

**SOUND TRANSIT  
STAFF REPORT**

**MOTION NO. M2007-78**

**Pierce Transit Mobile Communications Project**

<b>Meeting:</b>	<b>Date:</b>	<b>Type of Action:</b>	<b>Staff Contact:</b>	<b>Phone:</b>
Finance Committee	7/19/07	Discussion/Possible Action to Recommend Board approval	Ellen Gustafson, Acting Director of Transportation Services	(206) 398-5094
Board	7/26/07	Action	<b>Timothy Dunn, Bus Operations Manager</b>	(206) 398-5016

<b>Contract/Agreement Type:</b>	✓	<b>Requested Action:</b>	✓
Competitive Procurement		Execute New Contract/Agreement	✓
Sole Source		Amend Existing Contract/Agreement	
Agreement with Other Jurisdiction(s)	✓	Budget Amendment	
Real Estate		Property Acquisition	

**PROJECT NAME**

Mobile Communications Project

**PROPOSED ACTION**

Authorizes the chief executive officer to execute an agreement with Pierce Transit to purchase and install a new radio-CAD/AVL communications system for the Sound Transit bus fleet operated by Pierce Transit for a total agreement amount not to exceed \$5,720,000.

**KEY FEATURES of PROPOSED ACTION**

- The purpose of this action is to procure a new communications system for Sound Transit's fleet and modernize the fixed site equipment.
- The Pierce Transit Mobile Communications Project will replace an obsolete, overloaded and unreliable radio communications system for Sound Transit buses operated by Pierce Transit with an advanced 700 MHz digital, voice and data radio system from Motorola.
- This action is needed because the communications system is antiquated and unreliable on Sound Transit and Pierce Transit routes and the current system will not be supported after mid-2008.
- The agreement defines a scope of work, including financing and ownership of equipment. As part of the agreement, Sound Transit will contribute a capped amount of \$5.72 million to the \$30.6 million project.
- On-board technologies will provide real time information at Sound Transit facilities as envisioned in the Research and Technology's Corridor Technology Initiative.

- This project supports the continued safe operation of the Sound Transit system and has been contained in previous proposed capital budgets. The project was removed from the budget pending further definition of scope which is being provided here. Therefore, the creation of this project as a separate capital project is not a change to Sound Move.

**BUDGET IMPACT SUMMARY**

Current Project Phase: PE/Procurement  
 Projected Completion Date: Q2 2008

Action Outside of Adopted Budget:	✓	Comments on Checked Items
This Project	✓	This is a new project that is not included in the current Transportation Services capital budget.
This Phase		
This Task		
Budget Amendment Required	✓	Funding for this project will need to be made available through a budget amendment allocating \$5.72 million from the Research and Technology Fund, and the Pierce and South King County Bus Maintenance Base projects.

Key Financial Indicators:	✓	Comments on Checked Items
Contingency Funds Required		
Funding required from other parties (other than what is in financial plan)		

Not checked = action is assumed in current Board-adopted budget. No budget action or adjustment to financial plan required.

**BUDGET and FINANCIAL PLAN DISCUSSION**

Staff is recommending that Sound Transit participate in a mobile communications project that is currently in the final planning and procurement phases. The total project budget is \$30.6 million. Of this amount, Sound Transit is being asked to contribute a capped amount of \$5.72 million. The amount would be used to fund the purchase and installation of equipment and infrastructure necessary to ensure continued ST Express operations. A payment schedule was developed to reflect payments tied to project milestones as described below:

Project	Billing Date	Amount
Fixed Radio Site Equipment Installed	8/31/07	\$2.840m
CAD/AVL Fixed Equipment Installed	11/30/07	\$1.890m
Installation 1 <sup>st</sup> 50% of Fleet	4/30/08	\$0.495m
Installation 2 <sup>nd</sup> 50% of Fleet	6/30/08	<u>\$0.495m</u>
	Total	\$5.720m

Sound Transit and Pierce Transit are anticipating a partnership through 2014. Sound Transit will be able to continue to use the on-board systems through a leasing arrangement for air communication rights if the partnership is terminated at the end of 2014.

In the Adopted 2007 Budget, there are no budget allocations for mobile communications projects. However, funding has been identified from the Regional Technology fund and the Base Maintenance Facility funds (Pierce County and South King County subarea funds). The proposed budget transfer would still leave sufficient funds in the bus maintenance project to complete envisioned bus maintenance capacity improvements in those subareas.

Subarea participation in partner infrastructure projects such as this one is based on the percentage of service operated by that partner which benefits that particular subarea as described by the Service Implementation Plan. For Pierce Transit, the relative share is 88.3% to Pierce County and 11.7% to South King County. Route 574, which stops at Federal Way, is proportionately assigned to South King County.

Resolution No. R2007-17 is required to create a Mobile Communications fund and allocate dollars from the Research and Technology fund and the Base Maintenance Facility funds.

