

**Metropolitan Transportation Commission
Programming and Allocations Committee**

July 8, 2009

Item Number 2j

Resolution Nos. 3708, Revised; and 3722, Revised.

Subject: Real Time Transit Information project: RM2 programming revision and scope changes.

Background: Real Time Transit Information Project (Programming Revision of \$173,000): Livermore Amador Valley Transit Authority (LAVTA), one of the grant recipients for the Real Time project, recently returned to MTC their full RM2 Real Time Transit grant award of \$173,000 because of concerns that the grant amount is insufficient to fully fund their project and timing and coordination issues with the W. Dublin BART station.

Given that the amount of the returned funds is small, staff recommends that these funds be redirected to build upon previous investments instead of issuing a Call for Projects again. Specifically, staff recommends reprogramming \$61,000 of the returned \$173,000 to AC Transit for providing real time information on AC Transit's TransBay and All-Nighter routes, and the remaining \$112,000 to MTC to supplement the Transit Connectivity Hub Signage program, which will provide real time displays and their supporting data and electrical systems at the 24 regional transit hubs identified in the Transit Connectivity Plan. The table below provides a snapshot of the original and proposed grant amounts resulting from this action.

Sponsor	Previous grant amount	Proposed grant amount	Change
LAVTA	\$173,000	\$0	(\$173,000)
AC Transit	\$927,000	\$988,000	\$61,000
MTC	\$100,000	\$212,000	\$112,000

Staff is also proposing minor scope changes that were requested by the sponsors on the AC Transit Hastus Scheduling Software Upgrade and Real Time Signage project as well as the Caltrain Real Time Transit Information project.

Recommendation: Refer Resolution Nos. 3708, Revised; and 3722, Revised to the Commission for approval.

Attachments: MTC Resolution Nos. 3708, Revised; and 3722, Revised.

Date: October 26, 2005
W.I.: 1255
Referred by: PAC
Revised: 02/22/06-C 06/25/08-C
09/24/08-C 12/17/08-C
01/28/09-C 07/22/09-C

ABSTRACT

MTC Resolution No. 3722, Revised

This resolution approves the allocation of Regional Measure 2 funds for the Real-Time Transit Information Program administered by Metropolitan Transportation Commission (MTC) and sponsored/ implemented by the various Bay Area transit operators identified in Attachment A of Resolution No. 3708.

This resolution includes the following attachments:

- Attachment A - Allocation Summary Sheets
- Attachment B - Project Specific Conditions
- Attachment C - MTC staff's review of Initial Project Reports (IPRs)
- Attachment D - RM2 Deliverable/Useable Segment Cash Flow Plan

This resolution was revised on February 22, 2006 to allocate funds to the Peninsula Corridor Joint Powers Board for the Caltrain Real-Time Transit Information Project and to WestCAT for the Technology Implementation and Signage Project.

This resolution was revised on June 25, 2008 to rescind \$ 1,986,400 from the prior allocation and to reallocate these funds to different phases (new & old) of the project.

This resolution was revised on September 24, 2008 to extend the funds for the MUNI Automatic Vehicle Location project (19.2) - set to expire in October 2008 - by one year until October 2009.

This resolution was revised on December 17, 2008 to rescind \$125,000 from the Caltrain Real Time Transit Information project. This was part of a programming revision to remove funding for large-format, multi-agency real-time transit information displays at MTC designated regional transit hubs from the Caltrain, Golden Gate Transit and LAVTA grants. These funds were redirected to BART and MTC who will implement these signage improvements as part of MTC's Hub Signage Program instead.

ABSTRACT

MTC Resolution No. 3722, Revised

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This resolution was revised on January 28, 2009 to allocate \$ 2,530,000 to Santa Clara VTA towards the Final Design and Construction phases of their Real Time Information project.

This resolution was revised on July 22, 2009 to add additional scope to the Hastus Scheduling Software Upgrade and Real Time Signage project and make scope changes to the Caltrain Real Time Transit Information project.

