(2533) CONCRETE MEDIAN BARRIER, DESIGN 8337
SP2005-196-modified

**If requiring the new barrier design and not pinned (Staked) to the surface:**

The Contractor shall furnish and install portable precast concrete median barriers in accordance with current Mn/DOT Standard Plate No. 8337, these provisions, the Plan details and the following:

All portable precast concrete median barrier shall be placed as shown in the Plans and as directed by the Engineer. The barrier shall not be removed until the Engineer approves the removal.

The implementation dates of Technical Memorandum No. 03-09-C-01 shall not apply to this Contract. Only barrier built using Standard Plate No. 8337B shall be allowed.

The portable precast concrete median barrier shall remain the property of the Contractor until completion of the Project. The Contractor shall arrange for disposal of the barrier outside of the Right of Way at the completion of the Project.

The Contractor shall only place barriers that are deemed to be acceptable.

**To be acceptable**, the barrier section shall meet the following minimum requirements:

- Connecting loops shall be intact and undamaged. In the case of wire rope, there shall be no delamination or missing strands.
- No more than hairline cracking due to handling and wear shall be present.
- Barrier faces and/or ends have areas where surface concrete has been lost, but no area that would affect impacting vehicle travel/direction or overall structural integrity.
- Rebar surface is partially exposed but is not likely to affect impacting vehicle travel/direction or overall structural integrity.
- Finished edges are reasonably square with no loss of concrete and minimal chipping due to wear.

The barrier is **unacceptable** in the following cases:

- Any connecting loops are cracked or, in the case of wire rope, are delaminated or missing strands.
- Barrier section has major cracking that is likely to affect its structural integrity.
- Barrier faces have extensive loss of surface concrete which would affect vehicle travel/direction.
- Finished edges are so worn and rounded that the Type “F” face is no longer well-defined.
- Barrier is delaminated to the point that rebars are completely exposed and are likely to affect impacting vehicle travel/direction or structural integrity.

Additional information regarding acceptable and unacceptable barriers can be found at the website for the Office of Traffic, Security and Operations. Which can be found at:

http://www.dot.state.mn.us/trafficeng/
Refer to Special Provisions 2533 Concrete median Barrier Design 8337B for additional language regarding barrier quality

Barrier in field should be reviewed as a “run” of barrier. There may be situations where adjoining barrier sections present a hazard that would not exist if barrier sections were joined in other locations.

Damaged barrier ends may be placed opposite of traffic (hazard side) in order to present a safe barrier face to motorists.

Particular care should be taken when barrier is placed between traffic carrying (opposed) lanes. Hooking and launching of vehicles is especially dangerous in test cases.

Proper connections between sections are critical. Connections should be proper length to connect to barrier sections through all loops. Cable type loops are particularly prone to problems when improperly pinned, (especially at the bottom loops when barrier sections “close-up”).
Portable Concrete Barriers

Acceptable

Unacceptable
Portable Concrete Barriers

Acceptable

Chipping is marginal and should not cause vehicle hooking
Portable Concrete Barriers

Acceptable

Very minor chipping on this section

This section to the left may not be acceptable

Minor chipping should not cause hooking of impacting vehicle
Portable Concrete Barriers

Acceptable

Not enough concrete loss to cause tipping or lose base stability
Portable Concrete Barriers

Unacceptable

Overall, too much chipping could cause hooking of impacting vehicle

Impacting vehicle could “hook” on exposed end
Portable Concrete Barriers

Unacceptable

Impacting vehicle could “hook” on exposed ends

Barrier is so badly cracked and delaminated that it is no longer effective.
Portable Concrete Barriers

Unacceptable

So much concrete has been lost that the base could tip on impact.

Impacting vehicle could hook wheel/s
Portable Concrete Barriers

Unacceptable

Impacting vehicle could hook on exposed end