#### A. GENERAL

1. All dimensions shall be checked and verified prior to commencing construction.

# B. CONCRETE

- I. All concrete work shall be in accordance with CAN3-A23.1 concrete materials and methods of concrete construction.
- 2. Concrete strengths:

Component		Cement Type	28 Day Strength	Slump	Maximum Aggregate	Cover for Reinforcing Steel
	No.	Description	MPa	in.	in.	in.
Slabs (0.6)	10	Normal Portland	35	3 1/2"	3/4"	1 1/2" Top
Slabs (structural)	10	Normal Portland	35	3 1/2"	3/4"	1 1/2" Top and Bottom

- \* Ratio 040 maximum water/concrete
- 3. Exterior slab to have 5-8% air entrainment
- 4. Construct form work, shoring and bracing to meet design and code requirements, accurately, so that resultant finished concrete conforms to shapes, lines and to dimensions indicated on the drawings.
- 5. Construction joints, pour scheduling and work procedures shall be discussed with the contract administrator prior to commencing construction.
- 6. Notify the contract administrator 24 hours prior to pouring concrete.
- 7. Three concrete test cylinders and one slump test shall be taken for every 75 or less cubic meters or each day concrete is placed, whichever is the greater. Testing shall be performed in accordance with CAN3-A23.2.

#### C. REINFORCING STEEL

- 1. Perform concrete reinforcing work in accordance with CAN3-A23.3-unless indicated otherwise.
- 2. All reinforcing bars shall be high strength deformed bars with a minimum specified yield strength of 400 MPA in accordance with CSA G30.12.
- 3. Locate reinforcing splices not indicated on drawings at points of minimum stress. Locations of splices to be approved by consultant.
- 4. Before placing ensure reinforcing is clean, free of loose scale, dirt or other foreign coating which would reduce the bond to concrete.
- 5. Shop drawings shall be submitted which clearly indicate bar sizes, spacings, locations and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices for review prior to fabrication of the reinforcing steel. Detail in accordance with the latest ACI detailing manual.
- 6. All openings in cast-in-place concrete shall be reinforced with 2 15 M bars, all sides. All openings not shown on structural drawings shall be approved by the contract administrator prior to construction.

### D. STRUCTURAL STEEL

- 1. Fabrication and erection of structural steel shall be performed in accordance with CSA SIG steel structures for buildings. Verify all dimensions prior to fabrication.

  2. Hollow structural sections shall be in accordance with CSA G40.21, Grade 350W Class C. All other structural sections shall be in accordance with CSA G40.21. Grade 350W.
- 3. All structural steel connections shall be in accordance with CSA G40.21, Grade 350W. Design and fabricate all connections for the full strength of the member.
- 4. Splicing of members not permitted unless otherwise noted.
- 5. Provide masonry anchors 38  $\times$  3  $\times$  400 Leg a 400 O/C on all columns and beams adjacent to masonry.
- 6. Provide galvanizing of members to CSÅ GI64 as shown on drawings.
- T. Welding shall be undertaken by a company with proven capability in this type of work and shall have the approval of the Canadian welding bureau to the requirements of CSA W471
- 8. Welding shall conform to the requirements of the latest issue of CSA W59.
- 9. Structural steel to receive one coat of CISC CPMA standard 1-73A primer.
- 10. The contractor shall supply and install all temporary guying and bracing necessary to provide stability for the structure as a whole. These shall remain in place until floor slabs are well cured, steel roof deck is fully welded and/or permanent bracing is installed.
- II. The contractor shall submit shop drawings, sealed by a professional Engineer registered in the project province, including connection details and clearly indicating profiles, sizes, spacing and locations of structural members, cambers, and loads to the contract administrator for approval prior to fabrication.

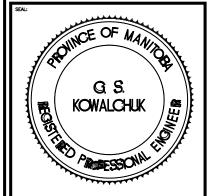
## E. MASONRY

- 1. Masonry mortar shall be type S based on property and proportion specifications of CSA AIT9 with a 28 day strength of 1800 psi.
- 2. Materials used in concrete masonry shall conform to CSA AI65.1.
- 3. Provide continuous bond beams with 2 15M bars in 20 MPA concrete at the top of masonry walls and as indicated on the drawings.
- 4. At lintel locations fill block two courses deep with 20 MPA concrete at bearing each end unless otherwise indicated.
- 5. Concrete strength to be 20 MPA at 28 days, type 10 cement for all concrete fill unless otherwise noted.
- 6. Masonry block reinforcing provide "DUR-O-WALL" or "BLOK-LOK", ladder type, standard, 3.76 MM side rods and cross bars, welded to ASTM A82 for cold drawn steel. Use reinforcing at maximum spacing of 16".
- 7. Brick ties to be installed in accordance to manufacturer's recommendations at maximum horizontal and spacing of 16 inches. Ties to be 3/16" diameter galvanized wire rectangular ties.
- 8. Masonry reinforcement and tying shall be in accordance with CAN3-S304-M78.



Certificate of Authorization Kowalchuk Consulting Engineers Ltd. No. 1777 Date:

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REV	DESCRIPTION	DATE	BY



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THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS AN LEVELS PRIOR TO COMMENCEMENT OF WORK AND IS HELD RESPONSIBLE FOR REPORTING ANY DISCREPANCY OR OMISSION TO NEIL COOPER ARCHITECT INC IMMEDIATELY.

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**GENERAL NOTES** 

PROJECT:

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O/H DOOR & CONCRETE
SLAB REPLACEMENT
WINNIPFG. MANITORA

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RAWN BY: CHECKED BY: SI DC GSK
ATE: MAY. 09, 2007

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