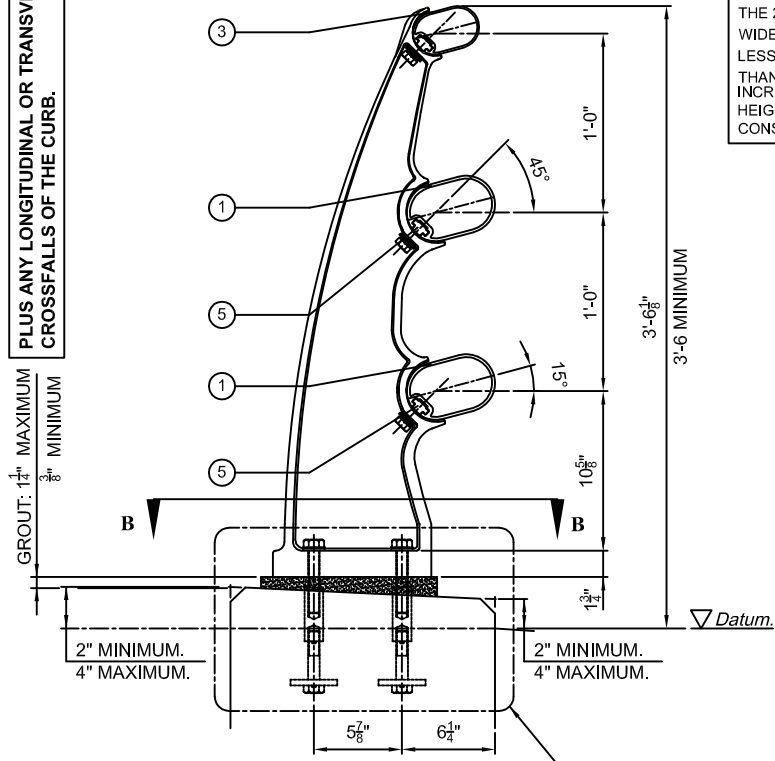
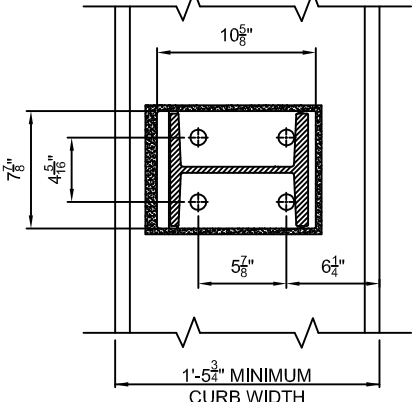


PLUS ANY LONGITUDINAL OR TRANSVERSE CROSSFALLS OF THE CURB.



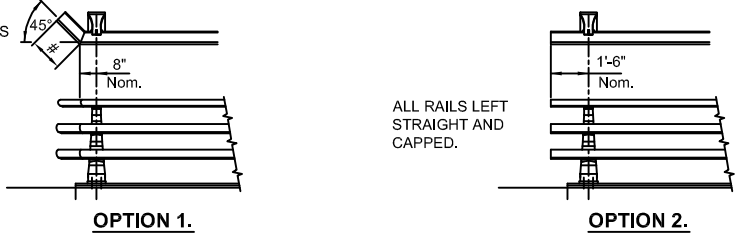
SECTION A-A



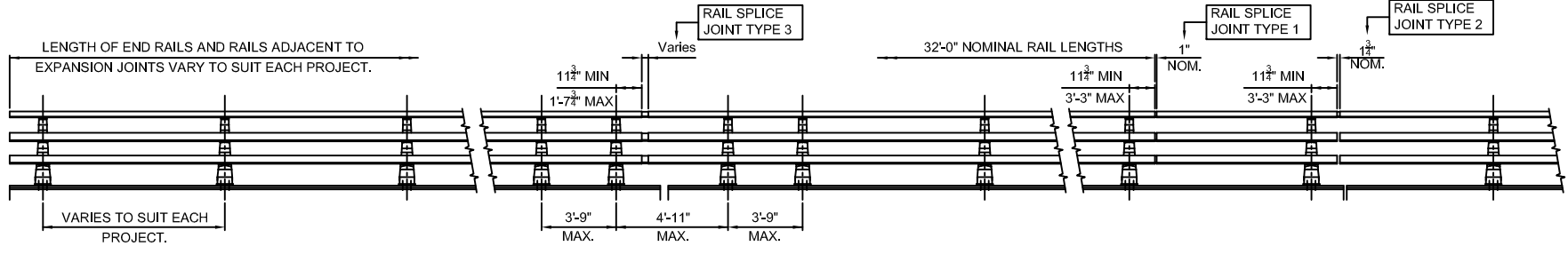
SECTION B-B.

