

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE: Motion to Authorize the City Manager to: 1) Execute a Contract with C.A. Carey Corporation for the Construction of the Richmond Beach Overcrossing Bridge Replacement Project; 2) Execute a Professional Services Contract with KBA for Construction Management and Inspection Services; and 3) Execute a Professional Services Contract Supplement with ABKJ Inc., for Engineering Services During Construction

DEPARTMENT: Public Works

PRESENTED BY: Tricia Juhnke, P.E., Capital Projects Administrator
Jon Jordan, P.E., Capital Projects Manager

PROBLEM/ISSUE STATEMENT:

Staff is requesting that Council authorize the City Manager to:

- 1) Execute a Contract with C.A. Carey Corporation for the Construction of the Richmond Beach Overcrossing Bridge Replacement Project;
- 2) Execute a Professional Services Contract with KBA Construction Management for Construction Management and Inspection Services; and
- 3) Execute a Professional Services Contract Supplement with ABKJ Inc., for Engineering Services During Construction.

The project was advertised on December 17 and 21, 2009 and bids were opened January 13, 2010. Seven bids were received, with C.A. Carey Corporation being the lowest responsive bid at \$1,838,336. The engineer's estimate is \$ 2.5 million.

RECOMMENDATION

Staff recommends that Council authorize construction of the Richmond Beach Overcrossing Bridge Replacement Project, and authorize the City Manager to: 1) execute a construction contract with C.A. Carey Corporation in the amount of \$1,838,336 plus a \$183,834 contingency (10%); 2) execute a professional services contract with KBA Construction Management for construction management and inspection services in the amount of \$533,000; and 3) execute a professional services contract supplement with ABKJ Inc., for engineering services during construction in the amount of \$119,768.

Approved By: City Manager  City Attorney _____

INTRODUCTION

The City of Shoreline seeks a contractor to furnish the materials, equipment, tools, labor, and other work or items included thereto to complete the Richmond Beach Overcrossing Bridge Replacement Project in accordance with the contract documents. The work shall include, but is not limited to, removing an existing timber structure and constructing a cast-in-place concrete structure, designing and constructing a temporary detour bridge, constructing approaches, shoring and excavation, constructing a temporary traffic signal, maintaining traffic control, landscaping, preparing submittals, and other work all to be performed over and adjacent to, but not on, two existing and highly active railroad tracks. Staff recommends Council to authorize the City Manager to execute contracts necessary to carry out this work.

BACKGROUND

The Richmond Beach Overcrossing Bridge (27th Avenue NW Overpass – Attachment B) was built by order of the State of Washington to replace an unsafe-at-grade crossing located just south of the bridge. The bridge was originally built in 1923 by Great Northern Railway Company at the cost of \$2,230 and rebuilt in 1956 at the cost of \$23,000. The typical life span of a timber bridge is 45 to 50 years. This bridge provides sole access to 35 homes on 27th Avenue NW (historically known as Apple Tree Lane).

Project – The goal of this project, as identified in the Capital Improvement Program, is to design and construct a new concrete bridge to replace the existing, deteriorating timber bridge. The design is based on a reinforced concrete through-girder bridge that will be safer and require significantly less maintenance than the timber structure. The new bridge will be built on the same alignment and location as the existing bridge. The design has been accepted by Burlington Northern Santa Fe Railway Company (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 27th Ave NW and Richmond Beach Drive. Access during construction of the new bridge will be maintained via a temporary detour bridge. The detour bridge will be located fifteen feet to the north of the existing bridge and have geometry similar to the existing bridge.

Benefits of the new bridge include:

- 80-year life expectancy;
- Seismic upgrades;
- Improved bridge geometry, sight safety, and vehicle access;
- Reduced maintenance cost and frequency of inspections and repairs;
- Increased load limit – new bridge will have a highway load rating and provide safe access for emergency vehicles, garbage trucks, dump trucks, fuel trucks, cement trucks, etc;
- Meet BNSF minimum horizontal and vertical clearance requirements; and
- Ability to accommodate a potential third track for BNSF/Sound Transit.

