

Transportation Management Center (TMC) Survey

GENERAL INFORMATION

191 Surveys Completed

1. Center name:

2. Location (address):

3. Does your TMC have a website?

Yes

URL:

No

4. What is the geographical area of coverage of your TMC? (Please describe)

5. What modes are included within the TMC? (Check all that apply)

Number of Agencies

Freeways	<input style="width: 50px;" type="text" value="128"/>
Arterials	<input style="width: 50px;" type="text" value="161"/>
Transit	<input style="width: 50px;" type="text" value="29"/>
Public Safety	<input style="width: 50px;" type="text" value="59"/>
Other (please specify):	<input style="width: 50px;" type="text" value="33"/>

TMC FUNCTIONS

6. Which of the following best describes the functions or services performed on FREEWAYS supported by this Transportation Management Center? (Check all that apply)

Number of Agencies

Does not perform any freeway functions or services	<input style="width: 50px;" type="text" value="53"/>
Network or roadway surveillance and data collection	<input style="width: 50px;" type="text" value="109"/>
Real-time traveler information dissemination to the public	<input style="width: 50px;" type="text" value="104"/>
Incident management detection, verification, and monitoring	<input style="width: 50px;" type="text" value="111"/>
Incident response dispatch	<input style="width: 50px;" type="text" value="83"/>
Environmental monitoring (e.g., air quality, noise and weather)	<input style="width: 50px;" type="text" value="43"/>
Planned special event traffic management	<input style="width: 50px;" type="text" value="107"/>
Evacuation management and traffic coordination	<input style="width: 50px;" type="text" value="82"/>
Emergency services traffic control coordination	<input style="width: 50px;" type="text" value="89"/>
Ramp management and control	<input style="width: 50px;" type="text" value="32"/>
Lane management and control (e.g., HOV, reversible lanes)	<input style="width: 50px;" type="text" value="38"/>
Integrated Corridor Management	<input style="width: 50px;" type="text" value="34"/>
Network performance monitoring, evaluation and reporting	<input style="width: 50px;" type="text" value="64"/>
Maintenance dispatch	<input style="width: 50px;" type="text" value="77"/>
Road weather management and/or weather-related maintenance	<input style="width: 50px;" type="text" value="74"/>
Manage work zones (coordinate lane closures, monitor WZ traffic conditions)	<input style="width: 50px;" type="text" value="89"/>
Other (please specify):	<input style="width: 50px;" type="text" value="19"/>

7. Which of the following best describes the functions or services performed on ARTERIALS supported by this Transportation Management Center? (Check all that apply)

	Number of Agencies
Does not perform any arterial functions or services	21
Network or roadway surveillance and data collection	133
Real-time traveler information dissemination to the public	95
Incident management detection, verification, and monitoring	111
Incident response dispatch	68
Environmental monitoring (e.g., air quality, noise and weather)	30
Planned special event traffic management	128
Evacuation management and traffic coordination	75
Emergency services traffic control coordination	85
Traffic signal coordination or control	123
Lane management and control (e.g., HOV, reversible lanes)	23
Integrated Corridor Management	38
Network performance monitoring, evaluation and reporting	73
Maintenance dispatch	88
Road weather management and/or weather-related maintenance	61
Manage work zones (coordinate lane closures, monitor WZ traffic conditions)	79
Other (please specify):	20

8. Which of the following best describes the functions or services performed on PUBLIC TRANSIT supported by this Transportation Management Center? (Check all that apply)

	Number of Agencies
Does not perform any transit functions or services	156
Transit scheduling and dispatch	6
Other (please specify):	29

OPERATIONS

9. Does your TMC employ any Center-to-Center communications standards?

Yes

Which of the following standards are used? (Check all that apply)

	Number of Agencies
IEEE 1512	30
SAE J2354	11
TMDD v2.01	14
TMDD v3.0	21
Other (please specify):	30

No

10. Does this TMC have established Center-to-Center connections to other TMCs?

Yes

No

11. Does this TMC have established Center-to-Center connections to private sector information disseminators?

Yes

No

12. Does your TMC have an Operations Manual?

Yes

Does the Operations Manual contain detailed (measurable) requirements?

