# DESIGN CODE

THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH PART 4 OF THE NATIONAL BUILDING CODE OF CANADA 2010 EDITION AND THE 2011 MANITOBA BUILDING CODE AMMENDMENTS.

# FOUNDATION

1. FOUNDATION DESIGN BASED ON THE GEOTECHNICAL REPORT PREPARED BY M. BLOCK & ASSOCIATES LTD. DATED JUNE 11, 2012.
2. CENTER PILES ON GRADE BEAMS UNLESS OTHERWISE NOTED.
3. PILE DESIGN IS BASED ON DRIVEN PRECAST PILES BASED ON THE FOLLOWING FACTORED GEOTECHNICAL RESISTANCE:

| | |
|---|---|
| 300mm HEX | 667KN |
| 350mm HEX | 934KN |
| 400mm HEX | 1201KN |

4. A QUALIFIED GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA SHALL REVIEW AND VERIFY PILE DESIGN CAPACITIES DURING INSTALLATION ON SITE.

# CONCRETE

1. ALL CONCRETE CONSTRUCTION, COLD WEATHER CONSTRUCTION & CONCRETE TESTING TO BE IN ACCORDANCE WITH THE LATEST EDITION OF CSA STANDARDS A23.1-09 AND A23.2-09.
2. ALL CONCRETE TO BE NORMAL WEIGHT HARD ROCK CONCRETE WITH A MINIMUM 28 DAY, OR 56 DAY COMPRESSIVE STRENGTH AS NOTED IN TABLE 2, A23.1-09.
3. CONCRETE CLASSES OF EXPOSURE (REFER TO TABLE 1, A23.1-09):

| | |
|---|---|
| A. GRADE BEAMS | CLASS F-2 EXPOSURE (30 MPa @28d) |
| B. INTERIOR SLABS ON GRADE (INCLUDING TOPPING) | CLASS N EXPOSURE (25 MPa @28d) |
| C. EXTERIOR SLABS ON GRADE (SIDEWALKS, CURBS, TOPPING, PADS) | CLASS C-2 EXPOSURE (32 MPa @28d) |
| D. EXTERIOR STRUCTURAL SLABS | CLASS C-1 EXPOSURE (35 MPa @28d) |
| E. PILE CAPS | CLASS S-2 EXPOSURE (32 MPa @56d) |

4. CONCRETE SLUMP TO BE COORDINATED BETWEEN CONTRACTOR AND CONCRETE SUPPLIER CONSIDERING THE PERFORMANCE CRITERIA AND THE CONTRACTOR'S CRITERIA FOR CONSTRUCTION AND PLACEMENT.
5. MISCELLANEOUS CONCRETE ELEMENTS (PITS, TRENCHES, ETC.) TO BE MINIMUM 152mm THICK REINFORCED WITH 10M @ 305mm O/C EACH WAY UNLESS NOTED OTHERWISE.

# REINFORCING

1. REINFORCING STEEL SHALL BE GRADE 400 DEFORMED NEW BILLET STOCK CONFORMING TO LATEST CSA SPECIFICATION G30.18-M92 (R2007). WELDED WIRE MESH SHALL CONFORM TO CSA A23.1-09 CLAUSE 8.1.1.1.
2. CONCRETE COVER TO BE AS PER TABLE 17 OF CSA A23.1-09

| EXPOSURE CONDITION | EXPOSURE CLASS | | |
|---|---|---|---|
| | N | F-1, F-2, S-1, S-2 | C-XL, C-1, C-3, A-1, A-2, A-3 |
| CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH | - | 75mm | 75mm |
| BEAMS, GIRDERS, COLUMNS, AND PILES | 30mm | 40mm | 60mm |
| SLABS, WALLS, JOISTS, SHELLS, AND FOLDED PLATES | 20mm | 40mm | 60mm |

