NOTE (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 H-Shaped. These barrier types shall not be mixed.

PORTABLE CONCRETE BARRIER (PCBDD) is not used. The PCB detailed here on bridge deck edges, or similar drop-offs, PCB. Bridge Mounted, shown on Structural Engineering's Standard Drawing PCB-91, is 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 ⅛" hinge bars. Use rebars meeting the requirements of CMS 509 ISTM A 515 Grade 60. Wire mesh shall meet CMS 702.10. Block Steel is permitted.

CONNECTING HARDWARE: Bolts, washers and hex nuts are to be galvanized after fabrication per CMS 701.82 and meet the requirements of CMS 701.83 except that the Rotational Capacity test specified in ASTM A 125 shall be waived.

ALTERNATE BARRIERS: 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 cast. If the barrier is cast using welded wire fabric instead of the rebars, and WWF to the end of the notation. Permanently impress these markings in the barrier using a minimum of ⅛" 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 code as to its manufacturer, and somewhere on the barrier, permanently mark the day and month the barrier was manufactured.


PAYMENT: This barrier is paid for in feet as ITEM 622 - Portable Barrier, Anchored, and ITEM 622 - Portable Barrier, Unanchored. Approved alternatives to the barrier shown on this drawing (and SCD Drawing MT-101.70, when specified in the plans.


PAYMENT: This barrier is paid for in feet as ITEM 622 - Portable Barrier, Anchored, and ITEM 622 - Portable Barrier, Unanchored. Approved alternatives to the barrier shown on this drawing (and SCD Drawing MT-101.70, when specified in the plans.

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 most current version of the Quality Standards for Temporary Traffic Control Devices and Acceptable delineation Methods for Vehicles.

PORTABLE CONCRETE BARRIER (PCB): Do not use the PCB detailed here on bridge deck edges, or similar drop-offs, PCB. Bridge Mounted, shown on 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 ⅛" hinge bars. Use rebars meeting the requirements of CMS 509 ISTM A 515 Grade 60. Wire mesh shall meet CMS 702.10. Block Steel is permitted.

CONNECTING HARDWARE: Bolts, washers and hex nuts are to be galvanized after fabrication per CMS 701.82 and meet the requirements of CMS 701.83 except that the Rotational Capacity test specified in ASTM A 125 shall be waived.

ALTERNATE BARRIERS: 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 cast. If the barrier is cast using welded wire fabric instead of the rebars, and WWF to the end of the notation. Permanently impress these markings in the barrier using a minimum of ⅛" 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 code as to its manufacturer, and somewhere on the barrier, permanently mark the day and month the barrier was manufactured.


PAYMENT: This barrier is paid for in feet as ITEM 622 - Portable Barrier, Anchored, and ITEM 622 - Portable Barrier, Unanchored. Approved alternatives to the barrier shown on this drawing (and SCD Drawing MT-101.70, when specified in the plans.

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 most current version of the Quality Standards for Temporary Traffic Control Devices and Acceptable delineation Methods for Vehicles.

PORTABLE CONCRETE BARRIER (PCB): Do not use the PCB detailed here on bridge deck edges, or similar drop-offs, PCB. Bridge Mounted, shown on 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 ⅛" hinge bars. Use rebars meeting the requirements of CMS 509 ISTM A 515 Grade 60. Wire mesh shall meet CMS 702.10. Block Steel is permitted.

CONNECTING HARDWARE: Bolts, washers and hex nuts are to be galvanized after fabrication per CMS 701.82 and meet the requirements of CMS 701.83 except that the Rotational Capacity test specified in ASTM A 125 shall be waived.

ALTERNATE BARRIERS: 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 cast. If the barrier is cast using welded wire fabric instead of the rebars, and WWF to the end of the notation. Permanently impress these markings in the barrier using a minimum of ⅛" 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 code as to its manufacturer, and somewhere on the barrier, permanently mark the day and month the barrier was manufactured.


PAYMENT: This barrier is paid for in feet as ITEM 622 - Portable Barrier, Anchored, and ITEM 622 - Portable Barrier, Unanchored. Approved alternatives to the barrier shown on this drawing (and SCD Drawing MT-101.70, when specified in the plans.

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 most current version of the Quality Standards for Temporary Traffic Control Devices and Acceptable delineation Methods for Vehicles.

PORTABLE CONCRETE BARRIER (PCB): Do not use the PCB detailed here on bridge deck edges, or similar drop-offs, PCB. Bridge Mounted, shown on 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 ⅛" hinge bars. Use rebars meeting the requirements of CMS 509 ISTM A 515 Grade 60. Wire mesh shall meet CMS 702.10. Block Steel is permitted.

