GENERAL NOTES

1. CONFORM TO THE REQUIREMENTS OF THE LATEST ONTARIO BUILDING CODE (OBC) INCLUDING ALL THE LATEST STANDARDS REFERENCED THEREIN, AND ANY APPLICABLE ACTS OF AUTHORITY HAVING JURISDICTION. THE LATEST VERSION OF ALL STANDARDS AND CODES LISTED BELOW SHALL BE USED.

2. READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER SPECIFICATIONS AND CONTRACT DOCUMENTS.

3. WHERE DISCREPANCIES EXIST BETWEEN CONTRACT DOCUMENTS, INCLUDING DRAWINGS AND APPLICABLE CODES AND ACTS, THE MOST STRINGENT SHALL GOVERN. CONTRACTOR SHALL CHECK ALL DIMENSIONS ON WORKING DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

4. THESE DESIGN DOCUMENTS ARE PREPARED SOLELY FOR THE USE BY THE PARTY WITH WHOM THE DESIGN PROFESSIONAL HAS ENTERED INTO A CONTRACT AND THERE ARE NO REPRESENTATIONS OF ANY KIND MADE BY THE DESIGN PROFESSIONAL TO ANY PARTY WITH WHOM THE DESIGN PROFESSIONAL HAS NOT ENTERED INTO A CONTRACT.

5. THE USE OF THESE DRAWINGS IS LIMITED TO THAT IDENTIFIED IN THE REVISION COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION" BY MTE CONSULTANTS.

6. UNDER NO CIRCUMSTANCES ARE THESE DRAWINGS TO BE SCALED, INCLUDING FOR PREPARATION OF SHOP DRAWINGS, CONSTRUCTION LAYOUT, OR BIDDING PURPOSES. ERRORS MADE BY PERSONS SCALING THESE DRAWINGS SHALL NOT BE THE RESPONSIBILITY OF MTE CONSULTANTS.

7. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF PITS, BASES, HOUSE KEEPING PADS, SUMPS, TRENCHES, DEPRESSIONS, GROOVES, CURBS, CHAMFERS AND SLOPES NOT SHOWN ON STRUCTURAL DRAWINGS.

8. BEFORE PROCEEDING WITH WORK, THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIARIZED WITH ALL CHARACTERISTICS AFFECTING NEW AND EXISTING CONSTRUCTION. ANY CHANGES, ALTERATIONS OR REVISIONS MUST BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

9. SUBSTITUTIONS FROM SPECIFIED PRODUCTS AND MATERIALS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO ORDERING OF MATERIALS. THE CONTRACTOR SHALL REIMBURSE ALL CONSULTANTS FOR ADDITIONAL COSTS INCURRED AS A RESULT OF REVIEWING ANY CHANGES MADE TO THE CONTRACT DOCUMENTS.

10. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS - O.REG. 213/91.

11. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN ALL SHORING AND TEMPORARY BRACING AS PER O.REG 213/91 AND THE CONTRACTOR SHALL RETAIN AN ENGINEER AS REQUIRED.

12. THE CONTRACTOR SHALL RETAIN AN INDEPENDENT INSPECTION AND TESTING COMPANY TO ENSURE THAT ALL WORK IS DONE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. REQUIRED TESTING SHALL BE AS PER THE TESTING AND INSPECTION TABLE BELOW.

13. MTE CONSULTANTS WILL PROVIDE GENERAL REVIEW OF CONSTRUCTION IN ACCORDANCE WITH THE PERFORMANCE STANDARDS OF THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF ONTARIO BY MEANS OF A RATIONAL SAMPLING PROCEDURE TO DETERMINE WHETHER THE CONSTRUCTION OF THAT WORK SHOWN ON THE MTE DRAWINGS IS IN GENERAL CONFORMITY WITH THE PLANS, SKETCHES, DRAWINGS, AND SPECIFICATIONS FORMING PART OF THE CONTRACT DOCUMENTS PREPARED BY "MTE". THE CONTRACTOR IS SOLELY RESPONSIBLE FOR QUALITY CONTROL AND THE PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE CONTRACT. "MTE" SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSON PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

14. IT IS THE RESPONSIBILITY OF BOTH THE OWNER AND THE CONTRACTOR TO NOTIFY THE ENGINEER OF CONSTRUCTION PROGRESS SO THE ENGINEER CAN COMPLETE GENERAL REVIEWS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A CONSTRUCTION SCHEDULE PRIOR TO STARTING THE WORK. GENERALLY, REVIEWS BY THE ENGINEER WILL BE REQUIRED FOR REBAR PRIOR TO CONCRETE PLACEMENT, FOOTING AND FOUNDATIONS PRIOR TO BACKFILLING, AND ABOVE GRADE FRAMING PRIOR TO INSTALLATION OF INTERIOR FINISHES.