Cost – The estimated project cost may be considered atypical for a project of this size and is attributable to several factors, including:

- The working restrictions required by BNSF over their two existing highly active railroad tracks, resulting in added time and labor costs;
- Accommodations, required by BNSF, for a future third track;
- An industry-wide increase in material and construction cost since the project was approved for funding;
- The need for a temporary detour bridge to maintain access to homes on 27th Ave NW;
- The need for a cast-in-place structure, rather than a less expensive pre-fabricated structure, to accommodate design criteria and railroad clearance requirements on a geographically constrained site; and
- Avoiding changes to the profiles of 27th Ave NW and Richmond Beach Drive, thereby minimizing public inconvenience and project costs.

Agreement & Easement – The existing (timber) bridge was constructed under agreement dated September 25, 1922 and reconstructed under supplemental agreement dated June 13, 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. Under the original agreement, the City was responsible for the maintenance of the roadway over and approaches to the bridge. The Burlington Northern Santa Fe Railway Company (BNSF) was responsible for maintenance of the bridge superstructure.

The new agreement supersedes and replaces the previous agreement. The new agreement spells out the terms of the Temporary Construction License that allows the City to work in BNSF's right-of-way, BNSF obligations including their financial contribution to the project, City obligations including conformance to plans and specifications, joint obligations such as maintenance and inspection, and contractor insurance requirements and responsibilities. The new agreement also includes exhibits for a temporary construction license, permanent easement, contractor requirements, an agreement between contractor and BNSF, cost for railroad work, bridge requirements, and an estimated project cost.

The City will be responsible for maintenance and repair of the new bridge, the approaches and appurtenances including surface water drainage, fencing, paint, walkways and handrails incorporated into this project within the limits of the bridge. BNSF will be responsible for maintenance and repair of the earth retention components, embankment slopes, erosion control, landscaping, and other improvements associated with the project outside the limits of the bridge.

Inspection – The bridge is inspected annually by the King County Bridge Unit for structural deficiency. An inspection in November 1997 and structural analysis conducted by King County in April 1998 determined that the timber 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 to specify 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 further load restrictions and to keep wheel loads off the weaker structural members until the bridge is replaced. The City of Shoreline conducts monthly inspections of the bridge deck (surface) for visible signs of weakening of the timber structure.

Grant – In June of 2000, the City received approval of Federal Bridge Replacement funds following a Close, Repair, Rehabilitate, or Replace (C3R) field review with WSDOT, FHWA, and City representatives. 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 Federal Highways Bridge Replacement and Rehabilitation Program (HBRRP) and 20% through the City's Roads Capital Fund. As a Transportation Equity Act for the 21st Century (TEA-21) bridge project eligible to receive toll credit funds dedicated to the Bridge Program, this project is funded at 100% of eligible costs through HBRRP for the right-of-way and construction phases.

Design – In April 2003, the City contracted 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. In December 2004, the City contracted with ABKJ to develop the Plans, Specifications, and Estimate (PS&E) for the project. In 2005, the City contracted with KBA Construction Management for a constructability review. The PS&E was completed in January 2006. Over the past few years, the City has worked with five different BNSF managers of public projects to draft a new agreement to replace the bridge.

Past Council Action – On April 28, 2003, Council authorized the City Manager 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 the City Manager 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 was completed in January 2006.

On October 10, 2005, Council authorized the City Manager to execute Local Agency Agreement Supplements to obligate federal grant monies for construction of the bridge replacement project.

On March 9, 2009, Council authorized the City Manager to execute the Construction, Operation, and Maintenance Agreement for the 27th Avenue NW Overpass with Burlington Northern Santa Fe (BNSF) Railway Company.

Community – Public involvement began in 1999 with the repair of the bridge deck and adoption of Ordinance 212 to specify a weight limit on the bridge. In November 2003,

the City installed a median as an interim solution to further weight restrictions. An open house was held on April 7, 2005 to introduce the community to the design concept for the preferred alternative and provide an opportunity for questions and input. The final design is the same as the concept presented at the open house.

