

D01 - GENERAL

D01-1 GENERAL INFORMATION

1. THE INFORMATION PRESENTED ON THESE DRAWINGS HAS BEEN DESIGNED AND ANALYZED IN ACCORDANCE WITH THE 2012 ONTARIO BUILDING CODE AS AMENDED JANUARY 1, 2020. CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH THIS AND ALL OTHER APPLICABLE CODES.
 - 1.1 CONCRETE STRUCTURE DESIGNED IN ACCORDANCE WITH CSA A23.3-14
 - 1.2 STEEL STRUCTURE DESIGNED IN ACCORDANCE WITH CSA S16-14
2. CONTRACTOR IS TO VERIFY/COORDINATE ALL DIMENSIONS/PENETRATIONS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, DRAWINGS PRIOR TO CONSTRUCTION. REPORT INCONSISTENCIES BEFORE PROCEEDING WITH WORK. ANY OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS ARE TO BE APPROVED BY STRUCTURAL ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
3. DEMOLITION DETAILS THAT AFFECT THE STRUCTURAL ELEMENTS HAVE BEEN REVIEWED IN ACCORDANCE WITH PARTS 2.4.10 AND 11 OF THE 2012 ONTARIO BUILDING CODE AS AMENDED JAN 01, 2020 WHERE REQUIRED. SUPPLEMENTARY TEMPORARY/REMEDIAL FRAMING HAS BEEN PROVIDED.
4. SEISMIC RESTRAINT OF ARCH/MICHELLE ELEMENTS NOT NOTED ON THE DRAWINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER. RESTRAINT DETAILS ARE TO BE DEVELOPED IN ACCORDANCE WITH THE 2012 OBC. CONTRACTOR'S ENGINEER IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF SEISMIC RESTRAINTS AND SOLUTIONS AS REQUIRED BY SPECIFICATIONS INCLUDING THE VERIFICATION THAT THE EXISTING/NEW STRUCTURE IS CAPABLE OF SAFELY SUPPORTING THE IMPOSED LOADS IN ACCORDANCE WITH THE 2012 OBC. NO ELEMENTS MAY BE CONSTRUCTED WITHOUT WRITTEN CONFORMANCE OF THESE CONDITIONS BY CONTRACTOR'S ENGINEER.
5. NO FOUNDATION ELEMENTS ARE TO BE CONSTRUCTED UNTIL WRITTEN APPROVAL OF THE BEARING SURFACES AND PRESSURES IS PROVIDED BY A GEOTECHNICAL ENGINEER THROUGH ON-SITE INVESTIGATION. FAILURE TO COMPLETE THIS WORK COULD RESULT IN THE REMOVAL/REINSTATEMENT OF ANY/ALL FOUNDATION ELEMENTS AT CONTRACTOR'S OWN COST.
6. DRAWINGS SHOW COMPLETED STRUCTURE ONLY. CONTRACTOR TO PROVIDE PRE-ENGINEERED SHORING AS REQUIRED TO ACCOMMODATE THE CONTRACTOR'S CONSTRUCTION ACTIVITIES AND TO PREVENT DAMAGE TO ANY ADJACENT PROPERTY. ALL CONSTRUCTION ACTIVITIES TO BE LIMITED TO THE LIMITS OF THE CONSTRUCTION SITE AND ALL DAMAGE TO EXISTING PROPERTIES MUST BE REINSTATED.
7. CONTRACTOR IS RESPONSIBLE FOR CO-ORDINATING & TIMING OF THE CONSTRUCTION WITH RESPECT TO THE VARIOUS TRADES.
8. PROPRIETARY SYSTEMS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
9. DO NOT SCALE THESE DRAWINGS.
10. DETAILS OF CONSTRUCTION ARE SHOWN BASED ON INFORMATION AVAILABLE AT THE TIME OF PREPARING DESIGN DRAWINGS IF, DURING CONSTRUCTION, CONDITIONS ARE REVEALED THAT DIFFER FROM THE ASSUMED CONDITIONS, ADVISE THE CONSULTANT BEFORE PROCEEDING.
11. VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS ON SITE PRIOR TO FABRICATION.

D01-2 DEMOLITION

1. CONTRACTOR TO SCAN FOR ALL SERVICES AND CALL FOR LOCATES PRIOR TO DEMOLITION.
2. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHILE DEMOLISHING EXISTING STRUCTURE AS TO NOT DAMAGE THOSE PORTIONS OF THE STRUCTURE THAT ARE TO REMAIN.
3. CONTRACTOR SHALL MAKE GOOD, TO THE SATISFACTION OF THE CONSULTANT, ANY DAMAGE THAT OCCURS DUE TO THE DEMOLITION PHASE.
4. ALL DEMOLISHED MATERIALS MUST BE DISPOSED OF OFF-SITE AT THE END OF EACH WORKING DAY.

D01-3 GRAVITY LOADS:

SLS/ULS VALUES:		SNOW LOAD FACTORS:	
SNOW, S _l :	ULS=1.0 SLS=0.9	SNOW LOAD FACTORS:	S = Is (S _l C _{pe} C _w C _e C _a) + S _l
WIND, W:	ULS=1.0 SLS=0.75	S _l = 2.5 kPa	S _l = 2.5 kPa
SEISMIC, I _e :	ULS=1.0	S _f = 0.4 kPa	C _w = 1.0
		C _e = 1.0	C _a = 1.0

ROOF:	DEAD:	ROOFING:	0.40
	STEEL DECK:	0.10	
	STRUCT. STEEL:	0.25	
	M.E.:	0.25	
	CEILING:	0.20	
		1.20 kPa	

LIVE:	ROOF:	1.0 kPa
	SNOW:	2.40 kPa (+ DRIFT) UN

D01-4 SEISMIC SYSTEM LOADING DATA

- SEISMIC FORCE RESISTING SYSTEM (SFRS):
 - SFRS SYSTEM & CONNECTIONS: (2012 OBC CLAUSE 4.1.8.9.4.1.8.10)
 - LATERAL LOAD RESISTING SYSTEM: CONVENTIONAL CONSTRUCTION - STEEL BRACED FRAMES
 - R_u = 1.5
 - R_o = 1.3
- SEISMIC IMPORTANCE FACTOR: (2012 OBC CLAUSE 4.1.8.5)
 - I_e = 1.0
 - REFERENCE CITY: OTTAWA (KANATA)
- SITE CLASS: THE NOTED SITE CLASSIFICATION FOR SEISMIC SITE RESPONSE AND SHEAR STRENGTH PARAMETERS INDICATED ARE ASSUMED AND ARE TO BE CONFIRMED BY A GEOTECHNICAL ENGINEER LICENSED TO PRACTICE IN ONTARIO IN WRITING, PRIOR TO CONSTRUCTION.
 - A □ B □ C □ D □ E □ F
- RESPONSE SPECTRUM DATA:
 - 5% DAMPED SPECTRAL RESPONSE ACCELERATION VALUES FOR REFERENCE CITY: (2015 NBC APPENDIX C)