PROJECT DESIGN DATA TABLE

BUILDING IMPORTANCE CATEGORY	NORMAL	
FLOOR AND ROOF DESIGN LOADS AS NOTED ON FRAMING PLANS		
SPECIFIED WIND LOADS		
HOURLY WIND PRESSURE (1/50) DESIGN DATA	0.43 kPa	
WIND DESIGN CATAGORY	CATAGORY 2	
TERRAIN	OPEN	
SPECIFIED SNOW LOADS		
BASIC ROOF SNOW LOAD	S	1.64 kPa
SNOW AND RAIN LOADING (1/50) DESIGN DATA	Ss	1.30 kPa
	Sr	0.40 kPa
	24HR RAIN	-
FACTORS USED FOR BASIC ROOF SNOW LOAD	Cb	0.95
	Cw	1.0
	Cs	1.0
	Ca	1.0
ADDITIONAL SNOW ACCUMULATION AROUND OBSTRUCTIONS AND ADJACENT TO HIGHER ROOF LEVELS OR WALLS IS INDICATED ON THE DRAWINGS.		
SPECIFIED EARTHQUAKE LOADS		
SEISMIC LOADING DESIGN DATA	Sa (0.2)	0.26
	Sa (0.5)	0.14
	Sa (1.0)	0.063
	Sa (2.0)	0.020
SITE CLASS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER	SITE CLASS	'D'
SEISMIC FORCE MODIFICATION FACTORS FOR SEISMIC FORCE RESISTING SYSTEM	Rd	1.5
	Ro	1.3
SEISMIC HAZARD INDEX	IeFaSa (0.2)	0.34

NOTES:
1. ALL LOADS AND ANALYSIS CONFROM TO THE 2012 OBC DIV B PART 4 AND THE USER'S GUIDE - NBC 2010 STRUCTURAL COMMENTARIES.
2. ALL DESIGN DATA ABOVE IS FROM THE 2012 OBC SUPPLEMENTARY STANDARD SB-1 TABLE 1.2.
3. WIND LOADING IS BASED ON THE STATIC PROCEDURE.
4. SEISMIC LOADING IS BASED ON THE EQUIVALENT STATIC FORCE PROCEDURE.
5. THE STRUCTURE HAS NOT BEEN DESIGNED FOR ANY FUTURE EXTENSION UNLESS NOTED.
6. THE FOUNDATION WALLS HAVE BEEN DESIGNED ASSUMING THAT THEY ARE NOT SUBJECT TO HYDROSTATIC PRESSURE. ENSURE PROVISIONS HAVE BEEN MADE FOR APPROPRIATE DRAINAGE OF GROUNDWATER.

TESTING AND INSPECTION

THE FOLLOWING ITEMS REQUIRE TESTING OR INSPECTION BY A CERTIFIED INDEPENDENT TESTING OR INSPECTION AGENCY UNLESS NOTED OTHERWISE. THE AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

ITEM	REQ'D	COMMENTS
SOIL BEARING CAPACITY	YES	BY SOILS ENGINEER
SOIL COMPACTION	YES	BY SOILS ENGINEER
HELICAL PIER INSTALLATION	YES	BY SOILS ENGINEER
REINFORCING STEEL PLACMENT	YES	INSPECT FINAL PLACEMENT
CONC. COMPRESSIVE TESTS	YES	MIN. 2 SETS PER 100 CUBIC METRES
CONCRETE SLUMP	YES	
STRUCTURAL STEEL BOLTING	YES	
STRUCTURAL STEEL WELDING	YES	INSPECT ALL FIELD WELDS
MORTAR CUBES	YES	

FOUNDATIONS

1. ALL BOREHOLE INFORMATION AND GEOTECHNICAL DATA HAS BEEN OBTAINED FROM THE SOIL INVESTIGATION PERFORMED BY EXP. SERVICES INC. AS REPORTED IN THEIR SOIL REPORT NO. BRM-00603770-BO, DATED NOVEMBER 27, 2015. READ THIS REPORT, AND BE THOROUGHLY FAMILIARIZED WITH ITS FINDINGS.

