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TransPort Technical Advisory Committee

Wednesday, July 14, 2010

1:00 p.m. –2:30 p.m.

Portland State University, ITS Lab

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Meeting Notes

In Attendance

Ed Anderson (ODOT), Rick Denney (FHWA), Jim Gelhar (Gresham), Bob Hart (SW RTC), Kyle Hedspeth (ODOT), Tu Ho (Beaverton), Rob Jaffe (Consystec), Jabra Khasho (Beaverton), Peter Koonce (Portland), Jingtao Ma (PTV America), Joe Marek (Clackamas), Chris Monsere (PSU), Pam O'Brien (DKS), Nathaniel Price (FHWA), Shaun Quayle (Kittelson), Deena Platman (Metro), Stacy Shetler (Washington Co), Jessica Tump (TriMet), Tom Urbanik (Kittelson)

Project Updates

- Chris Monsere announced a successful TRB NATMEC in Seattle. Portland area was well represented with six presenters on data collection activities for arterials, climate change, PORTAL, and freight. Chris will send out the link to the NATMEC site so TransPort member can review presentations.

Continuous Truck Count Project

Dr. Chris Monsere from Portland State presented information on the *Permanent Freight Data Collection Infrastructure and Archive System*, an MTIP funded project. The scope of work is under development. The objective is to develop a pilot project for continuous collecting and archiving truck count data. The idea is to develop and program an independent device and software to be housed in the signal cabinet. The data would be collected on freeways at key ramp meter locations and on arterials serving industrial districts. The Regional Freight TAC will work with Dr. Monsere to identify locations. TransPort members can help to identify opportunities and challenges with field conditions for installation. For example, the project requires installation of dual loops. Agencies may contribute to the effort by identifying locations with dual loops in place and/or install dual loops to facilitate collection at a key location.

The project anticipates using length-based truck classification, dividing vehicles into four bins. This data could augment other efforts like WSDOT's purchase of GPS data on truck activity. This data will cover activity to 100 miles within Oregon. There is also an opportunity to integrate RFID tag data as a future enhancement to collection efforts.

DRAFT

Work Order Contract #1
For
Intergovernmental Agreement #XXXXX

Permanent Freight Data Collection Infrastructure and Archive System

Updated: July 14, 2010

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1. INTRODUCTION

Freight transportation makes up a substantial portion of the daily vehicle miles traveled (VMT) in the Portland metropolitan area and is vital for the region's economic vitality. Further, truck movements on the Portland area freeway system are impacted heavily by congestion and in turn have a major safety impact. While it is possible to monitor and manage the movement of vehicles on the freeway system via an extensive traffic management operations system, it is currently not possible to determine how many trucks are traveling on the freeway system on an ongoing basis. In order to effectively manage our freeway transportation system today and plan for tomorrow, the region desperately needs a system for monitoring truck flows on the freeways. Fortunately, this can be achieved at a very low cost and will allow cities, counties, the Port of Portland, Metro, and ODOT to reap huge benefits immediately. Typically truck counts are obtained via labor intensive measurement techniques at a small number of locations on one or two days. This new system will enable permanent count/classification stations to be established at a number of locations, on a permanent basis.

This project will consist of new hardware to be installed in ramp meter controllers throughout the Portland metropolitan area, plus communications upgrades, software modifications and data archiving improvements to allow for permanent truck counts (at 20-second intervals, 24 hours per day, 365 days per year) at more than 50 locations on the freeway mainline in the metro area.

This project includes producing tools and performance measures in PORTAL to make the data useful to local transportation professionals, exploring new and innovative uses of the data. PORTAL is the official Archived Data User Service (ADUS) for the Portland Metropolitan region as specified in the Regional ITS Architecture.

This project will complete a critical gap in the freight data collection program now being implemented by the Port of Portland and reflects a small investment that will provide a permanent truck counting capability for the region. This will represent an approach that will be unique in the nation, and will provide key inputs to the travel forecasting efforts now underway at the Port, Metro and ODOT. This new system will also allow us to track seasonal and long run changes in truck flows and to report levels of congestion to the freight industry that are reflective of when their vehicles are actually on the freeways. Travel times for key freight corridors will be able to be linked to those locations and times experiencing the heaviest freight traffic, which will aid in local, regional and statewide planning efforts.

The project will be led at Portland State University by Christopher Monsere, with collaboration of Dr. Kristin Tufte (PSU) and David Kim (Oregon State University) and David Porter (Oregon State University). Deliverables have been identified for each task. The deliverables will be approved the project advisory committee.

2. WORK PLAN

This following is a description of the work required to carry out this research effort.

Task 0 Form project advisory committee

Task 1. Review state of the practice

Brief literature review to identify state of the art. Develop contact with FHWA Pooled-Fund study. Contact University of Washington. Document existing system and ATMS requirements. Explore feasibility of adding transponder reader antennas.

Task 2. ***Identify test locations***

Task 4. ***Develop independent hardware and software***

Task 5. ***Validate methodology***

Task 6. ***Test configuration for network, integrate with ATMS***

Task 7. ***Purchase hardware needed***

Task 8. ***Identify remaining locations for deployment***

Task 9. ***Modify PORTAL and prepare visualization enhancements***

Task 10. ***Prepare Documentation***

3. BUDGET

The project is cost-reimbursable. All costs are billed only when and if incurred. See attached budget spreadsheet.

Project Cost/Requested Funds (PLEASE PROVIDE INFORMATION ON THIS FORM):

	PE	ROW	CONSTRUCTION	TOTAL
Regional Flexible Funds			$179,460	$179,460
Local			$20,540	$20,540
Private				
TOTAL			$200,000	$200,000

TransPort members asked about the applications for this type of data. Examples of how it can be useful to practitioners include: work zone planning, travel modeling/simulation, and planning studies. Members also wonder about using video detection and radar to capture truck counts.

A copy of the draft work scope is attached.

MTIP 2014-15 TSMO Allocation Programming

Deena Platman from Metro facilitated a group discussion on how to program 2014-015 MTIP funds dedicated to TSMO. Ms. Platman provided an updated on the current process for allocating funding. The TSMO funds of $3 million are allocated in Step 1. JPACT identified active transportation and green economy/freight as the focus areas for this round of funding. There is now opportunity to partner with projects in Step 2 to advance TSMO initiatives in conjunction with active transportation or freight projects. The TSMO recommendation goes before TPAC and JPACT at their respective October and November meetings. TransPort will need to have an agreement on a recommendation by its October 13th meeting. (Update – the dates for TPAC and JPACT presentations have moved to November and December – TransPort will make a recommendation at their November 10th meeting.)

The group indicated that they liked the regional approach taken with the ARRA traffic signal upgrade project. There was general agreement among participants that the funds should focus on to bring all agencies up to a higher standard for the traffic signal system, continuing the current investment focus.

Other ideas included investment in communications to improve redundancy of the fiber ring. There was discussion about working with CTIC to create a master plan for communications to answer "where" and "what technologies".

The group also discussed video sharing and providing emergency responders with access. There was a question about fiber bandwidth adequacy. It was suggested that this would make a good OTREC research project.

The group was supportive of continuing support for PORTAL. There was a suggested that TSMO projects could also help support the archive, allocating a portion of project funds for evaluation that can be moved into PORTAL.

How to support the regional ITS architecture was also discussed. There was a suggestion that there could be an annual allocation for maintenance.

Ms. Platman agreed to prepare a draft proposal and circulate prior to the September TransPort meeting.

TransPort decided to cancel the August 11th meeting. Next meeting will occur on Wednesday, September 8th.

Meeting adjourned at 2:30 p.m.