

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D7	BRIDGE PAINTING 2023-3	MACON	19	1
		ILLINOIS	CONTRACT NO. 74B55	

• FAI 72 & FAP 322A

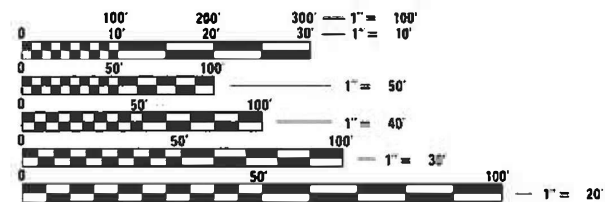
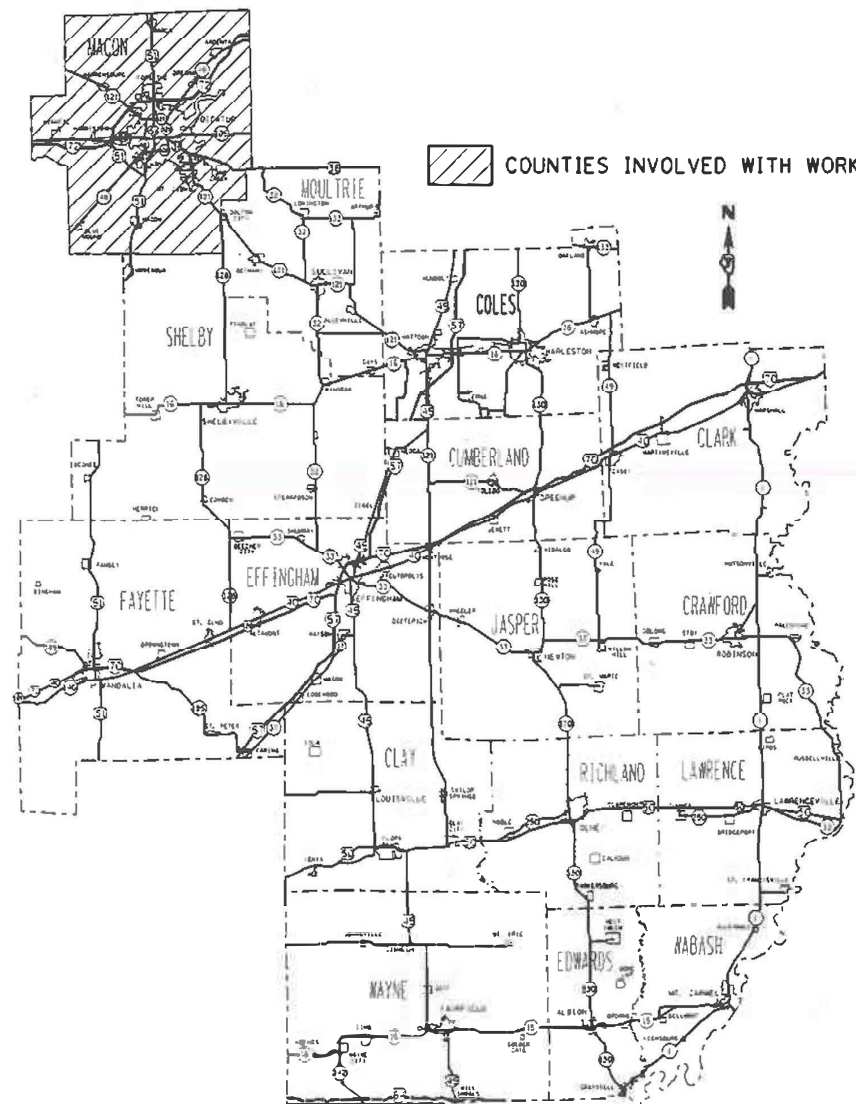
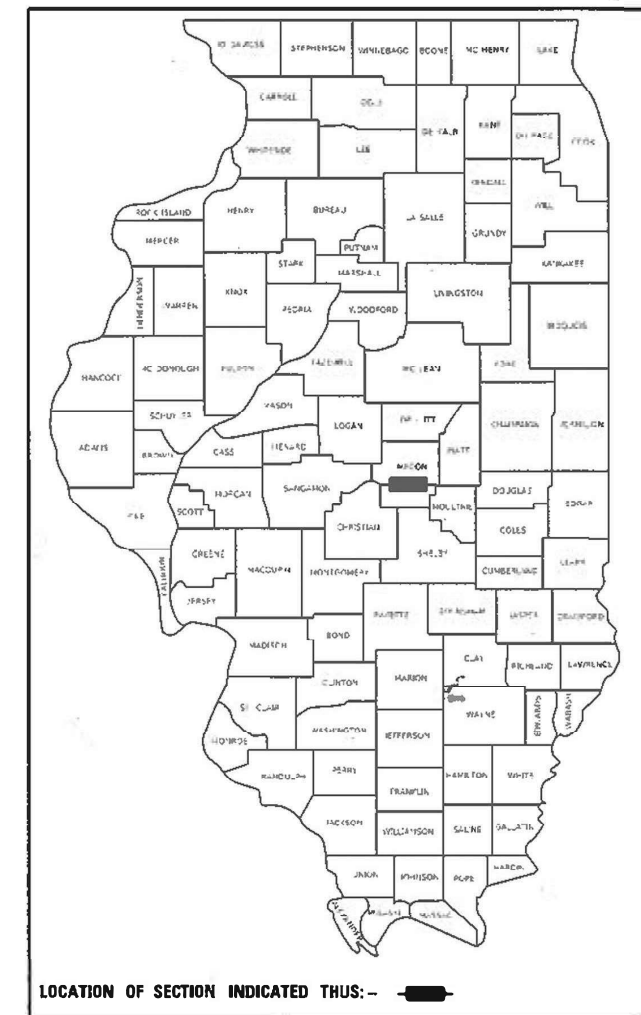
D-97-076-22

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

FAI 72 (I 72) & FAP 322A (US 51)
SECTION D7 BRIDGE PAINTING 2023-3
PROJECT STP-W2AS(624)
BRIDGE PAINTING
MACON COUNTY

C-97-127-22



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: MATT BOWER
PROJECT MANAGER: TUCKER RIEMAN
PHONE: (217)342-8359
CONTRACT NO. 74B55

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED FEBRUARY 16 2023
Jeffrey P. Myerson REGIONAL ENGINEER
March 24, 2023
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT
March 24, 2023
[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

THE PROPOSED PROJECT IS LOCATED AT 4 LOCATIONS: ON INTERSTATE I-72 AND US ROUTE 51 IN MACON COUNTY.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF CLEANING AND PAINTING THE BRIDGES AS SPECIFIED IN THE PLANS AND SPECIAL PROVISIONS.

THE STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED AS SPECIFIED IN THE PLANS AND THE SPECIAL PROVISIONS.

ALL DECK DRAINS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THEIR OWN EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ONLY STRUCTURAL STEEL IS TO BE PAINTED. ALL OTHER SURFACES WILL BE PROTECTED FROM BEING PAINTED. ALL PAINT AND OVERSPRAY WILL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

THE SSPC OP1 AND OP2 PAINTING CONTRACTOR CERTIFICATION WILL BE REQUIRED FOR THIS PROJECT.

INDEX OF SHEETS

SHEET NO.	ITEM
1	COVER SHEET
2	INDEX OF SHEETS, GENERAL NOTES, LOCATION DESCRIPTIONS
3	SUMMARY OF QUANTITIES
4	LOCATION MAP
5-19	EXISTING STRUCTURE PLANS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER THE LAST NUMBERED SHEET:

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS, & PATTERNS
- 643001-02 SAND MODULE IMPACT ATTENUATORS
- 701101-05 OFF-ROAD OPERATIONS, MULTI-LANE, 15' TO 24" FROM PAVEMENT EDGE
- 701106-02 OFF-ROAD OPERATIONS, MULTI-LANE, MORE THAN 15' AWAY
- 701400-09 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701401-11 LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701402-12 LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
- 701901-08 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER

LOCATION #1

BRIDGE # 1
 ROUTE: FAI ROUTE 72
 MARKED: I-72
 SECTION: 58-62HB-4
 STATION: 305+13.04
 STRUCTURE NUMBER: 058-0068, CARRYING I-72 OVER HARRISTOWN RD.

LOCATION #2

BRIDGE # 2
 ROUTE: FAI ROUTE 72
 MARKED: I-72
 SECTION: 58-62HB-4
 STATION: 508+89.58
 STRUCTURE NUMBER: 058-0069, CARRYING I-72 OVER HARRISTOWN RD.

LOCATION #3

BRIDGE # 3
 ROUTE: FAI ROUTE 72
 MARKED: I-72
 SECTION: 58-62-1HB
 STATION: 632+49.88
 STRUCTURE NUMBER: 058-0072, CARRYING I-72 OVER WYCKLES ROAD

LOCATION #4

BRIDGE # 4
 ROUTE: FAP ROUTE 322
 MARKED: US 51
 SECTION: 58-20-1HB
 STATION: 929+45.04
 STRUCTURE NUMBER: 058-0100, CARRYING CANTRELL ST. OVER US 51

COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings, and diaphragms, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". This structure contains lead paint.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

Three air monitors will be required at this location.

COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings, and diaphragms, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". This structure contains lead paint.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

Two air monitors will be required at this location.

COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings, and diaphragms, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". This structure contains lead paint.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

No air monitors will be required at this location.

COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings, and diaphragms, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". This structure contains lead paint.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

Four air monitors will be required at this location.

REV. - MS

MODEL: PROBLEMS\$
FILE NUMBER: 3115

USER NAME = \$USERS	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, GENERAL NOTES, AND BRIDGE LOCATIONS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN -	REVISED -	*				D7 BRIDGE PAINTING 2023-3	MACON	19	2	
PLOT SCALE = \$SCALES	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.		CONTRACT NO. 74855				
PLOT DATE = \$DATES	DATE -	REVISED -		ILLINOIS FED. AID PROJECT						

80% FED
20% STATE

80% FED
20% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0047		
67100100	MOBILIZATION	L SUM	1	1		
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	4	4		
	701402					
70100325	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	2	2		
	701423					
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1		
	701401					
70107007	PAVEMENT MARKING BLACKOUT TAPE, 7"	FOOT	10400	10400		
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	6064	6064		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	300	300		
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	360	360		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	4500	4500		
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1	1		
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	7	7		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0047		
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT	L SUM	1	1		
	CLEANING RESIDUES NO. 1					
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1		
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1		
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1	1		
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1	1		
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT	L SUM	1	1		
	CLEANING RESIDUES NO. 2					
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT	L SUM	1	1		
	CLEANING RESIDUES NO. 3					
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT	L SUM	1	1		
	CLEANING RESIDUES NO. 4					

MODEL: Default
 FILE: \\mafc-pw-bentley.com\PW\DOT\Documents\DOT_Offices\District_7\Projects\74B55\CADD\Drawings\74B55-SP-S00.dgn

REV. - MS

USER NAME = Jessica.Hille	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 2/8/2023	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

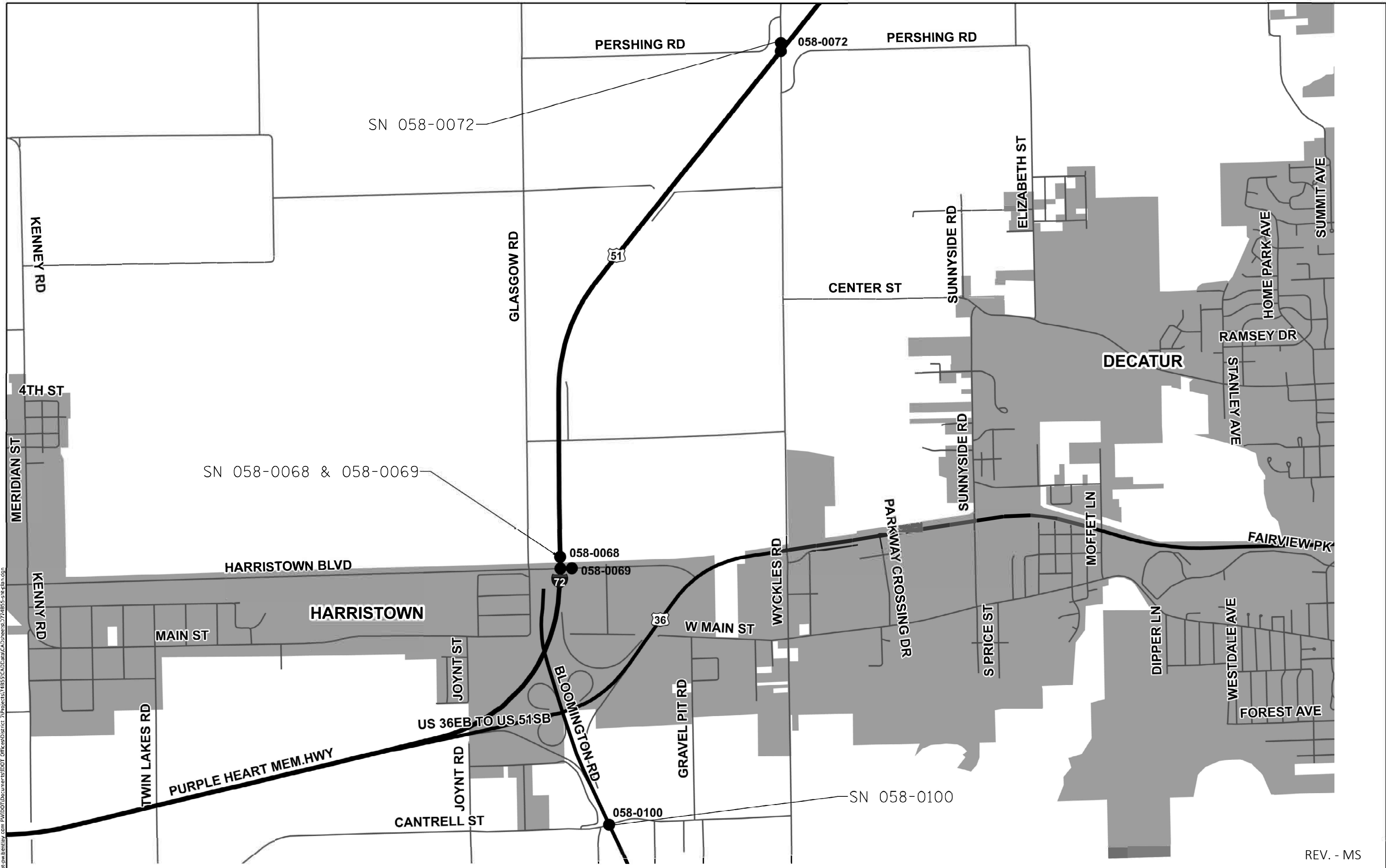
SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RT. 72 & VAP. 322	COUNTY	TOTAL SHEETS	SHEET NO.
*	MACON	19	3
CONTRACT NO. 74B55			
ILLINOIS FED. AID PROJECT			

* D7 BRIDGE PAINTING 2023-3

MODEL: D:\draft
 FILE NAME: P:\w\dot\ch\harristown\harristown\DOT_Offices\District_2\Projects\74855\CADD\data\CD\harristown\74855-314.dgn



REV. - MS

USER NAME = Jessica.Mille	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 2/8/2023	CHECKED -	REVISED -
	DATE -	REVISED -

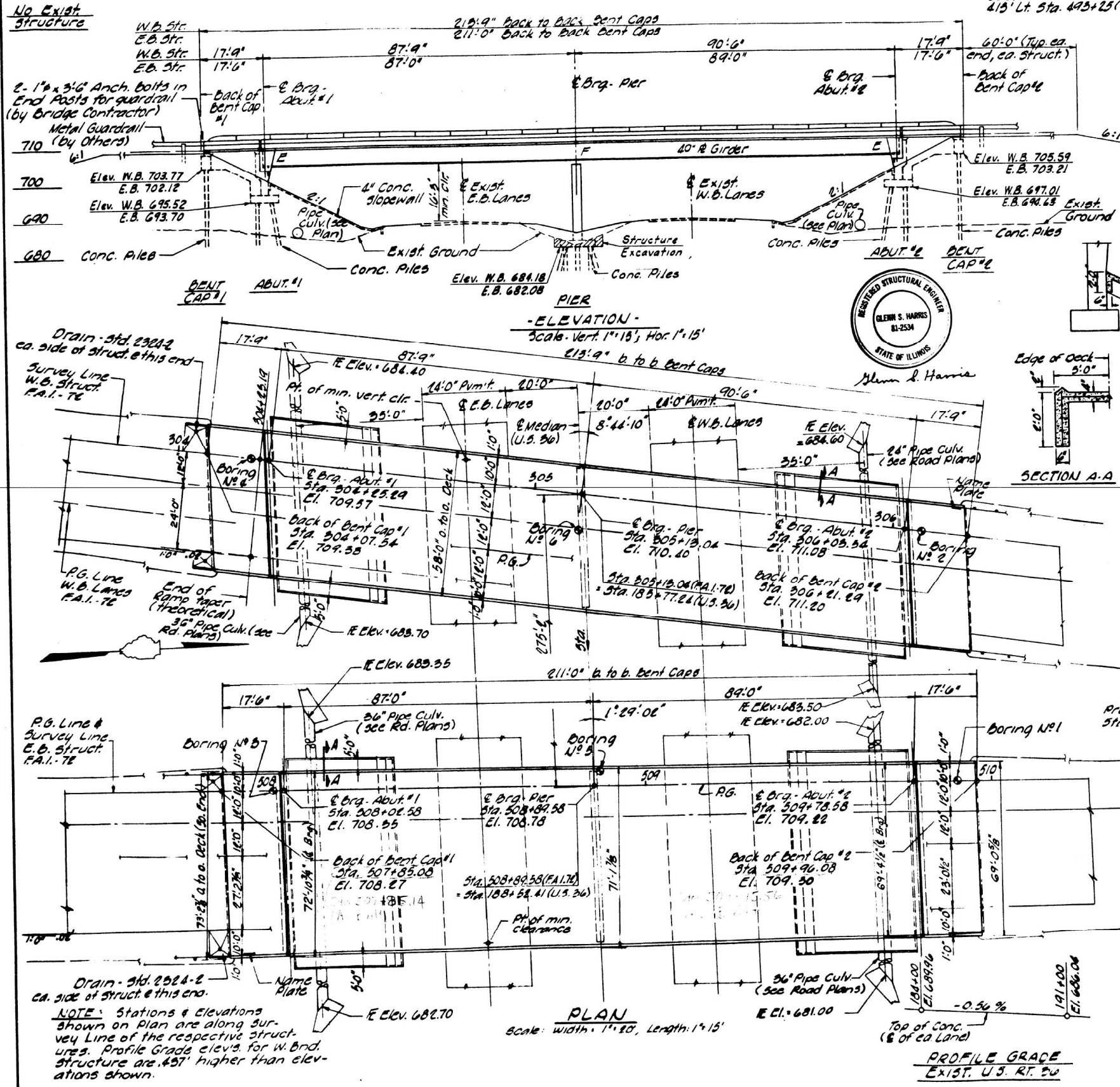
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

LOCATION MAP

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. FA RTE. 72 & VAR. 323 SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	MACON	19	4
CONTRACT NO. 74855			
ILLINOIS FED. AID PROJECT			

* D7 BRIDGE PAINTING 2023-3



DESIGN LOADING-
 Live Load HS 20-44 & Alt.
 AASHTO 1975 Specifications.
 Dead Load includes 25% of 34 ft. of roadway for future wearing surface.