Yes

No

No

13. Approximately how many planned special events does your TMC manage per year?

14. Has your agency deployed a decision support system to assist in operating the following?

Yes

Please indicate which decision support systems have been deployed. (Check all that apply)

Number of Agencies

Road weather management

Incident management

Emergency management

Evacuation

Maintenance

Other (please specify):

No

15. Is there any shared control of field devices between your TMC and other agencies?

Yes

Please indicate which devices are shared. (Check all that apply)

Number of Agencies

Dynamic message signs

Closed circuit TV

Traffic signals

Lane management control devices

Ramp meters

Other (please specify):

No

EMERGENCY OPERATIONS

16. Does your agency participate in a regional or statewide disaster planning program?

Yes, regional - intrastate

Yes, statewide

Yes, regional - multi-state

No

17. Does your region or state activate a designated multi-agency emergency operations center (EOC) in case of natural or man-made disasters?

Yes

No (go to question 20)

18. How is the EOC integrated with your TMC? (Check all that apply)

Number of Agencies

The TMC facility houses the EOC

Workstations are placed in the related Emergency Operations Center (EOC)

We have a formal interagency agreement with emergency management agencies covering goals, policies, and organizational roles

We have a private data network with availability limited to cooperating regional agencies

We have a restricted-access website for cooperating agencies

Other (please specify):

19. If an EOC is used, how much of your TMC staff is physically located at the EOC during emergency operations?

Number of Agencies

All

Some, not all

None

20. Which of the following approaches are used by your TMC during emergency operations to make your TMC system more reliable? (Check all that apply)

Number of Agencies

Backup power in center

Backup power for some or all field devices

Redundant data systems

Multiple data communications paths

None

Other (please specify):

INTEGRATION WITH PUBLIC SAFETY

21. Does the TMC have responsibility (shared or otherwise) for emergency vehicle dispatch?

Yes

No

22. Are 911 facilities located within, or adjacent, to the TMC location?

Yes

No

23. Do you integrate public safety Computer Aided Dispatch (CAD) information within the TMC through an interagency agreement?

Yes

What is included in the agreement? (Check all that apply)

Number of Agencies

Definition of what CAD information will be passed

Use of common incident location identifiers

Use of common format or an exchange format

The TMC can push data to the public safety CAD

No

24. Do you have methods other than CAD of receiving incident notifications from public safety agencies?

Yes Please describe:
No

TRAFFIC INCIDENT MANAGEMENT

25. Is the traffic incident management program integrated with the TMC?

Yes

Is there is an established interagency on-scene communications procedure detailed in a memorandum of understanding (MOU)?

Yes

No

No

26. Do you have a formally recognized multi-agency Traffic Incident Management committee?

Yes

Check all that apply to your committee:

Number of Agencies

It operates with an agreement signed by multiple agencies

The committee has regularly scheduled meetings

The scope of the committee is Regional

The scope of the committee is Statewide

No

27. Does your TMC have a full time Traffic Incident Management Engineer?

Yes

No

28. For what hours is response by on-duty Department of Transportation (DOT) personnel available?

24/7

Other Please specify:

29. Does your Traffic Incident Management program include safety service patrols?

Yes

Are the safety service patrol personnel trained to serve as incident responders?

Yes

No

No

30. Are the DOT maintenance/operations staff trained to serve as incident responders?

Yes

No

31. Is the Incident Command System widely used and common practice at all incident scenes?

Yes

No

32. Is a HAZMAT agency integrated into your TMCs traffic incident management program and on-scene response?

Yes

Are the HAZMAT requirements, cleanup procedures, and defined process for quick clean up widely understood by responding contractors?

Yes

No

No

TMC PERFORMANCE MEASURES

33. Which of the following performance measures, if any, are tracked? (Check all that apply)

Number of Agencies

Roadway clearance times

Incident clearance times

Agency response times

Secondary incident times

None (go to question 36)

Other (please specify):

34. Are the Federal Highway Administration (FHWA) definitions used for the above measures?

Yes

No

35. Are performance goals for incident clearance established?

Yes

Check the categories of incidents for which performance goals apply:

Number of Agencies

Major incidents

Moderate incidents

Minor incidents

No

INTEGRATED CORRIDOR MANAGEMENT

36. 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?

