

030

11-09-2018 LETTING ITEM 030

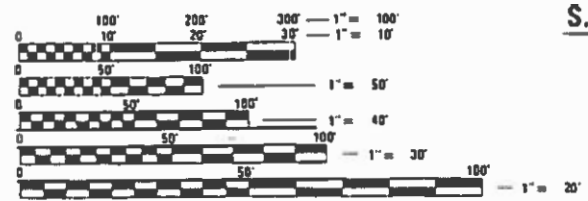
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D7 BRIDGE PAINTING 2019-3	MACON	11	1
ILLINOIS CONTRACT NO. 74877				

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

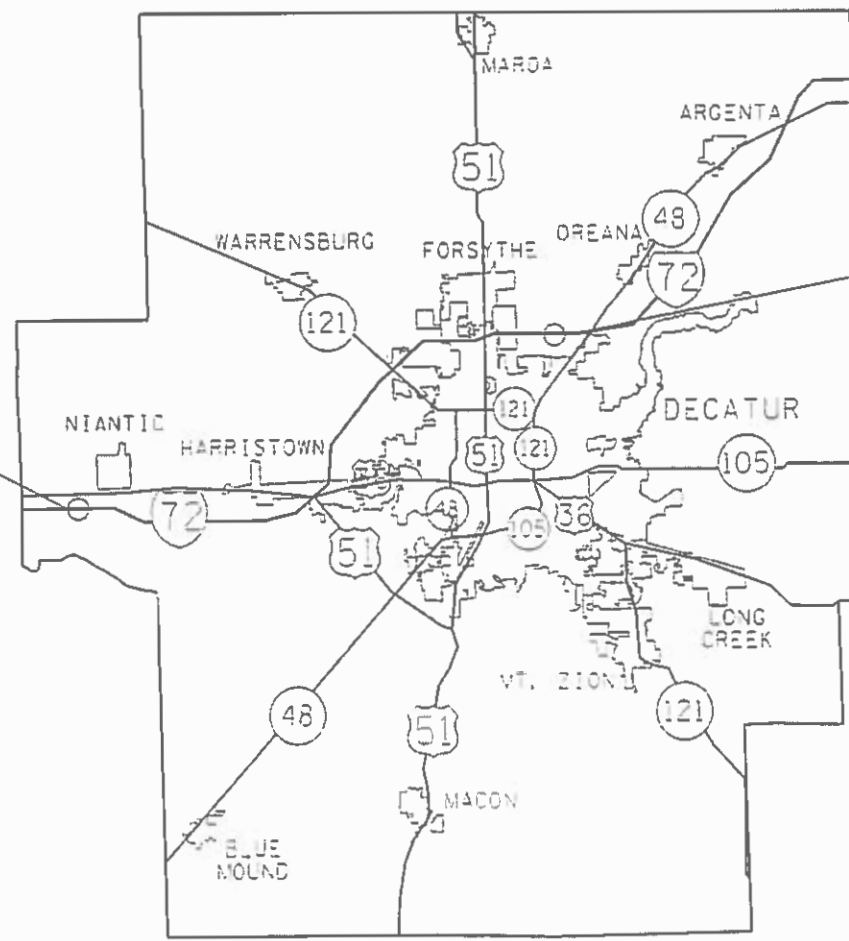
FAI 72 (I-72)
SECTION D7 BRIDGE PAINTING 2019-3
BRIDGE PAINTING
PROJECT NHPP-YICH(930)
MACON COUNTY
C-97-114-18



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: TOM RONAN
PROJECT MANAGER: TOM RONAN
PHONE: (217)342-8320
CONTRACT NO. 74877



S.N. 058-0060

S.N. 058-0054

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 09 20 18
Jeff M South
REGIONAL ENGINEER

OCT 5 2018
Paul J. [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

OCT 5 2018
Paul J. [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS, GENERAL NOTES, LOCATION DESCRIPTIONS,
3	SUMMARY OF QUANTITIES
4	LOCATION MAP
5-11	EXISTING STRUCTURE PLANS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 11:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, & PATTERNS
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
701901-07	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER

GENERAL NOTES

THE PROPOSED PROJECT IS LOCATED AT 2 LOCATIONS ON INTERSTATE 72 IN MACON COUNTY IN DISTRICT 7.

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.

BRIDGE LOCATION DESCRIPTIONS

LOCATION #1

BRIDGE # 1
ROUTE: FAI 72
MARKED: I-72
SECTION: 58-64HB-2
STATION: 258+36.38
STRUCTURE NUMBER: 058-0054

TYPE OF BRIDGE: WELDED PLATE GIRDERS-2 SPANS (5 GIRDERS)
LOCATION: 1.83 MILES SOUTH OF FAS 549
FEATURE CARRIED/SPANNED: TR 150 (GREENSWITCH ROAD) OVER I-72

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 GIRDERS, BEARINGS, AND DIAPHRAGMS/LATERAL BRACING, 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.

