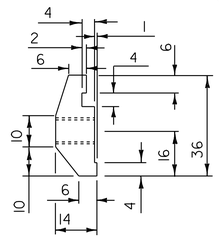
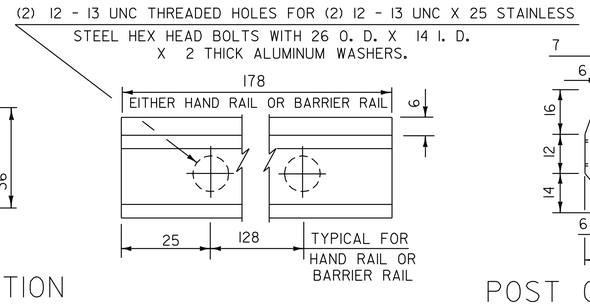
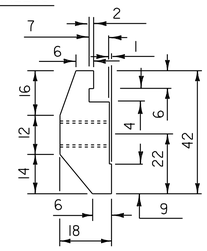
Metric



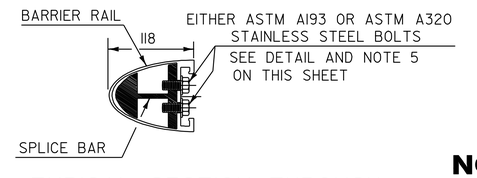
POST CONNECTION HAND RAIL SECTION



POST CONNECTION ELEVATION



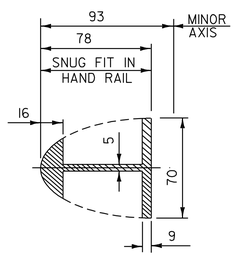
POST CONNECTION BARRIER RAIL SECTION



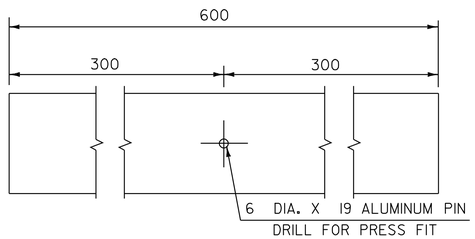
TYPICAL SECTION THROUGH BARRIER RAIL SPLICE

NOTES:

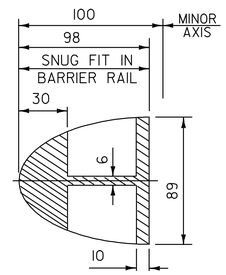
1. ANCHOR BOLTS, WASHERS AND HEAVY HEX NUTS MAY BE ANY OF THE FOLLOWING:
   A. ASTM A449 GALVANIZED, OR
   B. AASHTO M164 (ASTM A325) GALVANIZED
   C. BOLTS AND WASHERS OF STAINLESS STEEL ASTM A276, TYPE 304 (MINIMUM ULTIMATE STRENGTH OF 690 MPa) WITH STAINLESS STEEL NUTS OF ASTM A194, GRADE 8NA.
2. ALUMINUM POSTS, SPLICE BARS, CONNECTION BARS AND RAILS SHALL CONFORM TO ASTM B221 ALLOY 6061-T6 OR ALLOY 6351-T5. MINIMUM ALLOWABLE STRESS F = 250 MPa.
3. ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B26 ALLOY 356-T6.
4. THE POST, RAIL, AND OFFSET BLOCK CONNECTION BOLTS SHALL BE EITHER ASTM A193 OR ASTM A320. EITHER ONE SHALL BE CLASS 1, B8 GRADE A1S1 304 WITH AN ULTIMATE TENSILE STRENGTH OF 517 MPa. NUTS FOR EITHER OF THE ABOVE BOLTS SHALL BE ASTM A194, GRADE 8, STAINLESS STEEL WITH AN ULTIMATE TENSILE STRENGTH OF 517 MPa.
5. RIVETS SHALL BE COLD DRIVEN HIGH BUTTON HEAD "CONE POINT", CONFORMING TO ASTM B316 ALLOY 6061-T6.
6. WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10 USING THE GMAW-INERT GAS PROCESS AND AWS ER 5356 ELECTRODE WIRE.
7. ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
8. EXTRUDED SECTIONS ARE DETAILED TO COMPLY WITH CURRENT AASHTO-AGC-ARTBA STANDARDS. MINOR VARIATIONS OF THE DETAILS SHOWN MAY BE CONSIDERED PROVIDING THEY DO NOT REDUCE THE STRENGTH CAPACITY OF THE RAIL SYSTEM.
9. ALUMINUM WASHERS SHALL BE ASTM B209 ALLOY ACLAD 2024-T4.



