



STAFF REPORT/RESOLUTION

TO: Southwest Washington Regional Transportation Council Board of Directors
FROM: Dean Lookingbill, Transportation Director
DATE: April 30, 2013
SUBJECT: **2013-2014 Vancouver Area Smart Trek (VAST) Program,
Resolution 05-13-11**

AT A GLANCE - ACTION

Action on this resolution provides funding for RTC's 2013-2014 Vancouver Area Smart Trek (VAST) Program. The VAST Program has been one of RTC's ongoing programs since 2001. It links ITS technology and infrastructure projects with agency collaboration to improve the operation of the transportation system while not adding lanes to expand roadway capacity.

INTRODUCTION

RTC has been responsible for the coordination and administration of the Vancouver Area Smart Trek (VAST) program since 2001. RTC's role is to provide coordination, management, and deployment of intelligent transportation system (ITS) projects, infrastructure, and equipment to ensure integration and interoperability of projects. RTC's VAST Program recognizes the need for greater coordination between the ITS technology and transportation operations and presents an integrated transportation operations program. Funding for the 2013-14 program has been programmed in the FY 2014 Metropolitan Transportation Improvement Program. The action being requested is for Board approval to authorize the Director to submit the grant application to WSDOT Local Programs. The VAST program has been a continuing element of RTC's planning process since 2001.

VAST program activities also include regional collaboration on transportation system management and operations, or TSMO. These strategies focus on lower cost operational projects that are regionally coordinated and better utilize existing transportation facilities without expanding roadway capacity. The operational projects include a wide range of projects such as traveler information, freeway management, arterial management, coordinated incident management, and transit signal priority. RTC's TSMO Plan has identified a set of transportation corridors where the application of operational strategies would be an effective tool to improve reliability and performance and is a road map to guide TSMO investment and solutions for the next 10 years and improve reliability, improve safety, and reduce travel delay.

This resolution requests RTC Board support for RTC's management and coordination of the program and to enter into a contract with WSDOT Local Programs to use the programmed funds to carry out the VAST program,. The action requested will include approval to release a request for qualifications for consultant technical assistance, and support to fund the region's share to maintain and enhance the transportation data archive at Portland State University. RTAC recommended adoption of this at their meeting on April 19th.

The remaining portion of this resolution provides an overview of the VAST program and to summarize the accomplishments of the VAST Program in the last year and provides an outline of activities for an integrated traffic operations program for 2013-2014.

FEDERAL REQUIREMENTS

RTC's VAST program meets federal requirements for planning, development, and implementation of ITS projects. Federal regulation 23 CFR 940 requires that regions develop and maintain a regional ITS architecture to ensure that ITS technology projects are interoperable and that it must include participation from transportation stakeholders so that projects are coordinated and integrated. The TSMO element of the VAST program directly supports the federal Congestion Management Process (CMP) by providing regional services to agency partners to improve transportation performance by collaborating on operational strategies. Federal regulation 23 CFR 450.320(c) for the CMP requires that agencies collaborate to utilize operational management, demand management, transit, and ITS technology to address travel demand before adding roadway capacity.

REGIONAL COOPERATION AND AGENCY PARTNERSHIPS

Over the last 10 years, the VAST Program has been a successful and beneficial collaboration for the VAST partner agencies. RTC implements the program through the VAST Steering Committee which includes the following partner agencies: City of Vancouver, Washington State Department of Transportation (WSDOT), Clark County, C-TRAN, City of Camas, and RTC. The Steering Committee partnership has been an effective way for the agencies to coordinate project delivery, joint project funding, monitoring project development, and project integration. RTC also manages the VAST Communications Infrastructure Committee (CIC) which was formed in 2004. The CIC addresses the sharing, maintenance, and standards for communications infrastructure and equipment. It is represented by the same agencies but is made up of both transportation and communications technical staff.

The development of RTC's Regional TSMO Plan adopted in 2011 was facilitated through the active support and participation of the TSMO Steering Committee. The Committee includes operations and planning staff from partner agencies and continues to support TSMO planning and implementation of operational strategies.

