2006 Arterial Management Survey

SURVEILLANCE INFRASTRUCTURE

1. Total number of arterial centerline miles with real-time traffic data collection technologies (includes CCTV) used to monitor key transportation facilities for security purposes operated by your agency in this metropolitan area:

CHARACTERISTICS OF SIGNALIZED INTERSECTIONS

2. Total number of signalized intersections operated by your agency

3. Number of signalized intersections operated by your agency under closed loop or central system control

4. Number of signalized intersections operated by your agency that allow for signal preemption for emergency vehicles

5. Number of signalized intersections operated by your agency that allow signal priority for transit vehicles

6. Number of signalized intersections operated by your agency within 200 feet of a highway-rail intersection that adjust signal timing in response to train crossing to avoid vehicle entrapment

7. Total number of signalized intersections with automated photo red light running enforcement

8. Total number of signalized intersections under real-time traffic adaptive control using SCOOT/SCATS or other similar advanced software

9. Total number of signalized intersections with electronic data collection capabilities

LANE MANAGEMENT

10. Total number of arterial High Occupancy Vehicle (HOV) centerline miles equipped with automated lane management technologies (e.g., sensors detecting traffic conditions the use of dynamic message signs and moveable barriers [e.g., gates] to control the operation of HOV facilities) operated by your agency:

11. Total number of arterial reversible lane centerline miles equipped with automated lane management technologies (e.g., traffic sensors and lane control signs used to implement reversible flow lanes) operated by your agency:
12. Total number of arterial centerline miles under congestion pricing and equipped with traffic sensors, electronic payment, or automated enforcement technologies to support the implementation of congestion pricing strategies operated by your agency:

13. Total number of arterial centerline miles equipped with lane control signs, supported by surveillance and detection technologies, to allow the temporary closure of lanes by your agency:

14. Total number of arterial centerline miles equipped with variable speed limit technologies operated by your agency:

15. Total number of arterial centerline miles equipped with lane management measures such as reversible flow lanes and lane control to support emergency evacuations operated by your agency:

HIGHWAY-RAIL INTERSECTIONS

16. Total number of highway-rail intersections:

17. Total number of highway-rail intersections under electronic surveillance:

18. Does your agency receive information on highway-rail intersections crossing blockages for the purpose of managing incident response?
   
   Yes
   No

INFORMATION DISSEMINATION

19. Total centerline miles covered by Highway Advisory Radio (HAR)

20. Is your Highway Advisory Radio (HAR) used to broadcast arterial incident information?
   
   Yes
   No

21. Total number of permanent Dynamic Message Signs (DMS) deployed on arterials:
22. What type of information is displayed on your DMS? (check all that apply)
   Travel time
   Average speed
   Congestion
   Diversions
   Incident information
   Maintenance and construction work site information
   Advisory speed limits
   Weather alerts
   HOV regulatory information
   Information from other states
   Transit operations
   Roadway status
   Special events impacting travel
   Local special events announcements
   Amber alerts
   Public Service Announcements
   Driver safety campaigns
   Parking availability
   Other

23. Please check all the methods that your agency uses to distribute information to the public.
   Dedicated cable TV:
   Automated telephone system:
   Internet Web sites:
   Pagers or personal data assistants:
   Interactive TV:
   Kiosks:
   E-mail or other direct PC communication:
   In-vehicle navigation systems:
   Facsimile:
   511 Telephone System:
   Do not distribute information:

24. Please check all the types of information that your agency distributes to the public
   Arterial travel times:
   Arterial travel speeds:
   Incident information:

25. Which of the following technologies does your agency use to distribute pre-trip traveler information? (Check all that apply)
   Internet or wireless systems
   511
   Other (non-511) telephone systems
   TV/Radio
   Kiosks
26. Which of the following technologies does your agency use to distribute en-route traveler information? (Check all that apply)
   - Wireless systems
   - 511
   - Other (non-511) telephone systems
   - Radio
   - In-vehicle systems

**PARKING MANAGEMENT**

27. Does your agency deploy parking management data collection systems that monitor the availability of parking?
   - Yes
   - No

28. Does your agency deploy parking management systems that disseminate parking availability information to drivers?
   - Yes
   - No

29. Does your agency deploy parking fee payment systems to simplify payment for customers and reduce congestion at exits to parking facilities?
   - Yes
   - No

**INTEGRATION**

30. Does your agency provide arterial travel time, speed, and condition information in real-time to the following type of agencies?
    - Agencies involved in highway incident management:
      - Yes
      - No
    - Freeway Management Agencies:
      - Yes
      - No
    - Arterial Management Agencies:
      - Yes
      - No
    - Public Transit Agencies:
      - Yes
      - No

31. Does your agency receive, in real-time, arterial travel times derived from vehicle probes from any toll collection agency?
    - Yes
    - No
    - No toll
32. Does your agency share, in real-time, timing plans with another agency, coordinate changes to timing plans with another agency, and/or turn over control of signals to another agency?
   - Share timing plans information in real-time:
     Yes
     No
   - Coordinate changes to timing plans:
     Yes
     No
   - Turn over control of signals:
     Yes
     No

33. Which of the following field devices do you turn over or share control of to/with another agency? (Check all that apply)
   - CCTV cameras
   - Dynamic message signs
   - Highway Advisory Radio
   - Dynamic lane assignment

34. If your agency turns over or shares control of any field devices, how is integration achieved? (Check all that apply)
   - Regional guidelines
   - Non-binding or informal MOU
   - Agency policy
   - Formal legal interagency agreement
   - Other

