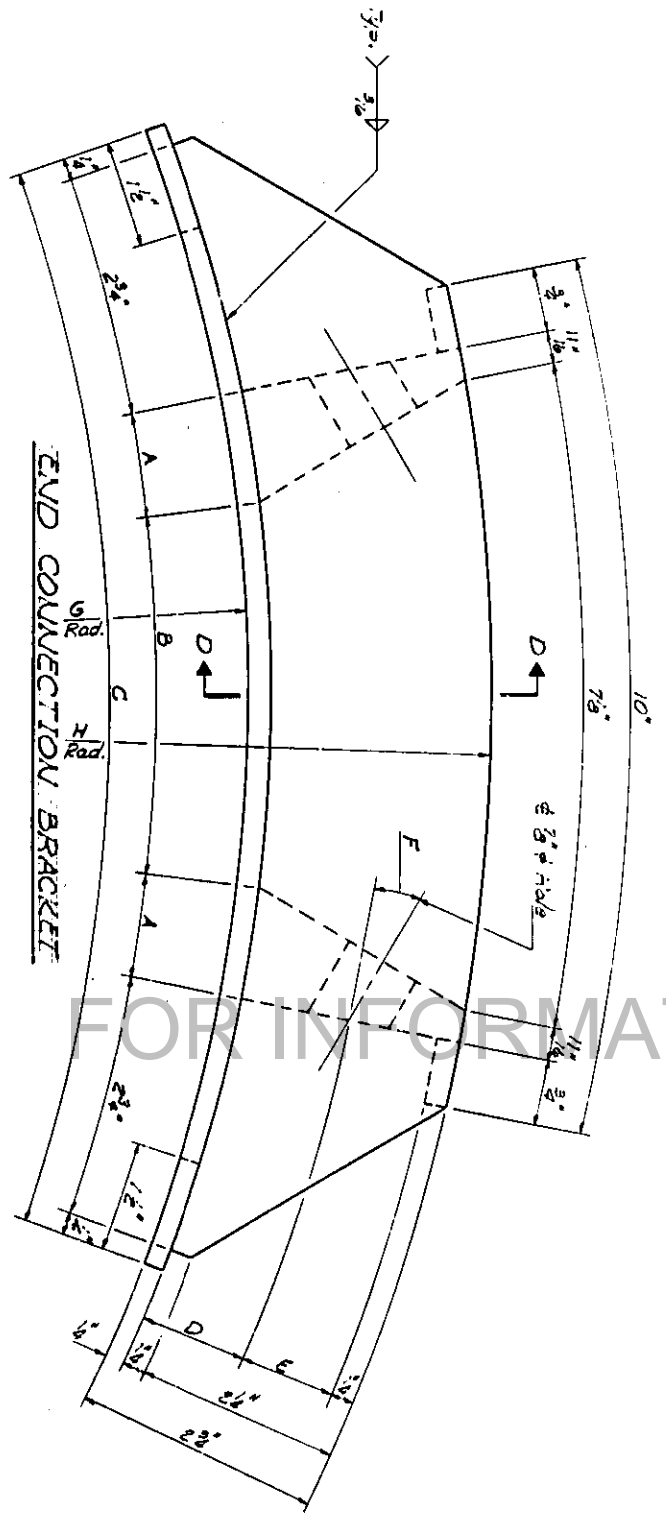
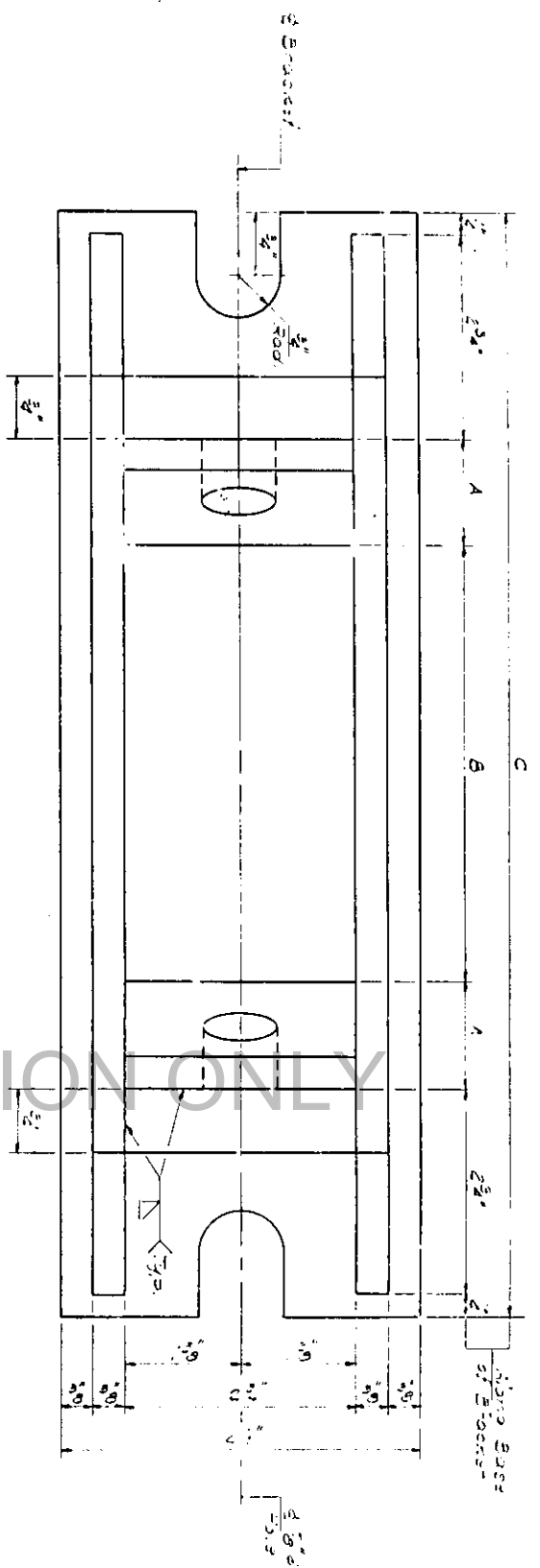
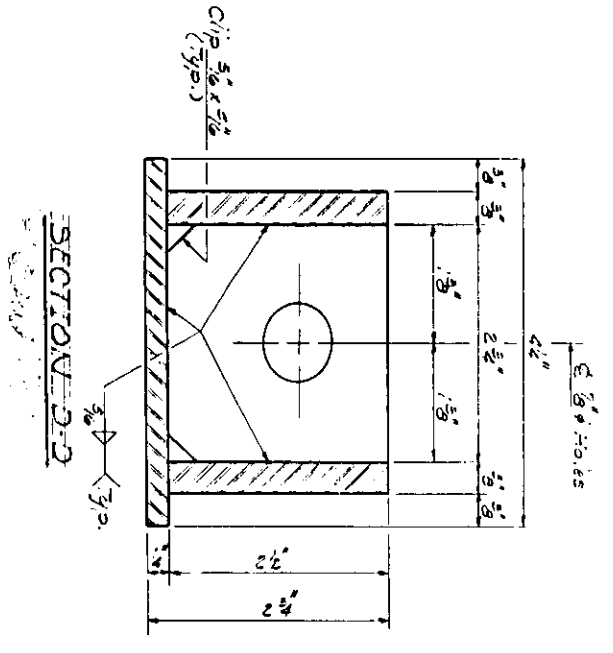


TABLE OF DIMENSIONS

COL. DIA.	A	B	C	D	E	F	G	H
4'-0"	1 1/2"	4 1/2"	13 5/8"	1 3/4"	1 1/2"	16'-40'-30"	2'-4"	26 3/4"
4'-6"	1'-3"	4'-6"	13 1/4"	1'-3"	1'-6"	15'-50'-23"	2'-7"	27'-3"
5'-0"	1'-0"	5"	13 3/4"	1'-4"	1"	15'-28'-01"	3'-0"	32 3/4"
5'-6"	1'-6"	5 1/4"	13 7/8"	1'-4"	1"	14'-46'-31"	3'-3"	35 1/4"
6'-0"	1'-6"	5 1/4"	13 7/8"	1'-4"	1"	14'-14'-15"	3'-6"	38 3/4"
6'-6"	1'-6"	5 1/2"	13 5/8"	1'-5"	1 1/2"	13'-45'-10"	3'-9"	41 1/4"
7'-0"	1'-4"	5 1/2"	14"	1'-5"	1 1/2"	13'-01'-07"	4'-2"	44 1/4"



DESIGNED R. F. RILEY
CHECKED R. L. S. M. C. COLLINS
DRAWN J. SCHWELLER
CHECKED R. S. M. C. COLLINS

EXAMINED *James J. Houbert*
DATE *Dec 9 1981*
APPROVED

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FAI ROUTE 70
SECTION 82-3HVB-R-2

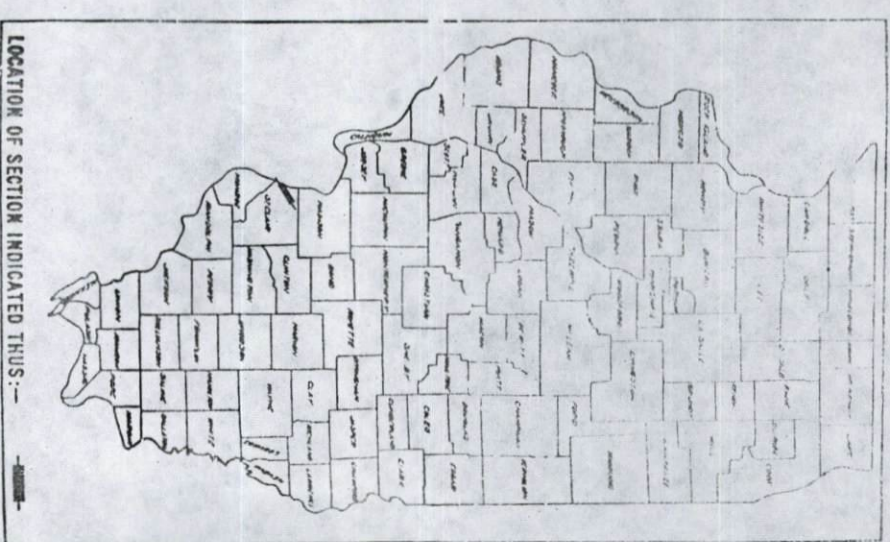
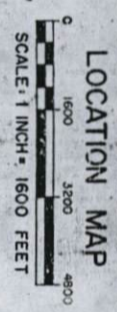
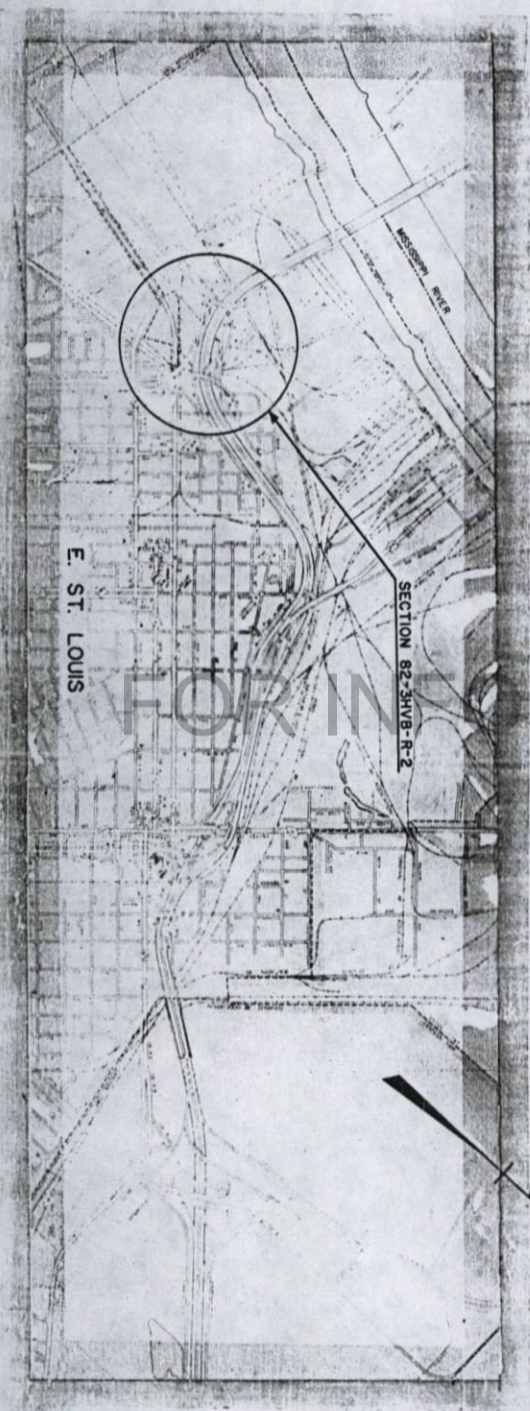
ST. CLAIR COUNTY
BRIDGE REPAIRS

C-98-126-77

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

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



P-98-025-76

SECTION	82-3HVB-R-2
DATE	4
BY	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

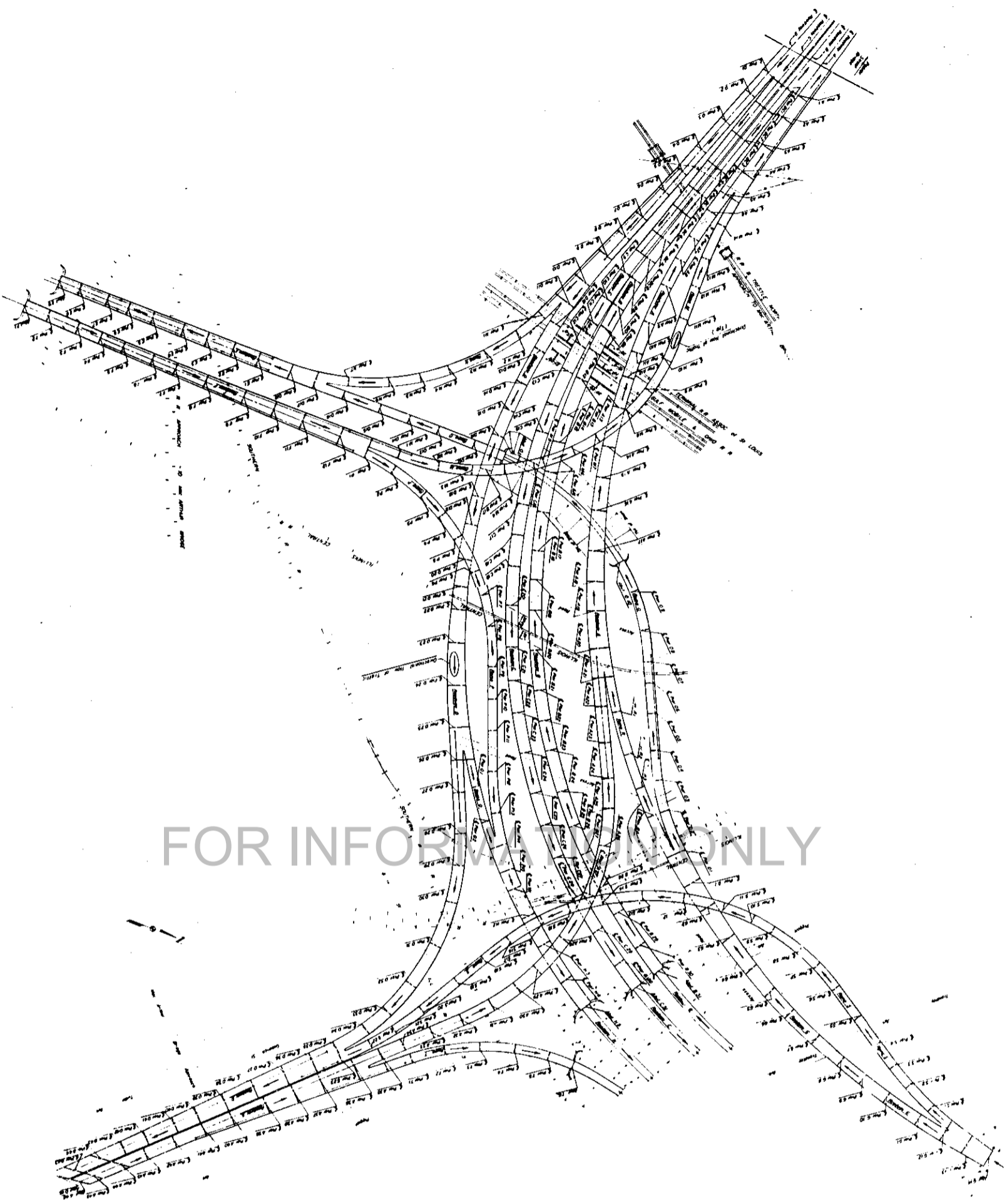
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[Signature]
 EXAMINED: March 29, 77
[Signature]
 PASSED: March 28, 77
[Signature]
 APPROVED: March 29, 77
[Signature]

CONTRACT NO. 32613

ST. CLAIR COUNTY SECTION 82-3HVB-R-2 F.A. ROUTE 70

REEL 8-112

082-005



FOR INFORMATION ONLY

CODE	SUMMARY OF QUANTITIES	UNIT	TOTAL QUANTITY
X05384	PIER CALLING: REPAIR	EACH	145
X05385	ABUT REPAIR	EACH	2
X64601	ENGR. FIELD OFFICE TYPE-A	CAL. NO.	33

SECTION	NO.	DATE
FAI-70	ST. CLAIR	4
		2

GENERAL PLAN
 FAI RTE. 7
 SEC. 82-3HVD
 ST. CLAIR CO.
 SUMMARY OF QUANTITIES

1
2
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24

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

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

Abutment Repair

Abutment No. Total Remarks See Spec. Prov. & Detail on Sheet 2 in Plans

F-17-E 1 2 each

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

Pier No.	Diameter	Length of Crack (Inches)	As Built	Method of Banding
B-11	4'-0"	30-30-36	82-3HV-B-1	Method 2
B-13	4'-0"	16		Method 2
B-14	4'-0"	23	82-3HV-B-3	Method 2
A-35	4'-6"	10-17		Method 1
A-36	4'-0"	12-18		Method 2
A-41	4'-0"	15		Method 2
A-45	4'-6"	15		Method 2
B-9	4'-0"	12	82-3HV-B	Method 1
B-9	4'-0"	14-8		Method 2
B-12	4'-0"	8-24		Method 2
B-13	4'-0"	34		Method 2
B-14	4'-0"	18		Method 2
B-15	4'-0"	42		Method 2
B-16	4'-0"	92		Method 2
B-26	4'-6"	16		Method 2
B-27	4'-0"	17		Method 2
B-28	4'-0"	16		Method 2
B-30	4'-0"	28-36-39		Method 1
C-5	4'-0"	24	82-3HV-B	Method 1
C-11	4'-0"	10-15-15		Method 1
C-13	4'-0"	10-24		Method 1
C-14	4'-0"	21		Method 2
C-15	4'-0"	22		Method 1
C-16	4'-0"	18	82-3HV-B-1	Method 1
D-8	4'-0"	17		Method 2
D-12	4'-0"	6-18		Method 2
D-12	4'-0"	12-19		Method 2
D-22	4'-6"	24-28		Method 2
D-23	4'-0"	18		Method 2
D-24	4'-0"	2-36		Method 2
D-24	4'-6"	7-16-23	82-3HV-B-3	Method 2
D-40	4'-0"	12		Method 2
D-44	4'-0"	9-20		Method 2
E-6	4'-0"	19	82-3HV-B-2	Method 1
E-4	4'-0"	12-17		Method 2
F-9	4'-0"	18		Method 1
F-10	4'-0"	21		Method 1
F-12	5'-0"	18-24	82-3HV-B	Method 1
G-2	4'-0"	20		Method 2
G-5	4'-0"	16	82-3HV-B-1	Method 1
G-7	4'-0"	33		Method 2
G-7	4'-0"	19		Method 2
G-13	4'-0"	22-24		Method 2
H-1	4'-0"	12-18		Method 2
H-1	4'-0"	18		Method 2
H-6	4'-0"	15-19		Method 2
H-6	4'-0"	26		Method 2
H-6	4'-0"	16		Method 1
H-6	4'-0"	33		Method 1
H-6	4'-0"	16	82-3HV-B-1	Method 1
O-17	4'-0"	8-10-25		Method 1
O-17	4'-0"	25-30	82-3HV-B-2	Method 1
O-18	4'-0"	9-40		Method 1
P-1	4'-0"	17	82-3HV-B-1	Method 1
P-14	4'-0"	18		Method 2
P-15	4'-6"	24		Method 2
P-15	4'-0"	21-30		Method 2
S-2	4'-0"	15		Method 2
S-3	4'-0"	20		Method 2
S-4	4'-0"	21		Method 2
S-8	5'-6"	9-24		Method 2
S-16	7'-0"	5-33		Method 2
S-17	6'-6"	6-34-40		Method 3
S-18	6'-0"	22-23		Method 1
S-18	4'-0"	16-65		Method 2
T-2	4'-6"	27	82-3HV-B-3	Method 1

TOTAL COLUMNS TO BE REPAIRED EACH 145

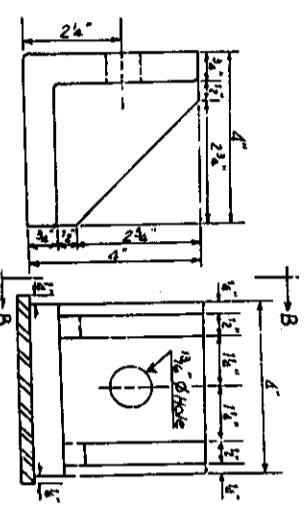
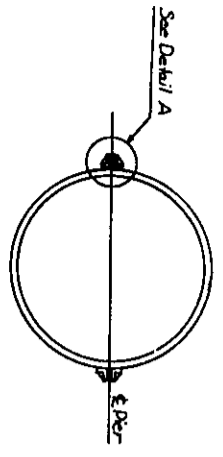
- * 82-3HV-B-R-2
- GENERAL NOTES -
 ① For details of method 162 see Sheet #2
 ② See Special Provisions for treatment of cracks in Pier Columns.
 ③ It will be the responsibility of the contractor to verify the Dia. of all pier columns prior to the fabrication of the bands.
 ④ Steel bands shall receive 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
 PAIRS
 PIER COLUMNS
 ABUTTS
 FAI ROUTE 70
 SEC. 82-3HV-B-R-2

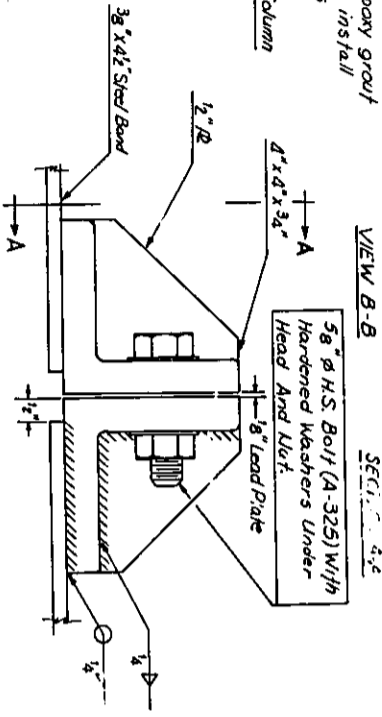
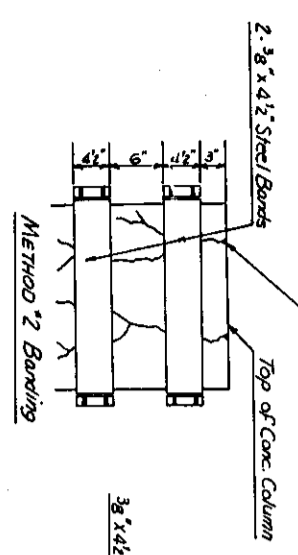


REPAIR OF CRACKED PIER (COLUMN)

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

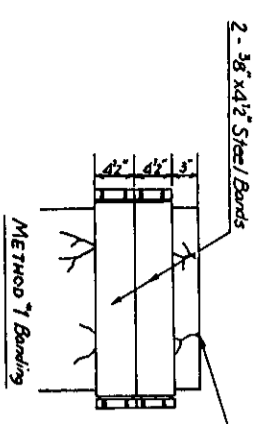


Clean and epoxy grout cracks, then install Steel Bands



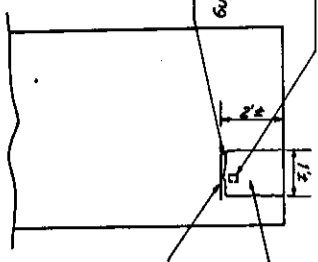
Cracks On top of Columns to be Vee'd by use of a Chipping Hammer or other suitable method approved by the Engineer

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.



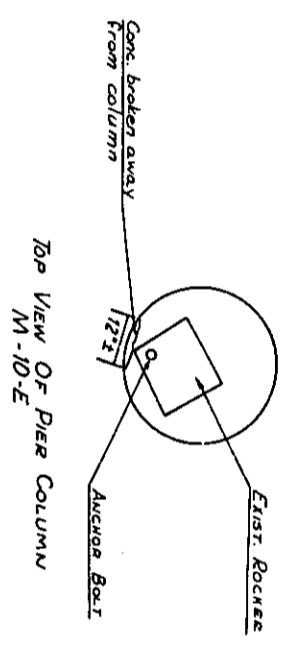
No Scale

Exposed Anchor Bolt
Material above saw cut to be removed to provide a good bonding shelf for repair material.
2 1/2" of conc. broken from column exposing anchor bolt.
1/2" Deep Saw Cut
To Be Used For As Pier Column Repair.

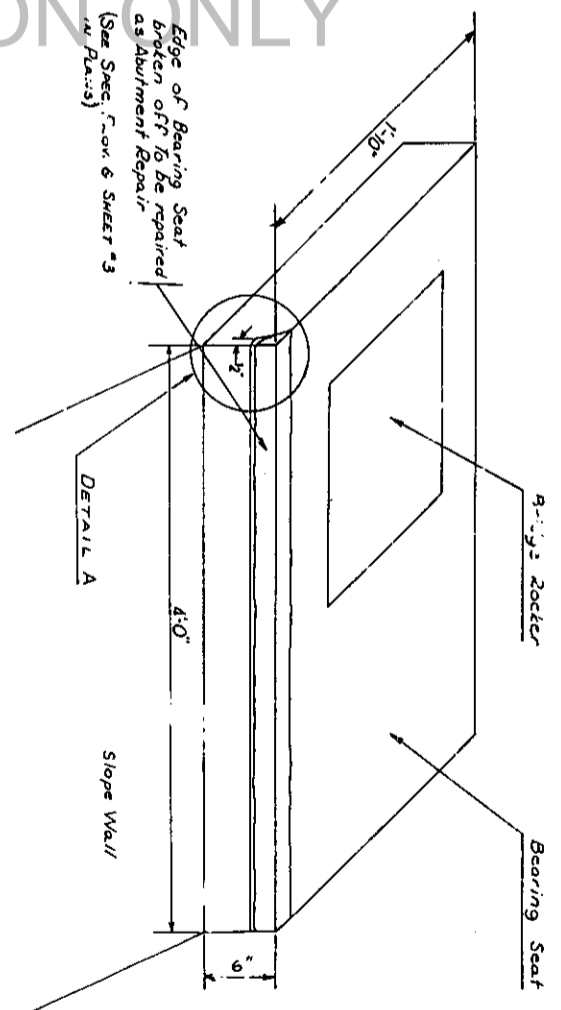


Pier Column No. M-10-E

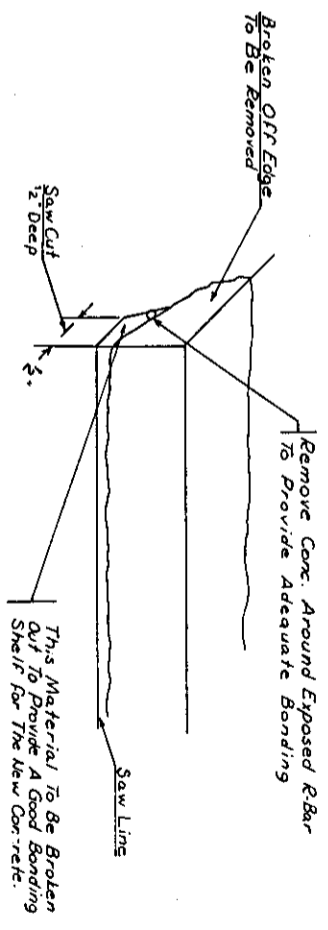
No Scale



FOR INFORMATION ONLY



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



DETAIL A

No Scale

GENERAL PI
FAIRTE 7
SEC. 82-3HVB-R-2
ST. CLAIR CO.
DETAILS OF CONSTRUCTION

NO.	SECTION	QUANTITY	UNIT	PRICE
FAI-70	SEC. 82-3HVB-R-2	ST. CLAIR	4	4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SET NO. 4 OF 4 SETS

STATE ROUTE NO.	SEC.	COUNTY	SECTION	SHEET
FAL 70	*	ST. CLAIR	30	1
* 82-13,10A5 PROJECT				

PC-98--004-73

FOR INDEX OF SHEETS
SEE SHEET NO. 2

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FAL ROUTE 70

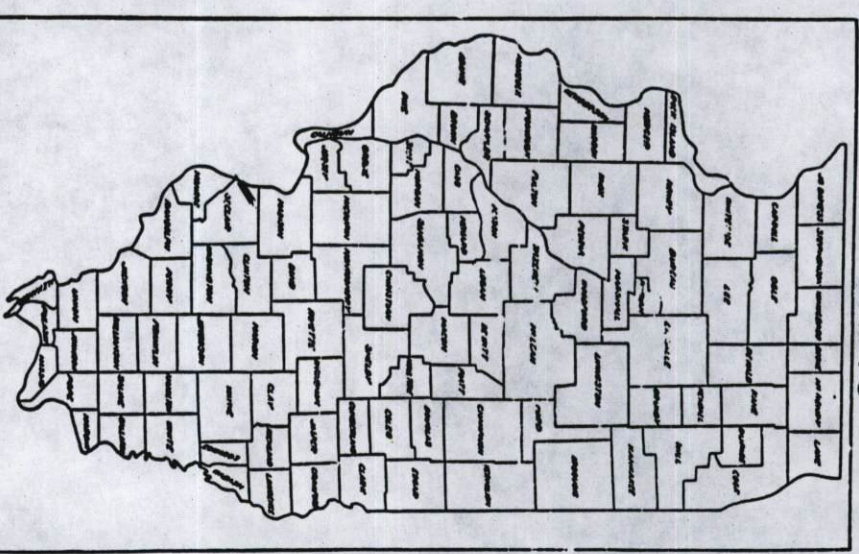
SECTION 82-(3,4)DRS

PROJECT I-70-K 10

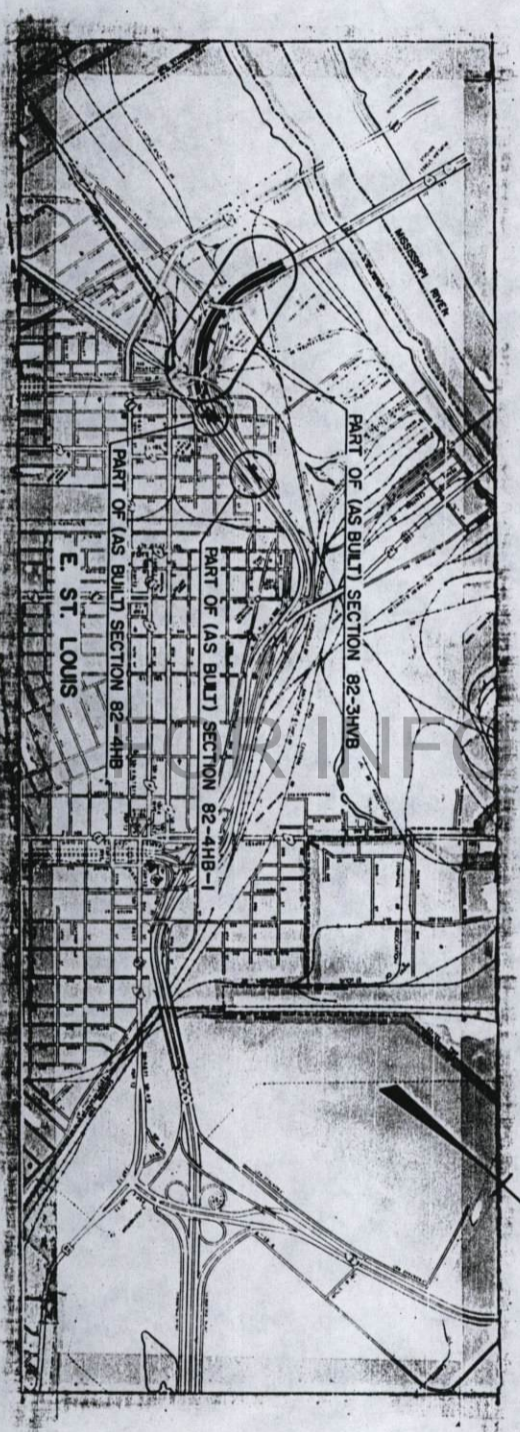
ST. CLAIR COUNTY

DECK RESURFACING

~~C-98-115-76~~



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



LOCATION MAP

SCALE: 1 INCH = 1600 FEET

NET LENGTH (AS BUILT) SECTION 82-3HB	ROADWAY B = 3085.00 FT. = 0.584 MILES
NET LENGTH (AS BUILT) SECTION 82-4HB	ROADWAY C = 3168.56 FT. = 0.600 MILES
NET LENGTH (AS BUILT) SECTION 82-4HB-1	ROADWAY B = 176.20 FT. = 0.033 MILES
NET LENGTH (AS BUILT) SECTION 82-4HB	ROADWAY C = 183.81 FT. = 0.035 MILES
NET LENGTH (AS BUILT) SECTION 82-4HB-1	ROADWAY E = 231.20 FT. = 0.044 MILES

NET LENGTH OF SECTION = 6235.77 FT. = 1.194 MILES

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____
DIVISION ADMINISTRATOR

DATE _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED _____
EXAMINED _____
PASSED _____
APPROVED _____
DIRECTOR OF HIGHWAYS

CONTRACT NO.

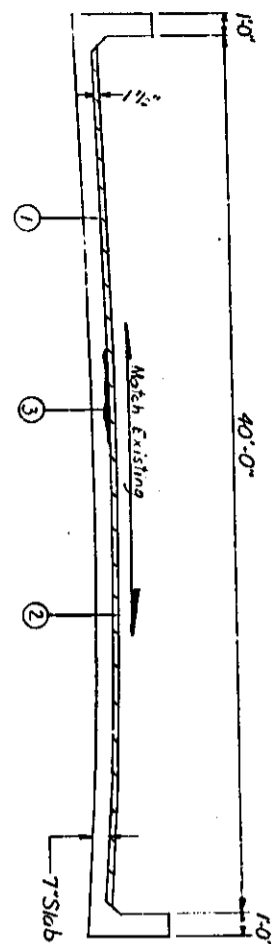
ST. CLAIR COUNTY SECTION 82-13,10A5 F.A.I. ROUTE 70

34

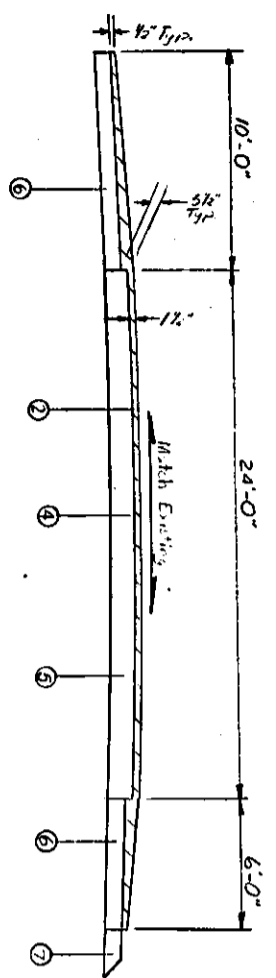
082-0005

REEL 8-110

ROUTE NO.	SECTION	QUANTITY	TOTAL	UNIT
62-70	#	57 CLAIR	30	17
TOTAL COST AND NUMBER OF SHEETS				
# 82-4-92RS				



TYPICAL SECTION



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

FOR INFORMATION ONLY

JOINT MODIFICATION SCHEDULE

JOINT NUMBER	JOINT LOCATION	CASE	NEOPRENE EXPANSION DAM	FUS
1	S ABUT	DEPT	67'-6"	2'-0"
	W ABUT	DEPT	67'-6"	2'-0"
TOTALS			135'-0"	4'-0"

*THE CONTRACTOR SHALL NOT USE TRANSELEX 2004 AT THIS LOCATION

DECK SLAB REPAIR SCHEDULE

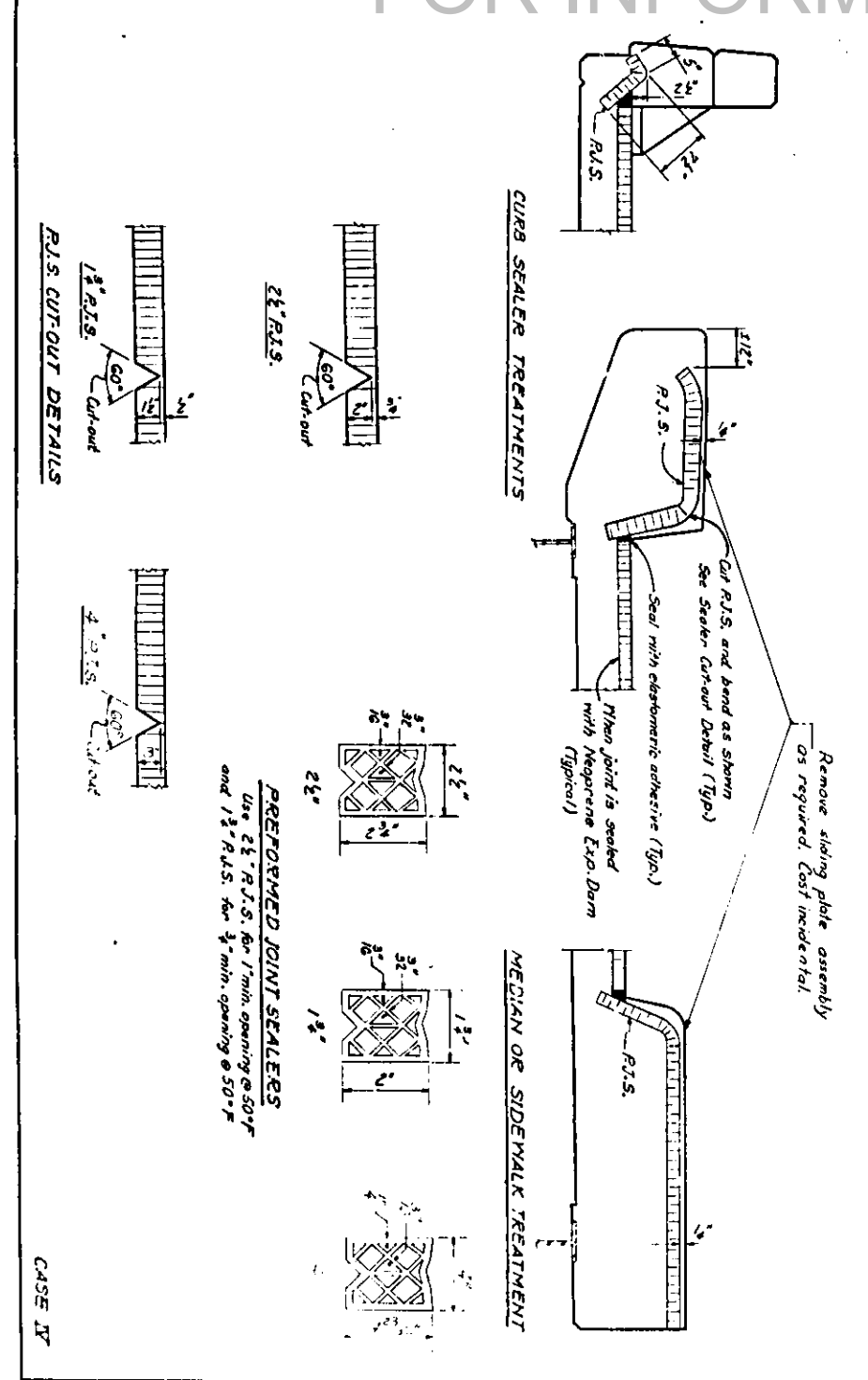
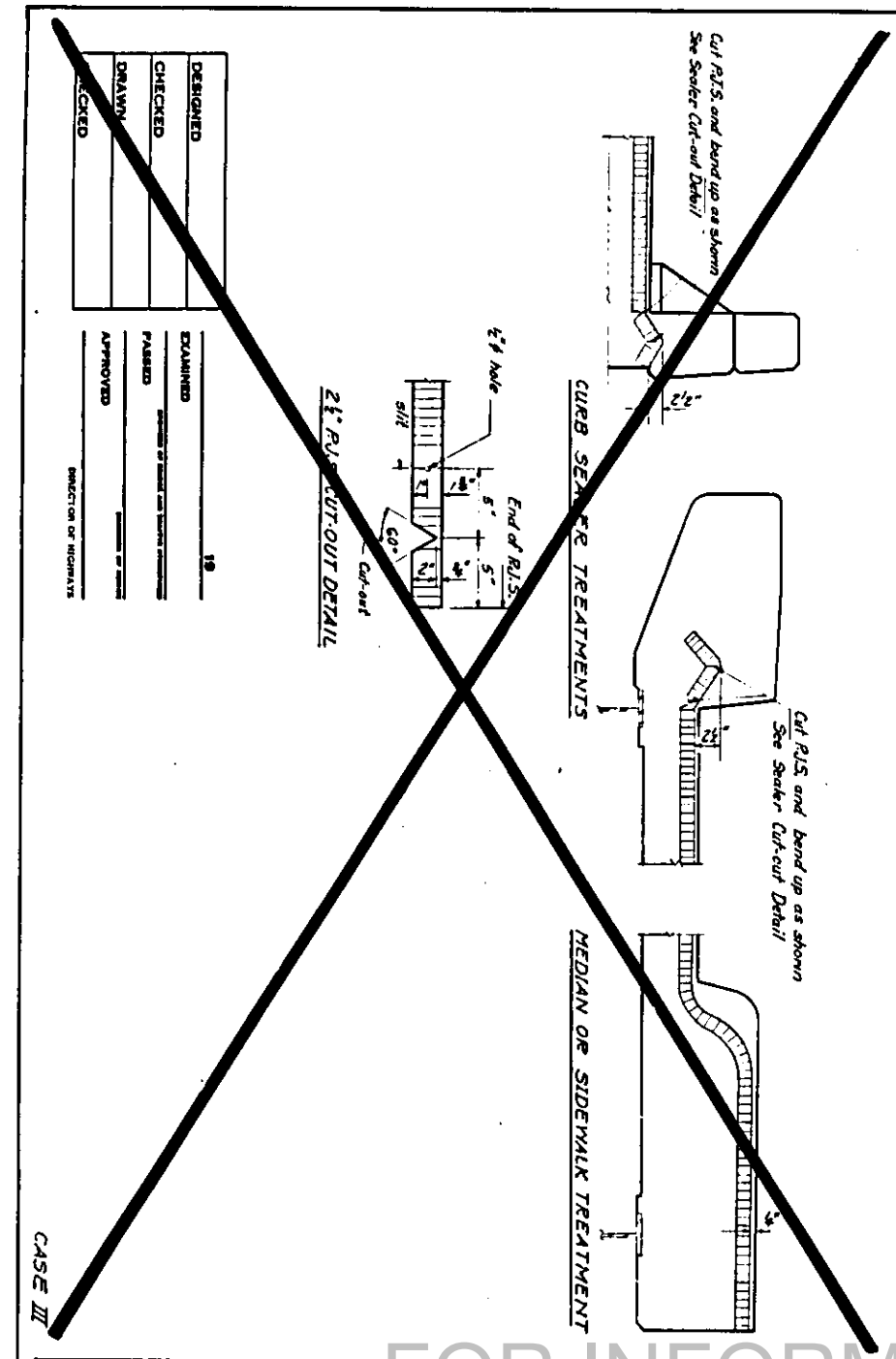
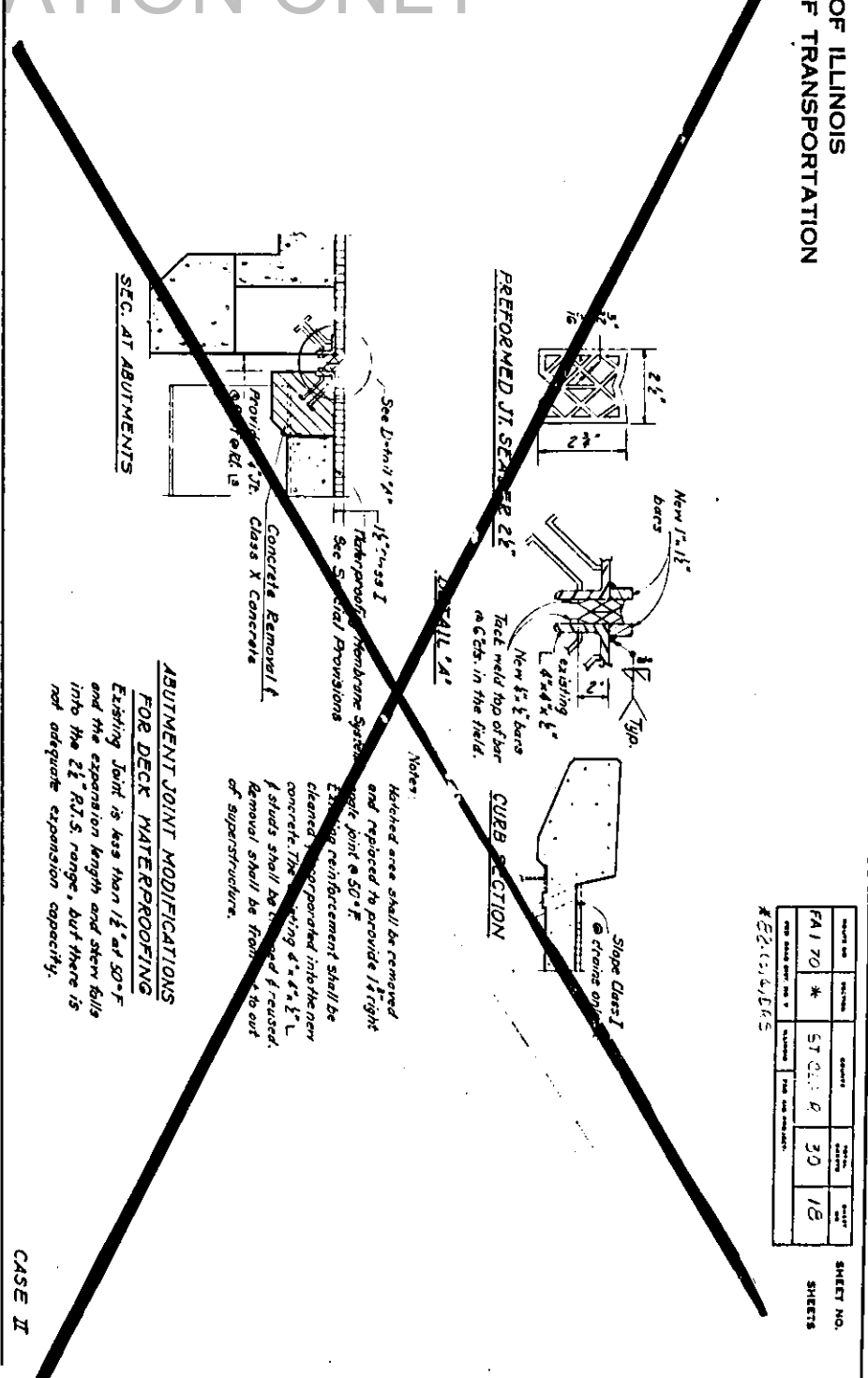
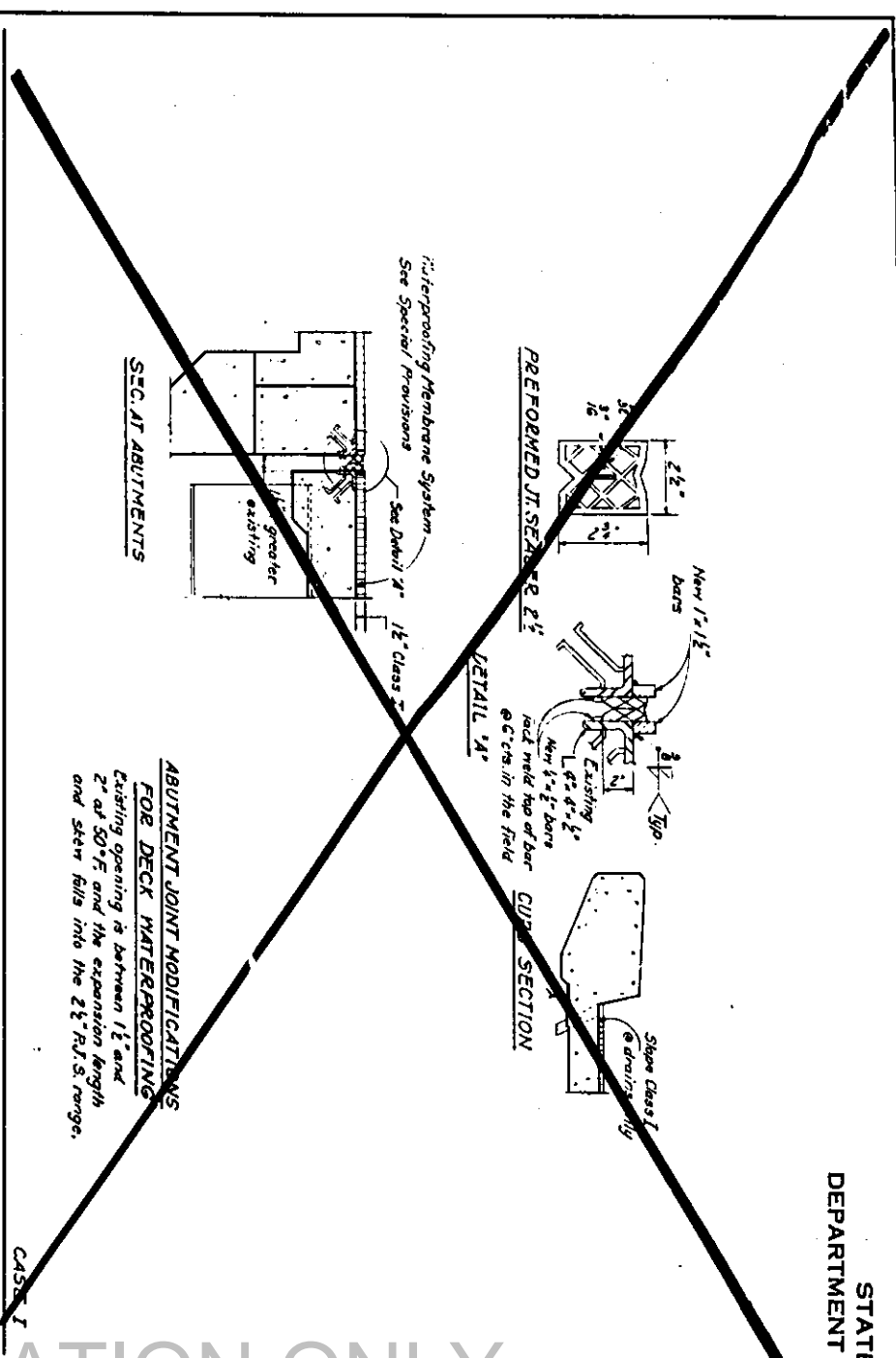
STATION	0+00 to 0+50	0+50 to 1+50	1+50 to 2+00	2+00 to 2+50	2+50 to 3+00	LANE TOTAL	DECK SLAB REPAIR (FILL DEPTH)	DECK SLAB REPAIR (PARTIAL)
Baseline A								
LANE A	.11					.11		
LANE B	.52			.09		.61		
LANE C	.13		3.19	.13	.23	3.68		
LANE D			.32			.32		
			4.72			4.72	1.57	3.15

FAI ROUTE 100
SECTION 82-434DRS
ST CLAIR COUNTY
(As Built)
Section 82-4HB-1
Roadway B

No Scale

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	FAI 70	* SHEET NO.	30	TOTAL SHEETS	18
SHEET NO. 30 OF 18					
SHEETS					

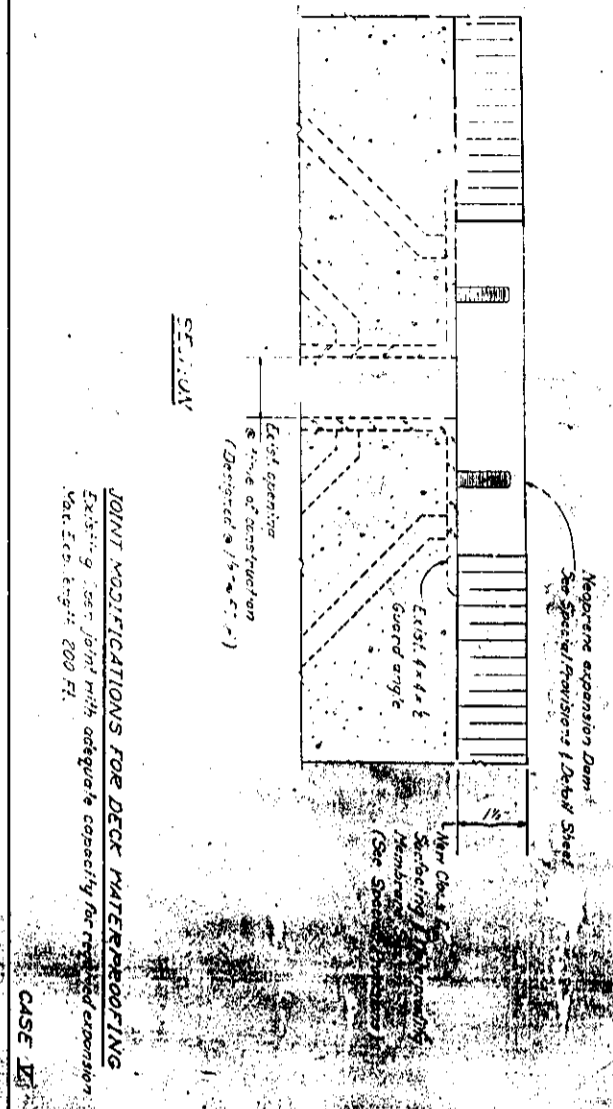


DESIGNED	EXAMINED
CHECKED	PLASSED
DRAWN	APPROVED
CHECKED	DIRECTOR OF HIGHWAYS

DESIGNED	EXAMINED
CHECKED	PLASSED
DRAWN	APPROVED
CHECKED	DIRECTOR OF HIGHWAYS

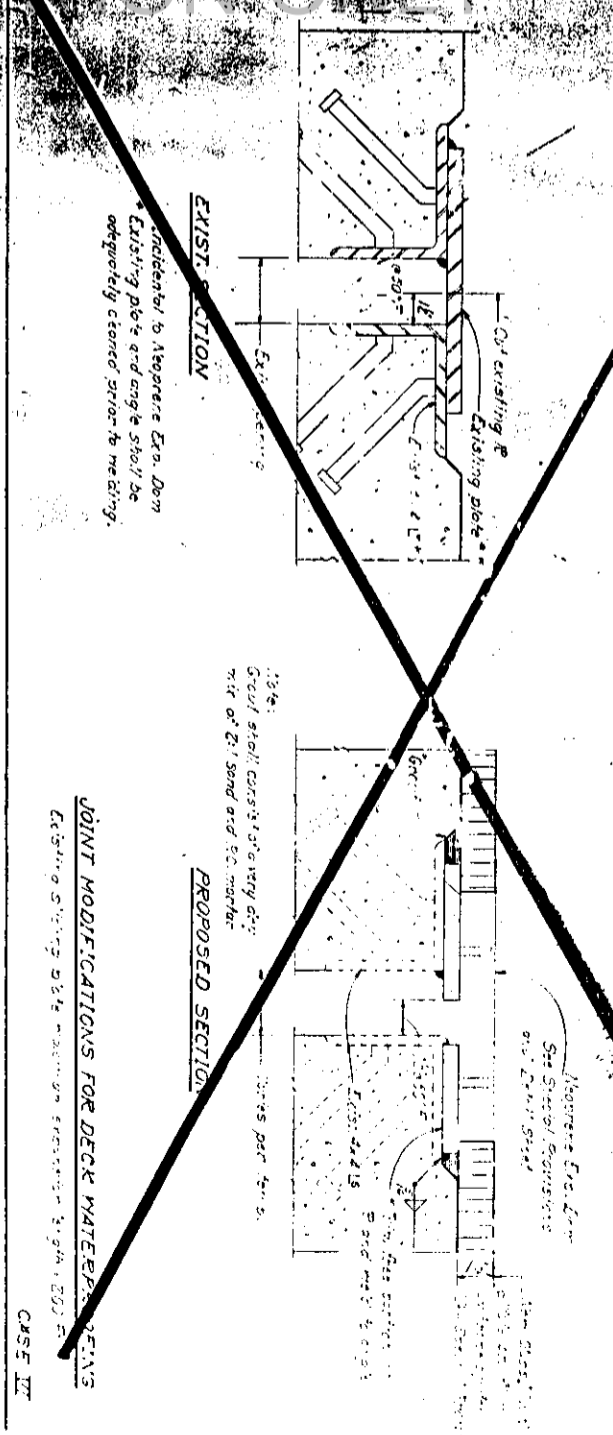
FOR INFORMATION ONLY

PROJECT NO.	ST CLAIR	SHEET NO.	13
SHEET NO.	20	SHEETS	13



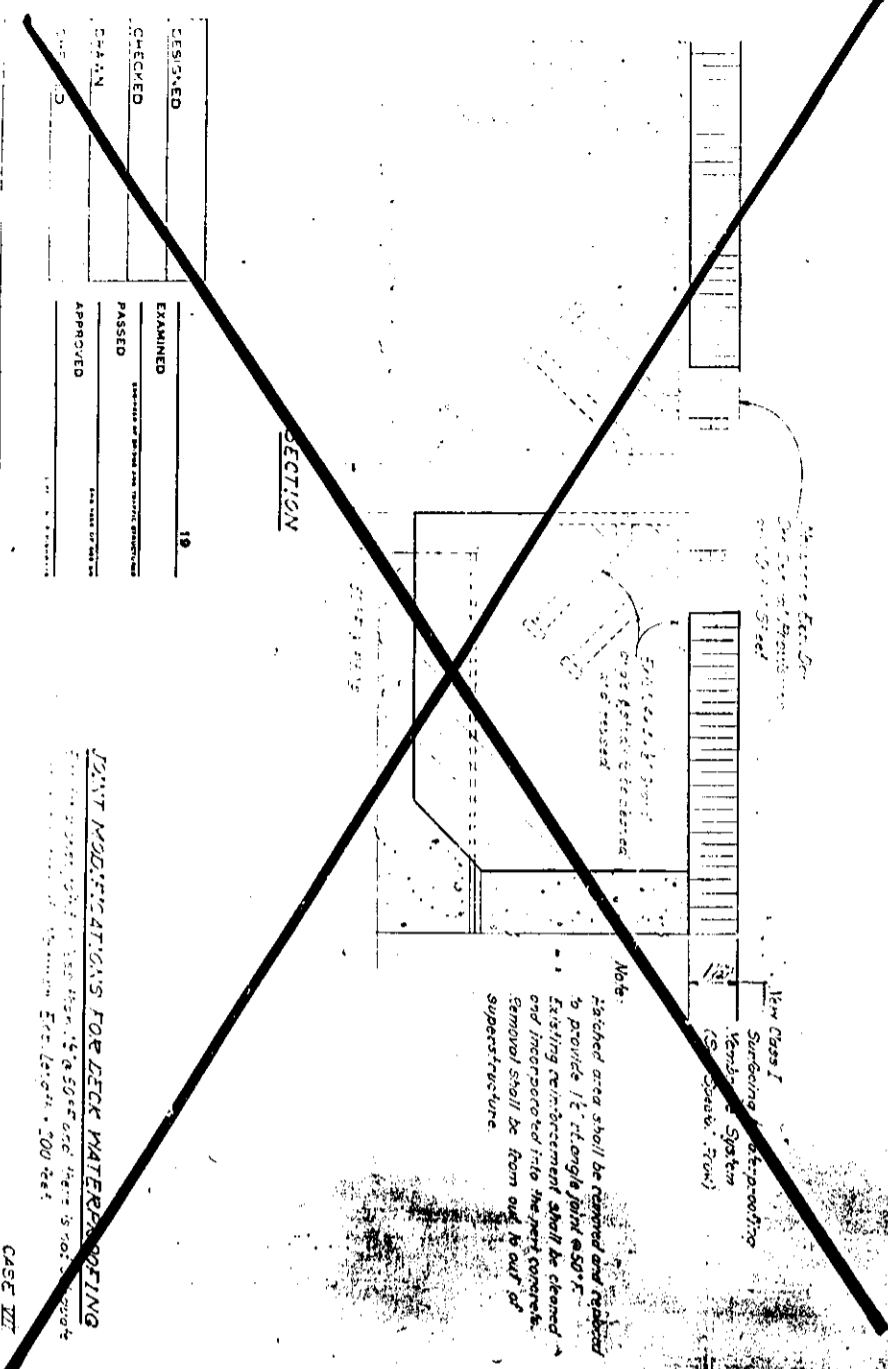
JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing joint with adequate capacity for required expansion
Max. Exp. length 200 Ft.

CASE II



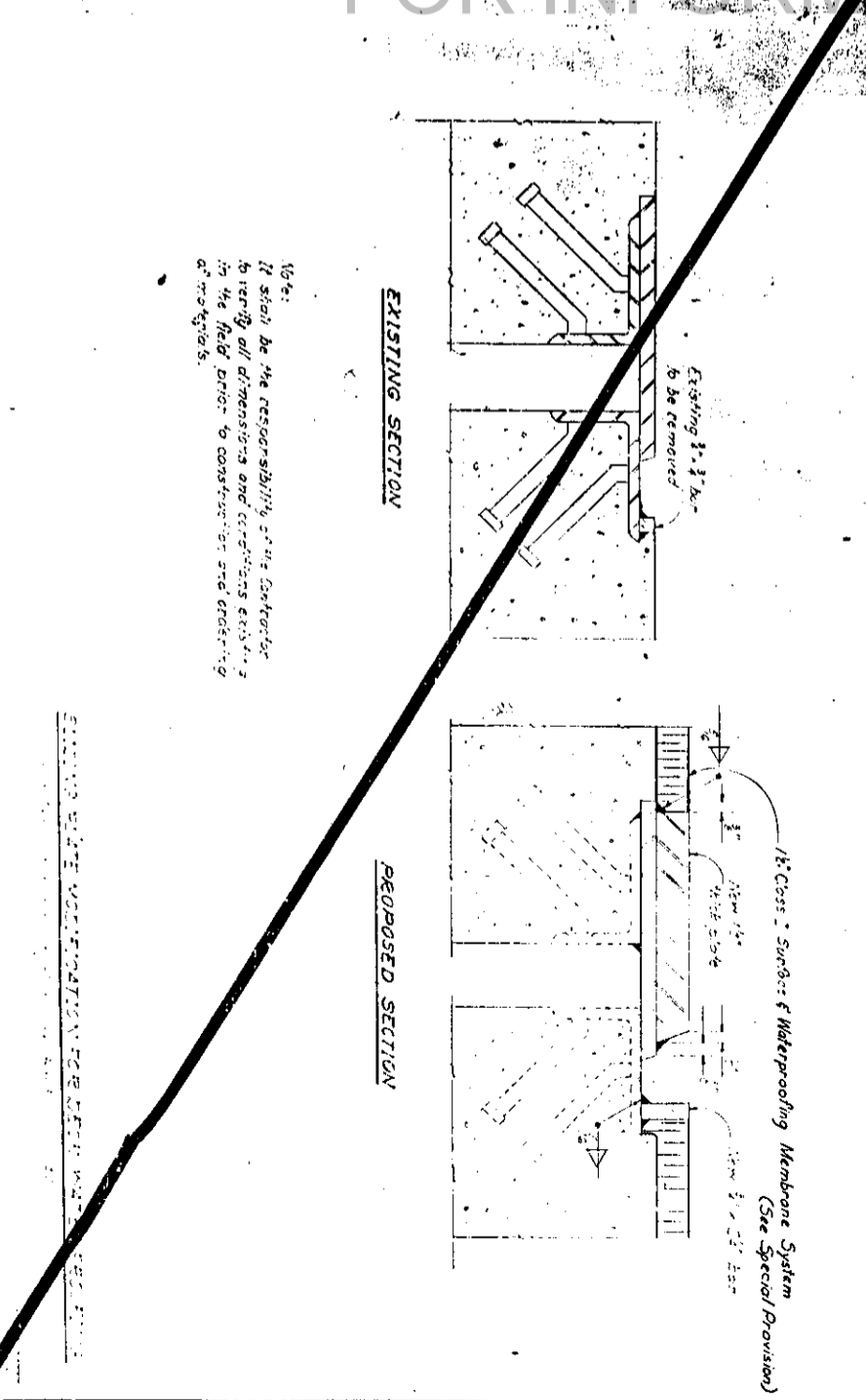
JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing opening 5/8\"/>

CASE III



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

CASE VII



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

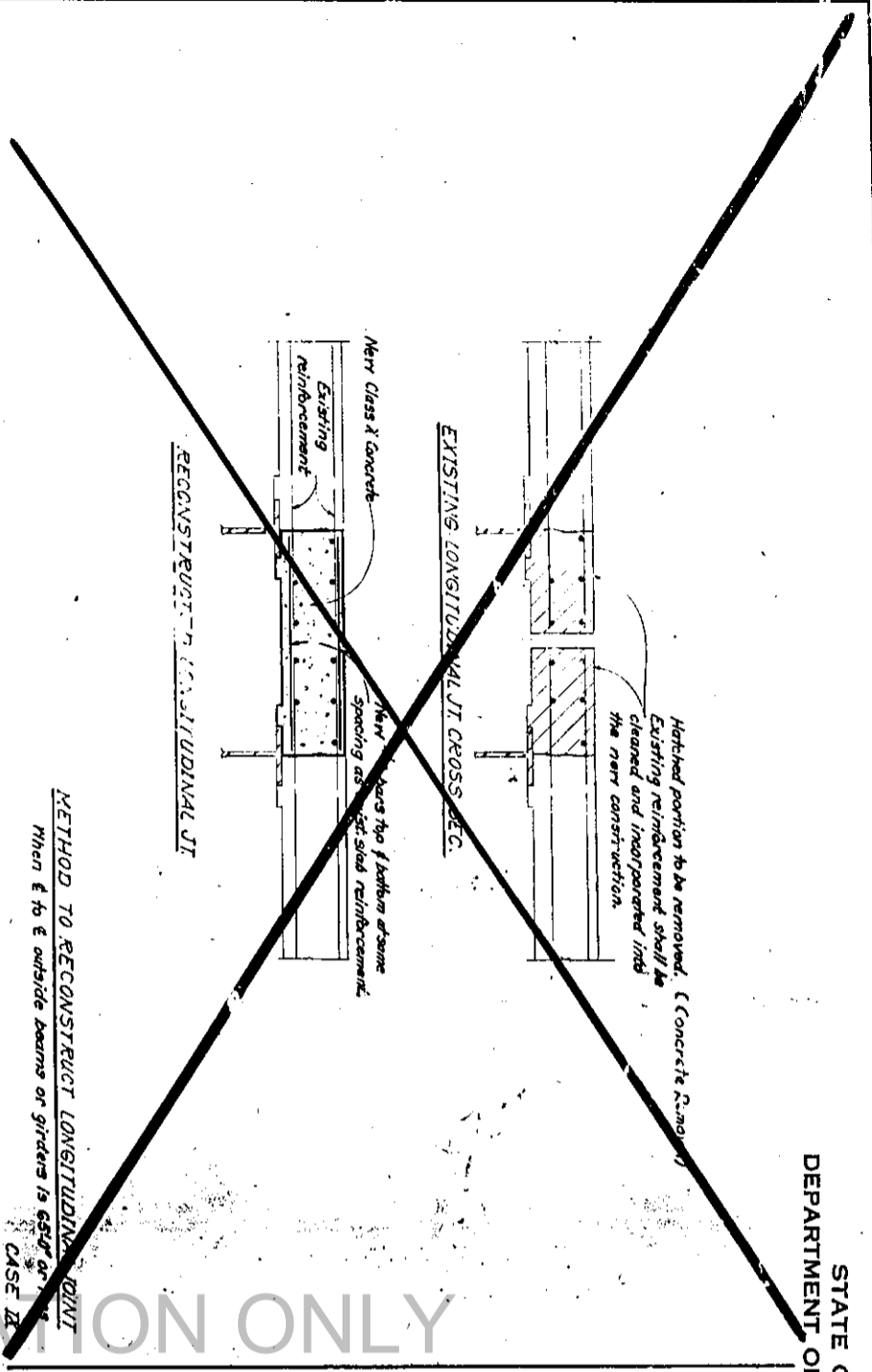
CASE VIII

DESIGNED	19
CHECKED	
EXAMINED	
PASSED	
APPROVED	

DESIGNED BY: [Name]
CHECKED BY: [Name]
EXAMINED BY: [Name]
PASSED BY: [Name]
APPROVED BY: [Name]

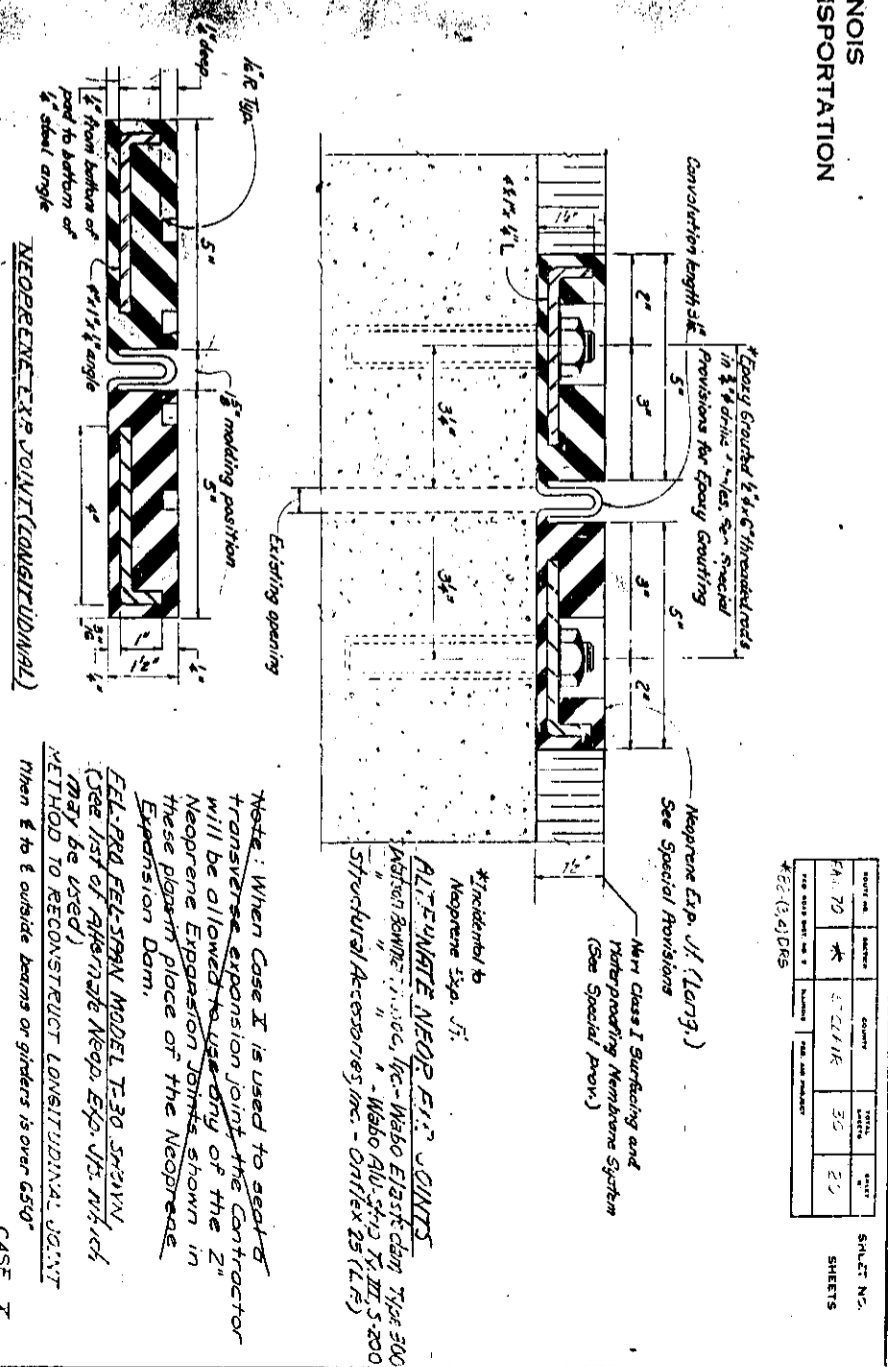
STANDARD SPECIFICATION FOR DECK WATERPROOFING

FOR INFORMATION ONLY



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

FOR INFORMATION ONLY



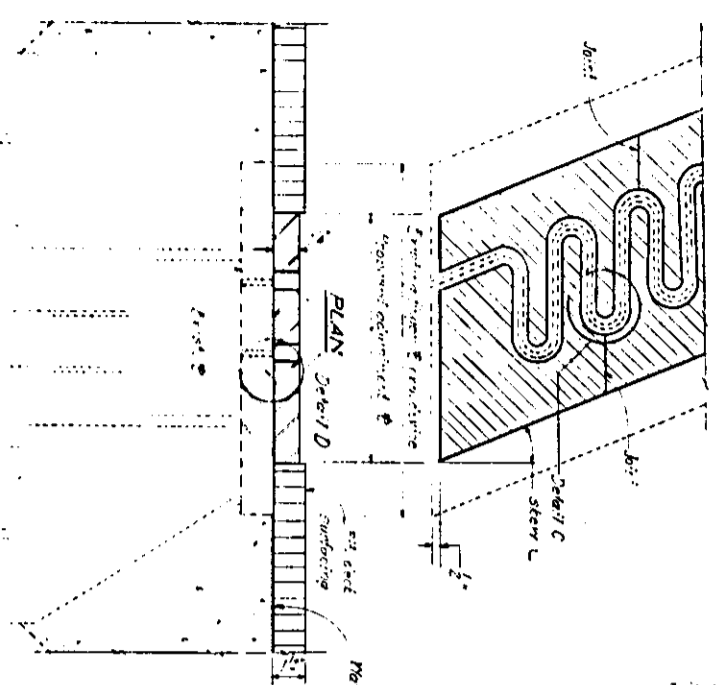
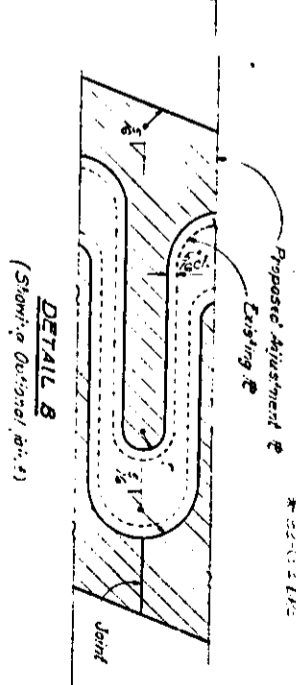
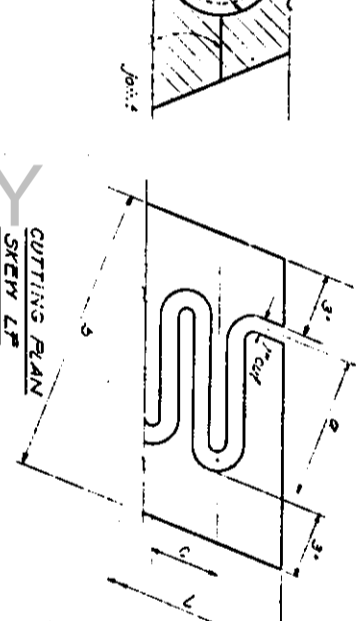
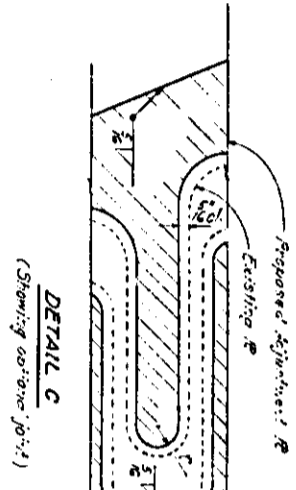
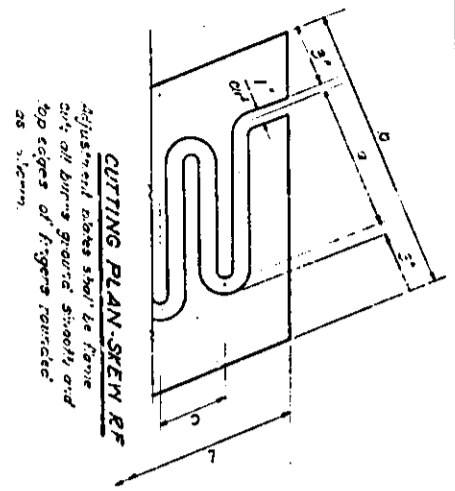
METHOD TO RECONSTRUCT LONGITUDINAL JOINT
When ϵ to ϵ outside beams or girders is over 65"
CASE I

NO.	DATE	BY	CHKD.	APP'D.	REVISION
1	11/17/79	W. J. HARRIS	W. J. HARRIS	W. J. HARRIS	1

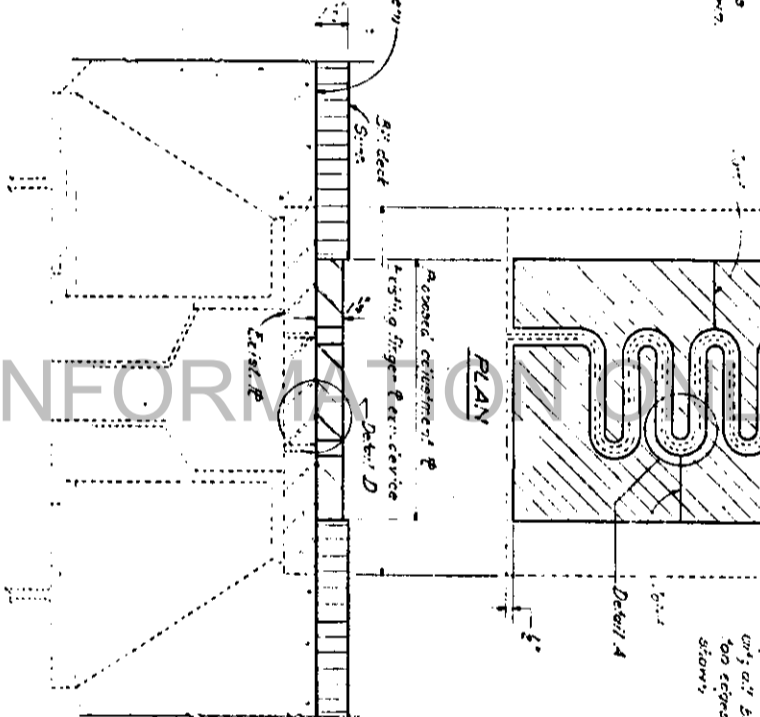
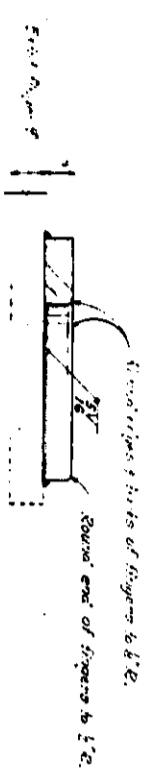
DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

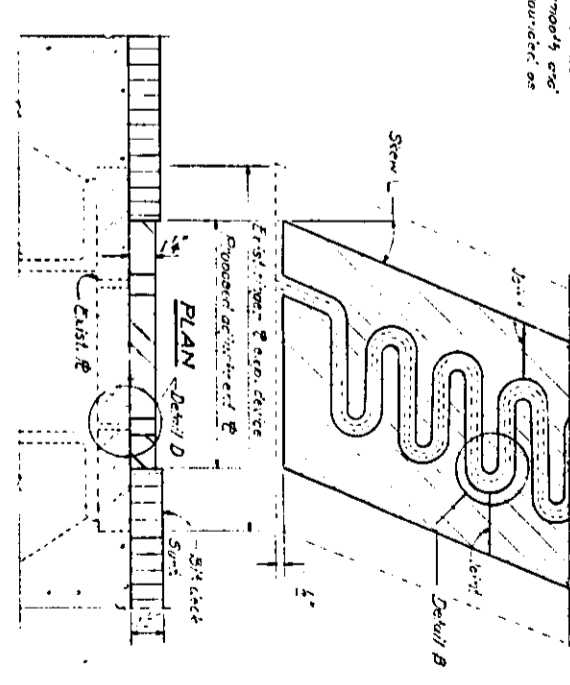
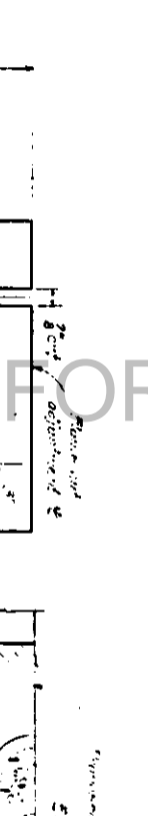
PROJECT NO.	111	CONTRACT NO.	111-1	SHEET NO.	21
DATE	11/1/68	ISSUE	1	TOTAL SHEETS	21



EXIST. SECTION EXP JOINT
(Stem EF)



EXIST. SECTION EXP JOINT
(Stem GF)



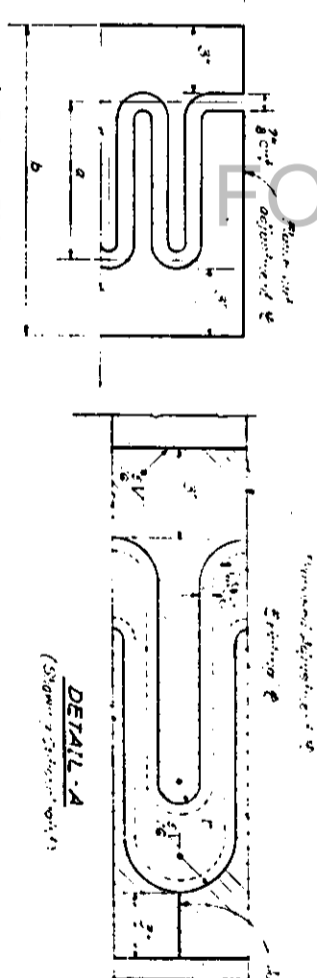
EXIST. SECTION EXP JOINT
(Stem LF)

SCHEDULE OF MATERIAL
ADJUSTMENT PLATES

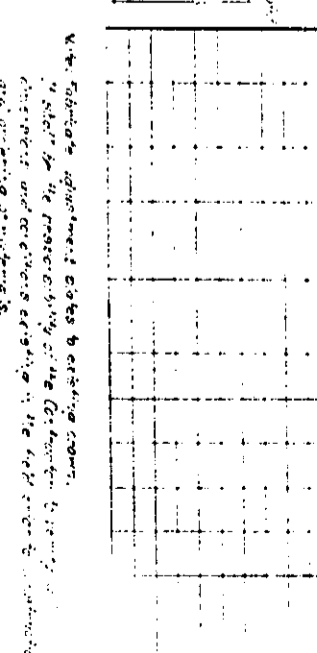
Bar Size	Quantity	Location	Size	Dimensions	Stem
70	10x28	B3248	St. Cur.	11" x 17 1/2" x 5/8"	0°
70	M#74	B3248	St. Cur.	11" x 17 1/2" x 5/8"	0°
70	M#74	B3248	St. Cur.	11" x 17 1/2" x 5/8"	0°
70	M#74	B3248	St. Cur.	11" x 17 1/2" x 5/8"	0°

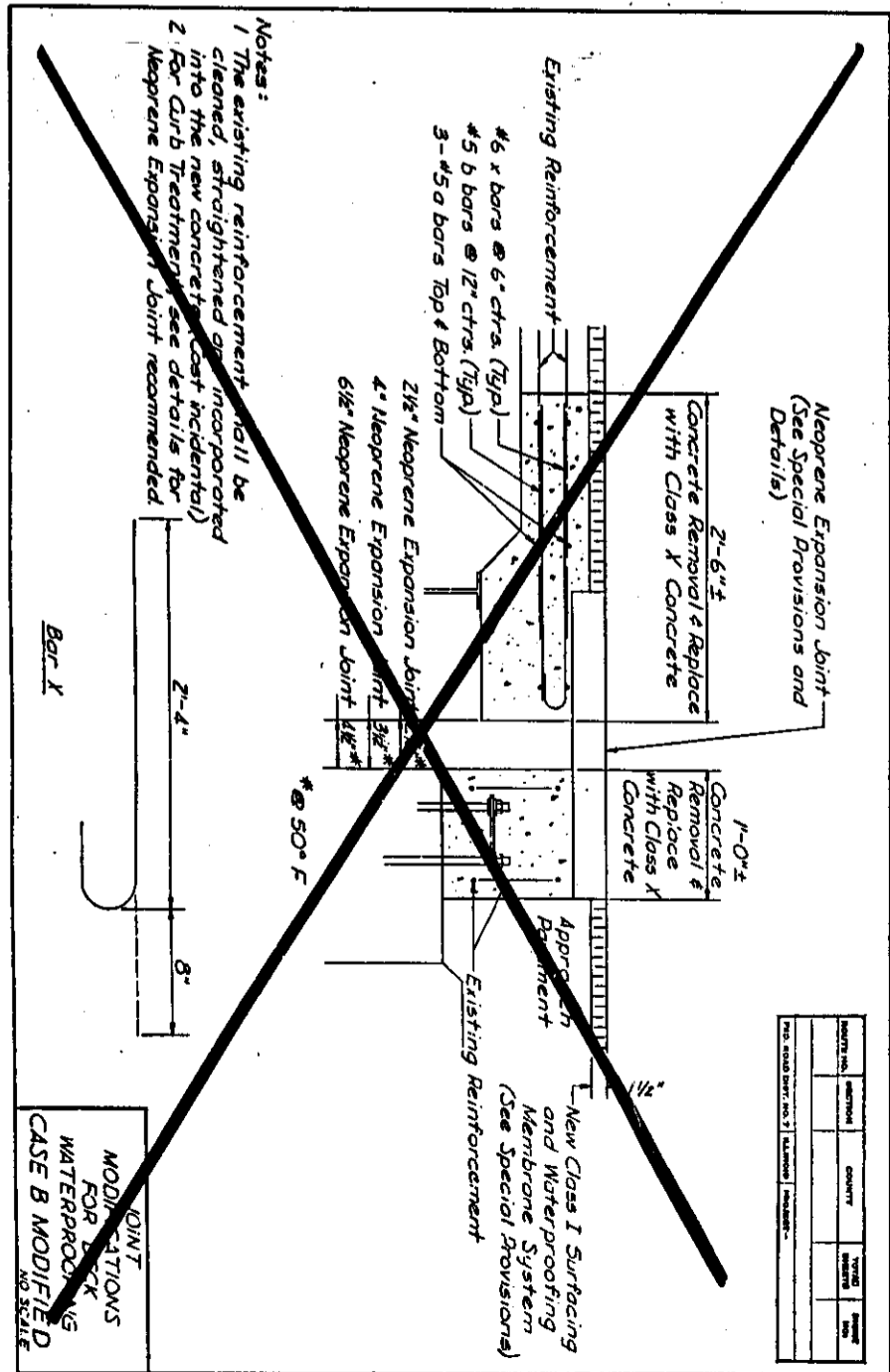
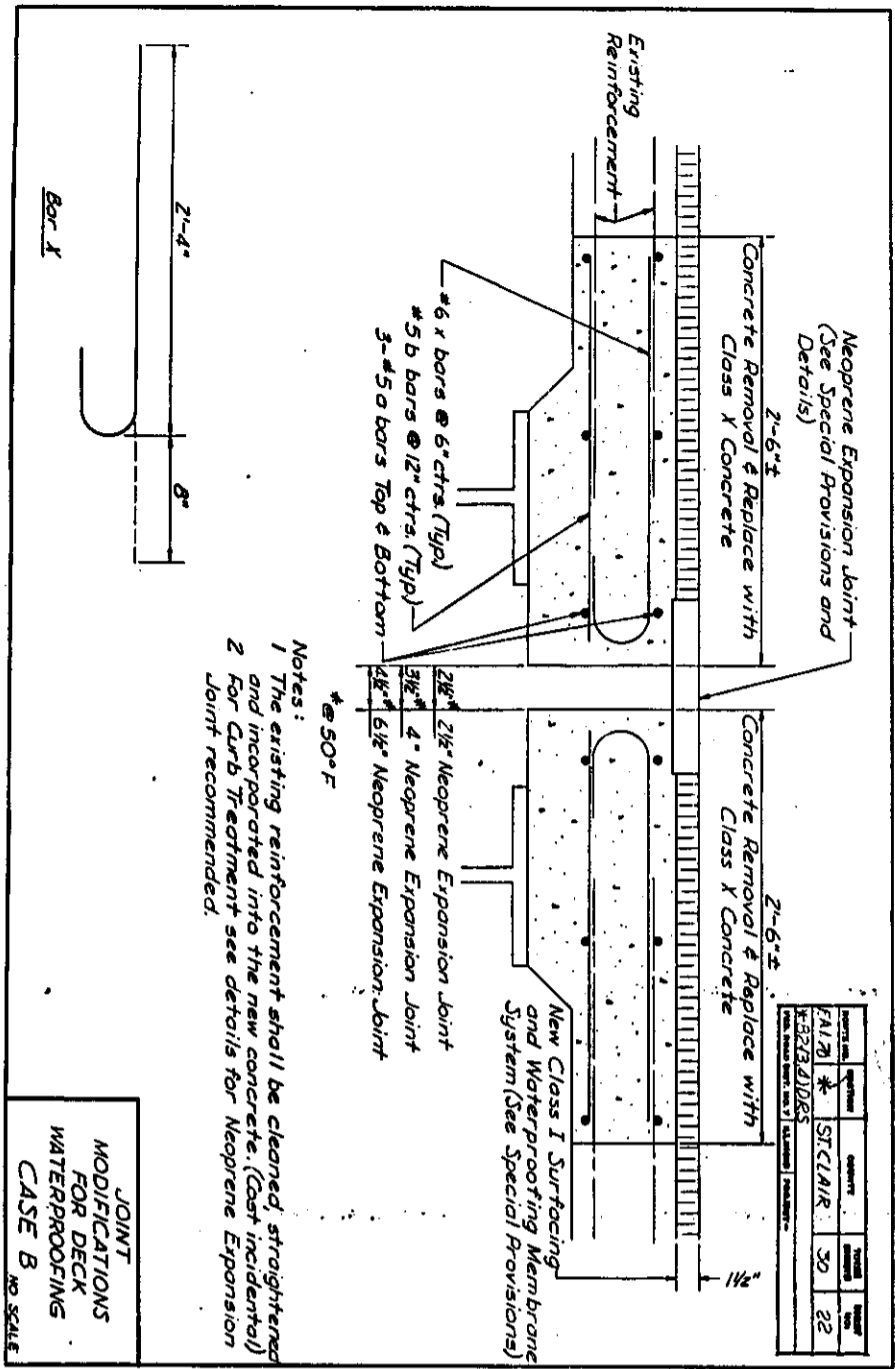
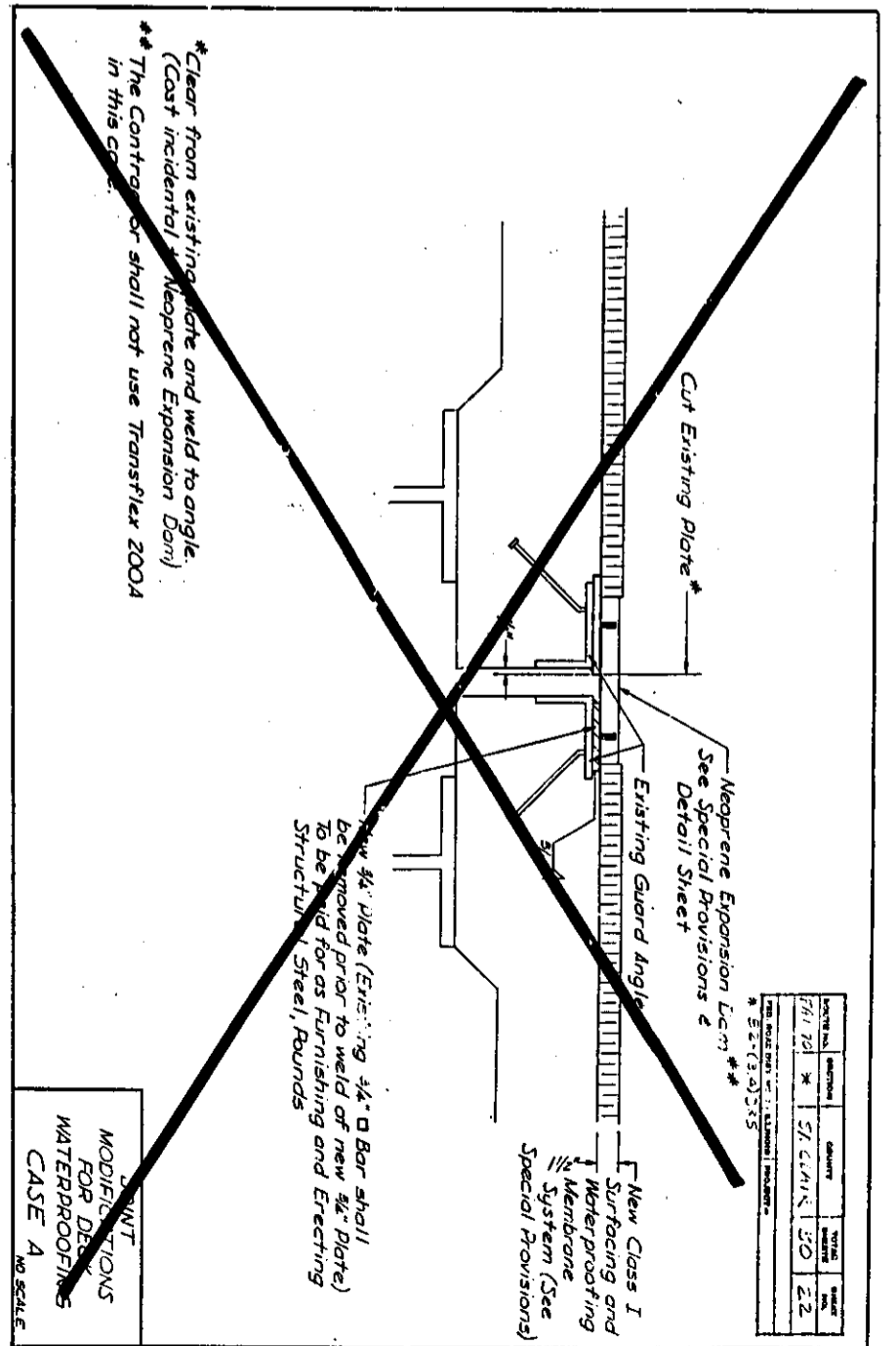
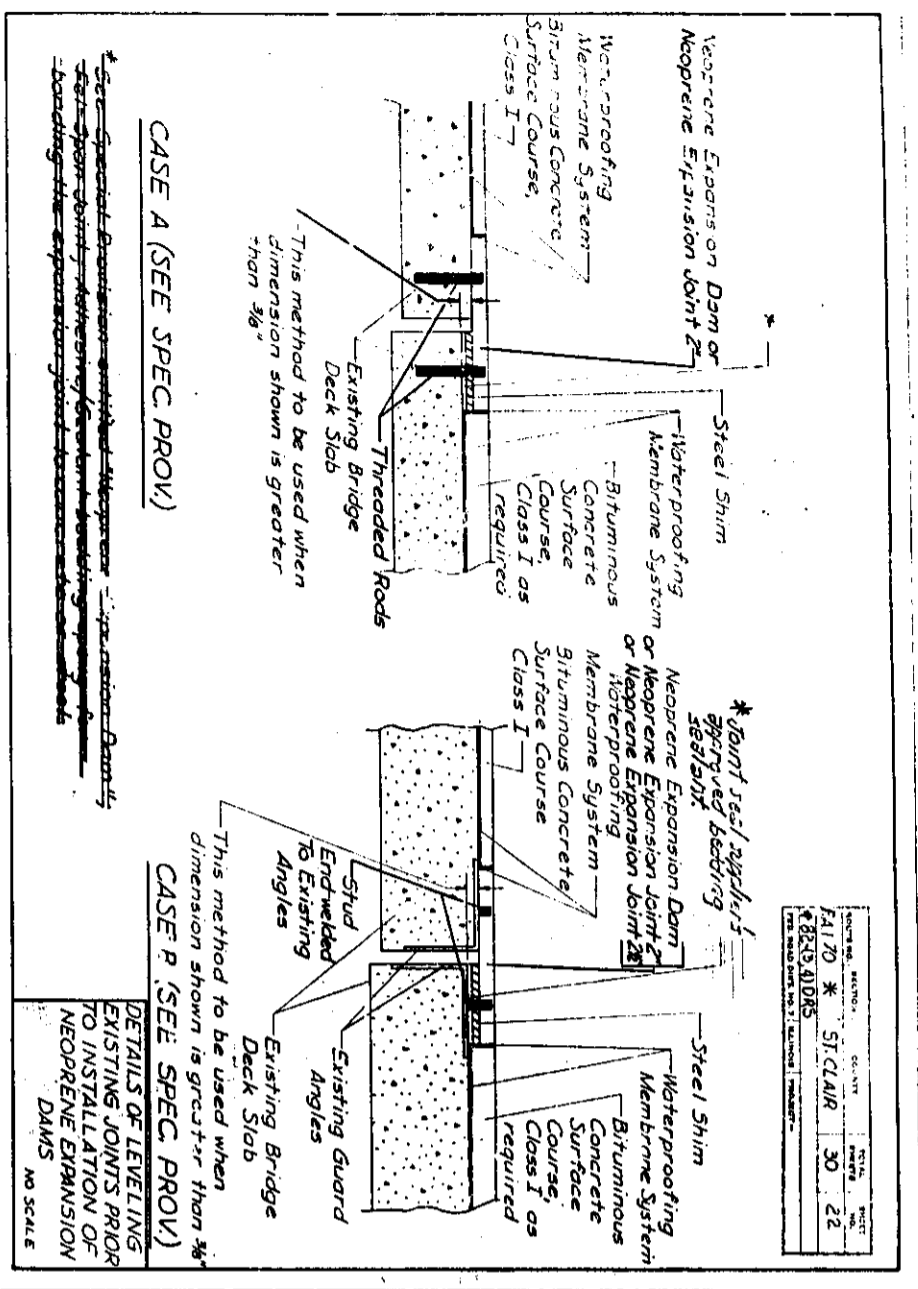
DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	DIRECTOR OF HIGHWAYS

CUTTING PLAN-O-SKEW
Adjustment Plates shall be frame cut all bars ground smooth and top edges of fingers rounded as shown.

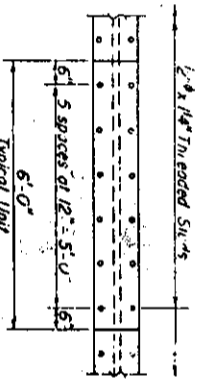
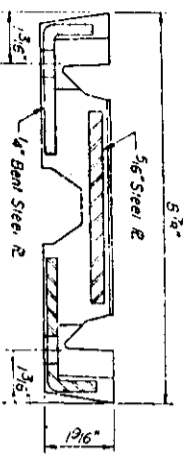


FINGER PLATE MODIFICATIONS FOR DECK WATER PROOFING
CASE XII



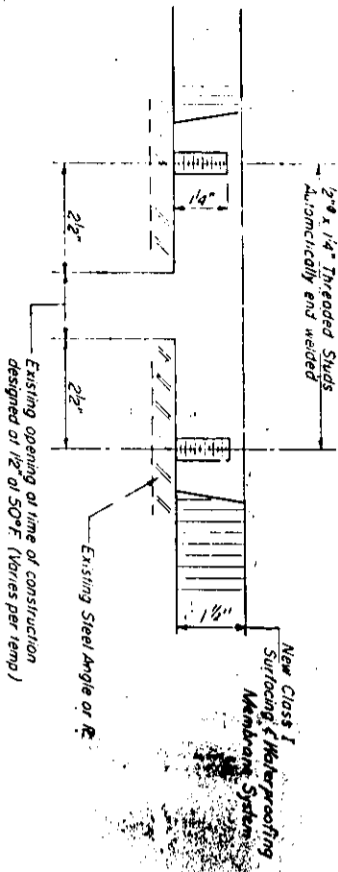


FOR INFORMATION ONLY



PLAN

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



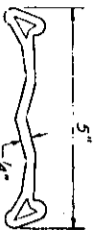
CROSS SECTION

Dimensions are at right angles

FOR EXPANSION LENGTH OF DECK = 0 TO 160 FT

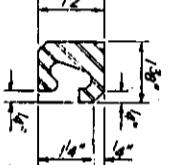
TRANSFLEX MODEL 200A
NARROW GAGE

(Structural Rubber Products Co.)



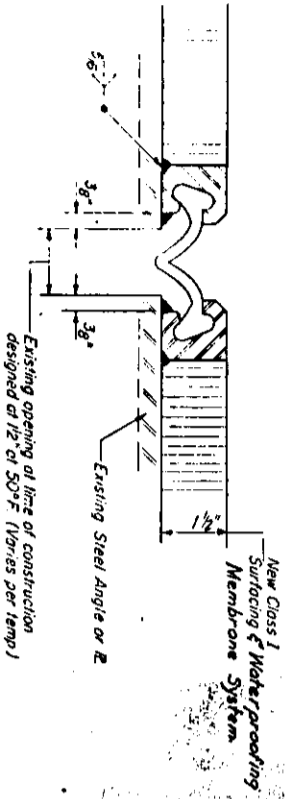
NEOPRENE EXTRUSION S-300

ASTM D-2628 Modified



STEEL EXTRUSION-TYPE E

ASTM A-242



CROSS SECTION

Dimensions are at right angles

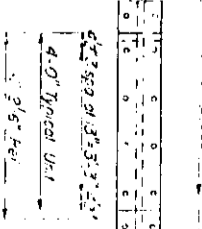
FOR EXPANSION LENGTH OF DECK = 0 TO 200 FT

WABO-MAURER MODEL S-300E

(Wabco-Rubber Products, Inc.)

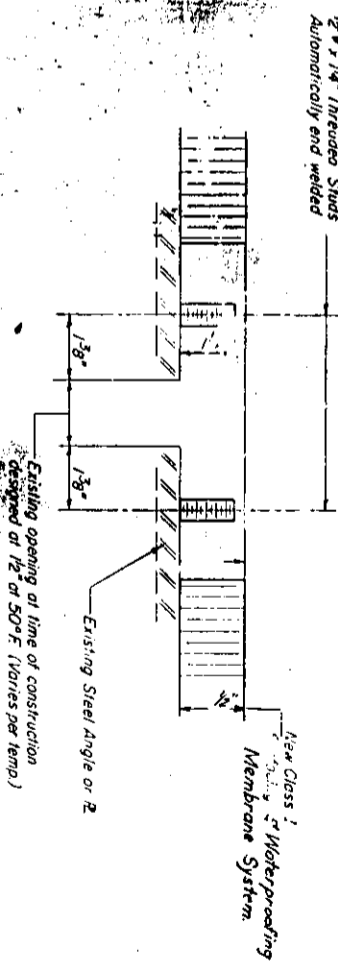
NO.	DATE	BY	CHKD	APP'D
1	11-15-57	ST. CLAIR	ST. CLAIR	ST. CLAIR

PLAN



PLAN

Note: Threaded studs require a flat washer & locknut



CROSS SECTION

Dimensions are at right angles

FOR EXPANSION LENGTH OF DECK = 0 TO 200 FT

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

(Fel-Pro Building Products, Inc.)

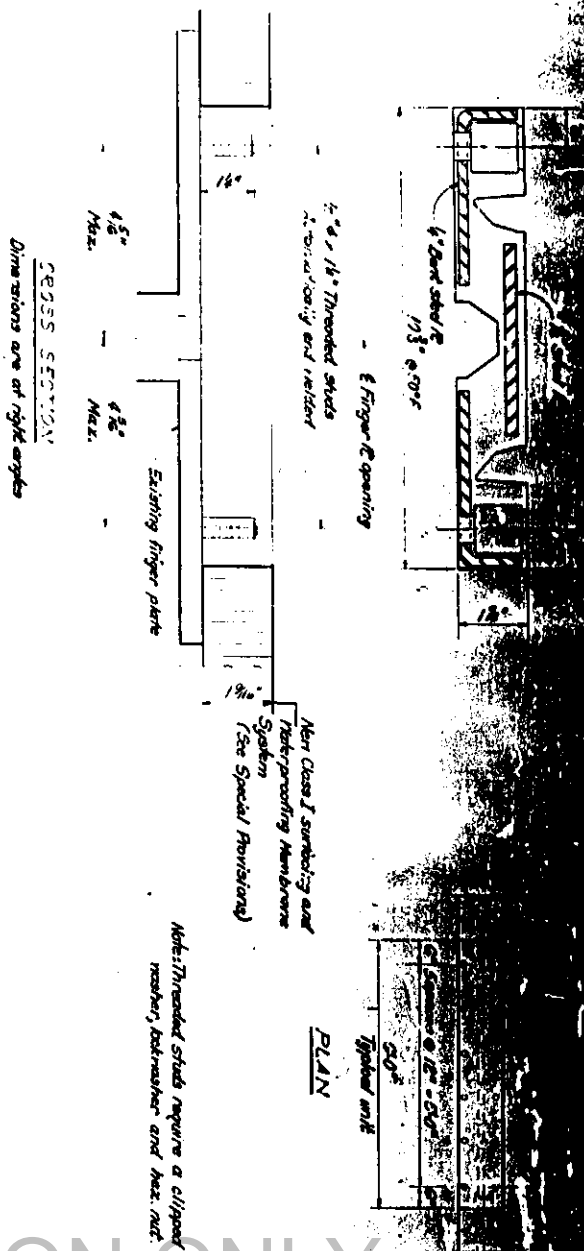
ALTERNATE NEOPRENE EXPANSION DAMS
(See Special Provisions)
-Wilson Bowman Assoc, Inc - Wabco Expansion Type 300 S
-Wabco, AU-Strip Type D, S-300
Structural Accessories, Inc - Daffex, Low Profile 25

NEOPRENE EXPANSION

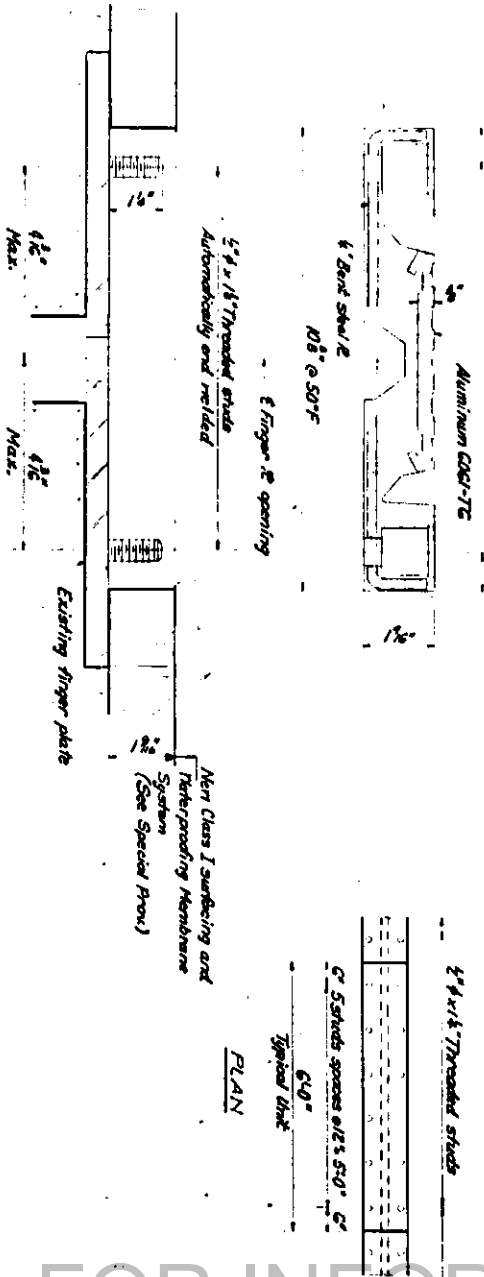
DESIGNED	
CHECKED	
IN CHARGE	
DATE	
PROJECT	
BY	
DATE	
EXAMINED	
DATE	
BY	
DATE	
APPROVED	
DATE	
BY	
DATE	

FOR INFORMATION ONLY



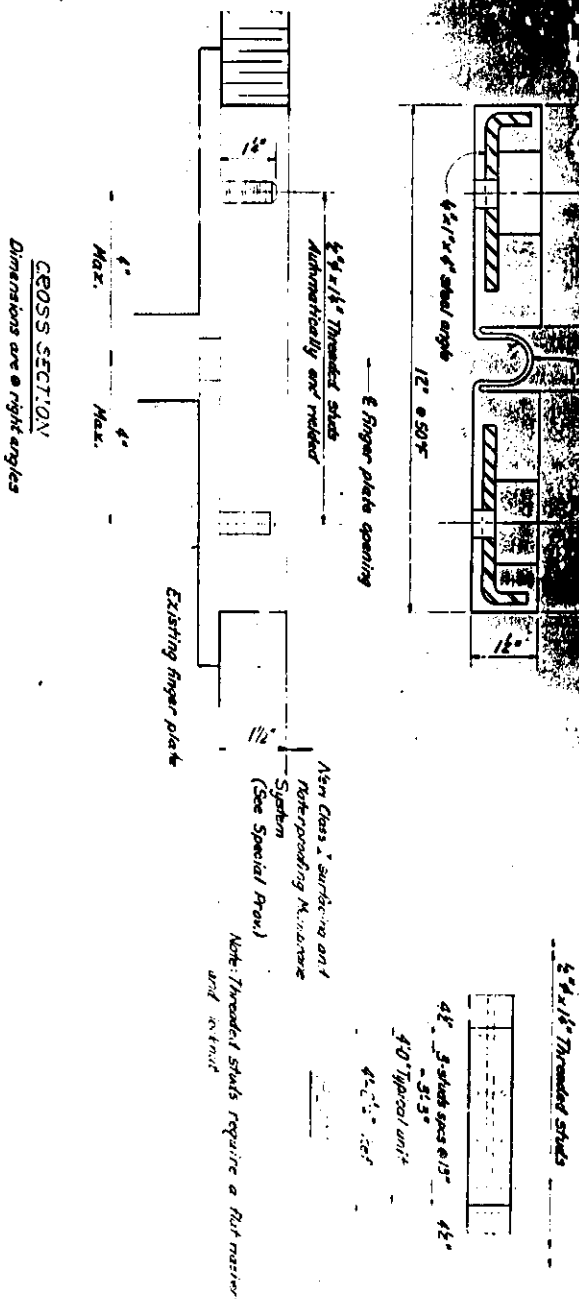


TRANSFLEX MODEL 200A
(Structural Rubber Products Co.)



DESIGNED	EXAMINED	18
CHECKED	PASSED	
DRAWN	APPROVED	
CHECKED		

TRANSFLEX MODEL SE 2
(Madson-Dowman Associates Inc.)

