

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION  
*Bureau of Highway Safety and Traffic Engineering*



**OFFICIAL  
TRAFFIC  
CONTROL  
DEVICES**

*Publication 212*

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## PREAMBLE

The Department of Transportation (Department) publishes Chapter 212 (relating to official traffic-control devices under the authority of 75 Pa.C.S. §§ 3353, 3354, 6103, 6105, 6121, 6122, 6123 and 6123.1).

The purpose of Chapter 212 is to adopt the National MUTCD, to establish new regulations regarding additional study requirements, warrants, principles and guidelines not included in the MUTCD; and to establish greater uniformity for the design, location and operation of all official traffic signs, signals, markings and other traffic-control devices within this Commonwealth.

With the promulgation of Chapter 212, the most recent edition of the National MUTCD, published by the FHWA, is the standard for traffic control in this Commonwealth. As provided in 75 Pa.C.S. §§ 6103(c) and 6121 (relating to promulgation of rules and regulations by department; and uniform system of traffic-control devices).

Chapter 212 was published at 34 Pa.B. 4712 (August 28, 2004) and the public was invited to submit comments. The proposed rulemaking was also submitted to the Independent Regulatory Review Commission (IRRC) and to the House and Senate Transportation Committees. Comments were received from IRRC and from the public.

Under section 5(c) of the Regulatory Review Act, IRRC and the Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing the Chapter 212, the Department has considered all comments from IRRC, the House and Senate Committees and the public.

A separate comment and response document was prepared to address these comments and is available upon request. Several commentators expressed concern that Chapter 212 would require local municipalities to be responsible for the installation and maintenance of stop signs, stop ahead signs and other traffic controls on State highways where they intersect with local roads. As explained more fully in the response document, it is the intention of Chapter 212 to clarify local responsibility for stop signs and stop ahead signs on local road approaches where they intersect with State highways. The Department will retain responsibility for the installation and maintenance of these signs and other traffic controls on State highways, except as specifically provided for in Chapter 212.

Under section 5.1(j.2) of the Regulatory Review Act (71 P. S. § 745.5a(j.2)), on December 14, 2005, the Chapter 212 was deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on December 15, 2005, and approved Chapter 212.

For questions regarding this Publication, contact the Bureau of Highway Safety and Traffic Engineering by mail at; 400 North Street, 6th Floor, Harrisburg, PA 17120-0064 or by telephone at (717) 787-3620.

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**BUREAU OF HIGHWAY SAFETY & TRAFFIC ENGINEERING  
CHAPTER 212. OFFICIAL TRAFFIC CONTROL DEVICES**

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## Subchapter A.

### GENERAL PROVISIONS

#### § 212.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

*ADT--Average daily traffic--*The total volume of traffic during a number of whole days--more than 1 day and less than 1 year--divided by the number of days in that period.

*Active work zone--*The portion of a work zone where construction, maintenance or utility workers are on the roadway or on the shoulder of the highway, and workers are adjacent to an active travel lane. Workers are not considered adjacent to an open travel lane if they are protected by a traffic barrier and no ingress or egress to the work zone exists through an opening in the traffic barrier.

*Advisory speed--*The recommended speed for vehicles operating on a section of highway based on the highway design, operating characteristics and conditions. When posted, the speed is displayed as a warning sign; that is, either a black-on-yellow or a black-on-orange sign.

*Angle parking--*Parking, other than parallel parking, which is designed and designated so that the longitudinal axis of the vehicle is not parallel with the edge of the roadway.

*Assemblage--*

(i) An organized gathering of people without vehicles, or with vehicles that are stationary, which encroaches onto a street or highway and interferes with the movement of pedestrian or vehicular traffic.

(ii) The term includes street fairs, block parties and other recreational events.

*Bureau--*The Bureau of Highway Safety and Traffic Engineering, which is the office of the Department responsible for traffic regulations and statewide policies regarding traffic-control devices.

*City of the first and second class--*A city so classified in accordance with section 1 the act of June 25, 1895 (P. L. 275, No. 188) (53 P. S. § 101), known as the City Classification Law.

*Conventional highway*--A highway other than an expressway or a freeway.

*Corner sight distance*--

(i) *Available corner sight distance*--The maximum measured distance along a crossing highway which a driver stopped at a side road or driveway along that highway can continuously see another vehicle approaching. For the purpose of measuring the available sight distance, the height of both the driver's eye and the approaching vehicle should be assumed to be 3.5 feet above the road surface. In addition, the driver's eye should be assumed to be 10 feet back from the near edge of the highway or the near edge of the closest travel lane if parking is permitted along the highway.

(ii) *Minimum corner sight distance*--The minimum required corner sight distance based on engineering and traffic studies, to ensure the safe operation of an intersection. The minimum value is a function of the speed of the approaching vehicles and the prevailing geometrics.

*Crash*--

(i) A collision involving one or more vehicles.

(ii) Unless the context clearly indicates otherwise, the term only includes those collisions that require a police report; that is, the collision involves one of the following:

(A) Injury to or death of any person.

(B) Damage to any vehicle involved to the extent that it cannot be driven under its own power in its customary manner without further damage or hazard to the vehicle, to other traffic elements, or to the roadway, and therefore requires towing.

*Department*--[The Department of Transportation of the Commonwealth.](#)

*Delineator*--A retroreflective device mounted on the road surface or at the side of the roadway in a series to indicate the alignment of the roadway, especially at night or in adverse weather.

*Divided highway*--A highway divided into two or more roadways and so constructed as to impede vehicular traffic between the roadways by providing an intervening space, physical barrier or clearly indicated dividing section.

*85th percentile speed*--The speed on a roadway at or below which 85% of the motor vehicles travel.

*Engineering and traffic study*--An orderly examination or analysis of physical features and traffic conditions on or along a highway, conducted in accordance with this chapter for the purpose of ascertaining the need or lack of need of specific traffic restrictions, and the application of traffic-control devices.

*Expressway*--A divided arterial highway for through traffic with partial control of access and generally with grade separations at major intersections.

*Freeway*--A limited access highway to which the only means of ingress and egress is by interchange ramps.

*Grade*--The up or down slope in the longitudinal direction of the highway, expressed in percent, which is the number of units of change in elevation per 100 units of horizontal distance. An upward slope is a positive grade; a downward slope is a negative grade.

*Highway*--

(i) The entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel.

(ii) The term includes a roadway open to the use of the public for vehicular travel on grounds of a college or university, or public or private school, or public or historical park.

*Local authorities*--

(i) County, municipal and other local boards or bodies having authority to enact regulations relating to traffic.

(ii) The term includes airport authorities except when those authorities are within counties of the first class or counties of the second class.

(iii) The term also includes State agencies, boards and commissions other than the Department, and governing bodies of colleges, universities, public and private schools, public and historical parks.

*MUTCD*--The current edition of the [Manual on Uniform Traffic Control Devices](#), as adopted by the Federal Highway Administration (FHWA), and available on the FHWA website.

*Narrow bridge or underpass*--A bridge, culvert or underpass with a two-way roadway clearance width of 16 to 18 feet, or any bridge, culvert or underpass having a roadway clearance less than the width of the approach travel lanes.

*Night or nighttime*--The time from 1/2 hour after sunset to 1/2 hour before sunrise.

*Normal speed limit*--The regulatory speed limit or the 85th percentile speed that existed before temporary traffic control was established, for example, prior to the beginning of a work zone.

*Numbered traffic route*--A highway that has been assigned an Interstate, United States or Pennsylvania route number, consisting of one, two, or three digits, sometimes with an additional designation such as business route, truck route or other similar designation.

*Private parking lot*--A privately owned parking lot open to the public for parking with or without restriction or charge.

*Procession*--

(i) An organized group of individuals, or individuals with vehicles, animals or objects, moving along a highway on the roadway, berm or shoulder in a manner that interferes with the normal movement of traffic.

