

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
067	(J) BP	MACOUPIN	9	1
		ILLINOIS	CONTRACT NO. 72M53	

04-23-2021 LETTING ITEM 055

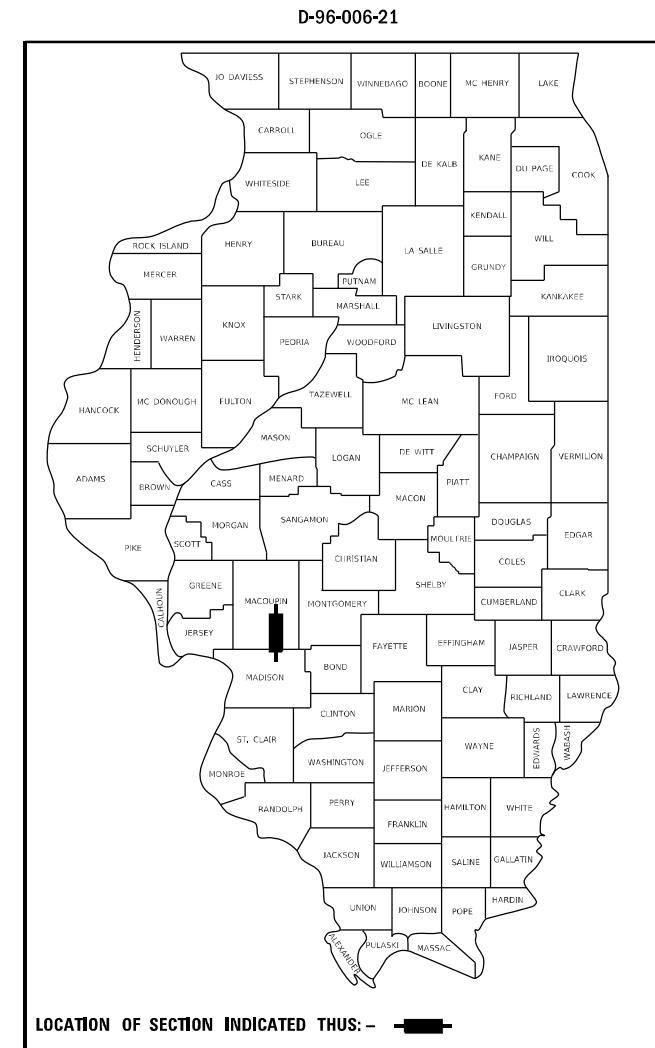
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INDEX OF SHEETS, SEE SHEET NO. 2

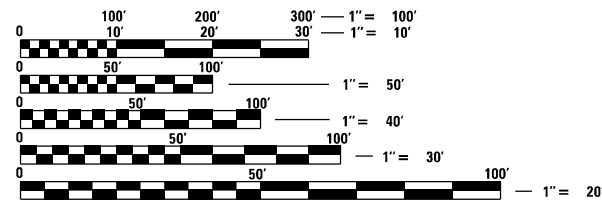
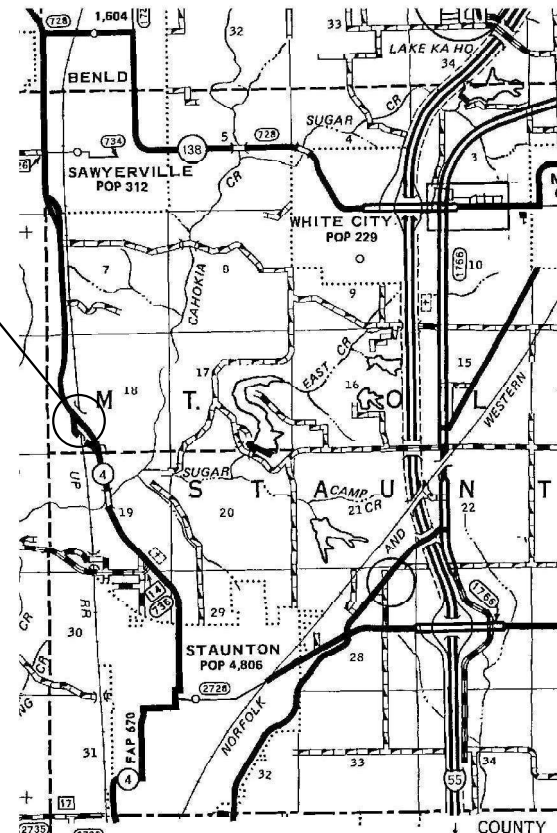
**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 067 (IL 4)
SECTION (J) BP
PROJECT NHPP-NA9U(839)
BRIDGE PAINTING
MACOUPIN COUNTY

C-96-019-21



PROJECT LOCATION
SN 059-0009
IL 4 OVER UPRR
2 MI N OF STAUNTON



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 EXCAVATORS
1-800-892-0123
OR 811

BRIDGE MAINTENANCE ENGINEER: BRANDON DUDLEY - (217) 785-9290

GROSS LENGTH = 227 FT. = 0.04 MILE
NET LENGTH = 227 FT. = 0.04 MILE

CONTRACT NO. 72M53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED November 25 2020

John P. Myer
REGIONAL ENGINEER

January 29, 2021
Scott A. Elk
ENGINEER OF DESIGN AND ENVIRONMENT

January 29, 2021
Thomas J. ...
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS**

HIGHWAY STANDARDS



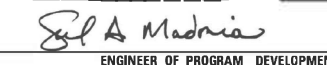
INDEX OF SHEETS

1	COVER SHEET
2	INDEX, STANDARDS, GENERAL NOTES, & SIGNATURES
3	SUMMARY OF QUANTITIES
4	TRAFFIC CONTROL PLAN
5-9	EXISTING BRIDGE PLANS LOCATION #1: SN 059-0009

000001-08
001006
701001-02
701006-05
701201-05
701301-04
701316-13
701901-08

GENERAL NOTES:

1. WORK SHALL CONSIST OF BLASTING AND PAINTING STRUCTURAL STEEL AT LOCATIONS DESCRIBED IN THE SPECIAL PROVISIONS. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL AREAS TO BE PAINTED SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING PER SSPC SP 10. ALL EXISTING STEEL CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COATS SHALL BE AS DESCRIBED IN THE SPECIAL PROVISIONS.
2. THE USE OF AIR MONITORS WILL BE REQUIRED.
3. CONTAINMENT OF CLEANING RESIDUE IS REQUIRED TO CONTROL NUISANCE DUST. SEE SPECIAL PROVISIONS.
4. SSPC OP1 (AND SSPC OP2) CERTIFICATION IS REQUIRED FOR THIS CONTRACT.
5. CARE SHALL BE TAKEN NOT TO DAMAGE RUBBER BEARING OR JOINT COMPONENTS DURING BLASTING AND CLEANING OPERATIONS. ANY DAMAGE TO THESE COMPONENTS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. RUBBER COMPONENTS SHALL NOT BE PAINTED.
6. UPON COMPLETION OF PAINTING OPERATIONS, THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM PIER OR ABUTMENT CAPS UPON WHICH PAINTING OPERATIONS TOOK PLACE. FINAL CLEANUP SHALL BE CONSIDERED INCIDENTAL TO THE PAINT PAY ITEM FOR THE RESPECTIVE LOCATION. THE ENGINEER SHALL HAVE THE RIGHT TO WITHHOLD PAYMENT UNTIL SATISFACTORY CLEANUP IS ACHIEVED.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6	
EXAMINED	November 23 20 20
	
