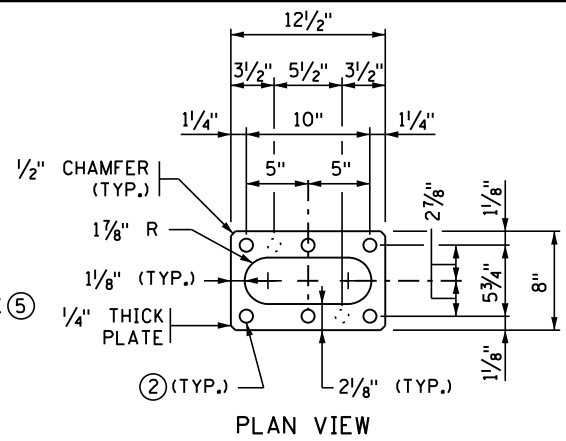
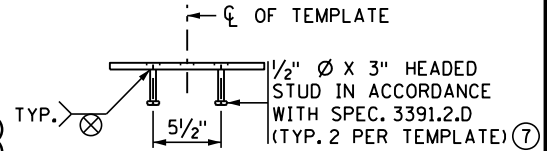


**PARTIAL ELEVATION**

(SHOWING ANCHOR ROD ASSEMBLY & HEX NUT POSITIONS AFTER POLE INSTALLATION)

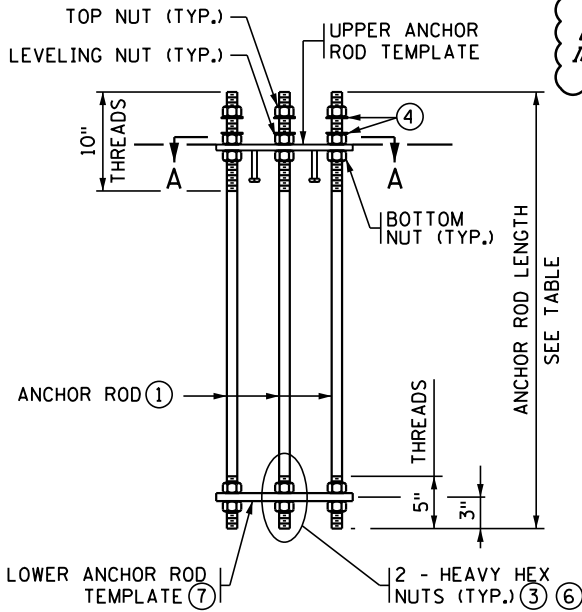


**PLAN VIEW**



**ELEVATION VIEW  
SECTION A-A  
ANCHOR ROD TEMPLATE**

**DESIGNER NOTE (REMOVE PRIOR TO PRINTING FINAL PLAN):**  
DESIGNER TO ENSURE REINFORCEMENT IN BARRIER OR PARAPET CAN DEVELOP YIELD STRENGTH OF ANCHOR RODS.



**ANCHOR ROD ASSEMBLY**

**NOTES:**

- INSTALL ANCHOR ROD ASSEMBLY PLUMB WITH UPPER ANCHOR ROD TEMPLATE LEVEL AND EMBEDDED IN CONCRETE AS SHOWN IN PARTIAL ELEVATION.
- PROTECT ANCHOR ROD THREADS AND LEVELING NUTS ABOVE THE UPPER ANCHOR ROD TEMPLATE FROM CONCRETE CONTAMINATION.
- GALVANIZE THREADED RODS, WASHERS, AND NUTS AFTER FABRICATION IN ACCORDANCE WITH SPEC. 3392.
- FURNISH & INSTALL PLATES IN ACCORDANCE WITH SPEC. 3306, GALVANIZE IN ACCORDANCE WITH SPEC 3394.
- TACK WELDING IS PROHIBITED.
- SUBSTITUTE MATERIALS IN ACCORDANCE WITH SPEC. 1605.

