

**SOUND TRANSIT
STAFF REPORT**

MOTION NO. M2004-51

Contract Amendment with Hatch Mott McDonald/Jacobs Joint Venture for Design Services during Construction for the C710 Beacon Hill Tunnel

Meeting:	Date:	Type of Action:	Staff Contact:	Phone:
Finance Committee	5/20/04	Discussion/Possible Action to Recommend	Ahmad Fazel, Link Director	(206) 398-5389
Board	5/27/04	Board Approval Action	Robert Parsons, Link Civil Engineering Manager	(206) 398-5150

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

✓ Applicable to proposed transaction.

OBJECTIVE OF ACTION

To amend the existing contract with Hatch Mott McDonald/Jacobs (HMM/J) Joint Venture to provide additional civil engineering services for construction of the Beacon Hill Tunnel including the following:

- Provision of design services during construction.
- Provision of engineering oversight services in support of the sequential excavation method (SEM) construction work of the Beacon Hill Tunnel.

ACTION

Authorize the Chief Executive Officer to 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 Central Link Light Rail Initial Segment Project in the amount of \$5,580,000 with no contingency for a new total authorized contract amount not to exceed \$18,668,763.

KEY FEATURES

- Design services during construction will include, but are not limited to: reviewing submittals; responding to requests for information from the contractor; preparing design modifications as required by existing conditions; and providing design change management.
- Additionally, the design services during construction will include engineering oversight services required for the SEM mining for the Beacon Hill Station, including provision of specialist staff experienced in SEM construction to monitor, inspect, and advise on the SEM

work. This work involves multiple shifts (24 hours/day) seven days a week that will be required to be coordinated with the contractor's work.

- Design services during construction will be provided by HMM/J on an on-call basis as determined necessary by Sound Transit staff. Services to be provided will be negotiated by staff and will be consistent with the project scope of work contained in the request for proposals. This amendment was anticipated at the onset of the contract for which the amendment is now being pursued.

BUDGET IMPACT SUMMARY

There is no action outside of the Board-adopted budget; there are no contingency funds required, no subarea impacts, or funding required from other parties other than what is already assumed in the financial plan.

BUDGET DISCUSSION

This action would authorize execution of a contract amendment with HMM/J to provide civil engineering design services during construction (DSDC), including engineering oversight services for SEM, for the Beacon Hill Tunnel in the amount of \$5,580,000 with no contingency for a revised total authorized expenditure not to exceed \$18,668,763.

The 2004 Adopted Budget for the Central Link Initial Segment is \$2.07 billion. Within that budget, as amended by Board Resolution No. R2004-05, \$25,307,932 has been set aside for DSDC in the final design phase. Should the proposed action be approved, the remaining balance for this budget line item will be \$17,300,252.

REVENUE, SUBAREA, AND FINANCIAL PLAN IMPACTS

The proposed action is consistent with the current Board-adopted budget, as amended by Board Resolution No. R2004-05, and is affordable within Sound Transit's current long-term financial plan and regional fund financial capacity. The action will have no new revenue impacts on Sound Transit.

BUDGET TABLE

Action Item: Hatch Mott MacDonald/Jacobs (Provide design services during construction (DSDC), including engineering oversight services in support of SEM, for C710 Beacon Hill Tunnel project 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	118,145	5,580	123,725	19,798
4 Right of Way	233,016	147,514		147,514	85,502
5 Construction	1,159,837	277,901		277,901	881,935
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 Total Current Budget	2,070,000	934,550	5,580	940,130	1,129,870

Phase Budget Detail

11 DSDC Initial Segment	25,308	2,428	5,580	8,008	17,300
12 Other Final Design	118,215	115,717		115,717	2,498
13 Total Phase	143,523	118,145	5,580	123,725	19,798

(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	1,815	740	39,597	-	-
Total phase commitments	118,145	277,901	63,823	52,469	131,799

Contract Budget	Board Approvals to Date (F)	Current Approved Contract Value (G)	Proposed Action (H)	Proposed Total for Board Approval (I)	Proposed Contract Value (J)
14 Contract Amount	12,177	13,089	5,580	17,757	18,669
15 Contingency	912	-	-	912	-
16 Total	13,089	13,089	5,580	18,669	18,669
17 Percent Contingency	7%	0%	0%	5%	0%

M/W/DBE – SMALL BUSINESS PARTICIPATION

Prime Consultant/Contractor

HMM/J is the prime civil facilities design consultant for the Beacon Hill Tunnel contract. During construction, the need to engage the designer of record is driven by the scope of a change or review, and the timeliness of the response required. The actual M/W/DBE and Small Business utilization will vary depending on these needs and cannot be confirmed at this time.

It is intended that DSDC services for elements of the work that were designed by M/W/DBE and Small Businesses would be directed to these subconsultant designers. However, as this subconsultant effort is focused on the relatively limited civil engineering surface and utility works, and given that the majority of the design support services for this contract are required in the specialist field of tunnel engineering (including the very specialized field of SEM mining), it is

estimated that MW/DBE and Small Business participation during the construction phase of the design contract would be in the order of 3%.

The MW/DBE and Small Business goal established for this contract was 13%. Performance to date on this contract achieved 11.49% MW/DBE participation. The MW/DBE and Small Business participation estimate for HMM/J's design services during construction and SEM services is 3%, which reflects the expected greater utilization of prime consultant staff during this phase. The resulting MW/DBE participation for the overall contract is estimated to be 8.96% at completion.