ENGINEER OF OPERATIONS	
EXAMINED	November 23 20 20
	
ENGINEER OF PROJECT IMPLEMENTATION	
EXAMINED	November 18 20 20
	
ENGINEER OF PROGRAM DEVELOPMENT	

REV. - MS

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PLOT DATE = 11/25/2020	DATE -	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, STANDARDS,
GENERAL NOTES, & SIGNATURES**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
067	(J) BP	MACOUPIN	9	2
			CONTRACT NO. 72M53	
ILLINOIS FED. AID PROJECT				

0-01374-6007
NHPP 80/20

SN 059-0009
0047-RURAL
MACOUPIN

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
67100100	MOBILIZATION	L SUM	1	1
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	350	350
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	75	75
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1

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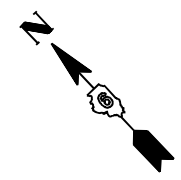
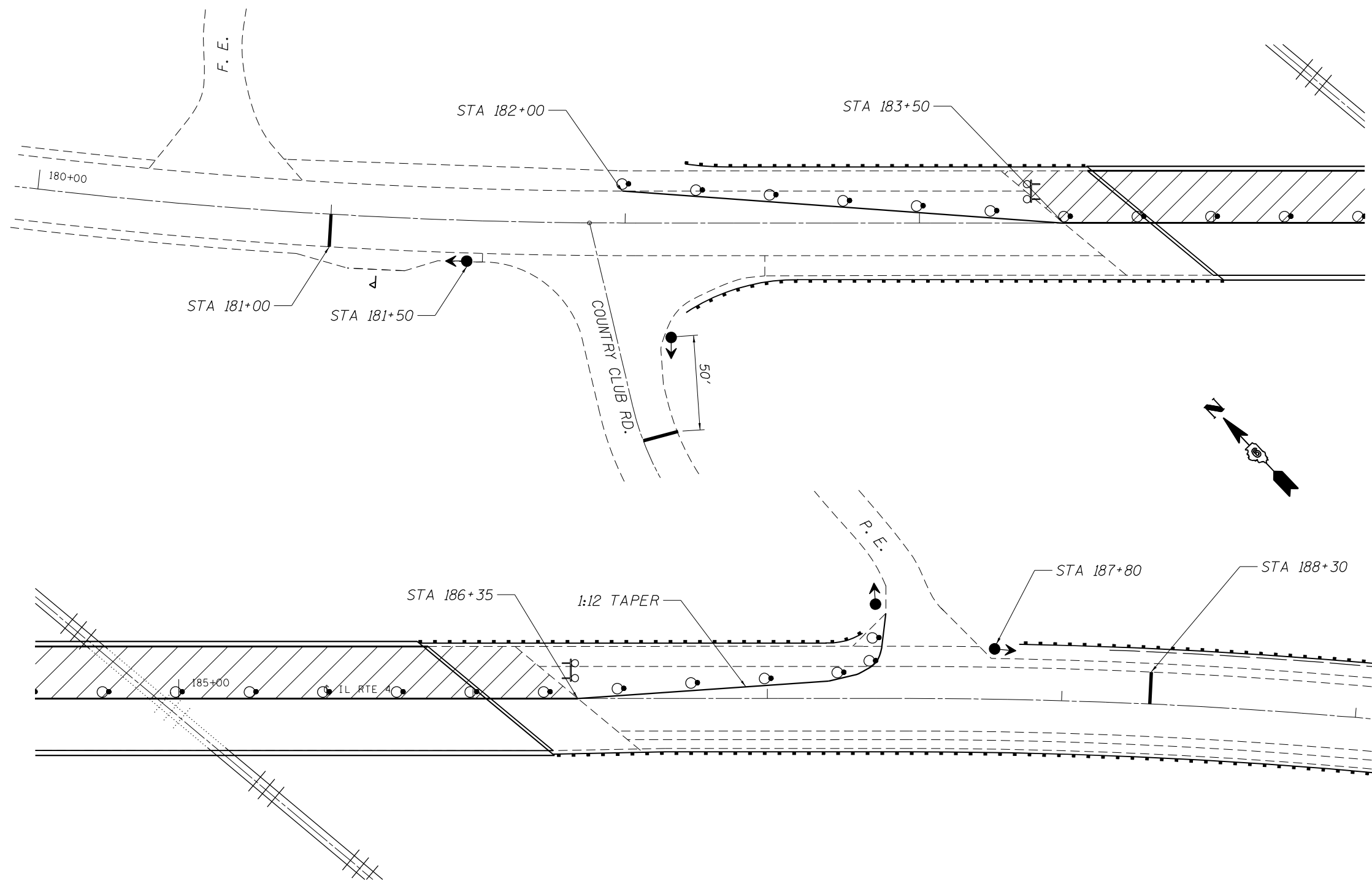
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**





SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
067	(J) BP	MACOUPIN	9	3
			CONTRACT NO. 72M53	
ILLINOIS			FED. AID PROJECT	



SYMBOLS

-  TRAFFIC SIGNAL
-  DRUM WITH STEADY BURNING LIGHT
-  TYPE III BARRICADE WITH FLASHING LIGHTS
-  WORK AREA

TRAFFIC CONTROL NOTES:

1. TRAFFIC CONTROL DEVICES NOT SHOWN IN THIS DETAIL SHALL BE PER STANDARD 701316. DEVICES AND TEMPORARY PAVEMENT MARKINGS SHOWN IN THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701316. RUMBLE STRIPS AND TEMPORARY TRAFFIC SIGNALS SHALL BE PAID SEPARATELY.
2. ALL EXISTING STOP SIGNS INSIDE THE WORK ZONE SHALL BE COVERED WHILE TRAFFIC SIGNALS ARE ACTIVE.
3. STOP BARS SHOWN SHALL BE 24" WIDE.
4. TRAFFIC CONTROL DEVICES SHALL NOT ENCROACH BEYOND CENTERLINE AND A MINIMUM 17' 6" OPENING SHALL BE MAINTAINED FOR TRAFFIC AT ALL TIMES.
5. ALL WORK SHALL BE ACCOMPLISHED IN ONE TRAFFIC STAGE.

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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL PLAN

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
067	(J) BP	MACOUPIN	9	4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72M53	

Existing Structure - Single bridge built in 1959. Structure No 059-0009 at Sta 6+710.01. The structure is a three span, wide flange steel beam bridge with open stub concrete abutments and concrete piers. 69.34 m back to back of abutments, 8.534 m roadway width and 50° Rt Ah skew.

The following shall be removed from the existing structure:

- Concrete Gutter
- Concrete deck, curb & rail
- End diaphragms, expansion rockers, backwall and approach pavement ledge at South and North abutments
- Wingwalls and wingwall footings

Traffic will be maintained by using stage construction according to STD 701321 (special). No salvage.

BM #TA-51 - Chiseled "□" on southwest concrete wingwall. Structure Number 059-0009 at Sta 6+667.4 5 m LT on IL 4 Elev 191.725

STATION 6+710.01
REBUILT 199_ BY
STATE OF ILLINOIS
F.A.P. RT. 670 SEC. (R,J) VBR
PROJECT ACBHF-670 (20)
LOADING MS18
STR. NO. 059-0009
NAME PLATE
See Std. 515001

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts M20, open holes 22 mm φ, unless otherwise noted.