NOTE:
THE 2" MINIMUM UPSTAND HEIGHT IS BASED ON A 1'-5 3/4" WIDE CURB WITH A 1 3/8" CROSSFALL. IF THE CROSSFALL IS LESS THAN 1 3/8" OR THE WIDTH OF THE CURB IS GREATER THAN 1'-5 3/4", THE MINIMUM UPSTAND HEIGHT IS TO BE INCREASED ACCORDINGLY TO ACHIEVE A MINIMUM OVERALL HEIGHT OF 3'-6". THE 4" MAXIMUM UPSTAND HEIGHT IS CONSTANT IN ALL SITUATIONS.

FOR DETAILS OF MITERED RAILS REFER TO DRAWINGS E-2000-2 & E-2000-3

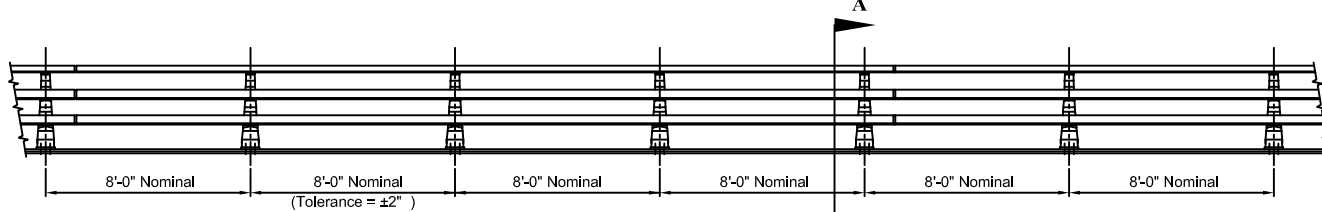


END DETAILS.

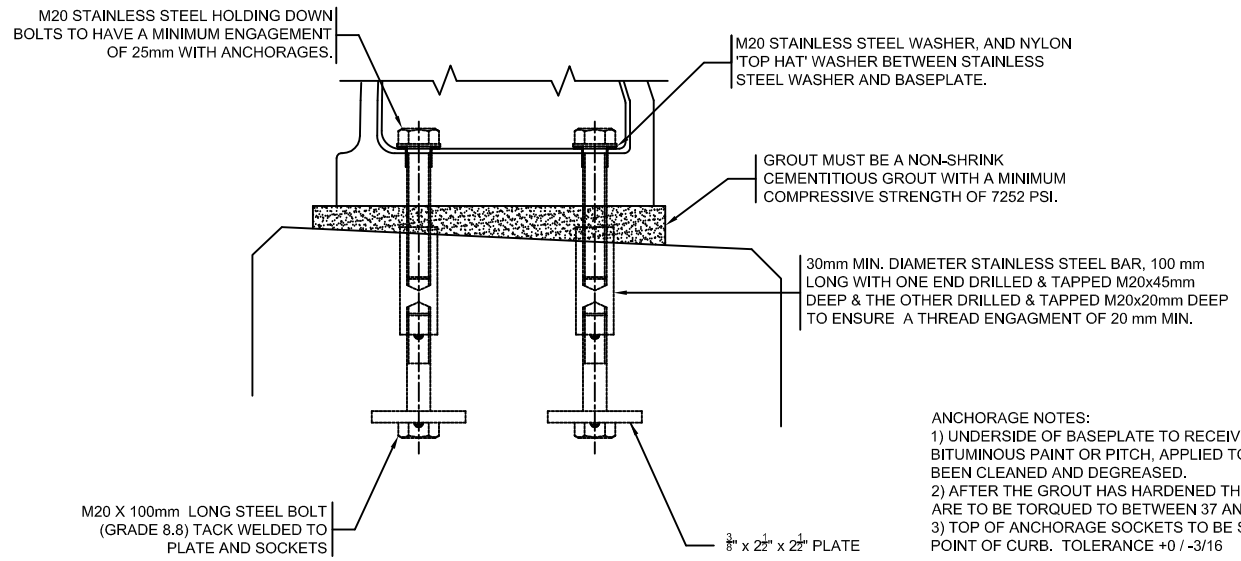


TYPICAL SPLICE JOINT LOCATIONS.

TYPICAL POST SPACING IS 8'-0". REDUCTION IN POST SPACING DOWN TO 7'-3" CENTERS CAN OCCUR ADJACENT TO TYPE 3 RAIL SPLICE JOINTS AND ENDS OF RUN. CLOSER POST CENTERS MAY BE USED FOR SINGLE SPANS WHERE THIS CANNOT BE AVOIDED AT MOVEMENT JOINTS AND ENDS OF RUNS.



