ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 2943	1212.8 -1-1	Cook	51	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 25
35 SHEETS

Contract # 60D74

NOTES

Anchor bolts shall be ASTM F1554 all-thread (or 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.

Anchor bolts for side retainers at Type I bearings may be installed in holes drilled before or after members are in place.

Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I or Elastomeric Bearing Assembly, Type II.

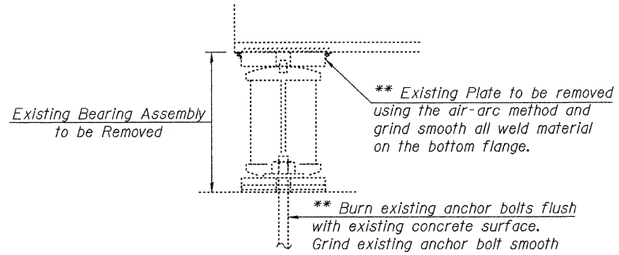
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

For Type II Elastomeric Bearing Assemblies, The $\frac{1}{8}$" PTFE 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.

For Type II Elastomeric Bearing Assemblies, Bonding of $\frac{1}{8}$" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Weight of Shim Plates and Steel Extensions included with Furnishing and Erecting Structural Steel.

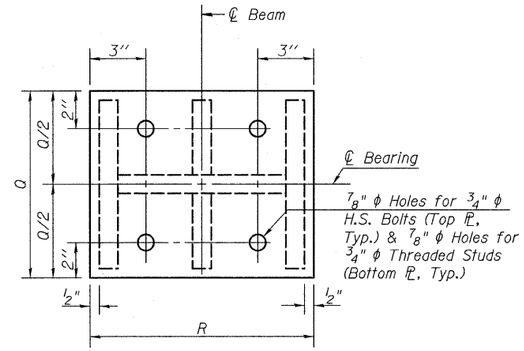


**Cost is included with Jack and Remove Existing Bearings

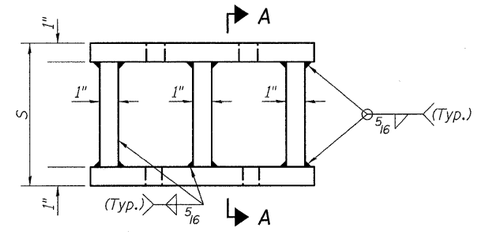
JACK AND REMOVE EXISTING BEARING

JACKING PROCEDURES

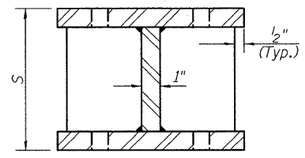
1. Prior to commencing any work at the bearings, the contractor shall submit plans for Jacking for approval by the Engineer.
2. Jacking shall be limited so that the maximum lift transversely between adjacent beams is $\frac{1}{8}$". See Special Provision for Jack and Remove Existing Bearings.
3. Minimum Jack capacity is 65 Tons.



STEEL EXTENSION PLAN



STEEL EXTENSION ELEVATION



SECTION A-A

REACTION TABLE

Bearing Location	Reaction (kips)			
	$R_{℄}$	$R_{℄}$	Impact	R_{Total}
℄ Brg. S. Abut.	37.1	38.1	9.0	84.2
℄ S. Brg. Pier 3	35.5	37.9	8.9	82.3
℄ N. Brg. Pier 3	36.6	46.5	11.7	94.8
℄ S. Brg. Pier 7	49.6	47.8	11.1	108.5
℄ N. Brg. Pier 7	31.9	45.9	11.9	89.7
℄ S. Brg. Pier 11	35.7	45.9	11.8	93.4
℄ N. Brg. Pier 11	34.5	45.9	12.0	92.4
℄ S. Brg. Pier 15	45.5	47.7	11.0	104.2
℄ N. Brg. Pier 15	31.4	45.6	12.1	89.1
℄ S. Brg. Pier 18	43.3	47.4	11.2	101.9
℄ N. Brg. Pier 18	45.6	47.7	11.0	104.3
℄ S. Brg. Pier 21	50.5	48.0	10.7	109.2
℄ N. Brg. Pier 21	55.6	48.6	10.5	114.7
℄ S. Brg. Pier 24	47.3	47.5	11.1	105.9
℄ N. Brg. Pier 24	41.4	23.3	5.8	70.5
℄ Brg. N. Abut.	40.0	23.2	5.8	69

