**ABUTMENT PILASTER**

**SPAN PILASTER**

**SPAN PILASTER**

**SUPPORT PLATE**

**BENT PILASTER WITH SLAB BREAKBACK**

**BENT PILASTER WITHOUT SLAB BREAKBACK**

**ROADWAY ELEVATION OF RAIL**

**TERMINAL CONNECTION DETAILS**

**ELEVATION SHOWING TYPICAL REINFORCING PLACEMENT**

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**NOTES:**

1. Terminal Connectors and associated hardware are to be paid for under Item 10 "Metal Beam Guard Fence". Attach Metal Beam Guard Fence Transitions to the bridge rail and extend along the embankment areas otherwise shown in the plans.

2. The use of this railing is restricted to speeds of 45 mph or less. The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

3. Number of windows in interior bays are not less than the amount in exterior bays (Note 2).

4. Space Span Pilasters at 1/3 span length (Approx) when spans are 100 ft and less, as shown. Space Span Pilasters at 1/5 length (Approx) for shallower grades.

5. Dimension is the same for all posts adjacent to Span Pilasters in a span. Dimension may vary from span to span. Min = 3", Max = 7" pilaster spacing in a span. Dimension may vary from span to span. Min = 3", Max = 7" pilaster spacing in a span. Dimension may vary from span to span.

6. Provide rail joints at ends of spans the same width as slab joint opening, except that rail joints near construction joints must be 3/16" Min to 3/8" Max in width. Joints must be open if slab joint opening is not sealed. Joints with construction joints and over sealed deck joints must be plugged. Filling material used in joints may be left in place if it is tight in now and compression, such as the following materials: polyurethane, neoprene, epi, cork granules, sponge rubber sheet, etc. If filling material is not left in place, plug the bottom 4" with slab joint sealing compound to prevent drainage and staining.

7. Place Preferred Bituminous Fiber Material between slab and rail when rail extends over expansion joint. Shift Bars S as necessary.

8. Increase 2" for structures with overpass.

9. Place 4 additional Bars WH(#5) 3'-8" in length inside Bars S(#5) and centered 2'-8" from end of rail when Terminal Connections are required. Field bend as needed.

10. Shift U Bars from region below 10' Preferred Bituminous Fiber Material at joints.
BRONZE STAR DETAIL

1. Southwell Company
Corpus Christi, Texas

PLAN OF RAIL AT EXPANSION JOINTS

Provide rail joints at ends of all spans the same width as Slab joint opening, except that Rail joints over construction joints must be 1/8" Min to 1" Max in width. Joints must be open if slab joint opening is not sealed. Joints over construction joints and over sealed deck joints must be plugged. Forming material used in joints may be left in place or removed by the Contractor. Forming material must be replaced with a flexible material such as the following materials: polystyrene, neoprene, molded core granules, sponge rubber sheet, etc. If forming material is not left in place, plug the bottom 6" with slab joint sealing compound to prevent drainage and seepage.

Increase Z for structures with overlap.

Typical glazed "Painit Bold" Typfaces with 1/8" recess. Place at top of Slab or as directed by the Engineer.

Dimensions must be the same on each side of joint

For flat-sided sidebars, add sidebar height to total bar height. Use sidebar height at rail's location.

Reduce by 1" or field bend over Preformed Bituminous Candle Sheeting if necessary.

Bronze Star dimensions of the final product can be slightly smaller due to shrinkage after casting.

GENERAL NOTES:

Do not use this railing on bridges with expansion joints allowing more than 0.01" movement.

Rail anchorage details shown on this standard may require modification for select structure types. See appropriate details elsewhere in plans for these modifications.

Shop drawings will not be required for this rail.

Attach Bronze Star with a Type III Class C, D, E, or F epoxy adhesive. Bronze star to epoxy adheres well. Remove any excess epoxy adhesive with 0000 steel wool. Cap any rail end with the Bronze Star.

Provide bar laps, where required, as follows:

Uncoated or galvanized - #5 = 3'-0"
Epoxy coated - #5 = 3'-6"

Provide Class "C" concrete for railing. Provide Class "C" (HPC) concrete if shown elsewhere on the plan.

Concrete Footprint must be molded cork granules, sponge rubber sheet, etc. If forming material used in joints may be left in place if it is light in color and compressible, such as the following materials: polystyrene, neoprene, molded core granules, sponge rubber sheet, etc. If forming material is not left in place, plug the bottom 6" with slab joint sealing compound to prevent drainage and seepage.

Cross-hatched area must have 10" Preferred Bilorphous Fiber Material under concrete rail, as shown.

Reinforcing bar dimensions shown are out-to-out dimensions.

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