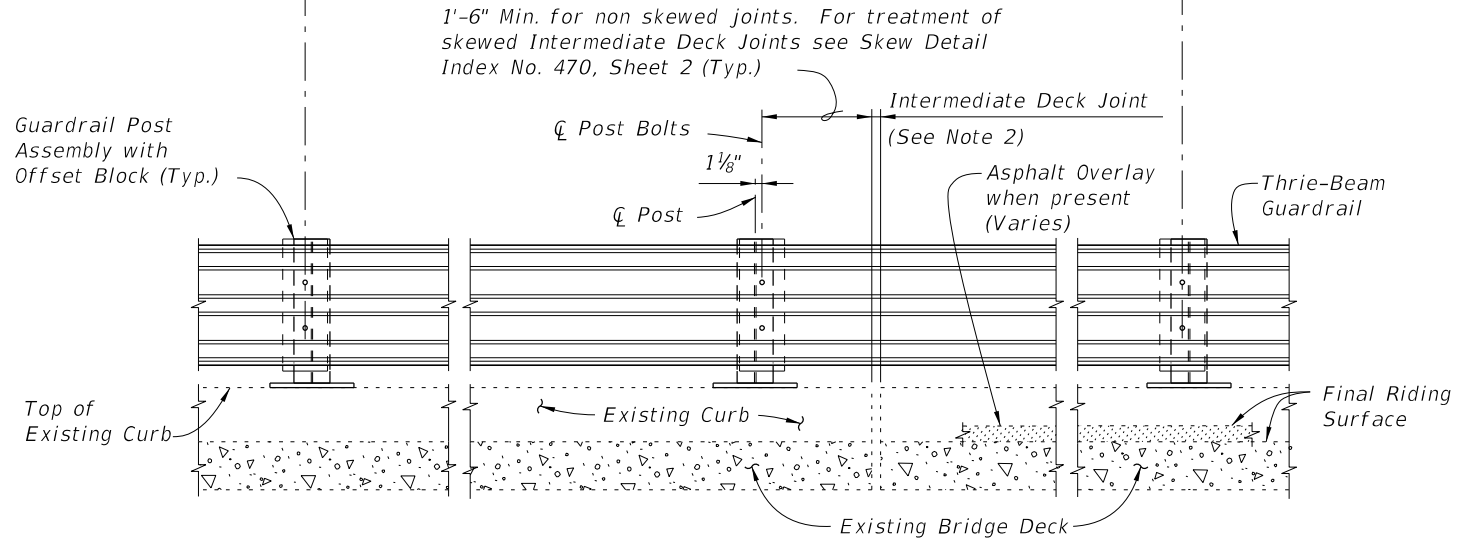
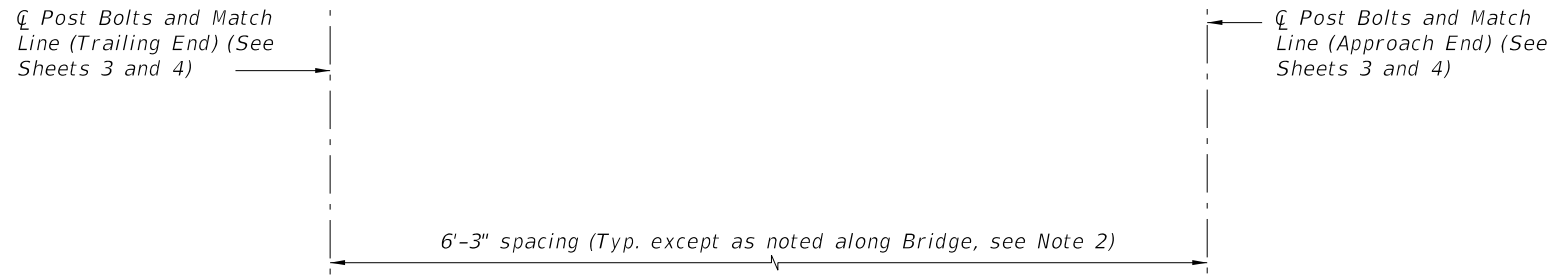


PARTIAL PLAN OF RAILING

- NOTES:**
1. On approach end provide Index No. 402 (as shown) or other site specific treatment, see Roadway Plans. For treatment of trailing end see Roadway Plans.
 2. Actual joint dimension and orientation vary. For Intermediate Deck Joints use the Modified Post Spacing at Intermediate Deck Joints Detail, Index No. 470, Sheet 2, as required.
 3. Areas where existing structure has been removed shall match adjoining areas and shall be finished flat by grouting or grinding as required. Exposed existing reinforcing steel shall be burned off 1" below existing concrete and grouted over.