2. ALL COLUMN AND WALL FOOTINGS SHALL BEAR DIRECTLY ON NATURALLY CONSOLIDATED, UNDISTURBED SOIL OR COMPACTED FILL WITH A MINIMUM SOIL BEARING CAPACITY OF 250 kPa (SLS) AND 375 kPa (ULS) AT THE DEPTHS PROVIDED BY SOILS ENGINEER.

3. NO FOUNDATION MAY BE POURED BEFORE THE BEARING MATERIAL HAS BEEN APPROVED BY THE GEOTECHNICAL ENGINEER. NOTIFY THE GEOTECHNICAL ENGINEER A MINIMUM OF 24 HOURS BEFORE THE INTENDED CONCRETE POUR.

4. REMOVE ALL TOPSOIL, ORGANIC LOOSE FILL AND OTHER DELETERIOUS MATERIAL FROM BUILDING AREA BEFORE STARTING CONSTRUCTION.

5. WHERE APPROVED, GRANULAR FILL UNDER ALL FOOTINGS ON GRADE SHALL BE COMPACTED IN 200 mm (8") LAYERS TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).

6. FOUND NEW FOOTINGS WHICH ARE LOCATED ADJACENT TO EXISTING FOOTINGS, AT THE SAME ELEVATION AS THE EXISTING FOOTINGS, UNLESS NOTED OTHERWISE. ANY NECESSARY PRECAUTIONS SHALL BE TAKEN TO ENSURE THAT EXISTING FOOTINGS ARE NOT DISTURBED OR UNDERMINED IN ANY WAY DURING EXCAVATION.

7. FOUND ALL FOOTINGS BELOW THE LEVEL AT WHICH POTENTIAL DAMAGE RESULTING FROM FROST ACTION CAN OCCUR FOR THE FINISHED STRUCTURE, BUT A MINIMUM 1200 mm (4 FT.) BELOW FINISHED EXTERIOR GRADE, UNLESS NOTED OTHERWISE. UNDER NO CIRCUMSTANCES SHOULD DEPTH BE LESS THAN LOCAL FROST PENETRATION REQUIREMENTS.

8. PROTECT ALL SOIL FROM FREEZING ADJACENT TO AND BELOW ALL FOUNDATIONS DURING CONSTRUCTION.

9. INSULATION IS SHOWN WHERE REQUIRED FOR PROTECTION OF THE FOUNDATIONS FROM DAMAGE DUE TO FROST ACTION ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR FOUNDATION INSULATION NOT SHOWN ON THE STRUCTURAL DRAWINGS.

10. SLABS ON GRADE
A. PLACE SLABS ON GRADE ON MATERIAL CAPABLE OF SAFELY SUPPORTING 25 kPa WITHOUT SETTLEMENT RELATIVE TO THE BUILDING FOUNDATIONS.
B. PROOF-ROLL EXISTING FILL MATERIAL. REMOVE ANY LOOSE OR SOFTENED AREAS BENEATH SLAB-ON-GRADE BEFORE PLACING GRANULAR FILL.
C. APPROVED GRANULAR FILL UNDER ALL FLOOR SLABS ON GRADE SHALL BE COMPACTED IN 150 mm (6") LAYERS TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
D. BEFORE CASTING THE SLAB PLACE 200 mm (8") OF CLEAR CRUSHED STONE OR COMPACTED GRANULAR A OVER THE SUB-BASE AND THOROUGHLY ROLL AND CONSOLIDATE TO THE LEVELS REQUIRED.
E. WHERE THE SLAB-ON-GRADE IS USED TO LATERALLY RESTRAIN THE TOP OF AN EARTH-RETAINING WALL, ADEQUATELY SHORE THE WALL UNTIL THE SLAB HAS BEEN CAST AND ATTAINED 70% OF ITS SPECIFIED STRENGTH.

11. CARRY OUT BACKFILLING AGAINST FOUNDATION WALLS WHERE THERE IS GRADE ON BOTH SIDES IN SUCH A MANNER THAT THE LEVEL OF BACKFILLING ON ONE SIDE OF THE WALL IS NEVER MORE THAN 500 mm (20") DIFFERENT FROM THE LEVEL ON THE OTHER SIDE OF THE WALL, EXCEPT WHERE TEMPORARY SHORING FOR THE WALL IS PROVIDED.

