

**SECTION 18.00**  
**GENERAL CLAUSES**  
**IMPACT ATTENUATION SYSTEMS**

**18.00.01--Description:** This item shall consist of furnishing a vehicular Impact-Attenuation System in accordance with the specifications herein and in conformity to the design, line, grades and dimensions shown on the plans or as directed by the Engineer. This work shall also include construction of related structures required for the system.

**18.00.02--Performance Criteria:** The performance criteria of these devices shall conform to the requirements set forth in NCHRP Report 350. In lieu thereof, the Contractor shall present documentation of system performance to demonstrate to the Engineer that the proposed system will perform the intended function with minimum maintenance.

**18.00.03--Materials:** In general, all materials shall be furnished new. The material composition, mass and size and specified hardware shall conform to the requirements of the project plans and pertinent manufacturer's specifications. If the system is not furnished new, the Contractor shall document and/or demonstrate to the Engineer that the system conforms to the requirements of a new system. The Contractor shall submit a materials certificate or certificate of compliance for each system in accordance with 1.06.07.

**18.00.04--Failure to comply:** In the event that, in the judgement of the Engineer, impact attenuation systems are not maintained adequately and/or safely on any part of the project, or the Contractor does not move or relocate traffic control devices to meet construction requirements for the safety of the public when directed to do so by the Engineer, on any day, the sum of \$250.00 per day will be deducted from any money due the Contractor as a charge for failure to comply with this specification.

**18.00.05--Designation of Impact-Attenuator System:** Impact-Attenuation Systems shall be designated by Type as follows:

- Type A Sand-filled Plastic Modules
- Type B Crushable Foam Cartridges
- Type C Crushable Steel Cylinders
- Type D Portable System

**18.00.06--Delineation of Impact-Attenuation Systems:** All impact-attenuation systems shall have an appropriate Type 3 Object Marker attached to its nose unless a delineator has been provided by the manufacturer. The object marker shall be attached to the nose, front cylinder or front module by the use of bolts or vandal resistant hardware. The object marker shall be paid for in accordance with Section 9.30.