Arterial Management Survey Summary

AGENCY CHARACTERISTICS **Number of Agencies:** 310

1. Centerline arterial miles operated by your agency:	280,210	244
2. Signalized intersections operated by your agency:	108,046	302

3. Indicate the number of staff performing traffic signal management, operations and maintenance in the following categories:

	Number of Staff	Number of Agencies
In-house management and operations:	1,812	297
Outsourced management and operations:	181	46
In-house maintenance:	2,675	262
Outsourced maintenance:	440	93

4. What types of training do you provide and/or require for in-house staff? (Check all that apply)

	Number of Agencies
Provide funding and encouragement for personnel to attend training	228
Provide training program	133
Require formal training leading to certification	103

5. What types of training do you provide and/or require for out-sourced staff? (Check all that apply)

	Number of Agencies
Provide funding and encouragement for personnel to attend training	28
Provide training program	32
Require formal training leading to certification	87

SURVEILLANCE

	Number of Miles	Number of Agencies
6. Total number of arterial centerline miles with real-time traffic data collection technologies (does not include Closed Circuit TV or CCTV):	20,722	111
6a. Number of these miles where real-time traffic data are collected using roadside infrastructure such as loops, radar detectors, or video imaging detector systems:	18,340	93
6b. Number of these miles where real-time traffic data are collected by vehicle probes, using technology such as toll tag readers, cell phones, etc.:	8,440	30

7. What type of vehicle probe readers are used to obtain traffic information? (Check all that apply)

	Number of Agencies
Toll tag readers	5
Blue tooth readers	31
Cellular phone readers	10
GPS readers	9
License plate recognition	4
Do not collect vehicle probe data	190

HARDWARE CHARACTERISTICS OF SIGNALIZED INTERSECTIONS

8. For each signal controller type in your system, please provide the number deployed and the average age (to the nearest year): (Please indicate 0 if a specific type of controller is not deployed)

	Number Deployed	Number of Agencies
NEMA:	49,017	194
Model 170:	15,632	70
Model 2070:	17,960	80
ATC:	1,129	16

9. How would you characterize the agency's primary motivation for upgrading traffic signal controllers? (Check all that apply)

	Number of Agencies
Lack of vendor or manufacturer support	67
New Operations/maintenance features are desired that are not available on current controller	170
Current controller is not compatible with central traffic signal management system	107
Advanced strategies like adaptive control or transit signal priority are not supported by current controller	91
A single controller platform is desored for the entire agency	141

10. Indicate: 1) the number signalized intersections where the following detection technologies are deployed and 2) the estimated % time detection technologies are operational (reliably operating as intended):

	Number Signalized Intersections	Number of Agencies
Loop detectors:	53,451	270
Video imaging detector systems:	17,005	231
Radar:	1,959	94

	Number Signalized Intersections	Number of Agencies
11. Number of pre-timed signalized intersections:	31,605	157
12. Number of semi-actuated signalized intersections:	27,119	175
13. Number of fully-actuated signalized intersections:	43,667	258
14. Number of signalized intersections equipped with Closed Circuit Television (CCTV) Cameras for the purpose of monitoring traffic flow:	8,682	139

TRAFFIC SIGNAL CONTROL OPERATION STRATEGIES

15. Does your agency have a documented plan (e.g., agency memo, Concept of Operations, MOU, agreement) inclusive of objectives and performance measures, to guide the management, operation and maintenance of traffic signals?

	Number of Agencies
Yes	132
Which of the following areas are included in the plan? (Check all that apply)	
Management and operations	97
Maintenance	110
No	167

16. Does your agency use adaptive signal control technology (ASCT) as an operational strategy to improve coordinated signal timing?

	Number of Agencies
No	56
What does your agency consider the most significant barrier to implementing adaptive control? (Select one)	
Cost to deploy	60
Cost to operate and maintain	24
Complexity to operate and maintain	13
Uncertainty about benefits	43
Incompatibility with existing system	13
Yes (Provide number of intersections below)	53

Number of signalized intersections under ASCT: 4,267

17. Does your agency participate in a regional program managed by the State DOT, MPO or other regional authority that actively coordinates traffic signals on arterials of regional significance across jurisdictional boundaries?

