### Definition of Treatment Zones for Various Edge Conditions

<table>
<thead>
<tr>
<th>Edge Condition I</th>
<th>Edge Condition II</th>
<th>Edge Condition III</th>
</tr>
</thead>
<tbody>
<tr>
<td>$S = (3:1)$ (or flatter)</td>
<td>$S = (2.99:1)$ to $(1:1)$</td>
<td>$S$ is steeper than $(1:1)$</td>
</tr>
</tbody>
</table>

**Edge Height (D) in Inches versus Lateral Clearance (Y) in Feet**

- **Edge Condition I**
  - $S = (3:1)$ (or flatter)
  - Warning Device or Traffic Barrier
  - 4" White Edge Line or Edge of Lanes being used for maintenance of traffic

### Figure 1: Conditions Indicating Use of Positive Barrier for Zone 5 (\( S \geq 0.5 \))

- **Positive Barriers**
  - *Not for use in multiple maintenance, construction, or repair activities*
  - *Check indications if possible barrier is located within a lateral offset of 2 feet from the edge of the travel lane*

### Factors Considered in the Guidelines

1. **The Edge Condition** is the slope (S) of the dropoff slope. The Edge Height is the height of the dropoff (D).
2. **Distance Y** is the minimum distance for high-speed conditions. Distance Y does not have a minimum.
3. In addition to the factors considered in the guidelines, some construction zone drop-off situations should be analyzed by the Traffic Operations Division.
4. **Traffic Barriers** are primarily applicable for high-speed conditions. Ground areas with speeds of 35 mph or less may have a lesser need for signage, delineation, and barriers. Right-angled edges, however, with $S$ greater than 2 inches and located within a lateral offset of 6 feet, may indicate a higher level of treatment.
5. If the distance $Y$ must be less than 1 feet, the use of a positive barrier may not be feasible. In such a case, consider either: 1) removing or relocating the hazard from a distance of 12 feet or 10-miles minimum (no CW-8-11 signs) or 2) provide an edge slope such as Edge Condition 1.

### Edge Condition Notes

1. **Edge Condition I**: Most vehicles are able to traverse an edge condition with a slope rate of $(3:1)$ or flatter. The slope must be constructed with a connected material capable of supporting vehicles.
2. **Edge Condition II**: Most vehicles are able to traverse an edge condition with a slope between $(2.99:1)$ and $(1:1)$ as long as $Y$ does not exceed 1.1 inches. Under-carrying drag or fragmental collision will occur when $D$ exceeds 6 inches, or $D$ exceeds 24 inches, where the possibility of rollover is greater than most vehicles.
3. **Edge Condition III**: Most vehicles are greater than $(1:1)$ and where $Y$ is greater than 2 inches. Where vehicles are present in the area for some vehicles, it is not true for most vehicles.

### Worksheet for Edge Condition Treatment Types

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Description</th>
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- **Texas Department of Transportation**
- Traffic Operations Division

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**Engineer's Note**

These guidelines apply to temporary traffic control areas or work zones where continuous pavement edge or drop-offs parallel and adjacent to a roadway used by traffic. The edge condition may be present between shoulders and travel lanes, between adjacent or opposing travel lanes, or in intermediate points across the width of the paved surface. Due to the variability in construction operations, restrictions in the vehicle may be altered by the Engineer. These guidelines do not apply to short-term construction, these guidelines do not constitute a guideline for construction with engineering judgment. These guidelines may be updated on the Design Division's website.