City of Shoreline Currents articles:

September 2000, December 2003, December 2004, April 2005, March 2006, Summer 2007, Summer 2008

Richmond Beach Community News articles:

September 2000, October 2009

Staff will meet with the community prior to construction to discuss construction sequencing and potential impacts and solutions for local residents.

Schedule – Construction is anticipated from May to September 2010 and January to March 2011 (the gap in construction is due to the fourth quarter no-work window imposed by BNSF)

ACTION ITEMS

1) Execute Construction Contract with C.A. Carey Corporation.

The project was advertised on December 17 and 21, 2009 and bids were opened January 13, 2010. Seven bids were received, with C.A. Carey Corporation being the lowest responsive bid at \$1,838,336. The engineer's estimate is \$ 2.5 million.

A table of all bid results follows.

Company	Total Base Bid	
1 Serpanok Construction, Inc	\$ 1,622,255	Nonresponsive
2 C.A. Carey Corporation	\$ 1,838,336	
3 Scarsella Bros. Inc.	\$ 1,968,234	
4 Advanced Construction, Inc.	\$ 2,038,066	
5 Harbor Pacific Contractor, Inc.	\$ 2,060,000	
6 Guy F. Atkinson Construction, LLC	\$ 2,370,656	
7 Construct Company LLC	\$ 2,559,277	

Serpanak was the apparent low bidder; however, after review of their proposal and their bid documents, they were deemed non-responsive. They have been notified and have not objected.

C.A. Carey was the second low bidder, and their documents were reviewed and determined to be responsive and responsible. Staff has completed all applicable reference checks on C.A. Carey Corporation, including state agency fiscal compliance. References were satisfactory regarding quality of construction and their history of managing budget, materials, and personnel. Staff is confident in C.A. Carey Corporation's ability to complete this project within all terms of the contract.

2) Execute Professional Services Contract with KBA Construction Management

The contract will allow KBA to provide construction management and inspection services during construction. These services include: consultation, contract administration, field observation, documentation, and material testing. A certain amount of overtime has been figured into the contract to use, if needed, during peak construction activities or night work. These services are budgeted from January 2010 to March 2011 and cover an extended contract time (210 working days) that accounts for work over an active railway and the intermittent "work windows" between train movements, the corresponding stand-by time related to these "work windows", and a provision for demobilization/remobilization during the fourth quarter BNSF "no-work" window. These costs are eligible for reimbursement at 100% through the HBRRP grant. KBA was selected to provide constructability review and construction management services following a formal Request for Qualifications process in 2005.

3) Execute Professional Services Contract Supplement with ABKJ Inc.

The contract supplement will allow ABKJ to provide engineering services during construction. These services include: verification of construction documents and site conditions, respond to requests for information, submittal review, meetings and special inspections, perform independent estimates of proposed changes and revise plans and specifications as needed, geotechnical services, preparation of record drawings, and other engineering services during construction. ABKJ was selected to provide design services following a formal Request for Qualifications process in 2003.

FINANCIAL IMPACT:

The improvements are funded in the 2010-2015 Capital Improvement Plan. A summary of the financial budget for this project can be found in Attachment A. There is sufficient funding in the project budget to execute a construction contract with C.A. Carey Corporation, a professional services contract with KBA Construction Management, and a professional services contract supplement with ABKJ, Inc., as presented in this staff report. The total project cost estimate, including these contracts, is \$3,957,967.

RECOMMENDATION

Staff recommends that Council authorize construction of the Richmond Beach Overcrossing Bridge Replacement Project, and authorize the City Manager to: 1) execute a construction contract with C.A. Carey Corporation in the amount of \$1,838,336 plus a plus a \$183,834 contingency (10%); 2) execute a professional services contract with KBA Construction Management for construction management and inspection services in the amount of \$533,000; and 3) execute a professional services contract supplement with ABKJ Inc., for engineering services during construction in the amount of \$119,768.