TRAFFIC INCIDENT MANAGEMENT
Service Patrols:

35. Total number of arterial miles patrolled by service patrols

36. Total number of vehicles operated

Incident Detection and Verification Methods:
   Please provide the miles covered by each of the following incident detection/verification methods:

37. Free cellular phone call to a dedicated phone number other than 911

38. Computer algorithms

39. CCTV
40. Are the CCTV images made available to the public?
   Yes
   No
   Don’t Know
   No CCTV

41. Which of the following technologies/methods are used by your agency to detect arterial incidents? (Check all that apply)
   - Inductive loop or acoustic roadway detector technologies
   - Wireless enhanced 911 systems
   - Mayday or Advanced Crash Notification (ACN) systems
   - Traveler reported information

42. Does your agency deploy variable speed systems?
   Yes
   No

43. Does your agency deploy speed enforcement technologies on arterials?
   Yes
   No

44. Do your agency deploy bicycle or pedestrian systems (e.g., pedestrian detectors, pedestrian activated lighted crosswalks, specialized pedestrian signals such as 'countdown' WALK/DON'T WALK signals and bicycle-actuated signals)?
   Yes
   No

45. Does your agency deploy special event systems (e.g., traffic signal operating plans, temporary lane restrictions, traveler guidance, or other measures)?
   Yes
   No

46. Does your agency use video imaging to assist with data collection at arterial incident scenes to speed the reopening of travel lanes?
   Yes
   No

47. Does your agency deploy temporary traffic control devices, such as portable message signs and lane control signs, to help ensure the safety of arterial incident scenes?
   Yes
   No
ITS STANDARDS AND REGIONAL ITS ARCHITECTURE

48. Please check the ITS Standards that you are using (deployed or in current RFP) or considering (assessing for use) in your agency’s systems from the list below.

<table>
<thead>
<tr>
<th>Using</th>
<th>Considering</th>
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49. Please check the equipment packages (from the list below) define in the ATIS1-Broadcast Traveler Information Market Package that are featured in your Regional ITS Architecture (if any).

   - Basic Information Broadcast
   - ISP Traveler Data Collection
   - Personal Basic Information Reception
   - Remote Basic Information Reception
   - Basic Vehicle Reception

TRANSPORTATION MANAGEMENT CENTER

50. Does your agency operate a Traffic Operations Center (TOC) or Transportation Management Center (TMC)?
   - Yes, Center name:

   - No

   Please answer questions 51 through 61 only if you operate a TOC/TMC

51. Center location (address):

52. What is the geographical area of coverage or area of responsibility?
53. Which of the following items describe the functional capabilities of your TOC/TMC? (Check all that apply)
   Network or roadway surveillance and data collection
   Incident management (e.g., detection, verification and monitoring of incident status)
   Information dissemination to other agencies (public, private and/or interagency)
   En-route driver information (dynamic message signs, highway advisory radio, in-vehicle
   Environmental monitoring (e.g., air quality, noise and weather)
   Special event traffic management
   Evacuation management and traffic coordination
   Emergency services traffic control coordination
   Ramp management and control
   Lane management and control (e.g., HOV, reversible lanes)
   Corridor management/traffic signal coordination or control
   Network performance monitoring, evaluation and reporting
   Road Weather Management
   Other

54. Select the 3 most important factors in making a decision to invest in a TOC/TMC from the list below. Please rank your choices using a scale of 1-3 where 1 = most important.
   Agency cost savings
   Incident management
   Voter or customer satisfaction
   Improved environment
   Improved travel reliability
   Improved safety
   Evacuation management
   Other (please specify):

55. What tools, resources, or support mechanisms are most helpful for implementing ITS standards? (Check all that apply)
   Training courses
   Published standards
   Workshops
   Web sites
   Forums
   E-Mail bulletins
   Software tools
   Case studies
   Peer to peer
   Guidance documents
   Other

56. Select the 3 most effective methods in persuading the public to support deployment of your TOC/TMC from the list below. Please rank your choices using a scale of 1-3 where 1 = most effective.
   Open meeting with the public
   Contractor provided briefings
   Emergency situation
   Public involvement
   Newspaper articles and other local media (e.g. radio, TV)
   Scanning tours for elected officials
   On-line message boards
   Other (please specify):
57. Approximately what percentages of the following funding sources are used to finance ongoing TOC/TMC operations?
   - % Local (Including toll revenue)
   - % State
   - % Federal
   - % Private
   - % Other (please specify):

58. What methods (e.g., the use of a common technology) has your agency employed to facilitate interoperability with other agencies? (Check all that apply)
   - Use of ITS standards
   - Purchase of the same hardware
   - Purchase of the same software
   - Use of contractor developed interface
   - Development of regional standards
   - Other

59. What measures have you used to manage the potential for technological obsolescence of your TOC/TMC technology? (Please describe)

60. Select the 3 most important legal issues involved with making a decision to deploy a TOC/TMC from the list below. Please rank your choices using a scale of 1-3 where 1 = most important.
   - Rules and regulations
   - Contract disputes and claims
   - Intellectual property
   - Liability
   - Privacy
   - Other (please specify):

61. Select the 3 most effective methods for recruiting TOC/TMC personnel from the list below. Please rank your choices using a scale of 1-3 where 1 = most effective.
   - College outreach
   - Advertising in local media
   - Recruiting services
   - Notices in trade publications
   - Other (please specify):