The impact of the proposed budget amendment on the respective project budgets is illustrated below:

**Summary for Board Action (Year of Expenditure \$000)**

**Project: NEW - Pierce Transit Mobile Communications Project**

	Adopted 2007 Budget <sup>1</sup> (A)	Proposed Budget Amendment <sup>2</sup> (B)	Revised 2007 Budget (C)
1 Agency Administration	\$ -	\$ -	\$ -
2 Preliminary Engineering	\$ -	\$ -	\$ -
3 Final Design	\$ -	\$ -	\$ -
4 Right of Way	\$ -	\$ -	\$ -
5 Construction	\$ -	\$ 5,720	\$ 5,720
6 Contingency	\$ -	\$ -	\$ -
7 Total Current Budget	\$ -	\$ 5,720	\$ 5,720
8 Pierce County Bus Maintenance Facility Project	\$ 10,155	\$ (3,991)	\$ 6,164
9 South King County Bus Maintenance Facility Project	\$ 3,390	\$ (529)	\$ 2,861
10 All Other Bus Maintenance Facility Project	\$ 10,072	\$ -	\$ 10,072
11 Total Bus Maintenance Facility Project	\$ 23,617	\$ (4,520)	\$ 19,097
12			
13 All Other Transportation Services projects	\$ 203,153	\$ -	\$ 203,153
14 Total Transportation Services Capital Program	\$ 226,770	\$ 1,200	\$ 227,970
15			
16 Research and Technology Fund	\$ 10,203	\$ (1,200)	\$ 9,003
17			
18 Total	\$ 236,973	\$ -	\$ 236,973

**Notes:**

<sup>1</sup> This is a new project that was not included in the Adopted 2007 Budget. The budget for the Bus Maintenance Base project is included on page 66 of the Adopted 2007 budget book, as amended by Resolution R2007-11.

<sup>2</sup> The proposed budget amendment would reallocate \$3,991,000 from the Pierce County Bus Maintenance Base project, \$529k from the South King County Bus Maintenance Base project, and \$1,200,000 from the Research and Technology Fund to create a \$5,720,000 project budget for a Pierce Transit Mobile Communications Project..

A Mobile Communications fund will also be required for future projects associated with upcoming King County Metro and Community Transit mobile communication projects. These will be taken to the Board as part of the 2008 Budget process.

## **SMALL BUSINESS PARTICIPATION**

### Prime Consultant/Contractor

Pierce Transit will be the contract administrator and project manager of this project and will comply with any Small Business participation program it has established.

### EEO Commitment

Pierce Transit will be the contract administrator and project manager of this project and utilizes the Disadvantage Business Enterprises it has established for its goals.

## **PROJECT DESCRIPTION and BACKGROUND for PROPOSED ACTION**

Pierce Transit has prepared a \$30.6 million Mobile Communications Project to replace their radio communications system through a Motorola contract including contingency, taxes, macro support, communications center equipment, server room and construction. The project will replace an unreliable and obsolete system, provide advanced communications and data collection technology, include next stop announcements (supporting ADA requirements), support next bus information at ST Express stops, expand automated passenger counters, provide on-time performance data and other automated data collection to support FTA and NTD reporting requirements and 5% equipment spares.

The 19% cost share is based on the number of buses operated by Pierce Transit. Sound Transit's buses are 19% of the total fleet operated by Pierce Transit. The cost share is capped at \$5.72 million and would draw from the Base Maintenance Facility Pierce County and South King County subarea funds and the Research and Technology fund, as proposed to the Board through Resolution No. R2007-17, which is concurrently being proposed to the Board with this action.

The CAD/AVL element will provide the interface for both radio and vehicle monitoring, integrate with Hastus scheduling software, provide text messaging between bus drivers and the communications center, expand the number of buses with APC, include advanced data collection abilities, on-time performance tracking, automated next stop announcements and the necessary systems for next bus information at ST Express stops. It will also support the options that can be added in the future such as vehicle performance monitoring.

The system will provide improvements in communications between the bus driver, communications center, and field supervisors providing improved safety, service reliability and enhance customer service. Also, it will discontinue time consuming and lengthy field work for manual data collection with automated real time data collection for service planning analysis and faster response time to service issues and service demands.

Communications systems generally have a useful life span of about 15 years. At this time, Sound Transit is planning to contract with Pierce Transit through 2014. If Sound Transit discontinues it's partnership with Pierce Transit, it is possible to continue leasing the radio air rights allowing continued use of the product through its useful life.

### **CONSEQUENCES of DELAY**

Pierce Transit is proceeding with implementing a new mobile communications system. Without Sound Transit's contribution to support the ST Express bus system, there will be no means to communicate between the communications center and the bus drivers putting safety and service in serious jeopardy. A delay in funding will affect the project timeline and Pierce Transit's contract with Motorola resulting in higher costs and transition difficulties.

### **PUBLIC INVOLVEMENT**

Not applicable to this action.

### **ENVIRONMENTAL COMPLIANCE**

SSK 7/13/07

### **LEGAL REVIEW**

JW 7/13/07

## **SOUND TRANSIT**

### **MOTION NO. M2007-78**

A motion of the Board of the Central Puget Sound Regional Transit Authority authorizing the chief executive officer to execute an agreement with Pierce Transit to purchase and install a new radio-CAD/AVL communications system for the Sound Transit bus fleet operated by Pierce Transit for a total agreement amount not to exceed \$5,720,000.

#### **Background:**

Pierce Transit has prepared a \$30.6 million Mobile Communications Project to replace their radio communications system through a Motorola contract including contingency, taxes, macro support, communications center equipment, server room and construction. The project will replace an unreliable and obsolete system, provide advanced communications and data collection technology, include next stop announcements (supporting ADA requirements), support next bus information at ST Express stops, expand automated passenger counters, provide on-time performance data and other automated data collection to support FTA and NTD reporting requirements and 5% equipment spares.

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**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 an agreement with Pierce Transit to purchase and install a new radio-CAD/AVL communications system for the Sound Transit bus fleet operated by Pierce Transit for a total agreement amount not to exceed \$5,720,000.

APPROVED by the Board of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on July 26, 2007.

Connie Marshall  
Connie Marshall  
Board Vice-Chair

ATTEST:

Marcia Walker  
Marcia Walker  
Board Administrator