SOUND TRANSIT
STAFF REPORT

MOTION NOS. M2003-24, M2003-25, M2003-26

Smart Card – Vendor Contract, Interlocal Agreement, and Allocation of Funding

Meeting:	Date:	Type of Action:	Staff Contact:	Phone:
Executive Committee	3/6/03	Discussion/Possible Action to Recommend Board Approval	Paul Matsuoka, Director Office of Policy and Planning	(206)398-5070
Finance Committee	3/6/03	Deferred	**Barbara Gilliland, Planning and Development Manager**	(206)398-5051
Finance Committee	3/20/03	Discussion/Possible Action to Recommend Board Approval	Brian Brooke, Project Manager	(206)398-5229
Board	3/27/03	Action		

Contract/Agreement Type:	3	Requested Action:	3
Competitive Procurement	X	Execute New Contract/Agreement	X
Sole Source		Amend Existing Contract/Agreement	
Memorandum of Agreement	X	Contingency Funds Required	
Purchase/Sale Agreement		Budget Amendment Required	X

4 Applicable to proposed transaction.

OBJECTIVE OF ACTION

To approve Sound Transit's participation in the Regional Fare Coordination/Smart Card project using Regional Fund/Fare Integration program monies to cover all needed costs for Sound Transit and a portion of the costs for some partner agencies' participation in the project.

ACTION

- Authorize the Executive Director to execute an interlocal agreement regarding the Smart Card project with partner transit agencies, which may include Community Transit (CT), Everett Transit (CET), Kitsap Transit (KT), King County Metro (KCM), Pierce Transit (PT), and Washington State Ferries (WSF).

- Authorize the Executive Director to execute a contract with ERG, Ltd., an Australian systems integration and transit fare collection equipment vendor, to design, implement, and operate a regional Smart Card-based fare collection and revenue processing system for Central Puget Sound transit agencies. This contract would include approximately $3.3 million for system design and implementation and all equipment, plus $2.7 million in payments for operations and maintenance of the system through 2014, and a 12% contingency amount of $0.7 million, for a total authorized contract amount of approximately $6.7 million.

- Authorize the Executive Director to allocate funding from the Regional Fund/Fare Integration Fund budget to cover the costs of Sound Transit's participation in the Smart Card project.

- Authorize the Executive Director to allocate funding from the Regional Fund/Fare Integration Fund budget to provide Smart Card project funding support to CT, ET and PT within Sound Transit's service area, and to renegotiate the Regional Pass and Fare Reconciliation Program (Puget Pass) Agreement to reduce and sunset Sound Transit's obligation to subsidize intersystem transfers.

KEY FEATURES

- Purchase of equipment and clearinghouse services from ERG, Ltd. for the collection and distribution of fares for multiple Central Puget Sound agencies through 2014.

- Implementation of a single Smart Card fare media which would improve the efficiency, convenience, and flexibility of customer fare payment.

- Construction of an automated regional fare collection and revenue processing system which would improve the accountability of regional fare and pass sales revenue distribution among Central Puget Sound transit agencies.

- Creates a Joint Board composed o comprised of representatives of the agencies to oversee project implementation and on-going operations.

- Establishes Sound Transit as the Fiscal Agent for the project, providing accounting services for project implementation funds and management of bank accounts for the Regional Fund Coordination system.

- Revises and establishes a sunset date for the current Regional Pass and Fare Reconciliation Program (Puget Pass) Agreement and the principle of Sound Transit fare revenue subsidies to partner agencies. Replacement of Puget Pass and associated regional policies with a regional Smart Card system is consistent with the intent of the Regional Fare Program.

- Cap Sound Transit's subsidy payments to transit agencies for implementation of Smart Card. Any project financial risks will be shared by all the transit agencies.

- Full realization of Sound Transit's benefits from a Regional Smart Card system will require participation by all transit agencies currently party to the Puget Pass agreement.

