1. **TAPER LENGTH FORMULAS**

<table>
<thead>
<tr>
<th>SPEED</th>
<th>FORMULA</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR SPEEDS OF 40 MPH AND LESS</td>
<td>L = L/WS</td>
</tr>
<tr>
<td>FOR SPEEDS OF 45 MPH AND GREATER</td>
<td>L = WS</td>
</tr>
</tbody>
</table>

2. **CHANNELIZING DEVICES**

   - **A)** Merging and shifting tapers: Use a minimum of 1 device per ft of lane closure width, plus 1 additional device to start.
   - **B)** Shoulder, one-lane two-way, and downstream tapers: Use a minimum of 1 device per 3 ft of width or portion thereof, plus 1 additional device to start.
   - **C)** On tangent: s x 2 = spacing up to 120 ft maximum.
   - **D)** Length of buffer zone (S2) is the distance from end of lane closure taper to work space, or any obstruction prior to work space.

**REDUCED SPEED WORK ZONE SIGNING**

- **SEE STD DWG TO 47 FOR PROJECT LIMIT SIGNING**
- **SEE NOTES 4-8**
- **SEE STD DWG TO 1**
- **NOTE 14**
- **EXEMPTION ONLY NOT TO SCALE SETUP TO BE SITE SPECIFIC**
- **PORTED SPEED**
- **THANK YOU XXXXXX XXXXX**
- **SEE NOTE 7**

1. **NOTES**

   1. Use the pre-construction posted speed limit prior to work zone to compute the sign spacing. Taper length, buffer zone, and work space are determined using the posted speed limit during work to determine the tangent spacing for channelizing devices.
   2. Remove or cover all work zone speed limit assemblies (RS2-14a) with a reduced speed limit and the work zone reduced speed limit area(s) (WA2-series) signs when no one is working, except as approved by the region traffic engineer.
   3. Additional signs may be used in the work zone for supplemental notification of the work zone speed limit.
   4. Place arrow board on shoulder when available. Place arrow board in first 1/3 of taper in the closed lane when no adequate shoulder is available.
   5. Use shoulder taper when arrow board is placed on shoulder.
   6. Use supplemental left side signing for high-speed divided highways.
   7. See "40 SERIES STD DWG" for sign design and layout.
   8. Fines double (RS2-6a) and fines double with fine notification (RS2-6b) signs may be used interchangeably.
   9. Place additional work zone speed limit assemblies (RS2-14a), fines double (RS2-6a), and/or fines double with fine notification (RS2-6b) signs at all major intersections and interchanges within the project when reduced speeds and/or the fines double with fine notification signing option is used.