Painting of the existing structural steel will be done under a separate painting contract. All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1.

Prior to pouring the new concrete for the deck, all loose rust, loose mill scale, and all other loose, detrimental foreign material shall be removed from the portions of the flanges of beams in contact with concrete. The removal shall be accomplished in accordance with the requirements of the SSPC Surface Preparation Specifications SP-2 for hand tool cleaning or SP-3 for power tool cleaning. Cost included with Conc. Superstr.

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

(Notes continued)

Anchor bolts shall be set before bolting diaphragms over supports. Reinforcement bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M Grade 400.

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 variation 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.

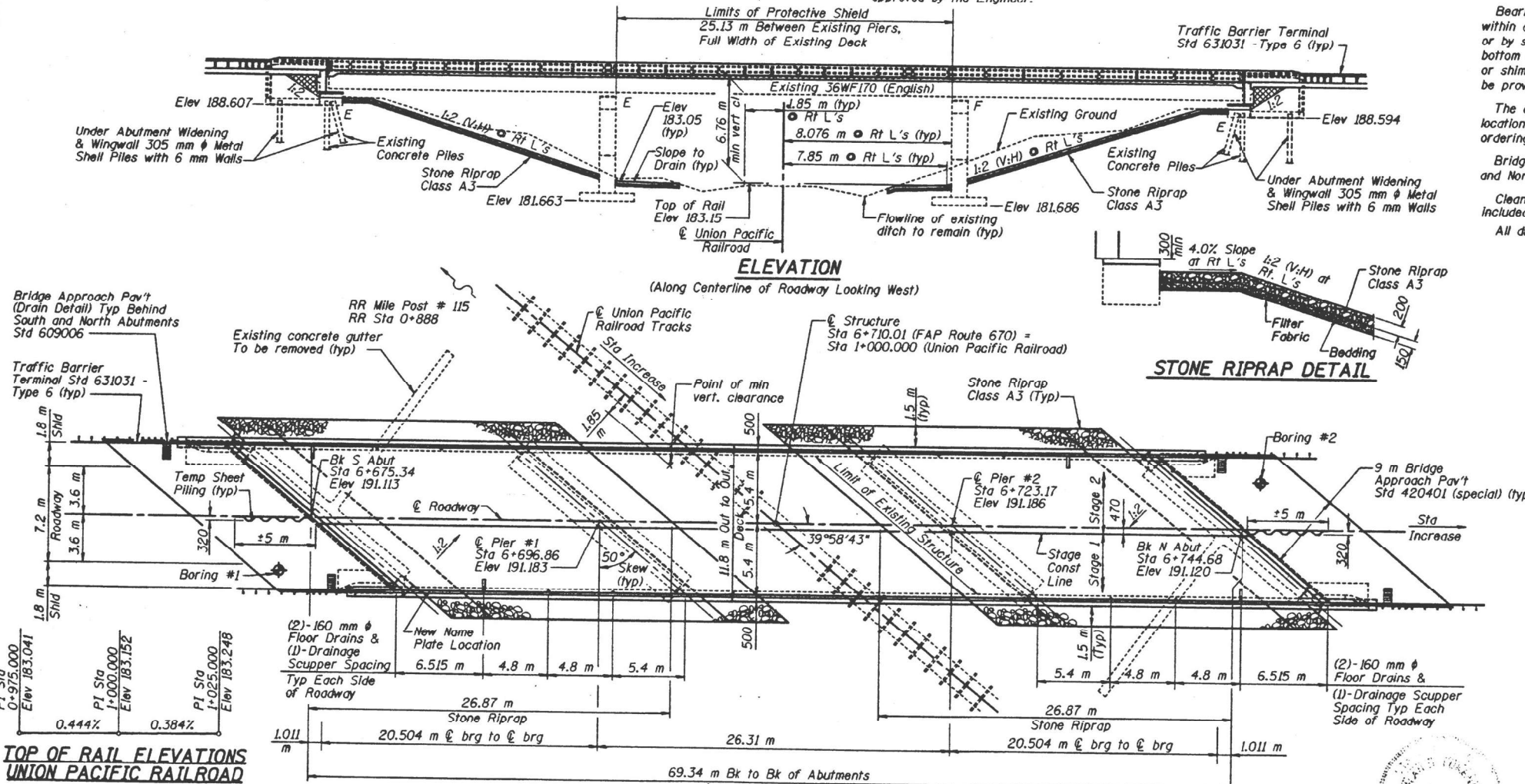
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, or the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, shims of the dimensions of the top plate shall be provided and placed as detailed.

The contractor shall drive one (1) test pile (305 mm φ Metal Shell Pile) in a permanent location at the South Abutment and North Abutment, as directed by the Engineer before ordering the remainder of piles.

Bridge Seat Sealer shall be applied to the seat area of the South Abutment and North Abutment.

Clean and relocate existing name plate adjacent to new plate. Cost is included with "Name Plate".

All dimensions are in millimeters (mm) except as noted.

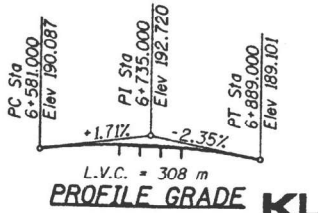


TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each			1
Structure Excavation	m ³		140	140
Floor Drains	Each	8		8
Protective Coat	m ²	890		890
Elastomeric Bearing Assembly Type I	Each	6		6
Elastomeric Bearing Assembly Type II	Each	6		6
Concrete Structures	m ³		50.1	50.1
Concrete Superstructure	m ³	221.8		221.8
Furnishing and Erecting Structural Steel	kg	4,590		4,590
Stud Shear Connectors	Each	3,396		3,396
Reinforcement Bars, Epoxy Coated	kg	32,690	5,010	37,700
Furnishing Metal Pile Shells (305 mm φ)	m		55.5	55.5
Driving and Filling Shells	m		55.5	55.5
Test Pile Metal Shells	Each		2	2
Temporary Sheet Piling	m ²			55.0
Name Plates	Each	1		1
Bar Splicers	Each	632	26	658
Bridge Seat Sealer	m ²		28.6	28.6
Drainage Scuppers Special	Each	4		4
Neoprene Expansion Joint 50 mm	m	34.8		34.8
Bridge Deck Grooving	m ²	736		736
Stone Riprap, Class A3	m ²			812
Filter Fabric for Use with Riprap	m ²			812
Concrete Removal	m ³		52.0	52.0
Formed Concrete Repair (Depth Less Than or Equal to 125 mm)	m ²		4.5	4.5
Epoxy Crack Sealing	m		2.9	2.9
Protective Shield	m ²			258
Jacking and Cribbing	Each			12

*Quantity includes top and inside face of parapet and top of deck surfaces.

The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.



PROFILE GRADE

DESIGNED	ADL
CHECKED	NA/N
DRAWN	BCJ
CHECKED	HK/N

KLINGNER & ASSOCIATES, P.C.
Consulting Engineers
616 North 24th Street (217) 223-3670
Quincy, Illinois 62301 FAX: 223-3603

TEMPORARY CANTILEVERED SHEET PILE DATA

Behind South and North Abutments:
Top Elevation = 191.5
Bottom Elevation = 186.0
Embedment = 2.5 m min.
Minimum Section Modulus = 350,000 mm³/m
Note: If the contractor chooses to alter the temporary cantilevered sheet piling design requirements, then full design submittals with the required seals will be expected by the department, for review and approval.