Additional discussion of this allocation is contained in the memorandum to the MTC Programming and Allocations Committee dated October 12, 2005, and summary pages dated February 8, 2006, June 11, 2008, September 10, 2008, December 10, 2008, January 14, 2009 and July 8, 2009.

**REGIONAL MEASURE 2 PROGRAM
Allocation of Funds**

Project Title: Caltrain Real-Time Transit Information Project
Sponsor: Peninsula Corridor Joint Powers Board
Project Number: 19.5

Allocation No. 1						
Activities to be funded with Allocation #1:						
<ol style="list-style-type: none"> 1. Expansion of Advanced Communication System (ACS). ACS will be installed on each train consist. 2. Computer-aided dispatching (CAD) workstations to track and monitor the PADS information system will be acquired and installed at the Caltrain central control dispatch operations facility and the JPB administrative office. 3. Provide Caltrain real-time information to MTC's 511 system and to all existing Caltrain LED signs at all station platforms. 4. Provide SamTrans real-time information to MTC's 511 system for all SamTrans buses and bus stops. 5. Provide Bus bay signs at SamTrans stops at Daly City BART, Colma BART, Redwood City Caltrain, and Top of the Hill, Daly City bus shelter 6. Provide SamTrans real-time information to Santa Clara VTA for display on bus bay signs that VTA will install at the Palo Alto Caltrain station. 7. Refurbish thirteen bus bay signs at the Millbrae Multimodal Station 8. Preparation of a Systems Engineering Management Plan (SEMP) 						
Allocation Instruction No.	Approval Date	Amount	Phase	Reimbursement Year	Cumulative Total To Date	
06372209	22-Feb-06	\$ 250,000	PSE	FY 2005-06	\$	250,000
07372210	22-Feb-06	\$ 39,000	PSE	FY 2006-07	\$	289,000
07372211	22-Feb-06	\$ 1,665,000	CON	FY 2006-07	\$	1,954,000
08372212	22-Feb-06	\$ 740,000	CON	FY 2007-08	\$	2,694,000
07372211	17-Dec-08	\$ (125,000)	CON	FY 2008-09	\$	2,569,000

REGIONAL MEASURE 2 PROGRAM Project Specific Conditions

Project Title: Caltrain Real-Time Transit Information Project
Sponsor: Peninsula Corridor Joint Powers Board
Project Number: 19.5

The allocation and reimbursement of RM2 funds for the above project are conditioned upon the following

1. Usable Segments

Provide real-time information for usable segments of the transit system. Usable segments are defined as routes that improve regional or intra-agency connectivity, routes that serve main arterials, express or limited-stop routes, or a subset of vehicle types within an agency (e.g., all light rail vehicles).

2. Performance Standards

Provide performance standards for real-time data accuracy that have been or will be established with the real-time system vendor and are being monitored. MTC reserves the right to require that agencies receiving RM2 funds meet minimum standards for accuracy.

3. Automated Updates of Configuration Data

Provide an efficient, automated way to update real-time system configuration data when changes are made to the scheduling system.

4. Data Sharing

Provide required real-time information to a regional database for dissemination on 511 and 511.org and to other transit operators, if applicable, in an MTC-approved format at no cost, without restriction, and for the duration of the Project. Required real-time information includes but is not limited to predicted arrival times for every stop, a date and time stamp for each prediction, and transit agency configuration data including but not limited to routes, stop ids and direction.

5. Regional Real-time Transit TAC

Grant recipients will be expected to participate in a regional Technical Advisory Committee of transit operators implementing real-time transit information systems.

6. Support MTC's RTIS

Grant recipients must support the Regional Transit Information System (RTIS). MTC will confirm before funding allocation that the requesting agency is actively supporting and efficiently transferring information and data required to successfully and accurately offer to the public the data provided on www.transit.511.org and the 511 TakeTransitSM Trip Planner.

