

**SOUND TRANSIT  
STAFF REPORT**

**MOTION NO. M2004-59**

**Contract Award for Link Construction of the  
Beacon Hill Tunnel Contract (C710)**

Meeting:	Date:	Type of Action:	Staff Contact:	Phone:
Finance	6/3/04	Discussion/Possible Action to Recommend Board Approval	<b>Ahmad Fazel, Link Director</b> Dick Sage, Deputy Construction Manager	(206) 398-5389 (206) 398-5226
Board	6/10/04	Action	<b>Joe Gildner, Link Deputy Director</b>	(206) 398-3350

Contract/Agreement Type:	✓	Requested Action:	✓
Competitive Procurement	✓	Execute New Contract/Agreement	✓
Sole Source		Amend Existing Contract/Agreement	
Interagency Agreement		Contingency Funds (Budget) Required	
Purchase/Sale Agreement		Budget Amendment Required	

✓ *Applicable to proposed transaction.*

**OBJECTIVE OF ACTION**

To construct the Initial Segment of the Central Link Light Rail alignment and stations between Airport Way South and Martin Luther King Jr. Way South, including the construction of the Beacon Hill Tunnel, the Beacon Hill Tunnel Station, the aerial guideway along McClellan Street, and the aerial McClellan Station (Contract C710).

**ACTION**

Authorize the Chief Executive Officer to execute a contract with Obayashi Corporation for the construction of the Beacon Hill Tunnel, the Beacon Hill Tunnel Station, the aerial guideway along McClellan Street, and the aerial McClellan Station in the amount of \$279,964,375, plus a contract contingency of \$20,000,000 for a total authorized contract amount not to exceed \$299,964,375, which includes reimbursed to Sound Transit by third-parties for betterments in the amount of \$215,066.

**KEY FEATURES**

- This contract includes the civil facilities construction for the Beacon Hill Tunnel, the Beacon Hill Tunnel Station, aerial guideways, and the aerial McClellan Station, including:
  - a short section of aerial guideway between Airport Way South and the west tunnel portal, including a crossing beneath Interstate 5;
  - approximately one mile of twin-bore tunnels, including tunnel portals;
  - a deep, mined, binocular tunnel station with platform, concourse, cross-passage and ventilation tunnels; station access and ventilation shafts; a station headhouse providing station access; and a plaza;
  - approximately one-half mile of aerial guideway between the east portal and Martin Luther King Jr. Way South, including the aerial McClellan Station; and

- trackwork; utilities; architectural features; mechanical and electrical equipment, including emergency ventilation fans and fire protection systems; high-speed elevators; and landscaping.
- Combined, contingency allowances included in the base contract and the proposed contract contingency yield a total contingency amount equal to approximately 14% of the base contract work. Due to the engineering complexities and safety considerations associated with the tunnel construction, the C710 contract provides for a range of options for the contractor to respond to unforeseen conditions in a timely manner. Cost allowances for these measures are included in the base contract amount. In light of the current steel price volatility, the contract also includes an allowance to address potential steel price increases. These allowances, with a combined value of approximately \$18 million, represent a form of contingency.
- The C710 contract includes the following betterment work to be paid by third parties: (a) Seattle City Light (SCL) reimbursements to Sound Transit in the amount of \$127,831 for betterments to the SCL 26 kV electrical distribution system at the West Portal; and (b) City of Seattle reimbursements to Sound Transit in the amount of \$87,235 for paving South Hanford Avenue and 27<sup>th</sup> Avenue South.
- Award of the C710 contract will require the transfer of \$42.1 million from contingency funds available within the construction phase, including \$35.0 million of surplus funds available due to lower than expected bids for awarded contracts and \$7.1 million of unallocated contingencies within the construction phase.
- With approval of this action, unallocated contingency in the amount of \$34.2 million would remain in the construction phase. This is augmented by surplus funds of \$22.9 in other project phases, yielding total unallocated contingency funds in the amount of \$57.1 million. These unallocated contingencies and surplus funds are approximately \$9 million more than the unallocated contingencies that had been included in the Initial Segment baseline budget.