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.074
Site Coefficient (S) = 1.0

DESIGN SPECIFICATIONS

1996 AASHTO
LOADING MS 18
Allow 1.2 kN/m² for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f_c = 9.6 Mpa (existing)
f_c = 24 MPa (new)
f_y = 400 MPa (reinf.)
f_s = 138 MPa (Existing Structure)
f_y = 250 MPa (M270 Grade 250) (Proposed Structure)

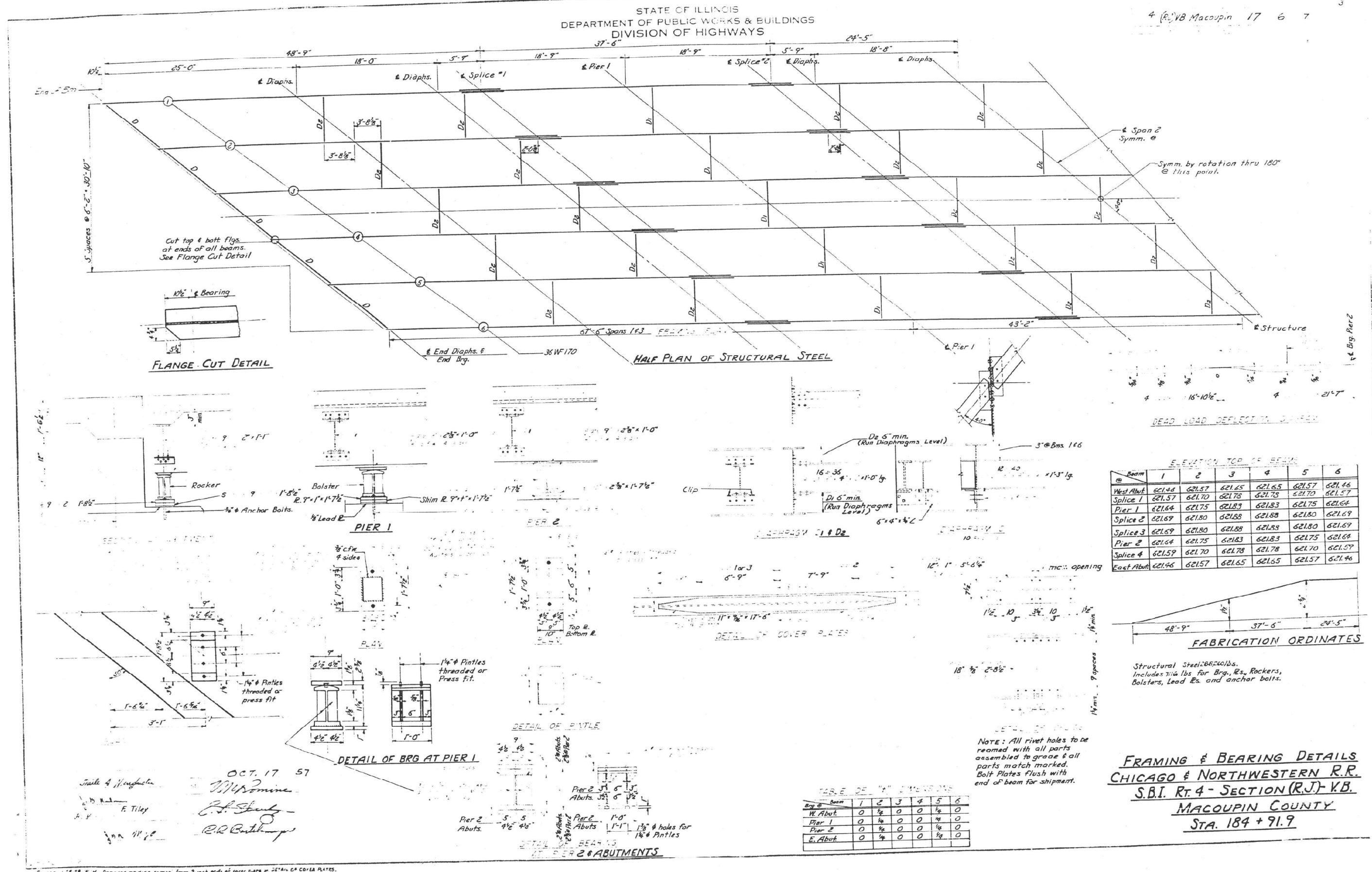


APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Alan D. Lukens
Licensed Structural Engineer
State of Illinois No. 081-005167
License Expires 11/30/98
Date: 12-12-97
REVISIONS
NAME DATE

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 4 OVER
UNION PACIFIC RAILROAD
(FORMERLY C & NW RAILROAD)
FAP ROUTE 670 SECTION (R,J) VBR
MACOUPIN COUNTY
STATION 6+710.01
STRUCTURE NUMBER 059-0009

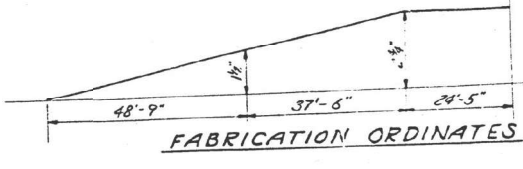
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PLOT DATE = 11/25/2020	CHECKED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				EXISTING BRIDGE PLANS, SN 059-0009 (FOR INFORMATION ONLY)	



ELEVATION TOP OF BEAM

Beam	1	2	3	4	5	6
West Abut	621.44	621.57	621.65	621.65	621.57	621.44
Splice 1	621.57	621.70	621.78	621.78	621.70	621.57
Pier 1	621.64	621.75	621.83	621.83	621.75	621.64
Splice 2	621.69	621.80	621.88	621.88	621.80	621.69
Splice 3	621.69	621.80	621.88	621.88	621.80	621.69
Pier 2	621.64	621.75	621.83	621.83	621.75	621.64
Splice 4	621.59	621.70	621.78	621.78	621.70	621.59
East Abut	621.44	621.57	621.65	621.65	621.57	621.44



Structural Steel 266260 lbs.
Includes 3114 lbs for Brg., Rs., Rockers,
Bolsters, Lead Rs. and anchor bolts.

FRAMING & BEARING DETAILS
CHICAGO & NORTHWESTERN R.R.
S.B.I. Rt. 4 - SECTION (R.J.) - VB.
MACOUPIN COUNTY
STA. 184 + 91.9

TABLE OF "I" DIMENSIONS

Beam	1	2	3	4	5	6
W. Abut.	0	1/2	0	0	1/2	0
Pier 1	0	1/2	0	0	1/2	0
Pier 2	0	1/2	0	0	1/2	0
E. Abut.	0	1/2	0	0	1/2	0