BUDGET IMPACT SUMMARY

Project Description: Regional Smart Card System (Fare Integration and Research & Technology Project)
Current Status: Proposal Approval
Projected Completion Date: Capital – 2006; Operations 2014

Action Outside of Adopted Budget:	**Y/N**	**Y Requires Comment**
This Line of Business	N	
This Project	N	
This Phase	N	
This Task	N	
Budget amendment required	N	
Key Financial Indicators:	**Y/N**	**Y Requires Comment**
Contingency funds required	N	
Subarea impacts	N	
Funding required from other parties other than what is already assumed in financial plan	Y	Multi-agency project. Sound Transit will operate as Fiscal Agent which will require receiving project payments from other agencies to pay the vendor.

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

BUDGET DISCUSSION

Sound Transit's total proposed costs for this project are $16.56 million. The costs are composed of two elements: $8.27 million for Sound Transit's share of the cost of the regional program (capital costs of $5.56 million - including $0.7 million contingency - and ten years of operation expense at $2.71 million) and $8.29 million to support other transit agency participation ($5.61 million support for CT, PT and ET, and $2.68 million to the project from Sound Transit's Research and Technology Fund). These expenditures would be paid in annual increments over the contract period.

The following table provides the project cost breakdown and summary of the funds requested for this project.

Total Requested Project Cost		**Current Budget**	
Sound Transit Costs: $8.27 M[*]			
♦ Fare Integration fund:	$7.95 M	♦ Fare Integration fund:	$13.56 M
♦ Research & Technology fund:	$0.32 M	♦ Research & Technology	$ 3.00 M
Costs to support other agencies: $8.29 M			
♦ Fare Integration fund:	$5.61 M		
♦ Research & Technology fund:	$2.68 M		
Total Project Cost	$16.56 M	Total Current Budget	$16.56

* $1.26 M will be provided from federal and Boeing grant funds.

This action will not require any changes to the 2003 budget. The operations and maintenance phase of the Fare Integration project budget and the research and technology phase of the Research and Technology project budget contain sufficient funds for this effort. Committing these funds does not endanger any other project elements that are to be funded out of the overall project. Future year budgets will be developed to accommodate this action; however, this budget action is still within the total budget funding allocations for the Fare Integration Fund and the Research and Technology Fund.

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 total regional cost of this project is estimated at $81.7 million for implementation and operation expenses through 2014. A substantial commitment from participating transit agencies is required for completion. Sound Transit will provide $3 million to the project from Research and Technology fund, plus will cover some additional funding shortfalls for CT, PT and ET. In addition, a total of $17.3 million in external grant dollars are dedicated to the project. These dollars will be shared among all of the agencies participating in the project. Sound Transit will receive a portion of a Boeing grant, the ITS Grants and Section 5307 formula funds, totaling $1.26 million.

The Regional Fund/Fare Integration Fund is funded from subarea revenues as outlined in Sound Move. There are currently enough funds remaining in the fund to pay for Sound Transit related costs and a portion of other agencies' costs. It is anticipated some funds will be remaining when the project is completed. These funds will be available for reallocation to other subarea needs.

IMPACT ON SOUND MOVE BUDGET

This proposal would result in estimated savings of up to $22 million from the original Sound Move budget. Sound Move set aside $59 million in YOE$ ($45 million in 1995$) for the Regional Fare Integration program. Under this proposal, a portion of the funds would be allocated to support the implementation and operation of the Smart Card project and the current Regional Fare Integration program would be discontinued at year-end 2006. The remaining balance would then be available for reprogramming.

Summary for Board Action (Year of Expenditure $000)

Action Item: Regional Smart Card System

	Fare Integration Budget (O&M)	Current Board Adopted Budget (A)	Committed To Date (B)	This Action (C)	Total Committed & Action (D)	Uncommited (Shortfall) (E)
1	Operations & Maintenance	56,234	1,125	13,560	14,685	41,550
2	Agency Administration	3,110	2,134	-	2,134	976
3	Total Current Budget	59,345	3,259	13,560	16,819	42,526
	Phase Budget Detail					
4	On-Board Survey	3,563	23	-	23	3,539
5	Puget Pass Production	2,224	356	-	356	1,868
6	Fare Transfer to other agency	31,177	570	-	570	30,607
7	Others	19,271	176	13,560	13,736	5,535
8	Total Phase	56,234	1,125	13,560	14,685	41,550
	Research & Technology Budget (CAP)					
9	Smart Card	3,121	121	3,000	3,121	0
10	Others	9,294	538	-	538	8,756
11	Total Current Budget	12,415	659	3,000	3,659	8,756
12	Total Budget	22,392	297	16,560	16,857	5,535

