**NOTES (NEW JERSEY SHAPE)**

GENERAL: This barrier may be manufactured with reinforcing steel or with welded wire fabric as shown in the ELEVATION and SECTION A-A details. See CMS 622 for additional information. The minimum design strength of the concrete is 4,000 psi and meets the requirements of CMS 499.

Barrier types New Jersey Shape and F-Shape in the same run shall not be mixed.

PORTABLE CONCRETE BARRIER (PCB) do not use the PCB detailed here on bridge deck edges, or similar applications. PCBs, Bridge Mounted, shown in Structural Engineering's Standard Drawing PCB-91, or approved alternative products as shown on the Office of Roadway Engineering's website, shall be used at those locations in accordance with that office's PCBDD Design Data Sheet.

HINGE and REINFORCING BARS use ASTM A 36 for the H x H hinge bars. Use rebars meeting the requirements of CMS 509 ASTM A 515 Grade 60. Wire mesh shall meet CMS 709.10. Black Steel is permitted.

CONNECTING HARDWARE. Bolts, washers and hex nuts are to be galvanized after fabrication per CMS 179.02 and meet the requirements of CMS 710.03 except that the rotational capacity test specified in ASTM A 529 shall be waived.

ALTERNATE BARRIER: Approved Alternate Portable Barrier can be found on the Office of Roadway Engineering's Website.

HANDLING DEVICES: Such devices may be used in lieu of the lifting slot for moving the barrier. They may be of any design sufficient to safely handle the weight of the section being lifted. No handling devices shall protrude from the surface of the barrier when in place.

MARKINGS: All barrier segments are to be marked on the top, as shown, where XX indicates the year casting. If the barrier is cast using welded wire fabric instead of the rebar, WWF to the end of the notation. Permanently impress these markings in the barrier using a minimum of 2" high lettering. The tapered end section is not required to be marked.

On the top of each barrier segment, including tapered end sections, permanently mark a unique identification as to its manufacturer, and somewhere on the barrier, permanently mark the day and month the barrier was manufactured.

REFLECTORIZATION: Install barrier reflectors in accordance with Roadway Engineering Standard Drawing M1204.01, when specified in the plans.

PAYMENT: This barrier is paid for in feet as ITEM 622 - Portable Barrier, 32". Approved alternatives to the barrier shown on this drawing and SCD PCB-91 can be found on the Office of Roadway Engineering's website.

Barrier sections meeting this standard and cost before January 1, 2020, may continue to be used until December 31, 2029, provided the barrier section remains in conformance with the quality standards for temporary traffic control devices and acceptable delineation methods for vehicles.

LEGEND

- 1/2" radius or 1/4" chamfer, all top and end corners.
- Permissible 1/2" radius.
- Permissible 1/2" radius.

**SECTION A-A**

Plan (reinforced casting option shown)

- Reinforcing Steel line with side
- Vertical edges on Lifting Slot may be battered. Depth 2"-1/2".
- Typical Barrier Reflector location, when specified in the plans.

**VIEW B-B**

- Vertical edges on Lifting Slot may be battered. Depth 2"-1/2".
- See MARKINGS Note.
Bar loop inserted through Hinge that Bolts can be easily placed close together so Barriers shall initially be is tightened onto Bolt. Fully open before the Nut Barrier joints shall be tightened onto Bolt. Slot permitted

<table>
<thead>
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<th>Mark</th>
<th>Bar</th>
<th>Shape</th>
<th>Quantity per typ. length</th>
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<td>X501</td>
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<td>9-6&quot;</td>
<td>2</td>
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<tr>
<td></td>
<td></td>
<td>Str.</td>
<td></td>
</tr>
</tbody>
</table>

Connecting Pin Assembly: 1-1/4" dia. High Strength Bolt with Plate Washers (2) and high strength heavy hex Nut, fully threaded.

The Tapered end section is not a crashworthy terminal and should not be used on the approach end of temporary barrier unless it is fully located beyond the clear zone.

