**Minutes – Lord Selkirk-West Kildonan Community Committee – March 19, 2013**

## REPORTS

**Minute No. 111 Condition of the Arlington Street Overpass (Mynarski and Point Douglas Wards)**

COMMUNITY COMMITTEE DECISION:

The Lord Selkirk-West Kildonan Community Committee received as information the report of the Winnipeg Public Service.

**Minutes – Lord Selkirk-West Kildonan Community Committee – March 19, 2013**

DECISION MAKING HISTORY:

Moved by Councillor Pagtakhan,

That the report of the Winnipeg Public Service be received as information.

Carried

STANDING COMMITTEE DECISION:

On February 26, 2013, the Standing Policy Committee on Infrastructure Renewal and Public Works forwarded the report of the Winnipeg Public Service, as it pertains to the Condition of the Arlington Street Overpass, to the Lord Selkirk – West Kildonan Community Committee for information.

COMMUNITY COMMITTEE RECOMMENDATION:

On December 11, 2012, the Lord Selkirk-West Kildonan Community Committee recommended to the Standing Policy Committee on Infrastructure Renewal and Public Works that the Winnipeg Public Service report on the condition of the Arlington Bridge from an engineering evaluation perspective in terms of its safety, structural integrity and life span.

# ADMINISTRATIVE REPORT

**Title: CONDITION OF THE ARLINGTON STREET OVERPASS**

**Critical Path: Standing Policy Committee on Infrastructure Renewal and Public Works**

## AUTHORIZATION

| Author | Department Head | CFO | CAO |
|---|---|---|---|
| L. Deane, P. Eng. | B.W. Sacher, P.Eng. | n/a | D. Joshi, COO |

## RECOMMENDATIONS

That this report be received as information.

## REASON FOR THE REPORT

On January 11, 2013, the Standing Policy Committee on Infrastructure Renewal and Public Works referred the recommendation of the Lord Selkirk-West Kildonan Community Committee to the Winnipeg Public Service to report back on the condition of the Arlington Overpass from an engineering evaluation perspective in terms of its safety, structural integrity and life span.

## IMPLICATIONS OF THE RECOMMENDATIONS

n/a

## HISTORY

The Arlington Street Overpass was constructed in 1910/1911 to carry traffic across the C.P. Rail Yards. The structure is composed of eight structural steel truss spans supported by concrete piers and two ramp structures. The north and south ramp structures are composed of several short structural steel girder spans supported on steel column bents and have very steep roadway gradients of 7% and 7.25% respectively. The total length of the Overpass is 610 metres. There are two traffic lanes and two sidewalks.

The overpass currently carries an average daily traffic of 15,400 vehicles per day and has been load restricted to carry a maximum gross vehicle weight of 9.1 Tonnes since 1965. By comparison, modern legal truck loading is currently 62.5 Tonnes. Essentially the weight restriction limits traffic on the bridge to light vehicles and no trucks. A structural analysis of the Overpass in 1982 confirmed that load restriction is appropriate. The load restriction has contributed to the extended service life of the structure.

The railway clearance under the main truss spans is slightly below minimum standards. Consequently, mainline train traffic travels on two tracks under the north approach ramp where sufficient clearance is available. In 1978, one of the main truss spans was damaged by an over-height train. In 2000, two derailments occurred within a month under the north approach ramp damaging the structure. Repairs were undertaken in each case restoring structural integrity.

Extensive maintenance and rehabilitation repairs have taken place in 1954, 1956, 1965, 1972, 1982, 1992, 2002, and 2010. The bridge deck was replaced in 1956. The 1982 and 1992 repairs included upgrades to vehicle and pedestrian safety; and repairs to maintain the existing

load restriction. The 2002 and 2010 repairs included extensive structural steel repairs due to corrosion. From 2002 to 2012, maintenance repairs have occurred almost annually at an approximate total cost of $1.5 million.
The overpass is currently considered to be in poor condition. Poor condition is defined as functioning safely but with extensive deterioration and limited remaining functional life. There is less reliability meaning unplanned repairs are required; sometimes on a frequent basis.

Without exception, a City bridge that has been downgraded from poor condition to critical condition is fully or partially taken out of service until repairs are undertaken to restore the bridge to a safe condition.

Generally, the poor condition of the overpass is attributed to corrosion of the structural steel, especially on the approach ramp structures and the deck on the main truss spans. The bridge deck is composed of a heavy gauge corrugated steel pan overlaid with asphalt. The pan is corroding from the inside out resulting in frequent small holes in the deck. These holes are detected by regular drive-by inspections and covered with a temporary steel plate until a permanent repair can be undertaken.

In 2013, the Public Works Department will undertake extensive deck repairs adjacent to the gutter areas as a preventative maintenance measure to limit the frequency of the deck holes. It will require an estimated bridge closure of approximately six weeks in July and August.

The Public Works Department has already started planning for the replacement or decommissioning of the existing overpass which must be undertaken by 2020. The 2013 Preliminary Capital Budget includes the project “CPR Yards Functional Crossing Study – between McPhillips Street and Main Street.” The purpose of the project is to undertake a functional design study to determine whether the bridge will be replaced in the same location, at an alternate location, or whether improvements can be made on alternate routes such that the overpass can be decommissioned and permanently removed.

Funding of $1.5 million is identified in 2013 for the functional design study and conceptual design of the recommended improvements. An additional $2.0 million is identified in 2017 to commence preliminary design of the approved concept.

Rehabilitation of the existing overpass is not a viable option as the structure is considered functionally obsolete. It is not feasible to adequately strengthen the bridge to remove or adequately improve the load restriction nor is it feasible to widen the structure, improve the approach ramp gradients or improve the railway clearance to modern standards.

## FINANCIAL IMPACT

**Financial Impact Statement Date:** January 25, 2013

**Project Name:**

CONDITION OF THE ARLINGTON STREET OVERPASS

**COMMENTS:**

There is no financial impact associated with the recommendation of this report.

*"Original Signed by D. Stewart, CA"*
D. Stewart, CA
Manager of Finance & Administration

## CONSULTATION

**In preparing this report there was consultation with:** n/a

## SUBMITTED BY

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|---|---|
| Department: | Public Works |
| Division: | Engineering |
| Prepared by: | B. Neirinck, P. Eng. |
| Processed by: | K. Ross |
| Date: | January 24, 2013 |
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