

Notes from the Workshop on
“How to Coordinate Planning and Operations”
 Sunday, January 21, 2007

8:30 A.M. **Welcome, Introductions, Purpose, and Scope** – Wayne Berman

Berman Comments:

- What’s Happening – State of the Practice
- Opportunities – State of the Practice
 - Use of ITS Architecture
- Regional Concept of Transportation Operations
- Putting it All Together

8:45 A.M. **The State-of-the-Practice: How Are MPOs Coordinating Planning and Operations** – John Mason

Mason Comments:

- Decade of progress toward integration
 - From “silos” to dialogue
- Different perspectives:
 - MPOs
 - States
 - Operating agencies
- **Las Vegas Experience – Brian Hoeft**
 - FAST (Freeway and Arterial System of Transportation)
 - RTC more than MPO – also operating agency
 - Transit
 - Fast
 - Coordination among cities/unincorporated areas
 - Coordination with state
 - Las Vegas growth – exploding
 - 2025 projected growth may be exceeded by 2020
 - RTC responsibilities
 - 1980s: LVACTS
 - 2003: LVACTS merged with NDOT
 - 2004: RTC became administrator of FAST
 - political control and oversight
 - FAST colocation with Nevada Highway Patrol (2005)
 - Focus on RTC site moving from transit to freeway and arterial operations
 - Ramp meters

- Live feed from traffic cameras
 - Need for greater coordination and communications for signal system
 - Need for education of elected officials about what can be done, and when
 - Demo of signal coordination benefits: came close to eliminating coordination on a stretch of arterial system (got cold feet/cooler heads prevailed)
 - Able to display volume data by link on both arterials and freeways: opportunity to respond to emerging
- **Baltimore Experience – Eileen Singleton**
 - Overview of region
 - 2.6 million population
 - Tourist destination
 - Coordination w/DC region
 - ITS Early Deployment Plan ('96)
 - Moved to MPO in 1998
 - Strategic Deployment Plan
 - 9 high priority projects
 - ITS oversight panel (ITS Partnership/M&O Partnership) – high level operations managers with some authority/credibility
 - Make recommendations to BRTB annually
 - Where to
 - Operations in short term & long term planning process
 - M&O Strategic Deployment Plan
 - Short Term:
 - Regional priority letter (as opposed to “local)
 - Considering other options that work within existing transportation planning process
 - Long-Term
 - M&O category in LRTP (equal to highway, transit, bike/ped)
 - M&O Strategic Deployment Plan
 - Update of ITS plan
 - Expand focus to M&O
 - Overarching needs: role of BRTB;
 - BRTB functions as convener, champion
 - Regional operations committee; customer satisfaction survey (regional performance measures)
 - Successes:
 - Brought stakeholders together (planners, operators, emergency response)

- Increased awareness of M&O/inclusion
 - Needs work:
 - Convey benefits to planners in “their language”)
 - IDAS/DYNASMART-P
 - Need to be champion
 - Better coordination between planning and operating agencies
 - Change in thinking from capital project to operations focus

- **Washington, DC Experience** – Andrew Meese
 - Overview:
 - COG/TPB
 - DC, states
 - Key challenges:
 - Congestion
 - Maintaining/enhancing system
 - Emergency preparedness
 - Air quality
 - Funding
 - Linking transport and land use
 - Paradigm shift: Operations Focus
 - (see handout)
 - Board members and transport professionals very interested in operations
 - Operations in UPWP –
 - Emergency preparedness in Public Safety committee
 - RESF #1 in transport area
 - Need for organization to handle impacts at regional level
 - MATOC (“virtual organization”)
 - Need tangible benefits for operations staff
 - MPO can provide conduit for info from operations to policy officials/planners
- Performance measures: are we there yet?
 - “Data challenged” but necessary
 - Data for “test cases” – use to educate officials
 - Replicating successes from elsewhere – not basing program on analysis
- Are we over the debate about whether there should be M&O in planning
 - Looking at “next hurdle” – measuring performance

Mason comments:

- ITS has been initial mechanism for coordination
- Need to institutionalize MPO role
- Performance measures an important link
- Emergency preparedness and response can also force the issue of collaboration
- Establishing a coordinating committee provides institutional mechanism
- Getting elected officials engaged can encourage operations “champions”
- Advances in technology leads to higher expectations for performance
- UPWP a vehicle for stimulating/maintaining activity on M&O

9:45 A.M. BREAK

10:00 A.M. **The State-of-the-Practice: How are States Coordinating Planning and Operations** – Valerie Briggs