TYPICAL ELEVATION



DETAIL 1 ENLARGED

ANCHORAGE NOTES:
1) UNDERSIDE OF BASEPLATE TO RECEIVE 2 COATS OF BITUMINOUS PAINT OR PITCH, APPLIED TO A SURFACE WHICH HAS BEEN CLEANED AND DEGREASED.
2) AFTER THE GROUT HAS HARDENED THE HOLDING DOWN BOLTS ARE TO BE TORQUED TO BETWEEN 37 AND 52 FT-LBS.
3) TOP OF ANCHORAGE SOCKETS TO BE SET LEVEL WITH HIGH POINT OF CURB. TOLERANCE +0 / -3/16

SECTION SCHEDULE		
1		TRAFFIC RAIL SECTION
2		TRAFFIC RAIL SPLICE SECTION
3		PEDESTRIAN RAIL SECTION
4		PEDESTRIAN RAIL SPLICE SECTION
5		RAIL CONNECTION NUT SECTION

- GENERAL NOTES:
- 1) THE SYSTEM SHOWN WAS DESIGNED BY VARLEY & GULLIVER LTD, BIRMINGHAM, U.K.. HILL AND SMITH INC AND VARLEY & GULLIVER ARE BOTH PART OF THE HS ROADS SEGMENT OF HILL & SMITH HOLDINGS LTD.
 - 2) THE SYSTEM SHOWN WAS DESIGNED IN ACCORDANCE WITH AASHTO'S "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION", WITH A HIGHWAY DESIGN LOADING OF 10 KIPS, AND A PEDESTRIAN RAIL LOADING OF 50 LBS/FT
 - 3) THE SYSTEM SHOWN WAS CRASH TESTED TO NCHRP 350, AND ACCEPTED BY THE FHWA AS A TEST LEVEL 3 AND 4 LONGITUDINAL BARRIER VIA LETTER REF: B-213, DATED 22 DEC 2010.
 - 4) MAIN RAILS CAN BE CURVED TO SUIT ON SITE DOWN TO A 500 FT. RADIUS. TIGHTER RADII CAN BE SUPPLIED SHOP CURVED.
 - 5) ALL EXTRUDED RAILS AND SPLICES SHALL BE ALUMINUM ALLOY EN AW 6082.
 - 6) POST SHALL BE ALUMINUM ALLOY A444.0 T4 TO ASTM B108.
 - 7) ALL BOLTS SHALL BE STAINLESS STEEL CONFORMING TO ISO 3506-1 GRADE A4 /80, UNLESS OTHERWISE NOTED.
 - 8) SPRING LOCK WASHERS SHALL BE STAINLESS STEEL CONFORMING TO ISO 3506 GRADE A4 OR A2, UNLESS OTHERWISE NOTED.
 - 9) PLAIN WASHERS SHALL BE STAINLESS STEEL CONFORMING TO ISO 3506 GRADE A4 OR A2, UNLESS OTHERWISE NOTED.

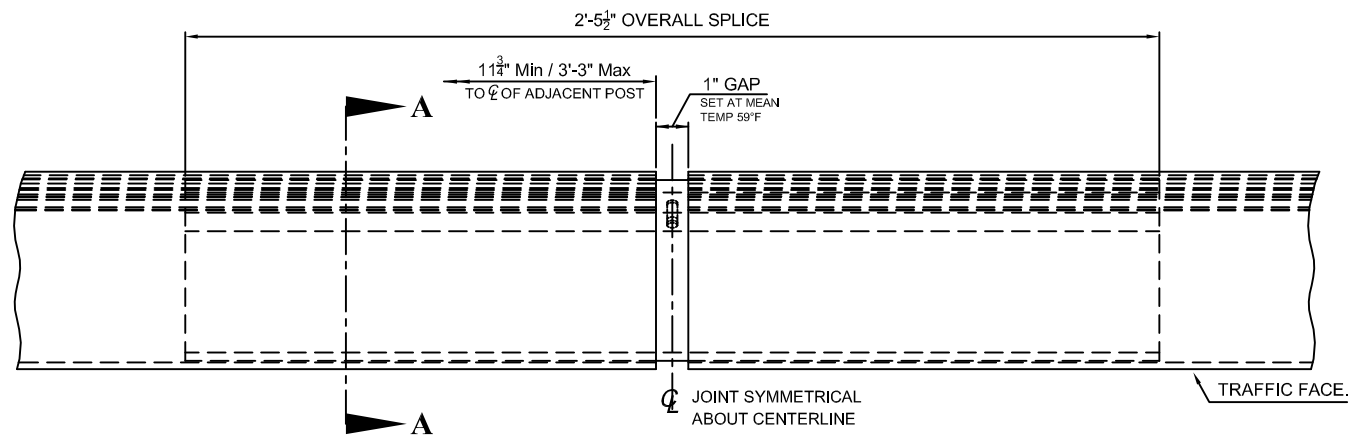
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Rev	Remarks	ECR	Date	Check
Drawn By	Date	Material		
GL	MAY 2011	AS SHOWN		
Scale	Finish	Weight		
NONE	-			