	Contract Budget	Approved Contract Value (F)	Spent to Date (G)	Proposed Action (H)	Proposed Total Contract Value (I)
12	ERG, Ltd.	0	0	6,000	6,000
13	Contingency	0	0	700	700
14	Total	0	0	6,700	6,700
15	Percent Contingency			12%	12%

Notes

3 Current project budget for Fare Integration Project

7 Current budget for reimburse to agencies for administration and uncommited funds

9 Current Smartcard budget for Research & Technology project (capital cost)

14 The total contract amount for ERG, Ltd., which will be funded by Fare Integration and Research & Technology project.

M/W/DBE – SMALL BUSINESS PARTICIPATION

ERG, Ltd. is the prime contractor for this contract. ERG, Ltd. will receive $58,862,528 / 99.58% of the contract. The subconsultants for this contract are:

Sub-Consultant	Cert. Status	Work	Dollars	%
C.A.E. & Associates	SBA8(a)	Equip. Installation & Maintenance	$125,000	0.21%
Strata Communications	WBE	Wiring & Equip. Installation	$125,000	0.21%

All agencies adopted King County Metro procurement rules for the solicitation of this project. The contract required that the vendor “demonstrate best effort” and “make affirmative effort” for DBE.

EEO COMMITMENT

ERG, Ltd. agrees to swear to an Affidavit and Certificate of Compliance regarding Equal Employment Opportunity upon entering into this contract.

HISTORY OF PROJECT

King County Metro (KCM), Community Transit (CT), Everett Transit (ET), Kitsap Transit (KT), Pierce Transit (PT), and Washington State Ferries (WSF), along with the Puget Sound Regional Council formally initiated the Smart Card project in 1994. Following Sound Transit's successful vote in 1996, it also joined this partnership, as the goals of the project mirrored the Sound Move promise to provide a "one-ticket ride." The partnership's 1999 RFP process yielded two responses. A Project Evaluation Team was established to review and rate each of the firms. Based upon the review, it was determined that only one firm, ERG, Ltd., met the RFP requirements and was selected for further consideration. After a temporary suspension to the procurement to address issues resulting from I-695, a best and final offer was requested and a submittal was received from ERG, Ltd. in July 2002. The proposal has been negotiated to final pricing and performance terms and agreement has been reached for the basic structure and language of a proposed interlocal agreement among the partner transit agencies.

What is Smart Card?
A "smart" card contains a microchip capable of holding rider fare and recent trip information such as:

- an electronic purse (e-purse) or cash balance which may be used to purchase transit services;
- a daily/weekly/monthly/annual pass allowing unlimited rides of a certain value;
- if a rider has recently paid a fare and is eligible for a free transfer, or should pay an upgrade;
- the customer type (adult, youth, etc.) and eligibility for a reduced fare or other special fare incentives.

To use a Smart Card, the holder waves it near a card reader (e.g. on a rail platform or at a bus farebox). The card and the reader automatically exchange information and process the transaction. Because each Smart Card transaction is recorded and validated through a central database, the system provides very useful accounting capabilities. For example, the revenue received from a monthly pass sale can be allocated proportionally to those transit agencies on which the pass holder rides during the month. The Smart Card system can also automate transactions such as adding cash value to a card or purchasing a new transit pass.

The Smart Card system would improve the ability of transit agencies to administer institutional pass programs by providing employers, schools, and universities with more flexible and accountable subsidy options. Employers that provide full transit subsidy could have data collected at the point of fare payment to be pre- or post-billed for rides actually taken. Companies that provide a fixed subsidy (e.g. a $25-per-month commuter bonus check) could automate their subsidy program via the Smart Card accounting process. In general, Smart Card would provide the agencies and customers of these subsidy accounts with accurate trip data, reduced administrative overhead and improved financial risk management, including the ability to cancel a card from the system when the employee is no longer eligible for the transit benefit.