7. Real-time Signage

All regional real-time signage being placed at transit hubs must adhere to the signage standards developed by the RM2 Connectivity Study with assistance from the Real-time Transit Technical Advisory Committee. The Peninsula Corridor JPB's obligation to comply with such standards after construction of their RM2 real-time project shall be negotiated with MTC, factoring in cost impacts to the JPB, after JPB has prepared a migration plan.

8. On-going Operations and Maintenance Costs

The real-time system and the data communications connection to the MTC Data Storage system shall be supported by the project sponsor, at the sponsor's expense, for a minimum of 5 years from the date of final acceptance.

9. Final Acceptance Testing

Transit agencies will allow MTC's technical advisor to participate in their final acceptance testing at no cost to the project.

10. Expiration of Project Funds

All project funds must be expended within three years of the allocation of funds to the grant recipient. If any funds remain after the three-year grant period, MTC will have the authority to either extend the grant period to complete the project or reallocate unspent funds to another project.

11. Cost Overruns

The grant recipient will be responsible for cost increases beyond the amount awarded in the initial grant.

12. Non-511 Phone Systems

MTC plans to provide real-time transit arrival/departure predictions on its 511 phone system. Consequently, no RM2 grant funds can be used to build or expand a separate real-time transit information phone system.

13. Overhead Rate Restrictions

For the real-time transit projects, an overhead rate (as defined in RM2 policies and procedures) is not an eligible expense and sponsors/implementing agencies will not be reimbursed for any overhead rate costs.

REGIONAL MEASURE 2 PROGRAM Project Cash Flow Plan

Project Title: Caltrain Real-Time Transit Information Project
Sponsor: Peninsula Corridor Joint Powers Board
Project Number: 19.5

	PRIOR	FY 2004-05	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	TOTAL
RM2 Funds Total	-	-	250,000	1,704,000	740,000	(125,000)	-	2,569,000
Environmental (ENV)	0	0	0	0	0	0	0	0
								0
								0
								0
								0
Final Design (PS&E)	0	0	335,000	190,000	0	0	0	525,000
RM2			250,000	139,000				389,000
Federal Earmark*			66,000	39,000				105,000
JPB Member Agency Fund			19,000	12,000				31,000
								0
Right of Way	0	0	0	0	0	0	0	0
								0
								0
								0
								0
Construction	0	0	0	2,108,000	998,000	-125,000	0	2,981,000
RM2				1,565,000	740,000	-125,000		2,180,000
Federal Earmark*				417,000	199,000			616,000
JPB Member Agency Fund				126,000	59,000			185,000
								0
TOTAL FUNDING								
Environmental	0	0	0	0	0	0	0	0
Final Design (PS&E)	0	0	335,000	190,000	0	0	0	525,000
Right of Way	0	0	0	0	0	0	0	0
Construction	0	0	0	2,108,000	998,000	-125,000	0	2,981,000
PROJECT TOTAL	0	0	335,000	2,298,000	998,000	-125,000	0	3,506,000

* Federal Earmarks include \$250,000 in a 2003 TCSP grant (CA-26-0026) and \$471,154 in a 2004 Section 115-STP funds (CA-15-x-002)

Date: July 27, 2005
W.I.: 1224
Referred by: PAC
Revised: 12/17/08-C
07/22/09-C

ABSTRACT

Resolution No. 3708, Revised

This resolution adopts the Regional Measure 2 (RM2) Real-time Transit Information Grant program.

The following attachment is provided with this resolution:

Attachment A— RM2 Real-time Transit Information Program of Projects

Attachment B – RM2 Real-time Transit Grant Program Requirements

This resolution was revised on December 17, 2008 to: (a) Remove funding for large-format, multi-agency real-time transit information displays at MTC designated regional transit hubs from the Caltrain, Golden Gate Transit and LAVTA grants. These funds were redirected to BART and MTC who will implement these signage improvements as part of MTC's Hub Signage Program. (b) Revise the Golden Gate Transit grant to reflect actual real-time transit procurement results. (c) Update the funding requirements for RM2 Real Time Transit grant recipients.