Barriers shall initially be placed close together so that Bolts can be easily inserted through Hinge Bar loops.

Barriers shall be fully open before the Nut is tightened onto Bolt.

Barrier joints shall be fully open before the Nut is tightened onto Bolt.
GENERAL: This barrier may be manufactured with reinforcing steel or with welded wire fabric as shown in the ELEVATION and SECTION A-A details. See CMS Item 622 for additional information. Provide cast-in-place concrete with a minimum compressive strength of 3,000 psi and permeability of 2,000 cubicities. Provide uncoated reinforcing steel or welded wire fabric in accordance with CMS Item 609.

Barrier types (New Jersey Shape and F-Shape) in the same run shall not be mixed.

Welded wire fabric with the same bar sizes as shown may be used instead of rebar.

Connecting hardware: Bolts and washers are to be galvanized after fabrication per CMS 710.02 and meet the requirements of CMS 709.10. Black Steel is permitted.


Markings: All barrier segments are to be marked on the top, PCB-XX-MASH-TL3, where XX indicates the year cast. If the barrier is cast using welded wire fabric instead of the rebar, add "WWF" to the marking. Mark the manufacturer and the day and year cast. Permanently mark the day and month the barrier was manufactured.

Handling devices shall protrude from the surface of the barrier when in place.

Drainage/Lifting slot: Such devices may be used in lieu of the lifting slot for moving the barrier. They may be of any design sufficient to safely handle the weight of the section being lifted. No other lifting devices shall protrude from the surface of the barrier when in place.

Surface to be edged when cast: Provide uncoated reinforcing steel or welded wire fabric in accordance with CMS Item 622 for additional information. See CMS Item 622 for additional information.

GENERAL: This barrier may be manufactured with reinforcing steel or with welded wire fabric as shown in the ELEVATION and SECTION A-A details. See CMS Item 622 for additional information. Provide cast-in-place concrete with a minimum compressive strength of 3,000 psi and permeability of 2,000 cubicities. Provide uncoated reinforcing steel or welded wire fabric in accordance with CMS Item 609.

Barrier types (New Jersey Shape and F-Shape) in the same run shall not be mixed.

Welded wire fabric with the same bar sizes as shown may be used instead of rebar.

Connecting hardware: Bolts and washers are to be galvanized after fabrication per CMS 710.02 and meet the requirements of CMS 709.10. Black Steel is permitted.


Markings: All barrier segments are to be marked on the top, PCB-XX-MASH-TL3, where XX indicates the year cast. If the barrier is cast using welded wire fabric instead of the rebar, add "WWF" to the marking. Permanent mark the identification as to its manufacturer. And somewhere on the barrier, permanently mark the year cast. If the barrier is cast using welded wire fabric instead of the rebar, add "WWF" to the marking. Permanently mark the day and month the barrier was manufactured.

Surface to be edged when cast: Provide uncoated reinforcing steel or welded wire fabric in accordance with CMS Item 622 for additional information. See CMS Item 622 for additional information.
NOTES (F-SHAPE)

1. Use this standard for the anchoring of precast concrete barrier on asphalt or portland cement concrete pavement including bridge decks.

2. After removing anchoring pins, clean the pin holes and fill them with non-shrink mortar conforming to CMS 705.22.

3. Refer to the Plans for locations of anchored barriers.

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2. After removing anchoring pins, clean the pin holes and fill them with non-shrink mortar conforming to CMS 705.22.

3. Refer to the Plans for locations of anchored barriers.

* THE MAXIMUM DEPTH FROM THE SURFACE OF THE PCB TO THE END OF THE HOLE SHALL BE 3/4 IN.

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2. After removing anchoring pins, clean the pin holes and fill them with non-shrink mortar conforming to CMS 705.22.

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* THE MAXIMUM DEPTH FROM THE SURFACE OF THE PCB TO THE END OF THE HOLE SHALL BE 3/4 IN.