How would a Smart Card system change Sound Transit's service delivery?
To implement a Smart Card system, Sound Transit would need to replace existing fare media and install additional equipment on board transit vehicles and at transit stations. The Smart Cards themselves would replace Puget Passes. Because the Smart Card media is reusable/rechargeable and can last for several years, their use would replace the cost of printing and distributing multiple passes. Cardholders could recharge their cards at transit customer service offices, at transit ticket vending machines (which would be retrofitted for the Smart Card system), at third party retailers, through online and telephone orders, or automatically via electronic debit/credit transactions.

On board Sound Transit buses, the Smart Card readers would replace the current mag-stripe readers. Cash fares would continue to be accepted through cash fareboxes, though many cash transactions would be replaced by use of the electronic purse feature of the Smart Card system.

For Sounder trains to continue operating under an open-platform boarding, proof-of-payment system, passengers would be required to "tag" their Smart Cards at card readers on the platform prior to boarding. Conductors would use handheld card readers to check for passenger proof of payment. To date, the regional Smart Card evaluation team has not selected the specific technology nor fully verified the functionality of handheld card readers for a proof of payment system. However there is consensus that there is low risk that the technology will not be readily available prior to system implementation (of all the participants, Washington State Ferries is the most heavily reliant on handheld readers for fare collection).

Link light rail is also planning to use the open-platform, proof-of-payment model, so implementation of the Smart Card system for light rail would be similar to that for Sounder.

Prior Board or Committee Actions and Relevant Board Policies

Motion or Resolution Number	Summary of Action	Date of Action
M98-42	Amending Contract with Booz-Allen & Hamilton Ltd for Smart Card development.	6/4/98
M98-54	Adoption of Puget Pass framework with region's five transit agencies.	7/23/98
M98-74	Research and Technology Program Definition.	10/22/98
M99-07	Puget Pass Agreement with the region's five transit agencies.	2/11/99
M2001-114	Regional Pass and Fare Reconciliation Program with the region's transit agencies	11/08/01
Executive Committee	Closed Discussion – Smart Card contract negotiations	08/01/02

CONSEQUENCES OF DELAY

Sound Transit is the final agency to take action on this project. Delay will affect all the other transit agencies who are now ready to move forward with the project.

REGIONAL PARTNERSHIP AND COOPERATION

- Letters of support for this project have been sent by Boeing and members of the Washington State legislature.
- This project has been earmarked for funding and evaluation as a model regional coordination project by the Federal Transportation Administration.
- During different phases of the project proposal development, other private and public sector entities have been consulted to discuss possible program involvement including the University of Washington, Microsoft and the parties involved in the Tacoma Narrows Bridge project.

Regional Transit Partnership

All Central Puget Sound transit agencies have participated in development of the Smart Card proposal: Pierce Transit, King County Metro Transit, Community Transit, Everett Transit, Kitsap Transit, Washington State Ferries, and Sound Transit. However, Pierce Transit, Everett Transit, and Community Transit have stated that they would be unable to participate in the project due to funding shortfalls.

Because these agencies are party to the current Regional Fare/Puget Pass agreement, their decision not to participate would increase fare collection complexity for Sound Transit as well as potentially increase the costs to support a regional fare structure while adopting Smart Card with the remaining agencies.

Currently, the Puget Pass program provides a means for transit riders to use a single piece of fare media to ride all transit services in the three-county region. Transfers among transit systems are relatively seamless; whether using a pass or cash, riders may transfer from the services of one agency to those of another without payment of an additional full fare. Puget Pass was embraced by regional transit agencies as a significant commitment to the one-ticket ride concept and was seen as an interim step toward implementation of Smart Card technology.

Continuing the current level of fare and service integration among transit agencies with different fare collection technologies would require Sound Transit to maintain dual parallel systems and revenue sharing agreements with different sets of partners. For example, should Sound Transit and King County Metro (KCM), but not Pierce Transit (PT), implement the Smart Card system:

- King County would need either to accept some form a non-Smart Card media, or choose not to honor Pierce Transit fare media; and
- Pierce Transit would need either to arrange for Smart Card holders to receive some form of PT-readable fare media with the purchase of Smart Card-based pass, or choose to discontinue acceptance of regional fare media; and
- Sound Transit would need equipment and policies to honor both Smart Card fare media and some form of non-Smart Card prepaid fares; and
- Sound Transit would need to enter into separate revenue sharing agreements with KCM (under Smart Card) and with PT (requiring continuation of administrative and survey expenses under the current regional agreement).