(ii) The term includes walks, runs, parades and marches.

*Retroreflective sheeting*--

(1) Material which allows a large portion of the light coming from a point source to be returned directly back to a location near its origin, and is used to enhance the nighttime reflectivity of traffic control signs, delineators, barricades and other devices.

(ii) The term includes materials with nonexposed glass bead lens and microprismatic retroreflective sheeting.

*Roadway*--That portion of a highway improved, designed or ordinarily used for vehicular travel, exclusive of the sidewalk, berm or shoulder. If a highway includes two or more separate roadways, the term refers to each roadway separately but not to all roadways collectively.

*Safe-running speed*--The average speed for a portion of highway determined by making a minimum of five test runs while periodically recording the speed at different locations while driving at a speed which is reasonable and prudent, giving consideration to the available corner and stopping sight distance, spacing of intersections, roadside development and other conditions.

*Sales Store*--The Department facility that sells [maps and publications](#).

*School*--A public, private or parochial facility for the education of students in grades kindergarten through 12.

*School zone*--A portion of a highway that at least partially abuts a school property or extends beyond the school property line that is used by students to walk to or from school or to or from a school bus pick-up or drop-off location at a school.

*Secretary*--The Secretary of the Department.

*Special activity*--

(i) An organized vehicle race, speed competition or contest, drag race or acceleration contest, test of physical endurance, exhibition of speed or acceleration, or any other type of event conducted for the purpose of making a speed record.

(ii) The term includes those races defined in [75 Pa.C.S. § 3367](#) (relating to racing on highways).

*State-designated highway*--A highway or bridge on the system of highways and bridges over which the Department has assumed or has been legislatively given jurisdiction.

*Stopping sight distance*--The length of highway over which a 2-foot high object on the roadway is continuously visible to the driver, with the driver's eye height assumed to be 3.5 feet above the road surface.

*TTC--Temporary traffic control*--An area of a highway where road user conditions are changed because of a work zone or incident by use of temporary traffic-control devices, flaggers, police officers or other authorized personnel.

*TTC plan*--A plan for maintaining traffic through or around a work zone.

*Through highway--*

(i) A highway or portion of a highway on which vehicular traffic is given preferential right-of-way, and at the entrances to which vehicular traffic from intersecting highways is required by law to yield the right-of-way in obedience to a Stop Sign (R1-1), Yield Sign (R1-2) or other traffic-control device when the signs or devices are erected as provided in this chapter.

(ii) The term includes all expressways and freeways.

*Traffic Calming--*The combination of primarily physical measures taken to reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for nonmotorized street users. The primary objectives of traffic calming measures are to reduce speeding and to reduce the volume of cut-through traffic on neighborhood streets.

*Traffic-control devices--*Signs, signals, markings and devices consistent with this chapter placed or erected by authority of a public body or official having jurisdiction, for the purpose of regulating, warning or guiding traffic.

*Traffic restriction--*A restriction designated by a traffic-control device to regulate the speed, direction, movement, placement or kind of traffic using any highway.

*Traffic signal--*

(i) A power-operated traffic-control device other than a sign, warning light, flashing arrow panel or steady-burn electric lamp.

(ii) The term includes traffic-control signals, pedestrian signals, beacons, in-roadway warning lights, lane-use-control signals, movable bridge signals, emergency traffic signals, firehouse warning devices, ramp and highway metering signals and weigh station signals.

*Travel lane--*

(i) A lane of a highway which is used for travel by vehicles.

(ii) A lane in which parking is permitted during off-peak hours but is restricted for use as a travel lane during peak hours to obtain greater traffic movement.

*Warrant--*A description of the threshold conditions to be used in evaluating the potential safety and operational benefits of traffic-control devices based upon average or normal conditions.

*Work zone*--The area of a highway where construction, maintenance or utility work activities are being conducted, and in which traffic-control devices are required in accordance with this chapter.

## **§ 212.2. Adoption of Federal standards.**

(a) *General provisions.* Consistent with the authority contained in [75 Pa.C.S. §§ 6103\(c\) and 6121](#) (relating to promulgation of rules and regulations by the Department; and uniform system of traffic-control devices), the Department hereby adopts the MUTCD, as published by the Federal Highway Administration. The MUTCD is adopted in its totality except where this chapter clearly indicates that it is not being adopted, or that additional warrants or criteria are being provided.

(b) *Modification of Federal statutes, regulations or provisions.* As provided in [75 Pa.C.S. § 6103\(d\)](#), if the MUTCD is amended or modified by the Federal Highway Administration, the amendment will take effect on the effective date specified by the Federal Highway Administration unless the Department publishes a notice in the *Pennsylvania Bulletin* stating that the amendment or modification will not apply.

## **§ 212.3. Pennsylvania's Supplement to the MUTCD.**

The Department will publish this chapter as a supplement to the MUTCD. This publication will be called *Official Traffic Control Devices* (Department Publication 212), and will include an appendix with additional guidance information, including the following:

- (1) How to determine various elements associated with engineering and traffic studies.
- (2) How to obtain crash rates for various types of roads.
- (3) How to measure the various types of sight distance.
- (4) Where National study data is located.

## § 212.4. Application.

(a) *General.* This chapter applies to the approval, location, installation, revision, operation, maintenance and removal of all traffic signs, signals, markings and other traffic-control devices on all streets and highways in this Commonwealth. All signs, signals, markings and other traffic-control devices erected shall conform to this chapter. Traffic restrictions, which were posted or erected prior to February 4, 2006, in accordance with any regulations in effect at that time, are not subject to this chapter.

(b) *New restrictions.* Except as noted in §§ 212.109 and 212.117 (relating to bridge speed limits; and weight, size and load restrictions), engineering and traffic studies can be performed by police officers, roadmasters, maintenance supervisors or traffic technicians. The establishment or revision of a traffic restriction may be warranted if one of the following applies:

(1) One or more of the engineering and traffic study warrants covered in this chapter justifies the traffic restriction.

(2) Sound engineering judgment based upon a combination of all data sources substantiates the need for the restriction.

(c) *Removal of an existing restriction.* The removal of an existing traffic restriction may be warranted if one of the following applies:

(1) A study indicates that none of the engineering and traffic study warrants covered in this chapter justify the existing traffic restriction.

(2) The condition that originally justified the restriction no longer exists.

(d) *Warrants no substitute for engineering judgment.* Warrants established under this chapter provide the threshold for consideration of the installation of a traffic-control device, but are not a substitute for engineering judgment. The fact that a warrant for a particular traffic-control device is met is not conclusive justification for the installation of the device.



(e) *Traffic-control during emergencies.* During National, State or local emergencies including floods, fires, hurricanes, tornadoes, earthquakes, terrorist events, sink holes and bridge collapses, the Department on State-designated highways and local authorities on highways under their jurisdiction may suspend existing restrictions or effect temporary restrictions without an engineering and traffic study as provided in [75 Pa.C.S. §§ 6108 and 6109\(a\)\(20\)](#) (relating to power of Governor during emergency; and specific powers of department and local authorities). These temporary restrictions expire at the end of the emergency.

(f) *Highway construction projects.* The standards in this chapter apply to all highway construction projects that do not have design field view approval before January 1, 2006, and all highway construction projects that have plans, specifications and estimate (PS&E) packages submitted to the Department's Bureau of Design on or after July 1, 2006. Highway construction projects that have design field view approval before January 1, 2006, and PS&E packages submitted to the Department's Bureau of Design before July 1, 2006, must comply with the standards applicable at the time of design. Those standards may be found in Department Publications 68, *Official Traffic Control Devices*, 1975 Edition, 201M, *Engineering and Traffic Studies*, dated December 1993, and 203M, *Work Zone Traffic Control*, dated September 24, 2002.