ONE AIR MONITOR WILL BE REQUIRED AT THIS LOCATION.

LOCATION #2

BRIDGE # 2
ROUTE: FAI 72
MARKED: I-72
SECTION: 58-61HB
STATION: 52+47.46
STRUCTURE NUMBER: 058-0060

TYPE OF BRIDGES: WELDED BOX GIRDERS-2 SPANS (2 GIRDERS)
LOCATION: 1.5 MILES SOUTHWEST OF NIANTIC
FEATURE CARRIED/SPANNED: TR 4 (ACOM ROAD) OVER I-72

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 BOX GIRDERS, DIAPHRAGMS/LATERAL BRACING, AND BEARINGS,

SHALL BE CLEANED BY SSPC-SP10- NEAR WHITE METAL BLAST CLEANING. 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.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, GENERAL NOTES,
AND BRIDGE LOCATIONS**

SCALE: SHEET 2 OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D-7 BRIDGE PAINTING 2019-3	MACON	11	2
			CONTRACT NO. 74877	
			ILLINOIS FED. AID PROJECT	

90% FED
10% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0047 URBAN	0047 RURAL	
67100100	MOBILIZATION	L SUM	1	0.5	0.5	
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	2	1	1	
	701402					
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	0.5	0.5	
	701401					
70400100	TEMPORARY CONCRETE BARRIER	FOOT	550	275	275	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1650	825	825	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	1	1	
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	6	3	3	
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	240	120	120	
Z0007112	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1	0.5	0.5	
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1		
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1		1	

MODEL: Default
 FILE NAME: P:\110848E\BID\NTEG Illinois.gov\PIV\DOT\Documents\DOT Offices\District 7\Projects\74877\CADD\DATA\CAD\Sheets\74877-sh-500.dgn

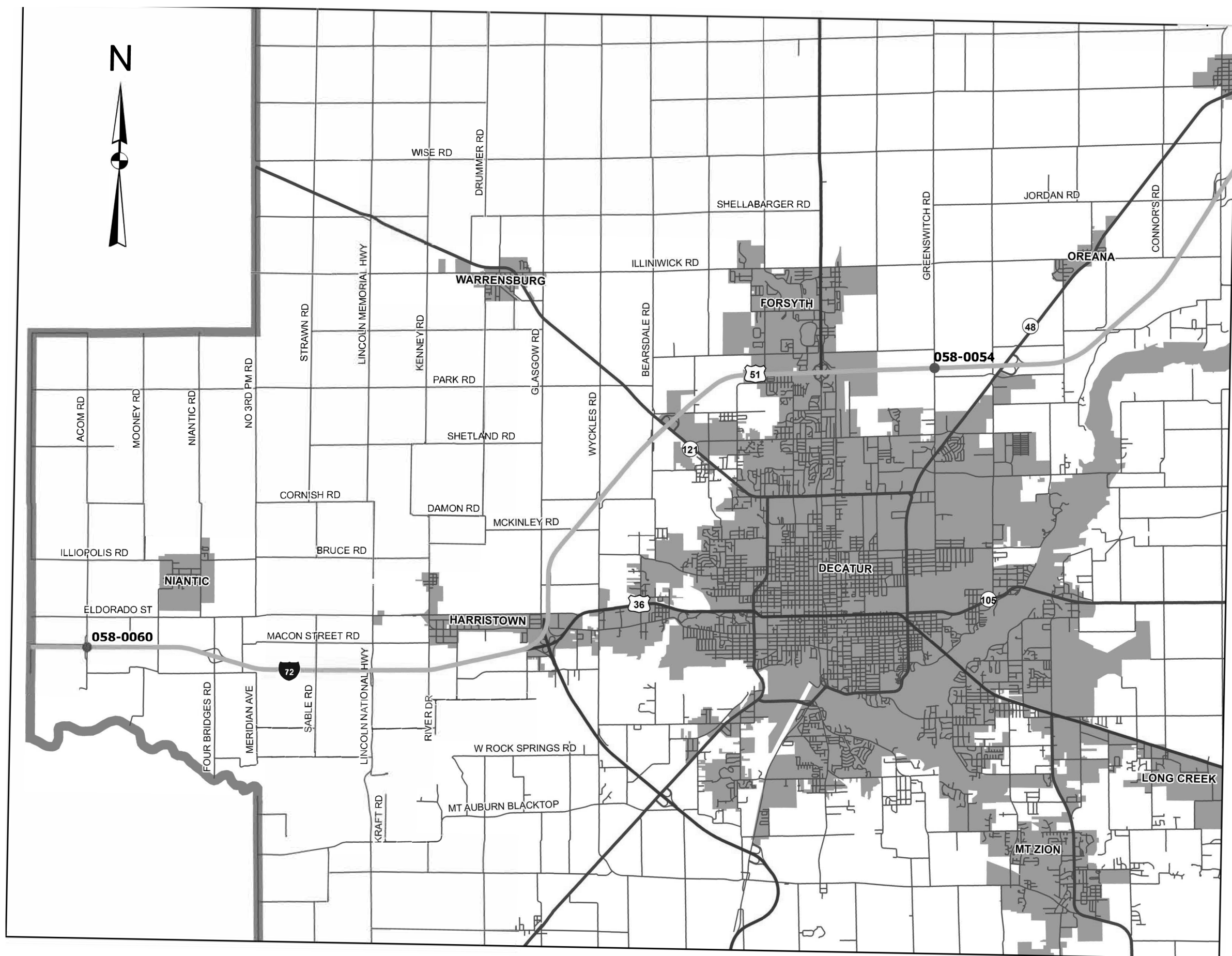
USER NAME = steffenk	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2018	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D7 BRIDGE PAINTING 2019-3	MACON	11	3
			CONTRACT NO. 74877	
ILLINOIS FED. AID PROJECT				