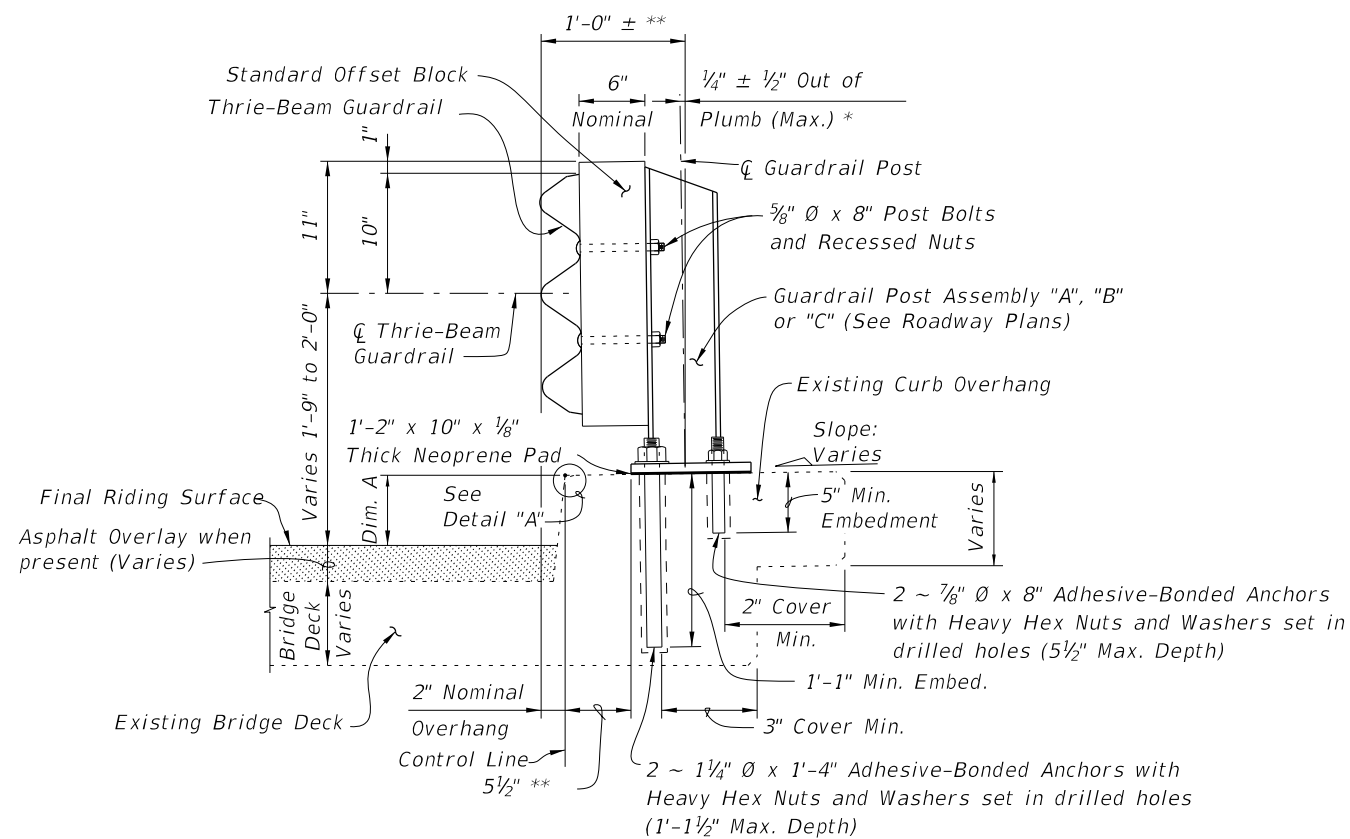
PARTIAL ELEVATION OF INSIDE FACE OF RAILING