(g) *Highway occupancy permits and utility work.*

(1) The standards in this chapter are applicable to all utility work and work performed under a highway occupancy permit, except that work performed under a highway occupancy permit or utility work requiring a permit, with the permit issued before January 1, 2006, must comply with the standards applicable at the time the permit was issued. Those standards may be found in Department Publications 68, *Official Traffic Control Devices*, 1975 Edition, 201M, *Engineering and Traffic Studies*, dated December 1993, and 203M, *Work Zone Traffic Control*, dated September 24, 2002.

(2) The standards in this chapter apply to all utility work performed on or after January 1, 2006, using an emergency permit card under [§ 459.6](#) (relating to emergency work).

## **§ 212.5. Installation and maintenance responsibilities.**

(a) *Authority to erect traffic-control devices.* The delegation of responsibilities for the installation and maintenance of traffic-control devices is in accordance with [75 Pa.C.S. §§ 6122 and 6124](#) (relating to authority to erect traffic-control devices; and erection of traffic-control devices at intersections).

(b) *Traffic-control devices on State-designated highways.*

(1) *Conventional highways.*

(i) Local authorities may not revise or remove any traffic-control device installed by the Department or by a contractor for the Department without written approval of the Department.

(ii) Cities of the first and second class are responsible for the installation, revision, removal, maintenance and operation of all traffic-control devices on the highways within their city boundaries. Department approval is not required, except as follows:

(A) As may be required in an agreement between the city and the Department.

(B) Department approval is required for traffic signals if the city does not have municipal traffic engineering certification in accordance with [Chapter 205](#) (relating to municipal traffic engineering certification).

(iii) Local authorities other than cities of the first and second class shall obtain written Department approval before installing any new, or revising or removing any existing traffic-control device unless noted otherwise in this chapter or as provided in an agreement with the Department.

(iv) Local authorities may install, revise or remove the following devices, and Department approval is not required:

(A) Stopping, standing or parking signs (R7 and R8 Series).

(B) Street name signs (D3 Series).

(C) Crosswalk markings at intersections.

(D) Parking stall markings, except written Department approval is required prior to creating new angle parking.

(E) Curb markings

(F) Parking meters.

(v) Local authorities, or other agencies as indicated, are responsible for installing, maintaining and operating the following traffic-control devices, subject to Department approval prior to any change in the traffic restriction:

(A) Traffic signals, and all associated signs and markings included on the Department-approved traffic signal plan.

(B) Speed Limit Signs (R2-1) for speed limits of 35 miles per hour or less. The Department will be responsible for all hazardous grade speed limits and bridge speed limits, and for all speed limits at Department rest areas, welcome centers and weigh stations.

(C) Stop lines and yield lines at intersections.

(D) Pedestrian group signs (R9 Series).

(E) Traffic signal group signs (R10 Series).

(F) Street Closed (\_\_\_\_) to (\_\_\_\_) Sign (R11-10).

(G) Snowmobile Road (\_\_\_\_) Closed to All Other Vehicles Sign (R11-11).

(H) All Trucks Must Enter Weigh Station Sign (R13-1-1) and Weigh Station signs (D8 Series) for weigh stations not owned or operated by the Department.

(I) Railroad Crossbuck Sign (R15-1), Track Sign (R15-2), Emergency Notification Sign (I-13a), and other signs, gates, or lights that are within the railroad company's right-of-way, shall be installed by the railroad company.

(J) Signal Ahead Sign (W3-3).

(K) Entrance and crossing signs (W11 Series), which warn of possible crossings by pedestrians, hikers, cattle, farm equipment, ATVs, fire apparatus, and so forth, except the Deer Crossing Sign (W11-3), Elk Crossing Sign (W11-3A), Horsedrawn Vehicle Sign (W11-11), Left Turns and Cross Traffic Sign (W11-21), Left Turns Sign (W11-21-1) and Watch for Turns Sign (W11-21-2) will be the responsibility of the Department.

(L) Children group signs (W15 Series).

(M) Parking Area Sign (D4-1).

(N) Telephone directional signs (D9-1 series), which shall be installed by the telephone company.

(O) Bicycle Route Sign (D11-1).

(P) Traffic Signal Speed Sign (I1-1).

(Q) Trail group signs (I4 Series).

(R) Snowmobile and all terrain vehicles group signs (I12 Series).

(S) School zone speed limits, and all school signs (S Series).

(T) Pavement markings for mid-block crosswalks.

(U) Pavement markings for bicycles such as the bicycle lane symbol.

(2) *Expressways and freeways.* Local authorities may not install, revise or remove traffic-control devices on an expressway or freeway or at an intersection with an expressway or freeway without written Department approval, unless noted otherwise in this chapter.

(c) *Traffic-control devices on local highways.* As provided in [75 Pa.C.S. § 6122](#), local authorities are responsible for the installation, revision, maintenance, operation and removal of any traffic-control device on highways under their jurisdictions, except local authorities shall obtain written Department approval for the following two items:

(1) Installing, revising or removing any school zone speed limit or traffic signal as indicated in [75 Pa.C.S. § 3365\(b\)](#) (relating to special speed limitations) and [§ 6122\(a\)\(2\)](#), respectively, except Department approval is not required for cities of the first and second class, and other local authorities that have municipal traffic engineering certification in accordance with [Chapter 205](#).

(2) Revising or removing a traffic-control device installed in accordance with an agreement between the local authorities and the Department.

(d) *Traffic-control devices on local highway approaches to intersections with State-designated highways.*

(1) The Department is responsible for approving the traffic control at intersections of local highways and State-designated highways, including the local highway approaches.

(2) At new intersections, the permittee is responsible for installing traffic-control devices on local highway approaches as required by an approved highway occupancy permit issued in accordance with [Chapter 441](#) (relating to access to and occupancy of highways by driveways and local roads).

(3) At existing intersections, local authorities or permittees are responsible to install, remove and maintain traffic-control devices as required to control traffic on the local highway approaches, including replacement or repair of missing, damaged, blocked or outdated devices in need of upgrade.

(i) Traffic-control devices to be maintained on local roadways include the following, as applicable:

(A) Stop Signs (R1-1) and Yield Signs (R1-2).

(B) Stop lines and yield lines.

(C) No Right Turn Signs (R3-1), No Left Turn Signs (R3-2), No Turns Signs (R3-3), Left Turn Signs (R3-5), Left Lane Must Turn Left Signs (R3-7L), One-Way Signs (R6 Series) and other similar type traffic restriction, prohibitions or lane control signs.

(ii) Local authorities or permittees shall obtain written Department approval before implementing any revised traffic-control scheme at the intersection.

(4) The Department may take appropriate action if it deems it necessary to carry out the maintenance responsibility of a local authority or permittee because of failure or inability to act in a timely manner.

(5) Local authorities are responsible to determine the need for any Stop Ahead Signs (W3-1) and Yield Ahead Signs (W3-2) on local highway approaches to State-designated highways, and for installing and maintaining any warranted signs.

(e) *Police authority.* Police officers may install temporary traffic-control devices on any highway without approval from the Department or the local authorities. These traffic-control devices may be used to close highways during emergencies, to weigh or inspect vehicles, to establish sobriety checkpoints or to conduct other enforcement programs or activities.

### **§ 212.6. Removal of traffic hazards.**

(a) *Interfering signs, lights or markings.* The Secretary and local authorities, under their respective jurisdictions, have the authority to cause the removal of all colored or flashing lighted signs or other lights, signs or markings so located as to interfere with traffic or to be confused with or to obstruct the view or effectiveness of traffic-control devices.

(b) *Trees, plants, shrubs or other obstructions.* The Department on State-designated highways, and local authorities on any highway within their boundaries, may require a property owner to remove or trim a tree, plant, shrub or other obstruction or part thereof which constitutes a traffic hazard. The following are examples of traffic hazards:

(1) The obstruction restricts the stopping sight distance for drivers of through vehicles or the available corner sight distance for drivers entering from side roads or driveways to distances less than the appropriate minimum stopping sight distance or minimum corner sight distance values.