S _w (0.2)	= 0.401
S _w (0.3)	= 0.218
S _w (0.5)	= 0.110
S _w (1.0)	= 0.053
S _w (2.0)	= 0.034
S _w (5.0)	= 0.021
S _w (10.0)	= 0.013
 - PEAK GROUND ACCELERATION (2015 NBC APPENDIX C)
 - P_{GA} = 0.257
 - DESIGN SPECTRAL RESPONSE ACCELERATION VALUES (SRRS): (2012 OBC CLAUSE 4.1.8.4)
 - CLASS C: (P_{GA}=2.0%)

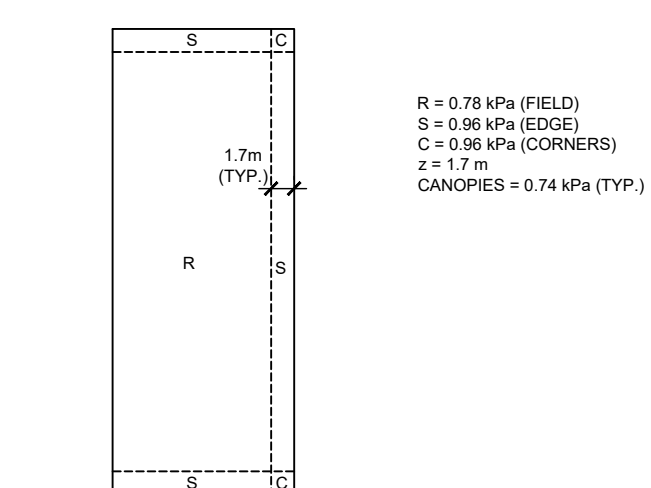
S(0)	= 0.401
S(0.2)	= 0.401
S(0.5)	= 0.218
S(1.0)	= 0.110
S(2.0)	= 0.053
S(5.0)	= 0.034
S(10.0)	= 0.021
- SYSTEM RESTRICTION VALUE: I_f = 0.50 + 0.35 YES NO
- FUNDAMENTAL PERIOD: (2012 OBC CLAUSE 4.1.8.11.4)
 - T_{nat} = 0.17 sec
 - T_{str} = 0.21 sec
- DESIGN FUNDAMENTAL PERIOD:
 - S_Tnat = 0.401
 - S_Tstr = 0.395
- STRUCTURAL SEPARATION: THE ADJACENT STRUCTURES HAVE BEEN SEPARATED IN ACCORDANCE WITH 4.1.8.14(1) OF THE 2012 O.B.C. N/A
- BUILDING WEIGHT FOR SEISMIC DESIGN: W = 251 kN
- BASE SHEARS:
 - V_{nat} = S_TT_{nat}² I_f W (R_uR_o) = 0.206 W
- STATIC MAXIMUM/MINIMUM VALUES:
 - V_{nat} = S_TQ₁W (R_uR_o) = 0.027 W
 - V_{nat} = S_TQ₂W (R_uR_o) = 0.137 W = 34.4 kN

D01-5 WIND LOADING:

WIND (PRIMARY STRUCTURAL)	NORTH-SOUTH: (-/+)	WIND (INDIVIDUAL WALLS)
q _r 0.41 kPa (1 IN 50 YEARS)	V _{base} = 25 kN V _{base} = 102 kN/m	I _e = 1.0 (ULS) I _e = 0.75 (SLS) C _{pe} = +1 TO -2.0 C _s = 0.9 C _w = 2.0 C _e = 0.45 TO +0.3 C _a = 1.34 kPa (ULS) C _a = 0.72 kPa (SLS)
W = 1.0 (ULS) W = 0.75 (SLS) C _{pe} = 1.3 (2 @ AT ENDS) DESIGN = 0.76 kPa C _s = 0.9	V _{base} = 10 kN V _{base} = 42 kN/m	

SEE ROOF PLAN FOR WIND UPLIFT

WIND LOADS: WIND UPLIFT (NET FACTORED)



D01-6 DEFINITIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED IN THESE NOTES AND DRAWINGS:

SYMBOL	DESCRIPTION	UNIT	MILLIMETRES
ARCH	AT BRACING (40)	mm	MAX
B	BOTTOM	mm	MECHANICAL
BL	BOTTOM LOWER LAYER	mm	MINIMUM
BUL	BOTTOM UPPER LAYER	mm	NEAR FACENOT TO SCALE
CC	CENTRE TO CENTRE	NTS	OUTSIDE FACE
CL	CENTRE LINE	CC	PLEE CUT-OFF
CONT	CONTINUOUS	CC	PLATE
CR	CORE WALL	R.D.	ROOF DRAIN
EA	EACH	SM	STANDARD GALVANIZED LADDER
EE	EACH END	SW	MASONRY REINFORCEMENTS
EF	EACH FACE	SW	SHEARWALL
EL	ELEVATION	SW	EACH SIDE
ES	EACH SIDE	T.J.	THE JOIST
EW	EACH WAY	TUL	TOP LOWER LAYER
FF	FAR FACE	TUL	TOP UPPER LAYER
H.HOR	HORIZONTAL	TUL	TOP OF FILL CAP
HDMR	HEAVY DUTY GALVANIZED TRUSSTYPE MASONRY REINFORCEMENT	TYP.	TYPICAL
IF	INSIDE FACE	UN	UNLESS OTHERWISE NOTED
IL	LOWER LAYER	US	UNDERSIDE
m	METRES	VERT.	VERTICAL