TYPICAL TREATMENT OF RAILING ALONG BRIDGE

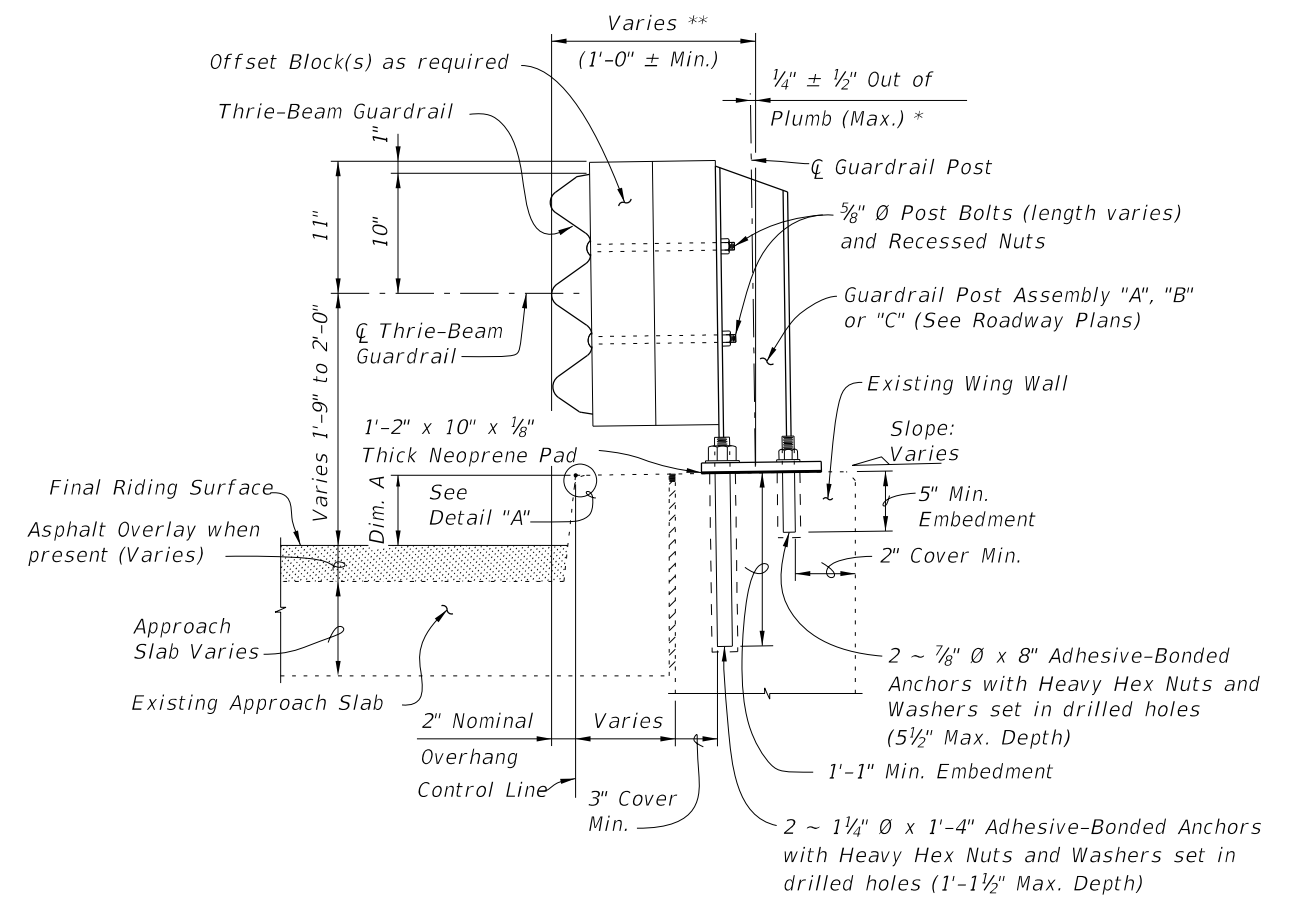
CROSS REFERENCES:
 For Match Line see Sheets 3 & 4.
 For Section A-A see Sheet 2.
 For Traffic Railing Notes and Details see Index No. 470.

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LAST REVISION 01/01/08	REVISION	DESCRIPTION:	 2016 DESIGN STANDARDS	TRAFFIC RAILING - (THRIE-BEAM RETROFIT) INTERMEDIATE CURB	INDEX NO. 474	SHEET NO. 1 of 4
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SECTION A-A
TYPICAL SECTION THRU RAILING ON BRIDGE DECK

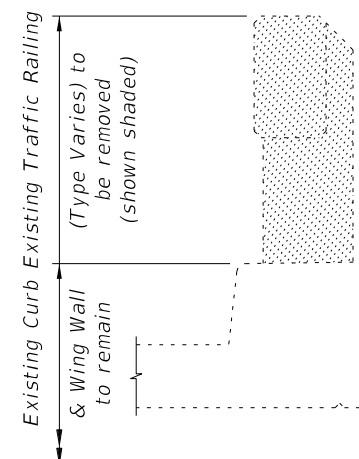


SECTION B-B (SCHEME 2)
TYPICAL SECTION THRU RAILING ALONG APPROACH SLAB

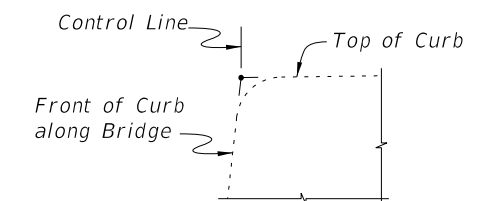
* Shim with washers around Anchor Bolts and Anchors as required to maintain tolerance.

** Offset may vary ± 1 " for Adhesive-Bonded Anchors to clear existing curb reinforcing and provide minimum edge clearance. Offset shall be consistent along length of bridge.

BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
L	4	4'-1"
BAR BENDING DIAGRAM		
DOWEL BAR 4L		
NOTE: All bar dimensions are out to out.		



