

**New Hampshire Department of Transportation  
Bureau of Materials & Research**

**Qualified Products List (QPL) – Qualification Criteria**

**Section 606 - Guardrail, NHDOT Specifications**

**QPL Category: 606.B. ITEM 606.9512 – Temporary Impact Attenuation Device (Redirective), Test Level 2**

**QPL Category: 606.C. ITEM 606.9513 – Temporary Impact Attenuation Device (Redirective), Test Level 3**

**QPL Category: 606.D. ITEM 606.9522 – Temporary Impact Attenuation Device (Non-redirective), Test Level 2**

**QPL Category: 606.E. ITEM 606.9523 – Temporary Impact Attenuation Device (Non-redirective), Test Level 3**

**Device Requirements**

Device Description

Temporary impact attenuation devices for traffic control shall be capable of attachment to, or placement in front of, concrete barriers (median barriers, roadside barriers, or bridge railings) or other rigid fixed objects such as bridge piers to prevent an errant vehicle from impacting fixed objects by gradually decelerating the vehicle to a safe stop or by redirecting the vehicle away from an obstacle.

Laboratory Test Performance

Temporary impact attenuation devices for traffic control manufactured **prior to January 1, 2020** and designed to meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 or American Society of State Highway Transportation Officials Manual (AASHTO) Manual for Assessing Safety Hardware 2009 (MASH 2009) at a minimum Test Level 2 [70 km/h (43.5 mph)] or Test Level 3 [100 km/h (62.1 mph)] as specified in the item description, may be used throughout their service life.

Temporary impact attenuation devices for traffic control manufactured **after December 31, 2019** shall be designed to meet the requirements of the AASHTO Manual for Assessing Safety Hardware 2016 Edition (MASH 2016) at a minimum of Test Level 2 [43.5 mph] or Test Level 3 [62.1 mph] as specified in the item description.

It is intended that these qualification criteria also provide a basis for qualifying devices that can stand up to the rigors of winter weather and maintenance operations.

**Required Submissions**

*Only complete device submittal packets will be considered for review.*

The following documents shall be included in the on-line submittal for review by the Department's Product Evaluation Unit (PEU) in consideration of qualifying the device for inclusion in the QPL:

QPL Product Submittal Form

The submitted form must be the current, on-line version of the form, and must be completely filled out. It can be accessed here: <https://www.nh.gov/dot/org/projectdevelopment/materials/research/products.htm>.

Letter of Compliance

A Notarized letter on the manufacturer's letterhead affirming the device meets all Department requirements described herein.

Device Literature

Literature that is relevant to evaluation of the device.

### List of Other Users

A list of State transportation agencies that use or allow the use of the submitted device. As these devices must stand up to winter maintenance activities, the States submitted shall be those with climates similar to New Hampshire.

### Design Criteria

Data that includes the overall length and width, the number of bays or modules, connection details, the point at which redirection is provided (where length of need is established on the device), the performance category (redirective or non-redirective), maximum design speed, and the NCHRP or MASH test level the attenuator was tested to.

The Department will review the submitted information to evaluate device characteristics related to design and maintenance requirements including, but not limited to the following:

- Apparent durability and ability to stand up to winter maintenance activities.
- Ability to attach to both beam guardrail and concrete barrier

### U.S. Department of Transportation Federal Highway Administration (FHWA) Eligibility Letters or Other Appropriately Accredited Laboratory Crash Test & Crash Test Results

Submittals without these letters or crash test results attached will not be reviewed.

### **Laboratory Crash Testing**

The Department will review the submitted, required, laboratory crash test results. Laboratory testing shall be conducted by an ISO 17025 Accredited testing laboratory as required by the MASH.

Test results must be submitted on the testing laboratory's letterhead and the documentation demonstrating that the device meets these requirements must be legible and current.

### **Device Performance Monitoring/Removal from QPL**

The device's field performance and technical data will be monitored by the Department. If either fails to meet the criteria noted herein, the device will be immediately removed from the QPL without notice to the manufacturer.

### **Changes to Name, Manufacturer, or Design, of a Currently-Listed QPL Device**

The PEU shall be contacted immediately when a change to any of the following is made to a device currently listed in the QPL:

- Name
- Manufacturer
- Design

For a change in the device name and/or manufacturer, the device will remain in the QPL reflecting that change only upon receipt of verification from the current or new manufacturer attesting the device design is unchanged. Verification shall consist of a letter signed by the manufacturer's representative.

Devices with design changes will not continue to be listed in the QPL.

If at any time it is determined that a device name, manufacturer, or design has changed without the required notification to the PEU, the device is subject to immediate removal from the QPL at the discretion of the PEU. The device will not be re-listed in the QPL until the manufacturer provides complete, updated information.

### **QPL Expiration Date**

Service life is defined as 6 years for the NCHRP 350 and MASH 2009 eligible devices. Their use and QPL listing shall be discontinued after December 31, 2025.

Service life, use, and QPL listing for the MASH 2016 eligible devices shall be as deemed suitable by Department engineers.

### **Device Marking and Labeling**

The manufacturer and model information shall be clearly marked on each device.

**Limitations**

The Department continues to evaluate its qualification criteria as well as devices that have been qualified against them, and reserves the right to revise the criteria and/or withdraw device qualification at any time for any reason without notice. Qualification of a device does not constitute an endorsement of the device, nor does it imply intent to purchase or specify the device.

**Qualification Criteria Approved by:**

Chief of Materials Technology, Materials & Research, on

Bureau Administrator, Materials & Research, on