	Number of Agencies
Yes	124
No	180

TRAFFIC SIGNAL PREEMPTION AND PRIORITY

	Number of Intersections	Number of Agencies
18. Number of signalized intersections that allow for signal preemption for emergency vehicles:	27,497	244
19. Number of signalized intersections that allow for signal priority for transit vehicles:	3,808	56
20. Number of signalized intersections near a highway-rail intersection that utilize traffic signal preemption to flush a vehicle queue spilled back across an active highway-rail grade crossing:	1,596	168

PARKING MANAGEMENT CAPABILITIES

21.Does your agency deploy parking management systems that monitor the availability of parking?

	Number of Agencies
Yes	29
Indicate which parking modes are monitored:	
On-street parking	11
Parking lots and/or garages	15
No	275

22. Does your agency disseminate pariking availability information to drivers?

	Number of Agencies
Yes	24
No	280

23. Does your agency use a parking pricing strategy (e.g., peak period surcharges) to manage conges

	Number of Agencies
Yes	13
No	293

TRANSPORTATION MANAGEMENT CENTER (TMC)

24. Does your agency operate an Freeway Management Transportation Management Center (TMC)?

	Number of Agencies
Yes	30
No	280

MANAGED LANES

25. Does your agency operate managed lanes?

	Number of Lanes	Number of Agencies
Total number of arterial centerline miles featuring managed lanes:	243	18
Please provide the estimated number of arterial centerline miles for each type of managed lane strategy:		
Occupancy control (HOV):	49	6
Reversible flow:	26	9
Lane open/closed (traffic incidents, roadway maintenance, etc.):	0	0
Truck only:	0	0
Variable speed limit:	51	2
Other congestion pricing strategies:	0	0
Other managed lane strategy (please specify):	11	2

MODELING AND DECISION SUPPORT

26. Does your agency use any Analysis, Modeling and Simulation (AMS) tools to optimize/model the arterial system?

	Number of Agencies
Yes	183
No	125

27. Has your agency deployed a decision support system to assist in operations of the following? (Check all that apply)

	Number of Agencies
Road weather management	61
Incident management	77
Emergency management	73
Evacuation	55
Maintenance	66
No decision support system deployed	169

AUTOMATED ENFORCEMENT

28a. What types of automated enforcement does your agency use? (Check all that apply)

	Number of Agencies
Speeding	22
Red-light running (asnwer part b below)	69
Do not use automated enforcement	211

	Number of Intersections	Number of Agencies
28b. Number of signalized intersections with automated red-light running enforcement :	1,175	70

SAFETY AND ROAD WEATHER MANAGEMENT

29. Has your agency deployed any of the following safety systems? (Check all that apply)

	Number of Agencies
Pedestrian warning system	92
Bicyclist warning system	22
Over-height warning system	35
Reference Location Signs	24
Dynamic Curve Warning System	26
None of the above	174

30. What are your agency's sources of weather and road weather information? (Check all that apply)

	Number of Agencies
National Weather Service products	213
FAA (ASOS, AWOS, etc.)	17
USGS earthquake alerts	19
Agency field personnel	91
Agency field sensors (RWIS/ESS, probes, etc.)	69
National sensor data sources (Clarus/MADIS)	16
Private providers	85

31. Does your agency employ safety warning systems related to road weather events?

	Number of Agencies
Yes	52

What hazards are covered? (Check all that apply)

High wind	29
Icy roads	38
Fog	17
Dust	10
Other	18

No	245

32. Has your agency deployed any Environmental Sensor Stations (ESS)?

	Total	Number of Agencies
Yes		52
How many?	443	

What data are collected by ESS and in-pavement sensors? (Check all that apply)

Pavement temperature	40
Pavement surface condition	29
Pavement precipitation	29
Temperature	46
Humidity	38
Wind speed	41
Precipitation (rain)	38
Precipitation (snow)	27
No	240

33. Is your agency using or planning to use a Maintenance Decision Support System (MDSS) for winter maintenance? (MDSS includes software systems that provide strategic and tactical weather forecasts, support treatment decision making and provide summary.)

