

## 4:1 and 6:1 Low-Slope End Sections for Corrugated Metal Pipe

### Better roadside safety

According to studies and field tests, the safest culvert installations are those with flatter embankment slopes and matching pipe-end treatments. The resulting recommendations: Roadside design and construction employ such practices that can reduce collision damages—whenever there is a possibility of vehicular contact with culvert pipe ends.

Newer safety-oriented designs, adopted by federal and many state highway agencies are based on 4:1 and 6:1 embankment slopes and matching steel-end sections with safety bars.

### Culvert improvements

In addition to providing extra safety, prefabricated Contech<sup>®</sup> steel pipe End Sections also help prevent scouring at inlet and outlet ends.

Additionally, Contech steel End Sections enhance the structure's appearance by blending pipe ends with embankment slopes.

### Multiple functions and performance benefits

Versatile and durable Contech prefabricated steel End Sections are available for either round or pipe arch shapes.

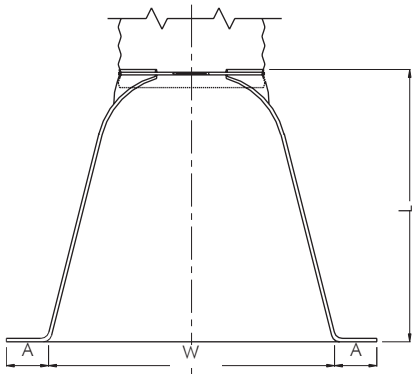
These field-proven units provide a number of important features and benefits:

- Prefabricated, lightweight sections.
- Corrosion-resistant, galvanized steel.
- Easy field attachment without special tools.
- Easier roadside maintenance.
- Conformance to 4:1 or 6:1 slopes.
- Improved inlet/outlet efficiencies versus square ends on pipe.
- Removable and salvageable if required.

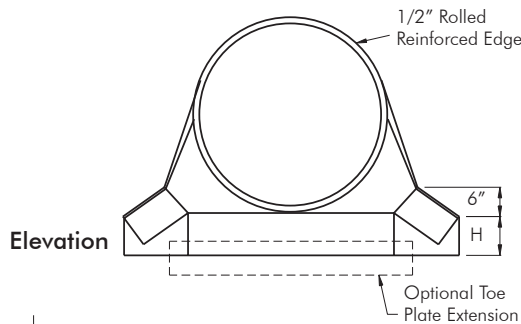


Low-Slope End Section is shown with optional field-attached safety bars.

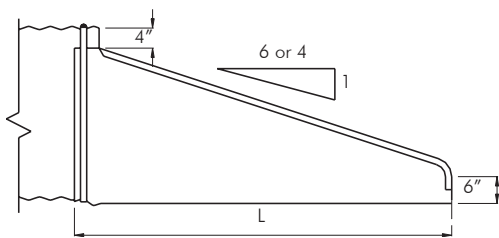
## 4:1 and 6:1 Low-Slope End Sections



Plan View



Elevation



Typical Cross Section

For more information, call one of Contech's Regional Offices located in the following cities:

|                                |                     |
|--------------------------------|---------------------|
| <b>Ohio (Corporate Office)</b> | <b>513-645-7000</b> |
| California (Long Beach)        | 562-733-0733        |
| Colorado (Denver)              | 720-587-2700        |
| Florida (Tampa)                | 727-544-8811        |
| Georgia (Atlanta)              | 770-409-0814        |
| Maine (Scarborough)            | 207-885-9830        |
| Maryland (Baltimore)           | 410-740-8490        |
| Oregon (Portland)              | 503-258-3180        |
| Texas (Dallas)                 | 972-590-2000        |

Toll Free: 1-800-338-1122

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### Notes and Product Details

- Sides and bottoms are fabricated from minimum 16 gauge galvanized steel per AASHTO M-218 and ASTM A 929 specifications.
- Top brims have reinforced rolled edges.
- Safety bars, including cross drainage bars, are optional and are fabricated from 3" Schedule 40 galvanized steel pipe meeting all requirements of ASTM A53 or equal. Ends of safety bars are flattened, downturned 90°, and punched for 1/2" hex head bolt attachment to end section.
- Toe plate extensions are available as accessories and are the same gauge and material grade as the end section body.
- 15" through 24" Contech End Sections attach to corrugated pipe ends with one flat strap and one bolted connection. Larger sizes use a steel rod with lug connections.
- All dimensions and weights shown are subject to standard manufacturing variances and tolerances.

| Circular Pipe End Sections Dimensions (inches) |            |   |    |               |                    |           |
|--|------------|---|----|---------------|--------------------|-----------|
| Pipe Sizes*                                    | Dimensions |   |    | Overall Width | Overall Length (L) |           |
|  | A          | H | W  |               | 4:1 Slope          | 6:1 Slope |
| 15   | 8          | 6 | 21 | 37            | 20                 | 30        |
| 18   | 8          | 6 | 24 | 40            | 32                 | 48        |
| 21   | 8          | 6 | 27 | 43            | 44                 | 66        |
| 24   | 8          | 6 | 30 | 46            | 56                 | 84        |

\* Inquire about product sizes not shown.

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