SHIM TABLE

Bearing Location	Size	*Girder											
		A	B	C	D	E	F	G	H	J	K	L	M
℄ Brg. S. Abut.	10" x 26½"	-	$\frac{7}{16}$"	-	$\frac{7}{16}$"	-	$\frac{3}{8}$"	-	-	-	-	-	-
℄ S. Brg. Pier 3	10" x 12"	-	-	-	$\frac{1}{8}$"	-	-	-	$\frac{7}{16}$"	-	-	-	-
℄ N. Brg. Pier 3	10" x 26½"	$\frac{1}{8}$"	$\frac{1}{4}$"	-	-	$\frac{3}{16}$"	$\frac{3}{16}$"	-	-	-	$\frac{3}{16}$"		
℄ S. Brg. Pier 7	11" x 26½"	-	-	-	-	$\frac{1}{8}$"	-	-	-	-	-		
℄ N. Brg. Pier 7	10" x 26½"	-	-	-	-	$\frac{1}{8}$"	-	-	-	-	-		
℄ S. Brg. Pier 11	10" x 26½"	-	-	-	-	-	$\frac{1}{8}$"	$\frac{3}{8}$"	-	-	-		
℄ N. Brg. Pier 11	10" x 26½"	-	-	-	-	-	-	$\frac{5}{16}$"	-	-	-		
℄ S. Brg. Pier 15	11" x 26½"	-	-	-	$\frac{1}{2}$"	$\frac{5}{16}$"	$\frac{5}{16}$"	-	-	-	-		
℄ N. Brg. Pier 15	10" x 12"	-	-	-	$\frac{7}{16}$"	-	-	$\frac{7}{16}$"	$\frac{7}{16}$"	$\frac{7}{16}$"	$\frac{7}{16}$"		
℄ S. Brg. Pier 18	11" x 26½"	-	-	-	-	$\frac{1}{4}$"	$\frac{9}{16}$"	$\frac{1}{4}$"	$\frac{1}{4}$"	$\frac{1}{4}$"	$\frac{1}{4}$"		
℄ N. Brg. Pier 18	11" x 12"	-	-	-	-	-	$\frac{3}{8}$"	-	-	-	-		
℄ S. Brg. Pier 21	11" x 26½"	-	-	-	-	-	-	-	-	-	-		
℄ N. Brg. Pier 21	11" x 16"	-	-	-	-	-	-	-	-	-	-		
℄ S. Brg. Pier 24	11 x 31"	-	-	-	-	-	-	-	-	$\frac{1}{8}$"	$\frac{3}{16}$"		
℄ N. Brg. Pier 24	10" x 26½"	-	-	-	-	-	-	-	-	-	-		
℄ Brg. N. Abut.	10" x 26½"	-	-	-	-	-	-	-	-	-	-		

*Girder A is the furthest West at all locations

BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings	Each	164
Elastomeric Bearing Assembly Type I	Each	42
Elastomeric Bearing Assembly Type II	Each	122
Furnishing and Erecting Structural Steel	Pound	22,920
Anchor Bolts, 1¼"	Each	328

