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.

	Using	Considering
AASHTO-ITE TM 2.1, Standards for Traffic Management Center-to-Center Communications (TMDD) (http://www.standards.its.dot.gov/fact_sheet.asp?f=17)		
IEEE 1512 – Family of Standards for Incident Management Message Sets (http://www.standards.its.dot.gov/fact_sheet.asp?f=12)		
SAE J2354 – Message Set for Advanced Traveler Information System (ATIS) (http://www.standards.its.dot.gov/fact_sheet.asp?f=54)		
APTA TCIP Dialogs – Transit Communications Interface Profile (http://www.standards.its.dot.gov/StdsSummary.asp?ID=411)		

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):