

Memo



Date: May 11, 2010
File: 1350-20
To: City Manager
From: T. Barton, Parks & Public Places
Subject: Lakeshore Road Bridge Project

Recommendation:

THAT Council receives, for information, the report from the Manager, Parks & Public Places dated May 11, 2011 with respect to the Lakeshore Road Bridge Project;

AND THAT Council instructs staff to proceed with preliminary discussions with the authorities having jurisdictions to determine preliminary requirements and costs;

AND THAT Council approves staff hosting a public open house regarding the concept design for the Lakeshore Road Bridge Project.

Purpose:

To provide Council an update on the progress of the design for the Lakeshore Road Bridge and corridor project.

Service Request #186683

COUNCIL DIRECTION FROM THE JANUARY 24, 2011 P.M. REGULAR MEETING:
THAT staff provide Council with a timeline for the installation of underground servicing along Lakeshore Road.

Service Request #194576

COUNCIL RESOLUTION FROM THE MAY 2, 2011 "IN-CAMERA" MEETING:
THAT staff report back to Council with respect to the realignment of Lakeshore Road/Mission Creek crossing project prior to holding an open house for public input.

Background:

The Lakeshore Road Bridge is scheduled for replacement as the existing bridge is nearing the end of its service life. The replacement of the bridge will be coordinated as the first phase (see Attachment 1) of an overall multi-year project to upgrade Lakeshore Road from Richter Street to Barnaby Road, approximately 5.5 km in length. The timing of the road upgrade project will be coordinated with the installation a new sanitary trunk underneath the roadway (Gyro Beach Lift Station to Old Meadows Road). The roadway, bridge and utility project is part of the DCC program with contributions from taxation, developer revenue and utility rates.

The design of Lakeshore Road and the new Bridge (see Attachment 2) will provide the following features:

- i. 3 vehicular lanes (one lane of travel each way, plus a centre turn lane/or median - see Attachment 3);
- ii. On-road commuter cycling lanes;
- iii. A multi-use corridor on the western side of the roadway as an extension of the recently completed Lakeshore Road Multi-use corridor;
- iv. Bridge design standards to accommodate storm events; the 1:200 year flood event (vertical clearance for debris and storm flow); and Transport Canada requirements for vertical clearance for navigable waters);
- v. Accommodate a pedestrian underpass for the extension of the Mission Creek Greenway - vertical clearance for pedestrian and cycling traffic; no equestrian access;
- vi. Provision of pedestrian and cycling access ramps to connect the multi-use corridor and sidewalks with the Mission Creek Greenway;
- vii. Accommodate the Lakeshore Road Sanitary Sewer Trunk Main and other utilities;
- viii. Burial of the overhead power lines from Mission Creek to Richter Street (urban areas of the project); the first phase of the project will be from Mission Creek to Cook Road;
- ix. Mission Creek riparian restoration;
- x. Potential Dyke upgrades; and
- xi. Boulevard treatment and tree planting.

The City recently acquired the LaMission Motel site at 579 Truswell Road for this project. The old hotel will be demolished as part of the construction project, a portion of the property dedicated as roadway and the remaining site developed as a staging area for the Mission Creek Greenway. The staging area will include the following components:

- Mission Creek Greenway - 3.0 m wide multi-use trail;
- Ramp connections to the Lakeshore Road Multi-use corridor and sidewalks;
- Parking for 10-15 vehicles;
- A public washroom;
- Picnic area; and
- Riparian restoration and protection.

Alternatives

During the current concept design phase, the City is exploring four (4) different bridge types including girder, extra-dosed, arch and cable-stayed. In addition, consideration is also being given to the extended elevated bridge idea submitted to the City by the Okanagan Mission Resident's Association. A number of criteria have been developed to help assess the merits of each option including: life cycling cost, maintenance cost, initial capital expenditure, functionality, public safety, length of construction, land acquisition requirements, and environmental impact. The five bridge options were evaluated, with opinions of probable costs as follows:

Girder Bridge	\$2.7 Million
Extra-dosed Bridge	\$3.8 Million
Cable-stayed Bridge	\$5.4 Million
Arch Bridge	\$4.6 Million
Extended Elevated Bridge	\$6.5 Million*

*Note: More assessment is required on the extended elevated bridge idea to refine the costs estimate in relation to the longer and higher span and the need to include costs associated with girder depth and piles.