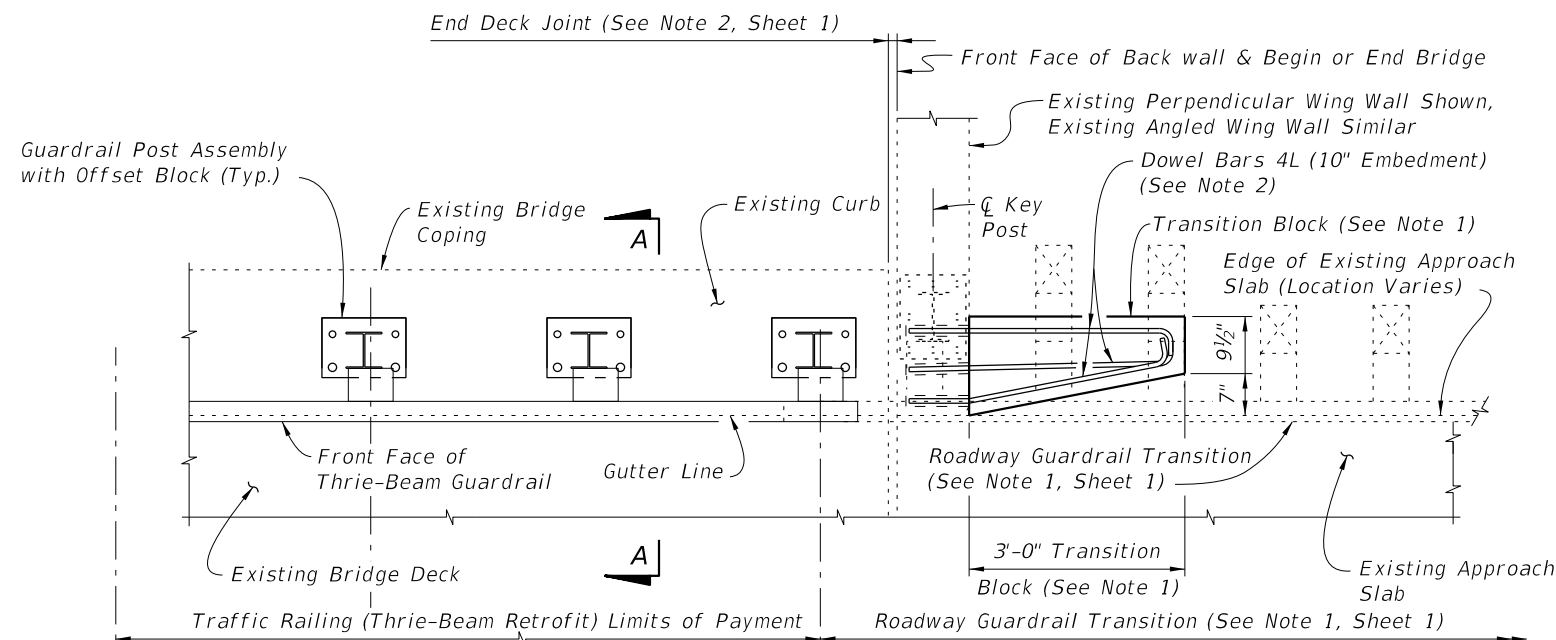
TYPICAL SECTION THRU EXISTING TRAFFIC RAILING SHOWING LIMITS OF REMOVAL (BRIDGE DECK SHOWN, WING WALL SIMILAR)



DETAIL "A"

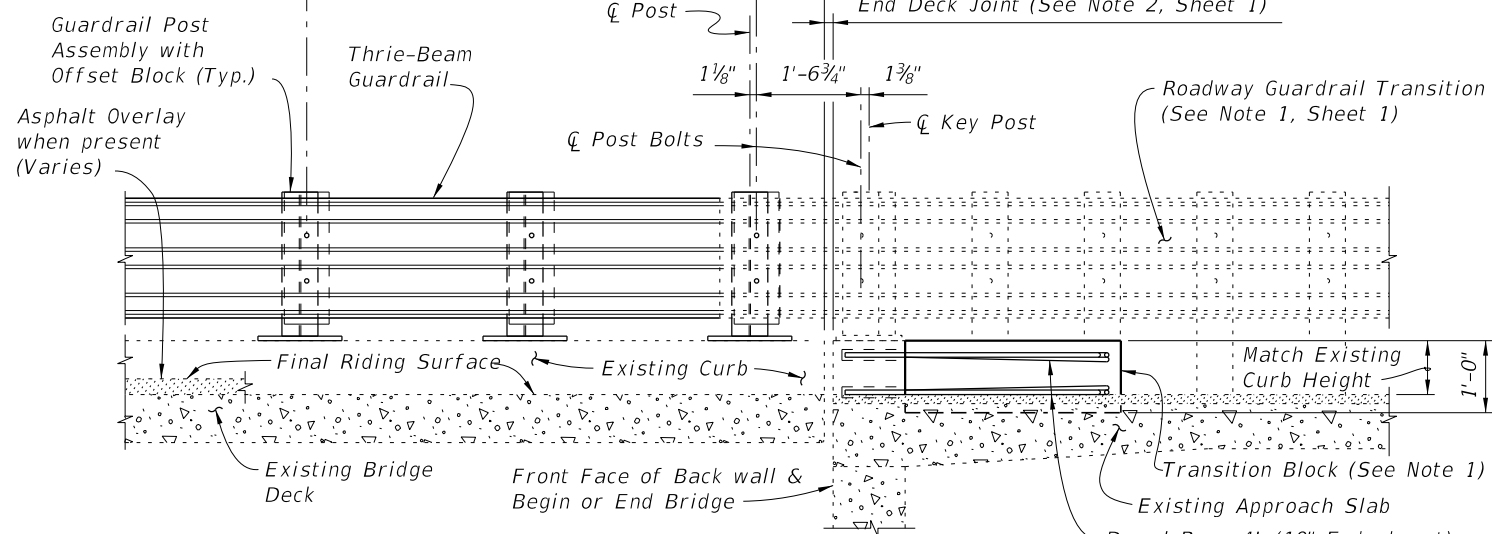
CROSS REFERENCES:
For location of Section A-A see Sheet 1 and 3.
For location of Section B-B see Sheet 3
For application of Dim. A see Post Dimension Table on Index 470, Sheet 3.

