General Information

1. Center name:

2. Location (address):

3. Does your TMC have a website?
   Yes, What is the URL?
   No

4. What is the geographical area of coverage or area of responsibility?

5. Which of the following best describes the functions or services supported by this transportation management center? (Check all that apply)

<table>
<thead>
<tr>
<th>Function</th>
<th>Arterials</th>
<th>Freeways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network or roadway surv. and data coll.</td>
<td></td>
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<tr>
<td>Incident management</td>
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<tr>
<td>Information dissemination</td>
<td></td>
<td></td>
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<tr>
<td>En-route driver information (DMS, HAR, IVS)</td>
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<tr>
<td>Environmental monitoring</td>
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<td></td>
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<tr>
<td>Special event traffic management</td>
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<tr>
<td>Disaster management and traffic coordination</td>
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<tr>
<td>Emergency services traffic control coordination</td>
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<tr>
<td>Ramp management and control</td>
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<tr>
<td>Lane management and control</td>
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<tr>
<td>Corridor mgt/traffic signal coord. or control</td>
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<td></td>
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<tr>
<td>Network perf. monitoring, evaluation and reporting</td>
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<tr>
<td>Incident management dispatch</td>
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<td>Maintenance dispatch</td>
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<td>Snow and ice removal</td>
<td></td>
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<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Maintenance

6. Which of the following technologies are used to communicate with field devices? (Check all that apply)
   - Fiber optic communications cable
   - Copper communications cable system
   - Wireless
   - Leased land lines
   - Ethernet communications network
   Other (please specify): ______________________________

7. Does your TMC operate a publicized call-in number or web site that the public can use to report malfunctions, ask questions, and suggest operational improvements?
   - Yes, call-in number only
   - Yes, web site only
   - Yes, call-in number and web site
   - No

8. In general, do your ITS systems provide continuous malfunction monitoring notification of critical
   - Yes
   - No

9. Do you use or have access to the following test equipment? (Check all that apply)
   - Oscilloscopes
   - Optical Time Domain Reflectometer (OTDR)
   - Signal Generator
   - Voltmeter
   Other (please specify): ______________________________

10. When performing maintenance, what level(s) of involvement do you typically exhibit? (Check all that apply)
    - Component Level
    - Board Level
    - Chip Level

11. Do you use an asset management system?
    - Yes
      Controllers
      Closed Circuit Television (CCTV)
      Video Incident Detection System (VIDS) Cabinets
      Signal heads
      Other (please specify): ______________________________
    - No, do not use an asset management system
        In monitoring components, what information is collected? (Check all that apply)
        - Date Installed
        - Last Date Repaired
        - General Maintenance History
        Other (please specify): ______________________________
12. What level of emergency response is available under current ITS maintenance procedures? (Check all that apply)
   Within 1 hour
   Within 2 hours
   Within 3 hours
   Other (please specify): _____________________________

13. Is ITS maintenance performance measured and tracked?
   Yes,
   How? (Check all that apply):
   Equipment up time percentages
   Response and repair completion times
   Other (please specify): _____________________________
   No

Operations

14. Do you use performance measures to analyze your maintenance program with regard to attainment of goals, etc.? 
   Yes,
   Please describe them below (e.g. total response time, time to repair, etc.):
   ______________________________________________________
   _____________________________
   No

15. Does your agency participate in a regional or statewide disaster planning program?
   Yes, Regional - intrastate
   Yes, Statewide
   Yes, Regional - multi-state
   No

16. Does your region or state activate a designated multi-agency emergency operations center (EOC) in case of natural or man-made disasters?
   Yes
   No

17. If an EOC is used, how much of your TMC staff is physically located at the EOC during emergency operations?
   All
   Some, not all
   None
18. Which of the following approaches are used by your TMC during emergency operations to make your TMC system more reliable? (Check all that apply)
   Backup power in center
   Backup power for some or all field devices
   Redundant data systems
   Multiple data communications paths
   Other (please specify): ________________________________

Policy and Planning

19. How does your agency coordinate ITS projects with the Regional ITS architecture to ensure system interoperability? (Check all that apply)
   A system engineering process is used during design
   An ITS Architecture Conformance Statement is prepared
   No Regional ITS Architecture
   Other (please specify): ________________________________

Traffic Signals

If you do not operate traffic signals go to question 25

20. Please provide the following information on your traffic signal control system and software:
   Type(s) of signal controllers: ______________________________
   Type(s) of signal cabinets: ________________________________
   Type(s) of signal control software used: ____________________

21. Which of the following does the process of developing new area-wide or corridor signal timing include? (Check all that apply)
   The use of traffic signal optimization software
   The use of simulation of optimized timing
   Field installation, observation, and fine-tuning
   Do not develop new signal timing plans

