

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF AMENDING THE ) RESOLUTION NO. 05-3582  
UNIFIED PLANNING WORK PROGRAM )  
TO INCLUDE THE DEVELOPMENT OF ) Introduced by: Councilor Rex Burkholder  
A REGIONAL CONCEPT FOR )  
TRANSPORTATION OPERATIONS )

WHEREAS, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) initiated federal support for deployment of Intelligent Transportation System (ITS) technology throughout the nation to harness computer and digital communication technology to the improvement of surface transportation; and

WHEREAS, this federal ITS initiative was retained in the Transportation Equity Act for the 21st Century (TEA-21); and

WHEREAS, the Metro region was the recipient of an ITS early deployment grant that produced a 20-year plan (the Portland Regionwide Advanced Traffic Management System Plan, DKS, 1993) for deployment of traffic management technology throughout the region (hereafter, the ITS Plan); and

WHEREAS, the ITS Plan addresses freeway management, including ramp metering, incident detection systems, emergency dispatch and response systems (COMET Vehicles), driver communication systems and data archiving; and

WHEREAS, the ITS Plan addresses arterial surface street management, including signal system coordination, video monitoring, electronic message signs, emergency and transit vehicle signal preemption and data archiving; and

WHEREAS, the ITS Plan addresses transit system management, including computer aided vehicle tracking and dispatch, smart bus technology, on-board security systems, real-time transit-traveler information and data archive and analysis capabilities; and

WHEREAS, sub-regional implementation plans have been developed cooperatively by the Oregon Department of Transportation (ODOT), the City of Gresham, Multnomah County, the City of Portland, the City of Vancouver and Clark County Washington and additional sub-regional plans are being developed with regional funds for Clackamas and Washington Counties; and

WHEREAS, TriMet and C-TRAN and the Port of Portland have, or are preparing equivalent sub-regional ITS plans addressing transit, freight and airport access operations that expand the initial regional emphasis on use of ITS technology for traffic operations to the broader issues of multi-modal transportation systems management; and

WHEREAS, the TRANSPORT Subcommittee of TPAC has overseen development of a federally mandated Regional ITS Architecture to assure system and component level compatibility of multi-agency, multimodal ITS field devices, communications networks and computer hardware and software technologies; and

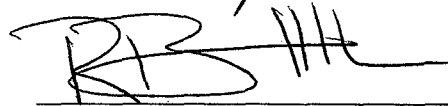
WHEREAS, the TRANSPORT Subcommittee has identified the need to improve coordination among ITS providers and update the regional strategy for a comprehensive approach to ITS;

WHEREAS, Metro and the City of Portland, on behalf of the TRANSPORT Committee has secured federal funding for the development of a Regional Concept for Transportation Operations; now, therefore

BE IT RESOLVED by the Metro Council;

1. The Unified Planning Work Program be amended to direct Metro and the City of Portland to develop a Regional Concept for Transportation Operations that strengthens and guides regional transportation operations collaboration and coordination.
2. That the Regional Concept for Transportation Operations presents an operations vision and direction for the future of transportation systems management and operations based on a holistic view of the region,
3. That the Regional Concept for Transportation Operations garners commitment from agencies and jurisdictions for a common regional approach to transportation management and operations, and
4. That the Regional Concept for Transportation Operations provides an opportunity to strengthen the linkage between regional planners and managers responsible for transportation operations by providing coherent operations strategy for consideration in the planning process.
5. That the TRANSPORT Subcommittee oversee development of the Regional Concept for Transportation Operations, and that reports on the development of the concept be made to TPAC, JPACT and the Metro Council.

ADOPTED by the Metro Council this 26<sup>th</sup> day of May, 2005.



Rex Burkholder, Deputy Council President

Approved as to Form:



Daniel B. Cooper, Metro Attorney

**Regional Mobility Program – Congestion Management - ITS**

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***PROGRAM***

The 2004 Federal Update to the RTP identified hundreds of needed improvements throughout the region, including numerous capacity improvements and system-management projects aimed at relieving congestion in chronic traffic “hot spots.” The RTP is also largely unfunded, which means that congestion-relief projects may not proceed in a timely manner. The Regional Mobility Program seeks to monitor the ongoing effects of congestion on livability and the regional economy, the degree to which delayed improvements are compounding these effects, and develop multi-modal strategies for coping with the gap in needed improvements.

***MANDATES, AUTHORIZATIONS, CONSTRAINTS***

The Regional Mobility Program encompasses federal mandates to maintain “congestion management” and “intelligent transportation” systems. These programs are largely incorporated into the RTP and include:

- Inventory of Congestion Hot Spots: Staff will work closely with TPAC, ODOT, the Port of Portland and local jurisdictions to develop and maintain an inventory of known congestion hot spots. This element will be conducted in concert with data inventory requirements of the Congestion Management System
- Ranking of Congestion Hot Spots: Metro will work with TPAC, ODOT and local jurisdictions to develop ranking criteria for evaluating the relative magnitude of known congestion hot spots, including measures addressing safety, system mobility and relative accessibility. These criteria will be used to develop a ranked list of congestion relief projects, incorporating existing RTP projects and others identified through this effort
- Congestion Action Plan: Working with JPACT and Metro Council, develop an action plan for implementing multi-modal congestion relief projects, including specific funding strategies for unfunded improvements. This work may be coordinated with a proposed regional transportation funding initiative in 2004
- Public Involvement: All activities require early, ongoing and responsive public involvement techniques, consistent with Metro public involvement policies. Newly-developed procedures to address environmental justice issues will be applied to this effort