- ① PROVIDE 1/4" NOMINAL DIA. ANCHOR RODS TYPE B, IN ACCORDANCE WITH SPEC. 3385.2.B FOR 49' LIGHT STANDARDS WITH TWIN ARMS 10' OR LONGER (6 REQUIRED). PROVIDE 1" NOMINAL DIA. ANCHOR RODS TYPE B, IN ACCORDANCE WITH SPEC. 3385.2.B FOR ALL OTHER INSTALLATIONS.
- ② 1 1/16" Ø HOLE FOR 1" NOMINAL DIA. ANCHOR ROD, 15/16" Ø HOLE FOR 1 1/4" NOMINAL DIA. ANCHOR ROD.
- ③ HEAVY HEX NUTS IN ACCORDANCE WITH SPEC. 3391.2.A (30 REQ'D PER ASSEMBLY)
- ④ FLAT WASHERS IN ACCORDANCE WITH SPEC 3391.2.A (12 REQ'D PER ASSEMBLY)
- ⑤ TEMPORARILY SECURE THE UPPER ANCHOR ROD TEMPLATE WITH THE LEVELING NUTS BEFORE CONCRETE PLACEMENT. AFTER CONCRETE PLACEMENT, LEAVE LEVELING NUTS SECURED AGAINST TEMPLATE UNTIL CLEANING & LUBRICATING THE ANCHOR ROD CONNECTIONS, JUST PRIOR TO POLE INSTALLATION.
- ⑥ USE A 12" LONG WRENCH TO SNUG TIGHTEN NUTS PULLING THE HANDLE WITH ONE ARM IN ONE SMOOTH MOTION.
- ⑦ OMIT HEADED STUDS ON LOWER ANCHOR ROD TEMPLATE.
- ⑧ REMOVE SURFACE CONTAMINANTS AND APPLY SILICONE SEALANT TO THE UPPER TEMPLATE AROUND THE ANCHOR RODS AND ANCHOR ROD HOLES, AND THE INNER AND OUTER EDGES WHERE THE PLATE MEETS CONCRETE. USE AN APPROVED SILICONE JOINT SEALANT FOUND ON MNDOT'S APPROVED/QUALIFIED PRODUCTS LIST UNDER BRIDGE PRODUCTS.
- ⑨ CAST LEVEL CONCRETE SURFACE BENEATH LIGHT FIXTURE. SLOPE ADJACENT CONCRETE, AS SHOWN ON SLOPED OR SUPERELEVATED BRIDGES.

STANDARD BARRIER AND PARAPET TYPES (SEE PLANS FOR TYPE)	ANCHOR ROD LENGTH
36" TYPE "S" W/O CONCRETE WEARING COURSE *	3'-5"
36" TYPE "S" W/ CONCRETE WEARING COURSE *	3'-5"
42" TYPE "S" W/O CONCRETE WEARING COURSE *	3'-11"
42" TYPE "S" W/ CONCRETE WEARING COURSE *	3'-11"
54" TYPE "S" W/O CONCRETE WEARING COURSE *	4'-11"
54" TYPE "S" W/ CONCRETE WEARING COURSE *	4'-11"
32" TYPE "F" W/O CONCRETE WEARING COURSE	3'-1"
32" TYPE "F" W/ CONCRETE WEARING COURSE	3'-3"
32" TYPE "F" MEDIAN W/O CONC. WEARING COURSE	3'-1"
32" TYPE "F" MEDIAN W/ CONC. WEARING COURSE	3'-3"
32" TYPE "F" ON RETAINING WALL	3'-1"
36" TYPE "S" ON RETAINING WALL	3'-5"
32" CONCRETE PARAPET (TYPE P4) W/O CONC. W. C.	3'-1"
32" CONCRETE PARAPET (TYPE P4) W/ CONC. W. C.	3'-1"

\* USE SAME ANCHOR ROD LENGTH FOR TYPE "S" SPLIT OR SOLID MEDIAN BARRIERS.

APPROVED: APRIL 09, 2020  
*Kevin Westrom*  
STATE BRIDGE ENGINEER

STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION  
**ANCHOR ROD ASSEMBLY FOR LIGHT POLES**

REVISED

DETAIL NO.  
**B950**