12. DO NOT PLACE BACKFILL AGAINST WALLS RETAINING EARTH (OTHER THAN CANTILEVERED RETAINING WALLS) UNTIL THE WALLS AND THE FLOOR CONSTRUCTIONS AT THE TOP AND BOTTOM OF THE WALLS HAVE BEEN CAST AND HAVE ATTAINED 100% OF THEIR DESIGN STRENGTH.

13. IN NO CASE SHALL HORIZONTAL CONTROL JOINTS BE ALLOWED IN ANY VERTICALLY SPANNING CONCRETE WALLS WITHOUT THE CONSENT OF THE ENGINEER.

CONCRETE AND REINFORCING

1. ALL CONCRETE WORK TO CONFORM TO THE LATEST REQUIREMENTS OF CSA STANDARDS A23.1, A23.2 & A23.3.

2. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CAN/CSA G30.18 GRADE 400W FOR REINFORCING STEEL AND BE DEFORMED HI-BOND HARD GRADE WITH MINIMUM YIELD STRENGTH OF FY = 400 MPa.

3. WELDED WIRE MESH AND WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF CAN/CSA G30.5 WITH A MINIMUM YIELD STRENGTH OF FY = 450 MPa. ALL WELDED WIRE PRODUCTS ARE TO BE SUPPLIED AS FLAT SHEETS AND SHALL BE LAPPED A MINIMUM OF 150mm (6") AT JOINTS (U.N.O.).

4. DETAILING AND PLACING OF ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE REINFORCING STEEL INSTITUTE OF CANADA "MANUAL OF STANDARD PRACTICE".

5. ALL REINFORCING STEEL SHALL BE SHOP FABRICATED TO INCLUDE HOOKS AND BENDS AS REQUIRED.

6. ALL REINFORCING LAP SPLICES SHALL CONFORM TO THE LATEST CSA STANDARD A23.3 AND ALL BAR SPLICES SHALL BE CLASS 'B' TENSION SPLICES (U.N.O.).
a. NO BAR SPLICES SHALL BE LESS THAN IN THE TABLE BELOW.
b. INCREASE HORIZONTAL SPLICE LENGTHS IN THE TABLE BY 1.3 WHERE MORE THAN 300MM (12") OF FRESH CONCRETE IS CAST BELOW THE SPLICE.

REBAR SIZE \ CONCRETE	TENSION SPLICE 25 MPa	TENSION SPLICE 30 MPa	TENSION SPLICE 35 MPa	COMPRESSION SPLICE
10M	400 (16")	400 (16")	400 (16")	450 (18")
15M	600 (24")	600 (24")	600 (24")	450 (18")
20M	800 (32")	800 (32")	800 (32")	600 (24")
25M	1200 (48")	1100 (44")	1000 (40")	750 (30")
30M	1400 (56")	1300 (52")	1200 (48")	900 (36")
35M	1650 (66")	1500 (60")	1400 (56")	1050 (42")

7. ALL DOWEL EMBEDMENT SHALL MATCH THE ABOVE TENSION SPLICE LENGTH, UNLESS NOTED OTHERWISE.

8. ALL REINFORCING STEEL FABRICATION AND PLACEMENT DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE FABRICATION.

9. PLACE REINFORCING BARS SYMMETRICALLY OVER SUPPORTS AND SYMMETRICALLY IN SPANS, UNLESS NOTED OTHERWISE.

10. REINFORCING BARS, DOWELS AND ANCHOR BOLTS SHALL BE SECURELY TIED IN PLACE SO AS TO MAINTAIN THEIR EXACT POSITION BEFORE AND DURING PLACEMENT OF CONCRETE. BAR SUPPORTS SHALL ONLY BE MADE OF PRECAST CONCRETE BLOCKS, PLASTIC OR WIRE.

11. ALL OIL, GREASE, MUD AND DEBRIS SHALL BE ENTIRELY REMOVED FROM THE REINFORCING STEEL AND ANCHOR BOLTS PRIOR TO THE PLACEMENT OF CONCRETE. REBAR SHALL BE STORED ON SITE IN A MANNER TO BE KEPT CLEAN AND FREE FROM DELETERIOUS MATERIALS.