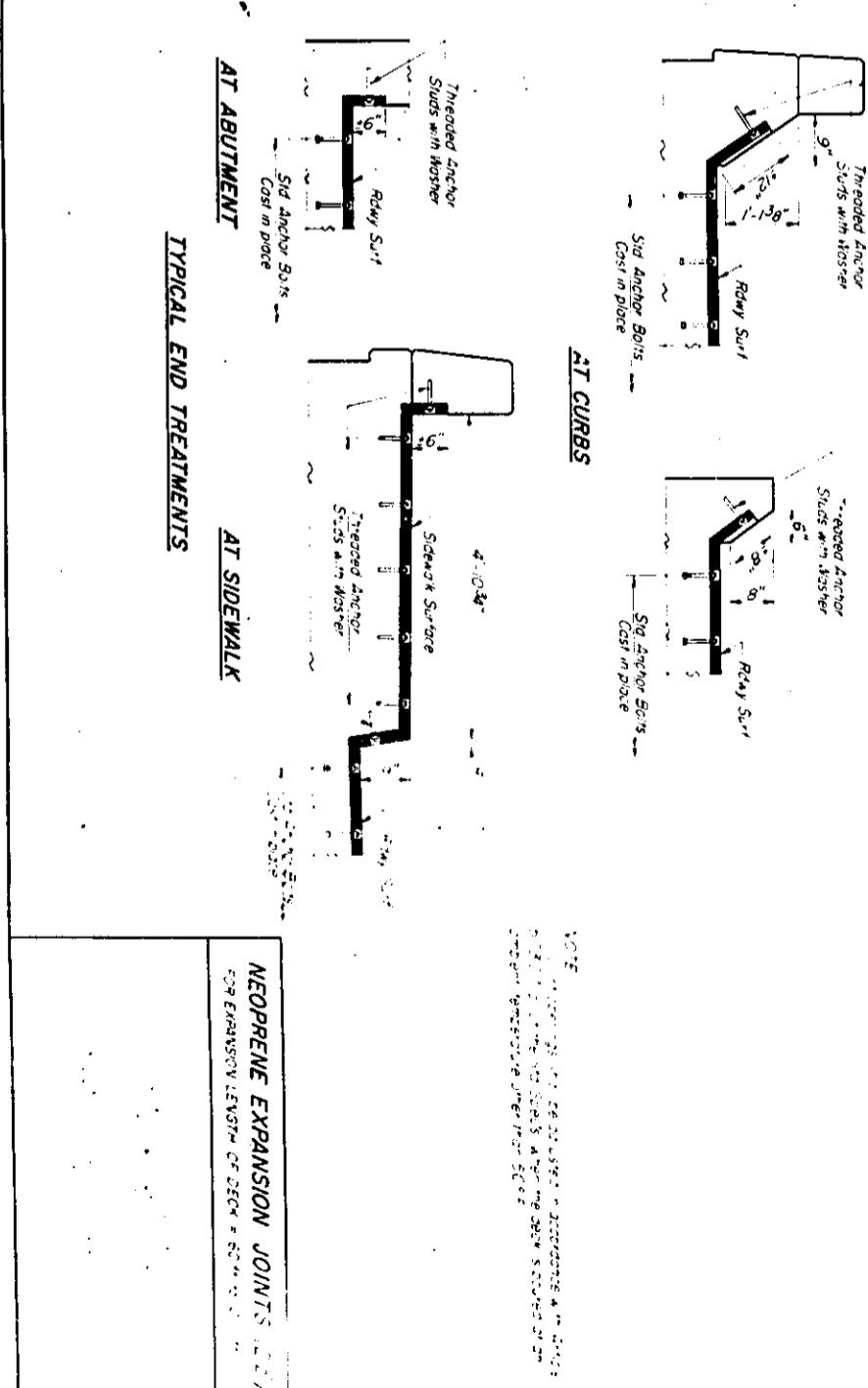
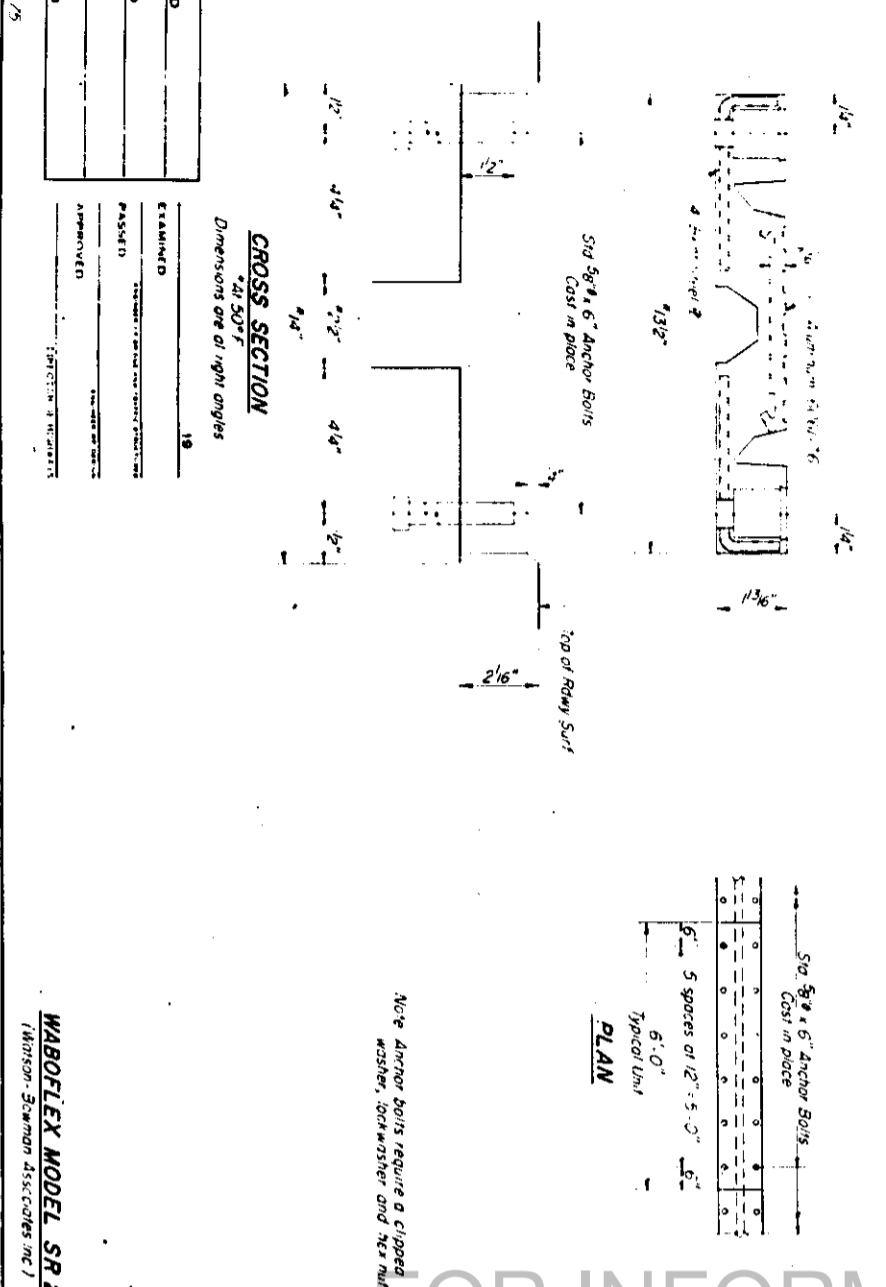
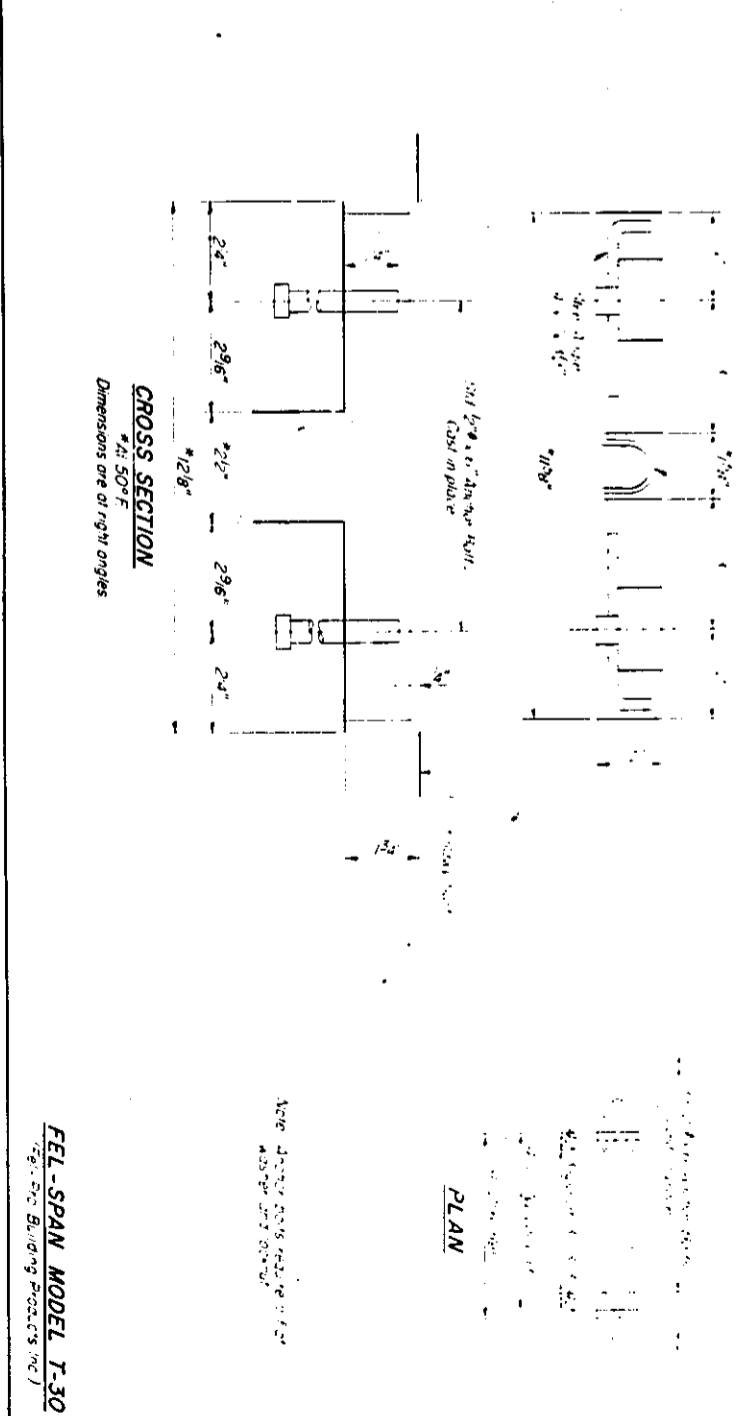
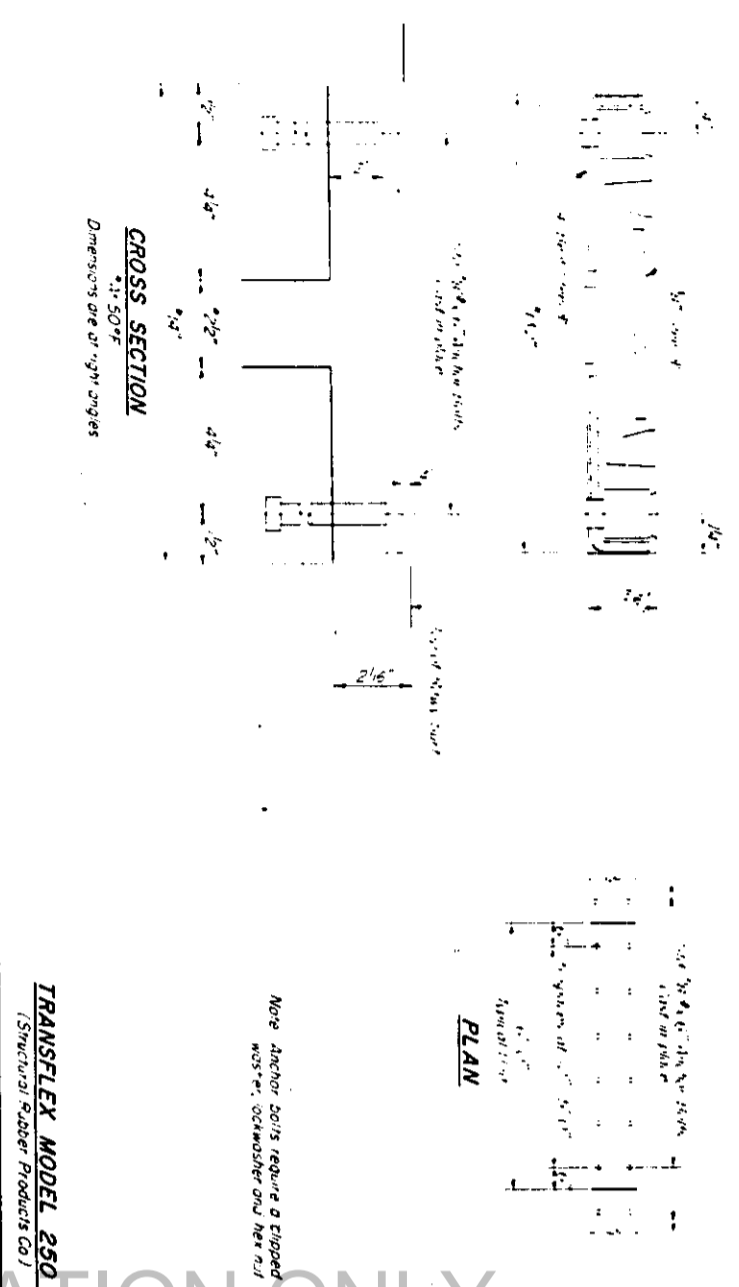


FEEL PRO BUILDING PRODUCTS INC.
(Fel Pro Building Products Inc.)

ALTERNATE NEOPRENE EXPANSION JOINTS
(See Special Provisions)
Madson-Dowman Assoc., Inc. - Wabo Elastodam Type S300 (See 2.05.02.F)

NEOPRENE STRIPS
for expansion length of Deck 0 to 120 ft.

FOR INFORMATION ONLY



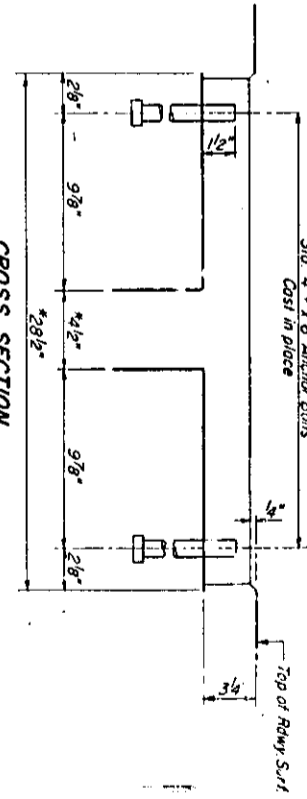
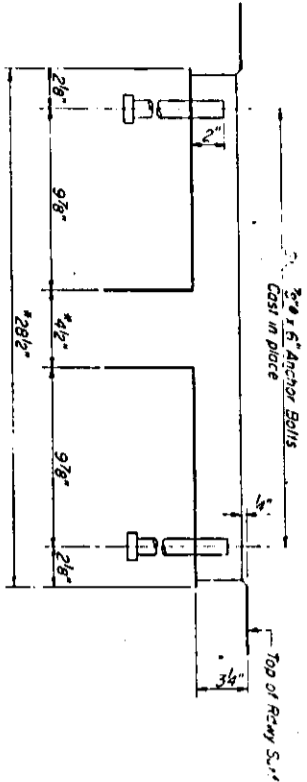
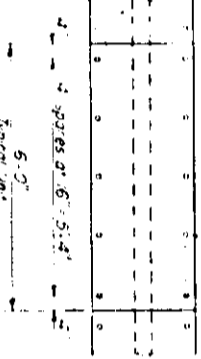
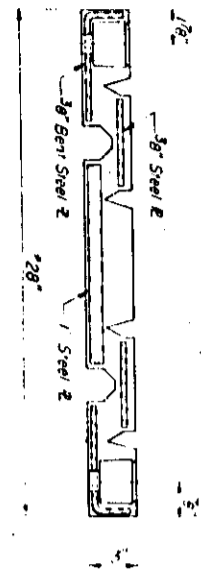
DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

PROJECT NO. 82-241023

DATE: 11/1/70

PROJECT NO.	FA172	SECTION	ST. CLAIR	NO.	30	SHEET NO.	26
DATE		SCALE		DATE		SHEETS	

*5212, 41, 45



CROSS SECTION
*At 50°F
Dimensions are at right angles

CROSS SECTION
*At 50°F
Dimensions are at right angles

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

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

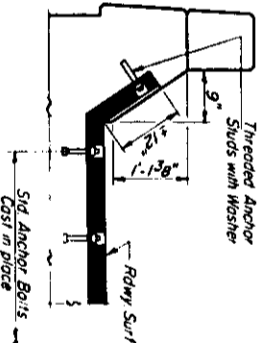
TRANSFLEX MODEL 650
(Structural Rubber Products Co.)

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

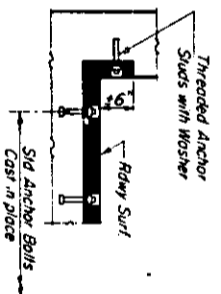
FOR INFORMATION ONLY

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	DIRECTOR OF HIGHWAYS

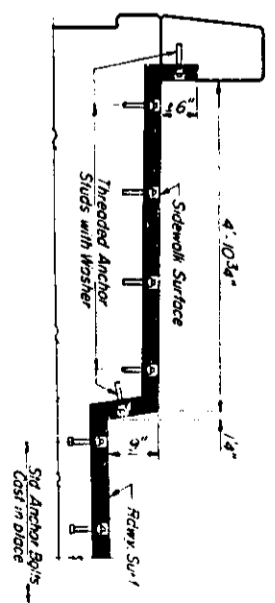
EU-4 4-15-55



AT CURB



AT ABUTMENT



AT SIDEWALK

TYPICAL END TREATMENTS

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

NEOPRENE EXPANSION JOINTS (6&7)
FOR EXPANSION LENGTH OF DECK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

BRIDGE RESURFACING

FAI ROUTE 70

SECTION 82-(3,5) DRS

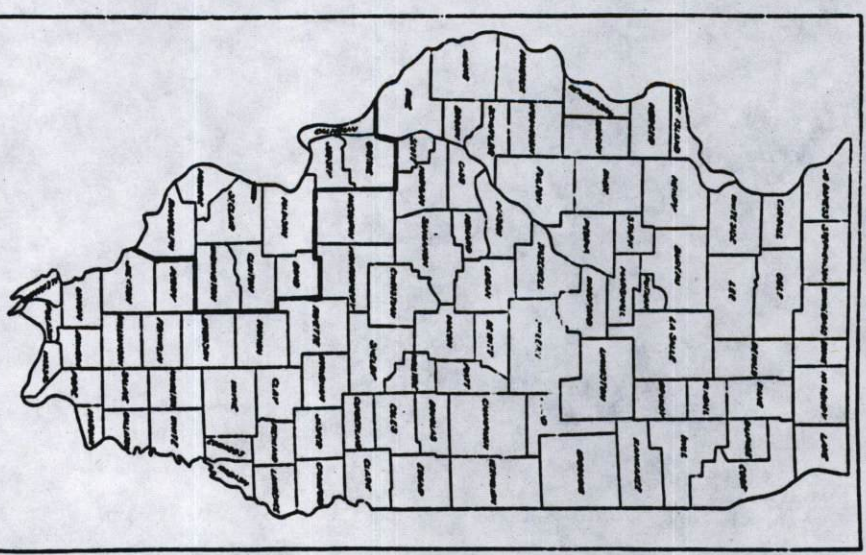
ST. CLAIR COUNTY

PROJECT 1-70-0(2)0

PC-98-004-73

SECTION NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	#	ST. CLAIR	20	1
F. A. I. ROAD NO. 70 - ILLINOIS PROJECT 1-70-0(2)0				
# 82-(3,5) DRS				

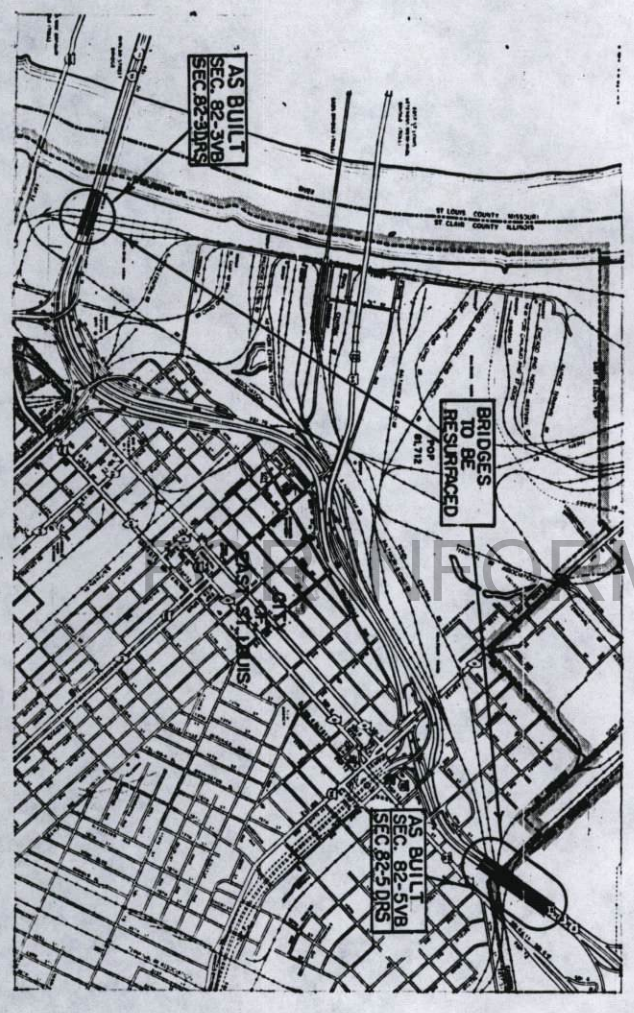
PC-98-004-73



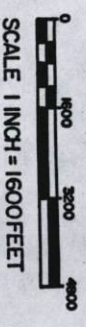
LOCATION OF SECTION INDICATED THUS:--

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
Designed by Robert S. Krump, Resident Engineer
Checked by Nov. 1, 1974
Reviewed by Nov. 1, 1974
Approved by Nov. 1, 1974
Approved by Nov. 1, 1974
Approved by Nov. 1, 1974

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 SHEETS

SECTION	DATE	TOTAL SHEETS	SHEET NO.
FALTO ST CLAIR	20	2	

COVER SHEET
INDEX OF SHEETS, SUMMARY OF QUANTITIES AND GENERAL NOTES

- 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 20J

- PLAN SHEET (AS BUILT) SECTION 82-3WB
- EXPANSION JOINT MODIFICATION CASES 1-1V
- EXPANSION JOINT MODIFICATION CASES V-VII
- EXPANSION JOINT MODIFICATION CASES VIII
- EXPANSION JOINT MODIFICATION CASES IX-XI
- TRAFFIC CONTROL PLAN SHEETS
- TRAFFIC CONTROL, SECTION 82-3HVB-R (FOR INFORMATION ONLY)
- STANDARDS: 22-5
- 2300-1
- 2316-3
- 2298-4
- 23A2
- 2173-3

FOR INFORMATION ONLY

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	PROJECT: 76-0(2)0		STATE	
				AS BUILT SEC. 82-3WB	AS BUILT SEC. 82-3WB	AS BUILT SEC. 82-3WB	AS BUILT SEC. 82-3WB
X64701	CONSTRUCTION TYPE CURB W/OT PAVEMENT JAWING TAPE	LIN FT	592	158	404		
406001	BITUMINOUS MATERIAL (PRIME COAT)	GALLON	151	60.2	90.8		
210300	<i>DECK SLAB REPAIR 1" TO 2" DEPTH</i>	SQ YDS	2,650			176.0	2,454.0
X21732	<i>ASPHALT PATCH</i>	SQ YDS	12				12
X21782	<i>ASPHALT PATCH</i>	SQ YDS	242				242
X21782	EXPANSION DAM	LN FT	8				
X21782	ASBESTOS-ASPHALT HERBICIDE PAVEMENT	TON	8				
X21782	EMULSIFIED ASPHALT PRIME, SPECIAL	GALLON	12				
X04589	PERFORMED JOINT SEALER 1 3/4"	LIN FT	15				15
X02250	PERFORMED JOINT SEALER 2 1/2"	LIN FT	11				11
X07001	FURNISH AND ERECT STRUCTURAL STEEL	POUNDS	49,311	24,069	33,242		
612250	INLETS TO BE ADJUSTED	EACH	35		20		
646002	ENGINEER FIELD OFFICE, TYPE B	EACH	4				
X02251	DELIMITER DETECTOR	L SIN	1				
ALTERNATE A							
X06415	BITUMINOUS CONCRETE SURFACE COURSE, CLASS 1,	TON	1,704	606	1,098		
X04941	WATERPROOFING MEMBRANE SYSTEM 1	SQ YDS	28,669	10,167	18,522		
X02395	TRAFFIC CONTROL SECTION 82-3DR8	L SIN	1				
X02396	TRAFFIC CONTROL SECTION 82-5DR9	L SIN	1				
ALTERNATE B							
X40613	BITUMINOUS CONCRETE SURFACE COURSE, CLASS 1,	TON	2,507	890	1,617		
X04941	WATERPROOFING MEMBRANE SYSTEM 2	SQ YDS	28,669	10,167	18,522		
X02395	TRAFFIC CONTROL SECTION 82-3DR8	L SIN	1				
X02396	TRAFFIC CONTROL SECTION 82-5DR9	L SIN	1				

GENERAL NOTES

THE STANDARDS WITH THE REVISION NUMBERS LISTED IN THE INDEX OF SHEETS INCLUDED IN THE PLANS SHALL HOLD PRECEDENCE OVER STANDARDS 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 REPAIR EXPANSION DAMS. THE COMBINED DEPTH AT THE REPAIR EXPANSION DAMS IS 1 1/2". THE 1 1/2" SHALL BE SHOWN ON THE BRIDGE DECK. ALL TRANSITIONING SHALL BE SHOWN ON THE BRIDGE DECK. ALL TRANSITIONING SHALL BE ACCOMPLISHED AT THE RATE OF 1" IN 20". WHETHER TRANSITIONING FROM 1 1/2" OR 1 3/4" SHALL BE ACCOMPLISHED AT THE RATE OF 1" IN 20".

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

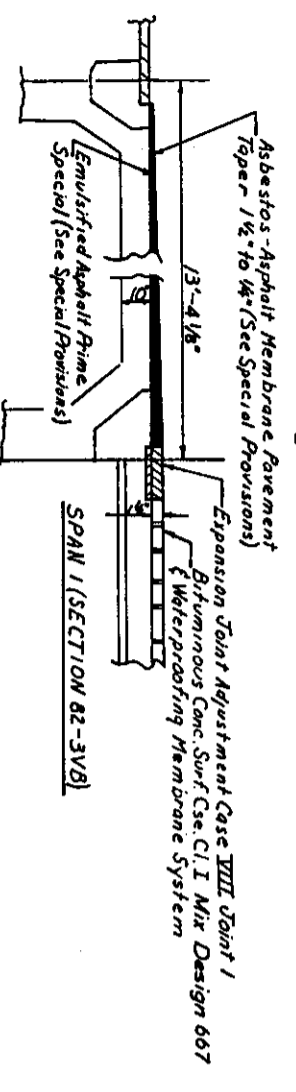
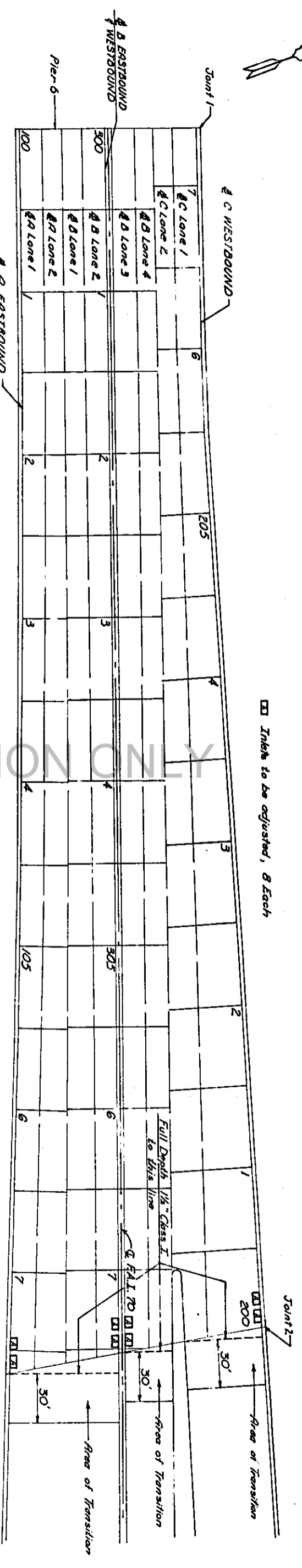
BITUMINOUS MATERIAL (PRIME COAT) SHALL BE USED ON ALL BRIDGE APPROACH PAVEMENT TRANSITION AREAS EXCEPT AT THE LOCATION WHERE THE EMULSIFIED ASPHALT PRIME, SPECIAL, IS REQUIRED.

SHEET 1 OF 2

JOINT MODIFICATION SCHEDULE

Joint Case	P. 2, 5.	P. 2, 5.	P. 11, Structural Steel	Membrane Expansion Dam
1	VI	2 1/2"	48734"	
2	II		91957#	
Totals			140691 #	

82-3,51 DRS
DATE # 97-CL-12-20



SECTION @ PIER 6 W/LT SPAN (No Scale)

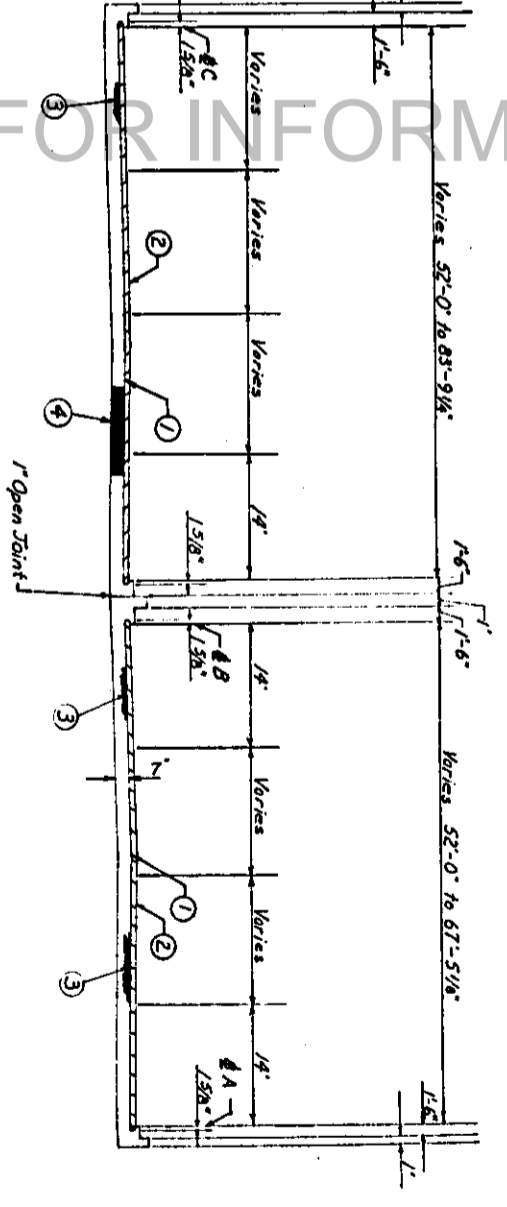
STA	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	SUB	TOTAL
0.0	0.8	1.7	0.8	0.8	0.8	1.6	0	0	0	0	0	2.1
Lane 1												9.1
Lane 2												2.6

DECK SLAB REPAIR (1" TO 2 1/2" DEPTH) SCHEDULE

STA	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	SUB	TOTAL
0.0	0.6	0	0	0	0	0	0	0	0	0	0	3.8
Lane 1												53.8
Lane 2												8.0
Lane 3												2.0
Lane 4												3.8

SECTION C WESTBOUND

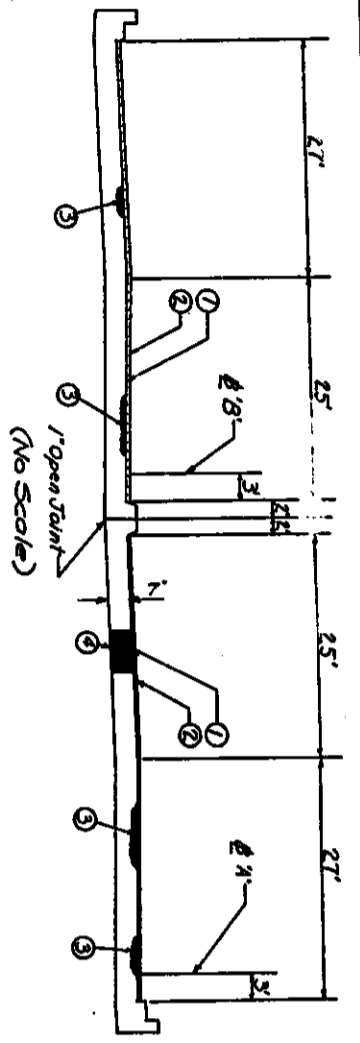
STA	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	SUB	TOTAL
0.0	12.1	0	1.5	14	0	0	0	0	0	0	0	45.1
Lane 1												36.1
Lane 2												4.96



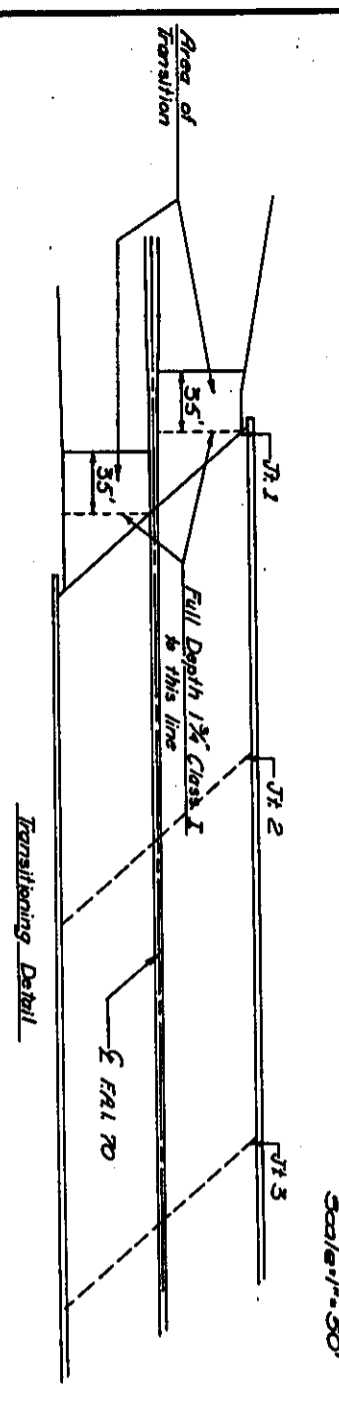
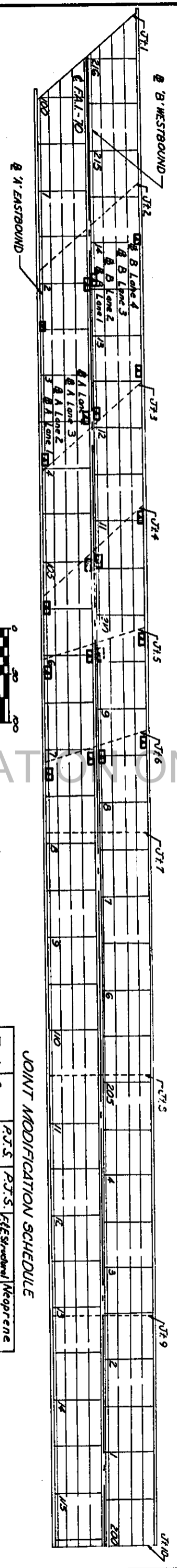
- TYPICAL SECTION (FACING EAST)
- 1 Waterproofing Membrane System (MLX or 2B)
 - 2 Bituminous Concrete Surface Course Class I Mix Design 657 (F/AH-A) or (F/AH-B)
 - 3 Deck Slab Repair (1" to 2 1/2" Depth)
 - 4 Deck Slab Full Depth Removal and Replacement

* 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
PAI ROUTE TO
SECTION 82-45(DRS
ST. CLAIR COUNTY
(AS BUILT SECTION 82-3V8)



- TYPICAL SECTION**
- 1 Waterproofing Membrane System (At/for B)
 - 2 Bituminous Concrete Surface Course Class I (7/8\"/>
 - 3 Deck Slab Repair (1\"/>
 - 4 Deck Slab Full Depth Removal and Replacement



DECK SLAB REPAIR (1\"/>

**DECK SLAB REPAIR (1\"/>

#1 - EASTBOUND		#2		#3		#4		#5		#6		#7		#8		#9		#10		TOTAL				
STA.	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	SUB TOTAL	TOTAL (SQ.YD)		
Lane 1	2.9	41.7	33.3	29.2	25.0	20.8	8.3	1.7	12.5	29.2	20.8	4.2	16.7	5.8	20.8	33.3	20.8	16.7	5.8	20.8	16.7	1.4	16.7	167
Lane 2	9.4	26.7	33.3	26.7	30.0	16.7	10.0	13.3	6.7	0.0	0.0	1.3	16.7	1.3	16.7	1.3	6.7	1.3	10.0	6.7	1.3	3.3	33.3	
Lane 3	14.0	26.7	26.7	23.3	16.7	16.7	20.0	2.0	0.0	23.3	6.7	0.0	6.7	10.0	6.7	10.0	6.7	7.3	13.3	6.7	1.3	3.3	33.3	
Lane 4	22.0	25.3	25.3	14.4	3.6	7.2	10.8	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	
																			TOTAL OF # 1-10		1,962.7		2,453.3 *	

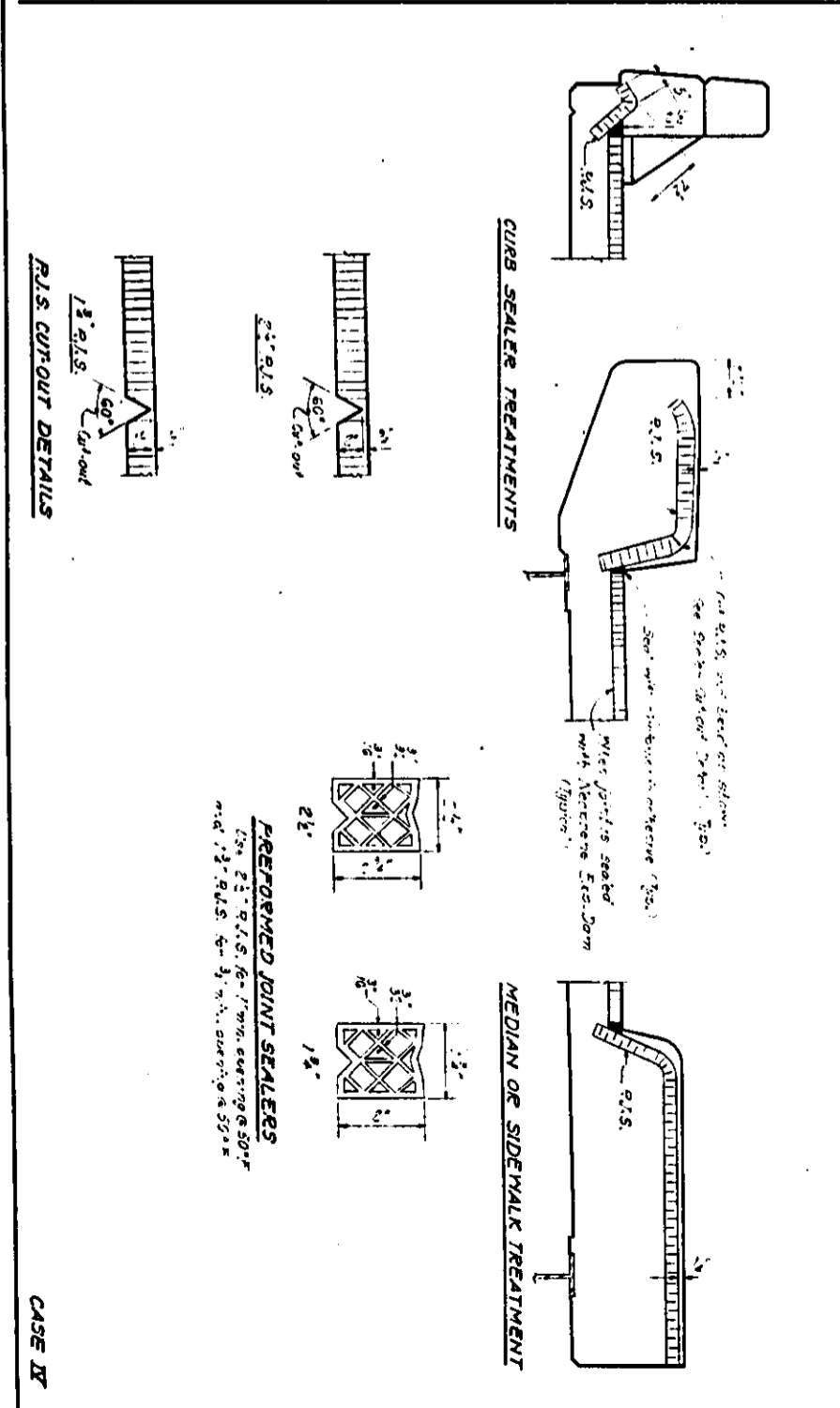
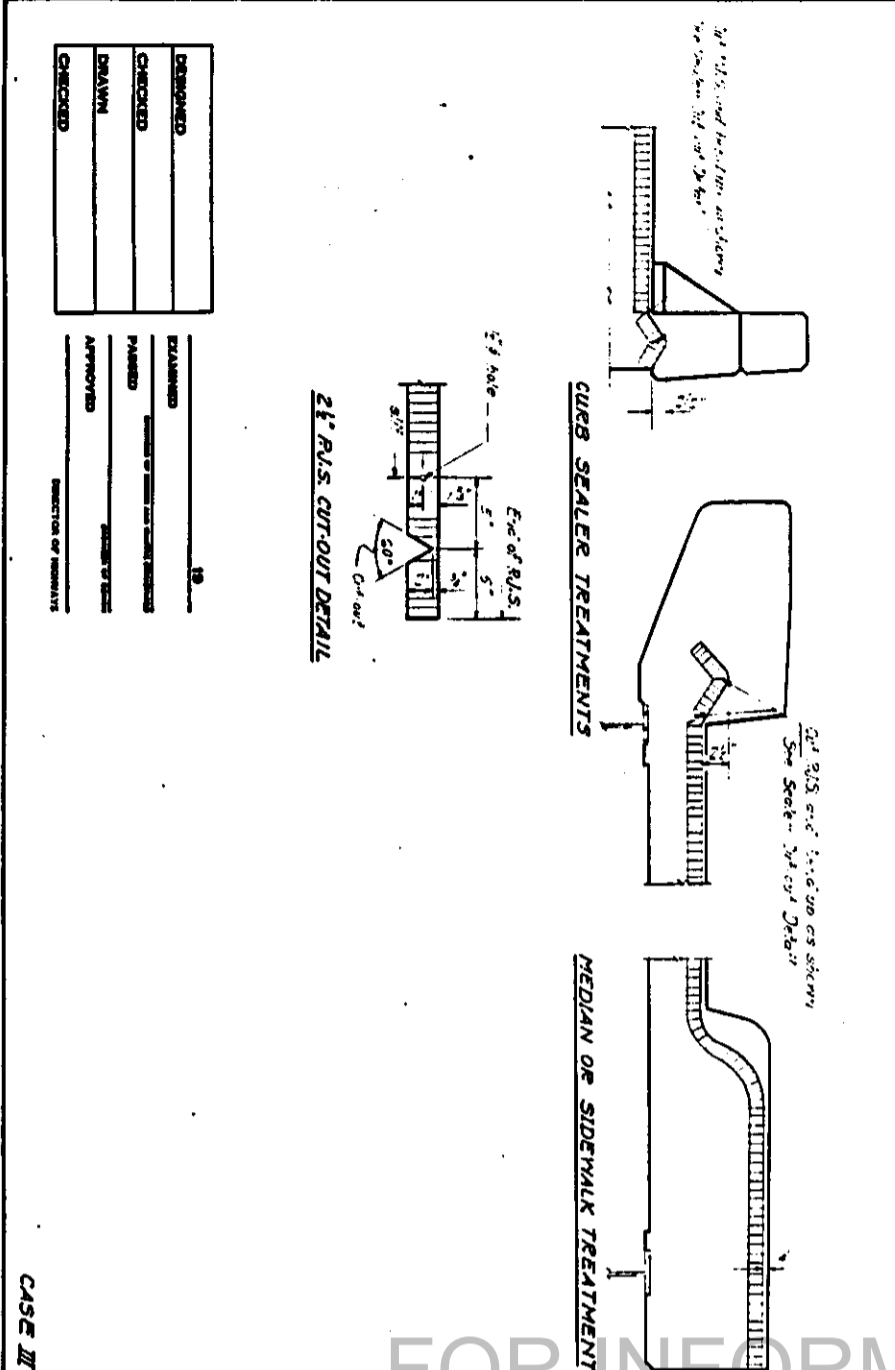
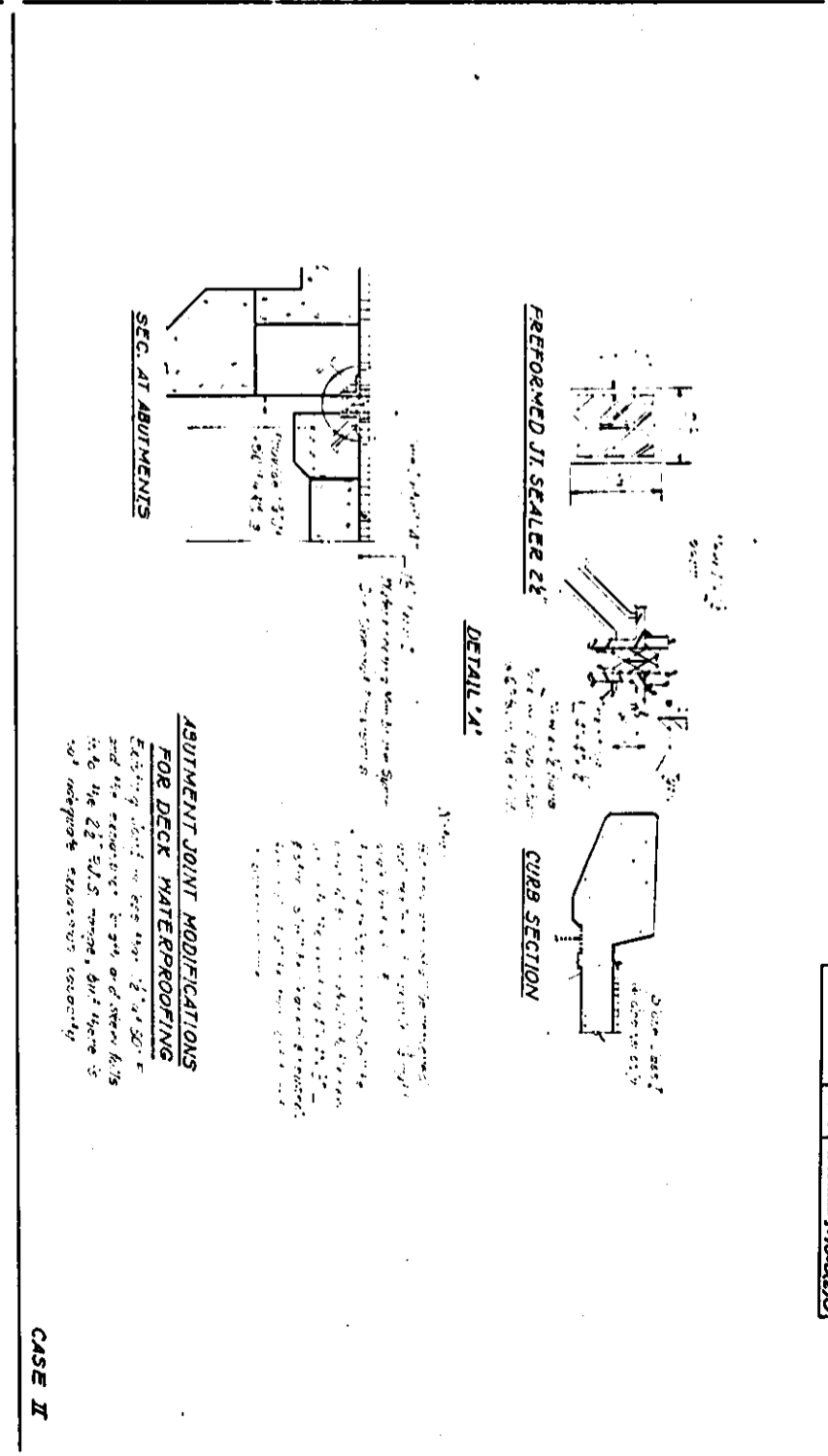
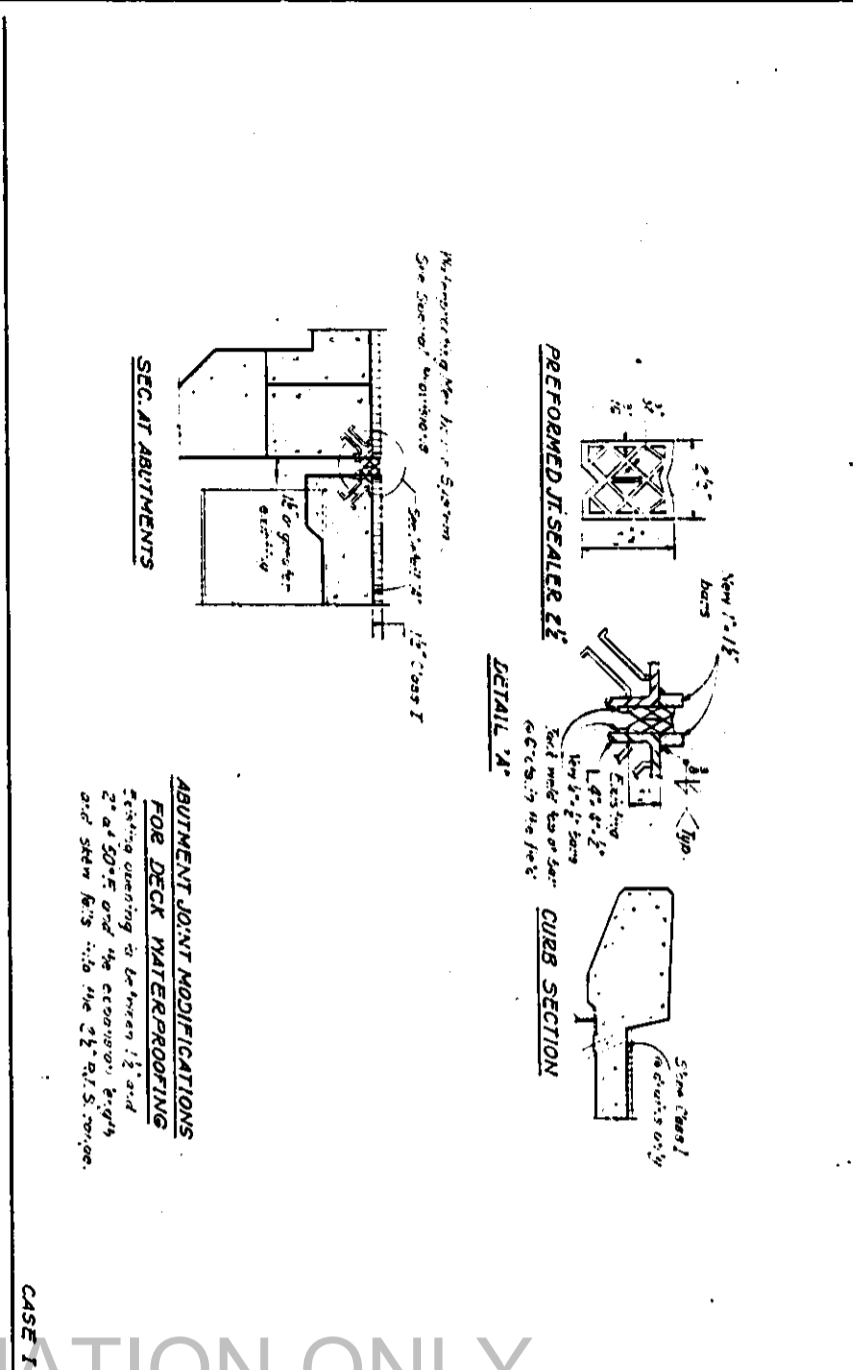
DECK RESURFACING

#1 - WESTBOUND		#2		#3		#4		#5		#6		#7		#8		#9		#10		TOTAL				
STA.	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	SUB TOTAL	TOTAL (SQ.YD)		
Lane 1	0.7	3.6	7.2	7.2	14.4	10.8	3.6	7.2	10.8	14.4	7.2	1.4	3.6	0.7	1.4	0.0	0.0	0.0	0.0	0.0	2.2	7.2	10.8	
Lane 2	0.0	4.7	6.7	6.7	0.0	5.3	6.7	6.7	13.3	13.3	17.3	6.7	0.0	3.3	2.0	0.0	0.0	1.3	0.7	1.3	0.7	3.3	3.3	
Lane 3	16.7	3.3	6.7	13.3	3.3	3.3	6.7	2.0	3.3	6.7	2.0	3.3	3.3	0.0	0.0	1.3	0.0	1.3	0.0	1.3	0.7	3.3	3.3	
Lane 4	4.2	4.2	4.2	12.5	8.3	17.5	4.2	4.2	1.7	4.2	4.2	3.3	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	8.3	
																			TOTAL OF # 1-10		1,962.7		2,453.3 *	

* Total Square Yard Of Patches Plus Anticipated Failures
 That May Occur Prior To Completion of The Contract
 This Table Does Not Include Full Depth Patching

DECK RESURFACING
 FAI ROUTE TO
 SECTION 82-135DRS
 ST. CLAIR COUNTY
 (AS BUILT SECTION 82-518)

PROJECT NO.	2430	SECTION	5th C&N	DATE	20	SHEET NO.	5
DATE	7-20-02	BY		CHECKED		SHEETS	

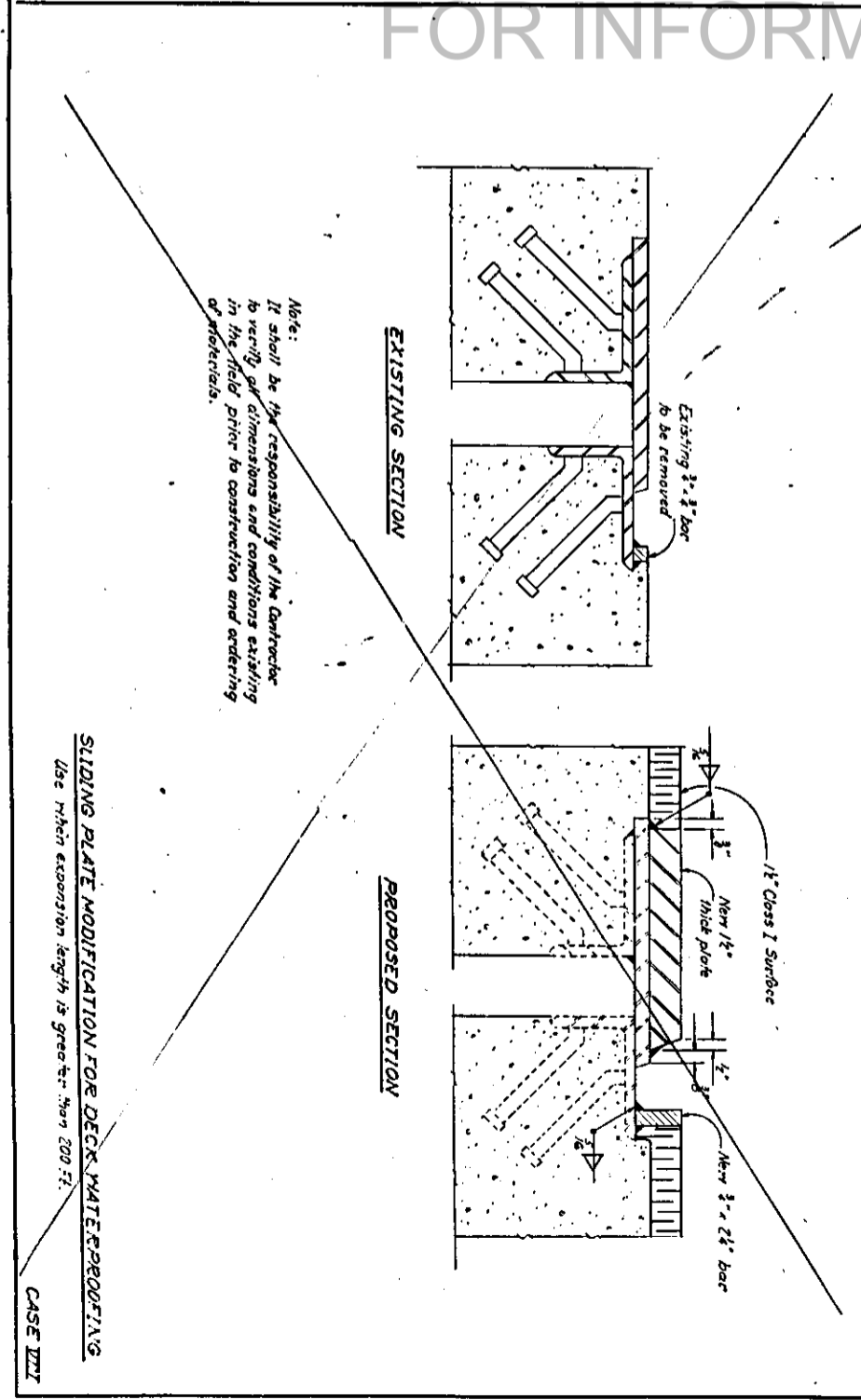
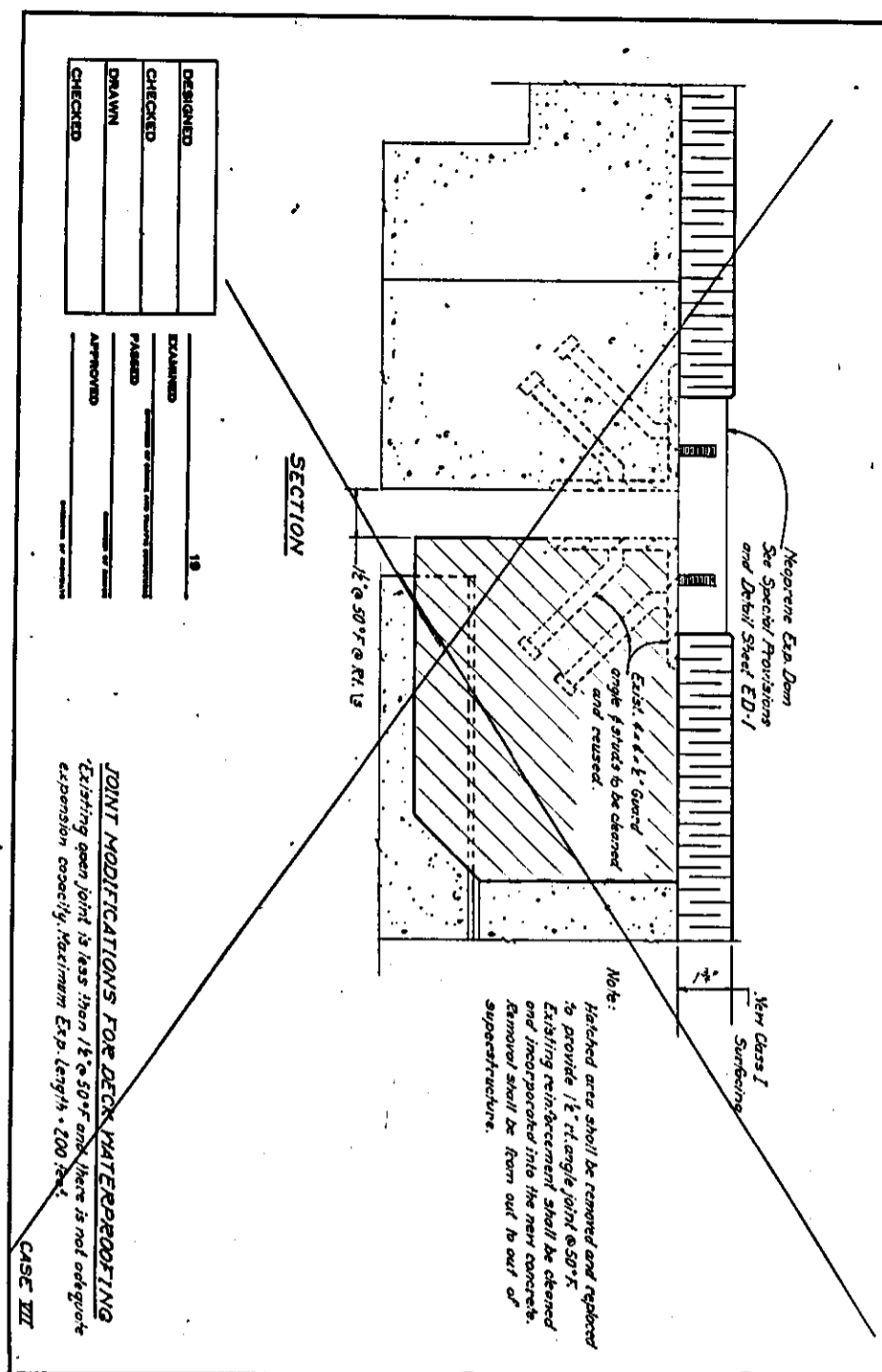
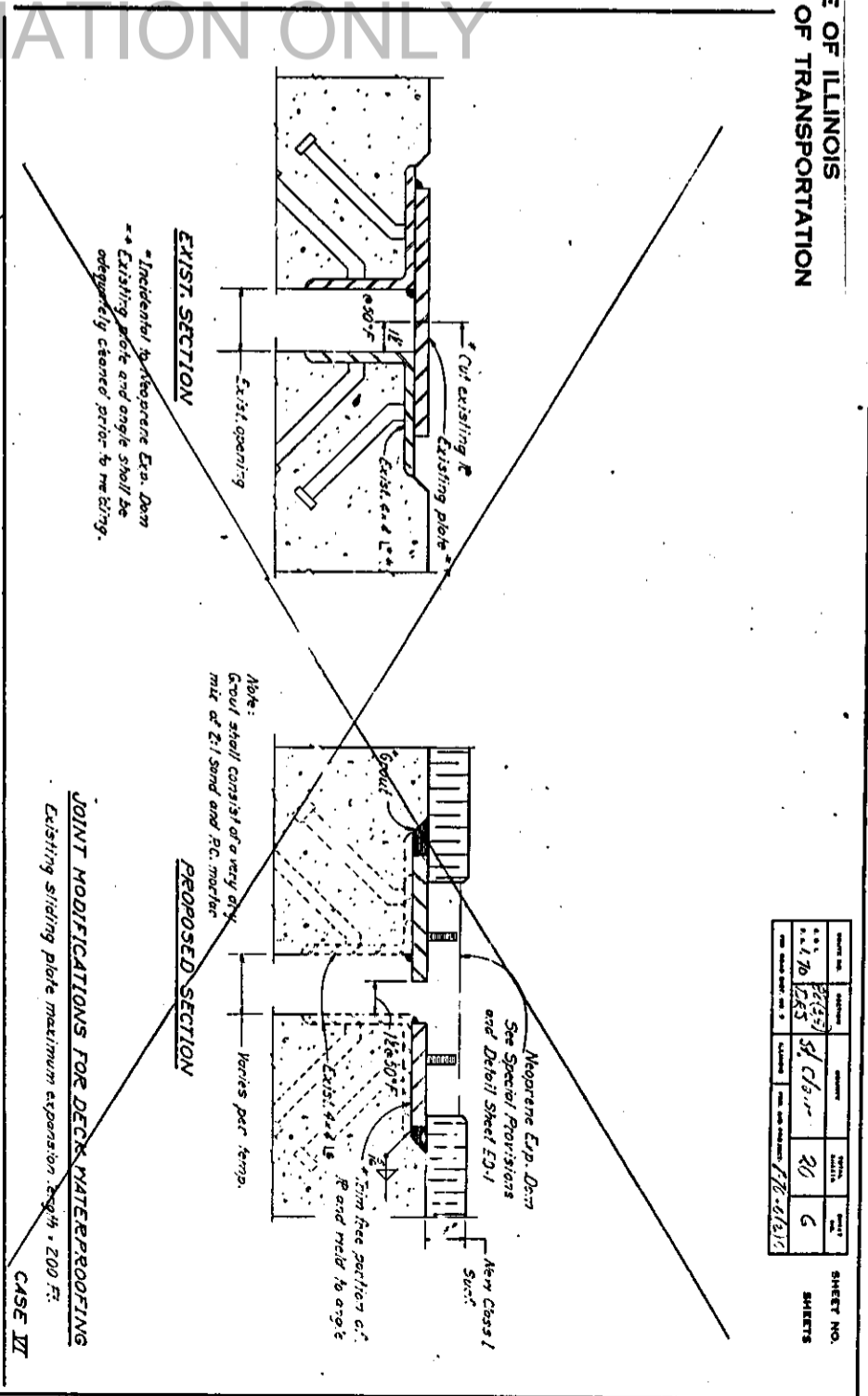
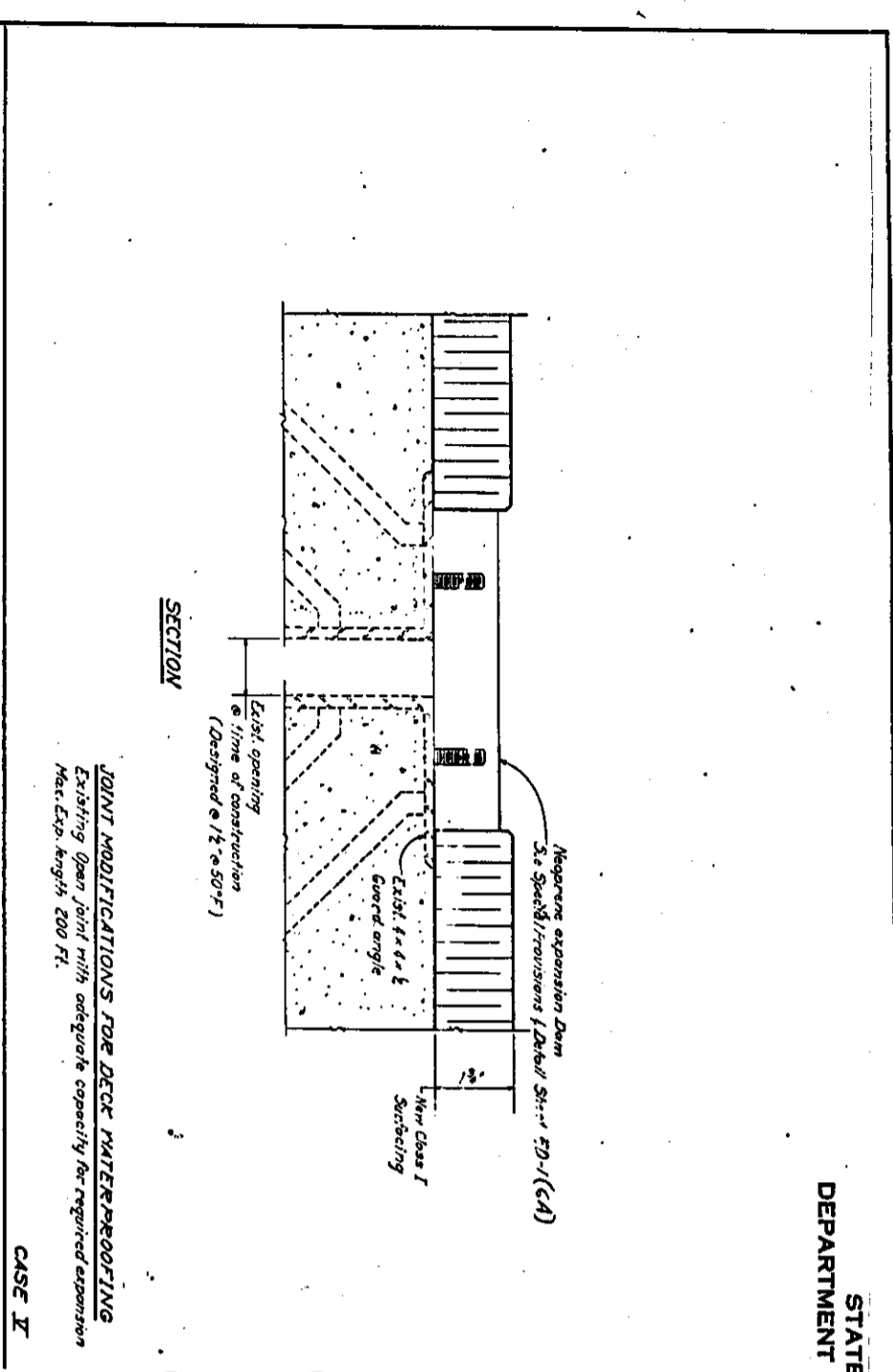


DESIGNED	_____	DATE	_____
CHECKED	_____	APPROVED	_____
DRAWN	_____	RECTOR OF PROJECT	_____
CHECKED	_____	DIRECTOR OF DISTRICT	_____

FOR INFORMATION ONLY

PROJECT NO.	200-01817
SHEET NO.	6
TOTAL SHEETS	20
DATE	5/1/83
DESIGNED BY	...
CHECKED BY	...
DRAWN BY	...
APPROVED BY	...

SHEET NO.
6
SHIETS



DESIGNED	18
CHECKED	
DRAWN	
CHECKED	
EXAMINED	
PLANNED	
APPROVED	

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

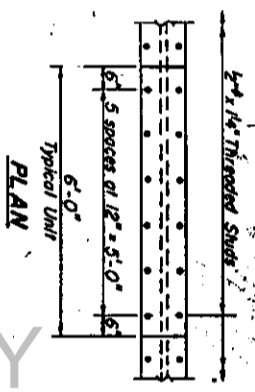
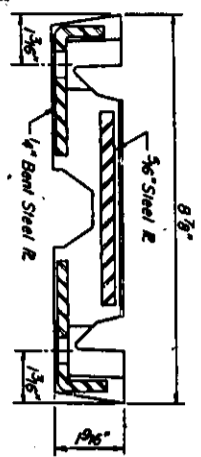
CASE III

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.

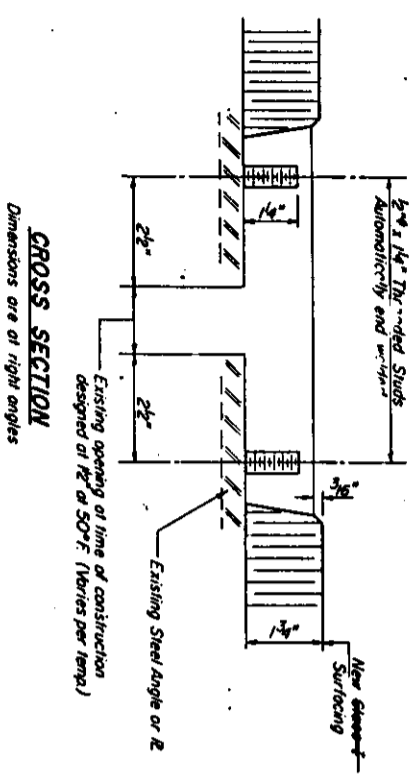
SLIDING PLATE MODIFICATION FOR DECK WATERPROOFING
Use when expansion length is greater than 200 ft.

CASE V

DATE	DESIGNED BY	CHECKED BY	SCALE	SHEET NO.
11/20/83	WABO	DRS	20	64
				SHEETS



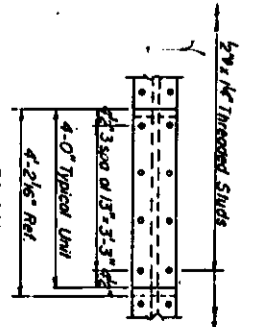
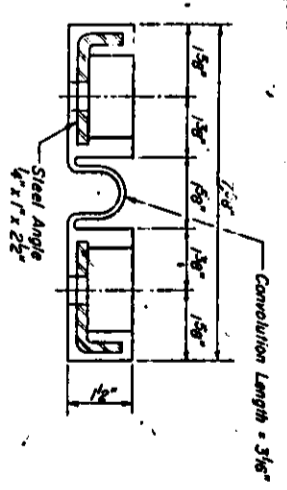
Note: Threaded studs require a clipped washer, lockwasher & hex nut.



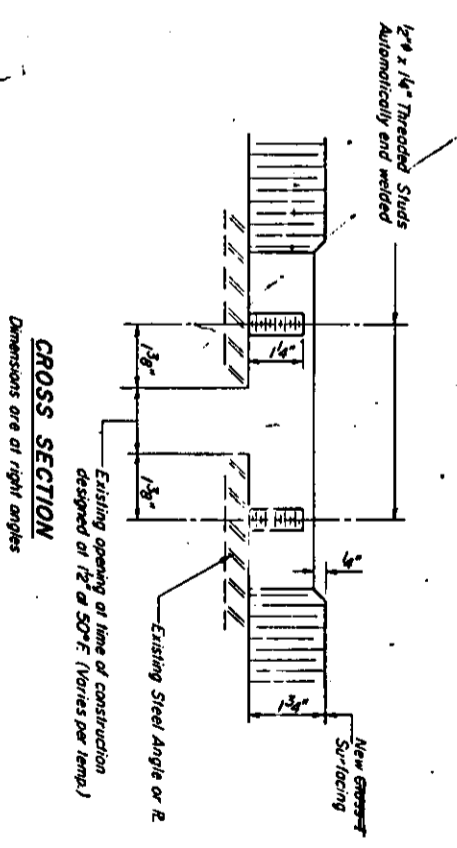
CROSS SECTION
Dimensions are of right angles

FOR EXPANSION LENGTH OF DECK = 0 to 160 FT

TRANSFLEX MODEL 200A
NARROW GAGE
(Structural Rubber Products Co.)



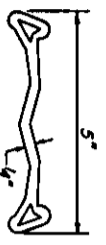
Note: Threaded studs require a flat washer & locknut.



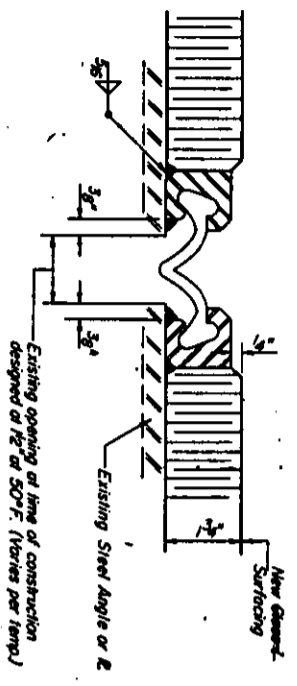
CROSS SECTION
Dimensions are of right angles

FOR EXPANSION LENGTH OF DECK = 0 to 200 FT

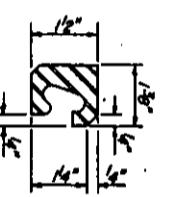
FEL-SPAN MODEL T-30-1/2-S
(Fel-Pro Building Products Inc.)



NEOPRENE EXTRUSION S-300
ASTM D-2628 Modified



CROSS SECTION
Dimensions are of right angles



STEEL EXTRUSION-TYPE E
ASTM A-242

FOR EXPANSION LENGTH OF DECK = 0 to 200 FT
2\"/>

WABO-MAURER MODEL S-300E
(Wilson Dowman Associates Inc.)

NEOPRENE EXPANSION DAMS

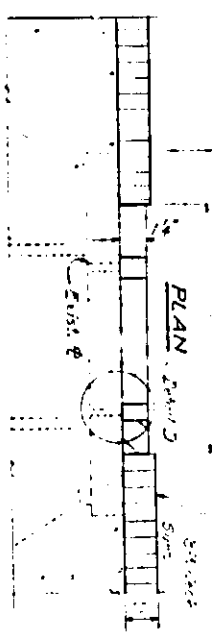
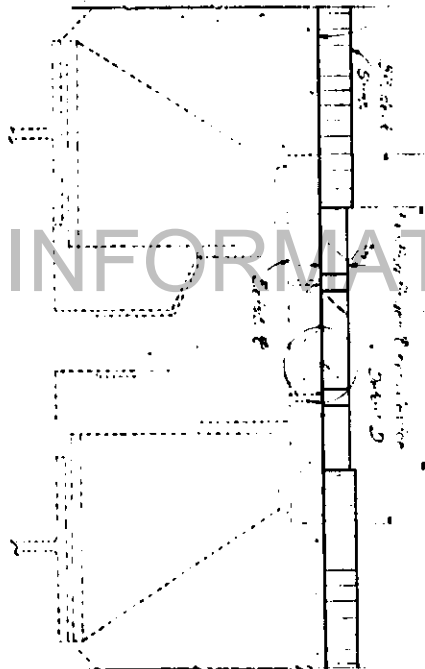
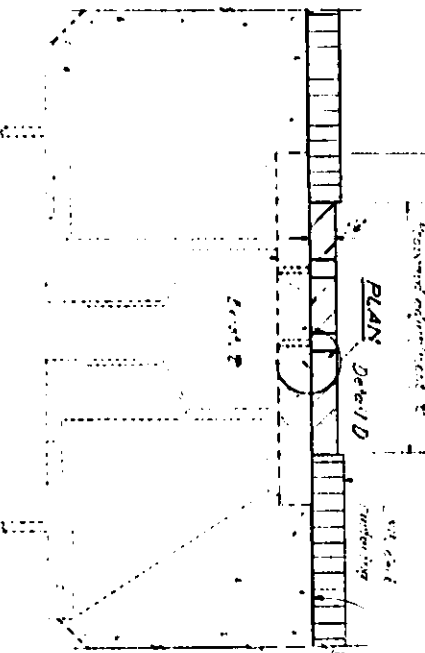
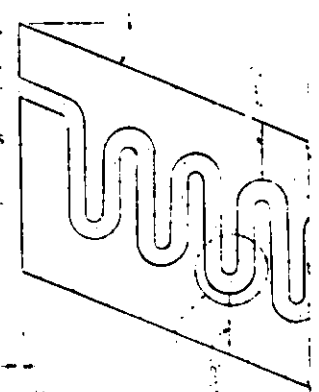
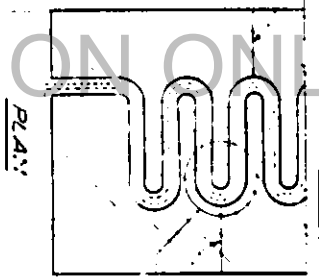
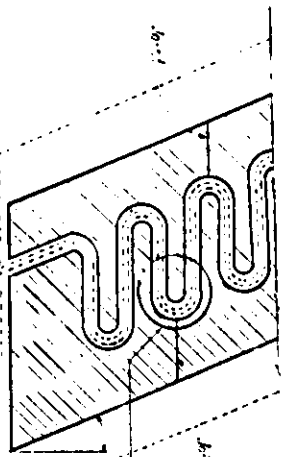
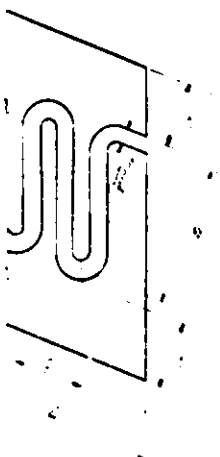
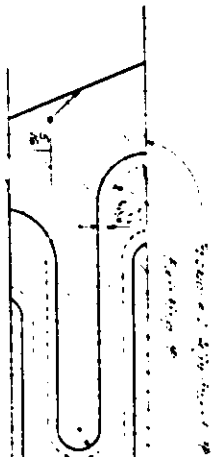
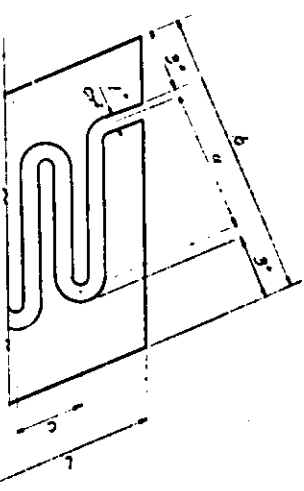
DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

ED-1 6-13-78

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Project No.	6434	Sheet No.	20	Scale	7'
Contract No.	370	Sheet Title		Date	6-20-08

SHEET NO.
SHEETS



EXIST SECTHRU EXP JOINT SCHEDULE OF MATERIAL ADJUSTMENT PLATES (Stem 4 F)

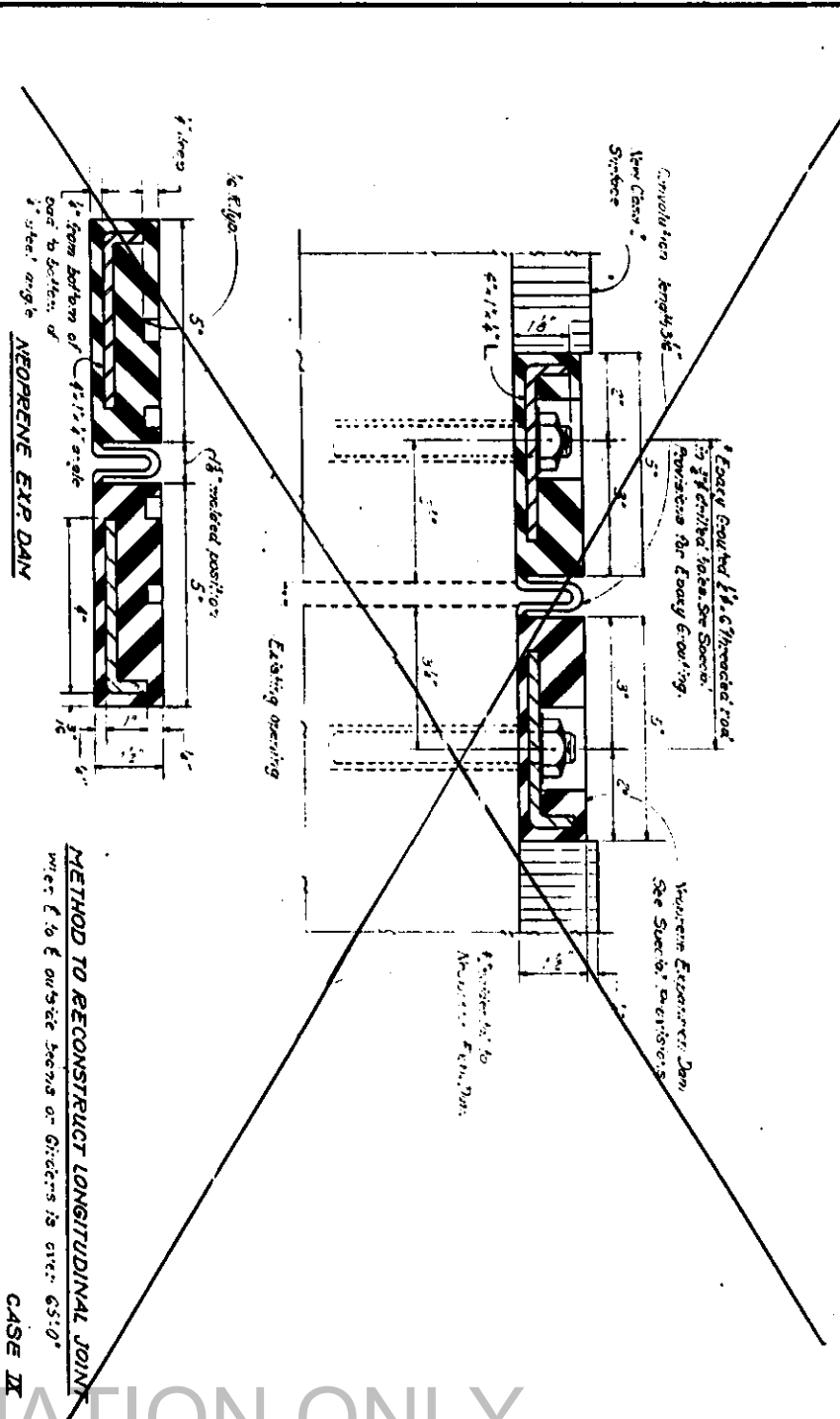
Plate (in full section)	Plate	Base Dimension	Stem
1a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z	1a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	0, 1, 2, 3, 4, 5, 6, 7, 8, 9
70	FR-316 St. Chlor. Joint 2	3 1/2" 10 1/2" 2 1/2" 3/4" 3/4"	4 1/2"
70	FR-316 St. Chlor. Joint 1	1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	1 1/2"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"
70		1 1/2" 1 1/2" 2 1/2" 3/4" 3/4"	0"

Note: Refer to adjustment plates to determine stem adjustment. Refer to the requirements of the Contractor for any other conditions and provisions existing in the contract documents and conditions of reference.

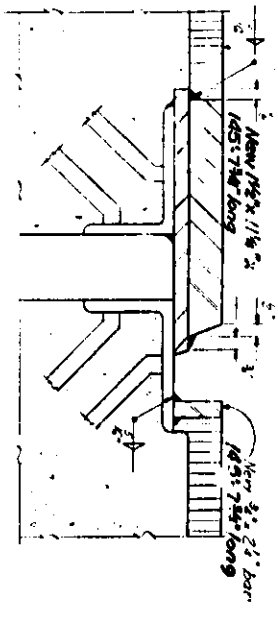
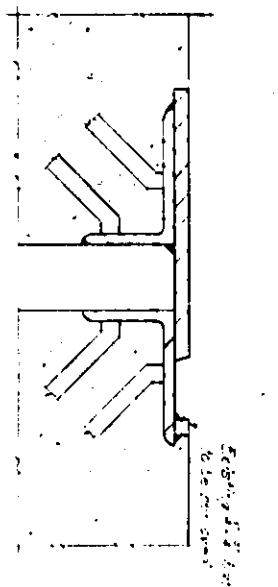
FINGER PLATE MODIFICATIONS FOR DECK WATERPROOFING CASE VIII

DESIGNED	_____ DATE	EXAMINED	_____ DATE
CHECKED	_____ DATE	PREPARED	_____ DATE
DRAWN	_____ DATE	APPROVED	_____ DATE
CHECKED	_____ DATE	DIRECTOR OF HIGHWAYS	_____ DATE

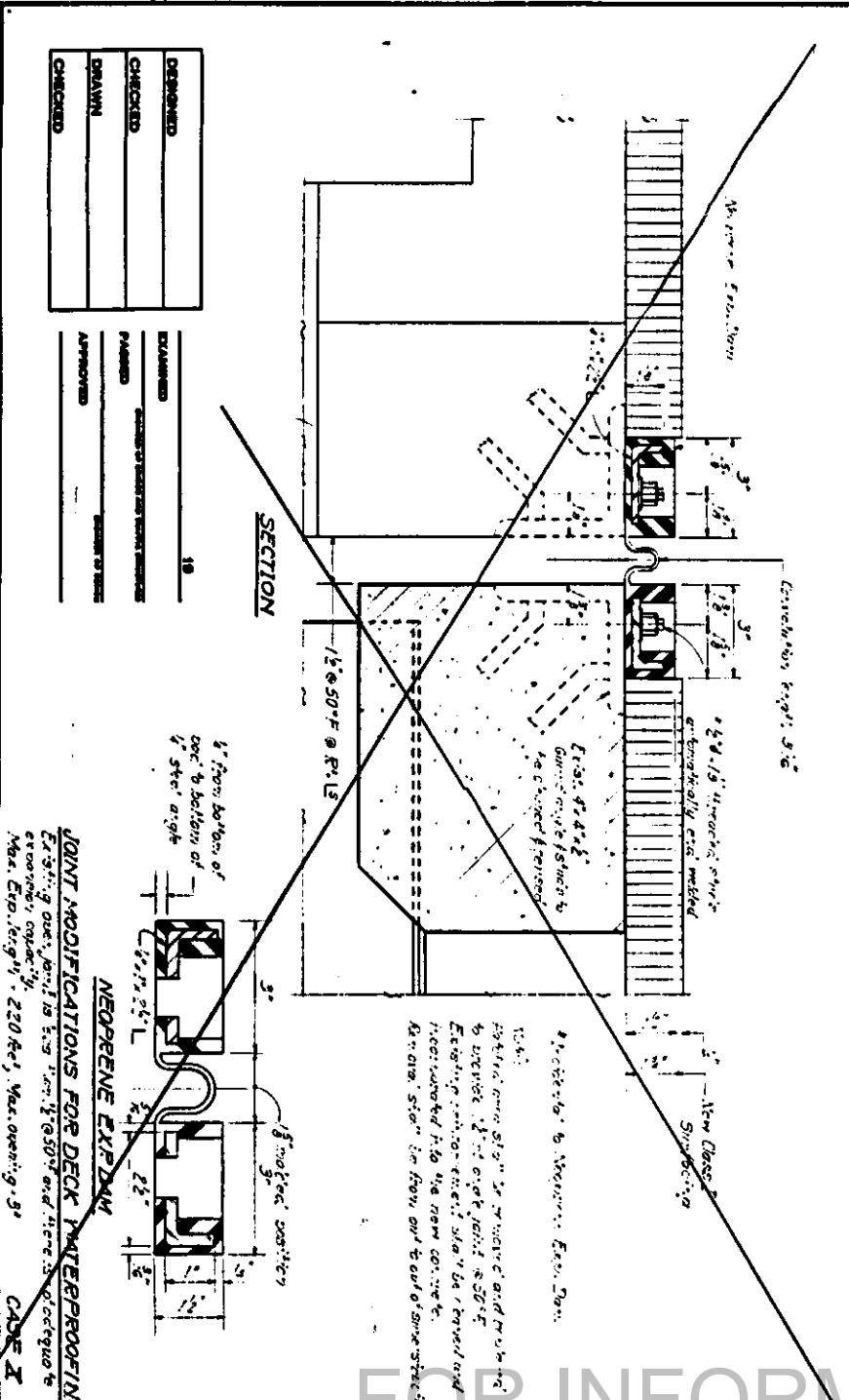
Project No.	Sheet No.	Scale
111-10-025	8 th Chair	20
111-10-025	20	5
111-10-025	5	5



METHOD TO RECONSTRUCT LONGITUDINAL JOINT
When 6" to 8" outside beams or girders is over 65:0"
CASE II



SLIDING PLATE MODIFICATION FOR DECK WATERPROOFING
CASE II



JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing opening is 18\"/>

DESIGNED	EXAMINED
CHECKED	DRAWN
CHECKED	APPROVED

FOR INFORMATION ONLY

St. Clair Co.

Sec. 82-3HV8-R

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FOR INDEX OF SHEETS
SEE SHEET NO. 2

FAI. ROUTE 70

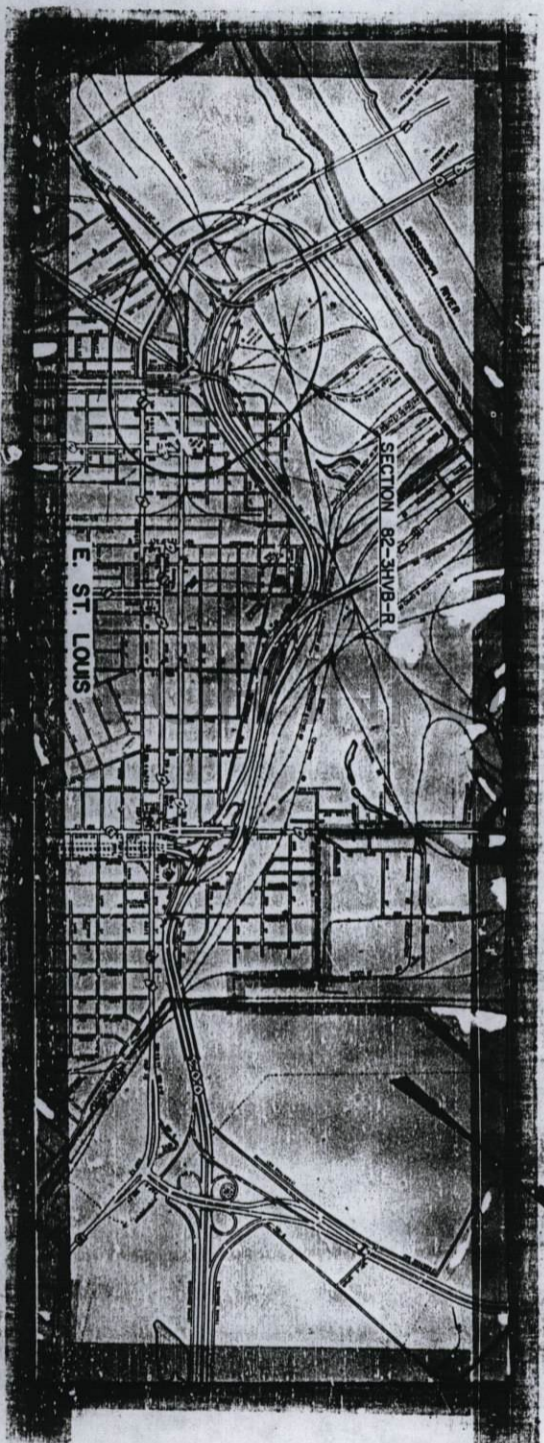
SECTION 82-3HV8-R

ST. CLAIR COUNTY
BRIDGE REPAIRS

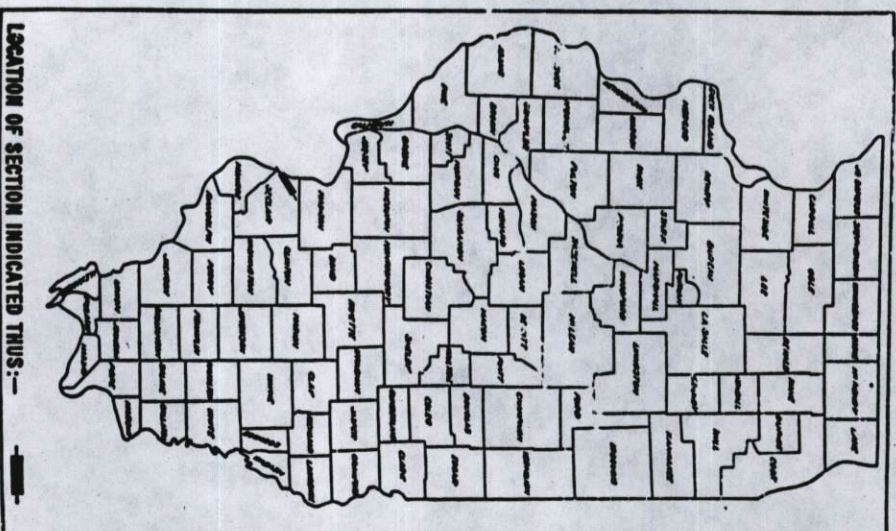
C-98-003-75

22 APR 23 1975
REVISED
3/21/75

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



LOCATION MAP
SCALE: 1 INCH = 1600 FEET



STATE	COUNTY	TOWNSHIP	SECTION
ILLINOIS	ST. CLAIR	28	1

P-98-085-74

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGNED BY: *[Signature]* 1-13-75
 DRAWN BY: *[Signature]* 1-16-75
 CHECKED BY: *[Signature]* 1-16-75
 IN CHARGE: *[Signature]* 1-16-75
 APPROVED BY: *[Signature]* 1-23-75
 DIRECTOR, HIGHWAYS

CONTRACT NO. 30450

ST. CLAIR COUNTY SECTION 82-3HV8-R F.A.I. ROUTE 70

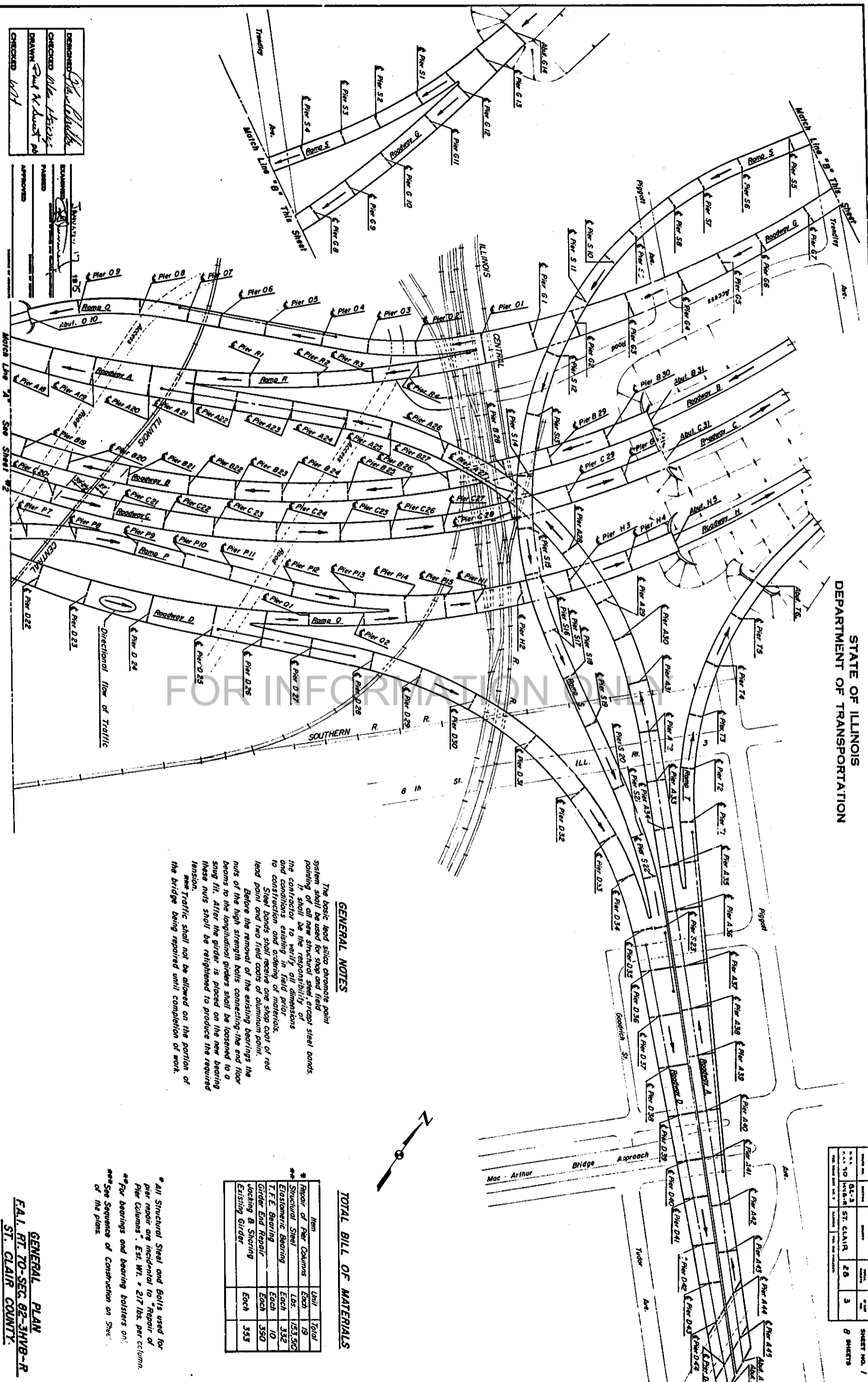
REVISED SET 2-25-75

REEL 8-102

082-005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	ST. 3	SHEET NO.	1
DATE	10/10	ST. CLAIR	28
SCALE	1" = 20'	NO. OF SHEETS	3
		8 SHEETS	



FOR INFORMATION ONLY

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 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.	153,360
Elastomeric Bearing	Each	332
T.F.E. Bearing	Each	10
Girder End Repair	Each	350
Locking & Shoring Existing Girder	Each	353

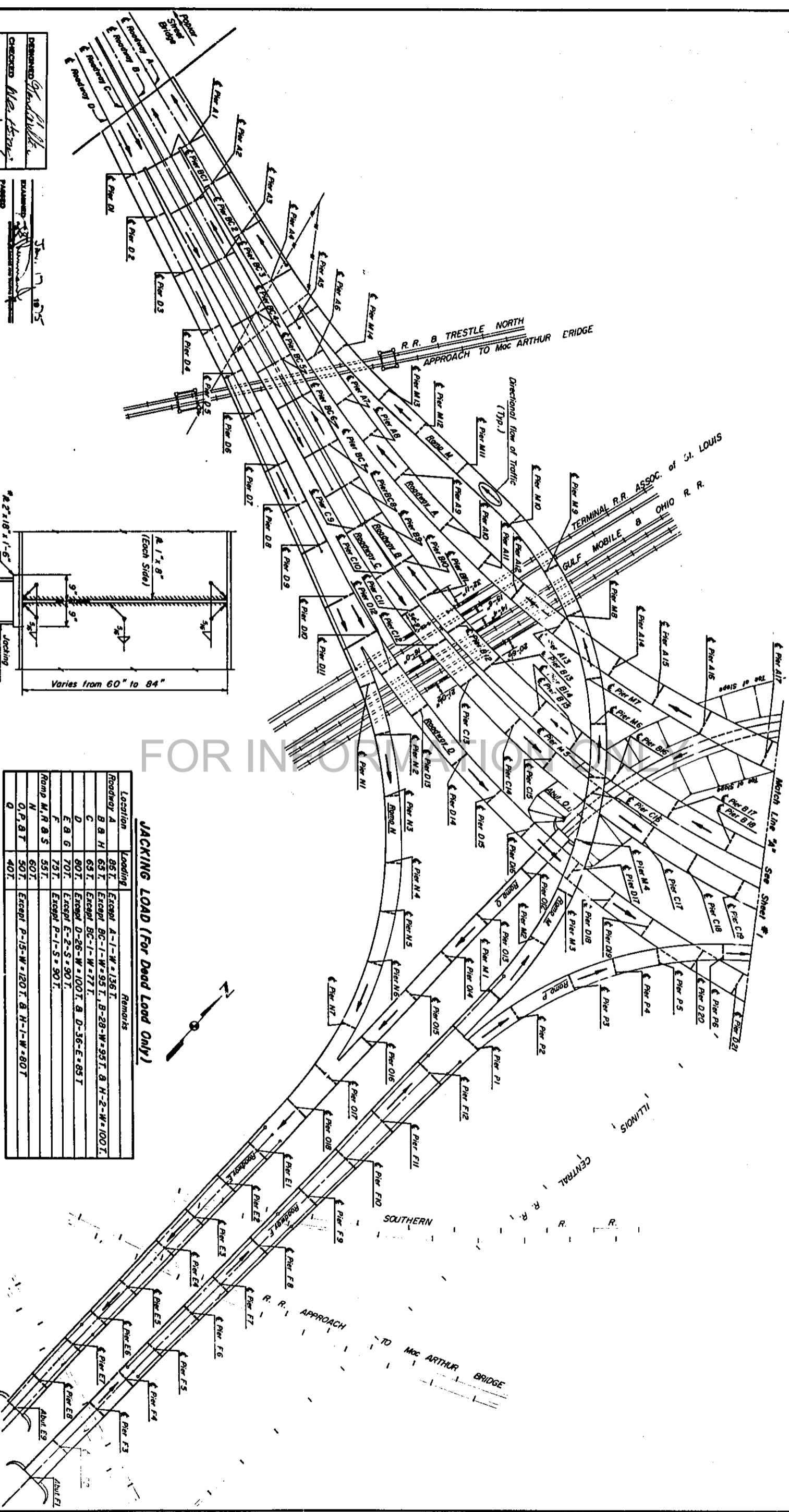
* All Structural Steel and Bolts used for pier repair are incidental to "Repair of Pier Columns", Est. Wt. = 217 lbs. per column.
** For bearings and bearing bolsters on.
*** See Sequence of Construction on Sheet of this plan.

GENERAL PLAN
F.A.I. RT. 70-SEC. 82-3HV-B-R
ST. CLAIR COUNTY.

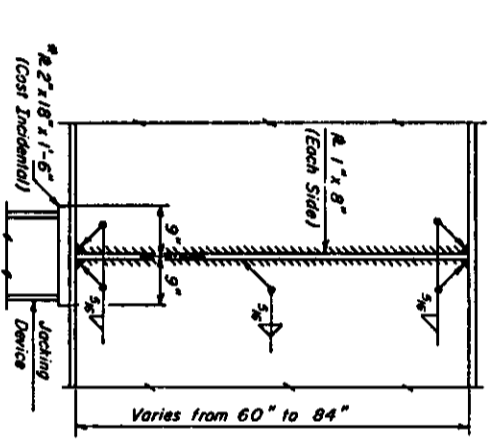
DESIGNED: *[Signature]*
CHECKED: *[Signature]*
DRAWN: *[Signature]*
CHECKED: *[Signature]*

EXAMINED: *[Signature]*
PASSED: *[Signature]*
APPROVED: *[Signature]*

Project No.	02-3	Sheet No.	28
Location	HWY 81 ST. CLAIR	Sheet No.	4



DESIGNED	W. H. H.
CHECKED	M. A. H.
DRAWN	W. H. H.
CHECKED	W. H. H.



BEARING STIFFENER AT JACKING POINT
(Cost Incidental)

JACKING LOAD (For Dead Load Only)

Location	Loading	Remarks
Roadway A	85T	Except A-1-W=136T.
B & H	65T	Except BC-1-W=95T, B-28-W=95T, B-H-2-W=100T.
C	65T	Except BC-1-W=77T.
D	80T	Except D-26-W=100T, B-D-36-E=85T.
E & 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, B-H-1-W=80T.
Q	40T	

A-1-W indicates Pier A-1, West Bearing, Both Girders.

Use 3' x 18" x 1'-6" B when loading > 80T.

GENERAL PLAN
F&I RT 70-SEC 82-3HWB-R
ST. CLAIR COUNTY

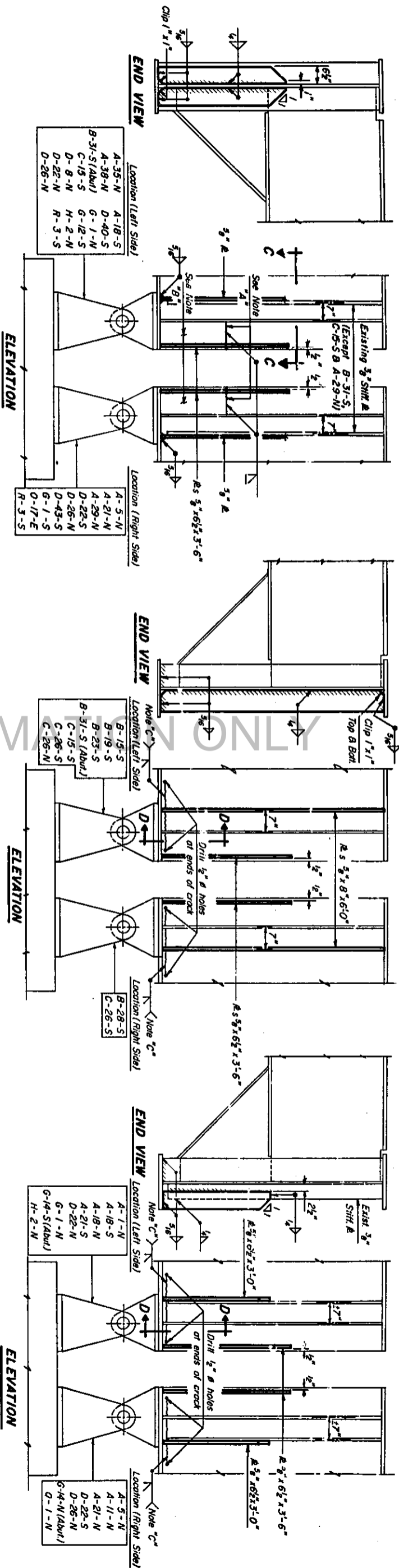
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	22-5	ST. CLAIR	26	5
SHEET NO.	3			
TOTAL SHEETS	8			

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 and weld, grind smooth.
If the crack extends into the flange, gouge the cracked flange to sound metal and weld, grind smooth.
Cost incidental to Girder End Repair.

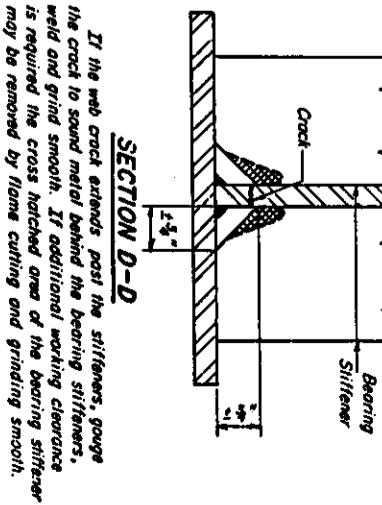
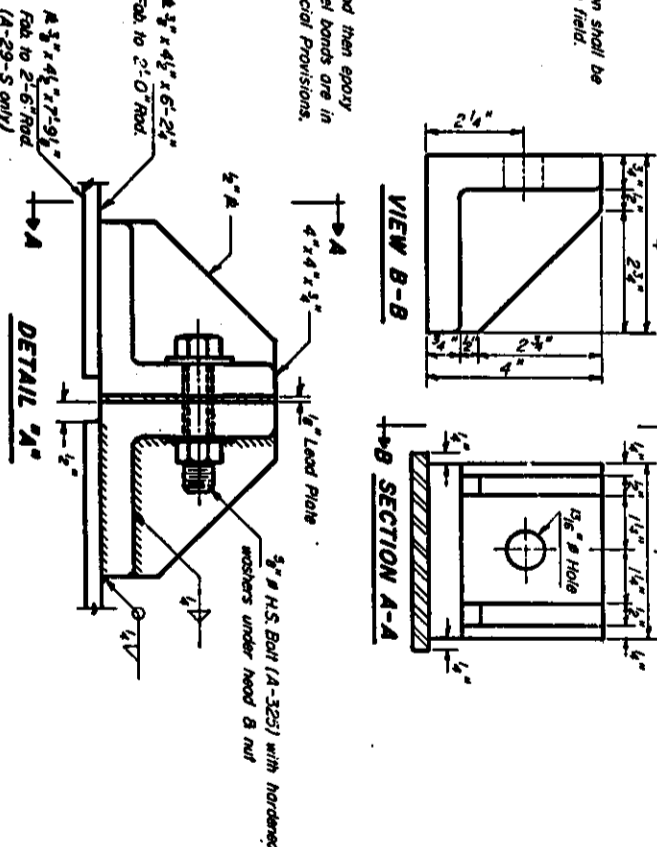
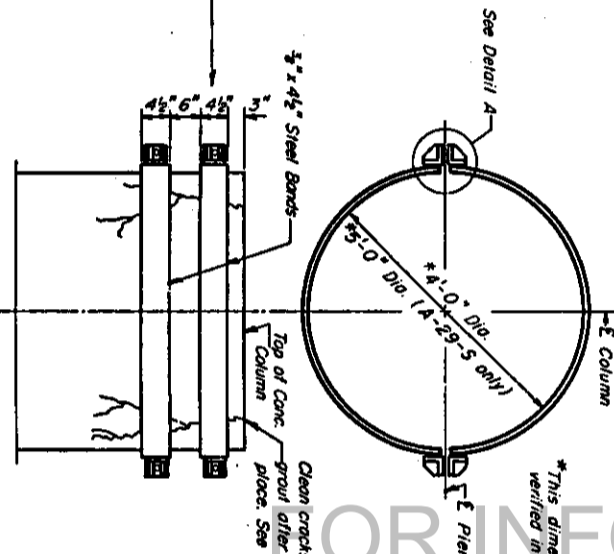
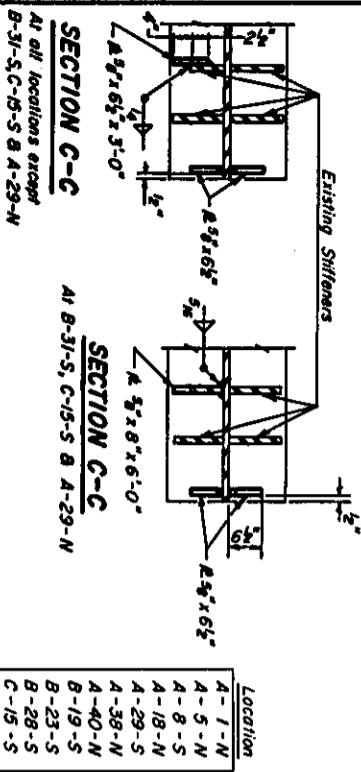
Location Designation Examples:
B-15-S refers to South end of Pier B-15, Looking North.
C-26-N refers to North end of Pier C-26, Looking South.



REPAIR OF BUCKLED WEBS

REPAIR OF CRACKED WEBS WITHOUT INTERMEDIATE STIFFENER ON OUTSIDE FACE

REPAIR OF CRACKED WEBS WITH INTERMEDIATE STIFFENER ON OUTSIDE FACE



WEB AND COLUMN REPAIRS
F.A.I. RT. 70 SEC. 82-3 HVB-R
ST. CLAIR COUNTY

DESIGNED BY	W. H. H. H.	EXAMINED BY	W. H. H. H.
CHECKED BY	W. H. H. H.	PASSED BY	W. H. H. H.
DRAWN BY	P. Bernert	APPROVED BY	W. H. H. H.
CHECKED BY	W. H. H. H.		