BEARING DIMENSIONS

Bearing Location	Bearing Type	Elastomer						Top Plate			Bottom Plate			Side Retainers			Steel Extension			Bot. Flange tr (max.)
		A	B	C	N_p	Tp	Ns	Ts	D	E	F	G	H	J	K	L	M	P	Q	R	S	
℄ Brg. S. Abut.	Type II	9"	12"	4 1/16"	7	⅜"	6	3/32"	10½"	14"	1½"	1⅞"	10"	26½"	1¼"	6"	6⅛"	21¾"	10½"	12"	7"	1⅛"
℄ S. Brg. Pier 3	Type I	9"	12"	3 3/16"	7	⅜"	6	3/32"	10"	14"	1½"	-	-	-	-	4¾"	6⅛"	21¾"	10"	12"	9½"	⅞"
℄ N. Brg. Pier 3	Type II	9"	12"	4 1/16"	7	⅜"	6	3/32"	10¼"	14"	1⅝"	1⅛"	10"	26½"	1⅜"	6"	6⅛"	21¾"	10¼"	12"	6⅛"	¾"
℄ S. Brg. Pier 7	Type II	10"	14"	4⅛"	6	7/16"	5	⅛"	11½"	16"	1¾"	1¾"	11"	26½"	1⅜"	6"	5⅛"	21¾"	11½"	12"	6¾"	1⅜"
℄ N. Brg. Pier 7	Type II	9"	12"	4 1/16"	7	⅜"	6	3/32"	10¼"	14"	1⅝"	1⅝"	10"	26½"	1¼"	5¾"	6⅛"	21¾"	10¼"	12"	7⅛"	¾"
℄ S. Brg. Pier 11	Type II	9"	12"	4 1/16"	7	⅜"	6	3/32"	10"	14"	1⅝"	1⅝"	10"	26½"	1⅜"	5¾"	6⅛"	21¾"	10"	12"	7"	¾"
℄ N. Brg. Pier 11	Type II	9"	12"	4 1/16"	7	⅜"	6	3/32"	10"	14"	1⅝"	1⅝"	10"	26½"	1⅜"	5¾"	6⅛"	21¾"	10"	12"	7"	¾"
℄ S. Brg. Pier 15	Type II	10"	14"	4⅛"	6	7/16"	5	⅛"	11½"	16"	1¾"	1¾"	11"	26½"	1¼"	6"	5⅛"	21¾"	11½"	12"	6⅞"	1¼"
℄ N. Brg. Pier 15	Type I	9"	12"	2¼"	5	⅜"	4	3/32"	10"	14"	1⅝"	-	-	-	-	3⅞"	6⅛"	21¾"	10"	12"	10⅜"	¾"
℄ S. Brg. Pier 18	Type II	10"	14"	4 11/16"	7	7/16"	6	⅛"	11¼"	16"	1¾"	1¾"	11"	26½"	1¼"	6½"	5⅛"	21¾"	11¼"	12"	6⅜"	1"
℄ N. Brg. Pier 18	Type I	10"	14"	3¼"	6	7/16"	5	⅛"	11"	16"	1¾"	-	-	-	-	5"	5⅛"	21¾"	11"	12"	9¼"	¾"
℄ S. Brg. Pier 21	Type II	10"	14"	4 11/16"	7	7/16"	6	⅛"	11¾"	16"	1¾"	2"	11"	26½"	1⅜"	6¾"	5⅛"	21¾"	11¾"	12"	6⅛"	¾"
℄ N. Brg. Pier 21	Type I	10"	14"	3 13/16"	7	7/16"	6	⅛"	11"	16"	1⅛"	-	-	-	-	5¾"	7⅜"	26¼"	11"	16"	8½"	1½"
℄ S. Brg. Pier 24	Type II	10"	14"	4⅛"	6	7/16"	5	⅛"	11¾"	16"	1¾"	2⅛"	11"	31"	1½"	6⅜"	7⅜"	26¼"	11¾"	16"	6½"	1⅛"
℄ N. Brg. Pier 24	Type II	9"	12"	4 1/16"	7	⅜"	6	3/32"	10¼"	14"	1¾"	1⅜"	10"	26½"	1¼"	5⅞"	6⅛"	21¾"	10¼"	12"	6⅝"	1"
℄ Brg. N. Abut.	Type II	9"	12"	4 1/16"	7	⅜"	6	3/32"	10½"	14"	1⅜"	1⅝"	10"	26½"	1¼"	5¾"	6⅛"	21¾"	10½"	12"	6¾"	1"

rjngroup
Excellence through Ownership
200 West Front Street
Wheaton, IL 60187

ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS - I
BURNHAM AVE OVER STATE ST, R.R. & RIVER
FAU RTE 2943 SECTION 1212.8-I-1
COOK COUNTY
STATION 231+79.04
STRUCTURE NO. 016-0806

DATE: 1-14-2009
DRAWN BY LM
CHECKED BY BLB