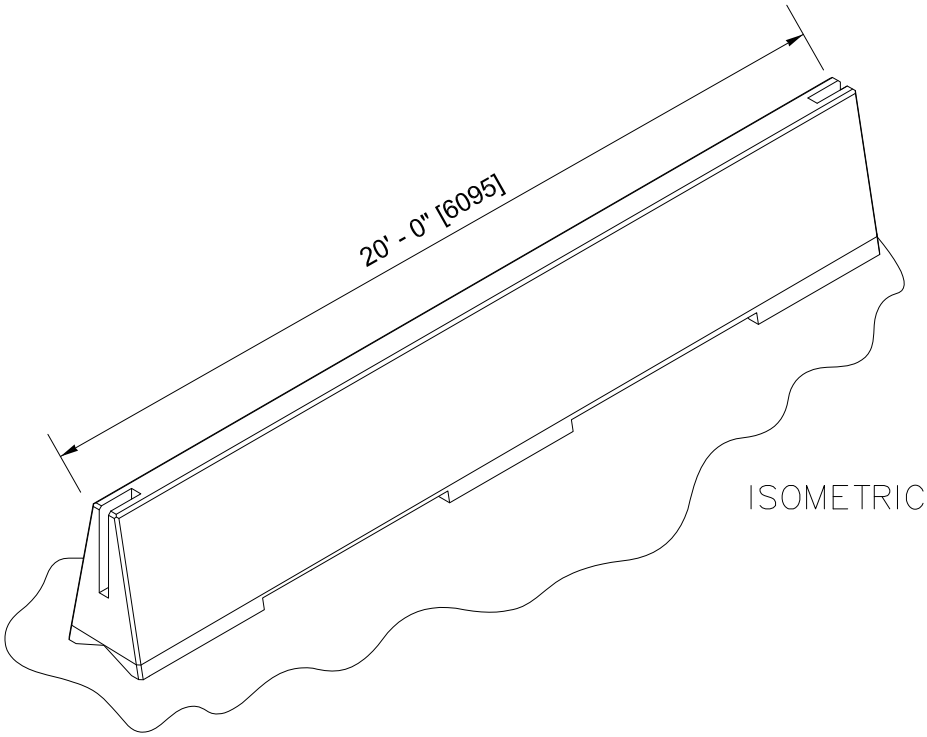
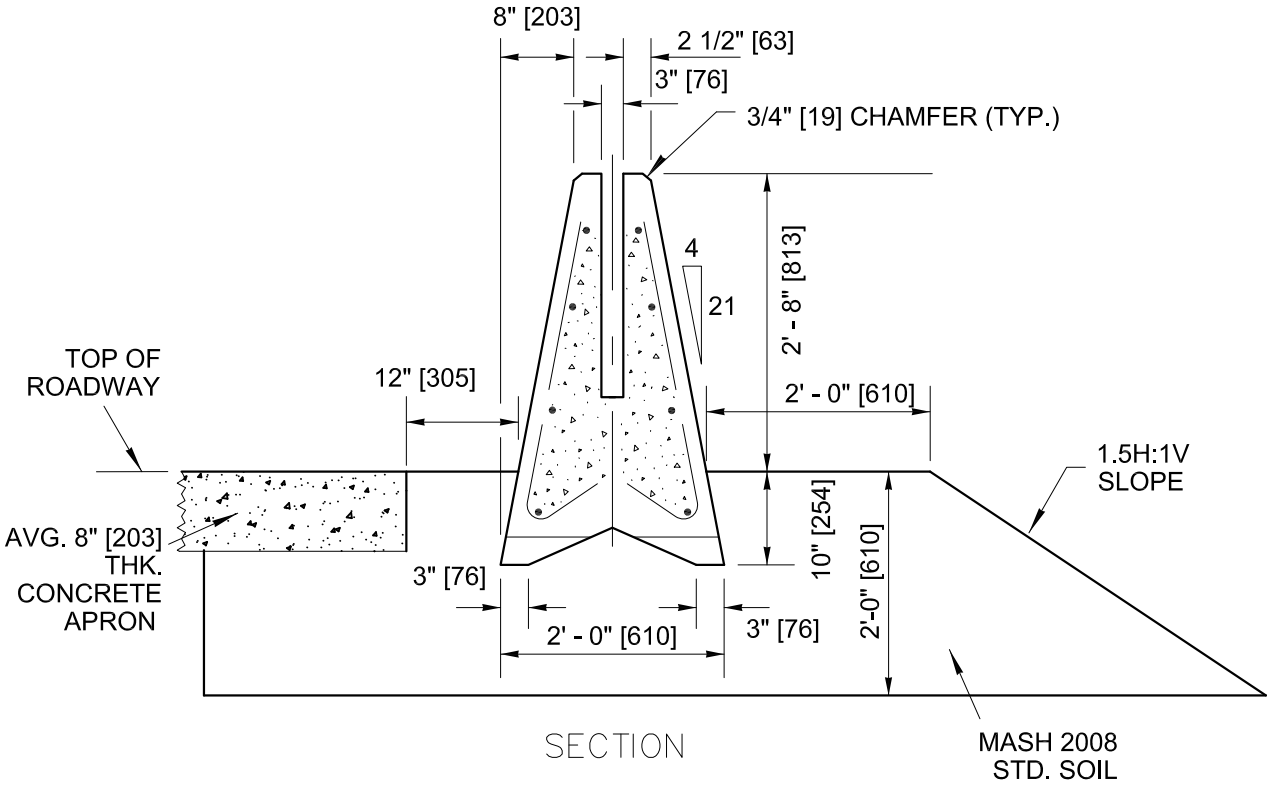