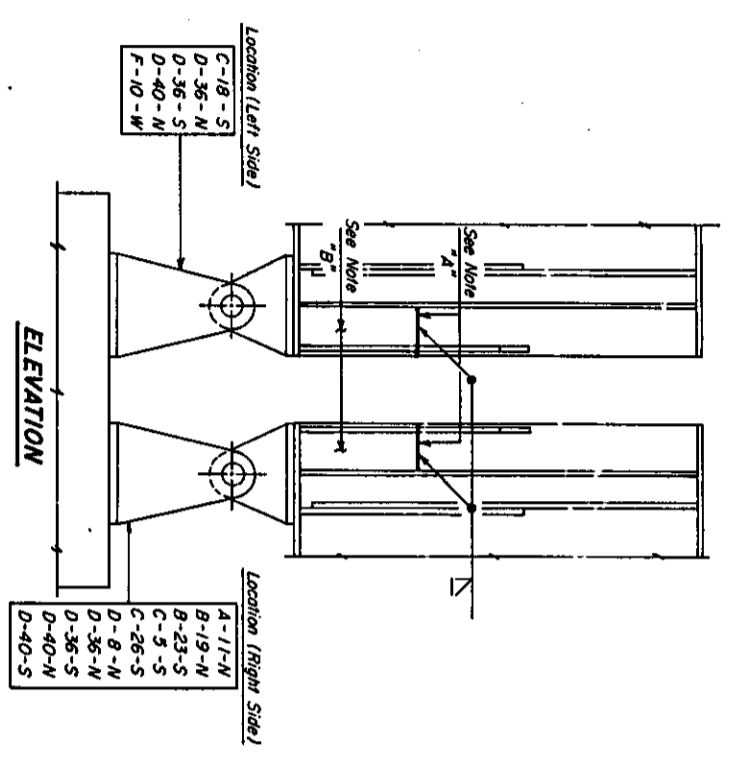
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	82-3	SHEET NO.	29	TOTAL SHEETS	54
DATE	11/70	BY	ST. CLAIR	DATE	11/70
SHEET NO. 34 8 SHEETS					

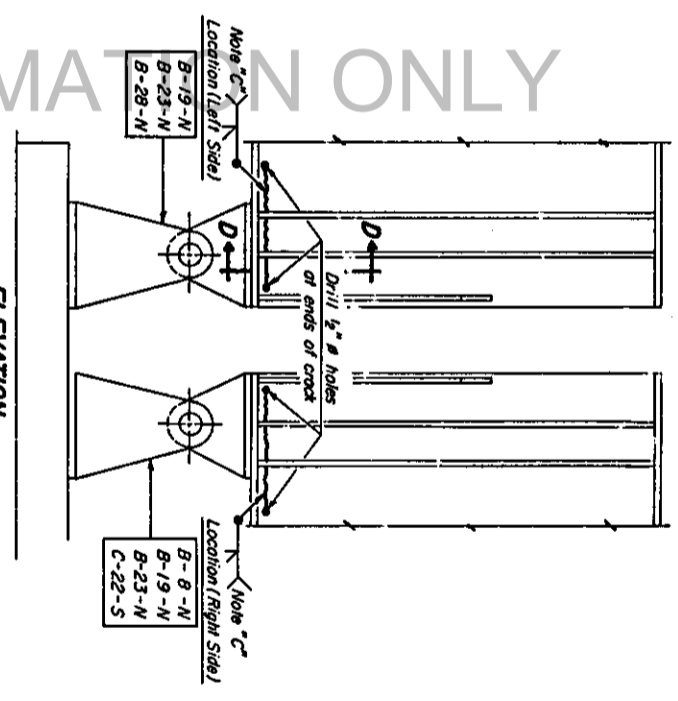
Note "A"
The web shall be cut to the face of the existing bearing stiffener just above the buckled area. This shall be done before the buckled area is straightened. After the web is straightened the cut portion shall be welded.
Note "B"
The buckled web shall be straightened using a continuous pressure applied to both sides of the web simultaneously.

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.

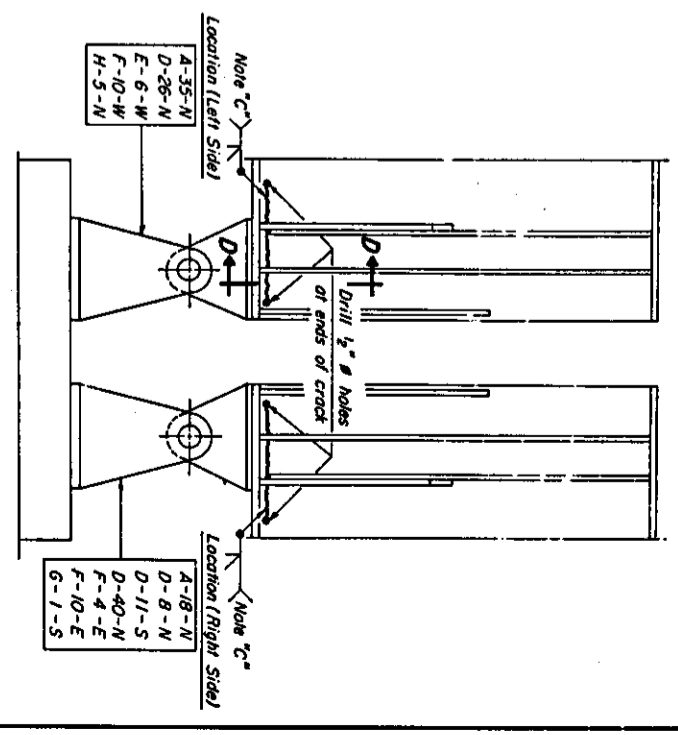


REPAIR OF BUCKLED WEBS



REPAIR OF CRACKED WEBS WITHOUT INTERMEDIATE STIFFENER ON OUTSIDE FACE

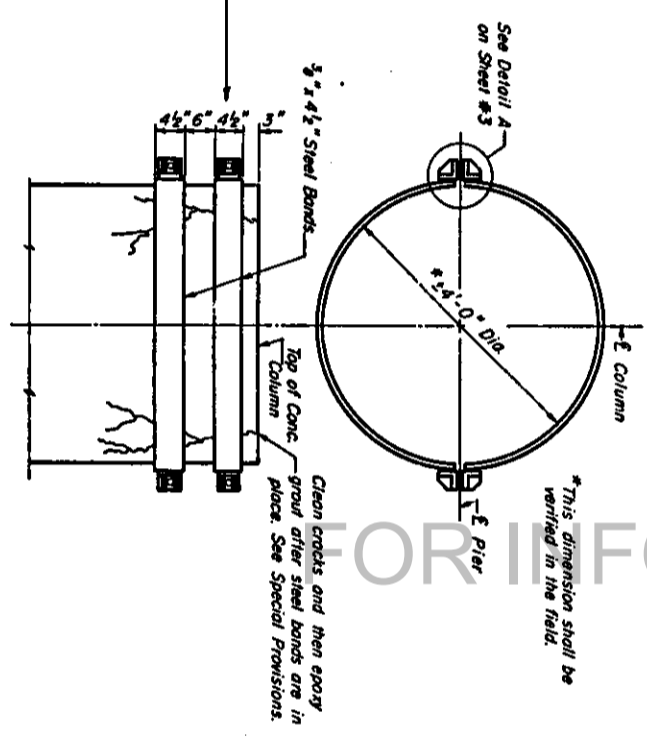
For Section D-D See Sheet #3



REPAIR OF CRACKED WEBS WITH INTERMEDIATE STIFFENER ON OUTSIDE FACE

Location:

A-20-S
B-29-S
B-30-S
C-11-S
C-12-S
C-22-N
C-27-N
C-28-N
C-29-S
C-30-N
D-21-N
D-22-N
D-43-S
G-9-S
G-12-N
M-9-S
M-10-S
P-14-W
S-16-W
S-17-W



REPAIR OF CRACKED PIER COLUMNS

DESIGNED *W. H. Hertz*
CHECKED
DRAWN *P. Barnett*
CHECKED

EXAMINED *David R. 10/75*
PREPARED *W. H. Hertz*
APPROVED
DATE OF REVISION

ADDITIONAL LOCATIONS FOR WEB AND COLUMN REPAIRS
I.A.I. RT. 70 SEC. 82-3 HYB-R
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	22-3	COUNTY	ST. CLAIR	SHEET NO.	28	TOTAL SHEETS	58
DATE	10/10/68	SCALE					

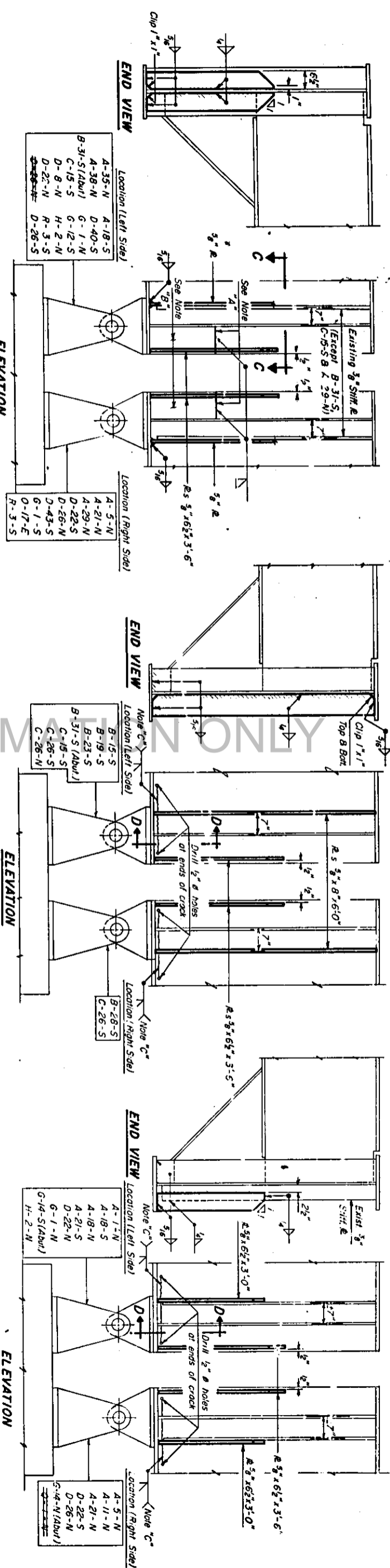
SHEET NO. 3 B
8 SHEETS

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. 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.

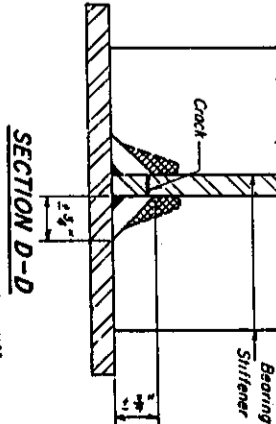
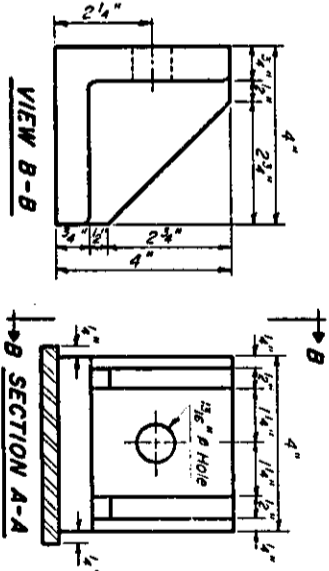
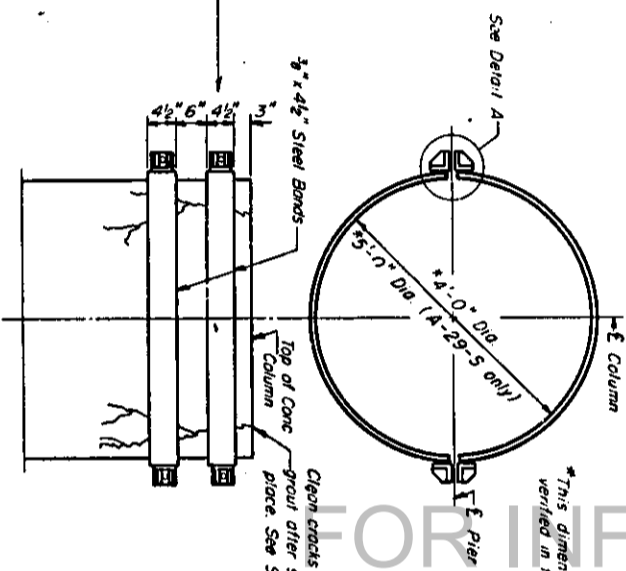
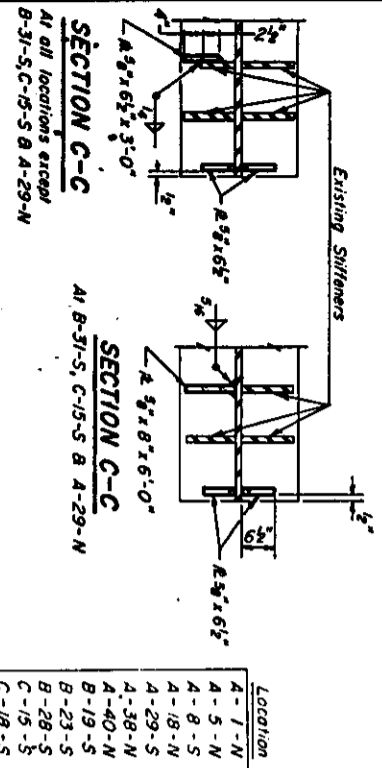
Location Designation Examples:
B-15-S refers to South end of Pier B-15, Looking North.
C-26-N refers to North end of Pier C-26, Looking South.



REPAIR OF BUCKLED WEBS

REPAIR OF CRACKED WEBS WITHOUT INTERMEDIATE STIFFENER ON OUTSIDE FACE

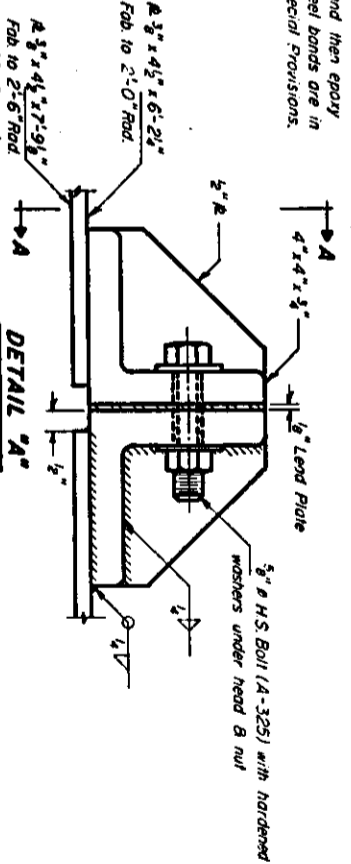
REPAIR OF CRACKED WEBS WITH INTERMEDIATE STIFFENER ON OUTSIDE FACE



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	G. A. H. H.	EXAMINED	J. H. H.
CHECKED	W. H. H.	PASSED	J. H. H.
DRAWN	P. B. H.	APPROVED	J. H. H.
CHECKED	L. H. H.		

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

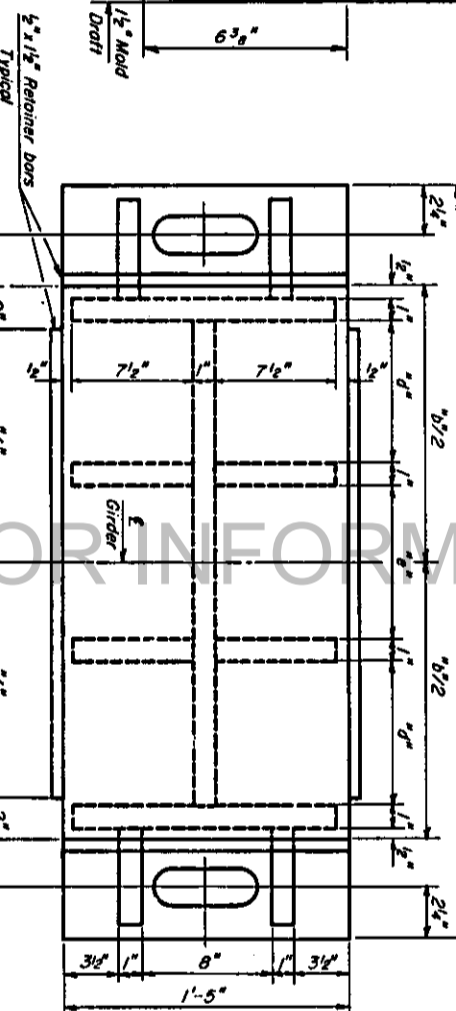
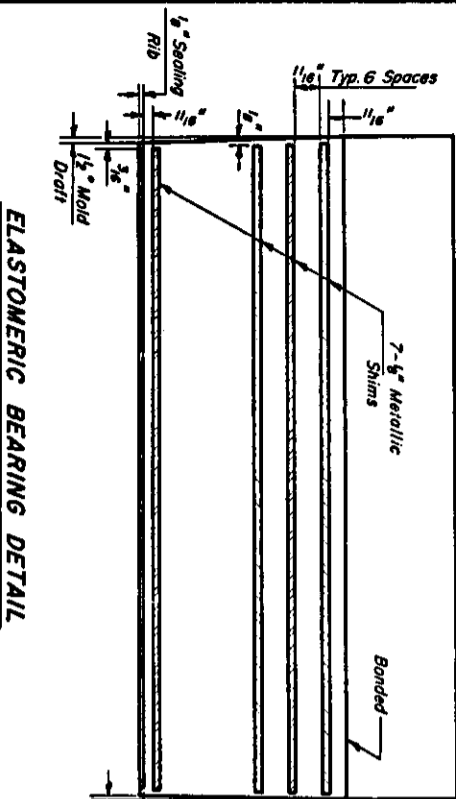
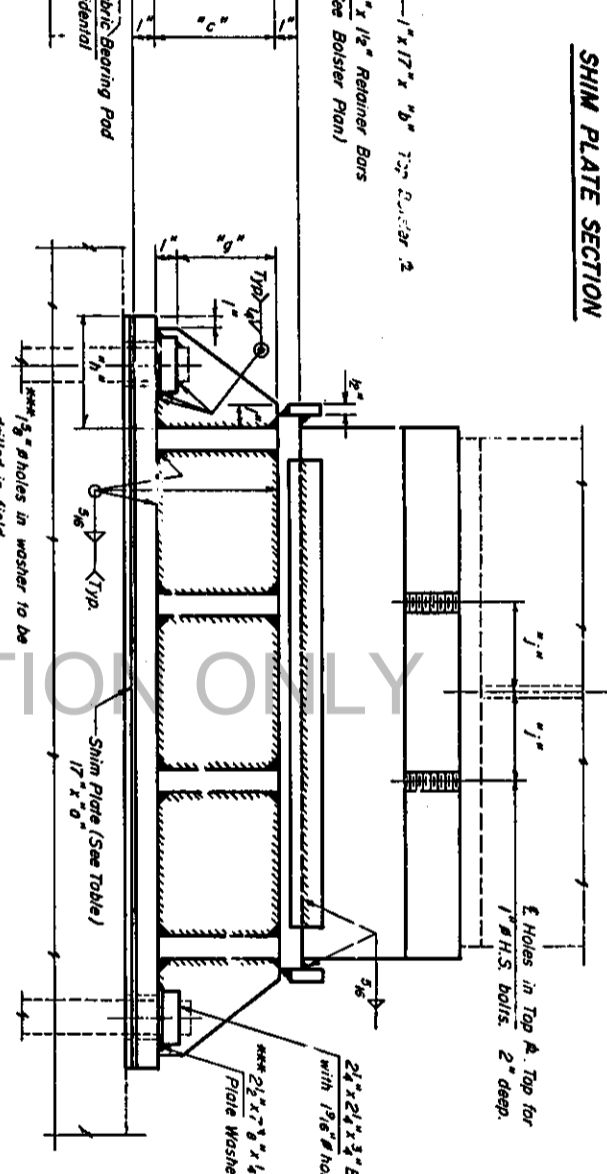
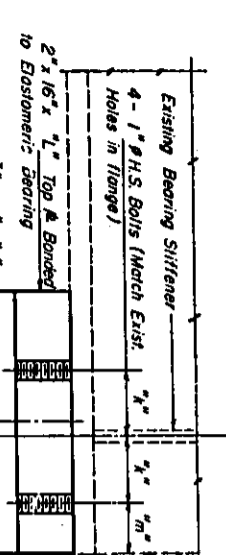
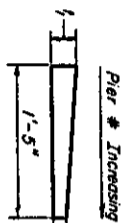
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPLACEMENT BEARINGS

8 SHEETS

DIMENSIONS OF ELASTOMERIC BEARINGS

Type	3"	4"	5"	6"	No. Rods
Type I	3 3/8"	2 3/4"	1-6"	3 5/8"	62
Type II	3 5/8"	2 7/8"	1-8"	3 7/8"	16
Type III	3 7/8"	2 3/4"	2-0"	3 3/4"	4
Type IV	3 1/2"	2 5/8"	1-6"	3 3/4"	22
Type V	4 1/8"	2 3/4"	1-8"	3 3/8"	2



DIMENSIONS OF BOLSTERS

Type of Bolster	No. Rods	A ₁	B ₁	C ₁	D ₁	E ₁	F ₁	G ₁	H ₁	I ₁
TYPE 1a	46	2-4"	1-7"	3 3/4"	4 1/2"	5"	7 1/4"	2 3/4"	2 3/4"	5"
TYPE 2a	56	2-7"	1-9"	7 3/4"	5"	6"	8 1/2"	6 1/2"	5 1/2"	5 1/2"
TYPE 3a	4	2-10"	2-1"	7 3/4"	6 1/2"	7"	10 1/2"	6 1/2"	5 1/2"	5"

DESIGNED *Alan Hines*
CHECKED R. F. Rooker
DRAWN P. Barnett
CHECKED *[Signature]*

EXAMINED *[Signature]*
APPROVED *[Signature]*
DATE 7/17/65

NOTES:
Bearings to be replaced one at locations given in Table I.
Existing Anchor Bolts to be reused. Reprint 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-1-E(B) indicates Pier # A-1, East Bearing, Both Girders.
A-5-W(N) indicates Pier # A-5, West Bearing, North Girder.
Area between retainer bar and elastomeric bearing to be filled with sealant 1" thick, slotted to drain. (Elastomeric Polymer Type Sealer)
The cost of the 2" top plate is included in the unit bid price of "Elastomeric Bearing".
Calculated Weight of Structural Steel = 55,380 lbs.
Existing Anchor Bolts shall be cut off 1/2" above the 3/4" bar.

TABLE I (CONT.)

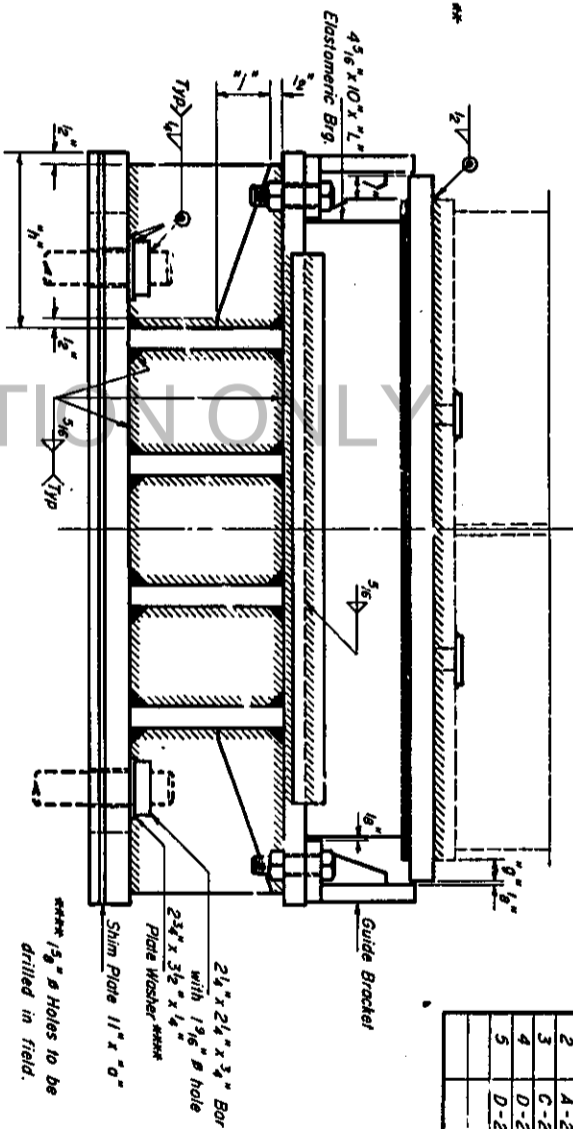
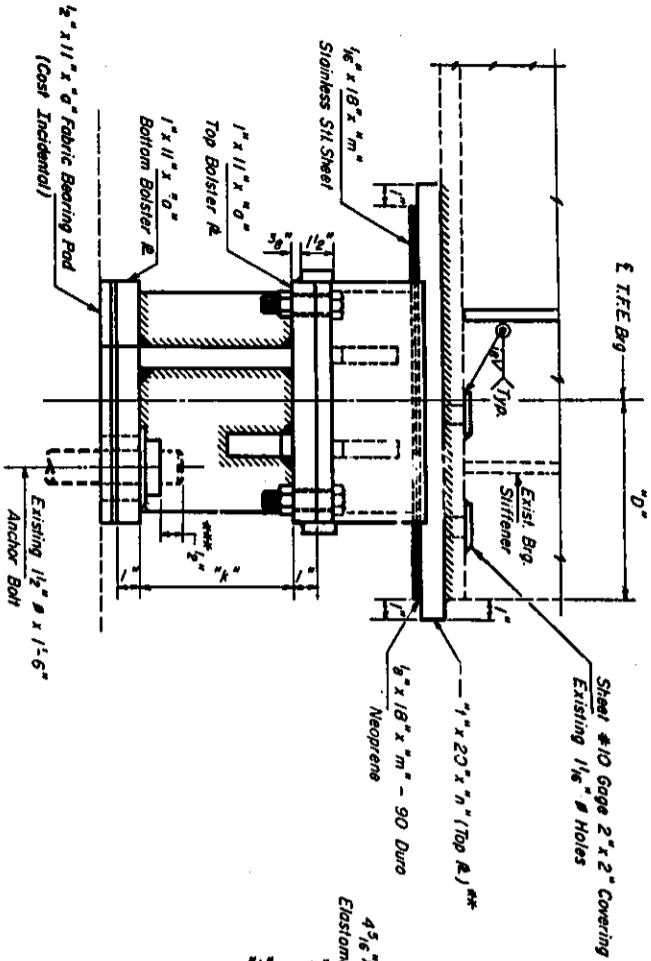
Location	Type of Bolster	Type of Elast. Brg.	Shim #	Length of H.S. Bolts
Roadway D				
D-1-W(B)	2a	II	1	2 1/2"
D-1-E(N)	1a	II	1	2 3/4"
D-1-E(S)	1a	II	1	2 3/4"
D-11-W(B)	2a	II	1	2 3/4"
D-11-E(B)	2a	II	1	2 3/4"
D-22-W(N)	2a	II	1	2 3/4"
Roadway C				
D-1-W(B)	2a	II	1	2 1/2"
D-1-E(N)	1a	II	1	2 3/4"
D-1-E(S)	1a	II	1	2 3/4"
C-11-W(B)	1a	II	1	2 3/4"
C-11-E(B)	1a	II	1	2 3/4"
C-22-W(B)	1a	II	1	2 3/4"
C-22-E(B)	1a	II	1	2 3/4"
Roadway B				
BC-1-W(B)	2a	II	1	2 1/2"
BC-1-E(B)	1a	II	1	2 3/4"
B-11-E(B)	1a	II	1	2 3/4"
B-23-W(B)	1a	II	1	2 3/4"
B-23-E(B)	1a	II	1	2 3/4"
B-28-W(B)	2a	II	1	2 3/4"
Roadway A				
A-1-W(S)	2a	II	1	2 1/2"
A-25-W(N)	1a	II	1	2 3/4"
A-25-W(S)	1a	II	1	2 3/4"
A-29-W(B)	1a	II	1	2 3/4"
A-35-E(N)	3a	II	1	2 3/4"
A-35-E(S)	3a	II	1	2 3/4"
A-36-E(B)	2a	II	1	2 3/4"
A-41-W(B)	1a	II	1	2 3/4"
A-43-E(B)	2a	II	1	2 3/4"
A-44-F(2)	2a	II	1	2 3/4"
Roadway F				
F-7-N(B)	1a	II	1	2 3/4"
F-10-S(B)	2a	II	1	2 3/4"
F-10-N(B)	2a	II	1	2 3/4"
P-1-S(E)	2a	II	1	2 3/4"
Roadway G				
G-1-N(B)	2a	II	1	2 3/4"
G-5-S(B)	1a	II	1	2 3/4"
G-5-N(B)	1a	II	1	2 3/4"
G-14-Abut(N)	2a	II	1	2 3/4"
G-14-Abut(E)	2a	II	1	2 3/4"
Roadway H				
H-5-Abut(B)	1a	II	1	2 3/4"
Roadway I				
I-1-E(N)	1a	II	1	2 3/4"
I-1-E(S)	1a	II	1	2 3/4"
N-5-N(B)	1a	II	1	2 3/4"
Roadway J				
P-10-E(N)	1a	II	1	2 3/4"
P-10-E(S)	1a	II	1	2 3/4"
Roadway K				
S-7-N(W)	1a	II	1	2 3/4"
S-7-N(E)	1a	II	1	2 3/4"
S-10-S(B)	1a	II	1	2 3/4"
S-15-N(B)	1a	II	1	2 3/4"
Roadway L				
A-35-N(W)	2a	II	1	2 3/4"
A-35-N(E)	2a	II	1	2 3/4"
T-6-Abut(B)	2a	II	1	2 3/4"
Roadway M				
D-22-W(S)	2a	II	1	2 3/4"
D-26-W(N)	3a	II	1	2 3/4"
D-26-W(S)	3a	II	1	2 3/4"
D-36-E(N)	2a	II	1	2 3/4"
D-36-E(S)	2a	II	1	2 3/4"
D-40-W(B)	2a	II	1	2 3/4"
D-43-E(B)	2a	II	1	2 3/4"
D-44-E(B)	2a	II	1	2 3/4"
Roadway N				
S-18-W(N)	1a	II	1	2 3/4"
S-18-E(S)	1a	II	1	2 3/4"
S-21-W(N)	1a	II	1	2 3/4"
S-21-E(B)	1a	II	1	2 3/4"
D-36-W(N)	1a	II	1	2 3/4"
D-36-W(S)	1a	II	1	2 3/4"
Roadway O				
S-18-W(B)	1a	II	1	2 3/4"
S-18-E(S)	1a	II	1	2 3/4"
S-21-W(N)	1a	II	1	2 3/4"
S-21-E(B)	1a	II	1	2 3/4"
D-36-W(N)	1a	II	1	2 3/4"
D-36-W(S)	1a	II	1	2 3/4"

REPLACEMENT BEARINGS
FA.I RT 70 SEC 82-3WB-R
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 6
8 SHEETS

** Cost of this plate together with 90 Duro Neoprene & 1/8" Stainless Steel Sheet is included in the unit bid price for "T.F.E. Bearing".



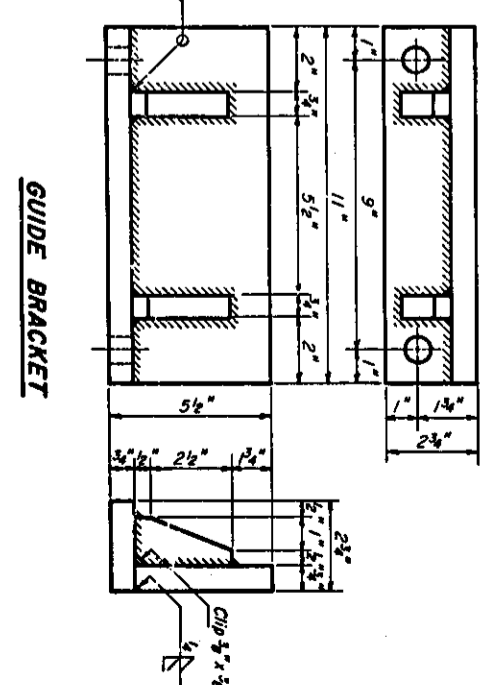
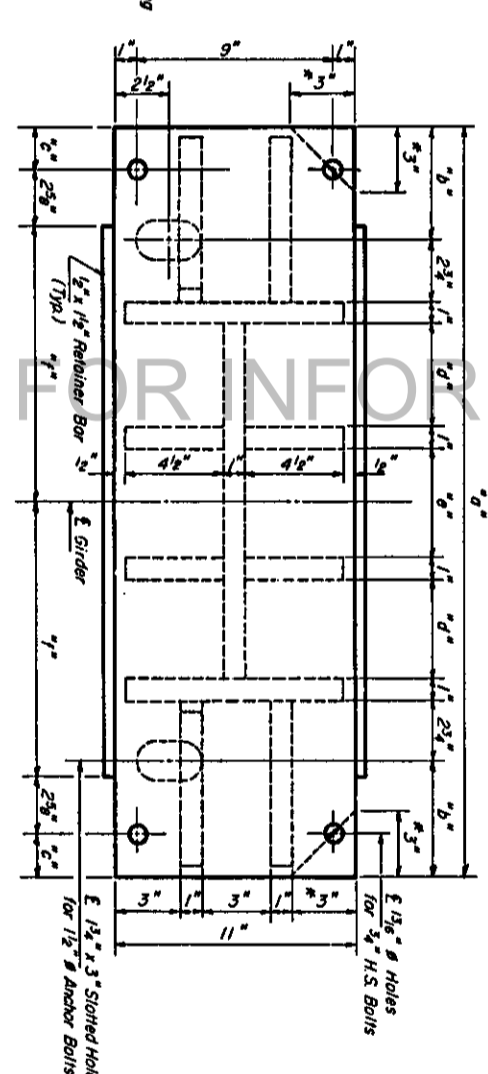
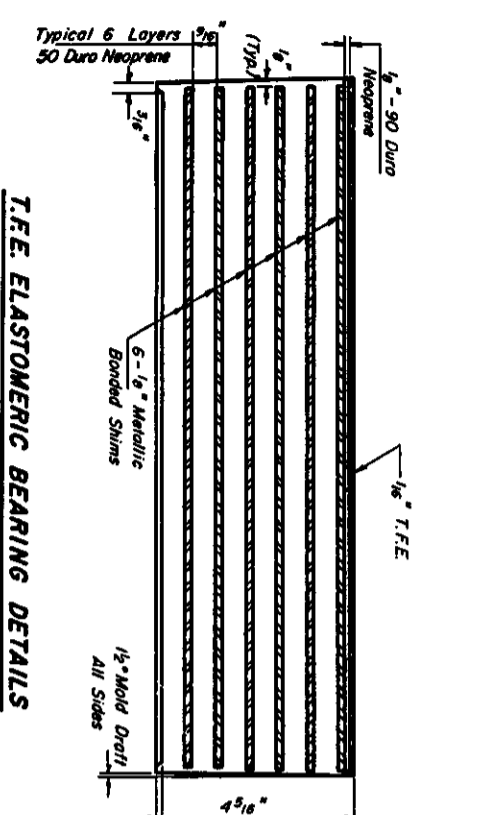
DIMENSIONS OF BOLSTER

Bearing No.	Location	a"	b"	c"	d"	e"	f"	g"	h"	i"	j"	k"	l"	m"	n"	o"	p"	q"	r"	s"	t"	u"	v"	w"	x"	y"	z"		
1	A-25-E	2'-10"	5 1/2"	1 1/2"	4 1/2"	5"	12 1/2"	1"	8"	5"	6 1/2"	2'-4"	2'-6"	2'-8"	2'-8"	1 1/2"													
2	A-29-E	2'-4"	2 1/4"	3 3/4"	4 1/2"	5"	8"	2 1/2"	5"	4 1/2"	6 1/2"	1'-7"	1'-9"	1'-11"	1 1/2"														
3	C-26-E	2'-10"	5 1/2"	1 1/2"	4 1/2"	5"	12 1/2"	1"	8"	5"	6 1/2"	2'-4"	2'-6"	2'-8"	2'-8"	1 1/2"													
4	D-22-E	2'-10"	5 1/2"	1 1/2"	4 1/2"	5"	12 1/2"	1"	8"	5"	6 1/2"	2'-4"	2'-6"	2'-8"	2'-8"	1 1/2"													
5	D-28-E	2'-10"	5 1/2"	1 1/2"	4 1/2"	5"	12 1/2"	1"	8"	5"	6 1/2"	2'-4"	2'-6"	2'-8"	2'-8"	1 1/2"													

TABLE OF "D" DIMENSIONS

Bearing No.	Location	Temperature		
		30°F	50°F	70°F
1	A-25-E	8 3/8"	9"	9 1/8"
2	A-29-E	8 1/8"	9"	9 1/8"
3	C-26-E	8 1/4"	9"	9 3/4"
4	D-22-E	8 1/8"	9"	9 3/8"
5	D-28-E	8 7/8"	9"	9 1/8"

The location of the T.F.E. bearing shall be determined by the "D" values shown. For temperatures other than those given the location shall be determined by interpolation.



DESIGNED R. F. ROCKETT
CHECKED M. H. HENRY
DRAWN P. BARNETT
CHECKED K. J. HAY
EXAMINED
PAVED
APPROVED

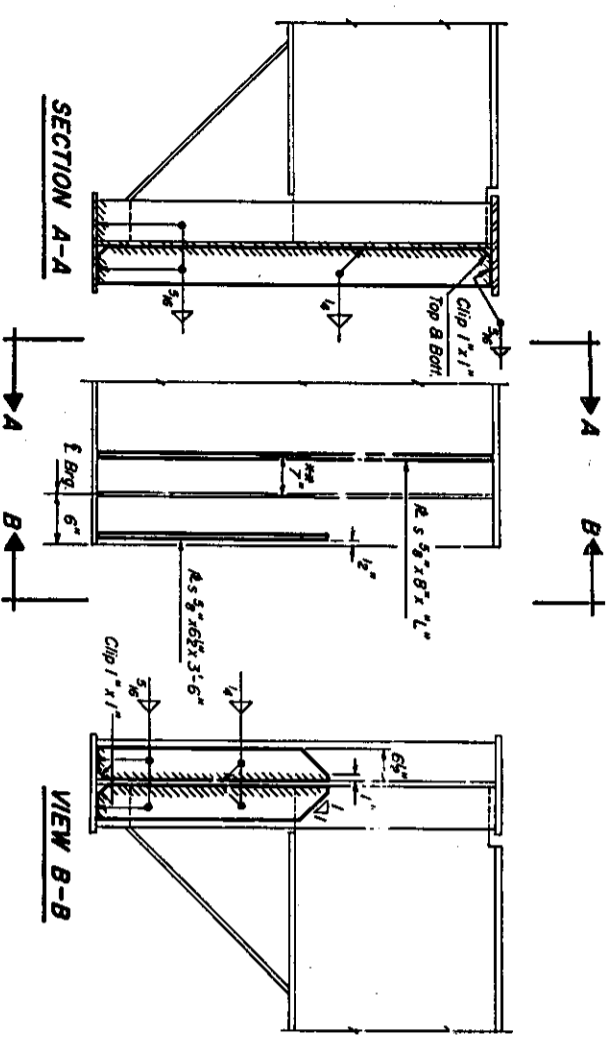
SHIM PLATE SECTION

Location	Shim Plate Thickness	Shim Plate Width
A-25-E	1/8"	1 1/2"
A-29-E	1/8"	1 1/2"
C-26-E	3/16"	1 1/2"
D-22-E	0"	0"
D-28-E	1/8"	1 1/2"

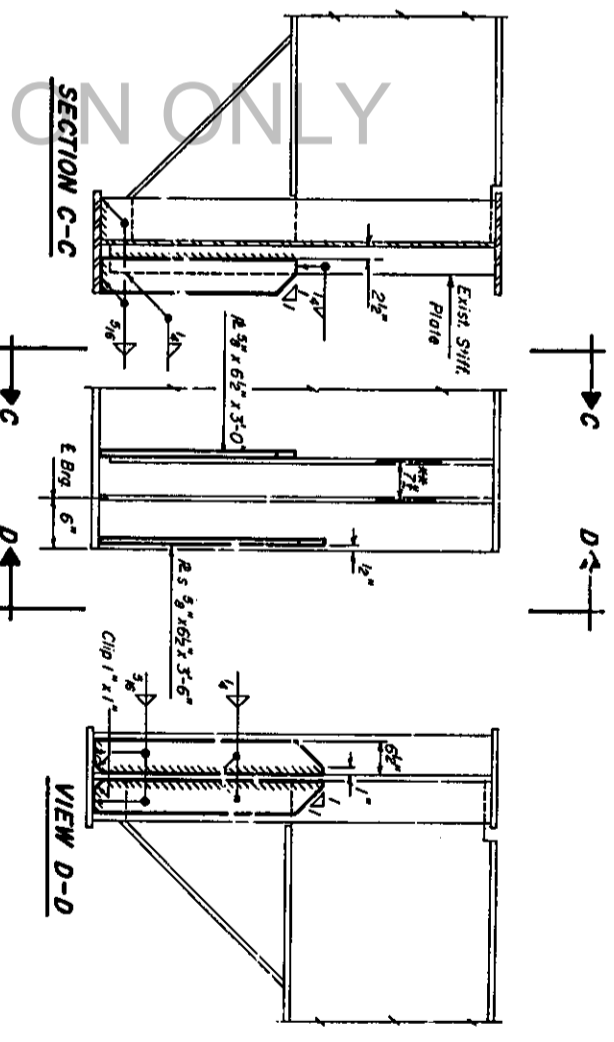
Notes:
1. If the portion of the bottom flange above the new bearing is bent the flange should be straightened using a continuous pressure applied to both faces of the plate simultaneously before setting up new bearing.
2. Clip bottom bolster plate, shim plate & fabric bearing pad for bearings #3, #4, & #5.

Notes:
1. Bearings to be replaced are both girders at locations shown in the table.
2. A-25-E indicates Pier A-25, East Bearing.
3. N indicates North Girder, S indicates South Girder.
4. Area between retainer bars and elastomeric bearing to be filled with sealer 1" thick, slope to drain. (Elastomeric Polymer Type Sealer)
5. Calculated Weight of Structural Steel = 4,440 lbs.

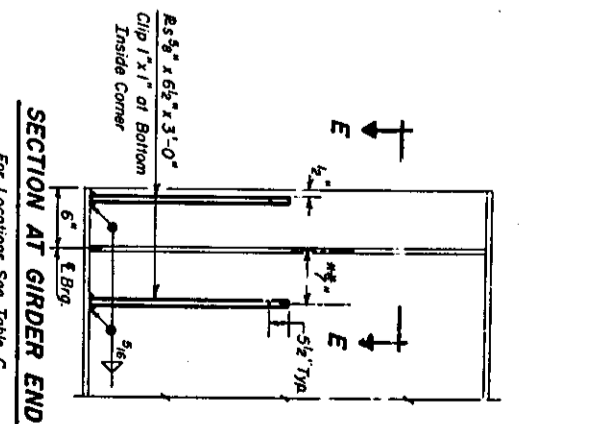
REPLACEMENT BEARINGS
F.A.T. RT.70 SEC. 82-3HYB-R
ST. CLAIR COUNTY



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

DESIGNED	M. H. Brown
CHECKED	R. Barnwell
DRAWN	R. Barnwell
CHECKED	W. H.

DESIGNED	M. H. Brown
CHECKED	R. Barnwell
DRAWN	R. Barnwell
CHECKED	W. H.

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.

Location	Location	Location
A-1-W(B)	D-22-W(B)	A-1-E(S)
A-1-E(B)	D-43-E(N)	A-5-W(S)
A-12-W(B)	D-44-W(B)	A-5-E(B)
A-23-E(B)	D-44-E(B)	A-8-W(B)
A-29-W(S)	D-45-W(B)	A-8-E(B)
A-44-E(B)	D-45-E(B)	A-11-W(S)
A-45-W(B)	E-2-S(B)	A-12-E(B)
A-45-E(B)	E-3-N(B)	A-15-W(B)
BC-1-E(B)	H-1-E(B)	A-15-E(B)
BC-1-W(B)	H-2-W(B)	A-18-W(N)
BC-8-E(B)	H-2-E(B)	A-18-E(S)
BC-8-W(B)	H-2-W(B)	A-21-E(B)
B-15-W(N)	M-3-N(B)	A-21-W(B)
B-15-E(B)	M-6-E(B)	A-29-E(B)
B-19-W(N)	M-6-E(B)	A-35-W(B)
B-19-E(B)	D-11-E(N)	A-35-E(S)
B-23-W(N)	D-11-E(S)	A-38-W(B)
B-23-E(B)	D-11-E(S)	A-38-E(S)
B-28-W(B)	N-1-W(N)	A-41-W(B)
B-28-E(B)	N-1-W(S)	A-41-E(B)
BC-1-W(B)	O-6-W(S)	A-43-W(B)
BC-1-E(B)	O-6-W(S)	A-43-E(B)
BC-8-W(B)	O-6-W(S)	A-44-W(B)
BC-8-E(B)	O-7-E(B)	A-44-E(B)
C-15-W(N)	P-14-E(B)	D-1-E(B)
C-15-E(B)	P-15-W(B)	D-5-W(B)
C-22-W(B)	P-15-W(B)	D-5-E(B)
C-22-E(B)	P-15-E(N)	D-9-W(B)
C-26-W(N)	P-15-E(N)	D-9-E(S)
C-26-E(N)	H-1-W(N)	D-11-W(B)
D-1-W(B)	H-1-W(S)	D-12-E(B)
D-11-E(N)	S-10-S(B)	D-15-W(B)
D-11-E(S)	S-10-S(B)	D-15-E(B)
D-12-W(N)	S-13-N(B)	
D-12-W(S)		
D-21-E(B)		

TABLE "A"

**Along & Girder or at Right Angles if on Stew.

Location	Location	Location
A-1-E(S)	D-18-W(B)	G-9-S(B)
A-5-W(S)	D-18-E(B)	G-9-N(B)
A-5-E(B)	D-21-W(B)	G-12-S(E)
A-8-W(B)	D-26-W(S)	H-2-E(S)
A-8-E(B)	D-26-E(S)	H-5-Abut(B)
A-11-W(S)	D-28-E(B)	P-1-N(B)
A-12-E(B)	D-33-W(N)	M-3-S(B)
A-15-W(B)	D-33-E(B)	M-6-W(B)
A-15-E(B)	D-36-W(B)	M-9-E(B)
A-18-W(N)	D-40-W(N)	M-12-E(B)
A-18-E(S)	D-40-E(B)	M-12-W(B)
A-21-E(B)	D-43-W(B)	A-5-E(B)
A-21-W(B)	O-17-S(B)	N-1-E(B)
A-29-E(B)	E-2-N(B)	N-5-N(B)
A-35-W(B)	E-3-S(B)	N-5-S(B)
A-35-E(S)	E-6-S(B)	O-17-N(B)
A-38-W(B)	E-9-Abut(B)	G-1-W(B)
A-41-W(B)	F-1-Abut(B)	O-3-E(B)
A-41-E(B)	F-4-S(B)	O-3-W(B)
A-43-W(B)	F-7-S(B)	O-6-E(B)
A-43-E(B)	F-7-S(B)	O-7-W(B)
A-44-W(B)	F-10-S(B)	O-10-Abut(B)
	F-10-S(B)	O-14-N(B)
	P-1-S(B)	O-14-S(B)
	P-1-S(B)	O-17-N(W)
	G-5-S(B)	A-35-N(B)
	G-5-N(B)	F-6-Abut(B)

TABLE "B"

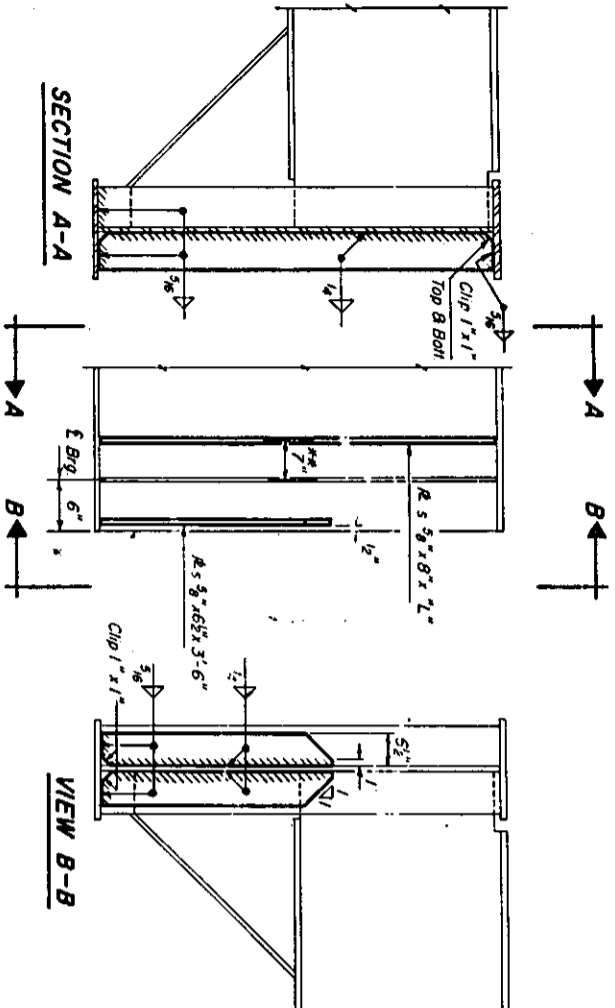
BEAM END REPAIRS
F.A.I. RT. 70 SEC 82-3 HV-B-R
ST. CLAIR COUNTY

Location	Location
BC-5-W(B)	C-11-W(B)
BC-5-E(B)	C-11-E(B)
BC-11-W(B)	C-12-W(B)
BC-11-E(B)	C-12-E(B)
BC-12-W(B)	C-18-W(B)
BC-12-E(B)	C-18-E(B)
BC-27-W(B)	C-31-Abut(B)
BC-27-E(B)	
BC-31-Abut(N)	

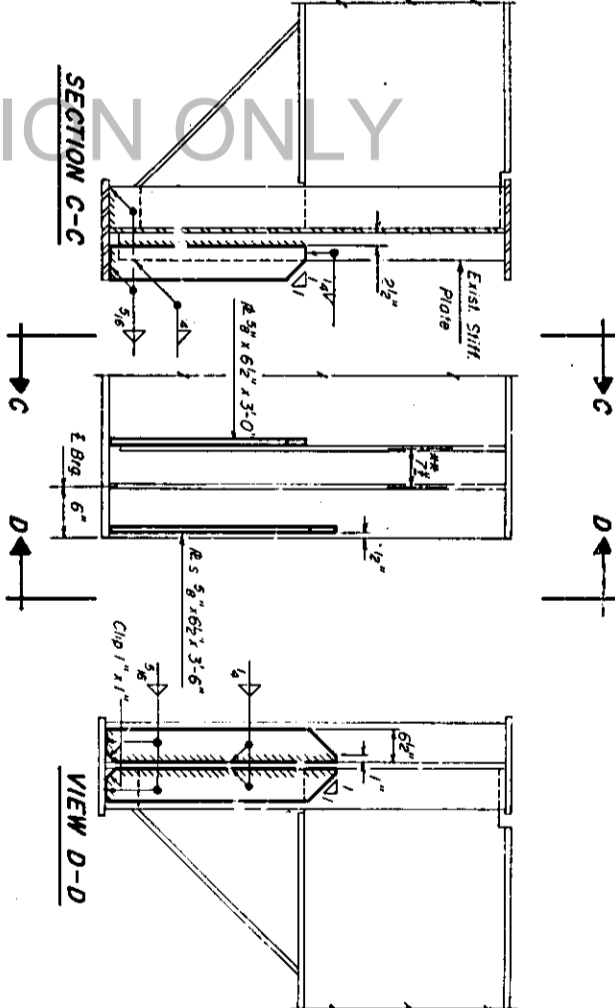
TABLE "C"

*Jacking & Shoring are not required (Total 37 Locations)

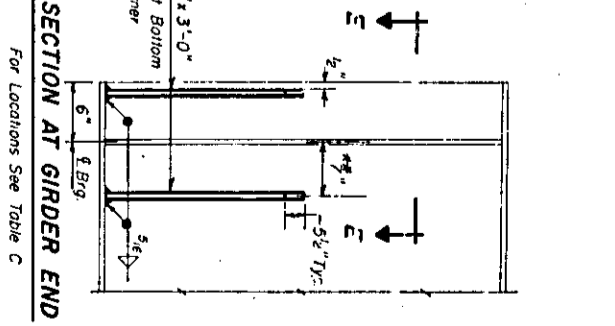
FOR INFORMATION ONLY



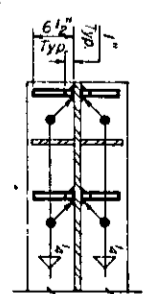
SECTION AT GIRDER END
For Locations See Table A



SECTION AT GIRDER END
For Locations See Table B



SECTION AT GIRDER END
For Locations See Table C



SECTION E-E

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.

TABLE "A"
Angles if on Stew.

Location	Angle	Location	Angle
A-1-W(B)	82 1/2°	D-22-E(N)	72°
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°	E-2-S(B)	84 1/2°
A-45-E(B)	66 1/2°	E-3-N(B)	82 1/2°
BC-1-W(B)	72°	H-1-E(B)	63 1/2°
BC-8-W(B)	72°	H-2-W(B)	85 1/2°
BC-1-E(B)	72°	H-3-N(B)	60°
BC-8-E(B)	72°	H-6-E(B)	60°
B-15-W(N)	72°	M-3-N(B)	60°
B-15-E(B)	72°	M-6-E(B)	60°
B-19-W(N)	72°	D-11-E(N)	89 1/2°
B-19-E(B)	72°	D-11-E(S)	89 1/2°
B-23-W(N)	72°	D-11-W(N)	89 1/2°
B-23-E(B)	72°	D-11-W(S)	85 1/2°
B-28-W(B)	69 1/2°	O-6-W(S)	66 1/2°
B-28-E(N)	72°	O-6-W(N)	66 1/2°
B-28-E(S)	72°	O-7-E(B)	66 1/2°
BC-1-W(B)	72°	O-7-E(N)	66 1/2°
BC-1-E(B)	72°	O-7-E(S)	66 1/2°
BC-8-W(B)	72°	O-7-E(N)	66 1/2°
BC-8-E(B)	72°	O-7-E(S)	66 1/2°
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-19-E(B)	72°	P-15-E(N)	68 1/2°
C-22-W(B)	72°	P-15-E(S)	66 1/2°
C-22-E(B)	72°	P-15-E(N)	63 1/2°
C-26-W(N)	72°	H-1-W(N)	63 1/2°
D-1-W(B)	82 1/2°	H-1-W(S)	63 1/2°
D-11-E(S)	81 1/2°	S-10-S(B)	60°
D-12-W(N)	70 1/2°	S-15-N(B)	60°
D-12-W(S)	70 1/2°		
D-21-E(B)	82 1/2°		

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)			P-7-E(B)
A-11-W(S)	D-28-E(B)	H-5-Abut. (B)	P-10-E(B)
A-12-E(B)	D-33-E(B)	M-3-S(B)	P-14-W(B)
A-15-W(B)	D-36-E(B)	M-6-W(B)	D-26-E(B)
A-18-W(N)	D-40-W(N)	M-9-E(B)	D-36-E(B)
A-18-E(S)	D-40-E(B)	M-12-E(B)	M-12-E(B)
A-21-E(B)	D-40-E(B)	M-12-W(B)	R-3-E(N)
A-25-W(B)	D-43-W(B)	M-12-W(B)	R-3-W(N)
A-35-W(B)	O-17-S(B)	A-5-E(B)	G-1-W(B)
A-35-E(S)	E-2-N(B)	N-1-E(B)	G-12-S(B)
A-38-W(B)	E-3-S(B)	N-5-N(B)	S-3-N(B)
A-41-W(B)	E-6-N(B)	N-5-S(B)	S-3-S(B)
A-41-E(B)	E-6-S(B)	O-17-N(B)	S-7-S(B)
A-43-W(B)	E-9-Abut. (B)	G-1-W(B)	S-7-S(B)
A-43-E(B)	F-1-Abut. (B)	O-3-E(B)	S-10-N(B)
A-44-W(B)	F-4-N(B)	O-3-W(B)	S-15-S(B)
D-1-E(B)	F-7-S(B)	O-6-E(B)	S-18-W(B)
D-5-W(B)	F-7-N(B)	O-7-W(B)	S-18-E(B)
D-5-E(B)	F-10-S(B)	O-10-Abut. (B)	S-21-W(B)
D-8-W(B)	F-10-N(B)	O-14-N(B)	S-21-E(B)
D-8-E(S)	P-1-S(B)	O-14-S(B)	D-36-W(B)
D-11-W(B)	G-3-N(B)	O-17-N(N)	
D-15-W(B)	G-3-S(B)		
D-15-E(B)			

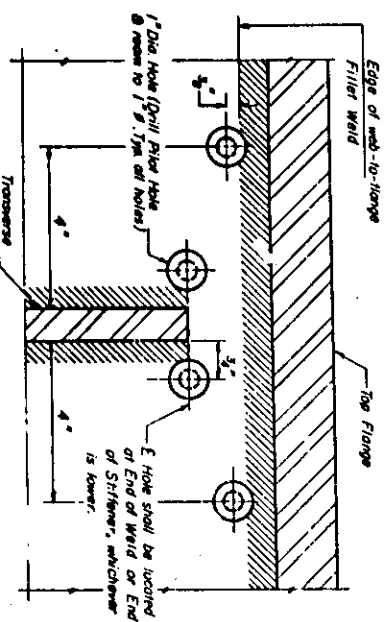
*Jacking & Shoring are not required (Total 37 Locations)

TABLE "C"

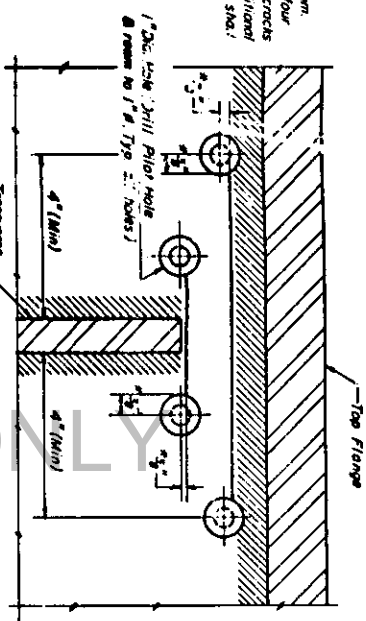
Location	Location
BC-5-W(B)	C-11-E(B)
BC-5-E(B)	C-12-E(B)
BC-11-W(B)	C-18-W(B)
BC-11-E(B)	C-18-E(B)
BC-5-E(B)	C-31-Abut. (B)

AS REVISED 5-6-75
BEAM END REPAIRS
F.A.I. RT. 70 SEC 82-3 HYB-R
ST. CLAIR COUNTY

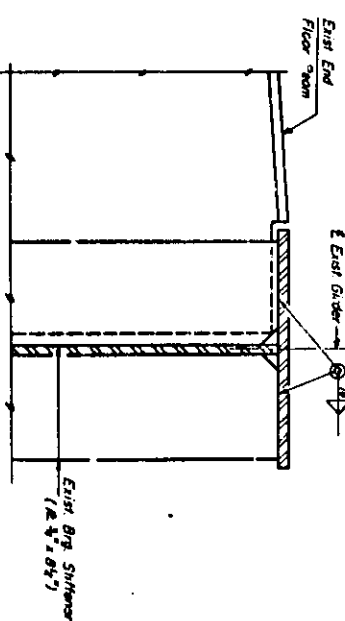
DESIGNED	W. H. H.
CHECKED	P. B. H.
DRAWN	P. B. H.
CHECKED	P. B. H.
EXAMINED	
PASSED	
APPROVED	



Pier holes shall be $\frac{3}{4}$ " 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.



*Dimensions of hole shall be located as shown with respect to ends of each crack. Number of holes is not limited to four at each pier location.



GIRDER REPAIR - TYPE III
SECTION AT REARING STIFFENERS
(Showing welding of stiffeners to end of girder)

Note: Location is roadway B, Pier B27, North Girder, West bearing

METHOD FOR LOCATING CRACK ENDS
GIRDER REPAIR - TYPE II

The location of the end of cracks shall be determined by ultra-sound 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-sound inspection around the hole to determine if the crack goes past the hole. If the ultra-sound 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 16 inches from the center of the other hole or holes.

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)

TABLE I
Floor Beam Location for
Girder Repair - Type I

ROADWAY A	ROADWAY B	ROADWAY C	ROADWAY D	ROADWAY E	ROADWAY F	ROADWAY G	ROADWAY H	RAMP M	RAMP N	RAMP O	RAMP P	RAMP Q	RAMP R	RAMP S	RAMP T
A2N-IWBLE	A36B-IWBLE	C24S-IE	D31B-IWBLE	H3N-IE	M8B-IWBLE	P2W-IN	S1B-INBLS								
A3N-IWBLE	A37B-IWBLE	C25S-IW	D34B-IWBLE	H3S-IWBLE	M10B-IWBLE	P2E-INBLS	S2B-INBLS								
A4S-IW	A39B-IWBLE	C28N-IE	D35B-IWBLE	H3W-INBLS	M11B-IWBLE	P3B-INBLS	S4B-INBLS								
A4N-IWBLE	A40B-IWBLE	C28S-IWBLE	D37B-IWBLE	G10W-IN	M13B-IWBLE	P5N-IE	S6B-INBLS								
A6B-IWBLE	A48B-IWBLE	C28S-IWBLE	D37B-IWBLE	G11W-INBLS	M14B-IWBLE	P5S-IWBLE	S6B-INBLS								
A7S-IWBLE	A48B-IWBLE	C28S-IWBLE	D37B-IWBLE	G11W-INBLS	M14B-IWBLE	P6S-IWBLE	S6B-INBLS								
A9S-IWBLE	A48B-IWBLE	C28S-IWBLE	D37B-IWBLE	G11W-INBLS	M14B-IWBLE	P6S-IWBLE	S6B-INBLS								
A10N-IW	A48B-IWBLE	C28S-IWBLE	D37B-IWBLE	G11W-INBLS	M14B-IWBLE	P6S-IWBLE	S6B-INBLS								
A13N-IWBLE	BC28-IWBLE	BC28-IWBLE	BC28-IWBLE	G4W-INBLS	N2B-IWBLE	P8B-IWBLE	S7B-INBLS								
A14B-IWBLE	BC3B-IWBLE	BC4B-IWBLE	BC4B-IWBLE	G4W-INBLS	N3B-IWBLE	P11S-IWBLE	S13B-INBLS								
A16N-IE	BC6N-IWBLE	BC6N-IWBLE	BC7N-IWBLE	G10W-IN	N6B-INBLS	P12S-IWBLE	S14B-INBLS								
A16S-IWBLE	BC7N-IWBLE	BC7N-IWBLE	BC7N-IWBLE	G10W-IN	N6B-INBLS	P12S-IWBLE	S14B-INBLS								
A17B-IWBLE	BC7S-IE	BC7S-IE	BC7S-IE	G10W-IN	N7B-INBLS	P13B-IWBLE	S16S-INBLS								
A19N-IWBLE	B9B-IWBLE	BC7S-IE	BC7S-IE	G10W-IN	N7B-INBLS	P13B-IWBLE	S16S-INBLS								
A19S-IW	B10N-IWBLE	C9B-IWBLE	C9B-IWBLE	G10W-IN	O1B-IWBLE	P13B-IWBLE	S16S-INBLS								
A20N-IW	B10N-IWBLE	C9B-IWBLE	C9B-IWBLE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A20S-IE	B14B-IWBLE	C14S-IE	C14S-IE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A22B-IWBLE	B16S-IWBLE	C14S-IE	C14S-IE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A24B-IWBLE	B17N-IW	C16B-IWBLE	C16B-IWBLE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A28B-IWBLE	B18S-IWBLE	C17N-IE	C17N-IE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A28B-IWBLE	B20N-IW	C17S-IWBLE	C17S-IWBLE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A28B-IWBLE	B20N-IW	C17S-IWBLE	C17S-IWBLE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A30B-IWBLE	B21S-IW	C19S-IWBLE	C19S-IWBLE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A31B-IWBLE	B21S-IW	C19S-IWBLE	C19S-IWBLE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A32B-IWBLE	B22S-IWBLE	C21B-IE	C21B-IE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A33B-IWBLE	B24N-IW	C23N-IE	C23N-IE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								
A34B-IWBLE	B24S-IWBLE	C30N-IWBLE	C30N-IWBLE	G10W-IN	O2B-IWBLE	P13B-IWBLE	S16S-INBLS								

TABLE II
Floor Beam Location for
Girder Repair - Type II

ROADWAY A	ROADWAY B	ROADWAY C	ROADWAY D	ROADWAY E	ROADWAY F	ROADWAY G	ROADWAY H	RAMP P	RAMP Q	RAMP R	RAMP S	RAMP T
A2S-IWBLE	BC6S-IWBLE	C24S-IE	D31B-IWBLE	H3N-IE	M8B-IWBLE	P2W-IN	S1B-INBLS					
A4S-IWBLE	BC7S-IW	C25S-IW	D34B-IWBLE	H3S-IWBLE	M10B-IWBLE	P2E-INBLS	S2B-INBLS					
A7N-IWBLE	BC10S-IWBLE	C28N-IE	D35B-IWBLE	H3W-INBLS	M11B-IWBLE	P3B-INBLS	S4B-INBLS					
A9N-IWBLE	BC17N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M13B-IWBLE	P5N-IE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					
A13S-IWBLE	BC20N-IW	C28S-IWBLE	D37B-IWBLE	G10W-IN	M14B-IWBLE	P5S-IWBLE	S6B-INBLS					

BILL OF MATERIAL

Item	Unit	Total
Girder Repair - Type I	Each	654
Girder Repair - Type II	Each	57
Girder Repair - Type III	Each	1

GIRDER REPAIRS
FAI RI 70-SEC 82-3HW-B-R
ST. CLAIR COUNTY

DESIGNED R. F. Kinsley
CHECKED W. J. ...
DRAWN P. Bennett
CHECKED W. J. ...

EXAMINED W. J. ...
APPROVED ...

Note: Edge of holes shall be painted after reaming. A2N-IWBLE indicates Pier A2, North Girder, first floor beam West of pier, and first floor beam East of pier. A2B-IW, IE, IE, IE indicates Pier A2B, North Girder, first floor beam West of pier, first floor beam East of pier, and second floor beam East of pier.

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'-118'-125'-94'	WELDED PLATE GIRDERS WITH ROLLED FLOOR BEAMS AND STRINGERS ON R. C. PIERS
	EIGHT-1 SPAN CONTINUOUS UNITS: SPANS: 2 @ 77'-100'-77' 1 EACH @ 74'-100'-77' 90'-115'-90' 92'-117'-92' 97'-124'-97'	CURVED WELDED PLATE GIRDERS WITH ROLLED FLOOR BEAMS AND STRINGERS ON R. C. PIERS (*ANDS 11'-118U ABUTMENTS)
	ONE-5 SPAN CONTINUOUS UNIT SPANS: 104'-116'-115'-115'-96' *	
	TWO SIMPLE SPANS @ 77'	COMPOSITE W.F. ON R. C. PIERS
	ONE SIMPLE SPAN - 110'	COMPOSITE I.L.V.E. GIRDER ON R. C. PIERS
ROADWAYS A, B, C & D	ONE SIMPLE SPAN - VARIES FROM 118'-10' 1/8' TO 91'-1 1/2'	
ROADWAY A	ONE-4 SPAN CONTINUOUS UNIT SPANS: 120'-155'-155'-120'	CURVED WELDED PLATE GIRDERS WITH ROLLED FLOOR BEAMS AND STRINGERS ON R. C. PIERS
RAMP M	ONE-1 SPAN CONTINUOUS UNIT SPANS: 76'-122'-76'	
RAMP S	ONE-1 SPAN CONTINUOUS UNIT SPANS: 76'-122'-76'	
ROADWAY D	PIER D17	REINFORCED CONCRETE
ROADWAY G	PIER G2	REINFORCED CONCRETE
RAILROAD TRUSTLE	FOUR SIMPLE SPANS @ 65'-0', 91'-4', 62'-6', 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 TRACES OF THE TERMINAL RAILROAD ASSOCIATION, GULF, MISSILE, 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 'J', AND RAMP 'S' OVER ROADWAYS A, B, C AND 'G'. THE RAILROAD TRUSTLE 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+73.07).

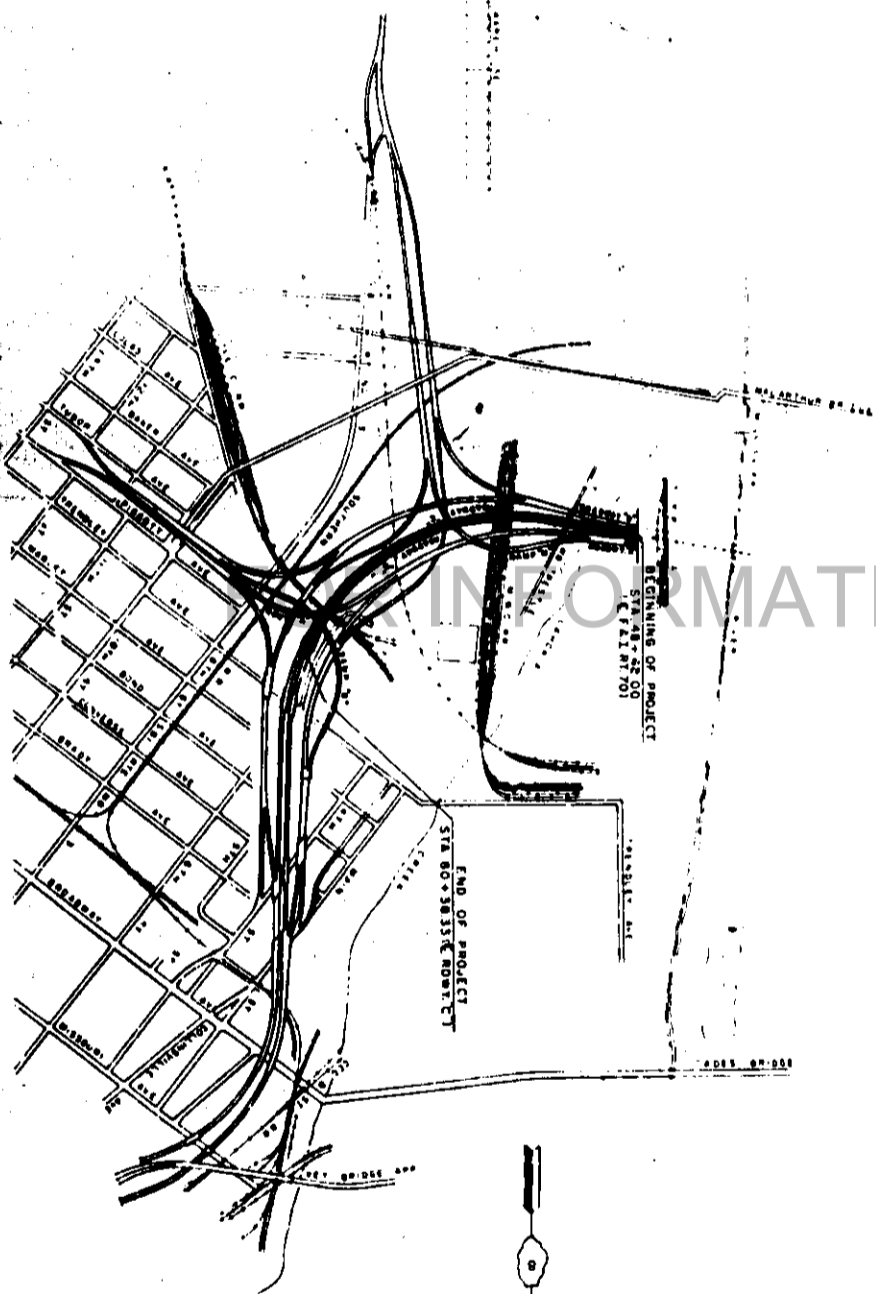
THIS SECTION ALSO INCLUDES ROUGH GRADING, DRAINAGE AND ELECTRICAL FACILITIES AND ALL APPROPRIATE AND COLLATERAL WORK NECESSARY TO COMPLETE THE PROJECT, AS SHOWN ON THE PLANS.

NOTE:
FOR INDEX OF SHEETS AND SUMMARY OF QUANTITIES SEE SHEET NO. 3

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(EG)O
POPULAR STREET BRIDGE APPROACHES
ST. CLAIR COUNTY

C-98-059-64



CITY OF EAST ST. LOUIS

LOCATION PLAN



CONTRACT NO. 24130

ST. CLAIR COUNTY

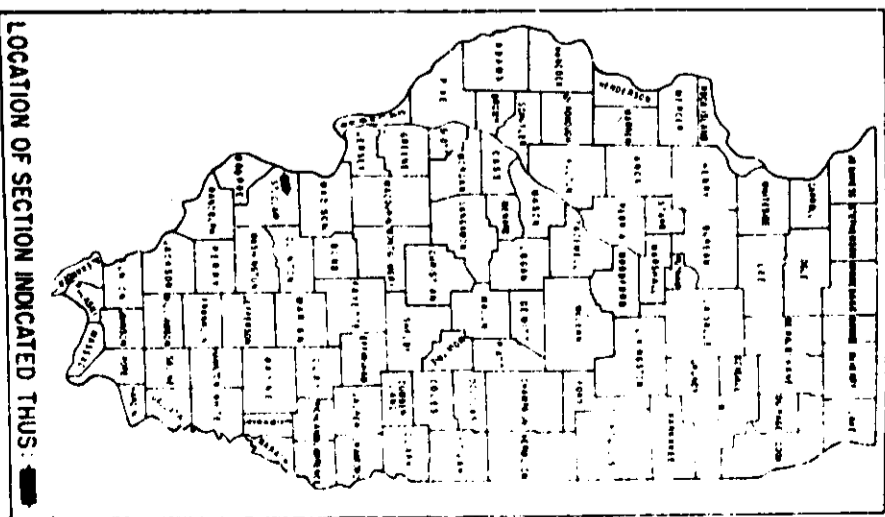
SECTION 82-3HVB

F. A. I. ROUTE 70

PROJECT I-98-70-1(EG)O

LENGTH OF PROJECT
3190.33 FT. - 604MILES
ROAD CLASSIFICATION: 4454-T-50

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS



LOCATION OF SECTION INDICATED THUS: [shaded area]

ROUTE NO.	SECTION	SUBDIV.	SHEETS	NO.
F. A. I.-70	82-3HVB	ST. CLAIR	257	1
FED. ROAD DIST. NO. 4	ILLINOIS	PROJECT 2-28-70-1(EG)O		

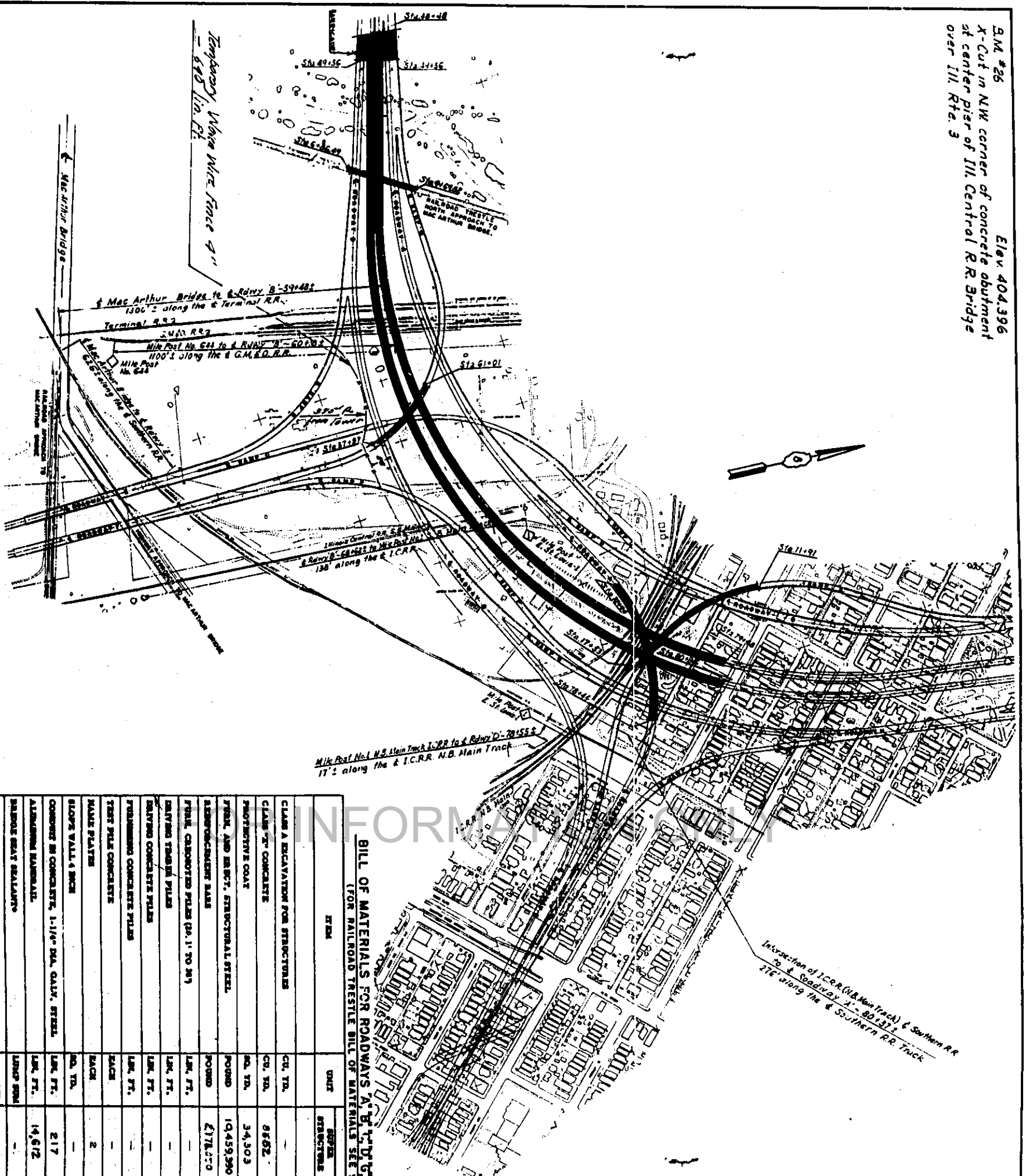
F-90-067-00

APPROVED: [Signature]
DISTRICT ENGINEER

DEPARTMENT OF COMMERCE
ENGINEERS
APPROVED: [Signature]
DISTRICT ENGINEER

REEL B-63

5M #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



KEY PLAN

BILL OF MATERIALS FOR ROADWAYS 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z'

ITEM	UNIT	SECTION 1-1-10	SECTION 1-1-11	TOTAL
CLASS A EXCAVATION FOR STRUCTURES	CU. YD.	-	10,047	10,047
CLASS 'C' CONCRETE	CU. YD.	8682	11,549	20,231
PROTECTIVE COAT	SQ. YD.	34,303	-	34,303
FRON. AND RECF. STRUCTURAL STEEL	POUNDS	10,459,290	-	10,459,290
REINFORCEMENT BARS	POUNDS	4,178,570	1,712,106	5,890,676
FRON. CARBONATED PILES (2 1/2" x 3 1/2")	LN. FT.	-	438	438
DRIVING TRUSS PILES	LN. FT.	-	438	438
DRIVING CONCRETE PILES	LN. FT.	-	107,824	107,824
FRAMING CONCRETE PILES	LN. FT.	-	107,824	107,824
TEST PILE CONCRETE	SQ. YD.	-	73	73
RAILS PLATES	SQ. YD.	2	-	2
SLOPE WALL, 4 INCH	LN. FT.	-	774	774
CONCRETE IN CONCRETE, 1-1/4" DIA. GALV. STEEL	LN. FT.	217	-	217
ALUMINUM BARRIAD	LN. FT.	14,612	-	14,612
REINFORCING BARRIAD	LN. FT.	-	1	1
PERMANENT BARRIAD	LN. FT.	-	30	30

CLASS A EXCAVATION FOR STRUCTURES INCLUDING EXCAVATION FOR SLOPE W.P.L. INCLUDING THE TOP SURFACE OF
 SLOPE SHALL BE PAINTED TO BE USED AT ABUTMENTS AND PIER AT EXPANSION JOINTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	02-31VB	ST. CLAIR	253	6
FD. ROAD DIV. NO. 4	ILLINOIS PROJECT			

COARSE AGGREGATE TO BE USED IN PAVEMENT SHALL BE ACCORDANCE WITH ARTICLE 51.19 OF THE STANDARD SPECIFICATIONS.
 SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" x 6" MESH, 14 VERTICAL RODS PER 100 SQ. FT.
 ALL REINFORCEMENT BARS SHALL BE LAPPED 30 DIAMETERS OR LESS OTHER WIRE SPOUT.

ALL STRUCTURAL STEEL SHALL CONFORM TO A. S. T. M. SPECIFICATION A-36.
 ALL FIELD CONNECTION BOLTED, HIGH STRENGTH STEEL BOLTS 7/8" OPEN HOLES 1 1/16" EXCEPT AS NOTED.
 ANCHOR BOLTS SHALL BE SET BEFORE SLOTTING DIMENSIONS OVER SUPPORT.
 ROADWAY EXPANSION JOINTS SHALL BE ARMORED IN THE SLOPE IN PROPER POSITION WITH THE ENDS IN PLACE AND SHALL BE LEFT ARMORED FOR SLOPE DIRECTION.
 SLOPE PLATES SHALL BE PLATE CUT AS PROVIDED IN ARTICLE 54.5 (1) OF THE STANDARD SPECIFICATIONS.

ALL SURFACE OF THE EXPANSION JOINT SHALL BE PROTECTED AFTER REPAIR SHALL BE GIVEN TWO COATS OF RED LEAD PAINT. THE CONTACT SURFACES SHALL BE GIVEN ONE COAT OF RED LEAD PAINT. ANCHOR STUDS SHALL NOT BE PAINTED.
 EXPANSION JOINTS ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL ESTIMATED WEIGHT IN 5,470 LBS.

EXCEPT AS OTHER WERE PROVIDED, ALL STRUCTURAL STEEL SHALL RECEIVE ONE COAT OF RED LEAD PAINT AND TWO COATS OF GREEN PAINT. SEE ARTICLE 54.1 TO 54.5 INCLUSIVE OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
 THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PRELIMINARY LOCATION AT EACH ABUTMENT AND EACH PIER AS INDICATED BY THE ENGINEER BEFORE THE REMOVAL OF PILES.
 CONCRETE PILES AT ABUTMENTS SHALL BE DRIVEN BY WELLS PILE COED THROUGH THE ENHANCEMENT IN ACCORDANCE WITH ARTICLE 64.9 (c) OF THE STANDARD SPECIFICATIONS.
 CRAYED GRASS, STRIPPEREASIS FLOOR SLABS AND END FLOOR SLABS SHALL BE COMPLETELY ARMORED IN THE SLOPE IN PROPER POSITION BEFORE BEING FIELD CONNECTIONS AND SHALL BE LEFT ARMORED FOR SLOPE DIRECTION.
 PERMANENT FOR US WILL NOT BE PERMITTED IN PAVING THE CONCRETE FLOOR.

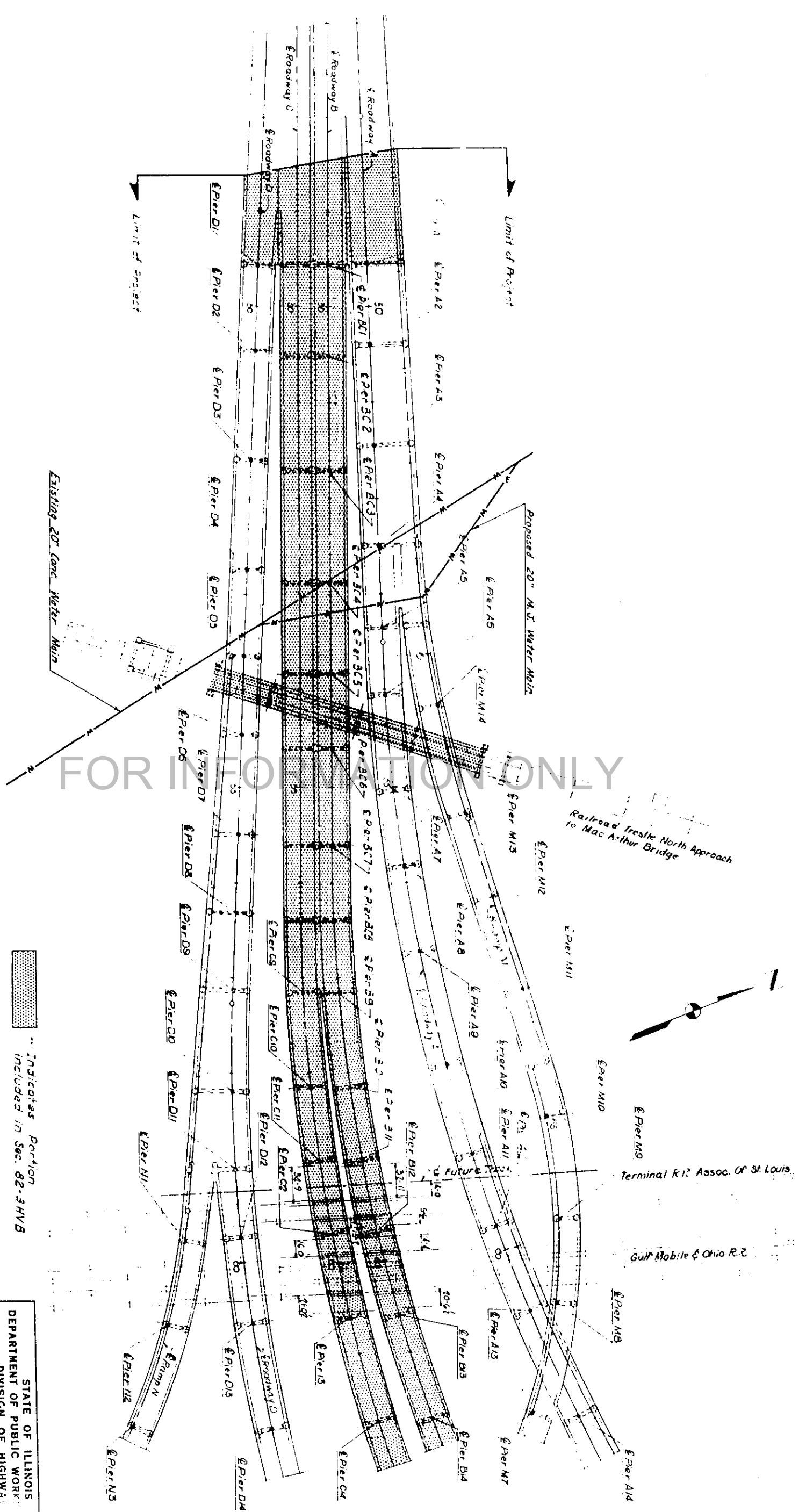
DESIGN STRESSES
 $f_c = 1400$ p.s.t. Super and Sub
 $f_s = 20,000$ p.s.t. Reinforcement
 $f_s = 20,000$ p.s.t. Struct. (A-36 Steel)
 $w_c = 75$ p.s.t. Footings
 $n = 10$
 LOADING HS20-44 @ A.H.

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. 97.70 ST. CLAIR CO. SECTION 02-31VB
 SHEET 6
 H. W. LOCKNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 70	82-3HV B	ST. CLAIR	789	77
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



FOR INFORMATION ONLY

--- Indicates Portion Included in Sec. 82-3HV B

DESIGNED BY RMR
 DRAWN BY JF
 CHECKED BY RMG
 APPROVED BY KA

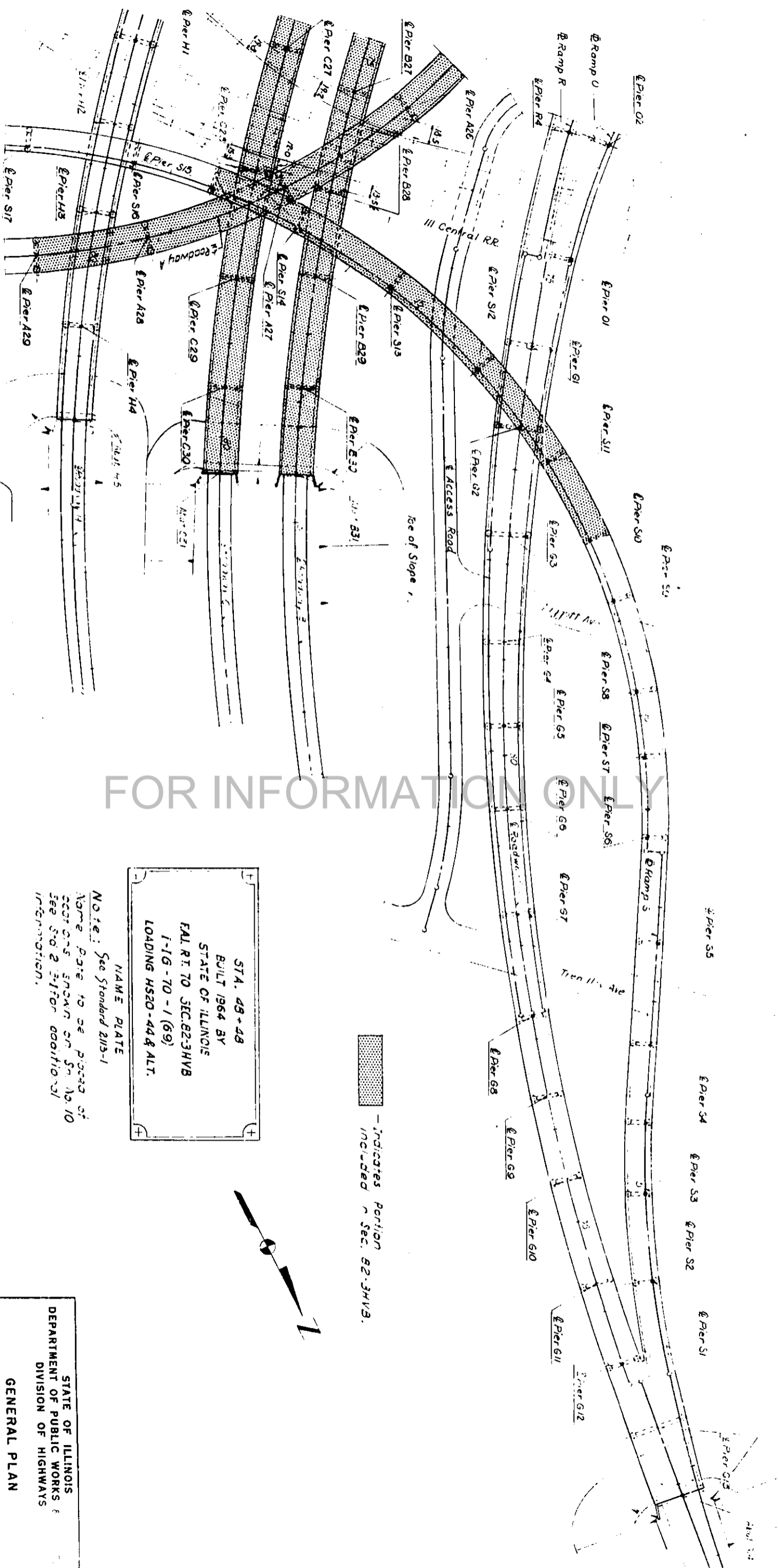
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

GENERAL PLAN
 POPLAR STREET BRIDGE APPROACHES

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HV B
 H. W. LOCKNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET 2 OF 2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HV8	ST. CLAIR	289	39
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			

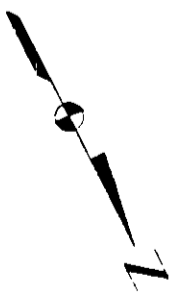


FOR INFORMATION ONLY

NAME PLATE
 Note: See Standard 2115-1
 Name plate to be placed at
 locations shown on S.D. No. 10
 See Std. 2-3 for additional
 information.

STA. 48+48
 BUILT 1964 BY
 STATE OF ILLINOIS
 F.A.I. RT. 70 SEC. 82-3HV8
 I-1G-70 - 1 (69)
 LOADING HS20-44 & ALT.

— indicates portion included in Sec. 82-3HV8.



DESIGNED BY: RME
 DRAWN BY: [Signature]
 CHECKED BY: RME
 APPROVED BY: EA

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

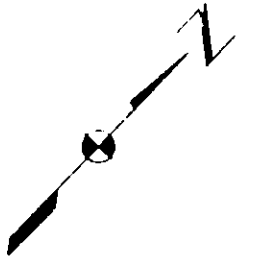
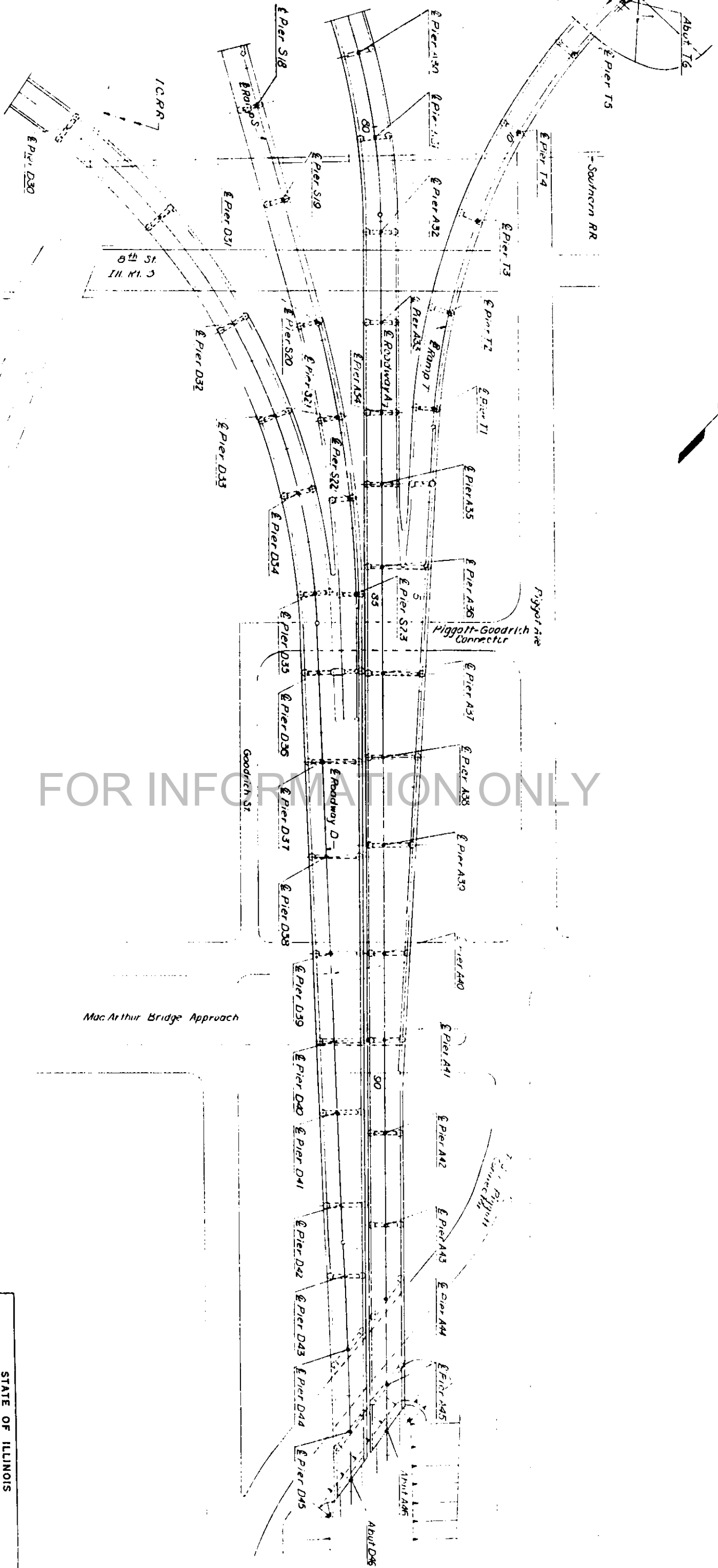
GENERAL PLAN
 POPLAR STREET BRIDGE APPROACHES

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HV8
 H. W. LOCKNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET NO. 39

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 70	82-3HV B	ST. CLAIR	789	40
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

FOR INFORMATION ONLY



DESIGNED BY *J. J. Q.*
 DRAWN BY *J. J. Q.*
 CHECKED BY *J. J. Q.*
 APPROVED BY *J. J. Q.*

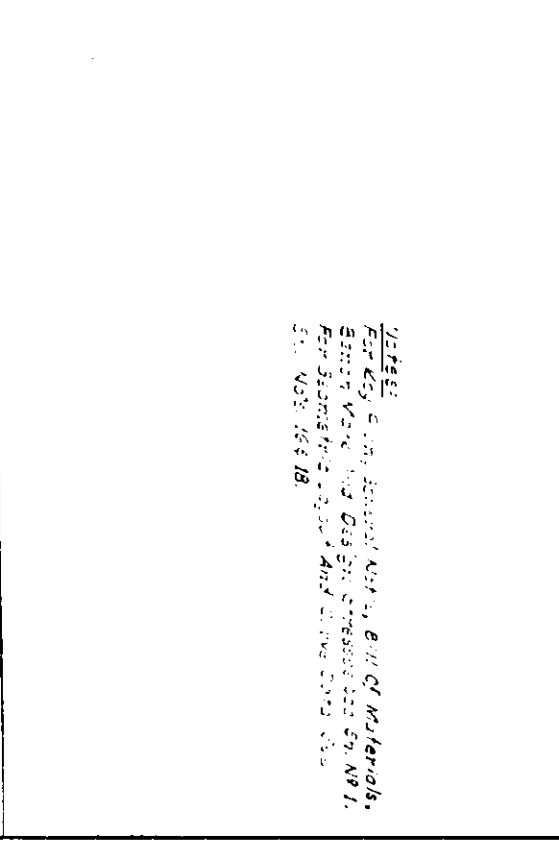
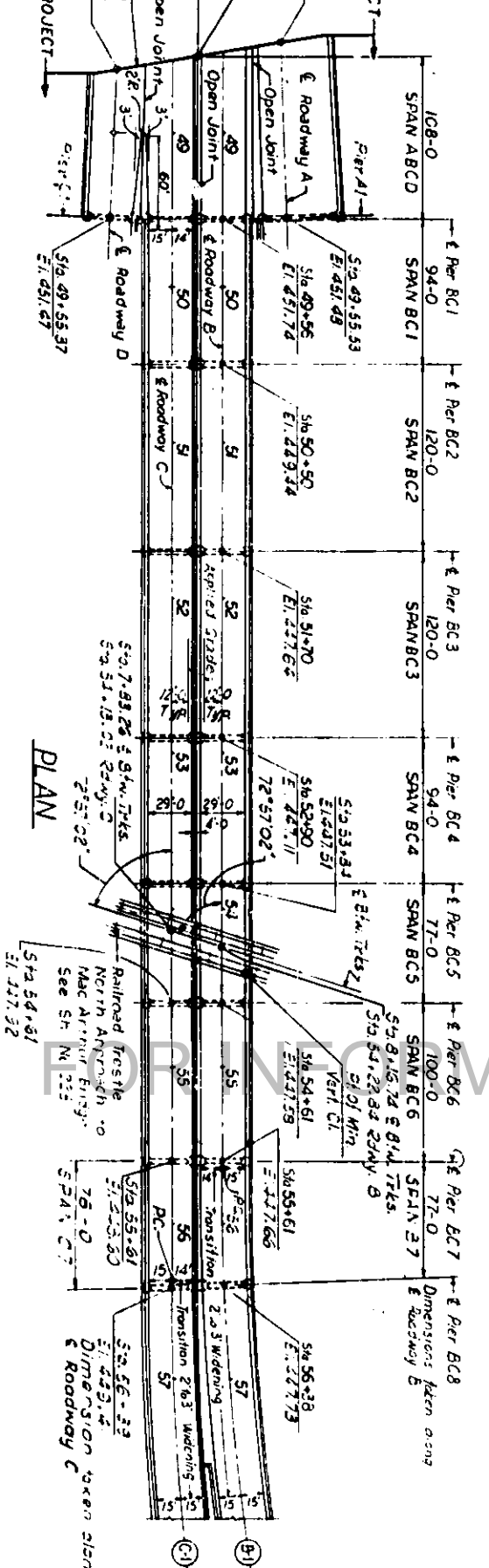
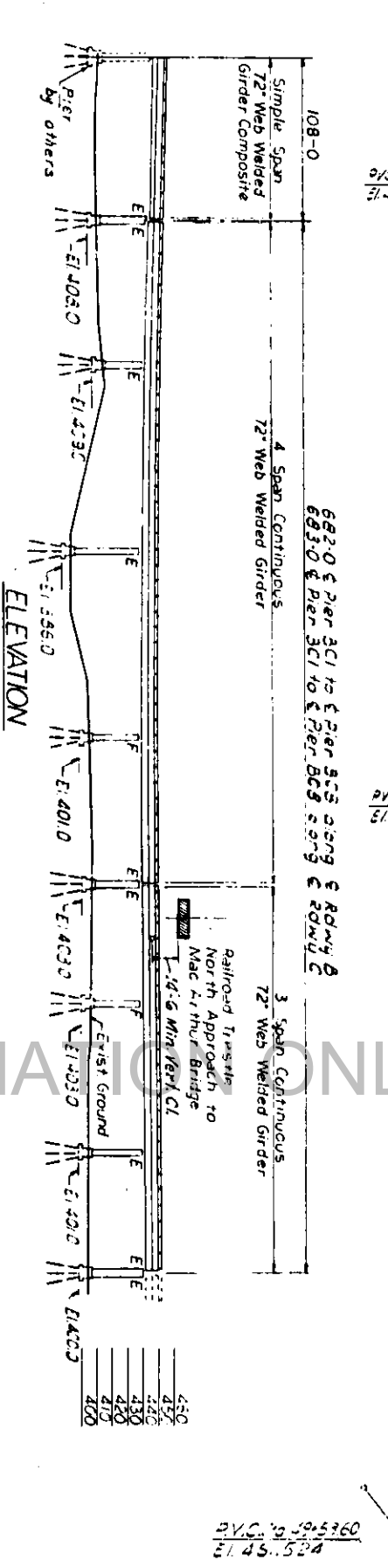
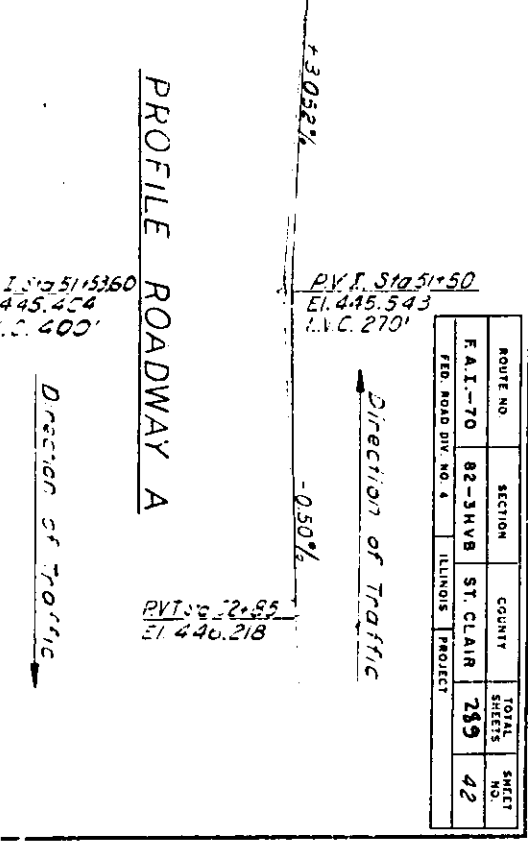
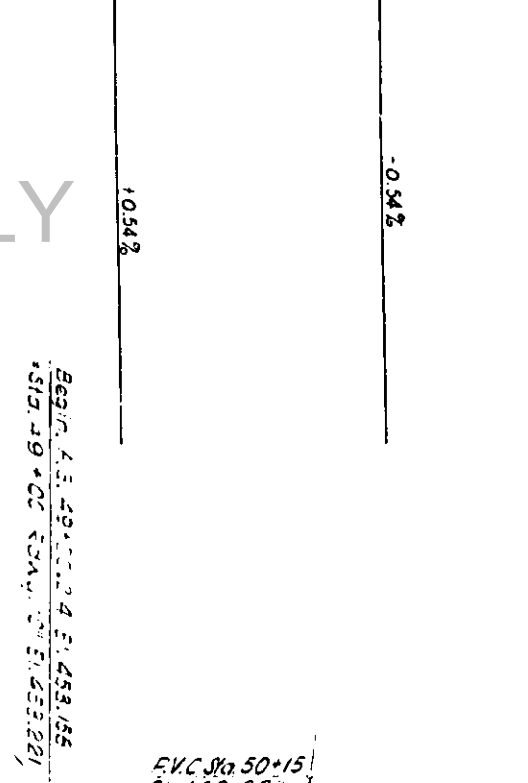
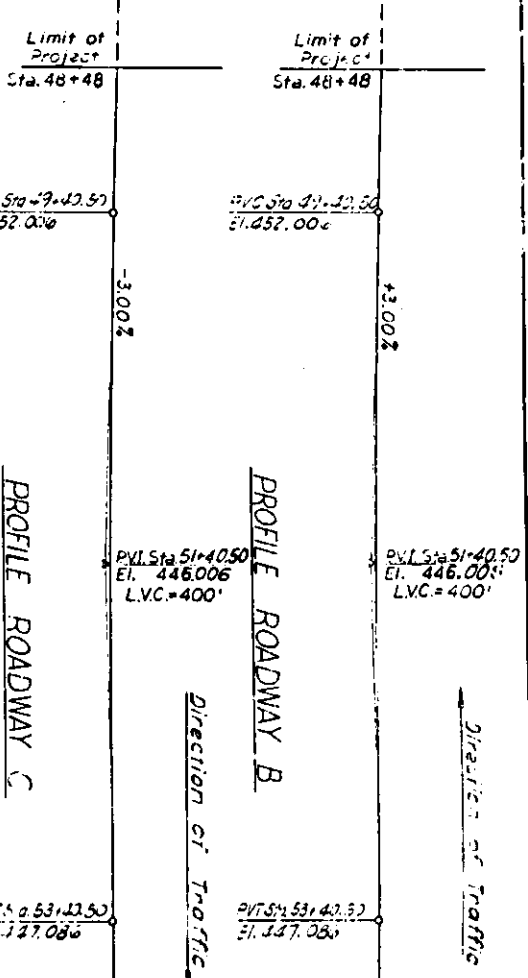
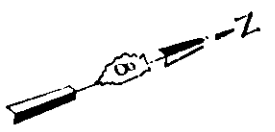
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS &
 DIVISION OF HIGHWAYS

GENERAL PLAN

POPLAR STREET BRIDGE APPROACHES

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HV B
 H. W. LOGGNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET 5 OF 5

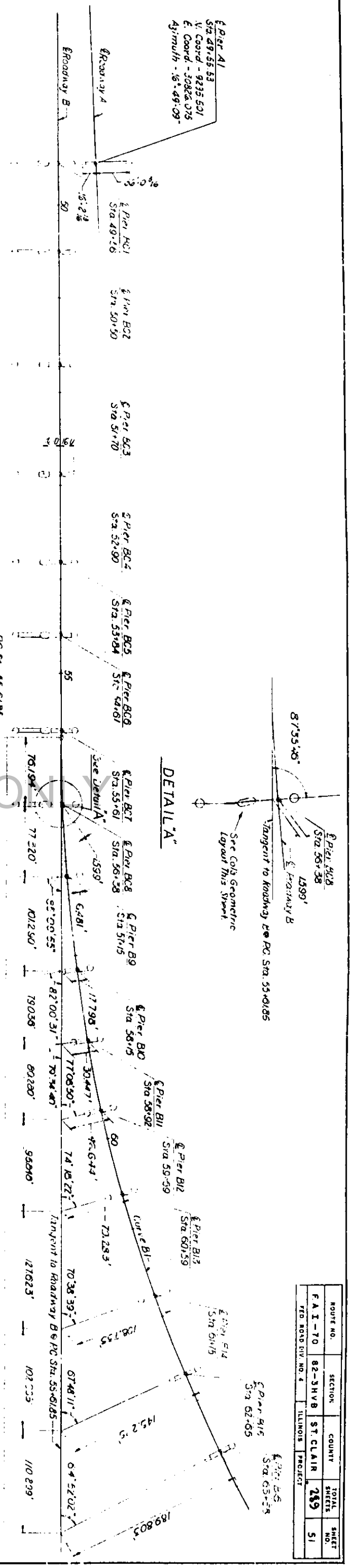


DESIGNED BY J.J.N.
 DRAWN BY D.C.F.
 CHECKED BY A.J.C.
 APPROVED BY K.A.

ROUTE NO.	SECTION	COUNT	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	259	42

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS &
 DIVISION OF HIGHWAYS
 PLAN AND ELEVATION
 SPAN ABCD, SPANS BCI THRU BCE, SPAN B7 & SPAN C7
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A", "B", "C" AND "D"
 F.A.I.R.T. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCKNER, INC.
 CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HWB	ST. CLAIR	289	51
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		

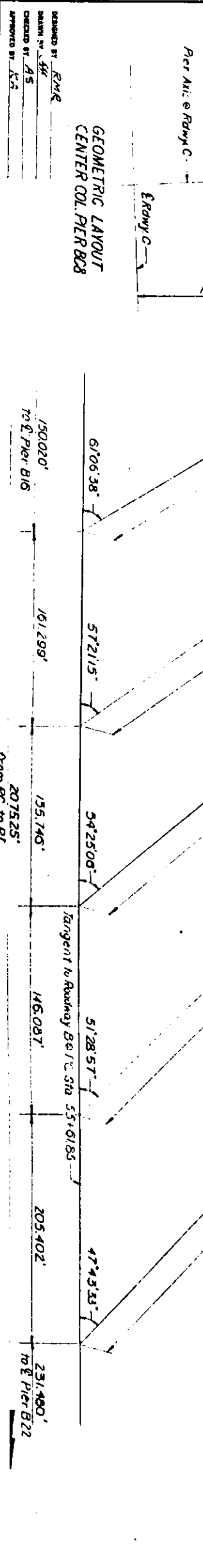


Curve B1
 PI = 76+31.10
 Δ = 37° 39' 18"
 D = 3' 07' 24"
 R = 12500'
 A = 309347'
 T = 2015.25
 E = 94197
 S = 8.001

Pier No	Station	N Coordinate	E Coordinate	Azimuth	Right Col Offset	Left Col Offset
B1	49+56	9256.143	30813.425	18° 47' 00"	16-0	16-0
B2	51+50	9225.570	30902.417	18° 47' 00"	16-0	16-0
B3	51+70	9182.237	31016.020	18° 47' 00"	16-0	16-0
B4	52+30	9140.590	31129.635	18° 47' 00"	16-0	16-0
B5	53+04	9118.331	31210.629	18° 47' 00"	16-0	16-0
B6	54+01	9093.537	31291.520	18° 47' 00"	16-0	16-0
B7	55+61	9064.339	31368.202	18° 47' 00"	16-0	16-0
B8	56+38	9038.005	31439.595	16° 22' 46"	*15-7 3/8	16-0
B9	57+15	9017.924	31533.908	13° 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	8963.895	31707.495	8° 21' 40"	16-0	16-0
B12	59+69	8974.117	31783.091	5° 55' 50"	16-0	16-0
B13	60+59	8967.041	31812.804	5° 05' 22"	16-0	16-0
B14	61+75	8964.494	31889.536	179° 25' 39"	16-0	16-0
B15	62+05	8967.624	32078.492	176° 35' 11"	16-0	16-0
B16	63+58	8975.537	32172.145	173° 39' 02"	16-0	16-0
B17	64+77	8992.564	32289.649	169° 33' 38"	16-0	16-0
B18	65+56	9017.269	32406.284	165° 08' 15"	16-0	16-0
B19	66+00	9041.854	32453.965	163° 12' 06"	16-0	16-0
B20	67+02	9071.000	32564.265	160° 15' 57"	16-0	16-0
B21	69+01	9114.824	32654.823	156° 30' 53"	16-0	16-0

*NOTE: Dimension is given to Girder B2 Bearing of Column; see Detail in this sheet.

