0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

GENERAL NOTES

1. READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS.

2. OPENINGS AND SLEEVES SHOWN ARE LOCATED AND DIMENSIONED FOR DETAILING PURPOSES ONLY. THE EXACT SIZES AND LOCATIONS MUST BE COORDINATED WITH THE DEPARTMENTAL REPRESENTATIVE AND TRADES DURING CONSTRUCTION.

3. REFER TO THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS AND SLEEVES NOT SHOWN ON THE STRUCTURAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE DEPARTMENTAL REPRESENTATIVE AND OBTAIN INSTRUCTIONS PRIOR TO PROCEEDING WITH THE WORK.

4. REFER TO THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR THE LOCATION OF PITS, EQUIPMENT BASES, SUMPS, DEPRESSIONS, GROOVES, CURBS, CHAMFERS, AND SLABS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

5. THE STRUCTURAL DRAWINGS ARE FOR THE COMPLETED PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF WORKERS AND THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE LOADS TABULATED IN THE DESIGN NOTES.

6. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE NATIONAL BUILDING CODE 2010.

DESIGN NOTES

1. LOADS SHOWN ON DRAWINGS U.N.O. BELOW.

1.1. UNLESS NOTED OTHERWISE, SPECIFIED LOADS ARE SHOWN ON THE DRAWINGS. IMPORTANCE IS NORMAL FOR WIND, SNOW, AND SEISMIC LOADS.

2. LATERAL LOADS FROM WIND AND EARTHQUAKE

2.1. WIND LOADS IS BASED ON:

REFERENCE VELOCITY PRESSURE,q (1/50)	0.37 kPa
IMPORTANCE FACTOR, Iw	1.00
EXPOSURE FACTOR, Ce	0.90
INTERNAL PRESSURE CATEGORY	2
DESIGN FACTORED ROOF WIND SHEAR =	130 kN IN EAST-WEST DIRECTION & 160 kN IN NORTH-SOUTH DIRECTION

2.2. SEISMIC LOAD IS BASED ON:

Sa(0.2)	0.16
Sa(0.5)	0.095
Sa(1.0)	0.058
Sa(2.0)	0.018
PEAK GROUND ACCELERATION	0.054
SITE CLASS	D
IMPORTANCE FACTOR	1.00
ACCELERATION BASED SITE COEFFICIENT, Fa	1.30
VELOCITY BASED SITE COEFFICIENT, Fv	1.40
FUNDAMENTAL LATERAL PERIOD OF VIBRATION, T	0.20s
SPECTRAL ACCELERATION, S(T)	0.190
Ie(Fa)(Sa)(0.2)	0.247
HIGHER MODE FACTOR, Mv	1.00
BASE OVERTURNING REDUCTION FACTOR, J	1.00
Rd	1.5
Ro	1.3

BASE ON THE ABOVE PARAMETERS, THE DESIGN BASE SHEAR V=8.5%W, WHERE W IS THE SEISMIC WEIGHT OF THE BUILDING. SEISMIC LOAD V=680 KN (EQUIVALENT STATIC FORCE DESIGN PROCEDURE)

2.3. LATERAL LOADS FROM WIND AND EARTHQUAKE ARE RESISTED BY CONCRETE WALLS AND STEEL BRACED FRAMES THAT ARE PART OF THE LATERAL FORCE RESISTING SYSTEM.

3. SPECIFIED LOADS FOR FLOOR & ROOF DESIGN : REFER TO PLANS

4. SNOW LOADS

4.1. SNOW LOAD, Ss (1/50) 2.0 kPa
ASSOCIATED RAIN LOAD, Sr 0.4 kPa
Cb 0.8
Cw 1.0
Cs 1.0
Ca 1.0
Basic Snow Load, S = Is[Ss(CbCwCsCa) + Sr] = 2.0 kPa
REFER TO PLANS FOR DRIFT SNOW LOADS IN ADDITION TO THE BASIC SNOW

5. RAIN LOADS ON ROOFS

5.1. LOADS FROM THE ACCUMULATION OF WATER ON ROOFS DURING A ONE DAY RAIN OF 119mm HAVE BEEN DETERMINED FROM CONSIDERATION OF ROOF SLOPES AND PARAPET HEIGHT, ASSUMING THAT SOME RAIN LEADERS ARE ACCIDENTALLY PLUGGED. ROOF DRAINS HAVE BEEN DESIGNED AS OPEN FLOW AND NO WATER RETENTION IS ALLOWED.