MODEL: Default
 FILE: \\nas01c.psu.edu\B&E\BID\NTEC\Illinois\gov\PIV\DOT\Documents\18071\Projects\174877\CADD\data\CAD\pkcses\074877-4877-4877.dgn

USER NAME = steffenmk	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2018	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

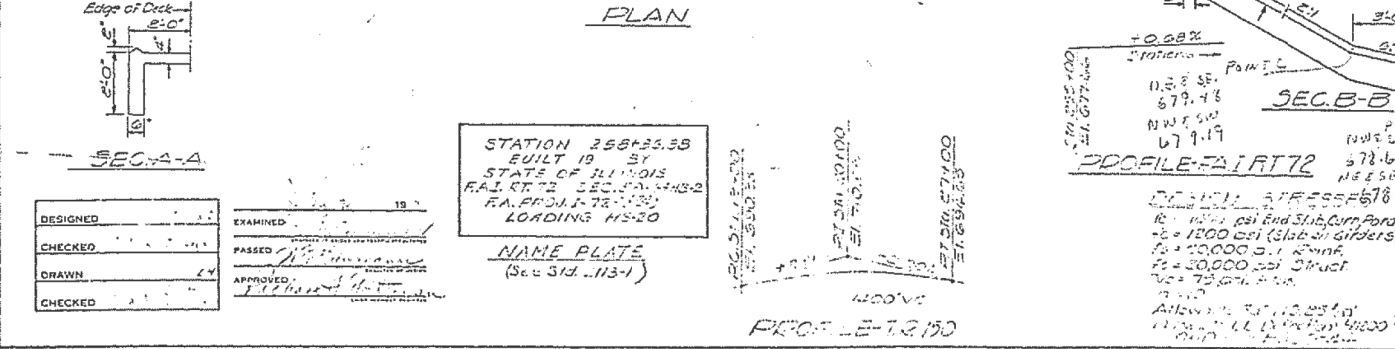
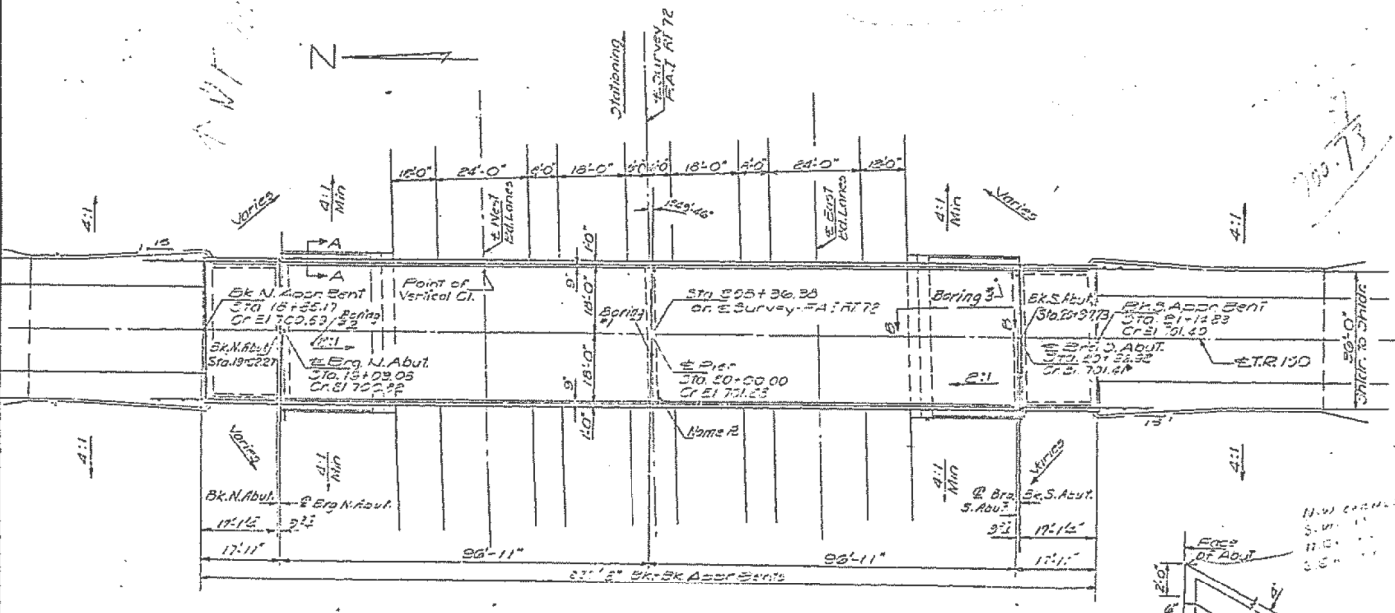
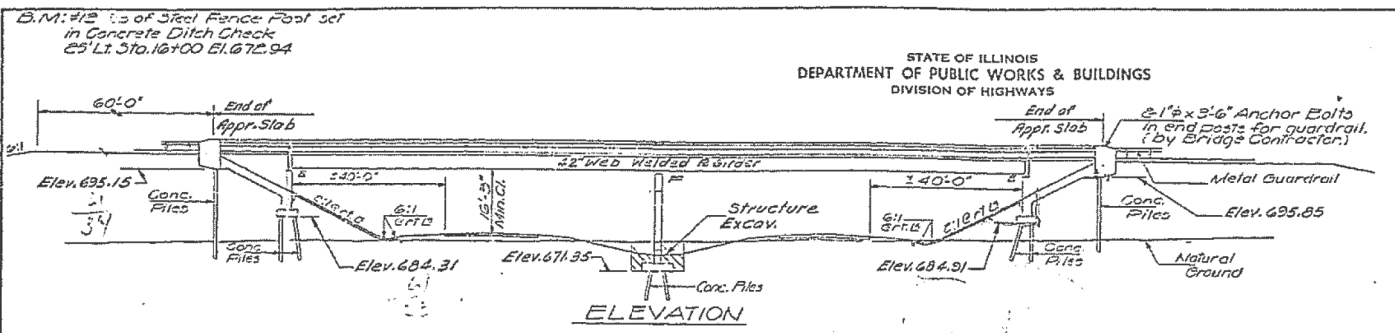
LOCATION MAP