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PARTIAL PLAN OF RAILING

2 ~ Variable Spaces (6'-3" Max., 3'-1 1/2" Min.)
 11" Post Spacing as measured to ϕ Post Bolts

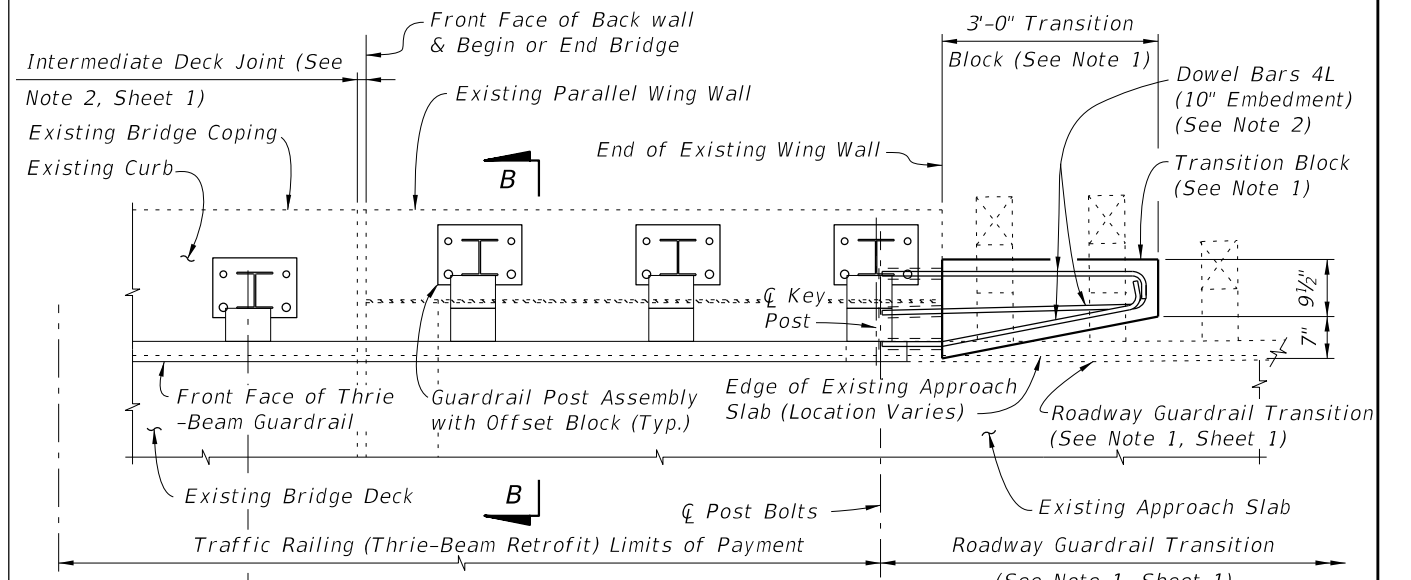


PARTIAL ELEVATION OF INSIDE FACE OF RAILING

SCHEME 1
RAILING END TREATMENT FOR PERPENDICULAR OR ANGLED WING WALLS

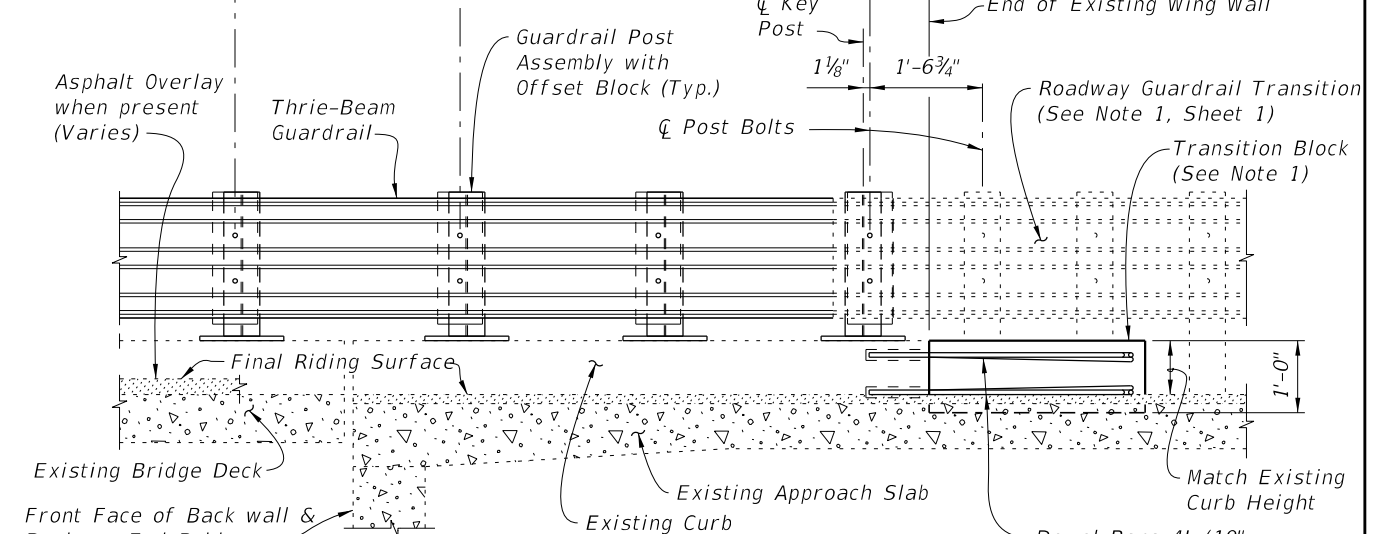
SCHEME 1 NOTES:

1. Provide Transition Block (as shown) or Curb if existing Approach Slab does not have a curb, see Roadway Plans. Shape and height of Transition Block or Curb shall match existing bridge curb. Transition Block may be omitted on trailing ends with no opposing traffic.
2. Field bend Dowel Bars 4L within Transition Block as required to maintain 2" top and side clearance and 3" bottom clearance.



PARTIAL PLAN OF RAILING