## **BUDGET IMPACT SUMMARY**

**Project Description:** Central Link Initial Segment

**Current Status:** Final Design/Construction

**Projected Completion Date:** 2009

<b>Action Outside of Adopted Budget:</b>	<b>Y/N</b>	<b>Y Requires Comment</b>
This Line of Business	N	
This Project	N	
This Phase	N	
This Task	Y	Transfer of funds is required from Unallocated Contingency and other surplus funds within the construction phase
Budget amendment required	N	
<b>Key Financial Indicators:</b>	<b>Y/N</b>	<b>Y Requires Comment</b>
Contingency funds required	N	
Subarea impacts	N	
Funding required from other parties other than what is assumed in financial plan	Y	Action includes reimbursements from SCL and the City of Seattle for betterments work

N = Action is assumed in current Board-adopted budget. Requires no budget action or adjustment to financial plan

## **BUDGET DISCUSSION**

The proposed action would authorize execution of a contract with Obayashi Corporation the construction of the Beacon Hill tunnel, the Beacon Hill Tunnel Station, the aerial guideway along McClellan Street, and the aerial McClellan Station (Contract C710) in the amount of \$279,964,375, plus a contract contingency of \$20,000,000 for a total authorized contract amount not to exceed \$299,964,375. This amount includes betterment work in the amount of \$215,066 that will be reimbursed by third parties. The maximum Sound Transit project expenditure authorized under the action is equal to \$299,749,309.

The total adopted capital budget for the Initial Segment is \$2.07 billion. Within that budget, \$257,634,460 is set aside in the construction phase for the C710 contract scope. The proposed action would create a line item budget variance in the amount of \$42,114,849 that will require the transfer of funds within the construction phase: \$35,000,000 from surplus funds available in the E-3 Busway (C700), the Operations and Maintenance Facility (C810), and MLK Way (C735) budget line items; and \$7,114,849 from unallocated contingency.

## **REVENUE, SUBAREA, AND FINANCIAL PLAN IMPACTS**

Sound Transit's share of the proposed action is covered by the current Board-adopted budget, and is affordable within the agency's current long-term financial plan and subarea financial capacity. The action will have no new revenue impacts on Sound Transit.

Costs related to betterment work included in the contract, for which Sound Transit will be reimbursed by SCL and the City of Seattle, will not be charged to the Initial Segment Project, and will be separately tracked.

# BUDGET TABLE

**Action Item:** Obayashi Corporation (Provide construction services for the C710 Beacon Hill Tunnel and Station in the Initial Segment.)

**(Year of Expenditure \$000)**

Initial Segment	Amended FY2004 Budget (A)	Committed To Date (B)	This Action (C)	Total Committed & Action (D)	Uncommitted (Shortfall) (E)
1 Agency Administration	218,780	109,259		109,259	109,521
2 Preliminary Engineering	35,000	33,639		33,639	1,361
3 Final Design	143,523	123,725		123,725	19,798
4 Right of Way	233,016	147,514		147,514	85,502
5 Construction	1,159,837	277,901	299,749	577,651	582,186
6 Construction Services	82,737	63,823		63,823	18,914
7 Third Party Agreements	58,800	52,469		52,469	6,331
8 Vehicles	138,307	131,799		131,799	6,508
9 Contingency				-	-
10 <b>Total Current Budget</b>	<b>2,070,000</b>	<b>940,130</b>	<b>299,749</b>	<b>1,239,879</b>	<b>830,121</b>

Phase Budget Detail					
11 Beacon Hill Segment (C710)	257,634	-	299,749	299,749	(42,115)
12 E-3 Busway (C700)	48,830	44,793		44,793	4,037
13 Maintenance Base (C810)	62,054	59,440		59,440	2,614
14 MLK Jr Way Segment (C735)	160,000	129,566		129,566	30,434
15 Other Segments	590,024	44,103		44,103	545,921
16 Unallocated Contingency	41,294	-		-	41,294
17 <b>Total Phase</b>	<b>1,159,837</b>	<b>277,901</b>	<b>299,749</b>	<b>577,651</b>	<b>582,186</b>

(A) AMENDED 2004 BUDGET reflects Board Resolution R2004-05 for Initial Segment phase budget transfer, adopted by the ST Board on 4/22/04.

