

GUARDRAIL INSTALLATION IN URBAN SETTINGS

In Urban settings with design speeds of 70 km/h or less that includes curb or curb and gutter, the use of guardrail is not recommended. Standard CG-2 or CG-6 (150 mm high curb) is usually used for design speeds of 70 km/h or less in urban and suburban areas and is referred to as "barrier curb" because it has a 150 mm vertical face and is intended to discourage motorists from deliberately leaving the roadway. Even when CG-3 or CG-7 (100 mm high mountable curb) is used in Urban settings, it is impractical to install guardrail in an attempt to protect pedestrians walking along sidewalks due to the lack of accessibility caused when placing guardrail and terminals adjacent to accessible routes.

When curbed sections do not include sidewalk or sidewalk space and hazards exist that warrant guardrail, St'd. GR-2 (Strong Post) guardrail (which includes a blockout) should be installed with the face of the rail aligned with the face of the curb. This decreases the possibility of an errant vehicle striking the curb before impacting the guardrail or from snagging the guardrail posts. If possible, to provide maximum offset, the guardrail should be placed 3.3m or more behind the curb for high speed (80 km/h or more) roadways and 1.8m or more behind the curb for low speed (72 km/h or less) roadways. The guardrail height when placed at the curb is measured from the roadway surface. When offset from the curb, it is measured from the ground beneath the rail. St'd. GR-8 (Weak Post) guardrail should not be used adjacent to asphalt or concrete curb.

Sometimes hazards that need to be shielded exist on urban projects with sidewalk/sidewalk space. In situations like this, guardrail can be placed behind the sidewalk/sidewalk space* and in front of the hazard. Examples of such hazards are ponds, steep embankments, etc. When these situations arise, sound engineering judgment should be used in deciding whether/where to place the guardrail. If the hazard is within the clear zone, a barrier would be warranted. The hazards that are outside the clear zone are the items that require an engineering decision based on evaluation of all the elements within the design site.

When a sidewalk or shared-use path transitions from the roadway onto a bridge, guardrail is required if the travelway and the sidewalk or shared-use path are separated by a barrier on the bridge. See detail in RDM, Appendix A, Section A-5 for shared-use paths and IIM-LD-55 for sidewalks.

GUARDRAIL LOCATIONS ON FIELD INSPECTION PLANS

The approximate locations of barriers should be shown on Preliminary Field Inspection plans and discussed at the [Preliminary Field Inspection](#). If the locations are not shown, the type, terminals, and placement should be generally discussed. Maintenance of areas protected by barriers should also be discussed at this time.

* Rev. 1/10