DESIGN STRESSES-
 fc = 1400 p.s.i. Substr. Curb, Parapet
 fc = 1200 p.s.i. App. Slab
 fc = 75 p.s.i. Footings
 fs = 20,000 p.s.i. Reinforcing Steel
 fs = 20,000 p.s.i. Structural Steel (AASHTO M183)

n = 10
 fc = 1000 p.s.i. Conc. in contact w/soil

LIVE LOAD DEFLECTION-
 L/1800 for Composite Const.

GENERAL NOTES

Boring Data are included with the Proposals. All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Fasteners shall be high strength bolts. Bolts 7/8"; open holes 15/16", unless otherwise noted.

Calculated weight of Structural Steel = 761,812 Lbs.

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

Field welding of construction accessories will not be permitted to the bottom flange of the girders nor to the top flange for a distance equal to one-fourth the span length from pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Slope wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58 pounds per 100 sq. ft.

Concrete piles at abutments shall be driven in holes precast through the embankment in accordance with Article 513.09(c) of the Standard Specifications.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

The concrete rail section above the mandatory construction joint at the top of the slab, shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.

Original field logs of the structure foundation borings made in conjunction with the design of this improvement are on file in the District Office in Paris, where they are available for inspection by contractors or prospective bidders.

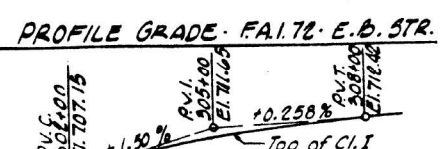
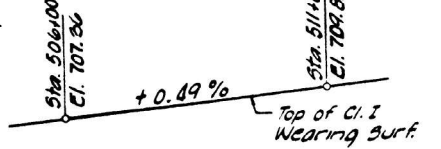
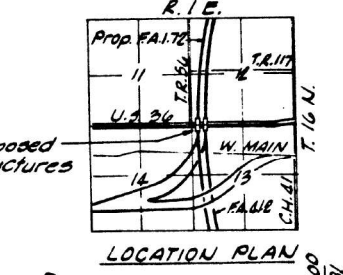
The Contractor shall drive six concrete test piles in permanent locations, one at each abutment and pier, as directed by the Engineer before ordering the remainder of piles.



STA. 508+89.58
 BUILT 197 BY
 STATE OF ILLINOIS
 F.A.I. 72 SECTION 58-0218-4
 F.A. PROJECT I-16-72-1(43)
 LOADING HS 20 & ALT.

LETTERING FOR NAME PLATES (E.B.)
 (See Std. 2113)

Note: Sta. for W.B. structure name plate shall be 305+13.04



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
Structure Excavation	Cu. Yds.	-	125	125
Class "X" Concrete	Cu. Yds.	894.0	692.2	1,586.2
Reinforcement Bars	Lbs.	218,420	75,780	294,200
Structural Steel	L. S.	-	-	-
Aluminum Railing	Lin. Ft.	837	-	837
Name Plates	Each	2	-	2
Concrete Piles	Lin. Ft.	-	10,861	10,861
Test Piles Concrete	Each	-	6	6
Slopedwall 4"	Sq. Yds.	-	1,222	1,222
Stud Shear Connectors	Each	6,624	-	6,624
Preformed Joint Sealer (2 1/2")	Lin. Ft.	261	-	261
Protective Coat	Sq. Yds.	298	-	298
Waterproofing Membrane System	Sq. Yds.	2,888	-	2,888
Bituminous Concrete Surface Course, Class I	Tons	240.5	-	240.5
Sand Backfill	Cu. Yds.	-	833	833

GENERAL PLAN AND ELEVATION

STATE OF ILLINOIS
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

FAI 72 SEC 58-0218-4 PROJ.
 STA 508+89.58 & 305+13.04 MAACON CO.

HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

REVISIONS:

1	1-17-73	551	REVISED
2	1-17-73	551	REVISED

DESIGNED BY: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: [Signature]

069 CN 23915 FAI 72 9.61 FA 47 9.14 FAU 7381

MODEL - SHOWN IN PLAN
 FILE NAME: STREETS

USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = 55CALES	DRAWN -	REVISED -
PLOT DATE = SDATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

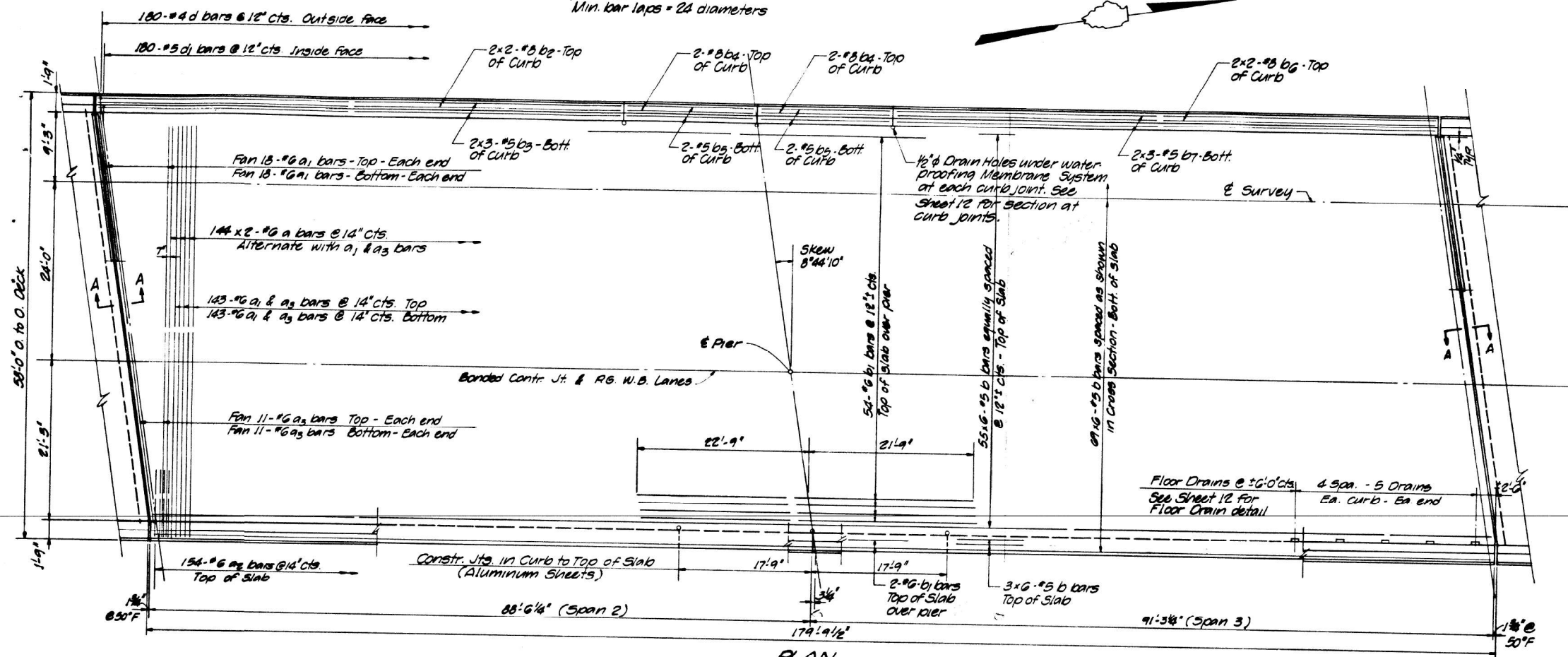
EXISTING STRUCTURE PLANS
 SN 058-0068 & 0069

SCALE: SHEET OF SHEETS STA. TO STA.

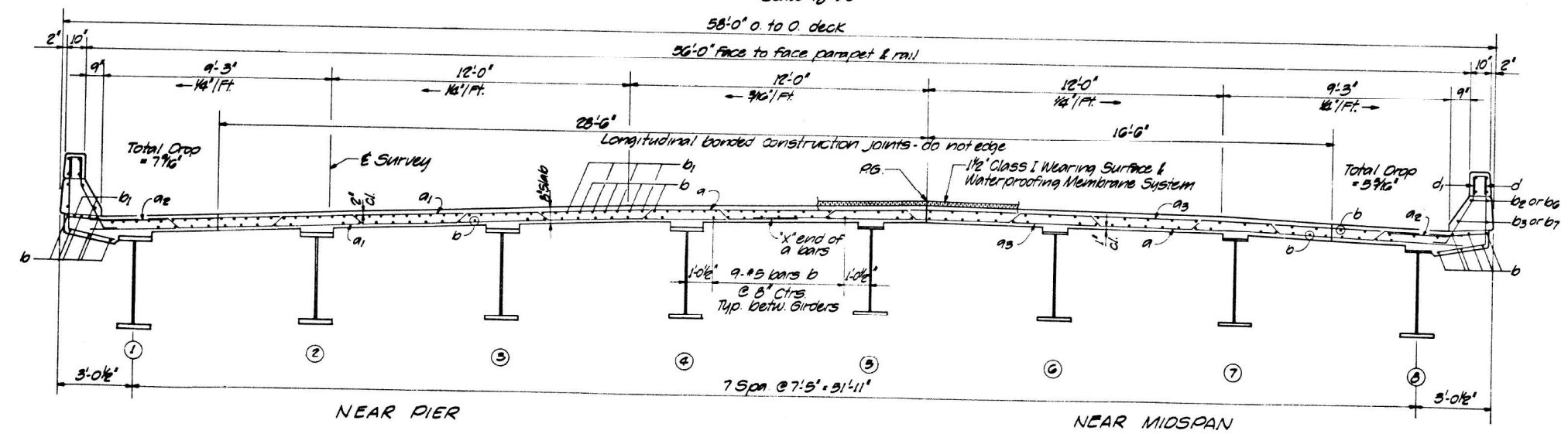
F.A. FAI 72 & VAR. 322 RTE. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	MAACON	19	5
		CONTRACT NO. 74B55	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-72	58424B-4	MACON	69	30

Note: Bars indicated thus 144 x 2-#6 etc. indicates 144 lines of bars with 2 lengths per line.
Min. bar laps = 24 diameters



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



CROSS SECTION
(Looking North)
Scale: 3/8"=1'-0"

Note: For deck details see Sheets 10-A & 12.

SUPERSTRUCTURE - SPANS 2 & 3 - W.B. LANES			
NO.	DATE	BY	REASON
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

STATE OF ILLINOIS DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS FAI-72 OVER U.S. 36 FAI-72 SEC. 58-62 HB-4 PROJ. STA. 808+89.58 & 303+13.04 MACON CO.	JLH 3-74 GSH 2-75 28GA-4
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS	30

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 058-0068 & 0069

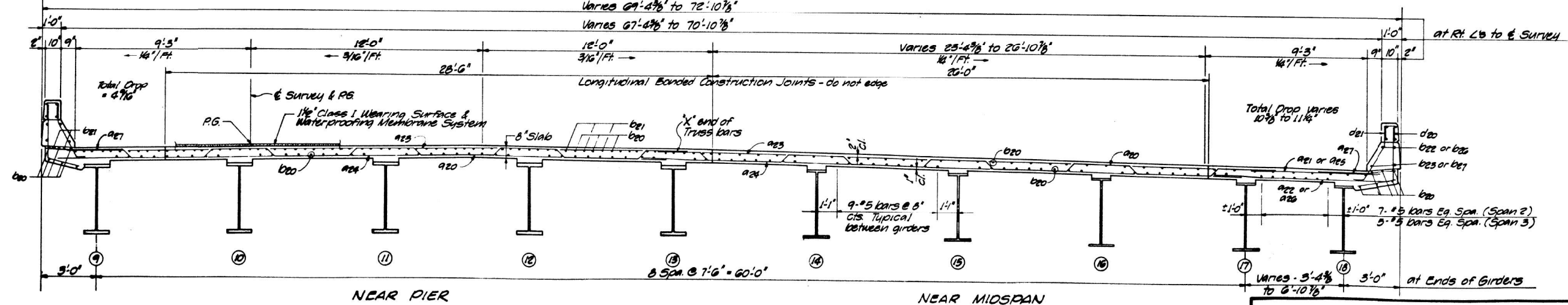
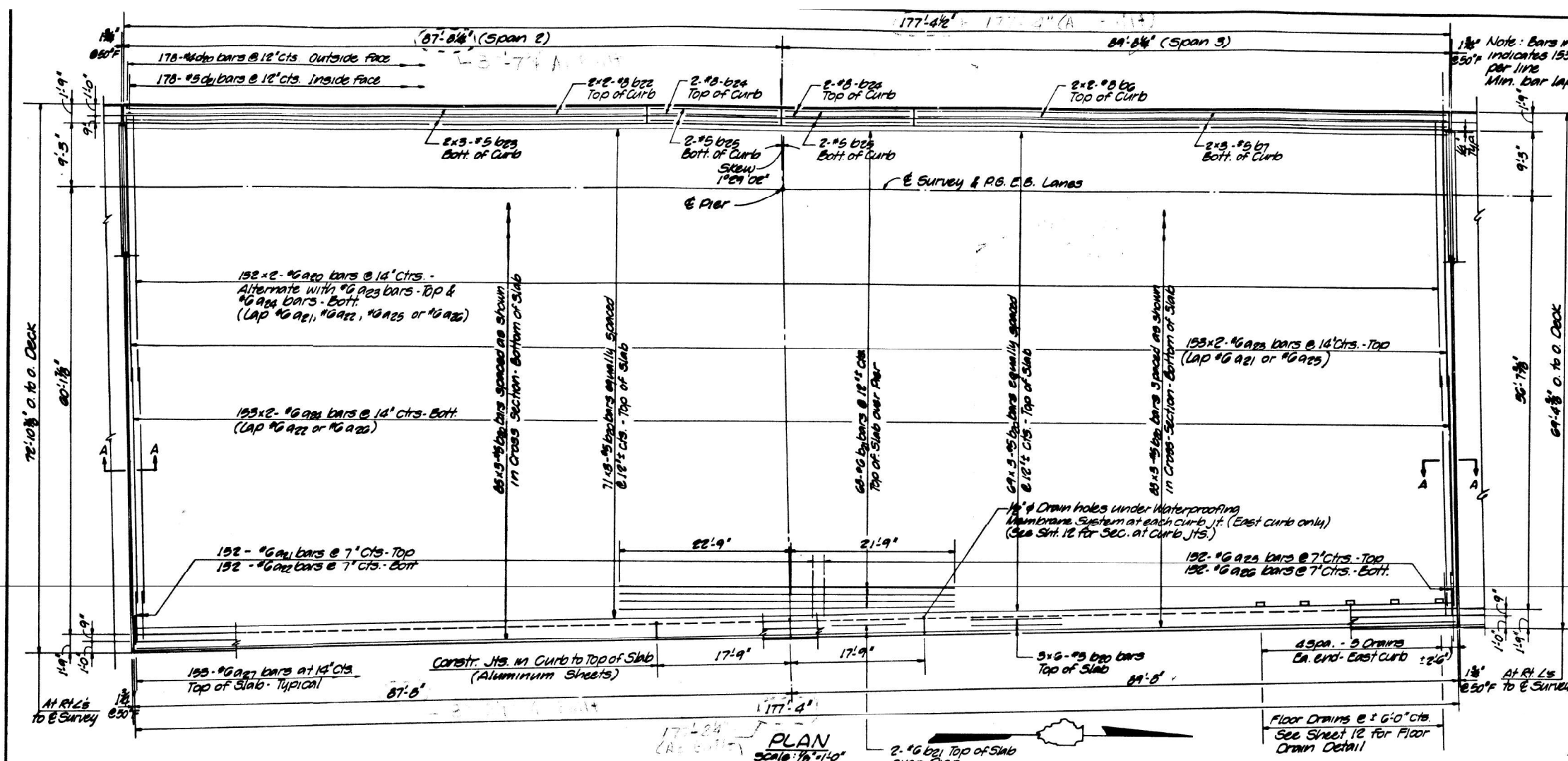
SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
--------	-------	----	--------	------	----	------