The region’s intelligent transportation activities are further guided by the TRANSPORT Committee, a multi-agency group of system providers involved in implementing intelligent transportation (ITS) policy. In early 2005, the role of this group as a Subcommittee of TPAC was formalized. In 2005-06, TRANSPORT will oversee a major update to the region’s ITS program to incorporate a Regional Concept for Transportation Operations, a new tool for strengthening and guiding regional transportation operations collaboration and coordination. The Regional Concept for Transportation Operations will serve the following three key purposes:

- Presents an operations vision and direction for the future of transportation systems management and operations based on a holistic view of the region,
- Garners commitment from agencies and jurisdictions for a common regional approach to transportation and management and operations, and
- Provides an opportunity to strengthen the linkage between regional planners and managers responsible for transportation operations by providing coherent operations strategy for consideration in the planning process.

**Regional Mobility Program – Congestion Management - ITS**

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The ITS program enhancement is funded through a special grant from the Federal Highway Administration, and will be administered by Metro in partnership with the City of Portland and the TRANSPORT Committee.

The 2004 Triennial Review identified a number of improvements to the Regional Mobility Program that will be implemented in FY 2005-06 through improvements to the RTP and through activities at the TRANSPORT Committee.

**STAKEHOLDERS**

- Metro Council
- Regional partner agencies and members of the public
- TPAC
- JPACT

**OBJECTIVES/PRODUCTS/DELIVERABLES**

Objectives for FY 2005-06 include:

- Prepare and map an inventory of congestion hot spots that affect the regional transportation system
- Develop criteria for ranking congestion hot spots. Prepare a ranked list of proposed congestion relief projects that improve movement of people and goods for review by JPACT and Metro Council
- Support JPACT and the Metro Council in their efforts to implement a financial strategy for completing improvements in a timely manner
- Develop a Congestion Management System procedure manual defining data collection and publication requirements
- Develop a Regional Concept for Transportation Operations, a new tool for strengthening and guiding regional transportation operations collaboration and coordination.

**ACCOMPLISHMENTS OF THIS PROGRAM TO DATE**

The RTP Update was completed in August 2000 with two purposes: first, it had to meet requirements set forth in the state TPR. Among other provisions, the rule seeks to reduce reliance upon the automobile and promote use of alternative modes of transportation. Second, revisions must reflect the ongoing Region 2040 planning effort and serve as the transportation element of the Regional Framework Plan. Together, these state and regional policy initiatives are expected to go far in slowing growth in travel demand and congestion in the region.

A new congestion policy in the 2000 RTP recognizes that different congestion measures should be applied in different areas. In the updated plan, the peak-hour congestion standard is relaxed in densely developed areas with high-quality transit, for example, since these areas are less dependent upon motor vehicles as a means of travel. The standard is higher in major statewide “through-traffic” corridors and key-freight connections.

**Regional Mobility Program – Congestion Management - ITS**

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The remaining congestion relief projects within the 2000 RTP were developed subject to congestion management system provisions within the plan. These provisions require jurisdictions to consider other solutions, such as alternative mode improvements, before making capacity improvements to address congestion. These provisions resulted in a combination of capacity projects and alternative mode improvements in situations where alternative mode projects were not sufficient to meet projected travel need.

In 2003, a Federal Update to the 2000 RTP was completed, with an expanded system of projects eligible for federal funding and new revenues identified for future improvements. However, the RTP is still substantially under-funded, despite new revenues.

**BUDGET SUMMARY**

<b>Requirements:</b>		<b>Resources:</b>	
Personal Services	\$ 111,646	PL	\$ 5,591
Interfund Transfers	\$ 31,834	STP/ODOT Match	\$ 21,834
Materials & Services	\$ 4,420	ODOT Support	\$ 15,643
		Section 5303	\$ 3,000
FY07 Carryover	\$ 96,900	FHWA ITS Grant	\$ 193,800
		TriMet	\$ 2,000
		Metro	\$ 2,932
<b>TOTAL</b>	<b>\$ 244,800</b>	<b>TOTAL</b>	<b>\$ 244,800</b>

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**Full-Time Equivalent Staffing**

Regular Full-Time FTE	1.40
<b>TOTAL</b>	<b>1.40</b>

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## **STAFF REPORT**

### **FOR THE PURPOSE OF AMENDING THE UNIFIED PLANNING WORK PROGRAM TO INCLUDE THE DEVELOPMENT OF A REGIONAL CONCEPT FOR TRANSPORTATION OPERATIONS**

Date: April 21, 2005

Prepared by: Tom Kloster

The purpose of this amendment is to enable the region to enhance existing transportation operations collaboration activities across numerous jurisdictions. This project will help demonstrate appropriate situations, conditions, and organizational approaches that can be applied to developing and using a Regional Concept for Transportation Operations. Metro will work with the City of Portland and the TRANSPORT Subcommittee of TPAC to observe and assess the process and organizational approaches needed to create and use the Regional Concept for Transportation Operations, and will help mainstream the Regional Concept for Transportation Operations into a regional transportation operations practice.

