

**SOUND TRANSIT
STAFF REPORT**

MOTION NO. M2004-26

Kirkland Transit Enhancements - Transit Signal Priority (TSP) Funding

Meeting:	Date:	Type of Action:	Staff Contact:	Phone:
Finance Committee	5/20/04	Discussion/Possible Action	Jim Edwards, Interim Regional Express Director Vicki Youngs, Pre-Construction Program Manager, Regional Express Eric Beckman, Project Manager, Regional Express	(206) 398-5436 (206) 398-5024 (206) 398-5251

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 obtain approval to provide funding to the City of Redmond for the implementation of Transit Signal Priority (TSP) at a total of 12 intersections within Redmond.

ACTION

- Authorizes the Chief Executive Officer to execute an Interagency Agreement with the City of Redmond to provide the design, installation, equipment procurement, and testing of Transit Signal Priority improvements for a total authorized amount not to exceed \$600,000.

KEY FEATURES

- Follows the Sound Transit Board's policy direction for the Research and Technology Program's corridor-level technology initiative, which includes Transit Signal Priority improvements.
- Allows Sound Transit to partner with the City of Redmond on an existing capital improvement called the Redmond Intelligent Transportation Systems (RITS) project in order to improve the speed and reliability along ST Express bus Routes 540 and 545.
- Implements TSP at intersections proposed within the scope and intent of the Kirkland Transit Enhancements project (#141), which set aside \$600,000 for signal improvements in the City of Redmond.
- TSP will improve the speed and reliability for both Sound Transit and King County Metro bus routes by mitigating signal delay along the corridors of Routes 540 and 545 and will improve bus access to the Overlake Transit Center and throughout the City of Redmond.

BUDGET IMPACT SUMMARY

There is no action outside of the Board-adopted budget; there are no contingency funds required because Sound Transit's contribution is capped at \$600,000. No subarea impacts or funding is required from other parties other than what is already assumed in the financial plan.

BUDGET DISCUSSION

The proposed action authorizes staff to execute an Interagency Agreement with the City of Redmond to provide the design, installation, equipment procurement, and testing of TSP improvements for a total authorized amount not to exceed \$600,000.

The adopted capital budget for the Kirkland Transit Enhancements project is \$14,000,460. Within the construction phase of this budget, \$8,454,100 is budgeted for construction and commitments to date total \$221,700. Should the proposed action be approved, the remaining budget in the construction phase would be \$7,632,400.

REVENUE, SUBAREA, AND FINANCIAL PLAN IMPACTS

The proposed action is consistent with the current Board-adopted budget and is affordable within Sound Transit's current long-term financial plan and the subarea financial capacity. The action will have no new revenue impacts on Sound Transit.

BUDGET TABLE

The phase budget for the Kirkland Transit Enhancements project appears on page 151 of the Proposed 2004 budget, which was adopted by the Board in December 2003. The following table highlights the impacts of this action on the phase budgets for this project:

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

Action Item: Interagency Agreement with the City of Redmond to contribute \$600,000 for Transit Signal Priority for the Kirkland Transit Enhancements project (#141), \$s in thousands

	2004 Adopted Budget (A)	Committed To Date (B)	This Action (C)	Total Committed & Action (D)	Uncommitted (Shortfall) (E)
Agency Administration	\$ 716	\$ 1,019	\$ -	\$ 1,019	\$ (303)
Preliminary Engineering	914	914	-	914	(0)
Final Design	978	978	-	978	(0)
ROW	2,000	134	-	134	1,866
Construction	8,454	244	600	844	7,610
Contingency	939	-	-	-	939
Total Current Budget	\$ 14,001	\$ 3,289	\$ 600	\$ 3,889	\$ 10,112

Phase Budget Detail

Construction	\$ 8,454	\$ 244	\$ 600	\$ 844	\$ 7,610
Other	-	-	-	-	-
Total Phase	\$ 8,454	\$ 244	\$ 600	\$ 844	\$ 7,610

Contract Budget	Current Approved Contract Value (F)	Spent to Date (G)	Proposed Action (H)	Proposed Total Contract Value (I)
City of Redmond	\$ -	\$ -	\$ 600	\$ 600
ST Contingency	-	0	-	-
Total	\$ -	\$ -	\$ 600	\$ 600
Percent Contingency	0%		0%	0%

Notes:

(A) - Adopted 2004 Budget taken from Page 151 of the Proposed 2004 Budget which was adopted by the Board by Resolution No. R2003-19 on December 11, 2003.