This resolution was revised on July 22, 2009 to remove the full funding from the LAVTA data lines project based on LAVTA's request, and redirect to 1) AC Transit - for providing real-time information on AC Transit's TransBay and All-Nighter routes (\$61,000) and, 2) MTC - for a new sub project "Transit Connectivity Hub Signage Program" which will provide real time displays and their supporting data and electrical systems at the 24 Regional Transit Hubs identified in the Transit Connectivity Plan (\$112,000). Further, additional scope was added to the AC Transit Hastus Scheduling Software Upgrade and Real Time Signage project and minor scope changes were made to the Caltrain Real Time Transit Information project.

Further discussion of this action is contained in the MTC Executive Director's memorandum to the Programming and Allocations Committee dated July 13, 2005, December 10, 2008 and July 8, 2009.

Date: July 27, 2005
W.I.: 1224
Referred by: PAC
Revised: 12/17/08-C
7/22/09-C

Attachment A
MTC Resolution No. 3708
Page 1 of 2

Recommended List of RM 2 Real-Time Transit Information Grant Program Fund Recipients

Agency	Recommended Funding	Project
AC Transit ⁶	\$988,000	<ul style="list-style-type: none"> • Hastus scheduling system upgrade to provide higher quality real-time transit information, and an automatic feed into regional 511/transit databases • Real-time information at every stop for additional lines • Signs at up to two BART stations • Add AC Transit Transbay routes to 511 phone, MY 511, and Transbay Terminal hub signs⁶ • Add AC Transit All-Nighter routes to 511 phone, MY 511, and Transbay Terminal hub signs⁶
BART ¹	\$100,000	<ul style="list-style-type: none"> • Four large-format, multi-agency real-time transit information displays at Dublin/Pleasanton, Millbrae and Richmond transit hubs
Emery Go-Round	\$105,000	<ul style="list-style-type: none"> • 2 Signs at MacArthur BART station
Golden Gate Transit ²	\$1,655,000	<ul style="list-style-type: none"> • Radio system with basic AVL capability • 30 bus stops signs and 12 hub signs (including San Rafael and Ferry Terminal transit hubs) • Interface to destination signs
LAVTA ³	\$0	<ul style="list-style-type: none"> • Data lines to bring BART schedule information into LAVTA base system
MTC ⁴	\$100,000	<ul style="list-style-type: none"> • Four large-format, multi-agency real-time transit information displays at 4th/King, Diridon, Mountain View, and Palo Alto transit hubs
Peninsula Corridor JPB ⁵	\$2,569,000	<ul style="list-style-type: none"> • Inclusion of real-time Caltrain data on all existing platform signs • Provide Bus bay signs at SamTrans stops at Daly City BART, Colma BART, Top of the Hill, Daly City bus shelter and Redwood City Caltrain⁸ • Refurbish thirteen bus bay signs at the Millbrae Multimodal Station⁸ • AVL system on Caltrain, including a software update for real-time predictions • Predictions for all SamTrans and Caltrain routes on 511

Agency	Recommended Funding	Project
SFMTA	\$11,283,000	<ul style="list-style-type: none"> • 450 bus shelter signs; 86 mobile computers • NextBus on 495 motor coaches • Connection to 511 real-time transit database • Automatic upload of configuration data • GPS repeaters to enable immediate identification of defective trackers • Interface between NextBus and subway systems • Continuous monitoring of data quality
VTA	\$2,530,000	<ul style="list-style-type: none"> • Completion of real-time system • Installation of 80 signs
WestCAT	\$551,000	<ul style="list-style-type: none"> • Implementation of technology to provide real-time at every stop and installation of 20 signs
MTC ⁷	\$112,000	<ul style="list-style-type: none"> • Provide real time displays and their supporting data and electrical systems at the 24 Regional Transit Hubs identified in the Transit Connectivity Plan. (Transit Connectivity Hub Signage Program)
Total Funds:		\$19,993,000