GEOMETRIC LAYOUT
 CENTER COL PIERS BCS



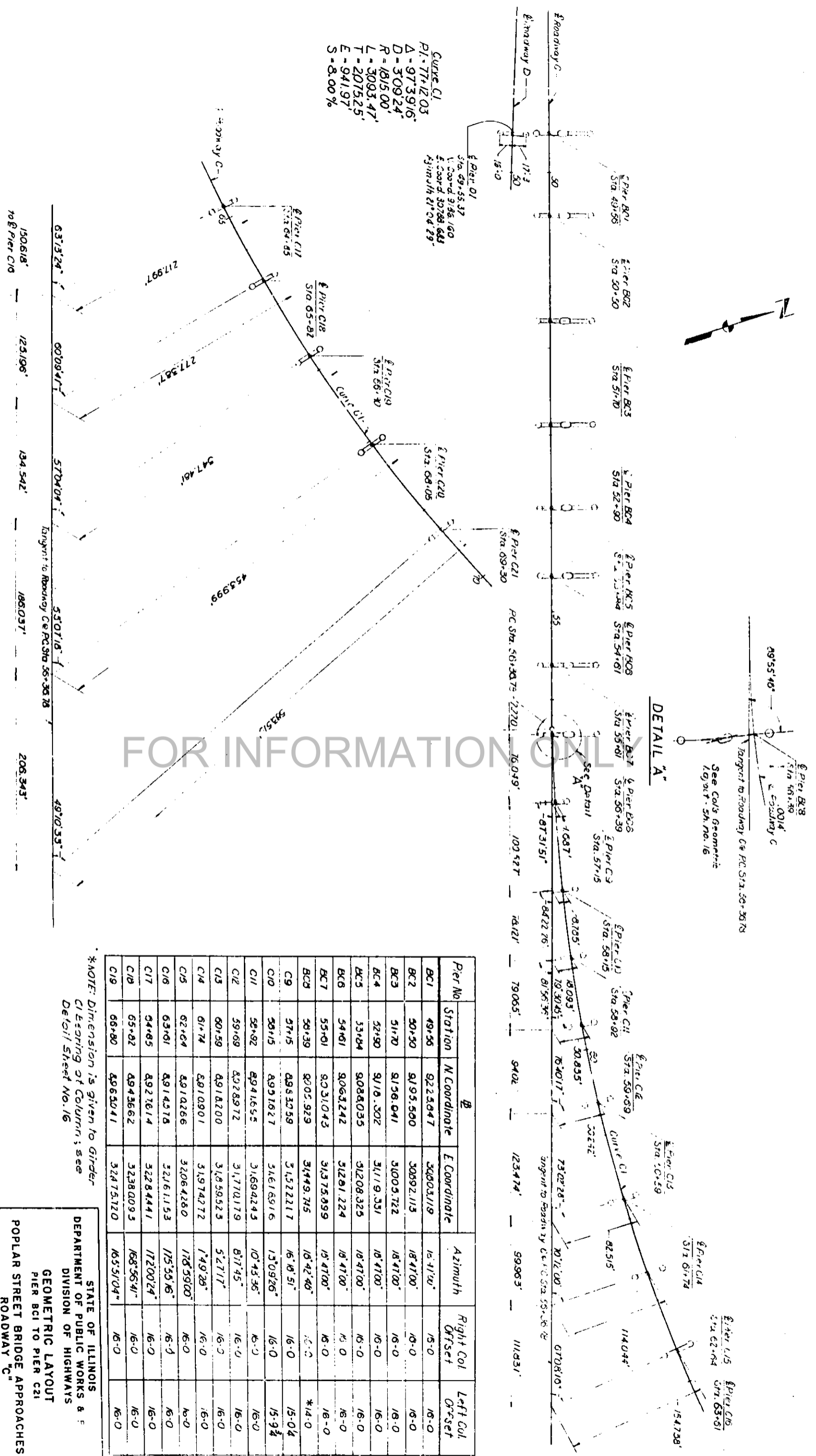
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS &
 DIVISION OF HIGHWAYS
 GEOMETRIC LAYOUT
 PIER BCI TO PIER B21
 POPLAR STREET BRIDGE APPROACHES
 ROADWAY "B"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HWB
 H. W. LOCKNER, INC. ENGINEERS
 CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-34VB	ST. CLAIR	289	53
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



DETAIL "A"



Curve C1
 P.I. - 77+12.03
 A - 973.916'
 D - 309.24'
 R - 1815.00'
 L - 3093.47'
 T - 2075.25'
 E - 941.97'
 S - 8.00%

Pier No	Station	N. Coordinate	E. Coordinate	Azimuth	Right Col Offset	Left Col Offset
BC1	49+56	922.5647	36803.119	16°11'00"	16-0	16-0
BC2	50+30	9195.500	36892.113	18°41'00"	16-0	16-0
BC3	51+70	9156.041	31005.722	18°41'00"	16-0	16-0
BC4	52+90	9119.302	31119.331	16°41'00"	16-0	16-0
BC5	53+84	9088.035	31208.325	16°47'00"	16-0	16-0
BC6	54+61	9063.242	31281.224	16°47'00"	16-0	16-0
BC7	55+01	9031.043	31375.899	16°47'00"	16-0	16-0
BC8	56+39	9005.929	31449.745	16°42'40"	16-0	16-0
BC9	57+15	8983.359	31522.217	16°18'51"	16-0	15-0 1/2
C10	58+15	8951.627	31618.916	13°09'26"	16-0	15-9 1/2
C11	58+92	8941.655	31694.243	10°43'36"	16-0	16-0
C12	59+69	8928.972	31770.179	8°17'45"	16-0	16-0
C13	60+59	8918.200	31859.523	5°27'17"	16-0	16-0
C14	61+74	8910.901	31974.272	1°49'28"	16-0	16-0
C15	62+64	8910.266	32064.260	17°59'00"	16-0	16-0
C16	63+61	8914.578	32161.153	17°55'16"	16-0	16-0
C17	64+85	8927.614	32284.441	17°00'24"	16-0	16-0
C18	65+82	8943.662	32380.093	168°56'41"	16-0	16-0
C19	66+90	8965.041	32475.120	165°31'04"	16-0	16-0

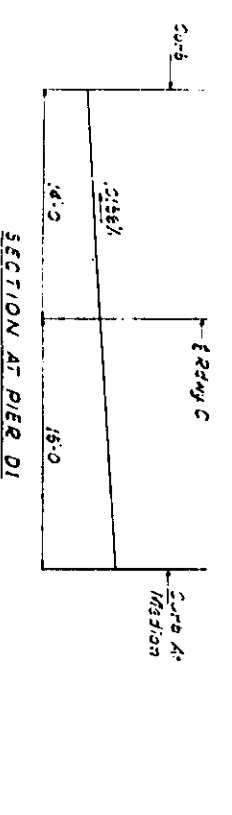
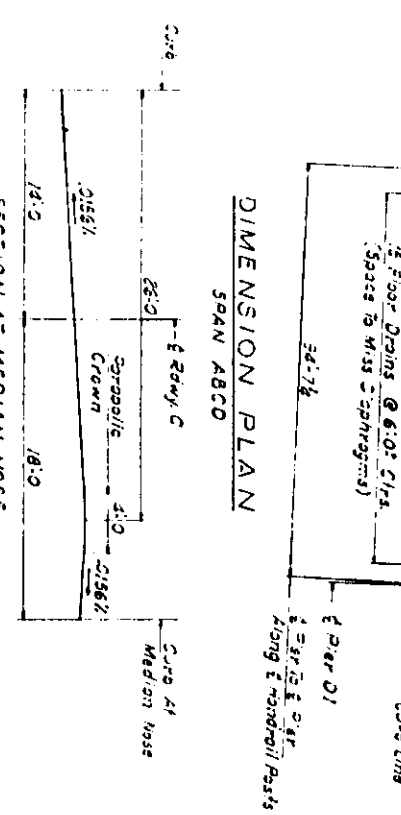
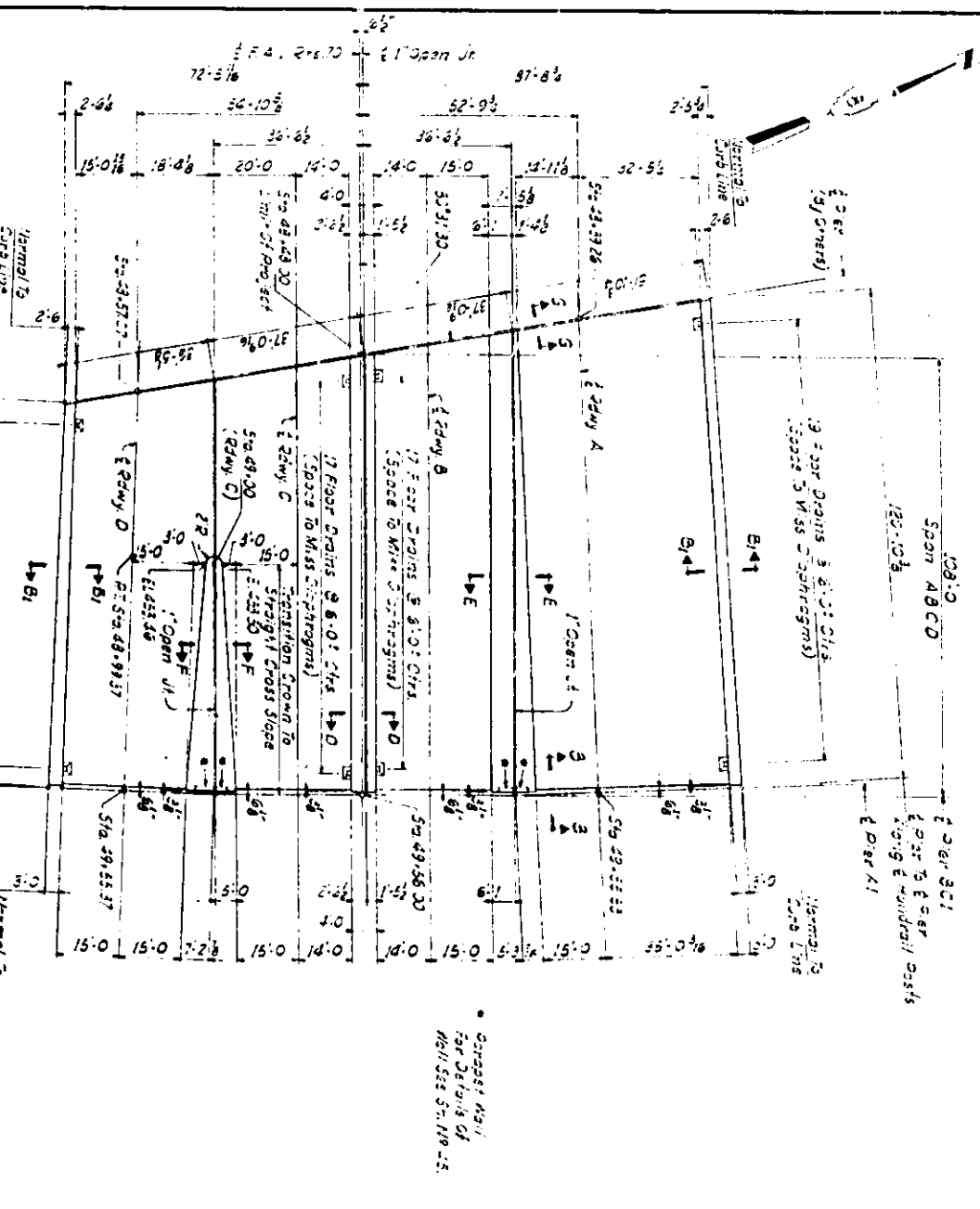
*NOTE: Dimension is given to Gilder
 Clearing of Columns; see
 Detail Sheet No. 16

DESIGNED BY: RJK
 DRAWN BY: JBT
 CHECKED BY: AS
 APPROVED BY: KA

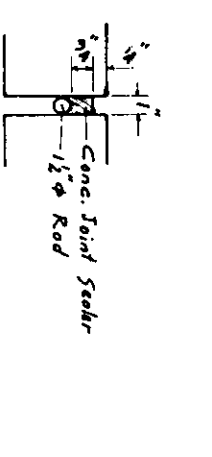
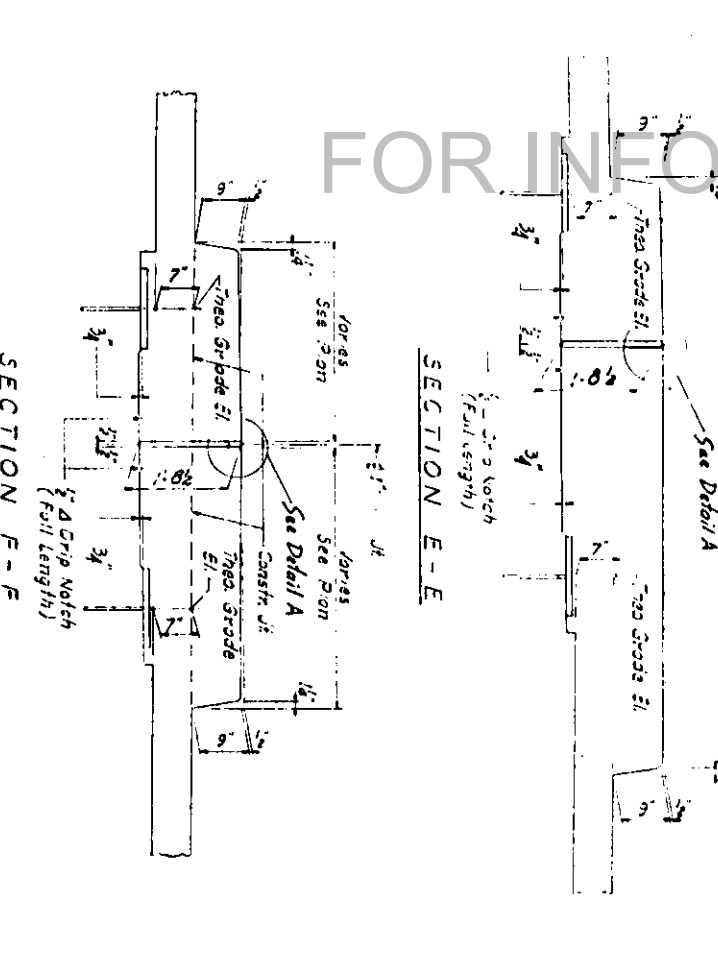
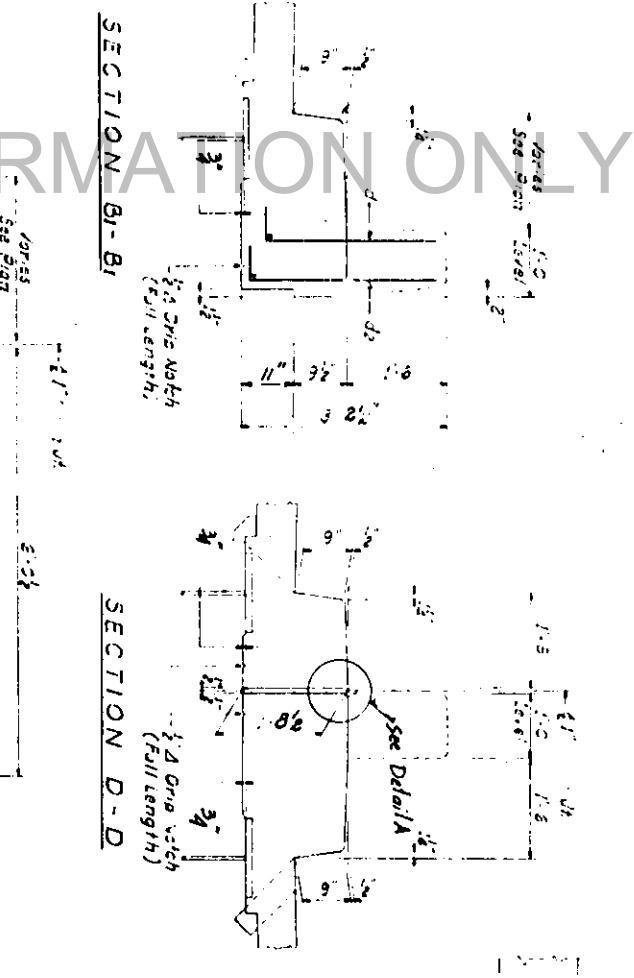
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & E
 DIVISION OF HIGHWAYS
 GEOMETRIC LAYOUT
 PIER BCI TO PIER C21
 POPLAR STREET BRIDGE APPROACHES
 ROADWAY "C"

F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-34VB
 H. W. ENGINEERS INC.
 CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA I-70	82-3NWB	ST. CLAIR	289	59
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			



RDWY. C CROSS SLOPE TRANSITION



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.

NO. 951
 For Notes on Joints See S. 17-5-1.
 For Reinforcement of Slab See S. 17-5-2.
 For Formwork Reinforcement See S. 17-5-3.
 For Section B-B See S. 17-5-4.
 For Detail A See S. 17-5-5.
 For Detail B See S. 17-5-6.

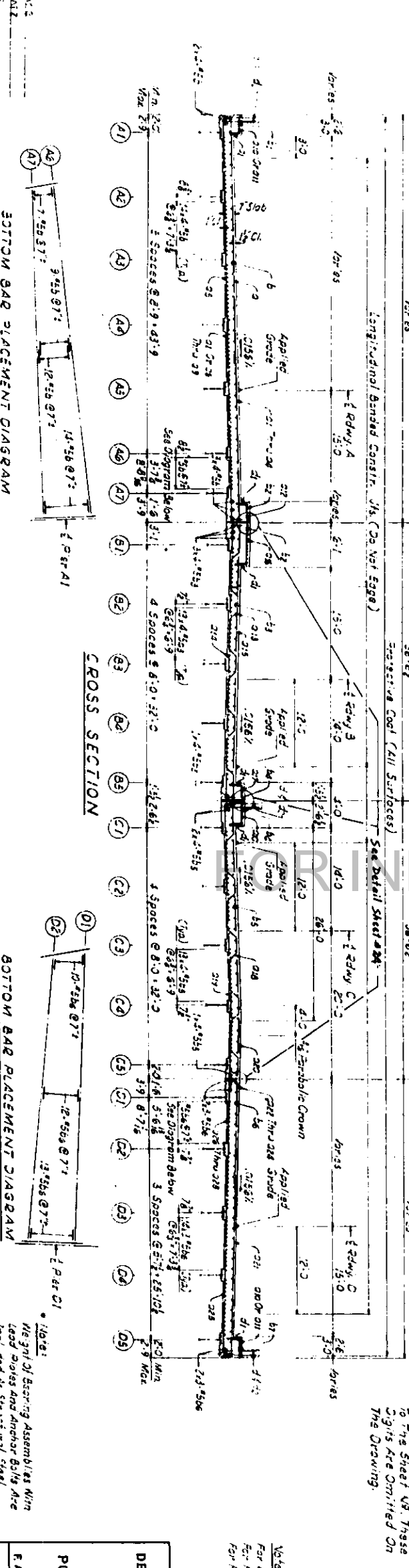
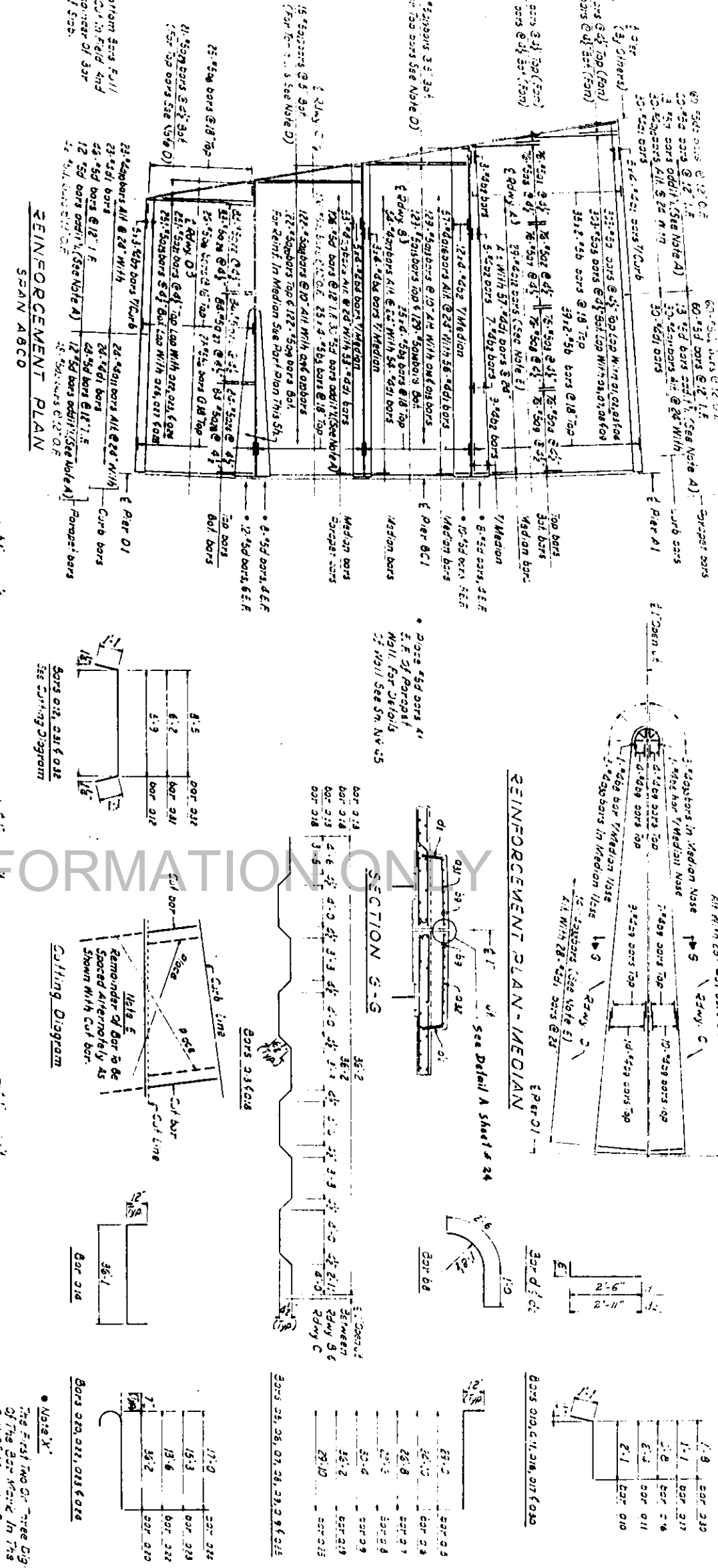
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS
 SLAB
 SPAN ABCD—DIMENSIONS
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A" "B" "C" AND "D"
 FA I-70 ST. CLAIR CO. SECTION 82-3NWB
 H. W. LOCKNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET
 240-241

DESIGNED BY: K.S.R.
 DRAWN BY: J.A.V.
 CHECKED BY: A.S.
 APPROVED BY: A.A.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-34VB	ST. CLAIR	789	
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			

BILL OF MATERIAL

NO.	SIZE	UNIT	TOTAL
312	1-1	bar 312	32.0
313	1-1	bar 313	32.0
314	1-1	bar 314	32.0
315	1-1	bar 315	32.0
316	1-1	bar 316	32.0
317	1-1	bar 317	32.0
318	1-1	bar 318	32.0
319	1-1	bar 319	32.0
320	1-1	bar 320	32.0
321	1-1	bar 321	32.0
322	1-1	bar 322	32.0
323	1-1	bar 323	32.0
324	1-1	bar 324	32.0
325	1-1	bar 325	32.0
326	1-1	bar 326	32.0
327	1-1	bar 327	32.0
328	1-1	bar 328	32.0
329	1-1	bar 329	32.0
330	1-1	bar 330	32.0
331	1-1	bar 331	32.0
332	1-1	bar 332	32.0
333	1-1	bar 333	32.0
334	1-1	bar 334	32.0
335	1-1	bar 335	32.0
336	1-1	bar 336	32.0
337	1-1	bar 337	32.0
338	1-1	bar 338	32.0
339	1-1	bar 339	32.0
340	1-1	bar 340	32.0
341	1-1	bar 341	32.0
342	1-1	bar 342	32.0
343	1-1	bar 343	32.0
344	1-1	bar 344	32.0
345	1-1	bar 345	32.0
346	1-1	bar 346	32.0
347	1-1	bar 347	32.0
348	1-1	bar 348	32.0
349	1-1	bar 349	32.0
350	1-1	bar 350	32.0
351	1-1	bar 351	32.0
352	1-1	bar 352	32.0
353	1-1	bar 353	32.0
354	1-1	bar 354	32.0
355	1-1	bar 355	32.0
356	1-1	bar 356	32.0
357	1-1	bar 357	32.0
358	1-1	bar 358	32.0
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369	1-1	bar 369	32.0
370	1-1	bar 370	32.0
371	1-1	bar 371	32.0
372	1-1	bar 372	32.0
373	1-1	bar 373	32.0
374	1-1	bar 374	32.0
375	1-1	bar 375	32.0
376	1-1	bar 376	32.0
377	1-1	bar 377	32.0
378	1-1	bar 378	32.0
379	1-1	bar 379	32.0
380	1-1	bar 380	32.0
381	1-1	bar 381	32.0
382	1-1	bar 382	32.0
383	1-1	bar 383	32.0
384	1-1	bar 384	32.0
385	1-1	bar 385	32.0
386	1-1	bar 386	32.0
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391	1-1	bar 391	32.0
392	1-1	bar 392	32.0
393	1-1	bar 393	32.0
394	1-1	bar 394	32.0
395	1-1	bar 395	32.0
396	1-1	bar 396	32.0
397	1-1	bar 397	32.0
398	1-1	bar 398	32.0
399	1-1	bar 399	32.0
400	1-1	bar 400	32.0



ITEM	UNIT	TOTAL
Class 'X' Concrete	Cu Yds	517.2
Reinforcement Bars	Lbs	142,110
Structural Steel	Sq Yds	210.8
Structural Steel	Lbs	318,640

Notes:
 For Dimensions See Dimension Pairs Span ABCD Sh. N^o 24
 For Notes on 1/2" Dia. Detail See Sh. N^o 43
 For Barlap Reinf. & Joint Spacing See Sh. N^o 45

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

SLAB
 SPAN ABCD - REINFORCEMENTS
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A" "B" "C" AND "D"

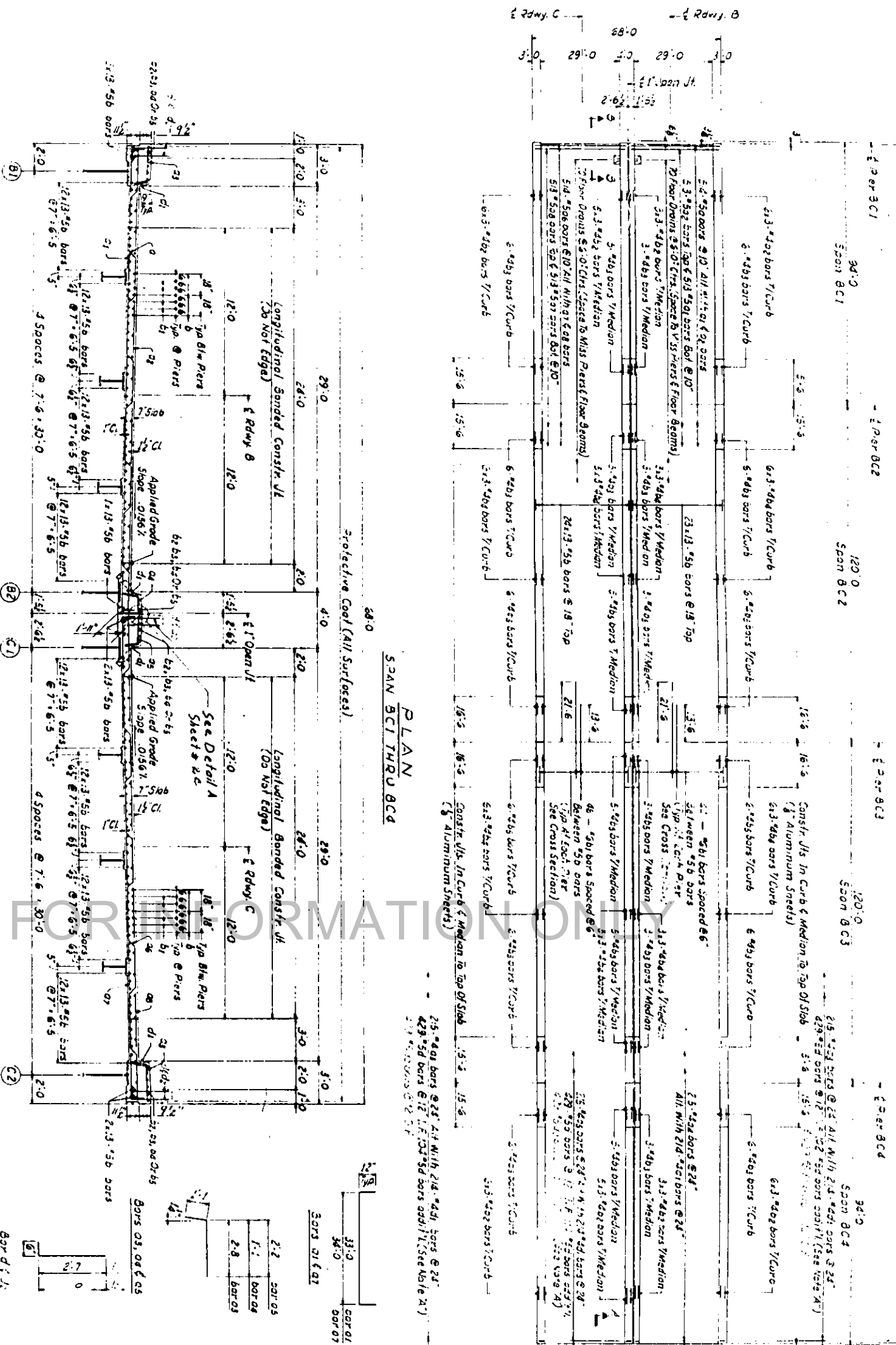
F.A.I.R.T.O. ST. CLAIR CO. SECTION 82-34VB
 H. W. LOCKNER, INC. ENGINEERS
 CHICAGO, ILLINOIS

DESIGNED BY: C.A.S.
 DRAWN BY: G.M.L.Z.
 CHECKED BY: J.E.
 APPROVED BY: J.E.

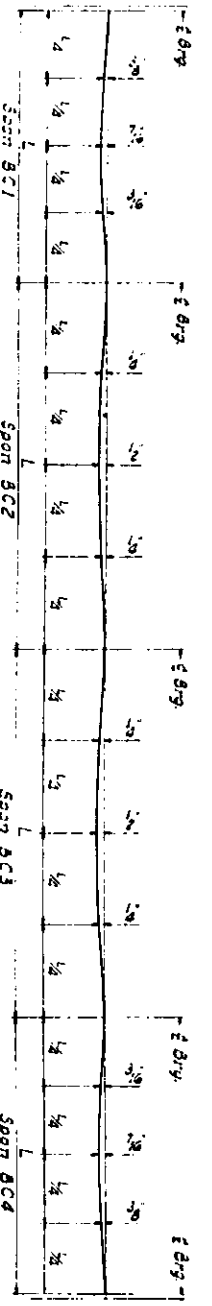
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-3HWB	ST. CLAIR	289	61
I.R.D. ROAD DIV. NO. 4 ILLINOIS PROJECT				

BILL OF MATERIAL

BAR NO.	SIZE	LENGTH	SHAPE	UNIT	TOTAL
BAR 1	3/4"	31.0	Rect	265	2167
BAR 2	3/4"	31.0	Rect	265	2167
BAR 3	3/4"	31.0	Rect	265	2167
BAR 4	3/4"	31.0	Rect	265	2167
BAR 5	3/4"	31.0	Rect	265	2167
BAR 6	3/4"	31.0	Rect	265	2167
BAR 7	3/4"	31.0	Rect	265	2167
BAR 8	3/4"	31.0	Rect	265	2167
BAR 9	3/4"	31.0	Rect	265	2167
BAR 10	3/4"	31.0	Rect	265	2167
BAR 11	3/4"	31.0	Rect	265	2167
BAR 12	3/4"	31.0	Rect	265	2167
BAR 13	3/4"	31.0	Rect	265	2167
BAR 14	3/4"	31.0	Rect	265	2167
BAR 15	3/4"	31.0	Rect	265	2167
BAR 16	3/4"	31.0	Rect	265	2167
BAR 17	3/4"	31.0	Rect	265	2167
BAR 18	3/4"	31.0	Rect	265	2167
BAR 19	3/4"	31.0	Rect	265	2167
BAR 20	3/4"	31.0	Rect	265	2167
BAR 21	3/4"	31.0	Rect	265	2167
BAR 22	3/4"	31.0	Rect	265	2167
BAR 23	3/4"	31.0	Rect	265	2167
BAR 24	3/4"	31.0	Rect	265	2167
BAR 25	3/4"	31.0	Rect	265	2167
BAR 26	3/4"	31.0	Rect	265	2167
BAR 27	3/4"	31.0	Rect	265	2167
BAR 28	3/4"	31.0	Rect	265	2167
BAR 29	3/4"	31.0	Rect	265	2167
BAR 30	3/4"	31.0	Rect	265	2167
BAR 31	3/4"	31.0	Rect	265	2167
BAR 32	3/4"	31.0	Rect	265	2167
BAR 33	3/4"	31.0	Rect	265	2167
BAR 34	3/4"	31.0	Rect	265	2167
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BAR 36	3/4"	31.0	Rect	265	2167
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BAR 39	3/4"	31.0	Rect	265	2167
BAR 40	3/4"	31.0	Rect	265	2167
BAR 41	3/4"	31.0	Rect	265	2167
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BAR 43	3/4"	31.0	Rect	265	2167
BAR 44	3/4"	31.0	Rect	265	2167
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BAR 46	3/4"	31.0	Rect	265	2167
BAR 47	3/4"	31.0	Rect	265	2167
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BAR 49	3/4"	31.0	Rect	265	2167
BAR 50	3/4"	31.0	Rect	265	2167
BAR 51	3/4"	31.0	Rect	265	2167
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BAR 53	3/4"	31.0	Rect	265	2167
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BAR 67	3/4"	31.0	Rect	265	2167
BAR 68	3/4"	31.0	Rect	265	2167
BAR 69	3/4"	31.0	Rect	265	2167
BAR 70	3/4"	31.0	Rect	265	2167
BAR 71	3/4"	31.0	Rect	265	2167
BAR 72	3/4"	31.0	Rect	265	2167
BAR 73	3/4"	31.0	Rect	265	2167
BAR 74	3/4"	31.0	Rect	265	2167
BAR 75	3/4"	31.0	Rect	265	2167
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BAR 94	3/4"	31.0	Rect	265	2167
BAR 95	3/4"	31.0	Rect	265	2167
BAR 96	3/4"	31.0	Rect	265	2167
BAR 97	3/4"	31.0	Rect	265	2167
BAR 98	3/4"	31.0	Rect	265	2167
BAR 99	3/4"	31.0	Rect	265	2167
BAR 100	3/4"	31.0	Rect	265	2167



CROSS SECTION



- Notes:
- Weight of Bearing Assemblies with Lead Poles and Anchor Bolts are included as Structural Steel.
- Est. Wt. 24116 Lbs.

NOTES:

For Notes and Misc. Details See Sp. N9 34, For Parapet Conf. & Joint Spacing See Sp. N9 46, For Light Standard Anchorage Detail See Sp. N9 45, For Sections 1-A & B See Sp. A6 131 & 132

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SLAB
SPANS BCI THRU BCD
POPULAR STREET BRIDGE APPROACHES
ROADWAYS "B" AND "C"

FAI RT. TO ST. CLAIR CO. SECTION 82-3HWB
H. W. LOCKNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DESIGNED BY: R.V. 2
DRAWN BY: GRATZ
CHECKED BY: S.S.
APPROVED BY: K. 4

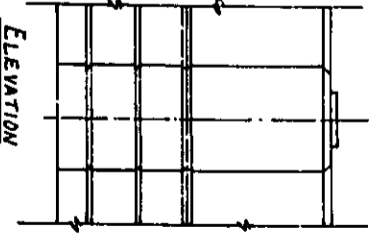
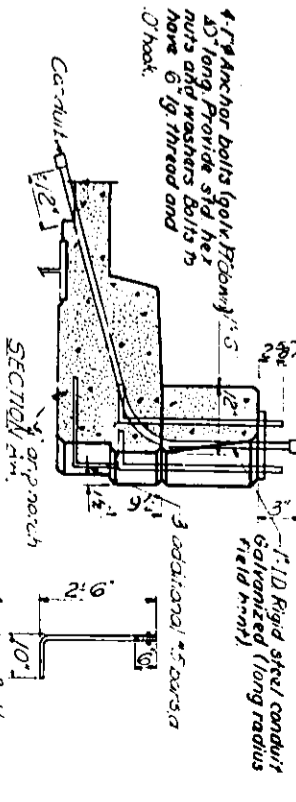
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS
F. A. I. - 70	82-3HV B	ST. CLAIR	799
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT	82

BILL OF MATERIAL

BAR NO.	NO.	SIZE	LENGTH	SHAPE
451	28	#5	16-0	—
451	4	#5	16-3	—
451	10	#5	16-6	—
451	8	#5	2-9	—
451	4	#5	5-9	—
451	24	#5	14-11	—
451	4	#5	4-11	—
451	10	#5	2-8	—
TOTAL				1780
CLASS. X-CONCRETE REINFORCING BARS				1780
ALUMINUM HANDRAIL				337

* See Note X Sh. No. 25

Thread and cap end of conduit when ready for wiring replace with bushing.

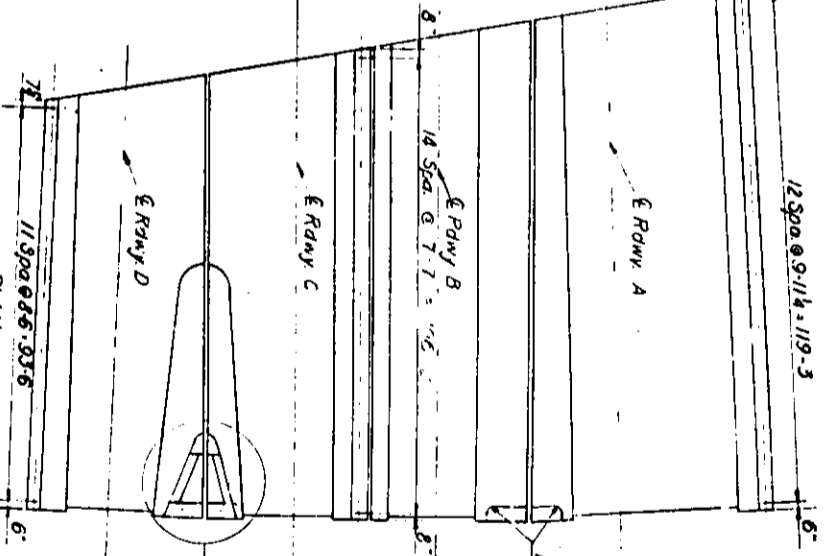
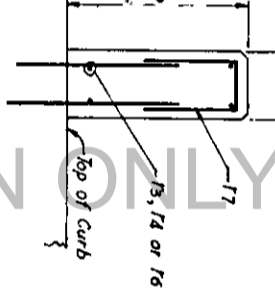


For Handrail and Parapet See Sh. No. 63.

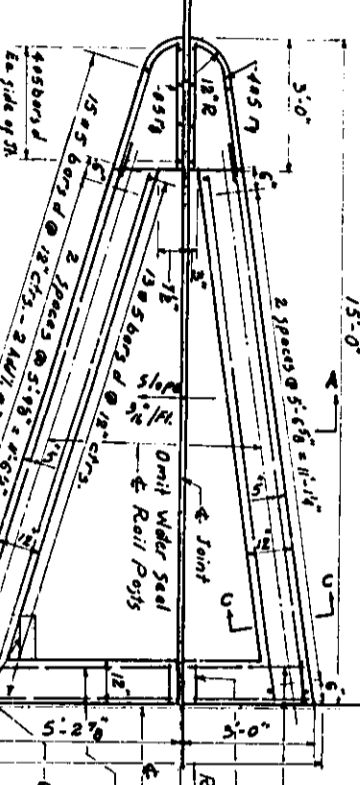
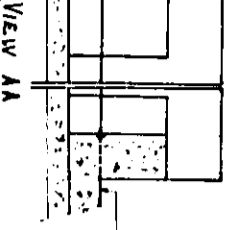
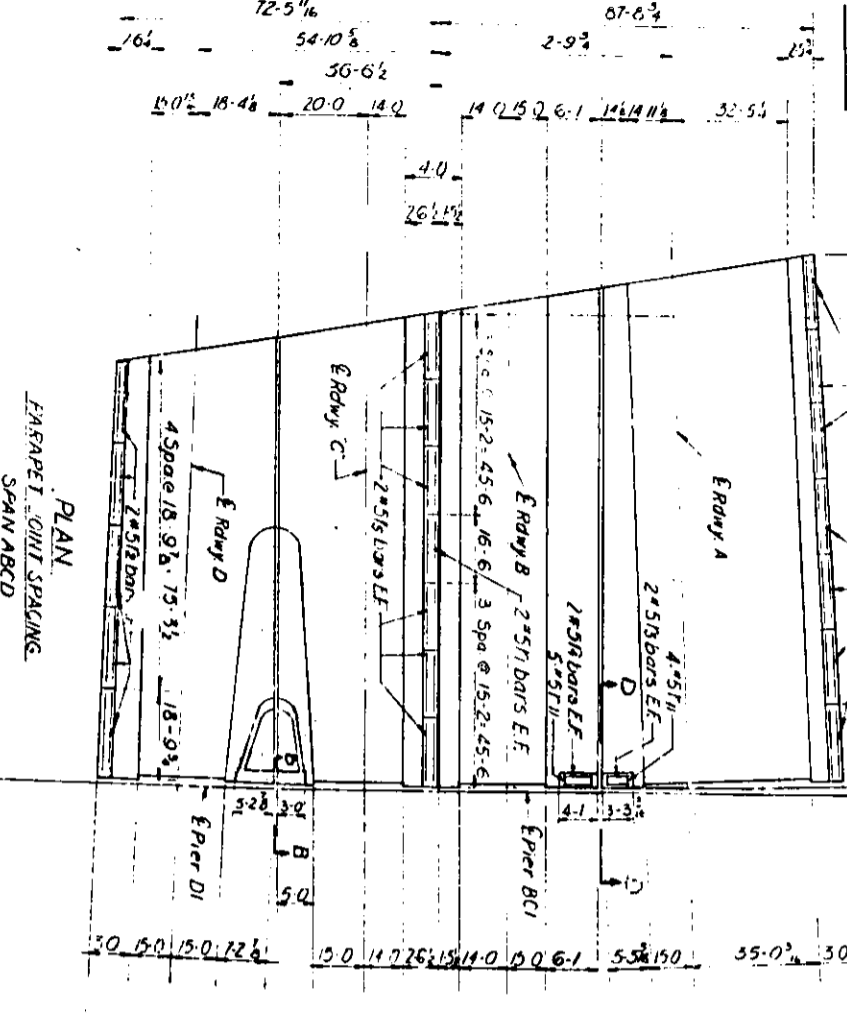
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
PARAPET AND HANDRAIL
SPAN ABCD

POPULAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B", "C" AND "D"

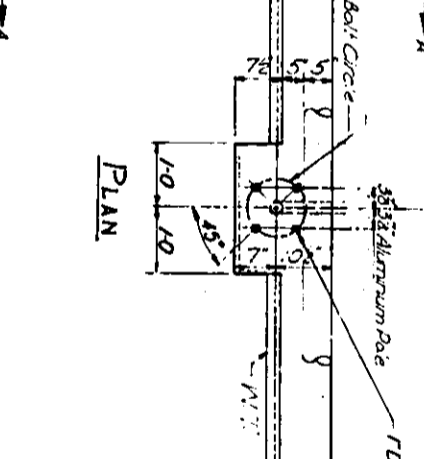
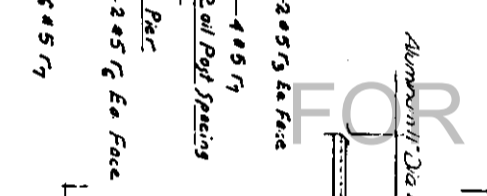
F. A. I. 70 ST. CLAIR CO. SECTION 82-3HV B
M. W. LOGGNER, INC.
ENGINEERS
CHICAGO, ILLINOIS



PLAN
PARAPET JOINT SPACING
SPAN ABCD



DETAIL LIGHT STANDARD ANCHORAGE ON STRUCTURE



DESIGNED BY: K.H.R.
DRAWN BY: J.M.
CHECKED BY: A.S.
APPROVED BY: K.A.

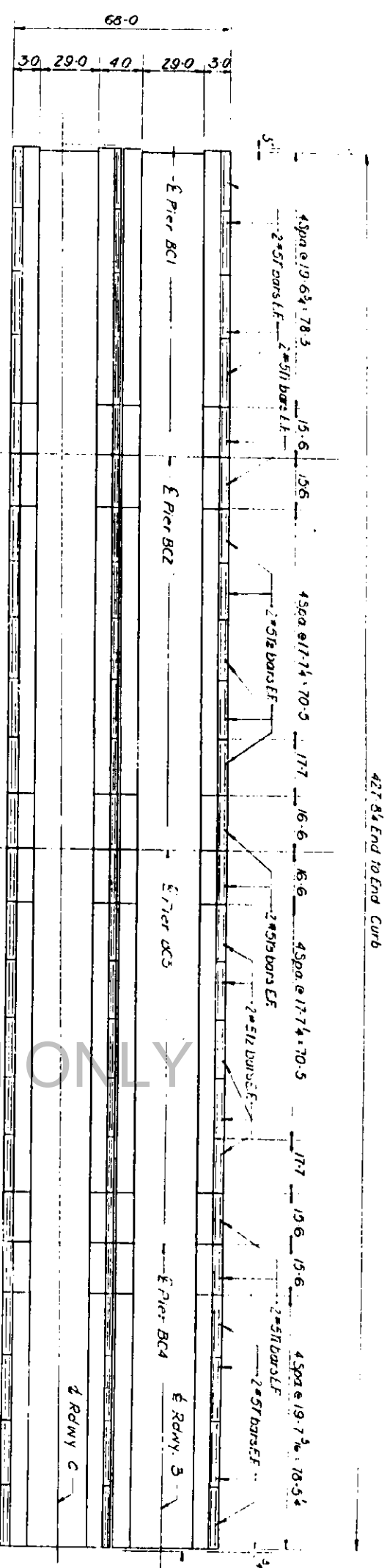
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I.-70	82-31VB	ST. CLAIR	289	81
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			

BILL OF MATERIAL

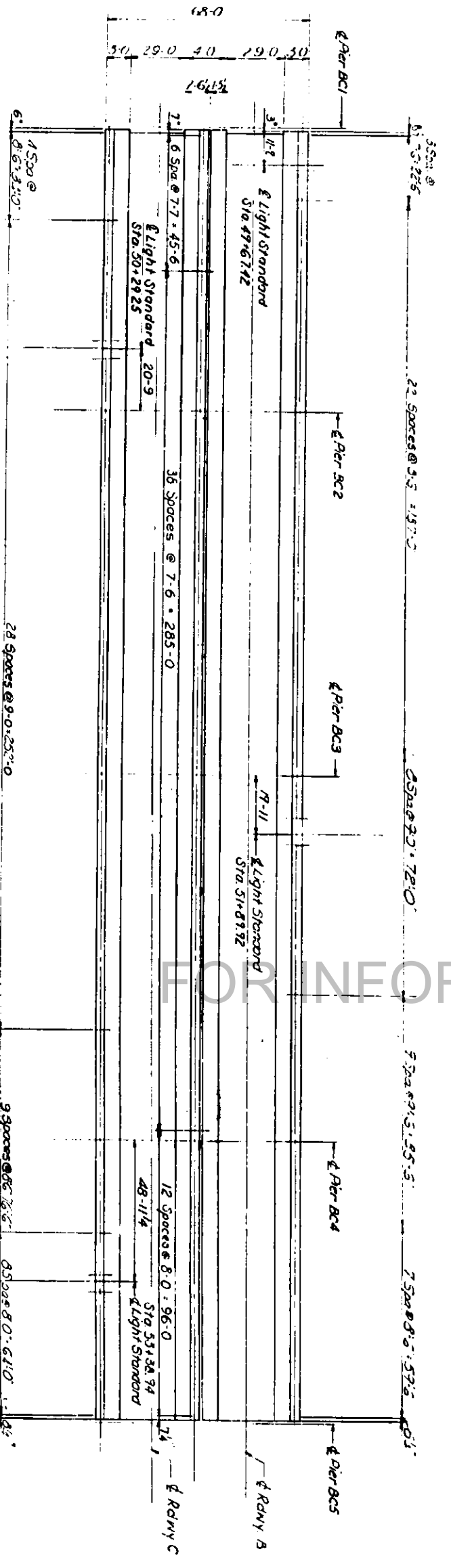
BAR NO.	SIZE	LENGTH	SHAPE	ITEM	UNIT	TOTAL
46F	#6	15.0		CLASS. Y. CONCRETE	Cu. Yds	675
46G	#8	15.7		REINFORCING BARS	LINEAL	5250
46H	#2	17.3		ALUMINUM HANDRAIL	LINEAL	7284
46I	#2	16.2				

* See Note Y Sh. No. 25

NOTE: Bars shown on plan for North parapet are typical for all parapets.



**PLAN
PARAPET JOINT SPACING
SPANS BCI THRU BC4**



Notes:
For Detail of Light Std. see Sh. No. 45.
For Handrail and Parapet Joint Details see Sh. No. 63.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & HIGHWAYS
DIVISION OF HIGHWAYS
PARAPET AND HANDRAIL
SPANS BCI THRU BC4
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "B" AND "C"
FAIRF. 70 ST. CLAIR CO. SECTION 82-31VB
M. W. LOCKNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DESIGNED BY: G.M.C.
DRAWN BY: J.H.
CHECKED BY: A.S.
APPROVED BY: K.H.

FOR INFORMATION ONLY

ROADWAY 'A'

BEAMS	536.6	+110	+100	+90	+80	+70	+60	+50	+40	+30	+20	+10	L1-A
C/RD. A1	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.044	.000
G100 A2-44	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.044	.000
G100 A3	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.044	.000
G100 A5	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.044	.000
G100 A7	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.044	.000

ROADWAY 'B' & 'C'

BEAMS	+110	+100	+90	+80	+70	+60	+50	+40	+30	+20	+10	L1-B
C/RD. B1	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.000
C/RD. B2	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.000
C/RD. B3	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.000
C/RD. B5	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.000
C/RD. C5	.000	.004	.008	.012	.016	.020	.024	.028	.032	.036	.040	.000

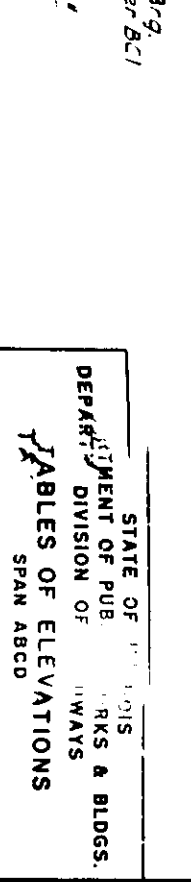
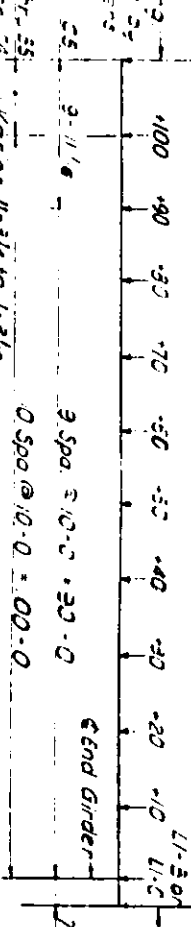
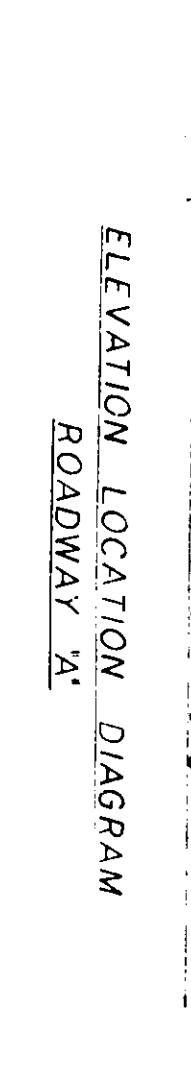
ROADWAY 'D'

BEAMS	+90	+80	+70	+60	+50	+40	+30	+20	+10	L1-D
C/RD. D1	.000	.004	.008	.012	.016	.020	.024	.028	.032	.000
C/RD. D2	.000	.004	.008	.012	.016	.020	.024	.028	.032	.000
C/RD. D3	.000	.004	.008	.012	.016	.020	.024	.028	.032	.000
C/RD. D5	.000	.004	.008	.012	.016	.020	.024	.028	.032	.000

STATION	536.6	+110	+100	+90	+80	+70	+60	+50	+40	+30	+20	+10	L1-A
A1	494.821	494.825	494.829	494.833	494.837	494.841	494.845	494.849	494.853	494.857	494.861	494.865	494.869
A2	494.772	494.776	494.780	494.784	494.788	494.792	494.796	494.800	494.804	494.808	494.812	494.816	494.820
A3	494.823	494.827	494.831	494.835	494.839	494.843	494.847	494.851	494.855	494.859	494.863	494.867	494.871
A4	494.874	494.878	494.882	494.886	494.890	494.894	494.898	494.902	494.906	494.910	494.914	494.918	494.922
A5	495.024	495.028	495.032	495.036	495.040	495.044	495.048	495.052	495.056	495.060	495.064	495.068	495.072
A6	495.125	495.129	495.133	495.137	495.141	495.145	495.149	495.153	495.157	495.161	495.165	495.169	495.173
A7	495.118	495.122	495.126	495.130	495.134	495.138	495.142	495.146	495.150	495.154	495.158	495.162	495.166

STATION	+110	+100	+90	+80	+70	+60	+50	+40	+30	+20	+10	L1-B
B1	495.388	495.392	495.396	495.400	495.404	495.408	495.412	495.416	495.420	495.424	495.428	495.432
B2	495.223	495.227	495.231	495.235	495.239	495.243	495.247	495.251	495.255	495.259	495.263	495.267
B3	495.009	495.013	495.017	495.021	495.025	495.029	495.033	495.037	495.041	495.045	495.049	495.053
B4	494.894	494.898	494.902	494.906	494.910	494.914	494.918	494.922	494.926	494.930	494.934	494.938
B5	494.729	494.733	494.737	494.741	494.745	494.749	494.753	494.757	494.761	494.765	494.769	494.773
C1	494.709	494.713	494.717	494.721	494.725	494.729	494.733	494.737	494.741	494.745	494.749	494.753
C2	494.794	494.798	494.802	494.806	494.810	494.814	494.818	494.822	494.826	494.830	494.834	494.838
C3	494.878	494.882	494.886	494.890	494.894	494.898	494.902	494.906	494.910	494.914	494.918	494.922
C4	494.963	494.967	494.971	494.975	494.979	494.983	494.987	494.991	494.995	494.999	495.003	495.007
C5	494.861	494.865	494.869	494.873	494.877	494.881	494.885	494.889	494.893	494.897	494.901	494.905

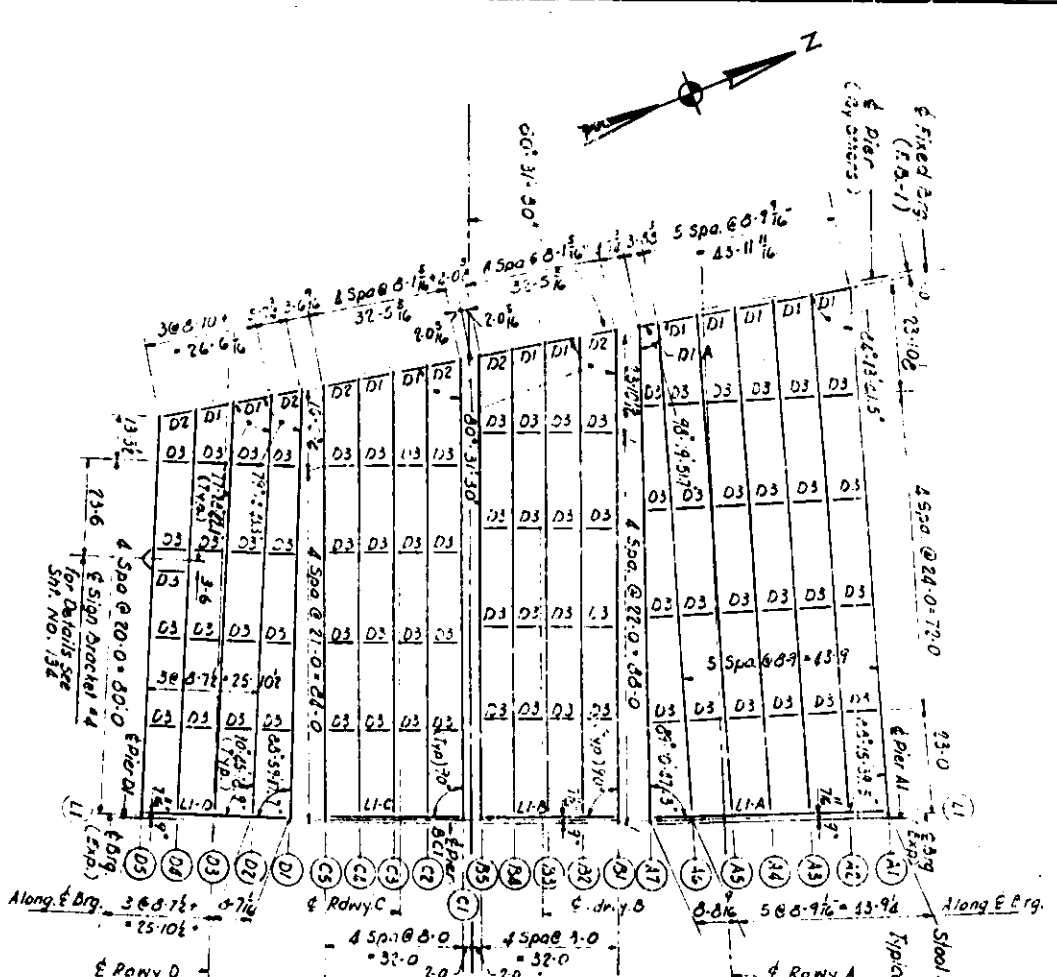
STATION	+90	+80	+70	+60	+50	+40	+30	+20	+10	L1-D
D1	494.788	494.792	494.796	494.800	494.804	494.808	494.812	494.816	494.820	494.824
D2	494.674	494.678	494.682	494.686	494.690	494.694	494.698	494.702	494.706	494.710
D3	494.594	494.598	494.602	494.606	494.610	494.614	494.618	494.622	494.626	494.630
D5	494.315	494.319	494.323	494.327	494.331	494.335	494.339	494.343	494.347	494.351
E1	494.728	494.732	494.736	494.740	494.744	494.748	494.752	494.756	494.760	494.764
E2	494.674	494.678	494.682	494.686	494.690	494.694	494.698	494.702	494.706	494.710
E3	494.610	494.614	494.618	494.622	494.626	494.630	494.634	494.638	494.642	494.646
E4	494.546	494.550	494.554	494.558	494.562	494.566	494.570	494.574	494.578	494.582
E5	494.482	494.486	494.490	494.494	494.498	494.502	494.506	494.510	494.514	494.518



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
 AR STREET BRIDGE APPROACHES
 POPULAR ROADWAYS 'A', 'B', 'C' AND 'D'

ST. CLAIR CO. SECTION 82-3WB
 H. W. LOCKER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET 64 OF 24

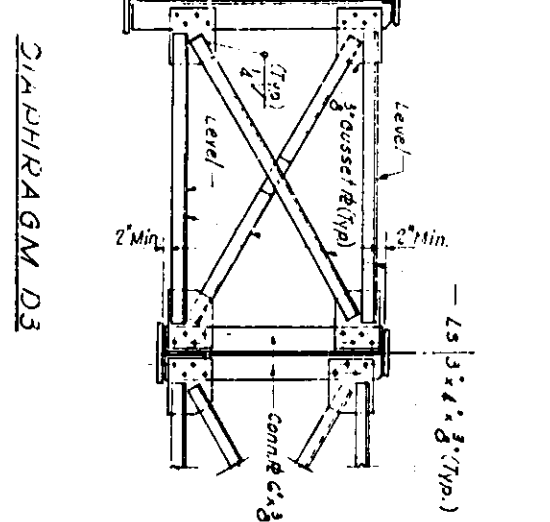
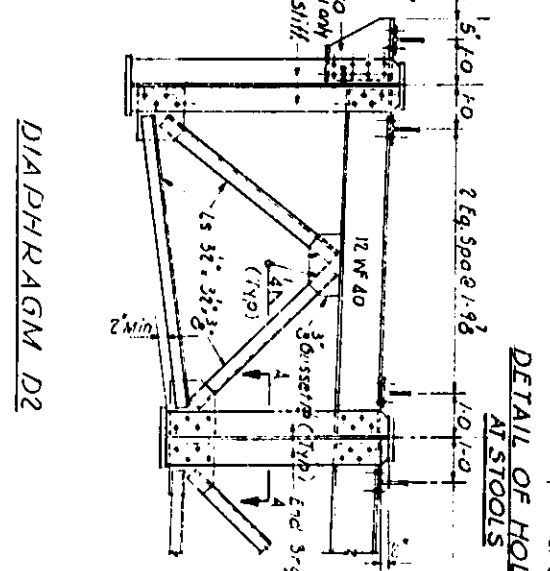
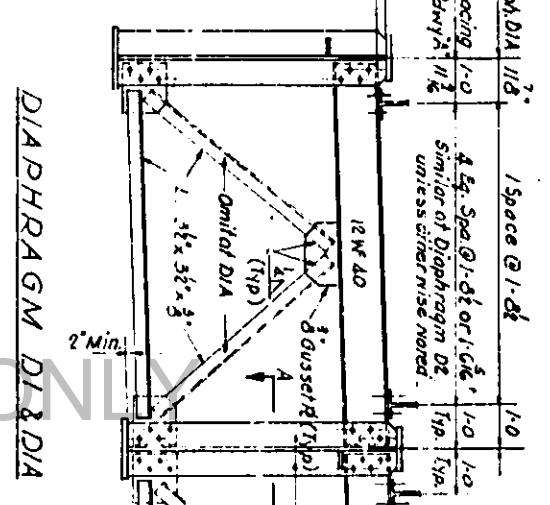


FRAMING PLAN SPAN ABCD

ELEVATION TOP OF BEAM WEB FOR FABRICATION (DEFLECTION NOT INCLUDED)

Span Marks	A1	A2	A3	A4	A5	A6	A7	D1	D2	D3	D4	D5	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5
At Pier A/D1 & D2	450.11	450.24	450.34	450.52	450.65	450.79	450.92	451.21	451.08	450.96	450.83	450.71	450.71	450.83	450.96	451.08	451.21	450.95	450.81	450.64	450.52	450.41
At Pier B/D3 & D4	453.79	453.89	453.91	454.09	454.19	454.21	454.14	454.56	454.39	454.23	454.06	453.90	453.86	453.96	454.06	454.15	454.03	453.96	453.84	453.66	453.48	453.30

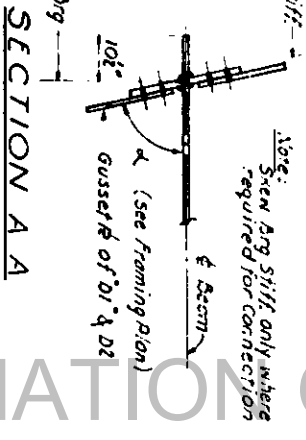
Note: Elevations are given at ± of 3ygs. see Typical Framing Detail Sht. Nos. 85 & 86



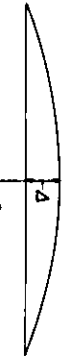
DETAIL OF HOLES AT STOOLS

5/8" Ga. 2 1/2" dia. for 3/4" bolts
4-8" for 3/4" bolts
4-2" for adjustment
of stools

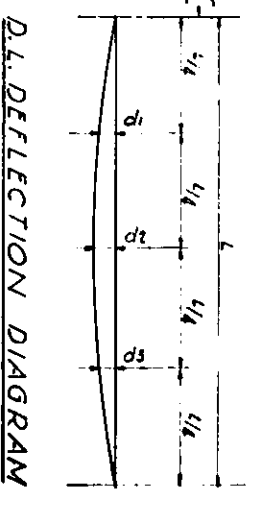
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-34VB	ST. CLAIR	259	119
REG. ROAD DIV. NO. 4	ILLINOIS PROJECT			



SECTION A-A



CAMBER DIAGRAM
Camber Only those Beams that are noted in Table A.



D.L. DEFLECTION DIAGRAM
WL. of Concrete only

D.L. DEFLECTION TABLE A

Beam No.	d1(m)	d2(m)	d3(m)	Δ	CAMBER
A1	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
A2	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
A3	1 1/4	1 1/8	1 1/8	2 1/2	2 1/2
A4	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
A5	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
A6	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
A7	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
D1	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
D2	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
D3	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
D4	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
D5	1 1/4	2 3/4	1 1/8	2 3/8	2 3/8
C1	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
C2	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
C3	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
C4	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
C5	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
D1 thru D5	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
Girder L1-A	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
Girder L1-B	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
Girder L1-C	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8
Girder L1-D	1 1/4	1 1/2	1 1/8	2 3/8	2 3/8

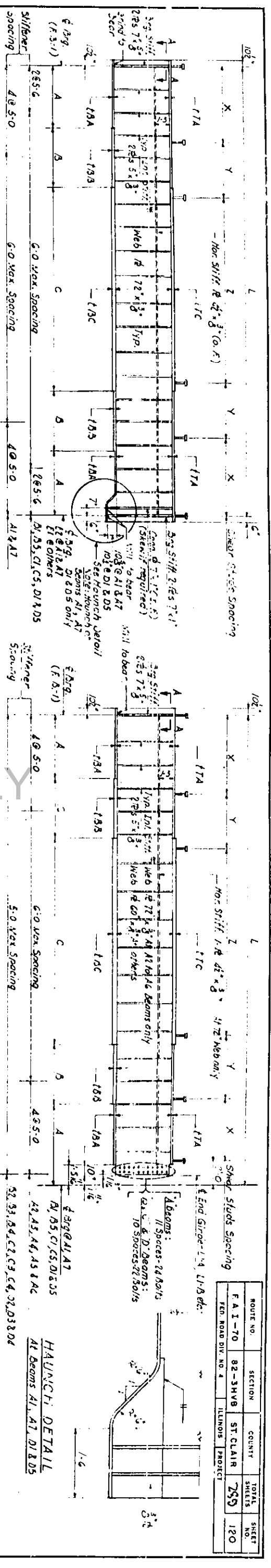
Note:
For Details of Beams & Girders see Shts. 10, 85 & 86
For Table of Weights see Sht. No. 85
For Details of Fixed Brgs. see Sht. No. 85
For Details of Exp. Brgs. see Sht. No. 129

DESIGNED BY: RMH
 DRAWN BY: AS
 CHECKED BY: JAF/RMH
 APPROVED BY: KA

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS
 FRAMING PLAN AND DETAILS
 SPAN ABCD
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A", "B", "C" AND "D"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-34VB
 H. W. LOGGNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET 84 OF 241



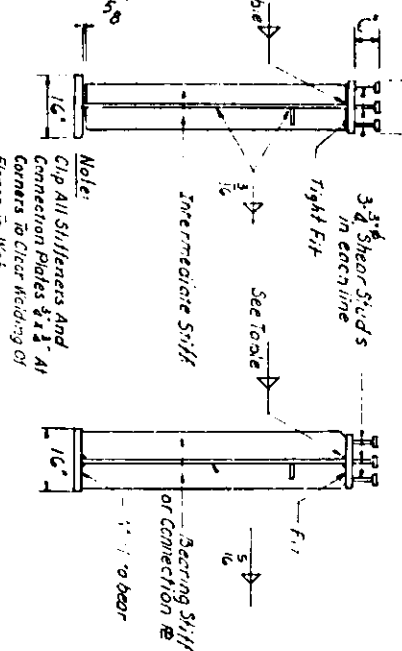
DETAIL OF BEAMS A1 & A7 - D1 & D5
BEAMS B1 & B5 - C1 & C5 SIMILAR

DETAIL OF BEAMS A2 to A6
B2 to B4 - C2 to C4 - D2 to D4

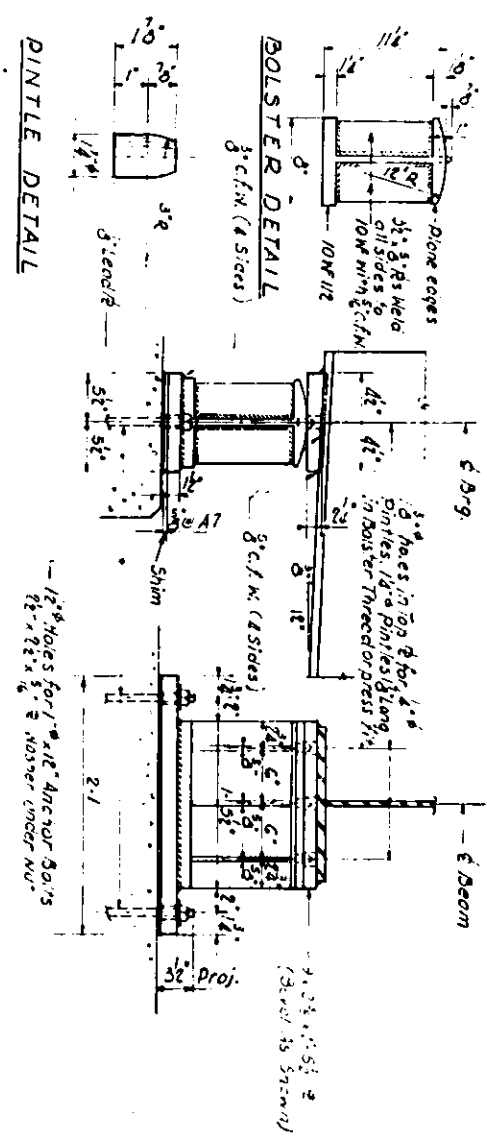
BEAM SCHEDULE

Beam No	A	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	Span No.
L	118'-0"	117'-0 1/2"	116'-6"	115'-2 1/2"	113'-1 1/8"	112'-5 1/8"	111'-0 1/8"	110'-6"	109'-2 1/8"	107'-10"	106'-6"	105'-10 1/2"	104'-6 1/2"	103'-2 1/8"	101'-10"	100'-6"	99'-2 1/8"	97'-10"	96'-6 1/2"	95'-10"	93'-3 1/2"	93'-3 1/2"	L
4	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-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"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	14'-0"	20'-0"	B
C	64'-10 1/2"	63'-8 1/2"	62'-6"	61'-4 1/2"	60'-2 1/2"	59'-1 1/8"	58'-6 1/8"	57'-10 1/2"	56'-6"	55'-2 1/8"	54'-10"	53'-6 1/2"	52'-2 1/8"	51'-10"	50'-6 1/8"	49'-10 1/2"	48'-6"	47'-1 1/8"	46'-10 1/2"	45'-6 1/2"	44'-2 1/8"	43'-3 1/2"	C
T1A	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"	T1A
T1B	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"	T1B
T1C	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	T1C
T1B4	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"	T1B4
T1B5	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	T1B5
T1B6	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	T1B6
X	37'-0 1/2"	37'-0 1/2"	37'-0 1/2"	37'-0 1/2"	37'-0 1/2"	37'-0 1/2"	37'-0 1/2"	37'-0 1/2"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	36'-7"	X
Y	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	16'-0 1/2"	Y
Z	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	Z

TYPICAL SECTIONS THRU BEAMS



Note:
For Details of Section A-A of Brg. Stiff. see SH. No. 84
For D1 Deflections see SH. No. 84
For Details of Expansion Drgs. E1 & E2 see SH. No. 109



FIXED BEARING DETAIL (F.B-1)

Est. Mr. Stud Shear Connectors - 5651 lbs.

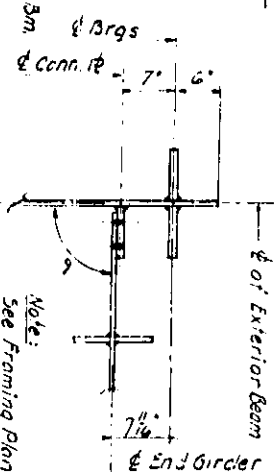
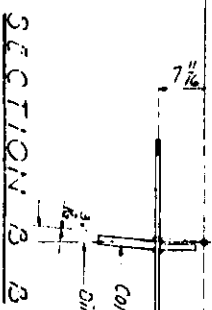
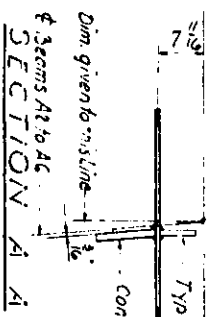
DESIGNED BY: RAY
DRAWN BY: A.S.
CHECKED BY: S.F. & F.M.
APPROVED BY: K.A.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
STEEL DETAILS
SPAN ABCD

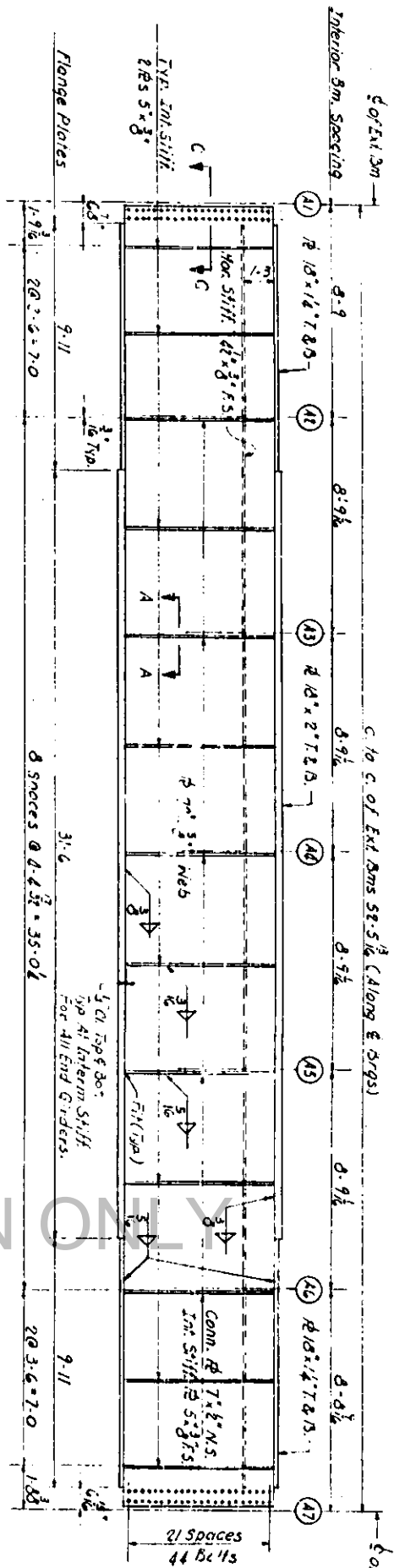
POPULAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B", "C" AND "D"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HWB
M. W. LOGGNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

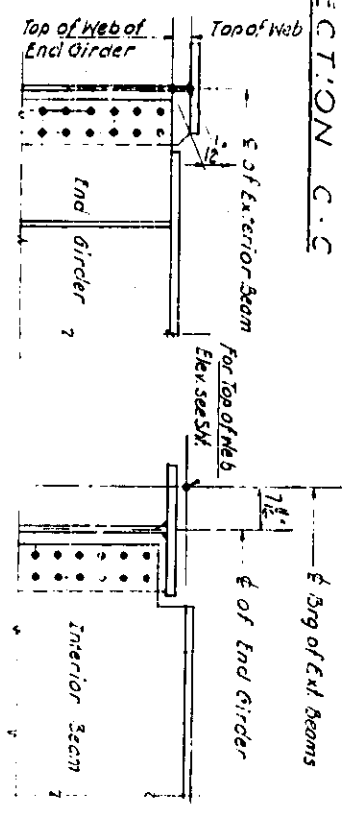
SHEET 85 OF 241



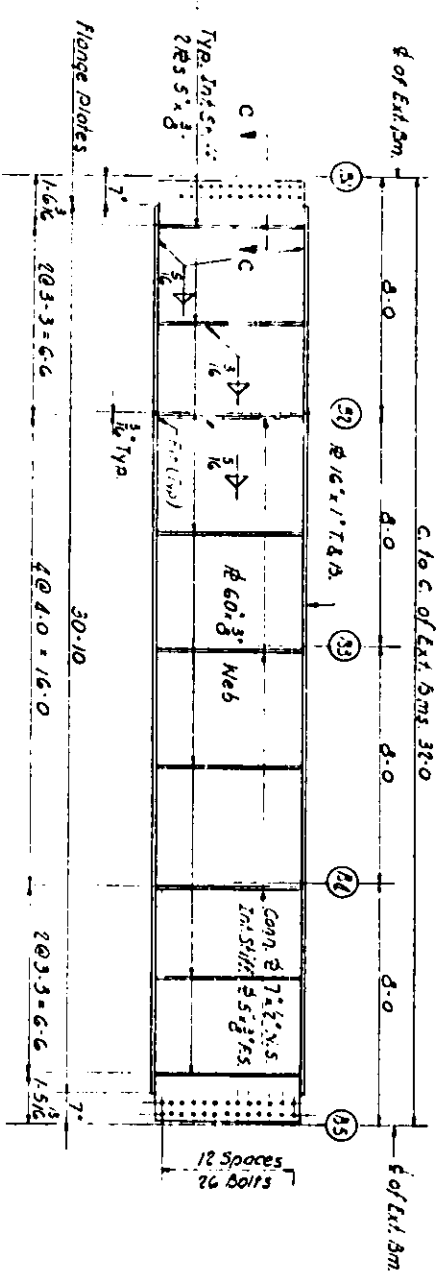
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	121
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



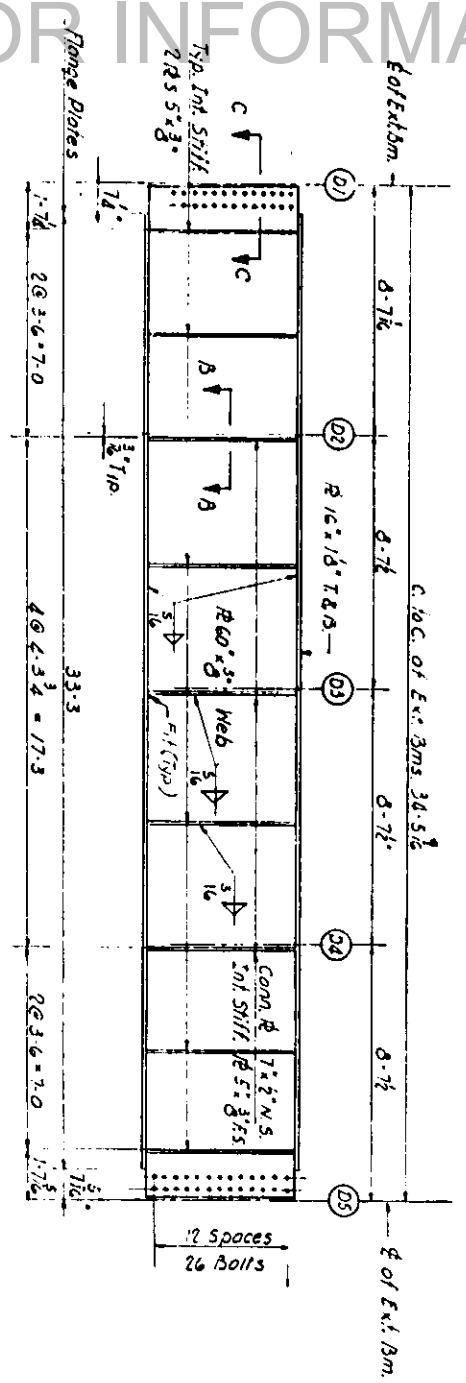
END GIRDER LI-A



TYPICAL FRAMING DETAILS
SHOWING RELATIVE TOPS OF WEBS



END GIRDER LI-B
END GIRDER LI-C SAME



END GIRDER LI-D

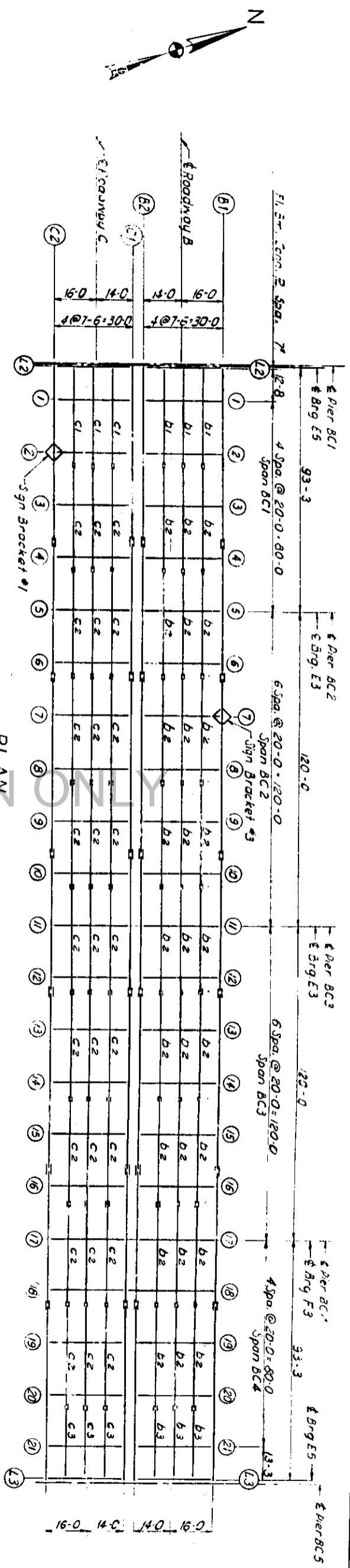
Note
For D.L. sections see Sht. No. 82
For Table of Weirds see Sht. No. 85
For Expansion Device Details see Sht. No. 31

DESIGNED BY S.S.
DRAWN BY H.C.
CHECKED BY E.H.C.
APPROVED BY K.A.

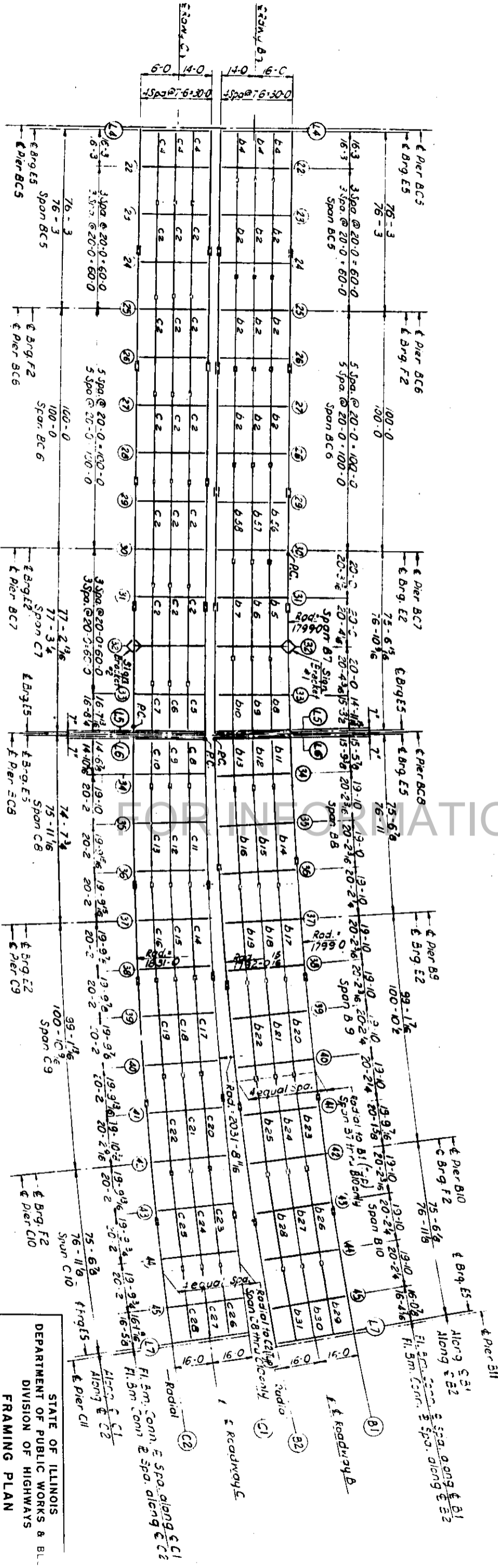
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
STEEL DETAILS
SPAN ABCD
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B", "C" AND "D"
F.A.I. RT 70 ST. CLAIR CO SECTION 82-3HVB
M. W. LOGGNER, INC.
ENGINEERS
CHICAGO, ILLINOIS
SHEET 98 OF 241

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 70	82-3HVB	ST. CLAIR	29	122
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			



SPANS BCI THRU BC4



PLAN

SPANS BC5 THRU C10

DESIGNED BY EMK
 DRAWN BY I.M.
 CHECKED BY A.J.C.
 APPROVED BY K.A.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS
 FRAMING PLAN
 SPANS BCI THRU B10 AND C10
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"
 FAIRVIEW ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOGGERS, INC.
 CHICAGO, ILLINOIS
 SHEET 122 OF 241

ELEVATION TOP OF GIRDER W.L.S FOR FABRICATION (DEFLECTION NOT INCLUDED)

ROUTE NO.	SECTION	COUNTY	ST. CLAIR	TOTAL SHEETS	SHEET NO.
FAI-70	82-3HYB	ST. CLAIR	159	149	

Loc.	W.L.	Per B1	Per B2	Per B3	Per B4	Per B5	Per B6	Per B7	Per B8	Per B9	Per B10	Per B11	Per B12	Per B13	Per B14	Per B15
G1	451.05	448.22	448.22	447.34	446.99	446.63	446.52	446.46	446.31	446.34	446.37	446.38	446.37	446.35	446.34	446.33
	450.58	448.22	448.22	447.34	446.99	446.63	446.52	446.46	446.31	446.34	446.37	446.38	446.37	446.35	446.34	446.33
G2	451.81	448.34	447.75	446.87	446.52	446.21	446.05	445.99	445.94	445.94	445.94	445.94	445.94	445.94	445.94	445.94
	450.58	448.34	447.75	446.87	446.52	446.21	446.05	445.99	445.94	445.94	445.94	445.94	445.94	445.94	445.94	445.94

Loc.	W.L.	Per B1	Per B2	Per B3	Per B4	Per B5	Per B6	Per B7	Per B8	Per B9	Per B10	Per B11	Per B12	Per B13	Per B14	Per B15
G1	449.39	447.66	447.91	447.95	448.30	448.44	448.57	448.92	449.22	449.56	449.92	450.07	450.22	450.37	450.52	450.67
	448.92	447.66	447.91	447.95	448.30	448.44	448.57	448.92	449.22	449.56	449.92	450.07	450.22	450.37	450.52	450.67
G2	449.39	448.22	448.51	448.80	449.09	449.38	449.67	449.96	450.25	450.54	450.83	451.12	451.41	451.70	451.99	452.28
	448.92	448.22	448.51	448.80	449.09	449.38	449.67	449.96	450.25	450.54	450.83	451.12	451.41	451.70	451.99	452.28

Loc.	W.L.	Per B1	Per B2	Per B3	Per B4	Per B5	Per B6	Per B7	Per B8	Per B9	Per B10	Per B11	Per B12	Per B13	Per B14	Per B15
G1	450.05	448.22	448.22	447.34	446.99	446.63	446.52	446.46	446.31	446.34	446.37	446.38	446.37	446.35	446.34	446.33
	449.58	448.22	448.22	447.34	446.99	446.63	446.52	446.46	446.31	446.34	446.37	446.38	446.37	446.35	446.34	446.33
G2	451.81	448.34	447.75	446.87	446.52	446.21	446.05	445.99	445.94	445.94	445.94	445.94	445.94	445.94	445.94	445.94
	450.58	448.34	447.75	446.87	446.52	446.21	446.05	445.99	445.94	445.94	445.94	445.94	445.94	445.94	445.94	445.94

ROADWAY 'B'

Loc.	W.L.	Per B1	Per B2	Per B3	Per B4	Per B5	Per B6	Per B7	Per B8	Per B9	Per B10	Per B11	Per B12	Per B13	Per B14	Per B15
G1	449.25	447.66	447.91	447.95	448.30	448.44	448.57	448.92	449.22	449.56	449.92	450.07	450.22	450.37	450.52	450.67
	448.78	447.66	447.91	447.95	448.30	448.44	448.57	448.92	449.22	449.56	449.92	450.07	450.22	450.37	450.52	450.67
G2	449.25	448.22	448.51	448.80	449.09	449.38	449.67	449.96	450.25	450.54	450.83	451.12	451.41	451.70	451.99	452.28
	448.78	448.22	448.51	448.80	449.09	449.38	449.67	449.96	450.25	450.54	450.83	451.12	451.41	451.70	451.99	452.28

Loc.	W.L.	Per B1	Per B2	Per B3	Per B4	Per B5	Per B6	Per B7	Per B8	Per B9	Per B10	Per B11	Per B12	Per B13	Per B14	Per B15
G1	449.25	447.66	447.91	447.95	448.30	448.44	448.57	448.92	449.22	449.56	449.92	450.07	450.22	450.37	450.52	450.67
	448.78	447.66	447.91	447.95	448.30	448.44	448.57	448.92	449.22	449.56	449.92	450.07	450.22	450.37	450.52	450.67
G2	449.25	448.22	448.51	448.80	449.09	449.38	449.67	449.96	450.25	450.54	450.83	451.12	451.41	451.70	451.99	452.28
	448.78	448.22	448.51	448.80	449.09	449.38	449.67	449.96	450.25	450.54	450.83	451.12	451.41	451.70	451.99	452.28

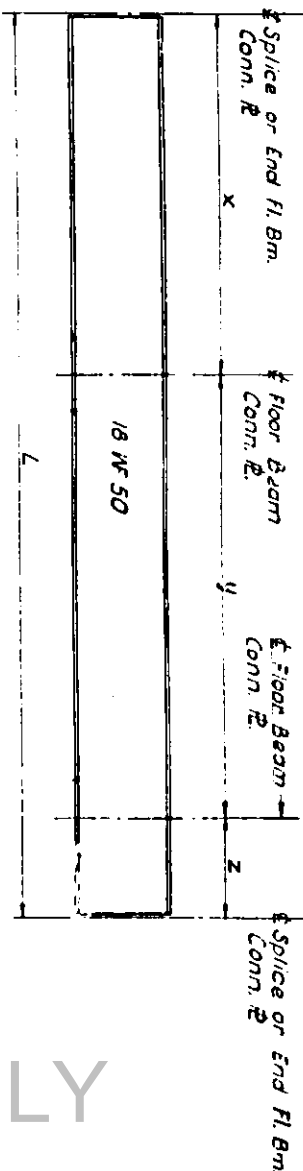
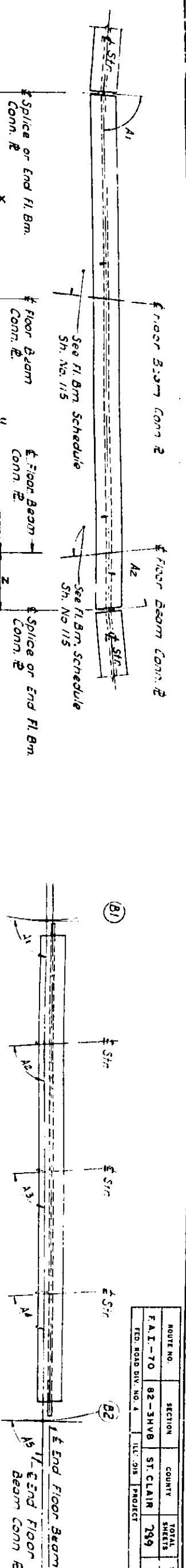
ROADWAY 'C'

Loc.	W.L.	Per B1	Per B2	Per B3	Per B4	Per B5	Per B6	Per B7	Per B8	Per B9	Per B10	Per B11	Per B12	Per B13	Per B14	Per B15
G1	452.71	452.08	452.76	452.66	452.21	452.03	451.81	451.74	451.81	451.74	451.81	451.74	451.81	451.74	451.81	451.74
	452.24	452.08	452.76	452.66	452.21	452.03	451.81	451.74	451.81	451.74	451.81	451.74	451.81	451.74	451.81	451.74
G2	452.71	452.08	452.76	452.66	452.21	452.03	451.81	451.74	451.81	451.74	451.81	451.74	451.81	451.74	451.81	451.74
	452.24	452.08	452.76	452.66	452.21	452.03	451.81	451.74	451.81	451.74	451.81	451.74	451.81	451.74	451.81	451.74

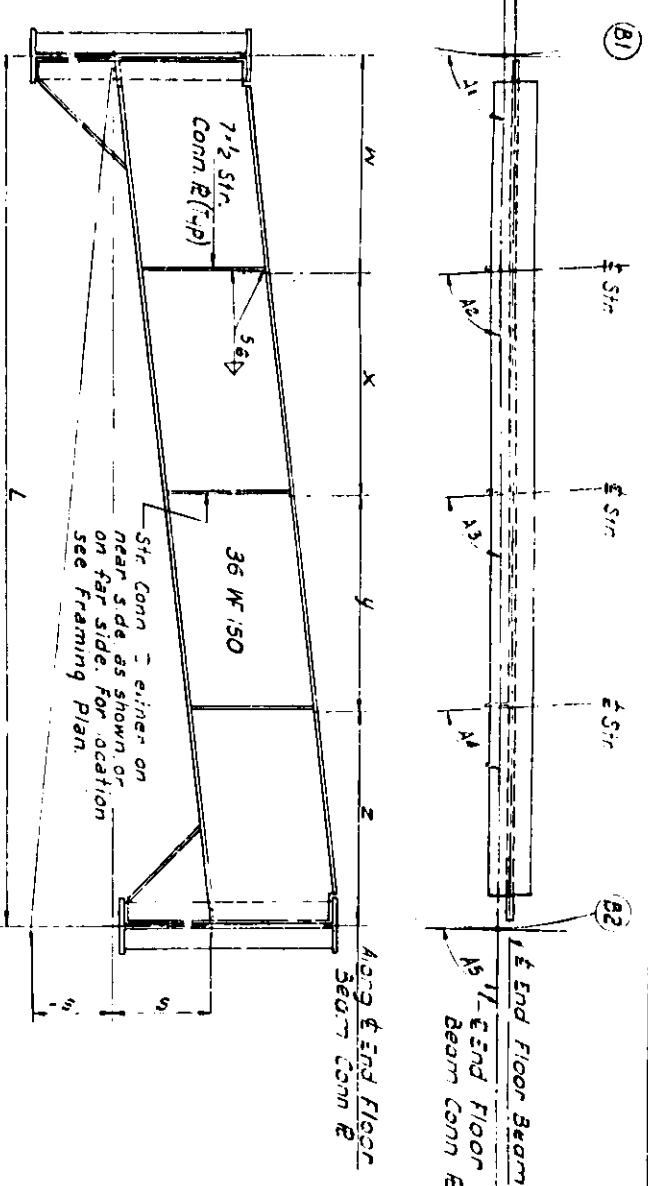
Note: * asterisks indicates variation to top of Flange of W.

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"
 FAI RT. 70 ST. CLAIR CO. SECTION 82-3HYB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET 149 OF 241



FOR PLACEMENT ONLY



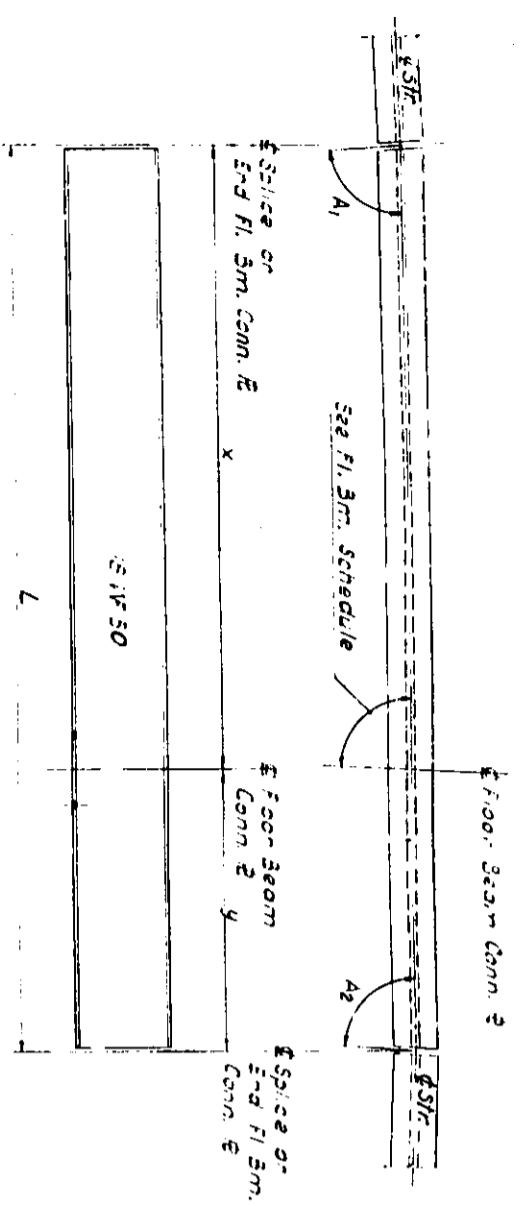
Str. No.	L	X	Y	Z	A1	A2
61	36-11	2-8	20-0	4-3	90°00:00	90°00:00
62	40-0	5-9	20-0	4-3	90°00:00	90°00:00
63	40-0	5-9	0	1-3	90°00:00	*
64	40-2	6-3	20-1	4-3	90°00:00	90°00:00
65	40-4	6-3	0	4-3	90°00:00	90°00:00
66	40-4	6-3	20-2	4-3	90°00:00	90°00:00
67	40-6	6-3	20-3	4-3	90°00:00	90°00:00
68	40-6	6-3	0	4-3	90°00:00	90°00:00
69	40-6	6-3	0	4-3	90°00:00	90°00:00
70	40-6	6-3	0	4-3	90°00:00	90°00:00
71	40-6	6-3	0	4-3	90°00:00	90°00:00
72	40-6	6-3	0	4-3	90°00:00	90°00:00
73	40-6	6-3	0	4-3	90°00:00	90°00:00
74	40-6	6-3	0	4-3	90°00:00	90°00:00
75	40-6	6-3	0	4-3	90°00:00	90°00:00
76	40-6	6-3	0	4-3	90°00:00	90°00:00
77	40-6	6-3	0	4-3	90°00:00	90°00:00
78	40-6	6-3	0	4-3	90°00:00	90°00:00
79	40-6	6-3	0	4-3	90°00:00	90°00:00
80	40-6	6-3	0	4-3	90°00:00	90°00:00
81	40-6	6-3	0	4-3	90°00:00	90°00:00
82	40-6	6-3	0	4-3	90°00:00	90°00:00
83	40-6	6-3	0	4-3	90°00:00	90°00:00
84	40-6	6-3	0	4-3	90°00:00	90°00:00
85	40-6	6-3	0	4-3	90°00:00	90°00:00
86	40-6	6-3	0	4-3	90°00:00	90°00:00
87	40-6	6-3	0	4-3	90°00:00	90°00:00
88	40-6	6-3	0	4-3	90°00:00	90°00:00
89	40-6	6-3	0	4-3	90°00:00	90°00:00
90	40-6	6-3	0	4-3	90°00:00	90°00:00
91	40-6	6-3	0	4-3	90°00:00	90°00:00
92	40-6	6-3	0	4-3	90°00:00	90°00:00
93	40-6	6-3	0	4-3	90°00:00	90°00:00
94	40-6	6-3	0	4-3	90°00:00	90°00:00
95	40-6	6-3	0	4-3	90°00:00	90°00:00
96	40-6	6-3	0	4-3	90°00:00	90°00:00
97	40-6	6-3	0	4-3	90°00:00	90°00:00
98	40-6	6-3	0	4-3	90°00:00	90°00:00
99	40-6	6-3	0	4-3	90°00:00	90°00:00
100	40-6	6-3	0	4-3	90°00:00	90°00:00

Str. No.	L	X	Y	Z	A1	A2
65	36-4	12-3	19-10	4-2	90°25:36	*
66	36-6	12-4	19-18	4-2	90°25:36	*
67	39-6	15-6	19-9	4-2	90°25:36	90°25:36
68	39-6	15-7	19-10	4-2	90°25:36	90°25:36
69	39-6	15-8	19-11	4-2	90°25:36	90°25:36
70	39-6	15-9	19-12	4-2	90°25:36	90°25:36
71	39-6	15-10	19-13	4-2	90°25:36	90°25:36
72	39-6	15-11	19-14	4-2	90°25:36	90°25:36
73	39-6	15-12	19-15	4-2	90°25:36	90°25:36
74	39-6	15-13	19-16	4-2	90°25:36	90°25:36
75	39-6	15-14	19-17	4-2	90°25:36	90°25:36
76	39-6	15-15	19-18	4-2	90°25:36	90°25:36
77	39-6	15-16	19-19	4-2	90°25:36	90°25:36
78	39-6	15-17	19-20	4-2	90°25:36	90°25:36
79	39-6	15-18	19-21	4-2	90°25:36	90°25:36
80	39-6	15-19	19-22	4-2	90°25:36	90°25:36
81	39-6	15-20	19-23	4-2	90°25:36	90°25:36
82	39-6	15-21	19-24	4-2	90°25:36	90°25:36
83	39-6	15-22	19-25	4-2	90°25:36	90°25:36
84	39-6	15-23	19-26	4-2	90°25:36	90°25:36
85	39-6	15-24	19-27	4-2	90°25:36	90°25:36
86	39-6	15-25	19-28	4-2	90°25:36	90°25:36
87	39-6	15-26	19-29	4-2	90°25:36	90°25:36
88	39-6	15-27	19-30	4-2	90°25:36	90°25:36
89	39-6	15-28	19-31	4-2	90°25:36	90°25:36
90	39-6	15-29	19-32	4-2	90°25:36	90°25:36
91	39-6	15-30	19-33	4-2	90°25:36	90°25:36
92	39-6	15-31	19-34	4-2	90°25:36	90°25:36
93	39-6	15-32	19-35	4-2	90°25:36	90°25:36
94	39-6	15-33	19-36	4-2	90°25:36	90°25:36
95	39-6	15-34	19-37	4-2	90°25:36	90°25:36
96	39-6	15-35	19-38	4-2	90°25:36	90°25:36
97	39-6	15-36	19-39	4-2	90°25:36	90°25:36
98	39-6	15-37	19-40	4-2	90°25:36	90°25:36
99	39-6	15-38	19-41	4-2	90°25:36	90°25:36
100	39-6	15-39	19-42	4-2	90°25:36	90°25:36

End Fl. Brm. No.	L	W	X	Y	Z	S	A1	A2	A3	A4	A5
62	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
63	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
64	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
65	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
66	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
67	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
68	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
69	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
70	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
71	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
72	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
73	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
74	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
75	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
76	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
77	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
78	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
79	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00
80	30-0	7-6	7-6	7-6	7-6	0-5 3/4	90°00:00	90°00:00	90°00:00	90°00:00	90°00:00

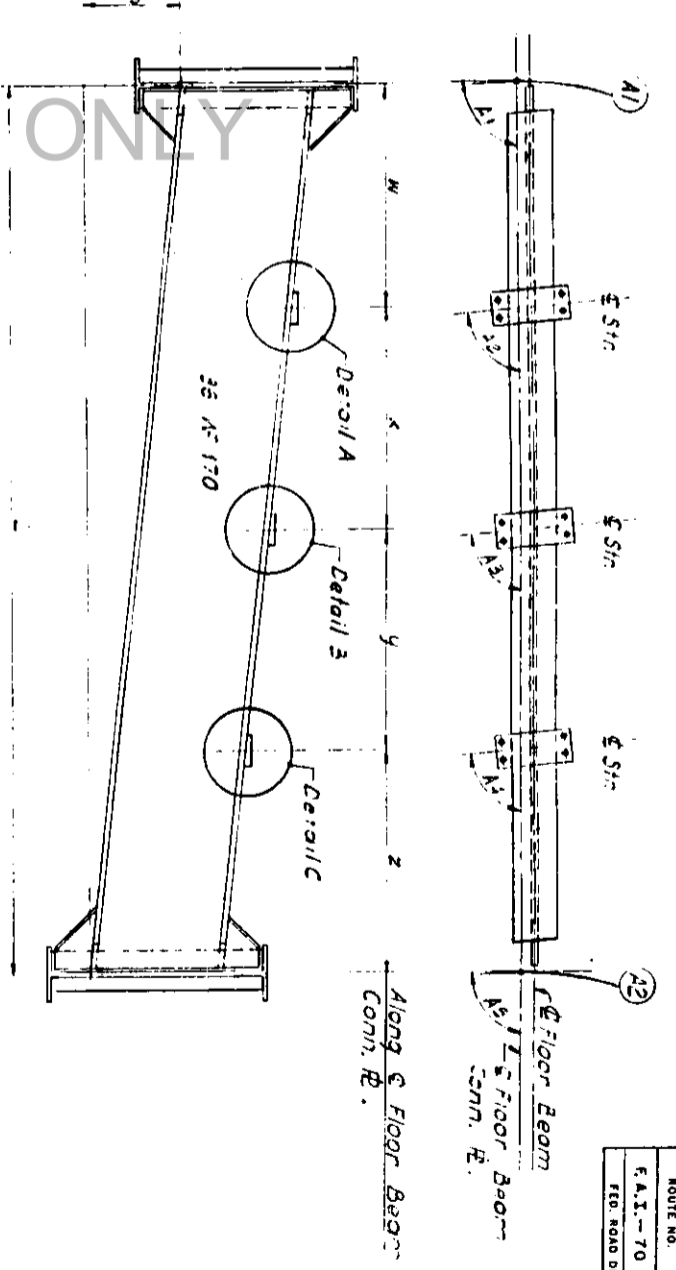
+ Designated as an End Girder.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 70	82-3HV8	ST. CLAIR	289	15
FED. ROAD DIV. NO. 2	ILLINOIS PROJECT			



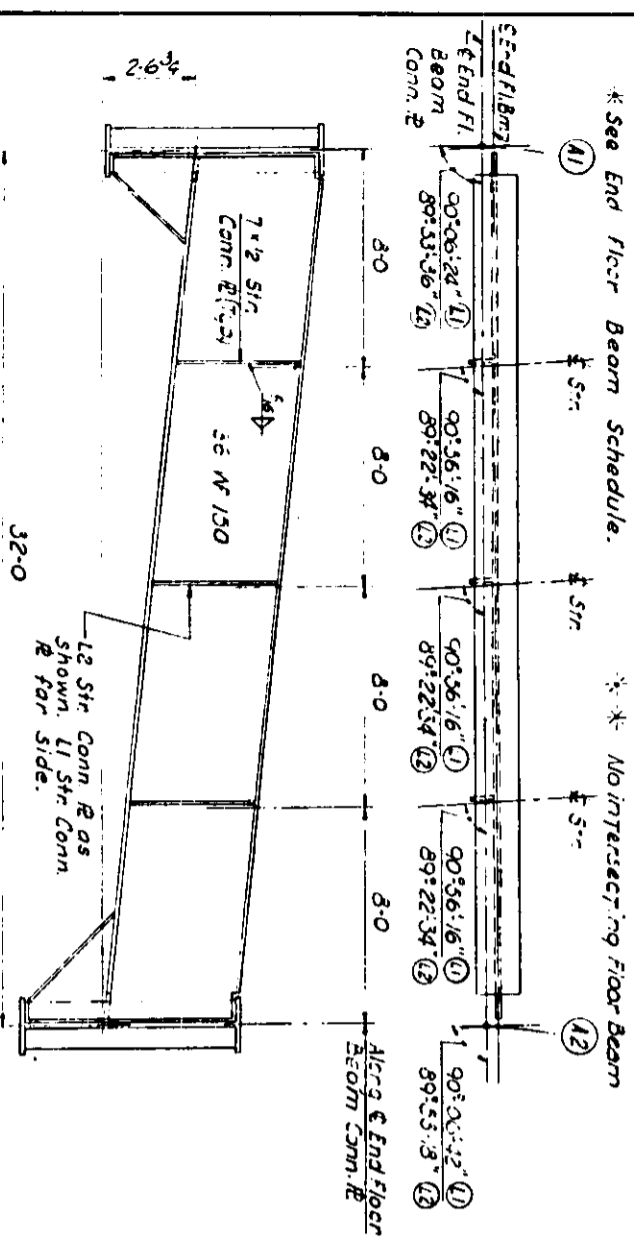
TYPICAL STRINGER ELEVATION

Str. No.	L	X	Y	A1	A2
01	20'5.5"	16'1/4"	4'4.24"	89°12'09"	89°12'09"
02	20'3"	15'0 1/2"	4'4.36"	89°10'16"	89°10'16"
03	20'5 1/2"	16'2 1/2"	4'4.36"	89°09'32"	89°09'32"
04	20'9 1/2"	16'2 1/2"	4'4.36"	89°09'32"	89°09'32"
05	20'3 1/2"	16'0 3/4"	4'3.56"	89°09'32"	89°09'32"
06	20'6 1/2"	16'2 1/2"	4'4.36"	89°10'10"	89°10'10"
07	20'3 1/2"	16'0 3/4"	4'3.56"	89°10'10"	89°10'10"
08	20'6 1/2"	16'2 1/2"	4'4.36"	89°10'10"	89°10'10"
09	20'0 1/2"	16'0 3/4"	4'3.56"	89°12'28"	89°12'28"
10	19'6 3/4"	15'5 1/4"	4'1 1/4"	89°12'28"	89°12'28"
11	19'2 3/4"	15'3 1/4"	4'1 1/4"	89°12'28"	89°12'28"
12	19'7 1/2"	15'7 1/2"	4'0 3/4"	89°12'28"	89°12'28"



TYPICAL FLOOR BEAM ELEVATION

Fl. No.	L	X	Y	Z	5	A1	A2	A3	A4	A5
1	32-0	8-0 1/2	8-0	8-0	7-11 1/2	2-6 1/4	90°00'00"	89°33'03"	89°33'03"	90°00'00"
2	32-0	8-0 1/2	8-0	8-0	7-11 1/2	2-6 1/4	90°00'00"	89°30'53"	89°30'53"	90°00'00"
3	Same as Floor Beam 2									
4	Same as Floor Beam 2									
5	32-0	8-0 1/2	8-0	8-0	7-11 1/2	2-6 1/4	90°00'00"	89°33'03"	89°33'03"	90°00'00"
6	32-0	8-0 1/2	8-0	8-0	7-11 1/2	2-6 1/4	90°00'00"	89°32'34"	89°32'34"	90°00'00"
7	Same as Floor Beam 7									
8	ditto									
9	ditto									
10	ditto									
11	ditto									
12	ditto									
13	32-0	8-0 1/2	8-0	8-0	7-11 1/2	2-6 1/4	90°00'00"	89°32'15"	89°32'15"	90°00'00"
14	Same as Floor Beam #									
15	Same as Floor Beam #									
16	Same as Floor Beam 7									
17	ditto									
18	ditto									
19	ditto									
20	ditto									
21	ditto									
22	32-0	8-0 1/2	8-0	8-0	7-11 1/2	2-6 1/4	90°00'00"	89°33'12"	89°33'12"	90°00'00"
23	Same as Floor Beam 2									
24	ditto									
25	ditto									
26	ditto									
27	32-0	8-0 1/2	8-0	8-0	7-11 1/2	2-6 1/4	90°00'00"	89°28'23"	89°28'23"	90°00'00"

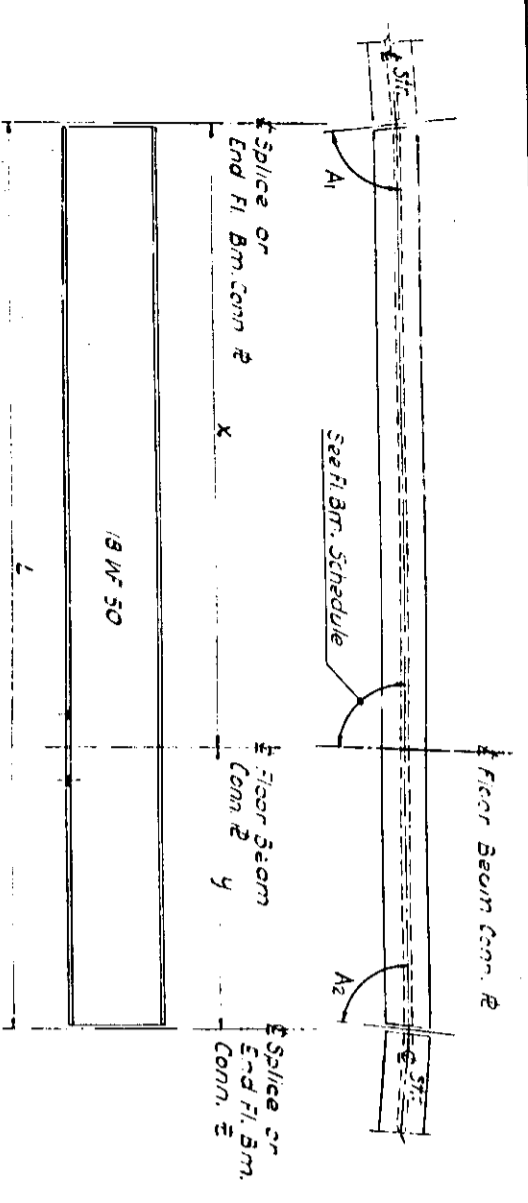


TYPICAL END FLOOR BEAM ELEVATION

DESIGNED BY: RMR
 DRAWN BY: L.M.
 CHECKED BY: AVG
 APPROVED BY: KA

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS
 BLDGS.
 FLOOR BEAM, STRINGER AND
 END FLOOR BEAM SCHEDULE
 POPLAR STREET BRIDGE APPROACHES
 ROADWAY "A"
 F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HV8
 SHEET
 H. W. LOCKNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS 60624

For Detail A, B and C see Sh. No. 133

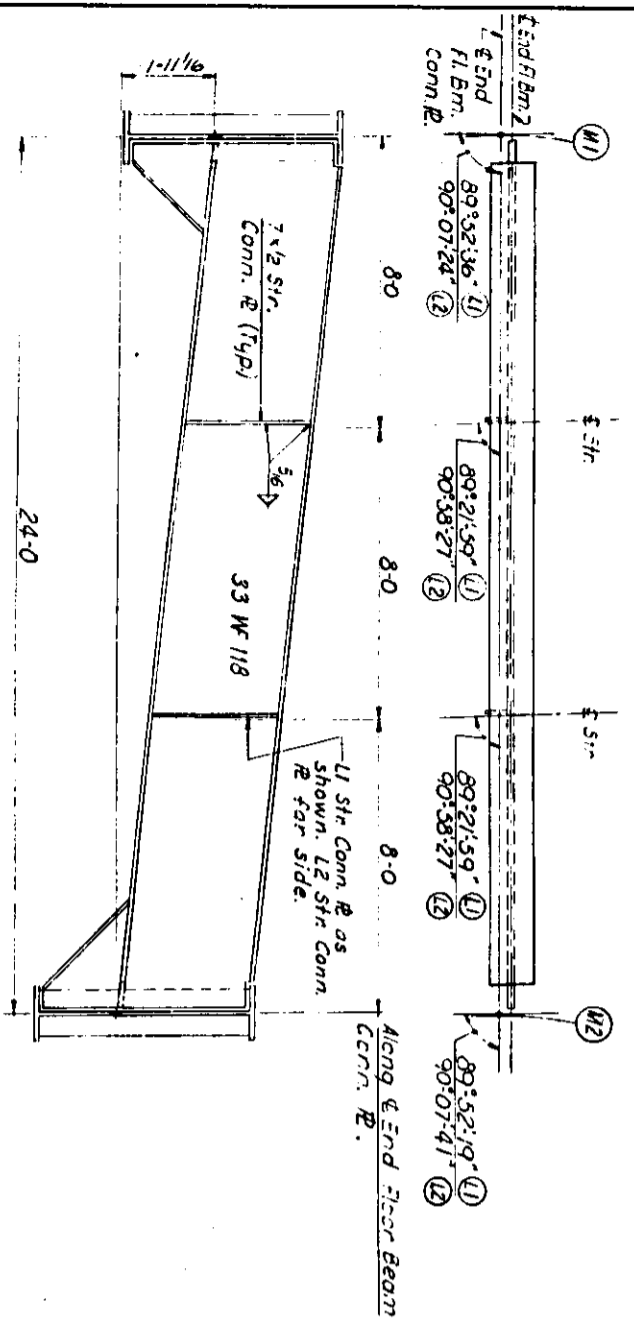


TYPICAL STRINGER ELEVATION

Str. No.	L	X	Y	A1	A2
m1	18'-7 1/2"	13'-9 1/2"	4'-4 1/2"	89°09':17"	89°09':17"
m2	17'-10 1/2"	13'-6 1/2"	4'-3 1/2"	89°09':11"	89°09':11"
m3	20'-8 1/2"	16'-4 1/2"	4'-4 1/2"	89°01':50"	89°01':50"
m4	20'-5 1/2"	16'-1 3/4"	4'-3 1/2"	89°01':50"	89°01':50"
m5	20'-0 1/2"	16'-6 1/2"	4'-4 1/2"	89°01':18"	89°01':18"

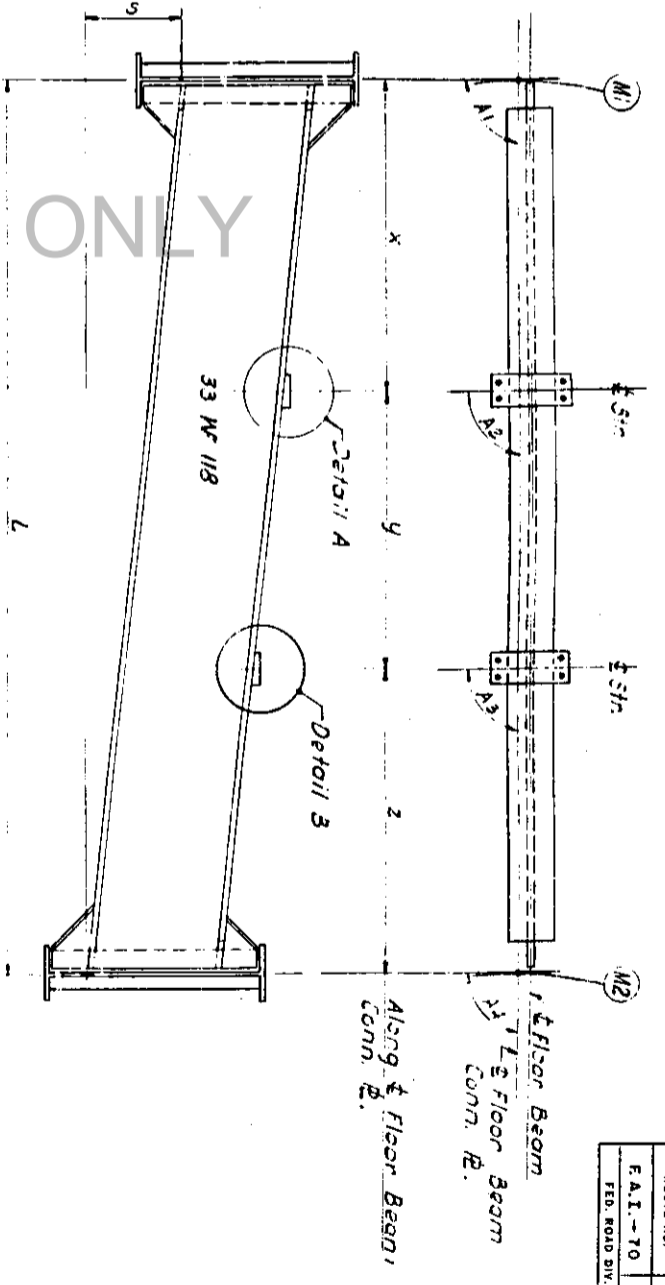
Str. No.	L	X	Y	A1	A2
m6	20'-7 1/2"	16'-3 1/2"	4'-3 1/2"	89°01':18"	89°01':18"
m7	19'-3"	16'-4 1/2"	2'-10 1/2"	89°05':55"	89°05':55"
m8	19'-0"	15'-7 1/2"	2'-10 1/2"	89°05':55"	89°05':55"
m9	10'-0 1/2"	10'-0 1/2"	0'-0 1/2"	89°29':37"	89°29':37"
m10	10'-8 1/2"	10'-8 1/2"	0'-0 1/2"	89°29':37"	89°29':37"

* See End Floor Beam Schedule
 ** As intersecting Floor Beam



TYPICAL END FLOOR BEAM ELEVATION

DESIGNED BY RME
 DRAWN BY J.M.
 CHECKED BY A.J.C.
 APPROVED BY K.A.