	Number of Agencies
Yes, agency uses an MDSS statewide	20
Yes, considering (pilot project, used partially, used in one district)	17
No, agency needs an MDSS, but does not have a system	55
No, agency does not need an MDSS	192

34. Does your agency adjust traffic signal timing in response to inclement weather or road weather conditions?

	Number of Agencies
Yes	52
No	255

35. Does your agency deploy variable speed limit systems?

	Number of Agencies
Yes	15

What event triggers the deployment? (Check all that apply)

Weather	6
Traffic volume	3
Incidents	6
No	291

INCIDENT MANAGEMENT/WORK ZONE MANAGEMENT

	Number of Miles	Number of Agencies
36. Number of arterial centerline miles patrolled by service patrol:	13,519	50

37. Number of arterial centerline miles covered by the following incident detection/verification methods:

	Number of Miles	Number of Agencies
Computer algorithms:	7,243	9
Closed Circuit Television (CCTV):	8,720	88
Other:	90	2

38. Does your agency deploy ITS technology at work zones?

	Number of Agencies
Yes	47

What ITS technologies does your agency deploy at work zones? (Check all that apply)

	Number of Agencies
Intrusion alarm	1
Dynamic lane merge system	7
Queue detection and alert system	14
Variable speed limit	5
Travel time system	16
Route guidance around work zones	17
Portable CCTV	26
No	251

TRAVELER INFORMATION

	Number of Miles	Number of Agencies
39. Number of arterial centerline miles covered by Highway Advisory Radio (HAR):	1,836	19
40. Total number of permanent Dynamic Message Signs (DMS) deployed on arterials:	850	85

41. Does your agency use the DMS in the absence of incidents or special events?

	Number of Agencies
Yes	63
No	230

42. Does your agency have an agreement with a private vendor to push mobile alerts regarding incidents, roadway conditions, etc. to mobile media?

	Number of Agencies
Yes	26
No	262

43. What methods are used to disseminate traveler information on arterials? (Check all that apply)

	Number of Agencies
511	62
Other (non-511) telephone systems	8
Email or alert	52
Twitter	92
Facebook	68
App for mobile device such as tablet or smart phone	26
Dynamic Message Signs	90
Website	141
Highway Advisory Radio	31

44. Please indicate whether your agency reports any of the following information to the public. (Check all that apply)

	Number of Agencies
Roadway or lane blocking incidents and events on arterials	152
Work zone location and duration on arterials	192
Roadway weather observations on arterials	47
Freeway blocked or with other travel restrictions	77
None of the above	80

45. Do you report arterial travel time data?

	Number of Agencies
Yes	29

What arterial travel time data are reported? (Check all that apply)

Travel time by segment	19
Travel time over selected route	19
No	270

SYSTEM PERFORMANCE MANAGEMENT

46. Does your agency collect operations data to track freeway network system performance?

	Number of Agencies
Yes	94
No	210

47. Does your agency have clearly stated and documented operational objectives and performance measures for the arterial system?

	Number of Agencies
Yes	58

Has your agency established targets for the performance measures?

Yes	45
No	47
No	239

48. Does your agency use archived operations data to track arterial system performance?

What are the archived operations data used for? (Check all that apply)	Number of Agencies
Yes	77
Real-time Operations (e.g., used in real-time to adjust system operations)	39
Capital planning/analysis	29
Operations planning/analysis	58
Dissemination to the public	19
Planning/analysis of work zone design	18
No	218

49. Which of the following measures are used to report on the performance of the arterial system? (Check all that apply)

	Number of Agencies
Travel time	100
Travel time reliability	11
Vehicles per lane per mile	15
Vehicles per hour	59
Person throughput per lane per hour	2
Person throughput per hour	2
Average auto occupancy	11
Average queue length	32
Performance measures are not used	61

MAINTENANCE OF FREEWAY MANAGEMENT ITS TECHNOLOGY

50. Does your agency utilize an asset management system to track infrastructure inventory and related maintenance and operations activity?

