

**§ 500.203 TMS general requirements.**

(a) Each State shall develop, establish, and implement, on a continuing basis, a TMS to be used for obtaining highway traffic data when:

(1) The data are supplied to the U.S. Department of Transportation (U.S. DOT);

(2) The data are used in support of transportation management systems;

(3) The data are used in support of studies or systems which are the responsibility of the U.S. DOT;

(4) The collection of the data is supported by the use of Federal funds provided from programs of the U.S. DOT;

(5) The data are used in the apportionment or allocation of Federal funds by the U.S. DOT;

(6) The data are used in the design or construction of an FHWA funded project; or

(7) The data are required as part of a federally mandated program of the U.S. DOT.

(b) The TMS for highway traffic data should be based on the concepts described in the American Association of State Highway and Transportation Officials (AASHTO) "AASHTO Guidelines for Traffic Data Programs"<sup>4</sup> and the FHWA "Traffic Monitoring Guide (TMG),"<sup>5</sup> and shall be consistent with the FHWA "Highway Performance Monitoring System Field Manual."<sup>6</sup>

(c) The TMS shall cover all public roads except those functionally classified as local or rural minor collector or those that are federally owned. Coverage of federally owned public roads shall be determined cooperatively by

<sup>4</sup>AASHTO Guidelines for Traffic Data Programs, 1992, ISBN 1-56051-054-4, can be purchased from the American Association of State Highway and Transportation Officials, 444 N. Capitol Street, NW., Suite 249, Washington, D.C. 20001. Available for inspection as prescribed in 49 CFR part 7, appendix D.

<sup>5</sup>Traffic Monitoring Guide, DOT/FHWA, publication No. FHWA-PL-95-031, February 1995. Available for inspection and copying as prescribed in 49 CFR part 7, appendix D.

<sup>6</sup>Highway Performance Monitoring System (HPMS) Field Manual for the Continuing Analytical and Statistical Data Base, DOT/FHWA, August 30, 1993 (FHWA Order M5600.1B). Available for inspection and copying as prescribed in 49 CFR part 7, appendix D.

the State, the FHWA, and the agencies that own the roads.

(d) The State's TMS shall apply to the activities of local governments and other public or private non-State government entities collecting highway traffic data within the State if the collected data are to be used for any of the purposes enumerated in § 500.203(a) of this subpart.

(e) Procedures other than those referenced in this subpart may be used if the alternative procedures are documented by the State to furnish the precision levels as defined for the various purposes enumerated in § 500.203(a) of this subpart and are found acceptable by the FHWA.

(f) Nothing in this subpart shall prohibit the collection of additional highway traffic data if such data are needed in the administration or management of a highway activity or are needed in the design of a highway project.

(g) Transit traffic data shall be collected in cooperation with MPOs and transit operators.

(h) The TMS for highways and public transportation facilities and equipment shall be fully operational and in use by October 1, 1997.

**§ 500.204 TMS components for highway traffic data.**

(a) *General.* Each State's TMS, including those using alternative procedures, shall address the components in paragraphs (b) through (h) of this section.

(b) *Precision of reported data.* Traffic data supplied for the purposes identified in § 500.203(a) of this subpart shall be to the statistical precision applicable at the time of the data's collection as specified by the data users at various levels of government. A State's TMS shall meet the statistical precisions established by FHWA for the HPMS.

(c) *Continuous counter operations.* Within each State, there shall be sufficient continuous counters of traffic volumes, vehicle classification, and vehicle weight to provide estimates of changes in highway travel patterns and to provide for the development of day-of-week, seasonal, axle correction, growth factors, or other comparable factors approved by the FHWA that

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support the development of traffic estimates to meet the statistical precision requirements of the data uses identified in § 500.203(a) of this subpart. As appropriate, sufficient continuous counts of vehicle classification and vehicle weight should be available to address traffic data program needs.

(d) *Short term traffic monitoring.* (1) Count data for traffic volumes collected in the field shall be adjusted to reflect annual average conditions. The estimation of annual average daily traffic will be through the appropriate application of only the following: Seasonal factors, day-of-week factors, and, when necessary, axle correction and growth factors or other comparable factors approved by the FHWA. Count data that have not been adjusted to represent annual average conditions will be noted as being unadjusted when they are reported. The duration and frequency of such monitoring shall comply to the data needs identified in § 500.203(a) of this subpart.

(2) Vehicle classification activities on the National Highway System (NHS), shall be sufficient to assure that, on a cycle of no greater than three years, every major system segment (i.e., segments between interchanges or intersections of principal arterials of the NHS with other principal arterials of the NHS) will be monitored to provide information on the numbers of single-trailer combination trucks, multiple-trailer combination trucks, two-axle four-tire vehicles, buses and the total number of vehicles operating on an average day. If it is determined that two or more continuous major system segments have both similar traffic volumes and distributions of the vehicle types identified above, a single monitoring session will be sufficient to monitor these segments.

(e) *Vehicle occupancy monitoring.* As deemed appropriate to support the data uses identified in § 500.203(a) of this subpart, data will be collected on the average number of persons per automobile, light two-axle truck, and bus. The duration, geographic extent, and level of detail shall be consistent with the intended use of the data, as cooperatively agreed to by the organizations that will use the data and the organizations that will collect the data. Such vehicle

occupancy data shall be reviewed at least every three years and updated as necessary. Acceptable data collection methods include roadside monitoring, traveler surveys, the use of administrative records (e.g., accident reports or reports developed in support of public transportation programs), or any other method mutually acceptable to the responsible organizations and the FHWA.

(f) *Field operations.* (1) Each State's TMS for highway traffic data shall include the testing of equipment used in the collection of the data. This testing shall be based on documented procedures developed by the State. This documentation will describe the test procedure as well as the frequency of testing. Standards of the American Society for Testing and Materials or guidance from the AASHTO may be used. Only equipment passing the test procedures will be used for the collection of data for the purposes identified in § 500.203(a) of this subpart.

(2) Documentation of field operations shall include the number of counts, the period of monitoring, the cycle of monitoring, and the spatial and temporal distribution of count sites. Copies of the State's documentation shall be provided to the FHWA Division Administrator when it is initially developed and after each revision.

(g) *Source data retention.* For estimates of traffic or travel, the value or values collected during a monitoring session, as well as information on the date(s) and hour(s) of monitoring, will remain available until the traffic or travel estimates based on the count session are updated. Data shall be available in formats that conform to those in the version of the TMG current at the time of data collection or as then amended by the FHWA.

(h) *Office factoring procedures.* (1) Factors to adjust data from short term monitoring sessions to estimates of average daily conditions shall be used to adjust for month, day of week, axle correction, and growth or other comparable factors approved by the FHWA. These factors will be reviewed annually and updated at least every three years.

(2) The procedures used by a State to edit and adjust highway traffic data collected from short term counts at field locations to estimates of average

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traffic volume shall be documented. The documentation shall include the factors discussed in paragraph (d)(1) of this section. The documentation shall remain available as long as the traffic or travel estimates discussed in paragraph (g) of this section remain cur-

rent. Copies of the State's documentation shall be provided to the FHWA Division Administrator when it is initially developed and after each revision.

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