Staff are continuing to assess the merits of each of the options and propose to proceed with preliminary discussions with the jurisdictions having authority to determine their requirements and associated costs. Construction may trigger permits and referrals from a number of agencies having jurisdictions including Fisheries & Oceans, Transport Canada, Ministry of the Environment, First Nations, and the City of Kelowna.

In addition, staff proposes to host a public open house to gather input from residents in the local area. A public open house is proposed to be held on Wednesday May 25th at the Cook Road Boat Launch - Parking Lot in a tent from 4pm - 7pm. The open house would explain the objectives of the project; provide a timeline for construction of the first phase; and allow public input into the planning process. A comment form would be provided to allow residents to submit concerns and suggestions on the project. The public open house would be advertised in the local newspapers (Daily Courier and Capital News), on a billboard at the Cook Road Boat Launch and posted on the City website.

Powerlines

The undergrounding of the existing overhead power lines along Lakeshore Road from Mission Creek to Cook Road will be included in the scope of the project and implemented as one integrated project. The remaining poles from Cook Road to Gyro-Beach Park will be buried during a future phase of the Lakeshore Road project.

Estimated Timeframe

Complete Concept Design	June 2011
Preliminary Design	June - September 2011
Detail Design	October 2011 - October 2012
Construction	at the earliest 2013 (pending funding & permits)

Financial/Budgetary Considerations:

Preliminary Opinion of Probable Costs (from Cook Road to Radant Road including the Lakeshore Road Bridge) based on the Girder Bridge:

Removals & Relocates	\$ 370,650
Roadway Construction	\$1,497,960
Storm Sewers	\$ 236,280
Water System	\$ 193,200
Shallow Utilities	\$ 202,380
Bridge with compensation	\$3,321,000
Staging Area	\$ 300,000
Engineering/Construction Services	\$ 797,936
Subtotal	\$7,447,406
HST (12%)	\$ 893,689
TOTAL	\$8,341,095

Note: A 20% contingency is included.

The costs of the Lakeshore Road Sanitary Trunk Main are estimated at an additional \$7.5M from the Gyro Beach Lift Station to Old Meadows Road which will be funded from the DCC Utility Program.

On-going maintenance costs for the bridge, roadway, multi-use corridor and staging area will be determined as part of the concept design phase.

Grant Opportunity

The City has recently submitted the Lakeshore Road Bridge project (from Cook Road to Radant Road) for funding from the Gas Tax General Strategic Priorities Fund (GSPF) in the amount of \$7.9M (based on eligible costs for the program). If successful, the project would need to be completed by March 31, 2014 which may be the determining factor in the selection of the bridge type.

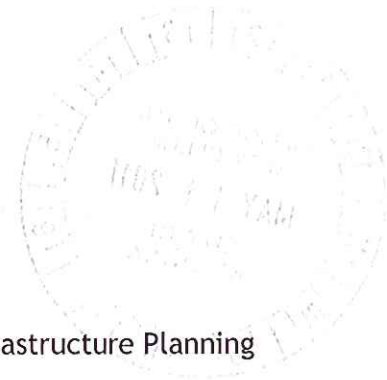
Considerations not applicable to this report

- Internal Circulation
- Legal/Statutory Authority
- Legal/Statutory Procedural Requirements
- Community & Media Relations Comments
- Existing Policy
- External Agency/Public Comments
- Personnel Implications
- Alternate Recommendation

Submitted by:



T. Barton, Manager of Parks & Public Places

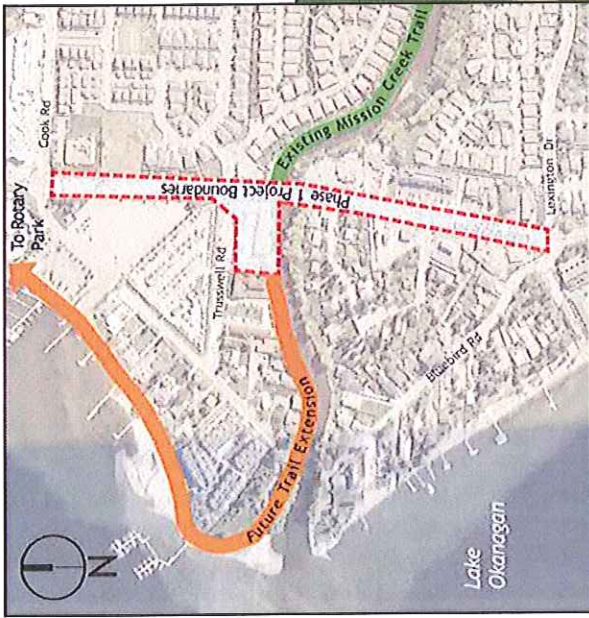


Approved for inclusion:

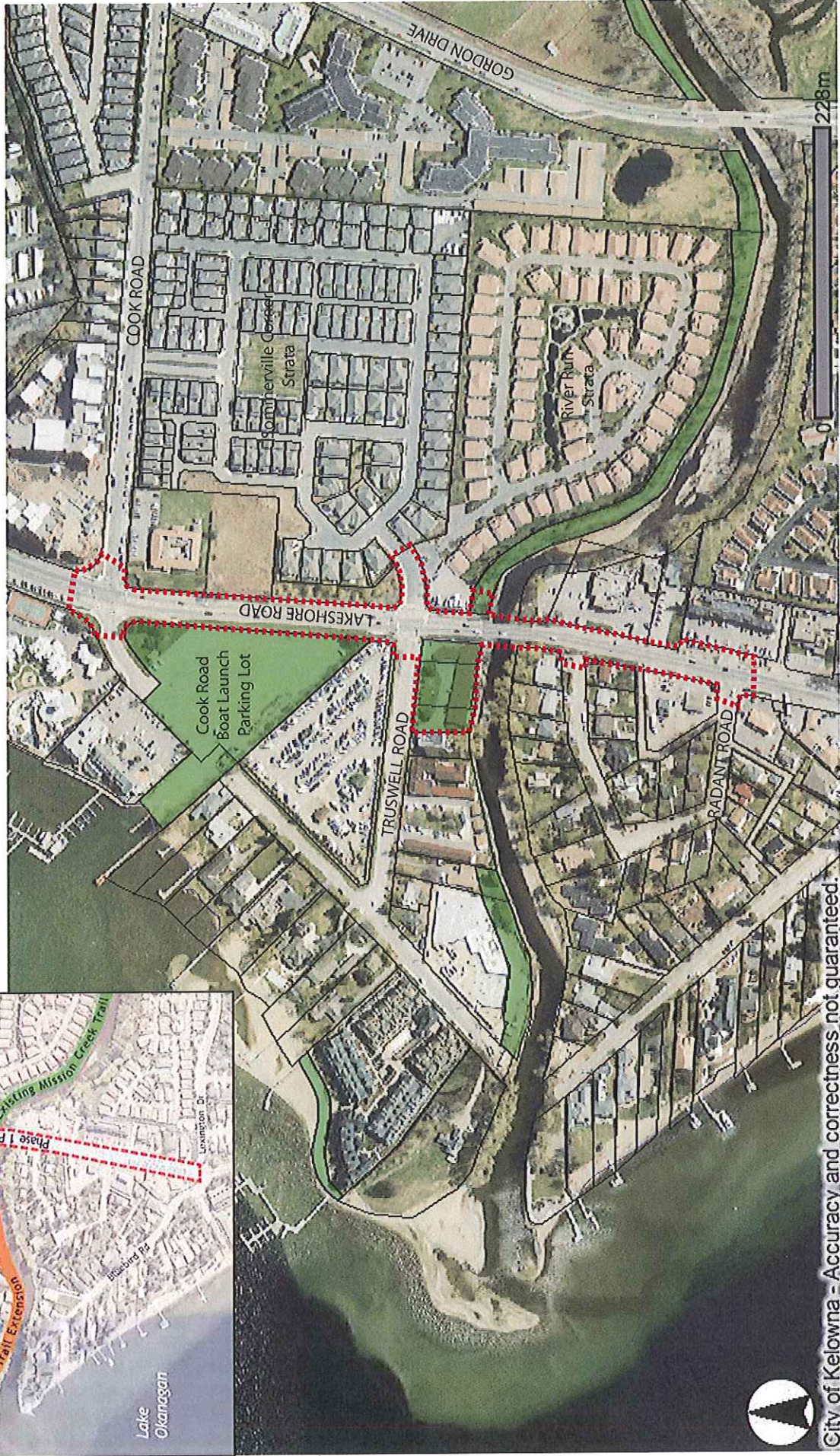


R. Cleveland, Director, Infrastructure Planning

- cc:
- Director, Community & Media Relations
 - Director, Design & Construction
 - Director, Civic Operations
 - General Manager Community Sustainability