	Number of Agencies
Yes	161
No	135

51. Does your agency have a preventive maintenance program for ITS devices?

Yes	168

How often are your ITS devices inspected and re-calibrated?

	Number of Agencies
a. Loop detectors	
Less than once annually	24
Once annually	73
More than once annually	62
Not regularly inspected and recalibrated	41
Not Applicable	15

	Number of Agencies
b. Other Types of Detectors (radar, microwave, toll tag readers)	
Less than once annually	17
Once annually	66
More than once annually	46
Not regularly inspected and recalibrated	23
Not Applicable	56

	Number of Agencies
c. CCTV Cameras	
Less than once annually	19
Once annually	51
More than once annually	61
Not regularly inspected and recalibrated	23
Not Applicable	58

No	101

52. How are decisions for maintenance, repairs, and replacement of ITS devices made? (Check all that apply)

	Number of Agencies
Reaction to failure in component or device	254
Planned program of routine and preventive maintenance	108
Results of inspection and monitoring of conditions	158
Cost/ benefit analysis	36
Estimated service life	55
Obsolescence (e.g. device becomes obsolete/out-of-date)	121

53. Does your agency collect data on the overall health and maintenance of ITS devices and equipment?

	Number of Agencies
Yes	127

What sources of data are used?

Inspections	127
Complaint calls	114
Real-time monitoring	86

For which of the following purposes does your agency use the data on equipment health and maintenance? (Check all that apply)

	Number of Agencies
To make investment decisions	82
To monitor specified performance metrics	37
To monitor specified performance trends	38
To conduct benefit-cost analysis	23
To communicate to decision makers	76
To communicate to public	25
No	147

54. Does your agency regularly measure the performance of traffic signals?

	Number of Agencies
Yes	205
Please indicate the methods used to gather data: (check all that apply)	
Manual methods are used primarily (citizen complaints)	211
Automated methods are used (travel time, cycle failure, queue length, speed)	94
No	85

DEDICATED SHORT RANGE COMMUNICATIONS (DSRC) STANDARD

55. Is your agency familiar with Dedicated Short Range Communications (DSRC) technology?

	Number of Agencies
Yes	75
No	228

56. Does your agency currently use or have plans to use dedicated short range communications (DSRC) in operating any of its ITS infrastructure?

	Number of Agencies
Currently use DSRC	21
Plan to use DSRC	20
No plans to use DSRC	90

57. Is your agency using or does it plan to use any DSRC-enabled technologies to support the deployment of the following:

	Number of Agencies		
	Currently Using	Plan to Use	No Plans to Use
Safety applications (e.g. intersection collision avoidance)	7	18	49
Mobility applications	7	22	43
Tolling operations	2	1	56
Commercial Vehicle Operations and regulation	0	6	56

INTEGRATED CORRIDOR MANAGEMENT

58. Have you identified corridor(s) for the purpose of integrating operations across multiple transportation facilities (including freeways, major arterials, and public transit networks) in order to actively manage travel demand and capacity in the corridor as a whole?

	Number of Agencies
Yes	81

How many corridors have been identified for integrated transportation operations?

1 corridor identified	37
1 corridor identified	16
3 or more corridors identified	56
No	203

59. The next set of questions all pertain specifically to the corridor you identified above. If you identified more than one corridor, please tell us about the corridor where the greatest level of coordination is taking place. In your responses, please do NOT include coordination efforts that are occurring outside the specific corridor you have identified.

