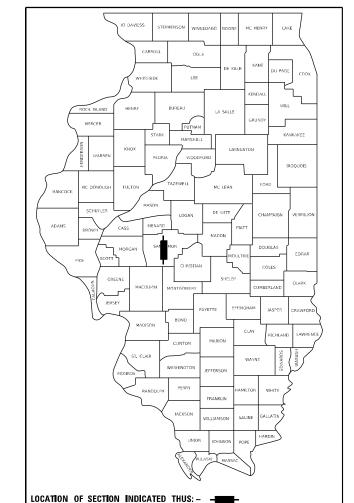
STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

* 5 + 2 = 7 TOTAL SHEETS

D-96-044-24



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BMITTED March 26 20 24

10, 2024

ENGINEER OF DE May 10, 2024

St

PRINTED BY THE AUTHORITY

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

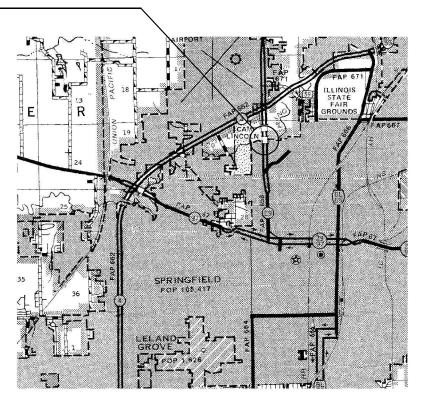
PROPOSED CONTRACT MAINTENANCE

FAP ROUTE 658 (J DAVID JONES PKWY)
SECTION (102B-1)BRR
PROJECT (STATE ONLY)
BRIDGE BEARING REPLACEMENT
SANGAMON COUNTY

C-96-065-24

PROJECT LOCATION

SN 084-0169
IL 29 (J DAVID JONES PKWY)
OVER SPRING CREEK
0.5 MI S IL 4



100' 200' 300' — 1" = 100' 100' 20' 30' — 1" = 50' 100' 1" = 50' 100' 1" = 40' 100' 1" = 30' 1" = 20'

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

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

GROSS LENGTH = 216 FT. = 0.04 MILE NET LENGTH = 216 FT. = 0.04 MILE

CONTRACT NO. 72738

 \bigcirc

REV. - MS

INDEX OF SHEETS STANDARDS

1 COVER SHEET

2 INDEX, STANDARDS, SIGNATURES, & GENERAL NOTES

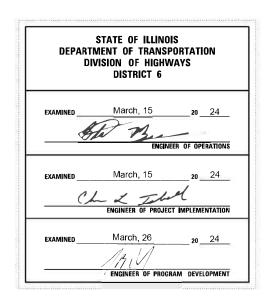
3 SUMMARY OF QUANTITIES

4-5B SN 084-0169 BRIDGE PLANS

000001-08 001001-02 001006 701101-05 701106-02 701422-10 701901-09

GENERAL NOTES:

THE CONTRACTOR SHALL CORRECT ELEVATION DIFFERENCES IN THE PROFILE GRADE ACROSS THE EXISTING EXPANSION JOINTS AT THE ENDS OF THE DECK. THIS SHALL BE ACCOMPLISHED BY ADDING SHIM PLATES AT LOCATIONS SHOWN ON THE PLANS. NO MORE THAN 2 SHIM PLATES SHALL BE ADDED TO EACH BEARING LOCATION. HOWEVER, THE CONTRACTOR IS ENCOURAGED TO USE THE MINIMAL NUMBER OF SHIMS AT EACH LOCATION AND MINIMUM SHIM THICKNESS SHALL BE 1/8". THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING DIMENSIONS AND PROPOSE ALL VERTICAL ADJUSTMENTS TO THE ENGINEER PRIOR TO ORDERING THE EXTRA SHIMS. THE ALLOWABLE ELEVATION TOLERANCES BETWEEN THE TWO SIDES OF THE EXPANSION JOINTS SHALL BE ±1/4". RECORDING ACCURATE MEASUREMENTS AND ORDERING PROPERLY SIZED BEARING EXTENSIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.



TO STA.

