

BELOW IS A PROPOSED SEQUENCE OF WORK FOR BEARING REPLACEMENT THAT MAY BE CONSIDERED BY THE CONTRACTOR. THE CONTRACTOR MAY PROPOSE AN ALTERNATE BEARING REPLACEMENT SEQUENCE WITH APPROVAL BY THE CONTRACT ADMINISTRATOR.

AT ABUTMENT BEARINGS :

1. PRIOR TO DEMOLITION OF THE DECK, JACK THE GIRDERS FROM THE EXISTING ABUTMENT CONCRETE DIAPHRAGM. NOTE THAT DECK DEMOLITION MAY COMMENCE PRIOR TO JACKING AND BLOCKING, BUT THE LAST 5' OF DECK FROM THE CENTERLINE OF THE ABUTMENT BEARINGS MAY NOT BE DEMOLISHED UNTIL AFTER JACKING IS COMPLETE AND BRIDGE IS LOWERED ONTO TEMPORARY BEARINGS.
2. CONSTRUCT ABUTMENT CONCRETE BEARING PEDESTALS.
3. INSTALL TEMPORARY BEARINGS ON PEDESTALS AND LOWER BRIDGE.
4. COMPLETE BRIDGE DECK DEMOLITION, INCLUDING ABUTMENT END DIAPHRAGMS.
5. INSTALL NEW BEARING AND ANCHOR BOL IS PRIOR TO FORMING AND CASTING NEW CONCRETE DECK AND ABUTMENT END DIAPHRAGMS
6. COMPLETE NEW BRIDGE DECK CONSTRUCTION, INCLUDING ABUTMENT END DIAPHRAGMS. PERMANENT ABUTMENT BEARING (ADDITIONAL DIAPHRAGM) PLATE TO BE CAST WITH ABUTMENT END DIAPHRAGM.
7. JACK BRIDGE FROM ABUTMENT END DIAPHRAGM, REMOVE TEMPORARY BEARINGS AND INSTALL PERMANENT ABUTMENT BEARINGS. LOWER BRIDGE ONTO BEARINGS.

1. FOLLOWING DEMOLITION OF EXISTING BRIDGE DECK, JACK GIRDERS FROM EXISTING GIRDER END BLOCK, ADJACENT TO LOCATION OF EXISTING BEARINGS. JACKING IS PERMITTED OFF PROPOSED PIER MODIFICATION CONCRETE PROVIDED CONCRETE HAS ATTAINED A MINIMUM OF 75% SPECIFIED CONCRETE STRENGTH.
2. INSTALL TEMPORARY BEARINGS IN LOCATION OF EXISTING BRIDGE BEARINGS. TEMPORARY BEARINGS SHALL BE LOCATED SO AS NOT TO INTERFERE WITH INSTALLATION OF PERMANENT PIER BEARINGS.
3. INSTALL NEW BEARING ANCHOR BOLTS PRIOR TO FORMING AND CASTING NEW CONCRETE DECK AND PIER END DIAPHRAGMS.
4. COMPLETE BRIDGE CONSTRUCTION, INCLUDING PIER END DIAPHRAGMS. PERMANENT PIER BEARING/ADDITIONAL DIAPHRAGM PLATE TO BE CAST WITH PIER END DIAPHRAGM. BEARINGS MAY BE INSTALLED PROVIDED BRIDGE WEIGHT IS STILL SUPPORTED BY TEMPORARY BEARINGS.
5. JACK BRIDGE FROM PIER END DIAPHRAGM, REMOVE TEMPORARY BEARINGS, AND INSTALL PERMANENT PIERS BEARINGS. LOWER BRIDGE ONTO BEARINGS.

The diagram illustrates a cross-section of a girder bearing assembly. At the top, a vertical dashed line represents the centerline of the bearing, labeled 'BEARINGS'. A horizontal dimension line, labeled 'X', indicates the distance from this centerline to the right edge of the sole plate. The assembly consists of several layers: the 'EXIST GIRDER' at the top, followed by the 'SOLE PLATE', 'SLIDER PLATE', and 'U/S OF GIRDER'. Below these is the 'POT BEARING', which sits on a 'SEAT PLATE'. The 'SEAT PLATE' is supported by the 'TOP OF ABUTMENT', which is part of a 'PEDESTAL OR PIER' at the base. The diagram uses hatching to differentiate the materials of the various components.



NOTES:

LONGITUDINAL DIRECTION IS PARALLEL TO THE GIRDER LINE AT THE BEARING LOCATIONS. TRANSVERSE DIRECTION IS PERPENDICULAR TO THE GIRDER LINE.

* FIXED AND GUIDED BEARING SHALL BE CAPABLE OF RESISTING THE LARGER OF THE GIVEN LOADS OR 10% OF THE VERTICAL LOAD CAPACITY OF THE BEARINGS.

** FABRICATION AND INSTALLATION TOLERANCES ARE NOT INCLUDED IN THE GIVEN LIVE LOAD ROTATION COLUMN SHOWN ON THE ABOVE BEARING LOAD TABLE.

*** THESE ARE ACTUAL MAXIMUM MOVEMENTS ALONG THE CENTERLINE OF THE BRIDGE ASSUMING BEARINGS ARE ZEROED AT 0°C. DESIGN MOVEMENTS OF BEARINGS SHALL ALLOW FOR AN ADDITIONAL MINIMUM OF 25mm OF LONGITUDINAL MOVEMENT.

B.M. ELEV.			<div></div> <div>TETRA TECH</div>			<div>ORIGINAL DRAWING REVISION "0" SEALED BY S.Y.I. AWAD 25.08.07</div>			<div></div> <div>THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION</div>					
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