

**CITY COUNCIL AGENDA ITEM**  
CITY OF SHORELINE, WASHINGTON

<b>AGENDA TITLE:</b>	Motion to Authorize the City Manager to execute Local Agency Agreement Supplements to obligate federal grant monies for Construction of the Richmond Beach Overcrossing Bridge Replacement Project
<b>DEPARTMENT:</b>	Public Works
<b>PRESENTED BY:</b>	Jill Marilley, P.E., City Engineer Jon Jordan, P.E., Capital Projects Manager

**BACKGROUND:** The Richmond Beach Overcrossing Bridge (bridge) was originally built in 1923 and rebuilt in 1956. The normal life span of a timber bridge is 45 to 50 years. This bridge provides sole access to 35 homes on 27th Avenue NW. The City is responsible for the maintenance of the roadway over and approaches to the bridge. The Burlington Northern Santa Fe Railway Company (BNSF) is responsible for maintenance of the bridge superstructure.

The bridge is inspected annually by the King County Bridge Unit. An inspection in November 1997 and structural analysis conducted by King County in April 1998 determined that the bridge was at risk for accelerated weakening due to aging deterioration and extensive use by vehicles carrying heavy loads. To minimize the risk, the City adopted an ordinance in November 1999, for the purpose of specifying a weight limit on the bridge that the structure can safely carry on a routine basis. A detailed inspection and load rating analysis in September 2003 recommended further measures to preserve the bridge and improve safety. In November 2003, a median was installed as an interim solution to keep wheel loads off the weaker structural members until the bridge is replaced.

The goal of this project, as identified in the 2006 –2011 Capital Improvement Program, is to design and construct a new concrete bridge to replace the existing, deteriorating timber bridge.

Benefits of the new bridge include:

- 50 to 80 year life expectancy;
- Seismic upgrades;
- Improves bridge geometry (improves sight safety and vehicle access);
- Reduces maintenance cost and frequency of inspections and repairs;
- Increases load limit (provides safe access for emergency vehicles, garbage trucks, dump trucks, fuel trucks, cement trucks, etc);
- Meets BNSF minimum horizontal and vertical clearance requirements; and
- Able to accommodate a potential third track for BNSF/Sound Transit

On April 28, 2003 Council authorized staff to execute a professional services contract with Andersen Bjornstad, Kane, Jacobs, Inc. Consulting Civil and Structural Engineers (ABKJ) for pre-design to determine the type, size, and location of the bridge and to develop the Type, Size, and Location Report.

On December 13, 2004 Council authorized staff to execute a professional services contract supplement with ABKJ to develop the Plans, Specifications, and Estimate (PS&E) for the project and to execute a Local Agency Agreement Supplement to obligate additional federal grant funds for the required design work.

The PS&E is based on a reinforced concrete through-girder bridge on approximately the same alignment as the existing bridge. This is the alternative recommended in the Type Size and Location (TS&L) Report prepared during pre-design. The design has been accepted by BNSF for meeting clearance requirements and the ability to construct a potential third track, at some time in the future, to accommodate increasing rail traffic. The new bridge can be built without right-of-way acquisitions or changes to the profiles of 27<sup>th</sup> Ave NW and Richmond Beach Drive. Access during construction of the new bridge will be maintained via a one-lane a temporary detour bridge equipped with automated traffic control. The detour bridge will be located to the north of the existing bridge and have geometry similar to the existing bridge. Staff anticipates advertising for bids late 2005 and beginning construction early 2006.

There is no right of way acquisition needed for this project and staff has completed the environmental review process, both of which are required before funds can be obligated for construction.

The existing bridge was constructed under Agreement dated September 25th, 1922 and reconstructed under Supplemental Agreement dated June 13th, 1955 between Great Northern Railway Company (now BNSF) and King County (now City of Shoreline) with the original Agreement remaining in full force and effect between parties. Staff is drafting an agreement with BNSF that will supplement or replace the existing agreement and will seek necessary Council approval as result of these negotiations.

**PROBLEM/ISSUE STATEMENT:** Staff is requesting that Council authorize the City Manager to execute Local Agency Agreement Supplements to obligate additional federal grant funds for the construction phase of this project.

A Local Agency Supplement from the Washington State Department of Transportation (WSDOT) is required to obligate federal grant monies for the construction phase. These monies will be reimbursed at 100% per the funding levels explained below.

**FINANCIAL IMPACT:** This project is estimated to cost \$2,561,561. This includes past and present maintenance and operation expenses to inspect and repair the existing bridge and the design and construction cost estimate for the new bridge. We expect additional funding from BNSF for the new bridge per the existing agreement with them.

When the City applied for a federal grant for replacement or rehabilitation of the bridge, the Bridge Replacement Advisory Committee (BRAC) selected the bridge to receive

grant monies for replacement with a concrete structure. The Preliminary Engineering (Design) phase of this project is funded 80% through the Bridge Replacement and Rehabilitation Program (BRRP) and 20% through the Roads Capital Fund. The Washington State Department of Highways and Local Programs (H&LP) is estimating that approximately \$85 million of toll credits will be dedicated to the Bridge Program over the next 10 years. As a result, all TEA-21 bridge projects up to \$10 million will be federally funded at 100% for phases not currently obligated (i.e., the construction phase of this project will be funded at 100%). The Richmond Beach Overcrossing Project is a TEA-21 bridge project, therefore eligible for 100% funding for construction. ISTEA selected bridges are not eligible to utilize toll credits.

The project costs and revenues are shown below. We anticipate BNSF contribution between \$100,000 and \$200,000 in 2005. BNSF has informed staff that they plan to contribute to the project. Once this revenue is received, it will go back into the Roads Capital Fund.

The maintenance and operation cost includes expenditures to replace the bridge deck and repair abutment walls in 1999, installation of the median in 2003, and other minor repairs, analyses, evaluations, and annual inspections by King County Bridge Unit since the City incorporated and assumed responsibility for the bridge.

The design cost is atypical for a roads project of this size and reflects the complexities of applying new bridge design standards and railroad clearance requirements to replace an outdated existing bridge located in an area with geographic constraints (e.g., a bridge that provides sole access; limited available right-of-way and limited distance between existing roadways; two existing and highly active railroad tracks and requirements to accommodate one future track; and a design with little or no grade changes to existing roadways to minimize public inconvenience and ineligible grant related costs).

Other design tasks included data collection and evaluation of the existing bridge, extensive alternative analysis and coordination with BNSF, a life cycle cost comparison, design standard deviations, and a temporary bridge for access during construction.

<b>Project Cost</b>	<b>Estimate</b>
Maintenance & Operation (1995 to present)	\$98,414
Design	\$512,699
Construction	\$1,950,448*
<b>Total</b>	<b>\$2,561,561</b>

<b>Revenue Sources</b>	<b>2006-2011 CIP Budget</b>
Roads Capital Fund	\$238,847
HBRRP	\$2,359,198
<b>Total</b>	<b>\$2,598,045</b>

\* The construction estimate includes a 30% contingency for market volatility.

**COMMUNICATION PLAN:** After City Council approval of the recommended alternative last April, staff met with the neighbors immediately surrounding the bridge including those living on Apple Tree Lane to provide a project update and share the Type, Size,

and Location Report and has had written communication with residents throughout the project. Staff will meet with the community again later this year prior to construction to share the final design plans, construction sequencing, and discuss potential impacts and solutions for local residents.

### **RECOMMENDATION**

Staff recommends that Council authorize the City Manager to execute Local Agency Agreement Supplements to obligate additional federal grant funds for the construction phase of this project.

Approved By:      City Manager  City Attorney \_\_\_\_