F.A. FAI 72 & VAR. 322 RTE. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	MACON	19	6
		CONTRACT NO. 74B55	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FR-72	58-62 NB-A	MACON	69	92
FID. ROAD DIST. NO.	ILLINOIS PROJECT			

Sheet No 21 of 29 sheets

Note: Bars indicated thus 153x2-#5 etc. indicates 153 lines of bars with lengths per line. Min. Bar laps = 24 diameters



REVISIONS		DATE	BY	DESCRIPTION
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

SUPERSTRUCTURE - SPANS 2 & 3 - E.B. LANES STATE OF ILLINOIS DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS F.A. 72 OVER U.S. 36 F.A. 172 SEC. 58-62 NB-A PROJ. STA. 508+09.50 & 305+13.04 MACON CO.		JUL 5-74 GSH 2-75 2009-4 #2
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		

MODEL: 1400BENLMM16
FILE: 1400BENLMM16.DWG

USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = 5/8" = 1'-0"	DRAWN -	REVISED -
PLOT DATE = 5/24/75	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

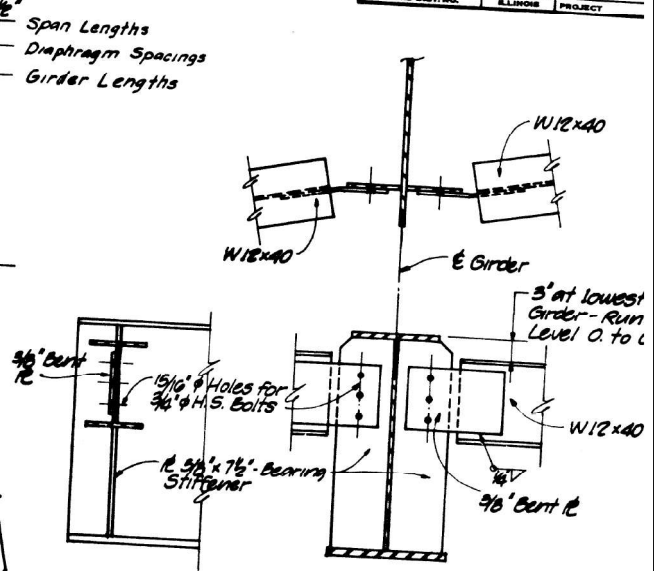
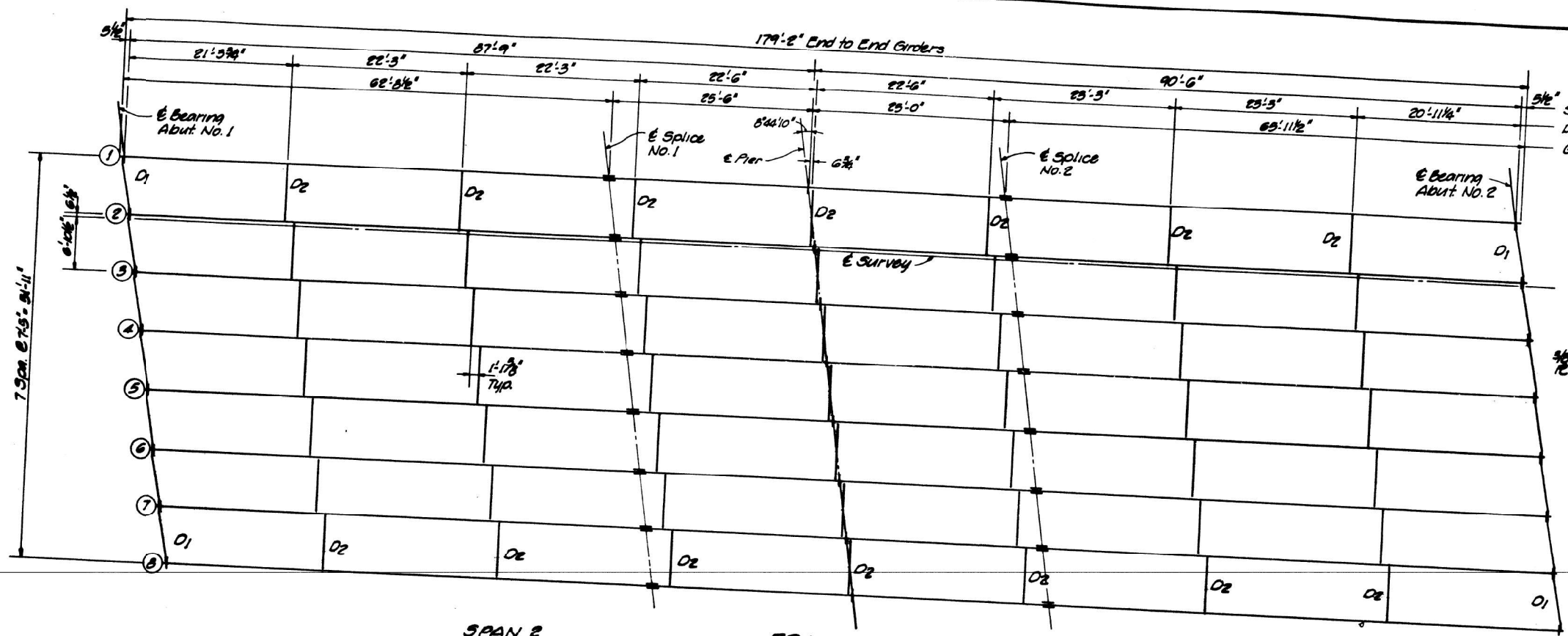
EXISTING STRUCTURE PLANS
SN 058-0068 & 0069

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. 72 & VAP. 322 RTE. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	MACON	19	7
		CONTRACT NO. 74B55	

Sheet No. 14
of 29 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS
FAI-72	5A-21B-4	MACON	69
FED. ROAD DIST. NO.	ILLINOIS	PROJECT	



END DIAPHRAGM - MK D1

SPAN 2

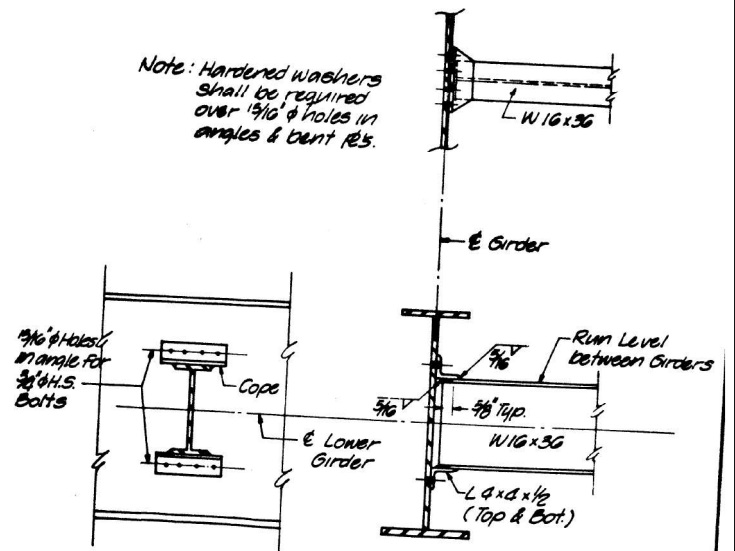
FRAMING PLAN
All end diaphragms to be W12x40 MK D1
All interior diaphragms to be W16x36 MK D2

SPAN 3

Girder Location	1	2	3	4	5	6	7	8
E Brg. Abut. #1	708.388	708.554	708.721	708.875	709.002	708.943	708.800	708.657
E Splice #1	708.911	709.077	709.244	709.398	709.525	709.466	709.323	709.180
E Pier	709.125	709.291	709.458	709.612	709.739	709.680	709.537	709.394
E Splice #2	709.335	709.501	709.668	709.822	709.949	709.890	709.747	709.604
E Brg. Abut. #2	709.885	710.051	710.218	710.372	710.499	710.440	710.297	710.154

* For Fabrication Only

Note: Hardened washers shall be required over 15/16" holes in angles & bent fls.



INTERIOR DIAPHRAGM - MK D2

REVISIONS			STRUCTURAL STEEL - W.B. LANES	
NO.	DATE	INITIALS	STATE OF ILLINOIS DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS	
1			DRAWN BY: DATE JUN 7-78	
2			CHECKED BY: DATE 654 2-75	
3			PROJECT NO. 2469-4	
4			SHEET NO. 35	
5			F.A.I. 72 OVER U.S. 30 STA. 500+09.50 & 305+43.04 MACON CO.	
6			HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS	

MODEL: S:\MODEL\BANKS
FILE: BANKS: STEELS

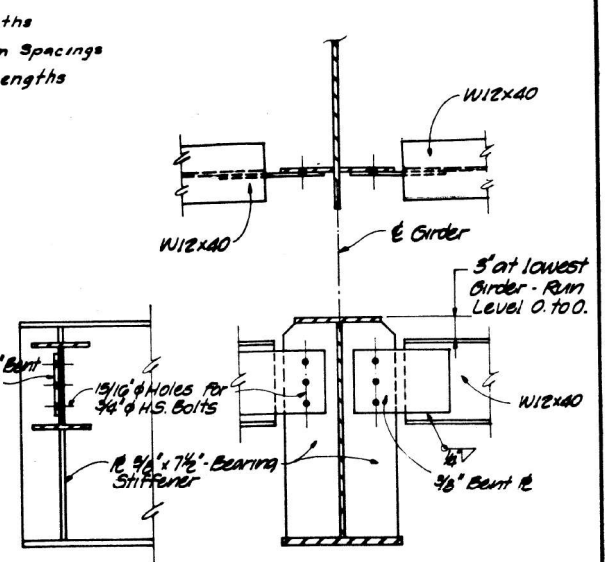
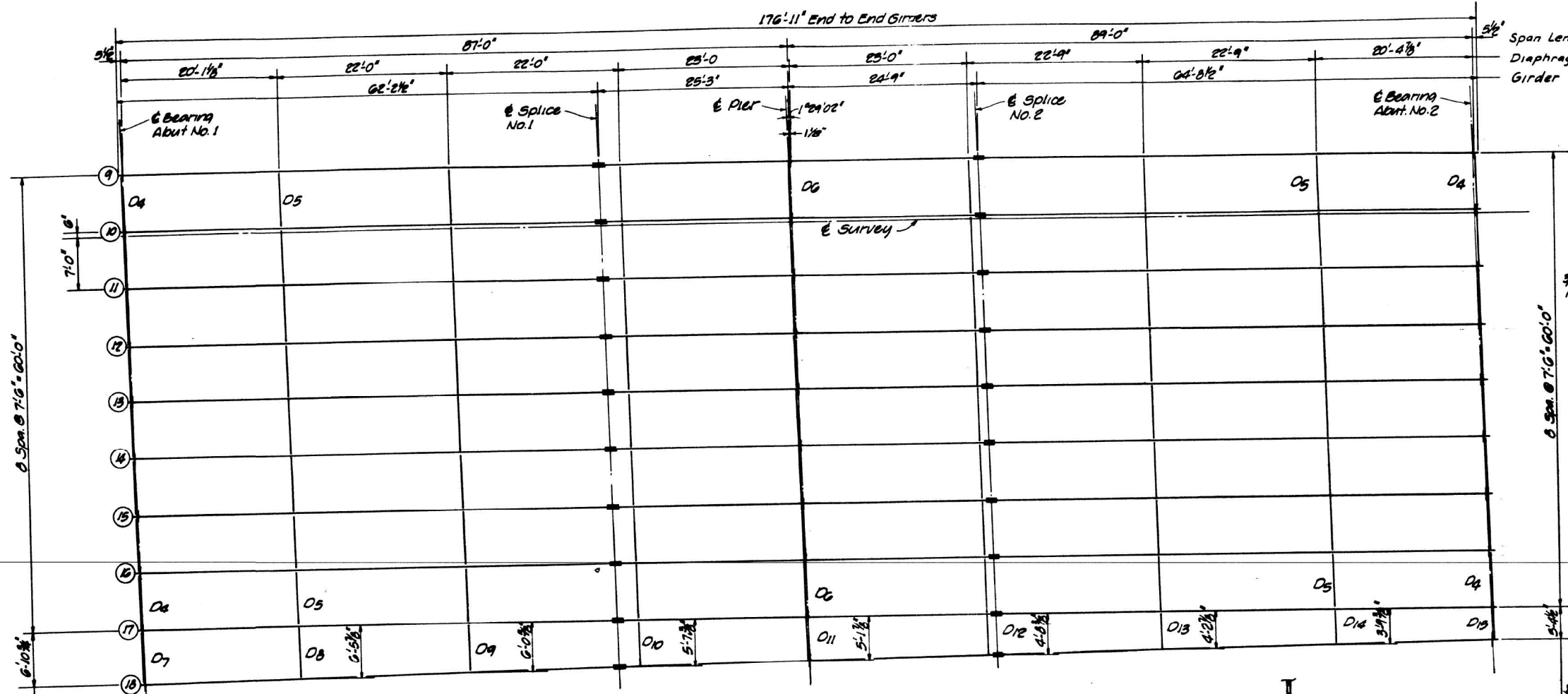
USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

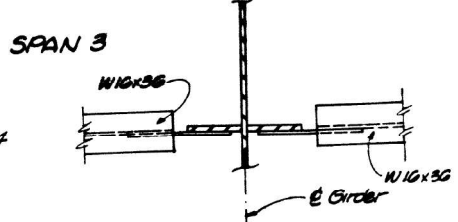
EXISTING STRUCTURE PLANS
SN 058-0068 & 0069

SCALE: SHEET OF SHEETS STA. TO STA.

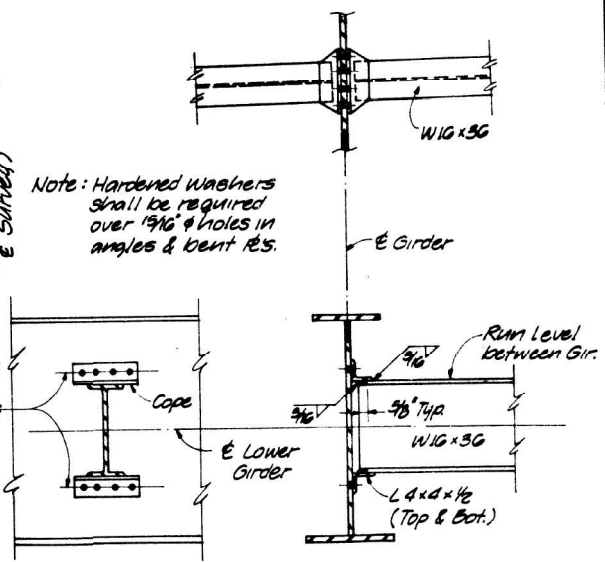
F.A.I. 72 & VAP. 322 RTE.	COUNTY	TOTAL SHEETS	SHEET NO.
	MACON	19	8
		CONTRACT NO. 74B55	



END DIAPHRAGM-MK D4
(D7 & D15 similar)



SPAN 3



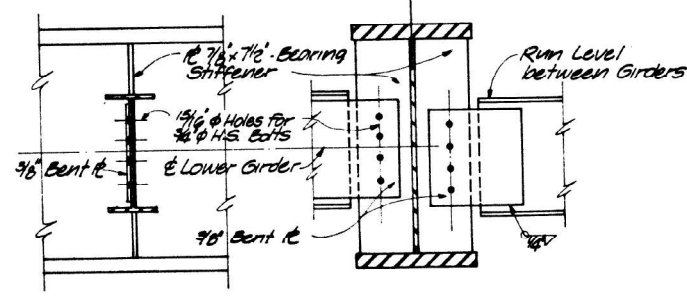
INTERIOR DIAPHRAGM-MK D5
(D8, D9, D10, D12, D13 & D14 similar)

FRAMING PLAN
 All end diaphragms to be W12x40 MK D4, D7 or D15
 All interior diaphragms to be W16x36 MK D5, D8 & D9 thru D14

TOP OF WEB ELEVATIONS *

Girder Location	9	10	11	12	13	14	15	16	17	18
⊖ Brg. Abut. #1	707.117	707.274	707.395	707.495	707.519	707.174	707.018	706.863	706.708	706.565
⊖ Splice #1	707.480	707.577	707.678	707.738	707.821	707.876	707.921	707.966	707.010	706.893
⊖ Pier	707.544	707.701	707.822	707.862	707.745	707.600	707.445	707.290	707.134	707.027
⊖ Splice #2	707.665	707.822	707.943	707.983	707.866	707.721	707.566	707.411	707.255	707.159
⊖ Brg. Abut. #2	707.980	708.137	708.258	708.298	707.181	708.036	707.881	707.725	707.570	707.500

* For Fabrication Only



INTERIOR DIAPHRAGM-MK D6
(D11 similar)

STRUCTURAL STEEL - E.B. LANES

REVISIONS	DATE	BY	INITIALS
1			
2			
3			
4			
5			
6			
7			
8			

STATE OF ILLINOIS
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 F.A.I. 72 OVER U.S. 36
 SEC 58-62 HB-4 PROJ.
 STA 508+89.58 & 305+13.04 MACON CO.

HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

ISSUED BY DATE
 JUN 7-74
 654 2-75
 200A-4
 16

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
 SN 058-0068 & 0069

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. 72 & VAR. 322 RTE.	COUNTY	TOTAL SHEETS	SHEET NO.
	MACON	19	9
		CONTRACT NO. 74B55	

B.M. USGS Survey Marker "TT10F", 48.7 Ft. Sta. 632+30.2
(F.A.I. 72), Elev. 693.94
No existing structure

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	58-02	MACON	52	17
SHEET NO. 1 17 SHEETS				

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
Fasteners shall be high strength bolts. Bolts 3/8"; open holes 1/8" Ø, unless otherwise noted.
Calculated weight of Structural Steel: M223 = 283,490
M103 = 240,160

The basic lead silica chromate paint system shall be used for shop and field painting of Structural Steel.
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.

Anchor bolts shall be set before bolting cross frames over supports.

Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 sq. ft.

The Contractor shall drive one concrete test pile in a permanent location at the South Abutment as directed by the Engineer before ordering the remainder of piles.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders.

Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Article 513.09(c) of the Standard Specifications.

For Boring Data see the Proposal.

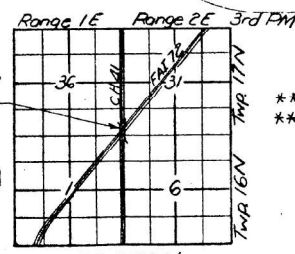
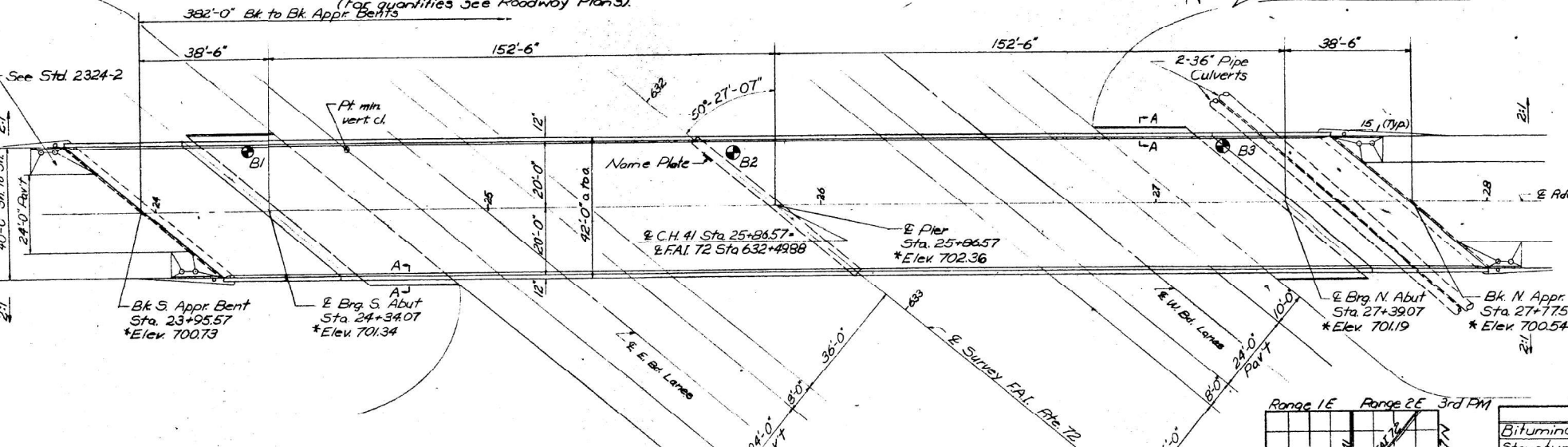
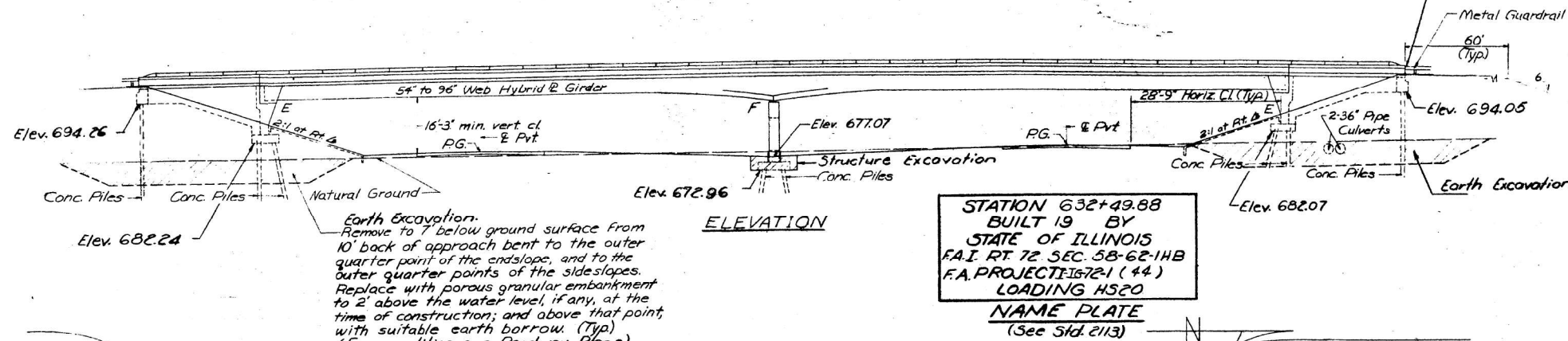
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Bituminous Concrete Surface Course, Class I	Tons	138		138
Structure Excavation	Cu. Yd.		118	118
Earth Excavation	Cu. Yd.		930	930
Porous Granular Embankment	Cu. Yd.		930	930
Protective Coat	Sq. Yd.	286		286
Class X Concrete	Cu. Yd.	551.3	425.0	976.3
Structural Steel	Lump Sum			1
Stud Shear Connectors	Each	2268		2268
Aluminum Railing	Lin. Ft.	757		757
Reinforcement Bars	Pound	135,610	54,340	189,950
Concrete Piles	Lin. Ft.		5,332	5,332
Test Piles Concrete	Each		1	1
Name Plates	Each		1	1
Slope Wall (4")	Sq. Yd.		390	390
Waterproofing Membrane System *	Sq. Yd.	1625		1625
Neoprene Expansion Joint (2") *	Lin. Ft.	127		127
Sand Backfill *	Cu. Yd.		460	460

*See Special Provisions.
**Quantities included in Roadway Plans.

GENERAL PLAN ELEVATION
PROJECT I-G-72-1144)34
C.H. 41 OVER F.A.I. RT 72
F.A.I. RT. 72 SEC. 58-62-1HB
MACON COUNTY
STA. 632+49.88

5-93

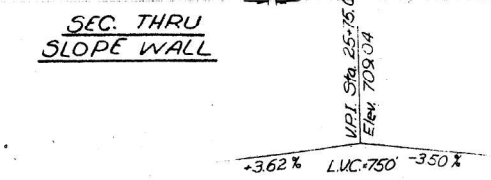
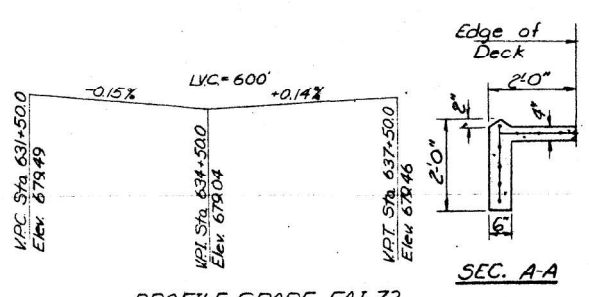


DESIGN STRESSES

$f_c = 1200$ psi - Deck slab - Main Spans
 $f_c = 1400$ psi - Curb, Parapet, Sub, Appr. Slab
 $f_s = 20,000$ psi - Reinf.
 $f_s = 20,000$ M183, 27,000 psi M223 (Gr. 50)
 $v_c = 75$ psi - Footing
 $n = 10$

Allow 25 PSF for future wearing surface
Design Specifications AASHTO 1973 (as applicable)

Design Loading HS 20-44



PROFILE GRADE F.A.I. 72

PROFILE GRADE & C.H. 41

DESIGNED	John A. Morris	EXAMINED	December 16, 1974
CHECKED	John P. Elmer	PASSED	
DRAWN	R. Doty	APPROVED	
CHECKED			

058-0072

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

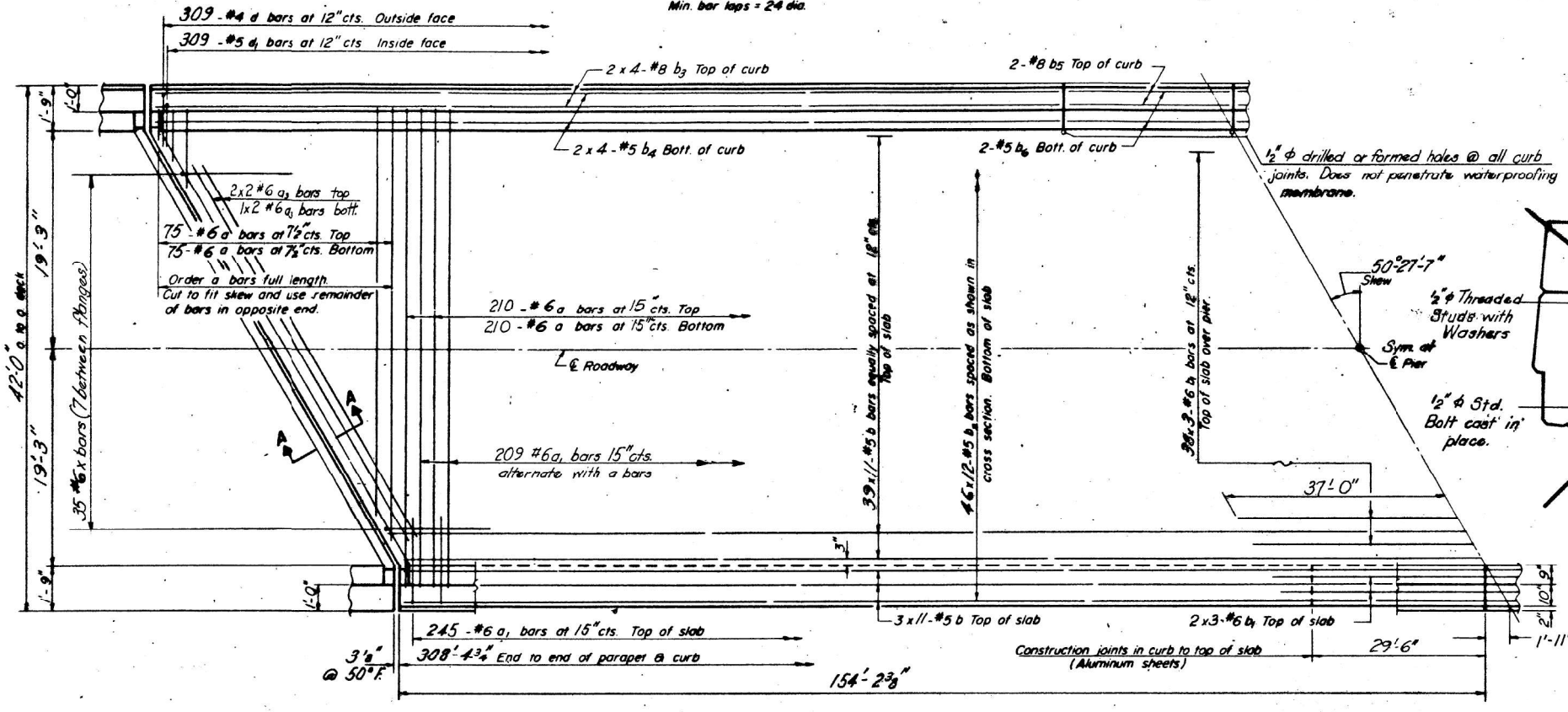
EXISTING STRUCTURE PLANS
SN 058-0072

USER NAME = SUSERS	DESIGNED -	REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	F.A.I. 72 & VAP. 322 RTE.	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 5/8" = 1'	DRAWN -	REVISED -									MACON	19	10
PLOT DATE = 5/8/74	CHECKED -	REVISED -											
	DATE -	REVISED -											

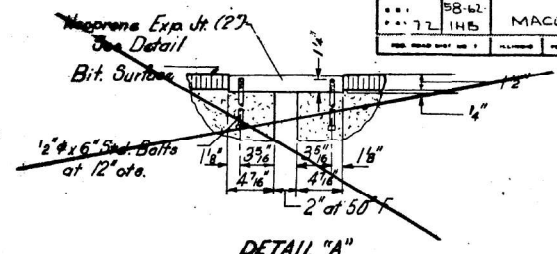
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	LOBBY	TOTAL SHEETS	SHEET NO.	SHEET NO.
58-62	14B	MACON	52	21	17 SHEETS

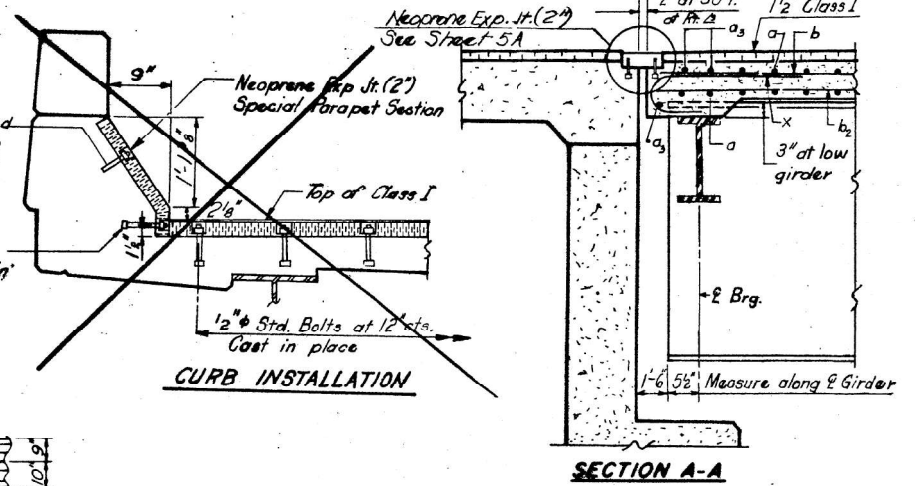
NOTE:
Bars indicated thus 20 x 3 - #5 etc.
indicates 20 lines of bars with 3
lengths per line.
Min. bar laps = 24 dia.



HALF PLAN

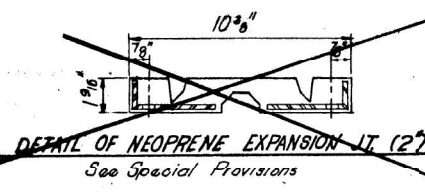


DETAIL "A"



CURB INSTALLATION

SECTION A-A



DETAIL OF NEOPRENE EXPANSION JT (2')
See Special Provisions

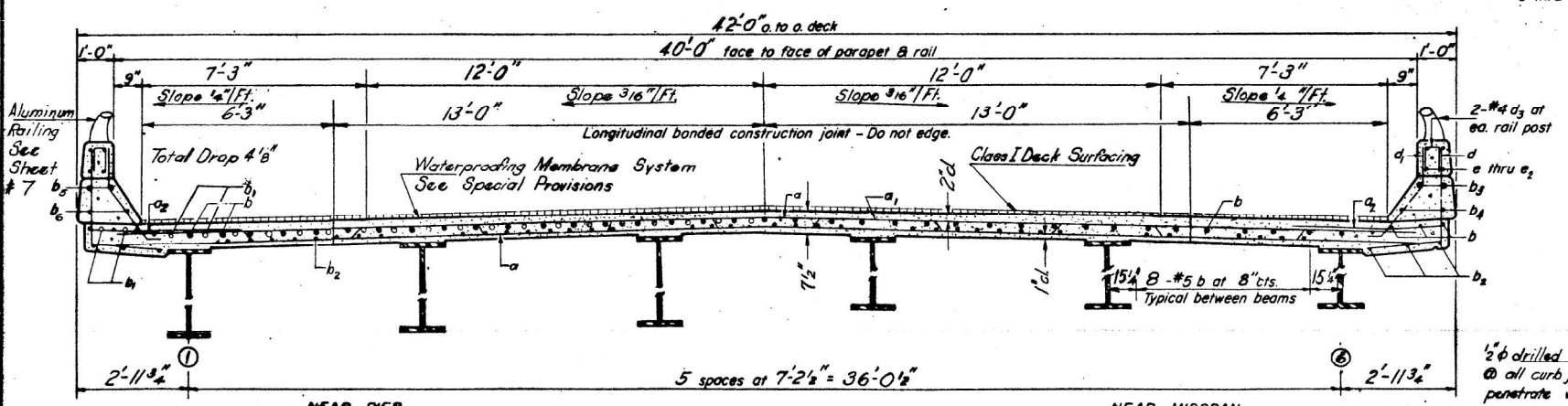
NOTE: For placement of bars d₃ and e thru e₂ see sheet # 7

BILL OF MATERIAL

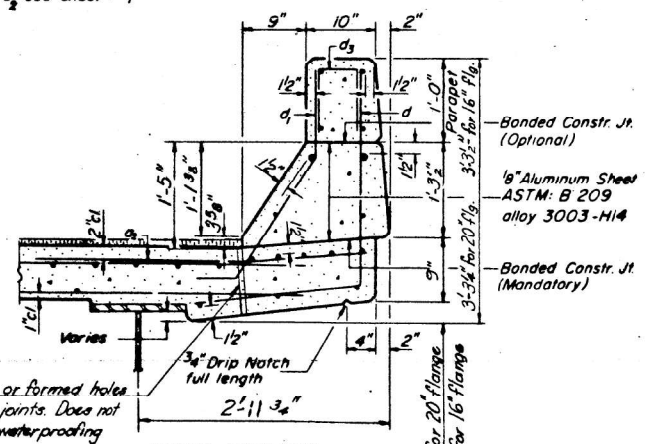
Bar	No.	Size	Length	Shape	
a	570	#6	40'-0"	————	
a ₁	209	#6	4'-8"	————	
a ₂	490	#6	4'-0"	————	
a ₃	12	#6	28'-0"	————	
b	495	#5	29'-3"	————	
b ₁	126	#6	25'-9"	————	
b ₂	552	#5	27'-0"	————	
b ₃	32	#8	32'-9"	————	
b ₄	32	#5	32'-0"	————	
b ₅	8	#8	29'-3"	————	
b ₆	8	#5	29'-3"	————	
d	309	#4	4'-6"	J	
e	309	#5	3'-5"	J	
x	70	#6	7'-0"	————	
Reinforcement Bars				Lbs	93790
Class X Concrete				Cu Yds	3572

Parapet Reinforcement and Class X Concrete are billed on sheet # 7

SUPERSTRUCTURE
F.A.I. RT. 72 SEC. 58-62-14B
MACON COUNTY
STA 632+49.88



CROSS SECTION

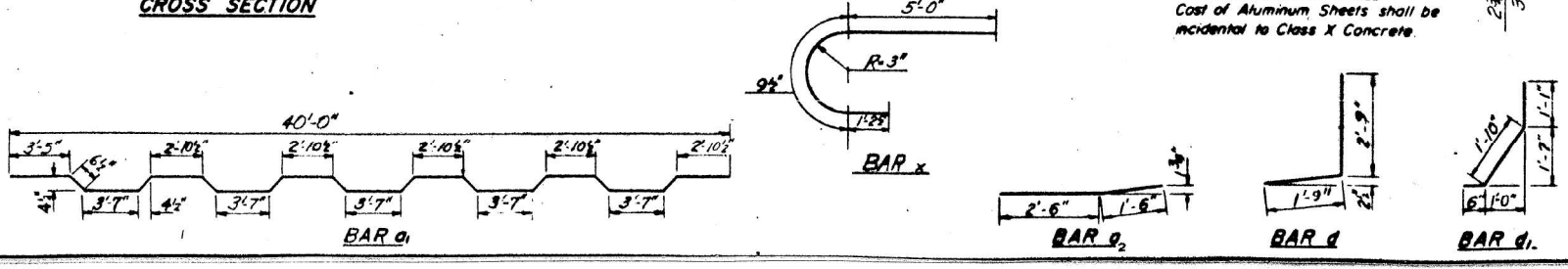


CURB SECTION

Cost of Aluminum Sheets shall be incidental to Class X Concrete.