- **Washington State Experience** – Ted Trepanier, Washington State DOT
 - “A ton of work going on” in Washington State – including at MPO level
 - Update to Washington State LRTP
 - Transportation Systems Plan under development: Hierarchy
 - Continuous activities;
 - All Plan Years;
 - Tier I (plan years 2 to 20)
 - Tier II (10 to 15)
 - Tier III (15 to 20)
 - I-5 Team looking at operational improvements can be included in pavement project
 - Activities:
 - Tolling for TNB/HOT Lanes
 - Marketing
 - Regional Transportation Investment plan
 - Regional Construction Traffic Planning
 - Commission’s Toll Study and Policies
 - Links to ferry system
 - Need for PPP
 - TSM/Incident Mgmt./HOV Policy
 - Planning activities:
 - Value pricing
 - CRA II
 - Integrated Corridor Mgmt.
 - Active Traffic Management
 - Performance Measures
 - Congestion Working Group
 - Systems Operations and Management Executive Leadership Team
 - Systems Operations and Management Working Group
- **Georgia Experience** – Anthony Bradford, Georgia DOT
 - NAVIGATOR system
 - Work closely w/ ARC
 - Developing greater coordination w/ other MPOs
 - Evacuation management/coordination (destination)
 - Mechanisms linking planning & operations
 - NaviGator Business Plan

- Local, federal awareness of ITS investment plans
 - ITS Architecture
 - Congestion and Incident Management
 - Ties to future planning
 - Targets for different elements if IM; no targets for recovery
 - 24/7 access to traffic information
 - Implementing 511 system
 - Both automated system and live operators
 - Performance measurement
 - Weekly ITS performance reports
 - Weekly construction activity reports
 - Monthly HERO reports
 - Avg. response time: 91/2 minutes
 - Benefits studies
 - Demographic surveys
 - NaviGator benefits
 - B/C ratio: 4.2 to 1
 - Service most requested: alternate routes/directions
 - Liability issue
 - Congestion
 - 52% of delay non-recurring
 - over \$2 billion cost
 - Fast Forward program – Congestion Relief Program
 - Short term: expand NaviGator to 220 mi, HERO to 286 mi.; reduce peak-hour delay by 30%
 - 100 new ramp meters: reduce peak hour delay by 7%
 - Long-Term:
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- **Kansas Experience – Mike Floberg, Kansas DOT**
 - ITS Program
 - KC Scout System (institutional issues)
 - ITS program resides in Planning Bureau
 - Freedom to work across division boundaries
 - Involved w/ KDOT Telecomm Committee
 - ITS unit “owns” backbone
 - O&M funded through Division of Operations funds
 - Provide data and KC Scout access to KDOT
 - MARC – partner and board member of KC Scout; leads Operation GreenLight
 - Wichita Area MPO: KDOT member of committees for ITS
 - KC Scout: data for performance measures; help set direction and performance for KC Scout
 - Conclusions:
 - Build Relationships

- Get involved
- Support, not own
- Be flexible
- Do not work in a vacuum

Discussion:

- Institutional issues
- Data: even with “data rich” environment, it is difficult to find data relevant to particular issue
- Information: customers want to see real-time info
 - Website hits in severe weather
- Tough to sell management on needs when you don’t have numbers; information can be used effectively
- Data accuracy and reliability at issue – need “fine tuning”
- IT resources available to Kansas ITS needs; NaviGator unit in IT division;

11:00 A.M. **Lessons Learned: Summary of a Sample of Best Practices of States and MPOs – Anita Vandervalk**

Vandervalk Comments:

- WisDOT Sketch Planning Tool: Corridor planning methodology for traffic operations (signal systems, etc.)
- Key strategies:
 - Active, multi-agency ops committee
 - Collection, use and reporting of performance measures
- Organization and project development processes:
- Performance data for planning:
 - CalTrans (statewide bond initiative)
- Need for improvement in using performance measures in state plans

11:20 A.M. **Lessons Learned on Coordinating Planning and Operations from other operating agencies:**

- **Utah Transit Authority – Michael Allegra**
 - Institutional issues key
 - Roles of MPOs and Transit/Highway Authorities
 - 2002 Salt Lake City Winter Olympics
 - Keys: Communications, management plan
 - Interagency coordination at TOC
 - Transport officials; law enforcement; highway patrol dispatch