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D7 BRIDGE PAINTING 2019-3	MACON	11	4
CONTRACT NO. 74877				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

DESIGNED BY	ST	WALCON	21a	7	SHEET NO. 1
CHECKED BY					11 SHEETS



GENERAL NOTES

Concrete piles of approach bents shall be driven in holes pre-cored through the embankment in accordance with Article 513.09(c) of the Standard Specifications.

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Fasteners shall be high strength bolts. Bolts 3/4", open holes 1 3/8" unless otherwise noted.

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 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 of other girders 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 35# per 100 sq. ft.

The Contractor shall drive two concrete test piles in a permanent location one each of South Abutment and pier 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 Mandatory Concrete.

Calculated Weight of Structural Steel = 224540 lbs

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Tot.
Sand Backfill	Cu. Yd.		179	179
Structure Excavation	Cu. Yd.		102	102
Protective Coat	Sq. Yd.	1057		1057
Class X Concrete	Cu. Yd.	273.6	263.5	537.1
Structural Steel	Lbs.			224540
Stud Shear Connectors	Ed.	1590		1590
Aluminum Bolting	Lbs.	450		450
Aluminum Girders	Lbs.	68230	27600	95830
Concrete Piles	Lbs.			2345
Cast Piles (Concrete)	Ed.			2
Name Plates	Ed.			1
Slope Wall (4")	Sq. Yd.			352
Prefabricated Joint Sealer	Lir. Ft.	76		76

GENERAL PLAN AND ELEVATION
PROJ. 1-72-226 (50)
T.R. 150 OVER FAIRT72
FAI. ROUTE 72
SECTION 30-64-13-2
MACON COUNTY
STATION 681+3.83

MODEL: Default
FILE NAME: P:\11108\B&E\ID\ITC\Illinois\gov\PHOTO\Documents\10DOT_Offices\Director_7\Projects\14877\CADD\B&E\CAD\B&E\14877-15-14877.dgn