HAND RAIL SPLICE SECTION

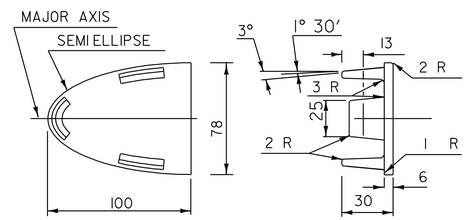


ELEVATION OF HAND RAIL SPLICE BAR

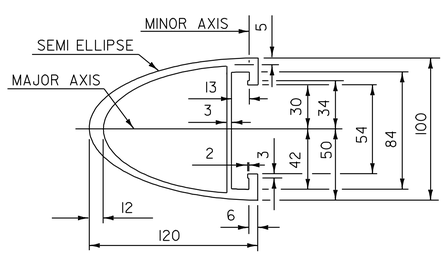


BARRIER RAIL SPLICE SECTION

(SEE THIS SHEET FOR ELEVATION OF BARRIER RAIL SPLICE BAR)

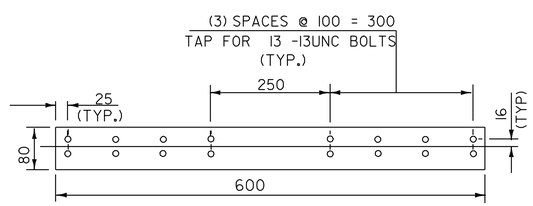


HAND RAIL END CAP

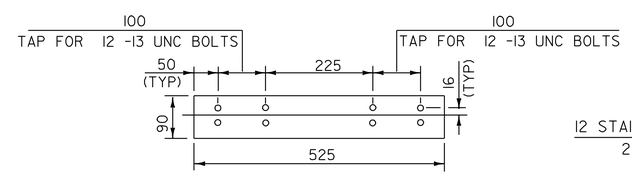


BARRIER RAIL SECTION

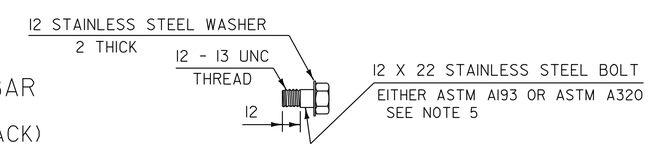
(SEE SHEET 39 FOR ELEVATION OF BARRIER RAIL)



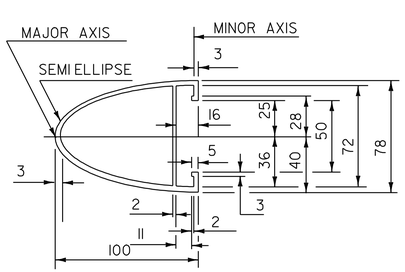
ELEVATION OF STD. BARRIER RAIL SPLICE BAR (FROM BACK)



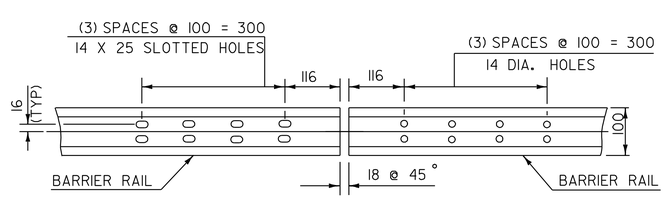
ELEVATION OF BARRIER RAIL SPLICE BAR TO BE USED AT TRANSITION BETWEEN APPROACH RAIL & GUARD RAIL (FROM BACK)



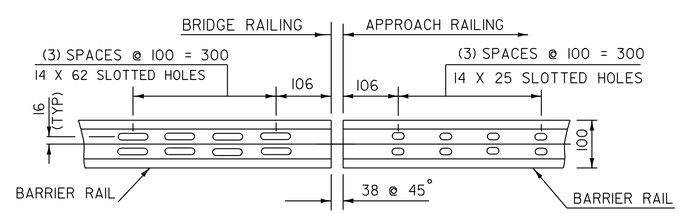
STAINLESS STEEL BOLT DETAILS



HAND RAIL SECTION



ELEVATION OF BARRIER RAIL (FROM BACK) AT ALL INTERMEDIATE RAIL SPLICES



ELEVATION OF BARRIER RAIL (FROM BACK)

ARCHIVED IN DPR

NOTE: ALL DIMENSIONS IN MILLIMETERS EXCEPT WHERE OTHERWISE INDICATED

NOT TO SCALE

BRIDGE APPROACH RAILING DETAILS #2

SURVEYED BY	N/A	DATE	N/A
DESIGN BY	JLL/GAE	DATE	11/96
DRAWN BY	W-M	DATE	11/96
DESIGN FILE NO.	/pave/92b221/pb221.dgn		
IPARM FILE	pb221dt8.i	DATE PLOTTED	28-SEP-2009 09:
PROJ. NAME	ESSEX-UNDERHILL		
PROJ. NO.	STP 9469(1)S		
SHEET 40 OF 40 SHEETS			