

MOTION NO. M2011-08
Design Services for the East Link Project Track Bridge System Prototype

MEETING:	DATE:	TYPE OF ACTION:	STAFF CONTACT:	PHONE:
Capital Committee	2/10/11	Final Action	Ric Ilgenfritz, Executive Director PEPD Don Billen, East Link Program Manager John Sleavin, Civil Engineering Director	206-398-5239 206-398-5052 206-398-5150

PROPOSED ACTION

Authorizes the chief executive officer to execute a contract with Parsons Brinkerhoff/Balfour Beatty to design a prototype of the I-90 Track Bridge System for the East Link project in the amount of \$4,438,000, with a 10% contingency of \$443,800 for a total authorized contract amount not to exceed \$4,881,800.

KEY FEATURES

- The proposed action funds Phase 1 of the contract to design the I-90 Track Bridge System prototype, complete computer modeling of the design, and develop the testing methods to be used in Phase 2 of the project.
- The Track Bridge System will allow light rail vehicles to travel across the existing I-90 expansion joints. The expansion joints move by expansion, contraction and rotation to accommodate movement of the floating sections of the bridge. Light rail tracks (LRT) will need to move with the expansion joints to allow continuous contact between the tracks and the light rail vehicles.
- The proposed contract includes an option to negotiate future amendments for Phase 2 of the contract subject to future Board authorization. Phase 2 would include the fabrication, testing, and production of the Track Bridge System prototype. The option gives Sound Transit the ability to utilize the consultant knowledge gained during prototype design, if satisfied with the contractor's performance during Phase 1.
- The consultant can earn varying levels of award fee for exceeding key goals and milestones.

PROJECT DESCRIPTION

The East Link project is an expansion of light rail from downtown Seattle to the Eastside. The project would connect to Central Link at the International District Station in Seattle and provide stations on I-90 at Rainier Avenue and Mercer Island. Through Bellevue and Redmond, the preferred alternative includes a station to serve an expanded S. Bellevue park-and-ride, two downtown Bellevue stations, an Overlake Hospital station, two Bel-Red stations, an Overlake Village station, and a terminal station at the Overlake Transit Center. Environmental review includes a future extension to downtown Redmond.

FISCAL INFORMATION

Budget Table

Action Item: Parsons Brinkerhoff/Balfour Beatty Contract for prototype design of the I-90 Track Bridge System for East Link project.

(Year of Expenditure \$000)

East Link	Adopted 2011 Budget (A)	Committed To Date (B)	This Action (C)	Total Committed & Action (D)	Uncommitted (Shortfall) (E)
Agency Administration	63,764	5,180	0	5,180	58,584
Preliminary Engineering	64,660	45,970	4,882	50,852	13,808
Final Design	169,400	0	0	0	0
Third Party Agreements	25,569	775	0	775	24,794
ROW	41,157	538	0	0	0
Total Current Budget	364,550	52,464	4,882	56,807	97,186

Preliminary Engineering Phase Detail

Track Bridge Prototype	8,000	0	4,882	4,882	3,118
Other	56,660	45,970	0	45,970	10,690
Total Phase	64,660	45,970	4,882	50,852	13,808

Contract Amount	Board Approvals to Date (F)	Current Approved Contract Value (G)	Proposed Action (H)	Proposed Total for Board Approval (I)	Proposed Contract Value (J)
Contract Amount	0	0	4,438	4,438	4,438
Contingency	0	0	444	444	444
Total Contract	0	0	4,882	4,882	4,882
Percent Contingency	0%	0%	10%	10%	10%

(A) ADOPTED 2011 BUDGET amounts as adopted by resolution of Sound Transit Board (R2010-24, approved 12/16/2010).

(B) COMMITTED TO DATE amounts are from Link WBS Report as of December 2010 + approved and pending board actions not recorded as of 12/31/10, or submitted after that date, and include allocated contingencies.

SMALL BUSINESS PARTICIPATION

Sound Transit Goal:

Small Business: 0%

DBE: 0%

Commitment:

Small Business: 25.2%

DBE: 3.1%

Subconsultant/Subcontractor	Business Type	% of Work	Dollar Value
Daniels Railroad Engineering	Small Business	1.6%	\$72,046
Lin and Assoc	DBE	0.3%	\$11,709
SC Solutions	Small Business	20.1%	\$893,070
Triunity	DBE	1.3%	\$58,639
Wilson Ihrig & Assoc	Small Business	2.9%	\$129,546
Bolima	DBE	1.5%	\$66,112
DMI	Small Business	0.6%	\$25,659
Total		28.3%	\$1,256,781

EQUAL EMPLOYMENT WORKFORCE PROFILE

31% women; 28% minorities.

BACKGROUND

East Link connects light rail from downtown Seattle to the Eastside via the I-90 Floating Bridge. Operating light rail on a floating bridge and its fixed approaches is a unique challenge. Expansion joints that are located at the ends of the transition spans allow for the bridge's movement through special modular joint systems. The existing modular joint systems were designed to allow a smooth ride for rubber-tired vehicles, but were not designed to accommodate a light rail transit track system. Part of the existing modular joints must be crossed with the Track Bridge System, a new unique rail movement structure, to accommodate the LRT. Prototype design and testing of the Track Bridge System is planned to be completed prior to the start of construction of light rail on the existing I-90 Floating Bridge reversible HOV-lanes.

In 2008, the Washington State Joint Transportation Committee hired an Independent Review Team (IRT) to evaluate the original floating bridge analysis, subsequent studies, tests, and concept studies to determine the feasibility and impact of installation and operation of LRT on the I-90 Floating Bridge and approach spans. While there are similar examples of LRT across suspension and cable-stayed bridges, there is no precedent for implementing light rail across a floating bridge. Based on extensive study, analysis, and discussions with Sound Transit and the Washington State Department of Transportation (WSDOT), the IRT concluded that all issues associated with the installation of LRT on the I-90 Floating Bridge and approach spans could be addressed or mitigated, and recommended early prototype and testing due to the unique nature of the Track Bridge System. The ST2 Expert Review panel concurred with the findings of the IRT and also recommending early prototyping.

In December 2009, Sound Transit held a track bridge workshop to verify and improve upon the concept design of the track bridge. The expert panel at the workshop recommended considering special contracting approaches to design, fabricate and test the prototype. Sound Transit developed the contracting approach in consultation with WSDOT and the industry and advertised the procurement in the fall of 2010. A selection panel composed of Sound Transit and WSDOT staff selected Parsons Brinkerhoff/Balfour Beatty as the most qualified.

ENVIRONMENTAL COMPLIANCE

Jl 2/2/2011

TIME CONSTRAINTS

A one month delay would not create a significant impact to the project schedule.

PUBLIC INVOLVEMENT

Not applicable to this action.

LEGAL REVIEW

LA 2/4/11

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MOTION:

It is hereby moved by the Capital Committee of the Central Puget Sound Regional Transit Authority that the chief executive officer is authorized to execute a contract with Parsons Brinkerhoff/Balfour Beatty to design a prototype of the I-90 Track Bridge System for the East Link project in the amount of \$4,438,000, with a 10% contingency of \$443,800 for a total authorized contract amount not to exceed \$4,881,800.

APPROVED by the Capital Committee of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on February 10, 2011.


Fred Butler
Capital Committee Chair

ATTEST:


Marcia Walker
Board Administrator