3. CONCRETE COVER FOR EXPOSURE CLASSES NOT NOTED ABOVE TO BE 40 mm.
4. TOP STEEL IN GRADE BEAMS TO BE SPLICED AT CENTER SPAN AND BOTTOM STEEL TO BE SPLICED OVER SUPPORTS. SPLICE LENGTHS:
   A. TENSION ZONE SPLICE TO BE AVOIDED WHEREVER POSSIBLE, BUT IF REQUIRED, LENGTH SHOULD BE SPECIFIED BY THE CONTRACT ADMINISTRATOR.
   B. COMPRESSION ZONE SPLICE SHOULD NOT BE LESS THAN 30 BAR DIAMETERS.

# STRUCTURAL STEEL & OPEN WEB STEEL JOISTS

1. ALL STRUCTURAL STEEL ROLLED SECTIONS AND STRUCTURAL PLATES SHALL CONFORM TO THE LATEST EDITION OF CSA STANDARDS G40.21-04. ALL HOLLOW STRUCTURAL SECTION SHALL CONFORM TO THE LATEST EDITION OF CSA STANDARD G40.21-04.
2. ALL ANCHOR BOLTS TO BE 19mm DIAMETER x457mm C/W 76mm HOOK. ANCHOR BOLT MATERIAL SHALL CONFORM TO THE LATEST EDITION CSA G40.21-M 300W.
3. ALL WELDERS AND WELDING PROCEDURES TO BE CERTIFIED BY CANADIAN WELDING BUREAU.
4. ALL OPEN WEB STEEL JOISTS TO BE DESIGNED ACCORDING TO THE REQUIREMENTS OF CSA STANDARD S16-01 (R2007), FOR THE LOADS SHOWN ON PLAN (INCLUDING MECHANICAL EQUIPMENT).
5. EXTEND THE BOTTOM CHORD AT THE END OF JOISTS, WHENEVER JOISTS LINE UP WITH CENTER LINE OF COLUMN.
6. MAXIMUM ALLOWABLE LIVE LOAD DEFLECTION FOR OPEN WEB STEEL JOISTS IS L/240 FOR ROOFS AND L/360 FOR FLOORS.
7. PROVIDE STIFFENER PLATES TO BOTH SIDES AT WEBS OF BEAMS BEARING OVER COLUMNS. THE PLATES ARE TO BE OF THE SAME THICKNESS AS COLUMN FLANGES FOR W-SHAPES, COLUMN WALL FOR HSS SHAPES OR 9mm WHICHEVER IS GREATER.
8. REINFORCING FOR ALL OPENINGS IN STEEL DECK GREATER THAN 406mm x 406mm IS TO BE DESIGNED, SUPPLIED AND INSTALLED BY THE STRUCTURAL STEEL SUPPLIER UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL DRAWINGS FOR REQUIRED OPENINGS.
9. STEEL FABRICATOR TO DESIGN AND SUPPLY ANGLES AS INDICATED FOR SUPPORT AND SUSPENSION OF MECHANICAL EQUIPMENT.
10. CROSS BRACING CONNECTIONS TO BE DESIGNED TO RESIST THE GROSS AREA OF THE BRACE LESS THE AREA OF STEEL REMOVED TO ALLOW FOR ONE 19.1mm DIAMETER BOLT CONNECTION.

# ROOF DECK

1. ROOF DECK TO BE 38mm DEEP (0.76 mm), ZINC COATED, ZF75 (A25), TRANSVERSE WELDS AT 305mm O/C. SIDE LAP BUTTON PUNCH AT 610mm O/C. UNLESS OTHERWISE NOTED ON DRAWINGS OR IN SPECIFICATIONS.
2. STEEL ROOF DECK TO COVER THREE SPANS MINIMUM AND TO ACT AS A STRUCTURAL DIAPHRAGM.
3. ALL ROOF DECK OPENINGS 406mm x 406mm OR LARGER TO BE REINFORCED.