(B) Committed to Date amounts are from the Link Program Cost Summary Report (HQ Reports) for April 2004 + Board motions not yet included in the report as follows:

	Final Design	Construction	Construct Svcs	Third Parties	Vehicles
Commitments through April 2004	116,330	277,161	24,227	52,469	131,799
Other Board motions	7,395	740	39,597	-	-
<b>Total phase commitments</b>	<b>123,725</b>	<b>277,901</b>	<b>63,823</b>	<b>52,469</b>	<b>131,799</b>

Contract Budget Betterments)	(excluding Current Approved Contract Value (F)	Spent to Date (G)	Proposed Action (H)	Proposed Total Contract Value (I)
18 Contract Amount			279,749	279,749
19 Contingency			20,000	20,000
20 <b>Total</b>	-	-	<b>299,749</b>	<b>299,749</b>
21 Percent Contingency	0%	0%	7%	7%

Task Level	\$ (J)	Potential Resources (K)	Source (L)
22 Beacon Hill Segment (C710)	42,115	78,379	Construction phase: unallocated contingency, and surplus budget Segments C700, C810, C735

Phase Budget Transfer	Resource	Budget Transfer	Remaining Balance
23 E-3 Busway (C700)	4,037	4,000	37
24 Maintenance Base (C810)	2,614	1,000	1,614
25 MLK Jr Way Segment (C735)	30,434	30,000	434
26 Unallocated Contingency	41,294	7,115	34,179
27 <b>Total Phase</b>	<b>78,379</b>	<b>42,115</b>	<b>36,264</b>

## **M/W/DBE – SMALL BUSINESS PARTICIPATION**

### Prime Consultant/Contractor

The Sound Transit Diversity Programs Office established the following participation goals for this contract in the solicitation for bids: Small Business overall goal of at least 11%, to be accomplished utilizing M/W/DBE overall goal participation of at least 7%. For the purposes of bidding, the Bidder had to demonstrate that it has achieved participation equal to or greater than a Bid Submittal Goal for Small Businesses of 6% of the Total Bid Price, to be accomplished utilizing M/W/DBE firms for at least 4%. During the performance of the C710 contract, approximately 4 years, the contractor is to work with Sound Transit to develop and implement a Small Business and M/W/DBE Participation Plan to achieve not less than the Small Business and M/W/DBE overall participation goals applicable to the contract price.

At this time, Obayashi Corporation has committed to 6.7% M/W/DBE and Small Business participation, with 6% to be performed by M/W/DBE firms and 0.7% to be performed by Small Businesses. This represents over one-half of the overall contract goal of 11%. Obayashi Corporation has committed to the utilization of M/W/DBE and Small Businesses throughout the duration of the project to meet or exceed the overall contract goals.

### Utilization Breakdown Table

<b>Subcontractors</b>	<b>Business Type</b>	<b>% of Work</b>	<b>Dollar Value</b>
C.E.I. Resources	WBE/DBE	1.8%	\$5,000,000
Thunderbird Electric	MBE/DBE	1.6%	\$4,400,000
Rebar International	MBE/DBE	2.5%	\$7,000,000
Wisko America	Small Business	0.7%	\$2,000,000
J. Harper Contractor, Inc.	MBE/DBE	0.1%	\$350,000
<b>Total</b>		<b>6.7%</b>	<b>\$18,750,000</b>

### EEO Commitment

Obayashi Corporation has agreed to adhere to the EEO provisions contained in the contract documents. The EEO goals are 21% people of color and 12% women of the total labor hours worked on the contract.

### Apprentice Utilization Commitment

Obayashi Corporation has committed to meet the 20% Apprentice Utilization goal as contained in the contract documents. Under the terms of the contract, people of color and women are to comprise at least 50% of all first-year apprentice hours, and 33% of all apprentice hours worked.

## **HISTORY OF PROJECT**

A number of the scope elements included in the C710 contract were previously contained in separate construction contracts. In order to avoid potential delays and costs due to interface coordination requirements among multiple contracts, the following elements were transferred to the C710 contract:

- The aerial guideway just east of Airport Way South (formerly in the C700 contract);
- Elements associated with the transition ramp in Martin Luther King Jr. Way South (formerly in the C735 contract); and

- The aerial guideway construction along the McClellan Section including the aerial station (formerly in the C720 contract).