(2) The obstruction critically restricts the sight distance to a traffic-control device.

(3) Vehicle crash records indicate that a crash has involved the obstruction or that the obstruction contributed to one or more of the vehicle crashes.

**§ 212.7. Signs and banners across or within the legal limits of a State-designated highway.**

(a) *Prohibition.* It is unlawful to place any sign, marking or banner containing advertising matter of any kind on, across or within the right-of-way of any State-designated highway without the written consent of the Department.

(b) *Abatement.* A sign, marking or banner containing advertising matter placed without the written consent of the Department will be declared to be a public nuisance and may be removed by the Department with or without notice to the persons responsible for the placing of the sign, marking or banner containing advertising matter.

**§ 212.8. Use, test, approval and sale of traffic-control devices.**

(a) *Statutory requirements.* Under [75 Pa.C.S. § 6127](#) (relating to dealing in nonconforming traffic-control devices), it is unlawful for a person to manufacture, sell, offer for sale or lease for use on the highway, any traffic-control device unless it has been approved and is in accordance with this title.

(b) *Devices requiring Department approval.* Department approval is required prior to the sale or use of the following types of traffic-control devices on any highway:

- (1) Delineation devices, including flexible delineator posts, guide rail and barrier-mounted delineators and raised pavement markers.
- (2) Pavement marking materials including paint, epoxy, polyesters, methyl methacrylate, thermoplastic, preformed tapes and glass beads.
- (3) Retroreflective sheeting materials used for traffic-control devices.
- (4) Traffic signal equipment, including the following:
  - (i) Controller units.
  - (ii) Signal heads--lane-use traffic-control, pedestrian, and vehicle.
  - (iii) Detectors--pedestrian and vehicle.
  - (iv) Load switches.

- (v) Flasher units.
  - (vi) Time clocks.
  - (vii) Relays.
  - (viii) Preemption and priority control equipment.
  - (ix) Electrically-powered signs--variable speed limit signs, blank-out signs and internally illuminated signs, including School Speed Limit Signs.
  - (x) Portable traffic-control signals.
  - (xi) Local intersection coordinating units.
  - (xii) Dimming devices.
  - (xiii) In-roadway warning lights.
  - (xiv) Auxiliary devices and systems.
- (5) Traffic signs and the associated breakaway sign supports.
- (6) Work zone traffic-control devices, including the following:
- (i) Arrow panels.
  - (ii) Barricades.
  - (iii) Citizen band traffic alert radios.
  - (iv) Cones.
  - (v) Crash cushions.
  - (vi) Drums.
  - (vii) Portable changeable message signs.
  - (viii) Portable traffic sign supports.



(ix) Speed display signs, as used to inform motorists of the speed of their vehicles.

(x) Stop/slow paddles.

(xi) Temporary pavement marking tapes.

(xii) Temporary traffic barrier.

(xiii) Tubular markers.

(xiv) Variable speed limit signs.

(xv) Vertical panels.

(xvi) Warning lights.

(7) Yield to pedestrian channelizing devices, which are designed for placement between lanes of traffic to remind motorists to yield to pedestrians in crosswalks.

(c) *Approval procedure.* A manufacturer or person desiring approval for the sale, use or lease of one or more of the devices listed in subsection (b) shall contact the Bureau of Highway Safety and Traffic Engineering.

(d) *Listing of approved traffic-control devices.* Approved traffic-control devices will be listed in the Department's *Approved Construction Materials* ([Department Publication 35](#)), available from the Department's Sales Store or through the Department's website.

## **§ 212.9. Traffic calming.**

(a) *General policy.* The Department on State-designated highways, and local authorities on any highway within their boundaries, may implement traffic calming measures in conformance with *Pennsylvania's Traffic Calming Handbook* ([Department Publication 383](#)).

(b) *Department approval.* Local authorities shall obtain approval of the Department prior to implementing a traffic calming measure on a State-designated highway, except when the Department's handbook provides otherwise or when the Department has entered into an agreement with local authorities that provides otherwise.

**§ 212.10. Requests for changes, interpretations or permission to experiment.**

A local authority may submit a request to the Department for a change or an interpretation of the provisions of this chapter, or for approval to use an alternate device or to experiment with a device in a way not provided for in this chapter.

(1) The request must be submitted in writing to the Bureau of Highway Safety and Traffic Engineering.

(2) The request must include information in accordance with Section 1A.10 of the MUTCD (relating to interpretations, experimentation, changes and interim approvals). If appropriate, the Department will forward the request to the Federal Highway Administration according to procedures in [Section 1A.10 of the MUTCD](#).

(3) The type of information to be compiled during any experiment must be identified in the request, and the collection of any data and the development of any follow-up report will be a conditional part of the request.

**§ 212.11. Metric measurements.**

(a) *General policy.* The following conversion factors may be used for the design and placement of traffic-control devices as included in this chapter:

(1) One inch equals 25 millimeters.

(2) One foot equals 0.30 meter.

(3) One mile equals 1.6 kilometers.

(b) *Metric sign messages.* Unless authorized in writing by the Secretary, sign messages on regulatory, warning and guide signs, except for auxiliary signs used for educational purposes, may not display metric units of measurement.

## § 212.12. Department publications.

The Department will publish or make available documents to assist those persons responsible for conducting engineering and traffic studies; manufacturing traffic signs and other traffic-control devices; erecting, maintaining and operating traffic-control devices; and maintaining traffic in work zones. The following documents will be available from the Department's Sales Store:

(1) *Approved Construction Materials* ([Department Publication 35](#)) which contains listings of approved suppliers of specific materials.

(2) *Official Traffic-Control Devices* (Department Publication 212) which contains this chapter, and an appendix containing additional guidance related to elements of appropriate engineering and traffic studies and the provisions of this chapter.

(3) *Pennsylvania Handbook of Approved Signs* (Department Publication 236M) which contains the design and application details of official traffic signs.

(4) *Signing and Marking Standard* (Department Publication 111M) which contains the traffic standards that provide detailed guidance for sign legends, expressway and freeway signs, sign spacing and location criteria and sign posts. The publication also includes detailed drawings of pavement marking lines and symbols, and the placement of delineation devices at on-ramps, off-ramps and lane drops.

(5) *Traffic Signal Design Handbook* (Department Publication 149M) which contains information for use in the design and operation of a traffic signal installation.

(6) *Traffic Signal Standard Drawings, TC-8800 Series* (Department Publication 148M) which contains detailed guidance for the construction of traffic signals, controller assemblies, traffic signal supports, electrical distribution, signal heads and detectors.

(7) *Work Zone Traffic Control Guidelines* ([Department Publication 213](#)) which provides additional guidance and suggested temporary traffic-control plans for maintaining traffic through highway construction, maintenance and utility work zones to supplement various situations not included in the MUTCD.

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## Subchapter B.

### SIGNS

#### § 212.101. Official signs.

(a) *Approved signs.* Official traffic signs are identified in the *Pennsylvania Handbook of Approved Signs* (Department Publication 236M) which includes sign standards that show the shape, color, dimensions, legends, application and placement of official signs. When sign messages are required other than those provided for in the *Pennsylvania Handbook of Approved Signs*, the Bureau of Highway Safety and Traffic Engineering may authorize new sign standards. When approved by the Secretary, through the Chief, Traffic Engineering and Operations Division, these signs shall also be regarded as official signs.

(b) *Existing nonstandard signs.* Official signs must replace existing signs of nonstandard design or application as rapidly as is economically feasible.

(c) *Unacceptable variations.* Variations in the proportion of symbols, stroke width and height of letters, width of borders or layout of word or symbol messages will be sufficient cause for the Secretary to order the removal or replacement of a sign, but will not be a defense in prosecution for violation of any mandatory traffic control provided by the sign.