(B) - Committed to Date amounts are taken from HQReports for March 15, 2004 and include contract contingencies.

M/W/DBE – SMALL BUSINESS PARTICIPATION

Not applicable to this action.

HISTORY OF PROJECT

Prior Board or Committee Actions and Relevant Board Policies

Motion or Resolution Number	Summary of Action	Date of Action
M2002-101	Regional and Sound Transit Technology Plan identified the need for the Research and Technology Program to fund TSP improvements and to work with local agency partners to develop and implement TSP systems.	9/05/02
M2002-74	Executing a contract with David Evans and Associates for Engineering Services for the Kirkland Transit Enhancement and Willows Projects in the amount of \$1,935,976 with a 10% contingency of \$193,598 and the Willows Road Project in the amount of 886,900 with a 10% contingency of \$88,690 for a total authorized amount not to exceed \$3,105,164.	6/13/02
R2001-07	Established a new Regional Express capital project named the Kirkland Transit Enhancements Project providing improvements to increase transit speed and reliability along ST Express Route 540. Recommended improvements include installation of TSP.	6/14/01

Introduction to TSP

TSP invokes several concepts on how to provide an advantage to a bus. There are many techniques to advance a bus through traffic such as queue jumps, HOV/Transit lanes, optimization of signal timings, and special access treatments. TSP refers to the concept of detecting a bus in the flow of traffic and providing more “green time” for the transit vehicle as it travels within the general traffic stream. Additional green time refers to a host of control strategies that are employed at the intersection traffic controller level once the bus is detected and is authorized for priority treatment. In the case of City of Redmond, there are 12 intersections identified through preliminary design (Exhibit 1) where this concept can be applied to the benefit of current transit operations.

Project Background

The RITS project is an area wide effort within Redmond city limits to implement intelligent transportation system (ITS) tools for traffic management, including signal controller upgrades and signal coordination systems. RITS will allow for the signal system to be interconnected and timing plans optimized with direct communication to a new traffic management center.

Benefits of TSP and the Project

TSP is a tool to both improve schedule reliability and to reduce trip time. For the average rider, TSP should create a better trip experience by shortening the time it takes them to get to their destination. Equally important, they will have a higher level of confidence that the bus will come when it is scheduled

For the RITS project, a TSP Interactive Model developed by King County Metro was used to determine what the TSP benefits will be at the intersection where the system is proposed. This

model takes into account many different operating variables to quantify what the total benefits versus total costs would be at a particular intersection or along a corridor. A few examples of the model variables include, but are not limited to total installation costs, operating conditions, transit benefits, service costs, and passenger benefits. The modeling results indicate the total benefits would be greater than the costs at the intersections where both Sound Transit and King County Metro operate.

Research and Technology Program Background/Relationship

The Research and Technology Fund was included in Sound Move to explore new technologies that could be, where practical, incorporated into the implementation of existing services and/or to provide the Board with the information which could be used in developing future programs and projects. Per Sound Move, Sound Transit will “evaluate...innovative ways to provide transit service, reduce dependency on single occupancy vehicles, improve public transportation’s cost effectiveness, and better respond to customer needs.”