DESIGNED	John A. Mares	EXAMINED	Dec 16 1974
CHECKED	J. P. Edwards	PASSED	
DRAWN	R. Neumann	APPROVED	
CHECKED		DIRECTOR OF HIGHWAY	

S-586-R(30) 4-22-68, 12-3-69



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 058-0072

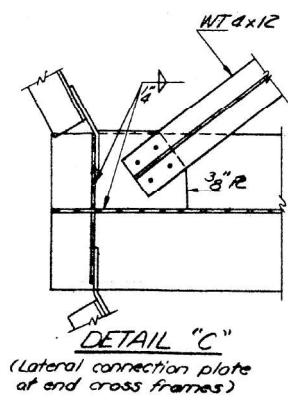
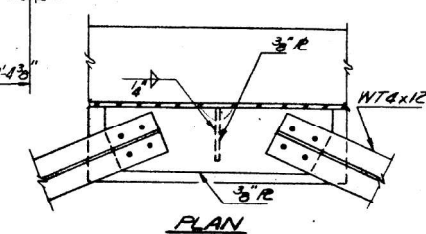
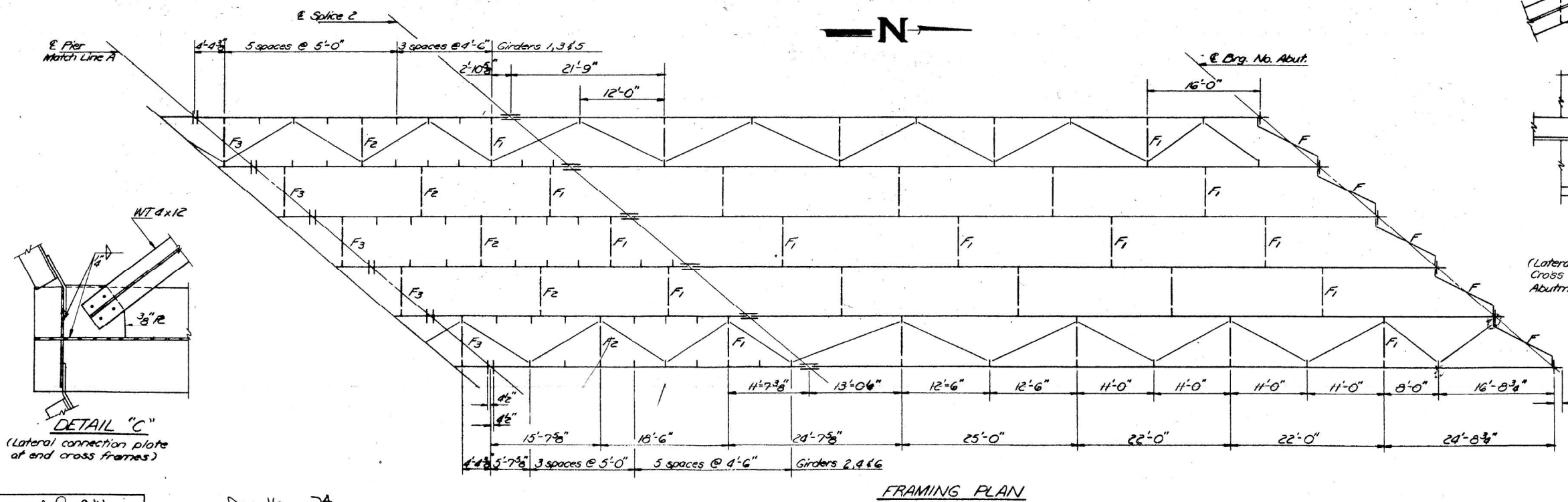
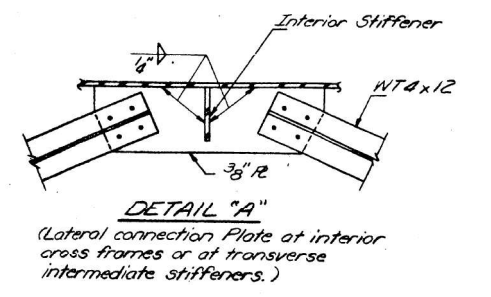
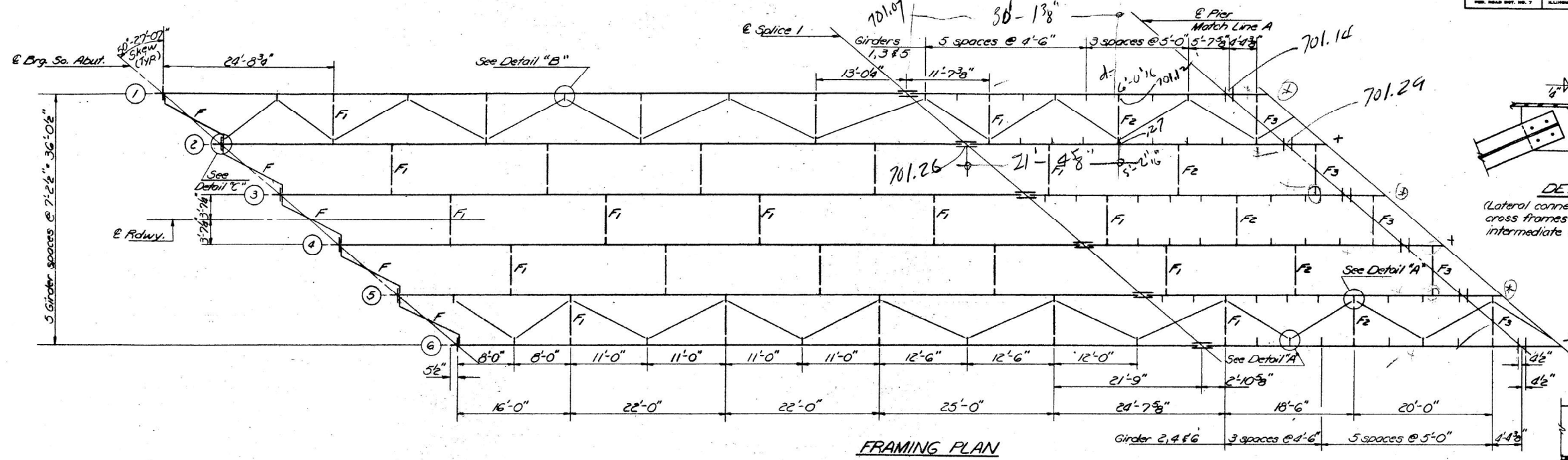
USER NAME =	SUSERS	DESIGNED -	REVISER -
PLOT SCALE =	SSCALES	DRAWN -	REVISER -
PLOT DATE =	SDATES	CHECKED -	REVISER -
		DATE -	REVISER -

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
--------	-------	----	--------	------	----	------

F.A.I. 72 & VAP. 322	COUNTY	TOTAL SHEETS	SHEET NO.
RT. SECTION	MACON	19	11
	CONTRACT NO. 74B55		
	ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8
S.A. 116	58-62	MACON	52	24	17 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:			



DESIGNED	John A. Morris	EXAMINED	Dec 16 1974
CHECKED	J. Ed. L.	PASSED	
DRAWN	Joe Sutherland	APPROVED	
CHECKED			

STRUCTURAL STEEL
F.A.I. RT. 72 SEC. 58-62-1H-B
MACON COUNTY
STATION 632+49.88

MODEL NUMBER/DATE
FILE NUMBER/DATE

USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

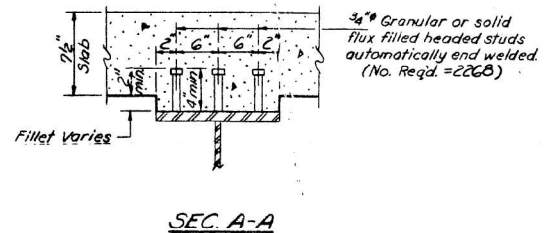
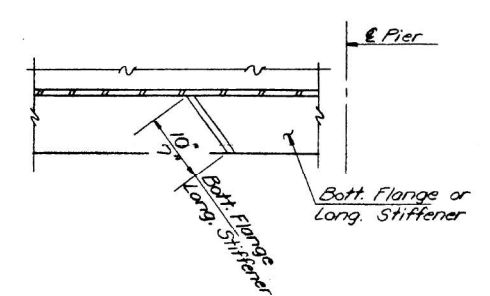
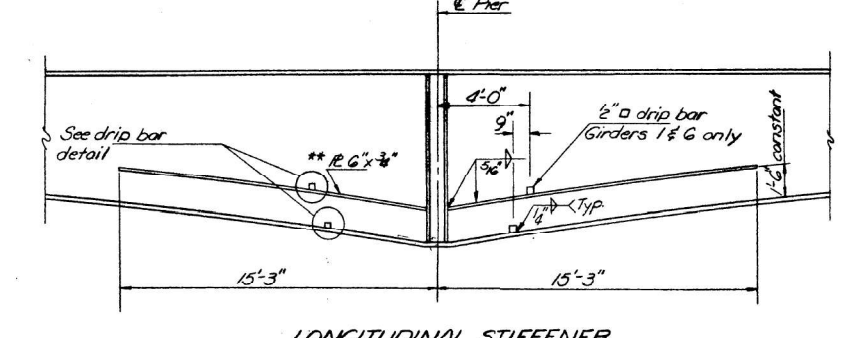
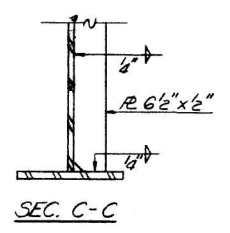
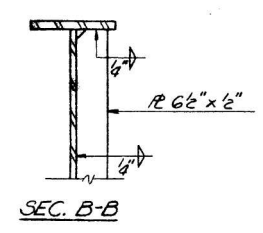
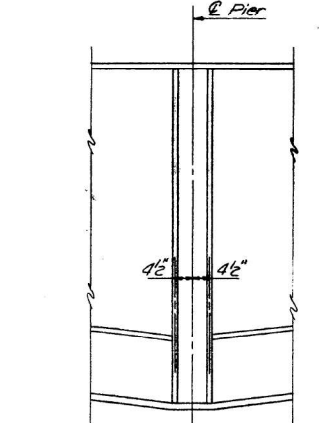
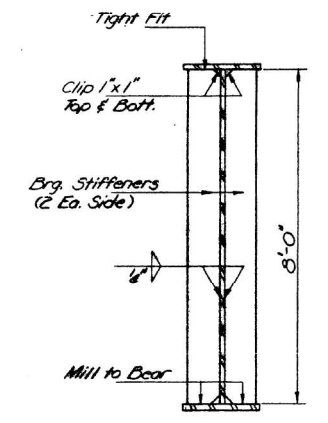
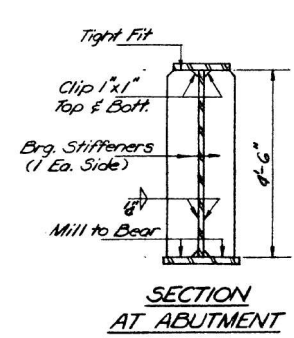
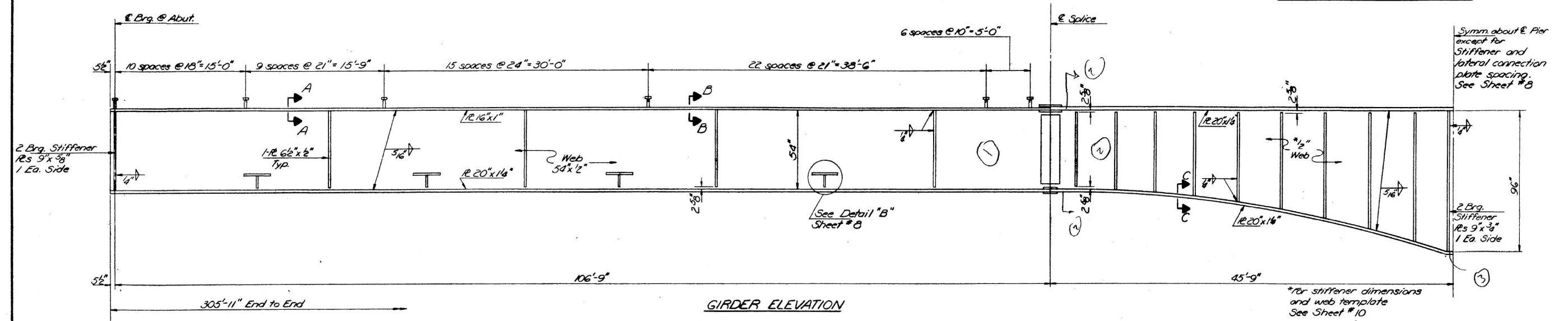
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS	
SN 058-0072	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.I. 72 & VAR. 322 R.T.E.	COUNTY	TOTAL SHEETS	SHEET NO.
	MACON	19	12
		CONTRACT NO. 74B55	
ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
58-GL		MACON	52	25
SHEET NO. 9 17 SHEETS				
F.A. RT. 72		ILLINOIS FED. AID PROJECT		



** Place on opposite side of web from Transverse Intermediate Stiffeners.

Note: Flange plates, flange splice plates, and longitudinal stiffeners are AASHTO M-223 Gr. 50. All remaining steel is AASHTO M-183.