A two-phase, pre-qualification, low-bid procurement process was used for the selection of the contractor. On October 27, 2003, Sound Transit requested statements of qualification from contractors experienced in Sequential Excavation Method mining for the Beacon Hill station excavation and Earth Pressure Balance tunneling for the line tunnels. On December 10, 2003, Sound Transit received a Statement of Qualifications from four firms. On February 9, 2004, a selection panel, considering both the written proposal and the interview, pre-qualified three firms to submit bids on this contract. On May 14, 2004, Sound Transit received two bids. The lowest responsive and responsible bidder is Obayashi Corporation.

The approved schedule for the Central Link Light Rail Initial Segment assumes the start of construction for this segment in June of 2004. All required environmental compliance to support the Board's approval of this contract has been completed.

### Prior Board or Committee Actions and Relevant Board Policies

Motion or Resolution Number	Summary of Action	Date of Action
M2004-51	Execute a contract amendment with Hatch Mott MacDonald/Jacobs Joint Venture to provide civil engineering design services during construction, including engineering oversight services for the sequential excavation work for the Beacon Hill Tunnel in the Initial Segment in the amount of \$5,580,000 for a new total authorized contract amount not to exceed \$18,668,763.	5/20/04
M2003-102	Authorized the Chief Executive Officer to execute a contract amendment with the Hatch Mott MacDonald/Jacobs Joint Venture to provide additional civil engineering final design services for the Beacon Hill Tunnel in the amount of \$975,000, with a 10% contingency of \$97,500, for a total of \$1,072,500, and for a new total contract amount not to exceed \$13,088,763.	10/9/03
M2003-101	Execute a contract amendment with Shannon & Wilson, Inc., to provide additional geotechnical engineering services for the Beacon Hill Tunnel in the amount of \$251,800, with a 10% contingency, for a total of \$276,980, and for a new total authorized contract amount not to exceed \$11,078,581.	10/9/03
M2003-76	Execute a contract amendment with Coluccio Construction Company to provide additional exploratory construction services for the test shaft as necessary for the Beacon Hill tunnel final design program, in an amount not to exceed \$370,000 for a new total authorized contract amount not to exceed \$2,400,000.	7/17/03
M2003-13	Execute a contract with Coluccio Construction Company, Inc., to provide construction services for an exploratory test shaft as part of the Beacon Hill Final Design Program, in the amount of \$1,761,882 with a contingency of \$268,118, for a total authorized amount not to exceed \$2,030,000	1/30/03
M2002-98	Execute a contract amendment with the Hatch Mott MacDonald/Sverdrup Joint Venture to provide additional civil engineering final design services for Beacon Hill Station in the amount of \$2,571,701 for a new total authorized contract amount not to exceed \$12,016,263.	8/22/02
M2002-09	Execute a contract amendment with Hatch Mott MacDonald/Sverdrup Joint Venture to provide additional Civil Engineering Final Design Services in the amount of \$3,355,269 plus a contingency of \$287,293, for a new total authorized contract amount not to exceed \$9,444,562.	2/14/02
M2002-05	Execute a contract amendment with Otak, Inc. for final design services with associated urban design for the Beacon Hill Station in the amount of \$858,100 for a new total authorized contract amount not to exceed \$3,209,387.	2/7/02
R2001-16	Selected the initial segment of the Central Link Light Rail Project to be constructed and operated by 2009.	11/29/01

## **REGIONAL PARTNERSHIP AND COOPERATION**

Sound Transit has worked closely with the City of Seattle and the Washington State Department of Transportation in the final design and permitting for this contract. The light rail facilities are being partially constructed on property owned by the WSDOT. In addition, the cooperation of Seattle City Light was important in the relocation of its 26 kV distribution lines at the West Portal area at Airport Way South, in order to clear the way for the light rail construction.

## **CONSEQUENCES OF DELAY**

A delay in the award of this construction contract would directly impact the critical path of the Initial Segment and would likely delay the overall project completion the start of operations.

## **PUBLIC INVOLVEMENT**

Public involvement in the McClellan station and elevated guideway dates back to the development of the Sound Move plan. The Beacon Hill tunnel was included in environmental scoping open houses in 1997 and selected by the Sound Transit Board to be included in the Central Link Draft Final EIS in 1998. During the environmental review process, the North Beacon Hill Community Council and the Beacon Hill Chamber of Commerce publicly supported inclusion of a tunnel station. In 2001, the Sound Transit Board voted to include a Beacon Hill station in the Initial Segment.