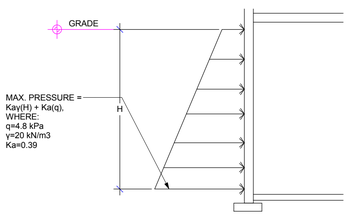
6. WALL CLADDING LOADS

6.1. SPECIFIED DEAD LOAD FROM WALL CLADDING
METAL PANEL 1.0 kPa

7. GEOTECHNICAL NOTES

.1 A GEOTECHNICAL REPORT HAS BEEN PREPARED BY LVM DATED MARCH , 2011. REFER TO DRAWING S2.00 FOR THE FOUNDATION BEARING CAPACITIES.

.2 THE FOUNDATION WALLS SHALL BE BACK FILLED WITH ONSITE CLAY AND SAND (300 mm LIFTS AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY) USED WITH DRAINAGE BOARD ATTACHED TO THE WALL. LATERAL SOIL PRESSURES ON FOUNDATION WALLS, INCLUDING SURCHARGE:



.3 FOUNDATION WALLS ARE DESIGNED ASSUMING THAT AN EFFECTIVE DRAINAGE SYSTEM FOR SOIL IS PROVIDED BEHIND THE WALLS.

.4 DO NOT BACK FILL AROUND FOUNDATION UNTIL BASEMENT, GROUND AND 2nd FLOORS AND ROOF ARE COMPLETE.

.5 FOLLOWING EXCAVATION TO THE FOOTING FOUNDING LEVEL, THE SUBGRADE SHOULD BE INSPECTED AND APPROVED, AND IMMEDIATELY COVERED WITH A 50mm WORKING MAT OF LEAN CONCRETE. (REFER TO GEOTECHNICAL REPORT)

.6 THE FILL MATERIAL IS NOT CONSIDERED SUITABLE FOR SUPPORTING STRUCTURAL LOADS AND MAY ALSO LEAD TO EXCESSIVE DEFORMATION.

.7 DO NOT EXCEED A SLOPE OF 7V:10H BETWEEN ADJACENT FOOTING EXCAVATIONS OR ALONG STEPPED FOOTINGS. REFER TO GEOTECHNICAL REPORT FOR MAXIMUM SLOPES OF EXCAVATION.

.8 ALL FOOTINGS SHALL BE CENTERED BELOW COLUMNS AND WALLS UNLESS NOTED OTHERWISE.

.9 ALL DOWELS, ANCHOR RODS/BOLTS TO BE PLACED WHEN CONCRETE IS POURED. TEMPLATES SHALL BE USED TO ENSURE CORRECT PLACEMENT/ALIGNMENT.

.10 A GEOTECHNICAL CONSULTANT RETAINED BY THE DEPARTMENT REPRESENTATIVE IS TO CONFIRM THE DESIGN BEARING CAPACITIES PRIOR TO POURING CONCRETE.

CONCRETE NOTES

1. CAST-IN-PLACE CONCRETE

.1 CONCRETE: CONFORM TO CAN/CSA-A23.1-09/A23.2-09, NORMAL WEIGHT, MEETING THE FOLLOWING REQUIREMENTS UNLESS NOTED OTHERWISE:

CLASS OF CONCRETE	CLASS OF EXPOSURE	MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (MPa) [psi]	NOMINAL SIZE OF AGGREGATE (mm) [in]	SPECIFIED SLUMP (mm) [in]	AIR CONTENT (%)	MAXIMUM WATER/ CEMENTING MATERIALS RATIO
EXTERIOR CONCRETE						
FOOTINGS & PIERS	F-2	25 [3571]	20 [3/4"]	75 [3"]	4-7	0.55
FOUNDATION WALLS & TIE-BEAMS	F-2	30 [4285]	20 [3/4"]	75 [3"]	4-7	0.55
EXTERIOR STRUCTURAL SLABS, BEAMS, WALLS & FOUNDATIONS (e.g. FLAG POLE & LIGHT STANDARD FOUNDATIONS)	C-1	35 [5000]	20 [3/4"]	65 [2 5/8"]	5-8	0.40
SITE CONCRETE (e.g. SIDEWALK CONC CURBS & OTHER NON-STRUCTURAL COMPONENTS)	C-2	32 [4571]	20 [3/4"]	60 [2 3/8"]	5-8	0.45
ARCHITECTURAL CONCRETE CLADDING	F-2	30 [4285]	14 [9/16"]	75 [3"]	4-7	0.55
INTERIOR CONCRETE						
SLAB ON GRADE	N	25 [3571]	20 [3/4"]	65 [2 5/8"]	-	0.50
CONC ON STEEL DECK, TOPPINGS & HOUSEKEEPING PAD	N	25 [3571]	14 [9/16"]	40 [1 5/8"]	-	0.50
INTERIOR BUILDING SLABS AND BEAMS	N	30 [4285]	20 [3/4"]	65 [2 5/8"]	-	0.50
MASONRY CORE FILLS	N	20 [2857]	10 [3/8"]	200 [8"]	-	-