#### § 212.102. Sign manufacturers.

Only signs manufactured by the Department or a Department-approved sign manufacturer shall be used on any highway. Commercial or municipal sign manufacturers who wish to obtain Department approval to manufacture signs shall request an application from the Bureau of Highway Safety and Traffic Engineering.

#### § 212.103. Sign size.

Signs smaller than the minimum size or larger than the largest size specified on the sign standards in the *Pennsylvania Handbook of Approved Signs* (Department Publication 236M) are not permitted without written approval from the Department.

#### **§ 212.104. Retroreflectorization.**

Retroreflective sheeting or other approved retroreflective materials must be used on all signs that do not have sign illumination, unless the sign standard as included in the *Pennsylvania Handbook of Approved Signs* (Department Publication 236M) indicates that the sign does not need to be retroreflective. Type III or higher type retroreflective sheeting is encouraged to improve nighttime visibility of signs, especially for older drivers.

#### **§ 212.105. Sign posts and mountings.**

Unless physically protected by guide rail or a barrier, or installed beyond the clear zone as defined in the Department's *Design Manual, Part 2* ([Department Publication 13M](#)), all sign posts must be of a Department-approved breakaway design as listed in the *Approved Construction Materials* ([Department Publication 35](#)), and in accordance with the *Signing and Marking Standards* (Department Publication 111M).

#### **§ 212.106. Additional warrants for Stop Signs (R1-1) and Yield Signs (R1-2).**

(a) *Through highways.* The Department and local authorities may designate highways as through highways to permit more continuous movement and less delay to the major flow of traffic.

(1) Stop Signs (R1-1) or Yield Signs (R1-2) may be installed at all approaches to the through highway to provide preferential right-of-way at intersections.

(2) The designation of a highway as a through highway does not prevent modification of the right-of-way assignment at intersections of the through highway.

(3) The justification for the modification at a particular intersection will be based on the warrants in the MUTCD and the additional warrants in subsection (b), (c) or (d).

(b) *Stop Signs (R1-1) at intersections.* In addition to the warrants for stop signs in the MUTCD (relating to stop sign applications), a Stop Sign (R1-1) may be installed on a channelized right-turn roadway at a signalized intersection where the traffic-control signals are not readily visible, and the right-turn roadway does not have separate signals, and a Yield Sign (R1-2) is not appropriate.

(c) *Multiway stop applications.* In addition to the criteria and options warranting multiway stop applications in the MUTCD, the following apply:

(1) The five or more reported crashes in a 12-month period for Warrant B may include both reportable crashes, and nonreportable crashes that are documented in the police files, that occurred during a 12-month period during the most recent 3 years of available crash data.

(2) Multiway stop applications may not be used because of limited available corner sight distance unless there is no practical method of improving the sight distance or reducing the speed limit to satisfy the minimum corner sight distance values.

(d) *Stop and yield control at locations other than intersections.*

(1) *One-lane bridges and underpasses.* Stop Signs (R1-1) are warranted in advance of a one-lane bridge or underpass when roadway geometry is such that drivers cannot see an approaching vehicle in sufficient time for both vehicles to stop prior to entering the bridge or underpass. If sight distance is not a problem, a Yield Sign (R1-2) with the supplemental To Oncoming Traffic Sign (R1-2a) may be installed at both ends of a one-lane bridge or underpass.

(2) *Crossings.* Stop Signs (R1-1) may be installed on highways on a temporary basis at officially designated crossings such as construction haul roads. These Stop Signs (R1-1) should only be visible and in effect during the time periods the crossing is being used and should be supplemented with a flashing red light for added visibility.

(3) *Private roads and driveways.* Stop Signs (R1-1) or Yield Signs (R1-2) may be installed to control traffic exiting from a private road or driveway onto a highway or to control traffic on the highway at a private road or driveway if the warrants applied at highway intersections are satisfied.

(4) *Truck pulloffs on hazardous grades.* A Stop Sign (R1-1) may be installed within an officially designated truck pull-off area in advance of a hazardous grade indicating the location that trucks are to stop within the pulloff.

(5) *Temporary traffic control.* Stop Signs (R1-1) may be installed at both ends of short one-lane construction, maintenance or utility operation to provide self-regulating traffic control providing the one-lane section excluding the tapers is less than 250 feet, the ADT is less than 1,500, and the sight distance is sufficient.

## **§ 212.107. Except Right Turn Sign (R1-1-1).**

When a major traffic movement at an intersection is a right turn, the Except Right Turn Sign (R1-1-1) may be placed below the Stop Sign (R1-1) on that approach to minimize the total delay at the intersection. When this sign is used, Stop Signs (R1-1) are required on all other intersection approaches except for the approach with a corresponding left-turn movement.

## **§ 212.108. Speed limits.**

(a) *General.* This section applies to maximum speed limits established according to [75 Pa.C.S. §§ 3362 and 3363](#) (relating to maximum speed limits; and alteration of maximum limits). Engineering and traffic studies are not required for statutory speed limits, but documentation should be on file for urban districts and residence districts to show that the requirements defined in the Vehicle Code are satisfied.

(b) *Engineering and traffic studies.* Speed limits established in accordance with [75 Pa.C.S. § 3363](#) may be established in multiples of 5 miles per hour up to the maximum lawful speed. The speed limit should be within 5 miles per hour of the average 85th percentile speed or the safe-running speed on the section of highway, except the speed limit may be reduced up to 10 miles per hour below either of these values if one or more of the following conditions are satisfied:

(1) A major portion of the highway has insufficient stopping sight distance if traveling at the 85th percentile speed or the safe-running speed.

(2) The available corner sight distance on side roads is less than the necessary stopping sight distance values for through vehicles.

(3) The majority of crashes are related to excessive speed and the crash rate during a minimum 12-month period is greater than the applicable rate in the most recent high-crash rate or high-crash severity rate table included in the appendix of Official Traffic-Control Devices (Department Publication 212). Crashes related to excessive speed include those crashes with causation factors of driving too fast for conditions, turning without clearance or failing to yield right-of-way.

(c) *Variable speed limits.* To improve safety, speed limits may be changed as a function of traffic speeds or densities, weather or roadway conditions or other factors.



(d) *Special speed limits.*

(1) Within a rest area or welcome center, a 25 mile per hour speed limit may be established without the need for an engineering and traffic study if pedestrians walk across the access roadways between the parking lot and the rest facilities.

(2) Within a toll plaza or a truck weight station, an appropriate speed limit may be established without an engineering and traffic study by the authorities in charge to enforce the safety of the operations or to protect the scales.

(e) *Posting of speed limits.* A Speed Limit Sign (R2-1) or variable speed limit sign showing the maximum speed limit shall be placed on the right side of the highway at the beginning of each numerical change in the speed limit, but an additional sign may also be installed on the left side of the highway. If the new speed limit begins at an intersection, the first sign should be installed within 200 feet beyond the intersection. The placement of this sign must satisfy both the requirement to post the beginning of the new speed limit and the requirement to post the end of the previous speed limit. Additional requirements for posting are as follows:

(1) Speed limits of 50 miles per hour or less shall be posted as follows:

(i) A Reduced Speed (\_\_\_\_) Ahead Sign (R2-5), or a Speed Reduction Sign (W3-5), shall be placed on the right side of the highway 500 to 1,000 feet before the beginning of every speed reduction unless one of the following applies:

(A) The speed reduction is 10 miles per hour or less.

(B) The speed reduction begins at an intersection and all traffic entering the roadway with the speed reduction has to either stop at a Stop Sign (R1-1) or make a turn.

(C) The new speed limit is posted on variable speed limit signs.

(ii) Speed Limit Signs (R2-1) or a variable speed limit sign showing the maximum speed shall be placed on the right side of the highway at the beginning of the speed limit and at intervals not greater than 1/2 mile throughout the area with the speed limit.

(iii) The end of a speed limit is typically identified by the placement of a sign indicating a new speed limit, but the End Plaque (R2-10) may be placed above a Speed Limit Sign (R2-1) at the end of the zone if the appropriate speed limit is not known on the following section of roadway.