Study Area



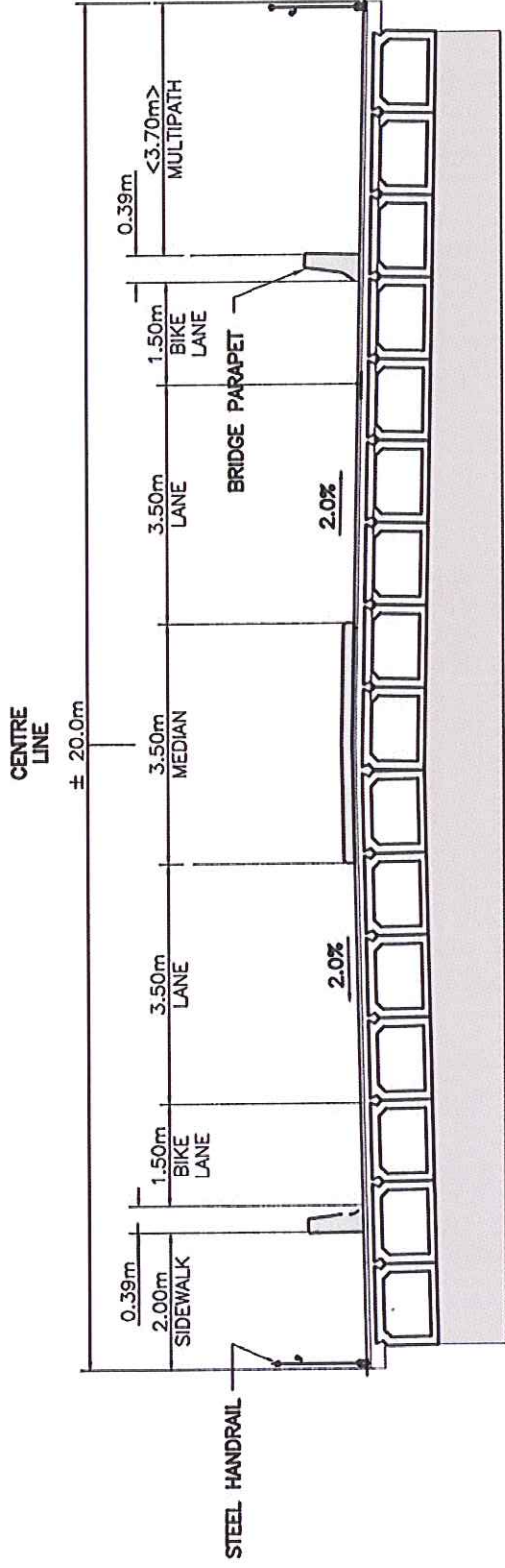
City of Kelowna - Accuracy and correctness not guaranteed.