DESIGNED	John A. Morris	EXAMINED	DEC 16 1974
CHECKED	Joe Sutherland	PASSED	
DRAWN	Joe Sutherland	APPROVED	
CHECKED	JE		

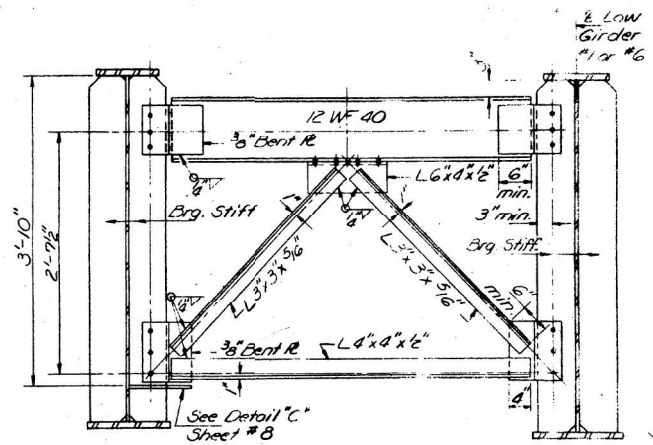
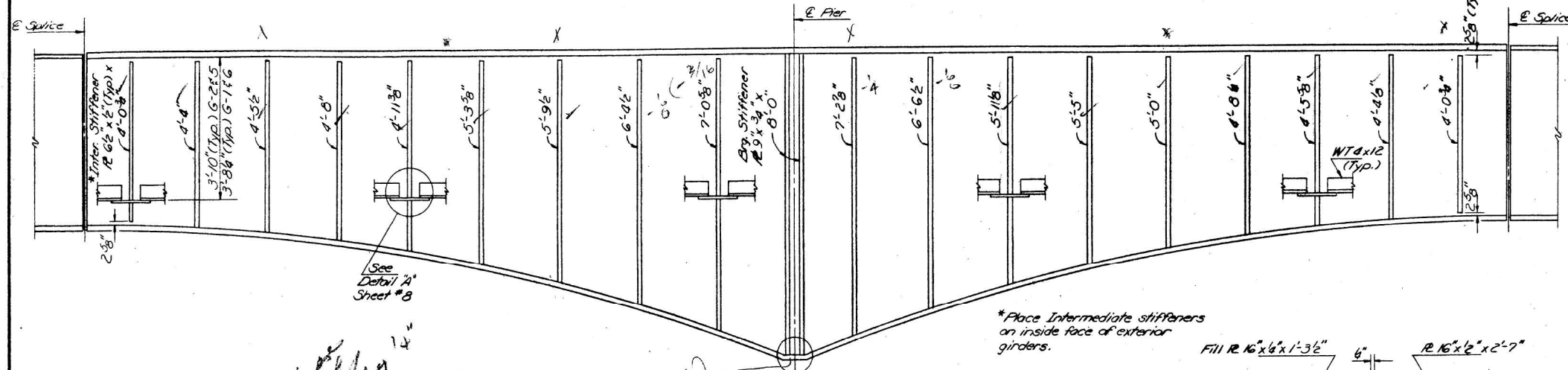
STRUCTURAL STEEL DETAILS
F.A. RT. 72 SEC. 58-62-1 HB
MACON COUNTY
STATION 632 + 49.88

MODEL: 1400/DEL/NAME/MS
FILE: NAME: STEELS

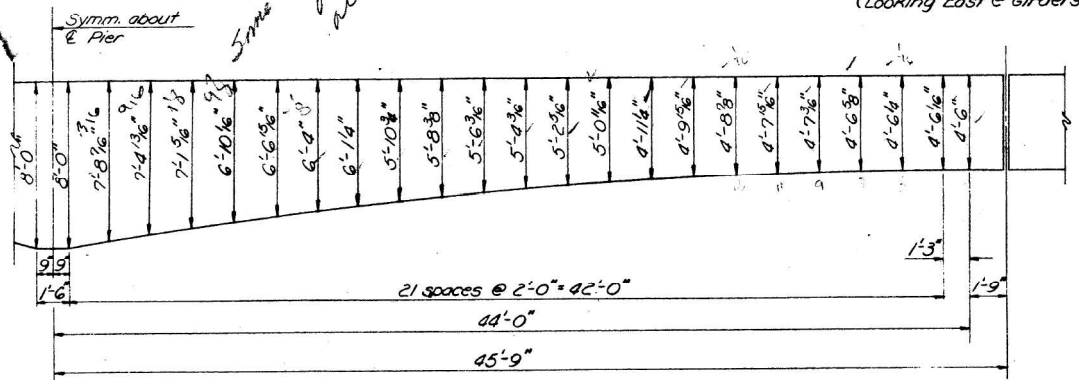
USER NAME = SUSERS	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		EXISTING STRUCTURE PLANS SN 058-0072		F.A. RT. 72 & VAR. 322 SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = \$SCALES	DRAWN -	REVISED -						MACON	19	13
PLOT DATE = \$DATES	CHECKED -	REVISED -							CONTRACT NO. 74B55	
	DATE -	REVISED -					ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

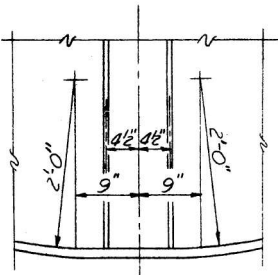
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0872	IHB	MACON	17	10
SHEET NO. 10				
17 SHEETS				



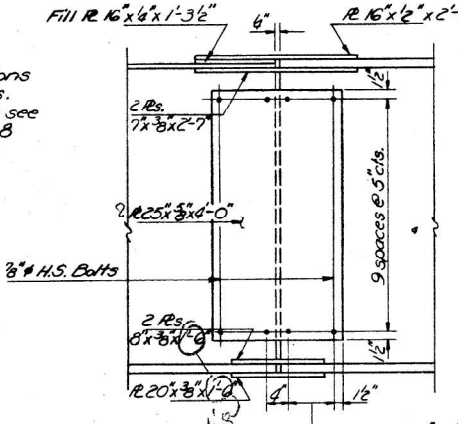
TYPICAL END CROSS FRAME
10 Required



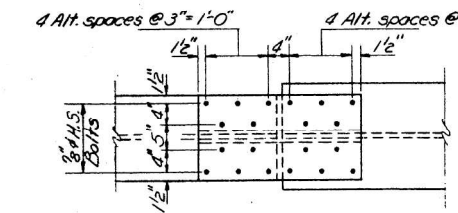
WEB PLATE TEMPLATE



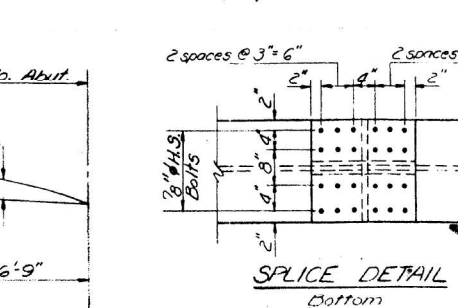
DETAIL D



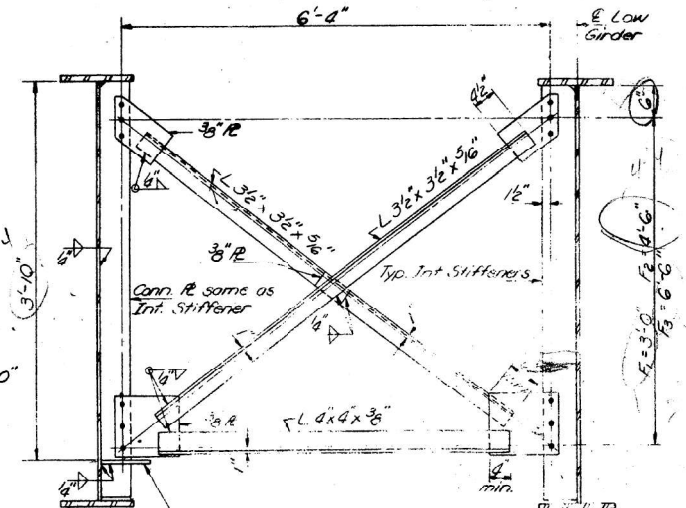
SPLICE DETAIL
Elevation



SPLICE DETAIL
Top



SPLICE DETAIL
Bottom

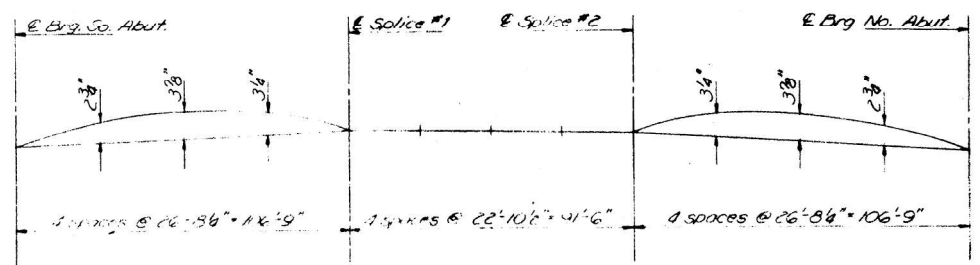


TYPICAL INTERIOR CROSS FRAME

Required: 50-F₁, 10-F₂ & 5-F₃
Note: 1/2" dia. holes in gusset R₁ thru R₄ bolts.
H₁ thru H₄ bolts shall be required over holes in gusset R₁.

TOP OF WEB ELEVATIONS

Station	6-1	6-2	6-3	6-4	6-5	6-6
6+00.00	699.80	700.08	700.32	700.45	700.45	700.41
6+00.00	701.07	701.26	701.41	701.45	701.36	701.28
6+00.00	701.12	701.29	701.41	701.40	701.28	701.12
6+00.00	701.21	701.38	701.47	701.36	701.20	701.00
6+00.00	700.28	700.51	700.53	700.17	699.90	699.63



CAMBER DIAGRAM

DESIGNED	EXAMINER
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

STRUCTURAL STEEL DETAILS
FAI INT. SEC. 50-60 IHB
MACON COUNTY
STATION 0+00.00-0+63.00

MODEL NUMBER/NAME
FILE NAME: STEEL

USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 058-0072

SCALE: SHEET OF SHEETS STA. TO STA.

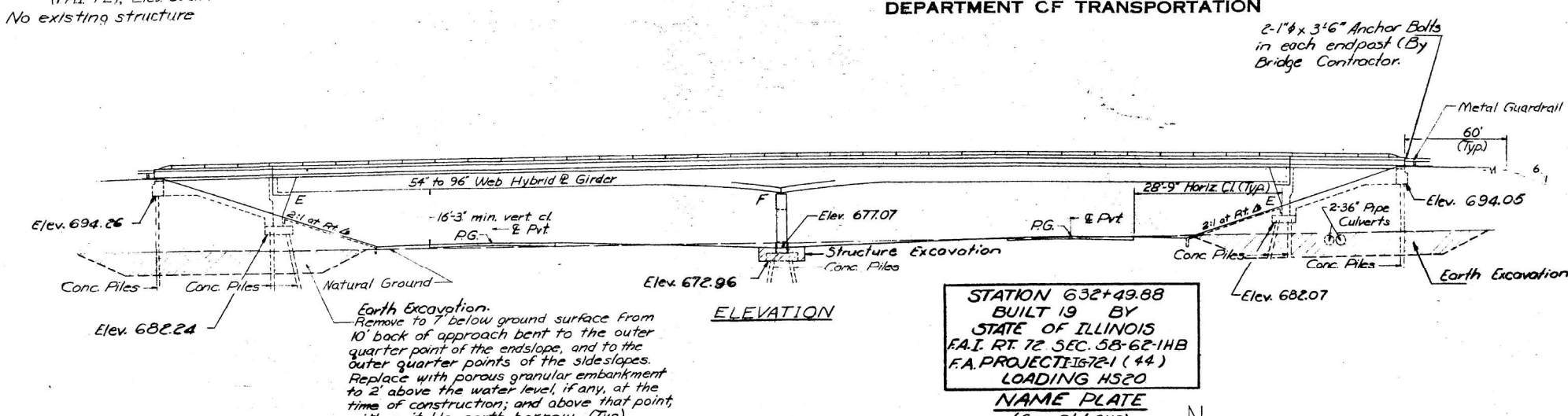
F.A.I. 72 & VAR. 321 RTE.	COUNTY	TOTAL SHEETS	SHEET NO.
	MACON	19	14
CONTRACT NO. 74B55			
ILLINOIS FED. AID PROJECT			

D7 BRIDGE PAINTING 2023-3

B.M. USGS Survey Marker "TT10F", 481' Ft. Sta. 632+30.2
(FAI 72), Elev. 693.94
No existing structure

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. / 17 SHEETS
F.A.I. 72	1HB	MACON	52	17	
ILLINOIS FED. AID PROJECT					

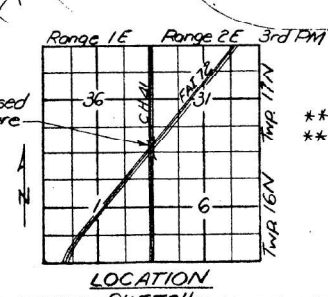
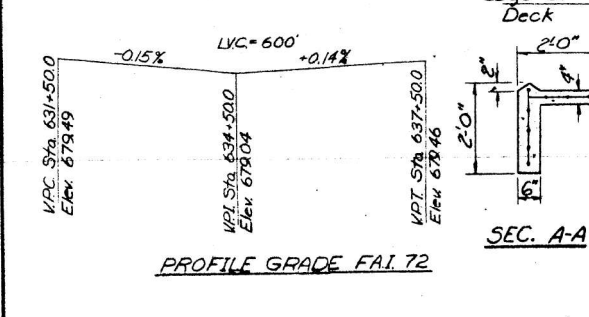
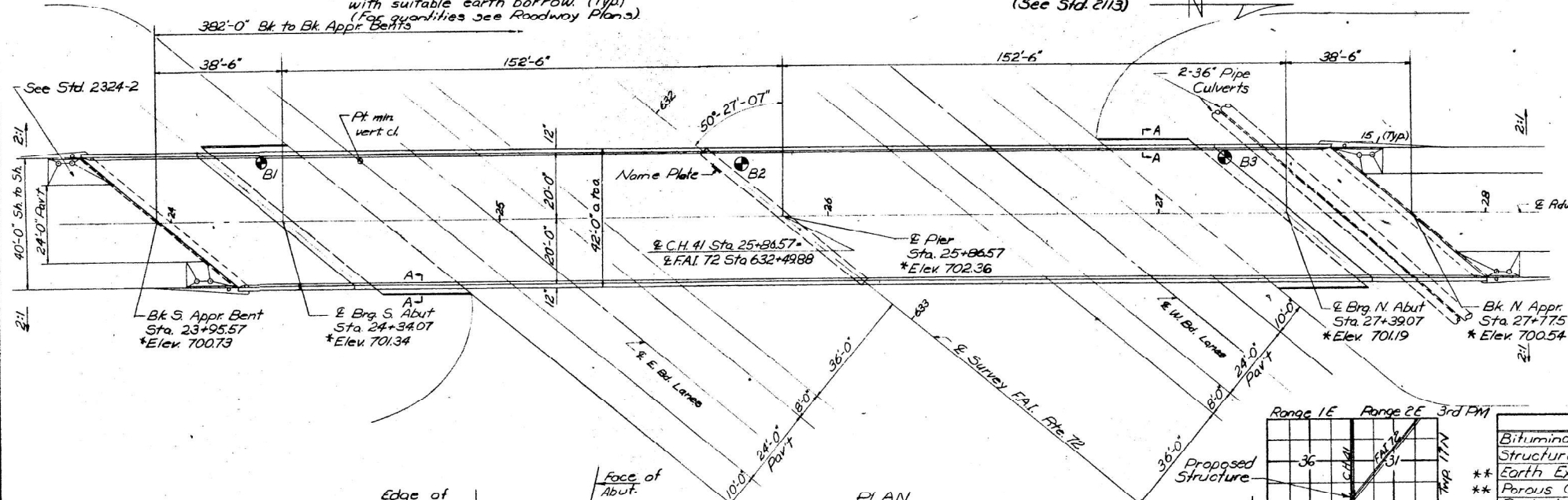


GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
Fasteners shall be high strength bolts. Bolts 3/8"; open holes 1/2", unless otherwise noted.
Calculated weight of Structural Steel: M223 = 283,490
M183 = 240,160

The basic lead silico chromate paint system shall be used for shop and field painting of Structural Steel.
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.

Anchor bolts shall be set before bolting cross frames over supports.
Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 50# per 100 sq. ft.
The Contractor shall drive one concrete test pile in a permanent location of the South Abutment as directed by the Engineer before ordering the remainder of piles.
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.
Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders.
Concrete piles of abutments shall be driven in holes precored through the embankment in accordance with Article 513.09(c) of the Standard Specifications.
For Boring Data see the Proposal.



DESIGN STRESSES

$f_c = 1200$ psi - Deck slab - Main Spans
 $f_c = 1400$ psi - Curb, Parapet, Sub, Appr. Slab
 $f_s = 20,000$ psi - Reinf
 $f_s = 20,000$ M183, 27,000 psi M223 (Gr. 50)
 $v_c = 75$ psi - Footing
 $n = 10$

Allow 25 PSF for future wearing surface
Design Specifications AASHTO 1975 (as applicable)

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Bituminous Concrete Surface Course, Class I	Tons	138		138
Structure Excavation	Cu. Yd.		118	118
Earth Excavation	Cu. Yd.		930	930
Porous Granular Embankment	Cu. Yd.		930	930
Protective Coat	Sq. Yd.	286		286
Class X Concrete	Cu. Yd.	551.3	425.0	976.3
Structural Steel	Lump Sum			1
Stud Shear Connectors	Each	2268		2268
Aluminum Railing	Lin. Ft.	757		757
Reinforcement Bars	Pound	135,610	54,340	189,950
Concrete Piles	Lin. Ft.		5,332	5,332
Test Piles Concrete	Each		1	1
Name Plates	Each		1	1
Slope Wall (4")	Sq. Yd.		390	390
Waterproofing Membrane System *	Sq. Yd.	1625		1625
Neoprene Expansion Joint (2") *	Lin. Ft.	127		127
Sand Backfill *	Cu. Yd.		460	460

DESIGNED: John A. Morris
CHECKED: J. J. Edwards
DRAWN: R. Doly
CHECKED: J. E.

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

DECEMBER 16 1974

DIRECTOR OF HIGHWAYS

058-0072

Design Loading HS 20-44

*See Special Provisions.
**Quantities included in Roadway Plans.