ϕ Post Bolts (Last Index No. 474 Post)
 Varies (6'-3" Max., 3'-1 1/2" Min.)
 Varies (3'-1 1/2" Spacing Max.) (Typ. Along Wing Wall)
 11" Post Spacing as measured to ϕ Post Bolts



PARTIAL ELEVATION OF INSIDE FACE OF RAILING

SCHEME 2
RAILING END TREATMENT FOR PARALLEL WING WALLS

SCHEME 2 NOTES:

1. Provide Transition Block (as shown) or Curb if existing Approach Slab Curb does not extend to end of Approach Slab. Shape and height of Transition Block or Curb shall match existing bridge curb. Transition Block may be omitted on trailing ends with no opposing traffic.
2. Field bend Dowel Bars 4L within Transition Block as required to maintain 2" top and side clearance and 3" bottom clearance.

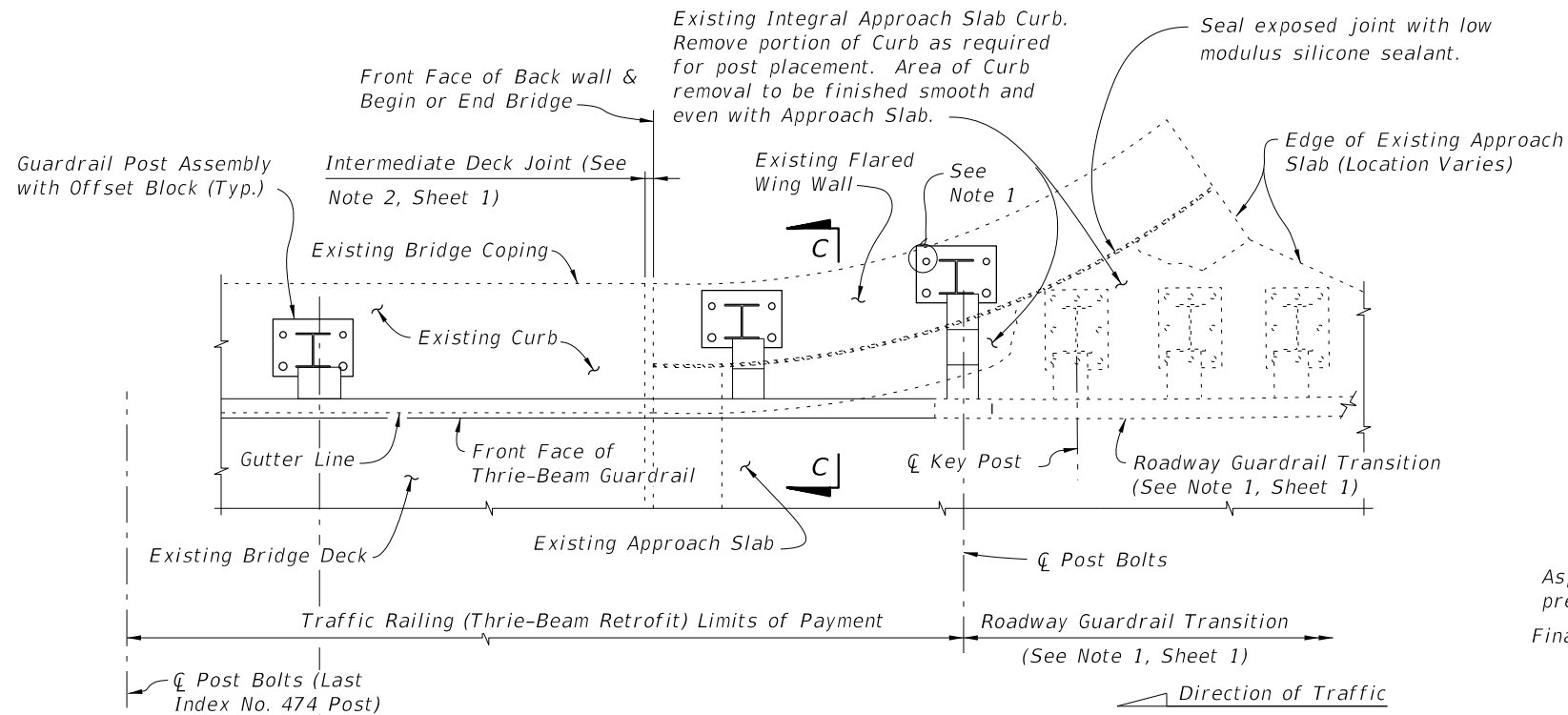
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LAST REVISION	DESCRIPTION:
01/01/08	