OCT. 17 57
W. Romine
C. L. Study
R. R. Butcher

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	DATE -	REVISED -

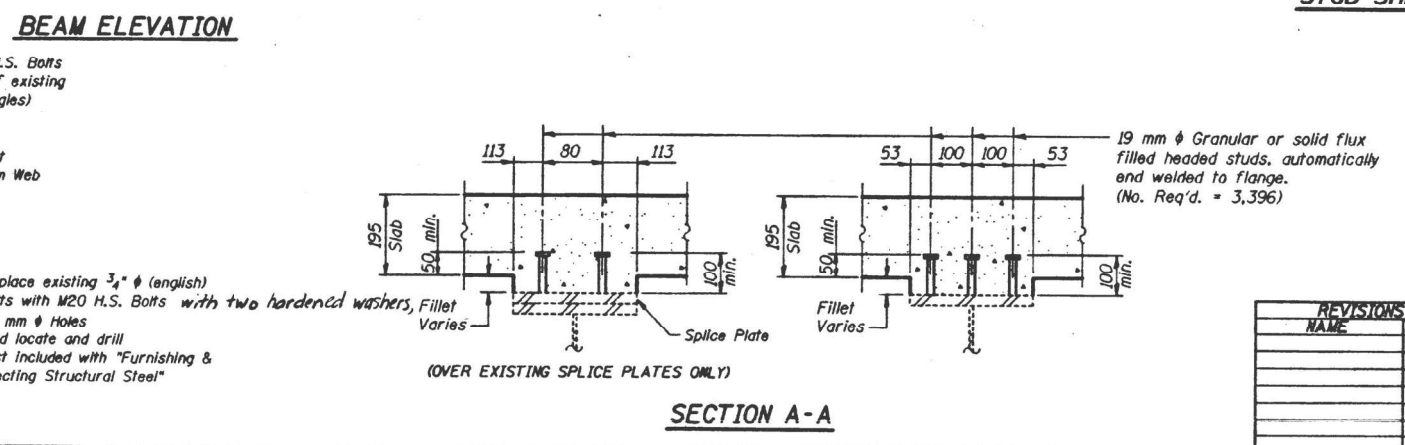
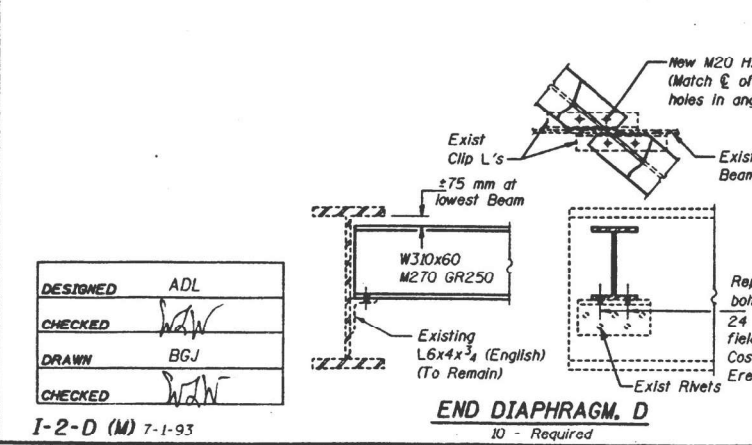
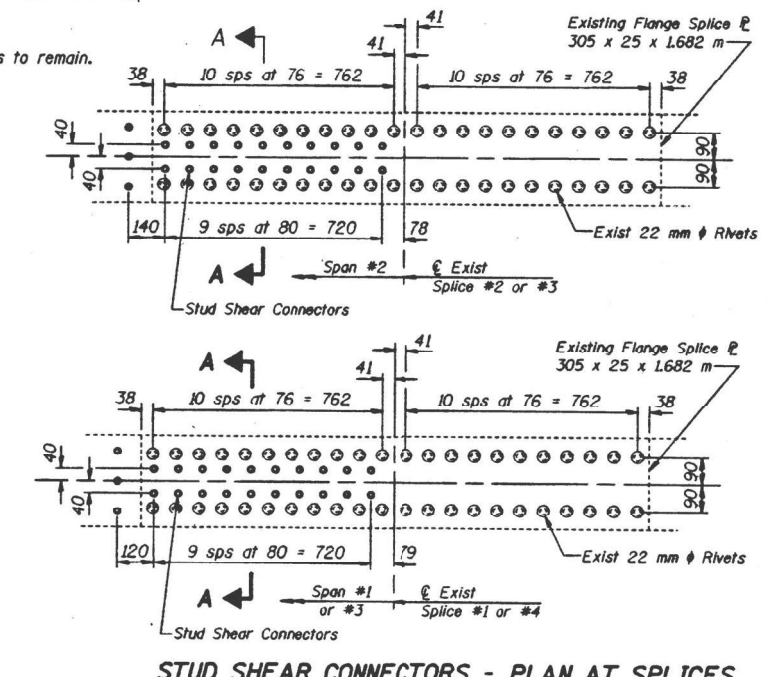
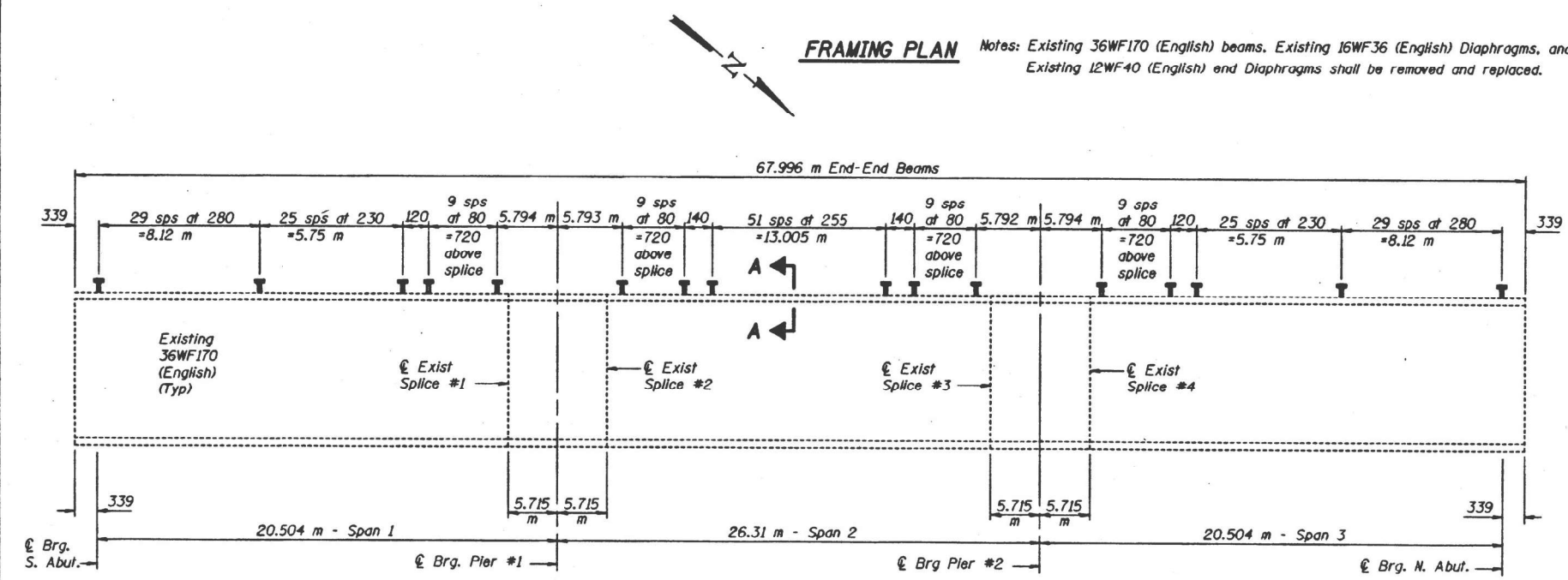
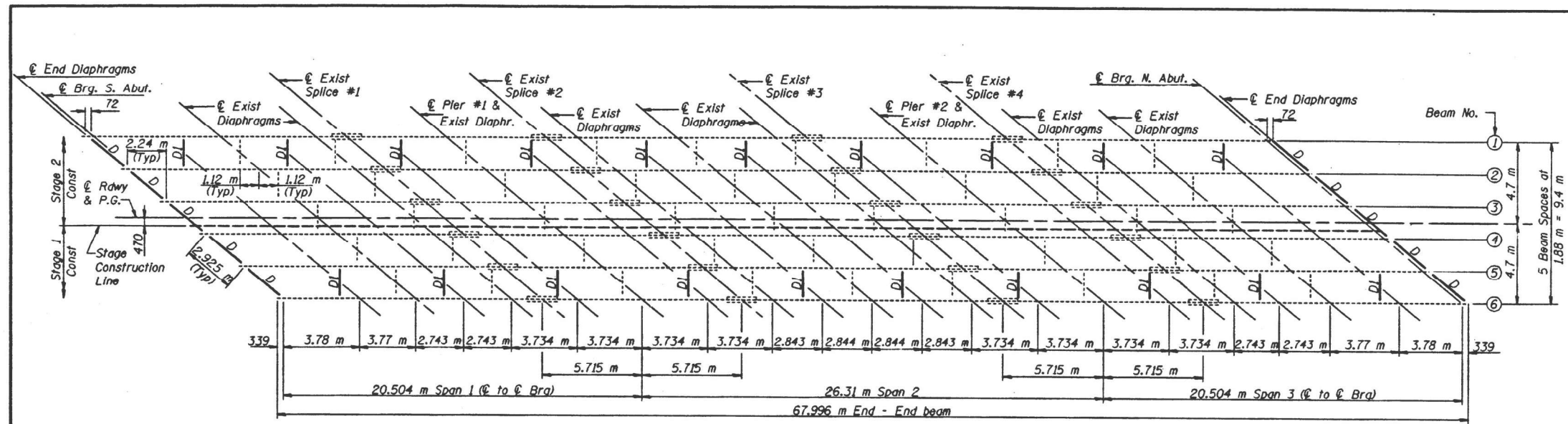
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DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 059-0009
(FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 067	SECTION (J) BP	COUNTY MACOUPIN	TOTAL SHEETS 9	SHEET NO. 6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72M53	