TYPICAL FLOOR BEAM ELEVATION

Fl. Bm. No.	L	X	Y	Z	S	A1	A2	A3	A4
1	24-0	8-0 1/2	8-0	7-1 1/2	11-1/2	90°00:00	89°22:16	89°22:16	90°00:00
2	24-0	8-0 1/2	8-0	7-1 1/2	11-1/2	90°00:00	89°26:27	89°26:27	90°00:00
3	Same as Floor Beam 2								
4	ditto								
5	24-0	8-0 1/2	8-0	7-1 1/2	11-1/2	90°00:00	89°23:49	89°23:49	90°00:00
6	Same as Floor Beam 2								
7	ditto								
8									
9									
10									
11									
12									
13									
14									
15	24-0	8-0 1/2	8-0	7-1 1/2	11-1/2	90°00:00	89°23:42	89°23:42	90°00:00

For Detail A and B see Sh No. 133

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 70	82-3HVB	ST. CLAIR	289	155
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			

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 82-3HVB
 H. W. LOCKNER, INC. ENGINEERS
 CHICAGO, ILLINOIS

SHEET 155 OF 241

3-Span Continuous

Table of Moments and Reactions

Spans 3C9, B9, 310 *

Location	Moment			Reaction		
	4Span B/C8	5Span B/C9	Pier B/C9	Pier B/C9	Pier B/C9	Pier B/C9
Dead Primary	1160	1300	2680	55	312	
Dead Secondary	23	26	53	2	5	
Live Primary	1030	1080	1080	71	105	
Live Secondary	21	22	20	1	2	
Impact	261	243	241	13	26	
Centrifugal force	37	39	37	2	3	
Total	2532	270	4043	130	454	
Section Modulus	1930	930	290			
Dead Load	4.7	5.2	5.8			
Live Load	4.1	4.3	3.4			
Impact	1.0	1.0	0.8			
Total	9.8	10.5	10.0			
Section Modulus	67.5	67.5	1080			

* Design applies also to Spans B/C5 thru B/C7 and Spans B/C8, C/C9, C/C10

3-Span Continuous

Table of Moments and Reactions

Spans B28 thru B30 *

Location	Moment			Reaction		
	4Span C18	5Span C19	Pier C19	Pier C19	Pier C19	Pier C19
Dead Primary	1650	1690	3740	104	360	
Dead Secondary	33	34	75	2	7	
Live Primary	1290	1430	1460	72	123	
Live Secondary	2	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	2410	2410	3970			
Dead Load	6.6	6.9	12.4			
Live Load	5.2	5.7	5.0			
Impact	1.0	1.2	1.3			
Total	12.8	13.7	18.7			
Section Modulus	87.5	87.5	148.5			

* Design applies also to Spans B12 thru B17 and Spans C12 thru C14.

4-Span Continuous

Table of Moments and Reactions

Spans 3C1 thru 3C4

Location	Moment			Reaction		
	4Span 3C1	5Span 3C2	Pier 3C3	Pier 3C1	Pier 3C2	Pier 3C3
Dead Primary	690	1510	4100	4400	332	393
Dead Secondary						
Live Primary	1250	1270	1630	1930	73	129
Live Secondary						
Impact	288	260	356	373	17	28
Centrifugal force						
Total	3228	3040	6086	6633	195	530
Section Modulus	2090	930	3970	4000		

Moments in foot-kips
Reactions in kips
Section Modulus - in³

4-Span Continuous

Table of Moments and Reactions

Spans 315 thru B18 *

Location	Moment			Reaction		
	4Span B15	5Span B16	Pier B17	Pier B17	Pier B17	Pier B17
Dead Primary	660	1490	4060	4340	103	378
Dead Secondary	33	30	41	44	2	8
Live Primary	1280	260	620	1530	73	29
Live Secondary	25	25	16	13	1	2
Impact	300	262	357	378	17	29
Centrifugal force	46	46	60	61	3	5
Total	3344	31.3	6174	6677	199	550
Section Modulus	2260	2260	4300	4300		
Dead Load	6.6	6.0	3.4	14.3		
Live Load	5.1	5.0	5.4	6.0		
Impact	1.2	1.0	1.2	1.2		
Total	2.9	1.20	2.00	21.5		
Section Modulus	51.0	51.0	1620	3225		

* Design applies also to Spans B19 thru B22 and Spans B23 thru B26.

4-Span Continuous

Table of Moments and Reactions

Spans C18 thru C21 *

Location	Moment			Reaction		
	4Span C18	5Span C19	Pier C20	Pier C18	Pier C19	Pier C20
Dead Primary	1360	1650	4500	4800	111	395
Dead Secondary	37	33	45	48	2	
Live Primary	1360	1360	1790	2000	74	134
Live Secondary	27	27	18	20	2	
Impact	310	277	382	404	17	28
Centrifugal force	49	49	65	72	3	5
Total	3643	3356	6800	734	209	565
Section Modulus	2420	2420	4800	5120		
Dead Load	7.5	6.6	14.8	5.3		
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		

* Design applies also to Spans C22 thru C25.

4-Span Continuous

Table of Moments and Reactions

Spans A25 thru A28

Location	Moment			Reaction		
	4Span A25	5Span A26	Pier A27	Pier A25	Pier A26	Pier A27
Dead Primary	2695	2466	7238	7488	132	497
Dead Secondary	157	79	246	210	6	
Live Primary	1730	1740	2730	3010	74	161
Live Secondary	100	56	93	84	3	
Impact	370	317	539	546	15	30
Centrifugal force	166	163	257	290	7	15
Total	5218	4521	11122	11618	237	703
Section Modulus	3480	3480	7920	7920		
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		

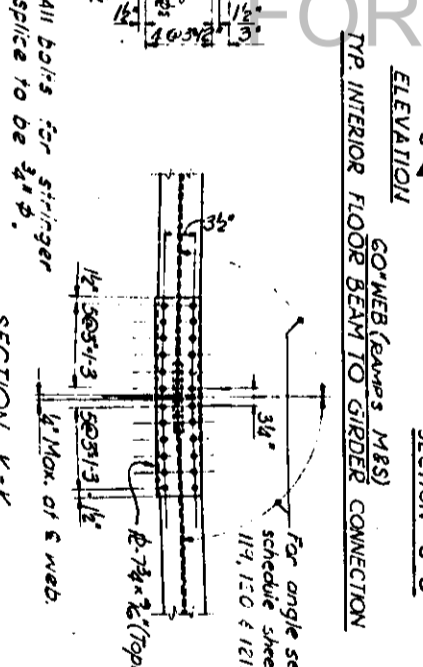
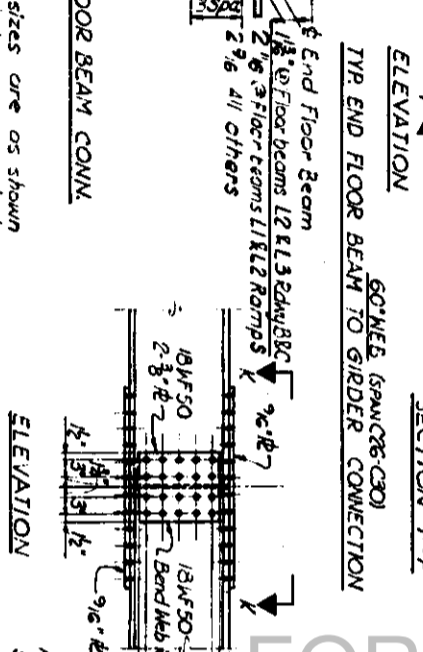
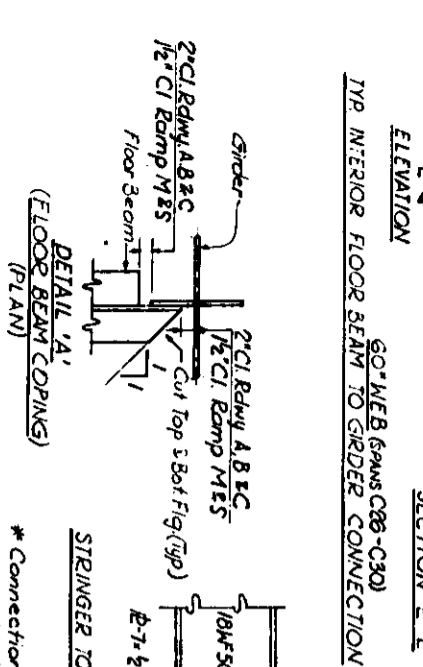
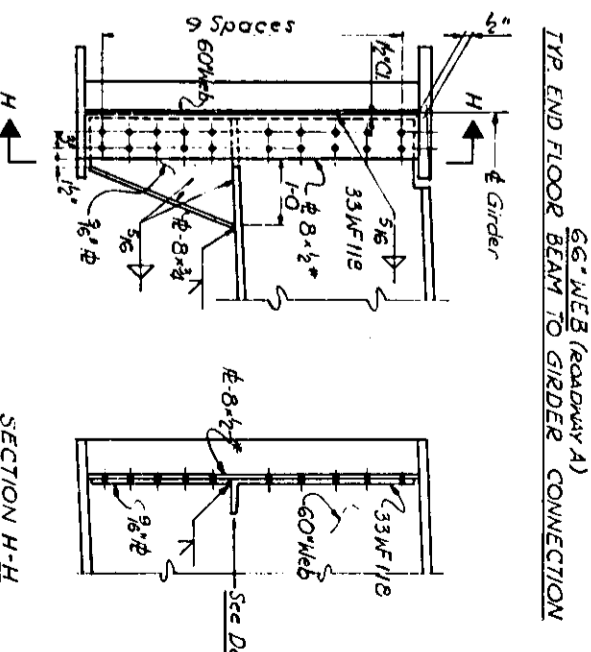
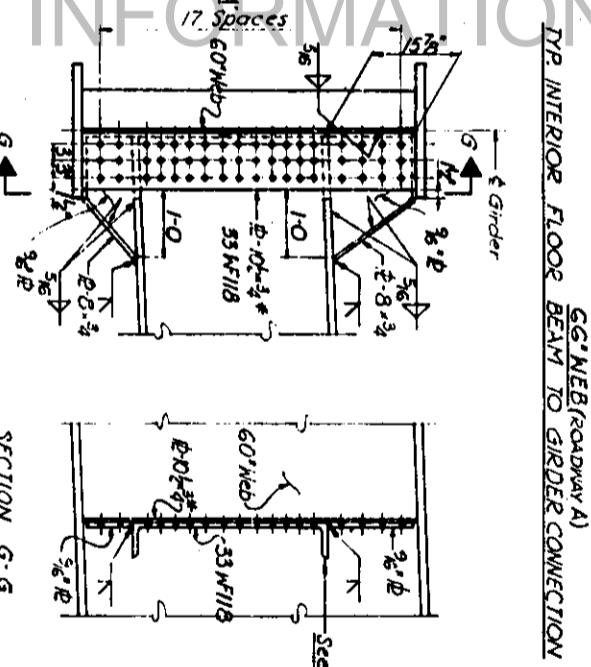
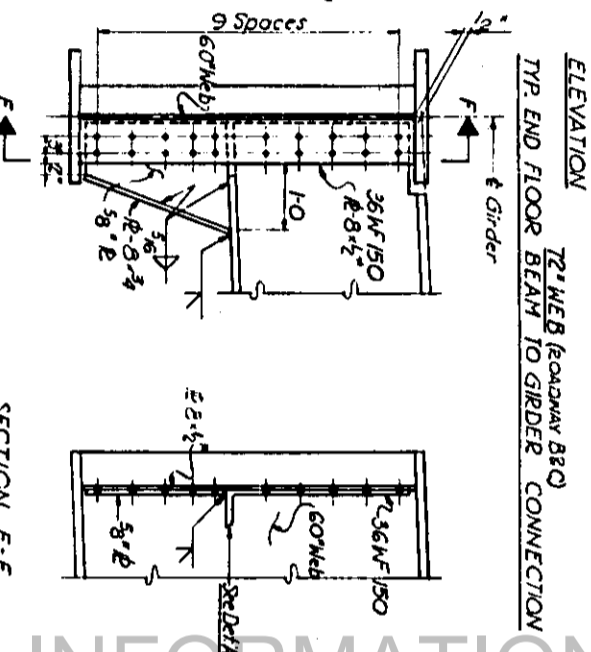
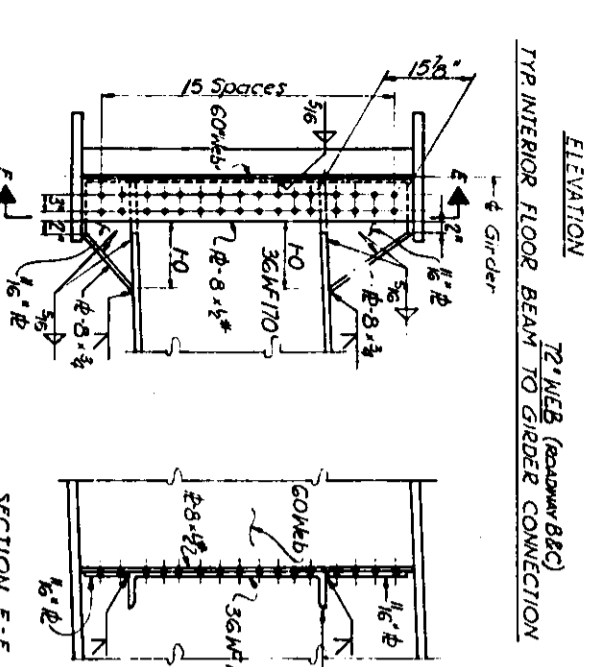
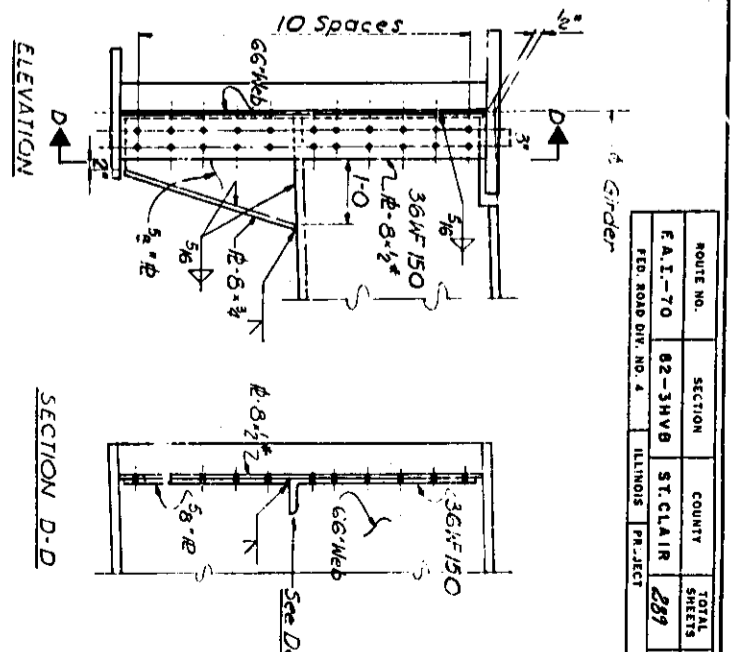
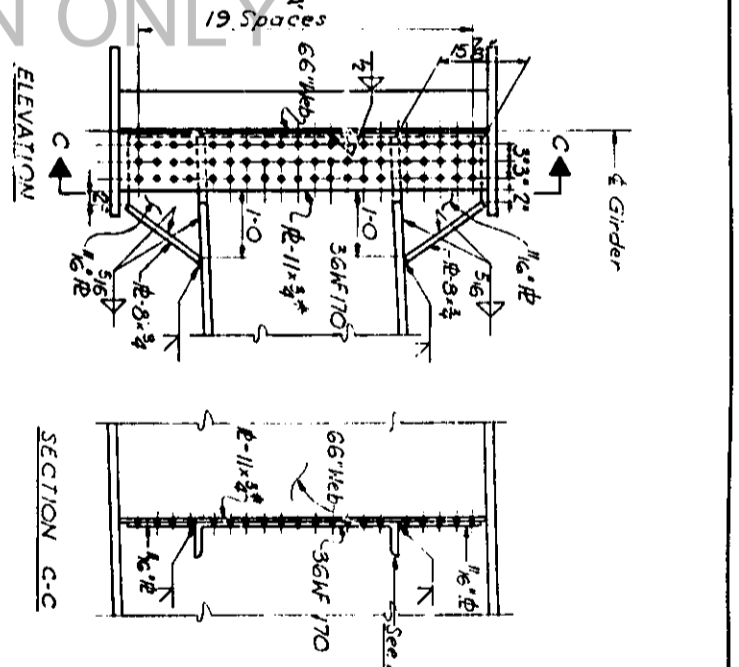
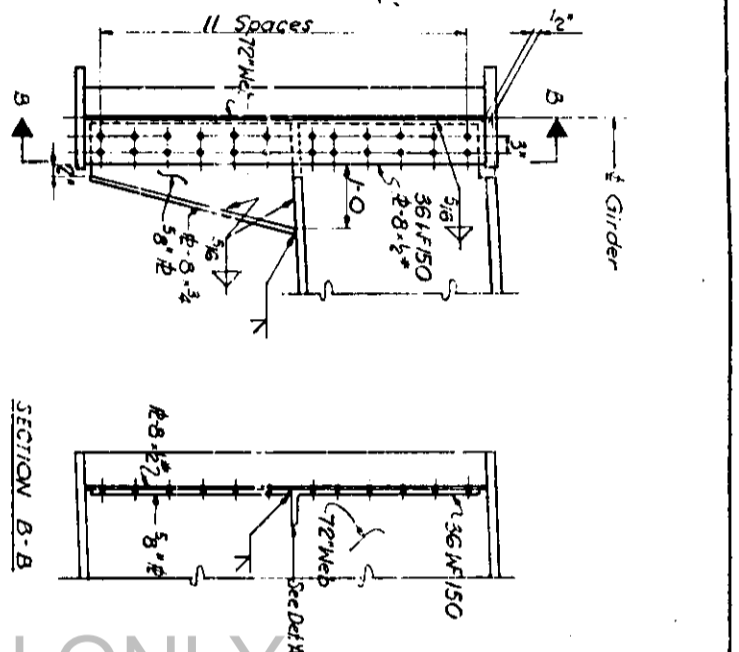
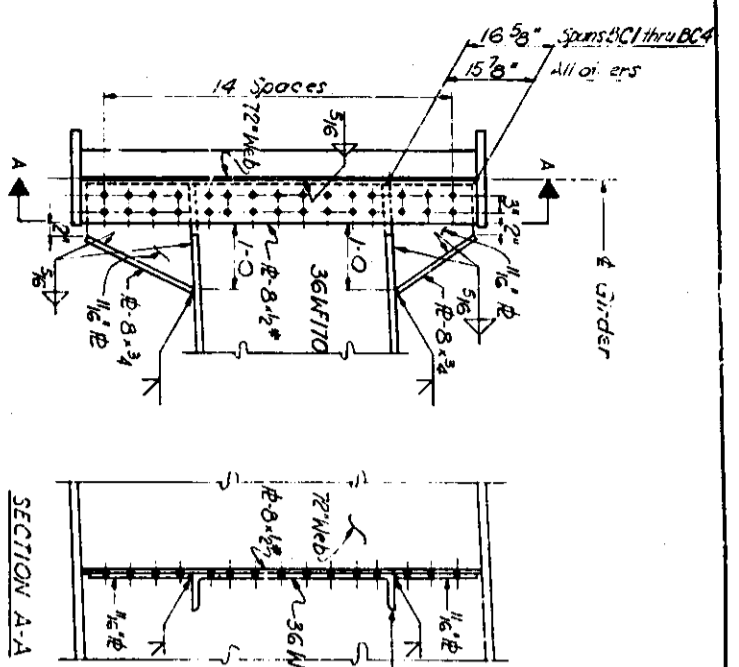
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
BLDGs.

POPULAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B" AND "C"

FA. RT. 70 ST. CLAIR CO. SECTION 82-3HV8
H. W. LOCKNER, INC. ENGINEERS
CHICAGO, ILLINOIS SHEET 22 of 241

DESIGNED BY AUA
CHECKED BY IM
APPROVED BY KA

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS
F.A.I.-70	82-3HWB	ST. CLAIR	289
FED. ROAD DIR. NO. 4	ILLINOIS	PR. SECT.	163



* 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".

Notes:
For angle see Stringer schedule sheet Nos 116 118, 119, 120 & 121.
For welding of connection plates to girder flanges see Notes A, D, B, C, sheet No. 96

DESIGNED BY: ERIC S. R.
DRAWN BY: ERIC S. R.
CHECKED BY: ERIC S. R.
APPROVED BY: K.A.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
LDGS.
STEEL FRAMING DETAILS
POPULAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B" AND "C"
RAMPS "M" AND "S"
F.A.I. RT 70 ST. CLAIR CO. SECTION 82-3HWB
H. W. LOCKNER, INC. ENGINEERS
CHICAGO, ILLINOIS
SHEET 289
1208-241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-3HVB	ST. CLAIR	289	164
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			

DETAIL 'A'
PLAN OF TAPERED HOLE

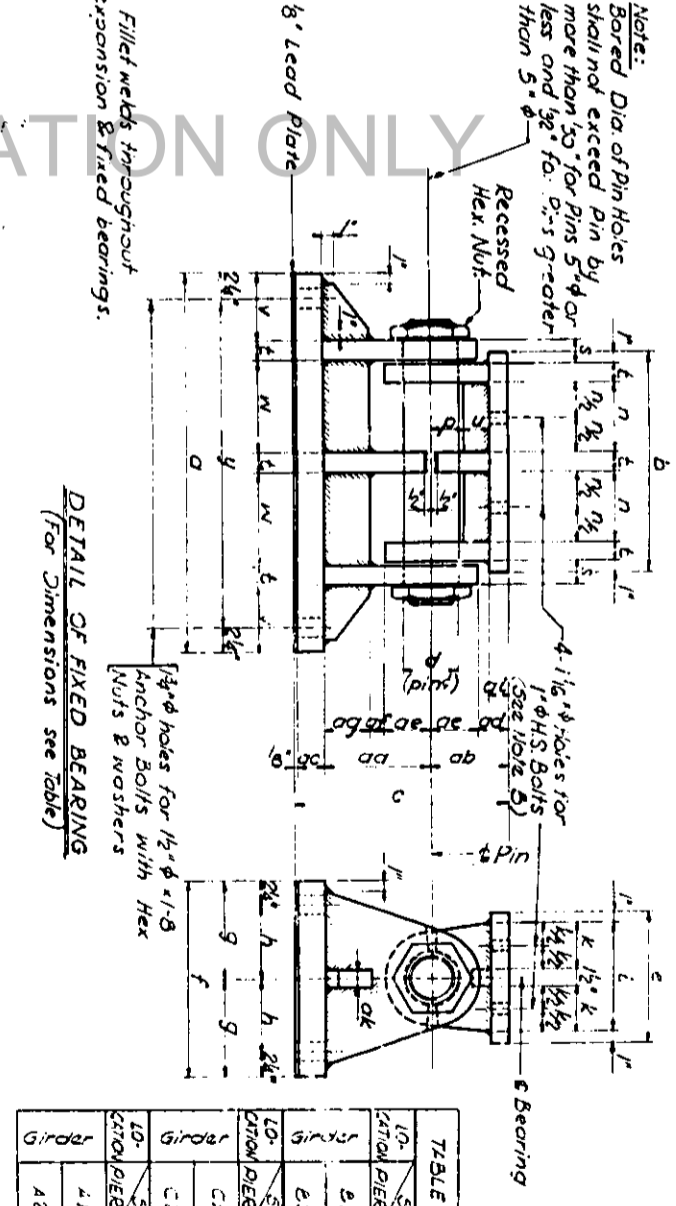
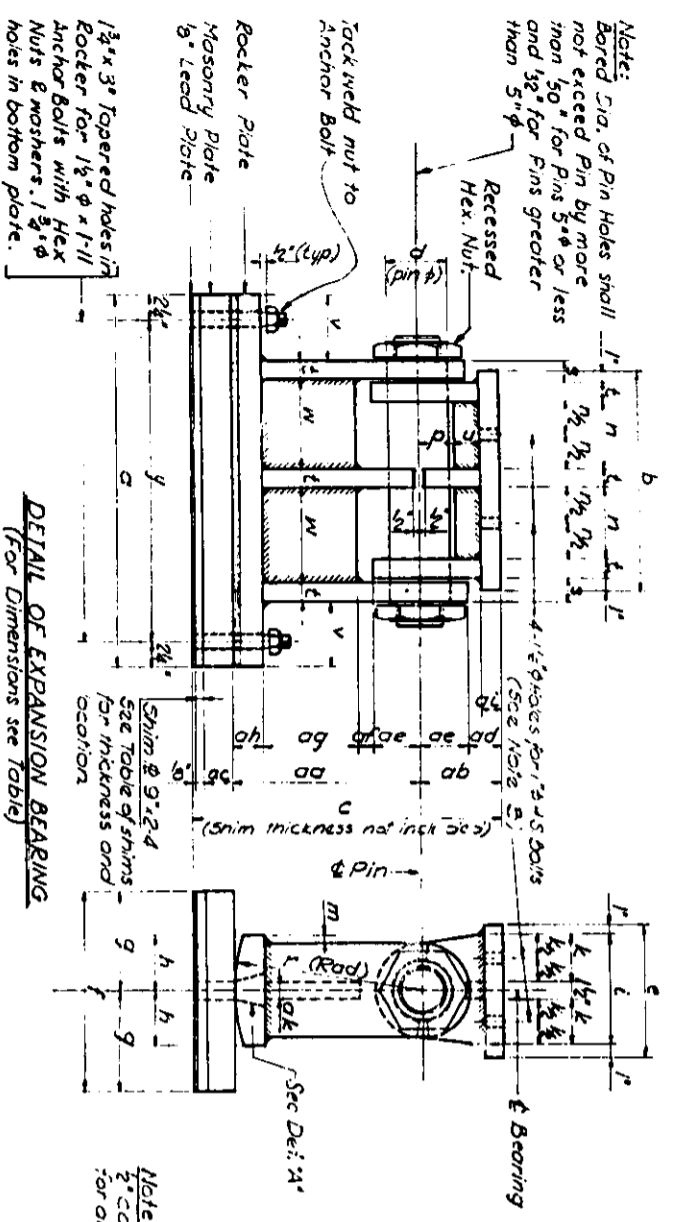
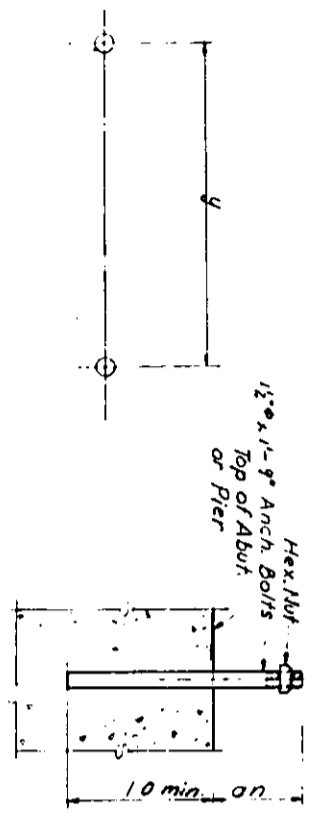


TABLE OF BEARING ASSEMBLY SHIMS

Location	Span	Span	Span	Span	Span	Span	Span	Span	Span
10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10
10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10	10-10-10

ANCHOR BOLT LOCATION FOR EXPANSION BEARING



ANCHOR BOLT LOCATION FOR FIXED BEARING

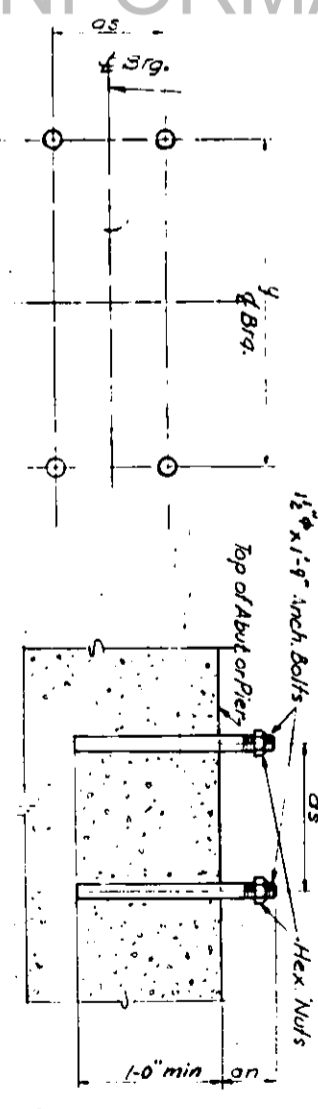
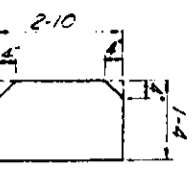


TABLE OF BEARING & ANCHOR BOLT ASSEMBLY DIMENSIONS

TYPE OF BEARING REQ'D	Dimension															
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
E1	3-7/8	1-7/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
E2	2-1/8	1-3/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
E3	2-1/8	1-3/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
E4	2-1/8	1-3/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
E5	2-1/8	1-3/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
F1	2-7/8	1-3/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
F2	2-7/8	1-3/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
F3	2-7/8	1-3/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
F4	2-7/8	1-3/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
F5	2-7/8	1-3/8	5"	1-1/2"	2"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"

Masonry to be cut according to detail for bearing E2 or E3-41 under 5'-0" clear - 13000 ASDCJ. 1 required

MASONRY & CUT DETAIL



Anchor bolts shall be grouted into drilled holes after bed has set in place, or bolts of bed per may be bolted to the masonry.

BEARING END DETAIL
The location of the anchor bolts and vertical alignment of the expansion bearings shall be adjusted to the temperature of the time of erection. See A1 54 917.

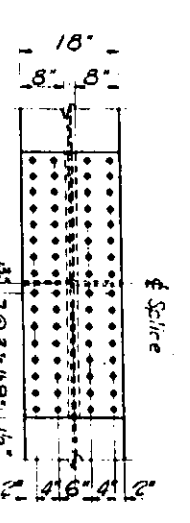
NOTE: The 1/2" H.S. bolts to be bearing type. Threads to be excluded from the contact surfaces.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
ROADS
POPULAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B", "C" AND "D"
RAMPS "M" AND "N"

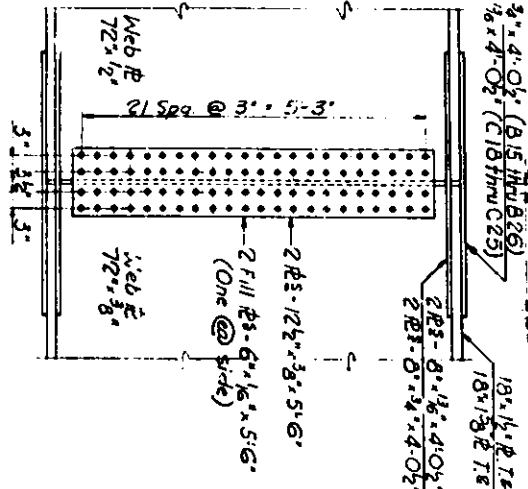
DESIGNED BY: R.M.K.
DRAWN BY: Geo. S. D.
CHECKED BY: A.S.
APPROVED BY: K.A.

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
H. W. LOGGNER, INC. ENGINEERS
CHICAGO, ILLINOIS

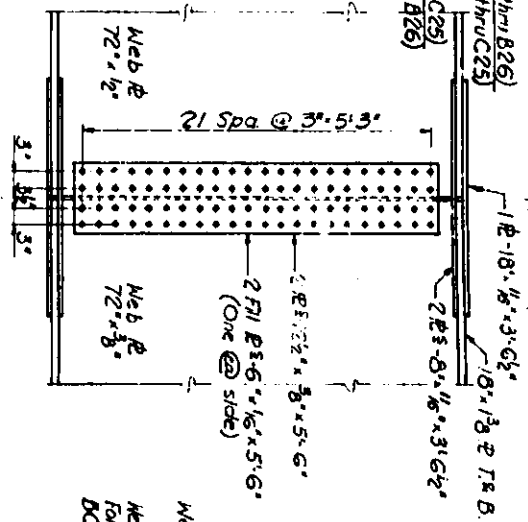
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	165
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			



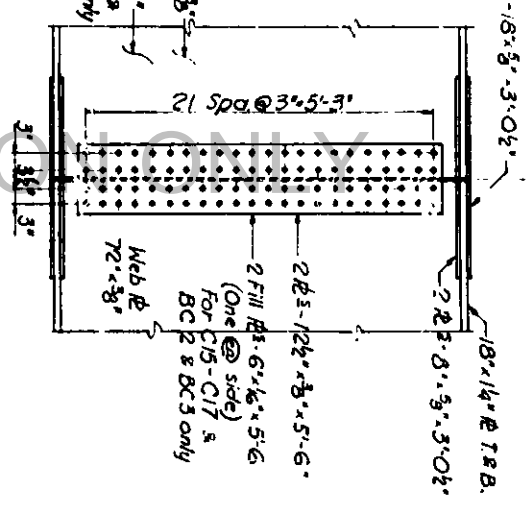
SPANS C18 through C21
 SPANS C22 through C25
 SPANS B15 through B18
 SPANS B19 through B22
 & B23 through B26



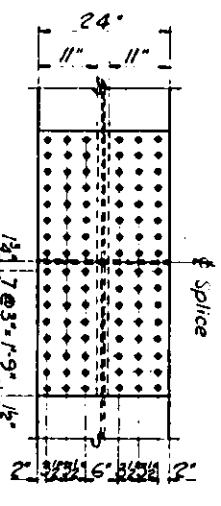
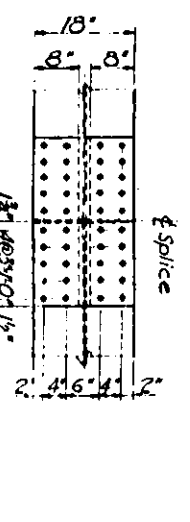
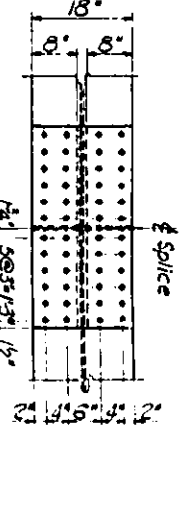
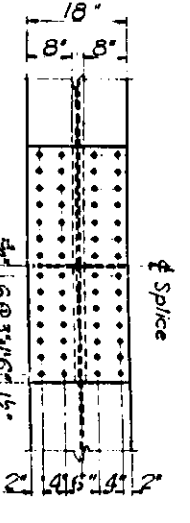
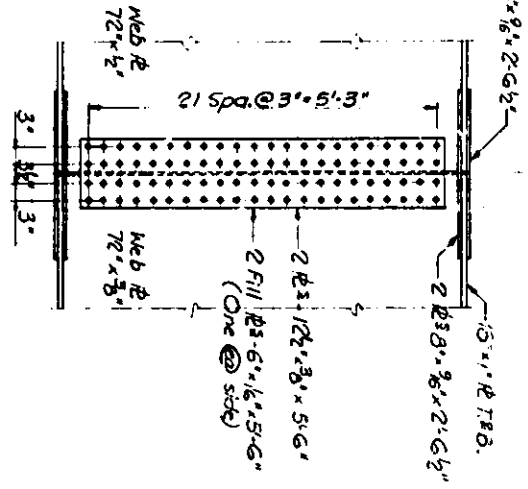
SPANS BCI and BC4



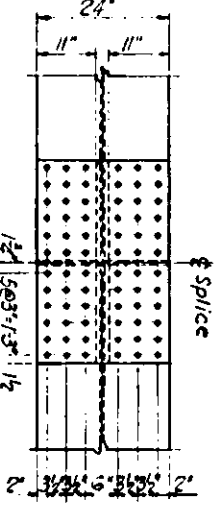
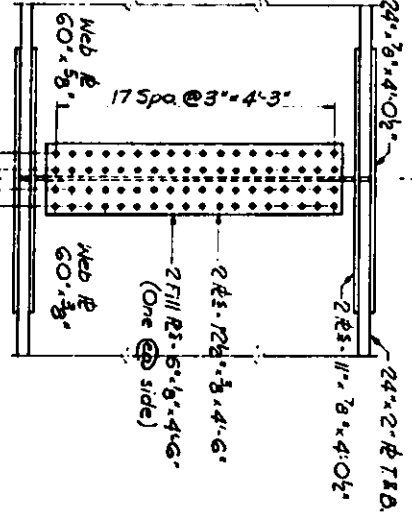
SPANS BC2 through BC3
 SPANS BC5 through BC7
 SPANS B8 through B10
 SPANS C8 through C10
 & C15 through C17



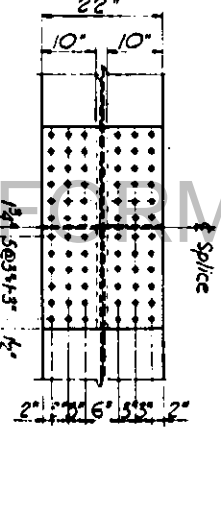
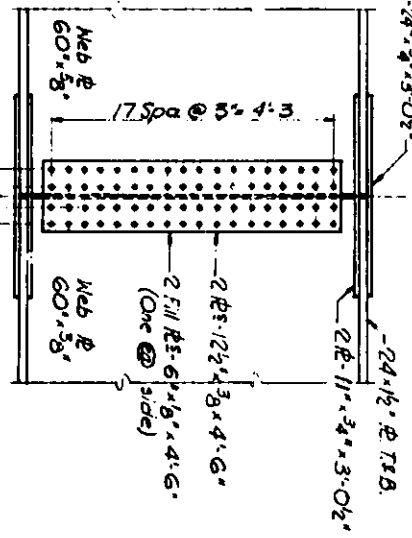
SPANS B12 through B14
 SPANS C12 through C14
 & B28 through B30



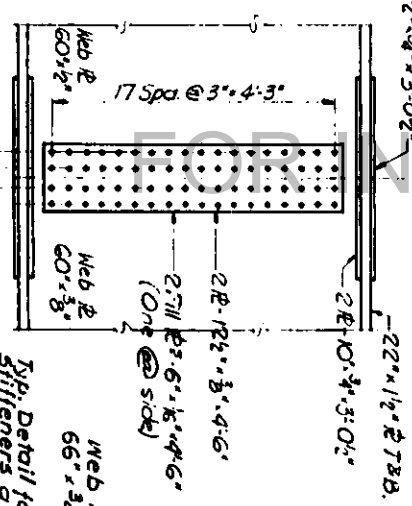
SPANS C26 and C27



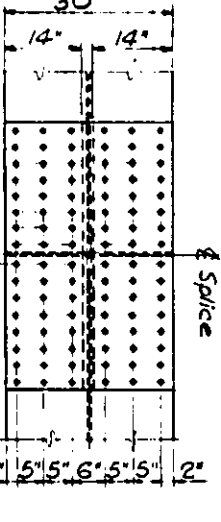
SPANS C28 through C30



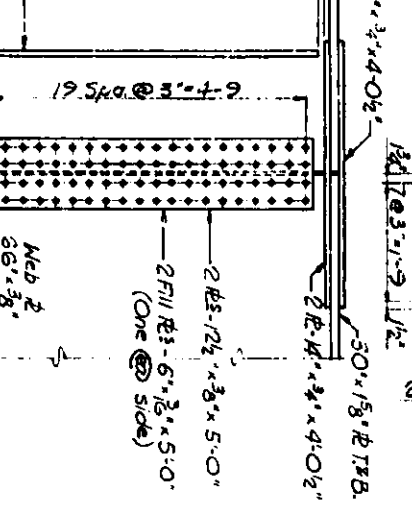
SPANS S11 through S15
 SPANS M4 through M6



Typ. Detail for Stiffeners of Splices



SPANS A25 through A28

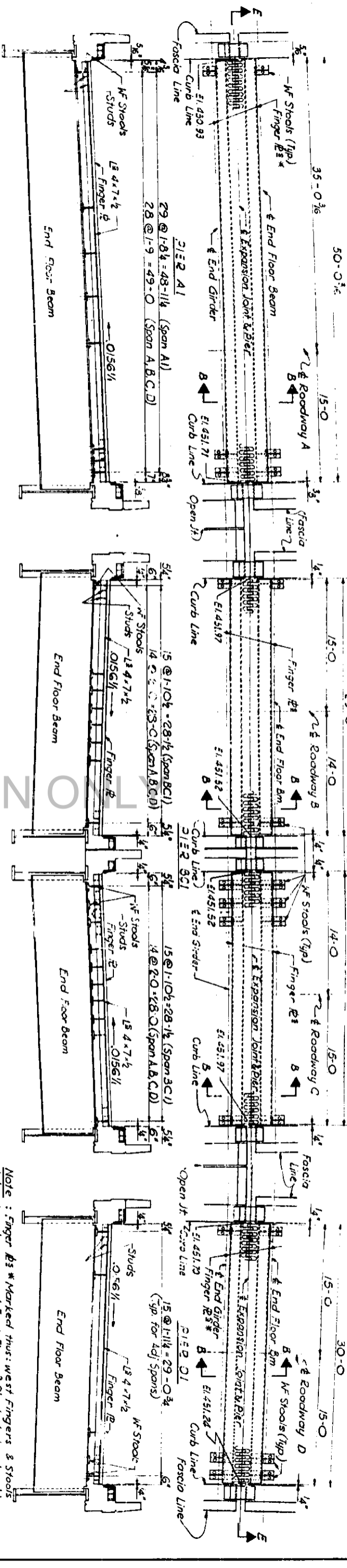


Note:
 Typ. Detail of stiffeners of splices shown on splice detail for spans A25 thru A28

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAY LOGS.
 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. LOCKNER, INC. ENGINEERS
 CHICAGO, ILLINOIS SHEET 165-241

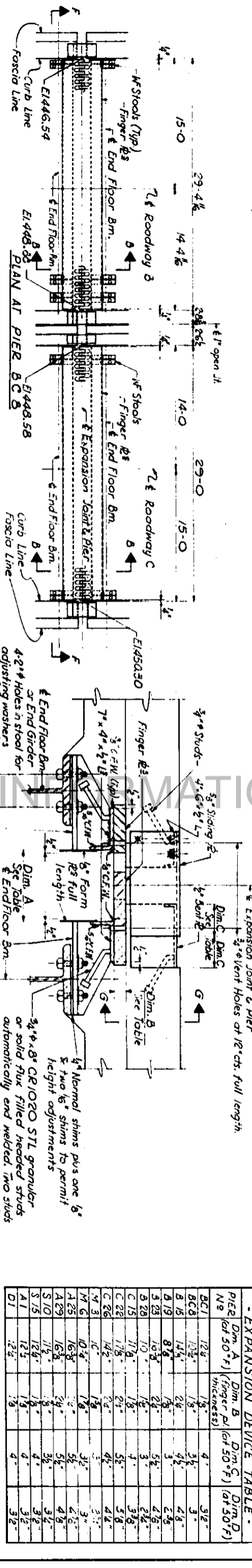
DESIGNED BY: S.B. GEO. S. P.
 CHECKED BY: A.J.
 APPROVED BY: K.A.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS
E. I. -70	82-34VB	ST. CLAIR	287
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT		166



Note: All Dimensions are Along & of Expansion Joint Axis Per

SECTION E-E



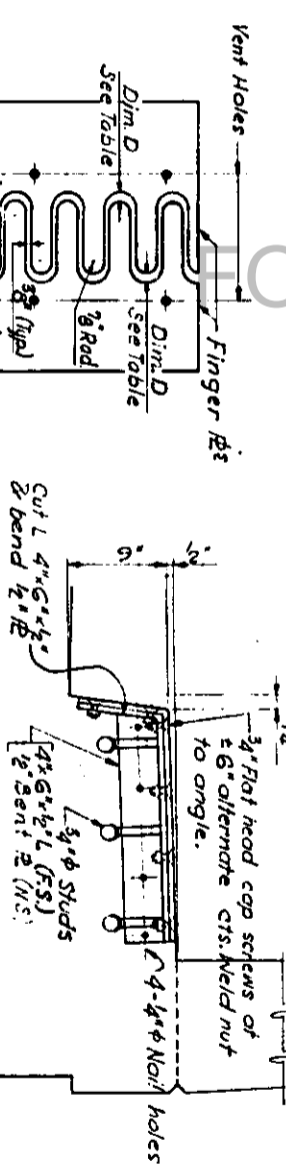
Note: Finger #3 * Marked thus: west Fingers & Stools to be placed as required. East Finger & Stools to be stored in shop until they are needed, see Special Provisions Table.

- EXPANSION DEVICE TABLE -

PIER NO	Dim. A (at 50°F)	Dim. B (finger pl. at 50°F)	Dim. C (at 50°F)	Dim. D (at 50°F)
BC1	12 1/4"	1 7/8"	4"	3 1/2"
BC8	13 1/4"	1 7/8"	3 1/4"	3 1/2"
B18	14 1/4"	2 1/4"	4 1/2"	4 1/8"
B19	8 1/4"	1 7/8"	3"	2 1/8"
S23	10 3/4"	1 7/8"	5 1/4"	4 1/8"
B28	10 3/4"	1 7/8"	3"	2 1/8"
C15	17 1/4"	1 7/8"	4 1/4"	3 1/8"
C22	17 1/4"	2 1/4"	5 1/4"	5 1/8"
C26	14 1/4"	2 1/4"	4 1/2"	3 1/2"
N3	10 1/4"	1 7/8"	3 1/2"	3 1/4"
N6	10 3/4"	2"	5 1/2"	4 1/2"
A29	16 3/4"	2 1/4"	5 1/4"	4 1/8"
S10	11 1/4"	1 7/8"	3 1/2"	3 1/2"
S15	12 1/4"	1 7/8"	4"	3 1/2"
A1	12 1/4"	1 7/8"	4"	3 1/2"
D1	12 1/4"	1 7/8"	4"	3 1/2"

Temperature's range = -30°F to 130°F with 50°F = Normal.

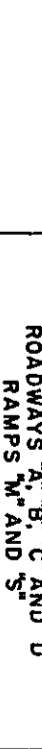
SECTION B-B



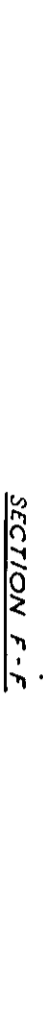
Note: 3/4" Flat head cap screws of 1/2" Dia. alternate cts. Weld nut to angle.
3/4" x 8" CR1020 STL granular or solid flux filled headed studs automatically end welded. Two studs spaced symmetrical between each pair of supports.
Note: tack weld 1/2" x 1/2" x 1/2" angles at 2" lengths on 18" centers.
1/4" Normal shims plus one 1/2" x two 1/2" shims to permit height adjustments.

FINGER # CUTTING DETAIL

SECTION G-G



SECTION F-F



DESIGNED BY: FMB
DRAWN BY: GEO. S. D.
CHECKED BY: A. J.
APPROVED BY: K. A.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & ENGINEERS
DIVISION OF HIGHWAYS
EXPANSION DEVICE
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B", "C" AND "D"
RAMP "M" AND "S"

E. I. R. 70 ST. CLAIR CO. SECTION 82-34VB
H. W. LOCKNER, INC. ENGINEERS
CHICAGO, ILLINOIS SHEET 1310241

DESIGNED BY *ENR*
 DRAWN BY *Geo S.P.*
 CHECKED BY *A.S.*
 APPROVED BY *K.A.*

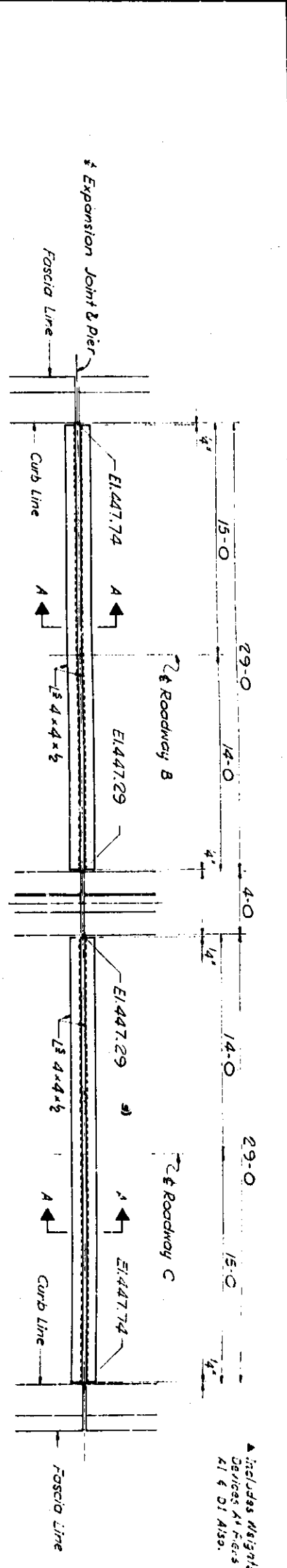
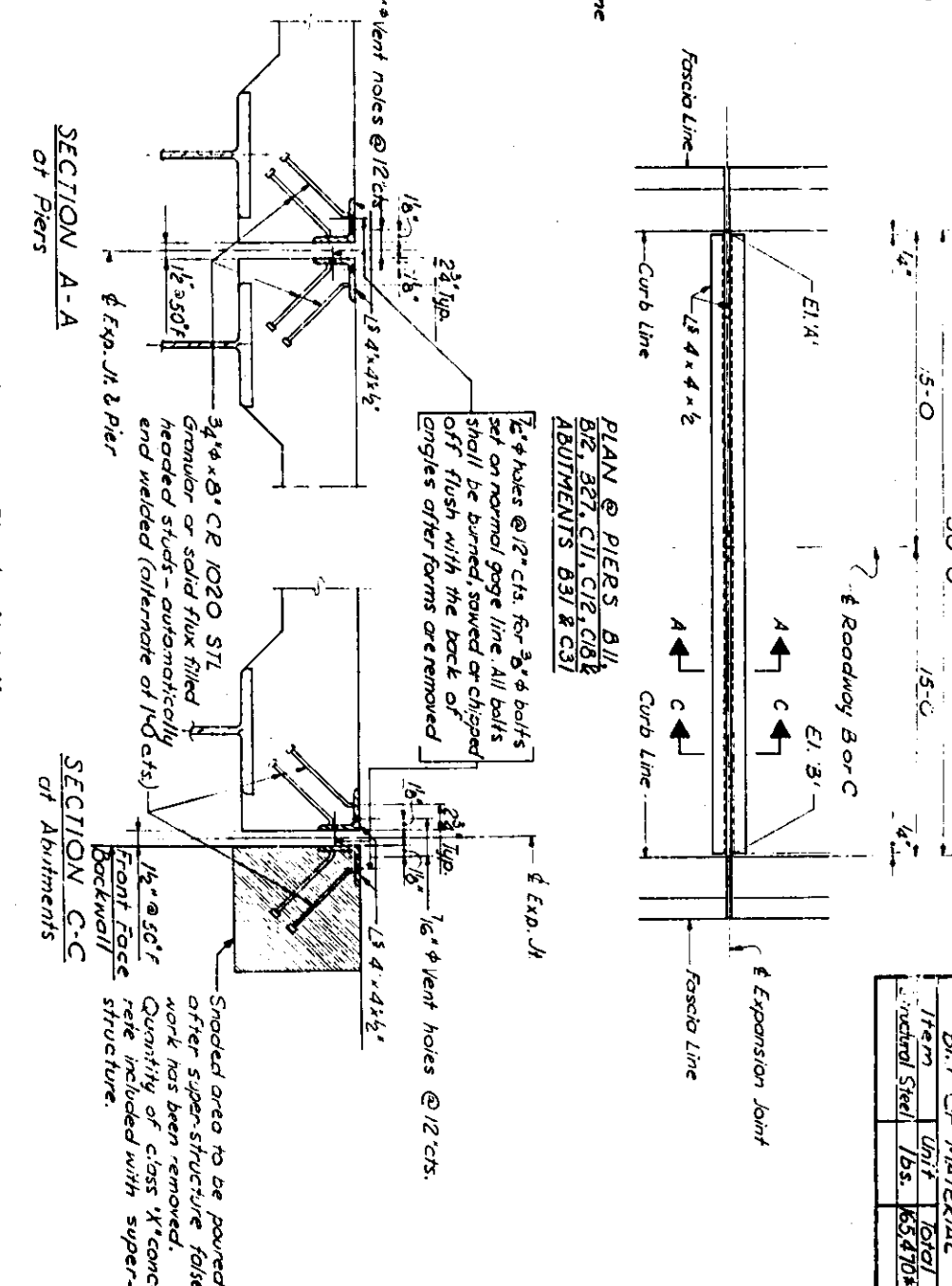
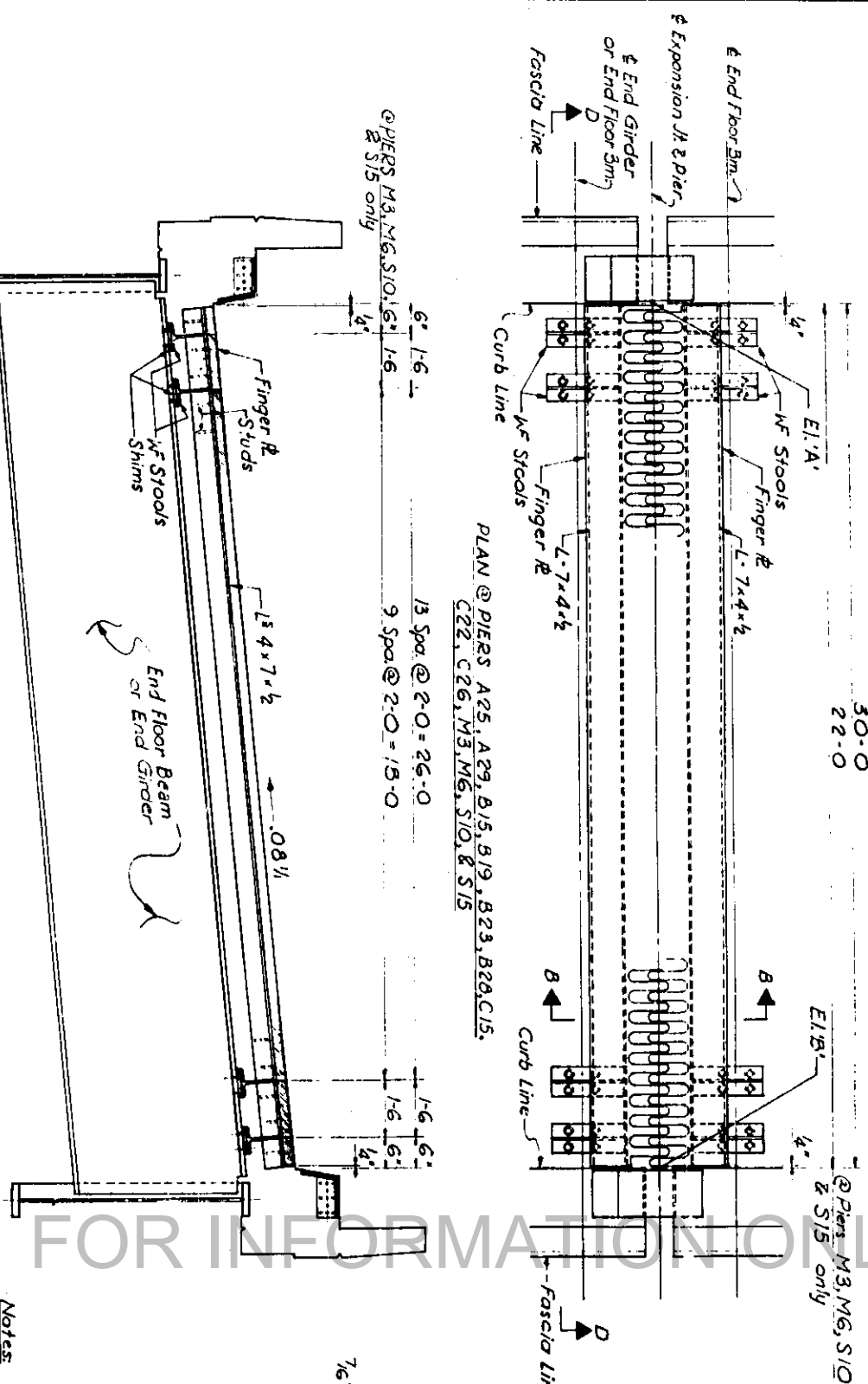


TABLE OF ELEVATIONS & WEIGHTS OF EXPANSION DEVICE

PIER	EI. A	EI. B	WEIGHT	PIER EI. A	EI. B	WEIGHT
A25	467.43	469.84	9,685	C18	453.55	455.95
A29	467.14	457.54	9,685	C26	454.15	456.55
B C1	See Plan	58,005	58,005	C26	451.01	453.41
B C5	See Plan	1,612	M 3	474.72	476.48	5,949
B C8	See Plan	15,318	M 6	475.91	477.70	5,949
B11	447.90	450.30	834	S10	481.76	483.52
B12	448.32	450.72	834	S15	494.45	496.21
B19	452.12	454.52	7,138			
B21	451.85	454.25	9,402			
B27	448.08	450.28	834			
B28	446.53	448.93	7,198			
C11	449.82	452.22	834			
C12	450.24	452.64	834			
C15	451.83	454.23	8,046			

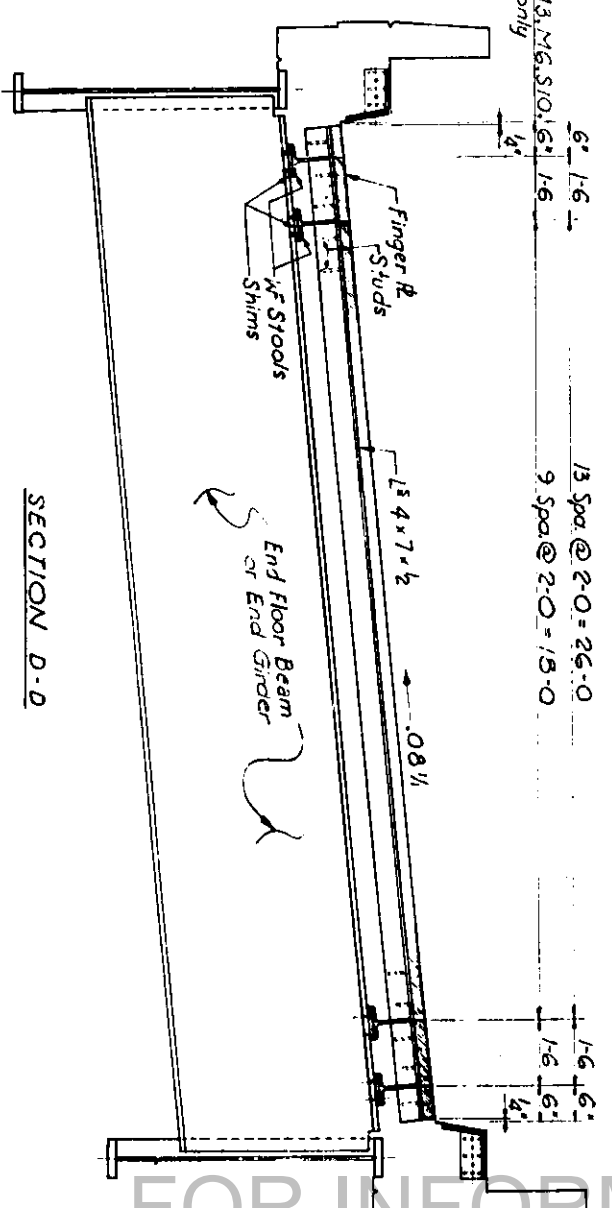
Bill of Material

Item	UNIT	TOTAL
Structural Steel	Lbs.	65,470.8



Notes:
 For Section B-B and Expansion Device Table see Sh. No. 131. All piers A25 - A29 - M3 - M6 - S10 & S15 only the Finger #3 & Stools that can be placed immediately shall be shipped; the future portions shall be stored in shop until they are needed, see Special Provisions.

SECTION D-D



STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS
 EXPANSION DEVICE
 POPULAR STREET BRIDGE APPROACHES
 ROADWAYS "A", "B" AND "C"
 RAMPS "M" AND "S"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HWB
 H. W. LOGGNER, INC. ENGINEERS
 CHICAGO, ILLINOIS

SHEET 32 OF 241

ROADWAY A SHIMS

Fl. Bm. No.	Detail A				Detail B				Detail C			
	f1	f2	f3	f4	f1	f2	f3	f4	f1	f2	f3	f4
1 Thru 4	3/8	1/2	5/8	1	Same as detail A				Same as detail A			
5 Thru 8	7/8	1 1/8	1 1/4	1 1/2	Same as detail A				Same as detail A			
9 Thru 12	1 1/8	1 1/4	1 1/2	1 3/4	Same as detail A				Same as detail A			
13 Thru 16	1 1/4	1 1/2	1 3/4	2	Same as detail A				Same as detail A			
17 Thru 20	1 1/2	1 3/4	2	2 1/4	Same as detail A				Same as detail A			
21 Thru 24	1 3/4	2	2 1/4	2 3/4	Same as detail A				Same as detail A			
25 Thru 27	2	2 1/4	2 3/4	3	Same as detail A				Same as detail A			

ROADWAY B SHIMS

Fl. Bm. No.	Detail A				Detail B				Detail C			
	f1	f2	f3	f4	f1	f2	f3	f4	f1	f2	f3	f4
1 Thru 6	1/8	1/4	3/8	1/2	Same as detail A				Same as detail A			
7 Thru 10	1/4	3/8	1/2	3/4	Same as detail A				Same as detail A			
11 Thru 18	3/8	1/2	5/8	1	Same as detail A				Same as detail A			
19 Thru 21	1/2	3/4	1	1 1/4	Same as detail A				Same as detail A			
22	3/4	1	1 1/4	1 1/2	Same as detail A				Same as detail A			
23	1	1 1/4	1 1/2	1 3/4	Same as detail A				Same as detail A			
24	1 1/4	1 1/2	1 3/4	2	Same as detail A				Same as detail A			
25	1 1/2	1 3/4	2	2 1/4	Same as detail A				Same as detail A			
26	1 3/4	2	2 1/4	2 3/4	Same as detail A				Same as detail A			
27	2	2 1/4	2 3/4	3	Same as detail A				Same as detail A			
28	1/8	1/4	3/8	1/2	Same as detail A				Same as detail A			
29	1/4	3/8	1/2	3/4	Same as detail A				Same as detail A			
30	3/8	1/2	5/8	1	Same as detail A				Same as detail A			
31	1/2	3/4	1	1 1/4	Same as detail A				Same as detail A			
32	3/4	1	1 1/4	1 1/2	Same as detail A				Same as detail A			
33	1	1 1/4	1 1/2	1 3/4	Same as detail A				Same as detail A			
34 Thru 78	Same as detail A											
79 Thru 81	Same as detail A											
82 Thru 87	Same as detail A											
88 Thru 93	Same as detail A											
94 Thru 99	Same as detail A											
100 Thru 102	Same as detail A											
103 Thru 108	Same as detail A											
109 Thru 114	Same as detail A											
115 Thru 120	Same as detail A											
121 Thru 123	Same as detail A											
124 Thru 138	Same as detail A											

ROADWAY C SHIMS

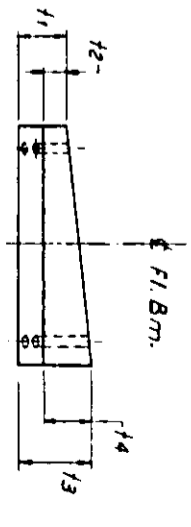
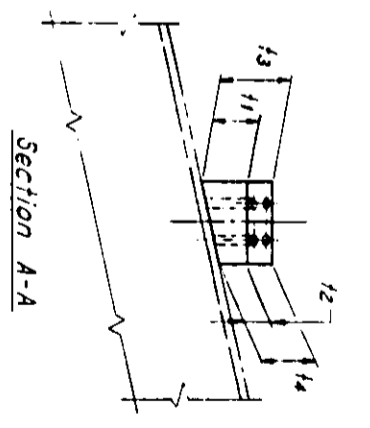
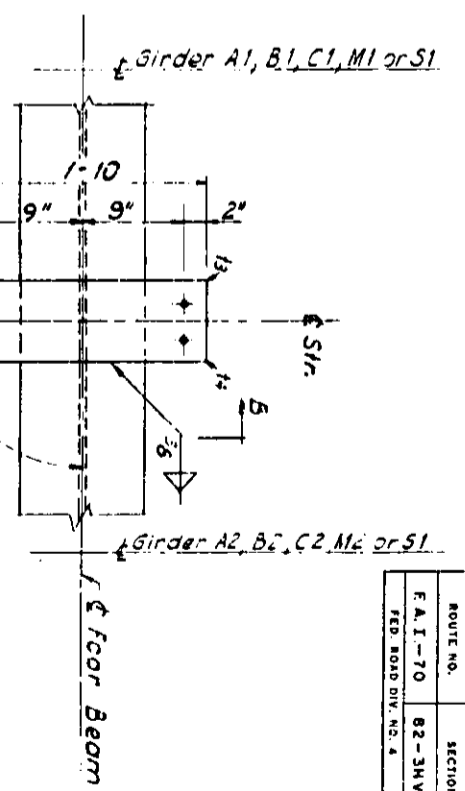
Fl. Bm. No.	Detail A				Detail B				Detail C			
	f1	f2	f3	f4	f1	f2	f3	f4	f1	f2	f3	f4
1 Thru 6	1/8	1/4	3/8	1/2	Same as detail A				Same as detail A			
7 Thru 12	1/4	3/8	1/2	3/4	Same as detail A				Same as detail A			
13 Thru 18	3/8	1/2	5/8	1	Same as detail A				Same as detail A			
19 Thru 21	1/2	3/4	1	1 1/4	Same as detail A				Same as detail A			
22 Thru 28	3/4	1	1 1/4	1 1/2	Same as detail A				Same as detail A			
29	1	1 1/4	1 1/2	1 3/4	Same as detail A				Same as detail A			
30	1 1/4	1 1/2	1 3/4	2	Same as detail A				Same as detail A			
31	1 1/2	1 3/4	2	2 1/4	Same as detail A				Same as detail A			
32	1 3/4	2	2 1/4	2 3/4	Same as detail A				Same as detail A			
33	2	2 1/4	2 3/4	3	Same as detail A				Same as detail A			
34	2 1/4	2 3/4	3	3 1/4	Same as detail A				Same as detail A			
35	2 3/4	3	3 1/4	3 3/4	Same as detail A				Same as detail A			
36	3	3 1/4	3 3/4	4	Same as detail A				Same as detail A			
37 Thru 45	Same as detail A											
46 Thru 51	Same as detail A											
52 Thru 57	Same as detail A											
58 Thru 63	Same as detail A											
64 Thru 66	Same as detail A											
67 Thru 70	Same as detail A											
71 Thru 74	Same as detail A											
75 Thru 78	Same as detail A											
79 Thru 81	Same as detail A											
82 Thru 87	Same as detail A											
88 Thru 93	Same as detail A											
94 Thru 96	Same as detail A											
97 Thru 102	Same as detail A											
103 Thru 108	Same as detail A											
109 Thru 114	Same as detail A											
115 Thru 117	Same as detail A											
118 Thru 121	Same as detail A											
122 Thru 146	Same as detail A											

RAMP M SHIMS

Fl. Bm. No.	Detail A				Detail B			
	f1	f2	f3	f4	f1	f2	f3	f4
1 Thru 3	3/8	1/2	5/8	1	Same as detail A			
4 Thru 6	1/2	3/4	1	1 1/4	Same as detail A			
7 Thru 9	3/4	1	1 1/4	1 1/2	Same as detail A			
10 Thru 12	1	1 1/4	1 1/2	1 3/4	Same as detail A			
13 Thru 15	1 1/4	1 1/2	1 3/4	2	Same as detail A			

RAMP S SHIMS

Fl. Bm. No.	Detail A				Detail B			
	f1	f2	f3	f4	f1	f2	f3	f4
1 Thru 3	3/8	1/2	5/8	1	Same as detail A			
4 Thru 6	1/2	3/4	1	1 1/4	Same as detail A			
7 Thru 9	3/4	1	1 1/4	1 1/2	Same as detail A			
10 Thru 12	1	1 1/4	1 1/2	1 3/4	Same as detail A			
13 Thru 15	1 1/4	1 1/2	1 3/4	2	Same as detail A			
16 Thru 19	2	2 1/4	2 3/4	3	Same as detail A			
20 Thru 21	2 1/4	2 3/4	3	3 1/4	Same as detail A			
22 Thru 24	2 3/4	3	3 1/4	3 3/4	Same as detail A			
25 Thru 27	3	3 1/4	3 3/4	4	Same as detail A			



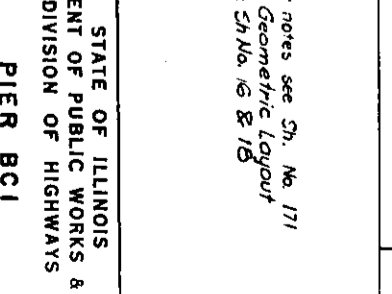
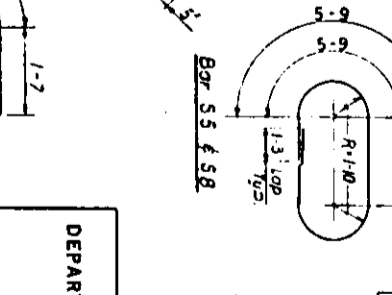
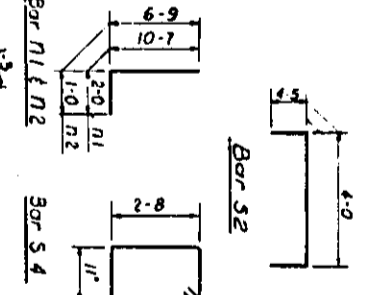
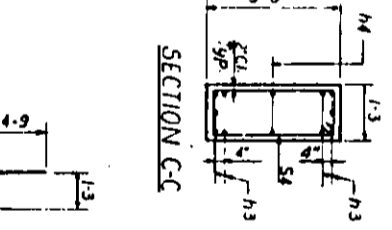
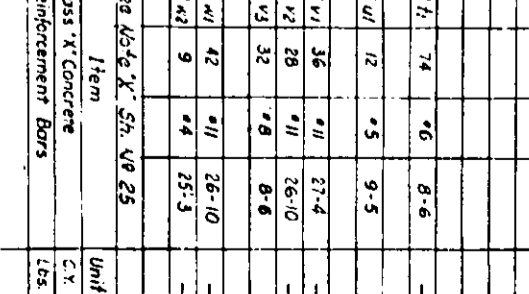
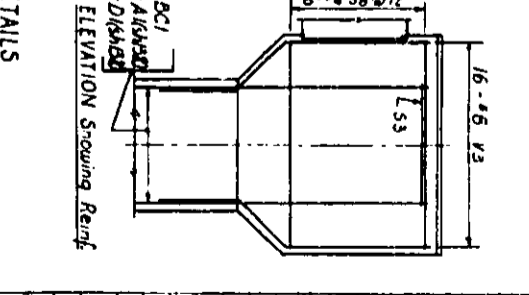
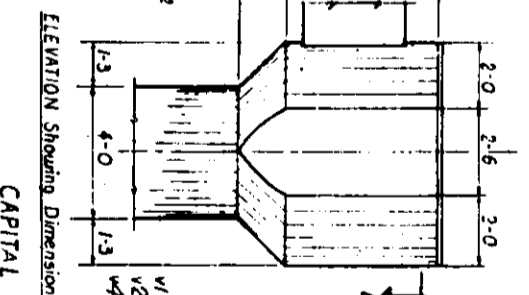
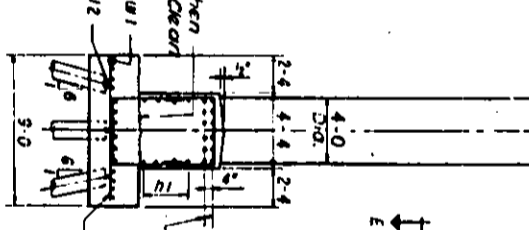
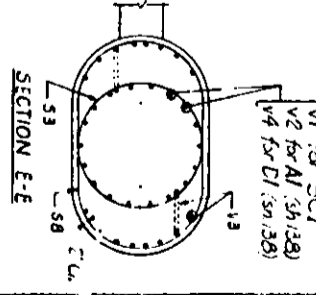
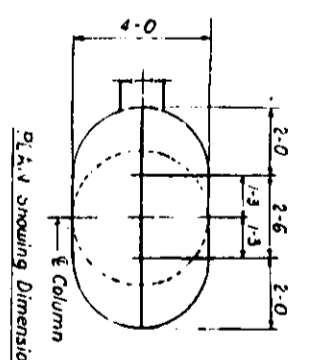
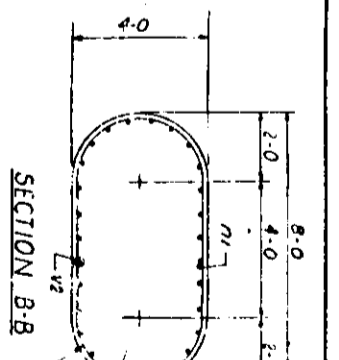
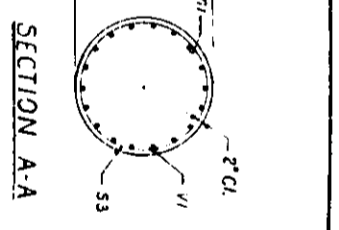
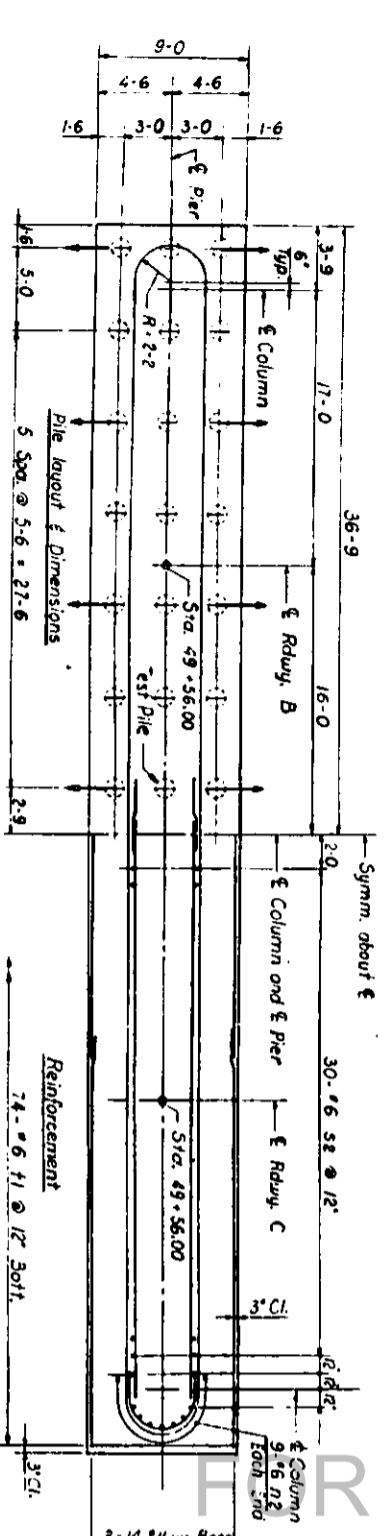
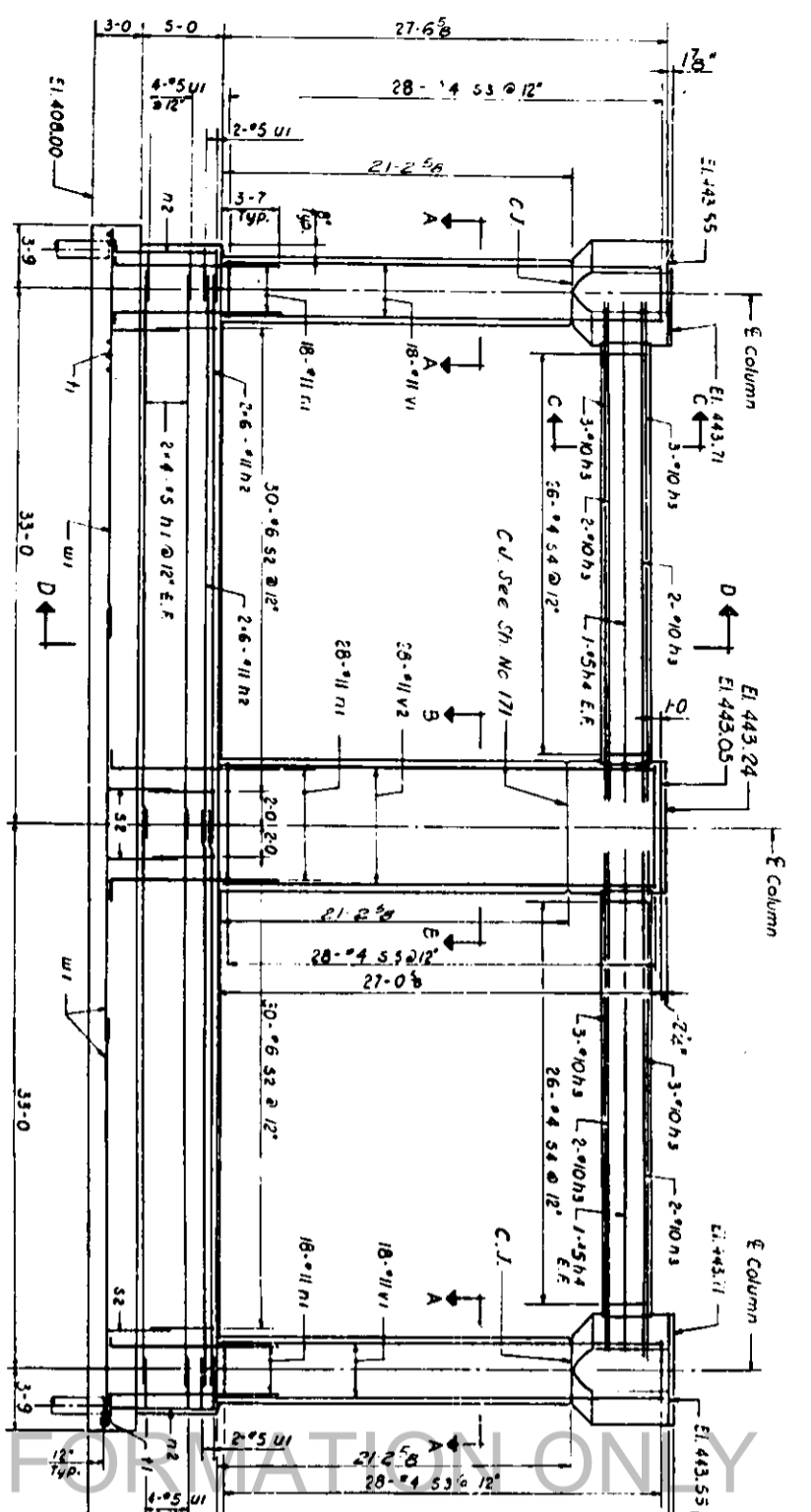
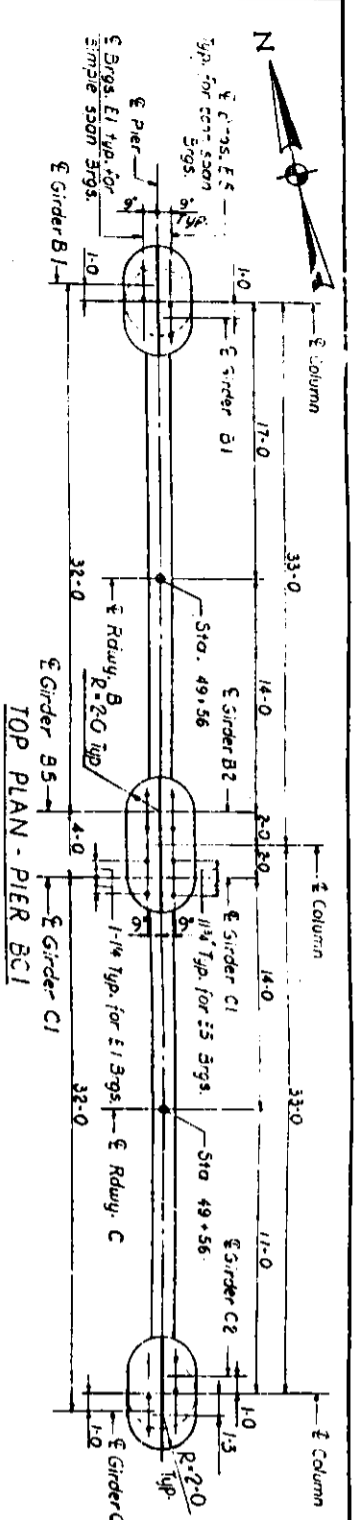
Note:
If additional shims are required,
the rest of these shims is to be
incidental to structural steel.

DETAIL A, B, OR C
Shim shown at floor beam 37 thru 75
Other shims are similar

NOTE
For location of Detail A, B or C
See Floor Beam Schedule.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E.A.I.-70	82-3NB	ST. CLAIR	287	168
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			

DESIGNED BY: R.M.E.
CHECKED BY: J.M.
APPROVED BY: A.J.C.
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & B.
DIVISION OF HIGHWAYS
STRINGER SHIMS
POPULAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B" AND "C"
RAMPS "M" AND "S"
F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3NB
H. W. LOCKNER, INC.
ENGINEERS
CHICAGO ILLINOIS
SHEET 168 OF 241



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS
FAI-70	B2-3HVB	ST. CLAIR	289
FED. ROAD DIV. NO. 4	ILLINOIS	PROJ.:	172

BILL OF MATERIAL			
No.	Qty	Reqd. Size	Length
13771	16	5	34.4
13772	24	11	35.4
13773	20	10	30.4
13774	4	5	28.6
13775	64	11	12.7
13776	18	6	7.9
13752	120	6	12.10
13753	56	4	12.9
13754	52	4	8.0
13755	28	4	20.9
13756	12	4	17.9
13757	74	6	8.6
13758	12	5	9.5
13759	36	11	27.4
13760	28	11	26.10
13761	32	8	8.6
13762	42	11	26.10
13763	9	4	25.3

Item	Qty	Unit	Total
Class 'X' Concrete	194.8	C.Y.	194.8
Reinforcement Bars	33040	Lbs	33040
Concrete Piles	1645*	L.F.	1645*
Test Piles (Concrete)	1	EA.	1

For notes see Sh. No. 171
For Geometric Layout
See Sh. No. 16 & 15

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS &
DIVISION OF HIGHWAYS
PIER B C1
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "B" AND "C"

FAI RT. 70 ST. CLAIR CO. SECTION 82-3HVB
N. W. LOGGNER, INC. ENGINEERS
CHICAGO, ILLINOIS
SHEET 157 of 241

FOR INFORMATION ONLY

DESIGNED BY: MC
DRAWN BY: E. M. U.
CHECKED BY: E. M. U.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-34VB	ST. CLAIR	287	173
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				

BILL OF MATERIAL

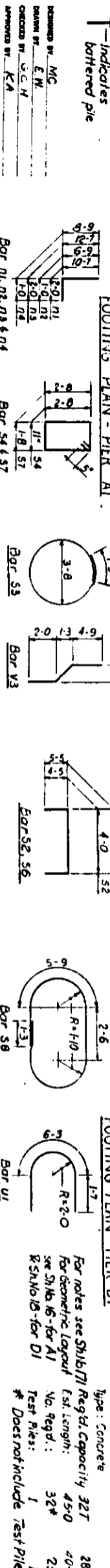
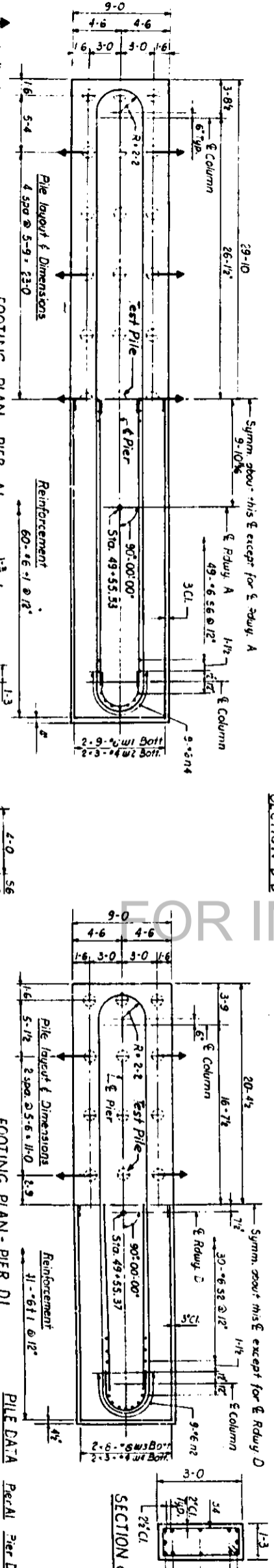
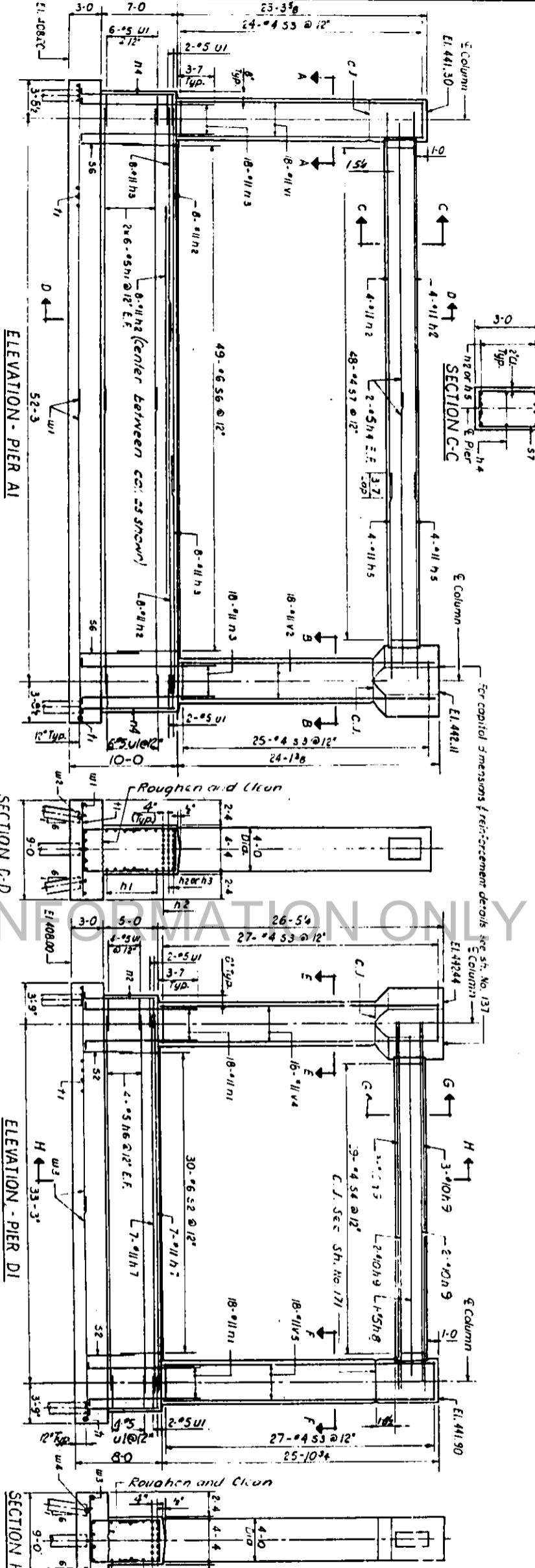
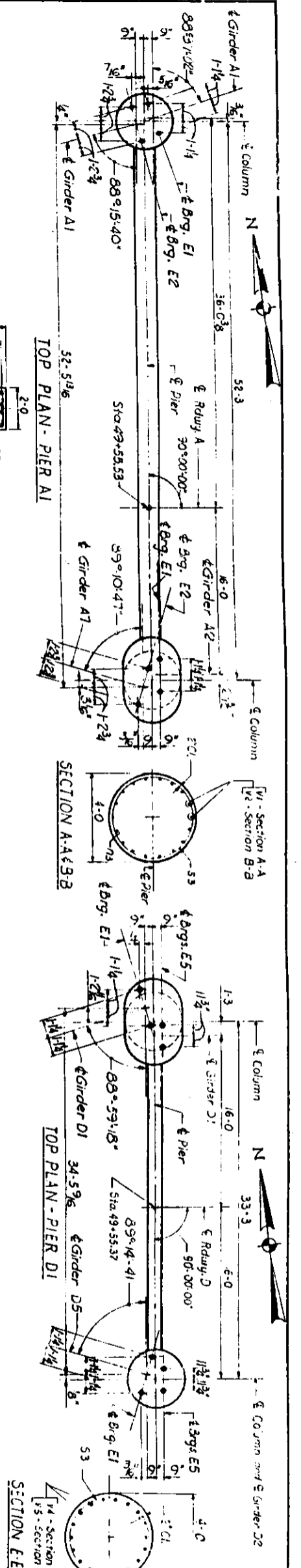
Work	No. Reqd.	Per Ft. or Per Yd.	Size	Length	Shape
136 N1	36	11	12-5		
136 N2	10	6	7-9		
136 N3	36	11	14-7		
136 N4	18	6	9-9		
136 N5	10	10	35-6		
136 W1	16	12	8-9		
136 W2	49	54	12-10		
136 W3	29	29	8-0		
136 W4	98	6	14-10		
136 W5	48	4	9-6		
136 W6	6	4	17-9		
136 V1	18	11	23-1		
136 V2	16	11	23-11		
136 V3	16	6	8-6		
136 V4	18	11	26-3		
136 V5	18	11	25-8		
136 W1	18	6	30-6		
136 W2	6	4	30-2		
136 W3	16	4	21-3		
136 W4	6	4	21-0		
Item	Unit	Total			
Class "X" Concrete	C.Y.	153.2	100.8		
Reinforcement Bars	Lbs	22,880	15,450		
Concrete Piles	L.F.	144.4	9,208		
Test Piles (Concrete)	Co.	1	1		

* See note "X" sh. No 25

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

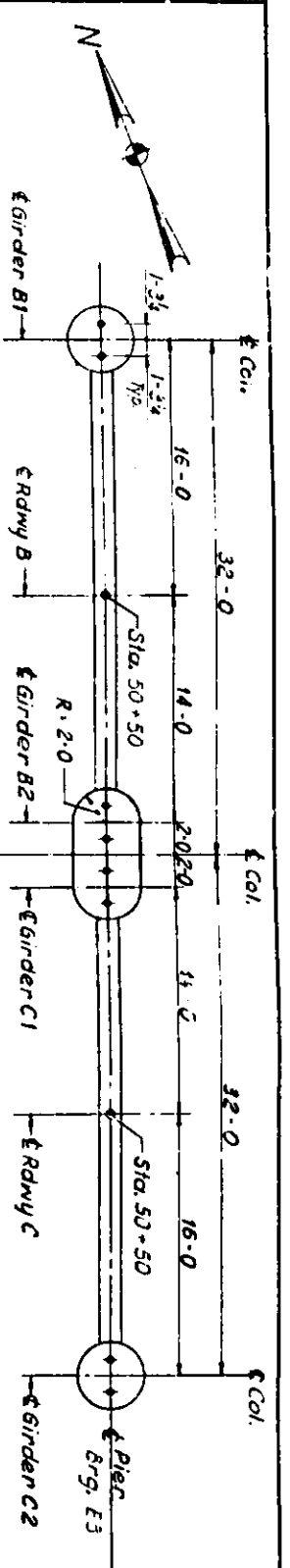
PIERS A1 AND D1
POPULAR STREET BRIDGE APPROACHES
ROADWAYS "A" AND "D"

FAI RTD TO ST. CLAIR CO. SECTION 82-34VB
H. W. JOHNSON, INC. ENGINEERS
CHICAGO, ILLINOIS

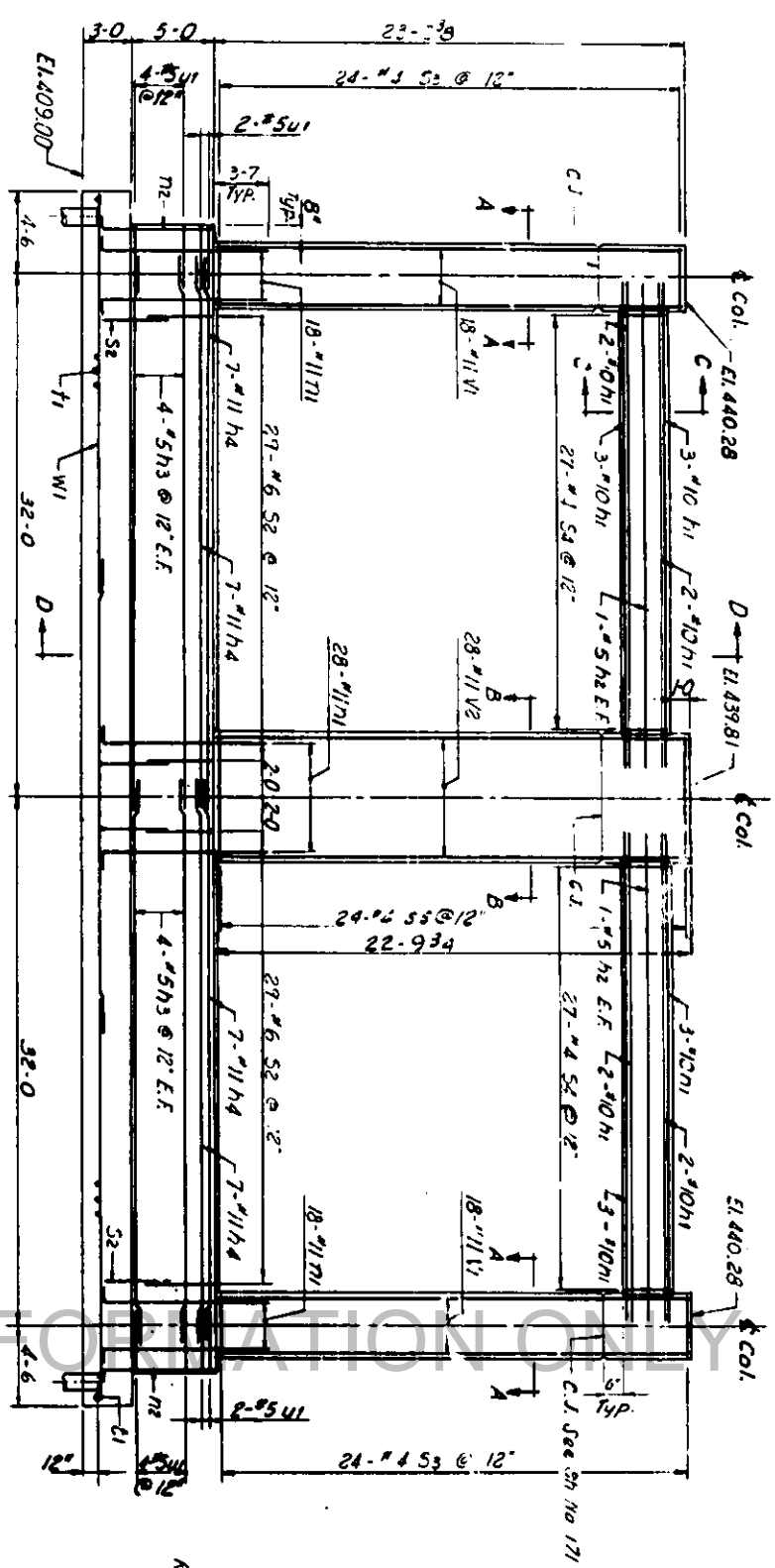
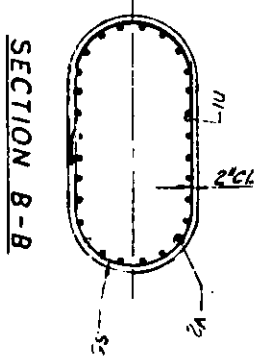
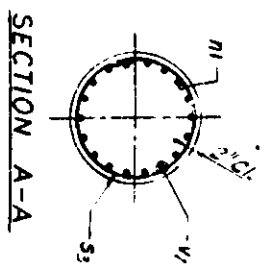


PILE DATA	Per A1	Per D1
Type: Concrete		
Req'd Capacity	32T	28T
Est. Length	45-0	40-0
No. Reqd.	32*	25*
Test Piles:	1	1
* Does not include Test Pile		

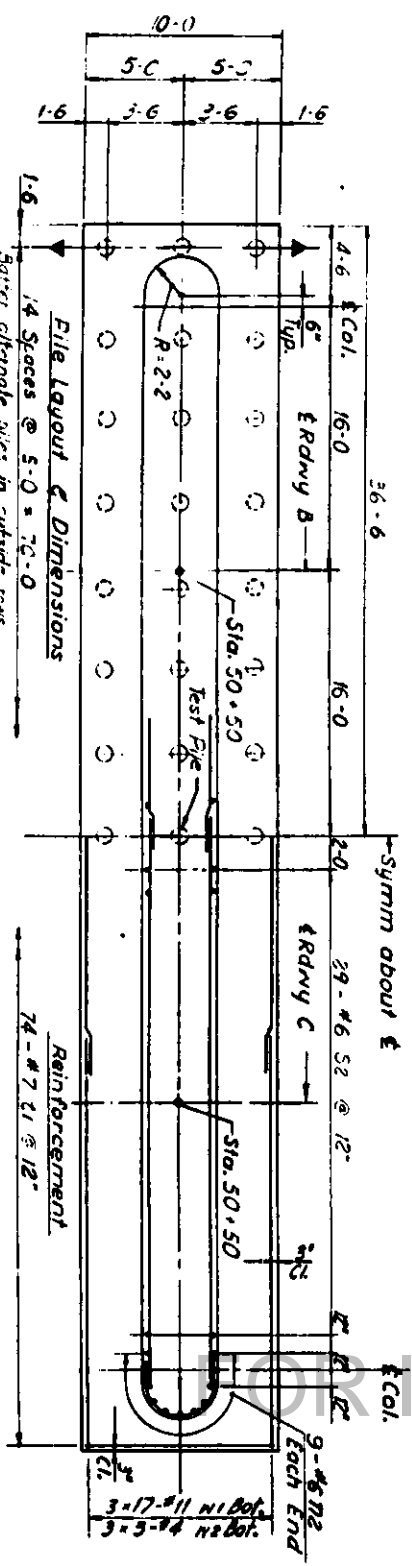
FOR INFORMATION ONLY



TOP PLAN - PIER BC2



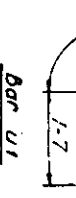
ELEVATION - PIER BC2



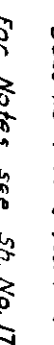
FOOTING PLAN - PIER BC2

↑ Indicates battering pile.

SECTION D-D



SECTION C-C



PILE DATA
 Type: Concrete
 Reg'd Capacity: 34T
 Est. Length: 52'-0"
 No. Reg'd.: 44*
 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	COUNT	TOTAL SHEET NO.
F.A.I.-70	82-34VB	ST. CLAIR	289
		ILLINOIS PROJECT	174

Mark	No	Reg'd Size	Length	Shape
129 H1	20	#10	30'-6"	
129 H2	2	#5	26'-6"	
129 H3	16	#5	33'-6"	
129 H4	28	#11	33'-4"	
129 H5	64	#11	12'-7"	
129 H6	18	#6	7'-9"	
129 S1	116	#6	12'-10"	
129 S2	18	#4	12'-9"	
129 S3	24	#4	8'-0"	
129 S4	24	#4	20'-9"	

Item	Unit	Total
Class 'X' Concrete	C.Y.	187.9
Reinforcement Bars	Lbs.	32,850
Concrete Piles	L.F.	2288 *
Test Piles (Concrete)	Eq.	1

DESIGNED BY: M.C.
 DRAWN BY: D.C.F.
 CHECKED BY: G.C.H.
 APPROVED BY: S.T.

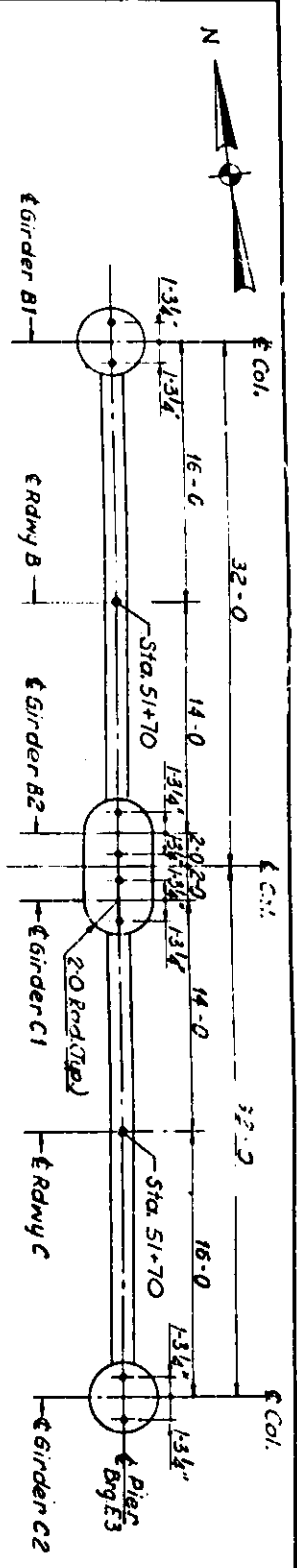
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

PIER BC2

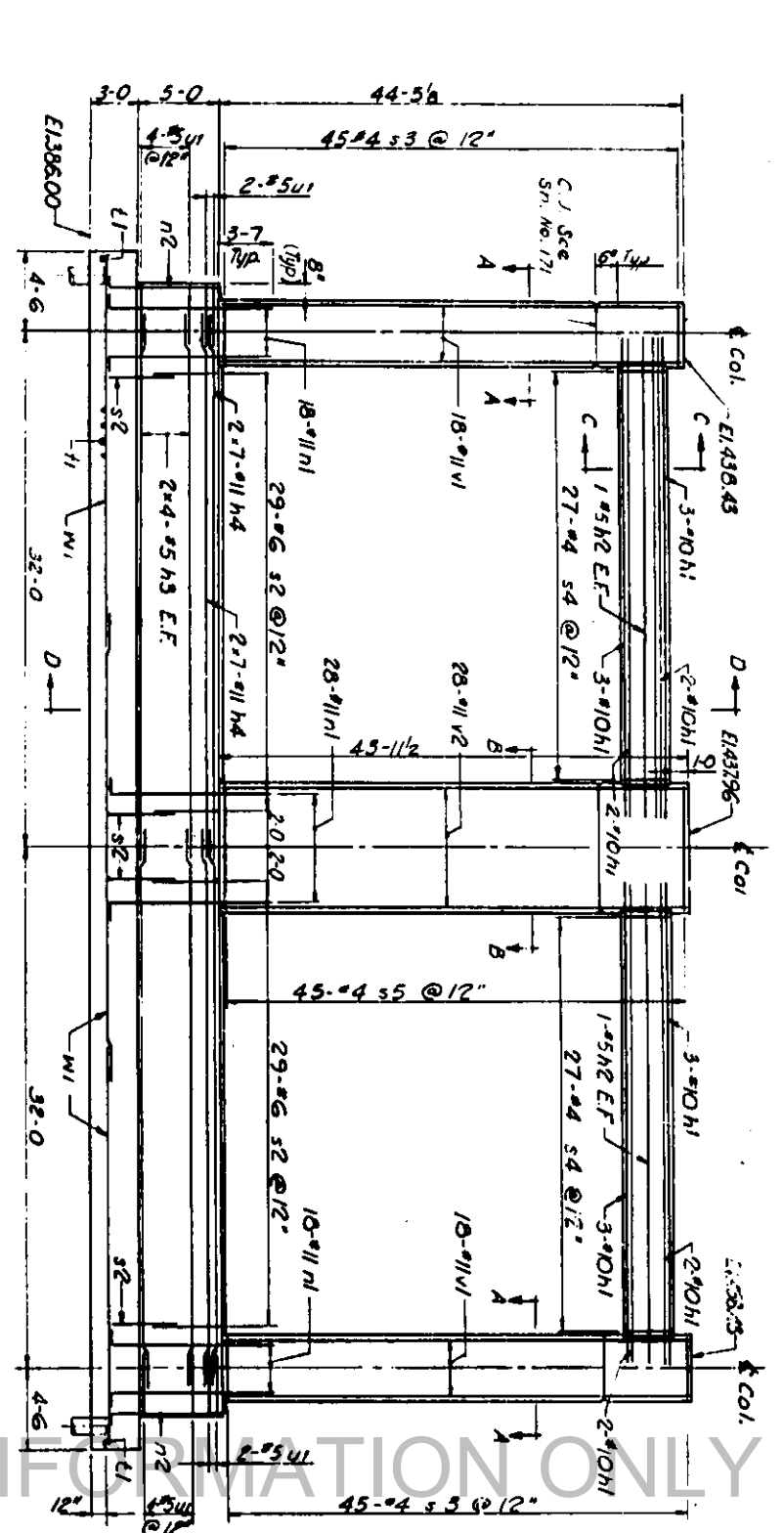
POPULAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-34VB
 H. W. LOCKNER, INC. ENGINEERS
 CHICAGO, ILLINOIS

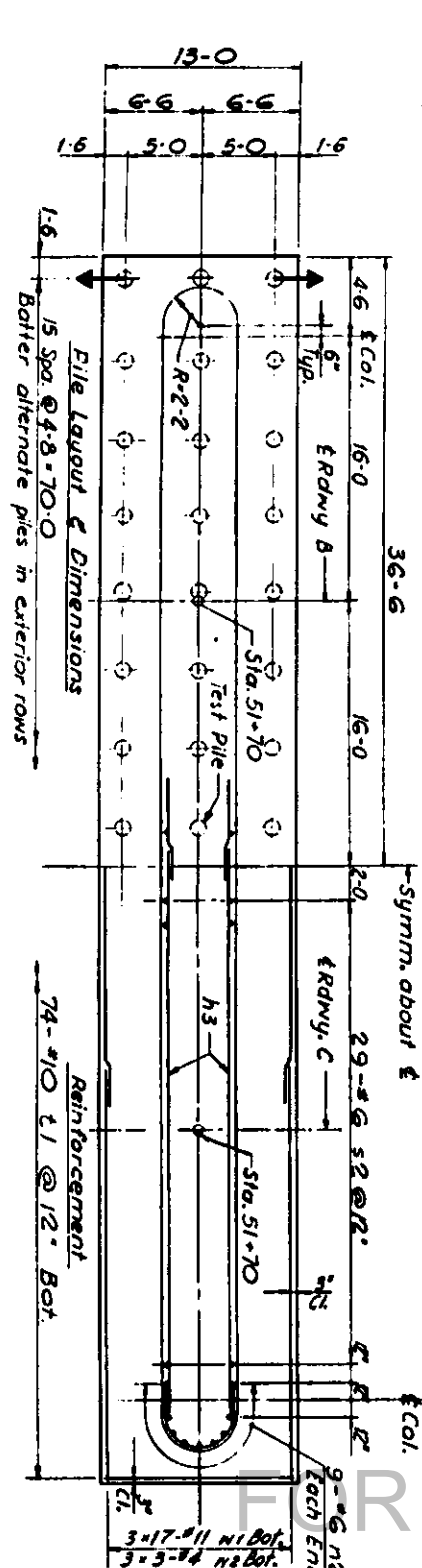
SHEET 29 OF 241



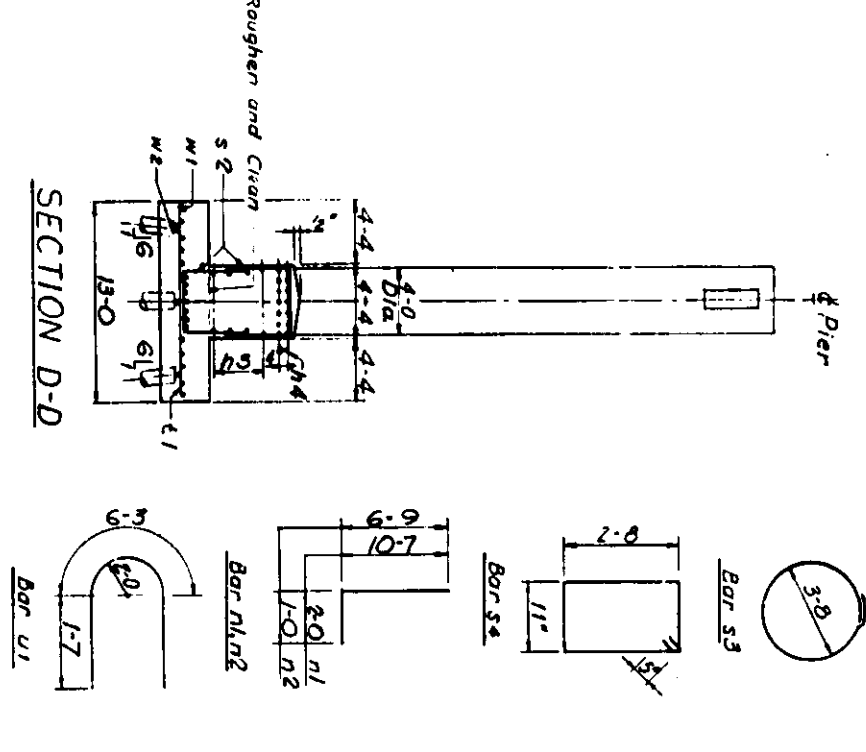
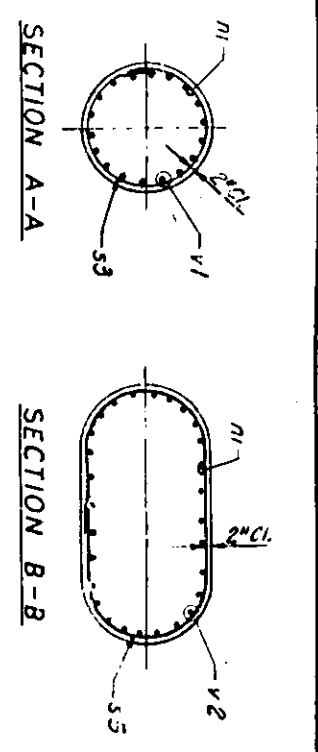
TOP PLAN - PIER BC3



ELEVATION - PIER BC3



FOOTING PLAN - PIER BC3



PILE DATA
 Type: Concrete
 Rqd Capacity: 35 T
 Est. Length: 53'-0"
 No. Rqd: 47#
 Test Pile: 1
 #Does not include Test Pile
 For notes see Sn. No. 171
 For geometric Layout see
 Sn. No. 16 & 18.