(2) On freeways, a Speed Limit Sign (R2-1) shall be installed after each interchange unless insufficient space exists for the signs.

### **§ 212.109. Bridge speed limits.**

(a) *Establishment.* A bridge speed limit shall be established under [75 Pa.C.S. § 3365\(a\)](#) (relating to special speed limitations) if an engineering investigation by a professional engineer establishes the need to reduce the vibration and impact of vehicles due to a structural condition of the bridge or elevated structure.

(b) *Posting.* An established bridge speed limit shall be posted similar to other speed limits in § 212.108(e) (relating to speed limits), except that a Bridge Sign (R12-1-2) must be mounted directly above each Speed Limit Sign (R2-1) and Reduced Speed (\_\_\_\_) Ahead Sign (R2-5). The sign indicating the beginning of the bridge speed limit should be installed within 50 feet of the beginning of the structure. The end of the bridge or elevated structure must be the end of the bridge speed limit.

### **§ 212.110. Hazardous grade speed limits.**

(a) *Establishment.* A hazardous grade speed limit may be established under [75 Pa.C.S. § 3365\(c\)](#) (relating to special speed limitations) if an engineering and traffic study establishes the need for all vehicles or vehicles having a gross weight in excess of a designated weight to be limited to a maximum speed on a downgrade.

(1) The designated weight should be 26,000 pounds unless the engineering and traffic study determines that a different weight should be used.

(2) When a hazardous-grade speed limit is established, it should be consistent with the speed that similar vehicles can climb the hill or other Department-approved methodology, except that a hazardous-grade speed limit should not be greater than the lowest advisory speed or legal speed limit either on the hill or at the base of the hill.

(3) A hazardous-grade speed limit may be established when one or more of the following conditions exist:

(i) The length of grade exceeds the value set forth in the following table:

Average Grade (percent %)	Length of Grade (feet)	
	Condition A*	Condition B**
-3	20,000	--
-4	8,000	16,000
-5	5,000	10,000
-6	3,000	6,000
-7	2,000	4,000
-8	1,800	3,600
-10	1,500	3,000
-12	1,250	2,500
-15	1,000	2,000

\* Condition A applies if vehicles are required to stop or reduce speed at or before the bottom of the hill or if there is an urbanized area at the base of the hill.

\*\* Condition B pertains to all other locations.

(ii) A crash has occurred on the downgrade that can be attributed to the speed of a vehicle having a gross weight in excess of the designated weight.

(iii) A verified report has been received during the past 3 years of an operator losing control of a vehicle on the grade, and the vehicle is a type having a gross weight in excess of the designated weight.

(b) *Posting.* A hazardous grade speed limit shall be posted with traffic-control devices as follows:

(1) A Reduced Speed (\_\_\_\_) Ahead Sign (R2-5), advising of the maximum hazardous grade speed limit, with a Truck Marker (M4-4), or other marker as applicable, mounted directly above the Reduced Speed (\_\_\_\_) Ahead Sign (R2-5), shall be placed on the right side of the highway at a distance of 500 to 1,000 feet before the hazardous grade speed limit, except that this advance sign is not required if the hazardous grade speed limit begins at a vehicle pull-off where all applicable vehicles are required to stop.

(2) A Trucks Over (\_\_\_\_) Lbs. Speed Sign (R2-2-1), or other sign as applicable, shall be erected at the beginning of the hazardous grade speed zone and at intervals not greater than 1/4 mile throughout the zone.

(3) A Trucks Over (\_\_\_\_) Lbs. Speed Sign (R2-2-1), or other sign as applicable, with an End Sign (R2-10) mounted above the Trucks Over (\_\_\_\_) Lbs. Speed Sign (R2-2-1) or other sign, shall be installed at the end of the hazardous grade speed limit.

### **§ 212.111. Turn restriction warrants.**

A straight-through or turning movement may be restricted if the movement can be made at an alternate location, and if one or more of the following conditions are present:

(1) A review of vehicle crashes shows that ten crashes have occurred during the previous 3 years, or five crashes have occurred during any 12-month period in the previous 3 years that can be attributed to vehicles making or attempting to make the movement.

(2) When a capacity analysis or field review of the intersection indicates that turning or crossing vehicles are causing unreasonable delays or creating a potential crash situation for through vehicles.

(3) When a field review of the intersection indicates that significant conflicts occur between vehicles making or attempting to make a particular movement and other vehicular or pedestrian movements.

(4) When a field review of the intersection indicates that a turn or straight-through movement delays the platoon of vehicles through a progressive signal system.

(5) When a field review of the intersection indicates that the geometric design or the available corner sight distance does not adequately provide for the movement or the movement frequently cannot be safely executed.

(6) A study shows that the turning movement is frequently being made by through traffic onto a residential street to avoid downstream congestion.

**§ 212.112. Signs to prohibit passing.**

The No Passing Zone Pennant (W14-3) is the primary sign to identify the beginning of a no-passing zone on a two-lane highway and shall be installed on the left side of the road. The Do Not Pass Sign (R4-1) may be installed on the right side of the roadway to supplement the No Passing Zone Pennant Sign (W14-3). The Pass With Care Sign (R4-2) may be installed at the end of the no-passing zone. Warrants for no-passing zones are included in § 212.202 (relating to no-passing zones).

**§ 212.113. One-way streets.**

A one-way street may be established if the following conditions are satisfied:

- (1) The traffic flow can be accommodated in both directions. Whenever possible, an adjacent parallel street should be used to form a one-way couplet.
- (2) The street has a reasonable number of intersections for entrance to or exit from the one-way street or one-way system.
- (3) The roadways at the terminal points of the one-way street provide satisfactory transitions to and from the two-way operation.
- (4) There will be a reduction of intersection delays.
- (5) Existing bus routes can be satisfactorily accommodated.
- (6) Emergency vehicles can reasonably and expeditiously reach their destinations.

**§ 212.114. Stopping, standing and parking restrictions.**

(a) *General.* Stopping, standing or parking may be restricted along the curb or edge of a roadway when one or more of the following conditions exist:

- (1) The distance between the center of the center line pavement markings (or the center of the roadway if center line pavement markings are not present) and the curb or edge of roadway is less than 19 feet on major arterial highways, or less than 18 feet on other roadways.

(2) The street width is such that, if vehicles are parked along one or both curb faces or edges of the roadway, two vehicles cannot move abreast of one another in the same or the opposite direction without one yielding to allow the other vehicle to pass.

(3) A capacity analysis indicates that parking should be removed at all times or during certain hours to accommodate the traffic volume.

(4) At an intersection, the available corner sight distance for a driver on the minor road is less than the necessary minimum stopping sight distance value for the driver on a through roadway.

(5) An analysis of vehicle crashes indicates that at least three crashes during the previous 3-year period have been directly or indirectly attributed to one of the following primary causes:

(i) Vehicles parking on the roadway.

(ii) Vehicles entering or leaving the parked position.

(iii) Drivers or passengers getting out of parked vehicles on the street side.

(iv) Reduced sight distance due to the parked vehicles.

(6) The area is designated as an official bus stop or as a loading and unloading zone.

(7) The area is adjacent to or opposite of a fire station driveway or any other type driveway or intersection where turning maneuvers would be restricted if parking were present.

(8) The width of the shoulder is not sufficient to allow a vehicle or its load to park completely off the roadway.

(9) Along roadways having three or more lanes and speed limits of 40 miles per hour or above, parking may be restricted to allow vehicles to use the berm or shoulder as a clear recovery area.

(b) *Angle parking*. As defined in § 212.1 (relating to definitions), angle parking will only be authorized as follows:

(1) New angle parking may be established only along streets where the following criteria are satisfied:

(i) The parking and maneuver area, as shown in the diagram which follows, adjacent to the near edge of the nearest travel lane equals or exceeds the distance indicated in the following table:

<b>Parking Angle (degrees)</b>	<b>Parking and Maneuver Area (feet)</b>
30	26
45	30
60	37
90	43

(ii) Parked vehicles do not adversely affect the available corner sight distance.