.2 USE TYPE GU PORTLAND CEMENT FOR ALL CONCRETE UNLESS NOTED OTHERWISE.

.3 FOR FLOOR SLABS, DESIGN THE CONCRETE MIXTURE WITH AGGREGATE GRADING AND WATER-TO-CEMENTING MATERIALS RATIO THAT MINIMIZE SHRINKAGE.

.4 JOINT FILLER STRIPS. FLOOR ISOLATION JOINTS: ASTM D1751, BITUMINOUS IMPREGNATED FIBREBOARD 13mm [1/2"] THICK MINIMUM. EDGE JOINT FILLER: ASTM D1751, BITUMINOUS IMPREGNATED FIBREBOARD, 13mm [1/2"] THICK MINIMUM.

.5 GROUT: NON-METALLIC, DRY-PACK OR FLOWABLE MATERIAL TO SUIT APPLICATION, 40 MPa [5714 psi] COMPRESSIVE STRENGTH AT 7 DAYS, ACID/ALKALI-RESISTANT, EXPANSION PROPERTIES EQUAL TO THE SHRINKAGE OF THE CEMENT CONTENT.

.6 PRODUCE CONCRETE TO CLAUSE 18, CAN/CSA A23.1. DESIGN READY-MIX CONCRETE CONFORMING TO CSA A23.1/A23.2, AND TO ACHIEVE PERFORMANCE PROPERTIES CONTAINED IN TABLE LOCATED ON DRAWINGS.

.7 PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. COMPLY WITH CSA A23.1 RECOMMENDATIONS FOR COLD OR HOT WEATHER PROTECTION DURING CURING.

.8 THE QUALITY ASSURANCE LABORATORY WILL PERFORM CONCRETE PLANT CHECKS AND QUALITY ASSURANCE SAMPLING AND TESTING FOR SLUMP, AIR CONTENT, AIR VOIDS AND COMPRESSIVE STRENGTH. QUALITY ASSURANCE TESTING SHALL BE PERFORMED BY A TECHNICIAN CERTIFIED BY CSA OR ACI AND PAID FOR BY THE DEPARTMENT REPRESENTATIVE.

.9 PROVIDE FORTY-EIGHT (48) HOURS NOTICE AND OBTAIN THE DEPARTMENT REPRESENTATIVE'S APPROVAL BEFORE PLACING CONCRETE.

.10 ENSURE THAT REINFORCEMENT, FORMWORK, INSERTS OR ACCESSORIES ARE SECURELY FASTENED AND WILL NOT BE DISTRIBUTED DURING CONCRETE PLACEMENT.

.11 VERIFY THAT ALL ITEMS TO BE EMBEDDED IN CONCRETE ARE IN PLACE.

.12 DO NOT ADD WATER AFTER THE INITIAL INTRODUCTION OF MIXING WATER AT THE PLANT EXCEPT AS WHEN THE SLUMP AT THE POINT OF INITIAL DISCHARGE IS LESS THAN SPECIFIED AND ONLY IF PERMITTED BY THE DEPARTMENT REPRESENTATIVE.

.13 WHEN THE AMBIENT AIR TEMPERATURE IN THE SHADE IS 23°C [73°F] OR HIGHER, CONCRETE AT TIME OF PLACEMENT SHALL NOT HAVE A TEMPERATURE EXCEEDING 30°C [86°F].

.14 WHEN THE AMBIENT AIR TEMPERATURE IS LOWER THAN 5°C [41°F], THE CONCRETE DELIVERED TO THE SITE SHALL HAVE A TEMPERATURE BETWEEN 15°C [59°F] AND 30°C [86°F].