In 2002, the Board adopted a Transit Technology Plan (Motion No. M2002-101) that would assess and identify an array of technological advancements to existing rail and bus transit service that will be implemented by 2006. This plan established an array of initiatives which are designed to improve customer service, customer safety and security, and operations through technology investments. This particular project is a component to one of the Sound Transit initiatives, “the Corridor Transit Technology Initiative,” which includes a set of related ITS projects that provide advanced transit technology applications for bus and commuter rail operations in select corridors. TSP is a component to this initiative and is a proven and beneficial application of ITS technology to improve localized operating conditions along a Sound Transit service corridor.

Partnerships

There are multiple agency funding partnerships and grants involved in this project. The overall budget for all three phases is approximately \$3,802,074. The City of Redmond has secured funding from the Federal Department of Transportation and the Washington State Transportation Improvement Board in the form of Congestion Management Air Quality (CMAQ), Transportation Improvement Board (TIB), Corridor Congestion Relief Program grants. Local matching funds are from King County Metro, the City of Redmond, and by this action from Sound Transit. (Please refer to funding table for a specific breakdown of sources and available funds.)

RITS Funding Source Table

RITS Phase	Funding source	Amount	Total Project Cost
1	CMAQ TIB King County Sound Transit City of Redmond	\$1,000,000 \$374,000 \$163,000 \$372,174 \$163,000	 \$2,072,174
2	Corridor Congestion Relief Program Grant King County Sound Transit City of Redmond	\$550,000 \$150,000 \$50,000 \$400,000	 \$1,150,000
3	CMAQ Sound Transit City of Redmond	\$346,006 \$161,894 \$72,000	 \$579,900
	Total Project Costs	\$3,802,074	

CONSEQUENCES OF DELAY

There are no significant risks should the Finance Committee delay action on the proposed contract for implementation of the TSP system within the City of Redmond.

PUBLIC INVOLVEMENT

The Redmond City Council is expected to approve the funding interagency agreement at its May 18, 2004, meeting.

LEGAL REVIEW

JW 5/11/04

SOUND TRANSIT

MOTION NO. M2004-26

A motion of the Finance Committee of the Central Puget Sound Regional Transit Authority authorizing the Chief Executive Officer to execute an Interagency Agreement with the City of Redmond to provide the design, installation, equipment procurement, and testing of Transit Signal Priority improvements for a total authorized amount not to exceed \$600,000.

Background:

The RITS project is an area wide effort within Redmond city limits to implement intelligent transportation system (ITS) tools for traffic management, including signal controller upgrades and signal coordination systems. RITS will allow for the signal system to be interconnected and timing plans optimized with direct communication to a new traffic management center.

In 2002, the Board adopted a Transit Technology Plan (Motion No. M2002-101) that would assess and identify an array of technological advancements to existing rail and bus transit service that will be implemented by 2006. This plan established an array of initiatives which are designed to improve customer service, customer safety and security, and operations through technology investments. This particular project is a component to one of the Sound Transit initiatives, "the Corridor Transit Technology Initiative," which includes a set of related ITS projects that provide advanced transit technology applications for bus and commuter rail operations in select corridors. Transit Signal Priority is a component to this initiative and is a proven and beneficial application of ITS technology to improve localized operating conditions along a Sound Transit service corridor.

Motion:


It is hereby moved by the Finance Committee of the Central Puget Sound Regional Transit Authority that the Chief Executive Officer is authorized to execute an Interagency Agreement with the City of Redmond to provide the design, installation, equipment procurement, and testing of Transit Signal Priority improvements for a total authorized amount not to exceed \$600,000.

APPROVED by the Finance Committee of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on May 20, 2004.