- TOC Control Room: Traffic info, service patrol dispatch; 2 ATMS; phone support; traffic signals (“took off organizational hats”)
- Community support for TDM alternatives
- Keys to success
 - Excellent planning – networking
 - Communications (hierarchy)
 - Empowered location captains and committed staff
 - Experienced, quality operators
 - Advance maintenance
- Lessons Learned:
 - People will use transit
 - Transit contributes to sustainable congestion management
 - Working on a common goal contributed to partnering atmosphere/reduce institutional barriers
 - Experience gained in “special events” transferable to daily activities
- **The Port Authority of NYNJ – Danny Jiji, PANYNJ**
 - Business Planning and Performance Management
 - Why do you have a plan? Is it working? Where are you going?
 - Make decisions; manage expectations
 - Mission and Vision
 - Trends and issues: yield challenges; convert to positives (objectives)
 - Cover the bases: financial; employee; customer/stakeholder; security; maintenance; operations
 - How are you doing?: Performance measures, targets (objectives yield strategies) – need higher level metrics for objectives, lower level metrics for specific strategies, initiatives and projects
 - Why measure?
 - What is measured gets done; satisfy mgmt, customers, stakeholders; data available
 - To make good business decisions (reallocate resources;
 - SMART Measures (specific, measurable, attainable, reliable, time bound)
 - Getting to Great Measures (usefulness, quality; high level filters – positive measures; measure outcomes – measure decisions, not output or activity level)
 - Usefulness: drives decisions; identify actions; demonstrate progress – Important and relevant; measure what’s important

- Quality criterion: Clear, understandable – define terms; presented in clear way; title suited to measure; Accessible and timely; Measurable – credible; adds value; time-based; Accountability – dependable; Directional and objective – achievable, realistic, yet a stretch; Quality – not only done right, but done well; Positive – not used in a punitive way; doesn't contribute to a “gotcha” culture
- Selecting measures: make a list, rate measures, and rank them
 - Usefulness 60%; quality 40% (weights can change)

Combining business planning and systems engineering:
Transparency: “new word” at Port Authority;

12:00 P.M. LUNCH

1:00 P.M. **Opportunities to Better Coordinate Planning and Operations – Bob Winick**

Winick Comments:

- **Use of Statewide and Regional Operations Data for Planning – Shawn Turner (TTI)**
 - Access
 - Data format
 - Assessing data quality
 - Accuracy
 - Validity
 - Completeness
 - Where is data missing? (random vs. systematic)
 - Institutional relationships facilitate technical solutions
- **Use of the ITS Regional Architecture – Mac Lister (FHWA)**
 - Requirements of Rule/Policy
 - 9 requirements
 - Just beginning to explore use and maintenance of regional architecture
 - Most developers of architectures find significant benefits in process
 - CalTrans; San Diego (LRTP System Management Chapter)
 - Use of Architecture in project prioritization
 - MTC; Anchorage (AMATS); MAG; ARC; Rhode Island
 - Architecture in Process: NYSDOT
- **Use of Performance Measures - Rob Hranac, BT Systems**
 - Sharing of Data
 - Automation
 - Archiving of ITS data
 - Why is the archive not enough?
 - Needs:
 - Fix data problems:
 - combine data from multiple sources
 - “Missing Data Pipeline”
 - Focus on sharing data in meaningful ways
 - Caltrans Bond Prioritization
 - PEMS data used for creating lists
 - Corridor Travel Times
 - Challenge: Hardware; agency data sharing; software integration with tools

- Measuring success: Trust in data; availability of useful data; more staff working on decision making rather than massaging data
- **Use of Existing Analysis Tools** – Krista Jeanotte, Cambridge Systematics, Inc.
 - FHWA project : synthesis; innovative applications and methods
 - Application to system as a whole
 - Considerations:
 - Needs assessment/deficiencies
 - Project definition/screening
 - Alternatives analysis
 - Programming Life-cycle
 - Prioritization
 - Performance monitoring
 - Validation/Calibration; education
 - Current methods and tools (sketch planning; TDF models; “deterministic” models; traffic signal optimization tools; simulation; archived operations data; operations-oriented performance measurement/metrics)
 - Matching needs with tools/methods
 - Matched with budget and resource requirements
 - Case Studies: Guidance on strategies; using HCM procedures in LRTP; Archived Data; using Microsimulation in evaluation of regional operations strategies
 - Challenges/Issues: Better understanding of benefits; few established methods and tools; guidance on application of tools; important analysis gaps (incidents, construction, weather, special events,; air quality impacts); Impacts of strategies on travel decisions; TDF models and simulations need to be better integrated; less interest in archived data than expected; need to take all modes and programs into consideration
 - Important to deliver data/performance measures in the form users need
 - Hazard: performing to the measure (looking good on a given PM)
 - Transparency in providing data (how it got fixed; original data format, metadata, etc.)
 - Automation of data clean-up; maintenance plan for equipment
 - Expensive to maintain equipment, but cost-saving in reducing duplicative data collection (MAG – priority detectors for multiple uses; Texas study on cost savings)