# MASONRY

1. CONCRETE BLOCKS TO CONFORM TO CSA A165.1-04 TO SPECIFICATIONS FOR, BLOCK TYPE, WATERPROOFING ADMIXTURES, ETC.
2. MASONRY WALLS TO BE BUILT WITH MORTAR AND GROUT AS PER CSA 179-04. MORTAR TO BE TYPE "S" WITH A MINIMUM STRENGTH OF 13 MPa. ALL MORTAR JOINTS SHALL BE FLUSH, FULL BED JOINTS.
3. USE DUR-O-WALL (OR EQUAL) SPACED VERTICALLY AT 406mm O/C.
4. COLD WEATHER CONSTRUCTION OF MASONRY SHALL CONFORM TO THE NATIONAL BUILDING CODE, WITH ADEQUATE PREHEATING OF MATERIALS, HOARDING AND HEATING DURING CONSTRUCTION AND THEREAFTER AS SPECIFIED. THE "TORCHING TECHNIQUE" WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
5. MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY BRACING OF ALL MASONRY COMPONENTS UNTIL ALL RELATED STRUCTURAL FRAMING HAS BEEN ERECTED AND COMPLETELY INSTALLED.
6. PROVIDE EXPANSION JOINTS @ MAXIMUM OF 6502mm O/C U.N.O.
7. PROVIDE CONTINUOUS BOND BEAMS WITH 2-15M BARS BOTTOM IN GROUT FILL AT TOP OF ALL EXTERIOR WALLS, BEARING WALLS OR AS INDICATED ON DRAWINGS. PROVIDE 2-15M VERTICAL BARS AT ALL OPENINGS EXCEEDING 1219mm IN WIDTH AND AT END OF WALLS. FILL WITH GROUT.
8. INSPECTION HOLES SHALL BE LEFT AT THE BASE OF GROUT FILLED WALLS.
9. MASONRY CORES SHALL BE FILLED IN LIFTS NOT EXCEEDING 3048mm.
10. CONCRETE BLOCKS TO HAVE COMPRESSIVE STRENGTH OF 15 MPa OR BETTER.
11. ENSURE MASONRY CORES FILLED WITH GROUT AT EXPANSION ANCHOR LOCATIONS. MINIMUM 102mm GROUT ON ALL SIDES.
12. TYPICAL MASONRY LINTELS UNLESS NOTED ON DRAWINGS:
   SPANS UP TO 1219mm -200 U-BLOCK 2-15M CONT. BOTTOM
   SPANS UP TO 1981mm -400 U-BLOCK 2-15M CONT. BOTTOM
   PROVIDE MINIMUM 203mm BEARING AT EACH END.
13. BRICK TIES TO BE "FERO" SLOTTED BLOCK OR STUD TIES OR APPROVED EQUAL CONNECTORS SPACED AS FOLLOWS:
   HORIZONTAL: 457mm O/C.
   VERTICAL: 1ST ROW @ 203mm FROM TOP AND BOTTOM.
   2ND ROW @ 406mm FROM TOP AND BOTTOM.
   BALANCE @ 610mm O/C.
14. INTERIOR 152mm WIDE MASONRY BLOCK TO BE 15MPa UNITS, TYPE N MORTAR , INSTALL BOND BEAM AT TOP OF WALL REINFORCED WITH 1-15M BAR. INSTALL 1-15M VERTICAL BAR AT ALL CORNERS AND DOORWAYS, FILL CORES WITH GROUT. PROVIDE 10M DOWELS FROM CONCRETE CURB TO MASONRY WALL EVERY 5th CORE, FILL BOTTOM 2 CORES WITH GROUT.