Description
EDGERAIL™
ALUMINUM BRIDGE RAIL SYSTEM
GENERAL ARRANGEMENT AND
INSTALLATION DETAILS

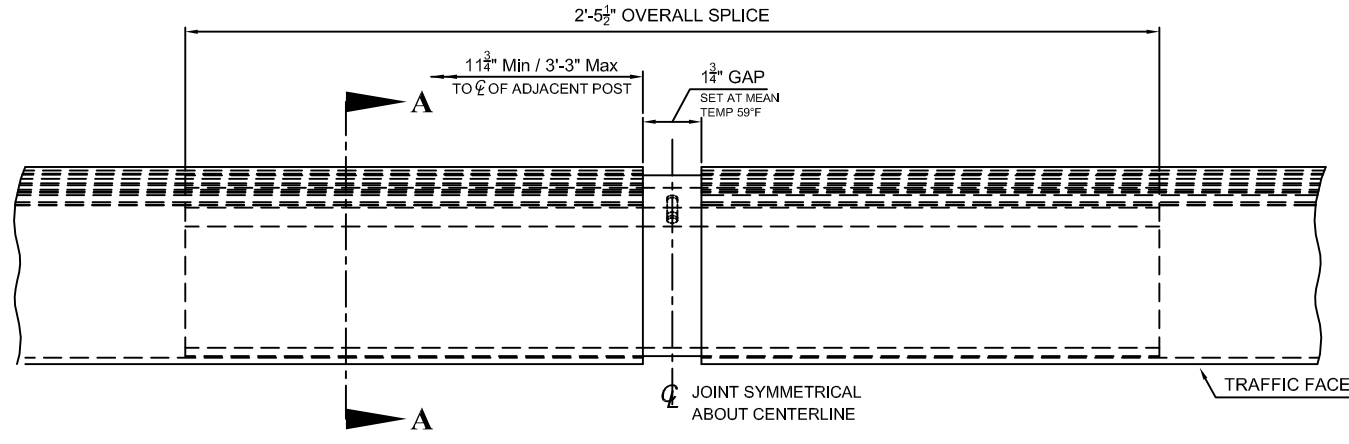
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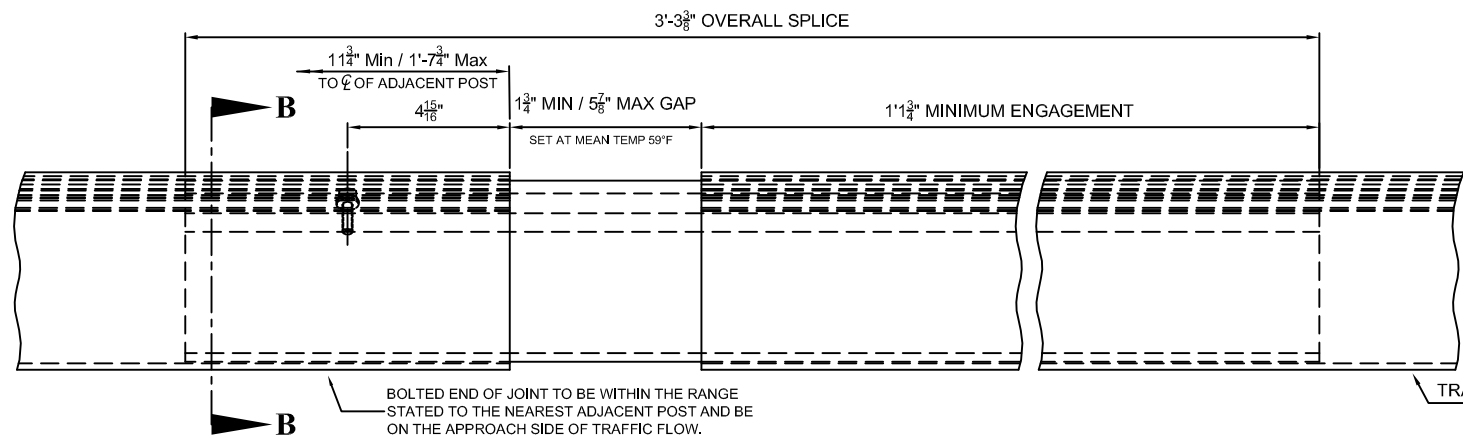
Drawing No. E-2000-1



STANDARD TRAFFIC RAIL JOINT TYPE 1.