.15 DISCHARGE TIME: COMPLETE THE DISCHARGE OF CONCRETE WITHIN NINETY (90) MINUTES OF THE INITIAL INTRODUCTION OF MIXING WATER TO THE CEMENT AND AGGREGATE AT THE PLANT. THE DISCHARGE TIME MAY BE EXTENDED TO ONE HUNDRED AND TWENTY (120) MINUTES BY INCORPORATING HYDRATION CONTROL ADMIXTURES. THE SUPPLIER MUST SUBMIT MIX DESIGNS FOR APPROVAL AND PROVIDE EVIDENCE THAT THE PLASTIC CONCRETE PROPERTIES (SLUMP, AIR CONTENT AND TEMPERATURE) CAN BE MAINTAINED THOUGH THE EXTENDED DISCHARGE TIME PERIOD.

.16 PROVIDE THE DEPARTMENT REPRESENTATIVE WITH A DELIVERY TICKET SHOWING THE FOLLOWING INFORMATION: BATCH PLANT OCATION,THE SUPPLIER'S NAME, TICKET AND TRUCK NUMBERS, MECHANICALLY PUNCHED DATE AND TIME OF INITIAL PLANT MIXING, LASS AND MIX DESIGN DESIGNATION, CEMENT TYPE AND AGGREGATE SIZE, TYPE AND AMOUNT OF ADMIXTURES, WATER ADDED, VOLUME OF CONCRETE, SITE ARRIVAL TIME, START AND END OF DISCHARGE TIME, AND ANY OTHER INFORMATION AS MAY BE REQUESTED BY THE DEPARTMENT REPRESENTATIVE.

.17 DO NOT PLACE CONCRETE DURING RAIN OR WHEN THERE IS IMMINENT DANGER OF RAIN OR IF THE WEATHER, IN THE OPINION OF THE DEPARTMENT REPRESENTATIVE, IS NOT SUITABLE.

2. REINFORCING

.1 REINFORCING STEEL: BILLET STEEL, GRADE 400, DEFORMED BARS TO CAN/CSA-G30.18-09, UNLESS INDICATED OTHERWISE. WELDABLE LOW ALLOY STEEL DEFORMED BARS TO CAN/CSA-G30.18. USE GRADE 400W WHERE WELDING IS NOTED.

.2 BENDING, CUTTING AND PLACING OF REINFORCING STEEL SHALL CONFORM TO CAN/CSA A23.1-09 AND CAN/CSA A23.3-04 (2010).

.3 WELDING SHALL CONFORM TO CSA-W186-M1990 (R2012).

.4 INSTALL STEEL REINFORCEMENT IN ACCORDANCE WITH CSA-A23.1 AND CSA-W186.

.5 UPON REQUEST, PROVIDE THE DEPARTMENT REPRESENTATIVE WITH A CERTIFIED COPY OF THE MILL TEST REPORT OF THE PROPOSED REINFORCING STEEL, SHOWING PHYSICAL AND CHEMICAL ANALYSIS, A MINIMUM OF TWO (2) WEEKS PRIOR TO ORDERING OF REINFORCING STEEL, OR AS NECESSARY TO FACILITATE A REVIEW.

.6 SUBMIT SHOP DRAWINGS, INCLUDING PLACING OF REINFORCEMENT. INDICATE ON SHOP DRAWINGS, BAR BENDING DETAILS, LISTS, QUANTITIES OF REINFORCEMENT, SIZES, SPACING, LOCATION OF REINFORCEMENT AND ANY MECHANICAL SPLICES (ONLY IF APPROVED BY THE DEPARTMENT REPRESENTATIVE), WITH IDENTIFYING CODE MARKS TO PERMIT CORRECT PLACEMENT WITHOUT REFERENCE TO STRUCTURAL DRAWINGS. INDICATE SIZES, SPACING AND LOCATIONS OF CHAIRS, SPACERS AND HANGERS.

.7 PREPARE REINFORCEMENT DRAWINGS IN ACCORDANCE WITH THE REINFORCING STEEL MANUAL OF STANDARD PRACTICE - BY THE REINFORCING STEEL INSTITUTE OF CANADA, OR ACI 315 AND ACI 315R, MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES.