# HOLLOWCORE

1. THE DESIGN OF ALL PRECAST FLOOR SLABS SHALL BE BY THE SUPPLIER'S ENGINEER, AS PER SPECIFICATION, TO SUPPORT THE LOADS INDICATED ON THE DRAWINGS.
2. DESIGNS SHALL BE IN ACCORDANCE WITH THE CSA A23.3-04, AND CSA A23.4-09 AND TOLERANCES SHALL BE IN ACCORDANCE WITH CSA A23.4-09.
3. MINIMUM STRENGTH AT 28 DAYS SHALL BE 35 MPa.
4. THE SUPPLIER SHALL CHECK WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR OPENINGS LARGER THAN 150mm AND FORM THEM IN SHOP, ALL FRAMING AND REINFORCING FOR OPENINGS TO BE DESIGNED AND SUPPLIED BY PRECAST SUPPLIER.
5. THE SUPPLIER SHALL PROVIDE THE CONTRACTOR WITH SETTING DRAWINGS, SHOWING THE LOCATIONS OF ALL EMBEDDED PARTS REQUIRED.
6. HOLLOWCORE SLABS MUST BE LEVELED AND ALIGNED BEFORE GROUTING THE KEYS AND JOINTS AS PER CSA A23.1-09.
7. ALL HOLLOWCORE SURFACES TO HAVE A BROOM FINISH SURFACE.
8. ALL TOPPINGS TO BE BONDED TO HOLLOWCORE SURFACE WITH CEMENT/ SAND GROUT OR LATEX MODIFIED GROUT ACCORDING TO CLAUSE 7.6.4.2.2 OF CSA A23.1-09.

# PRECAST

1. REFERENCE CODES AND STANDARDS: CSA A23.1-09, CSA A23.2-09, CSA A23.3-04, CSA A23.4-09.
2. PRECAST SUPPLIER/ MANUFACTURER:
   a. CANADIAN PRECAST/ PRESTRESSED CONCRETE INSTITUTE (CPCI) CERTIFICATION PROGRAM. CERTIFICATION STRONGLY PREFERRED, FINAL DECISION ON CPCI CERTIFICATION REQUIREMENT RESTS WITH THE CITY.
   b. MUST MEET REQUIREMENTS OF CSA A23.4, INCLUDING APPENDICES A & B, TOGETHER WITH PCI MNL-116 & 117 AND CPCI CERTIFICATION REQUIREMENTS.
3. THE DESIGN OF ALL PRECAST COMPONENTS SHALL BE THE RESPONSIBILITY OF THE SUPPLIERS ENGINEER. THE PRECAST SHALL BE DESIGNED TO SUPPORT ALL LOADS AS SPECIFIED IN THE APPLICABLE BUILDING CODE (INCLUDING LATERAL LOADS) PLUS THE LIVE, DEAD, AND EQUIPMENT LOADS INDICATED ON THESE DRAWINGS.
4. DESIGNS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION CSA A23.4-05 AND TOLERANCES SHALL BE IN ACCORDANCE WITH CSA A251.
5. MINIMUM STRENGTH AT 28 DAYS SHALL BE 35 MPa.
6. THE SUPPLIER SHALL CHECK WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR OPENINGS LARGER THAN 152mm AND FORM THEM IN SHOP, ALL FRAMING AND REINFORCING FOR OPENINGS TO BE DESIGNED AND SUPPLIED BY PRECAST SUPPLIER.
7. THE SUPPLIER SHALL PROVIDE THE CONTRACTOR WITH SETTING DRAWINGS, SHOWING THE LOCATIONS OF ALL EMBEDDED PARTS REQUIRED.