ATTACHMENTS

Attachment A – Budget Summary
Attachment B – Site Location

Attachment A: Budget Summary

Richmond Beach Overcrossing Bridge Replacement

Project Costs		Est. Subtotal	Est. Total
Project Administration			\$ 1,426,334
Action Item	Contracted Services (Current)	\$ 533,112	
	KBA Contract	\$ 533,000	
Action Item	ABKJ Supplement	\$ 119,768	
	City Costs	\$ 240,454	
Real Estate Acquisition			\$ 5,645.00
Construction			\$ 2,435,578
Action Item	Construction Contract	\$ 1,838,336	
Action Item	Construction Contingency (10%)	\$ 183,834	
	Railroad Work	\$ 413,408	
	Utilities (other)	\$ -	
	1% for Arts (est.)		\$ 18,383
	King County Maintenance & Inspection (of existing bridge)		\$ 72,027
Total Costs			\$ 3,957,967
Project Revenue			
	Roads Capital Fund	\$ 36,845	
	HBRRP Funding ¹	\$ 5,053,000	
	BNSF Funding 10% of project cost (est.)	\$ 478,247	
Total Revenue			\$ 5,568,092
Project Balance (revenue- costs)			\$ 1,610,125

¹ Grant was approved by Washington State Department of Transportation (WSDOT) on October 14, 2009.