Please name the key facilities that comprise the corridor (please be as specific as possible):

	Number of Agencies
a. Freeway(s) (e.g., US-75):	61
b. Key Arterial(s) (e.g., Greenville Avenue, US-75 Frontage Roads):	89
c. Public Transit Services (e.g., DART Red/Orange Light Rail Line, MTS Express Bus):	47
d. Other (e.g., freight, rail, bicycle, pedestrian):	18

60. Approximately how long is the corridor?

	Number of Agencies
Less than 10 miles	44
11-20 miles	34
21-30 miles	12
31-50 miles	4
More than 50 miles	4

61. For each agency type listed below, please indicate whether you are currently coordinating or plan to coordinate integrated transportation operations in the corridor specified above. If yes, please provide the name of the agencies in the corridor with which your agency is coordinating (referred to as the "coordinating agencies" in this survey). Please do NOT include coordination efforts that are occurring outside the corridor. For each agency type, a-d, select only one response.

	Number of Agencies			
	Currently Coordinate in Corridor	Plan to Coordinate in Corridor	No Plans to Coordinate in Corridor	Not Applicable
a. Freeway agencies:	47	18	10	13
b. Arterial agencies:	60	26	5	9
c. Transit agencies:	27	23	13	15
d. Other agencies (e.g., MPOs, Toll Authorities, Port Operators):	12	11	10	27

62. a. Has your agency signed any formal multi-jurisdictional or multi-agency Agreements, Memorandums of Understanding (MOUs), or other instruments with these coordinating agencies regarding the integrated operations of the corridor?

	Number of Agencies
Yes, already signed	42
One instrument signed	17
Multiple instruments signed	13
Agreements, MOUs, or instruments are being developed (plan to sign)	11
No, there is no plan to develop or sign Agreements, MOUs, or other instruments	41
Do not know	22

63. How are data about conditions in the corridor shared among the coordinating agencies?

	Number of Agencies
Manual data sharing: Corridor stakeholders call, radio, fax or email relevant corridor data to one another	64
Automated sharing of real-time video data (video servers/switcher communicate directly to one another in real time to share video images through video protocols)	47
Automated sharing of real-time data (computers, database servers communicate directly to one another to transmit data automatically (in real time) via center-to-center protocols)	36
In general is this sharing of real-time data active or passive? (select one)	
Active (your agency receives alerts; data is pushed to your agency)	20
Passive (your agency must access the data; no alerts are received)	21
Information Clearing House/Information Exchange Network (IEN) between corridor networks/agencies (a software system that collects, aggregates, warehouses and distributes traffic flow/transit performance data and incident/construction data for the corridor. All corridor agencies can access the agency/network information)	20
In general is this sharing of data active or passive? (select one)	
Active (your agency receives alerts; data is pushed to your agency)	15
Passive (your agency must access the data; no alerts are received)	7

64. a. We want to understand if data is sent and/or received among the coordination agencies in the corridor. For each type of data below, please indicate if your agency receives this data from the other coordinating agencies in the corridor, collects and sends this data to the other coordinating agencies, collects but does not send this data to the other coordinating agencies, or does not collect this data. For each item, a-i, check all that apply.

	Number of Agencies				
	My agency Receives	My agency Collects and Sends	My agency Collects but does not send	My agency does not collect	Not Applicable
a. Freeway incident data	40	23	3	24	18
b. Freeway traffic volumes, speeds, or travel times	22	20	5	24	24
c. Arterial incident data	28	27	16	21	13
d. Arterial traffic volumes, speeds, or travel times	15	21	27	17	18
e. Transit incident data	15	7	6	33	29
f. Transit vehicle location data (AVL)	6	3	5	36	34
g. Transit schedule adherence data	9	3	4	37	33
h. Transit passenger count data	5	2	5	38	36

b. For each type of data that is sent or received among coordinating agencies (as indicated in part a above), please indicate with what level of frequency the data is shared. For each item, a-i, select only one response.

	Number of Agencies			
	0-5 Minutes	6-15 Minutes	16-59 Minutes	60+ Minutes
a. Freeway incident data	34	4	2	11
b. Freeway traffic volumes, speeds, or travel times	25	6	1	9
c. Arterial incident data	19	8	3	12
d. Arterial traffic volumes, speeds, or travel times	20	5	2	11
e. Transit incident data	6	3	1	8
f. Transit vehicle location data (AVL)	4	1	1	5
g. Transit schedule adherence data	4	2	0	5
h. Transit passenger count data	3	1	0	7

65. For each of the following types of operations strategies please indicate whether your agency is currently coordinating or plans to coordinate operations with other corridor agencies across transportation facilities (i.e., freeway, arterial and transit) in order to achieve shared operations objectives. For each item, a-n, select only one response.

