Cutting Edge ITS Planning at MR MPO

Nathan P. Masek, AICP
Mid-Region MPO
Albuquerque Metropolitan Planning Area (AMPA)
Albuquerque, New Mexico USA
Topics of Discussion

- **MRMPO** – Who, What, Purview
- **ITS Subcommittee** at Work
- Integration with the **Congestion Management Process**, **Project Prioritization Process**, and **TIP Development**
- **Advanced Tools**, GIS, and the Web
- **Connections to Regional ITS Architecture**
Metropolitan Planning Organizations (MPO) ……Who is Involved, What is at Stake?
Coordinated Regional Transportation Goals and Strategies

- Regional Transportation Agencies, “member governments”, Metropolitan Transportation Board (MTB)
- Regional Transportation Goals and Strategies, Supporting Multi-Modal Transportation and Mobility
  - Goals and Objectives
- Supporting Technical Committees
- Programming of the MTP, TIP, Guided by CMP and Regional ITS Architecture
- Key Considerations
  - CMP Strategies
  - ITS Architecture……..Systems Engineering Certification
  - Project Prioritization Process

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But How Does This Help ITS Planning and Project Development?

FHWA/FTA ITS Architecture and Standards FINAL RULE (Rule 940.11)

- Stipulates that any project with ITS Elements seeking federal funding must be consistent with the Regional ITS Architecture
- Requires Systems Engineering Certification
- Provides the framework to ensure that
  - Institutional agreements considered,
  - Technical integration is consistent among projects,
  - Regional stakeholders are identified

What We Do at MRCOG – Integrate CMP, Project Prioritization Process (PPP) to TIP Development:

- ITS Subcommittee Reviews Each TIP Project Proposal
- Projects Identified by Project Type, and include project-level Management and Operational Strategies (TSM&O) from the CMP and ITS:
  - Align to the ITS Services and Service Packages in the Regional Architecture
- Online/Cloud-Based Tools
TIP Development, Committee Flow and ITS Subcommittee
TIP Development – Online Form….HUGE IMPROVEMENT!

Benefits:

• Integrated Project Prioritization Process (PPP)
• Ease of Access to the Standard Form
• All System/Supportive Resources are Linked
• Electronic Data – Easily Summarized, Referenced, etc
• Thorough (38 pages long), But Able to Include All Pertinent Areas including:

  • Project Information
  • Project Delivery
  • Mobility/Moving People
  • Economic Vitality
  • Environmental Resiliency
  • Active Places

• https://form.jotform.com/72837213684159

MTP Goals/TSM&O Strats
MTP/CMP Goal – “Management and Operations Strategies”
ITS and CMP Priority Corridor Matrices

ITS Priority Corridors

<table>
<thead>
<tr>
<th>ITS Priority Corridors</th>
<th>2014 CMP Ranking (Def)</th>
<th>High Priority</th>
<th>Medium Priority</th>
<th>Low Priority</th>
<th>Not Applicable</th>
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<tbody>
<tr>
<td>1. Alamedo Blvd. (Cottonwood to 1-25)</td>
<td>1</td>
<td>3</td>
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<tr>
<td>2. Montana Blvd. (Union to 1-25)</td>
<td>2</td>
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<tr>
<td>3. Bridge/Clear Channel Blvd.</td>
<td>4</td>
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<td>4. US 50</td>
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<tr>
<td>5. Coors Blvd. (1-70/5)</td>
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</tr>
<tr>
<td>6. Coors Blvd. (1-70/5) (I-25)</td>
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<tr>
<td>7. PDM Blvd. (University to Coors)</td>
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<td>8. PDM Blvd. (2 (I-25 to Tramway))</td>
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<tr>
<td>9. Densel Chavez (11th St to Coors)</td>
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<td>10. Rio Bravo (1 (Coors to UCD))</td>
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<tr>
<td>11. Rio Bravo (2 (I-25 to University))</td>
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<td>12. Tramway Blvd. (Central to Cedar Rd)</td>
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<td>0</td>
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<tr>
<td>13. Central Ave. (85th to Rio Grande Blvd.)</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
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<tr>
<td>14. Central Ave. (85th to Rio Grande Blvd.) (I-25 to CB)</td>
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<td>0</td>
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<td></td>
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<tr>
<td>15. Central Ave. (I-25 to S)</td>
<td>15</td>
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<td>16. Central Ave. (I-25 to Washington)</td>
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<td>17. Central Ave. (Washington to Tramway)</td>
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<td>18. NM 628 (Westside to Northeast)</td>
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<td>19. NM 628 (Northern to I-25)</td>
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<td>0</td>
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</table>

Priority is based on CMP/ITS review, and has been updated to consider current deployments along the corridor.

2014 CMP Ranking (Def): High Priority = 1, Medium Priority = 2, Low Priority = 3, Not Applicable = 0.
How Do ITS Services & Packages Support the CMP/PPP?