8. WELDED STEEL WIRE FABRIC: TO CSA-G30.3M, UNCOATED

.9 CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS: ADEQUATE FOR STRENGTH AND SUPPORT OF REINFORCING AND LIVE LOADS DURING CONSTRUCTION.

.10 FABRICATE REINFORCING STEEL IN ACCORDANCE WITH CSA-A23.1.

.11 OBTAIN THE DEPARTMENT REPRESENTATIVE'S APPROVAL FOR LOCATIONS OF REINFORCEMENT SPLICES OTHER THAN THOSE SHOWN ON PLACING DRAWINGS.

.12 UPON APPROVAL OF THE DEPARTMENT REPRESENTATIVE, WELD REINFORCEMENT IN ACCORDANCE WITH CSA-W186.

.13 DO NOT FIELD BEND OR FIELD WELD REINFORCEMENT EXCEPT WHERE INDICATED OR AUTHORIZED BY THE DEPARTMENT REPRESENTATIVE. WHEN FIELD BENDING IS AUTHORIZED, BEND WITHOUT HEAT, APPLYING A SLOW AND STEADY PRESSURE.

.14 REPLACE BARS THAT DEVELOP CRACKS OR SPLITS.

.15 PLACE REINFORCING STEEL AS INDICATED ON APPROVED DRAWINGS AND IN ACCORDANCE WITH CSA-A23.1.

.16 PLACE SUFFICIENT CHAIRS, AND SUPPORTS TO ADEQUATELY MAINTAIN THE POSITION OF THE REINFORCING STEEL DURING PLACEMENT OF CONCRETE, TO WITHIN THE TOLERANCES SPECIFIED IN THE REFERENCED CSA/CAN GUIDELINES. USE TIE WIRE TO PREVENT THE MOVING OR DISLODGING OF REINFORCING STEEL DURING PLACEMENT OF THE CONCRETE.

.17 USE PLAIN ROUND BARS AS SLIP DOWELS IN CONCRETE. PAINT PORTION OF DOWEL INTENDED TO MOVE WITHIN HARDENED CONCRETE WITH ONE COAT OF ASPHALT PAINT. WHEN PAINT IS DRY, APPLY A THICK EVEN FILM OF MINERAL LUBRICATING GREASE.

.18 PRIOR TO PLACING CONCRETE, OBTAIN THE DEPARTMENT REPRESENTATIVE'S APPROVAL OF REINFORCING MATERIAL PLACEMENT.

.19 ENSURE COVER TO REINFORCEMENT IS MAINTAINED DURING CONCRETE POUR.

.20 REINFORCING STEEL, ANCHOR BOLTS, OR OTHER REQUIRED INSERTS SHALL NOT BE INSERTED INTO CONCRETE DURING CONCRETE PLACEMENT.

.21 TOUCH UP DAMAGED AND CUT ENDS OF EPOXY COATED OR GALVANIZED REINFORCING STEEL WITH COMPATIBLE FINISH TO PROVIDE CONTINUOUS COATING.

.22 REINFORCE SLAB ON GRADE WITH ONE LAYER OF WWF 152x152 MW18.7xMW18.7 [WWF 6x6 W2.9xW2.9] PLACED AND CHAIRED IN FLAT SHEETS 25mm [1"] FROM TOP OF SLAB. DO NOT PLACE REINFORCING MESH ON THE BOTTOM OF THE SLAB AND THEN HOOK INTO POSITION AFTER CONCRETE IS POURED - ADEQUATELY POSITION THE MESH INTO POSITION WITH PROPER CHAIRS AND SUPPORTS TO ACCOMMODATE THE SUBGRADE AND THE CONSTRUCTION TRAFFIC LOADS UNO.

3. REINFORCED CONCRETE WORK

.1 REINFORCED CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF CAN/CSA-A23.1-09.