Attachment 1 - Study Area

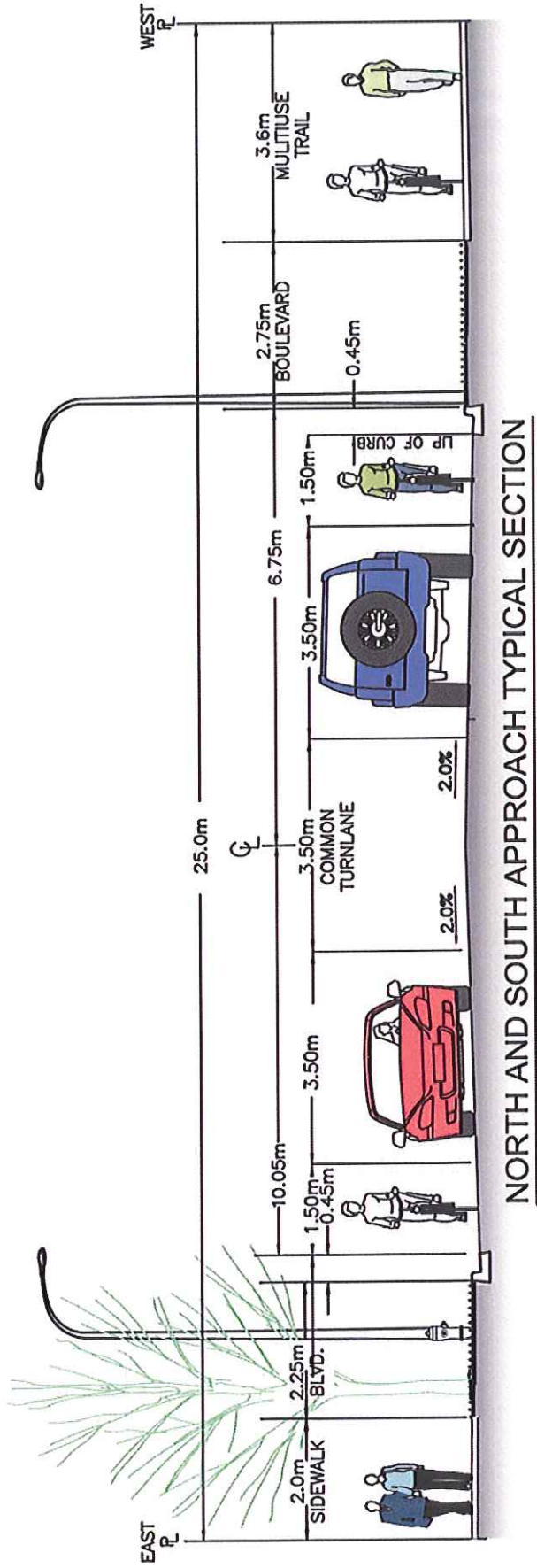
May 10, 2011



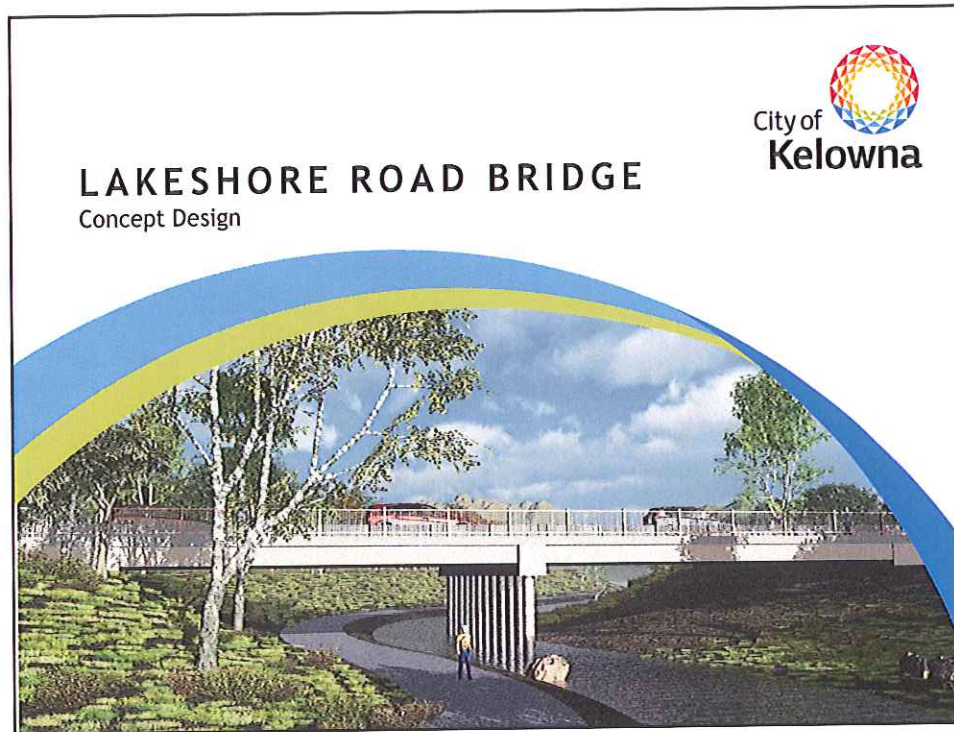
Attachment 2 - Concept Plan



BRIDGE DECK LANE TYPICAL SECTION




Attachment 3 - Roadway & Bridge Cross Section



LAKESHORE ROAD BRIDGE

Concept Design



PROJECT SCOPE

- ▶ Lakeshore Road Bridge (from Cook Road to Radant Road)
- ▶ First Phase of a multi-year project to upgrade Lakeshore Road from Richter Street to Barnaby Road (OCP2030 DDC Road Network Plan)