**CMP Management and Operations Strategies Match ITS Services**

**CMP/PPP Goal and Strategy-Areas**
- Active Roadway Mgmt
- TDM/Alternative Modes
- Physical Rdwy Capacity

**CMP/PPP Specific Strategies**
- Expanded Signal Timing
- Signal Equip. Modernization
- Traveler Info. Devices
- Comm. Networks/Rdwy Surveillance
- Transit Vehicle Information
- Transit Pre-Eemption
- Transit Vehicle Real-Time Information
- Queue-Jump Facilities
- Smart Parking
- Safety Strategies – needs to be expanded
### CMP Management and Operations (TSM&O) Strategies in PPP - ITS “Service Packages”

#### MANAGEMENT AND OPERATIONS STRATEGIES / Active Roadway Management - Identify which strategies are being utilized from the CMP Matrix for the project.
- [ ] Expanded traffic signal timing and coordination
- [ ] Traffic signal equipment modernization
- [ ] Traveler information devices
- [ ] Communications network and roadway surveillance
- [ ] Access management

  **ATMS03** – Traffic Signal Control
  **ATMS01** – Network Surveillance,  **ATMS03** – Traffic Signal Control
  **ATMS06** – Traffic Info. Dissemination,  **ATMS08**-TIM,  **ATIS01**-Broadcast Traveler Info.,  **MC04**-Weather Info. Distribution

  **ATMS01** – Network Surveillance,

#### MANAGEMENT AND OPERATIONS STRATEGIES / Travel Demand Management and Alternative Travel Modes - Identify which strategies are being utilized from the CMP Matrix for the project.
- [ ] Fixed guideways and dedicated transit lanes
- [ ] Transit service expansion / frequency increase
- [ ] Transit vehicle information
- [ ] Transit intersection queue-jump lanes and signal priority
- [ ] Off-vehicle fare collection
- [ ] Park and ride facilities
- [ ] Off-street multi-use trails
- [ ] On-street bicycle treatments
- [ ] Parking management

  **APTS01** – Transit Vehicle Tracking,  **APTS02**-Fixed Route Operations
  **APTS09** – Transit Signal Priority

  **ATMS16** – Parking Facility Management
MRCOG ITS Products on ArcGIS Online:

AMPAS ITS services:


AMPAS ITS Deployed Infrastructure “Elements”:

http://mrmpo.maps.arcgis.com/apps/PublicInformation/index.html?appid=cfc378d974304a3eb051fae09b42c711
Compared to ITS Service/Need Areas in the ITS Regional Architecture

- **7 ITS Service Areas in AMPA**
- **Specific ITS Service Packages in Systems Engineering Project Certification requirements, and M & O Strategies in PPP**

1. Traffic Management
2. Information Management
3. Traveler Information
4. Incident Management
5. Public Transportation Management
6. Emergency Management
7. Maintenance and Operations
2018-23 TIP, Summary of ITS Services from the Regional Architecture

<table>
<thead>
<tr>
<th>ITS Service Need Areas (Table 8)</th>
<th>2018-23 TIP Projects</th>
<th>% of total</th>
<th>2018-23 Non-TIP Projects</th>
<th>All Projects</th>
<th>% of All Projects</th>
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<tbody>
<tr>
<td>Information Management</td>
<td>7</td>
<td>4%</td>
<td>4</td>
<td>11</td>
<td>2%</td>
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<tr>
<td>Traveler information</td>
<td>21</td>
<td>32%</td>
<td>8</td>
<td>29</td>
<td>5%</td>
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<tr>
<td>Traffic Management</td>
<td>38</td>
<td>22%</td>
<td>5</td>
<td>43</td>
<td>3%</td>
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<tr>
<td>Incident Management</td>
<td>15</td>
<td>9%</td>
<td>5</td>
<td>20</td>
<td>3%</td>
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<tr>
<td>Emergency Management</td>
<td>7</td>
<td>4%</td>
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<td>7</td>
<td>0%</td>
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<tr>
<td>Public Transportation Management</td>
<td>8</td>
<td>5%</td>
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<td>8</td>
<td>0%</td>
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<tr>
<td>Maintenance and Operations</td>
<td>3</td>
<td>2%</td>
<td>0</td>
<td>3</td>
<td>0%</td>
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<tr>
<td><strong>Total projects in TIP</strong></td>
<td><strong>99</strong></td>
<td><strong>57%</strong></td>
<td></td>
<td><strong>131</strong></td>
<td></td>
</tr>
</tbody>
</table>

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Other Datasets – Travel Markets for Traveler Information – DMS Location, Correct Destinations/Messages

CTPP Tract Flows to Locate DMS
Decision Points

Multiple Tracts, Selected Iteratively
Questions?

Thank you!

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Senior Transportation Planner
Mid-Region MPO
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