USER NAME = steffenk	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

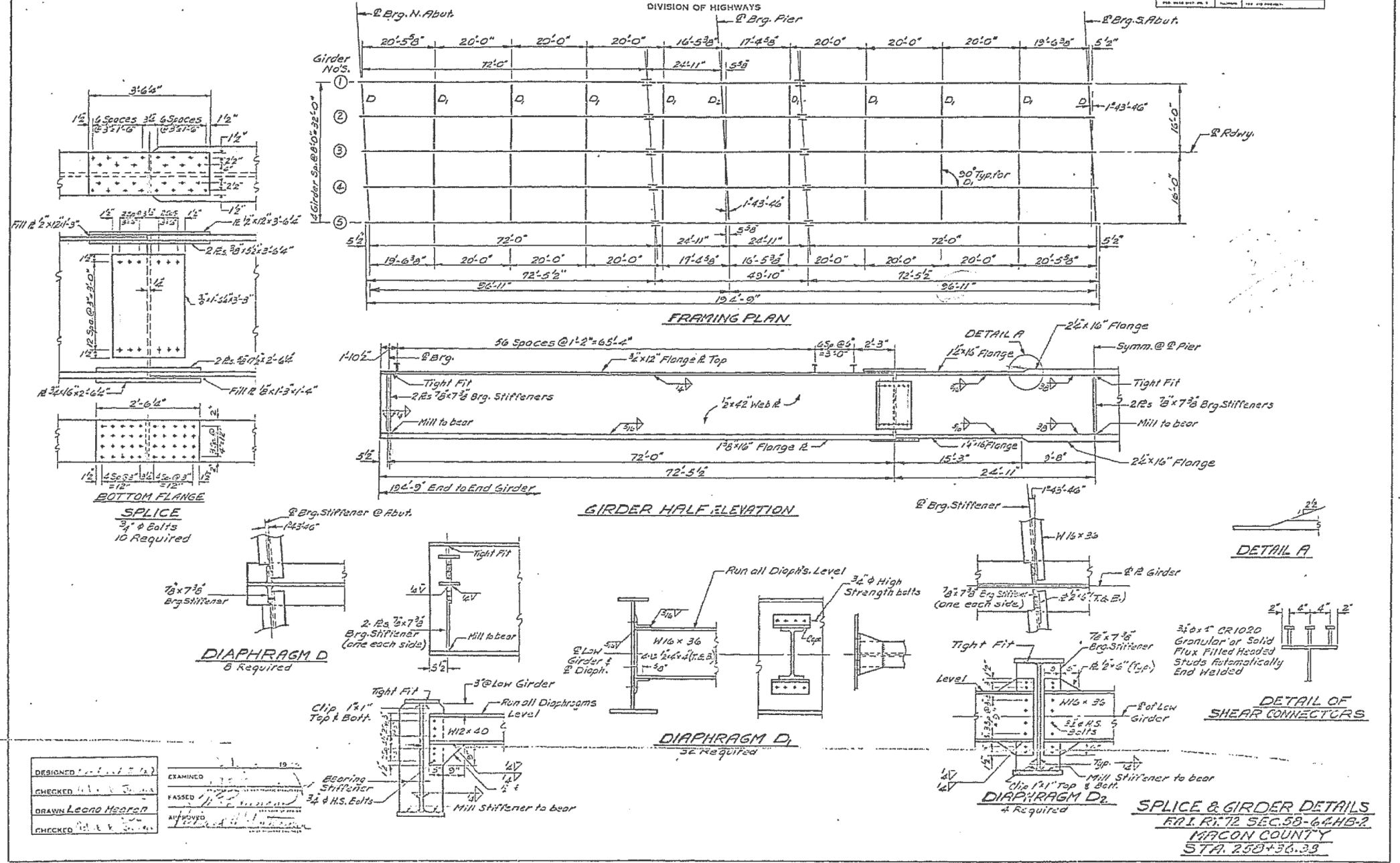
EXISTING STRUCTURE PLANS
058-0054

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D7 BRIDGE PAINTING 2019-3	MACON	11	5
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74877	

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

DATE	DESIGN	EXAMINED	CHECKED	DRAWN	SHEET NO.
11-11-12	MSJ	MAGCON	26	15	11 SHEETS
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS		
72	D7 BRIDGE PAINTING 2019-3	MACON	11	7	
			CONTRACT NO. 74877		



DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
058-0054

USER NAME = steffemk	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 8/14/2018	CHECKED -	REVISED -
	DATE -	REVISED -

