PLAN (Reinforcing Steel not shown for clarity)  
(T-Shaped Spread Footing Shown, L-Shaped Spread Footing and Trench Footing Similar) 

**ELEVATION OF INSIDE FACE OF TRAFFIC RAILING/NOISE WALL**  
(T-Shaped Spread Footing Shown, L-Shaped Spread Footing and Trench Footing Similar)  

**TRAFFIC RAILING/NOISE WALL NOTES**

1. This railing has been structurally evaluated to be equivalent or greater in strength to a safety shape/Noise Wall combination railing which has been crash tested to NCHRP Report 350 TL-4 Criteria.  

2. **CONSTRUCTION REQUIREMENTS:** Construct the Traffic Railing/Noise Wall and joints plumb; do not construct the Traffic Railing/Noise Wall perpendicular to the roadway surface. Slip forming is not permitted.  

3. **CONCRETE:** Use Class II concrete for slightly aggressive environments. Use Class IV concrete for moderately or extremely aggressive environments. Concrete will be in accordance with Specification Section 346.  

4. Construct ½" Open Joints plumb and perpendicular or radial to Gutter Line. Provide at 90'-0" maximum intervals as shown. ½" Open Joint locations are to coincide with ½" Expansion Joints in footings.  

5. Construct ½" V-Grooves plumb and provide at 30'-0" maximum intervals as shown. Space V-Grooves equally between ½" Open Joints and/or Begin or End Traffic Railing/Noise Wall. V-Groove locations are to coincide with V-Groove locations in footings.  

6. 14'-0" Noise Wall End Taper is required when Railing/Noise Wall is adjacent to an 8'-0" Traffic Railing/Noise Wall and may be used when an 8'-0" Traffic Railing/Noise Wall End Taper is provided (see Index No. 5210 for details). See Roadway Plans for Traffic Railing/Noise Wall End Treatment.  

7. Work this Standard Drawing with Index No. 5210 - Traffic Railing/Noise Wall (8'-0") and one or more of the following: 
   a. Index No. 5213 - Traffic Railing/Noise Wall T-Shaped Spread Footing,  
   b. Index No. 5214 - Traffic Railing/Noise Wall L-Shaped Spread Footing or  
   c. Index No. 5215 - Traffic Railing/Noise Wall Trench Footing.  

**CROSS REFERENCE:**  
For Section A-A, Detail "A" and Estimated Quantities, see Sheet 3.  
For Expansion Joint Detail in Footing, see Index No. 5213, 5214 or 5215.
ELEVATION OF TRAFFIC RAILING/NOISE WALL REINFORCING STEEL
(Bars 5S1 in Railing not shown for clarity)

NOTES:
1. Field Cut Bars 5R & 5S1 in Noise Wall End Taper as required to maintain minimum cover.
2. See Index Nos. 5213, 5214 and 5215 for footing reinforcement.
3. 3/4" Open Joint may be omitted when 8'-0" Traffic Railing/Noise Wall End Taper is adjacent to a 14'-0" Traffic Railing/Noise Wall End Taper as shown on Sheet 1. See Index No. 5219 for reinforcement details and spacing. Bars 5S2 are not required when 3/4" Open Joint is omitted.
4. Bar spacing shown is along the Gutter Line.

ELEVATION OF TRAFFIC RAILING/NOISE WALL END TAPER
(Bars 5S1 in Railing not shown for clarity)
Concrete (Traffic Railing)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete (Traffic Railing)</td>
<td>CY/FT</td>
<td>0.104</td>
</tr>
<tr>
<td>Concrete (Noise Wall, excluding any thickening)</td>
<td>CY/FT</td>
<td>0.302</td>
</tr>
<tr>
<td>Reinforcing Steel (Railing/Noise Wall) (Typical, excluding Footing Reinforcement)</td>
<td>LB/FT</td>
<td>103.43</td>
</tr>
<tr>
<td>Additional Reinf. @ Open Joint (Railing/Noise Wall)</td>
<td>CY/FT</td>
<td>761.91</td>
</tr>
</tbody>
</table>

**DETAIL "A" - SECTION AT OPEN JOINT**

- **NOTES:**
  1. See Index Nos. 5213, 5214 and 5215 for footing reinforcement.
  2. At 1½" Open Joints, plug the lower 3½" portion of the open joint by filling it with mortar in accordance with Specification Section 400.

**SECTION A-A**

**TYPICAL SECTION THRU TRAFFIC RAILING/NOISE WALL**

**REINFORCING STEEL BENDING DIAGRAMS**

**BILL OF REINFORCING STEEL**

<table>
<thead>
<tr>
<th>MARK</th>
<th>SIZE</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>5</td>
<td>5'-7&quot;</td>
</tr>
<tr>
<td>R</td>
<td>5</td>
<td>13'-9&quot;</td>
</tr>
<tr>
<td>S1</td>
<td>5</td>
<td>AS REQ.</td>
</tr>
<tr>
<td>S2</td>
<td>5</td>
<td>7'-3&quot;</td>
</tr>
</tbody>
</table>

**CROSS REFERENCE:**
For locations of Section A-A and Detail "A", see Sheet 1.