1. BART Project added on 12/17/08 for \$100,000.
2. Golden Gate grant reduced on 12/17/08 by \$25,000.
3. LAVTA grant of \$223,000 reduced on 12/17/08 by \$50,000; LAVTA project grant of \$173,000 removed on 7/22/09 after LAVTA returned funds.
4. MTC project added on 12/17/08 for \$100,000.
5. JPB grant reduced on 12/17/08 by \$125,000.
6. AC Transit grant increased on 7/22/09 by \$61,000 for additional scope.
7. MTC project added on 7/22/09 for the Transit Connectivity Hub Signage Program. (\$112,000)
8. Scope changes added on 07/22/09 for the Caltrain Real Time Transit Information Project.

Date: July 27, 2005
W.I.: 1224
Referred by: PAC
Revised: 12/17/08-C

Attachment B
MTC Resolution No. 3708
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Requirements for RM 2 Real-Time Grant Program Fund Recipients

Transit operators awarded funds under the RM 2 Real-Time Grant Program must meet the following requirements, in addition to the Regional Measure 2 Policies and Procedures:

1. Usable Segments

Provide real-time information for usable segments the transit system. Usable segments are defined as routes that improve regional or intra-agency connectivity, routes that serve main arterials, express or limited-stop routes, or a subset of vehicle types within an agency (e.g. all light rail vehicles.)

2. Performance Standards

Provide performance standards for real-time data accuracy that have been or will be established with the real-time system vendor and are being monitored.

3. Automated Updates of Configuration Data

Provide an efficient, automated way to update real-time system configuration data when changes are made to the scheduling system.

4. Data Sharing

Provide required real-time information to a regional database for dissemination on 511 and 511.org and to other transit operators, if applicable, in an MTC-approved format. Required real-time information includes predicted arrival times for every stop, a date and time stamp for each prediction, and transit agency configuration data including routes, stop ids and direction.

5. Regional Real-time Transit TAC

Grant recipients will be expected to participate in a regional Technical Advisory Committee of transit operators implementing real-time transit information systems.

6. Support MTC's RTIS

Grant recipients must support the Regional Transit Information System (RTIS). MTC will confirm before funding allocation that the requesting agency is actively supporting and efficiently transferring information and data required to successfully and accurately offer to the public the data provided on www.transit.511.org and the 511 TakeTransitSM Trip Planner.

7. Real-time Signage

Any large format real-time signage that will be placed in the general pedestrian area (i.e. not at a specific bus stop) of a significant multi-agency transfer hub (i.e. train/bus station, Transit Center) must adhere to the signage standards for equipment and content developed with input from the Real-time Transit Technical Advisory Committee.

8. On-going Operations and Maintenance Costs

The real-time system and the data communications connection to the MTC Data Storage system shall be supported by the project sponsor, at the sponsor's expense, for a minimum of 5 years from the date of final acceptance.

9. Final Acceptance Testing

Transit agencies will allow MTC's technical advisor to participate in their final acceptance testing at no cost to the project.

10. Expiration of Project Funds

All project work must be completed within three years of the allocation of funds to the grant recipient. If any funds remain after the three-year grant period, MTC will have the authority to either extend the grant period to complete the project or reallocate unspent funds to another project.

11. Cost Overruns

The grant recipient will be responsible for cost increases beyond the amount awarded in the initial grant.

12. Non-511 Phone Systems

MTC provides real-time transit arrival/departure predictions on its 511 phone system. Consequently, no RM2 grant funds can be used to build or expand a separate real-time transit information phone system.

13. Overhead Rate Restrictions

For the real time transit projects, an overhead rate (as defined in RM2 policies and procedures) is not an eligible expense and sponsors/implementing agencies will not be reimbursed for any overhead rate costs.