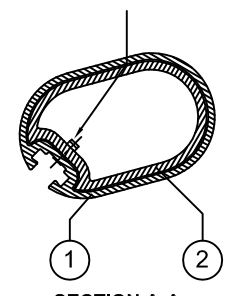


EXPANSION TRAFFIC RAIL JOINT TYPE 2 - FOR MOVEMENT RANGE UP TO +/- 1".



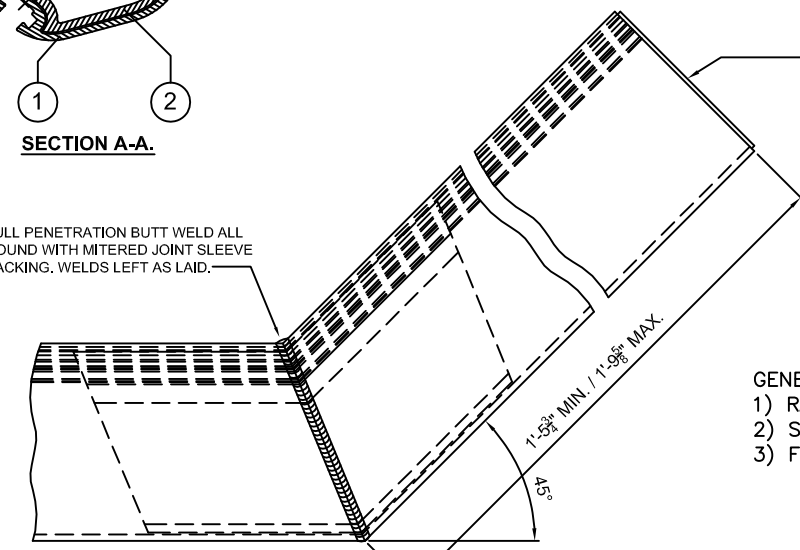
EXPANSION TRAFFIC RAIL JOINT TYPE 3 - NO TENSION EXPANSION JOINT FOR MOVEMENT OVER +/- 1" TO +/- 5 7/8".

STANDARD COILED SPRING PIN
INSTALLED CENTRALLY IN RAIL
JOINT SECTION WITH 3/8" EXTENDING OUT OF SECTION.



SECTION A-A.

FULL PENETRATION BUTT WELD ALL
ROUND WITH MITERED JOINT SLEEVE
BACKING. WELDS LEFT AS LAID.



MITERED MAIN RAIL.

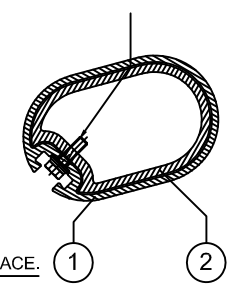
END OF RAIL CAPPED WITH A 1/8" THICK ALUMINUM PLATE WELDED ALL ROUND. CAP PLATE TO HAVE 1/8" DRAIN HOLE NEAR LOWER EDGE.

GENERAL NOTES:

- 1) RAIL CAPS SHALL BE ALUMINUM PER ALLOY EN AW5083.
- 2) STANDARD COILED SPRING PINS SHALL BE STAINLESS STEEL PER ISO 8750.
- 3) FOR ALL OTHER MATERIAL SPECIFICATIONS SEE SHEET E-2000-1.

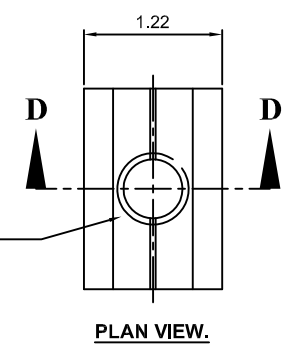
SECTION SCHEDULE		
1		TRAFFIC RAIL SECTION
2		TRAFFIC RAIL SPLICE SECTION
3		PEDESTRIAN RAIL SECTION
4		PEDESTRIAN RAIL SPLICE SECTION
5		RAIL CONNECTION NUT SECTION

M8x30mm LONG STAINLESS STEEL
HEX HEAD BOLT WITH FLAT
WASHER, LOCKWASHER &
NYLON FLAT WASHER.



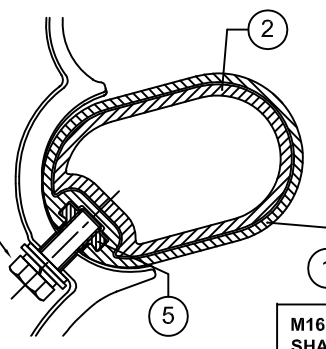
SECTION B-B.

RAIL CONNECTION NUT
TO BE DRILLED AND
TAPPED CENTRALLY
FOR AN M16 BOLT.