(iii) Additional travel lanes are not required for the existing traffic volumes to achieve a satisfactory level of operation.

(iv) Parking stalls will be adequately marked and spaced.

(v) Pedestrian activity is minimal within the parking maneuver area.

(2) It is recommended that existing angle parking be eliminated if an analysis of vehicle crashes indicates that the parking-related crash rate within the area of existing angle parking is greater than the rate on similar portions of the same street or other streets within the same municipality which have parallel parking.

(c) *Parking meters.* When parking is permitted, local authorities may install parking meters and appropriate pavement markings to designate parking stalls. The hours of effectiveness of parking meters must be indicated either on the meter or within the dome of the meter, but official traffic signs shall be erected to indicate hours when parking is prohibited.

(d) *Prohibition of kinds and classes.* When parking is permitted, local authorities or the Department may prohibit certain kinds and classes of vehicles from parking for safety, capacity or environmental reasons. Official signs must indicate the prohibitions.

(e) *Parking reserved for persons with disabilities.* The Reserved Parking Penalties Sign (R7-8f) shall be installed below all Reserved Parking Signs (R7-8), as provided in [75 Pa.C.S. § 3354\(d\)](#) (relating to handicapped persons and disabled veterans).

(f) *Miscellaneous restrictions.*

(1) Local authorities or the Department may restrict or regulate parking without an engineering and traffic study to accomplish the following:

- (i) Facilitate construction, maintenance or utility operations.
- (ii) Eliminate long-term parking or parking in excess of a specified time limit.
- (iii) Provide for reserved parking spaces.
- (iv) Provide for snow emergency routes.
- (v) Provide for mail delivery or pickup.

(2) Restrictions for the elimination of long-term parking must apply only during short periods of time such as early morning hours when it will not seriously inconvenience local residents.

(g) *Double parking.* When parking is permitted, local authorities may, by local ordinance without an engineering and traffic study, authorize double parking (standing or parking on the roadway side of a vehicle stopped or parked at the edge or curb of a roadway) for the purpose of loading or unloading persons or property. On State-designated highways, double parking is not permitted without written approval of the Department.

(h) *Authority.* Local authorities may establish, revise or remove stopping, standing or parking restrictions on State-designated highways within their physical boundaries, except Department approval is required prior to revising or removing any of the following:

- (1) Established in conjunction with a State or Federal aid project.



- (2) Requested or posted by the Department for safety or capacity reasons.
- (3) Included as a condition on a traffic signal permit.

**§ 212.115. Posting of private parking lots.**

(a) *General.* Posting of private property, including parking lots, giving notice to the public of parking restrictions as required by [75 Pa.C.S. §§ 3353\(b\)\(2\) and 3354\(d\)\(3\)](#) (relating to prohibition in specified places; and additional parking regulations) must be in accordance with this section.

(b) *Public notice signs.*

(1) The legend on public notice signs at private parking lots must indicate the restrictions which apply. In addition to a primary restriction such as those contained in subparagraph (i), the sign may contain one or more supplemental restrictions or messages of the type included in subparagraph (ii).

(i) Primary restrictions include messages such as private parking, parking by permit only, authorized parking only, private parking for (\_\_\_\_) apartment and parking only for patrons of (\_\_\_\_).

(ii) Secondary restrictions or messages may include applicable hours of the day, applicable days of the week, applicable charges and warnings that unauthorized vehicles may be towed.

(iii) The name and telephone number of the owner or other person in control or possession of the property should also be included on the legend.

(2) Public notice signs should be erected at each entrance to the private parking lot and positioned so as to face traffic entering the lot. If there are no designated entrances--such as when a lot has one or more sides continuously open to a roadway--one or more signs should be erected so as to be readily visible to an ordinarily observant driver. Minimum message size shall be as follows:

(i) A primary restriction as defined in paragraph (1)(i) must have a minimum letter height of 3 inches. Signs erected at a distance of more than 75 feet from an entrance point must have letter height which is at least one additional inch in high for each 25-foot interval in the distance. The stroke width of the legend must be a minimum of 1/8 of the required height of the legend.

(ii) A secondary restriction as defined in paragraph (1)(ii) must have minimum dimensions equal to one-half of the minimum dimensions required for the primary restriction, except the letter height must be at least 2 inches.

(3) Signs which have application during hours of darkness must have a retroreflectorized sign message or background and be positioned so as to be illuminated by the headlight beams of entering vehicles, or the sign may be illuminated during applicable hours of darkness so as to be readily visible to an ordinarily observant driver.

(4) Under [75 Pa.C.S. § 3353\(b\)](#), the prosecution of an owner or towing a vehicle from a private parking lot is prohibited unless restrictions are posted in accordance with this subsection.

(c) *Reserved parking signs or markings.*

(1) Special signs may be used to reserve designated parking stalls for named persons or classes of people, for particular vehicles, or for persons with special placards or assigned permit numbers. When used, these signs may be erected at the front of each parking stall or, in the case of parallel parking, at intervals not exceeding 100 feet along the side of the stalls. The minimum size sign must be 12 inches by 12 inches, and the minimum size message must be 2 inches in height.

(2) In lieu of signs to designate parking stalls as noted in subsection (a), pavement markings may be used on the pavement or an applicable curb for this purpose if:

(i) The public notice sign indicates that a permit is required.

(ii) The markings are readily visible to an ordinarily observant driver.

(3) The Reserved Parking Sign (R7-8) shall be used to designate reserved parking stalls for handicapped persons or severely disabled veterans. The Reserved Parking Penalties Sign (R7-8f), which indicates the minimum and maximum fine for violators and that violators may be towed, shall be installed below the Reserved Parking Sign (R7-8).

(4) Parking stalls designated under paragraph (3) for handicapped persons or severely disabled veterans may only be used by vehicles bearing a handicapped person or severely disabled veteran registration plate or displaying a handicapped person or severely disabled veteran parking placard issued by the Commonwealth or another state.

(5) Whenever signs required to implement the provisions of paragraph (3) become either obsolete or missing, they must be replaced with new official signs as rapidly as is feasible. The costs associated with the installation and replacement of the required signs for a particular location must be borne by the owner or person in control or possession of the property on which the signs are to be erected.

**§ 212.116. No Turn on Red Sign (R10-11 sign series).**

(a) *Warrants for no-turn-on-red restrictions.* The following warrants may be used in addition to the warrants for no-turn on red restrictions in the [MUTCD](#) (relating to traffic signal signs).

(1) A right turn on red, or left turn on red from a one-way highway to another one-way highway, may be prohibited from an intersection approach where an engineering and traffic study indicates that one or more of the following conditions exist:

- (i) The available corner sight distance between a driver desiring to turn on red and an approaching vehicle on the cross street is less than the minimum shown on the following table:

<b><i>Minimum Sight Distance to Approaching Vehicle*</i></b>							
<b><i>Speed Limit or 85th Percentile Speed</i></b>	<b>Std.</b>	<b><i>Cross Street Approach Grade</i></b>					
	<b>Values</b>	<b>-9%</b>	<b>-6%</b>	<b>-3%</b>	<b>3%</b>	<b>6%</b>	<b>9%</b>
25	152	173	165	158	147	143	140
30	197	227	215	205	200	184	179
35	247	287	271	257	237	229	222
40	301	354	333	315	289	278	269
45	360	427	400	378	344	331	320
50	424	507	474	446	405	388	375
55	493	593	553	520	469	450	433

\* Measure sight distance from a location 10 feet before a marked pedestrian cross walk or, if none, 10 feet from the edge of the cross street roadway or curb line, where both the eye and the approaching vehicle are 3.5 feet high.