Agency cooperation through the VAST program over the last 10 years has resulted in a successful partnership for developing and securing funding for ITS/operations projects that total more than \$18.1 million in federal funding.

2012 ACCOMPLISHMENTS

This section summarizes the major 2012 VAST program accomplishments and these include the following: joint funding applications, operational projects, sharing of fiber and communication assets, and a shared communications asset management system.

Local Agency Projects

RTC worked closely with the VAST agency partners to identify projects and develop funding applications for the partner agencies. The TSMO Plan contains an implementation strategy that

connects the planning process with project implementation. RTC's role in regional collaboration on operations planning is intended to identify the best operational projects, while the partner agencies are responsible for project delivery. Operational projects programmed last year include the following:

- *Bi-State Freeway Travel Time Project (WSDOT, ODOT):* The project will provide travel time information to key destinations and route choice locations in the region. The project will serve commuters and travelers within, into, and through the region. *\$952,000 total: \$714,000 CMAQ, \$238,000 local*
- *Orchards Traffic Signal Optimization Project (Clark County, WSDOT):* Improves mobility, travel reliability, and reduces congestion for regional corridors with the expansion and implementation of integrated and interconnected signal systems. *\$4,785,000 total: \$2,500,000 CMAQ, \$2,285,000 local*
- *Main Street Traffic Signal Optimization Project (City of Vancouver):* Like the previous project, it enhances mobility in a key north south corridor to downtown Vancouver. It also includes a new bike lane facility on Columbia Street. *\$1,060,000 total: \$917,000 CMAQ, \$143,000 local*
- *TSMO Pilot Project Phase One:* The pilot project supplements existing advanced traffic management system projects on Andresen Road and Mill Plain Boulevard by installing devices that monitor arterial performance including travel times, vehicle origin-destinations, volumes, and classification. Clark County, with support from the partner agencies, is leading the project implementation. RTC provided assistance on the development of project plans and requirements, drafting the request for proposals, the consultant selection process, project initiation, consultant management. Phase one construction began in late 2012. Phase two, to evaluate the new transportation technology and provide additional operational improvements, will begin in 2013.
- *Transportation Data Archive: Portal,* a regional transportation data archive operated/maintained by Portland State University (PSU), plays a key role in transportation performance measurement. Transportation agencies in Clark County began their participation in Portal during the development of the TSMO Plan. Portal changes in 2012 included a better user interface and enhanced reporting for highway data by day of week and time of day. In addition, sample data from Clark County incorporated into Portal was used to analyze approaches for reporting arterial traffic data and sample C-TRAN data was utilized to develop preliminary transit report concepts for data such as ridership, boardings, and alightings.

Intelligent Transportation Systems

In addition to the ITS project activities carried out through the Steering Committee and Communications Committee, other key activities under the program include:

- **Shared Fiber and Communications Assets:** VAST agencies have had a Communications and Interoperability Agreement in place since July 2006 that authorizes agencies to enter into

fiber asset sharing permits. The agreement has led to better use of existing fiber and communication equipment by sharing available capacity among agencies. In total, twenty five sharing permits affecting 94 miles of fiber have saved from \$14.1 to \$17.5 million as compared to the VAST agencies building these projects separately. The agreement was updated to reflect newly constructed fiber assets and clarify the use and maintenance for shared fiber assets.

- Communications Asset Management Software: The VAST agencies utilize shared mapping software that displays communications fiber and equipment as well as their detailed attributes. This asset management tool facilitates and supports fiber sharing among WSDOT, City of Vancouver, and Clark County. The agencies can easily review the fiber and communication network, fiber ownership, capacity, and availability. Effort now focuses on adding new projects and maintaining the database.

2013-2014 PROGRAM

RTC's 2013-2014 VAST Program is proposed to continue the coordination and management of the VAST program as well as the operational project related activities. Emphasis areas include providing support to partner agencies on transportation operations and planning; ITS projects, communications and integration; managing the TSMO/ITS committees; assisting in the development of funding applications for operational and ITS projects; coordinating on performance measurement of operational projects and ensuring that projects are interoperable. The funding for the 2013-14 program was anticipated with the inclusion of \$150,000 in the 2013-16 Metropolitan Transportation Improvement Program (MTIP). Funding was also included in RTC's 2013 work plan and budget. The key activities of the 2013-14 VAST program include the following.