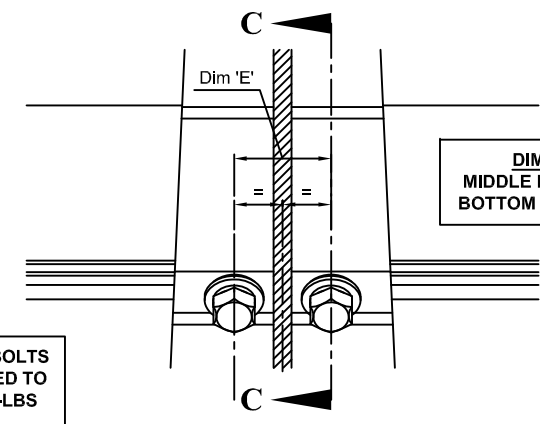
PLAN VIEW.

M16 x 45mm LONG STAINLESS STEEL
HEX BOLT WITH STAINLESS STEEL FLAT
WASHER, LOCKWASHER AND FLAT
NYLON WASHER CONNECTING INTO
RAIL CONNECTION NUT
(2 CONNECTIONS PER POST PER RAIL)



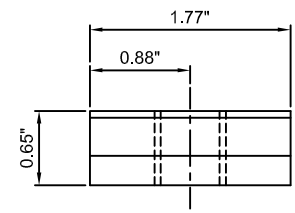
SECTION C-C.

M16 POST TO RAIL BOLTS
SHALL BE TIGHTENED TO
A TORQUE OF 30 FT-LBS

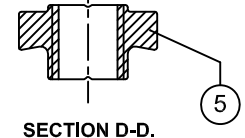


REAR VIEW ON POST TO RAIL CLEAT.

DIMENSION 'E'.
MIDDLE MAIN RAIL = 2.20"
BOTTOM MAIN RAIL = 3.15"



ELEVATION ON RAIL CONNECTION NUT.



SECTION D-D.

0	ISSUED		6/27/11	NC
Rev	Remarks	ECR	Date	Check
Drawn By GL	Date MAY 2011	Material AS SHOWN		
Scale NONE	Finish -	Weight		

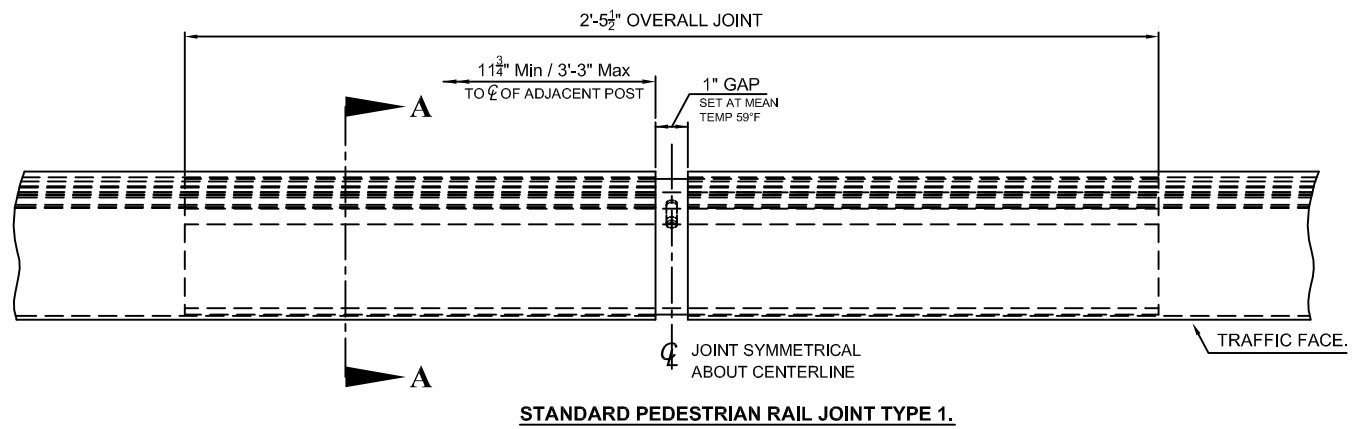
Description
EDGERAIL™
ALUMINUM BRIDGE RAIL SYSTEM
TRAFFIC RAIL SPLICE AND POST
CONNECTION DETAILS