	Number of Agencies			
	Currently Coordinate Across Facilities	Plan to Coordinate Across Facilities	No Plans to Coordinate	Not Applicable
a. Traffic incident management	40	29	17	11
b. Freeway ramp metering	9	8	29	44
c. Emergency management (e.g., evacuations)	38	24	19	13
d. Cross jurisdictional traffic signal coordination	52	25	9	10
e. Traffic responsive signal timing/coordination	26	24	22	19
f. Transit signal priority	13	28	22	27
g. Physical bus priority (e.g. bus-on-shoulder)	6	7	33	41
h. Demand-sensitive transit capacity increases (e.g., add cars/routes)	4	6	31	44
i. Real-time parking availability information (e.g., at transit stations)	2	11	32	42
j. Road weather management	16	10	36	26
k. Planned special events	46	19	11	15
l. Real-time traveler information delivered pre-trip	20	14	30	26
m. Real-time information delivered en-route (e.g., DMSigns)	31	16	23	22
n. Electronic multimodal payment systems	4	1	27	53

66. How would you describe the institutional coordination among the corridor stakeholders? Please select one response from the following scale, which ranges from less formal institutional coordination (1) to more formal institutional coordination (5).

	Number of Agencies
1 (Less Formal) - Ad hoc coordination; no regular meetings; corridor stakeholders address near-term issues only	32
2 - Informal working groups; regular meetings among corridor stakeholders	30
3 - Formally established working groups; assigned responsibilities for Integrated Corridor Management	23
4 - Funded staff person(s) and well defined responsibilities for Integrated Corridor Management	5
5 (More Formal) - Legal entity with dedicated resources and a governing board	1

67. Have the coordinating agencies in the corridor developed any of the following Integrated Corridor Management (ICM) documents for the corridor? For each item, a-d, select only one response.

	Number of Agencies				
	Document Completed	Currently Developing	Plan to Develop Next 2-3 Years	No Immediate Plans to Develop	Do Not Know
a. ICM Concept of Operations (ConOps)	19	14	3	23	35
b. ICM System Requirements Specifications (SyRS)	11	11	3	26	43
c. ICM Analysis Modeling and Simulation (AMS) Plan	6	7	5	31	44
d. ICM Implementation Plan	9	11	6	27	40

68. Have the coordinating agencies in the corridor developed a documented set of response plans or strategies, in any level of detail, that are based on shared operational objectives and that are designed to optimize performance in the corridor as a whole (e.g., across transportation facilities/modes) during conditions of both recurring and non-recurring congestion? In your response, please do not include response plans developed for emergency situations, such as evacuations.

	Number of Agencies
Response plans or strategies have been developed for day-to-day operations during conditions of both recurring and non-recurring congestion	18
Response plans or strategies are currently being developed	12
There are plans to develop response plans or strategies	14
There are no plans to develop response plans or strategies (skip to last question for additional comments)	26
Do not know	29

69. Has your agency deployed or does it plan to deploy a Decision Support System (DSS) to assist in the integrated operations of the Corridor?

NOTE: A DSS is a subsystem that utilizes measurements of real-time corridor conditions to recommend coordinated response plans to all corridor agencies. The DSS continues to update its recommendation based on corridor measurements showing changing corridor conditions.

	Number of Agencies
Yes, deployed	4
Plan to deploy	18
No (no plans to deploy)	39
Do not know	29

70. Have the coordinating agencies identified corridor-level/multimodal performance measures (e.g., person throughput, average travel time, average travel speed, etc.) that will be used to measure the effectiveness of the strategies and response plans that are implemented in the corridor?