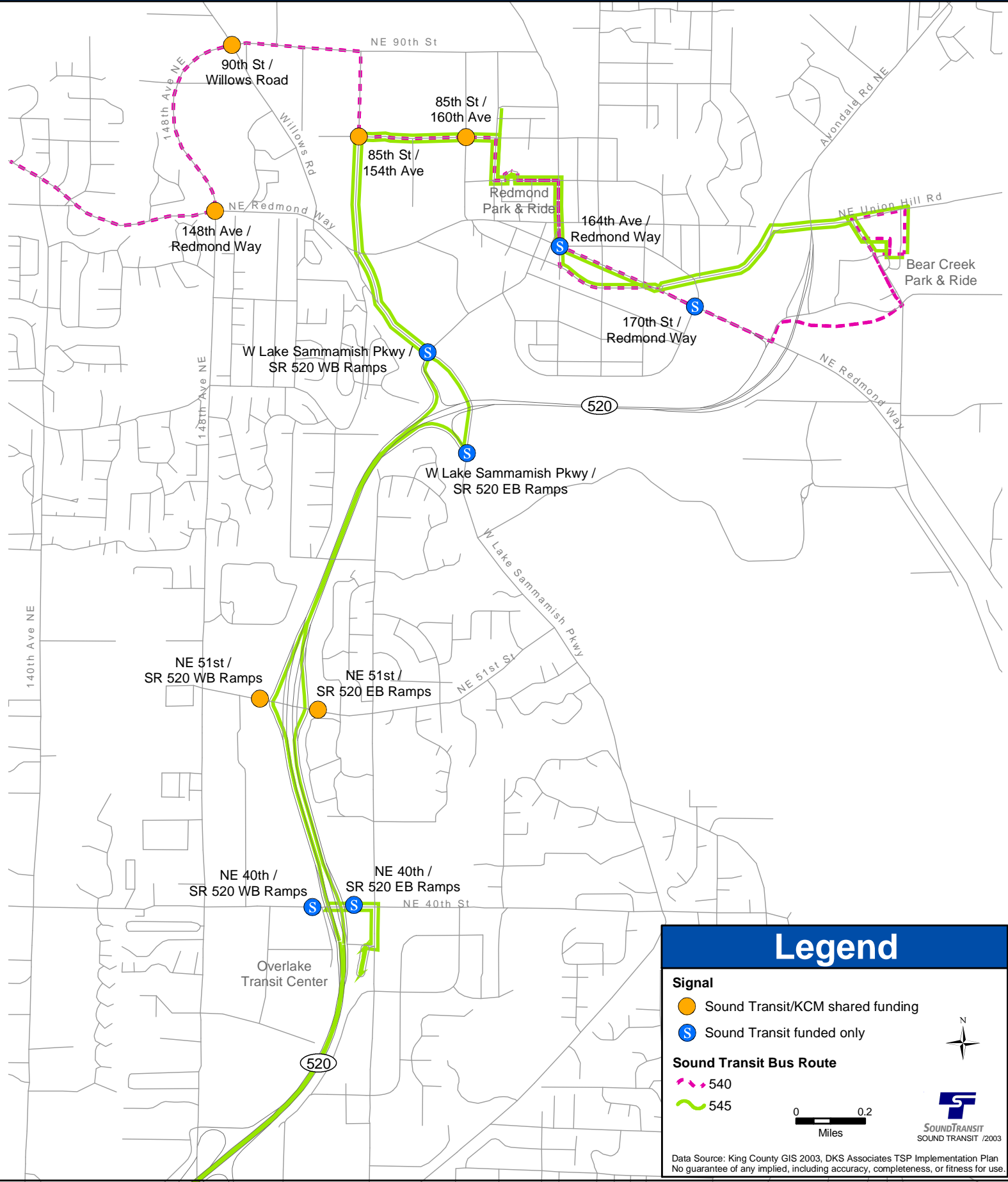
Kevin Phelps
Finance Committee Chair

ATTEST:



Marcia Walker
Board Administrator

Sound Transit Proposed TSP Locations - Redmond



Legend

Signal

- Sound Transit/KCM shared funding
- S Sound Transit funded only

Sound Transit Bus Route

- 540
- 545

0 0.2
Miles

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Data Source: King County GIS 2003, DKS Associates TSP Implementation Plan
No guarantee of any implied, including accuracy, completeness, or fitness for use.