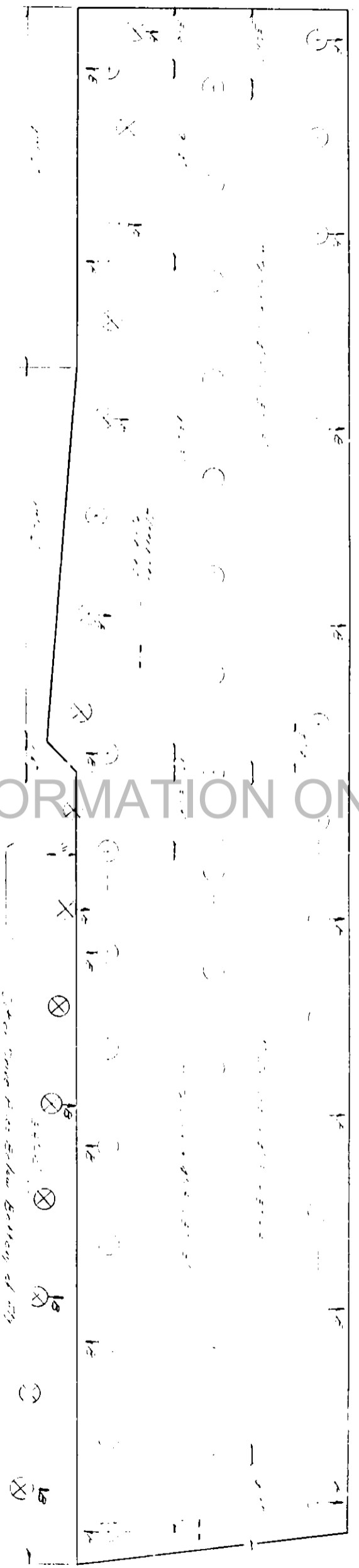
ROUTE NO.	SECTION	COURT	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-34VB	ST. CLAIR	289	175
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				

BILL OF MATERIAL				
Mark	No	Qty	Length	Shape
120h1	20	#10	30'-4"	—
120h2	4	#5	28'-6"	—
120h3	16	#5	35'-4"	—
120h4	28	#11	34'-4"	—
120n1	64	#11	12'-7"	—
120n2	18	#6	7'-9"	—
120s2	115	#6	12'-10"	—
120s3	90	#4	12'-9"	—
120s4	54	#4	8'-0"	—
120s5	45	#4	20'-10"	—
120t1	74	#10	12'-3"	—
120t2	72	#5	9'-5"	—
120v1	36	#11	44'-3"	—
120v2	28	#11	45'-9"	—
120w1	51	#11	26'-6"	—
120w2	9	#4	25'-1"	—
* See Note 'X' Sn. 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)	Eq.	1		

DESIGNED BY: M.C.
 DRAWN BY: G.E.S.P.
 CHECKED BY: G.C.H.
 APPROVED BY: K.A.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS
 PIER BC3
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"
 F.A.I.R.T. 70 ST. CLAIR CO. SECTION 82-34VB
 H. W. LOCKNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET NO. 24

PROJECT NO.	28-2	SHEET NO.	289	TOTAL SHEETS	1754
DATE	5/11/54	BY	W.C. HARRIS	CHECKED	W.C. HARRIS



LEGEND
 ○ NEW PILE
 ⊗ EXISTING PILE
 ○ BATTERY PILE

PILE DATA
 TYPE: CONCRETE
 CAPACITY: 35 TONS
 EMB LENGTH: 46'
 NO. REQUIRED: 42

EXISTING PILES

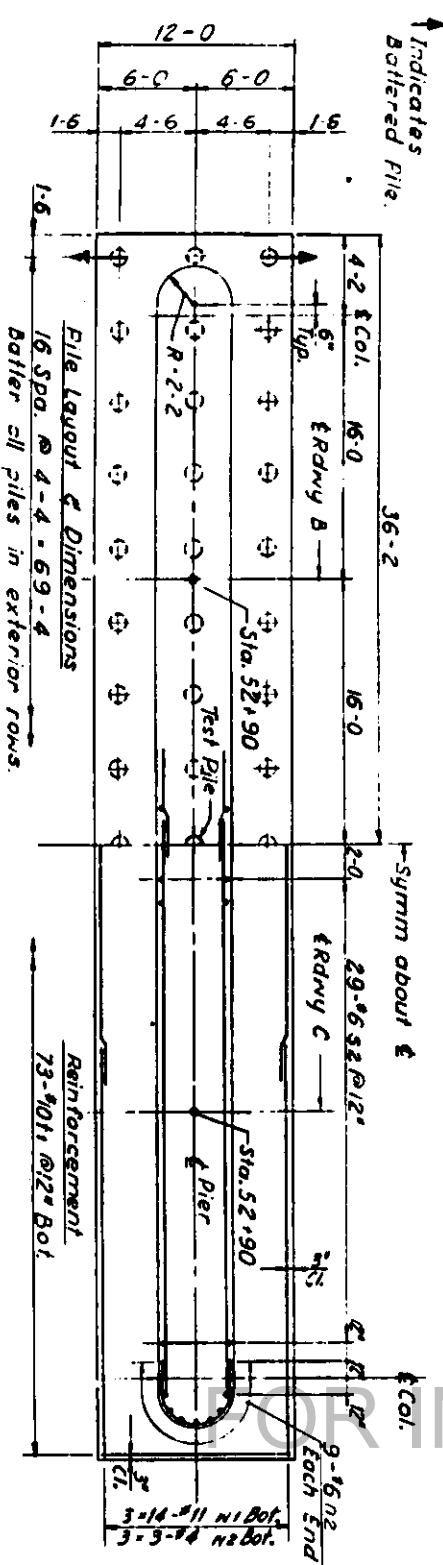
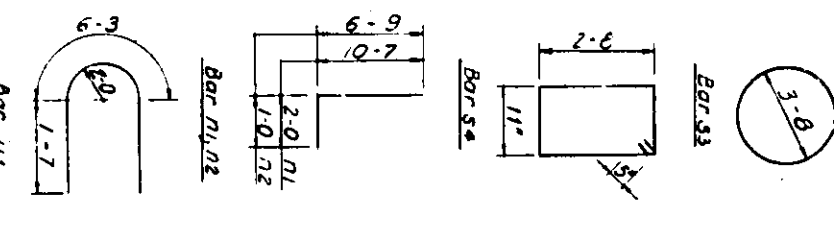
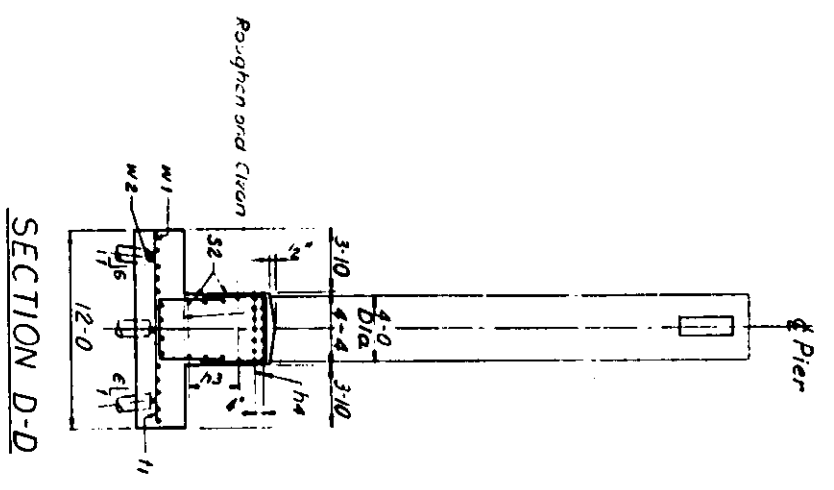
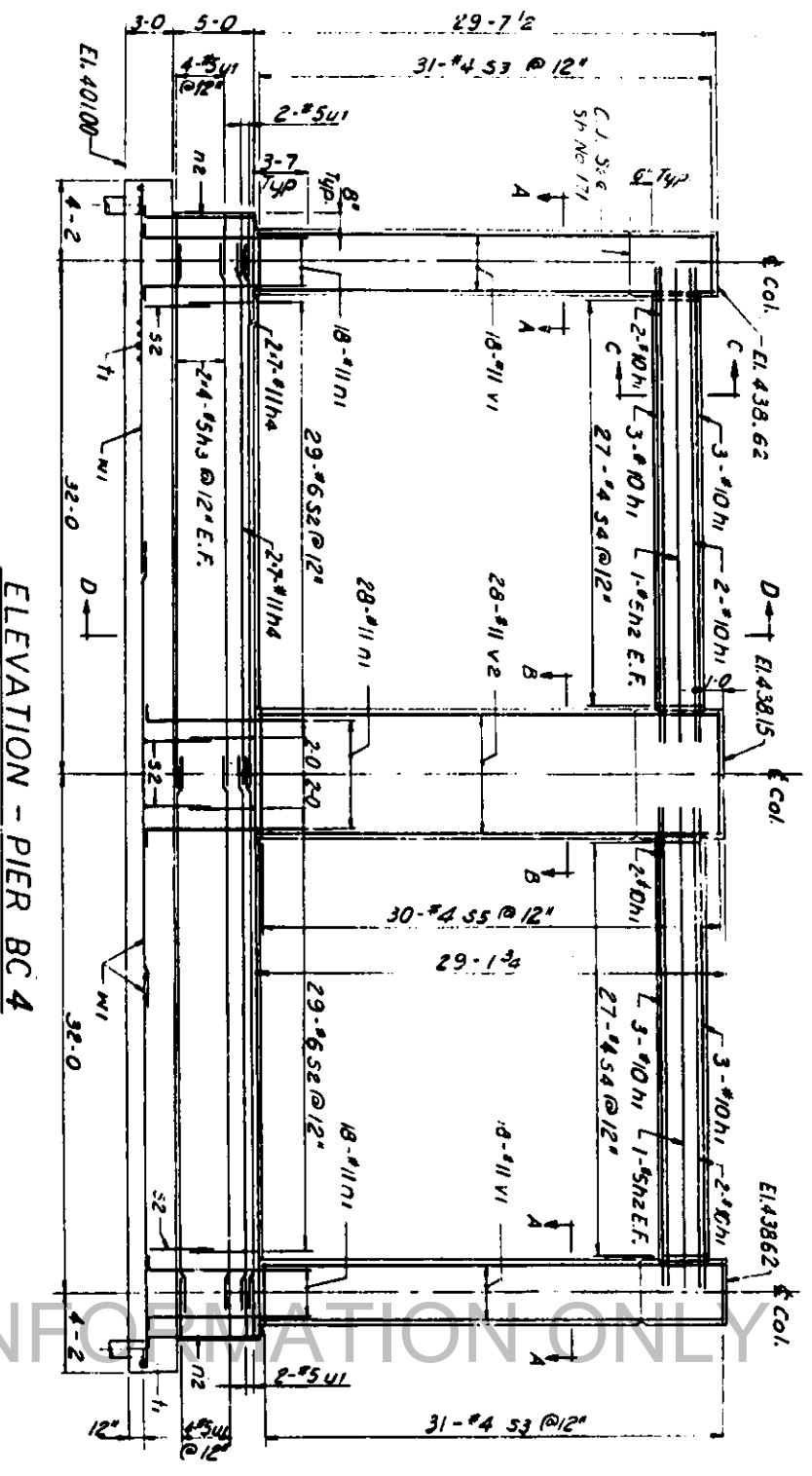
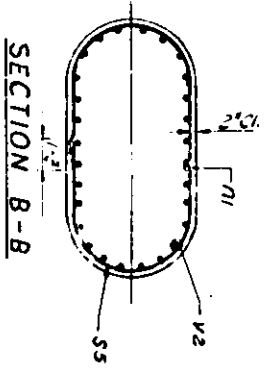
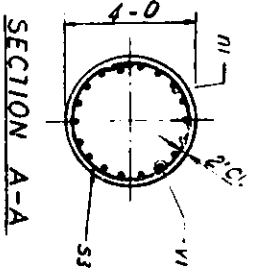
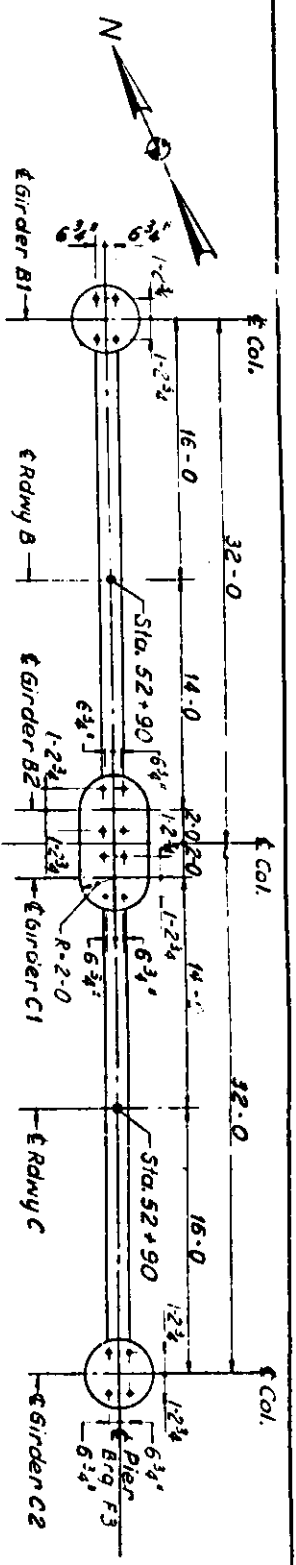
ADDITIONAL NOTE
 CLASS X CONCRETE 2 1/2 C. YRS
 CONCRETE PILES 1932 CON. PI.

AS BUILT

DESIGNED	FKL	EXAMINED	
CHECKED	FAR	PASSED	
DRAWN	FKL	APPROVED	
CHECKED	FAR		

PIER BC 3
 SQUARE STREET BRIDGE IMPROVEMENTS
 IRT BR 70 SEC 82-2443
 ST CLAIR COUNTY
 PROJECT I-16-70-16210

FOR INFORMATION ONLY



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 70	82-3HVB	ST. CLAIR	259	176
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		

Mark	No.	Reqt. Size	Length	Shape
141H1	20	#10	30'-4"	
141H2	5	#5	28'-6"	
141H3	16	#5	33'-4"	
141H4	28	#11	34'-4"	
141N1	64	#11	12'-7"	
141N2	18	#6	7'-9"	
141S2	116	#6	12'-10"	
141S3	62	#4	12'-9"	
141S4	54	#4	8'-0"	
141S5	30	#4	20'-10"	
141T1	73	#10	11'-8"	
141T2	12	#5	9'-5"	
141V1	36	#11	29'-5"	
141V2	28	#11	28'-11"	
141W1	42	#11	26'-4"	
141W2	9	#4	24'-9"	
552 Note X-5R N9 25				
Item	Unit	Total		
Class 'X' Concrete	C.Y.	215.7		
Reinforcement Bars	Lbs.	36,090		
Concrete Piles	L.F.	2000'		
Test Piles (Concrete)	Ea.	1		

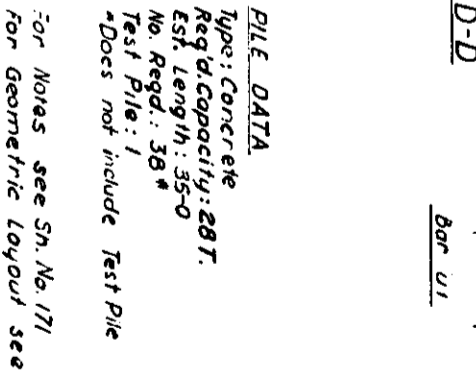
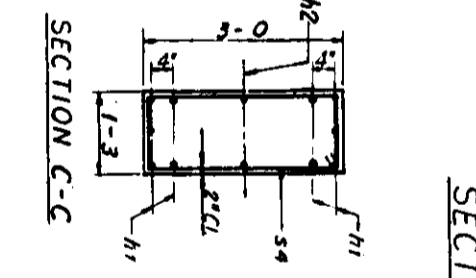
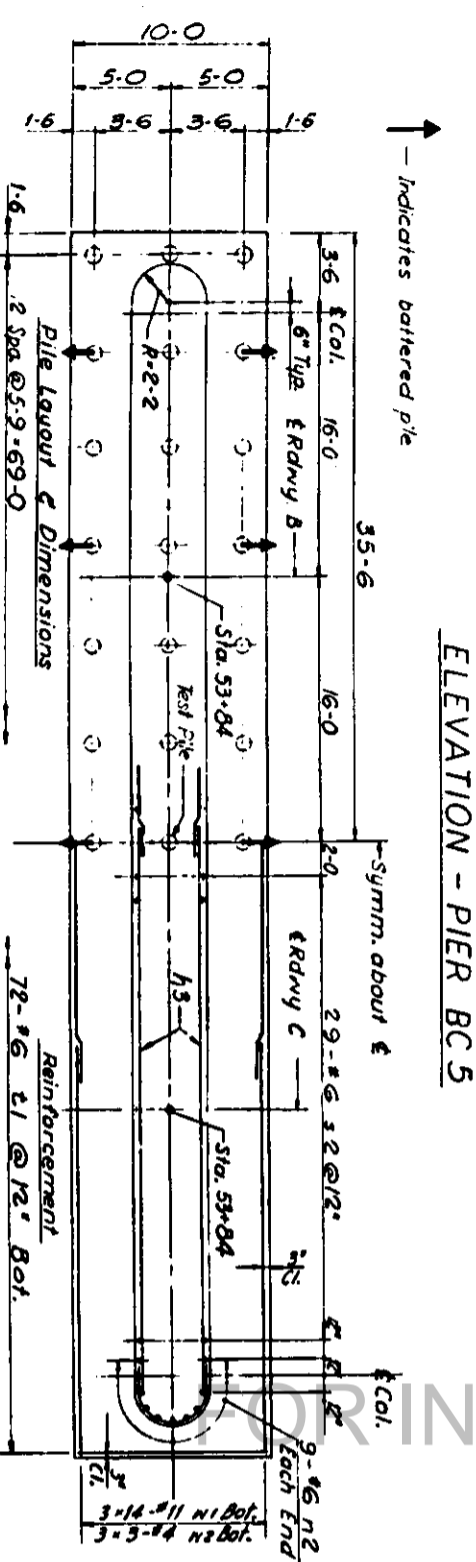
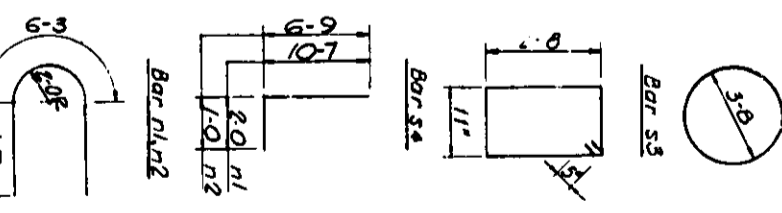
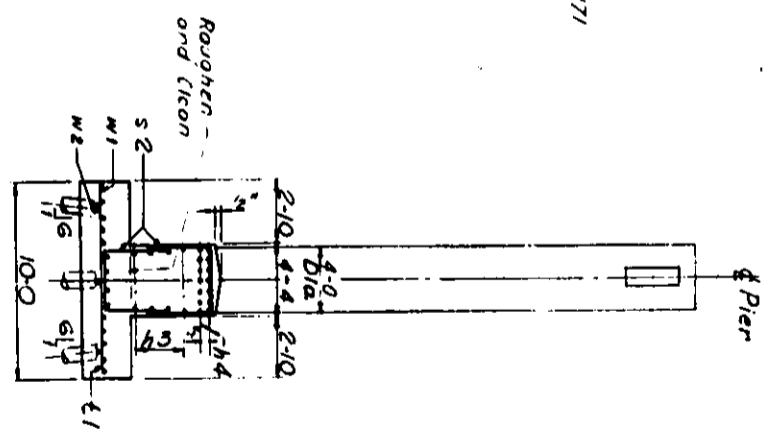
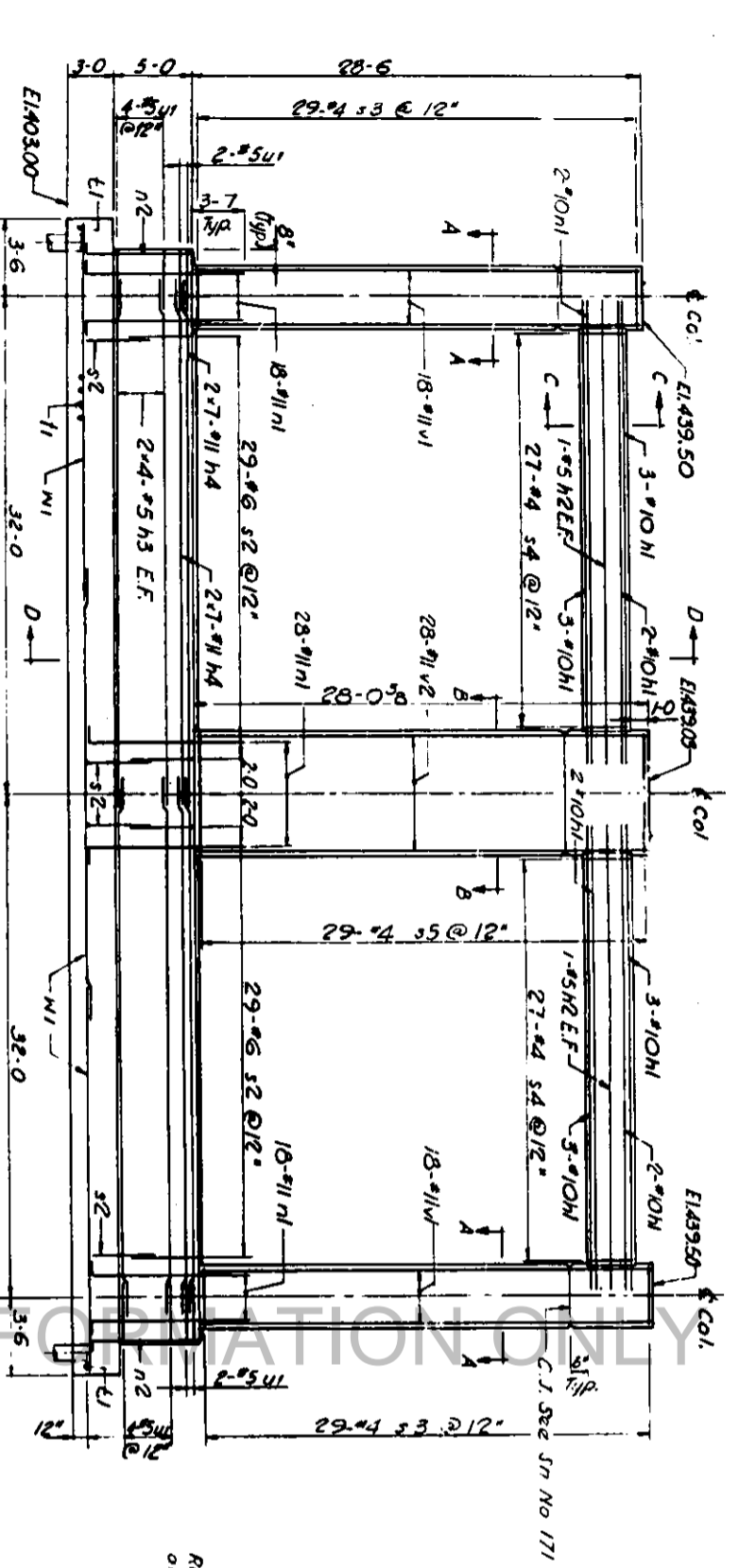
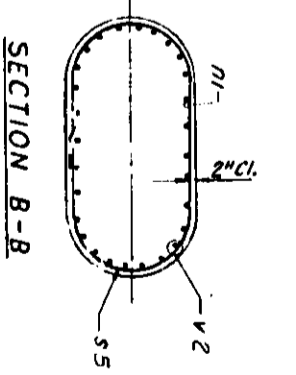
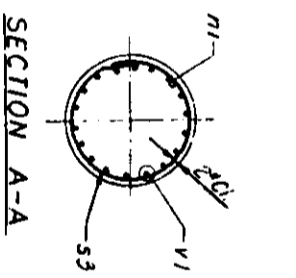
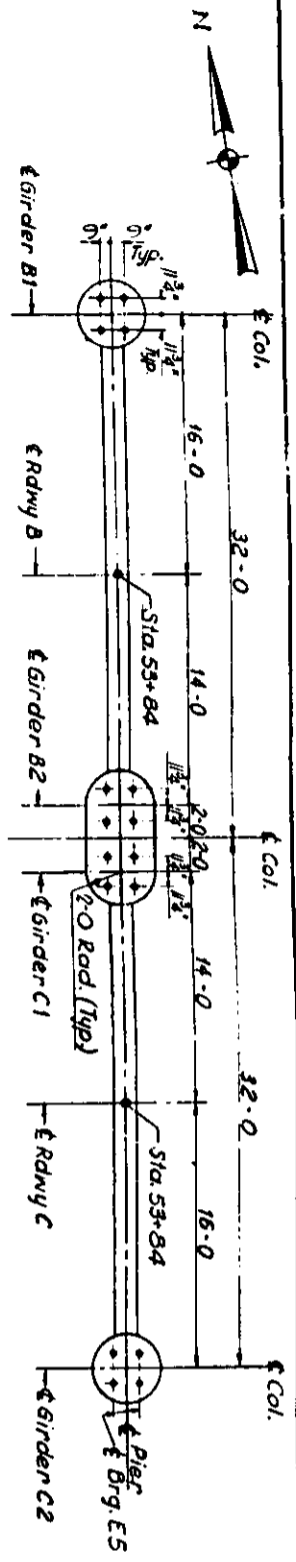
PILE DATA
 Type: Concrete
 Reqt. Capacity: 35 T.
 Est. Length: 40'-0"
 No. Reqt.: 50*
 Test Pile: 1
 *Does not include test pile

For Notes see Sh. No. 171
 for Geometric Layout: see
 Sh. No. 16 & 18.

DESIGNED BY: L.M.C.
 DRAWN BY: S.C.H.
 CHECKED BY: S.C.H.
 APPROVED BY: L.F.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS
 PIER BC4
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOGGERS, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET NO. 24



PILE DATA
 Type: Concrete
 Reg'd Capacity: 287.
 Est. Length: 35-0
 No. Reg'd: 38 #
 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	82-3HWB	ST. CLAIR	289	177
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				

Work Item	Quantity	Unit	Total
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	# 5	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
Concrete Piles			
L.F.			130
Test Piles (Concrete)			1
Class 'X' Concrete			196.2
Reinforcement Bars			32,960

DESIGNED BY: G.S.P.
 DRAWN BY: G.S.P.
 CHECKED BY: G.S.P.
 APPROVED BY: K.L.

FOOTING PLAN - PIER BC 5

ELEVATION - PIER BC 5

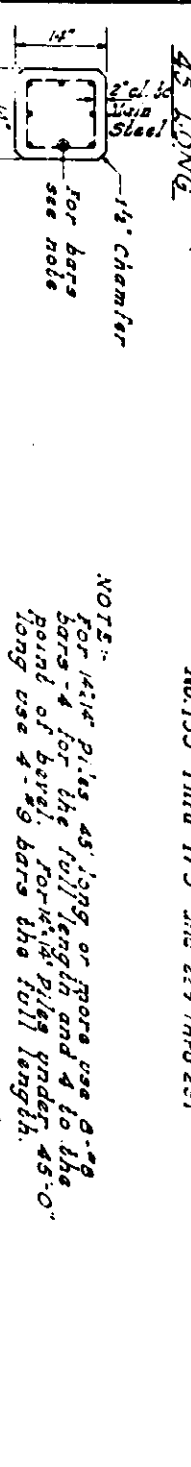
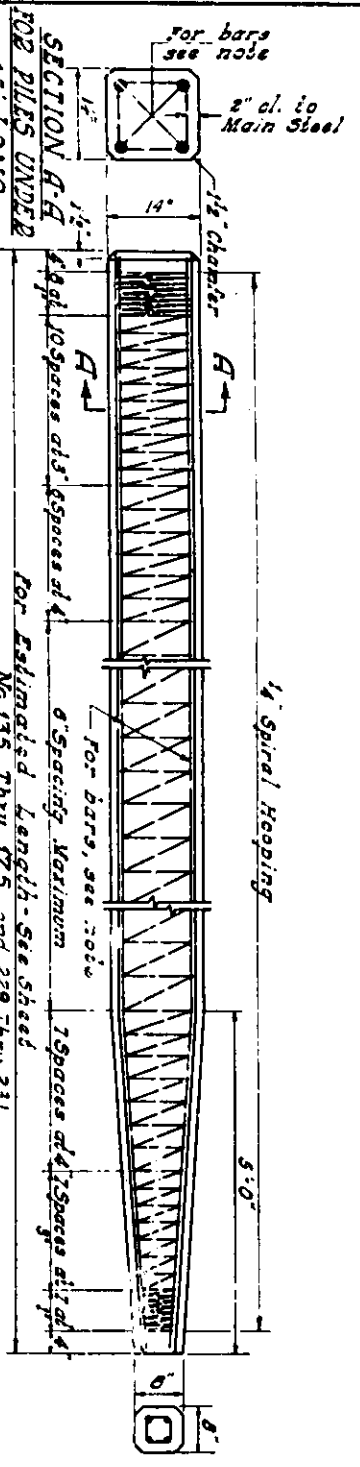
TOP PLAN - PIER BC 5

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

PIER BC 5
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"

F. A. I. NO. 70 ST. CLAIR CO. SECTION 82-3HWB
 H. W. LOCKNER, INC. ENGINEERS
 CHICAGO, ILLINOIS

SECTION	COURSE	SHEET
A.1-70	82-3HWB ST CLAIR	283
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT		



SECTION A-A FOR PILES UNDER 45' LONG

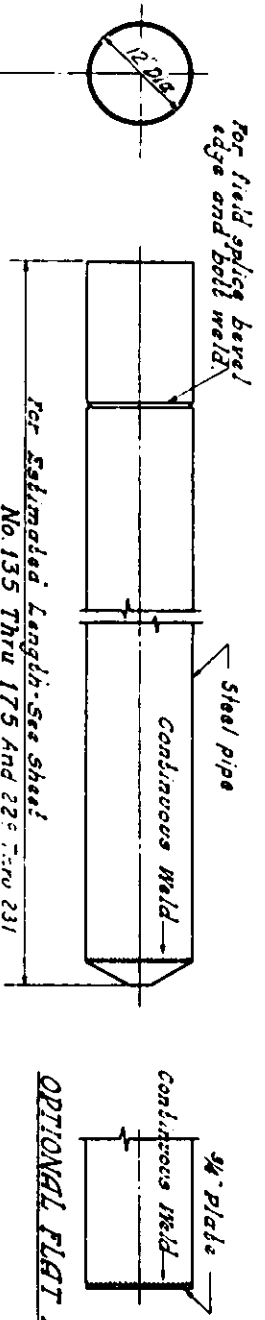
SECTION A-A FOR PILES 45' LONG OR MORE

NOTES:
 For 14" or more use 6-#8 bars - 4 for the full length and 4 to the point of barrel. For 14" piles under 45'-0" long use 4-#9 bars the full length.

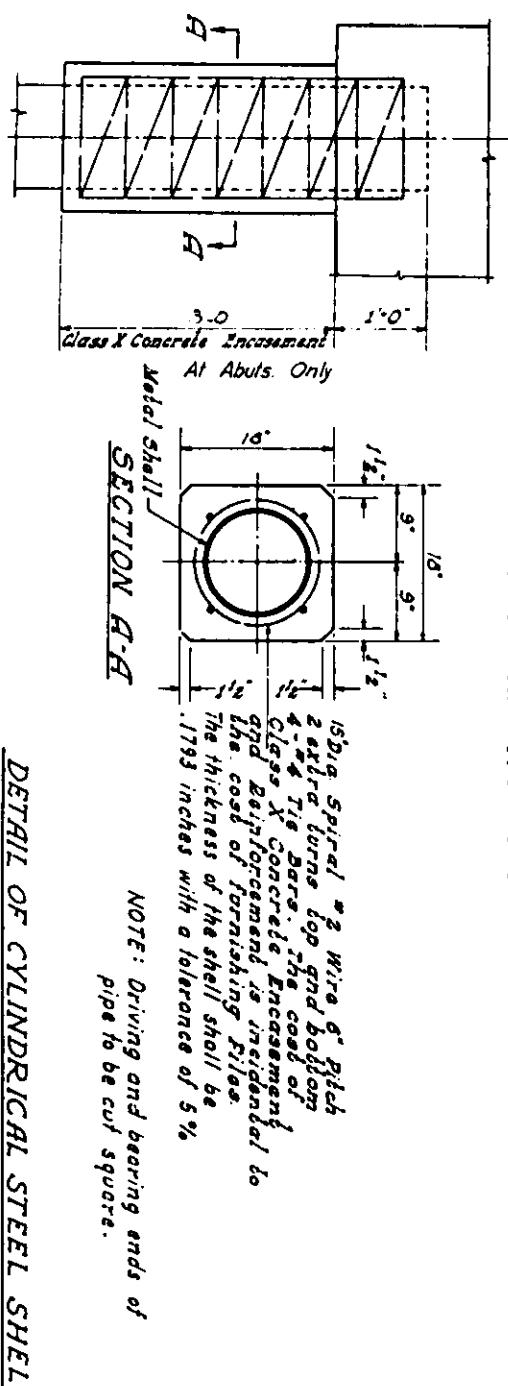
HANDLING: For pile lengths up to 45 ft. use slings placed at a distance of 0.21 L from each end. For piles longer than 45 ft., use three slings placed at a distance of 0.12 L from each end and at mid-point of pile.

* L Over all length of pile to be handled

DETAIL OF PRECAST CONCRETE PILES

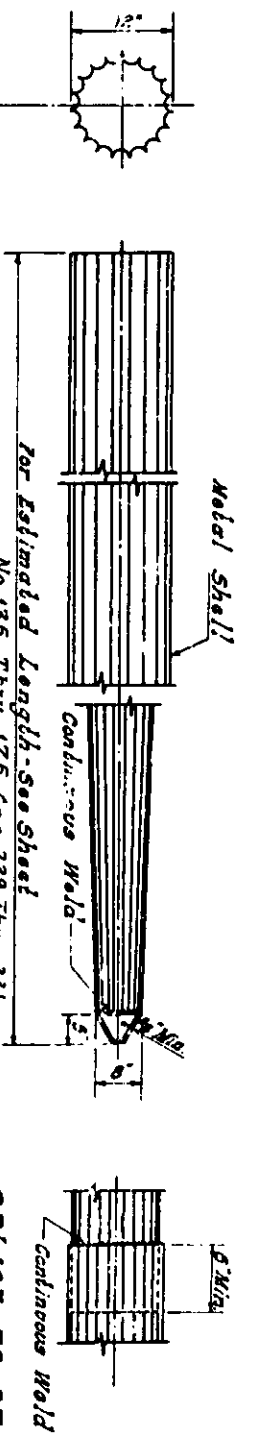


OPTIONAL FLAT END

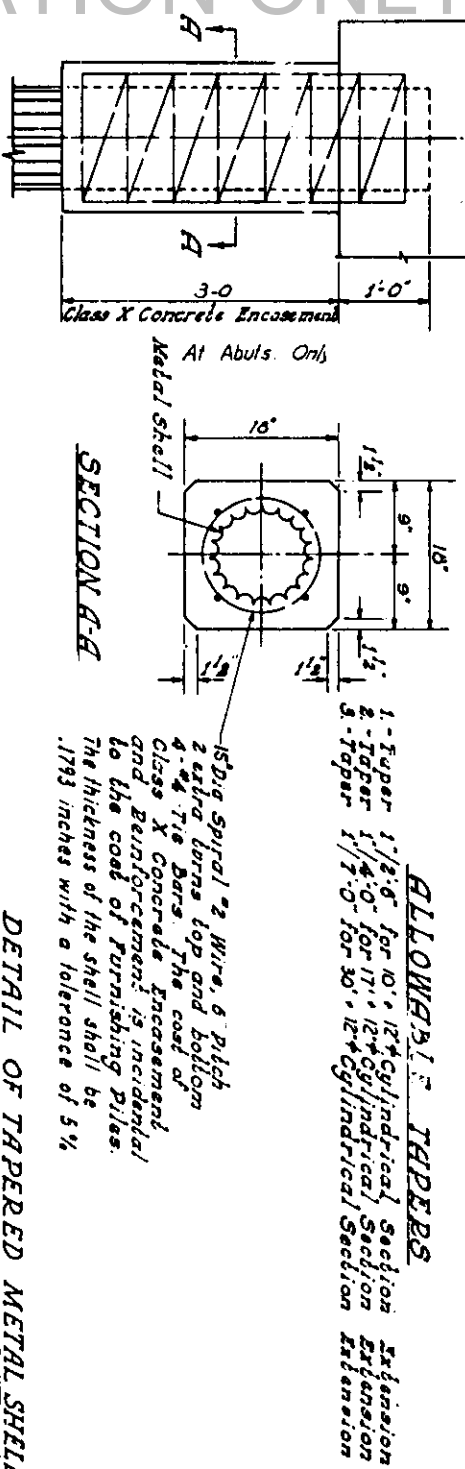


DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

NOTE: Drilling and bearing ends of pipe to be cut square.



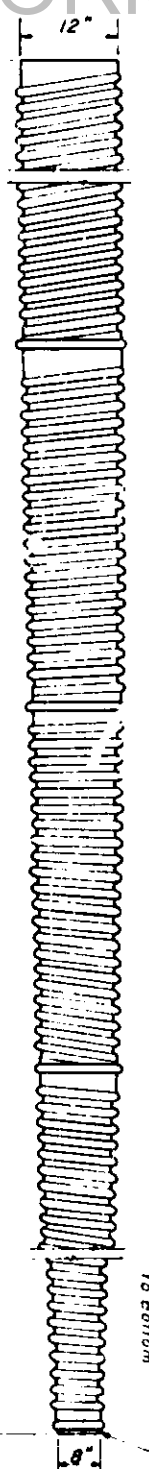
SPlice TO BE USED AS REQUIRED



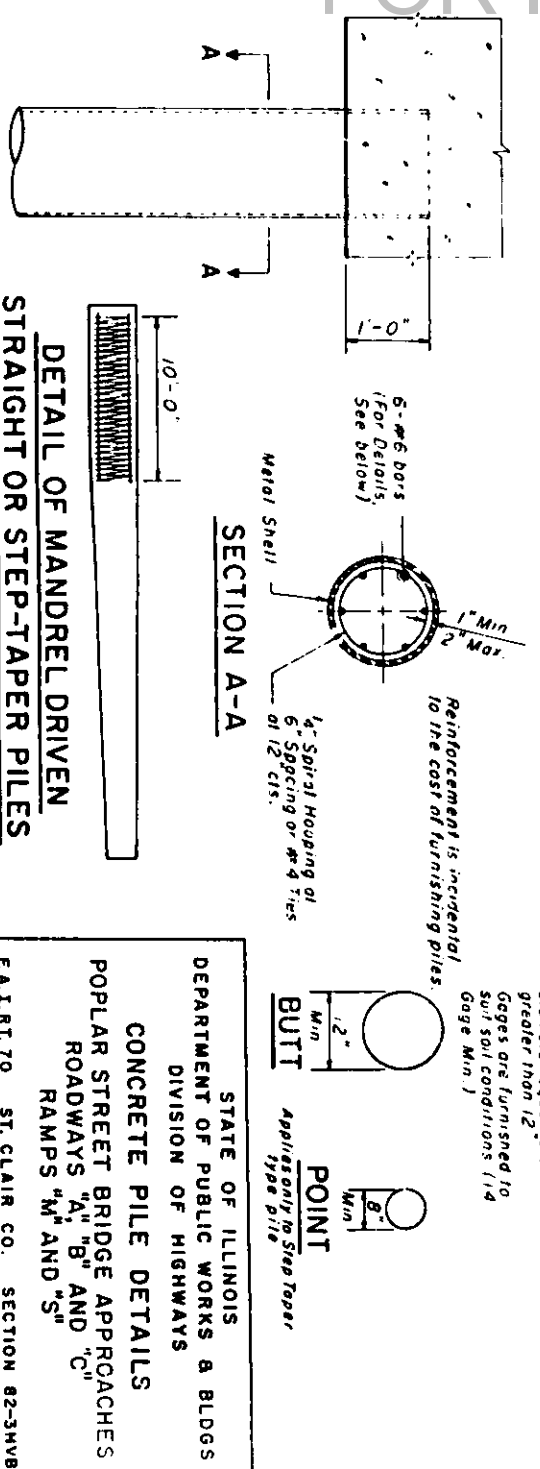
DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONC. PILES

ALLOWABLE TAPERES

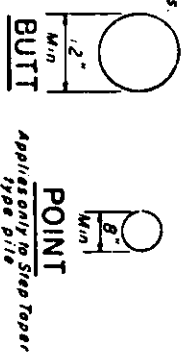
1 - Taper 1/2" for 10' 12" cylindrical section Extension
 2 - Taper 1/4" for 17' 12" cylindrical section Extension
 3 - Taper 1/10" for 30' 12" cylindrical section Extension



(Straight or increases 1" per step from pile point to butt)
 For Estimated Length - See Sheet No. 135 Thru 175 and 229 Thru 231



DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES



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"

FA. IRT. 70 ST. CLAIR CO. SECTION 82-3HWB
 H. W. LOGGERS, INC. ENGINEERS
 CHICAGO, ILLINOIS SHEET 227(24)

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

ILLINOIS APPROACH TO POPLAR STREET BRIDGE

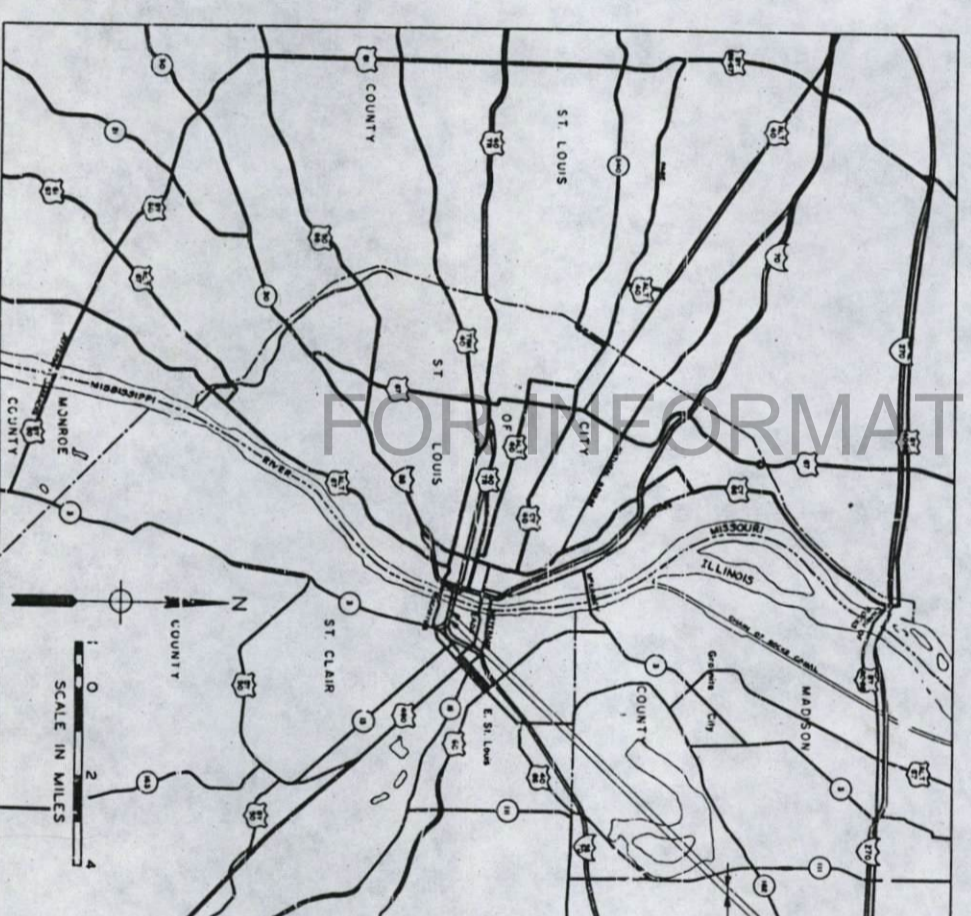
INTERSTATE ROUTE I-70 SECTION 82-3VB

PROJECT I-G-70-1(68)0
 ST. CLAIR COUNTY
 C-98-058-64

- 82-3VB
- 82-(3HV8-2R-2-1) I
- 82-3HV8-2R-2-1
- 82-3VB-HDL
- 82-3HV8-R-4
- 82-3HV8
- 82-3HV8-R
- 82-3HV8-R-2
- 82-(3,5) DRS
- 82-(3,4) DRS
- 82-3HV8-R-3

INDEX OF DRAWINGS

SHEET NUMBER	TITLE	SHEET TITLE
1	TITLE SHEET	
2	SUMMARY OF QUANTITIES	GENERAL PLAN
3	GENERAL PLAN AND ELEVATION	
4	LOC OF BORINGS AND SUBSTRUCTURE LAYOUT	
5	ANCHOR BOLT PLAN AND ESTIMATED QUANTITIES	
6	PIER 1	
7	PIER 2	
8	PIER 3	
9	PIER 4	
10	PIER 5	
11	PIILING STANLEY RD	
12	FRAMING PLAN AND GIRDER ELEVATIONS	
13	GIRDER ELEVATIONS	
14	GIRDER DETAILS	
15	EXPANSION DEVICE AT PIER 6-RIVER BRIDGE	
16	EXPANSION DEVICE AT PIER 5 AND SHOES	
17	SLAB DETAILS	
18	SLAB DETAILS	
19	SLAB LAYOUT	
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	SAFETY CURBS AND PARAPET 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	
49	STANDARD 2113-1, 2114	



BEGIN PROJECT STA. 41+00
 END PROJECT STA. 48+48
 LENGTH 748 FEET

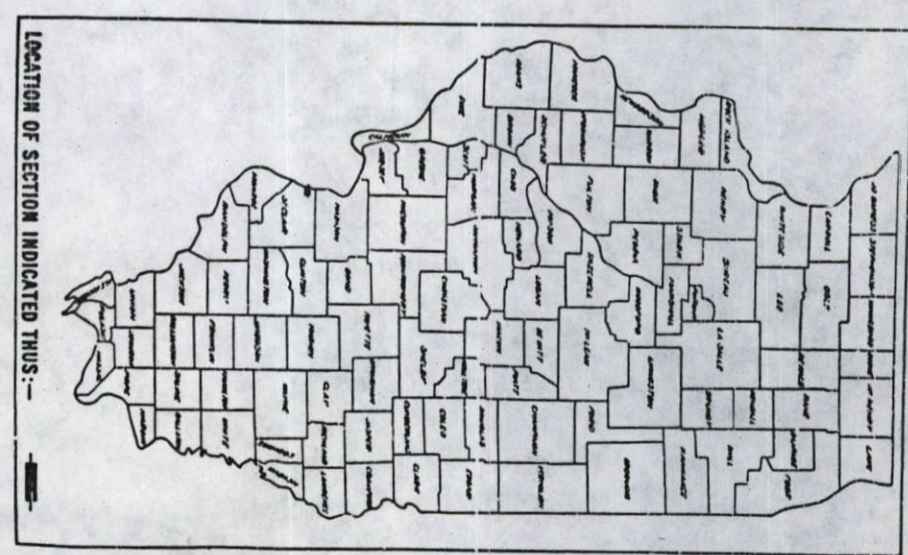
PROJECT LENGTH = 748 FT = 0.142 MI.

PERCENT	AMOUNT	AMOUNT
8.59	8.181	
8.63	8.219	
8.102	8.136	
8.105		
8.110		
8.112		
8.147		
8.162		

SVENDRUP & PARCEL AND ASSOCIATES, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

HIGHWAY CLASSIFICATION
 4454-T-50

SUBMITTED BY: *Robert M. Miller* Aug. 14, 1964



APPROVED

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

DIVISION ENGINEER

DATE

APPROVED

FOR GENERAL AGENCY ONLY

STATE OF ILLINOIS

DIVISION OF HIGHWAYS

DIVISION ENGINEER

DATE

8-59

082-0005

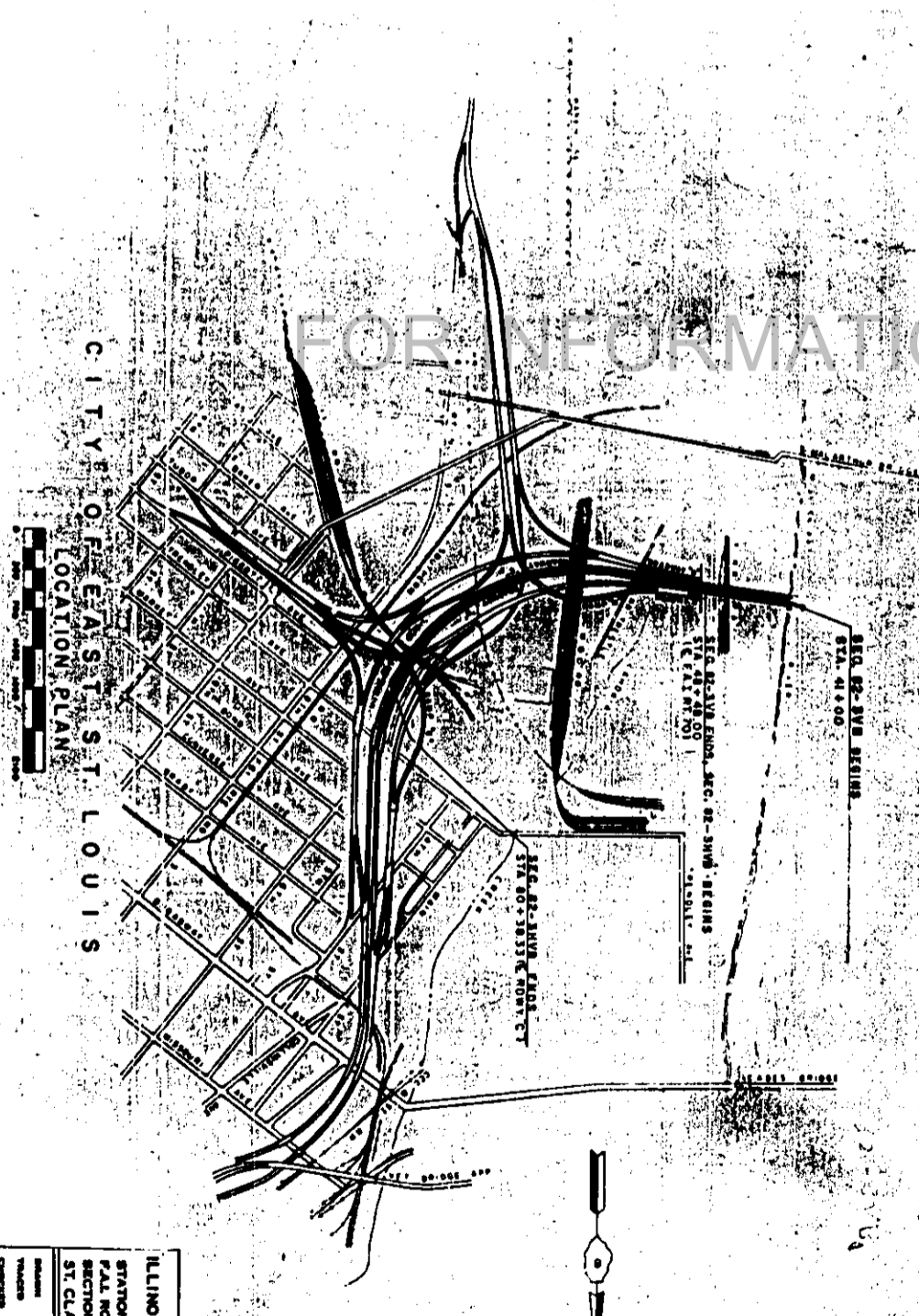
DATE	DESCRIPTION	COUNTY	SECTION	SHEET NO.
70	02-318	ST. CLAIR	4/8	1A
TOTAL SHEETS: 10				

SUMMARY OF QUANTITIES		PROJECT E-16-70-116902	
CODE NO.	ITEM	UNIT	BRIDGE STA.
	LOCATION OF WORK		STA. 41+70 42+73.50 (02-318)
	CONSTRUCTION TYPE CODE		X 131
050001	CLASS "A" EXCAVATION FOR STRUCTURE	CU. YD.	2,953
060007	TEST PILES (CONCRETE)	EACH	10
060004	FURNISHING CONCRETE PILES	LN. FT.	19,309
060043	DRIVING CONCRETE PILES	LN. FT.	19,309
052003	CLASS "B" CONCRETE	CU. YD.	5,089.6
059001	REINFORCEMENT BARS	POUND	1,101,970
0544042	FURNISHING & ERECTING STRUCTURAL STEEL - A26	POUND	2,114,330
0544043	FURNISHING & ERECTING STRUCTURAL STEEL - A441	POUND	1,198,930
200004	ALUMINUM HANDRAIL	LN. FT.	1,490
X02766	MEDIUM BARRIER RAIL (ALUMINUM)	LN. FT.	749
X02767	ROADWAY BEARINGS (TYPE C)	LN. FT.	1
051001	NAME PLATES	EACH	2
052021	PROTECTIVE OIL	SQ. YD.	11,510
201023	BRIDGE SEAT SEALANT	LN. FT.	1
X02768	LEVEE SLOPE PROTECTION	LN. FT.	1
X02769	SIGNING	LN. FT.	1
100112	CONDUIT ATTACHED TO STRUCTURE 2" DIA. GALVANIZED STEEL	LN. FT.	2,234
100056	CONDUIT IN CONCRETE 1 1/2" DIA. GALVANIZED STEEL	LN. FT.	50
102403	LUMINAIRE MERCURY VAPOR WITH BUILT-IN REGULATOR BALLAST, 400W	EACH	10
102812	LAMP, MERCURY VAPOR 400 WATTS TYPE HCS-1-CD	EACH	10
106038	ELECTRIC CABLE IN CONDUIT 600V (NEOPRENE RUBBER INSULATED)	LN. FT.	6,440
106036	1/2" NO. 6	LN. FT.	6,440
Z01065	ELECTRIC CABLE IN CONDUIT 600V (NEOPRENE RUBBER INSULATED) 600V 1/2" NO. 10	LN. FT.	660
	RAILROAD PROTECTIVE SERVICES	L. SUM	1
	ALTERNATE "A"	EACH	6
Z03228	POLE, CONCRETE ANCHOR BASE 30" DIA. 6' HAST ARM	EACH	2
Z00418	POLE, CONCRETE ANCHOR BASE 30" DIA. 6' HAST ARM	EACH	2
	ALTERNATE "B"	EACH	6
Z01228	POLE, ALUMINUM ANCHOR BASE 30" DIA. 6' HAST ARM	EACH	2
Z01318	POLE, ALUMINUM ANCHOR BASE 30" DIA. 6' HAST ARM	EACH	2

POPLAR STREET BRIDGE APPROACH

ST. CLAIR COUNTY

GENERAL PLAN



QUANTITY SUMMARY
GENERAL PLAN

ILLINOIS APPROACH TO POPLAR STREET BRIDGE
 STATION - 44+73.50
 FALL ROUTE - 70
 SECTION - 02-318
 ST. CLAIR COUNTY, ILLINOIS

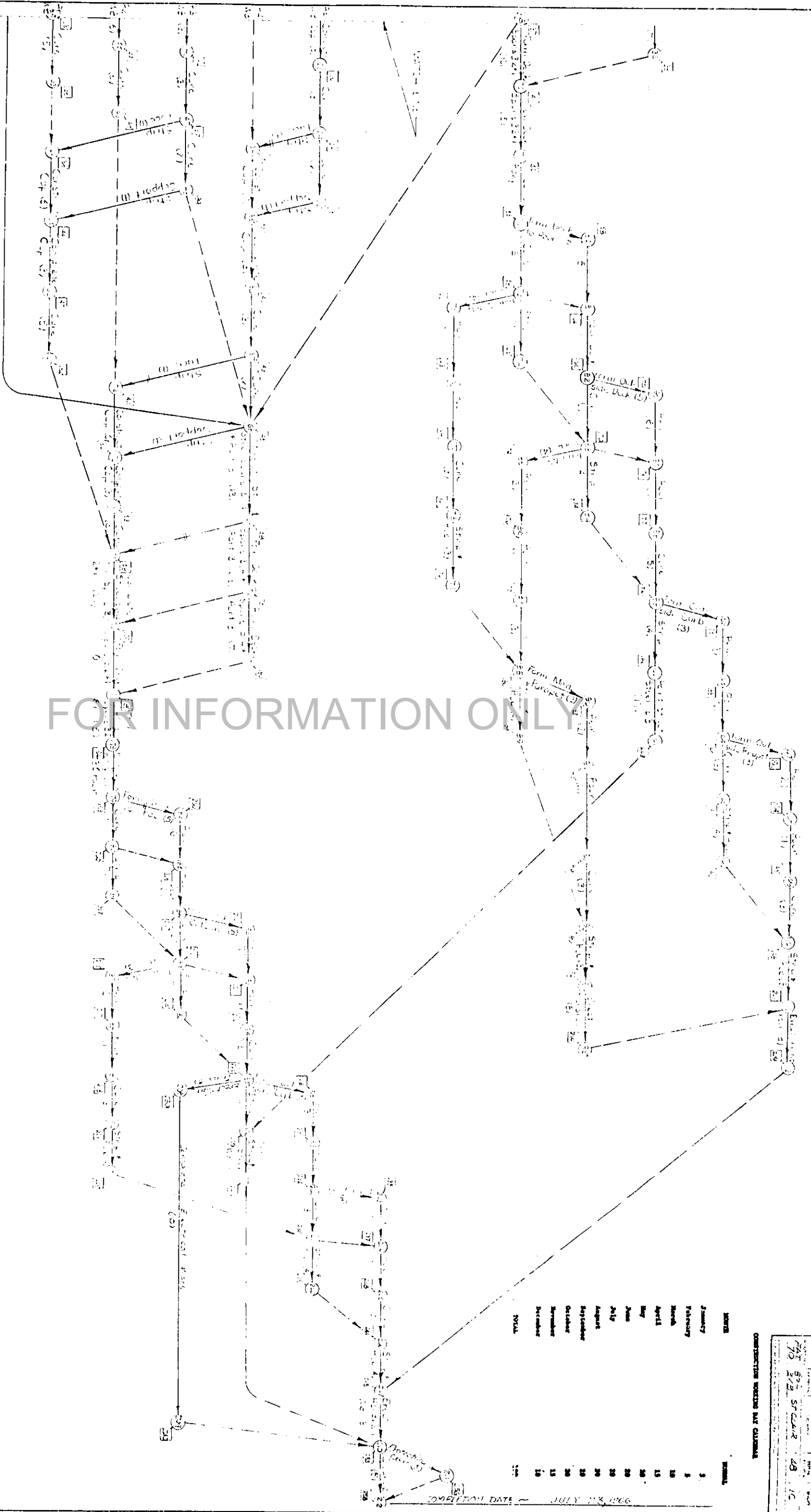
DESIGNED BY: **R. ROSSER, OCT 1964**
 DRAWN BY: **L. GOSSET, OCT 1964**

SCALE: NONE

NOT A PART OF THE CONTRACT DOCUMENTS IN PROJECT 700 4-1

1488
45623

FOR INFORMATION ONLY

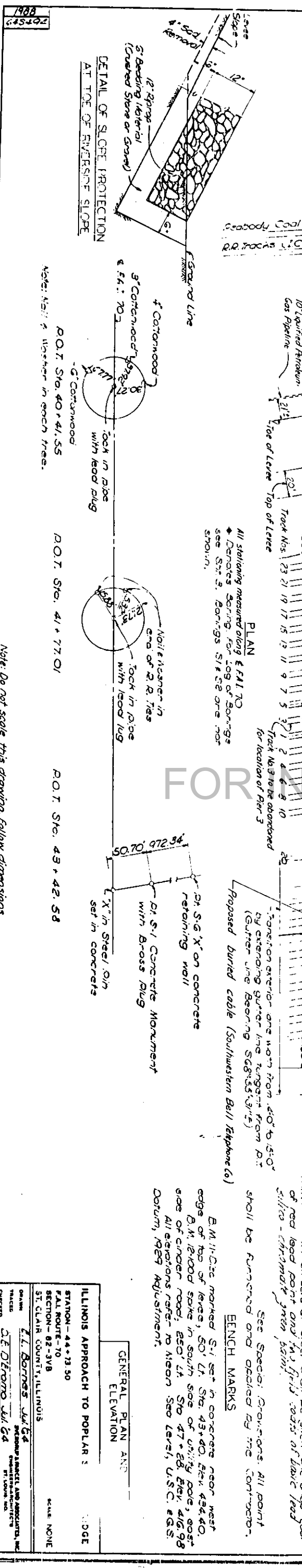
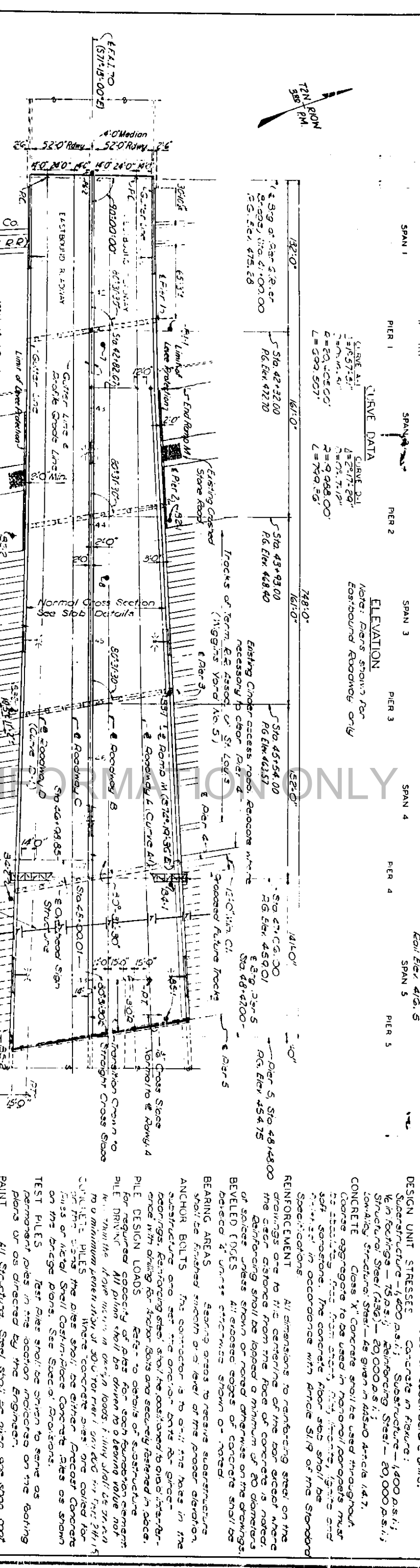
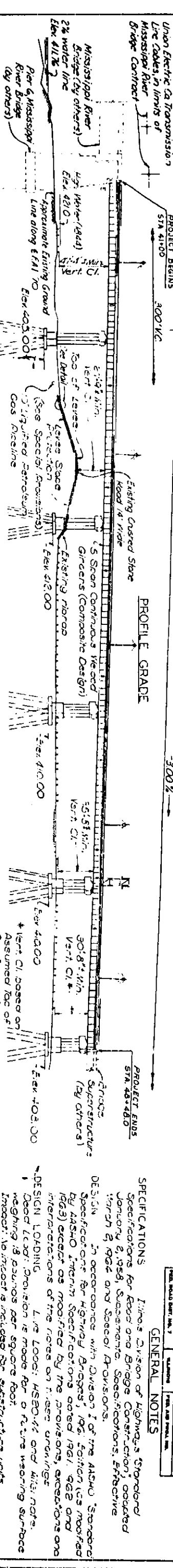


CONSTRUCTION SCHEDULE

DATE	ACTIVITY
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	
WEEK	

COMPLETION DATE - JULY 28, 1966

21-33E 24



GENERAL NOTES

ILLINOIS Division of Highways (Standard Specifications for Road and Bridge Construction), adopted January 2, 1958, Supplemental Specifications, Effective March 2, 1962 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 A19.5; Dead Load: Provision for future wearing surface impact; 10,000 lbs. included for substructure units.

DESIGN UNIT STRESSES. Concrete in flexure: Superstructure - 1,400 p.s.i.; Substructure - 1,600 p.s.i.; Weir 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 14.7.

CONCRETE. Class "X" Concrete shall be used throughout. Concrete aggregate to be used in non-rod portions must be of such quality that concrete, after curing, will be strong and durable. The concrete floor slab shall be reinforced in accordance with Article 51.9 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 of splices unless shown or noted otherwise on the drawings.

BEVELED EDGES. All exposed edges of concrete shall be beveled 2" unless otherwise shown or noted.

BEARING AREAS. Bearing areas to receive substructure 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 grout bearings. Reinforcing steel shall be positioned to distribute force 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 flow value in dry-rod loads. Piles shall be driven to a minimum penetration of 30' for pier 1 and 20' for pier 2.

CUT-IN 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 shown to serve as permanent piles in the location indicated on the bearing plans or as directed by the Engineer.

PAINT. All structure steel shall be given one shop coat of red lead paint and two field coats of white lead silica-chrome green paint.

See Special Provisions. All points shall be furnished and located by the contractor.

GENERAL PLAN AND ELEVATION

ILLINOIS APPROACH TO POPULAR JUDGE

STATION - 4+73.50

FALL ROUTE - 70

SECTION - 82-3VB

ST. CLAIR COUNTY, ILLINOIS

SCALE NONE

DESIGNED BY J.L. BARNES

CHECKED BY G.E. DEGENZO

BENCH MARKS

B.M. 11-C: Concrete marked S-1 set in concrete near west edge of top of parapet, S.O. L. Sta. 43+40. Elev. 454.40.

B.M. 12-K: Wood stake in south side of utility pole, east side of center road, S.O. L. Sta. 47+68. Elev. 416.98

All elevations refer to Mean Sea Level, U.S.C. G.S. Datum, 1929 Adjustment.

PLAN

All stationing measured along E&M 70

Denotes bearing for Log of Bearings see Sp. P. 3, Bearings S17.52 one for station.

Note: Holes in end of R.R. ties with lead plug

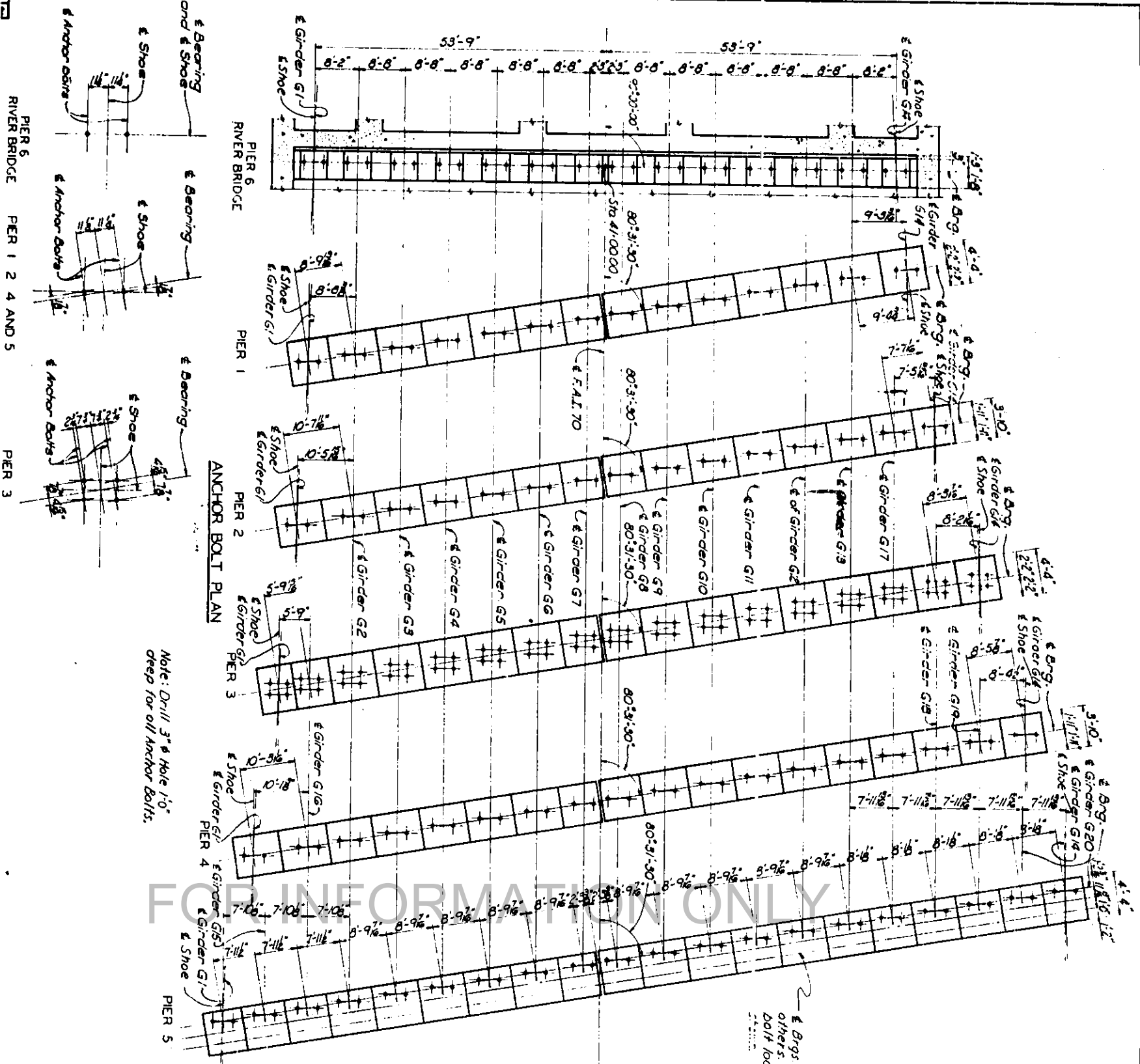
Note: Holes in end of R.R. ties with lead plug

Note: Do not scale this drawing, follow dimensions.

1988
64-345(1)

PIER 6
RIVER BRIDGE

ANCHOR BOLT PATTERN



Brgs for approach span by others. Pedestals and anchor bolt locations for brgs. not shown.

FOR INFORMATION ONLY

* TO BE APPLIED AT PIER NO 5

SCHEDULE OF ESTIMATED QUANTITIES

Item	Units	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Supersize	Total
Class A Excavation for Structure	Cu Yd	697	871	444	468	473		2,953
Rest Piles (Concrete)	Each	2	2	2	2	2		10
Furnishing Concrete Piles	Lin Ft	4602	4824	3,720	3,333	3,350		19,309
Driving Concrete Piles	Lin Ft	4602	4824	3,720	3,333	3,350		19,309
Class X Concrete	Cu Yd	4596	3917	6034	5082	5874		25,023
Reinforcement Bars	Lb.	53,490	49,810	71,940	57,880	53,940		214,970
Furnishing & Erecting Structural Steel - A36	Lb.							2,114,330
Furnishing & Erecting Structural Steel - A441	Lb.							1,981,930
Aluminum Horizontal	Lin Ft							1,490
Aluminum Vertical	Lin Ft							749
Roading Drains (Type C)	Lump Sum							2
Name Plates	Each							11,510
Protective Coat	Sq. Yds							1
Bridge Seat Sealant	Lump Sum							1
Levee Slope Protection	Lump Sum							1
Signaling	Lump Sum							1
Electrical	See Sheets							30431

ILLINOIS APPROACH TO PORTLAND CEMENT BRIDGE

STATION - 44+73.50

F.A.I. ROUTE - 70

SECTION - 82-3VB

ST. CLAIR COUNTY, ILLINOIS

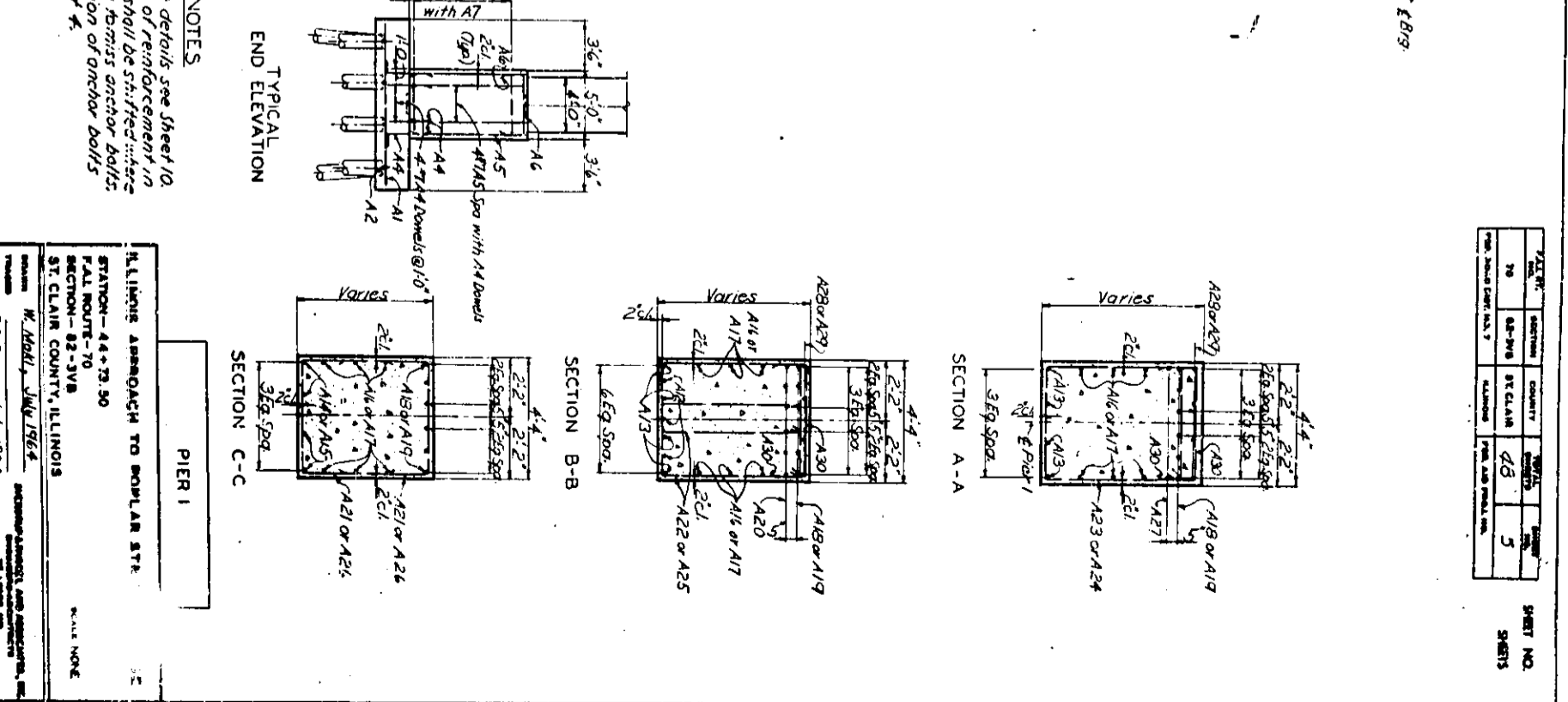
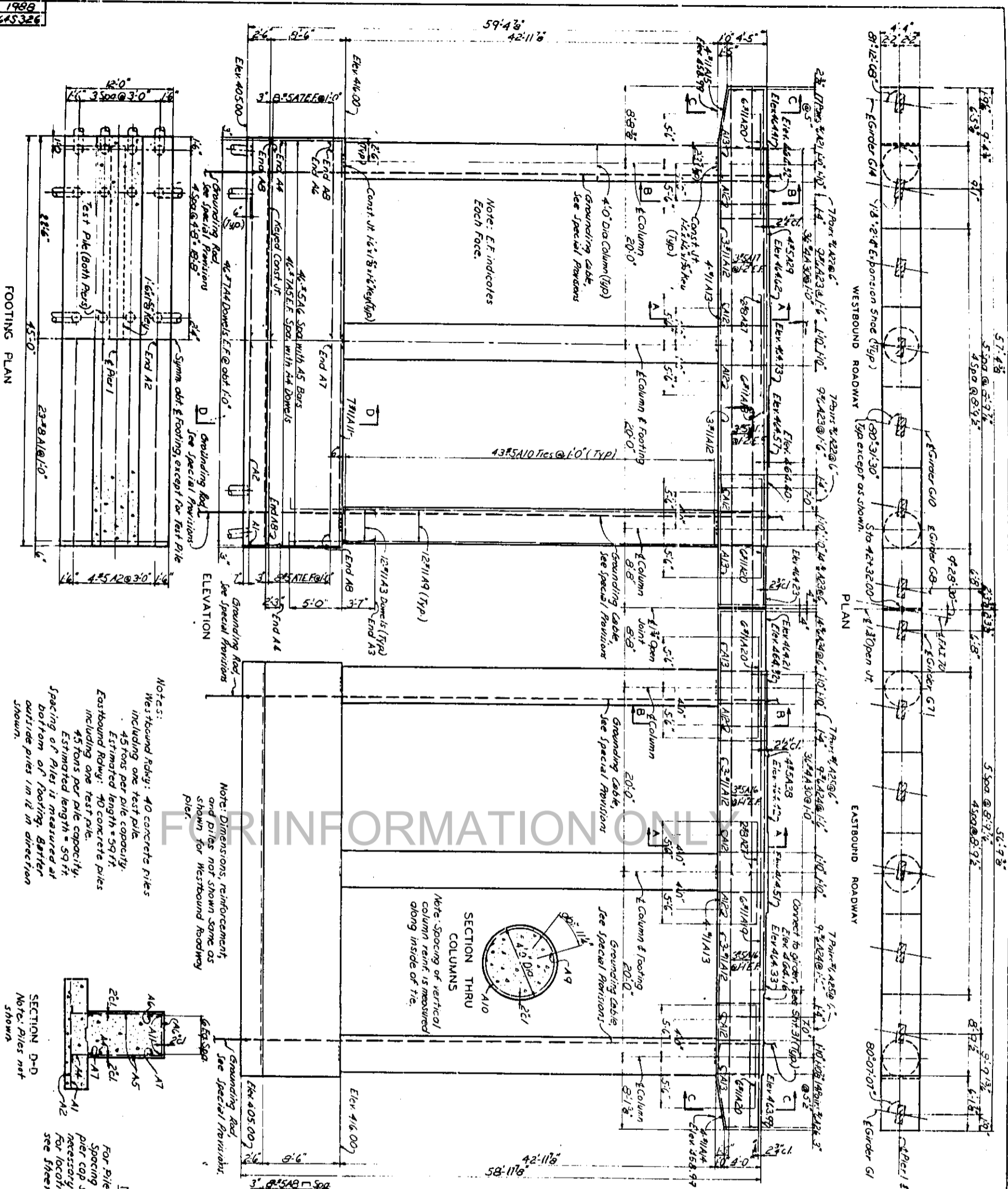
DESIGNED BY: R. Bauer - State Hwy. Engineering District, and Associates, Inc.

DATE: July 1944

ANCHOR BOLT PLAN AND ESTIMATED QUANTITIES

PLAN NO.	SECTION	COUNTY	DATE	SHEET NO.
70	82-3VB	ST. CLAIR	4/8	4

1968
645326



Notes:
Westbound Rddy: 40 concrete piles including one test pile
Estimated length = 59 ft
Eastbound Rddy: 40 concrete piles including one test pile
Estimated length = 59 ft
Spacing of piles is measured at bottom of footing. Barrier outside piles in it in direction shown.

SECTION D-D
Note: Piles not shown

NOTES
For pile details see Sheet 10.
Spacing of reinforcement in pier cap shall be shifted in necessary to form anchor bolts for location of anchor bolts see Sheet #.

ILLINOIS APPROACH TO DOWLAR STP
STATION - 44+73.50
FALL ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS
W. Mohl, July 1964
G.E. Bunch, July 1964

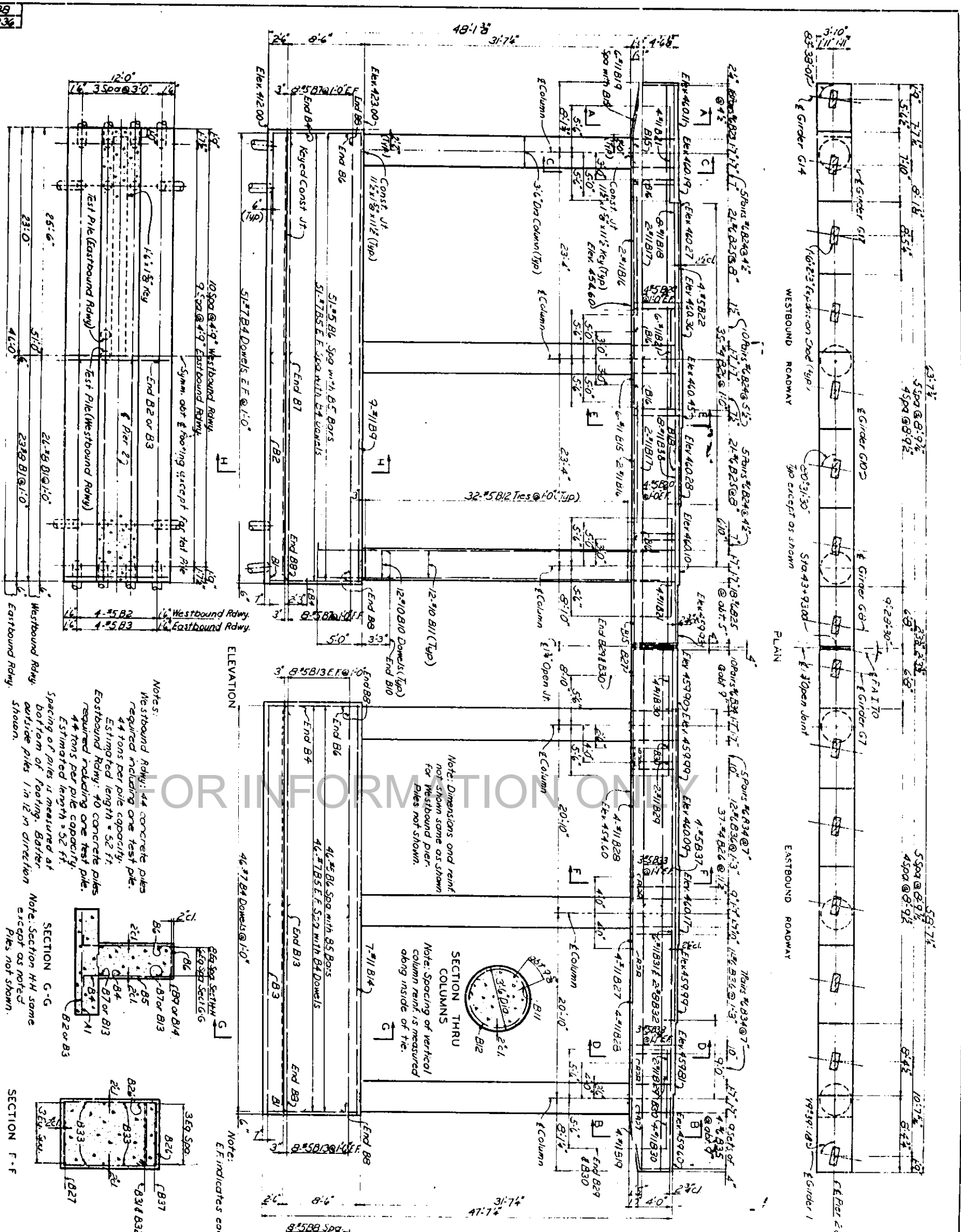
FOR INFORMATION ONLY

DATE	REVISION	BY	CHKD	APP'D	NO.
					1
					2
					3
					4
					5

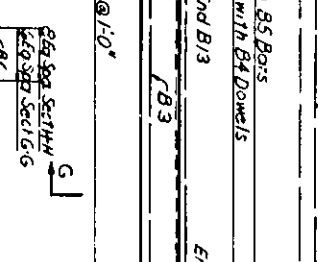
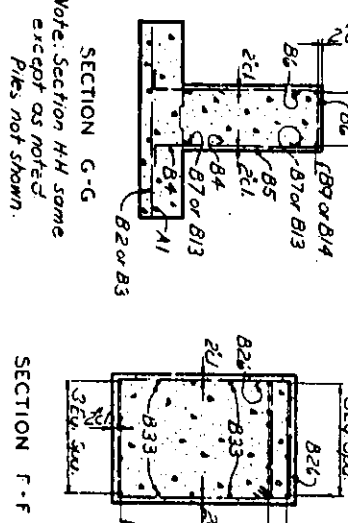
SHEET NO. 5
OF 5 SHEETS

1988
45336

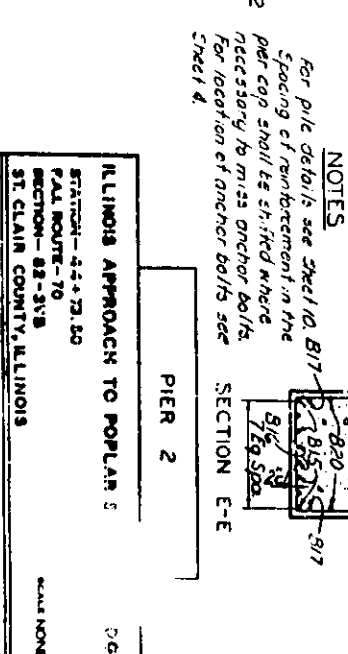
FOOTING PLAN



Notes:
Westbound Rdwy: 44 concrete piles required including one test pile. Estimated length = 52 ft.
Eastbound Rdwy: 40 concrete piles required including one test pile. Estimated length = 52 ft.
44 tons per pile capacity.
Spacing of piles is measured at bottom of footing. Barter outside piles 1/2 in. in direction shown.



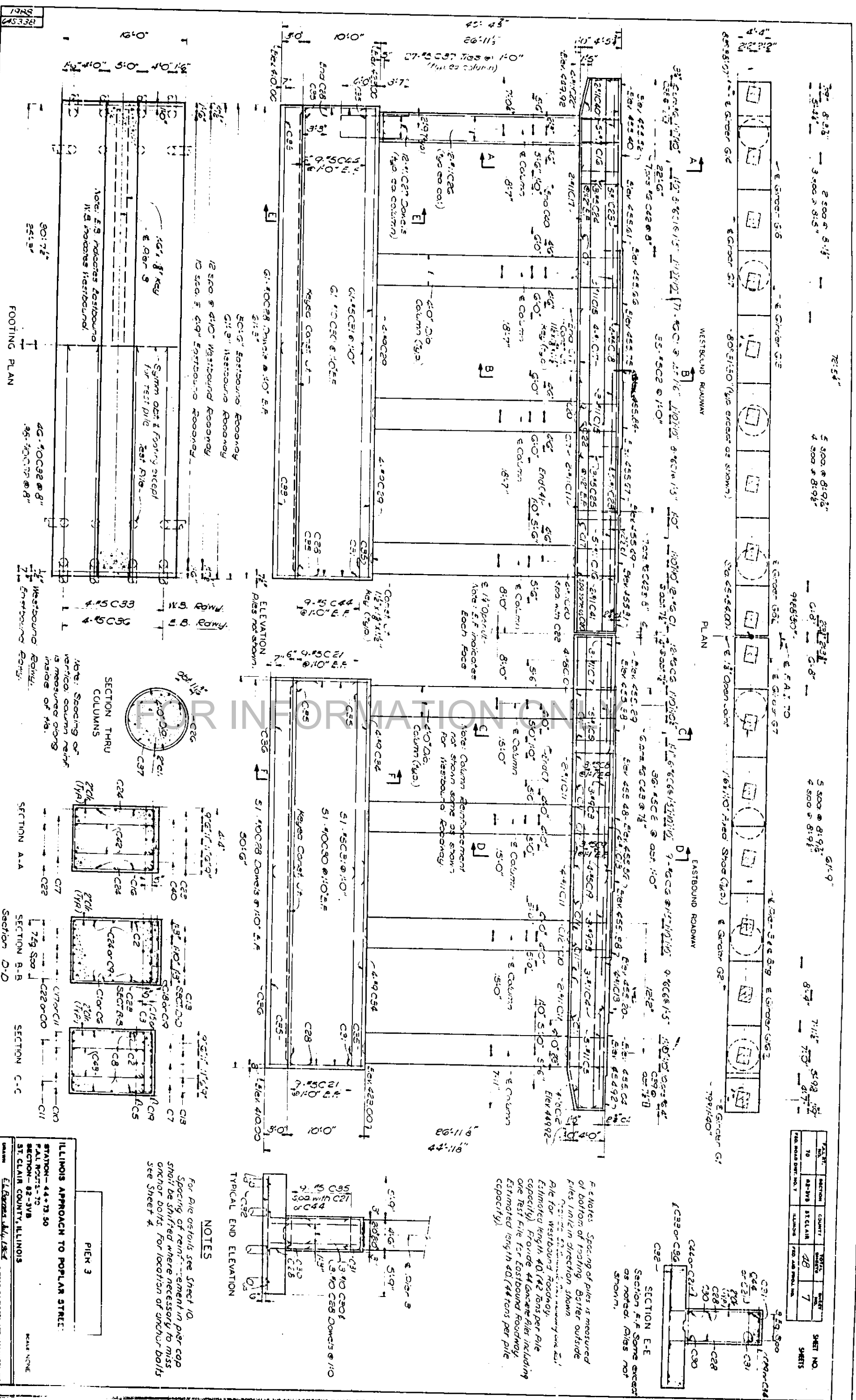
SECTION THRU COLUMNS
Note: Spacing of vertical column reinf. is measured along inside of tie.



Notes:
For pile details see Steel 10, B17.
Spacing of reinforcement in the pier cap shall be 5 in. x 5 in. where necessary to miss anchor bolts. For location of anchor bolts see Steel 4.

ILLINOIS APPROACH TO POPLAR S
FALL ROUTE-70
SECTION-82-31B
ST. CLAIR COUNTY, ILLINOIS
SCALE NONE

DATE	SECTION	QUANTITY	REMARKS	SHEET NO.
7-10	82-31B	ST. CLAIR	48	6
7-10	82-31B	ILLINOIS	48	6



SECTION	COURT	NO.	DATE	SHEET NO.
70	82-248	ST. CLAIR	48	7
ILLINOIS				

Notes: Spacing of piles is measured at bottom of footing. Batter outside piles in line in direction shown. Note: Estimated capacity shown. 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: Spacing of vertical column reinforcement is measured along inside of pile. Note: Column reinforcement not shown same as shown for westbound roadway. Note: E.F. indicates each face.

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 POPULAR STREET

STATION - 44+73.50
 FALL POINT - 72
 SECTION - 83-3WB
 ST. CLAIR COUNTY, ILLINOIS

DESIGNED BY: E. J. BARNETT, CIVIL ENGINEER
 CHECKED BY: R. H. WILSON, CIVIL ENGINEER
 SCALE: NONE

Note: Do not scale this drawing. Follow dimensions.

FOOTING PLAN

ELEVATION

SECTION THRU COLUMNS

SECTION A-A

SECTION B-B

SECTION C-C

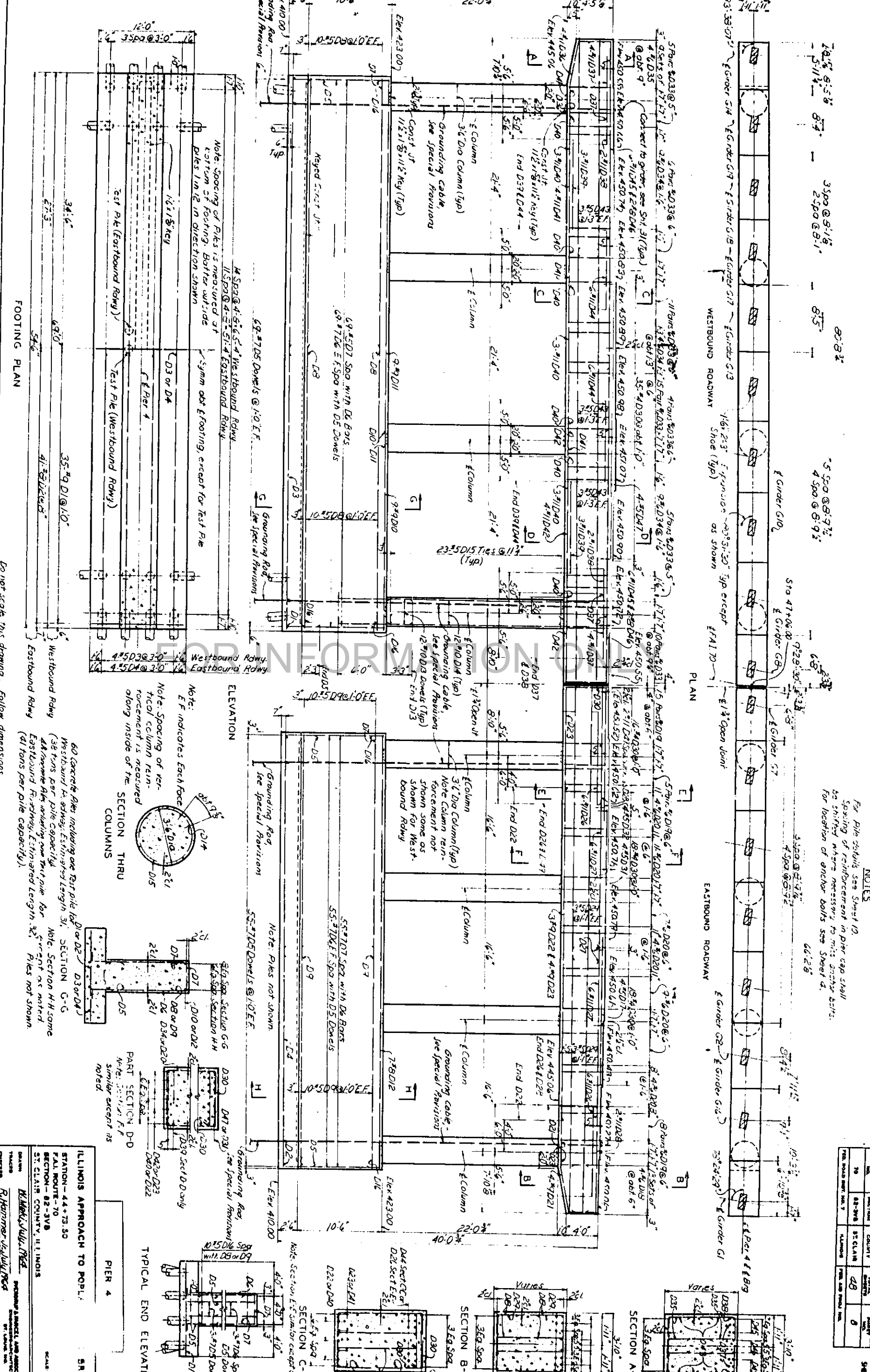
SECTION D-D

SECTION E-E

TYPICAL END ELEVATION

PIER 3

1988
AS343



Notes:
 1. Spacing of Piles is measured at bottom of footing. Barter will provide line in direction shown.
 2. Symm abt footing, except for Test Pile.
 3. EF indicates each face.
 4. Note: Spacing of vertical column reinforcement is measured along inside of the columns.
 5. Section C-C: Similar except as noted.

60 Concrete Piles including one Test pile for Westbound Roadway. Estimated Length 31'. SECTION C-C (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).

60 Concrete Piles including one Test pile for Westbound Roadway. Estimated Length 31'. SECTION C-C (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).

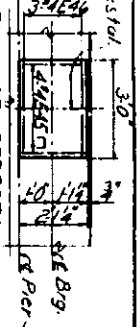
60 Concrete Piles including one Test pile for Westbound Roadway. Estimated Length 31'. SECTION C-C (38 tons per pile capacity).
 44 Concrete Piles including one Test pile for Eastbound Roadway. Estimated Length 32'. Piles not shown (41 tons per pile capacity).

ILLINOIS APPROACH TO POPPY BRIDGE
 STATION - 44+73.50
 FALL ROUTE - 70
 SECTION - 82-3V8
 ST. CLAIR COUNTY, ILLINOIS
 DRAWN BY: M. Mark, J. V. Reed
 CHECKED BY: R. H. ...
 DATE: ...

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.
 66'28"

ITEM NO.	SECTION	QUANTITY	UNIT	REMARKS	SHEET NO.
70	82-3V8	52	CLAMP		8
			FLANGES		
			PIER AND PILE CAP		

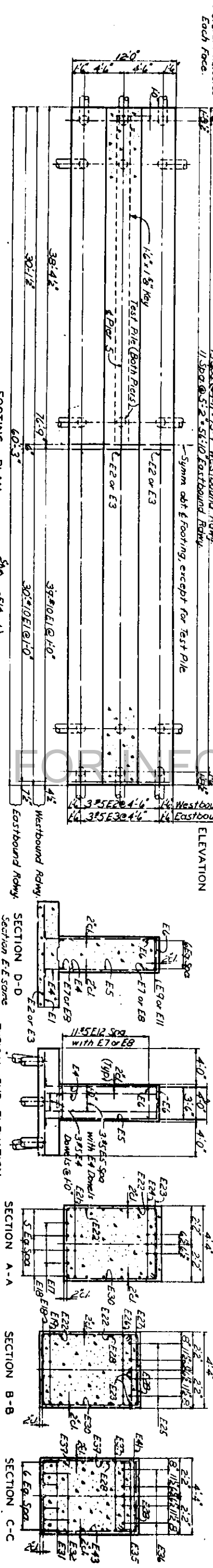
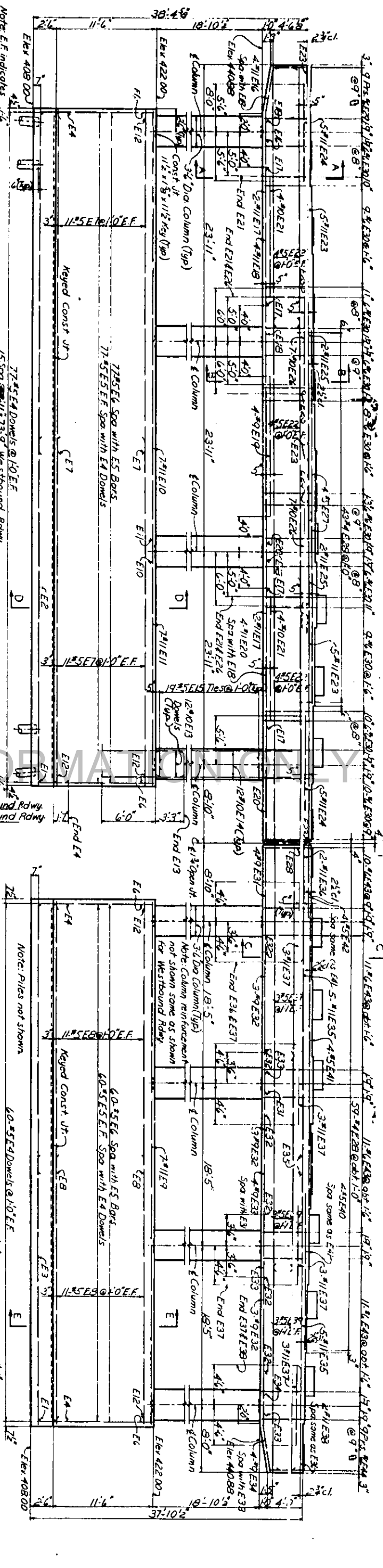
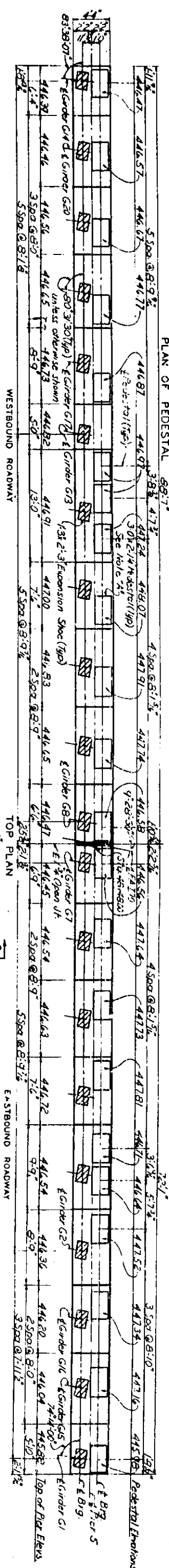
Reinforcement Note: Pedestals & Footings
 Reinforcement shown on Plan of Pedestals shall be provided for pedestals 1'0" and over in height (9 pedestals require reinforcement)



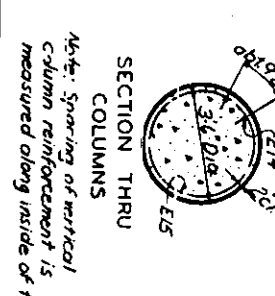
Note: Pedestals are provided to receive girder shoes by others. The Contractor shall be responsible for the placement of the reinforcing steel in the pier cap and pedestals to clear anchor bolts.

NO.	REVISION	DATE	BY	CHKD.
10	RE-DESIGN	08-28-88	EL CLARK	QJ3
9	REVISION	08-28-88	EL CLARK	QJ3

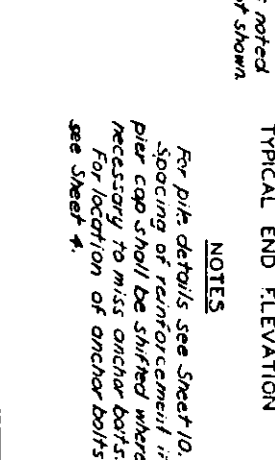
SHEET NO. 9
 SHEETS



Pile Notes: Spacing of piles is measured along bottom of footing. Barter outside piles 1 in 12 in direction shown.
 Westbound Rwy: 46 Concrete piles required including one test pile.
 Estimated length = 40
 39 tons per pile capacity
 Eastbound Rwy: 36 Concrete piles required including one test pile.
 Estimated length = 42
 44 tons per pile capacity



Note: Spacing of vertical column reinforcement is measured along inside of the.

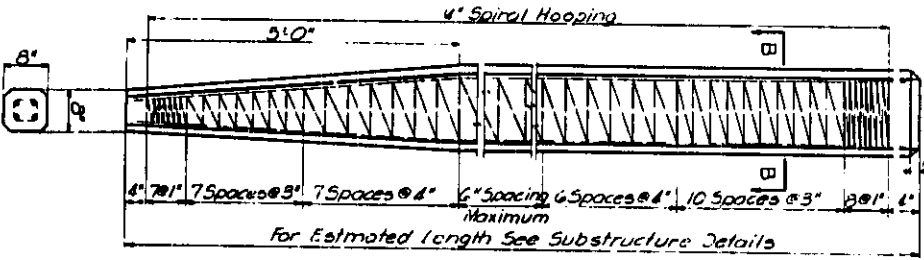
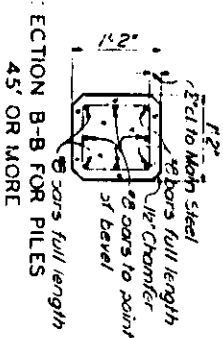


NOTES
 For pile details see Sheet 10. Spacing of reinforcement in pier cap shall be shifted where necessary to miss anchor bolts. For location of anchor bolts see Sheet 4.

ILLINOIS APPROACH TO POPLAR
 ST. CLAIR COUNTY, ILLINOIS
 W. M. ...
 06E

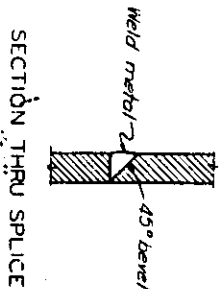
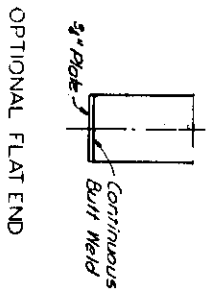
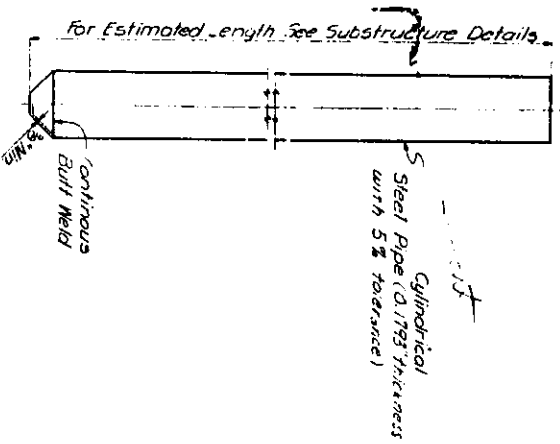
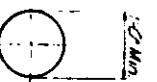
1988
643481

SECTION B-B FOR PILES
UNDER 45' LONG



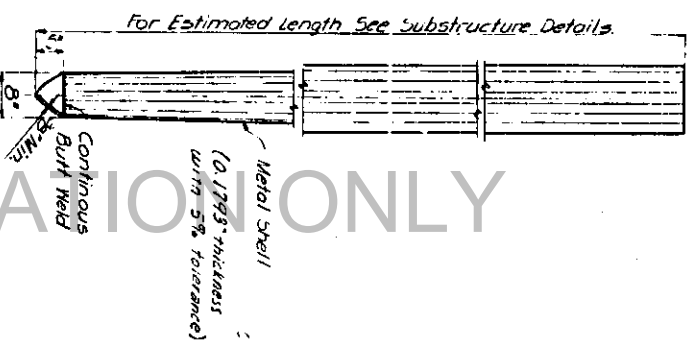
PRECAST CONCRETE PILE
ALTERNATE

Handling:
For pile lengths up to 45', use two slings spaced at a distance of 231.1' from each end.
For Piles longer than 45', use three slings placed at a distance of 0.12L' from each end and at mid-point of pile. L = Overall length of pile to be handled.



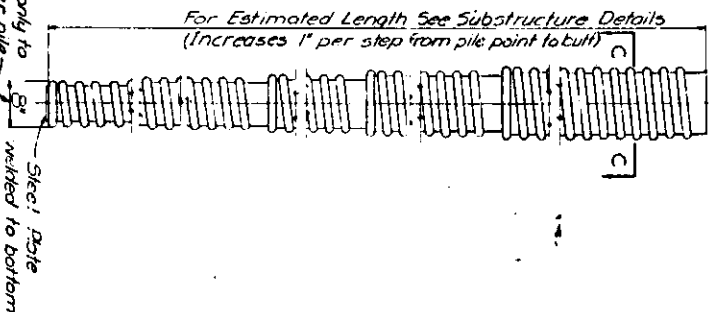
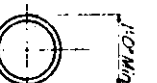
CYLINDRICAL STEEL SHELL
CAST IN PLACE CONCRETE PILE

Note: Driving and bearing ends of pipe shall be cut square.

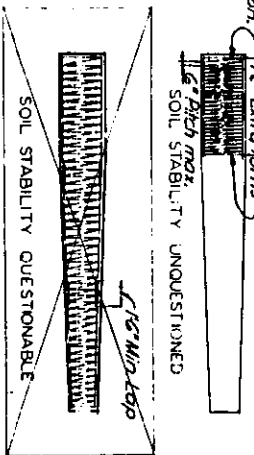


- ALLOWABLE TAPERS
- 1- Taper 1/2" x 6" for 10'-0" - 12" Dia. Cylindrical Section.
 - 2- Taper 1/4" x 4" for 17'-0" - 18" Dia. Cylindrical Section.
 - 3- Taper 1/10" for 30'-0" - 42" Dia. Cylindrical Section.

TAPERED METAL SHELL
CAST IN PLACE CONCRETE PILE

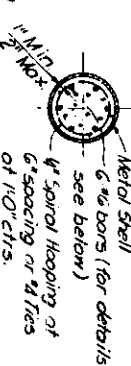


Applies only to step-taper pile
Steel Plate welded to bottom



MANDREL DRIVEN STEP-TAPER
CAST IN PLACE CONCRETE PILE

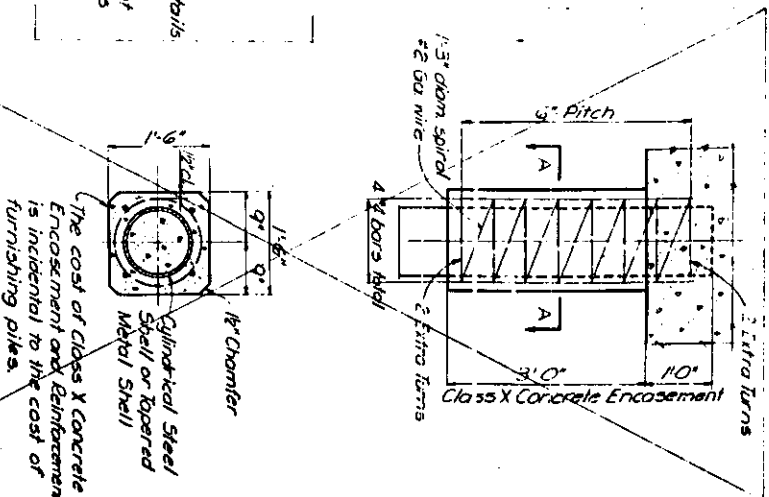
Note: At least 1/8" of the length of pile shall have a butt diameter equal to or greater than 1/8". Gages are furnished to suit soil conditions (See Note 3).



Note: Reinforcement is incidental to the cost of furnishing piles.

DETAIL OF ENCASUREMENT OF
METAL SHELL PILES AT ABUTMENTS

SECTION A-A



The cost of Class X concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.

PILING STANDARD

ILLINOIS APPROACH TO POPLAR STREET

STATION - 44+73.50	SCALE NONE
FALL ROUTE - 70	
SECTION - 82-SVB	
ST. CLAIR COUNTY, ILLINOIS	
DESIGNED BY: R. H. J. L. S. E.	PROJECT ARCHITECT AND ENGINEER
CHECKED BY: L. H. G. S. E.	OR CONSULTING ENGINEER

NO.	DESCRIPTION	QUANTITY	UNIT	AMOUNT	SHEET NO.
70	82-SVB	48	SE. CLAIR	10	82-SVB
TOTAL					10

Note: Do not scale this drawing. Follow dimensions.

FOR INFORMATION ONLY

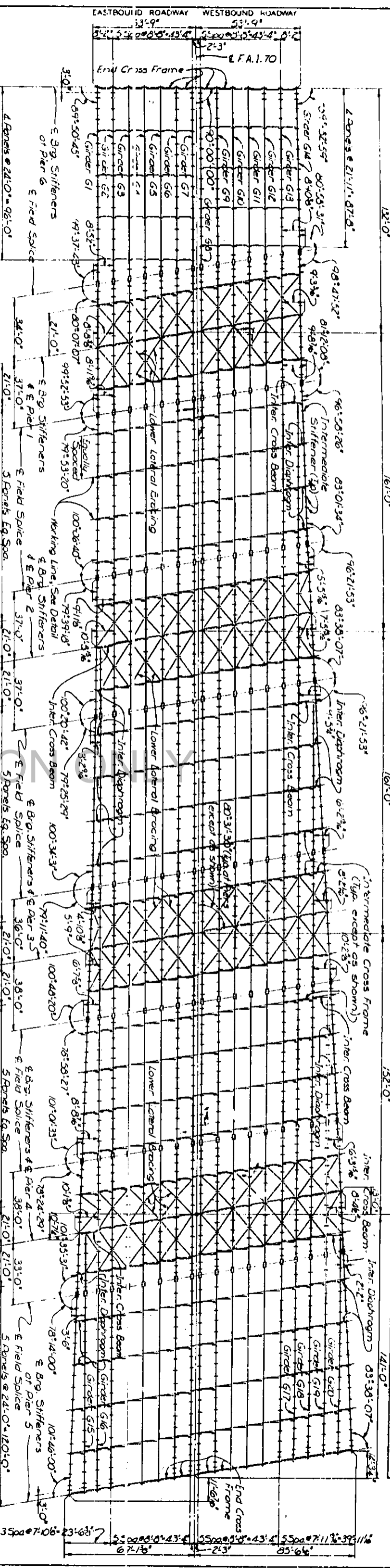
Note: Space intermediate stiffeners for Girders G3 thru G5 same as G2 and for Girders G6 thru G12 same as G3 except as shown.