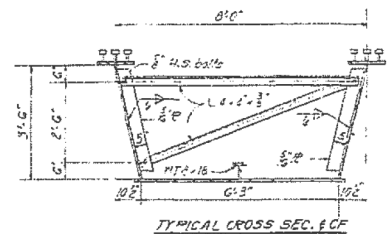
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D7 BRIDGE PAINTING 2019-3	MACON	11	7
			CONTRACT NO. 74877	
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
FILE: \\nas01\pwworkspace\Bentley\Projects\2019\3\72\72-0054\Drawings\058-0054.dgn

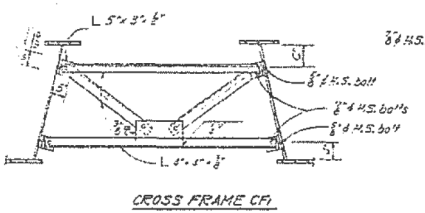
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	Sheet	SHEET NO.	SHEETS
18-018	MAINT	21	11	17



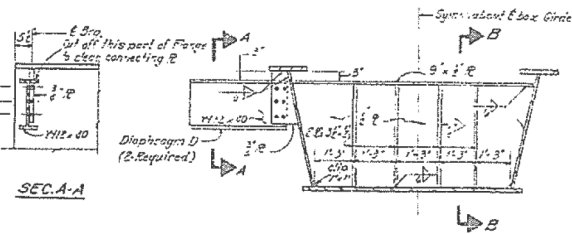
TYPICAL CROSS SEC. OF CF

Note:
Cross frames CF shall be placed in the shop and shall remain in place to stiffen the girders during erection, placement and curing of the concrete deck, after which these cross frames shall be removed.
No. required: 20



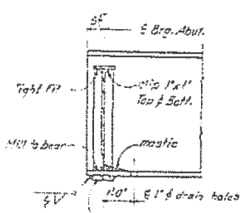
CROSS FRAME CF

Note:
Cross frames CF shall be in place during placement and curing of the deck, after which these cross frames shall be removed with the exception of 8 d H.S. bolts thru the web.
No. required: 8



SEC. A-A

SEC. AT BRG. ABUT

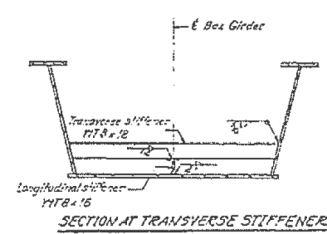


SEC. B-B

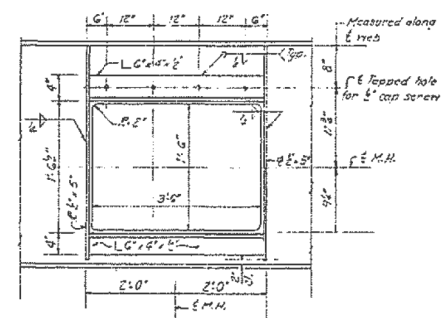
CAUTION - VENTILATE BEFORE ENTERING AND WHILE WORKING INSIDE BOX GIRDERS

WARNING NOTE

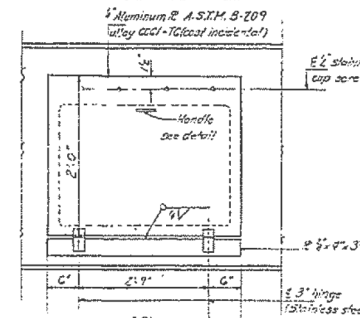
Note:
Warning Note shall be stenciled inside of door using approved paint and 2" high letters. A 1/2" neoprene gasket shall be cemented to inside of door plate around the edges.



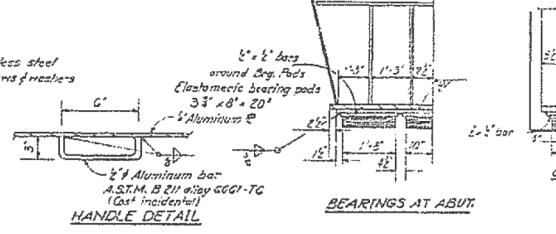
SECTION AT TRANSVERSE STIFFENER



INSIDE VIEW



DETAIL OF MANHOLES



HANDLES

BEARINGS AT ABUT

GIRDER MOMENT TABLE

Station	Moment (ft-k)	Reaction (k)
0+0	270.1	15.9
10+0	78.7	12.9
20+0	118.2	33.4
30+0	225.8	52.6
40+0	1.8	1.8
50+0	114.5	33.8
60+0	7.7	7.5
70+0	1.0	1.0
80+0	7.2	15.9
90+0	10.7	10.9
100+0	3.4	2.1
Total	282.2	211.0
Avg. Sp. (ft)	10.3	6.1
50% (ft)	18.0	13.6
100% (ft)	72.1	64.2

GIRDER REACTION TABLE

Station	Abut.	Pen.
0+0	10.5	396.2
10+0	53.3	92.6
20+0	11.6	20.1
Total	175.4	509.0

*I_x 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 I_c.
Write the maximum impact stress range in shop used to determine shear connector spacing.*

STRUCTURAL STEEL DETAILS
R.I. RT. 72 SEC. 50-G' HS
MACON COUNTY
STA. 52+47.46

DESIGNED	Suresh Dasai	EXAMINED	FEB 29 10 25
CHECKED	...	PASSED	...
DRAWN	...	APPROVED	...
CHECKED	S.D.		

