

Maine Department of Transportation

Highway Program

Design Guidance

Title: Crash Cushions

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Discipline: General Engineering

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Originators: Atlee Mousseau, P.E.,
Duane Brunell, P.E.

Approved By: Bradford Foley, P.E.

Background:

The Department has developed and maintains an extensive list of qualified crash cushions and attenuators to cover a variety of applications. All systems on this list meet current crash test criteria and may be used on MaineDOT projects. Crash cushions typically fall into one of three general categories: Sacrificial Crash Cushions, Reusable Crash Cushions, and Low Maintenance and/or Self-Restoring Crash Cushions. This guidance will provide direction on which category of crash cushions is appropriate for various situations.

Guidance:

Definitions

Sacrificial Crash Cushions

System designed for a single impact. The major components of these systems are typically destroyed on impact and need to be replaced.

Reusable Crash Cushions

System with major components that may survive impact and be salvaged for reuse. Some components may need to be replaced after an impact in order to make the repaired system crashworthy.

Low Maintenance and/or Self-Restoring Crash Cushions

System designed to suffer little, if any, damage on impact and can be easily pulled back into full operating condition. No system is completely maintenance free. Devices in this category are not guaranteed to be both low maintenance and self-restoring.

Systems should be selected from the Department's [Qualified Products List](#).

A Category 1 or 2 system may be selected if the location meets all listed requirements. A Category 3 system should be used at all other locations.

Category 1 - Sacrificial Crash Cushions

- ADT < 10,000 vpd
- Low history or expectation of impacts over the life-cycle of the system
- Offset 10 ft. or more from Edge of Travelway

Category 2 - Reusable Crash Cushions

- ADT < 10,000 vpd
- History or expectation of one or fewer impacts per year
- Offset 10 ft. or more from Edge of Travelway

Category 3 - Low Maintenance and/or Self-Restoring Crash Cushions

- ADT 10,000 vpd or greater
- History or expectation of multiple impacts per year
- Offset < 10 ft. from Edge of Travelway
- Restricted areas where repair operations would significantly impact traffic.
- Gore areas