2:30 PM

BREAK

2:45 PM

PANEL SESSION: The Regional Concept for Transportation Operations: A Tool for Coordinating Planning and Operations – Jocelyn Bauer

Bauer Comments:

RCTO: Management tool to assist in planning and implementing management and operations

Sets direction; bridges different perspectives, priorities and programs

Motivations; operations objective; approach; relationships and procedures; resource arrangements; physical improvements

- **The Portland, Oregon Experience – Jon Makler**
 - Formalize relationships that enabled a unique culture of collaboration
 - Three emphasis areas: Traveler info; network management; integrate TSMO into LRTP
 - Traveler Information:
 - RCTO should be focused on outcomes, not on means to an end
 - Region strong on traveler information, but lack of coordination and integration
 - Good lessons on relationship building
 - Network management
 - Stakeholders: “we’re too busy”; can’t enter if they won’t open the door (idea came from outside)
 - Integrate TSMO into LRTP
 - Raising question prompted several activities
 - Senior operations staff discussing how to integrate operations into LRTP
 - Effort to create TSMO policy committee
 - Elected official gets ambitious about incident management, snow/ice event management; construction information; RCTO accepted as appropriate tool
 - IM: direction to gain ground on managing non-injury incidents on urban highways; use of clout to convene senior managers; delegation of task to sub-committee to generate ideas and make recommendation; push to organize by timeline and approach
 - RCTO can be used where success depends upon the existence of a deliberate, rational process
- **The Detroit Experience – Tom Bruff**
 - RCTO for SEMCOG

- TSMO: Sharing resources, preserving capacity, security, safety & reliability; etc.
- Building upon past success
- RCTO partners: SEMCOG; MDOT; Michigan State Police; consultant (Hubble, Roth & Clark, Inc.)
- Other stakeholders

- **The Tucson Experience – Paul Casertano**
 - PAG
 - Needed “higher-level” operations vision, beyond ITS Strategic Plan and Architecture; I-10 reconstruction; ½ cent sales tax for transportation
 - Started with broad perspective, narrowed down to immediate needs – “drill down,” targeted approach; focus on immediate needs
 - Operations areas: Arterial mgmt, work zone mgmt, traveler info
 - Tucson Area Operations Manual
 - Policy Template: Policy statement; policy need; institutional arrangements; roles & responsibilities; resources required and estimated costs; status report
 - 3-5 year time frame does not fit into 5-year TIP cycle
 - Introduce projects for future years; funding from sales tax initiative;
 - RCTO implementation: keeping stakeholders engaged
 - Insights/observations:

- **The Hampton Roads Experience – Camelia Ravanbakht**
 - Motivated by high profile incidents on bridges and tunnels – work w/ VDOT to improve incident management
 - Structure: Expanded ITS stakeholder group to include public safety & emergency mgmt; combined members of ITS & highway operations group
 - RCTO charter endorsed by MPO in October 2005
 - Performance measures: Diversion response; clearance time; lane blockage (culture clash: emergency services vs. traffic ops)

Q&A:

Mobility brings people to the table; Safety brings them back
Culture shift at VDOT

4:15 PM **Putting It All Together – Harlan Miller**

Harlan Miller Comments:

10-year record of FHWA Planning working with Operations
SAFETEA-LU requirements

- **Federal Guidance to better Coordinate Planning and Operations –**

- **Integrating Operations into the Long Range Plan – John Mason**

Objectives driven, performance-oriented, with outcome-based performance measurement

Fundamental shift from project-oriented approach

Products of planning process: operational strategies, safety improvements, system preservation and maintenance, system expansion

Performance measurement crucial

MTP optimizes mix of capital and operating investments

- **Enhancing the Congestion Management Process – Erin Flanagan / Ken Leonard**

CMP:

Performance measures; analyzing problems; etc.

- **Lessons Learned From the Workshop – All**

CMP shouldn't be stand-alone document – opportunity to integrate M&O into LRTP

Self-assessment tool – interactive?

Training and outreach

Process vs. plan – funding for M&O? need for greater coordination and greater transparency

Transition period; some discomfort about moving away from V/C ratio and toward travel time reliability; move toward other measures depends upon availability of data

Need for systems approach to projects: performance measures, standards – national interest as opposed to purely local control/decision making

4:55 PM **CLOSING** – Walter Kraft

Walter Kraft Comments:

Kudos to Wayne

Success depended upon building relationships; “get involved;” support not own; don’t work in a vacuum

Share lessons learned; foster coordination; “don’t be a stranger;” keep learning; don’t reject new ideas and methods

What are next steps (putting presentations on website)

Tomorrow Room 8212, Park Tower

Wednesday, Lincoln Room, Marriott

5:00 PM **ADJOURN**