308.06.02 Crash Cushion

A Crash Cushion's main function is to decrease the magnitude of an accident by absorbing some of the force from an impact. They are effective in gradually slowing down and stopping or safely redirecting errant vehicles in head-on and side impact collisions.

Crash Cushions shall be used to shield hazardous conditions and fixed object hazards that can not be removed, relocated or designed to breakaway. These include ends of bridge barriers, rails and bridge piers in gore areas. Crash Cushions are also commonly used at ends of roadside and median barriers .

Selection Guidelines

The selection criteria for crash cushions differ in each individual case. Engineers must evaluate each hazard and select the most effective and appropriate crash cushion system for that case. Refer to the most recent edition of the AASHTO Roadside Design Guide.

The minimum requirement for a crash cushion system shall have the following characteristics:

- The system shall be able to stop or redirect a colliding vehicle without any debris penetrating the passenger compartment of the vehicle.

- The colliding vehicle shall remain in the upright position and not violently redirected to other traffic.

308.06.03 Placement Recommendations

Crash Cushion systems perform best on relatively flat surfaces. Therefore they shall be installed on hard level surfaces such as portland cement concrete or hot bituminous concrete pads. This allows the crash cushion system to compress uniformly throughout the impact. The path between the roadway and the crash cushions shall be relatively smooth and clear of obstructions. Ideally the vehicle's suspension systems should not be collapsed or extended when it collides with the crash cushions.