The Regional Concept for Transportation Operations will serve the following purposes:

- It presents an operations vision and direction for the future of transportation systems management and operations based on a holistic view of the region,
- It garners commitment from agencies and jurisdictions for a common regional approach to transportation management and operations, and
- It provides an opportunity to strengthen the linkage between regional planners and managers responsible for transportation operations by providing a coherent operations strategy for consideration in the planning process.

## **BACKGROUND**

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) initiated a national commitment to develop and implement computer and communication technologies to improve efficiency of existing freeway, surface street (arterial) and transit systems. The Portland-area was awarded early deployment funding by the federal highway administration to prepare a comprehensive technology inventory and implementation plan called an Advanced Traffic Management System (ATMS) Plan. As the concept of computer aided travel management evolved, the term ATMS was replaced at the federal level with Intelligent Transportation Systems, or ITS.

The regional ITS Plan was completed by DKS Associates in October 1993 and reflected input of an interagency technical committee that included representatives of ODOT, Metro and most of the region's major operating agencies including the City of Portland, Tri-Met, the Port of Portland, the three counties and many of the other smaller cities in the region and the City of Vancouver, Clark County Washington and Washington DOT. This group continued to meet after completion of the ITS Plan and worked to implement Plan recommendations on a regionwide, bi-state, cooperative basis. Eventually, the ad-hoc committee adopted the name of TRANSPORT.

As sharing of operations data and communications infrastructure has expanded within the group of agencies that comprise TransPort, the group has evolved into the multi-modal ITS services coordinating body within the greater Portland-Vancouver metropolitan area. When the early deployment phase of the federal ITS initiative moved into its present emphasis on integration of modal infrastructure systems

(MDI grants), *TransPort* submitted successful applications for funding and has been cooperatively managing implementation of priority technology integration projects in the Portland-Vancouver region. In 2005, the committee's role as the leader on ITS matters was formalized when the group was and was established as a subcommittee of TPAC.

The focus of ITS activity in Portland over the past ten years has largely been to install needed core field devices and communication systems and to perfect the computer hardware and software tools needed to integrate and optimize operation of the devices. These systems help operating agencies maintain field equipment more cheaply and minimize the severity of recurrent system congestion and to identify and rapidly respond to accidents. It is estimated that incidents, such as stalled cars and accidents, account for as much as 40 percent of typical freeway congestion. Similar events on surface streets also dramatically impact transit and freight operations. Early detection and response dramatically reduce delays attributable to such events and these are the strategies targeted by the ATMS Plan for earliest attention and sustained commitment of regional resources.

National standards have been developed to assure that ITS hardware and software tools produced by different manufactures will all be compatible. The concept is very similar to audio equipment, where the consumer is able to purchase components of a sound system from multiple manufactures, plug them into one another and have them all work together. These same kinds of interchangeability are facilitated by development of both national, regional and project scale architecture schemes. The Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) requires that all MPOs develop a regional ITS architecture and to assure that all ITS-related projects using federal funds comply with the architecture. In 2000, *TransPort* initiated consultant development of a Draft ITS Architecture. This was necessary to secure federal funds for a variety of management system integration projects for which *TransPort* had applied on behalf of the state ITS program. The committee has continued refinement of the Architecture and has developed procedures for assuring project level compatibility with the information flows and standards, which are at the heart of the concept.

The purpose of this proposed Regional Concept for Transportation Operations is to enable the region to enhance existing transportation operations collaboration activities across numerous jurisdictions by demonstrating appropriate situations, conditions, and organizational approaches where an integrated system can be implemented. The Regional Concept for Transportation Operations will:

- present an operations vision and direction for the future of transportation systems management and operations based on a holistic view of the region,
- garner commitment from agencies and jurisdictions for a common regional approach to transportation and management and operations, and
- provide an opportunity to strengthen the linkage between regional planners and managers responsible for transportation operations by providing coherent operations strategy for consideration in the planning process.

The concept will be presented to TPAC, JPACT and the Council for approval as an operating plan for the region's ITS providers at the culmination of the project. Periodic updates on the project will also be provided.

## **ANALYSIS/INFORMATION**

1. **Known Opposition.** There is no known opposition to this proposal.

2. **Legal Antecedents.** Metro is charged by TEA-21 with assuring compliance of all federally funded ITS activities with federal and regional ITS Architecture protocols and this responsibility would be delegated to the subcommittee.
3. **Anticipated Effects.** Establishment of a limited-duration 1.0 FTE Senior Transportation Planner at Metro (for two years) to implement the federal grant.
4. **Budget Impacts.** This position would be funded by a federal grant administrated and locally matched by the City of Portland, with Metro acting as a contractor. Metro would house the position using existing office space and equipment. Therefore, no additional effect on Metro's budget would result from adoption of this Resolution.