Operations

Program activities include the following elements: TSMO Plan implementation, support for the TSMO Pilot Project, maintenance of the regional Intelligent Transportation System Architecture, and maintain and enhance the Portal transportation data archive.

Continued implementation of the Regional TSMO Plan will involve several elements. TSMO corridors will be monitored and updated as needed to reflect changing traffic conditions. The 10-year TSMO Implementation Plan is used to identify projects and carry out operational improvements across the region. RTC will coordinate regularly with TSMO partners to develop guidelines and protocols for regional operations. Performance measures will be further developed for evaluating operations and identifying TSMO effective strategies.

The phase one construction element of the TSMO Pilot Project has just been completed. Phase two of the project evaluates the new transportation technology and provides a second round of operational refinements. Key elements of phase two include:

- Before and after analysis to evaluate the blue tooth data collection technology implemented in phase one, as well as changes to the transportation performance of corridor.

- Upgrades to the central signal system software will allow traffic operations staff to better analyze and enhance signal timings.
- Creating the data and physical network connections and automatically push transportation data to the Portal data archive.

Phase two is being led by Clark County, and RTC will provide support to Clark County regarding the phase two technical activities and consultant management. RTC will also lead the before and after analysis for the Pilot Project including lessons learned.

RTC updated the Regional ITS Architecture in 2012 and will be responsible for its maintenance and ongoing updates. RTC will coordinate with partner agencies so that the regional architecture is included in project development. The ITS architecture benefits agencies to ensure cost efficiency and better effectiveness of operational projects.

RTC will manage further development of the transportation data archive and will assist partner agencies as they begin to utilize it. Portal updates will include retrieval of comprehensive arterial and transit data and enhancements to improve its usability and reporting capabilities. The data archive will support performance measurement, monitoring of system operations, and analysis of improvement strategies.

Intelligent Transportation Systems (ITS)

RTC will continue to manage the VAST Steering Committee and Communications Infrastructure Committee. Other ITS related activities anticipated in the next year include:

- Continue the execution of communications infrastructure sharing between VAST agencies
- Maintain and update the shared asset database management system
- Identify additional funding opportunities
- Continue development of and agreements on fiber, equipment, and infrastructure standards

Intelligent transportation system technical assistance to RTC and the VAST partner agencies has been provided by consultant services over the last several years. The 2013-2014 program will continue to utilize technical support in carrying out the activities described above.

POLICY IMPLICATION

The adoption of this resolution is consistent with RTC's role and responsibilities in the management and implementation of the VAST program. Adoption of the resolution also provides support for the implementation and integration of the VAST program to meet federal requirements for the Congestion Management System as well as ITS projects. The VAST program is also consistent with the traffic operational efficiency goals in MTP, TIP, and the UPWP.

BUDGET IMPLICATION

The proposed budget for 2013-2014 VAST Program Coordination and Management is \$173,250 which would be funded by \$150,000 in federal Surface Transportation Program funds and \$23,250 in local match. These funds are available and programmed in the 2013-2016 Metropolitan Transportation Improvement Program as adopted by the RTC Board on October 2, 2012. The VAST program budget consists of \$73,250 in agency program funds, \$60,000 in consultant-based technical assistance, and \$40,000 for the PSU data archive. Action on this resolution would authorize the transportation director to obligate the \$150,000 in STP funds through an interlocal agreement with WSDOT Local Programs, release a request for qualifications for ITS consultant technical services, and to enter into an agreement with PSU to fund a share of the Portal costs.

ACTION REQUESTED

Adoption of Resolution 05-13-11 “2013-2014 Vancouver Area Smart Trek Program”.

ADOPTED this _____ day of _____ 2013,
by the Southwest Washington Regional Transportation Council.

SOUTHWEST WASHINGTON
REGIONAL TRANSPORTATION COUNCIL

ATTEST:

William J. Ganley
Chair of the Board

Dean Lookingbill
Transportation Director