CONNECTING HARDWARE: Bolts, washers and hex nuts are to be galvanized after fabrication per CMS 701.82 and meet the requirements of CMS 701.83 except that the Rotational Capacity test specified in ASTM A 125 shall be waived.

ALTERNATE BARRIERS: 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 cast. If the barrier is cast using welded wire fabric instead of the rebars, and WWF to the end of the notation. Permanently impress these markings in the barrier using a minimum of ⅛" 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 code as to its manufacturer, and somewhere on the barrier, permanently mark the day and month the barrier was manufactured.


PAYMENT: This barrier is paid for in feet as ITEM 622 - Portable Barrier, Anchored, and ITEM 622 - Portable Barrier, Unanchored. Approved alternatives to the barrier shown on this drawing (and SCD Drawing MT-101.70, when specified in the plans.

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 most current version of the Quality Standards for Temporary Traffic Control Devices and Acceptable delineation Methods for Vehicles.
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.

**Closed Joint**
Barriers shall initially be placed close together so that bolts can be easily inserted through hinge bar loop.

**Open Joint**
Barrier joints shall be fully open before the nut is tightened onto bolt.

---

**Section C-C**

**Pin & Loop Joint Connection Details**

**Reinforcing Bar List**

<table>
<thead>
<tr>
<th>Bar</th>
<th>Shape</th>
<th>Quantity per typ. length</th>
</tr>
</thead>
<tbody>
<tr>
<td>X501</td>
<td>3/4&quot; dia. High Strength Bolt</td>
<td>---</td>
</tr>
<tr>
<td>Y301 (Typ.)</td>
<td>Str.</td>
<td>10</td>
</tr>
</tbody>
</table>

---

**Bending Diagram**

---

**32" Tapered End with Pin & Loop Connection**

---

**Plan**

---

**Elevation**

---

**Pin & Loop Detail at Hinged Connection**

Shown with reinforcing.
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 623 for additional information. Provide Class S 50 concrete with a minimum compressive strength of 5,000 psi and permeability of 2,000 cfs. Provide uncoated reinforcing 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: 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 711.02 and meet the requirements of CMS 1289 unless Grade 65 wire mesh shall now CMS 709.10. Block Steel is permitted.

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.

NOTES (F-SHAPE)

- 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 711.02 and meet the requirements of CMS 1289 except that the Rotational Capacity test specified in ASTM A 325 shall be waived.
- Alternate Barrier: Approved Alternate Portable Barriers can be found on the Office of Roadway Engineering’s website.

- Hinge and Reinforcing Bars: Use ASTM A 36 for the 1/2" hinge bar. Use rebars meeting the requirements of CMS 1289 A 36 Grade 60. Wire mesh shall now CMS 709.10. Black Steel is permitted.

- Hinge and Reinforcing Bars: Use ASTM A 36 for the 1/2" hinge bar. Use rebars meeting the requirements of CMS 1289 A 36 Grade 60. Wire mesh shall now CMS 709.10. Black Steel is permitted.

- Hinge and Reinforcing Bars: Use ASTM A 36 for the 1/2" hinge bar. Use rebars meeting the requirements of CMS 1289 A 36 Grade 60. Wire mesh shall now CMS 709.10. Black Steel is permitted.

- Hinge and Reinforcing Bars: Use ASTM A 36 for the 1/2" hinge bar. Use rebars meeting the requirements of CMS 1289 A 36 Grade 60. Wire mesh shall now CMS 709.10. Black Steel is permitted.

- Hinge and Reinforcing Bars: Use ASTM A 36 for the 1/2" hinge bar. Use rebars meeting the requirements of CMS 1289 A 36 Grade 60. Wire mesh shall now CMS 709.10. Black Steel is permitted.

- Hinge and Reinforcing Bars: Use ASTM A 36 for the 1/2" hinge bar. Use rebars meeting the requirements of CMS 1289 A 36 Grade 60. Wire mesh shall now CMS 709.10. Black Steel is permitted.
1. Use this standard for the anchoring of precast concrete barrier on asphalt or Portland cement concrete pavements including bridge decks.

2. After removing anchoring pins, clean the pin holes and fill them with non-shrink mortar conforming to TSS 105.22.

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

NOTES (F-SHAPE)

1. HOT DIP GALVANIZE AFTER

2. 1" DIAMETER (ASTM A36), COLD ROLL FORMED STEEL ANCHORING PIN 1 3/4" (IN) x 48" (IN) LONG GALVANIZING AFTER FABRICATION ACCORDING TO CMS 711.02

3. DRILL 1 1/2" (IN) DIAMETER HOLE USING SLOTS AS GUIDE.