# ITEMS EMBEDDED IN CONCRETE

SEE ALSO CSA A23.1-09 - CLAUSE 6.7
EXCEPT WHEN APPROVED BY THE STRUCTURAL ENGINEER, PIPES, CONDUITS, AND SLEEVES EMBEDDED IN CONCRETE SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:

1. GENERAL
   A. NOT WITHSTANDING THE SATISFYING OF THESE GUIDELINES, THE CONDUIT, SLEEVES, PIPES ETC. SHALL NOT IMPAIR THE STRUCTURAL STRENGTH AND SHALL BE MOVED IF SO DIRECTED BY THE STRUCTURAL ENGINEER.
   B. CENTERLINE SPACING TO BE NOT LESS THAN 3 DIAMETERS.
   C. CENTERLINE SPACING BETWEEN PARALLEL CONDUIT AND REINFORCING BARS TO BE 3 DIAMETERS.
   D. ADD REINFORCING AT POINTS OF CONGESTION AS DIRECTED BY THE STRUCTURAL ENGINEER.
2. FOR SLABS - CONDUITS IN THE PLANE OF THE SLAB:
   A. LOCATE BETWEEN TOP AND BOTTOM REINFORCING. (WHERE APPLICABLE)
   B. MAXIMUM SIZE IN ONE LAYER TO BE NOT MORE THAN 1/4 OF CONCRETE THICKNESS.
   C. THREE LAYERS OR MORE CROSSING WILL NOT BE PERMITTED.
3. FOR WALLS - CONDUIT/ PIPES NOT ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

# NON-STRUCTURAL ELEMENTS

1. "NON-STRUCTURAL" OR "SECONDARY STRUCTURAL" ELEMENTS ARE NOT THE RESPONSIBILITY OF TOWER ENGINEERING GROUP. THEY ARE DESIGNED, DETAILED AND REVIEWED IN THE FIELD BY OTHERS. THEY APPEAR ON DRAWINGS OTHER THAN THOSE OF TOWER ENGINEERING GROUP WHERE STRUCTURAL ENGINEERING RESPONSIBILITY IS
REQUIRED FOR THESE ELEMENTS, THIS SHALL BE PROVIDED BY SPECIALTY STRUCTURAL ENGINEERS, WHO SHALL ALSO
PROVIDE ANY LETTERS REQUIRED BY BUILDING PERMIT AUTHORITIES.
2. EXAMPLES OF NON-STRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:
   A. ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, CEILINGS, MILLWORK ETC.
   B. LANDSCAPE ELEMENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, ETC.
   C. CLADDING, GLAZING, WINDOW MULLIONS, INTERIOR STUD WALLS AND EXTERIOR STUD WALLS.
   D. ARCHITECTURAL PRECAST, PRECAST CLADDING.
   E. MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS, AND THEIR ATTACHMENT DETAILS.
   F. ELEVATORS AND CONVEYING SYSTEMS.
   G. BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
   H. NON-LOAD BEARING MASONRY.
   I. NON-STRUCTURAL CONCRETE TOPPINGS
   J. ALUMINUM SKYLIGHTS.
3. SHOP DRAWINGS FOR NON-STRUCTURAL ELEMENTS WHICH MAY AFFECT THE PRIMARY STRUCTURAL SYSTEM SHALL BE SUBMITTED TO TOWER ENGINEERING GROUP THESE DRAWINGS WILL BE REVIEWED ONLY FOR THE EFFECT ON THE PRIMARY STRUCTURAL SYSTEM.

# STRUCTURAL MOVEMENTS/ TOLERANCES

THIS STRUCTURE WILL UNDERGO NORMAL TYPES OF MOVEMENT AND DEFLECTION AND THE NON-STRUCTURAL COMPONENTS MUST BE DETAILED TO ACCOMMODATE THIS.
DRYWALL PARTITIONS, MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT AND BUILDING FIXTURES MUST BE DETAILED
AND INSTALLED TO ACCOMMODATE SLAB MOVEMENT.
ALL STRUCTURES ARE SUBJECT TO CONSTRUCTION TOLERANCES. THIS SHOULD BE ALLOWED FOR IN DETAILING NON-STRUCTURAL COMPONENTS.

