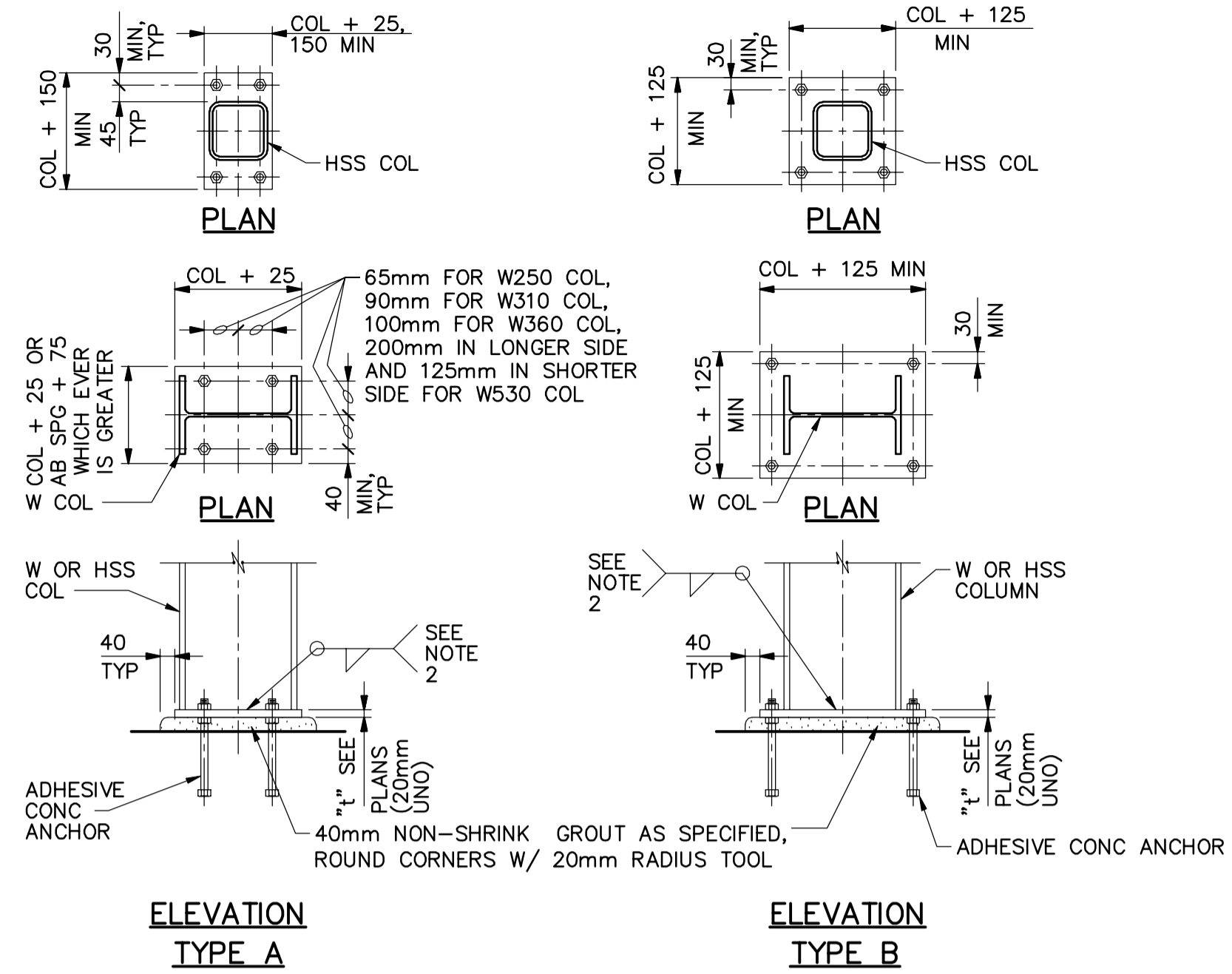


- NOTE:**
1. TYPICAL AROUND ENTIRE STRUCTURE.
 2. T.O.S. ELEVATION VARIES, COORDINATE WITH ARCHITECTURAL DRAWINGS.

2 MASONRY VENEER SUPPORT AT FOUNDATION
N.T.S.
(REVISED FOR IFT FEB. 22/07 DK)

1 NOT IN USE
N.T.S.

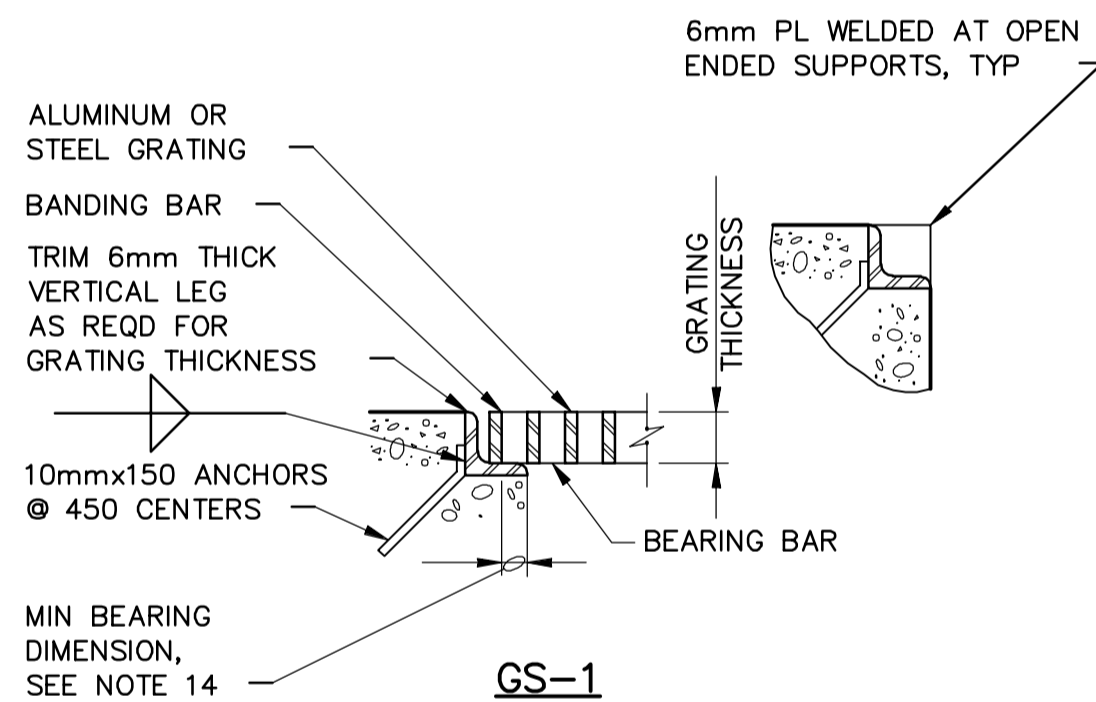


- NOTES:**
1. UNLESS OTHERWISE NOTED, ADHESIVE CONC ANCHORS SHALL BE 20mm DIA x REQUIRED WITH LEVELING NUTS AND 300mm MINIMUM EMBED AND BASEPLATES SHALL BE CENTERED ON COLUMN.
 2. WELD SIZE SHALL BE DETERMINED BY THE THICKEST MEMBER JOINED; MINIMUM WELD SIZE SHALL BE 5mm FILLET FOR MATERIAL THICKNESSES UP TO AND INCLUDING 15mm, 6mm FILLET FOR THICKNESSES OVER 15mm TO 20mm, AND 8mm FILLET FOR MATERIAL THICKNESSES OVER 20mm. ALL WELDS SHALL BE SINGLE-PASS WELDS.
 3. USE OF 2 - BOLT STEEL POST BASEPLATE ANCHORAGE DETAIL SHOWN SHALL BE LIMITED TO STEEL SUPPORT MEMBERS WEIGHING LESS THAN 135kg.

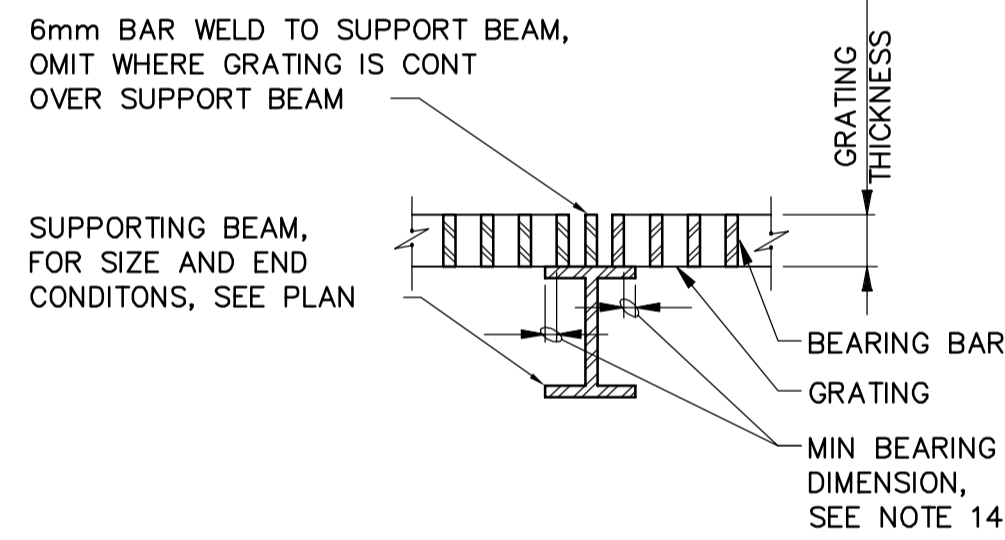
3 STEEL COLUMN BASE
N.T.S.

GENERAL NOTES:

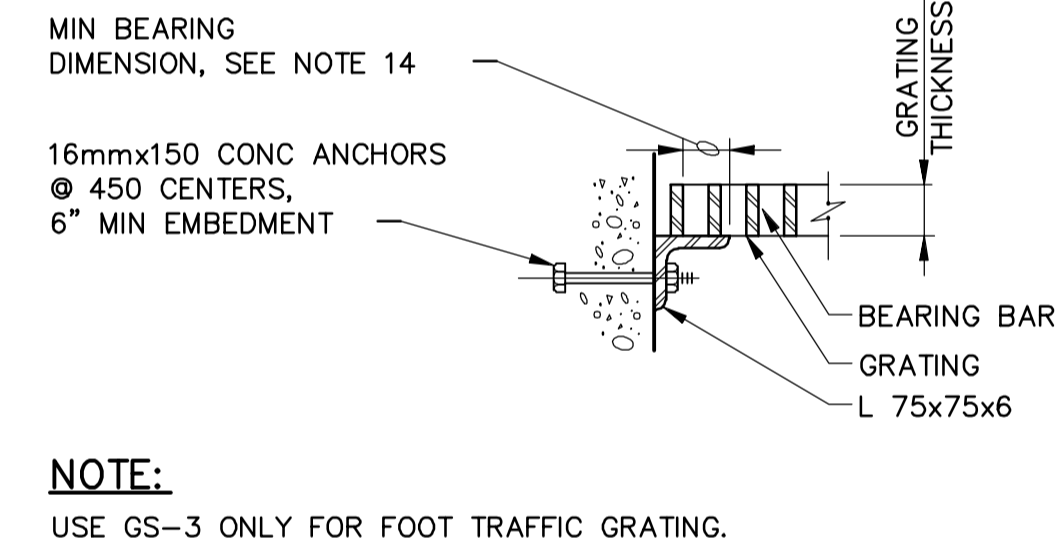
1. NOT USED
2. NOT USED
3. GRATING SPAN SEE PLAN.
4. WIDTH OF GRATING SECTIONS SHALL NOT EXCEED 900mm.
5. SHOP DRAWINGS BASED ON FIELD DIMENSIONS SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR PRIOR TO FABRICATION.
6. MATERIAL FOR SUPPORTS OF STEEL AND ALUMINUM GRATING TO BE SAME AS GRATING, EXCEPT METAL SUPPORTS THAT ARE TO BE EMBEDDED IN CONCRETE SHALL BE TYPE 316 STAINLESS STEEL.
7. UNLESS NOTED OTHERWISE ON PLANS, GRATING THICKNESS SHALL BE AS TABULATED IN "GRATING THICKNESS TABLE" FOR APPLICABLE TRAFFIC.
8. BEARING BAR THICKNESS FOR GRATING TO BE 5mm MINIMUM.
9. BAND ALL EDGES WITH 5mm x DEPTH OF BEARING BAR.
10. PROVIDE MISCELLANEOUS GRATING FASTENERS AS REQUIRED.
11. TYPE OF MATERIAL USED SHALL BE AS SHOWN ON PLANS OR AS SPECIFIED. THIS STANDARD DETAIL INCLUDES 2 TYPES, ALTHOUGH BOTH MAY NOT BE INCLUDED IN PROJECT.
12. THE HORIZONTAL CLEARANCE BETWEEN THE GRATING AND GRATING SUPPORTS SHALL NOT BE LESS THAN 6mm NOR GREATER THAN 13mm AND AS SPECIFIED.
13. ALL GRATING SECTIONS, WHEN IN PLACE, SHALL ALWAYS BE FIRMLY ANCHORED TO THEIR SUPPORTS AS SPECIFIED.
14. MIN BEARING HORIZONTAL DIMENSION = 25mm FOR GRATING DEPTH 57mm OR LESS, MIN BEARING HORIZONTAL = 50mm FOR GRATING DEPTH GREATER THAN 57mm



GS-1

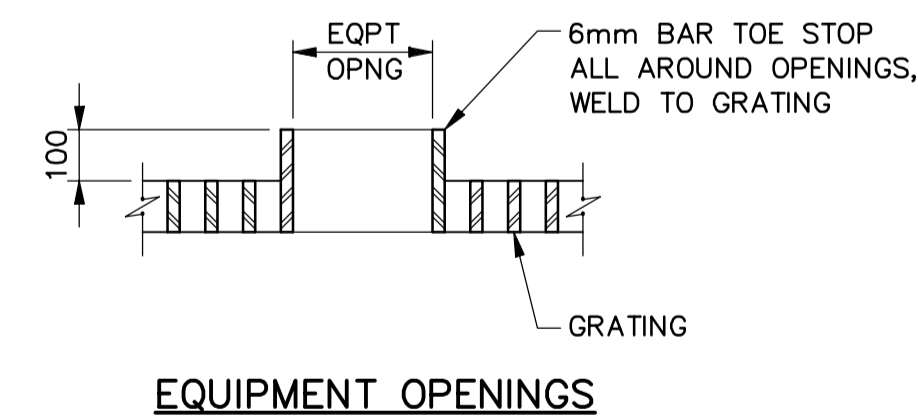


GS-2



GS-3

- NOTE:**
USE GS-3 ONLY FOR FOOT TRAFFIC GRATING.



EQUIPMENT OPENINGS

| HEAVY VEHICULAR TRAFFIC (HS 20-44) | | |
|---------------------------------------|-------------------|-----------------------------|
| MAXIMUM SPAN | STEEL | ALUMINUM |
| 300 | 51x4.8 | DO NOT USE ALUMINUM GRATING |
| 500 | 64x6.4 | |
| 600 | 64x9.5 OR 76x6.4 | |
| 750 | 76x9.5 OR 102x6.4 | |
| 1000 | 89x9.5 | |
| 1200 | 102x9.5 | |
| 1500 | 114x9.5 | |

| LIGHT VEHICULAR TRAFFIC (WHEEL LOAD = 900KG OR LESS) | | |
|---|--------|-----------------------------|
| MAXIMUM SPAN | STEEL | ALUMINUM |
| 300 | 44x4.8 | 44x4.8 |
| 450 | 44x4.8 | 44x4.8 |
| 600 | 51x4.8 | 51x4.8 |
| 750 | 57x4.8 | 57x4.8 |
| 900 | 64x4.8 | 64x4.8 |
| 1200 | 64x6.4 | DO NOT USE ALUMINUM GRATING |
| 1500 | 64x9.5 | |
| 1800 | 64x9.5 | |
| 2100 | 76x9.5 | |

| FOOT TRAFFIC GRATING THICKNESS TABLE | | |
|---|----------|-------|
| MAXIMUM SPAN | ALUMINUM | STEEL |
| 1050 | 32 | 25 |
| 1200 | 38 | 25 |
| 1350 | 44 | 25 |
| 1500 | 44 | 32 |
| 1650 | 51 | 32 |
| 1800 | 57 | 38 |
| 1950 | 57 | 38 |
| 2100 | 64 | 44 |

VEHICULAR TRAFFIC NOTE:
STEEL GRATING BEARING BARS FOR VEHICULAR TRAFFIC SHALL BE SPACED AT 48mm OC; ALUMINUM GRATING BEARING BARS FOR VEHICULAR TRAFFIC SHALL BE SPACED AT 30mm OC.

SERRATED BEARING BARS:
INCREASE GRATING THICKNESSES SHOWN IN TABLES BY 6mm FOR GRATING WITH SERRATED SLIP RESISTANT SURFACES.

4 STANDARD GRATING
N.T.S.

| | | | | | | | |
|---|----------------------------------|---------------------------------------|--|-----------------|--|---|---------------------------------|
| <p>Certificate of Authorization CH2M HILL Canada Ltd. No. 1441 Expiry: April 30, 2007</p> | B.M. ELEV. | <p>Frederickson Cooper ARCHITECTS</p> | <p>1350 International Ltd. Company</p> | ENGINEER'S SEAL | <p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION</p> | | |
| | | | | DESIGNED BY MH | | CHECKED BY AP | ORIGINAL SIGNED BY D. KRUGER |
| | | | | DRAWN BY CR | | APPROVED BY AHL | 2007/01/31 |
| | | | | SCALE: NTS | | RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI | CONSULTANT DRAWING NO. WJ-S0455 |
| | 00 ISSUED FOR TENDER 07/01/31 MH | DATE 2006/08/22 | DATE 2007/01/31 | | <p>WATER TREATMENT PLANT SODIUM HYPOCHLORITE BUILDING SODIUM HYPOCHLORITE AND CHEMICAL STORAGE BUILDINGS</p> <p>STRUCTURAL SODIUM HYPOCHLORITE BUILDING STANDARD DETAILS</p> | | |
| | NO. REVISIONS | DATE | DATE | | <p>CITY FILE NUMBER</p> <p>SHEET OF</p> <p>CITY DRAWING NUMBER 1-0601J-A-S0455-001-000</p> | | |