



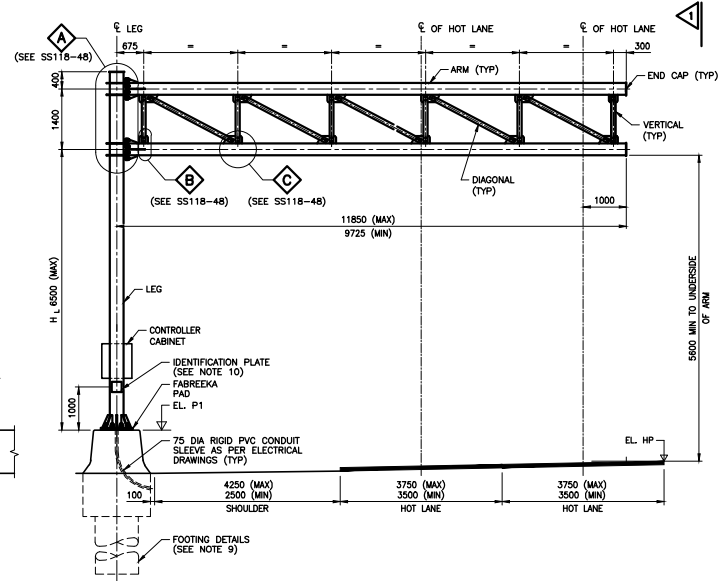
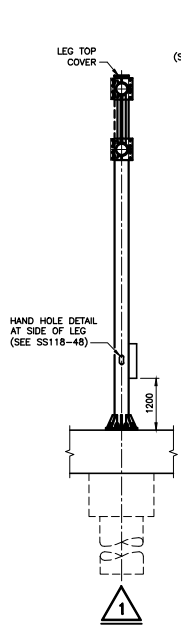
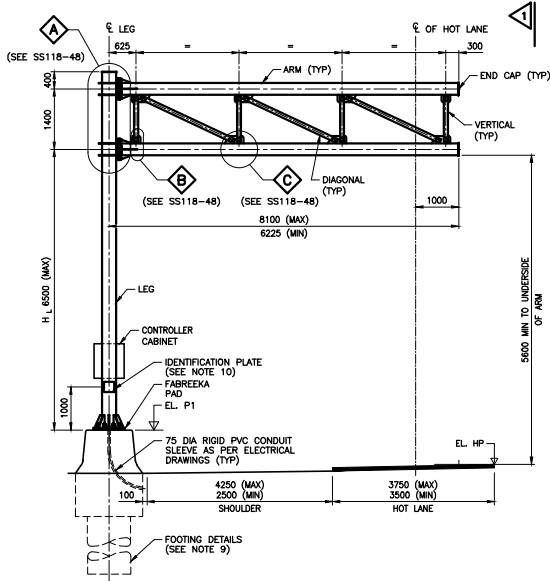
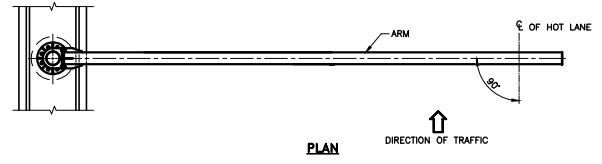
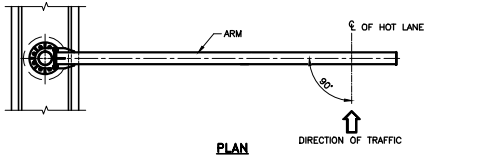
FILE NAME: C:\Users\vestad\Documents\Bridges Office\1. CFS Memo and det\1 Ready det for release\2018\Feb 23 C\118-46 Feb 2018.dwg  
 MODIFIED: 2018-02-12 1:51  
 Ministry of Transportation, Ontario

**NOTES TO DESIGNER:**

1. ANY CHANGE TO THE SHOWN SHOULDER AND LANE WIDTH RANGES SHALL REQUIRE FULL REDESIGN OF THE STRUCTURE.
2. TABLE 1 SHALL BE FILLED BY THE DESIGNER FOR SITE SPECIFIC INFORMATION.
3. DESIGNER SHOULD CHECK THE VERTICAL CLEARANCES TO THE STEEL TRUSS (5600mm) AND TO THE TOLL EQUIPMENT AND ASSOCIATED HARDWARES (5300mm) TO SATISFY THE VERTICAL CLEARANCE REQUIREMENTS.
4. WHEN SIGN BOARD IS REQUIRED TO BE MOUNTED ON THE STRUCTURE, THE STRUCTURE HAS TO BE RE-DESIGNED ACCORDING TO DIVISION 3 OF THE SIGN SUPPORT MANUAL.
5. THE "NOTES TO DESIGNER" SHALL BE DELETED FROM THIS DRAWING PRIOR TO ISSUING.

**METRIC**  
 DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN  
 DRAWING NOT TO BE SCALED  
 100mm ON ORIGINAL DRAWING


 Ministry of Transportation  
**CONT**  
**WP**  
**OVERHEAD SUPPORT STRUCTURE FOR MANAGED LANE TOLL EQUIPMENT GENERAL ARRANGEMENT I**  
  
**SHEET**



- NOTES:**
1. ALL STRUCTURAL STEEL SHALL BE ACCORDING TO CAN/CSA G40.20-13/G40.21-13 GRADE 300W OR ASTM SPECIFICATION A500 GRADE C OR API-5L-X46 FOR ROUND SECTION OF O.D. ≥ 508mm.
  2. ALL BOLTS, NUTS, AND WASHERS SHALL BE ACCORDING TO ASTM A325M AND BE HOT-DIP GALVANIZED UNLESS SPECIFIED OTHERWISE.
  3. ASTM A325 1" BOLTS MAY BE SUBSTITUTED FOR M24 BOLTS AND SHALL BE HOT-DIP GALVANIZED.
  4. ALL BOLTS SHALL BE INSTALLED BY TURN-OF-NUT TIGHTENING IN CONFORMANCE WITH CAN/CSA S6-14.
  5. ALL STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION. LEGS ONLY SHALL BE SUBSEQUENTLY COATED WITH AN APPROVED PAINT SYSTEM ACCORDING TO OPS 911.
  6. STRUCTURE SHALL NOT BE ERRECTED UNTIL FOUNDATION CONCRETE HAS REACHED 80% OF SPECIFIED STRENGTH.
  7. NO SHOP SPLICES SHALL BE ALLOWED IN ANY MEMBERS.
  8. ELEVATIONS TO BE VERIFIED IN THE FIELD BEFORE SIGN SUPPORT STRUCTURE FABRICATION.
  9. THIS STANDARD TO BE READ IN CONJUNCTION WITH DRAWING SS118-09 (FOOTING FOR SYMMETRICAL MEDIAN) AND/OR DRAWING SS118-10 (FOOTING FOR ASYMMETRICAL MEDIAN).
  10. EACH SUPPORT SHALL HAVE AN IDENTIFICATION MARKING SHOWING THE SITE NUMBER, THE MANUFACTURER'S NAME OR TRADEMARK, AND THE DATE OF MANUFACTURE. THIS 4mm THICK RECTANGULAR STAINLESS STEEL PLATE SHALL HAVE A RUBBER BACKING, AND BE OF SUFFICIENT DIMENSIONS TO ACCOMMODATE THE REQUIRED INFORMATION USING 8mm HIGH ENGRAVED LETTERING. THE PLATE SHALL BE ATTACHED TO THE LEG OF THE STRUCTURE BY MEANS OF STAINLESS STEEL BAND CLAMPS THAT GO THROUGH VERTICAL HOLES AT EACH SIDE OF THE PLATE, PASS BEHIND THE PLATE, AND WRAP AROUND THE LEG. NO DRILLING INTO THE HSS FOR ATTACHMENT OF PLATE IS PERMITTED.
  11. REFER TO DRAWING SS118-48 FOR CONNECTIONS DETAILS.
  12. BOLTED CONNECTION OF DIAGONAL AND VERTICAL MEMBERS HAS BEEN DESIGNED FOR ACTUAL JOINT FORCES.
  13. THIS SUPPORT STRUCTURE IS DESIGNED FOR MOUNTING TOLL EQUIPMENT SUCH AS CAMERA AND TRANSPONDER READER ETC. ABOVE HOT LANES. SIGN PANELS ARE NOT PERMITTED TO BE MOUNTED ON THE STRUCTURE.
  14. FOR ORIENTATION AND REQUIRED ELECTRICAL WORK SEE ELECTRICAL DRAWING.

**NOTES FOR TOLL EQUIPMENT:**

1. THE CONNECTIONS BETWEEN THE TOLL EQUIPMENT AND THE ARMS SHALL BE MADE OF STAINLESS OR GALVANIZED STEEL COMPONENTS.
2. THE MINIMUM VERTICAL CLEARANCE FROM THE HIGHEST POINT ON THE HOT LANES TO THE UNDERSIDE OF THE TOLL EQUIPMENTS SHALL NOT BE LESS THAN 5300mm.

REFER TO 2.4.1 IN THE SIGN SUPPORT MANUAL FOR PROFESSIONAL ENGINEER STAMPING REQUIREMENTS.

**TABLE 1 - GENERAL**

STATION	----		
SITE No.	----		
STRUCTURE TYPE	----		
EL. HP	----		
EL. P1	----		
H <sub>L</sub>	----		

**DESIGN INFORMATION**

STRUCTURE TYPE	C1	C2
DIAGONAL/VERTICAL SIZE	2 L89x89x9.5 ANGLES	2 L102x102x9.5 ANGLES
ARM SIZE	HSS 273x8.0	HSS 356x12.7
LEG SIZE	HSS 406x12.7	HSS 508x12.7

DESIGN	CHK	CODE	CSA S6-14	LOAD	----	DATE	----
DRAWN	CHK	SITE	----		----	DWG	----