ELEVATION-MEB SPLICE
18" Ø H.S. bolts (13" Ø holes)

PLAN-FLANGE SPLICES
(8" Ø H.S. bolts (13" Ø holes))

MODEL: Default
FILE NAME: P:\ILLINOIS\B&E\ID\ITC\Illinois\poc\p\WDDOT\Documents\1807\1807-01-01\1807-01-01.dgn
PROJECT: 1807-01-01\1807-01-01\1807-01-01.dgn
OFFICE: D:\1807-01-01\1807-01-01.dgn

USER NAME	= steffemk
PLOT SCALE	= 100,0000' / in.
PLOT DATE	= 8/14/2018

DESIGNED	-	REVISED	-
DRAWN	-	REVISED	-
CHECKED	-	REVISED	-
DATE	-	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

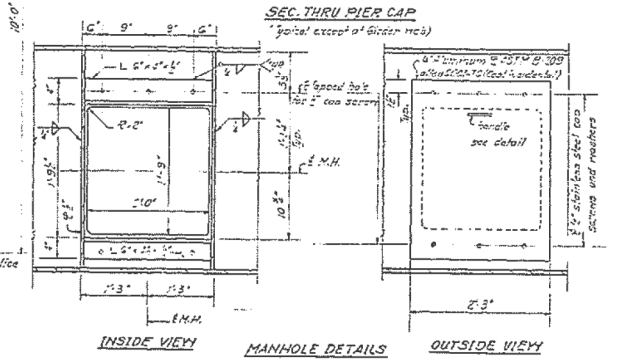
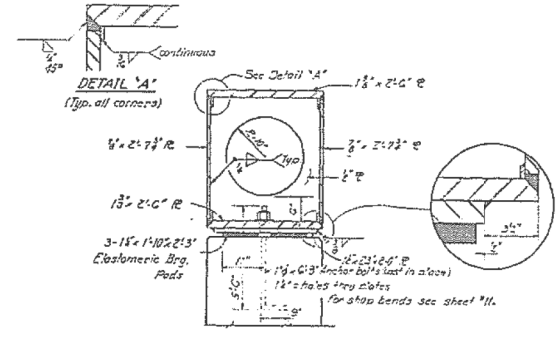
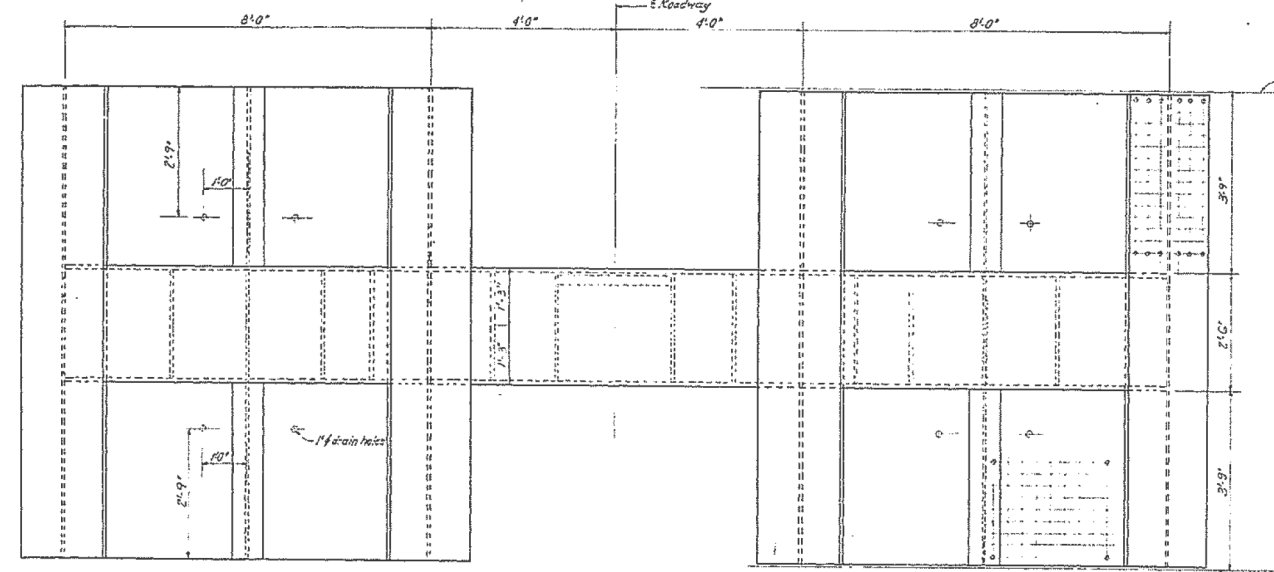
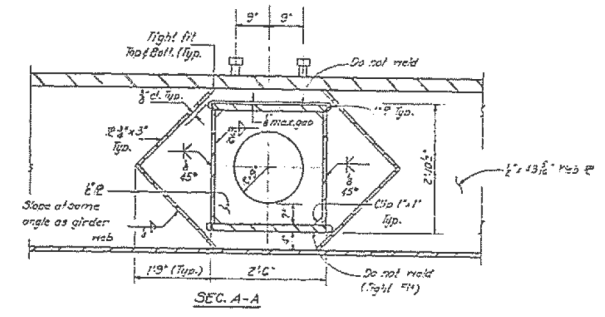
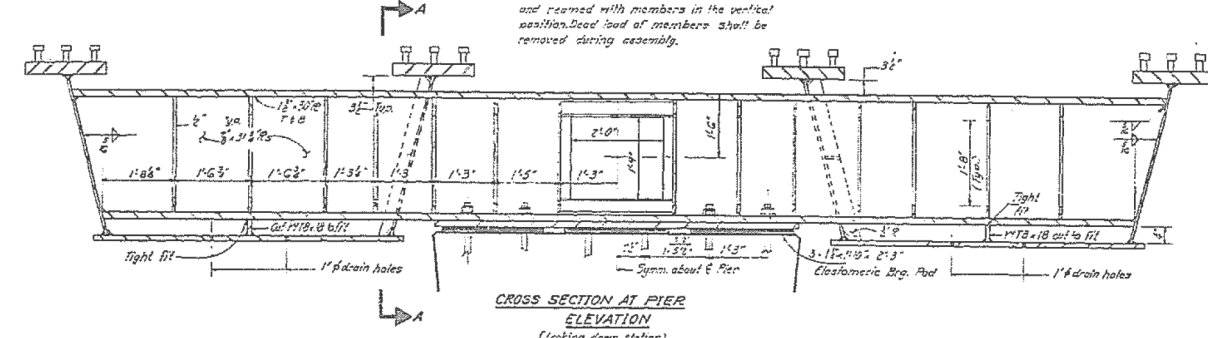
EXISTING STRUCTURE PLANS		F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
058-0060		72	D7 BRIDGE PAINTING 2019-3	MACON	11	10
SCALE:		SHEET OF SHEETS		STA. TO STA.		CONTRACT NO. 74877
				ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

