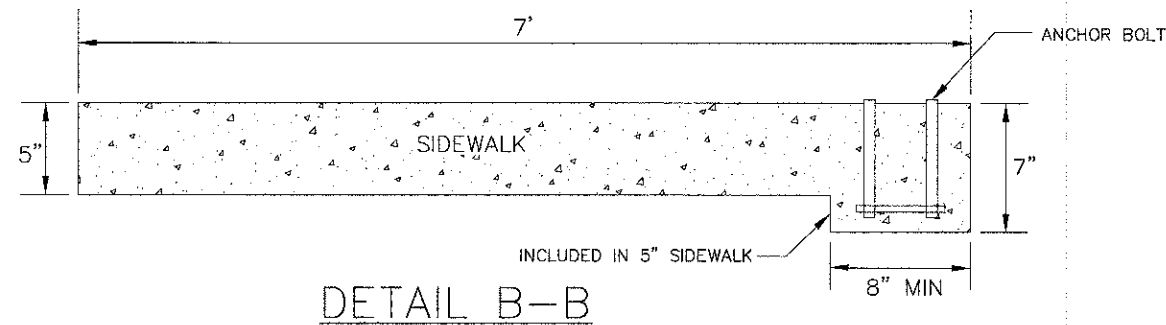
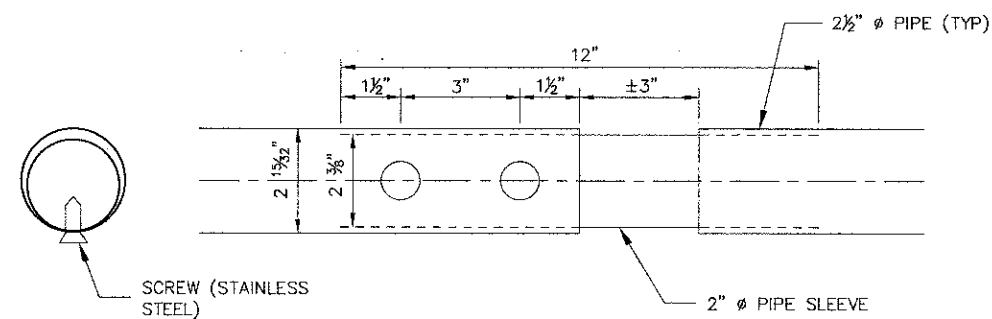


**HANDRAIL ELEVATION DETAIL**

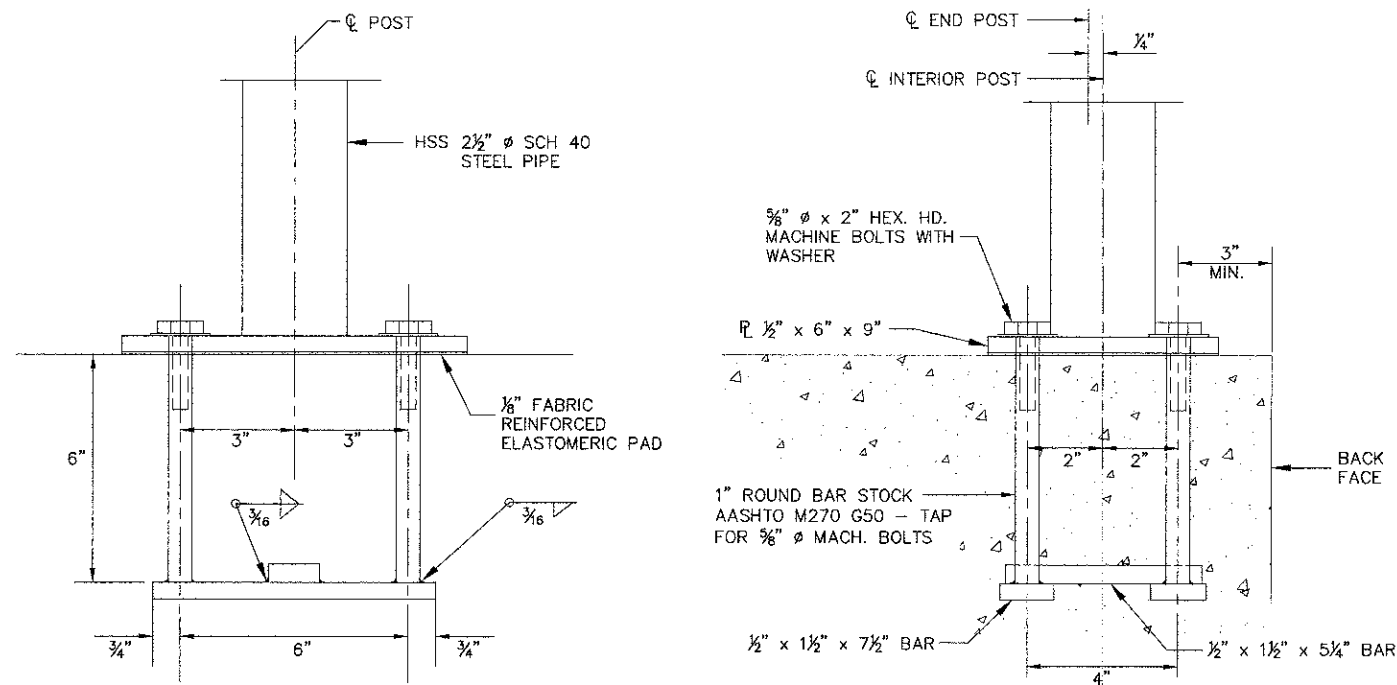


**DETAIL B-B**



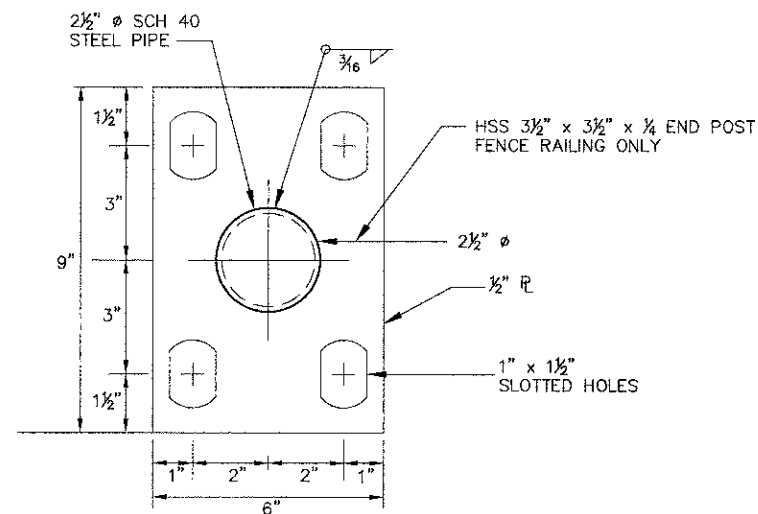
**DETAIL A  
HANDRAIL EXPANSION JOINT**

HANDRAIL EXPANSION JOINT SHALL BE INSTALLED AFTER EACH INTERVAL OF THREE, 7 FOOT HANDRAIL PANELS, FOR A TOTAL OF THREE EXPANSION JOINTS IN THE 110 FOOT HANDRAIL LENGTH.



**ANCHOR BOLT DETAILS FOR MOUNTING HANDRAIL  
ONTO PCC SIDEWALK 6 INCH, SPECIAL**

IN LIEU OF THE CAST-IN-PLACE ANCHOR DEVICE SHOWN, THE CONTRACTOR HAS THE OPTION OF DRILLING AND SETTING 5/8" Ø ANCHOR RODS ACCORDING TO ARTICLE 509.06 OF THE STANDARD SPECIFICATIONS. EMBEDMENT SHALL BE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.



**BASE R**

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE HANDRAIL, ITS CONFIGURATIONS AND ITS INSTALLATION TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIALS.
2. RAILING SHALL BE ACCORDING TO SECTION 509 OF THE STANDARD SPECIFICATIONS, EXCEPT AS NOTED, AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR HANDRAIL.
3. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 500, GRADE B, STRUCTURAL STEEL TUBING.
4. ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO W 270 GRADE 36.
5. IF THE OPTION OF DRILLING AND EPOXY GROUTING THE ANCHOR RODS IS CHOSEN, THE CONTRACTOR SHALL USE THE CAPSULE OR ADHESIVE CARTRIDGE TYPE ANCHOR RODS THAT HAVE BEEN PREVIOUSLY TESTED AND GIVEN PRIOR APPROVAL BY THE DEPARTMENT. THE CONTRACTOR SHALL INSTALL THESE ANCHOR RODS IN PRE-DRILLED HOLES ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES. THE CAPSULE OR THE ADHESIVE CARTRIDGE SHALL BE SEALED WITH PREMEASURED AMOUNTS OF THE ADHESIVE CHEMICAL.
6. SPACE REINFORCEMENT TO MISS ANCHOR RODS.
7. ALL POSTS, RAILING, SPLICES, ANCHOR DEVICES, AND PLATES SHALL BE GALVANIZED AFTER SHOP FABRICATION ACCORDING TO AASHTO M 111 AND ASTM A 385. ALL BOLTS, NUTS, WASHERS, AND ANCHOR RODS SHALL BE GALVANIZED ACCORDING TO AASHTO M 232 EXCEPT STAINLESS STEEL BOLTS AS NOTED.
8. VENT HOLES FOR GALVANIZING SHALL BE PLACED IN THE POSTS AND RAILS AT LOCATIONS THAT WILL NOT ALLOW THE ACCUMULATION OF MOISTURE IN THE MEMBERS.
9. HANDRAIL SHALL BE PAINTED BLACK PER ARTICLE 509.05.

FILE NAME = DETAILSH.DWG	DESIGNED -- DRAWN -- CHECKED -- DATE --	REVISED -- REVISED -- REVISED -- REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Hassell Road STP Project Details	F.A.U. RTE. 1100	SECTION 11-00087-00-FP	COUNTY Cook	TOTAL SHEETS 164	SHEET NO. 127	CONTRACT NO. 63770	ILLINOIS FED. AID PROJECT CMM 9003(757)
SCALE: NONE				SHEET NO. 3 OF 4 SHEETS		STA. TO STA.					