Yes

How many corridors have been identified for integrated transportation operations?

Number of Agencies

1 corridor identified

2 corridors identified

3 or more corridors identified

No (go to Next Section)

37. 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):

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

38. Approximately how long is the corridor?

	Number of Agencies
Less than 10 miles	<input type="text" value="29"/>
11-20 miles	<input type="text" value="21"/>
21-30 miles	<input type="text" value="13"/>
31-50 miles	<input type="text" value="3"/>
More than 50 miles	<input type="text" value="10"/>

39. 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				Agency Names
	Currently Coordinate in Corridor	Plan to Coordinate in Corridor	No Plans to Coordinate in Corridor	Not Applicable	
a. Freeway agencies:	<input type="text" value="40"/>	<input type="text" value="15"/>	<input type="text" value="5"/>	<input type="text" value="10"/>	<input type="text" value="38"/>
b. Arterial agencies:	<input type="text" value="42"/>	<input type="text" value="18"/>	<input type="text" value="4"/>	<input type="text" value="10"/>	<input type="text" value="39"/>
c. Transit agencies:	<input type="text" value="21"/>	<input type="text" value="16"/>	<input type="text" value="15"/>	<input type="text" value="9"/>	<input type="text" value="32"/>
d. Other agencies (e.g., MPOs, Toll Authorities, Port Operators):	<input type="text" value="17"/>	<input type="text" value="10"/>	<input type="text" value="11"/>	<input type="text" value="12"/>	<input type="text" value="22"/>

40. 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?

- Yes, already signed
 - One instrument signed
 - Multiple instruments signed
- Agreements, MOUs, or instruments are being developed (plan to sign)
- No, there is no plan to develop or sign Agreements, MOUs, or other instruments
- Do not know

IF SIGNED OR PLAN TO SIGN:

Please describe what is covered by the Agreements, MOUs, or instruments:

41. How are data about conditions in the corridor shared among the coordinating agencies? (Check all that apply)

Number of Agencies

Manual data sharing: Corridor stakeholders call, radio, fax or email relevant corridor data to one another	<input type="text" value="46"/>
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)	<input type="text" value="42"/>
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)	<input type="text" value="38"/>
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)	<input type="text" value="21"/>
Passive (your agency must access the data; no alerts are received)	<input type="text" value="10"/>
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)	<input type="text" value="24"/>
In general is this sharing of data active or passive? (select one)	
Active (your agency receives alerts; data is pushed to your agency)	<input type="text" value="18"/>
Passive (your agency must access the data; no alerts are received)	<input type="text" value="11"/>
Other (please specify):	<input type="text" value="13"/>

42. 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	<input type="text" value="33"/>	<input type="text" value="32"/>	<input type="text" value="9"/>	<input type="text" value="10"/>	<input type="text" value="14"/>
b. Freeway traffic volumes, speeds, or travel times	<input type="text" value="24"/>	<input type="text" value="29"/>	<input type="text" value="9"/>	<input type="text" value="10"/>	<input type="text" value="16"/>
c. Arterial incident data	<input type="text" value="27"/>	<input type="text" value="28"/>	<input type="text" value="9"/>	<input type="text" value="17"/>	<input type="text" value="8"/>
d. Arterial traffic volumes, speeds, or travel times	<input type="text" value="17"/>	<input type="text" value="19"/>	<input type="text" value="16"/>	<input type="text" value="18"/>	<input type="text" value="10"/>
e. Transit incident data	<input type="text" value="12"/>	<input type="text" value="4"/>	<input type="text" value="4"/>	<input type="text" value="27"/>	<input type="text" value="24"/>
f. Transit vehicle location data (AVL)	<input type="text" value="6"/>	<input type="text" value="2"/>	<input type="text" value="4"/>	<input type="text" value="27"/>	<input type="text" value="28"/>
g. Transit schedule adherence data	<input type="text" value="10"/>	<input type="text" value="2"/>	<input type="text" value="4"/>	<input type="text" value="28"/>	<input type="text" value="25"/>
h. Transit passenger count data	<input type="text" value="4"/>	<input type="text" value="1"/>	<input type="text" value="5"/>	<input type="text" value="28"/>	<input type="text" value="28"/>
i. Other data (please describe):	<input type="text" value="7"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="1"/>	<input type="text" value="13"/>