The cost of maintaining these parallel systems would offset Sound Transit's financial and operational benefits realized from the more efficient Smart Card technology. Sound Transit's cost-benefit analysis of the alternative approaches shows that the cost of maintaining dual fare

collection systems would exceed the cost of providing subsidies to partner agencies in order to maintain a single regional fare system.

PUBLIC INVOLVEMENT

- No formal community outreach has been undertaken during development of the present project plan.

DESCRIPTION OF POLICY

The purpose of the current Fare Integration Program is to develop a uniform, single-ticket fare system and integrated fare policy for the region's entire public transit service network. Adoption of Smart Card technology for regional fare collection would replace current Puget Pass fare media with an electronic Smart Card system capable of holding pass user information such as a prepaid e-purse or unlimited ride pass, ride history (for determining transfer validity timing and distributing cash payments among transit systems used), rider discount type, etc.

Adoption of Smart Card would necessitate system-wide installation of new fare sales/collection equipment on buses and at transit stations and customer service offices. It would also require installation of new data systems at transit bases, including wireless communication equipment for uploading/downloading system data.

The Smart Card proposal would also involve use of a central financial clearinghouse (operated by the vendor and located in California) for reconciling the data to distribute collected revenues among participating transit partners based on actual transactions and pre-established revenue sharing criteria. This would replace the current survey-estimate based system of dividing regional fare revenues and provide improved accounting for calculating reimbursements from Sound Transit's Fare Integration Fund to partner agencies for intersystem passenger transfers.

As set forth in this proposal, the reformulation of the current Regional Pass and Fare Reconciliation Program Agreement (the interlocal agreement governing the operation of the current Fare Integration Program), would:

- provide needed funding assistance to those partner agencies facing a shortfall in funds for Smart Card project participation;
- remove uncertainty in projections and likely reduce expenditures of the current Fare Integration program through 2006; and
- sunset the Fare Integration Program at year-end 2006 and make available approximately $23 million for reprogramming from the Regional Fund to other agency priorities.

FACTORS TO CONSIDER

1. Full realization of project benefits would require participation by all current partners to the Regional Pass and Fare Reconciliation Program Agreement (CT, ET, KCM, PT, and Sound Transit).

2. Participation by other transit agencies is dependent upon acceptance of the proposal by their respective governing boards and managers

3. The proposal is subject to a number of risks:

   Technology Risks
   As with any technology procurement project, there is risk that the systems will fail to operate as specified, that unforeseen technical challenges will delay or prevent implementation, the purchased technology will be outmoded by new advances, or the protocols of the selected system will fail to conform with future industry standards as they emerge.

   Project Risks
   Sound Transit's cost/benefit analysis of the Smart Card proposal assumes that the project benefits will be delivered as scoped in the proposal, and that project costs will not exceed the current proposed budget. It also assumes that Sound Transit will not be required to contribute additional funds beyond its current commitments. The validity of these assumptions is subject to risk.

   While the project may be a net financial benefit for Sound Transit if it is delivered as proposed, there are also the possibilities of project delays, change orders and cost overruns. To address these types of risks the negotiated vendor contract includes a number of performance security provisions, including:

   - requirements that the vendor post letters-of-credit and performance bonds in a total amount of $8 million;
   - timing of vendor payments to coincide with successful completion and acceptance of project milestones;
   - provisions to withhold payment in the case of dispute over project performance; and
   - insurance and indemnification deemed sufficient to protect the transit partners against unforeseen financial risk

   Partnership Risks
   In addition to the vendor agreement with ERG, implementation and operation of the Smart Card program would be governed by an interlocal agreement defining the operational and financial relationships among the participating transit agencies. This document details the joint project management, cost sharing, and decision-making processes that would be agreed to by the partner agencies. This agreement would be administered by a Joint Administrative Board (JAB) comprised of representatives of the agencies. Once constituted, the JAB would have significant delegated authority to affect the project as well as operating and certain financial policies of the partner agencies. The JAB is also charged with direct oversight of the project management team, including authority to hire and fire the project manager. Although most decisions of the JAB would require unanimous approval by all participants, Sound Transit would hold only one vote in the decision-making process.

