CROSS REFERENCES:
For General Notes, Dowel Details, Expansion Dowel Details, Reinforcing Steel Notes and Reinforcing Steel Bending Diagram see Index 521-480.

SCHEMATIC PLAN VIEW - NEAR LANE APPROACH

SCHEMATIC PLAN VIEW - OPPOSING LANE APPROACH

*Guardrail or Crash Cushion may also be shown in the Contract Plans, in lieu of the Tapered End Transition.
CROSS REFERENCES:
For Section A-A, B-B and X-X see Sheet 4.

20'-0" (Traffic Railing to Curb Transition)

Extend Bars 5S in back face of Traffic Railing 1'-6" into Tapered End Transition

Bars 5F (Typ.)
Bars 4G (Typ.)
Bars 5S (field bend & cut to maintain cover)
Bars 5E (Typ.)

20'-0" (Traffic Railing and Curb Transition)

Bars 5E (Typ.) (Cut to maintain cover in Transition Area)
Bars 5S (field bend & cut to maintain cover)
Bars 5F @ 8" spacing

PARTIAL PLAN VIEW

PARTIAL ELEVATION VIEW

DETAIL "B"
TRANSITION TO NON-CURB APPROACH
(Reinforcing Not Shown For Clarity)
NOTES:
1. On approach end provide a Roadway Guardrail Transition, Index 536-002 (Sheet 16 - Scheme 1) or other site specific treatment. See Roadway Plans for limiting station of Roadway Guardrail Transition or other site specific treatment.
2. Provide Railing & Curb Base Transitions (as shown) if curb does not extend beyond end of Spread Footing Approach, see Roadway Plans. Railing End Transition & Railing & Curb Base Transitions may be omitted on trailing ends with no opposing traffic.

GUARDRAIL END TRANSITION
**SECTION X-X (TYPICAL CURB, TYPE VARIES, TYPE F SHOWN)**
(See Index 520-001 and Plans for Details)

- Match Cross Slope of high side and low side at begin or end bridge or approach slab.

**SECTION C-C**
(GUARDRAIL END TRANSITION)

Varies (3" Max., 1" Min. match bridge offset constant for Retrofit to begin transition)

**SECTION A-A**
(TYPICAL SECTION)
(9" Curb shown, 6" Curb similar)

**SECTION B-B**
(TAPERED END TRANSITION)
(Bars 5S not shown for clarity)

**CROSS REFERENCES:**
For location of Sections A-A, B-B and X-X see Sheet 2.
For location of Section C-C see Sheet 3.

**NOTE:** Quantities are based on a 9" curb, no curb cross slope.
Note:
** Match curb height of adjacent bridge and approach slab.

PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Expansion Dowel Assemblies and Bars 4C not shown for clarity)

SCHEME 1 - MODIFICATION FOR INDEX 521-481, 521-482 AND 521-483 - SCHEME 1
RAILING END TREATMENT FOR PERPENDICULAR OR ANGLED WING WALLS WITH NARROW CURBS (SHOWN), WIDE CURBS AND INTERMEDIATE CURBS (SIMILAR)

CROSS REFERENCE:
For Section A-A see Sheet 4.
For Expansion Dowel Assemblies and placement of Dowel Bars 6D Details see Index 521-480.

TRAFFIC RAILING - (VERTICAL FACE RETROFIT) SPREAD FOOTING APPROACH
NOTES:
1. Remove existing concrete along saw cut joints. Existing reinforcing steel may be cut at joint or extended into new concrete. Exposed existing reinforcing not encased in new concrete shall be removed 1" below existing concrete surface and grouted over.

SCHEME 2 - MODIFICATION FOR INDEX 521-481 - SCHEME 2
RAILING END TREATMENT FOR PARALLEL WING WALLS WITH NARROW CURBS

CROSS REFERENCES:
For Section A-A see Sheet 4.
For Section D-D see Sheet 5.
For Expansion Dowel Assembly and placement of Dowel Bars 6D Details see Index 521-480.
SCHEME 3 ~ MODIFICATION FOR INDEX 521-481 SCHEME 3
RAILING END TREATMENT FOR FLARED WING WALLS WITH NARROW CURBS

FUNCTIONS:
A. Expansion Dowel Sleeve Assemblies
B. Organic Felt bond breaker along joint
C. Organic Felt bond breaker along end bent wing wall

CROSS REFERENCES:
For Section A-A see Sheet 4.
For Section D-D see Sheet 5.
For Section F-F see Sheet 6.
For Expansion Dowel Assemblies Details and placement of Dowel Bars 6D see Index 521-480.
Existing Parallel Wing Wall and Post
Bond Breaker against wing wall only

Bars 4C (Typ.)

Expansion Dowel Sleeve Assembly

PARTIAL PLAN OF RAILING

Bars 5E @ 8" spacing Max. (Typ.) tied to Bars 5F
Curb & portion of Approach Slab (when present, shown shaded) to be removed

Gutter Line

PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Existing Wing Post, Expansion Dowel Assemblies and Bars 4C not shown for clarity)

SCHEME 4 ~ MODIFICATION FOR INDEX 521-482 SCHEME 2
RAILING END TREATMENT FOR PARALLEL CURBS AND WING WALLS WITH WIDE CURBS

PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Existing Wing Post, Expansion Dowel Assemblies and Bars 4C not shown for clarity)

SCHEME 5 ~ MODIFICATION FOR INDEX 521-482 SCHEME 3 AND 4
RAILING END TREATMENT FOR PARALLEL CURBS AND FLARED WING WALLS WITH WIDE CURBS

CROSS REFERENCES:
For Section A-A see Sheet 4
For Section D-D see Sheet 5
For Section G-G see Sheet 7
For Expansion Dowel Assemblies Details see Index 521-480
SCHEME 6 – MODIFICATION FOR INDEX 521-483 SCHEME 2
RAILING END TREATMENT FOR PARALLEL CURBS AND WING WALLS WITH INTERMEDIATE CURBS
SCHEME 7 – MODIFICATION FOR INDEX 521-483 SCHEME 3
RAILING END TREATMENT FOR PARALLEL CURBS AND FLARED WING WALLS WITH INTERMEDIATE CURBS

PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Expansion Dowel Assemblies and Bars 4C not shown for clarity)

PARTIAL PLAN OF RAILING

CROSS REFERENCES:
For Section A-A see Sheet 4.
For Section D-D see Sheet 5.
For Section H-H see Sheet 9.
For Expansion Dowel Assemblies and placement of Dowel Bars 6D Details see Index 521-480.

Note:
** Match curb height at adjoining existing end bent wing.