# DESIGN LOADS

| | | |
|---|---|---|
| SNOW LOAD | Ss = 1.9 kPa | Sr = 0.2 kPa |
| WIND LOAD | 0.35 kPa (q50) | 0.45 kPa (q10) |
| IMPORTANCE CATEGORY | HIGH | |
| SEISMIC LOADS | NOT APPLICABLE | |
| FLOOR LOADS | REFER TO PLAN | |

CONTRACTOR TO ENSURE THAT CONSTRUCTION LOADS DO NOT EXCEED DESIGN LOADS.

# ABBREVIATIONS

ALT.-------- ALTERNATE
BOT.-------- BOTTOM
B.W.-------- BOTH WAYS
C/W--------- COMPLETE WITH
D.L.-------- DEAD LOAD
E.E.-------- EACH END
E.F.-------- EACH FACE
E.S.-------- EACH SIDE
E.W.-------- EACH WAY
H.1E-------- HOOK ONE END
H.2E-------- HOOK TWO ENDS
H & V------- HORIZONTAL AND VERTICAL
HORIZ.------ HORIZONTAL
L.L.-------- LIVE LOAD
MAX.-------- MAXIMUM
MIN.-------- MINIMUM
N.T.S.------- NOT TO SCALE
O/C--------- ON CENTER
R/W--------- REINFORCED WITH
S.D.L.------- SUPERIMPOSED DEAD LOAD
SIM.-------- SIMILAR
S.O.G.------- SLAB ON GRADE
STAG.------- STAGGER
S.J.-------- STRUT JOIST
TYP.-------- TYPICAL
T/O--------- TOP OF
T1E--------- TIE ONE END
T & B------- TOP AND BOTTOM
T & C------- TENSION AND COMPRESSION
U.N.O.------ UNLESS NOTED OTHERWISE
VERT.------- VERTICAL

# OWNERSHIP AND COPYRIGHT RESERVED



# FIELD REVIEW BY TOWER ENGINEERING GROUP

TOWER ENGINEERING GROUP PROVIDES FIELD REVIEW ONLY FOR THE WORK SHOWN ON THESE STRUCTURAL DRAWINGS. THIS REVIEW IS NOT A "FULL TIME" REVIEW BUT IS A PERIODIC REVIEW AT THE SOLE DISCRETION OF TOWER ENGINEERING GROUP'S ENGINEERS IN ORDER TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY TOWER ENGINEERING GROUP. FIELD REVIEW BY TOWER ENGINEERING GROUP IS NOT CARRIED OUT FOR THE CONTRACTOR'S BENEFIT, NOR DOES IT MAKE TOWER ENGINEERING GROUP GUARANTORS OF THE CONTRACTORS WORK. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. TOWER ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK OF FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

TOWER ENGINEERING GROUP WILL REVIEW SHOP DRAWINGS PERTAINING TO WORK SHOWN ON TOWER ENGINEERING GROUP'S DRAWINGS. THE EXTENT OF THIS REVIEW IS AT THE SOLE DISCRETION OF TOWER ENGINEERING GROUP'S ENGINEER AND IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMANCE WITH THE STRUCTURAL DESIGN CONCEPT. THE REVIEW IS NOT AN APPROVAL OF THE DESIGN, DETAILS AND DIMENSIONS INHERENT IN THE SHOP DRAWINGS. RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OF FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

# GENERAL NOTES

1. THIS SET OF DRAWINGS SHOWS THE COMPLETED PROJECT. THEY DO NOT INCLUDE COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY IN AND ABOUT THE JOB SITE DURING CONSTRUCTION, AND THE DESIGN AND ERECTION OF ALL TEMPORARY STRUCTURES. FORM WORK, FALSE WORK, SHORING, ETC. REQUIRED TO COMPLETE THE WORK.

2. THE USE OF THESE DRAWINGS IS LIMITED TO THAT IDENTIFIED IN THE REVISIONS COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION" OR "ISSUED FOR TENDER" IN THE REVISION'S COLUMN BY TOWER ENGINEERING GROUP.