Note: All intermediate stiffeners shall be placed normal to girder web except Girders G1 and G4 of Intermediate Cross Frames, Diaphragms and Cross Beams. (See Detail)

Overhead Sign Structure (for details of overhead sign structure support see Sheet 14)

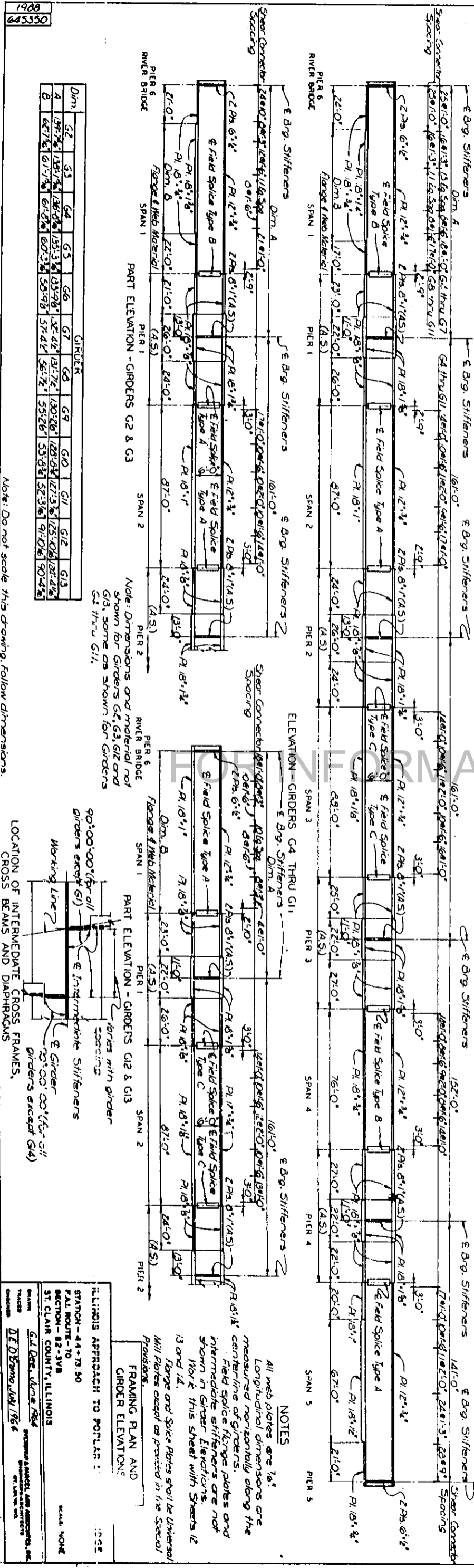
SECTION	COUNT	MARK	NO.
30	82-318	ST CLAIN	48
		ILLINOIS	11

SHEET NO. 48
SHEETS 11



FRAMING PLAN
Note: All intermediate stiffeners to be P. 5^{1/2} x 3^{1/2} and one to be of the same material as the web plate to which they are welded.

Estimate of Structural Steel: 436 - 1,977,940
441 - 1,198,170



Dim	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13
A	137'-7 1/2"	137'-7 1/2"	136'-8 1/2"	135'-3 1/2"	135'-9 1/2"	137'-7 1/2"	130'-5 1/2"	128'-0 1/2"	127'-3 1/2"	125'-10 1/2"	124'-4 1/2"	124'-4 1/2"
B	62'-7 1/2"	61'-7 1/2"	61'-0 1/2"	60'-3 1/2"	59'-9 1/2"	57'-4 1/2"	56'-7 1/2"	55'-2 1/2"	53'-8 1/2"	52'-3 1/2"	51'-0 1/2"	50'-4 1/2"

Note: Do not scale this drawing, follow dimensions.

LOCATION OF INTERMEDIATE CROSS FRAMES, CROSS BEAMS AND DIAPHRAGMS

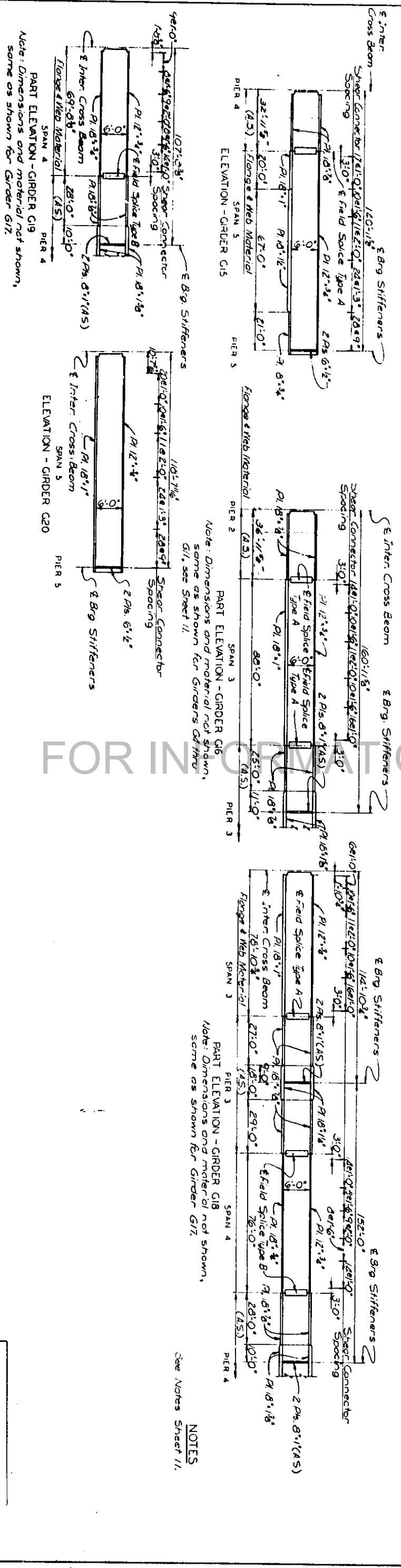
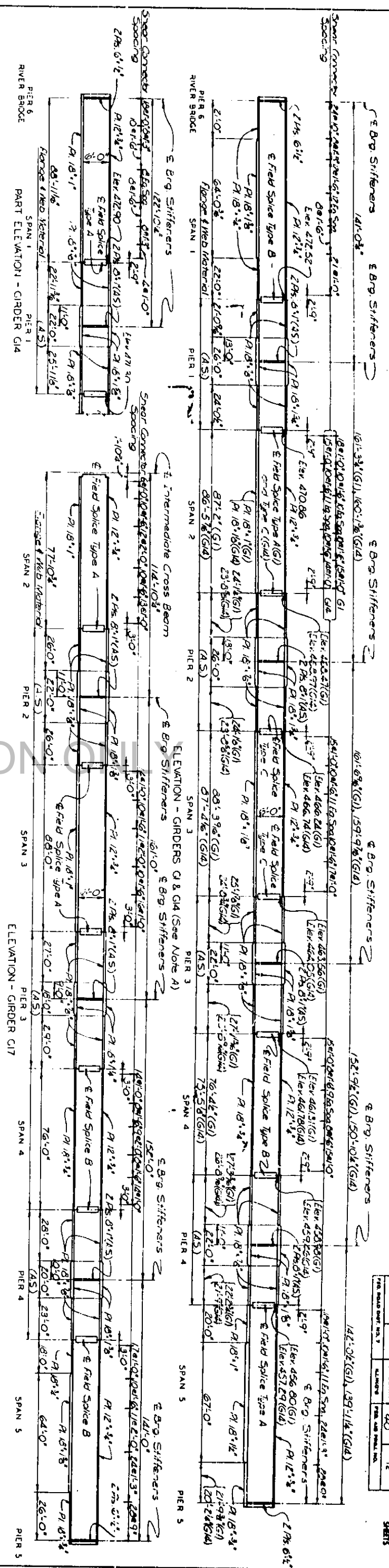
ILLINOIS APPROACH TO POPLAR :
STATION - 44+75.50
FAL ROUTE - 70
SECTION - 82-318
ST CLAIR COUNTY, ILLINOIS
G.I. DEER, June 1964
G.I. DEER, June 1964
G.I. DEER, June 1964

NOTES
All web plates are 7/8"
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 and 14.
Flange and splice plates shall be Universal Mill Plates except as provided in the Special Provisions.
FRAMING PLAN AND GIRDER ELEVATIONS

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.

TAB. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
73	82-318	ST. CLAIR	48	12
73 ROAD DIST. NO. 7				STATE HIGHWAY NO.



Part Elevation - Girder G19
 Part Elevation - Girder G20
 Part Elevation - Girder G21
 Part Elevation - Girder G22
 Part Elevation - Girder G23
 Part Elevation - Girder G24
 Part Elevation - Girder G25
 Part Elevation - Girder G26
 Part Elevation - Girder G27
 Part Elevation - Girder G28
 Part Elevation - Girder G29
 Part Elevation - Girder G30

Note: Dimensions and material not shown, same as shown for Girders G1 thru G11, see Sheet 11.

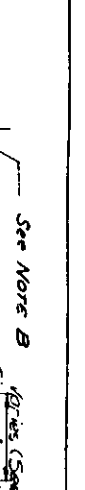
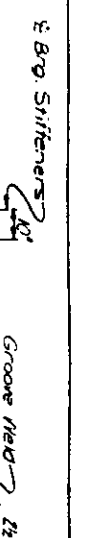
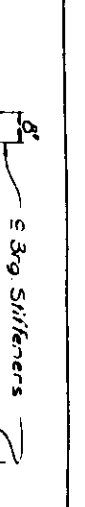
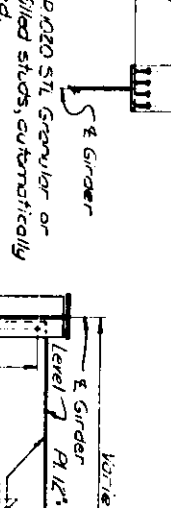
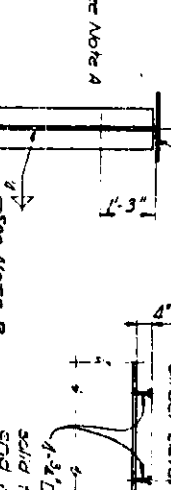
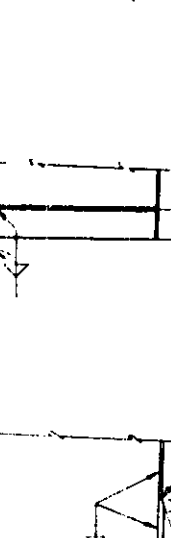
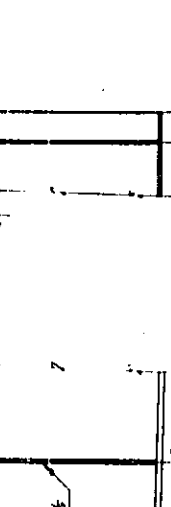
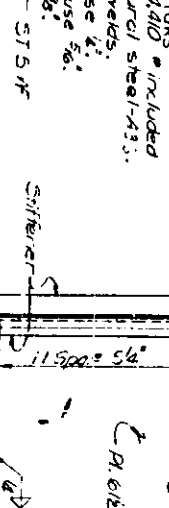
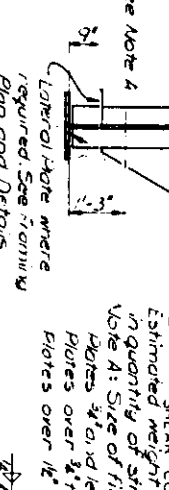
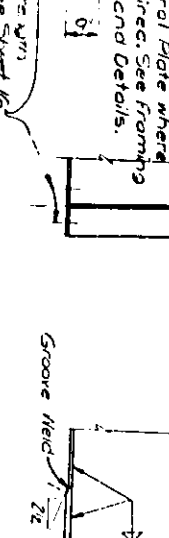
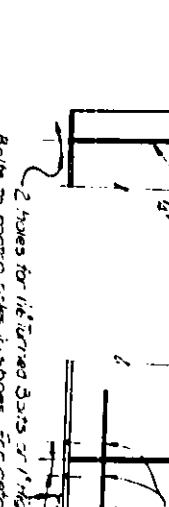
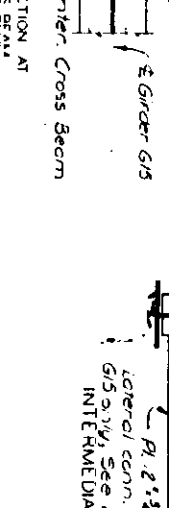
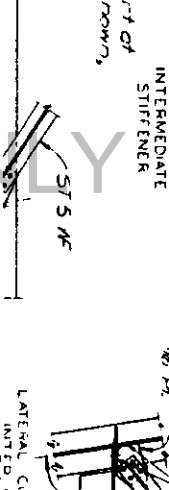
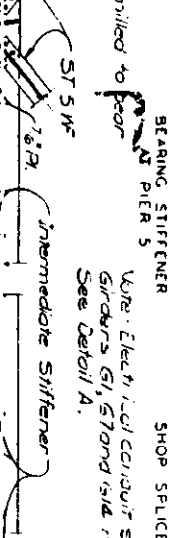
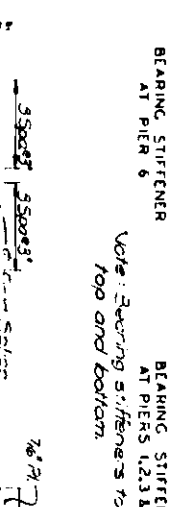
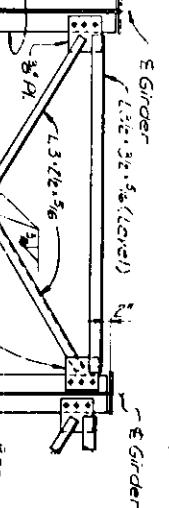
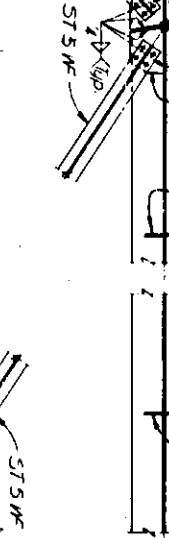
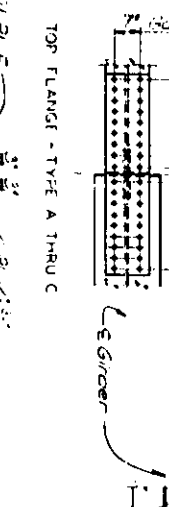
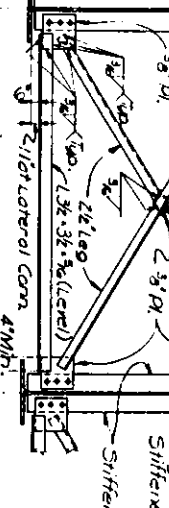
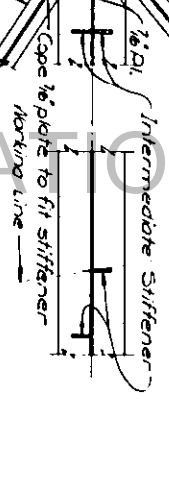
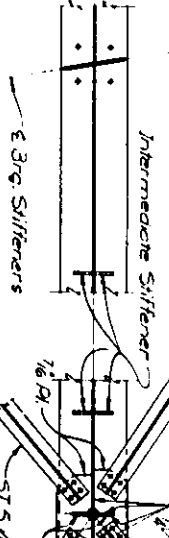
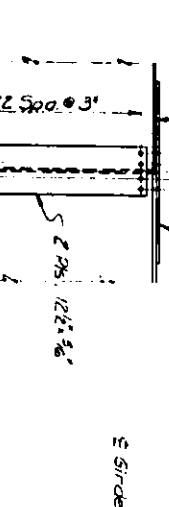
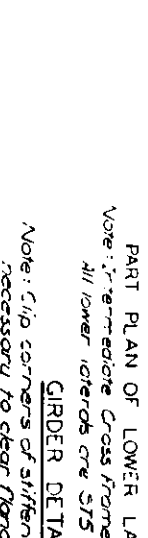
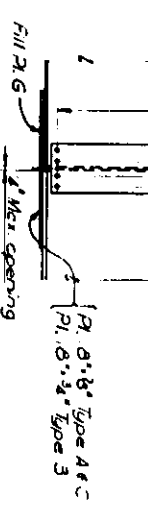
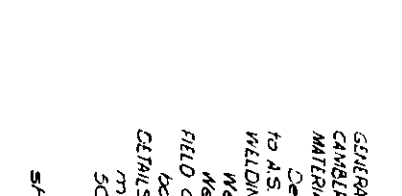
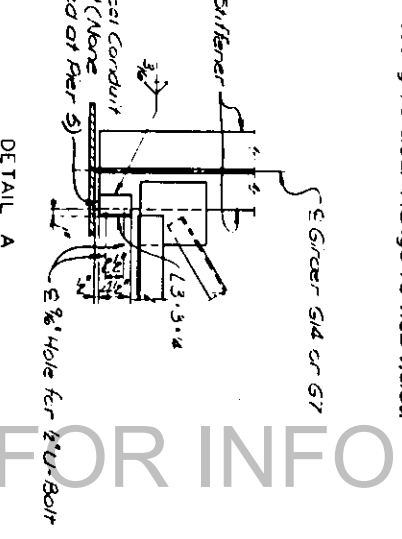
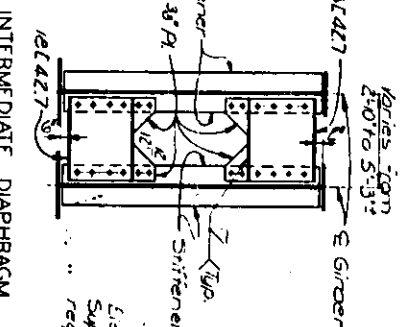
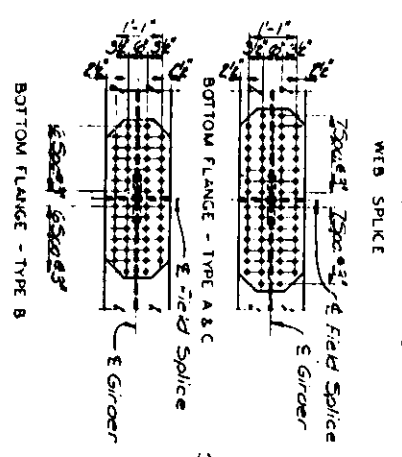
See Notes Sheet 11.

ILLINOIS APPROACH TO POPLAR BRIDGE
 STATION - 44+73.50
 FALL ROUTE - 70
 SECTION - 82-318
 ST. CLAIR COUNTY, ILLINOIS
 SCALE NONE
 DRAWN BY G.L. DEER, J.W. REE
 CHECKED BY J.E. DIERMAN, J.W. REE
 PROJECT MANAGER AND ARCHITECT: J.E. DIERMAN, INC., ST. LOUIS, MO.

FOR INFORMATION ONLY

SPURCE	PLATE F	PLATE G
SPURCE A	R 12" x 6"	R 12" x 6"
SPURCE B	R 2" x 6"	R 12" x 6"
SPURCE C	R 12" x 6"	R 12" x 6"

FIELD SPLICES



FOR INFORMATION ONLY

STRUCTURAL STEEL NOTES

GENERAL NOTES: See Sheet 2.
 CAMBIA: All girders to be cambered as shown.
 MATERIALS: Material marked (MS) shall conform to ASTM Designation A441-63, all other structural steel to conform to ASTM Designation A36-62T.
 WELDING: Welding shall conform to the Specifications for Welding Highway and Railway Bridges of the American Welding Society, AWS, D20-63.
 FIELD CONNECTIONS: All field splices and connections to be bolted with 3/4" High Strength Bolts, except as shown. DETAILS: All longitudinal and transverse dimensions are measured horizontally at normal temperature of 50°F.
 All intermediate stiffeners to be placed vertical. Field splices may be shifted slightly from positions shown. All field splices are vertical.

NOTE B: Intermediate stiffeners shall have a tight fit at bottom flange and 3/8" clearance at top flange over pier. Between field splices, and a tight fit at top flange and 3/8" clearance at bottom flange at all other locations.

ILLINOIS APPROACH TO PORTLAND CEMENT CONCRETE BRIDGE

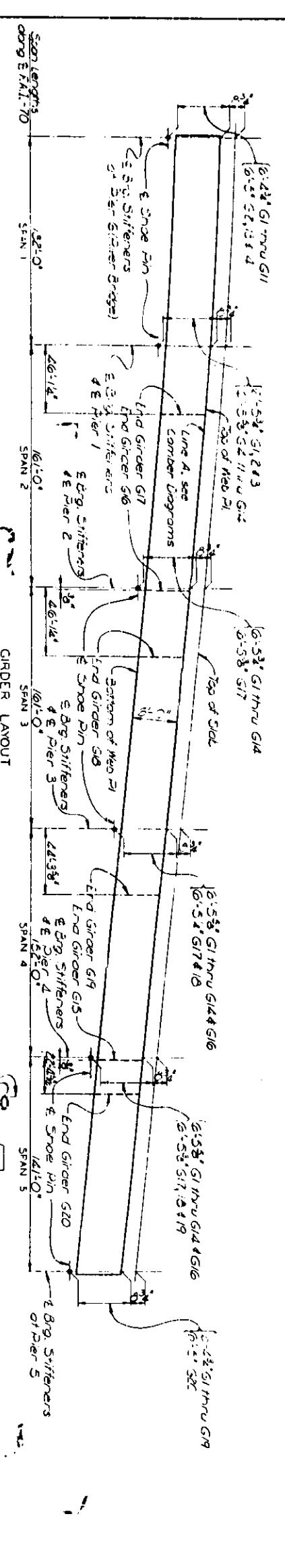
STATION - 44+73.50
 PAL ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

SCALE: NONE

DESIGNED BY: G. L. Deane, June 1964
 CHECKED BY: J. E. Deane, July 1964
 DRAWN BY: J. E. Deane, July 1964
 PROJECT ENGINEER: J. E. Deane, July 1964
 PROJECT ARCHITECT: J. E. Deane, July 1964
 PROJECT ENGINEER: J. E. Deane, July 1964

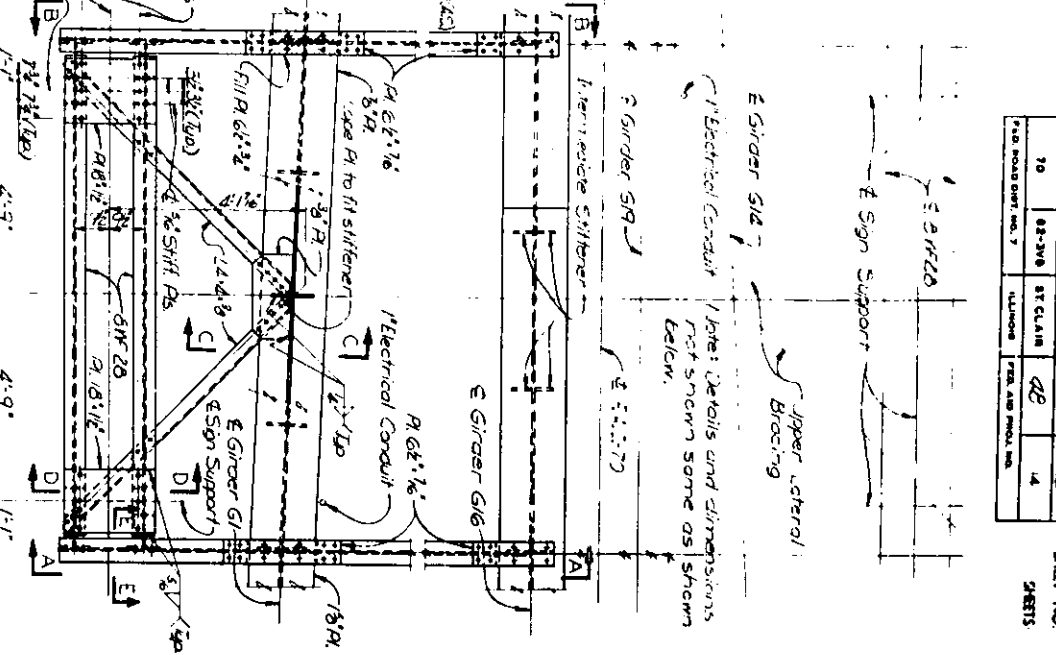
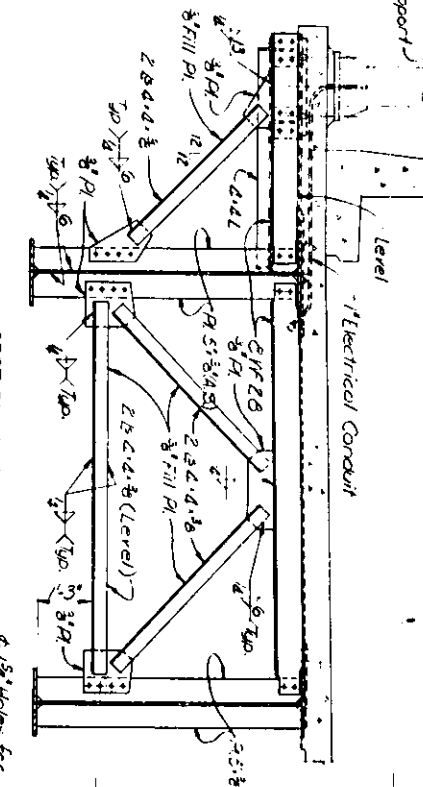
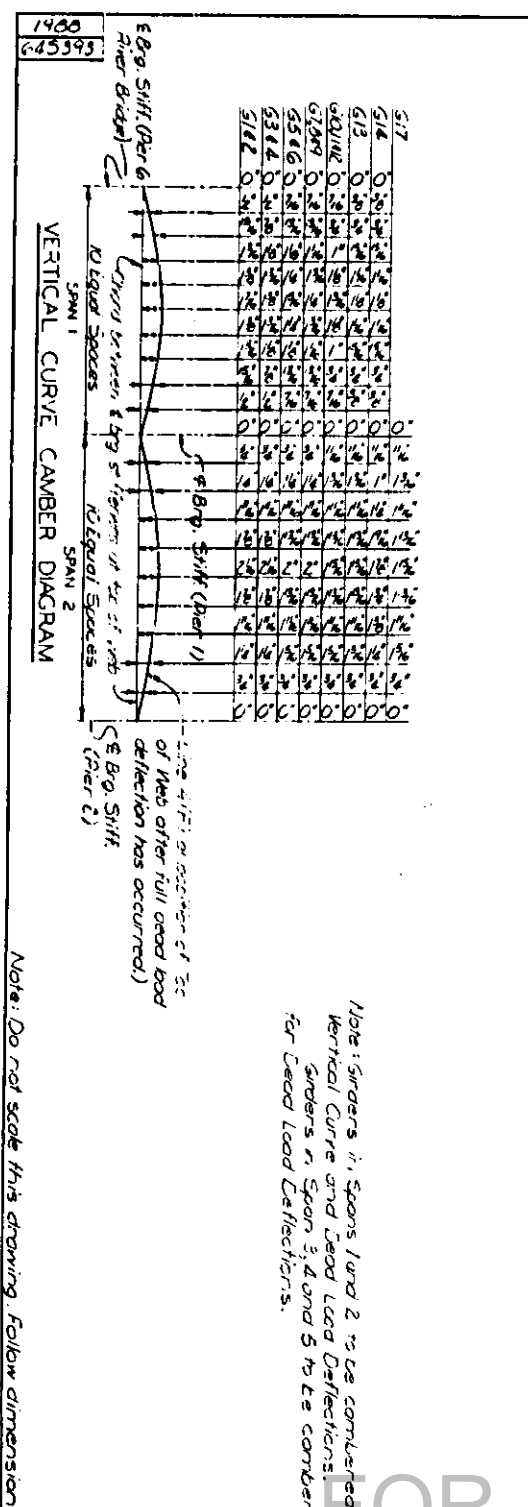
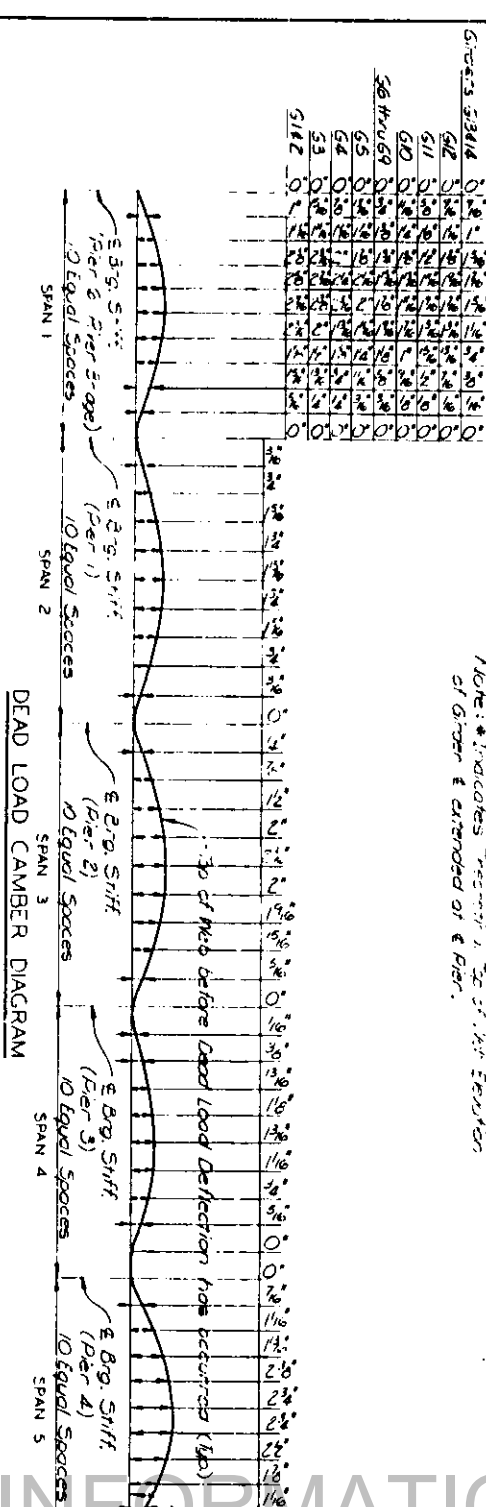
SHEET NO.	SECTION	QUANTITY	DATE	BY
48	82-3VB	37 CLAM	48	J. E. Deane
13	82-3VB	37 CLAM	48	J. E. Deane

TITLE	SECTION	COUNTY	DATE	SHEET NO.
ILLINOIS APPROACH TO POPULAR STR. <td>82-248</td> <td>ST. CLAIR</td> <td>4/28</td> <td>14</td>	82-248	ST. CLAIR	4/28	14
DESIGNED BY	ILLINOIS	SCALE	AS SHOWN	SHEETS



TOP OF WEB ELEVATIONS

PIER	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19	G20
1	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25
2	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25
3	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25
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5	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25	61.25



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.

ILLINOIS APPROACH TO POPULAR STR.

STATION - 44+73.50
FALL ROUTE - 70
SECTION - 82-248
ST. CLAIR COUNTY, ILLINOIS

DESIGNED BY: G. J. Deitz, 7/64
CHECKED BY: C. L. Deitz, 11/64

PREPARED BY: BUREAU OF PUBLIC WORKS AND HIGHWAYS, ILLINOIS DEPARTMENT OF TRANSPORTATION

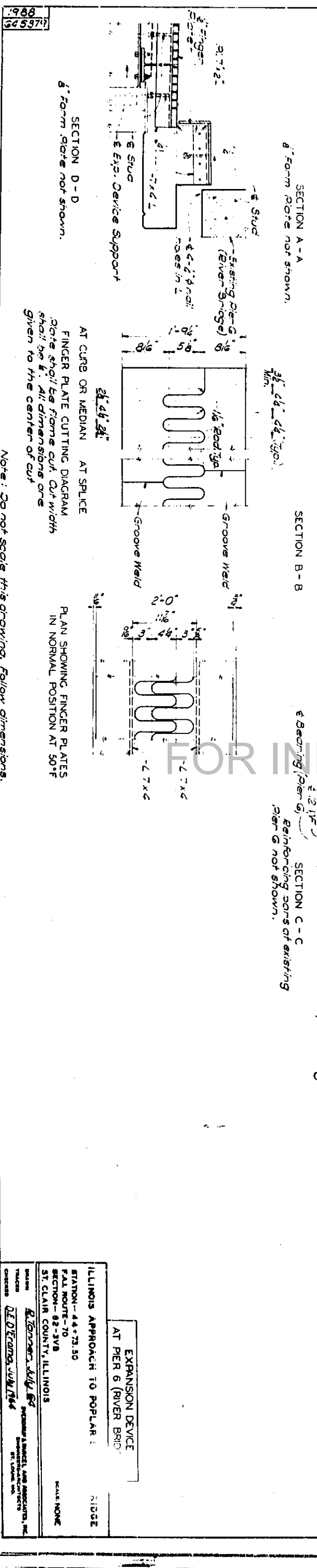
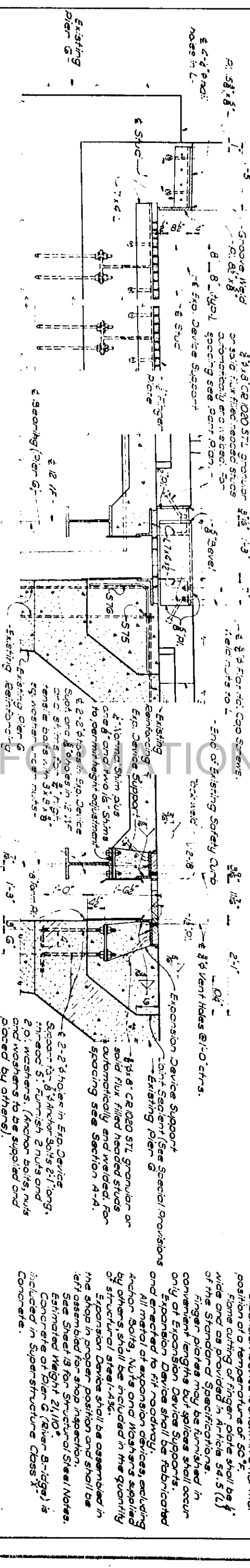
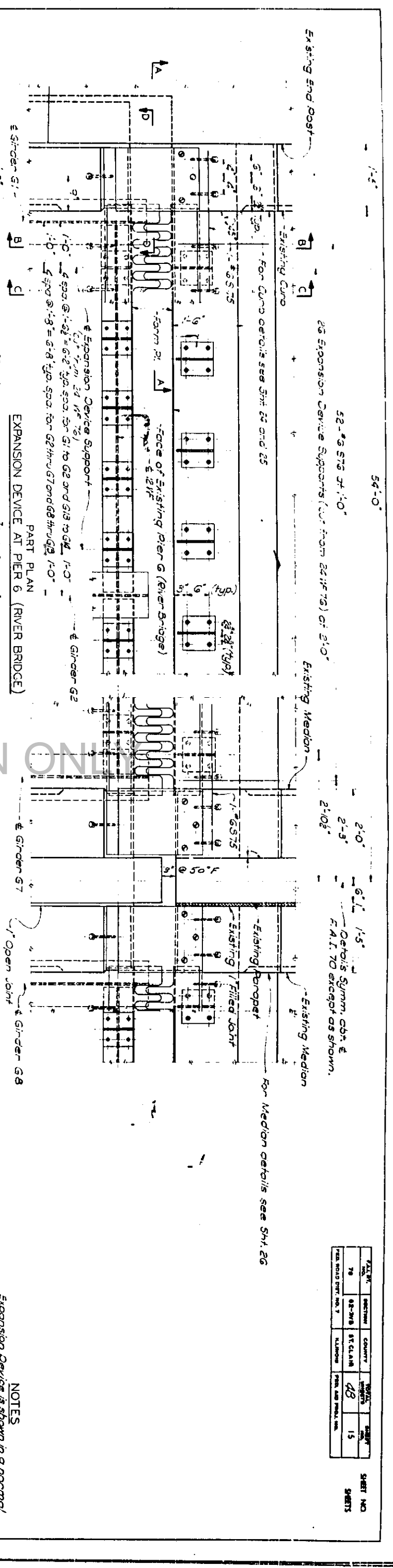
SCALE: NONE

Note: Do not scale this drawing. Follow dimensions.

FILE NO.	SECTION	COUNTY	ROUTE	SHEET NO.
78	92-218	ST. CLAIR	48	15
FILE NO.	SECTION	COUNTY	ROUTE	SHEET NO.
78	92-218	ST. CLAIR	48	15

SHEET NO. 15

SHEETS



NOTES

Expansion Device is shown in a normal position of a temperature of 50°F. Finger cutting of finger plate shall be wide and as provided in Article 54.5 (L) of the Standard Specifications. Finger plates may be furnished in convenient lengths but splices shall occur only at Expansion Device Supports. Expansion Device shall be fabricated and erected to fit roadway. All metal of expansion devices, including anchor bolts, nuts and washers supplied by others, shall be included in the quantity of structural steel-43c. Expansion Device shall be assembled in the shop in proper position and shall be left assembled for shop inspection. See Sheet 13 for Structural Steel Notes. Estimated Weight 21,110' Concrete of Pier G (River Bridge) is included in Superstructure Class X Concrete.

EXPANSION DEVICE
AT PIER 6 (RIVER BRIDGE)

ILLINOIS APPROACH TO POPLAR
STATION - 44+73.50
FAL ROUTE - 70
SECTION - 92-218
ST. CLAIR COUNTY, ILLINOIS

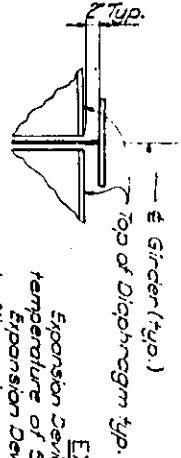
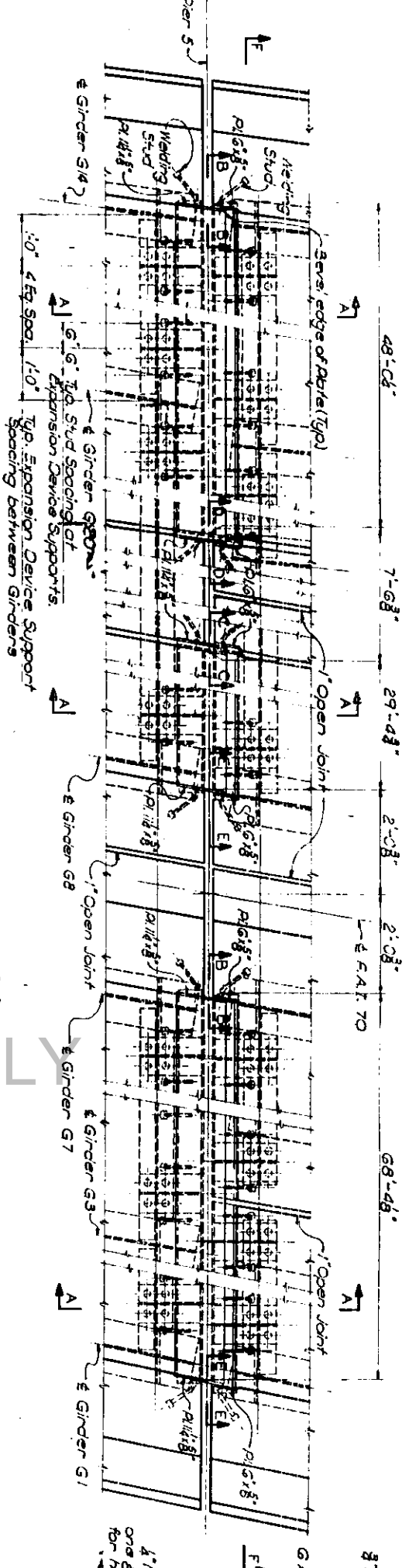
SCALE NONE

DESIGNED BY: *DE O'Connell, J.W.M.*
CHECKED BY: *R. Ziemer, J. Kelly, G.D.*

PREPARED BY: *R. Ziemer, J. Kelly, G.D.*
DRAWN BY: *R. Ziemer, J. Kelly, G.D.*

ENGINEER: *DE O'Connell, J.W.M.*
ARCHITECT: *R. Ziemer, J. Kelly, G.D.*

Design by S&P — Design by others —
except for expansion
device and pier.



EXPANSION DEVICE NOTES
Expansion Device is shown in a normal position of a temperature of 50° F.
Expansion Device shall be fabricated and erected to fit roadway.
All metal of expansion device is included in the quantity of Structural Steel, A36.
See Sheet 13 for Structural Steel Notes.
Estimated Weight 22,390 Lbs.

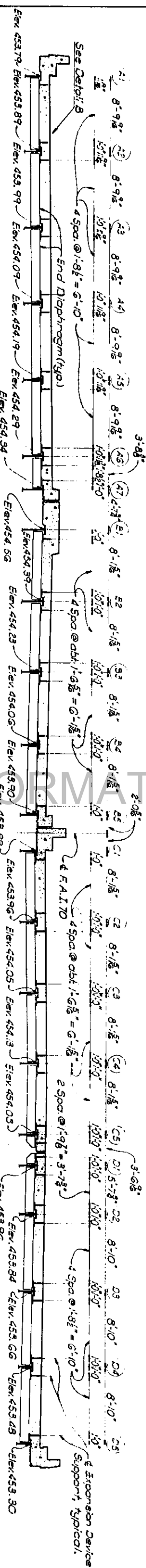
EXPANSION DEVICE AT PIER 5

HOLE PATTERN FOR EXPANSION DEVICE SUPPORT

SECTION B - B
Section E-E opposite hand

SECTION C - C
Section D-D opposite hand

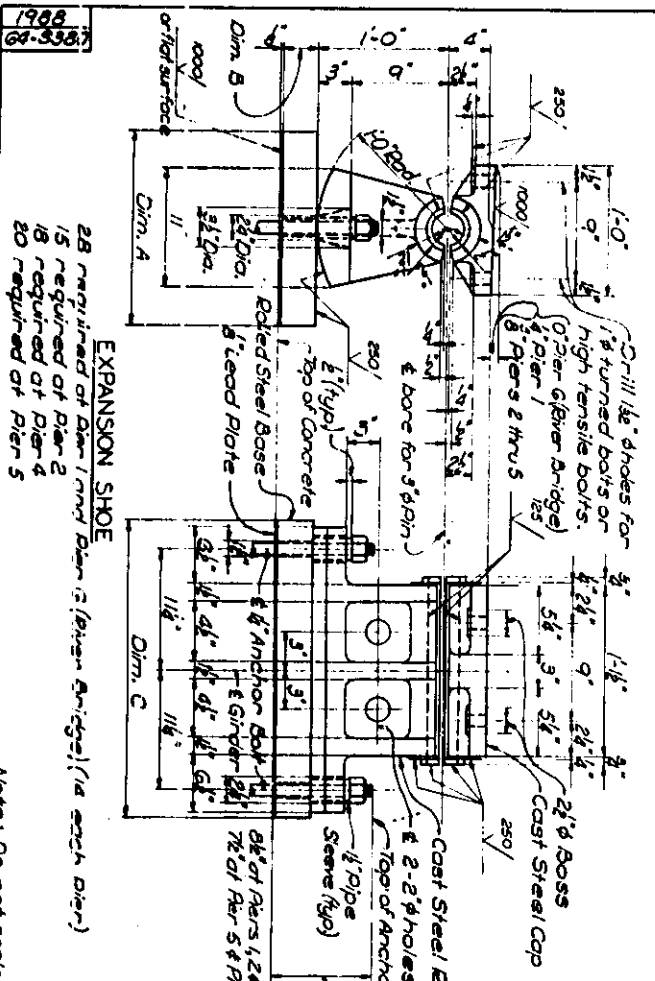
SECTION A - A



SECTION F-F
Note: (B) refers to the identification of girders by others.
Elevations shown are of Top of Web.

SHOE NOTES

Finish all surfaces as shown.
All fillets on castings shall have 3" radius.
All castings shall conform to A.S.T.M. Designation A27-65, Grade 6535, fully annealed.
All pins shall be forged carbon steel A.S.T.M. Designation A235-63T Class C, finish all over.
Estimated weight of castings 47,260 Lbs.
Estimated weight of Shoes (Castings) 98,380 Lbs.
Anchor bolts and all related items shall be included in the weight of Structural Steel, A36.
Where finished surfaces are indicated on the drawings, the surface finishes shall conform to the American Standards Association surface roughness requirements in A5.4.
8/4/1-1962.

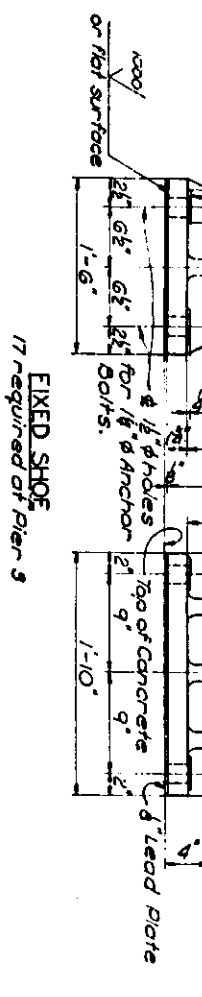


EXPANSION SHOE
28 required of Pier 1 and Pier 2 (River Bridge) (14 each Pier)
15 required of Pier 2
18 required of Pier 4
20 required of Pier 5

Note: Do not scale this drawing. Follow dimensions.

VARIABLE DIMENSIONS			
Pier	Dim. A	Dim. B	Dim. C
1	1-8"	3/4"	2-4"
2	1-6"	3/4"	2-3"
4	1-6"	3/4"	2-5"
5	1-3"	2/4"	2-3"
Girder B	1-3"	2/4"	2-3"

FIXED SHOE
17 required of Pier 3

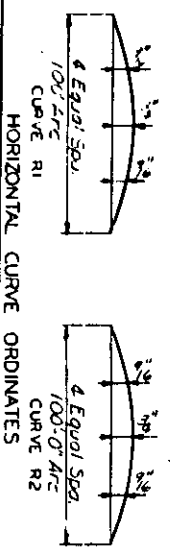
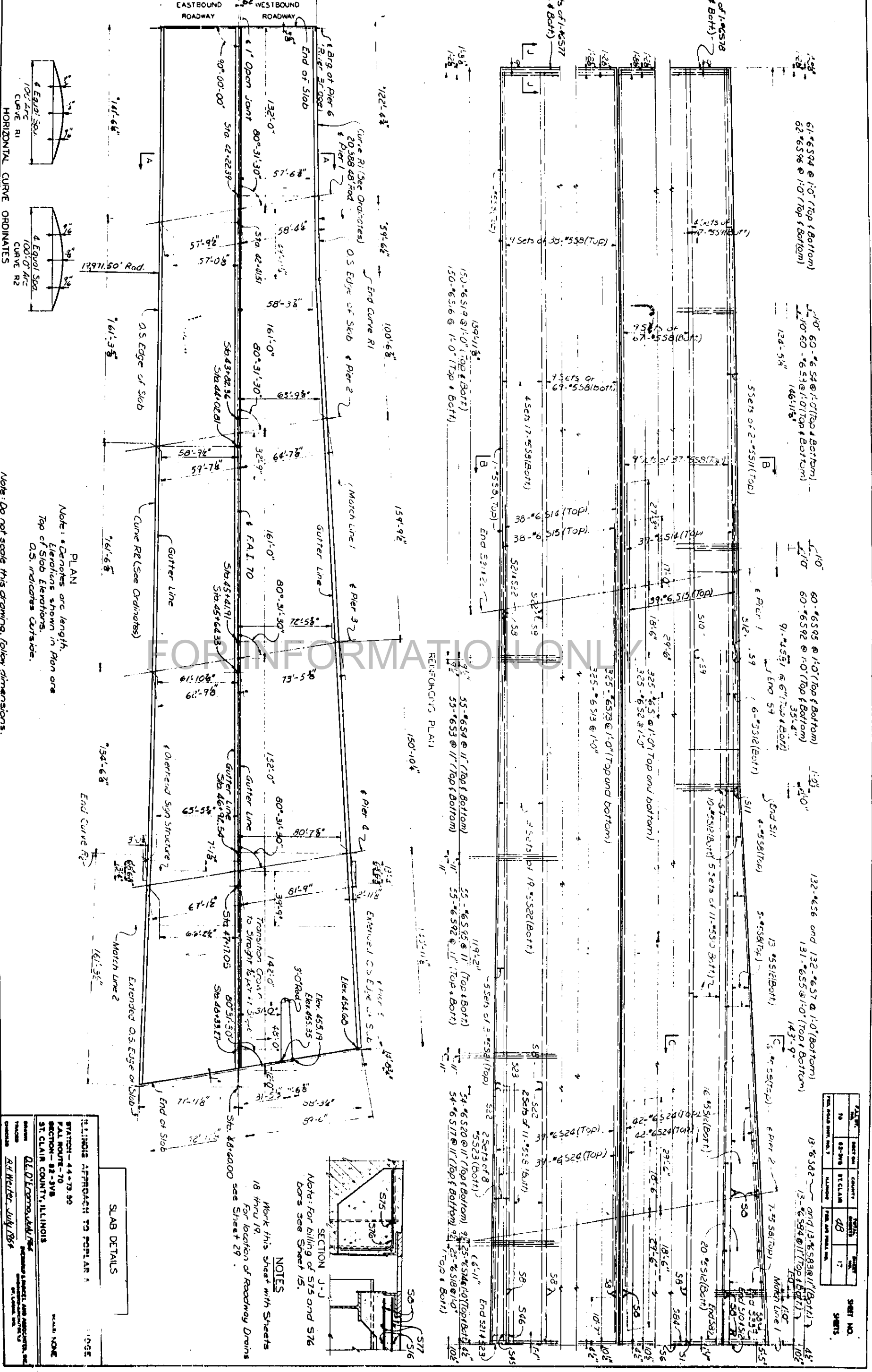


EXPANSION DEVICE AT PIER 5 AND SHOES
ILLINOIS APPROACH TO POPLAR ST
DATE: 4-4-73
FALL ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS
SCALE: NONE
DRAWN BY: DE DERMATIAN
CHECKED BY: DE DERMATIAN

SECTION	COUNTY	PROJECT NO.	SHEET NO.
70	ST. CLAIR	48	16

Details sym. oth. & Pier 5 except as shown.

1988
645341



PLAN
Note: * Denotes arc length.
Elevations shown in Plan are
Top of Slab Elevations.
O.S. indicates Curbside.

Note: Do not scale this drawing, follow dimensions.

ILLINOIS APPROACH TO POPLAR
STATION - 44+73.50
FALL ROUTE - 70
SECTION - 82-3VA
ST. CLAIR COUNTY, ILLINOIS
SCALE NONE
DATE 10-2-84
DRAWN BY Q.L. O'NEILL
CHECKED BY R.K. WELCH
APPROVED BY R.K. WELCH
DATE 10-2-84

SLAB DETAILS

SECTION J-J

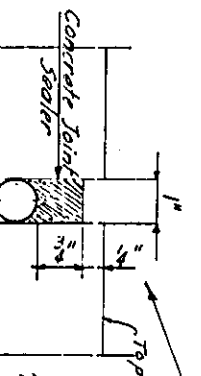
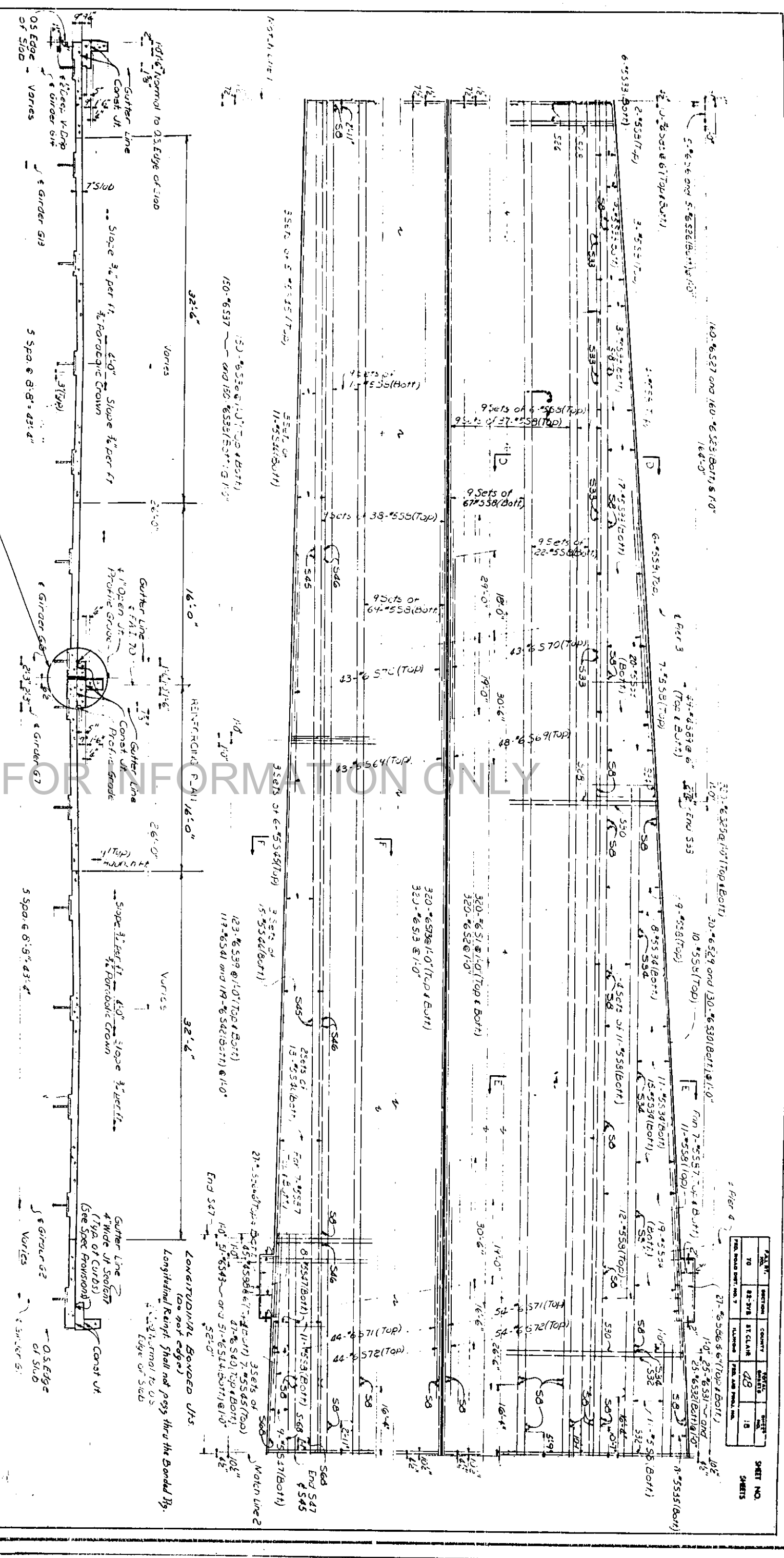
Note: For billing of S75 and S76
bars see Sheet 15.

Notes
Work this sheet with Sheets
18 thru 19.
For location of Roadway Drains
see Sheet 29.

DATE	BY	NO.	REVISION
10-2-84	R.K. WELCH	48	1

SHEET NO.
48
SHEETS
17

1988
645351



SECTION A-A
Note: Dimensions shown are typical except as shown or noted.
For height of 'y', see Sheet 20.
Note: Joint Stagger shall be staggered and effectively masked prior to the application of the flexible coat.

Note: Do not scale this drawing. Follow dimensions.

NOTES
Work this sheet with sheets 17 and 19.

SLAB DETAILS

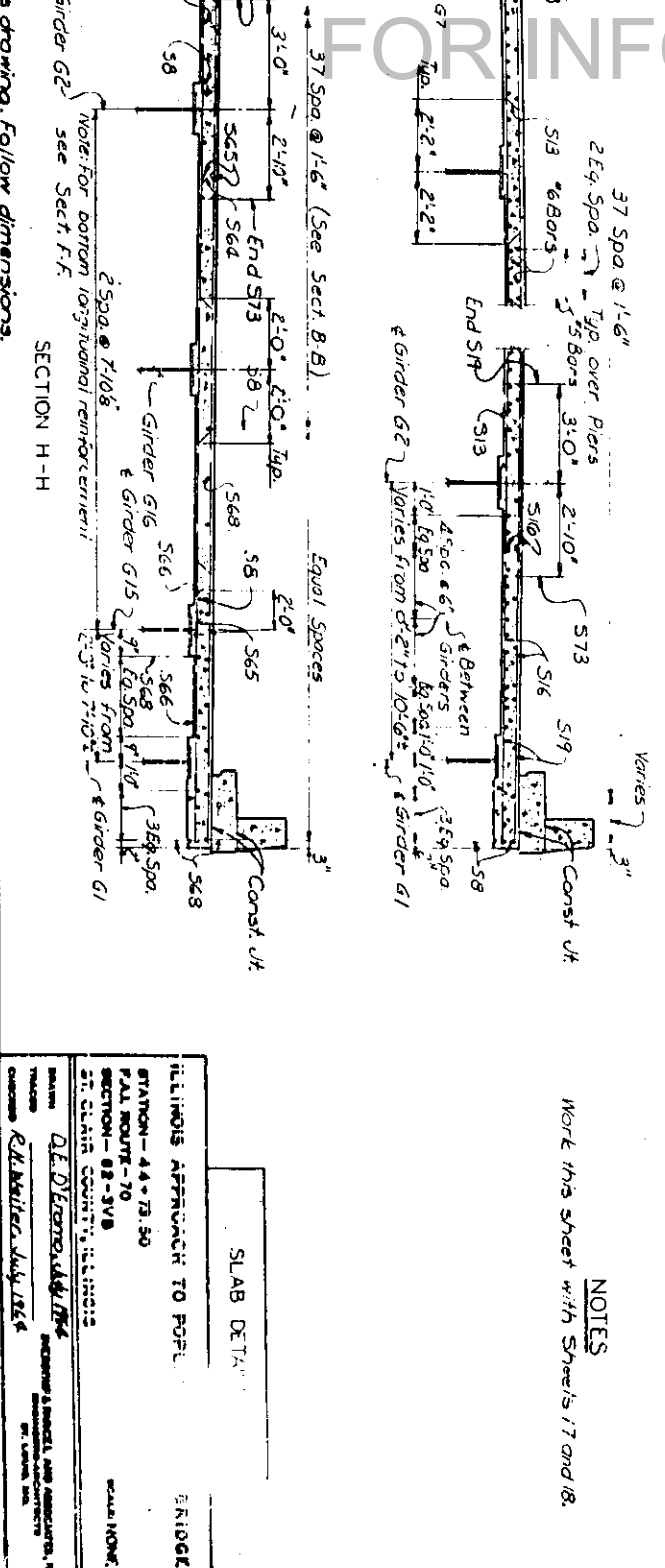
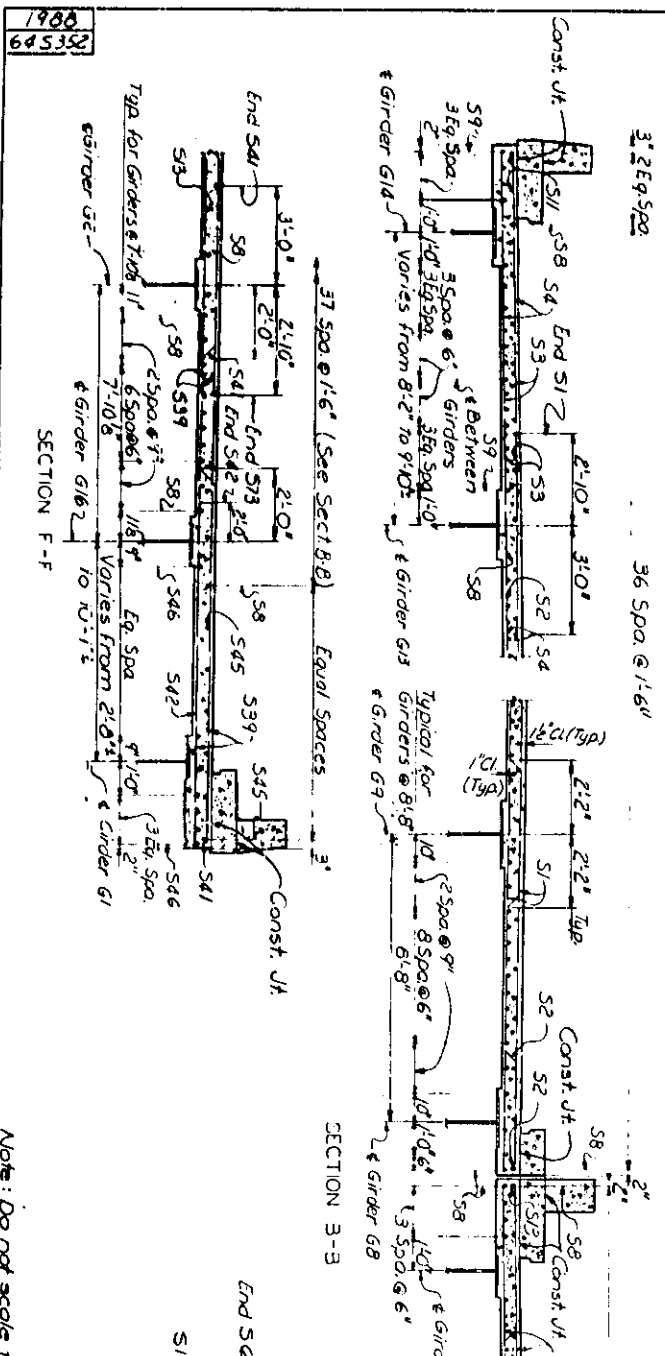
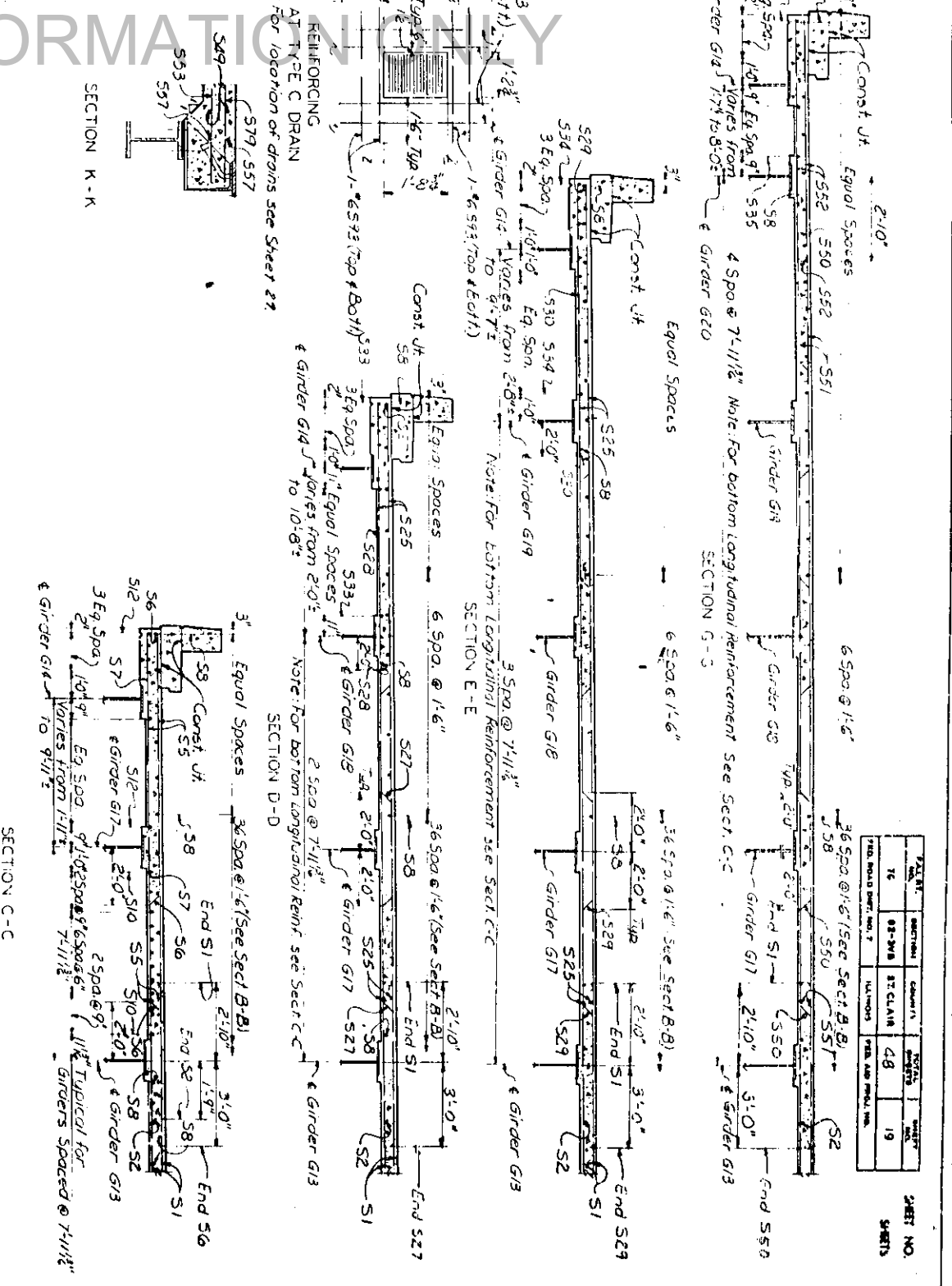
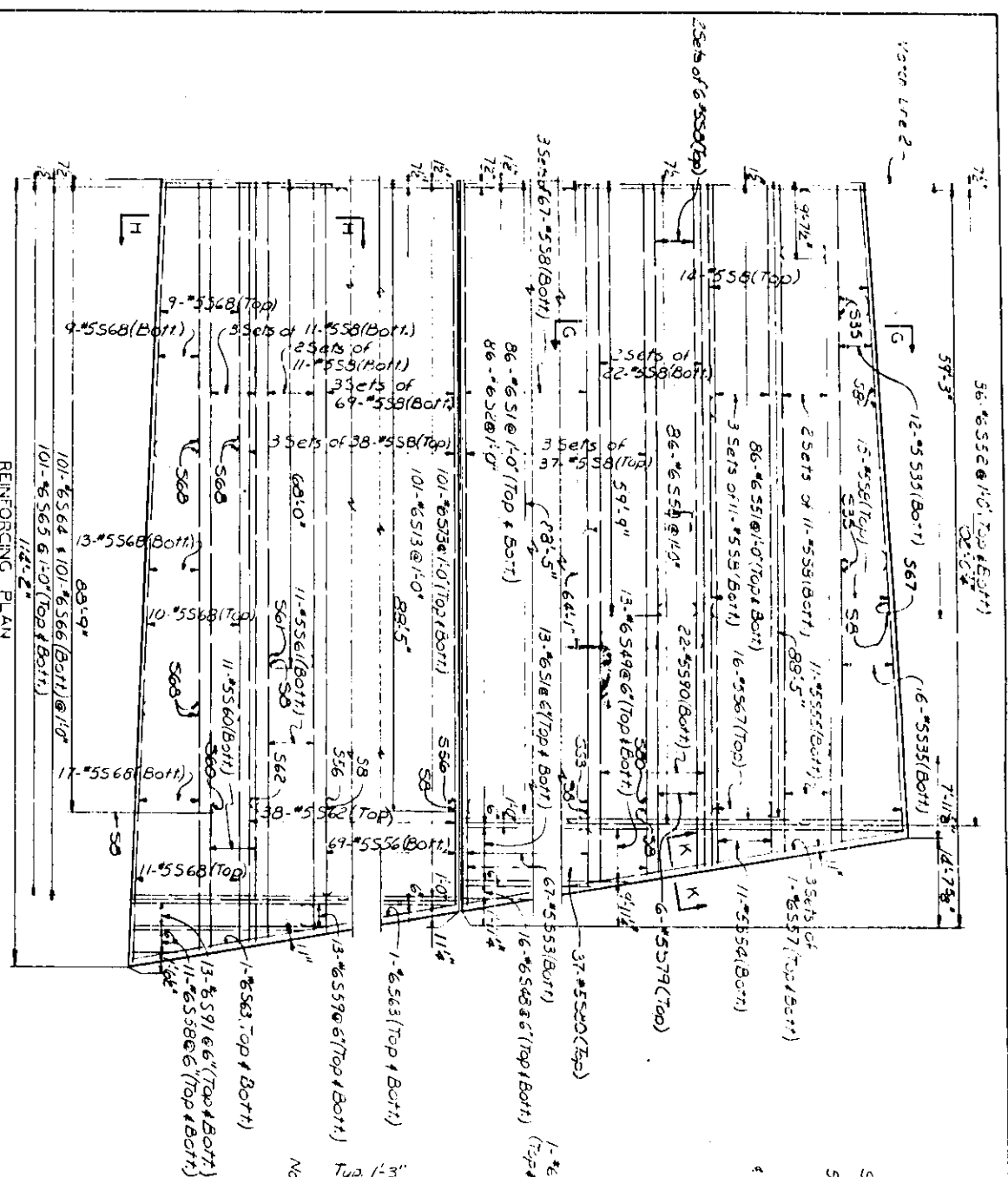
ILLINOIS APPROACH TO POPLAR STREE.	
STATION - 44+73.50	
FALL ROUTE - 70	
SECTION - 82-3VB	
ST. CLAIR COUNTY, ILLINOIS	
DESIGNED BY Q.E. DeYoung, AIA, P.E.	CHECKED BY R.H. Weirter, AIA, P.E.
ENGINEER'S SPECIALty ASSOCIATES, INC. 1015 S. LEXINGTON ST. LOUIS, MO.	
SCALE: NONE	

PLAN NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
70	82-3VB	ST. CLAIR	418	18
TOTAL SHEETS: 18				

SHEET NO. 18 OF 18

NO.	REVISION	DATE	BY	CHKD.
16	REVISION			
17	REVISION			
18	REVISION			
19	REVISION			

SHEET NO. 19
OF 20 SHEETS

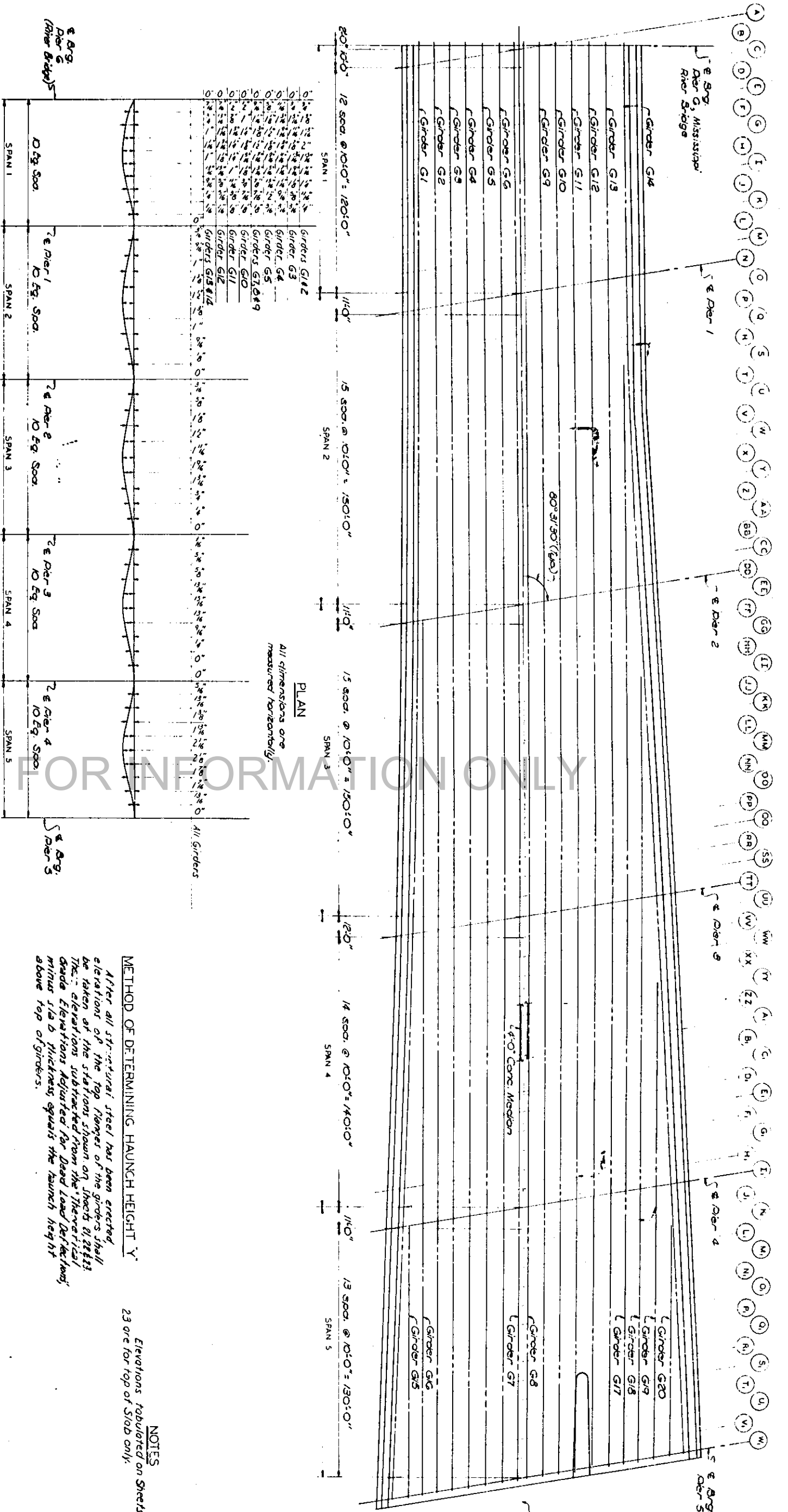


NOTE: Do not scale this drawing. Follow dimensions.

ILLINOIS APPROACH TO POPLAR
STATION - 44+73.50
PAL ROUTE - 70
SECTION - 88-318
SLAB DETAIL
DATE: December 1964
BY: R.L. Weiler, July 1964

NOTES
Work this sheet with Sheets 17 and 18.

1988
645470



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.

Note: Do not scale this drawing. Follow dimensions.

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. The 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

STATION - 44+73.50
 FALL ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

E. L. BORDS - DESIGNER
 PROJECT ENGINEER, AND SUPERVISOR

R. E. HILL - CHECKER
 PROJECT ENGINEER

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

NO.	QUANTITY	UNIT	AMOUNT
78	82-3VB	SECTION	48
	ILLINOIS	PER. AND PROJ. NO.	20

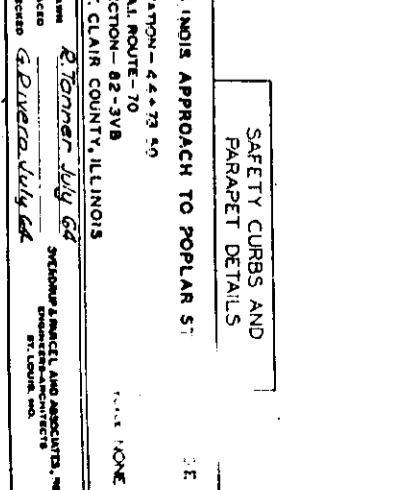
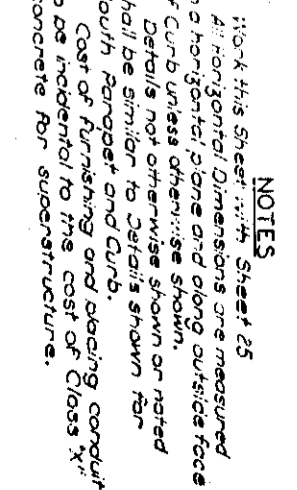
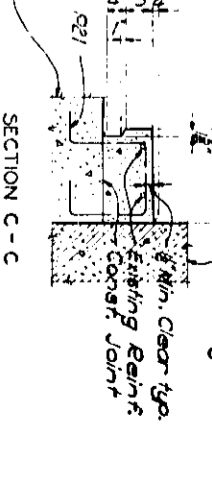
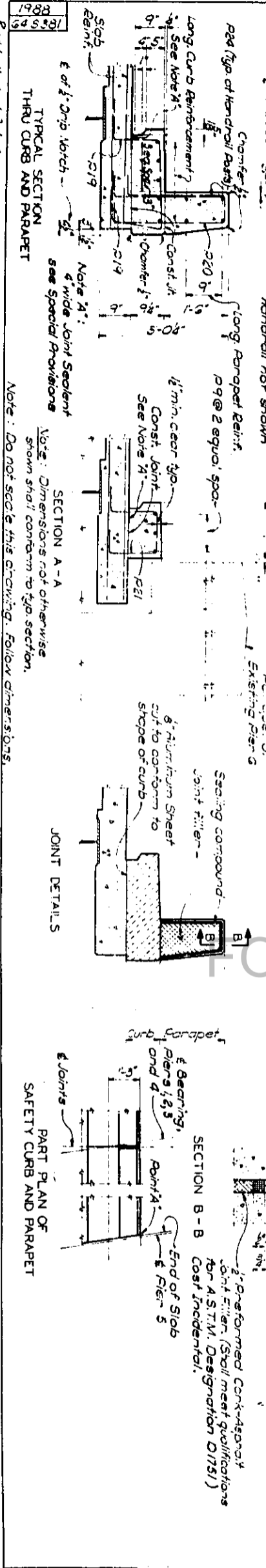
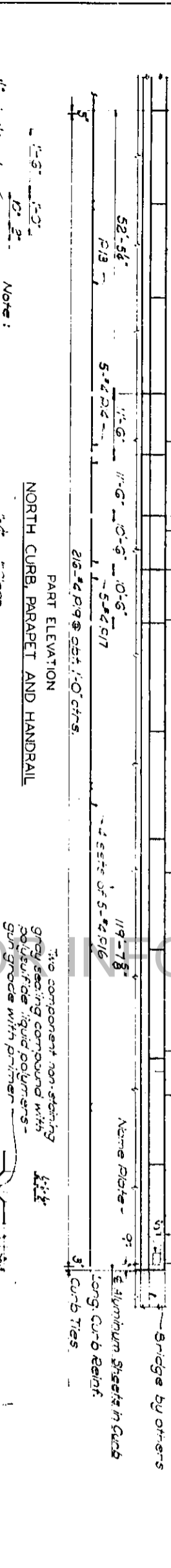
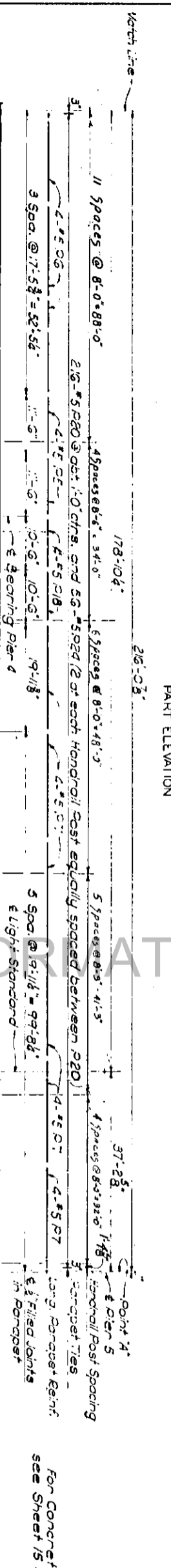
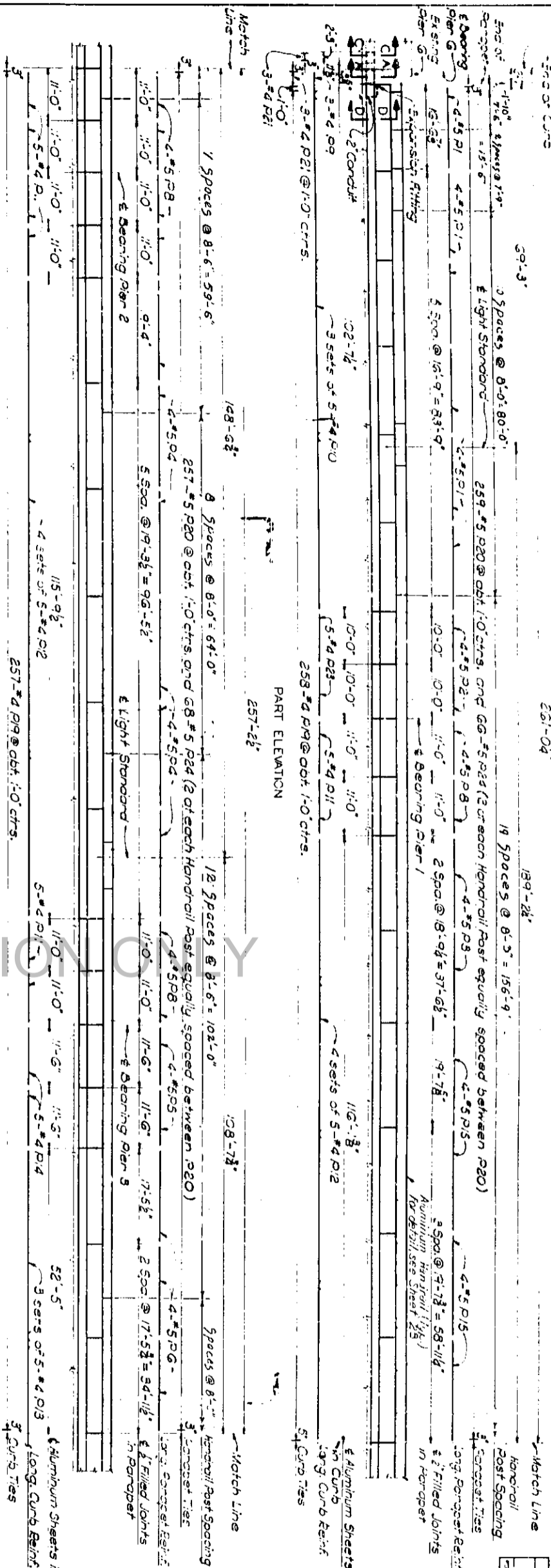
SHEET NO. 48
 OF 20 SHEETS

FILE NO.	SECTION	COUNTY	TOWNSHIP	RANGE	SHEET NO.
70	82-3VB	ST. CLAIR	48	24	1
ILL. ROAD DIST. NO. 7	ILLINOIS	ST. CLAIR COUNTY, ILLINOIS			SHEETS

STATION 44+73.50
 BUILT 19 BY
 STATE OF ILLINOIS
 F.A.I. PROJ. 116-70(165)
 LOADING HS20 & ALT.

LETTERING FOR NAME PLATE

Note: See Standard 213-1
 The name plates shall be embedded in the concrete parapet as designated on the General Plan and the parapet details. Reinforcement anchors shall be provided in accordance with the Specifications, see 213-1.05 and 213-1.06.

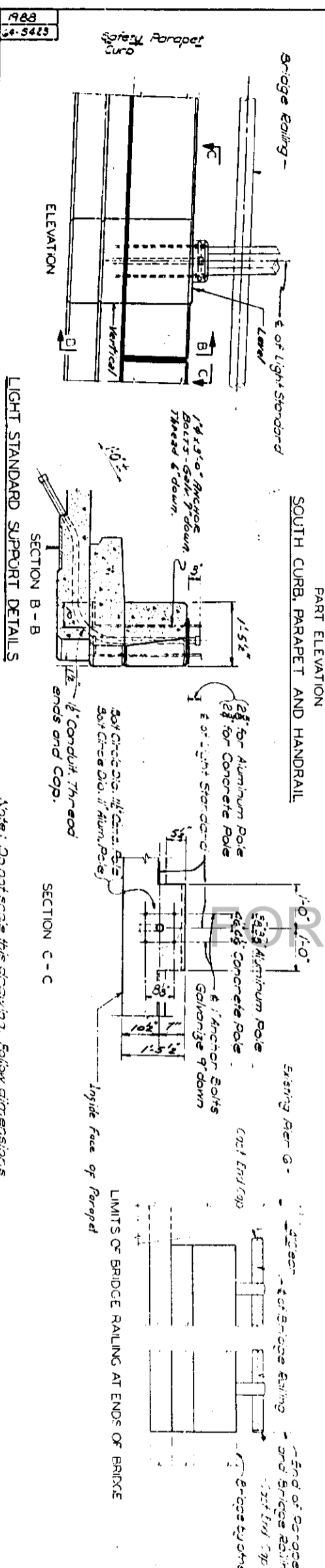
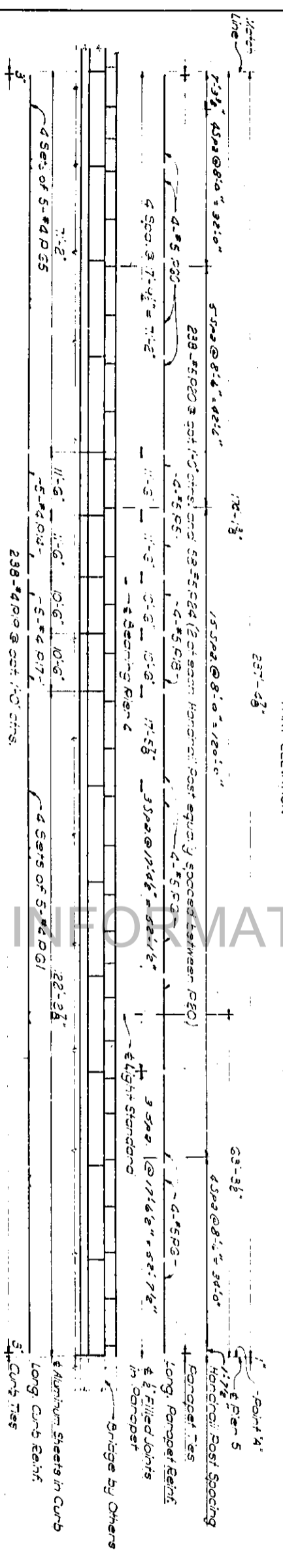
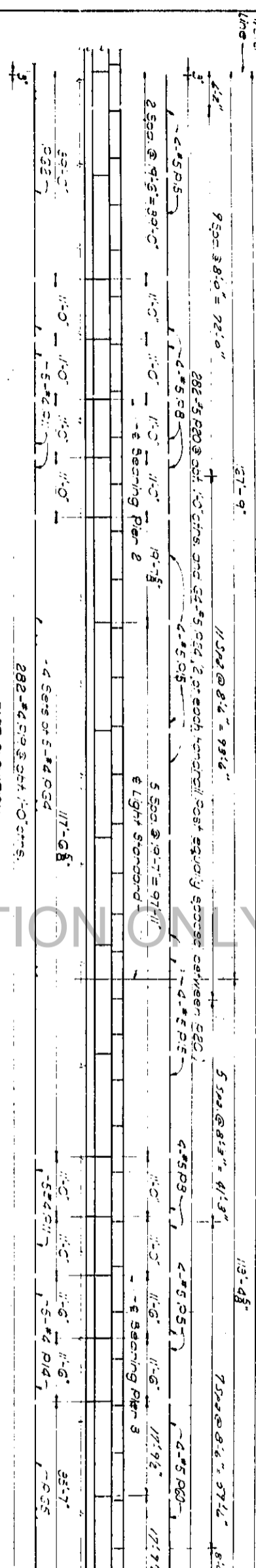
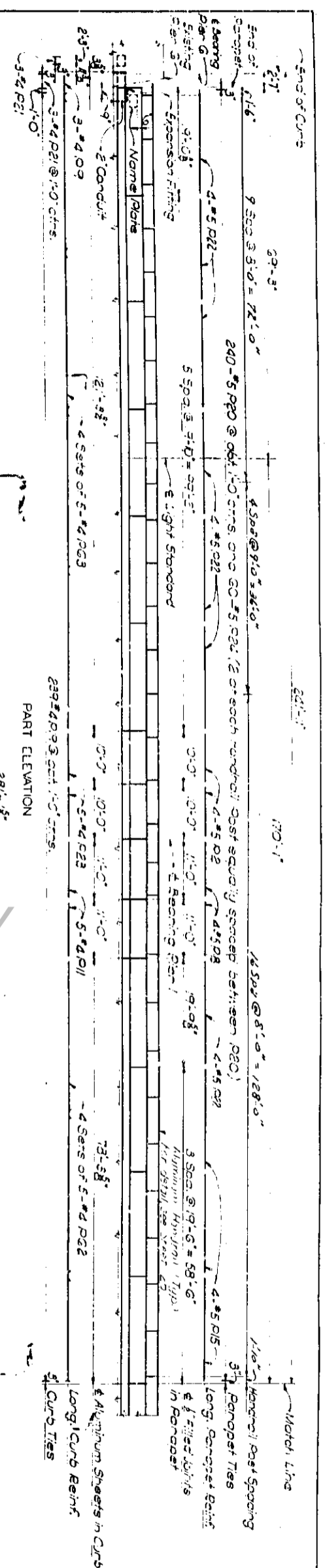


NOTE: Work this Sheet with Sheet 25
 All horizontal dimensions are measured in a horizontal plane and along outside face of curb unless otherwise shown.
 Details not otherwise shown or noted shall be similar to details shown for South Parapet and Curb.
 Cost of furnishing and placing conduit to be incidental to the cost of Class 'X' concrete for superstructure.

ILLINOIS APPROACH TO POPLAR ST.
 STATION 44+73.50
 F.A.I. ROUTE-70
 SECTION-82-3VB
 ST. CLAIR COUNTY, ILLINOIS
 DRAWN BY: Tommer, J. G.
 CHECKED BY: Divera, W. J.
 STANLEY B. MCELROY & ASSOCIATES, INC.
 ENGINEERS AND ARCHITECTS
 1000 N. LAUREL ST.
 ST. LOUIS, MO. 63102

DATE	SECTION	BY	NO.
10	82-318	FT. CLAIR	48
10	82-318	ALTOONA	25

SHEET NO. 25



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.

ILLINOIS APPROACH TO PROJ.
 STATION—44+73.50
 P.A.L. ROUTE—70
 SECTION—82-318
 ST. CLAIR COUNTY, ILLINOIS

**SAFETY CURBS
 PARAPET DET.**

SCALE NONE

DESIGNED BY: **G. JOHNSON JULY 64**

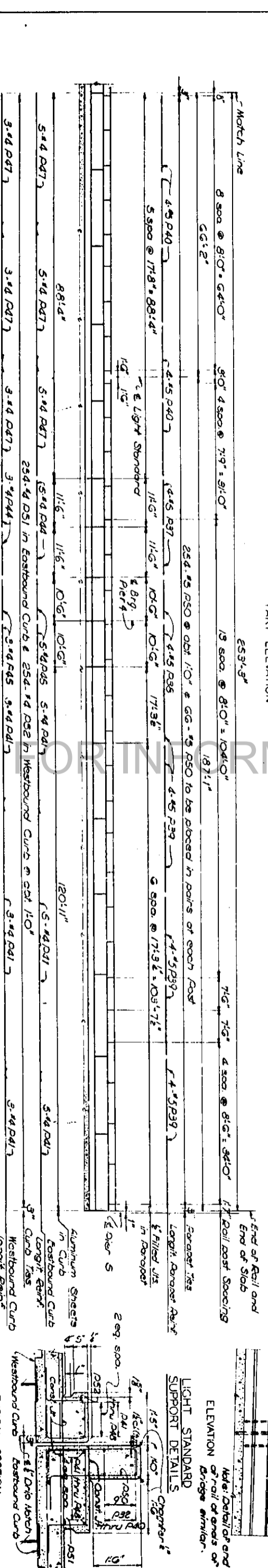
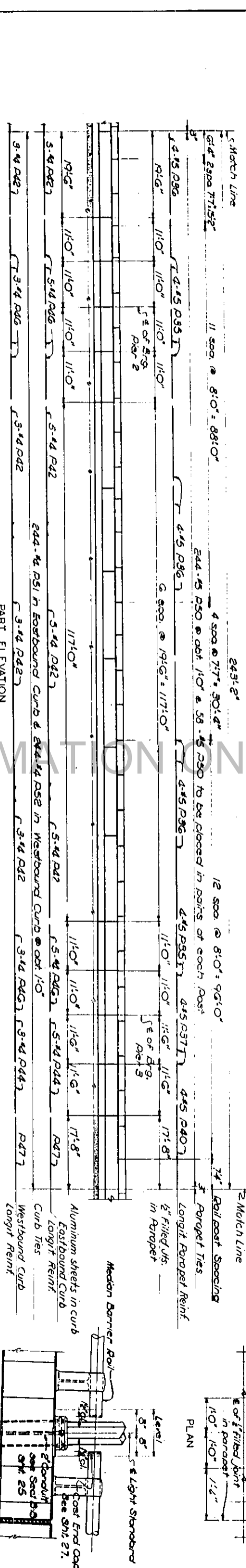
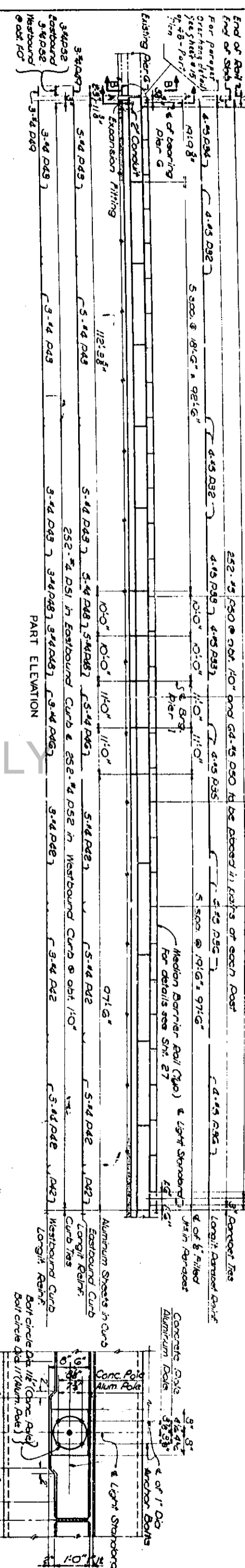
CHECKED BY: **G. JOHNSON JULY 64**

DRAWN BY: **R. JOHNSON JULY 64**

APPROVED BY: **W. JOHNSON JULY 64**

988
 64-5423

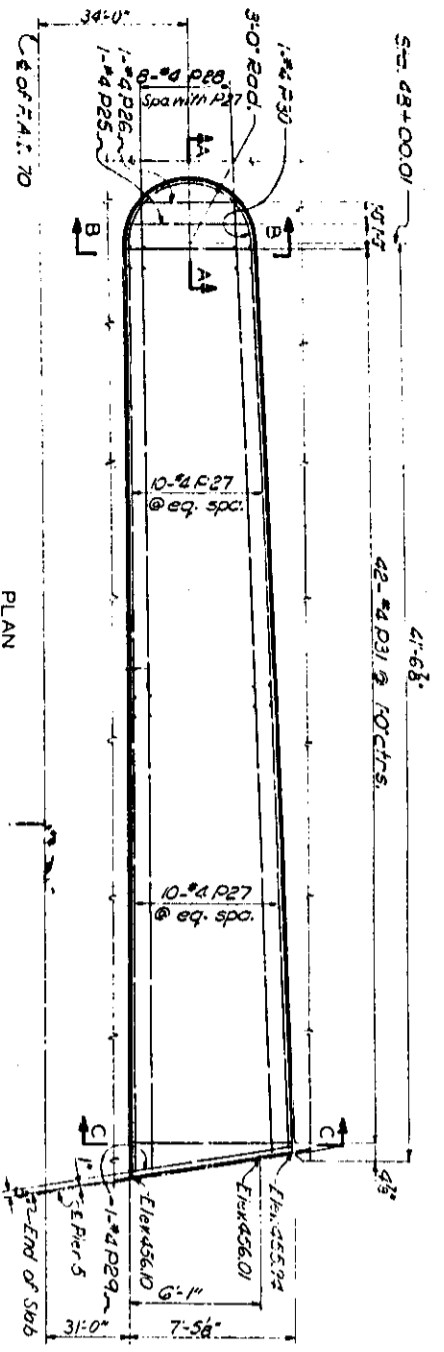
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	PRICE	TOTAL	REMARKS
1	CONCRETE	48	CU YD	26		
2	STEEL	26	TONS			



SECTION B-B
 Notes: Do not scale this drawing. Follow dimensions.

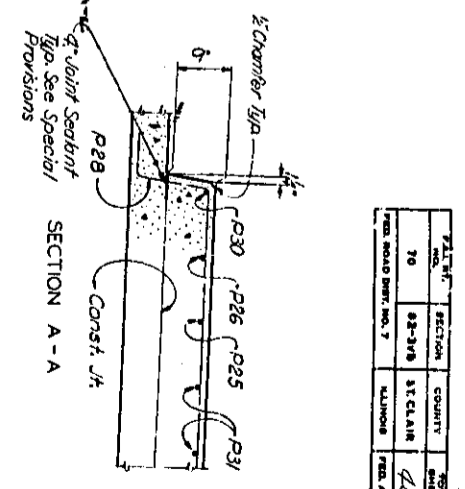
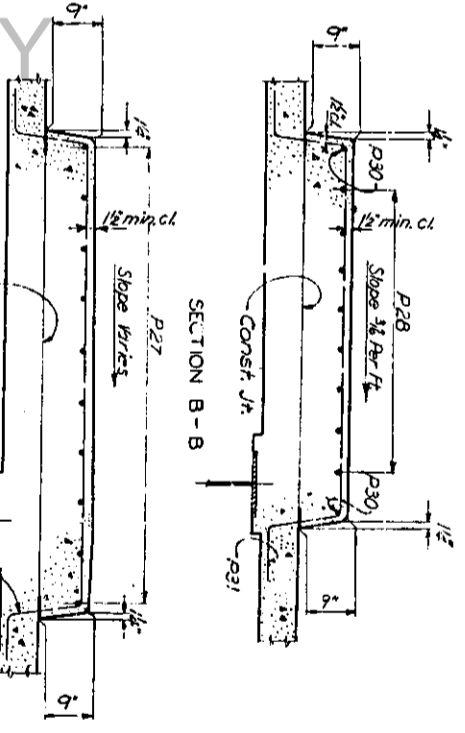
ILLINOIS APPROACH TO POB:
 STATION - 44+75.50
 FALL ROUTE - 70
 SECTION - 82-3V8
 ST. CLAIR COUNTY, ILLINOIS

EL Barajas, INC.
 2221 W. 14th St. St. Louis, MO 63104

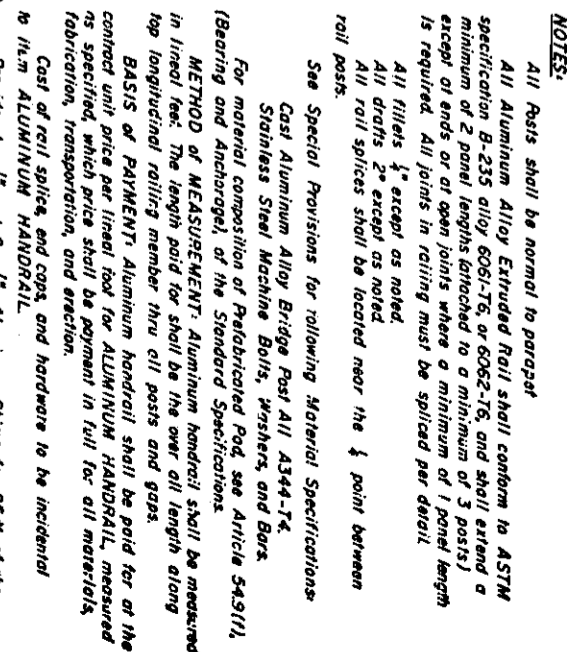
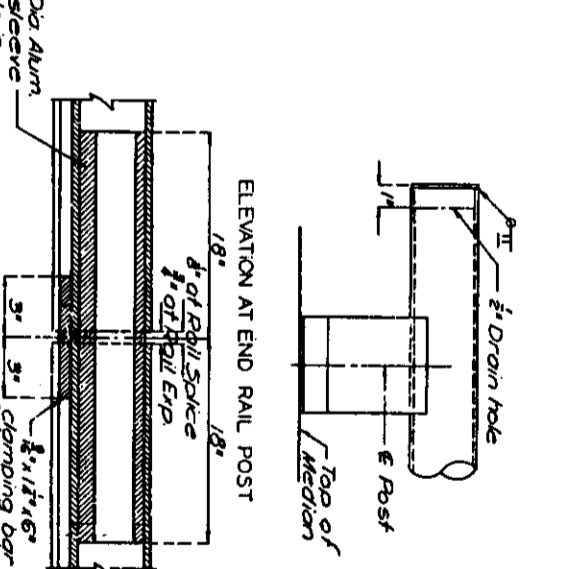
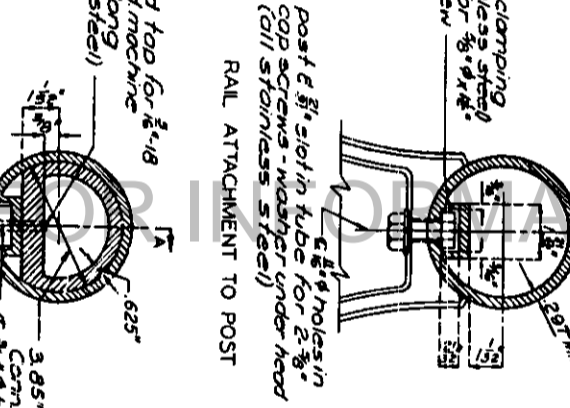
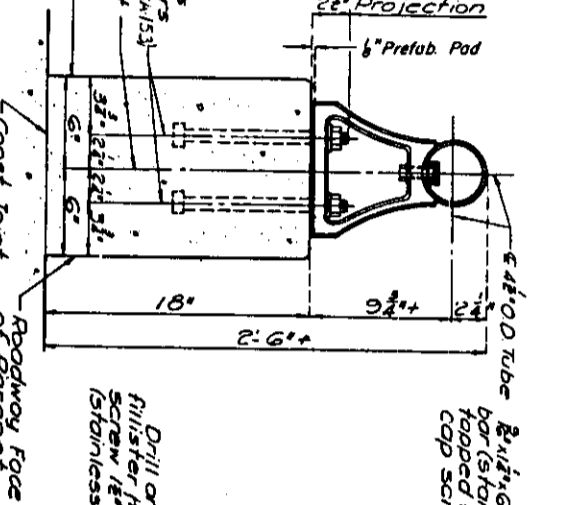
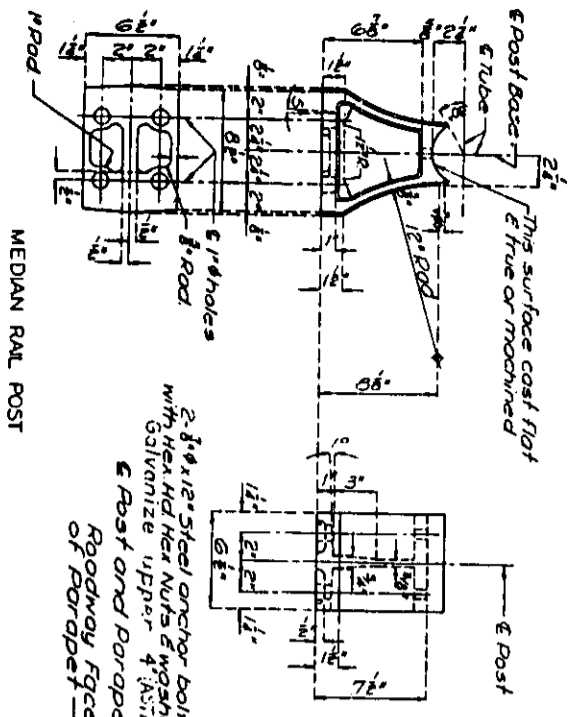


SAFETY ISLAND PLAN

Note: The surface of the safety island shall be transitioned from the normal cross slope of 3/8" per ft. of the nosing to the elevations shown at the end of slab.



TITLE	SECTION	COUNTY	WORKS	SHEET	SHEET NO.
70	82-318	ST. CLAIR	43	21	
FED. ROAD DIST. NO. 7		ILLINOIS			



RAIL ATTACHMENT TO POST

CAST END CAP Drive fit type & Required



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 fillers 1/2" except as noted.
 All drafts 2" except as noted.
 All rail splices shall be located near the 1/2" 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 Perforated Pad, see Article 54.9(1), METHOD of MEASUREMENT. Aluminum handrail shall be measured in linear feet. The length paid for shall be the over all length along top longitudinal rolling member thru all posts and gaps.
BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per linear foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.
 Cast of rail splice, end caps, and hardware to be incidental to 1/2" ALUMINUM HANDRAIL.
 Provide 1 - 1/2" and 2 - 1/2" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

18
 Note: Seal base of post to parapet with two component non-staining grey sealing compound with polysulfide liquid polymers - gun grade with primer.

ALUMINUM MEDIAN RAIL

MEDIAN BARRIER RAIL AND SAFETY ISLAND

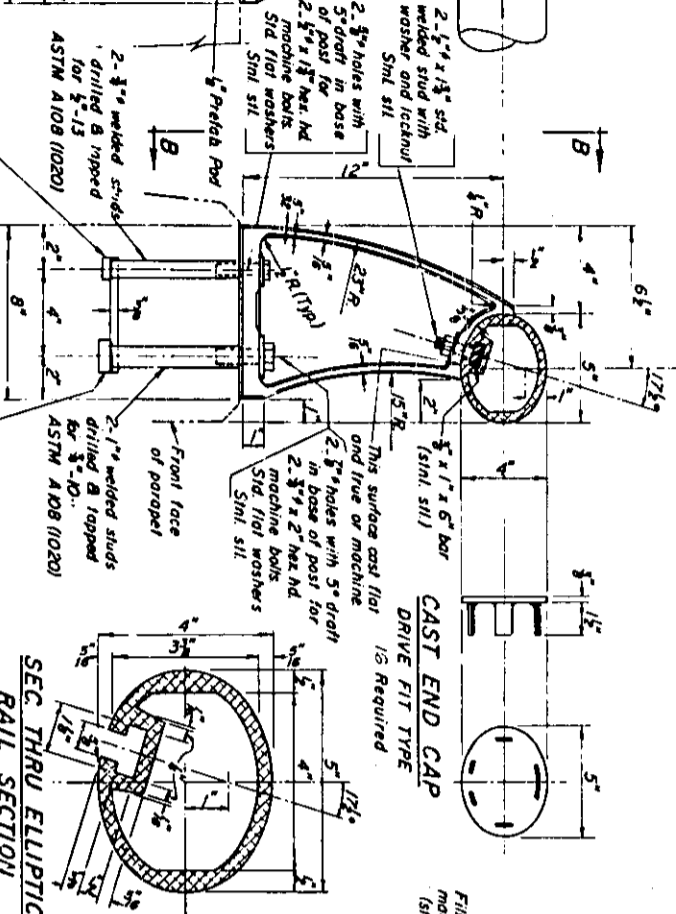
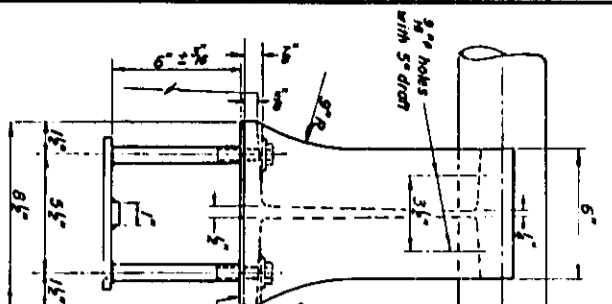
Note: Do not scale this drawing. Follow dimensions.

ILLINOIS APPROACH TO POPLAR STREET
 STATION-44+73.50
 F&L ROUTE-70
 SECTION-82-318
 ST. CLAIR COUNTY, ILLINOIS
 DRAWN: E. HANSEN, July 1963
 CHECKED: R. HANSEN, July 1964
 ENGINEER: J. M. HANSEN, July 1964
 SCALE: NONE

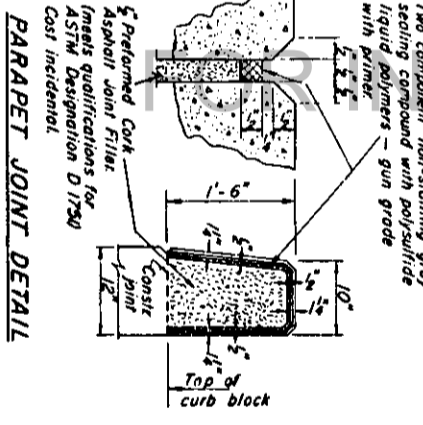
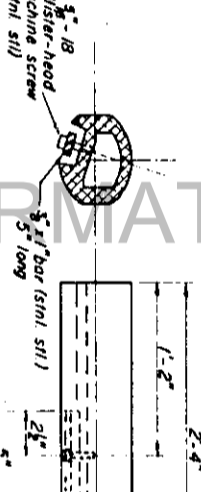
R-17 Dem 5-28-64

DESIGNED
CHECKED
DRAWN *M. W. Bair*
CHECKED

EXAMINED
PASSED
APPROVED

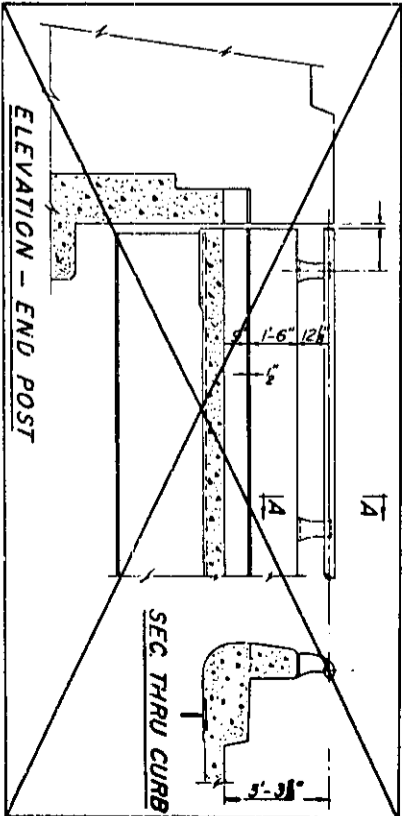


SEC THRU SPLICE
Splice must be a sliding fit in Rail Section



FORMATION ONLY

- 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 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.
 - See Special Provisions for following Material Specifications:
Cast Aluminum Alloy Bridge Post— Alloy 344-T4
Stainless Steel Welded Stud Bolts, Washers, and Locknuts
For material composition of Prefabricated Pad, 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 of rails shall be measured along the 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.
 - Cast of rail, surface, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.
 - For post spacing, see Sheet's 24 & 25.