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	39	5	1	3
b. Freeway traffic volumes, speeds, or travel times	36	3	0	4
c. Arterial incident data	25	6	1	4
d. Arterial traffic volumes, speeds, or travel times	25	4	1	5
e. Transit incident data	9	3	1	6
f. Transit vehicle location data (AVL)	6	1	0	3
g. Transit schedule adherence data	7	0	0	5
h. Transit passenger count data	5	0	0	4
i. Other data (described above):	3	0	0	2

43. 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.

For example, if traffic signal timing is coordinated across facilities, then signal timing on arterials is adjusted based on information about both freeway and arterial conditions.

	Number of Agencies			
	Currently Coordinate Across Facilities	Plan to Coordinate Across Facilities	No Plans to Coordinate	Not Applicable
a. Traffic incident management	46	16	8	5
b. Freeway ramp metering	14	9	11	37
c. Emergency management (e.g., evacuations)	44	18	4	7
d. Cross jurisdictional traffic signal coordination	43	18	8	5
e. Traffic responsive signal timing/coordination	23	29	10	9
f. Transit signal priority	14	24	12	21
g. Physical bus priority (e.g. bus-on-shoulder)	9	8	16	37
h. Demand-sensitive transit capacity increases (e.g., add cars/routes)	4	5	17	43
i. Real-time parking availability information (e.g., at transit stations)	3	12	14	39
j. Road weather management	23	11	15	19
k. Planned special events	49	8	10	5
l. Real-time traveler information delivered pre-trip	28	19	11	15
m. Real-time information delivered en-route (e.g., Dynamic Message Signs)	42	13	8	10
n. Electronic multimodal payment systems	4	2	15	47
o. Other (please specify):	1	1	2	14

44. 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).

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

45. 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)	<input type="text" value="14"/>	<input type="text" value="19"/>	<input type="text" value="6"/>	<input type="text" value="14"/>	<input type="text" value="20"/>
b. ICM System Requirements Specifications (SyRS)	<input type="text" value="10"/>	<input type="text" value="12"/>	<input type="text" value="11"/>	<input type="text" value="16"/>	<input type="text" value="23"/>
c. ICM Analysis Modeling and Simulation (AMS) Plan	<input type="text" value="7"/>	<input type="text" value="8"/>	<input type="text" value="7"/>	<input type="text" value="22"/>	<input type="text" value="26"/>
d. ICM Implementation Plan	<input type="text" value="9"/>	<input type="text" value="16"/>	<input type="text" value="8"/>	<input type="text" value="17"/>	<input type="text" value="22"/>

46. 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	<input type="text" value="25"/>
Response plans or strategies are currently being developed	<input type="text" value="11"/>
There are plans to develop response plans or strategies	<input type="text" value="9"/>
There are no plans to develop response plans or strategies (skip to last question for additional comments)	<input type="text" value="13"/>
Do not know	<input type="text" value="19"/>

47. 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	<input type="text" value="5"/>
Plan to deploy	<input type="text" value="21"/>
No (no plans to deploy)	<input type="text" value="21"/>
Do not know	<input type="text" value="26"/>

48. 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?

Yes, corridor-level/multimodal performance measures identified

16

Number of Agencies

Agency plans to identify corridor-level/multimodal performance measures

21

No plans to identify corridor-level/multimodal performance measures

12

Do not know

24

49. Additional comments about the integration and coordination of operations in the corridor:

14

ADDITIONAL COMMENTS

50. Please use the space below to provide any additional comments regarding your agency's deployment, operations or maintenance of ITS. (Please be as specific as possible when commenting on particular ITS technologies.)

37