PROJECT NO.	SECTION	GROUP	DATE	SHEET NO.
A.A.A. 670	VBR	MACOUPIN	44	24
20 SHEETS				



Notes: Two hardened washers shall be required over all oversize holes for diaphragms. See Sheet #10 of 20 for Jack and Remove Existing Bearing details and Diaphragm, D1 details. All dimensions are in millimeters (mm) except as noted.

STRUCTURAL STEEL DETAILS
ILLINOIS ROUTE 4 OVER
UNION PACIFIC RAILROAD
(FORMERLY C & NW RAILROAD)
FAP ROUTE 670 SECTION (R,J) VBR
MACOUPIN COUNTY
STATION 6+710.01
STRUCTURE NUMBER 059-0009

DESIGNED	ADL
CHECKED	[Signature]
DRAWN	BGJ
CHECKED	[Signature]

I-2-D (M) 7-1-93

REVISIONS	NAME	DATE

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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 059-0009
(FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
067	(J) BP	MACOUPIN	9	7
CONTRACT NO. 72M53				
ILLINOIS FED. AID PROJECT				

	0.4 Sp. 1 & 3	Piers 1 & 2	0.5 Sp. 2
Is (10 ⁶ mm ⁴)	4,370	6,107	4,370
Ic (n) (10 ⁶ mm ⁴)	10,384		10,384
Ic (3n) (10 ⁶ mm ⁴)	7,537		7,537
Ss (10 ³ mm ³)	9,504	12,898	9,504
Sc (n) (10 ³ mm ³)	13,342		13,342
Sc (3n) (10 ³ mm ³)	11,990		11,990
Z (10 ³ mm ³)	10,947		10,947
Q (kN/m)	11.65	15.87	11.65
MR (kN-m)	318	901	325
sR (kN/m)	4.22		4.22
MsR (kN-m)	126		147
Mt (kN-m)	603	431	674
M (Imp) (kN-m)	157		160
S ₃ (Mt+M Imp) (kN-m)	1,266	897	1,390
Ma (kN-m)	2,224	2,338	2,421
fsR non-comp (MPa)	33	70	34
fsR (comp) (MPa)	11		12
fsS ₃ (t+Imp) (MPa)	95	70	104
fs (Overload) (MPa)	101	139	151
fs (Total) (MPa)	131	181	196
VR (kN)	210		202

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

$$Ma \text{ (Applied Moment)} = 1.3[MR + MsR + S_3(Mt + M Imp)]$$

fs (Overload) is the sum of the stresses due to MR + MsR + S₃(Mt + M Imp).

fs (Total) is the sum of the stresses due to 1.3[MR + MsR + S₃(Mt + M Imp)].

MR - Moment due to dead loads on non-composite section.

MsR - Moment due to dead loads on composite section.

Mt - Moment due to live load on non-composite or composite section.

M Imp - Moment due to live load impact on non-composite or composite section.

	0.4 Sp. 1 & 3	Piers 1 & 2	0.5 Sp. 2
Is (10 ⁶ mm ⁴)	4,370	6,107	4,370
Ic (n) (10 ⁶ mm ⁴)	10,384		10,384
Ic (3n) (10 ⁶ mm ⁴)	7,537		7,537
Ss (10 ³ mm ³)	9,504	12,898	9,504
Sc (n) (10 ³ mm ³)	13,342		13,342
Sc (3n) (10 ³ mm ³)	11,990		11,990
Z (10 ³ mm ³)	10,947		10,947
Q (kN/m)	14.93	19.15	14.93
MR (kN-m)	408	1,093	417
sR (kN/m)	4.22		4.22
MsR (kN-m)	126		147
Mt (kN-m)	603	431	674
M (Imp) (kN-m)	157		160
S ₃ (Mt+M Imp) (kN-m)	1,266	897	1,390
Ma (kN-m)	2,340	2,587	2,539
fsR non-comp (MPa)	43	85	44
fsR (comp) (MPa)	11		12
fsS ₃ (t+Imp) (MPa)	95	70	104
fs (Overload) (MPa)	148	154	160
fs (Total) (MPa)	193	201	208
VR (kN)	210		202

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

$$Ma \text{ (Applied Moment)} = 1.3[MR + MsR + S_3(Mt + M Imp)]$$

fs (Overload) is the sum of the stresses due to MR + MsR + S₃(Mt + M Imp).

fs (Total) is the sum of the stresses due to 1.3[MR + MsR + S₃(Mt + M Imp)].

MR - Moment due to dead loads on non-composite section.

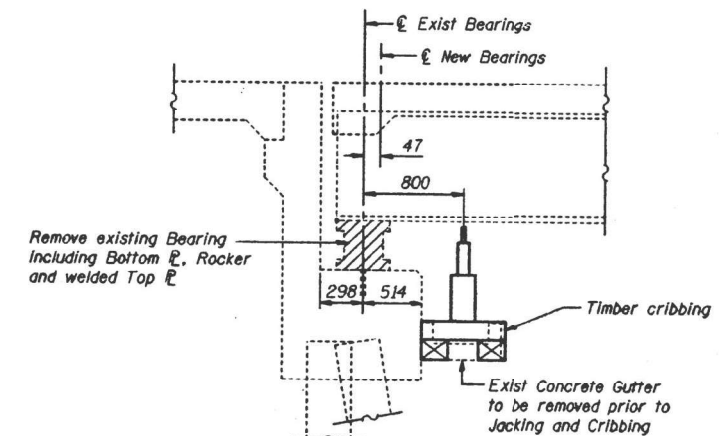
MsR - Moment due to dead loads on composite section.