ALTERNATIVES

Status Quo
Continuation of the current Regional Pass and Fare Reconciliation Program Agreement would require that no current parties to that agreement change to Smart Card or other form of non-Puget Pass fare media. King County Metro has indicated that it will be adopting Smart Card and will not be continuing participation in the current Puget Pass program. This effectively removes the status quo option as a viable alternative. However, were the current program continued, the $59 million Regional Fare Integration fund would be projected to be fully expended by year-end 2009.

Adopt Smart Card without providing additional partner assistance
Should Sound Transit adopt the Smart Card system in conjunction with King County Metro and other agencies able to join the partnership using funds currently available, then Community Transit, Pierce Transit and Everett Transit would likely not be able to participate. In order to best fulfill its commitment to maintaining a "one-ticket ride," Sound Transit would need to adopt a dual system of fare collection, including both Smart Card and non-Smart Card fare media.

Sound Transit's cost-benefit analysis of alternatives shows that this dual system approach would likely be as costly or more costly than continuing the status quo (i.e., the Fare Integration Fund would be fully expended by 2009 with no cost savings), while the benefits of the Smart Card system would be only partially realized. The "one-ticket ride" concept would also be compromised.

LEGAL REVIEW

MB 2/03

SOUND TRANSIT

MOTION NO. M2003-25

A motion of the Board of the Central Puget Sound Regional Transit Authority authorizing the Executive Director to execute an interlocal agreement regarding the Smart Card project with partner transit agencies, which may include Community Transit, Everett Transit, Kitsap Transit, King County Metro, Pierce Transit, and Washington State Ferries.

Background:

King County Metro, Community Transit, Everett Transit, Kitsap Transit, Pierce Transit, and Washington State Ferries along with the Puget Sound Regional Council formally initiated the Smart Card project in 1994. Following Sound Transit's successful vote in 1996, it also joined this partnership, as the goals of the project mirrored the Sound Move promise to provide a "one-ticket ride."

The purpose of Sound Transit's current Fare Integration Program is to develop a uniform, single-ticket fare system and integrated fare policy for the region's entire public transit service network. Adoption of Smart Card technology for regional fare collection would replace current Puget Pass fare media with an electronic Smart Card system capable of holding pass user information such as a prepaid electronic purse (e-purse) or unlimited ride pass, ride history (for determining transfer validity timing and distributing cash payments among transit systems used), rider discount type, etc.

The Smart Card proposal would also involve use of a central financial clearinghouse to reconcile the data and distribute collected revenues among participating transit partners based on actual transactions and pre-established revenue sharing criteria. This would replace the current survey-estimate based system of dividing regional fare revenues and provide improved accounting for calculating reimbursements from Sound Transit's Fare Integration Fund to partner agencies for intersystem passenger transfers.

In addition to the vendor agreement with ERG Transit Systems (USA) Inc., a California corporation and wholly-owned subsidiary of ERG Limited, implementation and operation of the Smart Card program will be governed by an interlocal agreement defining the operational and financial relationships among the participating transit agencies. This document details the joint project management, cost sharing, and decision-making processes that would be agreed to by the partner agencies. This agreement would be administered by a Joint Administrative Board (JAB) comprised of representatives of the agencies. Once constituted, the JAB would have significant delegated authority to affect the project as well as operating and certain financial policies of the partner agencies. The JAB is also charged with direct oversight of the project management team, including authority to hire and fire the project manager. Although most decisions of the JAB would require unanimous approval by all participants, Sound Transit would hold only one vote in the decision-making process.

Motion:

It is hereby moved by the Board of the Central Puget Sound Regional Transit Authority that the Executive Director is authorized to execute an interlocal agreement regarding the Smart Card project with partner transit agencies, which may include Community Transit, Everett Transit, Kitsap Transit, King County Metro, Pierce Transit, and Washington State Ferries.

APPROVED by the Board of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on April 24, 2003.

Ron Sims
Board Chair

ATTEST:

Marcia Walker
Board Administrator