During 2002 and 2003, Sound Transit held multiple open houses and design workshops related to the final design of the McClellan and Beacon Hill stations. The station design, public art, and parking mitigation plans were substantially revised because of these meetings. Additionally, Sound Transit held public meetings and participated in City of Seattle public hearings for the Beacon Hill tunnel noise variance, which will allow the necessary 24-hour construction on the tunnel to occur with noise mitigation in place to protect the neighborhood.

During construction of the Beacon Hill test shaft, staff regularly hand distributed and mailed construction updates to nearby businesses and neighbors. Beginning in the summer of 2003, staff began meeting on a monthly basis with members of the North Beacon Hill Community Council and the Beacon Hill Chamber of Commerce to discuss construction and detailed mitigation plans. In March 2004, a project update was mailed to the Beacon Hill neighborhood and a project open house was held.

During construction of the Beacon Hill tunnel and station and McClellan guideway and station, staff intends to continue and expand the outreach methods used during construction of the Beacon Hill test shaft. Regular construction update meetings will be held where neighborhood residents and businesses can learn about upcoming construction activities directly from the contractor and Sound Transit. Other activities will include distributing written construction updates, a 24-hour community construction hotline, interpretive services for all construction materials, and construction mitigation for affected businesses.

## **LEGAL REVIEW**

JW 5/13/04

## **SOUND TRANSIT**

### **MOTION NO. M2004-59**

A motion of the Board of the Central Puget Sound Regional Transit Authority authorizing the Chief Executive Officer to execute a contract with Obayashi Corporation for the construction of the Beacon Hill Tunnel, the Beacon Hill Tunnel Station, the aerial guideway along McClellan Street, and the aerial McClellan Station in the amount of \$279,964,375, plus a contract contingency of \$20,000,000 for a total authorized contract amount not to exceed \$299,964,375, which includes reimbursement to Sound Transit by third-parties for betterments in the amount of \$215,066.

#### **Background:**

This contract includes the civil facilities construction for the Beacon Hill Tunnel, the Beacon Hill Tunnel Station, aerial guideways, and the aerial McClellan Station, including:

- a short section of aerial guideway between Airport Way South and the west tunnel portal, including a crossing beneath Interstate 5;
- approximately one mile of twin-bore tunnels, including tunnel portals;
- a deep, mined, binocular tunnel station with platform, concourse, cross-passage and ventilation tunnels; station access and ventilation shafts; a station headhouse providing station access; and a plaza;
- approximately one-half mile of aerial guideway between the east portal and Martin Luther King Jr. Way South, including the aerial McClellan Station; and
- trackwork; utilities; architectural features; mechanical and electrical equipment, including emergency ventilation fans and fire protection systems; high-speed elevators; and landscaping.

Combined, contingency allowances included in the base contract and the proposed contract contingency yield a total contingency amount equal to approximately 14% of the base contract work. Due to the engineering complexities and safety considerations associated with the tunnel construction, the C710 contract provides for a range of options for the contractor to respond to unforeseen conditions in a timely manner. Cost allowances for these measures are included in the base contract amount. In light of the current steel price volatility, the contract also includes an allowance to address potential steel price increases. These allowances, with a combined value of approximately \$18 million, represent a form of contingency.

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The approved schedule for the Central Link Light Rail Initial Segment assumes the start of construction for this segment in June of 2004. All required environmental compliance to support the Board's approval of this contract has been completed.




**Motion:**

It is hereby moved by the Board of the Central Puget Sound Regional Transit Authority that the Chief Executive Officer is authorized to execute a contract with Obayashi Corporation for the construction of the Beacon Hill Tunnel, the Beacon Hill Tunnel Station, the aerial guideway along McClellan Street, and the aerial McClellan Station in the amount of \$279,964,375, plus a contract contingency of \$20,000,000 for a total authorized contract amount not to exceed \$299,964,375, which includes reimbursement to Sound Transit by third-parties for betterments in the amount of \$215,066.

APPROVED by the Board of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on June 10, 2004.

  
John W. Ladenburg  
Board Chair

ATTEST:

  
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Marcia Walker  
Board Administrator