Mt - Moment due to live load on non-composite or composite section.

M Imp - Moment due to live load impact on non-composite or composite section.

JACKING AND CRIBBING PROCEDURES

- Jacking and Cribbing shall be done after existing deck removal is completed. See suggested stage construction sequence on sheet #2 of 20.
- The Contractor shall submit for approval by the Engineer plans for jacking and cribbing, prior to commencing any work at the bearings. The maximum dead load reaction with the deck removed (per bearing) at the north and south abutments = 25.8 kN. The minimum jack capacity at each beam shall be 52 kN at the north and south abutments.
- Top of beam elevations shall be measured prior to jacking and shall remain the same after bearings are in place.
- There shall be at least one jack per bearing and the jack shall be placed close to the bearing. The steel shall be raised a maximum of 7 mm and shall be blocked in position until after the completion of the installation of new bearings.
- Remove the existing anchor bolts flush with the concrete surface, grind smooth, and seal with epoxy. The rockers and top and bottom plates shall be removed. The top plate shall be removed using the air-arc method. Grind smooth all weld material remaining on the bottom flange. Cost of removing anchor bolts, rockers, top plates, and bottom plates shall be included with "Jacking and Cribbing."
- Anchor bolts shall be set before bolting diaphragms over supports.
- The new concrete abutment seats, elastomeric bearings, and end diaphragms shall be in place and the jacks lowered before the new concrete deck is poured.



AT NORTH AND SOUTH ABUTMENTS
(Dimensions at Rt L's)

JACKING AND CRIBBING

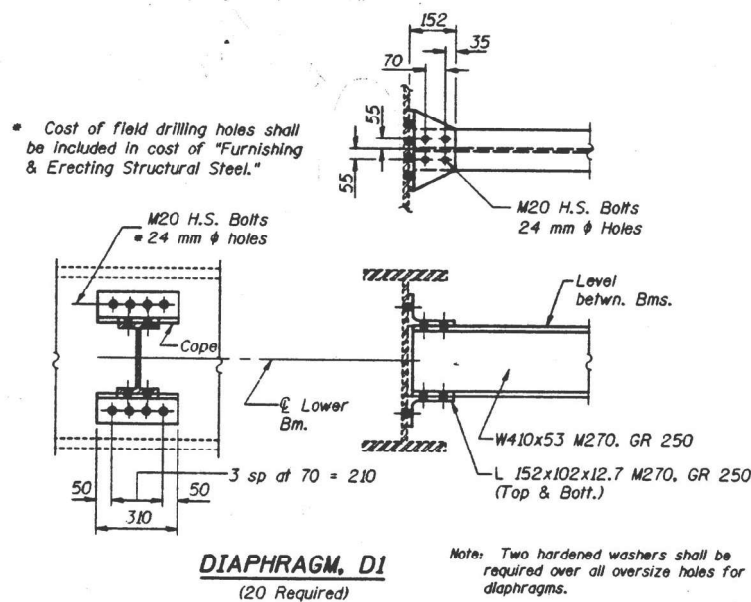
BILL OF MATERIAL

Item	Unit	Total
Jacking and Cribbing	Each	12

STRUCTURAL STEEL DETAILS
ILLINOIS ROUTE 4 OVER
UNION PACIFIC RAILROAD
(FORMERLY C & NW RAILROAD)
FAP ROUTE 670 SECTION (R,J) VBR
MACOUPIN COUNTY
STATION 6+710.01
STRUCTURE NUMBER 059-0009

REVISIONS	
NAME	DATE

	S. & N. Abutts.	Piers 1 & 2
R _l (kN)	119	415
R _t (kN)	151	206
Imp. (kN)	39	54
R (Total) (kN)	309	675



DIAPHRAGM, D1
(20 Required)

* Cost of field drilling holes shall be included in cost of "Furnishing & Erecting Structural Steel."

DESIGNED	ADL
CHECKED	[Signature]
DRAWN	BGJ
CHECKED	[Signature]

USER NAME	= dudleybm
PLOT SCALE	= 100,0000' / in.
PLOT DATE	= 11/25/2020

DESIGNED	-
DRAWN	-
CHECKED	-
DATE	-

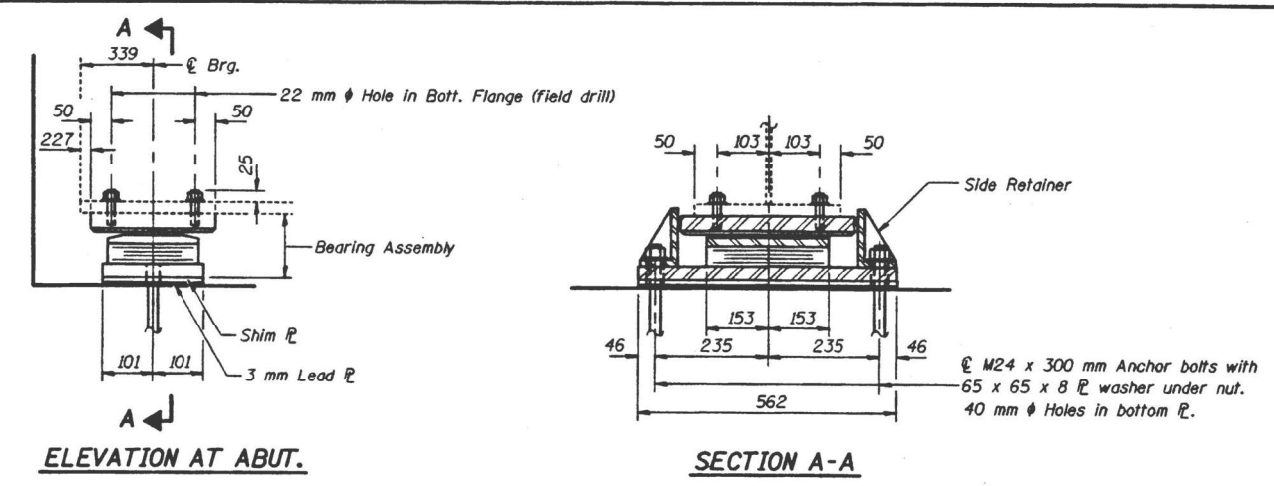
REVISED	-
REVISED	-
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REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