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PROJECT OBJECTIVES

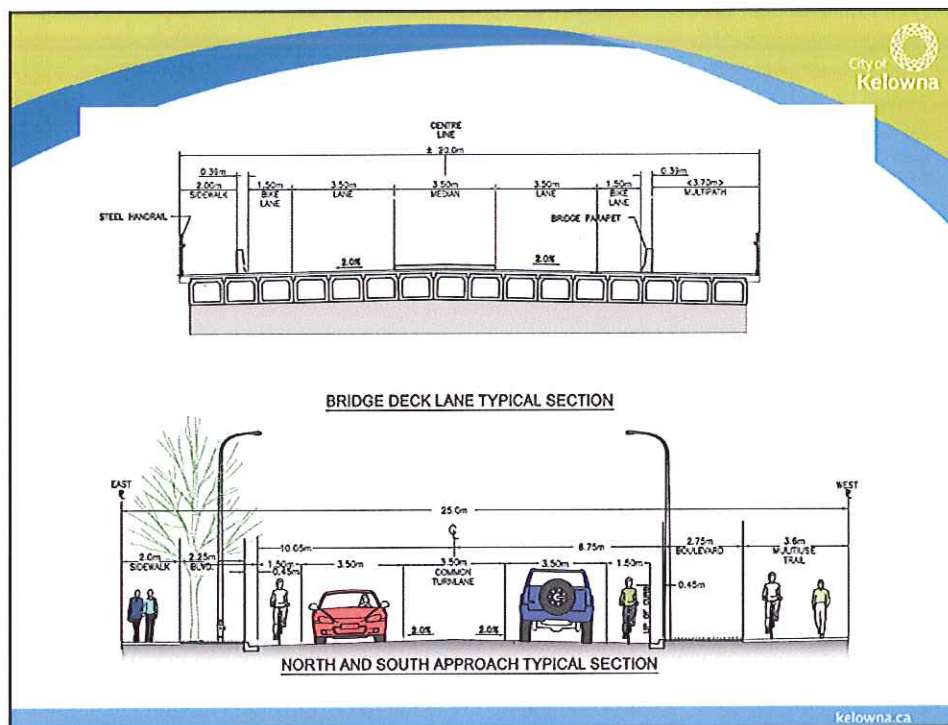
- ▶ 3 vehicular lanes (one lane of travel each way, plus a centre turn lane/or median);
- ▶ On-road commuter cycling lanes;
- ▶ A multi-use corridor on the western side of the roadway as an extension of the recently complete Lakeshore Road Multi-use corridor;
- ▶ Bridge design standards to accommodate storm events; the 1:200 year flood event (vertical clearance for debris and storm flow); and Transport Canada requirements for vertical clearance for navigable waters);

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PROJECT OBJECTIVES


- ▶ Accommodate a pedestrian underpass for the extension of the Mission Creek Greenway - vertical clearance for pedestrian and cycling traffic; no equestrian access;
- ▶ Provision of pedestrian and cycling access ramps to connect the multi-use corridor and sidewalks with the Mission Creek Greenway;
- ▶ Accommodate the Lakeshore Road Sanitary Sewer Trunk Main and other utilities;
- ▶ Burial of the overhead power lines from Mission Creek to Cook Road (urban areas of the project);
- ▶ Mission Creek riparian restoration;
- ▶ Potential Dyke upgrades; and
- ▶ Boulevard treatment and tree planting.





PROJECT TIMEFRAME

Phase	Time
Complete Concept Design	June 2011
Preliminary Design	June – September 2011
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POTENTIAL GRANT

- ▶ Project submitted for the Gas Tax General Strategic Priorities Fund (GSPF)
 - ▶ If successful, critical deadline: March 31, 2014

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NEXT STEPS

- ▶ Discussions with Authorities having Jurisdiction
 - ▶ Fisheries & Oceans
 - ▶ Transport Canada (including Navigable Waters)
 - ▶ Ministry of the Environment (including the Dyke Manager)
 - ▶ First Nations

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NEXT STEPS

- ▶ Public Open House on Concept Design
 - ▶ Inform residents on design objectives
 - ▶ Provide estimated timeframe for construction
 - ▶ Provide opportunity for feedback on concepts

