

**Combination Curb and Grate Inlet Protection
Sediment and Debris Control
GUIDE SPECIFICATION**

PRODUCT:
Combo Guard™

MANUFACTURER:
ERTEC®
1150 Ballena Blvd. Suite 250
Alameda, CA 94501
Phone: 866-521-0724
Fax: 510-521-3972
email: sales@ertecsystems.com
Web: www.ertecsystems.com

1.0 Description:

Work covered under this item consists of installing a Combo Guard™ inlet protection system for combination curb and grate drain inlets. The purpose is to minimize silt and sediment and stop debris from entering the storm drain system.

2.0 Material:

Provide a low profile curb & grate inlet protection device:

- **Size.** Furnish "L"-shaped low profile curb & grate inlet protection device with a maximum vertical height of 7 in and a horizontal filter flap that is long and wide enough to cover and seal the adjoining grate. The horizontal filter flap shall not protrude out from the curb surface or vertically from the gutter pan surface by more than 0.5 in.
- **Structure.** Furnish low profile curb & grate inlet protection device manufactured from non-biodegradable materials. It shall be UV stable, resist cracking or performance deterioration from sunlight for 4 years. System shall be made from recyclable materials and recyclable at the end of life. Filter material shall be laminated between and protected by semi-rigid layers of apertured polymeric high density polyethylene (HDPE). Service temperature shall be from -30 to 160 deg F.
- **Flow Rate.** Furnish low profile curb & grate inlet device containing a filter fabric with a minimum clean-water flow-through rate between 130 and 180 gallons per square foot per minute and a percentage-open-area of 9% to 13%.
- **High-Flow Bypass:** Furnish low profile curb & grate inlet protection device with vertical filter height of 2 +/- 0.33 vertical inches to provide for a high-flow bi-pass. When water reaches the vertical height of the filter, the device shall allow water to flow over the filter with minimum impedance into the storm drain inlet.
- **Single unit Construction:** Furnish low profile curb & grate inlet protection device with a horizontal grate filter/cover and vertical curb opening filter/cover that is constructed as a single unit.
- **Underflow Seal:** Furnish low profile curb & grate inlet protection device with an underflow seal to prevent sediment laden water from flowing under the filtering system.

3.0 Installation:

- **Installation and Anchoring.** Install low profile curb & grate inlet protection device with the anchor flap facing upstream toward the street. Place Combo Guard tightly against curb opening and cover entire grate. CG should extend at least 2 inches past grate towards street. If the storm inlet opening exceeds 42" in length, overlap first segment by 6" over end of adjoining segment for a continuous run until the desired length is achieved. Anchor CG so that water cannot flow behind it. Installation Alternatives: **A)** Install gravel bags at each side of CG – half-on and half-off the edges. Use half-filled gravel bags (15 or 20 lbs). Round rock is recommended or **B)** Attach with 16 gauge tie-wire. Cut wire to 18" length. At each corner of CG, feed one end of wire down through CG, around grate bar, and back up thru CG. Above ground, twist wires several times. Snip off excess. Or **C)** Fasten with concrete anchors/nails at the outside edges of CG. Reuse low profile curb & grate inlet protection device when allowed by the engineer.

4.0 Maintenance:

- Perform maintenance as required. Inspect following rainfall events and at least daily during prolonged rainfall. Maintain to provide an adequate sediment holding capacity. Trash shall be removed daily and sediment shall be removed when the sediment accumulation reaches 2 inches of vertical height. Removed sediment shall be incorporated in the project at designated locations or disposed-of outside the project or in conformance with requirements. Remove the device after final stabilization has been achieved.

5.0 Method of Measurement:

- **Low Profile Curb & Grate Inlet Protection Device.** Low profile curb & grate inlet protection device size will be based on grate size. Each unit shall overlap grate by at least 2 to 3 inches on each side. One unit per 42" opening.

6.0 Basis of payment:

- **Low Profile Curb & Grate Inlet Protection Device.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Low Profile Curb & Grate Inlet Protection Device." This price is full compensation for furnishing, placing, maintaining, and for permanently removing the low profile curb & grate inlet protection device from the project, and for all other materials, labor, tools, equipment, and incidentals.
- Removal of low profile curb & grate inlet protection device will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the low profile curb & grate inlet protection device installation or portions thereof be replaced, payment will be made at the unit price bid for "Low Profile Curb & Grate Inlet Protection Device," which is full compensation for the removal and reinstallation of the low profile curb & grate inlet protection device installation.