D01-7 SHOP DRAWINGS

1. SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL WORK AND WORK AFFECTING THE STRUCTURE TO THE CONSTRUCTION MANAGER. OBTAIN ARCHITECT'S AND ENGINEER'S APPROVAL BEFORE PROCEEDING WITH THE FABRICATION.
2. EACH OF THE FOLLOWING SHOP DRAWINGS MUST BEAR THE SIGNATURE AND STAMP OF A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE (PLUS OTHER DRAWINGS AS NOTED):
 - a) DRAWINGS FOR ANY TEMPORARY WORK, INCLUDING SHORING OF EXISTING STRUCTURE DESIGNED BY THE CONTRACTOR'S FORCES
 - b) DRAWINGS FOR ANY STRUCTURAL PARTS
 - c) STRUCTURAL STEEL
 - d) OPEN WEB STEEL JOISTS 'JOISTS'
 - e) STEEL TO STEEL CONNECTIONS
3. SHOP DRAWINGS MUST BE REVIEWED AND STAMPED PERMITTED BY THE CONTRACTOR BEFORE ISSUING TO THE ARCHITECT/ENGINEER. SHOP DRAWINGS NOT STAMPED BY THE CONTRACTOR WILL BE REJECTED. ANY DELAYS IN THE CONSTRUCTION SCHEDULE DUE TO NONCOMPLIANCE WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. SUBMIT STEEL JOIST AND STEEL DECK SHOP DRAWINGS FOR STRUCTURAL ENGINEER REVIEW BEFORE FABRICATION.
5. SHOP DRAWINGS ARE REVIEWED FOR CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THIS REVIEW DOES NOT IMPLY APPROVAL OF THE DETAILED DESIGN OR QUANTITIES DESCRIBED IN THE SHOP DRAWINGS. THE RESPONSIBILITY FOR THE QUANTITIES AND DETAILED DESIGN OF THE MATERIALS AND COMPONENTS AS REQUIRED TO PROVIDE THE COMPLETE AND SATISFACTORY JOB DESCRIBED IN THE DESIGN DOCUMENTS REMAINS WITH THE CONTRACTOR.

D021 EXCAVATION, FOUNDATIONS, AND BACKFILL

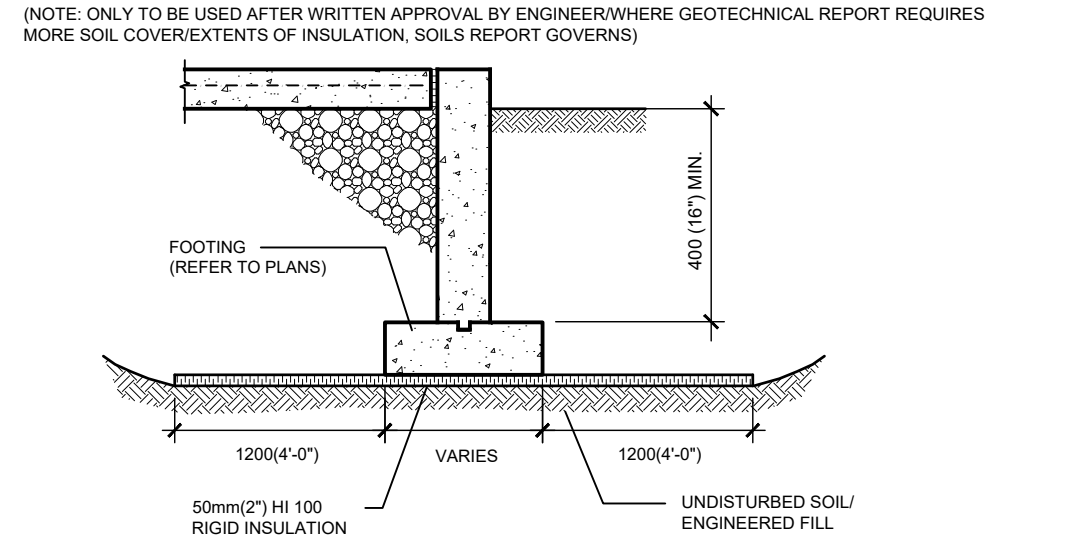
- D02-1 FOOTINGS:**
- ALL FOOTINGS TO BEAR ON UNDISTURBED NATIVE MATERIAL WITH MINIMUM ALLOWABLE BEARING STRENGTHS AS NOTED AND AS PROVIDED BY GEOTECHNICAL ENGINEER ON SITE. REFERENCE: GEOTECHNICAL REPORT: P06018-1 (DATED NOVEMBER 30, 2021) REPORT AUTHOR: PATERSON GROUP INC.
- D02-2 EXCAVATION AND BACKFILL:**
- REFER TO GEOTECHNICAL REPORT AS INDICATED IN D01-1.
1. PRIOR TO ANY EXCAVATION, VERIFY LOCATION OF EXISTING SERVICES AND TAKE ALL NECESSARY MEASURES TO MAINTAIN SERVICES WHERE REQUIRED. NOTIFY OWNER AND CONSULTANT IF ANY SERVICES NOT SHOWN ON PLAN OR OTHERWISE EXPECTED ARE ENCOUNTERED. DO NOT PROCEED FURTHER UNTIL DIRECTED.
 2. CARE MUST BE TAKEN TO AVOID UNDERMINING EXISTING BUILDING FOUNDATIONS OR UNDERGROUND SERVICES.
 3. PROTECT SUB-GRADE FROM FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION.
 4. FOOTINGS MUST BEAR ON APPROVED BEARING SURFACES.
 5. BACKFILL TO WITHIN 200mm OF UNDERSIDE OF SLAB WITH GRANULAR 'B' TYPE II IN LAYERS UP TO 300mm THICK COMPACTED TO MINIMUM 100% SPMD0
 6. FINAL 200mm UNDER SLAB TO BE GRANULAR 'A' COMPACTED TO MINIMUM 100% SPMD0
 7. RE-USE OF EXCAVATED GRANULAR MATERIAL IS SUBJECT TO APPROVAL OF A GEOTECHNICAL CONSULTANT.
 8. CONTRACTOR TO RETAIN THE SERVICES OF A GEOTECHNICAL ENGINEER TO PROVIDE WRITTEN CONFORMANCE OF THE COMPACTED GRANULAR MATERIAL, WAS INSTALLED AS SPECIFIED FOR REVIEW AND APPROVAL.