	Number of Agencies
Yes, corridor-level/multimodal performance measures identified	10
Agency plans to identify corridor-level/multimodal performance measures	21
No plans to identify corridor-level/multimodal performance measures	31
Do not know	30

ITS FUNDING

72. Do you have a separate budget for ITS?

	Number of Agencies
Yes	74

Please indicate whether you track the budget separately for each of the following categories and indicate the percentage of budget allocated to each category that is separately tracked:

ITS Planning and Systems Engineering	23
Device Installation	27
ITS Operations	32
ITS Maintenance and Inspection	32
Repair of ITS Technologies	25
Do not track categories separately (go to next section)	28
No	233

ITS PURCHASE DECISION-MAKING

73. Please rate the importance of each of the following factors to your agency's decision to purchase ITS technologies: (1 = Not at All Important; 2 = Not Very Important; 3 = Neutral; 4 = Somewhat Important; 5 = Very Important) Please check only one rating box per row.

	Number of Agencies				
	Not at All Important	Not Very Important	Neutral	Somewhat Important	Very Important
Cost of initial deployment	3	2	21	80	172
Cost to maintain and repair	4	5	23	77	169
Public/constituent involvement	18	31	120	80	27
Funding/grant availability	4	5	30	61	178
Mobility benefits (e.g., to address congestion)	1	5	38	100	133
Safety benefits	2	5	26	91	154
Environmental benefits	9	28	81	98	58
Integration with other agencies	15	25	83	119	34
Integration with your current technologies	2	6	32	100	139
Already used by other agencies	19	20	82	118	34

74a. Does your agency have any plans to invest in new ITS technology or to expand current ITS coverage in 2014 through 2016?

	Number of Agencies
Yes	189
Check all that apply:	
Invest in new ITS	122
Expand current ITS coverage	156
No	97

BENEFITS OF FREEWAY MANAGEMENT TECHNOLOGIES

75. Based on your agency experience, please rate the benefits of the following ITS technologies on freeways. Select a rating from 1 (No Benefit) to 5 (Significant Benefit) or No Experience in each row. Please check only one rating box per row.

	Number of Agencies					
	No Benefit (1)	(2)	Moderate Benefit (3)	(4)	Major Benefit (5)	No Experience
Traffic Sensors	2	7	26	50	162	51
Vehicle Probes	5	18	39	20	13	192
Adaptive Traffic Signal	12	16	25	27	48	165
Cameras	7	8	26	53	148	54
Lane Management	14	16	28	12	11	212
Traveler Information	11	13	36	47	38	142
Automated Enforcement	17	25	36	23	13	178
Archived Data	7	14	46	48	52	120
Environmental Sensor Stations	17	19	29	27	18	170

PLANNING FOR OPERATIONS

76. Is there a long range ITS plan to guide project/program selection?

	Number of Agencies
Yes	131
No	165

77. Does your agency routinely utilize systems engineering to identify agency needs and requirements when implementing/procuring ITS?

	Number of Agencies
Yes	131
No	165

78. Does your agency rely on sample or model procurement documents provided by FHWA (e.g., for ASCT)?

	Number of Agencies
Yes	100
No	189

79. Is your agency part of the Regional ITS Architecture used to support regional transportation planning?

	Number of Agencies
Yes	192
No	99

80. Is your agency included in a Regional Concept for Transportation Operations?

	Number of Agencies
Yes	169
No	118

81. Does your agency provide arterial travel time, speed and condition information in real-time (as these events occur) to the following types of agencies? (Check all that apply)

		Number of Agencies		
Agencies involved in incident management	Yes	56	No	233
Freeway Management agencies	Yes	41	No	243
Arterial Management agencies	Yes	46	No	242
Public Transit agencies	Yes	23	No	260

82. Select all that apply concerning your agency's participation in regional coordination activities:

	Number of Agencies
No regular interagency meetings	119
Regular meetings with other agencies to coordinate planning	142
Regular meetings to coordinate operations	81
Formal agreement on coordination and data sharing with other agencies	51
Formal agreement to integrate operations with other agencies	40