ITS Strategies Matrix, Project Evaluation and Prioritization Criteria
January 2015

The following describes the ranking categories and methodologies for each of the evaluation criteria. The valuation of each is based on current and/or near-term programmed projects using a scale of 1 to 5, with 1 signifying "optimal" and 5 signifying "deficient". The criteria are separated into 2 primary areas of evaluation:

- Existing deployment
- "Other Evaluation Criteria" as developed by the ITS SC

The first category is discreet in nature, easily measureable, and based on current project deployment activity. The second category captures ancillary or associated criteria that affect the ITS operations of the corridor or other conditions related to the corridor that the ITS SC determined as having significance to the application of ITS. The set of corridors are a subset of the ITS System Corridors which overlap the CMP corridors with slight variations, and are focused on the management and dissemination of traveler information around the primary commute in the AMPA between the Northwest to/from the East as well as select river crossings.

The corridors are ranked using several combinations of these criteria to better capture project-level priority:

- Two rankings based on summing the matrix criteria
- A "Valuation of Deficiency" ranking that captures corridors with highest deficiency (categories 4 and 5)

The ranking is intended for use in project development activities by the ITS SC, as long as to serve as project support among MRCOG member agencies in their respective project development.

Existing Deployment-Based Criteria:

Signal Timing and Coordination: Date of timing plan, Number of Plans
This criterion identifies the status of timing plans including the date of the most recent plan as well as the number of plans imposed. Typically, timing plans in the AMPA include 2-3 plans, ie, AM, PM and OP average and reflect **"recurring"** travel conditions.
Some corridors would benefit from additional plans that capture unique temporal conditions or travel-demand conditions such as school zones, special events, and those on weekends near shopping malls and other activity center/high traffic generators. Additional timing plans may exist in support of Incident Management whereby "flush" timing plans may be employed under certain conditions to accommodate non-recurring network congestion. Higher values indicates deficient conditions with higher weight given to the currency of the timing plans.

Traffic Signal Equipment Modernization
Criterion to capture current-generation signal control capabilities such as "Flashing Yellow" and "Pedestrian call recovery". Higher values indicate less extensive deployment of such devices.

Traveler Information (DMS)
Corridors include Traveler Information Devices to relay downstream travel conditions at key decision points on the network. Installations can be permanent of temporary, however the latter must be identified for permanent installation at a later point in time. This criterion measures the amount of deployment to disseminate real-time traveler information on the corridor.   Applies to devices that functionally serve the corridor.

Communications Networks
Criterion evaluates the status of the telemetry along the corridor, typically in the form of communications between intersections. A distinction exists between fiber, radio/microwave (video enabled or not), "twisted pair", or "no-comm" including gaps.

Roadway Surveillance Coverage
Criterion captures the amount of traveler surveillance present for volume, speed, incident, and vehicle classification. Devices can include Closed Circuit Television (CCTV), Bluetooth, mid-block detection (MVDS), as well as Third Party data (INRIX, Airsage, etc).

Bus/Transit Pre-Emption/Priority
Criterion captures the degree of signals enabled with transit-specific technology /enhancements. Elements include signal pre-emption specifically for the purpose of providing transit vehicles with priority over general purpose vehicles, or transit-specific signal heads (supporting queue-jumpers).

Notes from ABQ Ride:

Criterion captures the degree of transit signal priority implemented in the corridor specifically for the purpose of providing transit vehicles with (travel time) priority over general purpose vehicles through signalized intersections. Elements include whether infrastructure is installed (may include queue –jump lanes), efficacy of signal timing plans at moving transit vehicles through the corridor, and variations along the corridor.

Bus/Transit Vehicle Real Time Location Kiosks
Criterion captures the degree of bus stops equipped with real time countdown devices (devices that indicate the predicted arrival time of the next transit vehicle) and/or kiosks displaying real time transit vehicle location information for use by passengers

Qualitative Evaluation-Based Criteria:

Multi-Agency Corridor
Criterion assesses the degree a corridor includes multiple stakeholder agencies/jurisdictions. Higher ranking is applied to those corridors with multiple agencies involved.

Infrastructure Gaps (weighted by distance..)
Indicator of the "missing links" in ITS deployment; applies to telemetry, other ITS infrastructure such as DMS, etc. Redundant and covered elsewhere, can be removed?

Corridor VMT
Each corridor was evaluated for VMT based on the 2012 Traffic Counts Database with higher values correlating with a higher value. Ranking is relative among the values and is distributed into 3 categories, ie, 1, 3, 5.

Current or Planned Project Activity (I mile buffer)
Indicator of current and/or near-term major construction activity. This measure identifies opportunities for ITS deployment in support of the opportunity to integrate permanent ITS elements as part of the construction activity. The ITS SC will coordinate with the project sponsoring agency as appropriate to identify ITS elements to be included.

Key Detour/Parallel Route or Continuation of Adjacent CMP corridor
Criterion is targeted at incident management and/or Integrated Corridor Management (ICM) as opposed to construction-related activity. It indicates if the facility is part of a broader corridor subject to/identified for detouring or a continuation of an existing corridor where the continuation of an ITS project would benefit the larger corridor.

Potential ITS for Transit
Roadway facilities are varied with respect to their "appropriateness" for deploying *ITS in support of Transit*. First of all, ITS can support transit in different ways such as providing TSM-type enhancements such as "queue jumpers" or signal priority that allows transit travel time advantages over general traffic, or kiosk-enhanced bus stops with traveler information such as next-bus-arrival times. These types of ITS transit-enhancements support transit operations on corridors that already host transit routes and ridership. Other corridors, for one reason or another, do not include or support significant transit activity or routes, and therefore do not have a potential for transit that could benefit with the ITS implements mentioned above.

Appropriateness for ASC, ie, Corridor versus Network characteristics
The criteria identifies the corridor in relation to the adjacent or area roadway network type. For example, the effectiveness of ASC can be a function of the area's roadway network type and volume of side-access or major intersections with high traffic volumes.
Corridors with higher amount of un-coordinated/fewer coordinated cross streets, regardless of volume, will rank higher. (1, 3, 5)