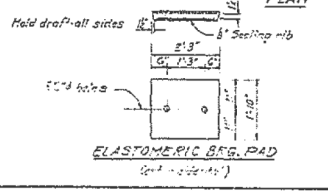
PROJECT NO.	SECTION	DATE	SHEET NO.
100-0000	058-0060	3/17	11
SHEET NO. 8 11 SHEETS			

Note:
The inside surfaces of the pier cap box shall receive two shop coats of paint. No additional field paint required.

Note:
Holes for gullies shall be cut punched and reamed with members in the vertical position. Dead load of members shall be removed during assembly.

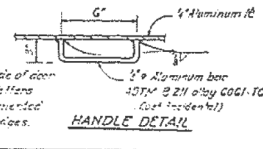


DESIGNED	Suresh Desai	EXAMINED	3/23/15
CHECKED	7/10/15	PASSED	
DRAWN	3/14/15	APPROVED	
CHECKED	S.D.		



CAUTION-VENTILATE BEFORE ENTERING AND WHILE WORKING INSIDE BOX GIRDERS
WARNING NOTE

Note:
Warning note shall be attached inside of door using approved paint and 2" high letters. 1 1/2" x 3" warning gasket shall be provided to inside of door plate around the edges.



STRUCTURAL STEEL DETAILS
F.A.I. RT. SEC. 58-G1 H3
MACON COUNTY
STATION 52+47.46

MODEL: Default
FILE NAME: P:\ILLINOIS\B&E\ID\ITC\Illinois\poc\p\WIDOT\Documents\DOT Office\IDirect 7\Projects\14877\CADD\B&E\CAD\Drawings\14877-58-g1-h3.dwg

USER NAME = steffemk	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		EXISTING STRUCTURE PLANS 058-0060		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -					72	D7 BRIDGE PAINTING 2019-3	MACON	11	11
PLOT DATE = 8/14/2018	CHECKED -	REVISED -					CONTRACT NO. 74877				
	DATE -	REVISED -			SCALE: SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT				