

DESIGN LOADS

GENERAL FLOOR AREAS

LIVE LOAD: 4.8 kPa

APPARATUS FLOOR

LIVE LOAD: 12.0 kPa

GENERAL ROOF AREAS

LIVE LOAD: SNOW + RAIN 2.15 kPa

DEAD LOAD: BALLAST + MEMBRANE 0.57 kPa
 INSULATION 0.10 kPa
 MEMBRANE 0.10 kPa
 PRECAST CONCRETE FLOOR UNITS 3.35 kPa
 MECH/ELECT/MISC 0.29 kPa
 CEILING 0.24 kPa

 4.65 kPa

TOTAL LOAD: 6.80 kPa
 + DRIFT
 + SLIDING
 + PATIO STONES
 + ROOF UNIT
 + CONCRETE PAVER (1.20kPa)

APPARATUS BAY ROOF

LIVE LOAD: SNOW + RAIN 2.15 kPa

DEAD LOAD: METAL ROOF 0.33 kPa
 INSULATION 0.07 kPa
 MEMBRANE 0.07 kPa
 ROOF DECK 0.12 kPa
 JOISTS & BRIDGING 0.40 kPa
 MECH/ELECT/MISC 0.24 kPa

 1.23 kPa

TOTAL LOAD: 2.95 kPa

NET FACTORED UPLIFT 1.20 kPa

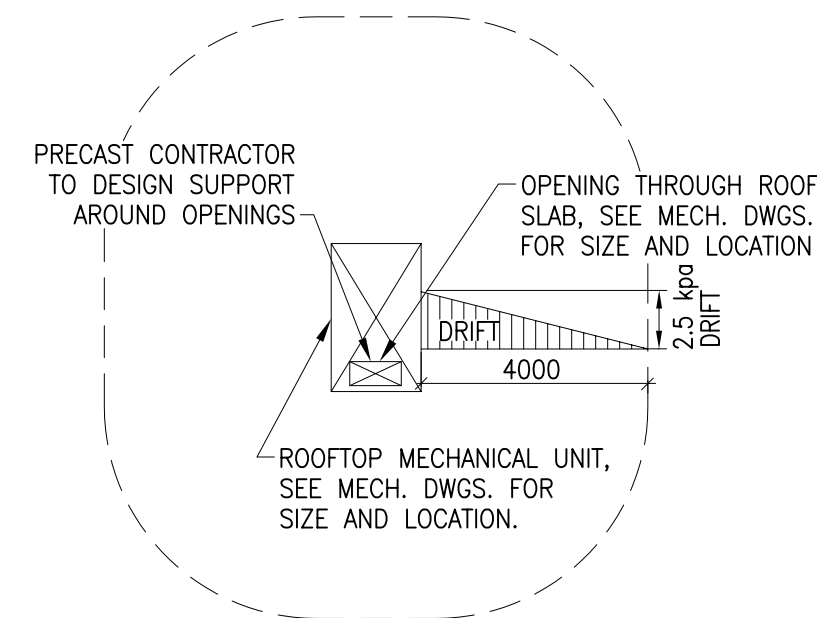
OTHER ENVIRONMENTAL LOADS

WIND PRESSURE
 $q_3 = 0.45 \text{ kPa}$
 IMPORTANCE FACTOR $I_w = 1.25$

SEISMIC DATA
 $S_a(0.2) = 0.12$
 $S_a(0.5) = 0.056$
 $S_a(1.0) = 0.023$
 $S_a(2.0) = 0.006$
 PCA = 0.059

SITE CLASS C
 IMPORTANCE FACTOR $I_e = 1.5$

SNOW LOAD
 $S_s = 1.9$ $S_r = 0.2$
 IMPORTANCE FACTOR $I_s = 1.25$



TYPICAL SNOW DRIFT AROUND MECHANICAL UNITS

LOOSE LINTEL SCHEDULE

LINTEL MARK	MAX. ROUGH MASONRY OP'G	MATERIAL	ARRANGEMENT	REMARKS
L1	1200	12x125 VERT. PLATE 10x180 HORIZ. PL AT 190 BLOCK AND L90x90x8 AT BRICK		HOT DIP GALVANIZE EXTERIOR BRICK LINTEL
L2	2400	S200x27 + PL 180x6 CONT AT BLOCK AND L152x90x10 AT BRICK		HOT DIP GALVANIZE EXTERIOR BRICK LINTEL
L3	3000	W200x31 + PL 370x6 CONT +PL 10x170 VERT WELD TO BOTTOM PLATE		HOT DIP GALVANIZE ENTIRE LINTEL ASSEMBLY
L4	1200	S200x27 + PL 180x6 CONT		
L5	2100	W200x31 + PL 180x6 CONT		
L6		SEE TYPICAL DETAIL 5.01 FOR NON-LOAD BEARING WALL LINTEL		

NOTES

- USE SCHEDULE IN CONJUNCTION WITH THE ARCHITECTS, MECHANICAL & ELECTRICAL DWGS.
- PROVIDE A SUITABLE LINTEL FOR ALL OPENINGS IN MASONRY WALLS.
- PROVIDE 200 mm MIN. BEARING EACH END ON FILLED OR SOLID MASONRY.
- WELD ALL BACK TO BACK ANGLES AT 460 o/c
- ALL EXTERIOR LINTELS TO BE HOT-DIPPED GALVANIZED.
- FILL MASONRY AROUND LINTELS SOLID WITH MORTAR
- CONNECT ALL LINTELS TO COLS WHERE LESS THAN 300 OF MASONRY REMAINS BETWEEN ROUGH OPENING AND FACE OF COLUMN.
- LOCATE ALL NEW MECHANICAL OPENINGS NO CLOSER THAN 300mm FROM CENTRE OF JOIST OR BEAM BEARING PLATES.
- MECHANICAL TRADES ARE TO SUPPLY A DRAWING OF EACH WALL ELEVATION SHOWING ALL OPENINGS SIZES AND LOCATIONS RELATIVE TO JOIST AND BEAMS PRIOR TO THE MASON STARTING WALL CONSTRUCTION.
- PROVIDE 12mm DIA. WELDED ANCHORS 450mm LG. + HOOK WELDED TO TOP SIDE OF ALL LINTELS IN LOAD BEARING WALLS WITH SPANS GREATER THAN 1200mm. SPACE ANCHORS AT SAME SPACING AS JOIST BEARING PLATES ABOVE.

STEEL BEARING PLATE/BASE PLATE SCHEDULE

PLATE MARK	PLATE SIZE	ANCHOR BOLTS	ANCHOR SPACING	COMMENTS
BP1	180Wx16x200L	2-13mmø x 400 LONG + 50 HOOK BOLTS		
BP2	180Wx16x200L	2-16mmø x 600 LONG + 50 HOOK BOLTS		

NOTES:

- STEEL BEARING PLATES TO BE FABRICATED BY STRUCTURAL STEEL CONTRACTOR AND PLACED BY MASONRY CONTRACTOR.
- LOCATION AND ELEVATION OF BEARING PLATES TO BE COORDINATED WITH STRUCTURAL STEEL SHOP DRAWINGS. BEAM TO BE SUPPORTED ON THE PLATE TO BE CENTRED ALONG THE LENGTH OF THE PLATE.
- DIMENSION OF PLATE NOTED IN PLATE SIZE COLUMN AS 'L' TO BE PLACED ALONG THE LENGTH OF THE WALL AND/OR ORIENTED ALONG THE LENGTH OF THE BEAM/JOIST - UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.
- BEAM FLANGE TO BE FIELD WELDED DOWN TO TOP OF BEARING PLATE USING A MINIMUM 6mm FILLET WELD EACH SIDE OF BEAM FOR THE ENTIRE LENGTH OF BEARING.
- FOR BEARING PLATES PLACED ON CONCRETE BLOCK WALLS - GROUT SOLID THE CORES OF THE BLOCKS CONTAINING THE ANCHOR BOLTS OF THE PLATES CONTINUOUS TO THE TOP OF THE FOUNDATION WALL. GROUT SOLID THE BEAM POCKETS AFTER FIELD WELDING
- ANCHOR BOLTS SHOWN TO BE WELDED TO THE UNDERSIDE OF THE BEARING PLATE FOR TENSILE CAPACITY OF THE BOLT

COLUMN SCHEDULE

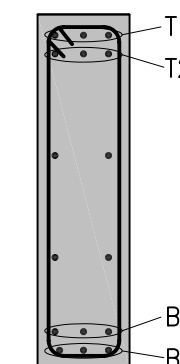
COLUMN MARK	SIZE	BASE PLATE	REMARKS
C1	HSS 152x152x6.4	300x16x200	2-20 ø A-BOLTS, 100 PROJ 460 EMBEDMENT + 100 HOOK
C2	HSS 203x203x8.0	350x19x350	2-20 ø A-BOLTS, 100 PROJ 460 EMBEDMENT + 100 HOOK
C3	HSS 127x127x8.0	275x16x175	2-20 ø A-BOLTS, 100 PROJ 460 EMBEDMENT + 100 HOOK

GRADE BEAM SCHEDULE

BEAM MARK	GRADE BEAM DIMENSIONS	GRADE BEAM REINFORCING	BEAM STIRRUPS	UNDERSIDE OF BEAM ELEVATION
GB1	400x1200 dp	T1=4-20M B1=4-20M 4-15M EACH FACE	10M @ 300 o/c	-
GB2	400x1200 dp	T1=4-25M B1=5-25M 4-15M EACH FACE	10M @ 300 o/c	-
GB3	400x750 dp	T1=4-25M B1=5-25M 2-15M EACH FACE	10M @ 200 o/c	-
GB4	400x1200 dp	T1=4-25M T2=2-15M B1=5-25M B2=2-15M 4-15M EACH FACE	10M @ 200 o/c	-

NOTES:

- CONCRETE CONTRACTOR TO HAVE ALL REINFORCING INSPECTED BY VANBOXMEER & STRANGES LTD. AND APPROVED PRIOR TO PLACING CONCRETE.
 - SUPPLY 30 MPa CONCRETE WITH 75 SLUMP ± 25, AIR ENTRAINED 6% ± 1%. REINFORCING STEEL YIELD TO BE 400 MPa
 - PROVIDE 35M SPACER BARS BETWEEN BAR LAYERS AT 1200 o/c AT BEAMS WHERE THERE IS MORE THAN ONE LAYER OF TOP OR BOTTOM STEEL.
 - LAP TOP BARS AT MID SPAN OF BEAMS WITH A CLASS 'B' LAP
 - LAP BOTTOM BARS AT SUPPORTS WITH A CLASS 'B' LAP
 - REFER TO TYPICAL DETAIL 3.19 FOR CONTINUOUS BEAM REINFORCING DETAIL.
HOOK ALL TOP BARS AT ENDS OF ALL BEAM LINES
 - PLACE 2-10M BARS EACH SIDE OF CAISSON, TYPICAL
- T1 = TOP UPPER MOST LAYER B1 = BOTTOM LOWER MOST LAYER
 T2 = TOP SECOND LAYER B2 = BOTTOM UPPER LAYER



LOAD BEARING CONCRETE BLOCK WALL SCHEDULE

WALL MARK	WALL TYPE	VERTICAL REINFORCING	COMMENTS
MW190A	190 CONCRETE BLOCK	-15M@800mm o/c MAXIMUM -2-15M VERTICAL EACH SIDE OF EACH OPENING	
MW290A	290 CONCRETE BLOCK	-15M@800mm o/c MAXIMUM -2-15M VERTICAL EACH SIDE OF EACH OPENING	

LOAD BEARING MASONRY WALL SCHEDULE NOTES:

- ALL MASONRY WALLS SHOWN ON PLAN AS THUS ARE LOAD BEARING (GRAVITY AND/OR LATERAL).
- PROVIDE 9ga. LADDER TYPE REINFORCING IN EVERY OTHER HORIZONTAL COURSE (@ 400mm c/c MAX. VERTICAL) UNLESS NOTED OTHERWISE IN PLAN DETAILS.
- PROVIDE 2-15M VERTICAL IN CORE ADJACENT TO EACH SIDE OF ROUGH OPENINGS OR IN CORE ADJACENT TO BEARING PLATE OF STEEL LINTEL. VERTICAL REINFORCING IS TO BE INSTALLED CONT FROM FOUNDATION WALL TO UNDERSIDE OF BEAM/STEEL DECK.
- FULLY GROUT ALL REINFORCED CORES. (SEE NOTE #8)
- FILL ALL CORES IN PIERS LESS THAN 600mm IN WIDTH SOLID WITH GROUT IN ADDITION TO THAT REQUIRED BY NOTE #3.
- GROUT SOLID ALL CORES BELOW THE BEARING POINT OF ALL BEAMS, JOISTS OR LINTELS CONT TO THE FOUNDATION.
- PROVIDE MECHANICAL CONNECTION BETWEEN LOWER AND UPPER LIFTS OF VERTICAL REINFORCING.
- ALL GROUT TO BE 20MPa WITH 10mm MAX. AGGREGATE SIZE AND 175mm±25mm SLUMP. ALL GROUTING TO CONFORM TO CSA/CAN3 A371-M84. PLACE GROUT IN "LOW LIFTS" (NOT MORE THAN 1.5m VERTICAL).
- PROVIDE BOND BEAM FOR EACH LOAD BEARING BLOCK WALL. SEE SECTIONS FOR BOND BEAM DETAILS.

ISSUES:		
NO.	DATE	DESCRIPTION
1	SEP. 24, 2010	ISSUED FOR TENDER
2	DEC. 16, 2010	ISSUED FOR CONSTRUCTION

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PROJECT NAME:

NEW WINNIPEG STATION No. 27 PROJECT

WINNIPEG, MANITOBA

DRAWING TITLE:

SCHEDULES

PROJECT NORTH: STAMP:

SCALE: PROJECT NO.:
 DATE: 10123
 ISSUED: FILE NAME:
 MAY 20 2010
 DRAWN BY: DRAWING NO.:
 DZ
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