GENERAL PLAN & ELEVATION
PROJECT I-IG-72-1(44)34
C.H. 41 OVER F.A.I. RT. 72
F.A.I. RT. 72 SEC. 58-62-1HB
MACON COUNTY
STA. 632+49.88

5-93

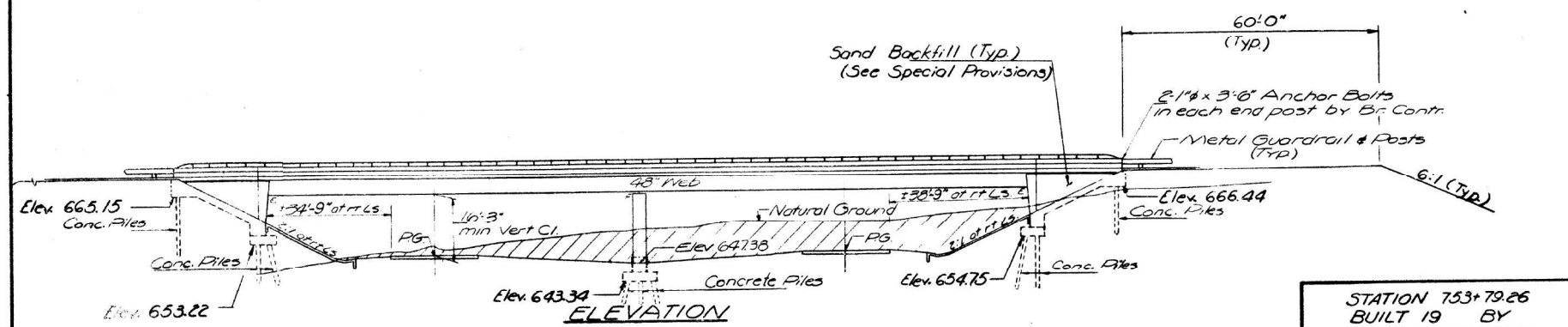
B.M. #7-C Lag Screw in telephone pole North Side
 TR 60-C FAI.72 Station 754+275(62' Lt.)
 Elev. 655.69. No Existing Structure.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

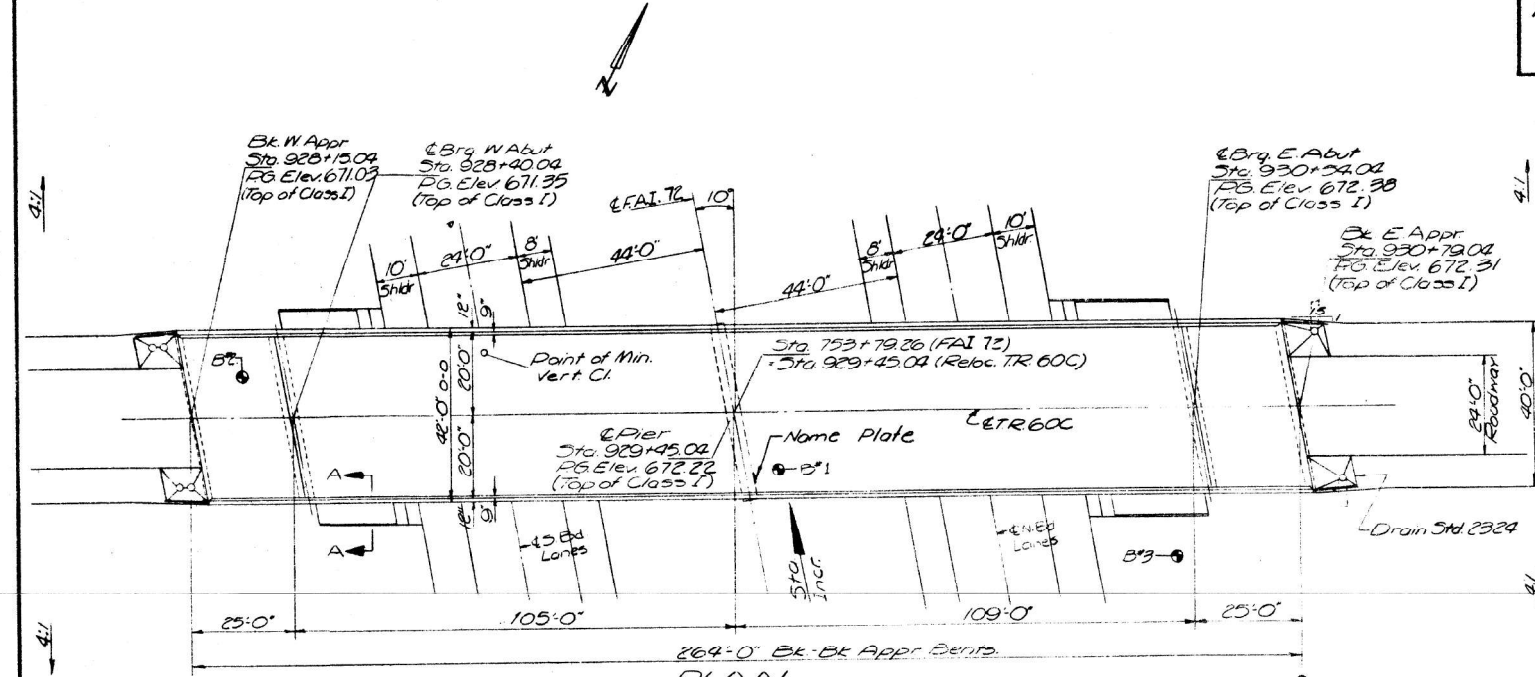
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	58-11B	MACON	79	27
SHEET NO. 14 SHEETS				

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
 Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " open holes $\frac{3}{8}$ ", unless otherwise noted.
 Calculated weight of Structural Steel = 303,350 Lbs.
 The basic lead silica chromate paint system shall be used for shop and field painting of Structural Steel.
 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.
 Concrete piles of the West Approach Bent shall be driven in holes precast through the embankment in accordance with Article 51309(c) of the Standard Specifications.
 Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 Sq. ft.
 The Contractor shall drive one concrete test pile each in a permanent location of the Pier and West Abutment as directed by the Engineer before ordering the remainder of piles.
 The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
 The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.
 Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\pm \frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
 The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders.
 For Boring Data see the Proposal.
 Anchor bolts shall be set before bolting diaphragms over supports.



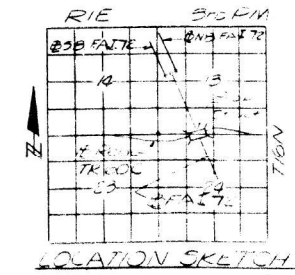
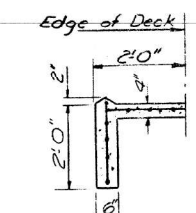
STATION 753+79.26
 BUILT BY
 STATE OF ILLINOIS
 F.A. RT. 412 SEC. 58-20-11B
 PROJECT EBRF-412-2(12)
 LOADING HS20
 NAME PLATE
 (See Std. 2113)



DESIGN STRESSES
 fs: 1800 psi (Super. main & stir.)
 fs: 1400 psi (Curb, parapet sub. Appr. Slab)
 fs: 20000 psi (Reinf.)
 fs: 20000 psi (Struct.) M183
 vs: 75 psi (FFg)
 m: 10

PROFILE GRADE
 RELOC. TR. 60C

PROFILE GRADE
 FAI.72
 (HS 20 & Pav't)



PROJECT EBRF-412-2(12)
 GENERAL PLAN & ELEVATION
 TR 60C over FAI.72
 FA RT. 412 SEC. 58-20-11B
 MACON COUNTY
 STATION 753+79.26 (FAI.72)
 STATION 929+45.02 (TR 60C)

5-94

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
 SN 058-0100

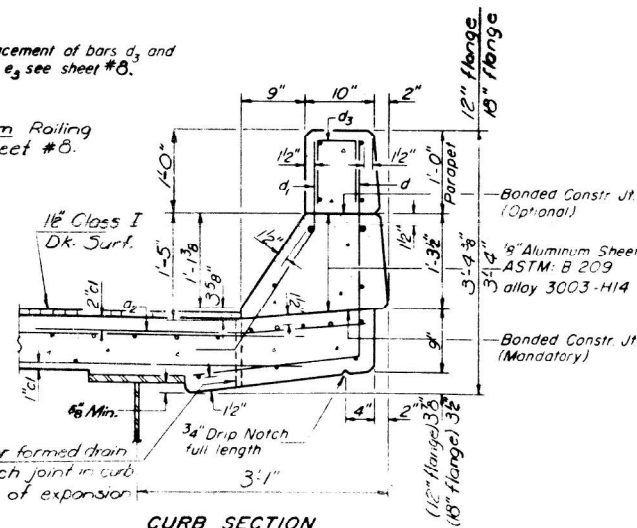
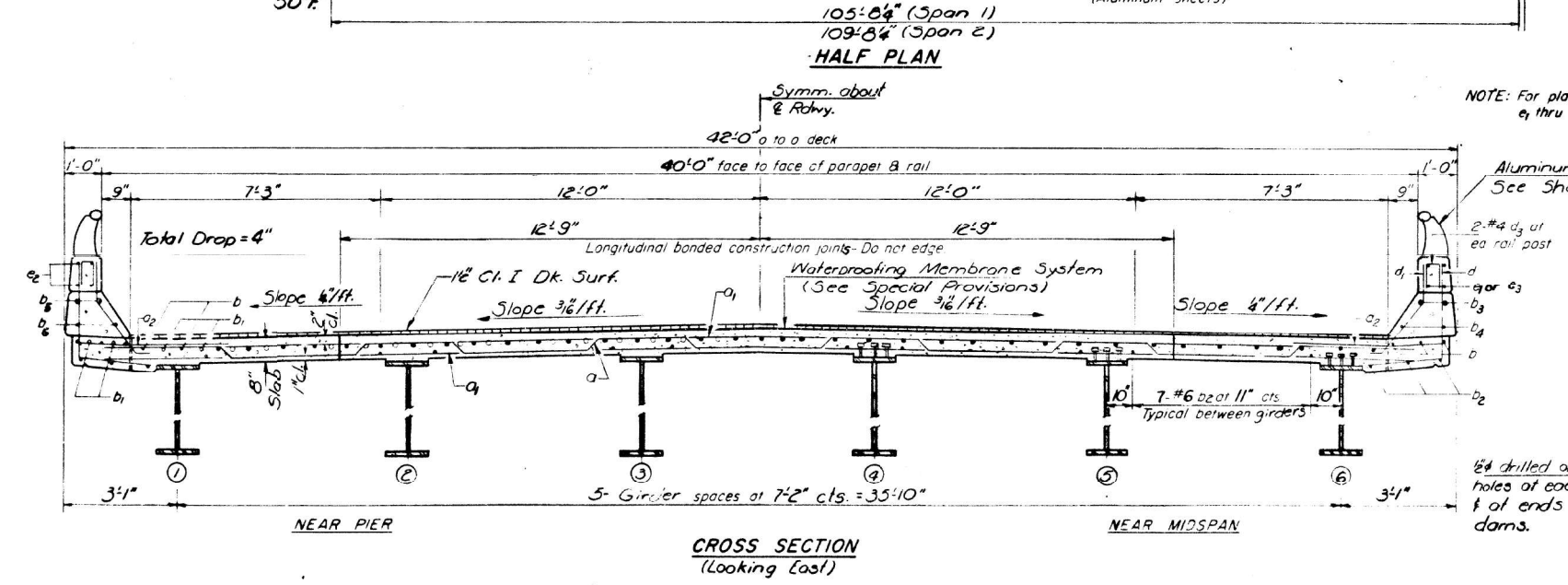
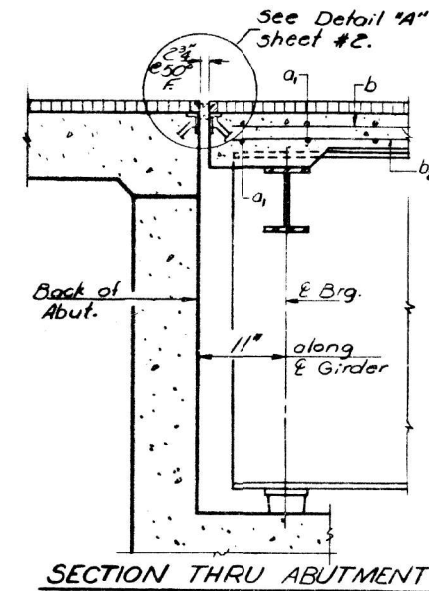
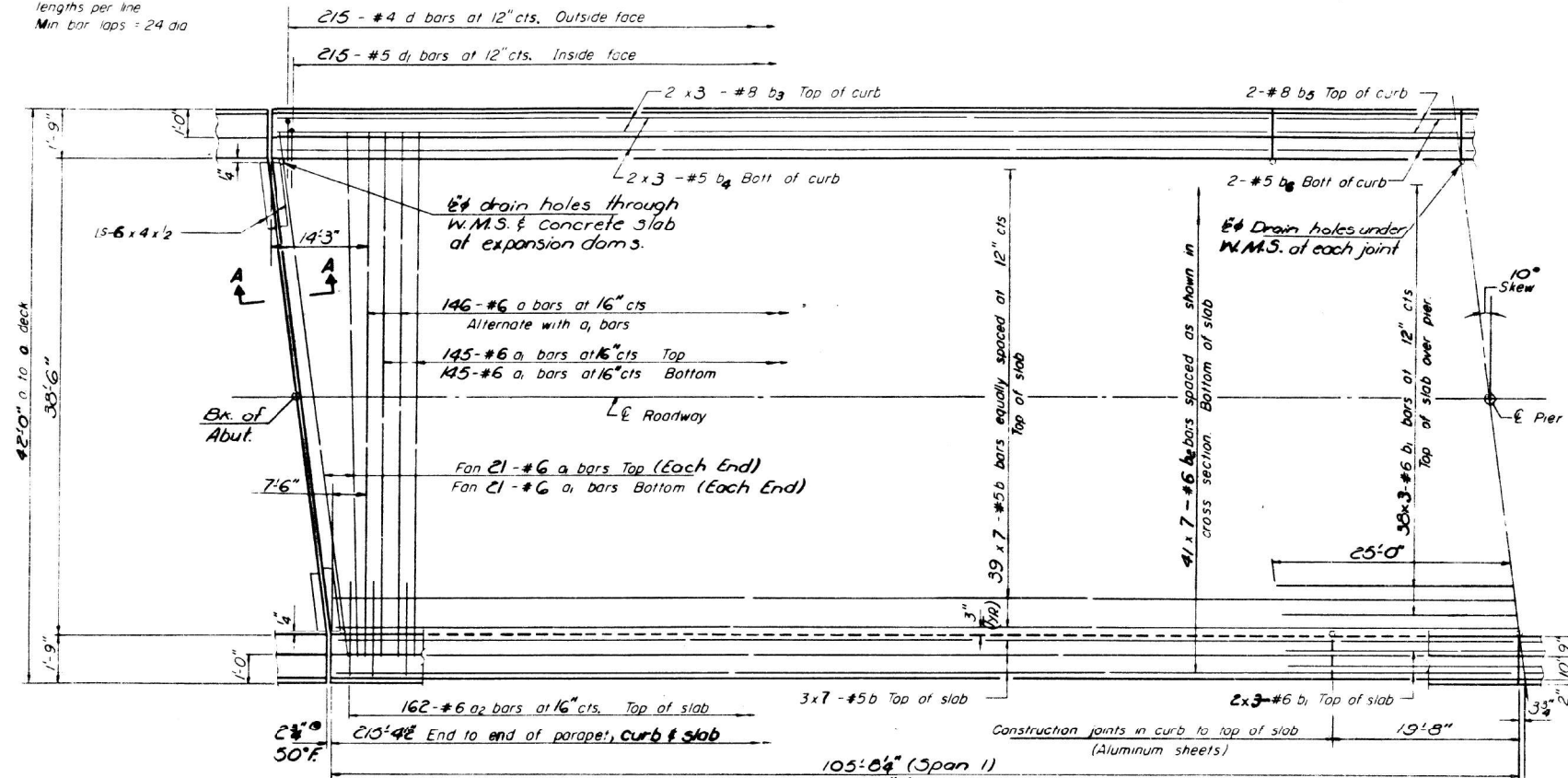
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. FAI.72 & VAR. 321	COUNTY	TOTAL SHEETS	SHEET NO.
RT. 412 SEC. 58-20-11B	MACON	19	16
CONTRACT NO. 74B55			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	20-146	MACON	79	32
NO. REVISIONS		DATE	BY	APP. PROJECT

NOTE
Bars indicated thus 20-x3-#5 etc
indicates 20 lines of bars with 3
lengths per line
Min bar laps = 24 dia

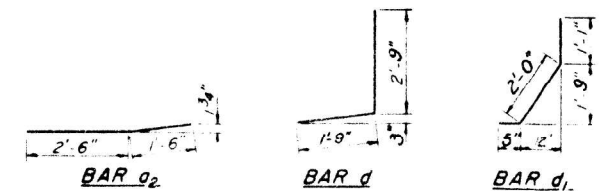
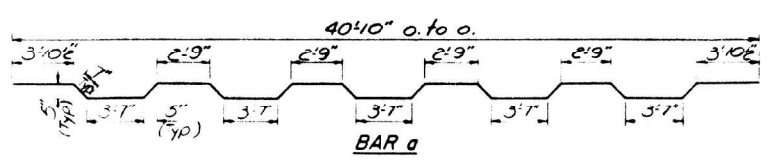


BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	146	#6	42'-6"	~
a1	374	#6	40'-6"	~
a2	324	#6	4'-0"	~
b	315	#5	32'-0"	~
b1	126	#6	17'-9"	~
b2	287	#6	32'-0"	~
b3	24	#8	31'-3"	~
ba	24	#5	31'-0"	~
bs	8	#8	19'-5"	~
be	8	#5	19'-5"	~
d	430	#4	4'-6"	J
d1	430	#5	3'-6"	J
Reinforcement Bars		Lbs	67900	
Class X Concrete		Cu Yds	253.0	

DESIGNED: J. J. Edwards
CHECKED: Colin Strong
DRAWN: R. Doty
CHECKED: CWS

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



Parapet Reinforcement and Class X Concrete are billed on sheet #8.

