

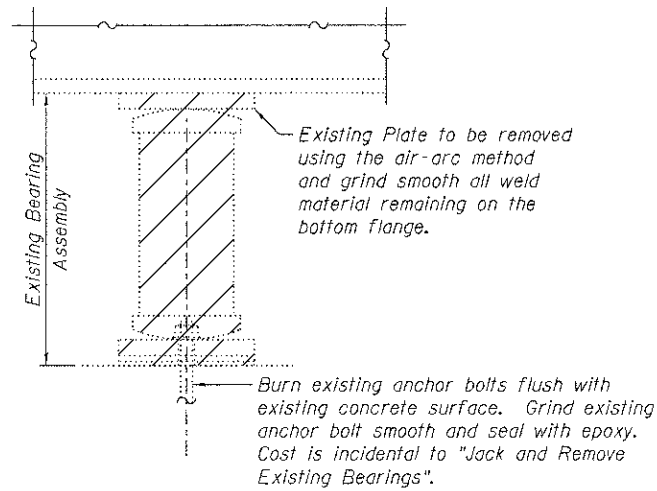
**BEAM REACTION TABLE**

	W. Abut.	Pier 1	Pier 2	Pier 3	E. Abut.
R Q *	(K) **4.2	**13.4	**13.5	13.4	**4.2

\* Reactions for dead load are for dead load of beam only.  
 \*\* For information only.

**JACK & REMOVE EXISTING BEARING PROCEDURE**

1. Removal of existing deck.
2. Disconnect diaphragms at stage construction line.
3. Jacking existing superstructure.
4. Remove and replace bearings.



**EXISTING BEARING REMOVAL DETAIL**

**JACKING AND REMOVING BEARING NOTES:**

1. Jacking existing superstructure should be done after the existing deck is removed.
2. The Contractor shall submit plans for jacking the existing superstructure for approval by the Engineer prior to commencing any work with the bearings. The submittal shall be prepared and sealed by a Licensed Structural Engineer in Illinois.
3. The lifting of the structure should be controlled so that the relative elevation between adjacent beams does not vary more than 1/4 inch from their original elevation differential.
4. The relative elevations at adjacent substructure units should not vary more than 3/4 inch from the original relative elevations.
5. The jack capacity provided should be between 50% and 100% greater than the maximum expected loading. For reaction table see above.
6. The diaphragms should not be used as load carrying members in the jacking and cribbing system.
7. When jacks are placed directly under a beam, the jack should be centered under the web and a steel plate should be placed between the top of the jack and the bottom flange of the beam. When web stiffeners bearing on the bottom flange do not exist directly over the location of the jack under a steel beam, hardwood timbers should be installed tightly between the top and bottom flange to prevent flange rotation. Steel stiffening angles should be attached to the web of the beam when the beam web thickness is not adequate to carry the jacking load. Steel plates should be placed under jacks bearing directly on the existing substructure to distribute the jacking load and prevent damage to the existing concrete.
8. Jacks should be placed in a manner and in locations that will ensure that the jacks will be equally loaded and the load will be uniformly distributed to the foundation of the jacking system.
9. The following maximum allowable pressures should be used to determine the area of the timber mats supporting jacking systems.

Supporting Material	Max. Allowable Pressure
Natural Ground (Unsaturated).....	0.5 tons/sq. ft.
Conc. Slopewalls & Bit. Shoulders.....	1.0 tons/sq. ft.
Bituminous Pavements.....	2.0 tons/sq. ft.
Concrete Pavements.....	4.0 tons/sq. ft.

**BILL OF MATERIAL**

Item	Unit	Total
Jack and Remove Existing Bearings	Each	10

I:\PROJ\_0003408\_000\Design\Structural\CAD\099-3031\_0003408\_20 Bearing Removal.dgn



USER NAME = rdenley	DESIGNED - MHT	REVISED -
	CHECKED - SMY	REVISED -
PLOT SCALE = 0.1:0000 '1' / in.	DRAWN - SRG	REVISED -
PLOT DATE = 1/28/2013	CHECKED - BWS	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BEARING REMOVAL DETAILS  
STRUCTURE NO. 099-3031**

SHEET NO. S-20 OF S-24 SHEETS

F.A.I. RTE. 298	SECTION 04-0069-18-BR	COUNTY WILL	TOTAL SHEETS 51	SHEET NO. 41
CONTRACT NO. 63803				
ILLINOIS FED. AID PROJECT				