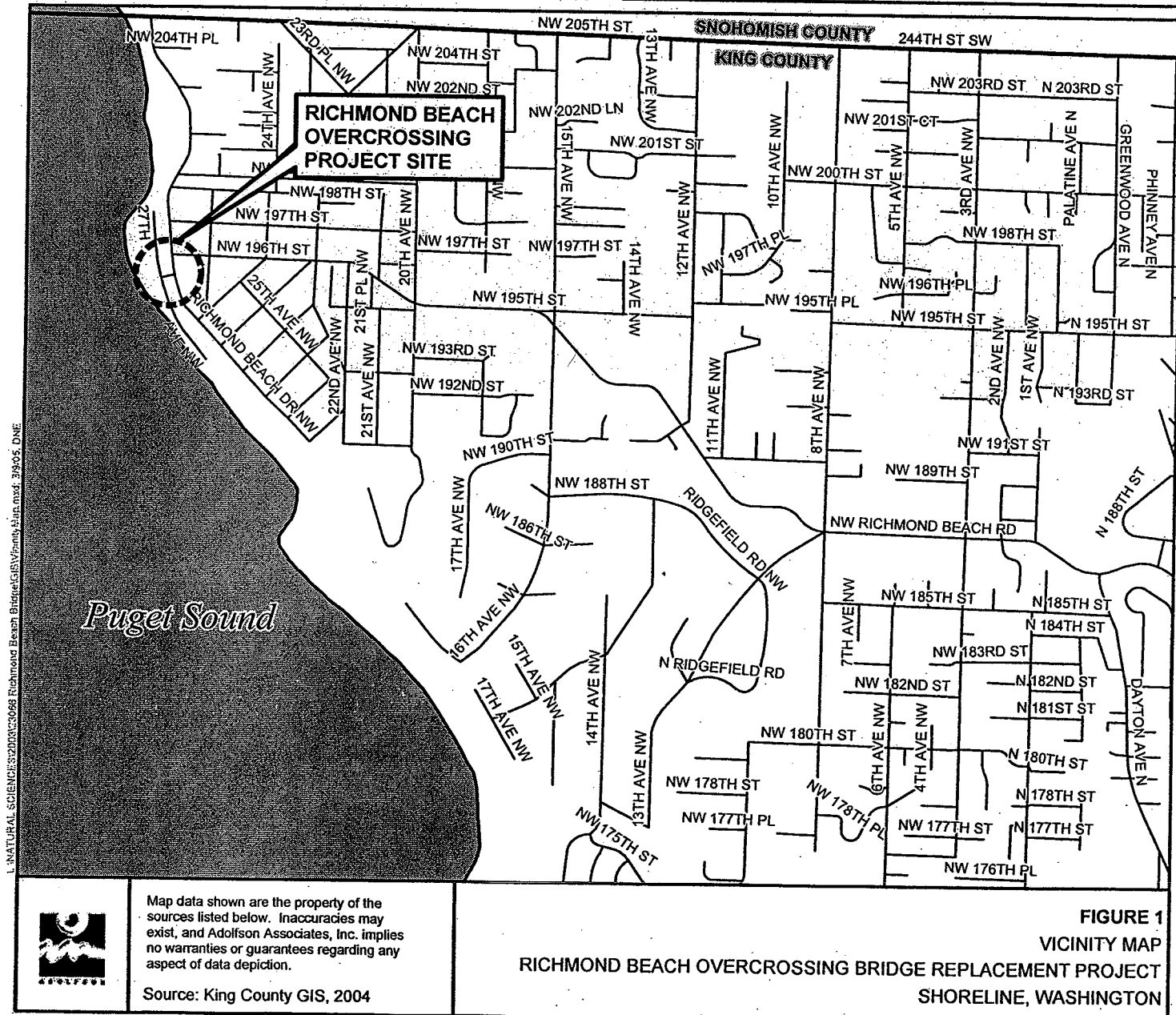
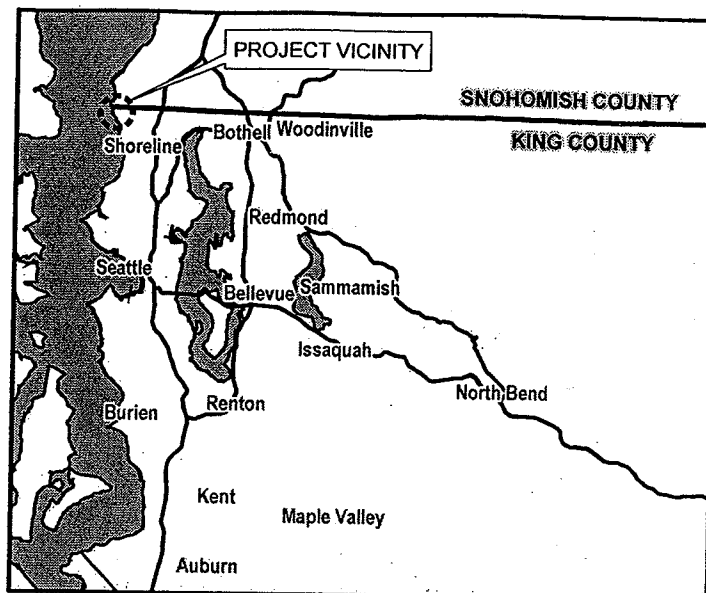
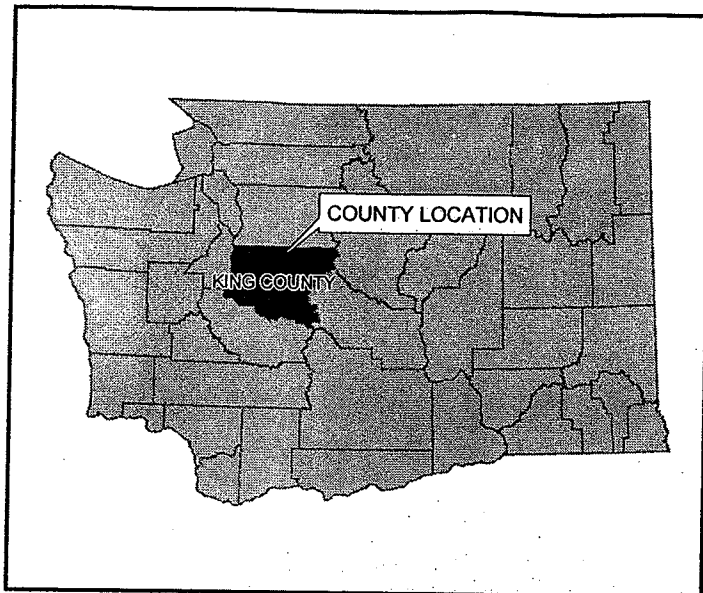