REV. - MS

1	USER NAME = Brandon.Dudley	DESIGNED	REVISED =	07475 05 11111010
		DRAWN	REVISED -	STATE OF ILLINOIS
	PLOT SCALE = 100.0000 / in.	CHECKED	REVISED -	DEPARTMENT OF TRANSPORTATION
	PLOT DATE = 3/26/2024	DATE	REVISED +	

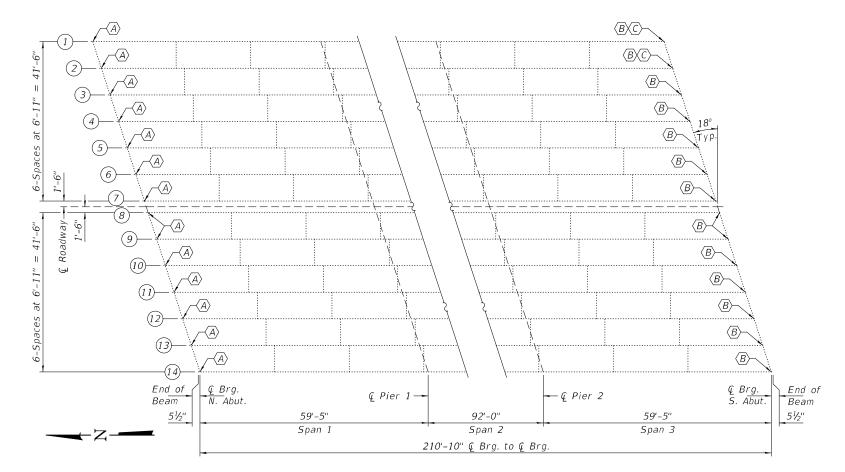
SCALE:

0-0	2178-603	31
SN	084-01	69
100	% STAT	E
DDT		DANI

				BRIDGE/URBAN
CODE			TOTAL	0013
NO.	ITEM	UNIT	QUANTITY	SANGAMON
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4,580	4,580
			,	,,,,,,
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	28	28
52100520	ANCHOR BOLTS, 1"	EACH	56	56
67100100	MOBILIZATION	L SUM	1	1
70100320	TRAFFIC CONTROL AND PROTECTION, STANDARD 701422	L SUM	1	1
70107025	CHANGEABLE MESSAGE SIGNS	CAL DAY	60	60
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	28	28

?	F١	/	_	M	S

USER NAME = Brandon-Dudle	ey	DESIGNED -	REVISED -							F.A.P.	SECTION	COUNTY	TOTAL SHEET
		DRAWN -	REVISED -	STATE OF ILLINOIS		S	UMMAR	Y OF QUANTITIES	5	658	(102B-1)BRR	SANGAMON	5 3
PLOT SCALE = 100.0000 ' / i	in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION							(1011 1/2::::	CONTRACT	NO. 72738
PLOT DATE = 3/26/2024		DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS STA.	TO STA.	i	ILLINOIS FED. /	AID PROJECT	i



PARTIAL FRAMING PLAN

- $\langle \overline{A} \rangle$ Existing Exp. Brg. Assembly to be Removed & Replaced. (14-Locations) (See sheet 2 of 4.)
- $\langle \overline{B} \rangle$ Existing Exp. Brg. Assembly to be Removed & Replaced. (14-Locations) (See sheet 3 of 4.)
- $\langle \overline{C} \rangle$ Additional Brg. Stiffener Angle to be installed. (2-Locations) (See sheet 4 of 4.)



Expires: November 30, 2024

DESIGNED -	Victor H. Veliz	EXAMINED	2/	DATE -	MAY 9, 2024	
CHECKED -	Chi-Cheung Chau		ENGINEER OF STRUCTURAL SERVICES			
DRAWN -	STEFFEN	PASSED	Jayan F. Arhill	REVISED	-	
CHECKED -	VHV CCC		ENGINEER OF BRIDGES AND STRUCTURES	REVISED	-	

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

PARTIAL FRAMING PLAN & REPAIR DETAILS IL 29 (J. DAVID JONES PARKWAY) OVER SPRING CREEK SN 084-0169 SHEET NO. 1 OF 4 SHEETS

COUNTY TOTAL SHEETS NO. SANGAMON 5 4 SECTION (102B-I)BRR 658 CONTRACT NO. 72738

TOTAL BILL OF MATERIAL

GENERAL NOTES

unless otherwise noted.

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

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for

additional compensation for a change in scope of the work, however, the Contractor

will be paid for the quantity actually furnished at the unit price bid for the work.

Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized

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

Existing structural steel that will be in contact with new structural steel shall

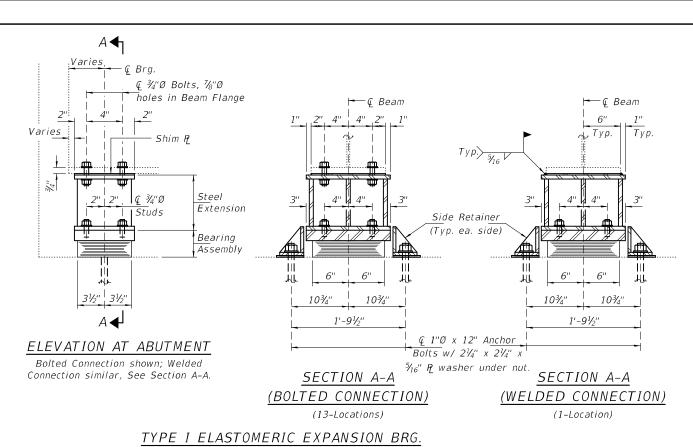
All new structural steel and bearing assemblies shall be hot-dip galvanized.

be cleaned and painted prior to erection as required by the special provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

See Special Provisions for "Hot Dip Galvanizing for Structural Steel.

bolts. Bolts $\frac{7}{8}$ "Ø, open holes $\frac{15}{16}$ "Ø, unless otherwise noted.

<u>TOTAL BILL OF MATERIAL</u>						
ITEM	UNIT	QUANTITY				
Jack and Remove Existing Bearings	Each	28				
Elastomeric Bearing Assembly, Type I	Each	28				
Furnishing and Erecting Structural Steel	Pound	4580				
Anchor Bolts, 1"Ø	Each	56				



BEAM REACTIONS

R₽ + S₽	(K)	21.3
R Ł	(K)	36.7
Imp.	(K)	10.0
R (Total)	(K)	68.0

Notes:

© New Brg. & E. Anchor Bolt

@ Existing ¾"_

Stiffener P

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

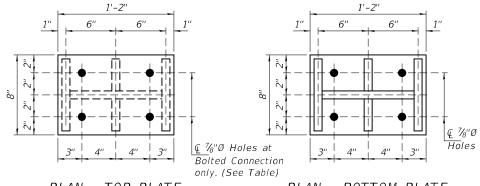
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 35 Tons.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

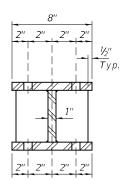
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

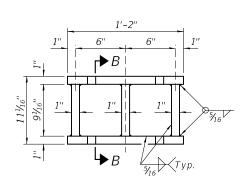
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN - TOP PLATE

P 1" x 8" x 1'-2" (14-Req'd) (13-with holes; 1-without holes.) PLAN - BOTTOM PLATE P_ 1" x 8" x 1'-2" (14-Req'd)





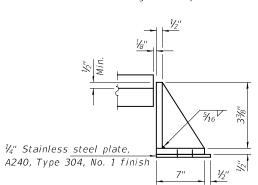
SECTION B-B

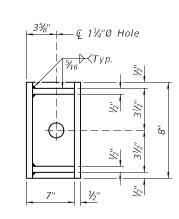
STEEL EXTENSION DETAIL

to Pier 1 ¾"Ø Threaded Stud 4'' with flat washer & hex nut. (4-Reg'd.) Bondea Tapered P 13/4" x 8" x 1'-2" 3-Layers of -⅓" Elastomer (55 Durometer) 2- 3/32" Steel Plates BEARING ASSEMBLY

Note:

Shim plates shall not be placed under Bearing Assembly.

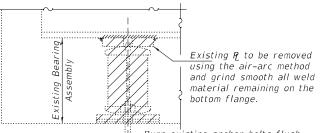




Trim girder to 1" min. cl. (See Note Edge of "B" Edge of Existing Back Wall BEARING LOCATION PLAN See Table for Dims. "A" & "B".