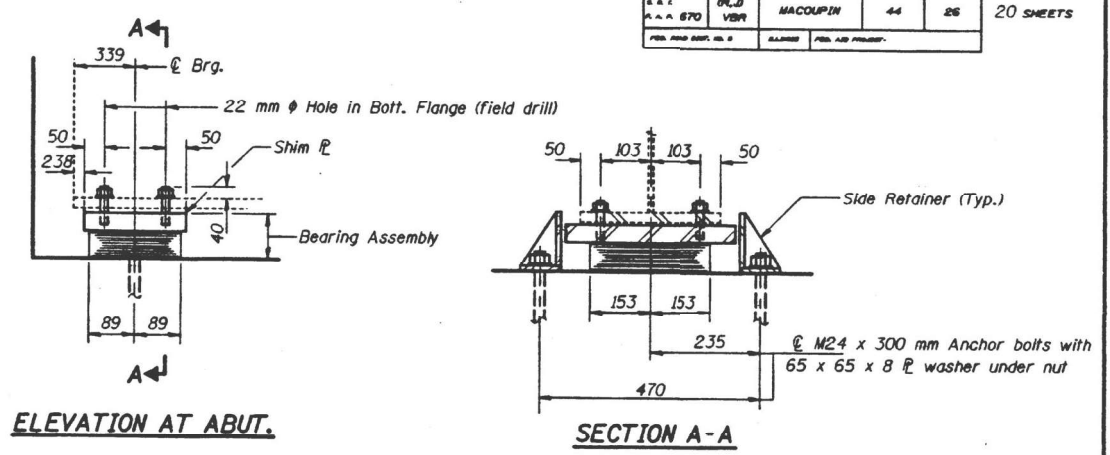
EXISTING BRIDGE PLANS, SN 059-0009
(FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

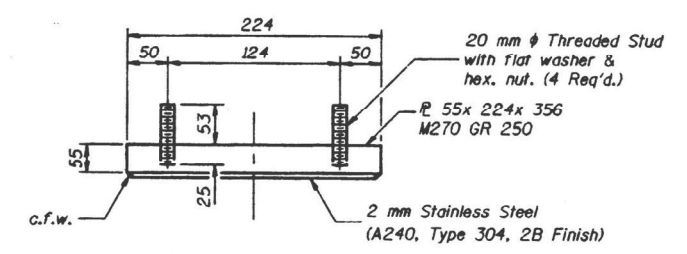
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
067	(J) BP	MACOUPIN	9	8
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72M53	



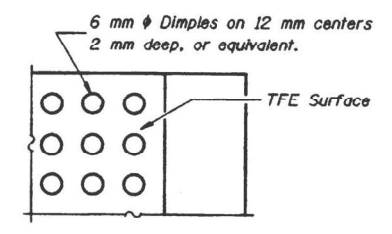
ELEVATION AT ABUT.
SECTION A-A
TYPE II ELASTOMERIC EXP. BRG. AT SOUTH ABUTMENT



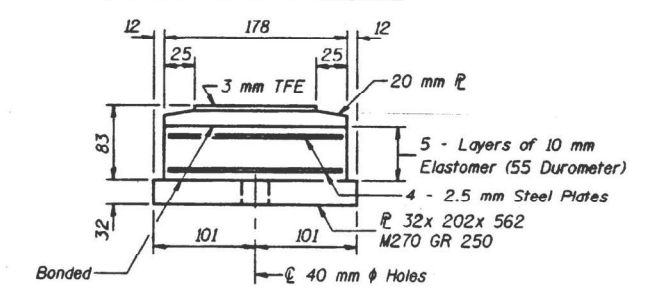
ELEVATION AT ABUT.
SECTION A-A
TYPE I ELASTOMERIC EXP. BRG. AT NORTH ABUTMENT



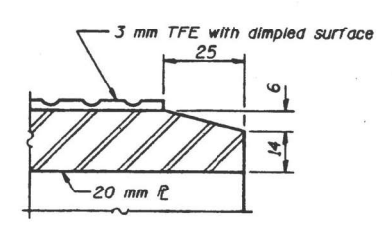
TOP BEARING ASSEMBLY



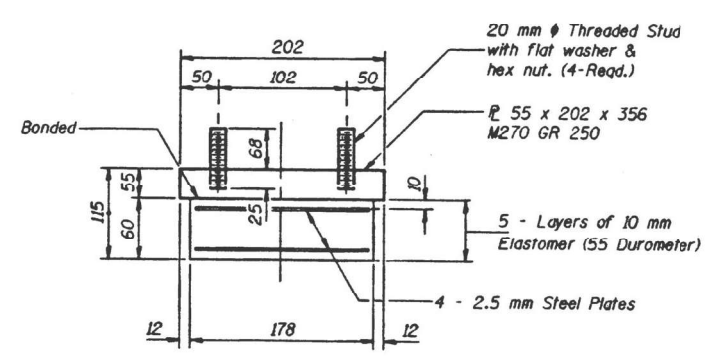
PLAN-TFE SURFACE



BOTTOM BEARING ASSEMBLY

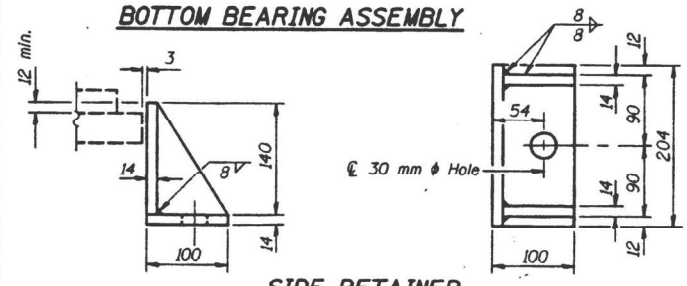


SECTION THRU TFE



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

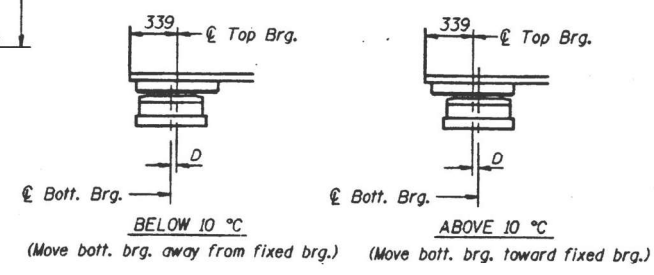


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

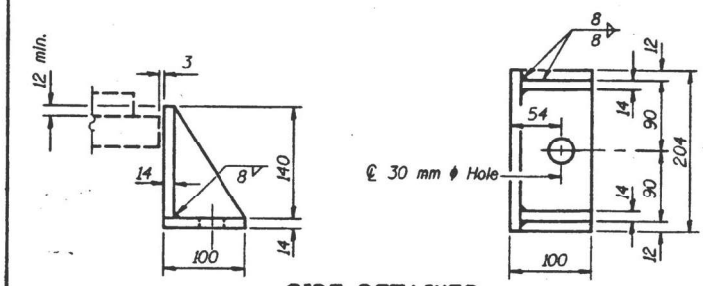
Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

Notes: See sheet #12 of 20 for Anchor Bolt installation. All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	6
Elastomeric Bearing Assembly Type II	Each	6

TYPE I & TYPE II ELASTOMERIC BEARINGS
ILLINOIS ROUTE 4 OVER UNION PACIFIC RAILROAD (FORMERLY C & NW RAILROAD)
FAP ROUTE 670 SECTION (R,J) VBR MACOUPIN COUNTY
STATION 6+710.01
STRUCTURE NUMBER 059-0009

REVISIONS	
NAME	DATE

DESIGNED	ADL
CHECKED	BGJ
DRAWN	BGJ
CHECKED	BGJ

MODEL Path: C:\OPERATIONS\Bridges\Bridges\Illinois_CAD\72M53 - 0590009.dwg

USER NAME = dudleybm	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 11/25/2020	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 059-0009
(FOR INFORMATION ONLY)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
067	(J) BP	MACOUPIN	9	9
ILLINOIS			FED. AID PROJECT	
SCALE:			CONTRACT NO. 72M53	