22. What percentage of signal modules utilize LEDs as the light source?
   ______________________________________________________

23. How often are crash records reviewed to identify intersections at which safety could be improved through revised signal operations (e.g., protected turns, longer clearance intervals, etc.)?
   Monthly
   Quarterly
   Every year
   Every other year
   Every 3 years
   Other (please specify): ________________________________
24. Do you coordinate signal timing across jurisdictional boundaries?
   Yes,
   Does your agency have a cross-jurisdictional and/or regional agreement (formal or informal) regarding signal coordination and operations?
   Yes
   No

Funding

25. Do you estimate future annual maintenance costs associated with ITS equipment deployments?
   Yes,
   How? (Check all that apply)
   - Based on percentage of deployment costs
     If so, what percentage is used?
   - Local historical data
   - Detailed annual cost estimates based on expected expenditures
   - Other (please specify): __________________________

   No

26. Do you budget for ITS maintenance and operations separately?
   Yes
   No

27. What is the most common method used to pay for field ITS maintenance?
   - In-house staff
   - Time and materials basis by private entities
   - Each piece of work performed by private entities and paid for at contract pricing
   - By piece of equipment functional on a daily basis to private entities
   - On a lump sum annual basis for scoped and included ITS equipment
   Other (please specify): __________________________

28. Approximately what percentages of the following funding sources are used to finance ITS maintenance costs?
   - Local funding (Including toll revenue)
   - State funding sources
   - Federal funding sources
   - Private funding sources
   Other funding sources (please specify): __________________________
Technical Integration

29. How is emergency management integrated with your TMC? (Check all that apply) 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
   - The TMC facility houses the EOC
   - Other (please specify): ______________________________

30. Do you integrate public safety CAD information within the TMC through an interagency agreement?
   Yes, What is included in the agreement? (Check all that apply)
   - Definition of what CAD information will be passed
   - Use of common incident location identifiers
   - Use of common format or an exchange format
   No

31. Do you have a redundant, survivable network to enable the operations centers of all organizations involved with emergency response to coordinate operations?
   Yes
   No

Procurement

32. How is your ITS system deployed / constructed? (Check all that apply)
   - Design-build
   - Through design and plan production with low bid letting process
   - Proposal based selection of contractors
   - Other (please specify): ______________________________

33. How are spare / replacement parts procured? (Check all that apply)
   - Through procurement contracts based on bid supplier selection
   - Through procurement contracts based on proposal review suppliers
   - Through procurement contracts through other agencies
   - Through ITS maintenance contractor
   - Purchased through deployment projects
   - Other (please specify): ______________________________

34. How is most field ITS maintenance performed?
   - In-house dedicated maintenance staff
   - In-house electrician maintenance staff
   - Contracted for with other public agencies
   - Contracted for with private entities
   - Other (please specify): ______________________________
Maintenance Contracting

If you do not use an outside contract for maintenance of ITS devices and/or systems go to question 43

35. Which of the following describes the factor you relied upon most in selecting a maintenance contract?
   Cost Qualifications
   Combination of cost and qualifications (e.g., best value)
   Other (please specify): __________________________

36. What is the typical contract duration (in years)?
   ___________________________________________________________________

37. Is the contract renewable?
   Yes,
   Please describe the conditions of renewal:
   No

38. What is the basis for payment to the contractor?
   Unit cost
   Lump sum
   Force account
   Other (please specify): __________________________

39. Is liability defined in the contract?
   Yes
   No

40. How are parts and equipment provided? (Check all that apply)
   Parts provided by contractor
   Parts provided by owner/agency
   Equipment provided by contractor
   Equipment provided by owner/agency

41. In general, is preventive maintenance separated from corrective maintenance?
   Yes,
   What does the contract cover?
   Preventive only
   Corrective only
   Both

   No
42. How is inflation adjusted for in the maintenance contract?
   - Annual increase
   - Included in initial pricing
   - No adjustments

Human Resources

43. Does your agency provide regular training programs for ITS maintenance personnel?
   - Yes
   - No

44. What level(s) of certification do you require for your ITS maintenance staff? (Check all that apply)
   - None
   - International Municipal Signal A IMSA Level 2
   - IMSA Level 3
   - Other (please specify): __________________________

45. Are new ITS maintenance staff trained in-house or externally?
   - In-House Training
   - External Training (from manufacturers, vendors, or others)

46. How many full time equivalent in-house and contractor employees are dedicated to ITS maintenance?
   - In-house Number of Employees: __________________________
   - Contractor Number of Employees: __________________________