FIGURE 1
VICINITY MAP
RICHMOND BEACH OVERCROSSING BRIDGE REPLACEMENT PROJECT
SHORELINE, WASHINGTON

PHOTOS

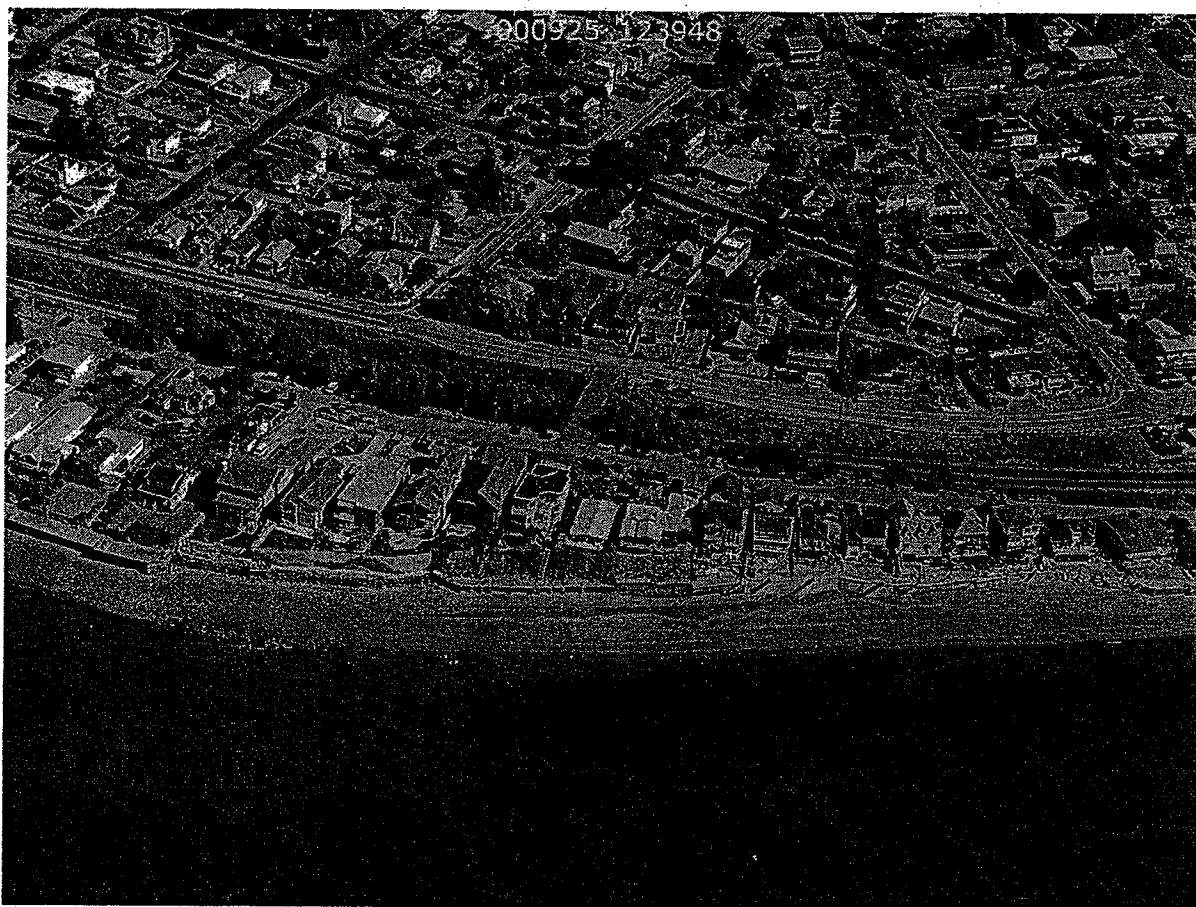


Photo 1. Oblique Aerial Photo of Richmond Beach Overcrossing (Ecology, 2000).



Photo 2. Richmond Beach Overcrossing (from south side of bridge, aspect NW).



Photo 3. Railroad embankment north of bridge (aspect west). Approximate location of detour bridge.