D02-3 PROTECT LATERAL STABILITY OF BEARING STRATA UNLESS NOTED:

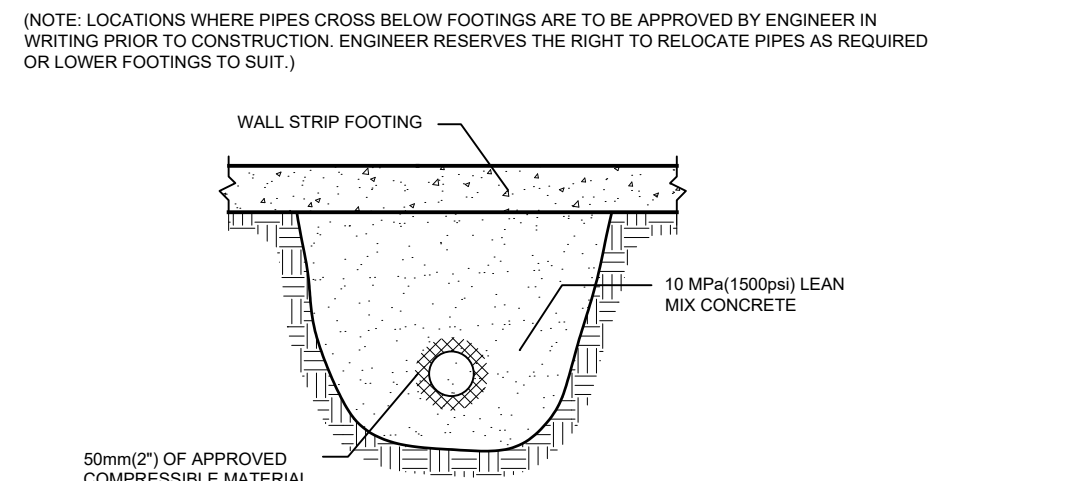
UNLESS OTHERWISE OUTLINED IN GEOTECHNICAL REPORT DO NOT EXCAVATE BELOW A LINE EXTENDING DOWNWARD FROM ANY BEARING STRATA AT A SLOPE OF 1 VERTICAL TO 2 HORIZONTAL. ADJUST FOOTING AND TRENCH ELEVATIONS TO MEET THIS REQUIREMENT (SEE DIAGRAM).



D02-5 ALTERNATE FROST COVER DETAIL



D02-6 PIPE CROSSING BELOW STRIP FOOTING:



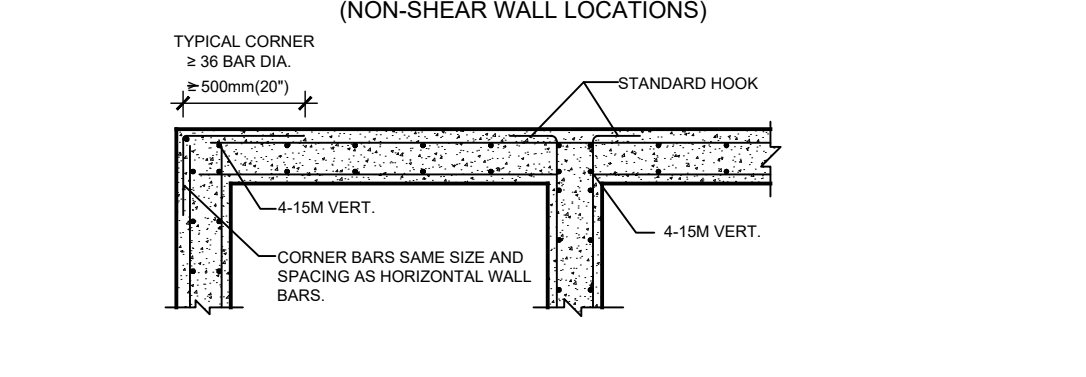
D031 CONCRETE COVER (CLEAR TO REINFORCING):

US FOOTINGS AND SLAB ON GRADE (AGANST SOIL)	75mm
FOOTINGS AND SLAB ON GRADE (BASES & TOP)	50mm
FOUNDATION WALLS	50mm

D03-2 CONCRETE REINFORCING STEEL:

1. REINFORCING TO BE GRADE 400W DEFORMED BARS TO CSA-G30.18.
2. SPACING OF BARS SHALL BE APPROXIMATELY UNIFORM WITHIN THE CONCRETE ELEMENTS. DO NOT ELIMINATE OR DISPLACE REINFORCEMENT TO ACCOMMODATE HARDWARE. OBTAIN APPROVAL OF ALL MODIFICATIONS FROM ENGINEER BEFORE THE PLACING OF CONCRETE.
3. ALL LAPS AND EMBEDMENT OF DOWELS SHALL BE 40 BAR DIAMETERS, BUT NOT LESS THAN 600mm IF NOT SPECIFIED OTHERWISE. WIRE MESH LAPS SHALL BE 150mm MINIMUM.
4. BAR DESIGNATION:
 - METRIC: 10-19M MEANS 10 BARS, SIZE 19M.
5. PROVIDE STANDARD HOOKS WHERE TOP AND BOTTOM BARS TERMINATE AT EDGES.
6. ALL DOWELS TO BE IN LINE WITH THE VERTICAL OF HORIZONTAL STEEL WITHIN THE STRUCTURAL ELEMENT UNLESS OTHERWISE NOTED.
7. DETAIL, FABRICATE AND PLACE ALL REINFORCEMENT IN CONFORMITY TO CURRENT MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ACI 315, CSA A23.3 - LATEST EDITION AND REINFORCING STEEL MANUAL OF STANDARD PRACTICE BY RS&O.
8. ALL REINFORCING STEEL TO BE CHANGED AND SECURELY TIED IN PLACE USING STANDARD TIES AND CHAIRS TO THE REQUIRED COVER FOR EXPOSED CONCRETE. CHAIRS AND BOLLERS TO BE PLASTIC TYPED OR STAINLESS STEEL.
9. SUBMIT REINFORCING SHOP DRAWINGS FOR STRUCTURAL ENGINEER REVIEW PRIOR TO FABRICATION.

D03-3 HORIZONTAL WALL STEEL DETAIL AT CORNERS UN: (NON-SHEAR WALL LOCATIONS)



D03-4 CONCRETE MIXES

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CSA-A23.1, TO GIVE THE FOLLOWING QUALITY FOR ALL CONCRETE AS INDICATED.