SUPERSTRUCTURE
F.A. RT. 412 SEC 58-20-146
MACON COUNTY
STA. 753+79.26

MODEL: S:\MODEL\BENT
FILE NAME: STILES

USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = \$DATES	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

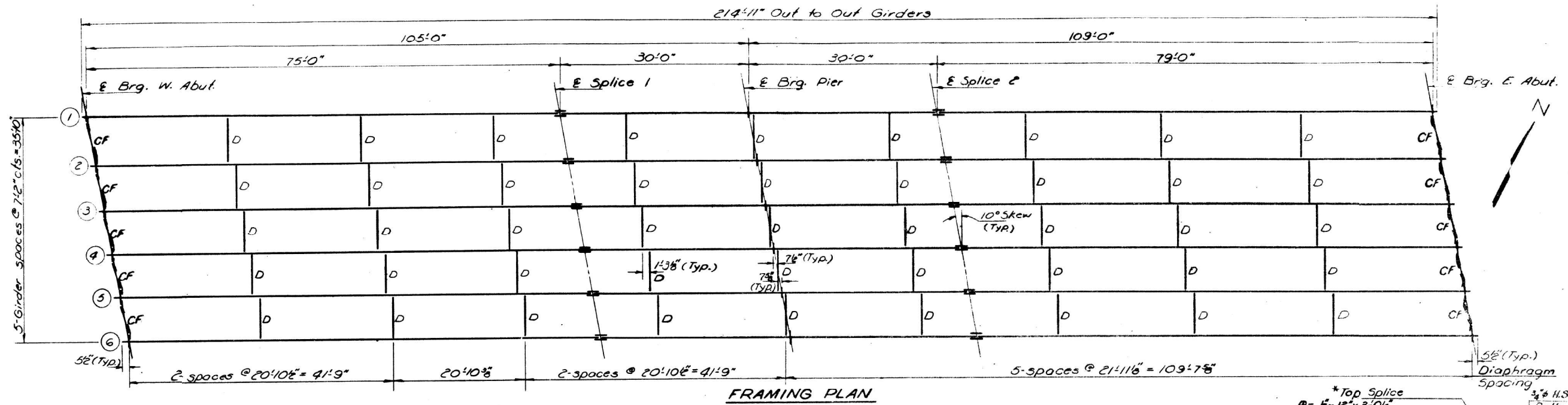
EXISTING STRUCTURE PLANS
SN 058-0100

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RT. 72 & VAR. 321	COUNTY	TOTAL SHEETS	SHEET NO.
SECTION	MACON	19	17
		CONTRACT NO. 74B55	

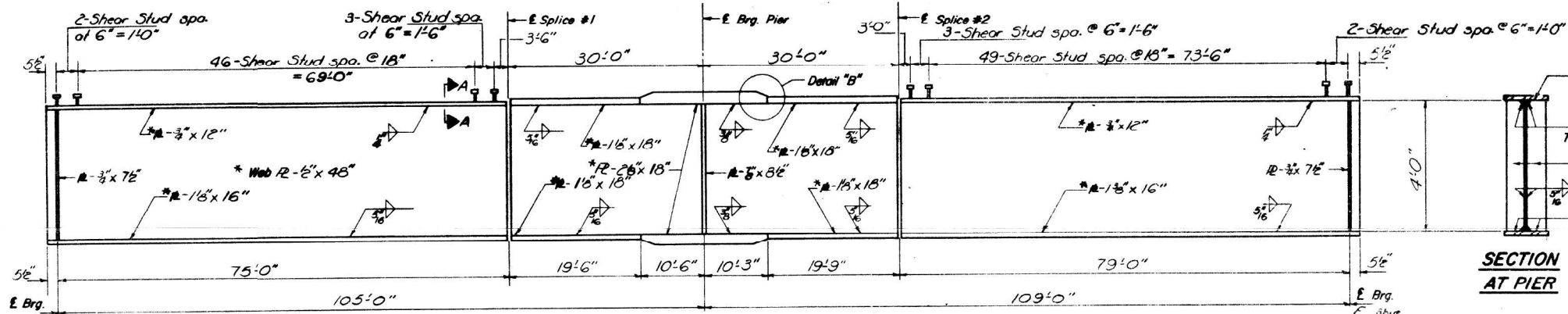
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	SHEET NO.	SHEET TOTAL
59	MACON	79	35
SHEET NO. 14 SHEETS			



FRAMING PLAN

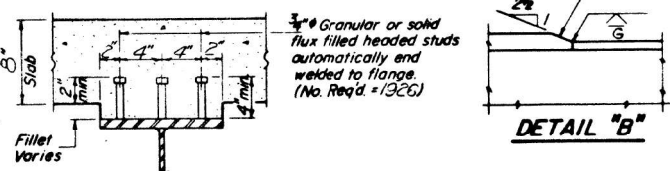
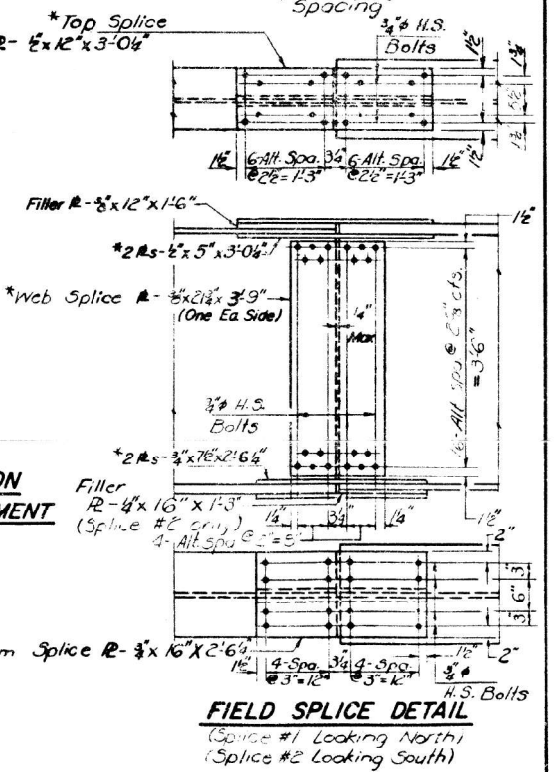
* Indicates Notch Toughness Requirements are applicable. See General Notes.



GIRDER ELEVATION

SECTION AT PIER

SECTION AT ABUTMENT

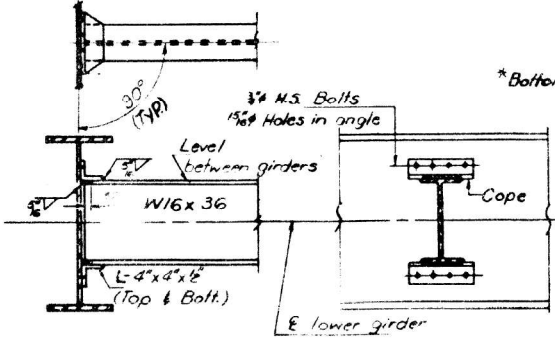


SECTION A-A

DESIGNED	J. J. Edwards	EXAMINED	J. J. Edwards
CHECKED	Colin Strong	PASSED	J. J. Edwards
DRAWN	R. Doty	APPROVED	J. J. Edwards
CHECKED	C. H. S.		

G-1 7-1-72

Note: Work this sheet with sheet #10.



STRUCTURAL STEEL
F.A. RT 412 SEC 59-20-145
MACON COUNTY
STA 753+0.00

MODEL NUMBER/REVISED FILE NAME: STEELS

USER NAME = SUSERS	DESIGNED -	REVISED -
PLOT SCALE = 5/8" = 1'-0"	DRAWN -	REVISED -
PLOT DATE = 5/24/72	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 058-0100

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
--------	-------	----	--------	------	----	------

F.A. RT. 72 & VAR. 321	COUNTY	TOTAL SHEETS	SHEET NO.
SECTION	MACON	19	18
	CONTRACT NO. 74B55		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
58	20-14E	MACON	79	36
SHEET NO. 10				
14 SHEETS				

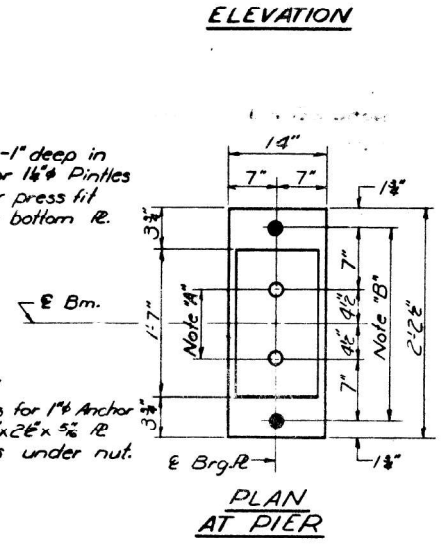
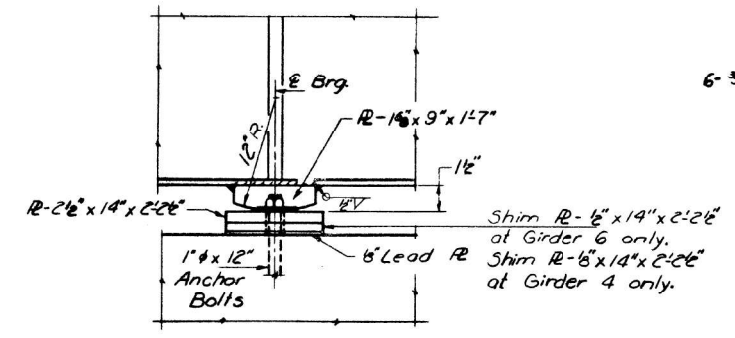
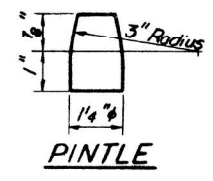
INTERIOR GIRDER MOMENT TABLE

	0.4 Sp. 1	Pier	0.6 Sp. 2
I_s (in. 4)	19844	52689	21462
I_c (in. 4)	31926		57381
S_x (in. 3)	936.0	2016.8	1101.2
S_c (in. 3)	1316.4		1510.8
ϕ (K/1)	.932	1.138	.948
M_R (K)	600.5	1683.7	714.2
$f_s \phi$ (ksi)	7.54	10.03	7.78
$s \phi$ (K/1)	.419	.419	.419
$M_s \phi$ (K)	330.2	562.5	373.2
$M_t \phi$ (K)	864.8	783.3	913.6
$M_{imp} \phi$ (K)	187.7	169.2	195.5
$T_{tot} \phi$ (K)	1382.7	1513.0	1482.3
$f_s T_{tot} \phi$ (ksi)	12.60	9.00	11.77
V_R (K)	56.1		56.0

INTERIOR GIRDER REACTION TABLE

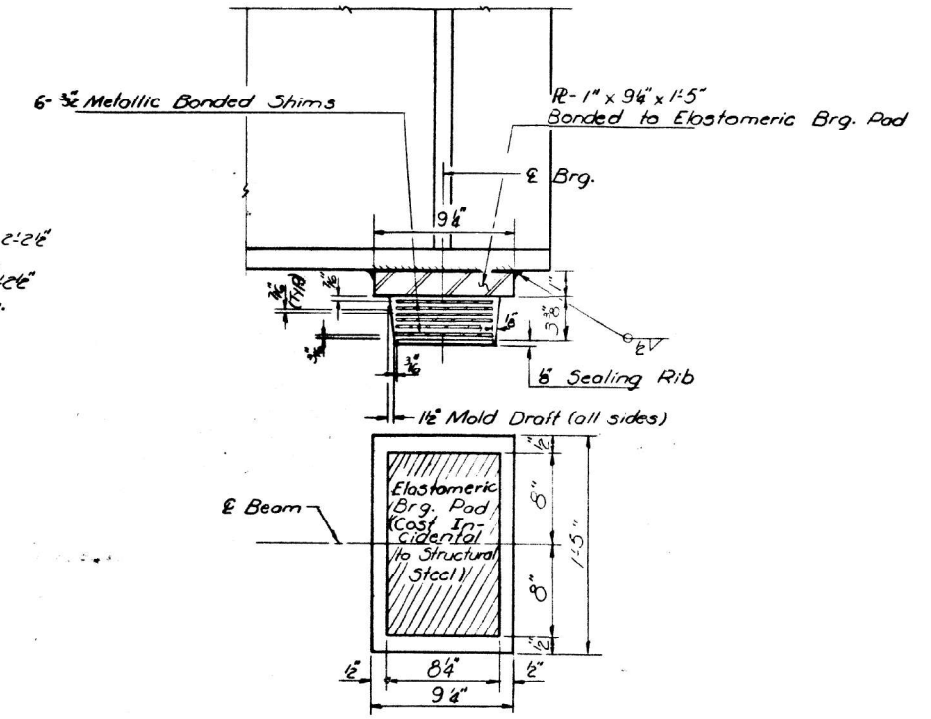
	E. Abut.	Pier	W. Abut.
R_B (K)	51.19	190.49	55.30
R_t (K)	41.88	72.04	42.12
$Imp. (K)$	9.09	13.36	9.01
$R_{total} (K)$	102.16	275.09	106.43

I_s and S_x are the moment of inertia and section modulus of the steel section.
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s .
 V_R is the maximum $\frac{1}{2}$ + Impact shear range in span used to determine shear connector spacing.



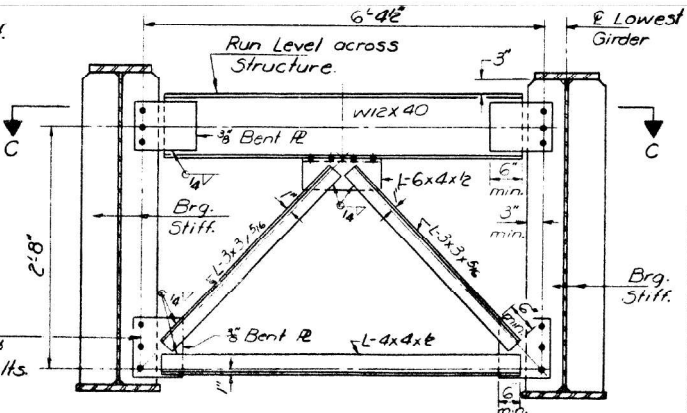
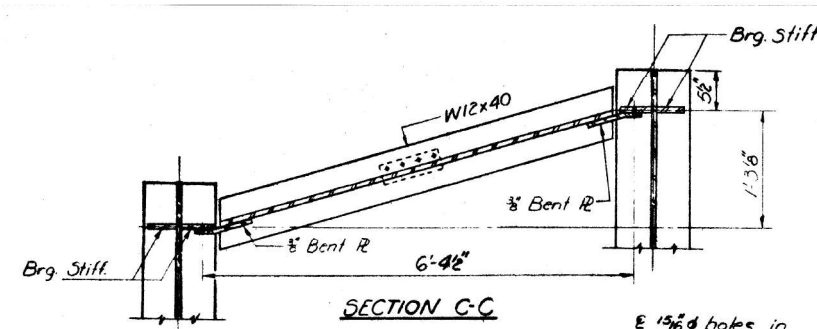
Note "A"
1 1/2" Holes - 1" deep in top R for 1 1/2" Pintles Thread or press fit pintles in bottom R.

Note "B"
1 1/2" Holes for 1 1/2" Anchor Bolts - 2 1/2" x 2 1/2" x 3/8" R Washers under nut.



ELASTOMERIC EXP BRG. DETAILS

Note
Mark this sheet with sheet #9.

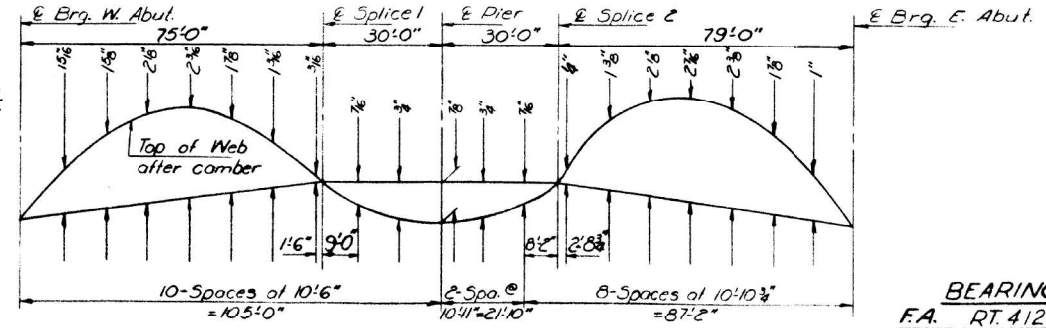


CROSS FRAME CF
(10 Required)
Note: Hardened washers shall be required over holes in gusset Rs.

TOP OF WEB ELEVATIONS BEFORE ANY DEFLECTION

	G-1	G-2	G-3	G-4	G-5	G-6
E Brg. W. Abut.	670.08	670.24	670.37	670.38	670.29	670.16
E Splice 1	670.77	670.92	671.04	671.05	670.95	670.81
E Pier	670.86	671.01	671.13	671.14	671.03	670.89
E Splice 2	671.10	671.25	671.36	671.37	671.26	671.12
E Brg. E. Abut.	671.16	671.30	671.41	671.41	671.29	671.15

Note: Elevations shown are for fabrication only.
Elevations of splices have been adjusted for camber.



CAMBER DIAGRAM

BEARING DETAILS
F.A. RT. 412 SEC. 58-20-14B
MACON COUNTY
STA. 753+79.26

DESIGNED	R. Doty	EXAMINED	Dec 3 1974
CHECKED	C. S. Strang	PASSED	
DRAWN	R. Doty	APPROVED	
CHECKED	CWS		

MODEL NUMBER/REVISED
FILE NUMBER/REVISED

USER NAME = SUSERS	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = \$SCALES	CHECKED -	REVISED -
PLOT DATE = \$DATES	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
SN 058-0100

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
--------	-------	----	--------	------	----	------

F.A. RT. 72 & VAR. 323 RTE. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	MACON	19	19
CONTRACT NO. 74B55			
ILLINOIS FED. AID PROJECT			