ISOMETRIC VIEW



SECTION

SINGLE SLOPE CONCRETE BARRIER PLACED IN FRONT OF STEEP SLOPE

SGR42

SHEET NO.	DATE:
1 of 3	10/31/2013

INTENDED USE

SGR42 is a MASH Test Level 3 (TL-3) single-slope concrete barrier that may be placed a minimum of 24 in [610 mm] from the field side of the barrier face to the break point of a 1.5H:1V fill slope. The barrier segments are 20 ft. [6.1 m] long, embedded 10 in. [254 mm] in soil, and are connected using the grouted rebar-grid slot connection. The MASH test installation was 100 ft. [30.5 m] long. The single-slope barrier segments are 42 in. [1067 mm] tall, 24 in. [610 mm] wide at the base, and 8 in [203 mm] wide at the top.

For the crash tests, the barrier was embedded in crushed limestone road base material that conforms to MASH standard soil. To embed the barrier to a depth of 2 ft. [610 mm], the native soil adjacent to the testing facility's concrete pavement was excavated. The excavated area was then backfilled with standard MASH soil and compacted in approximately 6 in. [152 mm] lifts. Once the backfill soil reached a level of 10 inches below the concrete pavement surface, the barrier was set in place and further soil was added and compacted in front and back of the barrier. As the soil was backfilled, a 1.5H:1V slope was built into the embankment with the breakpoint located 2 ft. [610 mm] from the field side of the barrier.

A rebar-grid was then dropped into the slot at each barrier connection location. It was comprised of two vertical No. 6 bars that were spaced 10 in. [254 mm] apart, and three longitudinal #8 bars that were spaced 8 in. [203 mm] apart. With the rebar-grid in place, the connection was grouted using a non-shrink grout.

The barrier concrete was specified to have a minimum 28-day compressive strength of 4000 psi [27.5 MPa]. The reinforcing steel was specified to be grade 60. The steel material used for manufacturing the rebar-grid was also specified to be grade 60. The grout used for making the connection was a non-shrink grout which had a minimum compressive strength of 4000 psi [27.5 MPa].

APPROVALS

Federal Highway Administration (FHWA) Acceptance Letter B-225, November 17, 2011.

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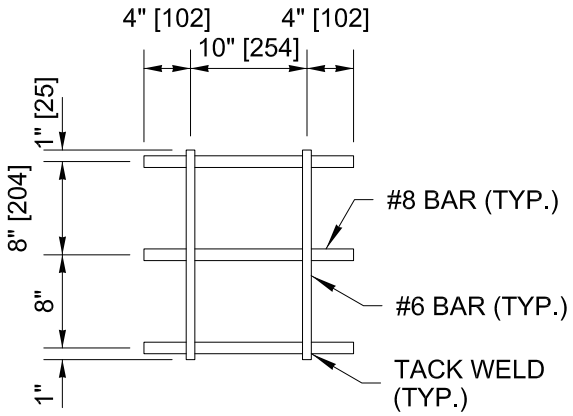
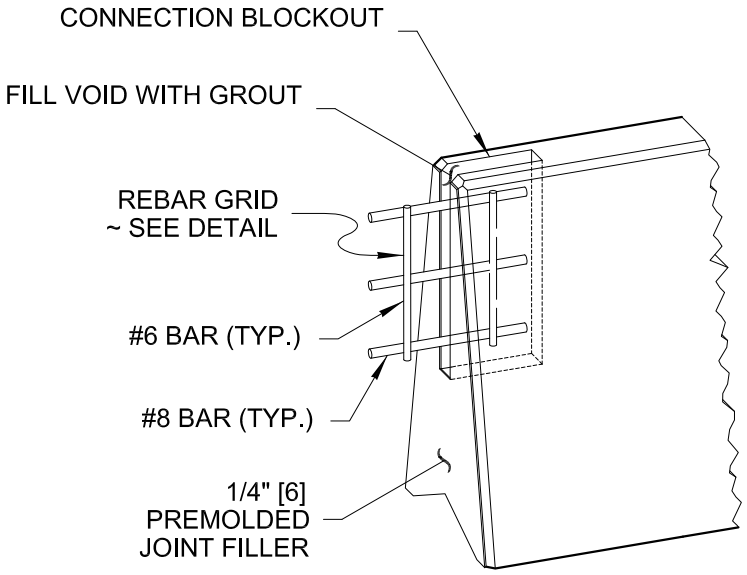
Single Slope Concrete Barrier Placed in Front of Steep Slope

SGR42

SHEET NO.	DATE
2 of 3	10/31/2013



REBAR GRID DETAIL



BARRIER CONNECTION DETAIL

SINGLE SLOPE CONCRETE BARRIER PLACED IN FRONT OF STEEP SLOPE

SGR42

SHEET NO.	DATE:
3 of 3	10/31/2013