LOCATION	28 DAY STRENGTH	SUMP	CLASS OF EXPOSURE
THICKENED SLAB ON GRADE	35 MPa (5100 psi)	75mm (3")	C-1
RETAINING WALLS	35 MPa (5100 psi)	75mm (3")	C-1
FOOTINGS	35 MPa (5100 psi)	75mm (3")	C-1

* REFER TO CSA-A23.1 FOR THE MAXIMUM WATER/CEMENT RATIO, MINIMUM COMPRESSIVE STRENGTH, AIR CONTENT, CURING REQUIREMENTS, CHLORIDE ION PERMEABILITY AND ALTERNATE CEMENT TYPE TO MEET THE REQUIREMENTS FOR THE NOTED EXPOSURE CLASS.

READY-MIXED CONCRETE AND CONCRETE PROPORTIONS SHALL BE IN ACCORDANCE WITH CSA A23.1, CLAUSE 12 AND AS FOLLOWS:

1. PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF SPECIFIED QUALITY AND YIELD AND THAT STRENGTH WILL COMPLY WITH CSA-A23.1.
2. USE OF CALCIUM CHLORIDE NOT PERMITTED.
3. DO NOT CHANGE CONCRETE MIX WITHOUT PRIOR APPROVAL OF CONSULTANT. SHOULD CHANGE IN MATERIAL SOURCE BE PROPOSED, NEW MIX DESIGN TO BE APPROVED BY CONSULTANT.
4. ALL CONCRETE EXPOSED TO EXTERIOR CONDITIONS TO BE AIR ENTRAINED AS PER CSA A23.1.

D03-5 CONCRETE COLD WEATHER PROTECTION

1. CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY HEAT, INSULATION MATERIALS OR OTHER MEANS AS REQUIRE TO PROTECT THE MASONRY BLOCKS, GROUT, CONCRETE AND GRANULAR MATERIALS FROM FREEZING DURING THE WORK, IN ACCORDANCE WITH CSA-A23.1.
2. PROTECT SUB-GRADE FROM FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION. DO NOT PLACE CONCRETE ON FROZEN GROUND.
3. CONTRACTOR TO PROVIDE PROPOSED METHOD OF PROTECTION FOR OUR REVIEW PRIOR TO COMMENCING THE WORK.
4. CURE CONCRETE TO CSA A23.1A23.2. TAKE APPROPRIATE PRECAUTIONS FOR COLD WEATHER WORK AS PER CSA A23.1A23.2.

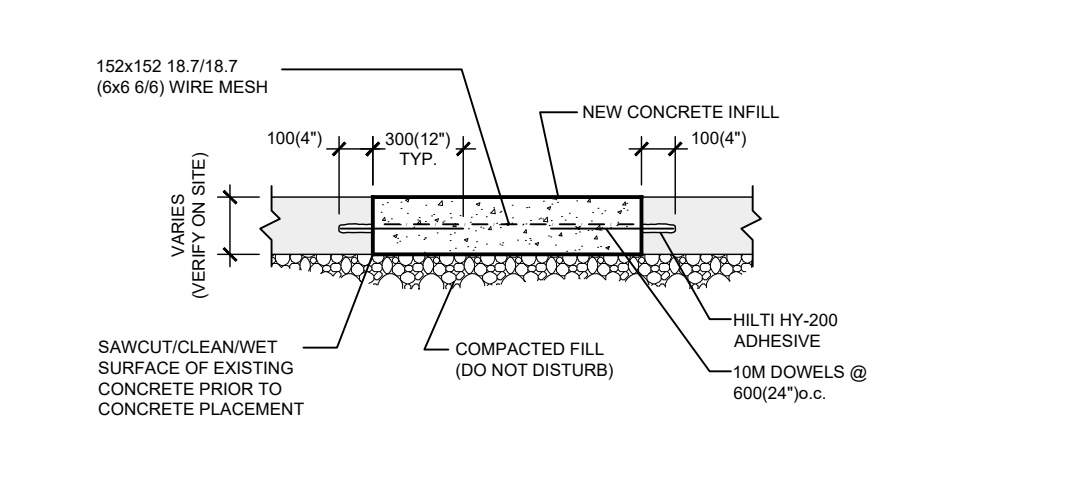
D03-6 CONCRETE WARM WEATHER PROTECTION

1. CARRY OUT HOT WEATHER CONCRETING IN ACCORDANCE WITH CSA A23.1.
2. PROTECT CONCRETE FROM EFFECT OF HOT OR DRYING WEATHER CONDITIONS. PROTECT FORMS AND REINFORCING FROM THE DIRECT RAYS OF THE SUN OR COOL BY FOGGING AND EVAPORATION.
3. CURE CONCRETE TO CSA A23.1A23.2. TAKE APPROPRIATE PRECAUTIONS FOR HOT WEATHER WORK AS PER CSA A23.1A23.2.

D03-7 FIELD QUALITY CONTROL

1. INSPECTION AND TESTING OF CONCRETE AND CONCRETE MATERIALS WILL BE CARRIED OUT BY AS TESTING LABORATORY DESIGNATED BY THE CLIENT IN ACCORDANCE WITH CSA-A23.1 AND DIVISION 1.
2. AIR ENTRAINMENT TEST AND SLUMP TEST MADE FROM SAME BATCH OF CONCRETE FROM WHICH TEST CYLINDERS ARE MADE.
3. TESTS WILL BE MADE IN ACCORDANCE WITH CSA A23.2.
4. INSPECTION COMPANY'S REPORTS OF TESTS WILL BE FORWARDED TO THE CONSULTANT AND CONTRACTOR WITH AN OPINION OR REASON FOR ANY ABNORMALITIES NOTES THEREON.
5. COOPERATE WITH AND ASSIST INSPECTION COMPANY'S PERSONNEL DURING INSPECTION AND TESTS.
6. REMOVE DEFECTIVE MATERIALS AND COMPLETED WORK WHICH FAILS TESTS AND REPLACE AS DIRECTED BY THE CONSULTANT.
7. WHERE WORK OR MATERIALS FAIL TO MEET STRENGTH REQUIREMENTS AS INDICATED BY TEST RESULTS, PAY COSTS OF ADDITIONAL INSPECTION AND TESTING REQUIRED FOR NEW REPLACEMENT WORK ON MATERIALS.
8. NON-DESTRUCTIVE METHODS FOR TESTING CONCRETE SHALL BE IN ACCORDANCE WITH CSA-A23.2.
9. INSPECTION OR TESTING BY THE CONSULTANT WILL NOT AUGMENT OR REPLACE CONTRACTOR QUALITY CONTROL NOR RELIEVE HIM OF HIS CONTRACTUAL RESPONSIBILITY.