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WHEN PRINTED**

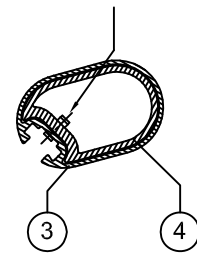


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Drawing No.
E-2000-2

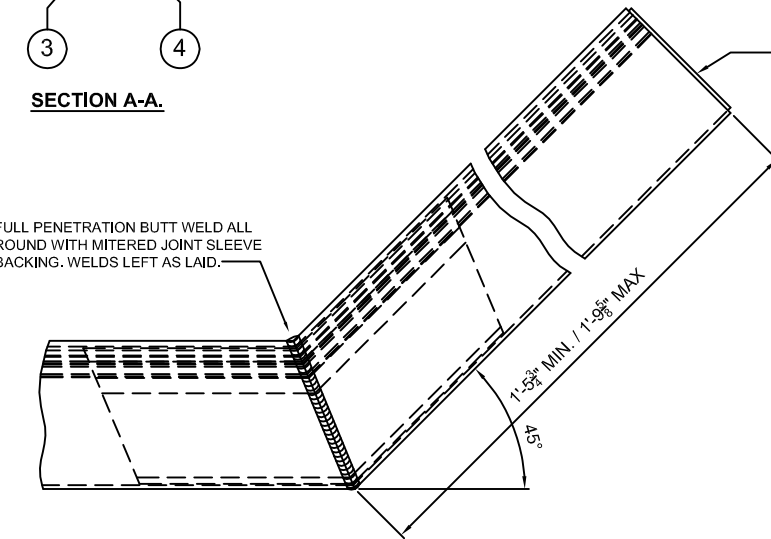


STANDARD COILED SPRING PIN INSTALLED CENTRALLY IN RAIL JOINT SECTION WITH 3/8" EXTENDING OUT OF SECTION.

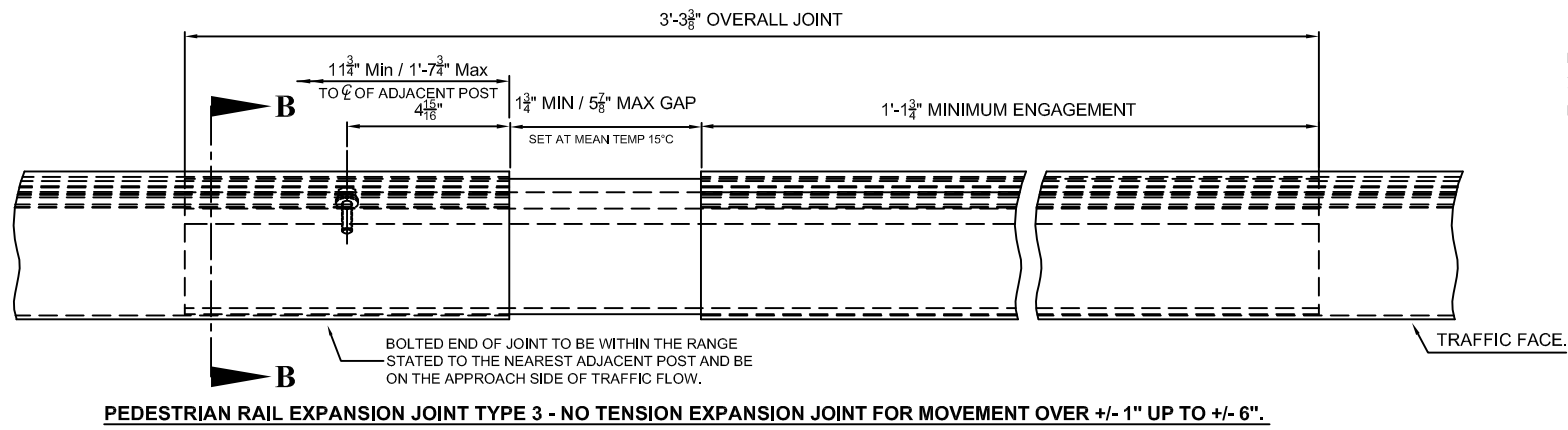
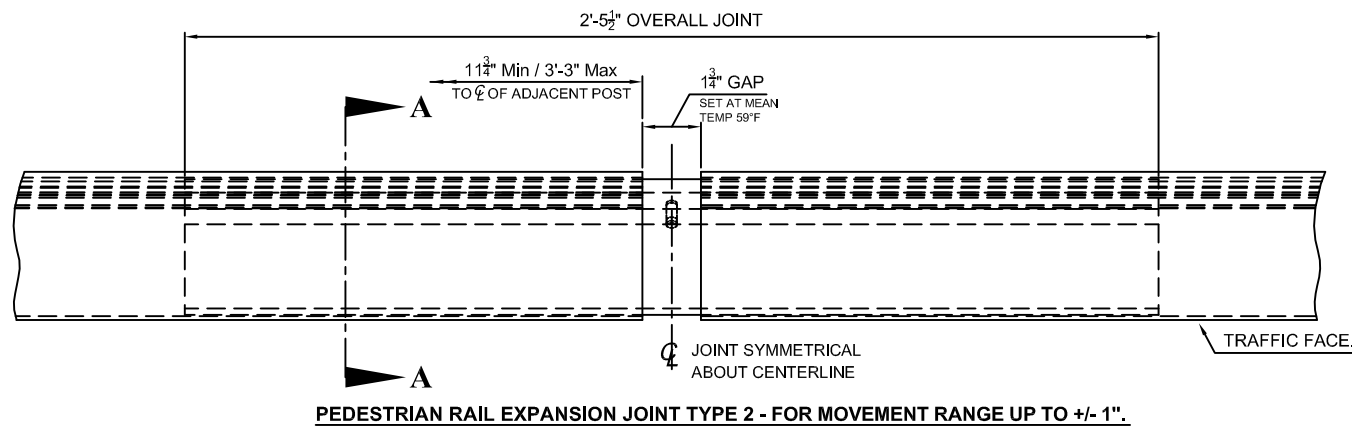