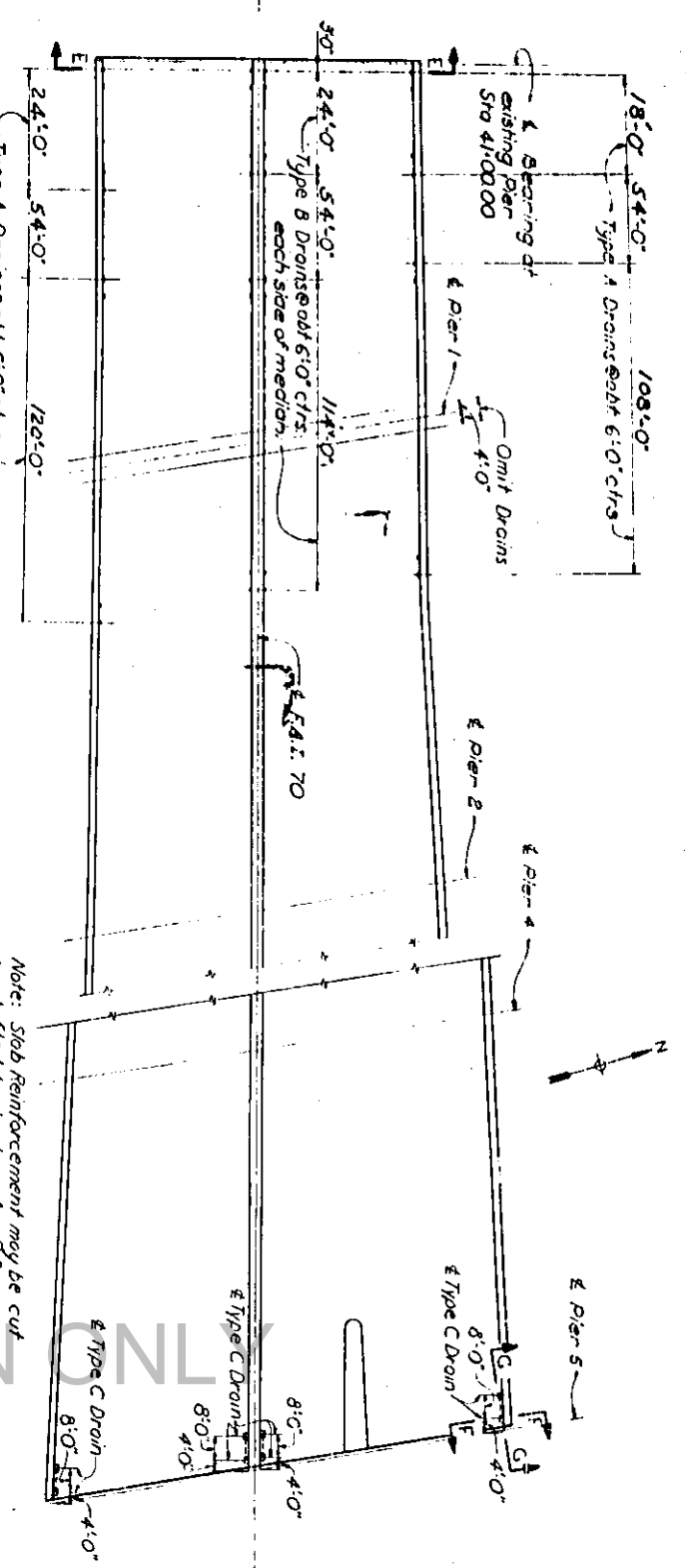


BILL OF MATERIALS

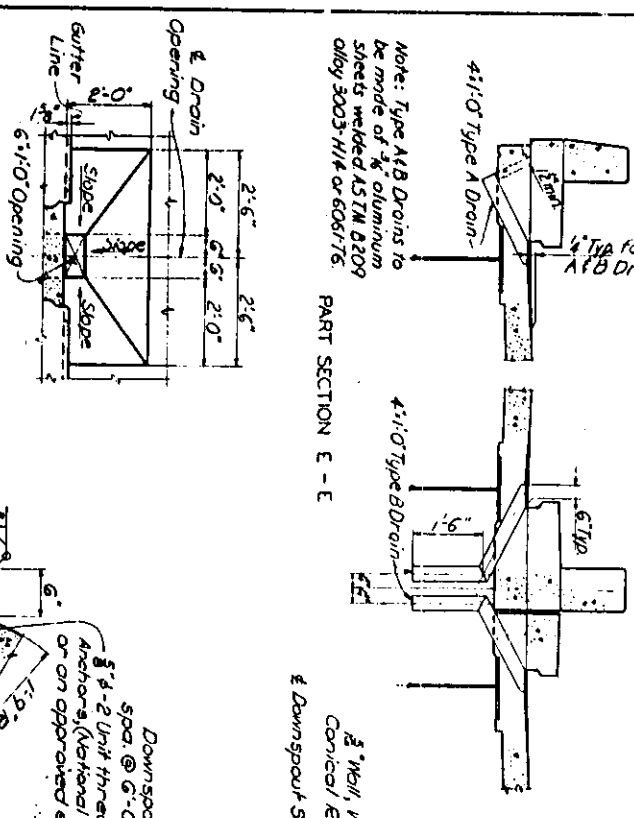
Item	Unit	Quantity
ALUMINUM HANDRAIL	Lin. Ft.	

ALUMINUM HANC

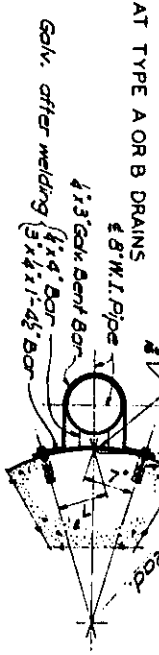
1988
643430



PLAN OF ROADWAY DRAINS
Note: Dimensions are measured horizontal along respective gutter lines.

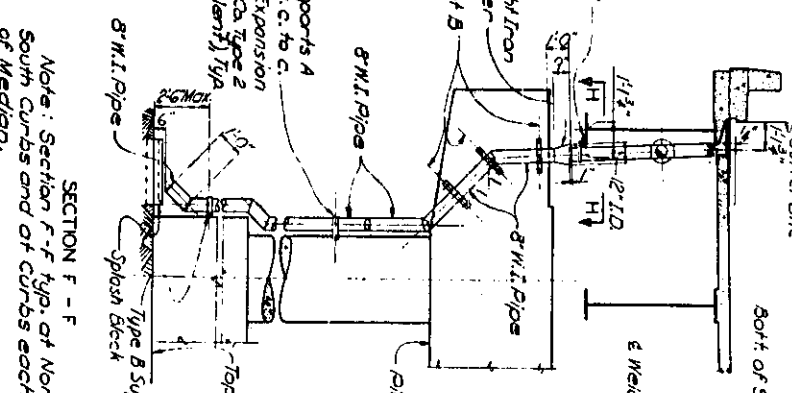


PART SECTION E - E

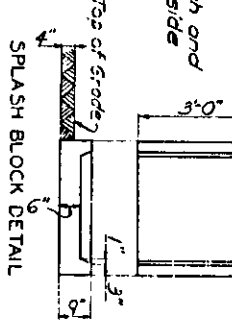


PLAN AT TYPE A OR B DRAINS

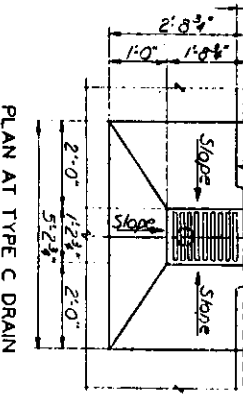
DETAIL OF DOWNSPOUT SUPPORT A
Note: Downspout Support B is similar to Support A except the concrete surface is flat.



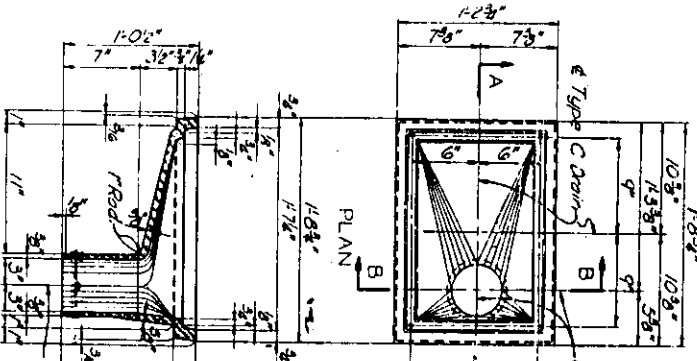
SECTION F - F
Note: Section F-F typ. of North and South Curbs and of Curbs each side of Median.



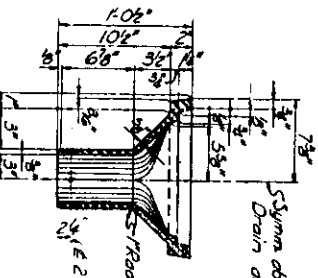
SPLASH BLOCK DETAIL



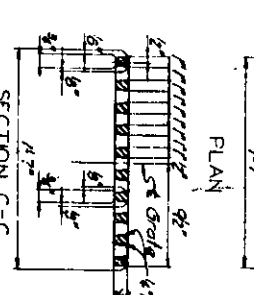
PLAN AT TYPE C DRAIN



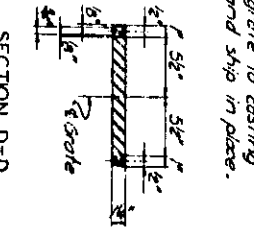
SECTION A - A



SECTION B - B



SECTION C - C



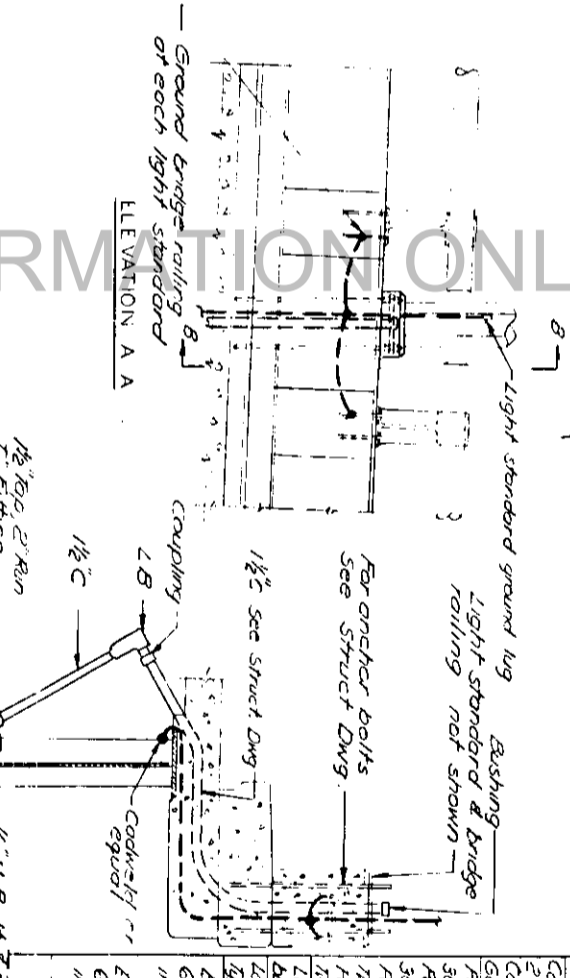
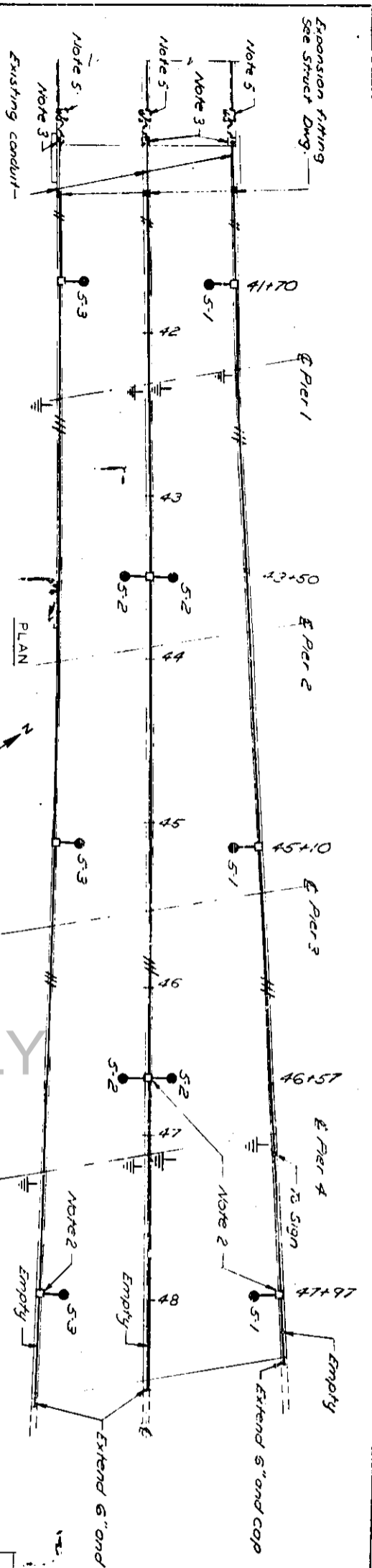
SECTION D - D

ILLINOIS APPROACH TO POPLAR S.
STATION - 44+73.50
FALL ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS
SCALE NONE
DRAWN BY R. ZIMMERMAN
CHECKED BY E. HENNINGER
DESIGNED BY R. ZIMMERMAN
DATE: JULY 1964

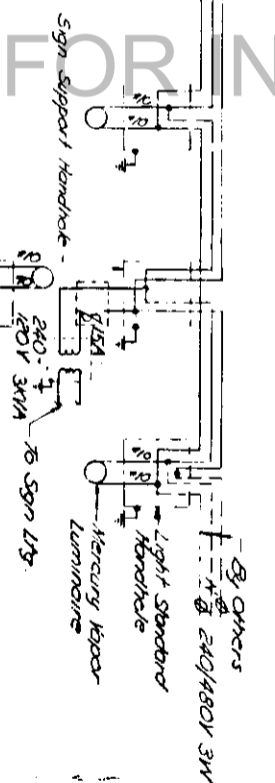
FILE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
70	82-3VB	ST. CLAIR	18	29
FILE NO. 82-3VB	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
70	82-3VB	ST. CLAIR	18	29

SHEET NO.
18
SHEETS
29

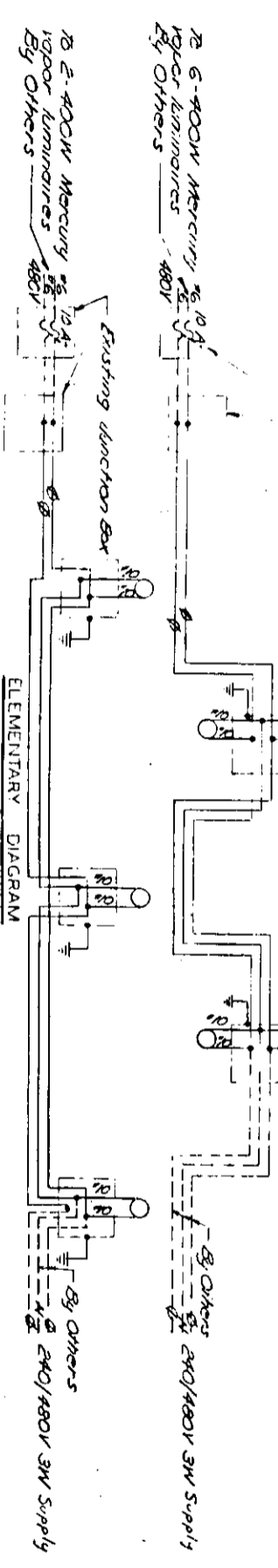
DATE	SECTION	COUNTY	SHEET NO.	SHEET NO.
10	88-218	ST. CLAIR	4/8	30
FED. ROAD DIST. NO. 1	ALUMINE	TRK. AND PROJ. NO.		SHEETS



SECTION B B
CONDUIT INSTALLATION & GROUNDING



DETAIL 2
CONDUIT INSTALLATION & GROUNDING



SYMBOLS

- Unit Substation No. (By Others)
- 400W Mercury vapor luminaires
- Bracket arm
- Bot base pole
- Rigid steel conduit
- Mercuries indicate no. of 1/2" 6" 600V conductors
- Ground conductor in pier
- Ground conductor
- Codeweld or equal

UNIT	DESCRIPTION	QUANTITY
LF	CON S 2 GAUS	2234
LF	CON C 1/2 GAUS	50
EO	PC AB 30MM 6M	6
EO	PA AB 30MM 6M	2
EO	FC 15 30MM TGM	10
EO	FA AB 30MM TGM	10
EO	LUM MV B REG BL 40W	10
EO	LAMP MV 400W 4231CD	10
EO	TYPE HSS 1 1/2 CD	10
LF	EL CBL C NR IC No 6	6440
LF	EL CBL 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.
- Col 2'-0" 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 post.
- Luminaires shall produce 454 lumen distribution.
- Contractor shall install 25MA Style 6 1/2 or equal, 600V dual element fuses in existing junction box.

ELECTRICAL DETAIL

ILLINOIS APPROACH TO POPLAR ST.

STATION - 44+73.50
FALL ROUTE - 70
SECTION - 82-318
ST. CLAIR COUNTY, ILLINOIS

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

DATE: 7/62

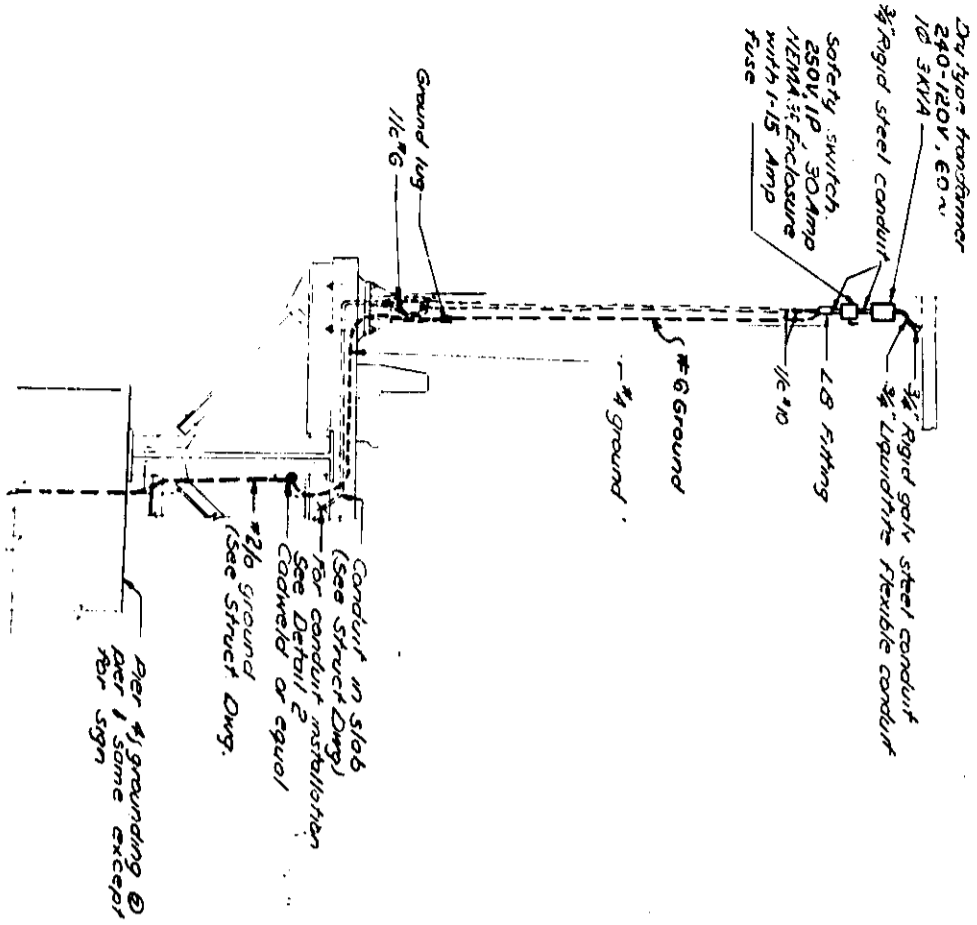
DESIGNED BY: [Signature]

CHECKED BY: [Signature]

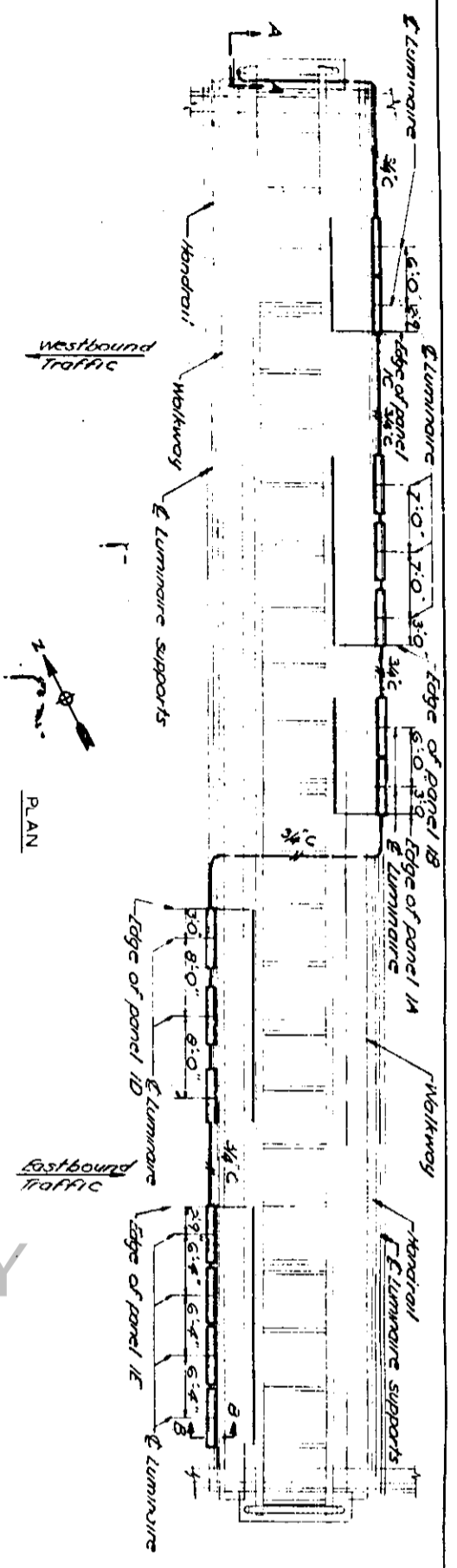
1788
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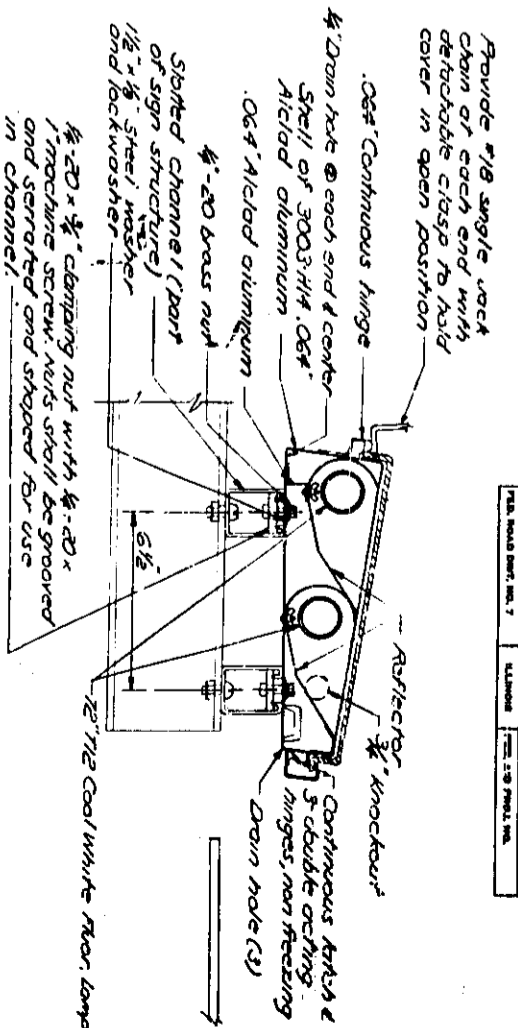
ELEVATION A A



DETAIL 3
SIGN LIGHTING



FOR INFORMATION ONLY



NOTE
1. Electrical items for sign lighting shall be included in the lump sum bid for the mass.

ELECTRICAL DETAILS

ILLINOIS APPROACH TO POPLAR STREET

STATION - 44+73.50
 FALL ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

SCALE AS NOTED

DESIGNED BY: [Name]
 CHECKED BY: [Name]
 DRAWN BY: [Name]
 DATE: [Date]

DATE	BY	SECTION	CONTRACT	NO.	SHEET NO.
7/8	82-3VB	ST. CLAIR	48	31	SHEETS

NO. DIST.	SECTION	COUNTY	TOTAL AREA	SHEET NO.	DIMENSIONS FOR BENDING									
					A	B	C	D	E	F	G	H	K	R
PER 1														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PER 2														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PER 3														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PER 4														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PER 5														
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

FOR INFORMATION ONLY

ILLINOIS APPROACH TO POPULARITY

STATION - 44+73.50

SECTION - 82-3VB

ST. CLAIR COUNTY, ILLINOIS

DATE: 7/15/84

DRAWN BY: JOEHNK, Aug. 61

PROJECT NO. 82-3VB

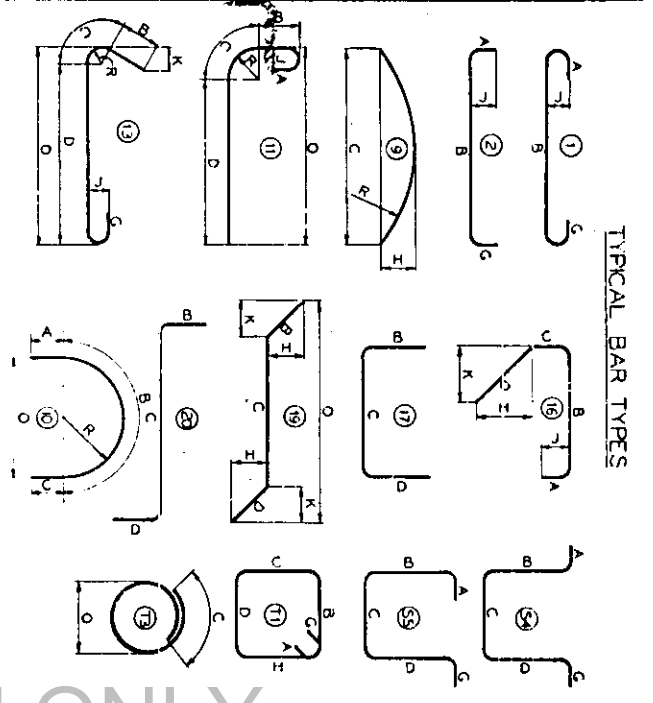
ENGINEER: JOEHNK, Aug. 61

BAR LIST

NO.	SECTION	COUNTY	TOTAL AREA	SHEET NO.
1	82-3VB	ILLINOIS	4.5	32

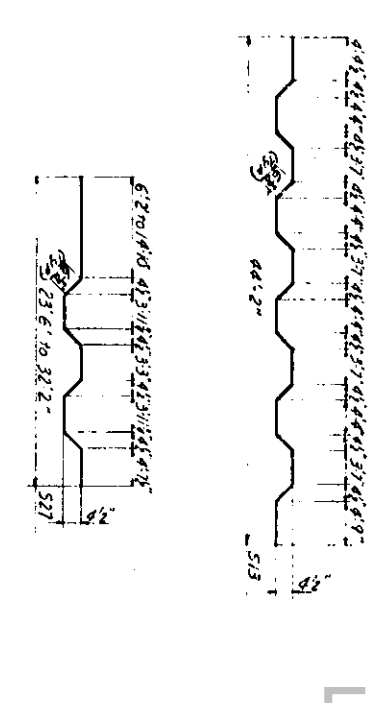
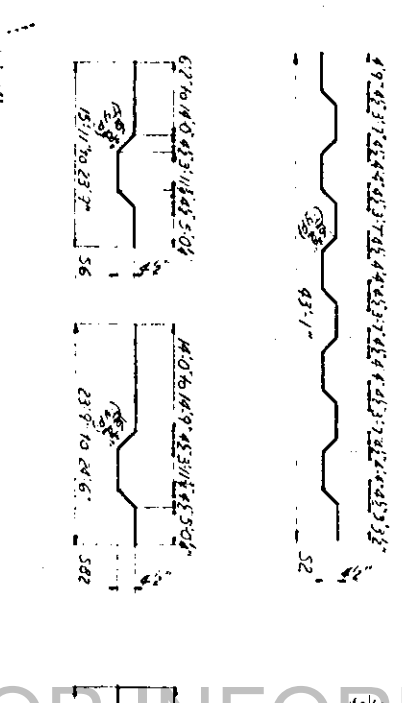
NO. DIST.	SECTION	COUNTY	TOTAL AREA	SHEET NO.
1	82-3VB	ILLINOIS	4.5	32

NO. BAR	LENGTH	LOCATION	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
2021	6	PARAPET	5.65	5.58													
2022	6	PARAPET	5.65	5.58													
2023	6	PARAPET	5.65	5.58													
2024	6	PARAPET	5.65	5.58													
2025	6	PARAPET	5.65	5.58													
2026	6	PARAPET	5.65	5.58													
2027	6	PARAPET	5.65	5.58													
2028	6	PARAPET	5.65	5.58													
2029	6	PARAPET	5.65	5.58													
2030	6	PARAPET	5.65	5.58													
2031	6	PARAPET	5.65	5.58													
2032	6	PARAPET	5.65	5.58													
2033	6	PARAPET	5.65	5.58													
2034	6	PARAPET	5.65	5.58													
2035	6	PARAPET	5.65	5.58													
2036	6	PARAPET	5.65	5.58													
2037	6	PARAPET	5.65	5.58													
2038	6	PARAPET	5.65	5.58													
2039	6	PARAPET	5.65	5.58													
2040	6	PARAPET	5.65	5.58													
2041	6	PARAPET	5.65	5.58													
2042	6	PARAPET	5.65	5.58													
2043	6	PARAPET	5.65	5.58													
2044	6	PARAPET	5.65	5.58													
2045	6	PARAPET	5.65	5.58													
2046	6	PARAPET	5.65	5.58													
2047	6	PARAPET	5.65	5.58													
2048	6	PARAPET	5.65	5.58													
2049	6	PARAPET	5.65	5.58													
2050	6	PARAPET	5.65	5.58													
2051	6	PARAPET	5.65	5.58													
2052	6	PARAPET	5.65	5.58													
2053	6	PARAPET	5.65	5.58													
2054	6	PARAPET	5.65	5.58													
2055	6	PARAPET	5.65	5.58													
2056	6	PARAPET	5.65	5.58													
2057	6	PARAPET	5.65	5.58													
2058	6	PARAPET	5.65	5.58													
2059	6	PARAPET	5.65	5.58													
2060	6	PARAPET	5.65	5.58													



NOTES

All dimensions are out to cur, except 'R' which is inside of bend.
 All bends shown are bent around a standard mandrel, except where radius 'R' is indicated.
 Figures in circles indicate bar types from A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Structures.
 Dimensioning bending and hooks for bent bars shall conform to recommendations indicated in A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Structures.
 A dash used in the appropriate dimension column indicates that a hook or portion of the standard bar is to be omitted.
 Mark this Sheet with Sheet 32.

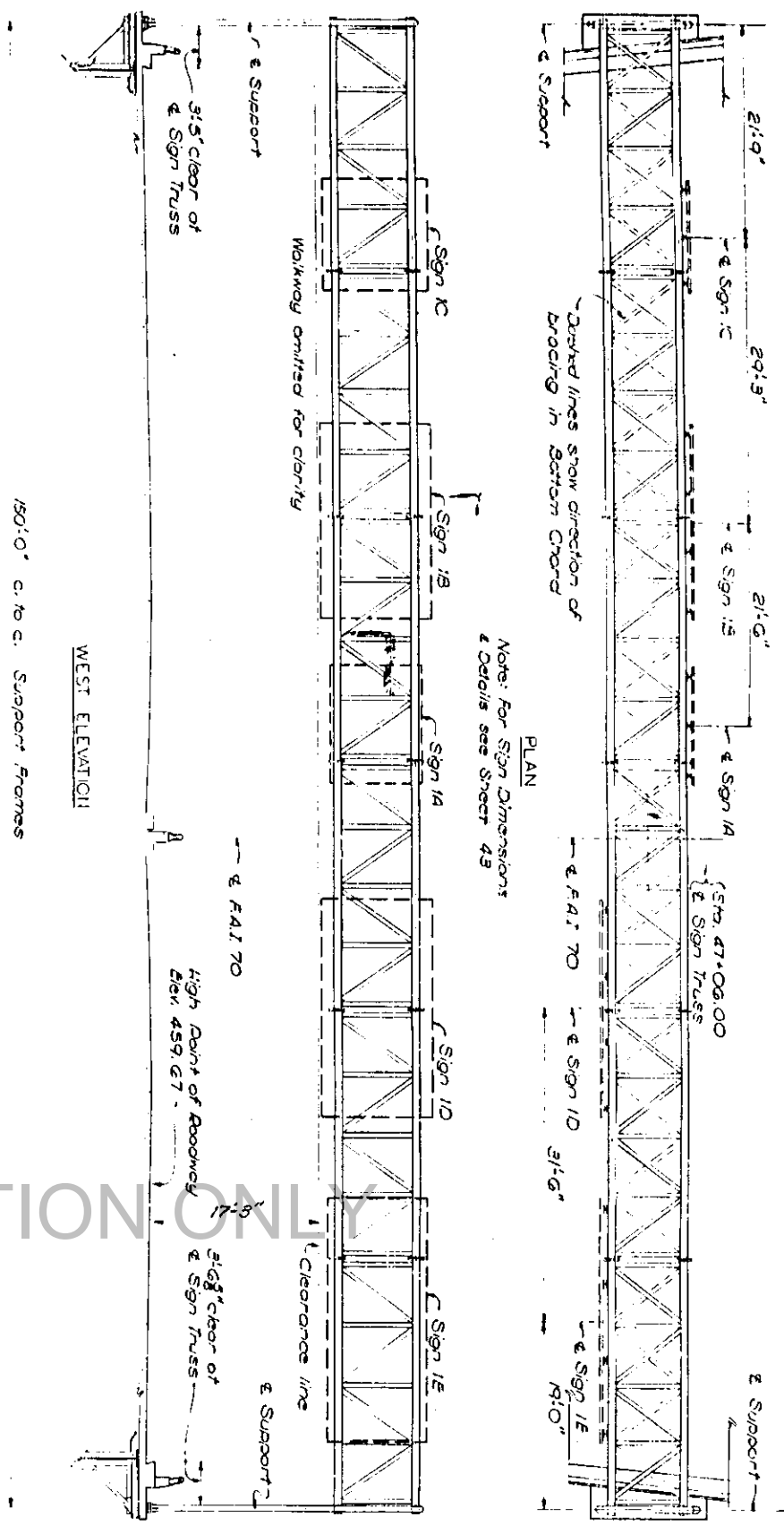


BAR LIST

ILLINOIS APPROACH TO POPLAR ST.
 STATION - 44+73.50
 FALL ROUTE - 70
 SECTION - 02-3VB
 ST. CLAIR COUNTY, ILLINOIS

DESIGNED BY: **W.A. [Signature]**
 DRAWN BY: **[Signature]**
 CHECKED BY: **[Signature]**
 PROJECT: **ILLINOIS APPROACH TO POPLAR ST.**
 ST. CLAIR COUNTY, ILLINOIS

1984
23525



FOR INFORMATION ONLY

Note: Do not scale this drawing. Follow dimensions.

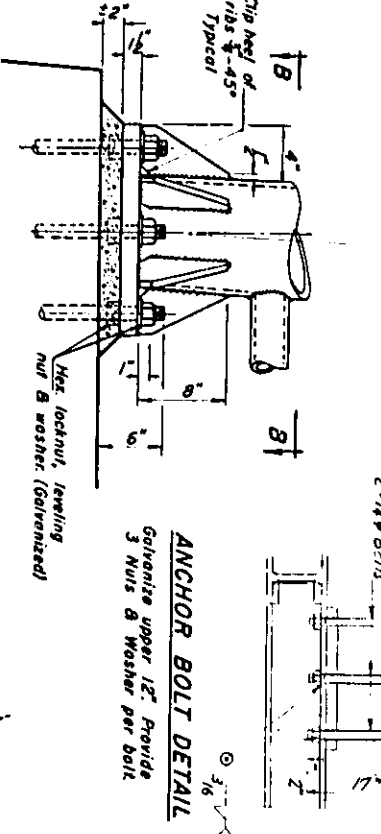
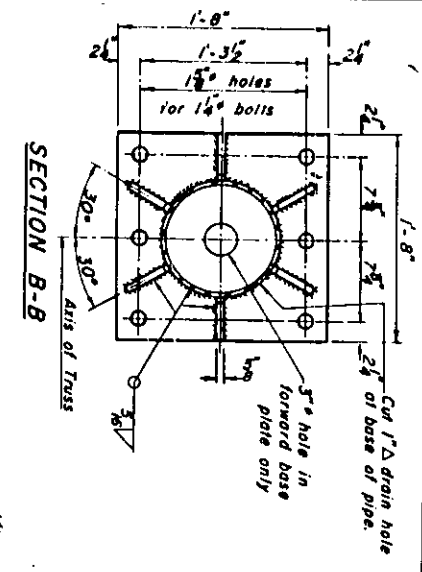
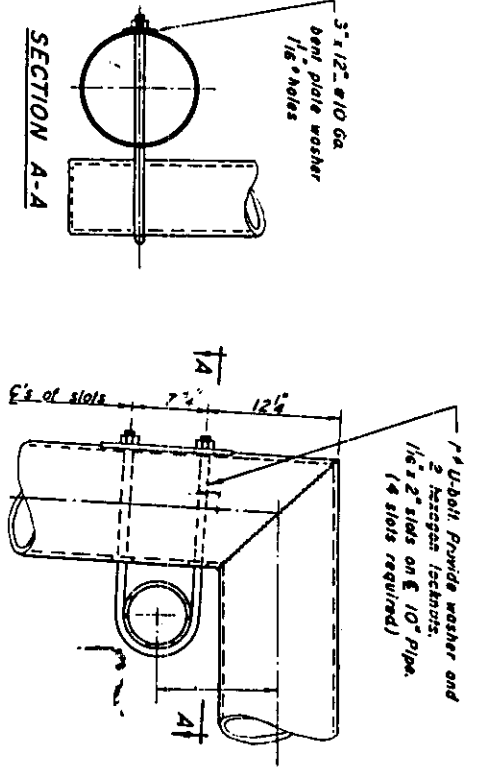
TOTAL SHEETS	SECTION	COUNTY	ROUTE	SHEET NO.	SHEET NO.
70	82-318	ST. CLAIR	28	34	

SIGNING NOTES

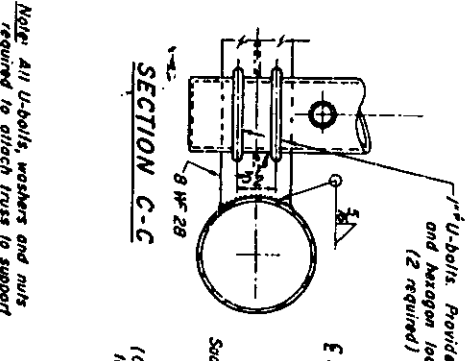
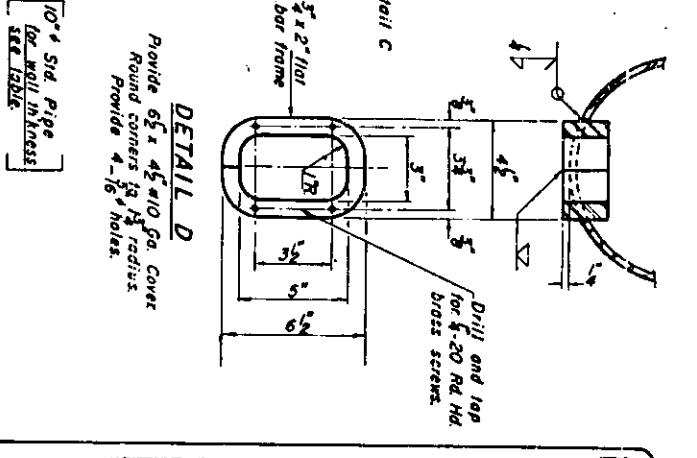
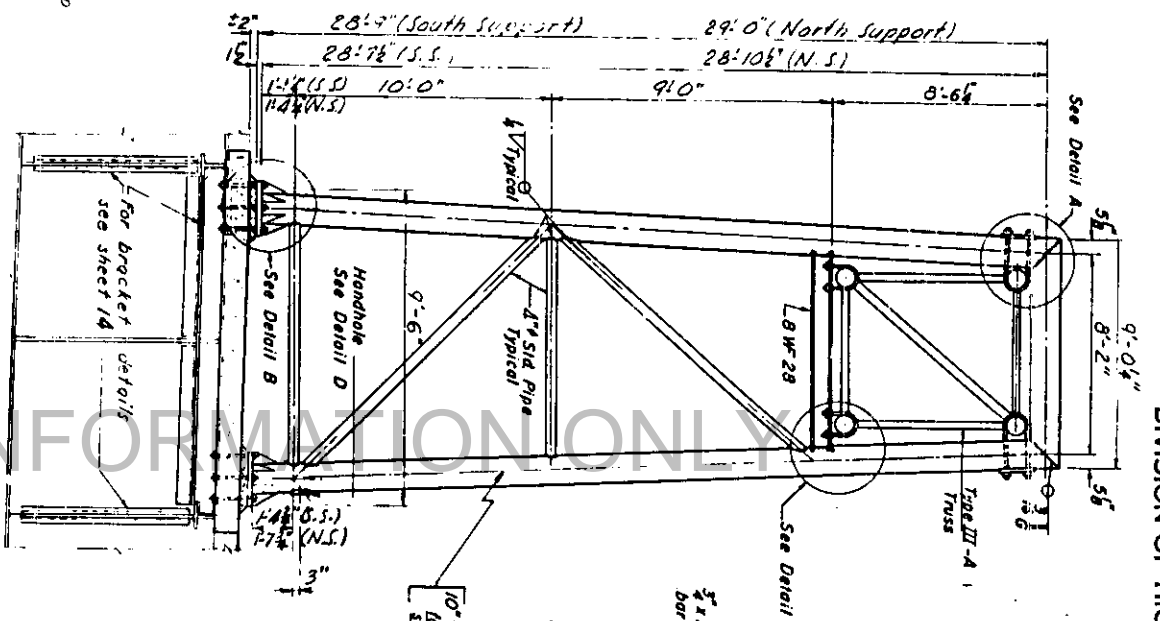
SPECIFICATIONS:
 DESIGN: AASHTO Specifications for the Design and Construction of Structural Supports for Highway Signs, dated November 1960.
 CONSTRUCTION: Standard Specifications for Road and Bridge Construction State of Illinois, dated January 2, 1958; Supplemental Specifications for Road and Bridge Construction dated March 2, 1974 and Supplemental Specifications for Highway Signing dated March 1, 1963 and Special Provisions.
 LOADINGS:
 WIND LOADING: 30 p.s.f. normal to Sign Panel Area (9.0 ft sign height x 75% Design Snow 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 AASHTO Specifications for Highway Signs, Nov. 1960.
 Allowable unit stresses due to wind load in combination with other forces are increased 1/45.
 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 ER5356.
 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

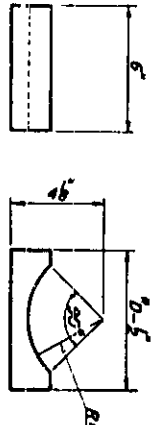
ILLINOIS APPROACH TO POPULAR RIDGE
 STATION - 4+73.50
 F.A.I. ROUTE - 70
 SECTION - 82-318
 ST. CLAIR COUNTY, ILLINOIS
 SCALE: NONE
 DRAWN BY: E.L. Barnes, July 1964
 CHECKED BY: Robert E. Gubert, July 1964
 ENGINEER: SKEGEMUE & SHELLEY ASSOCIATES, INC.
 PROFESSIONAL ENGINEERS
 ST. LOUIS, MO.



SIDE ELEVATION



DETAIL C



SADDLE SHIM DETAIL
 ASTM B-26 Alloy 56-704 (As Cast)
 or ASTM B-209 Alloy 6061-T6
 4 required per sign truss

D = Outside Diameter of Chord

Truss No.	Station	Wall Thickness
1	47+06	0.365

TRUSS SUPPORT DETAILS
 (10" Std. Pipe - Type III-A Truss)

05-A-7 1-4-63

DESIGNED	DATE
CHECKED	BY
DRAWN BY: M. Best	APPROVED
CHECKED	DATE

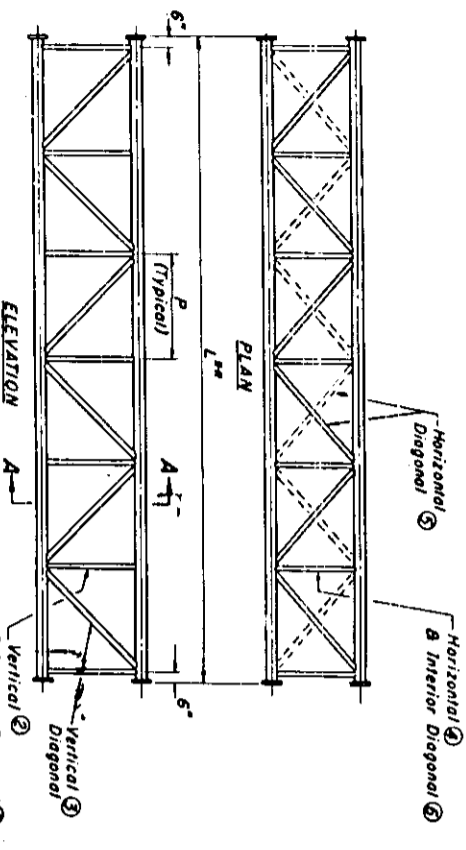
**OVERHEAD SIGN STRUCTURES
 SUPPORT FRAME FOR ALUMINUM TRUSS**

ILLINOIS APPROACH TO POPLAR ST:
 STATION - 44+73.50
 FALL INCLINE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

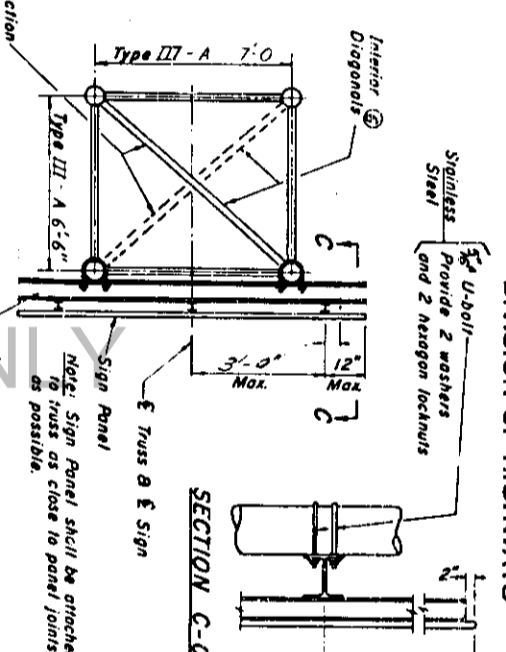
SCALE NONE

DESIGNED & DRAWN BY: W.A.A. July 1964
 CHECKED BY: G. K. J. July 1964

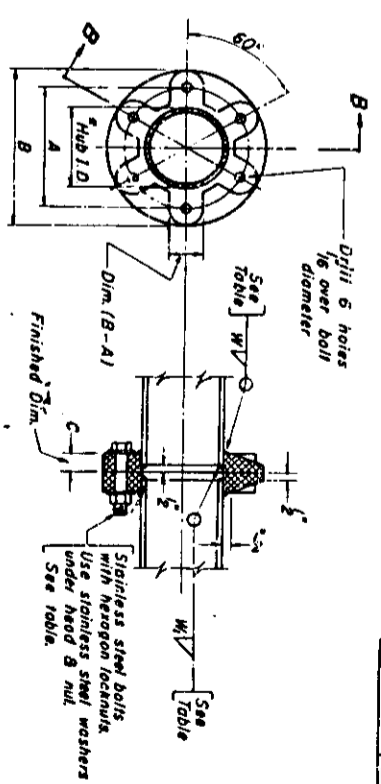
ENGINEER & ARCHT. AND ARCHITECTS, INC.
 510 NORTH 7TH ST. CHICAGO, ILL.



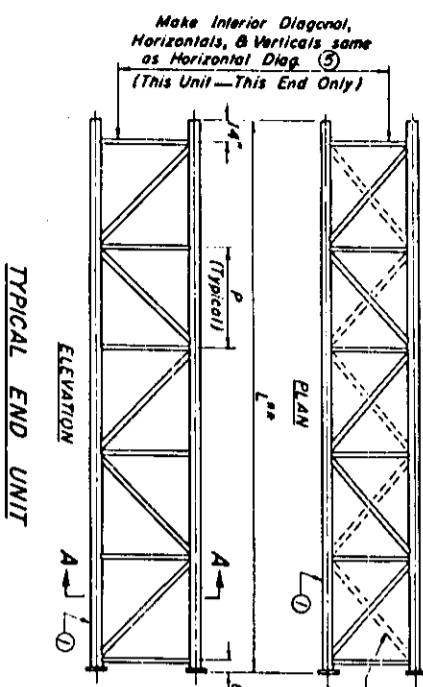
Note: Reverse Direction of Diagonals of alternate panels.



SPlicing FLANGE
ASTM B-26, Alloy SG-70A
Temper T6
or
ASTM B-247 Alloy 6061
Temper T6
*To 1/4" O.D. of Chord

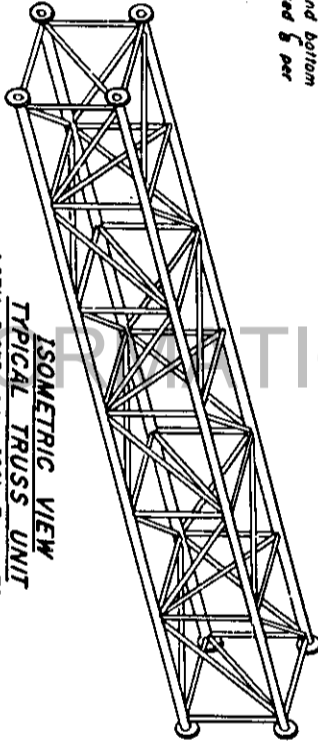


SECTION B-B
Note: Flanges shall be given additional finish if necessary to insure full contact between plates.



Make Interior Diagonal, Horizontals, & Verticals same as Horizontal Diag. (This Unit—This End Only)

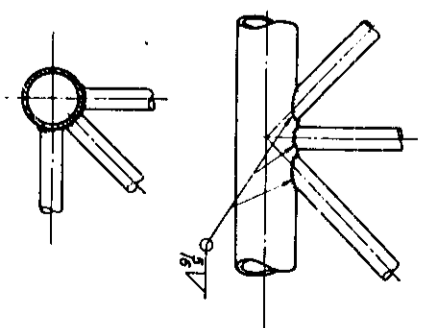
Note: Dimension L of top chord of truss unit shall be increased 5 per 20'-0" of truss and bottom chord shall be decreased 5 per 20'-0" of truss unit.



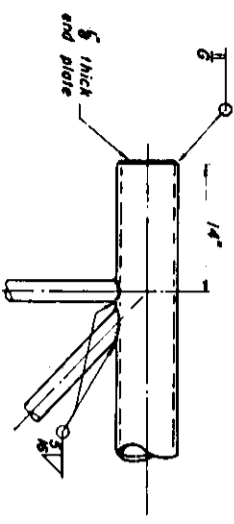
ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B-235 Alloy 6061 Temper T6

SPlicing FLANGE TABLE

Truss Number	Balls	W	W ₁	A	B	C
1	120	1 1/4"	9/16"	1 1/2"	15"	2"



TYPICAL JOINT DETAILS
Note: All members shall fit snugly before welding.



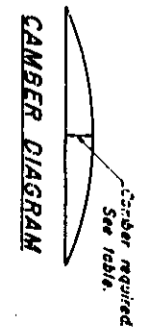
END DETAIL for END UNIT
Note: Contractor may use standard aluminum drive-fit cap to close end.

DESIGNED	EXAMINED
CHECKED	APPROVED
DRAWN BY: M. B. GAY	

OS-A-2 1-4-63

TRUSS UNIT TABLE

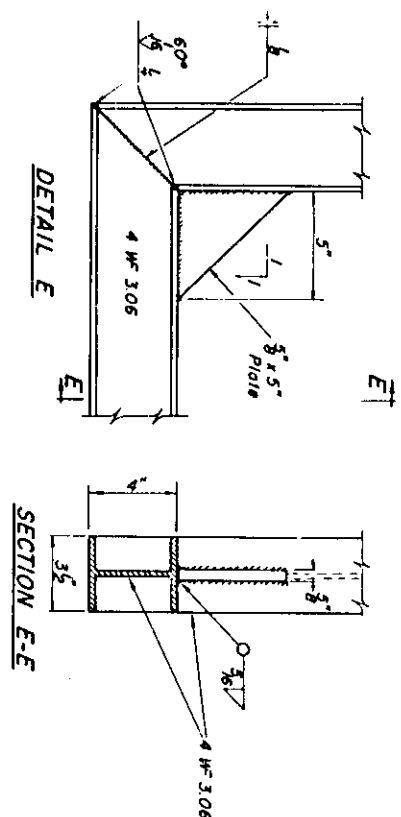
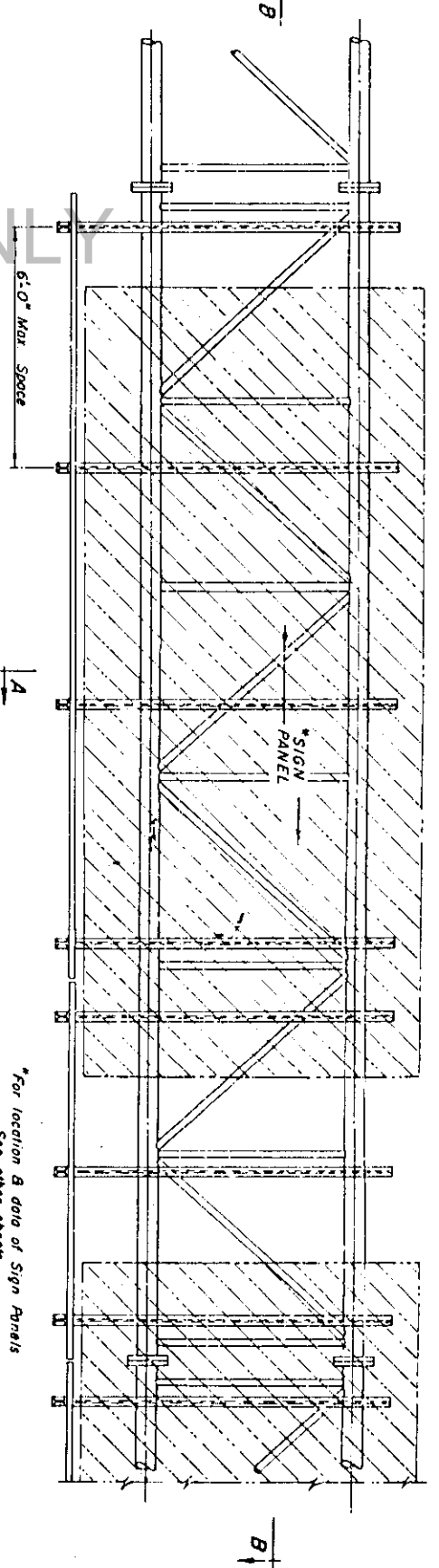
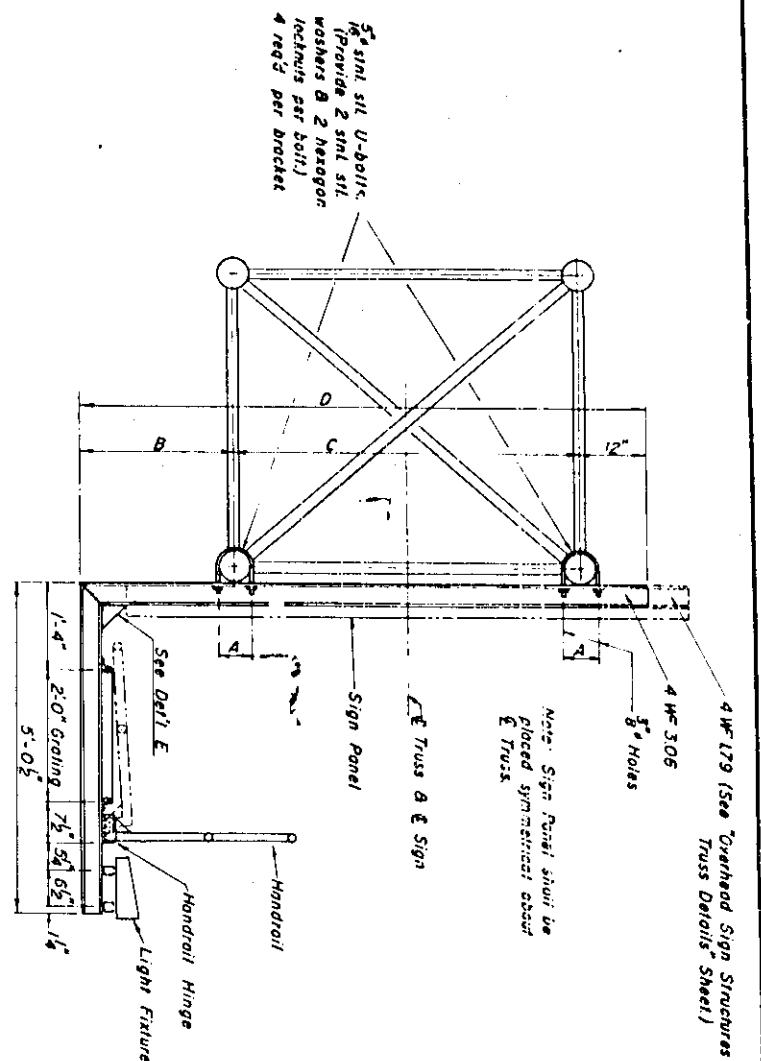
Truss Number	Station	Truss Type	End Unit (2)		Interior Unit		Top & Rim		Vertical		Horizontal		Interior	Combar or E
			No. Panels Unit	Panel Length (ft)	No. Panels Unit	Panel Length (ft)	Chord	Wall	Wall	Wall	Wall	Wall		
1	47+0.6	1	4	25'-0"	4	25'-0"	7'	1 1/2"	3"	3/16"	3/16"	3"	3/16"	4/8"



OVERHEAD SIGN STRUCTURES
ALUMINUM TRUSS DETAILS

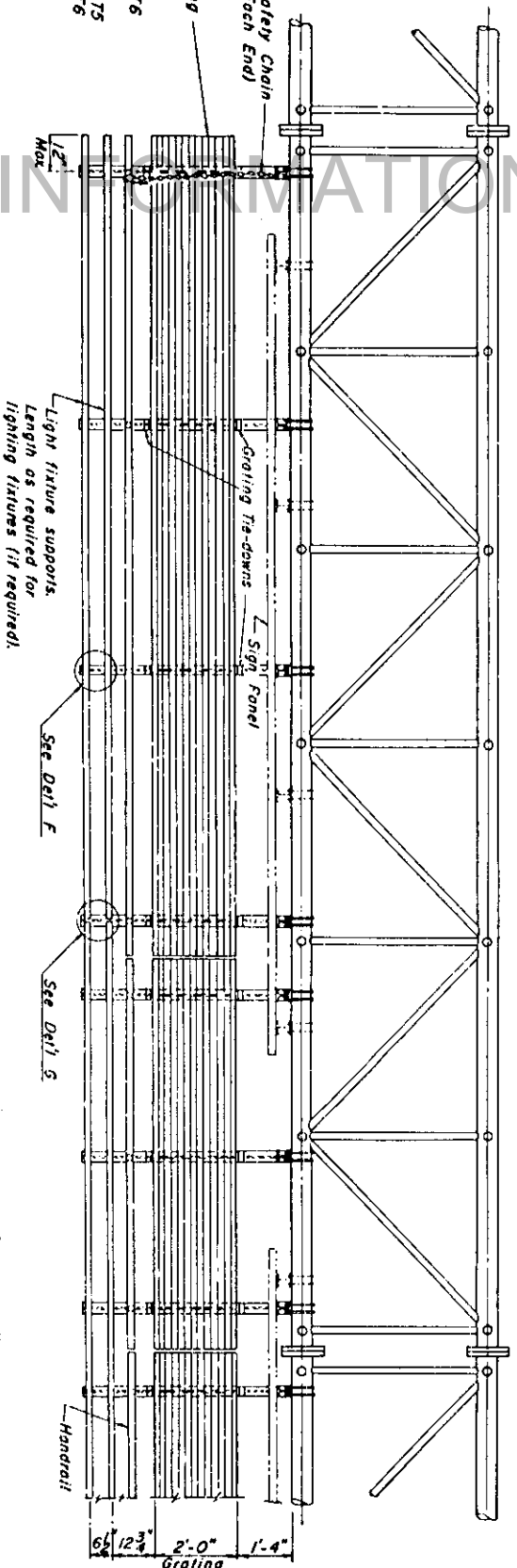
ILLINOIS APPROACH TO POPLAR STREET
STATION—44+73.45
F&L ROUTE—70
SECTION—82—3VB
ST. CLAIR COUNTY, ILLINOIS

DESIGNED: A.A. Lilly, 3-25
CHECKED: [Signature]
ENGINEER: SHERMAN LAMMEL AND ASSOCIATES, INC.
STRUCTURAL ENGINEERS
ST. LOUIS, MO.



BRACKET DETAILS

Standard Aligning Grating
Bars $\frac{3}{8}$ x $1\frac{1}{2}$ ac
Bearing Bars $\frac{1}{8}$ ac
ASTM B-211 Alloy 6061-T6
Cross Bars 4" ac
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.

DESIGNED	DATE
CHECKED	BY
DRAWN BY M. B. B.	APPROVED
CHECKED	

Truss Number	Station	A	B	C	D
1	47+06	78	210	70	1010

OS-A-8 1-4-53

**OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS**

ILLINOIS APPROACH TO POPLAR STREET
STATION - 44+73.50
F.A. ROUTE - 79
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

DESIGNED BY J.A. 3/53
CHECKED BY [Signature]
BYRON P. MARCEL AND ASSOCIATES, INC.
ENGINEERS AND ARCHITECTS
ST. LOUIS, MO.

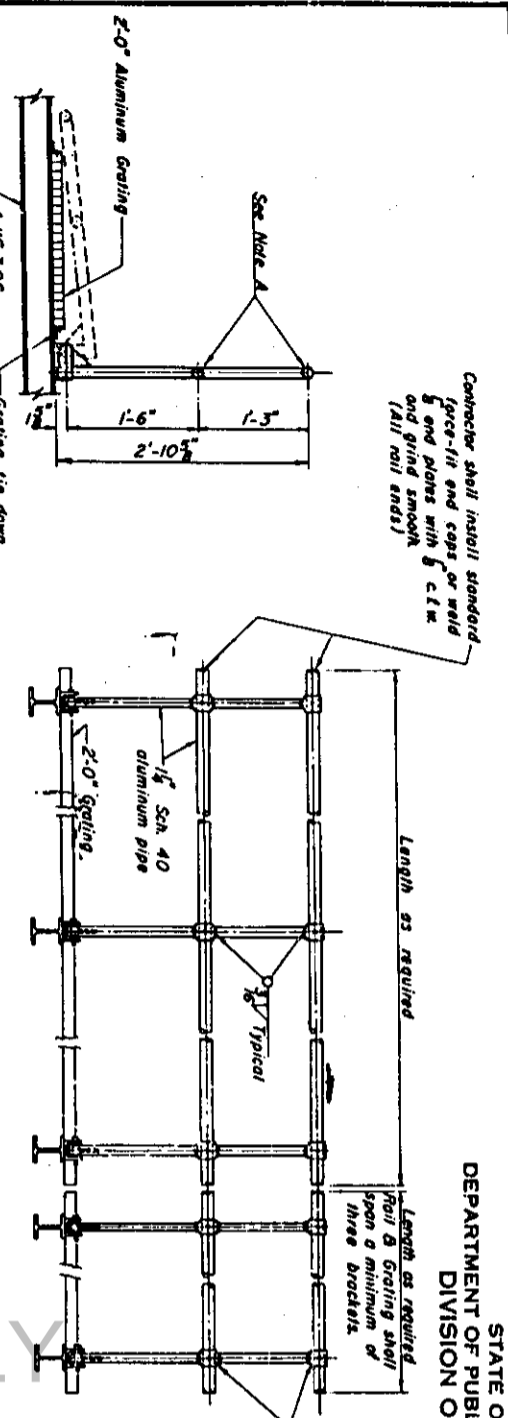
FOR INFORMATION ONLY

14 15 16 17 18 19 20 21 22 23 24

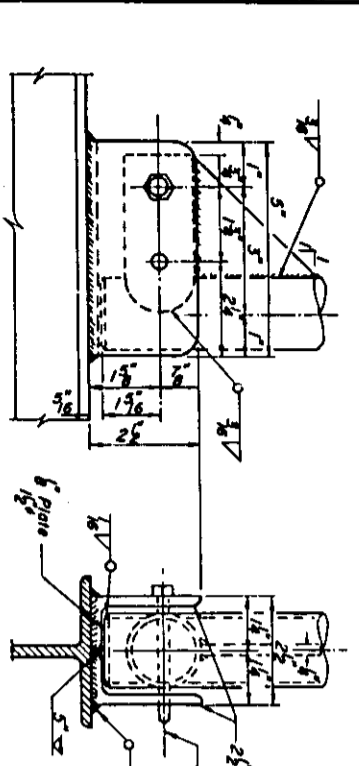
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

Sheet No.	Total Sheets
48	34

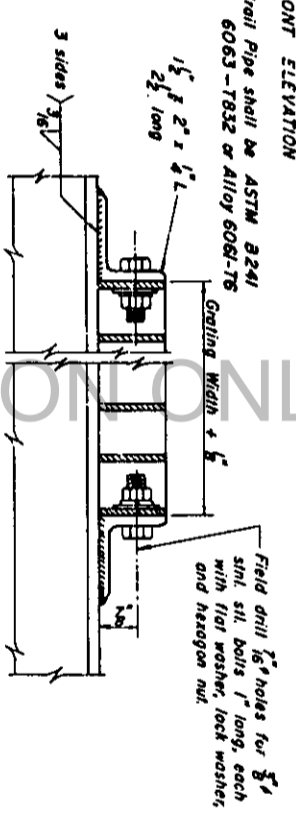
SHEET NO.
48 OF 34 SHEETS



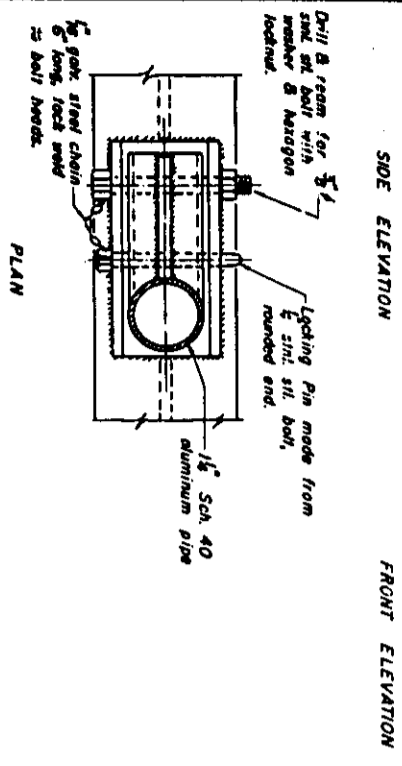
NOTE: Handrail pipe shall be ASTM 3241 Alloy 6063-T532 or Alloy 6061-T6



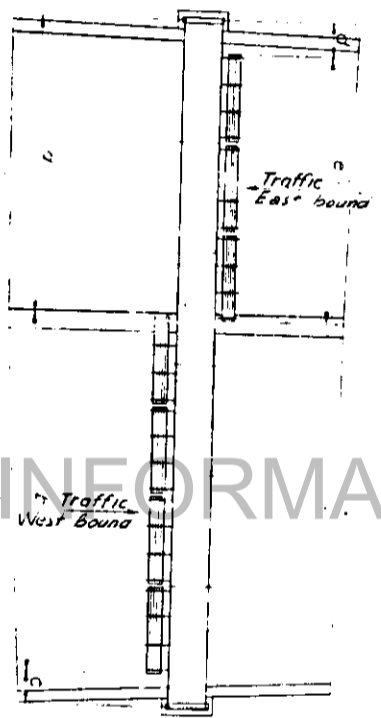
NOTE: Handrail pipe shall be ASTM 3241 Alloy 6063-T532 or Alloy 6061-T6



2 Redd per Walkway Bracket

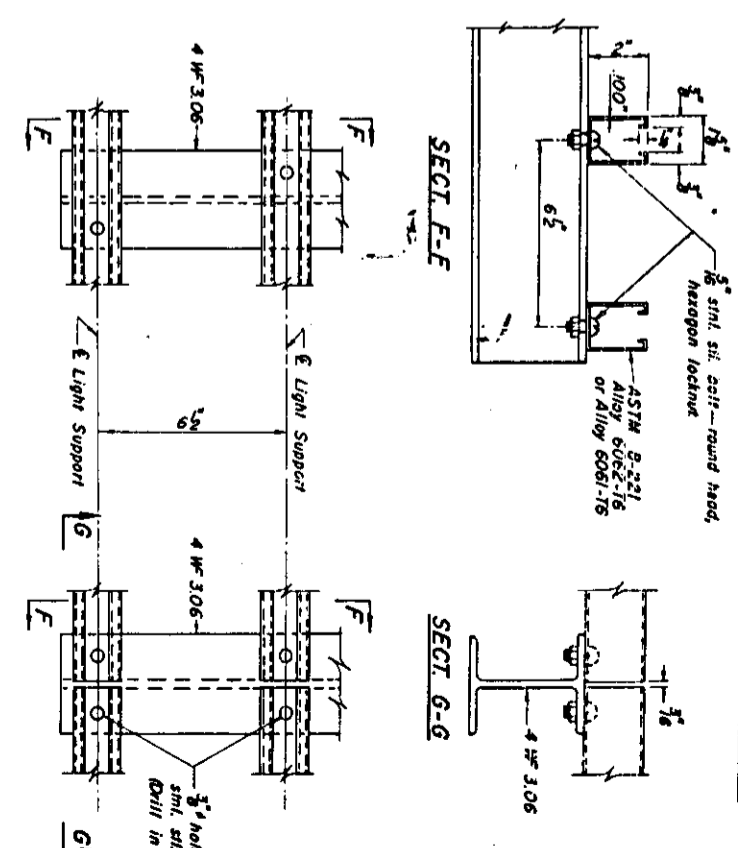


DETAILS OF HANDRAIL HINGE

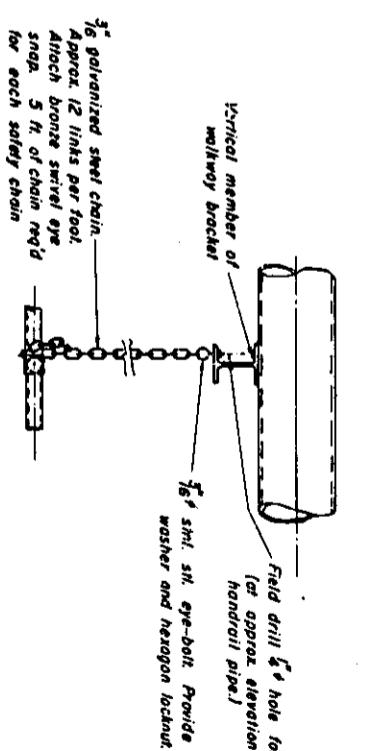


WALKWAY AND HANDRAIL SKETCH

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"



LIGHTING FIXTURE MOUNTS (IF REQ'D)



SAFETY CHAIN

One (1) required for each end of each walkway. Note: All bolts, nuts, and washers shall be stainless steel.

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

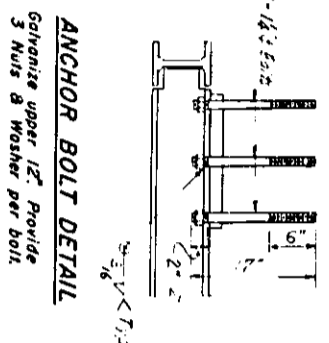
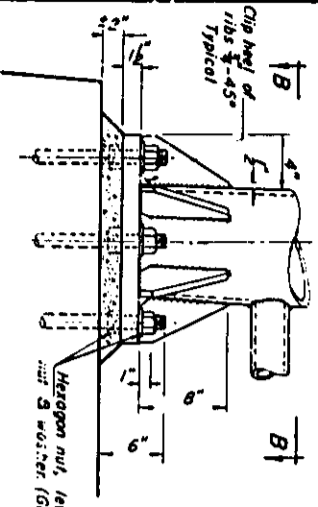
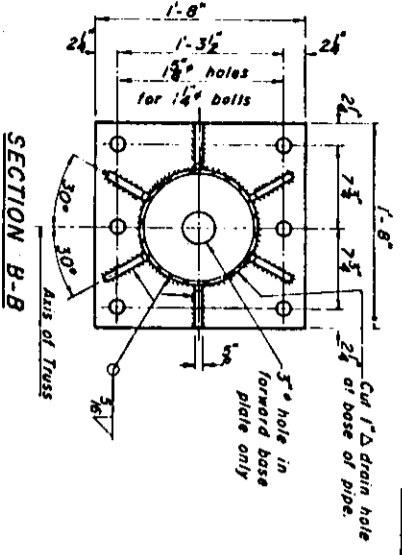
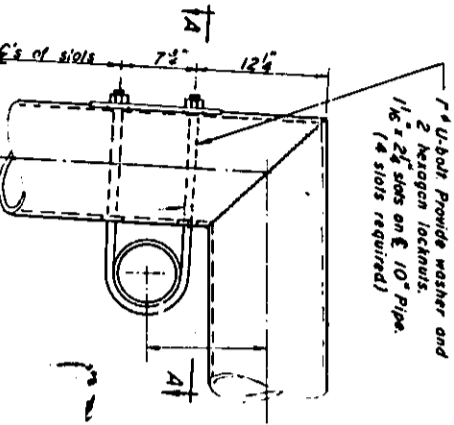
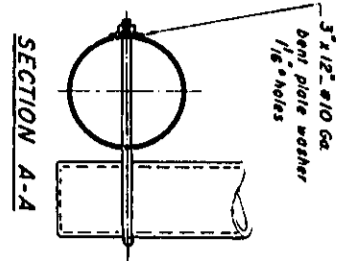
ILLINOIS APPROACH TO POPLAR STREET
STATION--44+73.50
F.A.L. ROUTE--70
SECTION--S2-3VB
ST. CLAIR COUNTY, ILLINOIS

SCALE: 1"=4'-0"

DESIGNED BY: W.A. JULY 1964
CHECKED BY: S. OCHOKI July 1964

ENGINEER: ROYCE H. BROWN, INC.
STRUCTURAL ARCHITECTS
ST. LOUIS, MO.

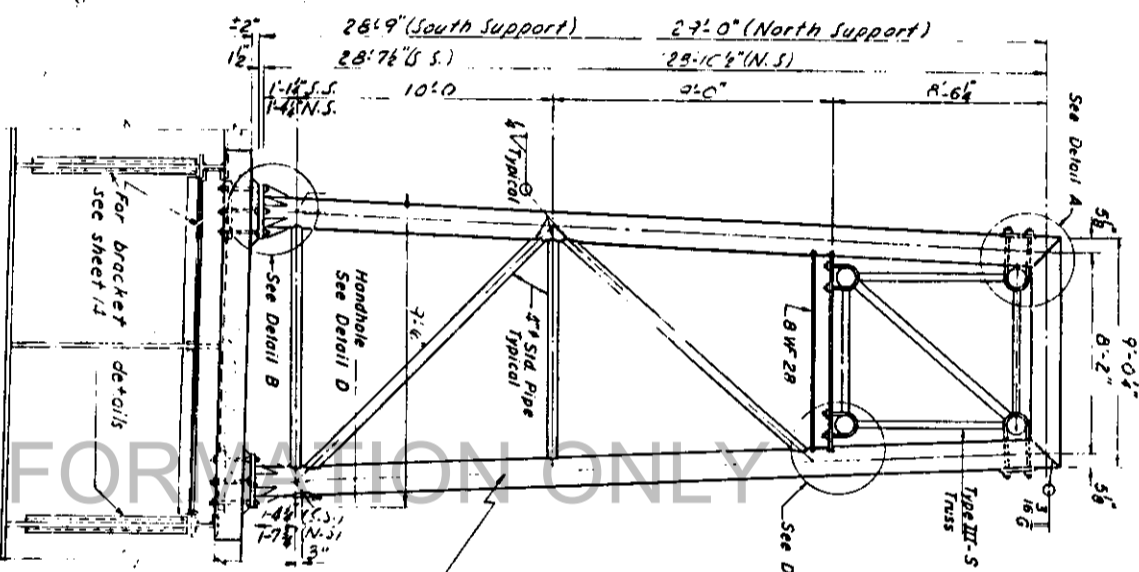
OS-A-9 1-4-63



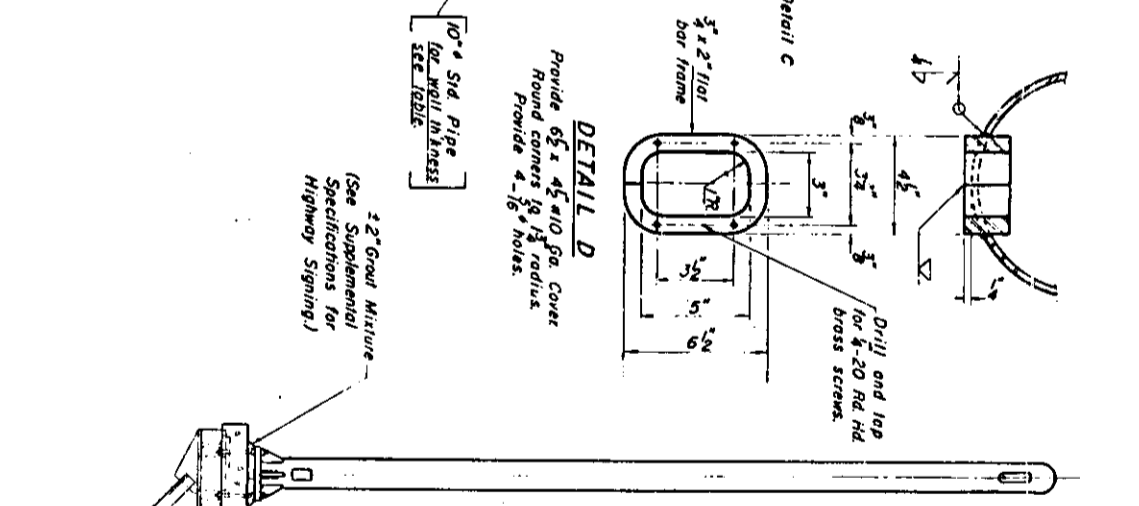
Note: Ribs shall be cut to fit slope of pipe. Weld to pipe and to base plate with $\frac{5}{16}$ c.t.w.

DESIGNED	EXAMINED
CHECKED	APPROVED
DRAWN BY: M. BEEL	APPROVED
CHECKED	

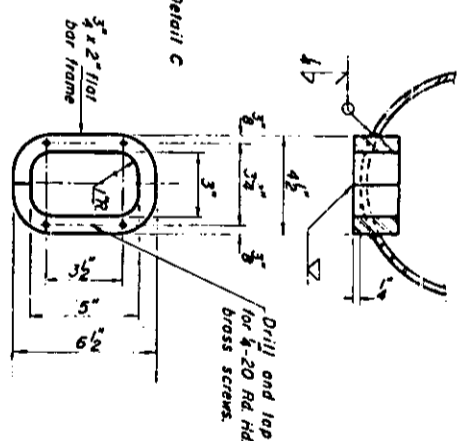
OS-S-7 11-27-62



SIDE ELEVATION

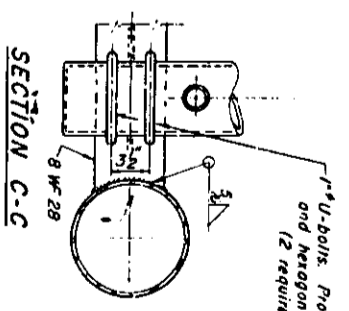


FRONT ELEVATION

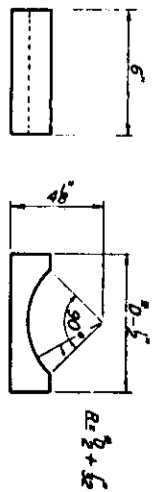
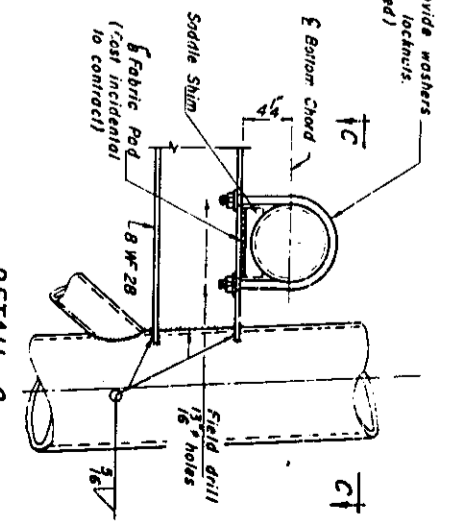


DETAIL D: Detail of the 10\"/>

2\"/>



Note: All U-bolts, washers and nuts required to attach truss to support shall be stainless steel.



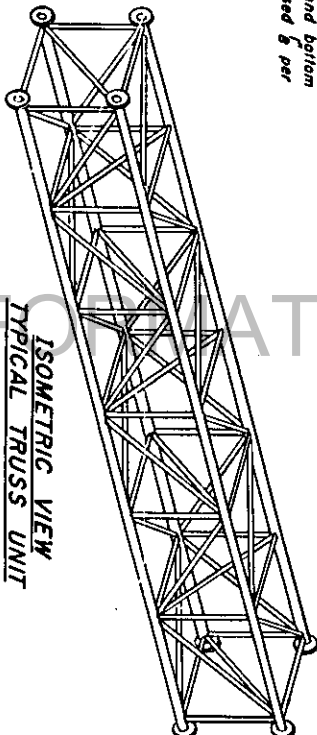
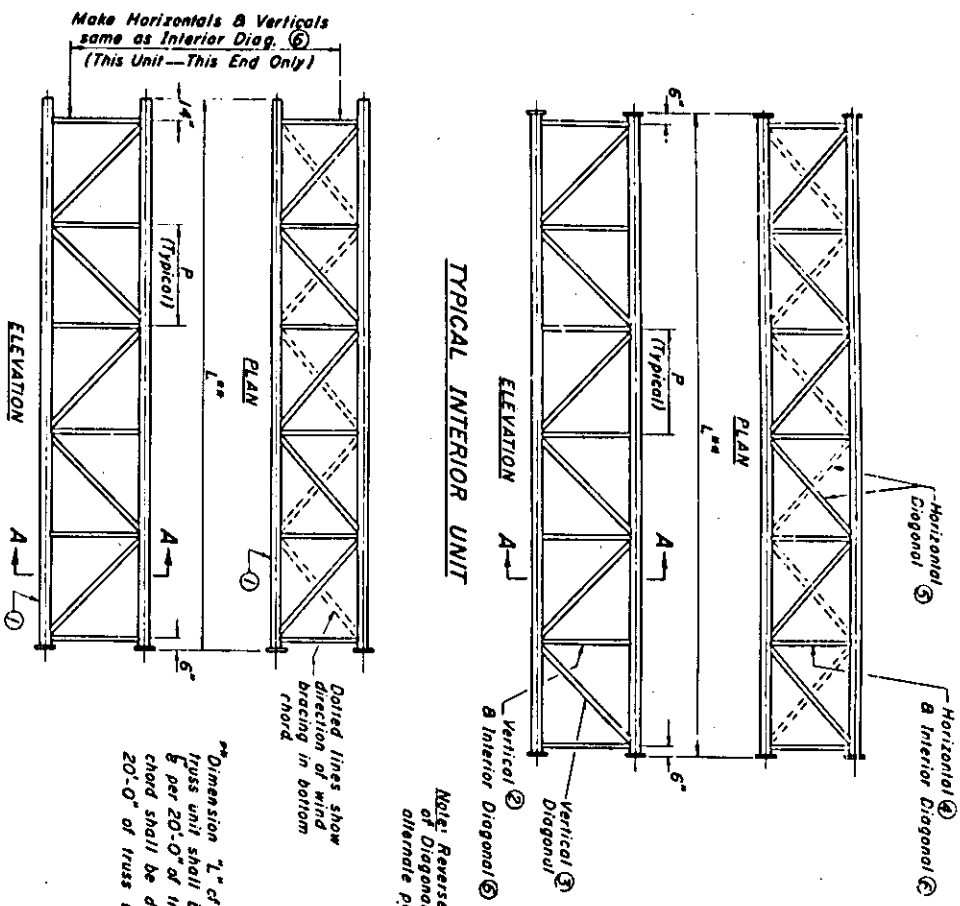
Malleable Iron Casting shall conform to Article 124.15 of Std. Specs 4 required per sign truss

Truss No.	Station	Wall Thickness
1	47-06	0.365"

TRUSS SUPPORT DETAILS
(10" Std. Pipe - Type III-S Truss)

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR STEEL TRUSS

ILLINOIS APPROACH TO POPLAR STREET
STATION - 44+79.50
E. ILL. ROUTE - 70
SECTION - 82-318
ST. CLAIR COUNTY, ILLINOIS
DRAWN: W.L.A. July 1964
CHECKED: Gordon K. July 1964
ENGINEER: ARNOLD AND ASSOCIATES, INC.
DESIGNER: ARNOLD AND ASSOCIATES, INC.
ST. LOUIS, MO.



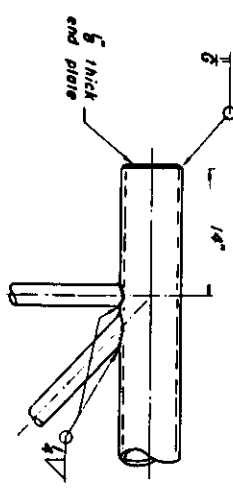
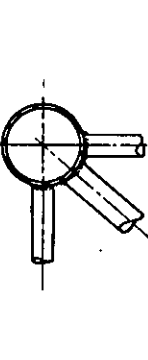
The steel overhead sign trusses shall be hot-dipped galvanized after fabrication is completed in accordance with ASTM Designations A-123 and A-365. All closed or blind tubes or pipes of the trusses shall be vented with two one-half inch (2-1/2") holes located in such positions that the tubes or pipes will not retain water after erection.

During shipment to and storage at the site, the trusses shall be blocked and any portions which could be damaged shall be wrapped with rough, non-staining paper to preserve the finish. The exposed surfaces of the trusses shall be of even texture, free from damage marks or imperfections. Poor appearance or damage to the galvanizing surfaces of the trusses shall be sufficient cause for rejection.

The cost of galvanizing the steel trusses shall be included in the contract Lump Sum price for OVERHEAD SIGN STRUCTURE.

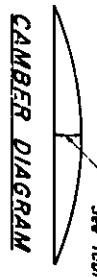
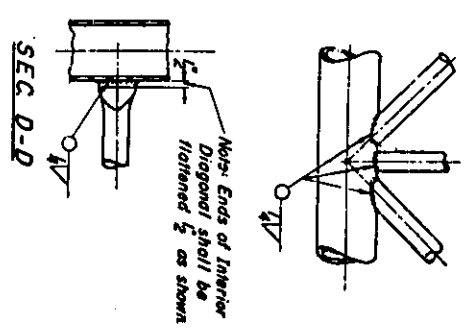
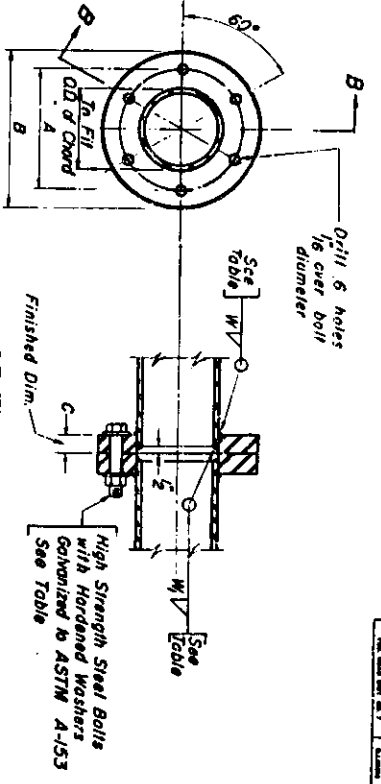
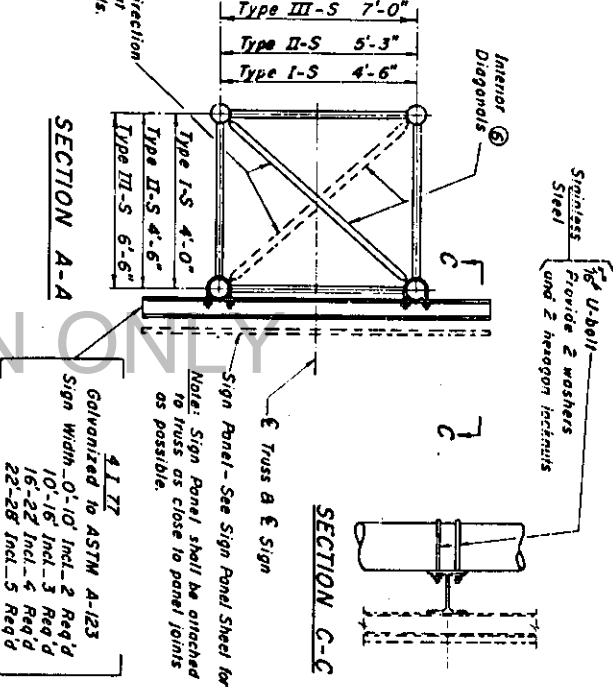
SPlicing FLANGE TABLE

Truss Number	Balls	W	W ₁	A	B	C
1	120	1"	3/8"	10"	13"	1 1/2"



TRUSS UNIT TABLE

Truss Number	Station	Truss Type	End Units (2)		Interior Unit		Top & Blm.		Vertical		Horizontal		Interior	Camber or E
			No. Panels per Unit	Unit Length (ft)	No. Panels per Unit	Unit Length (ft)	Chord (ft)	Diag. (ft)	Diag. (ft)	Diag. (ft)	Diag. (ft)	Diag. (ft)		
1	47+06	III-S	4	25'-8"	4	25'-0"	7'	3'-8"	3"	3"	2 1/2"	2 1/2"	3"	3 1/2"



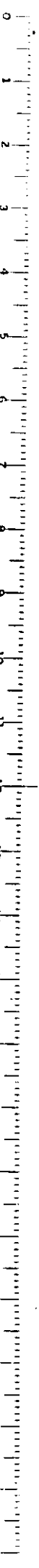
OVERHEAD SIGN STRUCTURES
STEEL TRUSS DETAILS

ILLINOIS APPROACH to POPLAR ST. BRIDGE

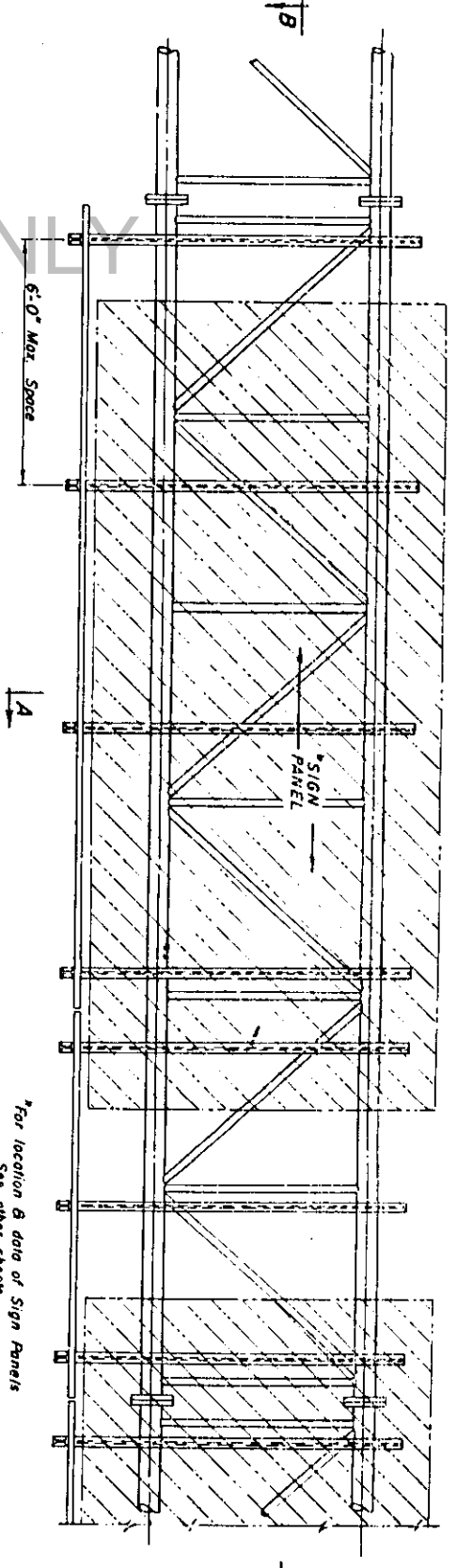
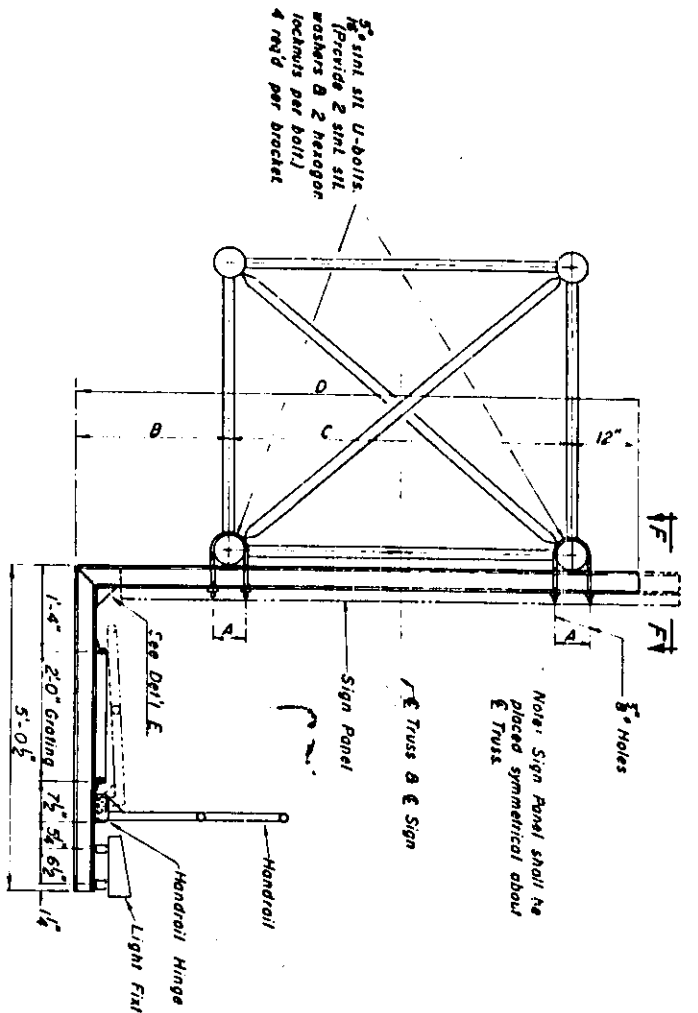
STATION 44 + 73.50
F&I ROUTE 70
SECTION 82-3VB
ST. CLAIR COUNTY

DESIGNED
CHECKED
DRAWN
APPROVED

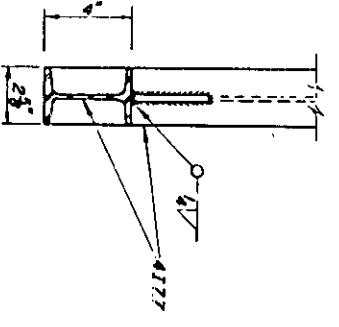
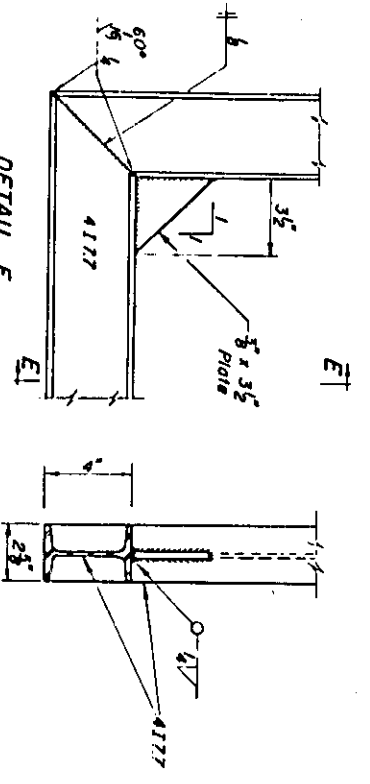
DATE: 11-28-62



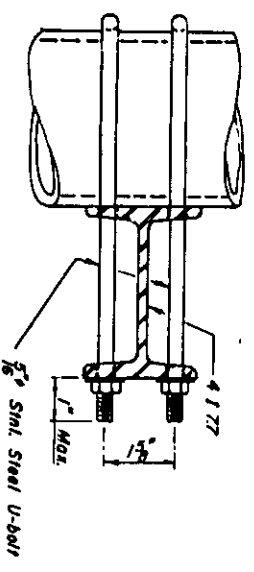
OS-S-2 11-28-62 RKL-B-65 Revised galvanizing notes d1/R



TYPICAL FRONT ELEVATION
(With Lights & Handrail omitted for clarity)



BRACKET DETAILS
Galvanized to ASTM A-123 & A-395

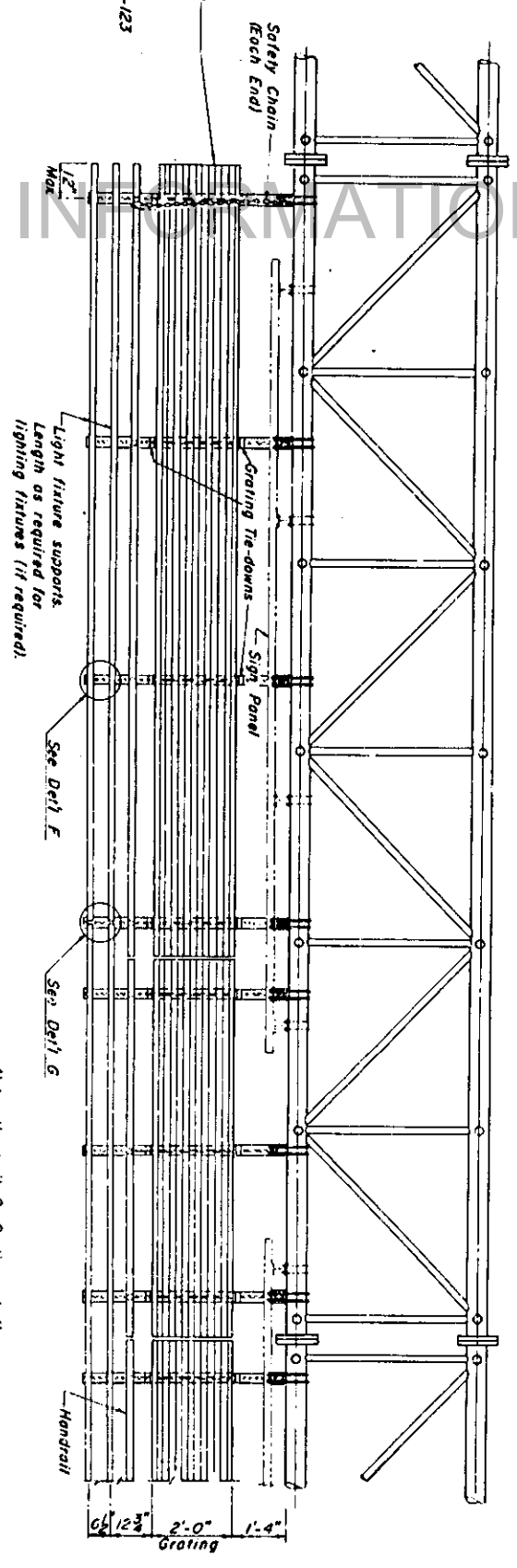


DESIGNED	DATE
CHECKED	APPROVED
DRAWN BY M. BEIT	
CHECKED	

OS-S-8 11-20-62

Truss Number	Station	A	B	C	D
1	47+00	7 3/8'	21'0"	7'0"	10'10"

Standard Steel Grating
Bearing Bars 1 1/2" x 4"
Cross Bars 4" x 8"
Galvanized to ASTM A-123
and ASTM A-395



Note: Stainless steel hardware shall not be galvanized.

SECTION 3-B

Note: Handrail & Grating shall span a minimum of three brackets. Place all sign and walkway brackets as close to panel points as possible.

OVERHEAD SIGN STRUCTURES
STEEL WALKWAY DETAILS

ILLINOIS APPROACH TO POPLAR STREET
STATION - 44+72.00
FALL ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS
DRAWN BY: M.A. J. July, 1962
CHECKED BY: J. G. [Signature]
DESIGNED BY: [Signature]
ENGINEER: [Signature]
ST. LOUIS, MO.

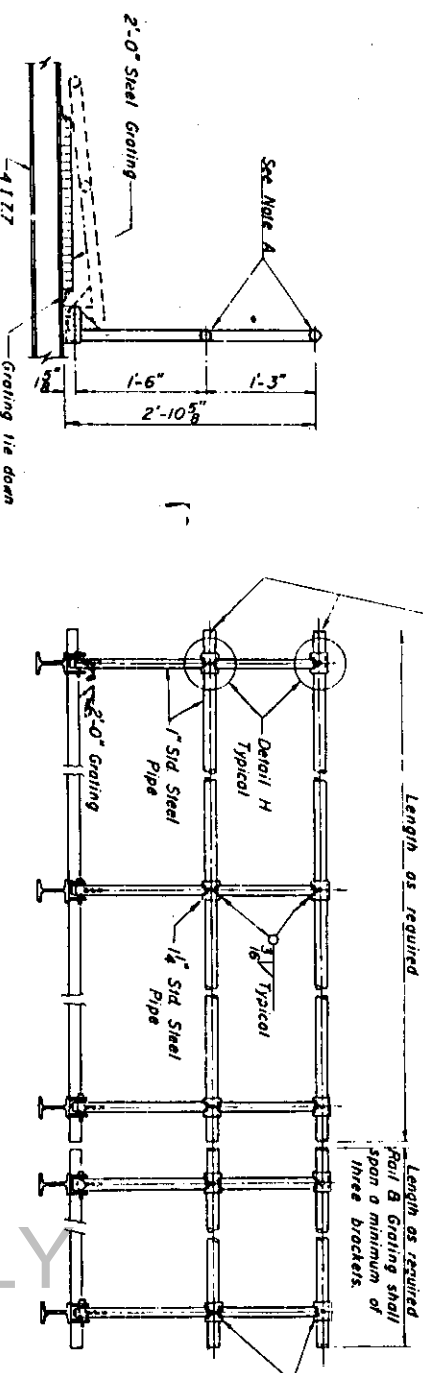
FOR INFORMATION ONLY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

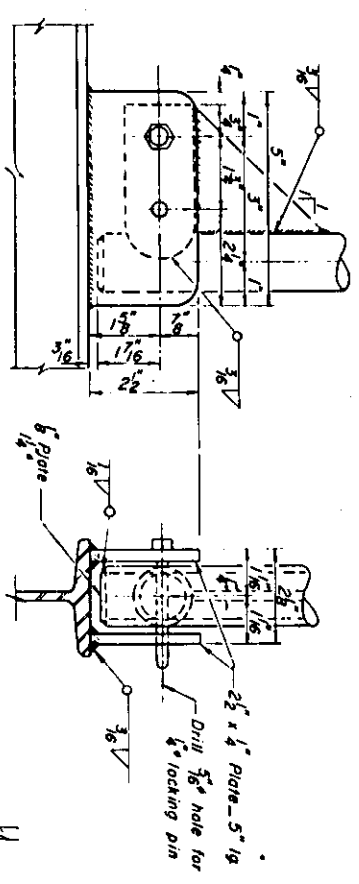
Contractor shall install standard galvanized force-fit end caps (All rail ends)

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO.	48	42
SHEETS		

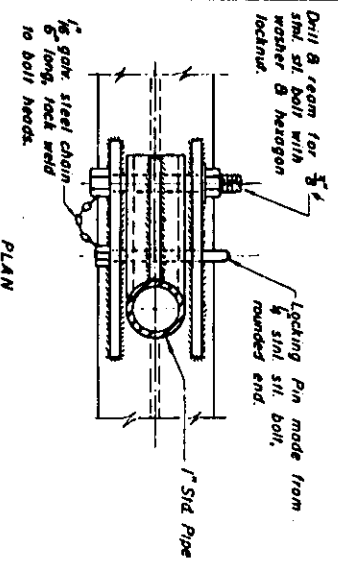


TYPICAL HANDRAIL DETAIL



SIDE ELEVATION

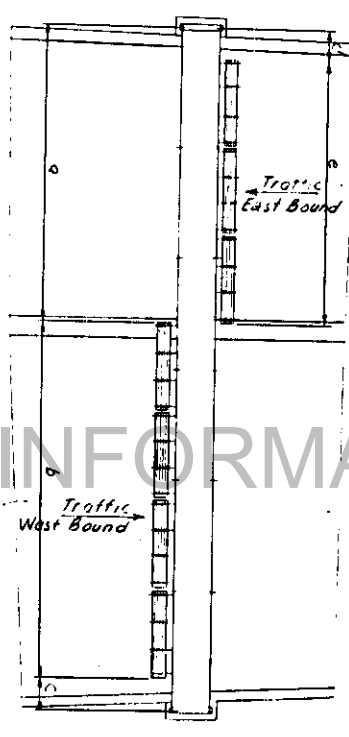
FRONT ELEVATION



PLAN

DETAILS OF HANDRAIL HINGE

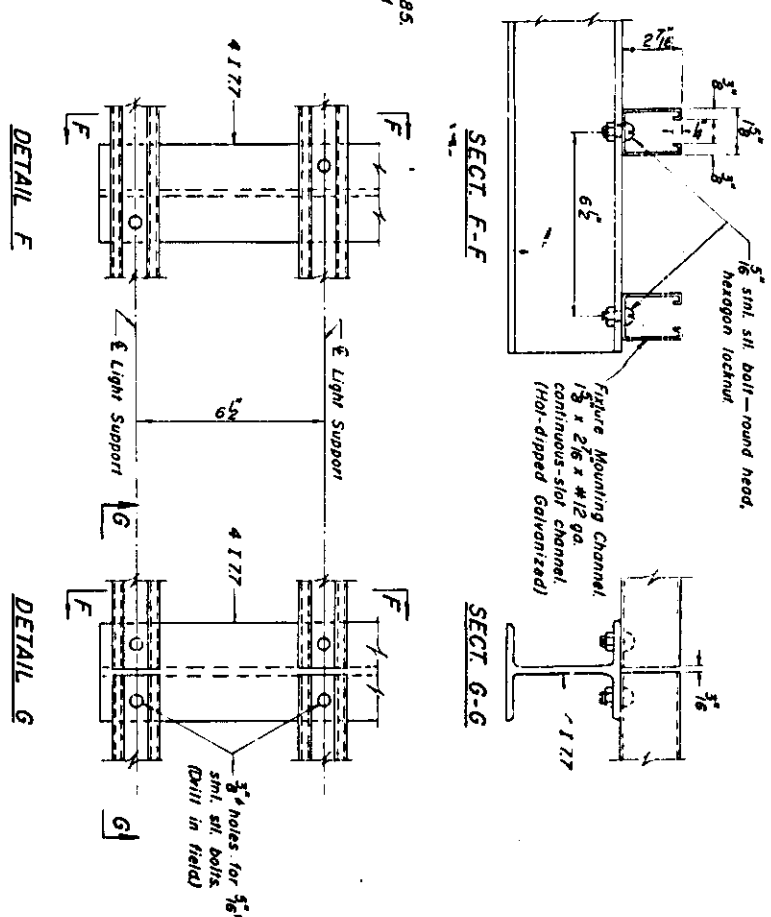
Note: Handrail pipe shall be ASTM A-53, Grade B, galvanized after fabrication to ASTM A-123 & A-385. Vertical Handrail Pipe Member shall be galvanized after fabrication to ASTM A-123 & A-385. Vertical Handrail Pipe shall be galvanized.



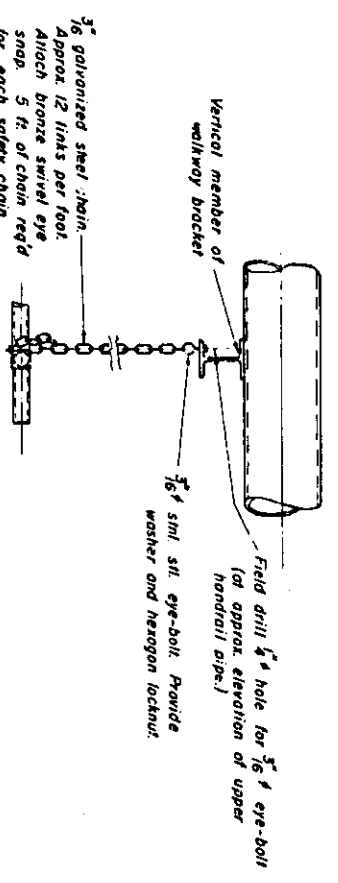
WALKWAY AND HANDRAIL SKETCH

Note: Road Plan shown beneath truss just typical.

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

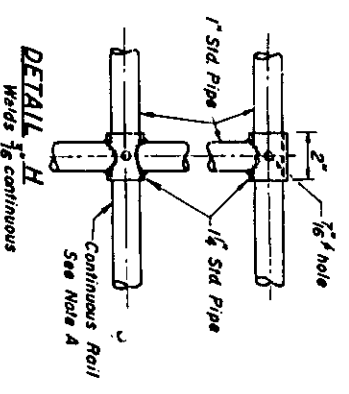


LIGHTING FIXTURE MOUNTS (IF REQ'D.)



SAFETY CHAIN

One (1) required for each end of each walkway.



DETAIL H

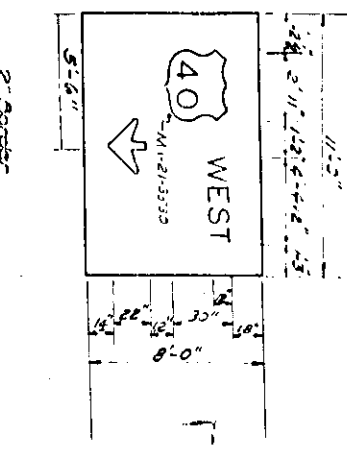
OVERHEAD SIGN STRUCTURES
STEEL WALKWAY DETAILS

ILLINOIS APPROACH TO POPLAR STR. GE
STATION - 44+73.50
FALL ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS
DATE: JULY 1966
DRAWN BY: J.A.A.
CHECKED BY: G. DeBart
DESIGNED BY: J. M. BARNETT, INC.
ENGINEERS AND ARCHITECTS
ST. LOUIS, MO.

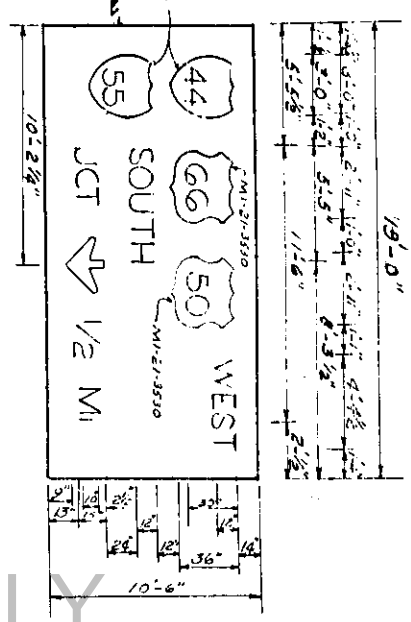
OS-S-9 11-27-62

PALLET NO.	SECTION NO.	COUNTY	TOWNSHIP	RANGE
70	82-318	ST. CLAIR	48	43
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJ. NO.		

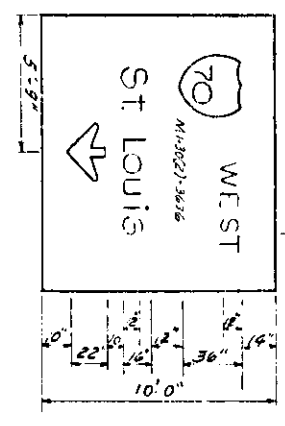
SHEET NO. 43
SHEETS



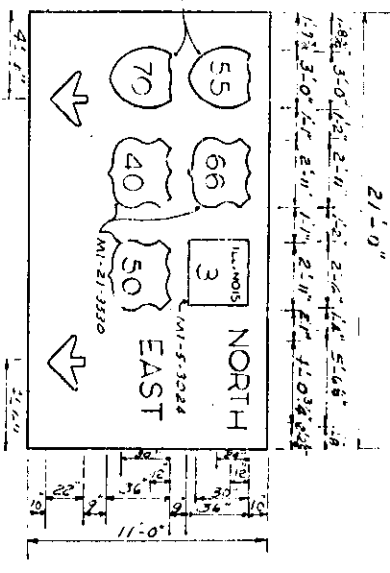
2' Border Radius
9" Corner Radius
SIGN NO. 1A



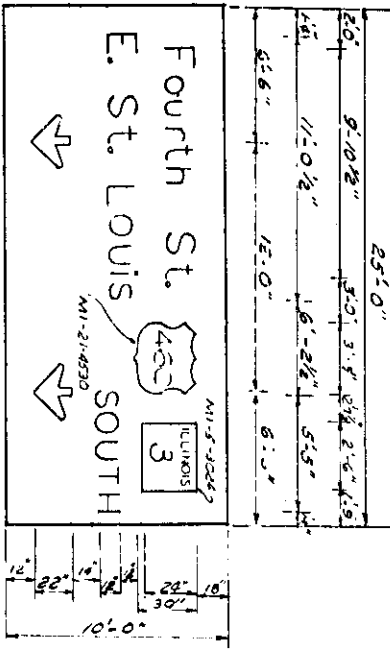
2' Border Radius
12" Corner Radius
SIGN NO. 1B



2' Border Radius
9" Corner Radius
SIGN NO. 1C



2' Border Radius
12" Corner Radius
SIGN NO. 1D



2' Border Radius
9" Corner Radius
SIGN NO. 1E

TABULATION OF STANDARD SIGNS & ARROWS

Sign No.	Standard Arrow	M/I-21-4530	M/I-5-3024	M/I-30(2)-3636	M/I-21-3530
1A	1				1
1B	1			2	2
1C	1		1	2	3
1D	2		1		
1E		7	2	5	6

FOR INFORMATION ONLY

448
AS 977

Note: Do not scale this drawing. Follow dimensions.

ILLINOIS APPROACH TO POPULAR ENGINEERING
STATION—44-73 50
FAL ROUTE—70
SECTION—82-318
ST. CLAIR COUNTY, ILLINOIS
SCALE: NONE
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DESIGNED BY: [Signature]
ENGINEER: [Signature]
ST. LOUIS, MO.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24