3. THE INFORMATION ON THIS DRAWING SHALL NOT BE USED FOR ANY OTHER THAN THE SPECIFIED WORKS OR PART OF THE WORKS FOR WHICH IT HAS BEEN AUTHORIZED BY TOWER ENGINEERING GROUP.

4. SECTION MARKER SHOWN THUS MEANS SECTION # SHOWN ON DRAWING SHEET S-#.


5. SEE ARCHITECTURAL DRAWINGS FOR FLOOR AND ROOF ELEVATIONS, RECESSED, DRAINAGE SLOPES, DETAILED DIMENSIONS FOR DOORS, WINDOWS AND OTHER OPENINGS ETC.

6. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SLEEVES, NAILERS, INSERTS, ETC. TO BE ENCASED IN CONCRETE.

7. THE CONTRACTOR SHALL REVIEW ALL THE DRAWINGS AND CHECK DIMENSIONS BEFORE CONSTRUCTION. REPORT DISCREPANCIES BETWEEN STRUCTURAL AND OTHER DISCIPLINES DRAWINGS FOR CLARIFICATION.

8. DO NOT CUT OR DRILL ANY OPENINGS IN STRUCTURAL MEMBERS WITHOUT THE WRITTEN PERMISSION OF TOWER ENGINEERING GROUP. CONTRACTOR TO PROVIDE APPROPRIATE ATTACHMENTS AND CONNECTIONS FOR MECHANICAL, ELECTRICAL, AND OTHER SERVICES WITHOUT CUTTING OR DRILLING.

9. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND LANDSCAPE DRAWINGS FOR LOCATIONS, CONFIGURATIONS, EXTENT, AND SIZES OF ALL CURBS, UPSTANDS, DOWNTURNS: AND FOR OPENINGS THROUGH FLOORS AND WALLS FOR DUCTS.

10. FIRE RESISTANCE RATINGS:
   SEE ARCHITECTURAL DRAWINGS AND SPECIFICATION FOR PRECISE LOCATION OF REQUIRED FIRE RESISTANCE RATINGS.

11. THE CONTRACTOR SHALL PROVIDE REASONABLE NOTICE TO TOWER ENGINEERING GROUP PRIOR TO POURING CONCRETE OR CONCEALING ANY STRUCTURAL COMPONENTS. THE PURPOSE OF THIS NOTICE IS TO ENABLE TOWER ENGINEERING GROUP TO CONDUCT ANY REQUIRED FIELD REVIEWS.

12. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE CONTENT AND RECOMMENDATIONS OF THE GEOTECHNICAL REPORTS.

13. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL COMPONENTS TO TOWER ENGINEERING GROUP FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS TO INCLUDE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER FOR DESIGN OF COMPONENTS AND/ OR CONNECTIONS AS REQUIRED.

# LIST OF STRUCTURAL DRAWINGS



APEGM
Certificate of Authorization
Tower Engineering Group
No. 4156 Expiry: April 30, 2013

TOWER ENGINEERING GROUP

TOWER PROJECT NUMBER: 12131

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PROVINCE OF MANITOBA
REGISTERED PROFESSIONAL ENGINEER

Winnipeg
THE CITY OF WINNIPEG PLANNING, PROPERTY AND DEVELOPMENT DEPARTMENT
MUNICIPAL ACCOMMODATIONS DIVISION
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Project:
**MAYFAIR RECREATION CENTRE**
40 MAYFAIR PLACE

Project Number: 2011-112
Bid Opportunity Number: 556-2012

Drawing Title:
GENERAL NOTES

| # | Issue/Revision | Date |
|---|---|---|
| 1 | 66% REVIEW | AUG 16 2012 |
| 2 | 66% REVIEW REISSUE | NOV 26 2012 |
| 3 | 99% REVIEW | MAR 04 2013 |
| 4 | ISSUED FOR TENDER | APR 12 2013 |

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