(ii) The intersection has more than four approaches or has restrictive geometry that is likely to cause vehicular conflicts which are not easily recognized by drivers.

(iii) The turning movement is allowed from more than one lane on a specific approach.

(iv) The vehicular turning movement would result in significant vehicular and pedestrian conflicts, such as locations where the crosswalk is designated as a school crossing or is used by large numbers of children, senior citizens or persons with physical disabilities. A no-turn-on-red restriction at these locations may only apply during the time periods that significant vehicular-pedestrian conflicts would occur, in accordance with paragraph (3).

(v) Opposing traffic has unusual movements, such as double left turns, which would not be expected by drivers turning on a red signal.

(vi) An analysis of vehicle crash data indicates that the turn-on-red movement has created an unsafe condition.

(2) Part-time or intermittent prohibition of the turn-on-red movement must be used at locations where a potential safety concern exists for only a portion of the day. These restrictions must be implemented by the use of one or more of the following:

(i) A Restricted Hours Panel (R10-20A) under the No Turn On Red Sign.

(ii) A supplemental message incorporated directly into the No Turn On Red Sign.

(iii) A sign designating the hours the restriction is effective.

(iv) A blank-out No-Turn-On-Red Sign.

(3) A part-time or intermittent prohibition of the turn-on-red movement may be used at an intersection approach where vehicles turning on red would cross an at-grade railroad crossing within 200 feet and the traffic signal controller is preempted during train movements during the time the signal controller is preempted in accordance with paragraph (2).

(b) *Application.* This section applies to signalized roadway and driveway intersections along all highways.

(c) *Engineering and traffic studies.* Engineering and traffic studies required by subsection (a)(1) shall be conducted by local authorities. The Department will be responsible for conducting the study at the following locations:

(1) At intersections where the traffic signal controller is preempted during train movements for a nearby crossing.

(2) At new or revised traffic signal installations when the traffic signal is designed by the Department.

(d) *Department approval.* Written approval of the Department's district executive shall be obtained prior to installation of a No Turn on Red Sign (R10-11 Series) at any intersection where the Department has issued the traffic signal permit.

## § 212.117. Weight, size and load restrictions.

(a) *Weight restriction based on condition of bridge.* Traffic on a bridge may be prohibited or restricted by weight of vehicle, number of vehicles, or kinds or classes of vehicles when an engineering evaluation conducted by a professional engineer establishes the need. Engineering evaluation of a bridge or bridge component may be based on structural analysis and rating computations, testing, engineering judgment or a combination thereof. Restriction is warranted when one or more of the following conditions are present:

(1) The safe load capacity of the bridge is exceeded by the load effect of any of the legal load configurations. The capacity and load effects are to be determined in accordance with the *Bridge Safety Inspection Manual* ([Department Publication 238](#)).

(2) Engineering judgment indicates that the condition or material of construction of one or more portions or components of a bridge is such that further use by heavy vehicles may damage the bridge because of severe impact, fatigue or other reasons.

(3) The bridge is damaged due to fire, a vehicle crash or environmental deterioration, and engineering judgment indicates that a vehicle weight restriction is necessary to ensure an adequate level of safety.

(b) *Weight restriction based on condition of highway.* Traffic on a highway may be prohibited or restricted by weight of vehicle, or kinds or classes of vehicles when warranted by an engineering evaluation. Engineering evaluation may be based on structural analysis, testing, engineering judgment or a combination thereof. A restriction is warranted when one or more of the following conditions are present:

(1) The highway pavement or shoulders have inadequate structural capacity or have been weakened due to deterioration, high traffic volumes or climatic condition, and may be seriously damaged unless a restriction is imposed.

(2) An engineering evaluation of previous similar climatic conditions on the highway or on similar highways indicates that vehicles over a certain weight should have been prohibited.

(c) *Size restriction based on condition of bridge or highway.* Traffic on a bridge or highway may be restricted by size of vehicle or kinds or classes of vehicles when, after an engineering evaluation, one or more of the following conditions are found to be present:

(1) A bridge has poor alignment, substandard horizontal or vertical clearance, or creates problems for vehicles with low ground clearance, or the restriction is otherwise necessary to protect the bridge from vehicle crashes or damage.

(2) A highway has inadequate turning radii, horizontal width or creates concerns for vehicles with low ground clearance at one or more locations.

(d) *Weight and size restrictions based on traffic conditions.* Traffic on a highway or bridge may be prohibited or restricted by weight or size of vehicle, or kinds or classes of vehicles when, an engineering evaluation of the horizontal and vertical alignment, prevailing traffic speeds, compatibility of the various types of traffic, history of vehicle crashes or vehicular characteristics, indicates that the movement of certain vehicles constitutes a safety hazard. Restrictions may include weight; height, width or length of vehicles or their loads; types of cargo; speed or gearing; stopping requirements; specified travel lanes; and hours of operation.

(e) *Erection of signs.* Appropriate signs shall be erected within 25 feet of each end of a restricted portion of a highway or bridge whenever vehicles are prohibited under subsection (a), (b), (c) or (d). In the case of a restriction on a highway or bridge which does not begin or end at an intersection with an unrestricted highway, an advance information sign shall also be erected at the intersection nearest each end of the restricted highway or bridge to allow drivers to avoid the restricted highway or bridge.

(f) *Alternate routes.* An alternate route shall be established whenever vehicles are prohibited under subsection (a) or (b) on either a numbered traffic route or a State-designated highway on the National Highway System, as established by the Federal Highway Administration, when the following apply:

(1) A reasonable alternate route exists which is not readily perceived by drivers.

(2) The alternate route can legally, safely, structurally and physically accommodate the weight and size of vehicles and their loads that are being detoured.

(3) Five or more vehicles per day are estimated to be prohibited from using the original route.

**§ 212.118. Street name signs.**

For street name signs, white lettering on a green background is recommended, but local authorities may use white lettering on blue or brown background, or black lettering on white background, provided the same colors are used systematically throughout the municipality. To improve sign legibility, upper and lower case lettering is recommended.

**§ 212.119. Signing of named highways.**

Signs carrying the name of the highway will be permitted at intervals of at least every 15 miles on conventional highways.

**§ 212.120. General motorist service signs.**

The application of general motorist service signs shall be in accordance with the Department's Statewide policy and the *Signing and Marking Standards* (Department Publication 111M), and will be limited to expressways and freeways, except:

(1) Small trailblazer signs shall be installed on conventional highways when motorist services are signed on an expressway or freeway and it is necessary to guide motorists along conventional highways to the physical site of the motorist service.

(2) Hospital symbol signs are permitted on all highways.

**§ 212.121. Specific service signs.**

(a) The Department may enter into an agreement with a private agency to administer a program for specific service signs for gas, food, lodging, camping and attractions. Specific service signs may only be installed on freeways, except small trailblazer signs shall be installed on conventional highways when it is necessary to guide motorists to the physical site of the specific service. If a trailblazer is required on a local roadway to direct motorists to a specific business, and the local authority refuses to allow the trailblazer on its local highway, specific service signs may not be provided for that business.

(b) Airports may be signed on either major guide signs or on specific service signs at freeway-to-freeway interchanges.



**§ 212.122. Recreational and cultural interest area signs.**

Recreational and Cultural Interest Area Signs, as described in Chapter 2H of the MUTCD, that is, relating to the RG, RM, RA, RL, RW and RS Series signs, will be authorized for use within any State park, State forest picnic area, Federal recreation area, National forest or public park.

**§ 212.123. Tourist-oriented directional signs.**

Tourist-Oriented Directional Signs (D7-4) must be of the size and type specified in the Department's *Handbook of Official Signs* (PennDOT Publication 236M) or as specified in an agreement with the Department, instead of the design included in [Chapter 2G of the MUTCD](#) (relating to tourist-oriented directional signs). The Department may enter into an agreement with an outside entity to administer a program for tourist-oriented directional signs.