D03-8 SLAB ON GRADE REMOVALS/REINSTATEMENT



D041 STEEL

D04-1 STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL COMPLY WITH CSA S16 UNLESS OTHERWISE NOTED.

ITEM	APPLICABLE SPECIFICATION (UNLESS OTHERWISE NOTED)
ROLLED SECTIONS	CSA G40.21 - 350W
HSS (TUBE) SECTIONS	CSA G40.21 - 350W (CLASS D)
CONNECTION BOLTS	ASTM A325 (BEARING TYPE)
ANCHOR BOLTS	ASTM F1554 GRADE 36 (UN NOTED IN BASEPLATE SCHEDULE)
CHANNELS, ANGLES, PLATES	CSA G40.21-350W

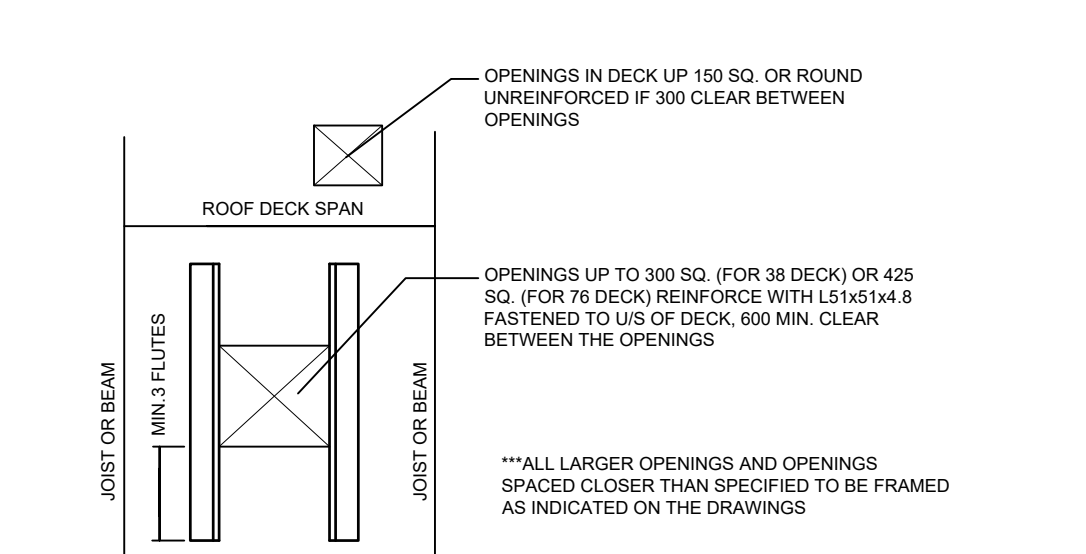
1. ALL STEEL WORK SHALL BE GIVEN ONE COAT OF APPROVED PRIMER.
2. FIELD AND SHOP CONNECTIONS SHALL BE WELDED OR HIGH TENSILE BOLTED (ASTM STANDARD A325).
3. WELDING SHALL CONFORM TO LATEST CSA SPECIFICATION W59 AND BE UNDERTAKEN BY A FABRICATOR APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA SPECIFICATION W4.1.
4. ALL EXPOSED WELDS SHALL BE CONTINUOUS AND BE GRIND SMOOTH.
5. ALL EXTERIOR EXPOSED STRUCTURAL STEEL SHALL BE GALVANIZED OR PAINTED WITH APPROVED RUST INHIBITIVE PAINT.
6. STRUCTURAL STEEL MEMBERS SHALL NOT BE SPLICED UNLESS APPROVED BY THE STRUCTURAL ENGINEER IN WRITING.
7. WHERE STRUCTURAL STEEL MEMBERS SPECIFIED ON THE STRUCTURAL DRAWINGS ARE UNAVAILABLE TO THE CONTRACTOR, THE STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE MEMBERS HAVING ALL SECTION PROPERTIES EQUAL TO OR BETTER THAN THAT OF THE SPECIFIED MEMBERS AT NO ADDITIONAL COST. CONTACT ENGINEER FOR ACCEPTANCE OF ANY AND ALL SUBSTITUTIONS.
8. DESIGN DETAILS AND CONNECTIONS IN ACCORDANCE WITH REQUIREMENTS OF CSA S16 TO RESIST FORCES, MOMENTS, SHEARS AND ALLOW FOR MOVEMENTS INDICATED.
9. DESIGN FORCES FOR CONNECTIONS SHOWN ON DRAWINGS HAVE BEEN AMPLIFIED BY FACTOR LISTED IN CLAUSE 27.11 OF CSA S16.14.

SHEAR CONNECTIONS:

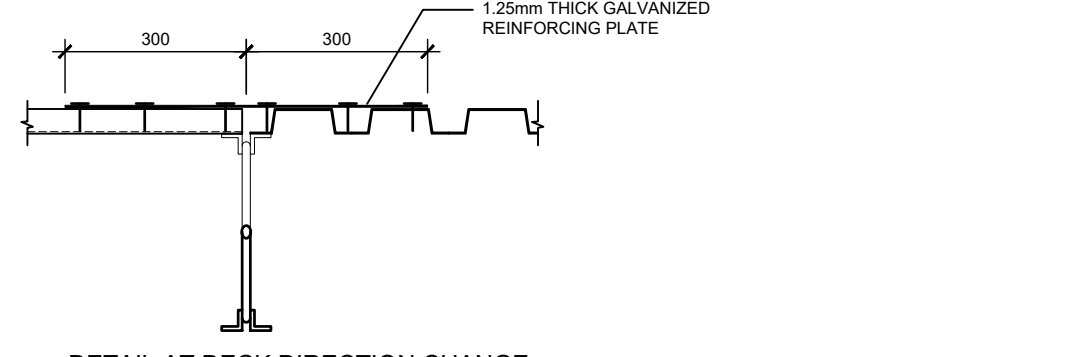
1. SELECT FRAMED BEAM SHEAR CONNECTIONS FROM AN INDUSTRY ACCEPTED PUBLICATION SUCH AS "HANDBOOK OF THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION" WHEN CONNECTION FOR SHEAR ONLY (STANDARD CONNECTION) IS REQUIRED.
2. SELECT OR DESIGN CONNECTIONS TO SUPPORT REACTION FROM MAXIMUM UNIFORM/DISTRIBUTED LOAD THAT CAN BE SAFELY SUPPORTED BY BEAM IN BENDING, PROVIDED NO POINT LOADS ACT ON BEAM, WHEN SHEARS ARE NOT INDICATED.