.2 CONCRETE COVER TO REINFORCING STEEL SHALL CONFORM TO THE APPLICABLE REQUIREMENT LISTED BELOW THAT RESULTS IN THE GREATEST AMOUNT OF COVER:

CONCRETE CAST AGAINST EARTH	75mm [3"]
CONCRETE CAST IN FORMS BUT EXPOSED TO EARTH OR WEATHER	
-SLABS EXPOSED TO DEICING CHEMICALS	
-TOP BARS	60mm [2 3/8"]
-BOTTOM BARS	40mm [1 5/8"]
-OTHER SLABS	
-TOP BARS	40mm [1 5/8"]
-BOTTOM BARS	40mm [1 5/8"]
-BEAMS, GIRDERS, COLUMNS (TO TIES), STIRRUPS	40mm [1 5/8"]
-WALLS	40mm [1 1/2"]
CONCRETE NOT EXPOSED TO WEATHER AND NOT IN CONTACT WITH EARTH	
-SLAB BOTTOM REINFORCING	
-2H OR LESS FIRE RESISTANCE RATING	25mm [1"]
-SLAB TOP REINFORCING	25mm [1"]
-BEAMS, GIRDERS, COLUMNS (TO TIES), STIRRUPS	40mm [1 5/8"]
-WALLS EXPOSED TO FIRE ON BOTH SIDES (VERTICAL REINFORCING)	50mm [2"]
-OTHER WALLS	25mm [1"]

.3 UNLESS NOTED OTHERWISE, PROVIDE DOWELS OF THE SAME SIZE, NUMBER AND SPACING WHERE REINFORCING IS SPLICED.

.4 SUBMIT TO THE DEPARTMENT REPRESENTATIVE FOR REVIEW THE LOCATION OF ALL CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS.

.5 HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE MADE IN BEAMS UNLESS SHOWN ON THE DRAWINGS.

.6 SUBMIT TO THE DEPARTMENT REPRESENTATIVE FOR REVIEW THE LOCATIONS OF ALL SLEEVES AND OPENINGS NOT SHOWN ON THE DRAWINGS. THE DEPARTMENT REPRESENTATIVE WILL PROVIDE STRUCTURAL DETAILS AS REQUIRED FOR SLEEVES AND OPENINGS.

.7 SLEEVES SHALL NOT BE PLACED HORIZONTALLY ALONG OR VERTICALLY THROUGH BEAMSUNLESS AUTHORIZED BY THE DEPARTMENT REPRESENTATIVE.

4. CONCRETE FORMWORK AND FALSEWORK

.1 REFER TO ARCHITECTURAL DRAWINGS FOR CHAMFERS ON CORNERS OF COLUMNS,BEAMS AND WALLS. USE 20mm x 20mm [3/4"X3/4"] FORMED CHAMFERS ON EXPOSED CORNERS UNLESS CHAMFERS OF OTHER SIZES ARE SHOWN ON DRAWINGS.

.2 SUPPLY, ERECT AND DISMANTLE CONCRETE FORMWORK AND FALSEWORK IN ACCORDANCE WITH CSA-A23.1 EXCEPT WHERE SPECIFIED ELSEWHERE.

.3 THE DESIGN OF ALL FORMWORK, FALSEWORK, SCAFFOLDING, SHORING, ETC. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COMPLETED IN ACCORDANCE WITH CAN/CSA-A269.3-92M(R2008).

.4 FABRICATE AND ERECT FORMWORK IN ACCORDANCE WITH CAN/CSA-S269.3 TO PRODUCE FINISHED CONCRETE CONFORMING TO SHAPE, DIMENSIONS, LOCATIONS AND LEVELS INDICATED WITHIN TOLERANCES REQUIRED BY CSA-A23.1

.5 VOID FORM:
VOID FORM MATERIALS:
TYPE 'A' EXPANDED POLYSTYRENE COMPRESSIBLE FILL MATERIAL 'FROST CUSHION' BY PLASTICS, OR EQUAL. FOR USE UNDER WALLS AND GRADE BEAMS.
TYPE 'B' 6mm [1/4"] MIN. HARD BOARD OVER CRUSHABLE BIODEGRADABLE FILLER OF SUFFICIENT STRENGTH TO SUPPORT THE SLAB CONCRETE AND CONSTRUCTION LOAD UNTIL THE CONCRETE HAS CURED. FOR USE UNDER STRUCTURAL SLABS ON GRADE.

.6 FORM STRIPPING AGENT: COLOURLESS MINERAL OIL, FREE OF KEROSENE, WITH VISCOSITY BETWEEN 15 TO 24 mm²/S AT 40°C [104°F.] FLASHPOINT MINIMUM 150°C [302°F], OPEN UP.

.7 DO NOT PLACE SHORES AND MUD SILLS ON FROZEN GROUND.

.8 PROVIDE SITE DRAINAGE TO PREVENT WASHOUT OF SOIL SUPPORTING MUD SILLS AND SHORES.