Utilization Breakdown Table

Subconsultant	Business Type	% of Work	Dollar Value
Rose Water Engineering	W/DBE	1.5%	\$84,000
Garry Struthers Associates, Inc.	M/DBE	1.5%	\$84,000
Total		3.0%	\$168,000

HISTORY OF PROJECT

Motion or Resolution Number	Summary of Action	Date of Action
R2004-05	Amended the Adopted 2004 Budget by transferring the surplus lifetime capital budget of \$8 million from the Administration Phase and \$12 million from the Construction Phase of the Central Link Light Rail Initial Segment Project to the Final Design Phase of the project.	4/22/04
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
M2002-98	Executed a contract amendment with the Hatch Mott MacDonald/Sverdrup Joint Venture to provide additional civil engineering final design services for the Beacon Hill Station in the amount of \$2,571,701 for a new total authorized contract amount not to exceed \$12,016,263.	9/12/02
M2002-09	Executed a contract amendment with Hatch Mott MacDonald/Sverdrup (HMM/S) 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 total of \$3,642,562 and for a new total authorized contract amount not to exceed \$9,444,562	2/14/02
M2000-55	Executed a contract with Hatch Mott MacDonald/Sverdrup for civil engineering final design services associated with construction of the Beacon Hill tunnel segment for the Central Link Light Rail project for a contract amount of \$5,275,000 with a 10% contingency of \$527,000 for a total authorized amount not to exceed \$5,802,000.	7/13/00

A contract with HMM/J was executed on August 1, 2000, for final design of the civil facilities for the Beacon Hill Tunnel. The scope included design of a limited portion of the shaft and tunnel structures for the Beacon Hill Station to be constructed with the running tunnels in the initial construction phase. Completion of the station was to be deferred to a future construction phase, after the system was in operation. Subsequently, and after a pause in the design program from February 23, 2001 through November 14, 2001, the Sound Transit Board in February 2002 authorized completion of the Beacon Hill Station design to allow the station to be included in the initial phase of construction. The design was to be completed with a revised station configuration and a revised tunnel alignment, in order to avoid contaminated ground identified on the original alignment during the geotechnical exploration program for the final design.

The final design for the Beacon Hill Tunnel and Station, including implementation of an exploratory test shaft program, was completed by the HMM/J team in December 2003. A two-step bid process for the construction was implemented, with an initial pre-qualification of contractors being followed by "Invitation for Bids" issued to successfully pre-qualified contractors. Construction bids are due on May 14, 2004.

The design program authorized by the Board in February 2002 included Task 13: Assistance during Construction. No budget or detailed scope was provided for this task for work by the 710 civil facilities consultant during the construction phase. The outline scope stated that Task 13 was to provide for review of the contractor's submittals and for the provision of field representatives specifically to monitor and provide engineering oversight services for all aspects of the SEM mining construction. This proposed amendment to the HMM/J contract will provide for these required services.

CONSEQUENCES OF DELAY

Significant delay in Board action could result in delayed responses to the contractors' submittals and requests for information, which could delay the construction schedule.

PUBLIC INVOLVEMENT

Not applicable to this action.

LEGAL REVIEW

JW 5/12/04

SOUND TRANSIT

MOTION NO. M2004-51

A motion of the Board of the Central Puget Sound Regional Transit Authority authorizing the Chief Executive Officer to 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 Central Link Light Rail Initial Segment Project in the amount of \$5,580,000 with no contingency for a new total authorized contract amount not to exceed \$18,668,763.

Background:

A contract with HMM/J was executed on August 1, 2000, for final design of the civil facilities for the Beacon Hill Tunnel. The scope included design of a limited portion of the shaft and tunnel structures for the Beacon Hill Station to be constructed with the running tunnels in the initial construction phase. Completion of the station was to be deferred to a future construction phase, after the system was in operation. Subsequently, and after a pause in the design program from February 23, 2001 through November 14, 2001, the Sound Transit Board in February 2002 authorized completion of the Beacon Hill Station design to allow the station to be included in the initial phase of construction. The design was to be completed with a revised station configuration and a revised tunnel alignment, in order to avoid contaminated ground identified on the original alignment during the geotechnical exploration program for the final design.

The final design for the Beacon Hill Tunnel and Station, including implementation of an exploratory test shaft program, was completed by the HMM/J team in December 2003. A two-step bid process for the construction was implemented, with an initial pre-qualification of contractors being followed by "Invitation for Bids" issued to successfully pre-qualified contractors. Construction bids are due on May 14, 2004.

The design program authorized by the Board in February 2002 included Task 13: Assistance during Construction. No budget or detailed scope was provided for this task for work by the 710 civil facilities consultant during the construction phase. The outline scope stated that Task 13 was to provide for review of the Contractor submittals and for the provision of field representatives specifically to monitor and provide engineering oversight services for all aspects of the Sequential Excavation Method (SEM) mining construction. This proposed amendment to the HMM/J contract will provide for these required services.

Motion:

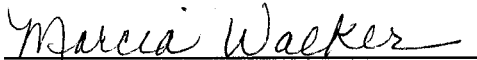
It is hereby moved by the Board of the Central Puget Sound Regional Transit Authority that the Chief Executive Officer is authorized to execute a contract amendment with Hatch Mott MacDonald/Jacobs Joint Venture to provide civil engineering design services during construction, including engineering oversight services for the sequential excavation work for the Beacon Hill Tunnel in the Central Link Light Rail Initial Segment Project in the amount of \$5,580,000 with no contingency for a new total authorized contract amount not to exceed \$18,668,763.

APPROVED by the Board of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on May 27, 2004.



John W. Ladenburg
Board Chair

ATTEST:



Marcia Walker
Board Administrator