END OF RAIL CAPPED WITH A 3/8" THICK ALUMINUM PLATE WELDED ALL ROUND. CAP PLATE TO HAVE 3/8" DRAIN HOLE NEAR LOWER EDGE.

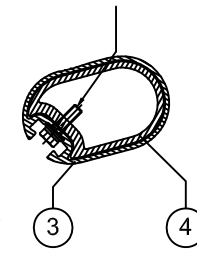
FULL PENETRATION BUTT WELD ALL ROUND WITH MITERED JOINT SLEEVE BACKING. WELDS LEFT AS LAID.



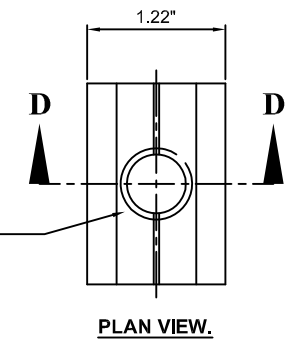
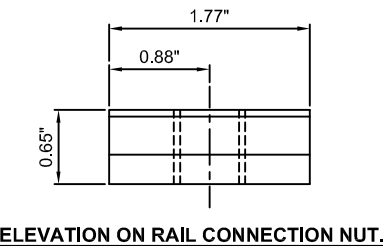
SECTION SCHEDULE		
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5		RAIL CONNECTION NUT SECTION



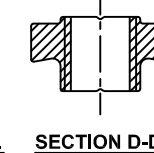
M8x30 mm LONG STAINLESS STEEL HEX HEAD BOLT WITH FLAT WASHER, LOCKWASHER & NYLON FLAT WASHER.



RAIL CONNECTION NUT TO BE DRILLED AND TAPPED CENTRALLY FOR AN M16 BOLT.



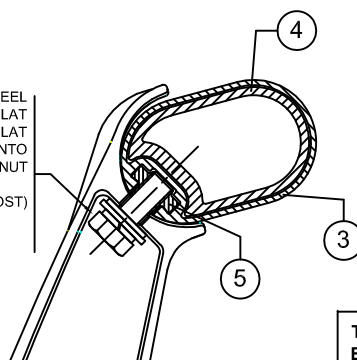
SECTION D-D.



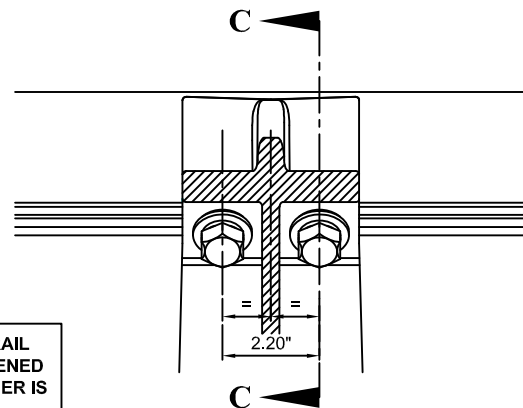
GENERAL NOTES:

- 1) RAIL CAPS SHALL BE ALUMINUM PER ALLOY EN AW5083.
- 2) STANDARD COILED SPRING PINS SHALL BE STAINLESS STEEL PER ISO 8750.
- 3) FOR ALL OTHER MATERIAL SPECIFICATIONS SEE SHEET E-2000-1.

M16x35 mm LONG STAINLESS STEEL HEX BOLT WITH STAINLESS STEEL FLAT WASHER, LOCKWASHER AND FLAT NYLON WASHER CONNECTING INTO RAIL CONNECTION NUT (2 CONNECTIONS PER POST)



TOP RAIL POST TO RAIL BOLTS TO BE TIGHTENED UNTIL SPRING WASHER IS FLAT.



0	ISSUED		6/27/11	NC
Rev	Remarks	ECR	Date	Check
Drawn By GL	Date MAY 2011	Material AS SHOWN		
Scale NONE	Finish -	Weight		

Description

EDGERAIL™
ALUMINUM BRIDGE RAIL SYSTEM
PEDESTRIAN RAIL SPLICE AND
POST CONNECTION DETAILS

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