TABLE OF DIMENSIONS & EXTENSION CONNECTION TYPE

BEAM	Dim. "A"	Dim. "B"	CONNECTION TYPE
1	1''	55%"	Bolted
2	1''	55/8"	Bolted
3	11/8"	5¾"	Welded
4	1"	5¾"	Bolted
5	1"	6½"	Bolted
6	1''	61/2"	Bolted
7	1''	61/2"	Bolted
8	1"	61/2"	Bolted
9	1"	6½"	Bolted
10	1"	5 ⁷ /8"	Bolted
11	1''	6"	Bolted
12	1"	61/4"	Bolted
13	1"	61/4"	Bolted
14	1''	6¾"	Bolted



Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	14
Jack and Remove Existing Bearings	Each	14
Furnishing and Erecting Structural Steel	Pound	2160
Anchor Bolts, 1"Ø	Each	28

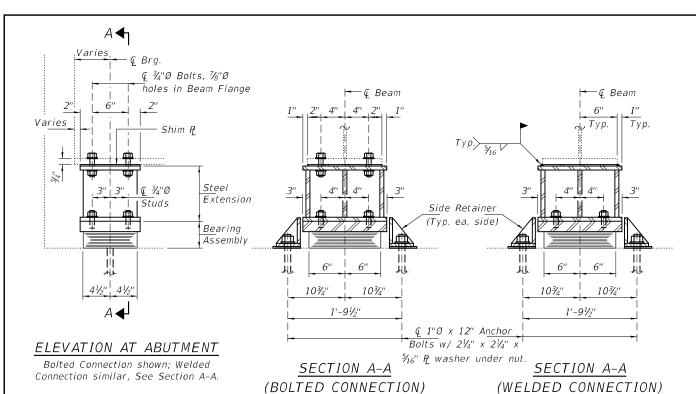
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

DESIGNED -	VHV	EXAMINED		DATE -	MAY 9, 2024
CHECKED -	CCC	-	ENGINEER OF STRUCTURAL SERVICES		
DRAWN -	STEFFEN	PASSED	Jayne F. Jelff	REVISED	-
CHECKED -	VHV CCC	-	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	-

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. RTE	SEC ⁻	TION		COUNTY	TOTAL SHEETS	SHEET NO.			
658	(102B-I)BRR			SANGAMON	5	5			
			CONTRACT	NO. 72	738				
	NA MADE SEE AND DROUGET								



(5-Locations)

TYPE I ELASTOMERIC EXPANSION BRG.

BEAM REACTIONS

RP + SP	(K)	21.3
R Ł	(K)	36.7
Imp.	(K)	10.0
R (Total)	(K)	68.0

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

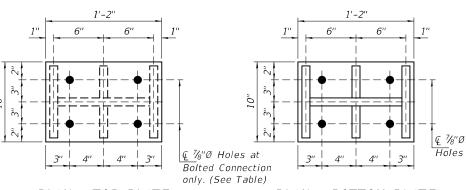
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 35 Tons.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_V =36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.

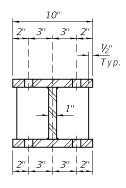


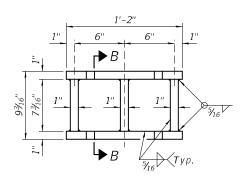
PLAN - TOP PLATE

P 1" x 10" x 1'-2" (14-Req'd) (5-with holes; 9-without holes.)

PLAN - BOTTOM PLATE

P_ 1" x 10" x 1'-2" (14-Req'd)





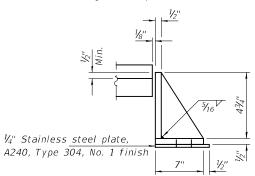
SECTION B-B

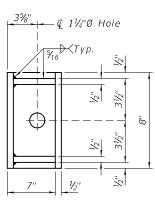
STEEL EXTENSION DETAIL

¾"Ø Threaded Stud 10" with flat washer & hex nut. (4 Regd.) 1½" x 10" x 1'-2" 7-Layers of ¾" Elastomer (55 Durometer) 6 - 3/32" Steel Plates

BEARING ASSEMBLY

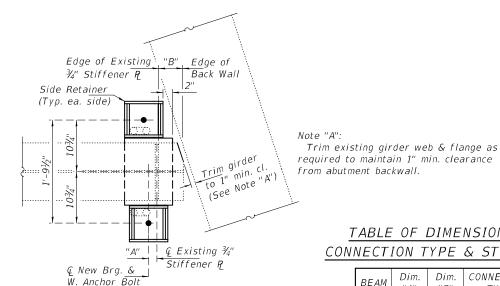
Shim plates shall not be placed under Bearing Assembly.





SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



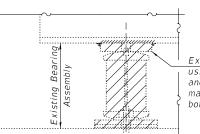
(9-Locations)

BEARING LOCATION PLAN

See Table for Dims. "A" & "B". (New Stiffener \angle at Beams 1 & 2 not shown, see sheet 4 of 4.)

TABLE OF DIMENSIONS, EXTENSION CONNECTION TYPE & STIFFENER REPAIRS

BEAM	Dim. "A"	Dim. "B"	CONNECTION TYPE	NEW BRG. STIFFENER
1	21/2"	4''	Welded	Yes
2	21/2"	4''	Welded	Yes
3	15/8"	5"	Welded	No
4	1¾"	4¾"	Welded	No
5	1¾"	4¾"	Welded	No
6	1¾"	4¾"	Welded	No
7	1 1/4"	5½"	Welded	No
8	1"	6½"	Bolted	No
9	1"	6½"	Bolted	No
10	1"	5 ⁷ /8''	Bolted	No
11	1"	5¾"	Bolted	No
12	11/8"	5¾''	Welded	No
13	1"	55/8''	Bolted	No
14	11/2"	5"	Welded	No



Existing R to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

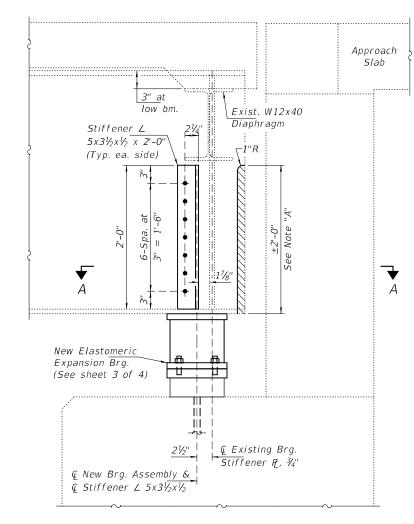
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	14
Jack and Remove Existing Bearings	Each	14
Furnishing and Erecting Structural Steel	Pound	2420
Anchor Bolts, 1"Ø	Each	28
	Each	28

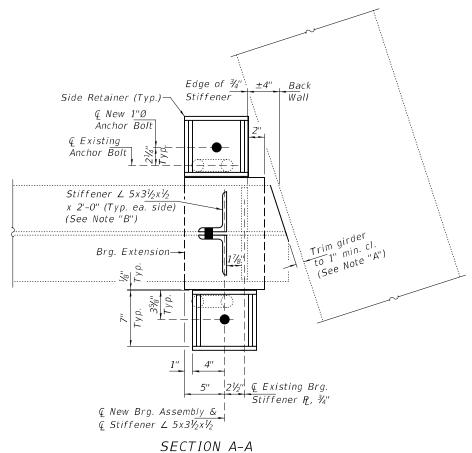
DESIGNED - VHV EXAMINED MAY 9, 2024 CHECKED - CCC DRAWN - STEFFEN PASSED REVISED -CHECKED - VHV CCC REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** SOUTH ABUTMENT BEARING REPLACEMENT DETAILS SN 084-0169 SHEET NO. 3 OF 4 SHEETS

TOTAL SHEET NO. 5 5A SECTION COUNTY SANGAMON 658 (102B-I)BRR CONTRACT NO. 72738



BEARING STIFFENER REPAIR 2-Locations



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

Note "A":

Trim existing girder web & flange as required to maintain 1" min. clearance from abutment backwall.

Note "B":

Cost of new stiffeners included with Furnishing & Erecting Structural Steel.

DESIGNED - VHV	EXAMINED		DATE -	MAY 9, 2024
CHECKED - CCC		ENGINEER OF STRUCTURAL SERVICES		
DRAWN - STEFFEN	PASSED	Jayne F. Jehth	REVISED	-
CHECKED - VHV CCC		ENGINEER OF BRIDGES AND STAUCTURES	REVISED	-

ADDITIONAL BEARING STIFFENER DETAILS SN 084-0169 SHEET NO. 4 OF 4 SHEETS

F.A.P. RTE	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
658	(102B-I)BRR		SANGAMON	5	5B
			CONTRACT	NO. 72	738
	ILLINOIS	IS FED. AID PROJECT			