.9 ALIGN FORM JOINTS AND MAKE WATERTIGHT. KEEP FORM JOINTS TO A MINIMUM.

.10 FORM CHASES, SLOTS, OPENINGS, DRIPS, RECESSES AND EXPANSION AND CONTROL JOINTS AS INDICATED.

.11 BUILD IN ANCHORS, SLEEVES, AND OTHER INSERTS REQUIRED TO ACCOMMODATE WORK SPECIFIED IN OTHER SECTIONS. ASSURE THAT ANCHORS AND INSERTS WILL NOT PROTRUDE BEYOND SURFACES DESIGNATED TO RECEIVE APPLIED FINISHES, INCLUDING PAINTING.

.12 FOR FORM REMOVAL, LOOSEN ALL WALL OR BEAM SIDE FORMS WITHIN THE FIRST TWENTY-FOUR (24) HOURS AFTER PLACING FOR THE PURPOSE OF SPRAYING WATER BETWEEN THE CONCRETE AND THE FORMS. STRIP WALL AND COLUMN FORMS WITHIN FORTY-EIGHT (48) HOURS TO FACILITATE FINISHING.

.13 REMOVE UNDERSIDE OF SLAB OR BEAM FORMS ONLY AFTER TWENTY-EIGHT (28) DAYS, OR AFTER CONCRETE HAS ATTAINED A MINIMUM OF SEVENTY-FIVE (75%) PERCENT OF THE SPECIFIED TWENTY-EIGHT (28) DAYS STRENGTH, WITH RESULTS INDICATED BY FIELD CURED TEST CYLINDERS, AND ONLY AS APPROVED BY THE DEPARTMENT REPRESENTATIVE.

.14 RE-SHORING TO REMOVE FORMS WILL BE PERMITTED PROVIDED IT IS IN ACCORDANCE WITH CSA-S269.1.

5. CONCRETE CONSTRUCTION TOLERANCES

.1 LEVEL ALIGNMENT (TOP OF SLAB FROM SPECIFIED PLANE AT ANY POINT)
- SLAB ON GRADE ±3mm IN 3m [1/8" IN 10'-0"]
- SLAB ON FALSEWORK ±12mm IN 3m [1/2" IN 10'-0"]

.2 VERTICAL ALIGNMENT
- GENERAL LOCATION OF LINES, SURFACES, ARISES ±25mm [1"]
- SLOPE OF LINES, SURFACES, ARISES ±3mm IN 1m [1/8" IN ±3'-3"]
- EXTERIOR FACE OF COLUMNS REFER TO TYP DETAIL CT-01

.3 SLAB THICKNESS, BEAM DEPTH
- THICKNESS LESS THAN 300mm [12"] 8mm [1/3"]
- THICKNESS GREATER THAN 300mm [12"] ±12mm [1/2"]

.4 EMBEDDED PLATE LOCATION
- VERTICAL AND HORIZONTAL LOCATION ±20mm [3/4"]
- SLOPE OF SURFACE ±1mm IN 50m, MAX 6mm [1 IN 50, MAXIMUM 1/4"]

.5 OTHER TOLERANCES IN ACCORDANCE WITH CAN/CSA-A23.1-09 AND CAN/CSA-S16-09.

Public Works and Government Services Canada
Travaux publics et Services gouvernmentaux Canada

DIALOG™

stamp

LICENSED PROFESSIONAL ENGINEER
D.J. KHACHI
04 OCT. 2013
PROVINCE OF ONTARIO

revision		date
01	ISSUED FOR BID	2013/10/04

Do not scale drawings
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies

A detail no. no. du détail
B drawing no. - where detail required dessin no. - où détail exigé
C drawing no. - where detailed dessin no. - où détaillé

project title
titre du projet

GRAND VALLEY INSTITUTION FOR WOMEN
1575 HOMER WATSON BLVD.
KITCHENER, ONTARIO, N2P2C5

PRINCIPAL ENTRANCE BUILDING

drawing title
titre du dessin

GENERAL NOTES

drawn by dessine par	KAZ
designed by conc par	NM
approved by approuve par	DK
bid offre	RP
project manager administrateur de projets	
project date date du projet	10/24/2012
project no. no. du projet	DIALOG NO. 09487T.02 R.047995.001
drawing no. dessine no.	S1.01