



SECTION 617

CONCRETE TRAFFIC BARRIER

SECTION 617.10 PERMANENT CONCRETE TRAFFIC BARRIER

617.10.1 Description. This work shall consist of constructing permanent concrete traffic barrier as shown on the plans or as directed by the engineer. For purposes of this specification, permanent concrete traffic barrier will be defined as Type A, B, C, D or any modification of these types.

617.10.2 Material. All reinforcing steel shall be Grade 60 deformed bar, and all reinforcing steel and dowels shall be epoxy coated. All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section/Specification
Reinforcing Steel for Concrete	1036
Concrete Curing Material	1055
Dowel Bars	1057
Preformed Fiber Expansion Joint Material	1057
Joint Sealer	1057
Joint Filler	1057
Prestressing Strands	AASHTO M 203

617.10.3 Construction Requirements.

617.10.3.1 Permanent concrete traffic barrier shall be constructed of Class B or B-1 concrete. Concrete shall be air-entrained with 28-day compressive strength of 4000 psi (28 MPa). Material, proportioning, air-entraining, mixing, slump and transporting shall be in accordance with [Sec 501](#). Concrete shall be placed and finished in accordance with [Sec 703](#). Permanent concrete traffic barrier shall be cured in accordance with [Sec 502](#).

617.10.3.2 Permanent concrete traffic barrier shall be constructed using an extrusion machine or forms specifically designed for constructing cast-in-place reinforced concrete traffic barrier. Precast units will not be permitted. Barriers that do not exhibit a consistent surface shall be corrected to the satisfaction of the engineer.

617.10.3.3 When extruded construction is used, station numbers shall be indented into the 10-inch (250 mm) high sloped face of the Type A and B barrier and 10 inches (250 mm) above the base of Type C and D barrier in accordance with [Sec 502](#). Station numbers will not be required in the pavement when placed on the concrete traffic barrier.

617.10.3.4 For retrofit installation, dowels shall be installed in accordance with [Sec 1039.30](#).

617.10.4 Method of Measurement. Final measurement will not be made except for authorized changes during construction, or where appreciable errors are found in the contract quantity. The revision or correction will be computed and added to or deducted from the contract quantity. Where required, measurement for each type of permanent concrete traffic barrier, including barrier height transitions, will be made to the nearest 1/2 linear foot (0.1 m)

for each continuous length and totaled to the nearest linear foot (0.5 m) for the sum of the lengths.

617.10.5 Basis of Payment. Accepted permanent concrete traffic barrier will be paid for at the contract unit price for each of the types specified in the contract. No direct payment will be made for reinforcing steel, dowels, joint filler material, and sawed joints.

SECTION 617.20 TEMPORARY TRAFFIC BARRIER

617.20.1 Description. This work shall consist of furnishing, installing, relocating and removing temporary traffic barrier as shown on the plans or as directed by the engineer. For purposes of this specification, temporary concrete traffic barrier will be defined as Type F concrete traffic barrier or approved alternate barrier system that meets NCHRP 350 criteria and has FHWA acceptance.

617.20.2 Material. All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section/Specification
Temporary Traffic Barrier	1064
Anchor Bolts	ASTM A 307

617.20.2.1 New temporary traffic barrier will not be required; however, barrier shall be in a serviceable condition during installation and relocation as determined by the engineer.

617.20.2.2 Two-loop or three-loop temporary Type F concrete traffic barrier may be used at the option of the contractor.

617.20.2.2.1 For two-loop style temporary traffic barrier, as well as two-loop and three-loop styles used in combination, the bottom washer, retainer bolt and nut will be required. Visual cracks in the loop steel will be cause for rejection of the barrier unit by the engineer.

617.20.2.2.2 Existing two-loop concrete barrier owned by contractors or previously accepted two-loop concrete barrier in a manufacturer's stockpile (inventory) will be allowed for use on MoDOT projects if:

- (a) The barrier was fabricated prior to January 1, 2004.
- (b) Either the MoDOT acceptance stamp is legible on the barrier or certification is provided by the contractor stating that the barrier was fabricated prior to January 1, 2004, and in accordance with MoDOT specifications.
- (c) The barrier is in acceptable condition.

617.20.2.3 Other types of temporary traffic barrier will be allowed if the barrier has been approved in accordance with [Sec 1064](#) and meets the project specific need as approved by the engineer.

617.20.3 Certification. The contractor shall provide to the engineer a barrier manufacturer's certification that the barrier furnished is in accordance with the contract documents prior to use.

617.20.4 Construction Requirements.

617.20.4.1 As directed by the engineer, damaged units shall be immediately replaced and removed from the right of way at the contractor's expense.

617.20.4.2 All barrier sections shall remain the property of the contractor unless specified otherwise in the contract.

617.20.4.3 Equipment or material shall be stored a minimum of 4 feet (1.2 m) away from loop system Type F temporary concrete traffic barrier. For other temporary barriers approved for use, equipment or material shall be stored no closer than the maximum deflection that occurred during NCHRP 350 impact tests or specified by the manufacturer.

617.20.4.4 Temporary concrete traffic barrier shall not be anchored unless shown on plans or approved by the engineer. Anchoring of Type F temporary concrete traffic barrier shall be as shown on the plans. Other types of temporary traffic barrier shall be anchored in accordance with the manufacturer's recommendations.

617.20.5 Method of Measurement. Measurement of temporary traffic barrier and relocated temporary traffic barrier will be made to the nearest 1/2 linear foot (0.1 m) for each continuous length and totaled to the nearest linear foot (0.5 m) for the sum of the lengths. Measurement of temporary traffic barrier height transitions and relocated temporary traffic barrier height transitions will be made per each.

617.20.6 Basis of Payment. Accepted temporary concrete traffic barrier and temporary concrete traffic barrier height transitions will be paid for at the contract unit price for each of the pay items included in the contract. Accepted relocated temporary concrete traffic barrier and relocated temporary concrete traffic barrier height transitions will be paid for at the contract unit price for each of the pay items included in the contract.

SECTION 617.30 TRAFFIC BARRIER DELINEATORS

617.30.1 Description. This work shall include furnishing, installing and maintaining retroreflectorized traffic barrier delineators as shown on the plans or as designated by the engineer.

617.30.2 Material. All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Specification
Delineators	1065

617.30.3 Construction Requirements.

617.30.3.1 Delineators shall be placed on all traffic barrier spaced at 50-foot (15 m) intervals.

617.30.3.2 Delineator reflector colors shall correspond with pavement marking. Delineators shall be sheeted on one side, facing oncoming traffic, unless otherwise specified. Where permanent concrete traffic barrier divides opposing lanes of travel, the delineators shall have retroreflective sheeting on both sides corresponding to adjacent pavement marking.

617.30.3.2.1 Delineators mounted on permanent concrete traffic barrier shall be anchored with galvanized mechanical fasteners that prevent movement in accordance with the manufacturer's recommendations.

617.30.3.2.2 Delineators mounted on temporary concrete traffic barriers shall be mounted to the traffic barrier in accordance with the manufacturer's recommendations.

617.30.3.3 Any damaged or missing delineators shall be replaced by the contractor at the contractor's expense.

617.30.4 Basis of Payment. No direct payment will be made for traffic barrier delineators provided on new permanent concrete traffic barrier or temporary traffic barrier. Delineators specified for installation on existing permanent concrete traffic barrier will be measured and paid for per each.