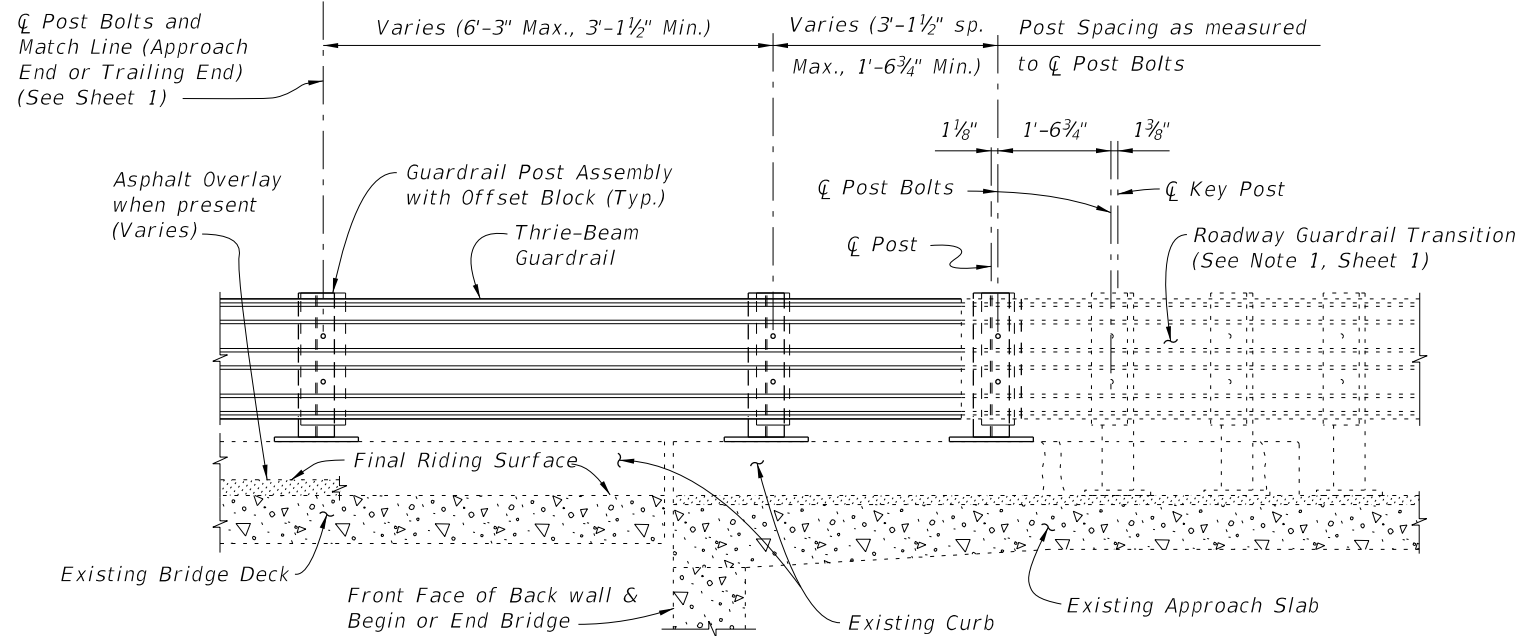


TRAFFIC RAILING - (THRIE-BEAM RETROFIT) INTERMEDIATE CURB

INDEX NO.	SHEET NO.
474	3 of 4

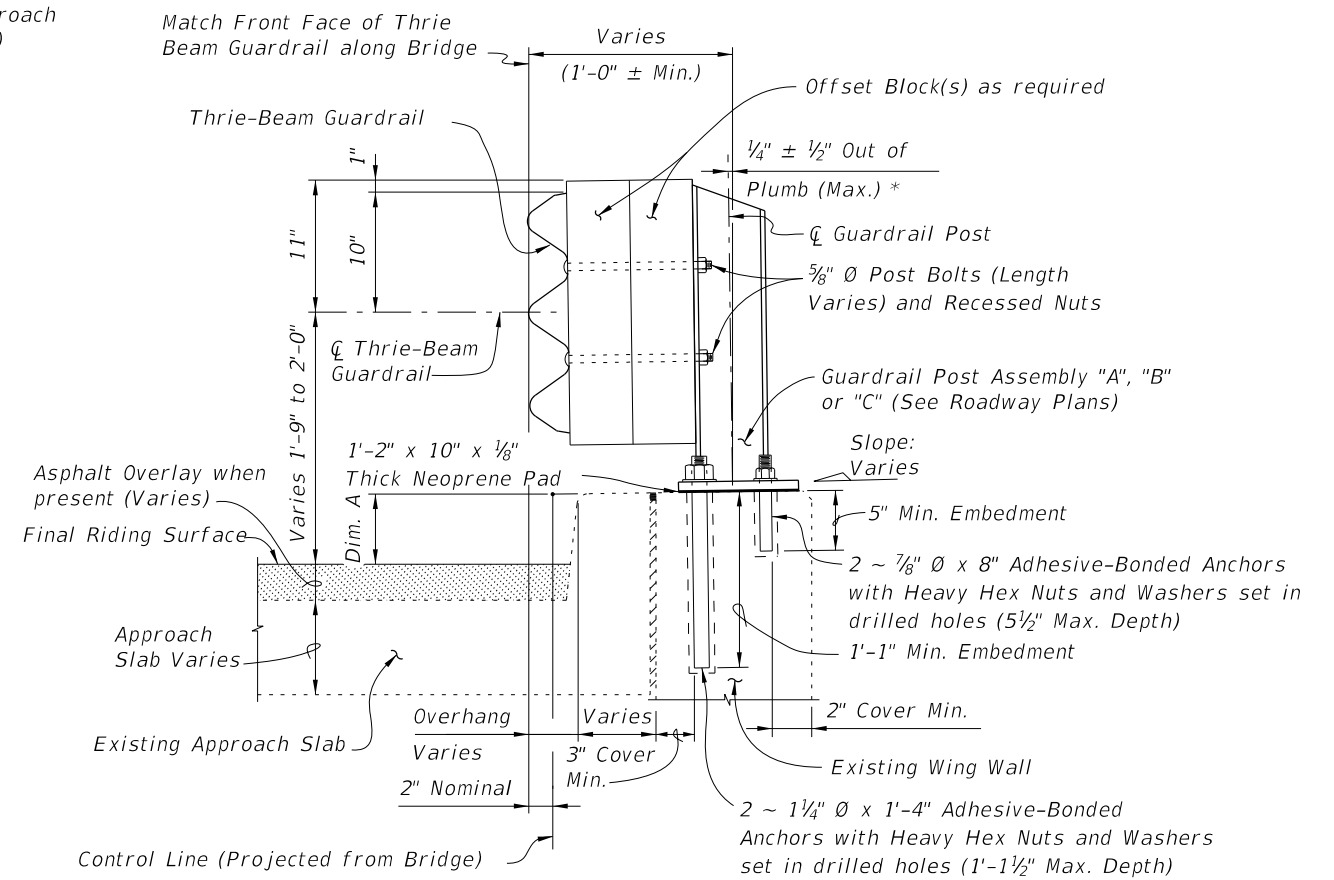


PARTIAL PLAN OF RAILING



PARTIAL ELEVATION OF INSIDE FACE OF RAILING

**SCHEME 3
RAILING END TREATMENT FOR FLARED WING WALLS**



**SECTION C-C (SCHEME 3)
TYPICAL SECTION THRU RAILING ALONG APPROACH SLAB**

SCHEME 3 NOTE:

1. A single 7/8" Ø x 8" Adhesive-Bonded Anchor may be omitted as shown when 2" clear cover cannot be provided (see Section C-C).

CROSS REFERENCE:

For application of Dim. A see Post Dimension Table on Index 470, Sheet 3.

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LAST REVISION 07/01/09	DESCRIPTION:
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**TRAFFIC RAILING - (THRIE-BEAM RETROFIT)
INTERMEDIATE CURB**

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