D04-2 STEEL DECK:

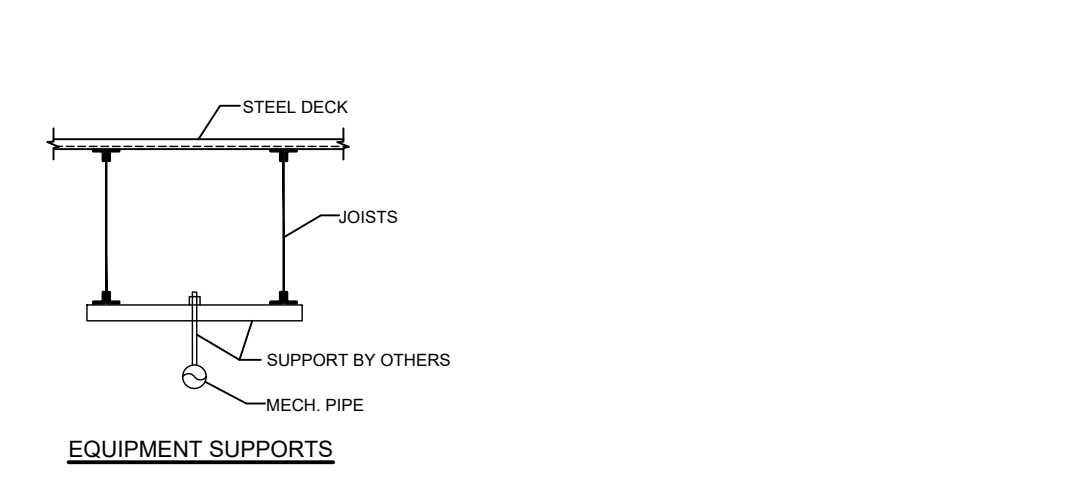
1. ALL METAL DECK SHALL BE A MINIMUM OF 38mm (1 1/2") DEEP, WITH DECK FLUTES AT 150mm (6") CENTRES, CONTINUOUS OVER AT LEAST THREE SPANS, AND SHALL BE FORMED FROM SHEET STEEL, CONFORMING TO C588 10M (20M20), MINIMUM GRADE 'A', WITH A BASE STEEL NOMINAL THICKNESS SPECIFIED ON PLANS, AND A MINIMUM ZINC COATING DESIGNATION OF 'WIPED COAT'. MINIMUM SIZES AS FOLLOWS (UN ON PLANS):
 - ROOFS: 38x0.91 (1 1/2"x0.94)
2. DECK CONNECTIONS TO SUPPORTING STRUCTURE TO BE AS FOLLOWS (UN ON PLANS):
 - WELT X EDIN 19 POWDER ACTUATED NAILS 4" x 7/8" (12" O/C) ALONG DECK PERIMETER AND INTERMEDIATE SUPPORTS #10 SCREWS @ 12" O/C AT SIDELAPS.
3. ALL WELDS SHALL BE PRIME PAINTED BY DECK CONTRACTOR.
4. STEEL DECK CONTRACTOR TO REINFORCE ALL OPENINGS AS NOTED BELOW:



5. ALL DECK CLOSURES SHALL BE SUPPLIED AND INSTALLED BY THE DECK CONTRACTOR. (PROVIDE DECK CLOSURES AT ALL AREAS WHERE DECK EDGES ARE WEAK).
6. WEDGE THE FLUTES OF THE STEEL ROOF DECK UNDER WOOD SLEEPERS CARRYING ROOF TOP UNITS (THIS SHALL ALSO APPLY TO ROOF TOP UNITS WITH METAL CURBS).
7. NO MECHANICAL OR ELECTRICAL EQUIPMENT/ACCESSORIES SHALL BE HUNG FROM THE STEEL DECK.
8. HANGERS FOR SUSPENSION OF CEILING ARE TO BE ATTACHED TO THE STEEL JOISTS. THESE MAY HOWEVER BE ATTACHED IN BETWEEN STEEL JOISTS TO THE SIDE OF THE DECK FLUTES AND BY LOOPING AND TYING AROUND, BUT ON NO ACCOUNT SHOULD THESE HANGERS BE PUNCHED THROUGH THE BOTTOM FLUTES.
9. DETAIL AT DECK DIRECTION CHANGE:
 - 1.25mm THICK GALVANIZED REINFORCING PLATE

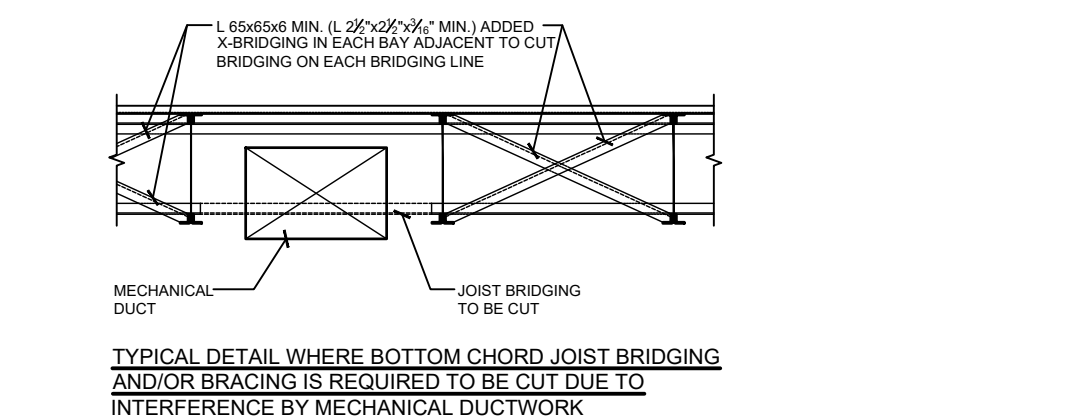


DETAIL AT DECK DIRECTION CHANGE



D04-3 STEEL JOISTS AND BRIDGING: S16.1 AND S136:

1. ALL JOISTS ARE TO BE EQUALLY SPACED BETWEEN THE JOISTS BEAMS.
2. ALL JOISTS ARE TO BE CARRIED FOR FULL DEAD LOAD DEFLECTION. LIMIT LIVE LOAD DEFLECTIONS TO NOT MORE THAN L/60 FOR ROOF AREAS AND NOT MORE THAN L/80 FOR FLOOR AREAS. TOTAL LOAD DEFLECTION FOR FLOOR JOISTS NOT TO EXCEED L/240. FLOOR JOISTS TO ALSO MEET VIBRATION CRITERIA OUTLINED IN 2006 OBC CLAUSE 4.1.3.6.
3. IN ORDER TO FACILITATE THE PASSAGE OF MECHANICAL DUCTS AND PIPES THROUGH THE ROOF JOISTS, THE JOIST SUPPLIER SHALL LOCATE THE DIAGONALS SO THAT THEY LINE UP FROM JOIST TO JOIST.
4. SPECIFIED POINT LOADS ARE SHOWN ON PLANS.
5. ALL PIPES MUST BE HUNG FROM TOP CHORD OF JOISTS IF A LOAD (APPROVED BY THE STRUCTURAL ENGINEER) IS HUNG FROM A JOIST AT A LOCATION OTHER THAN THE PANEL POINT, THEN A WEB DIAGONAL SHALL BE WELDED FROM THE HANGER LOCATION TO THE NEAREST PANEL POINT ON THE OPPOSITE CHORD.
6. LOADING DIAGRAMS:
 - AREAS SHADEN ON ROOF PLAN INDICATE EXTENT OF ADDITIONAL SNOW PILING WITH PEAK SPECIFIED LOADS NOTED. ROOF DECK AND JOISTS SHALL BE DESIGNED, MANUFACTURED AND ERRECTED TO SUPPORT BASIC SPECIFIED AS WELL AS ADDITIONAL SNOW LOADING.
7. a) PROVIDE 1 ROW OF HORIZONTAL BRIDGING AT FIRST BOTTOM CHORD PANEL POINT AT EACH END OF JOIST. PROVIDE ADDITIONAL CROSS BRIDGING AS INDICATED ON PLAN.
 - b) STEEL CONTRACTOR SHALL DESIGN, SUPPLY AND ERRECT REMANENT OR HORIZONTAL JOIST BRIDGING OF SUFFICIENT SIZE AND SPACING IN ACCORDANCE WITH CSA S16.1 LATEST EDITION.
8. DESIGN JOISTS FOR ALL LOADING CONDITIONS SPECIFIED IN THE NATIONAL BUILDING CODE IN ADDITION TO THE SNOW LOADS SPECIFIED ON PLANS.
9. PROVIDE ADDITIONAL X BRIDGING BETWEEN THE OUTSIDE PERIMETER BEAMS AND THE FIRST ROW OF JOIST RUNNING PARALLEL. ADDITIONAL BRIDGING IS SHOWN AS _____ ON PLAN. MINIMUM SIZE TO BE L 38x38x4 (L 12"x12"x1/2") SPACED @ 1800mm (6') O.C. (MAX) UNLESS OTHERWISE NOTED.

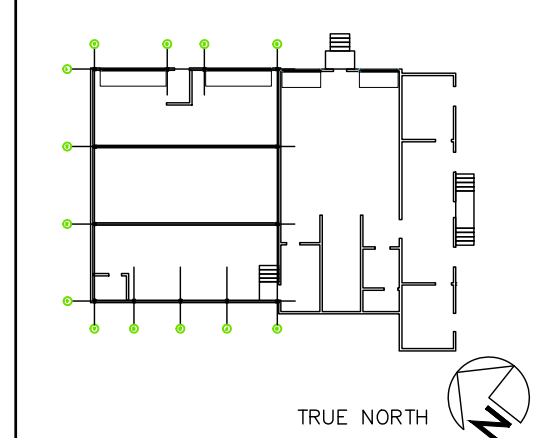


TYPICAL DETAIL WHERE BOTTOM CHORD JOIST BRIDGING AND/OR BRACING IS REQUIRED TO BE CUT DUE TO INTERFERENCE BY MECHANICAL DUCTWORK

COLUMN SCHEDULE

MARK	SIZE	NOTES
C1	HSS 6"x6"x1/2"	CLASS 'C'

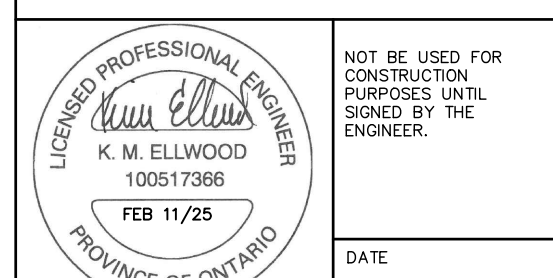
KEY PLAN: LEVEL 1



CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
DO NOT SCALE DRAWINGS.

REVISIONS

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	JAN 04/24
2	RE-ISSUED FOR PERMIT	MAY 06/24
3	ISSUED FOR SITE PLAN CONTROL	JUNE 18/24
4	RE-ISSUED FOR SITE PLAN CONTROL	OCT 25/24
5	RESPONSE TO CITY COMMENTS SPC_803	FEB 11/25



NOT BE USED FOR CONSTRUCTION PURPOSES UNTIL SIGNED BY THE ENGINEER.

DATE: 2024-01-04

PROJECT NORTH
DRAWN: W. ARSENAULT
CHECKED: A.R./K.E.
DATE PRINTED:

CARVECO WAREHOUSE

ADDRESS: 129 John Cornough Dr., Corp., ON M2A 1J2

STORMWATER DETENTION RETAINING WALL DETAILS

SCALE: AS SHOWN
DRAWING NO.: **S300**
PROJECT NO.:

THIS DETAIL ONLY SHOWS THE REBAR THAT IS ADDITIONAL TO THE WALL REINFORCEMENT. REFER TO OTHER DETAILS FOR TYPICAL WALL REINFORCING