12. WELDING OF REINFORCING STEEL SHALL NOT BE PERMITTED UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.

13. CONFORM TO THE CONCRETE COVER REQUIREMENTS OF CSA A23.1 AND THE FOLLOWING, UNLESS NOTED OTHERWISE:
a. CONCRETE CAST AGAINST EARTH: 75 mm (3")
b. PIERS AND WALL: 40 mm (1.5")
c. EXPOSED TO DE-ICING CHEMICALS: 60 mm (2.5")
d. INTERIOR BEAMS: 30mm
e. INTERIOR SLABS: 25mm

14. CONCRETE PROPERTIES:
a. ALL CONCRETE SHALL HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 20 MPa UNLESS OTHERWISE SPECIFIED.
b. CONCRETE MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO USE AT JOB SITE.

CONCRETE MIX PROPERTIES TABLE

CONCRETE	MIN.28 DAYS STRENGTH (MPa)	SLUMP mm(in)	AIR CONTENT (%)	MAX. AGGREGATE SIZE (in)	EXPOSURE CLASS
EXTERIOR PIERS, FNDN. WALLS and FOOTINGS	25	80 (±30")	4-7	3/4"	F-2
INTERIOR PIERS, FNDN. WALLS and FOOTINGS	25	80 (±30")	0	3/4"	N
INT. S.O.G.	25	80 (±30")	0	3/4"	N
FREEZE THAW EXPOSURE	25	80 (±30")	4-7	3/4"	F-2
EXTERIOR SLAB (UNREINFORCED)	32	80 (±30")	5 - 8	3/4"	C-2
EXTERIOR SLAB (REINFORCED)	35	80 (±30")	5-8	3/4"	C-1
NON-SHRINKABLE GROUT	30	AS PER MANUF. RECOMEN.	0	-	N
LEAN MIX CONCRETE	8	80 (±30")	0	-	N

15. WHEN SUPER-PLASTICIZERS ARE USED, THE SLUMP MAY BE INCREASED BEYOND THE VALUES GIVEN, BUT SHALL BE BELOW THE POINT WHERE SEGREGATION WILL OCCUR. THE COST OF SUPER-PLASTICIZERS SHALL BE INCLUDED IN THE COST OF CONCRETE.

16. DO NOT ADD WATER TO CONCRETE UNLESS WRITTEN APPROVAL GIVEN BY THE ENGINEER. IF HIGHER SLUMP CONCRETE IS DESIRED, CONCRETE SUPPLIER SHALL DESIGN AND SUPPLY ACCORDINGLY.

17. HOT AND COLD WEATHER CONCRETING SHALL COMPLY WITH ALL REQUIREMENTS OF CSA STANDARD A23.1. CALCIUM CHLORIDE ADDITIVES WILL NOT BE PERMITTED.

18. ALL CONCRETE FORMWORK TOLERANCES AND SURFACE FINISHES SHALL COMPLY WITH CSA STANDARD A23.1 UNLESS NOTED OTHERWISE ON THE ARCHITECTURAL DRAWINGS.

19. ALL CONCRETE FORMS TO BE WET THOROUGHLY BEFORE POURING CONCRETE.

20. WATER CURING OF CONCRETE IS RECOMMENDED. CURE AND PROTECT ALL CONCRETE IN ACCORDANCE WITH CSA A23.1 SECTION 7.4.

21. ALL CONCRETE EXCEPT SLABS ON GRADE 150mm (6") THICK OR LESS SHALL BE MECHANICALLY VIBRATED SO AS TO COMPLETELY FILL THE FORM WITHOUT CAUSING UNDUE SEGREGATION. ANY DEFECTS IN THE HARDENED CONCRETE SHALL BE SATISFACTORILY REPAIRED OR SHALL BE REPLACED.

22. CONTROL JOINTS IN SLABS ON GRADE SHALL BE ¼ THE THICKNESS OF THE SLAB. SPACING OF CONTROL JOINTS IN CONCRETE SLABS-ON-GRADE SHALL NOT EXCEED THE GREATER OF 25 TIMES THE THICKNESS OF THE SLAB OR 3000 MM (10'-0") UNLESS NOTED ON THE DRAWINGS.

23. WHERE STEEL BEARING PLATES ARE SHOWN ON THE DRAWINGS, THEY SHALL BE ANCHORED WITH A MINIMUM OF TWO 12MM DIA X 450MM LONG + 50MM (1/2" □ x 18" LONG + 2") HOOKED ANCHOR RODS WELDED TO THE PLATES AND EMBEDDED INTO THE CONCRETE.

24. CHECK ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL, LANDSCAPE AND ALL OTHER RELEVANT DRAWINGS FOR LOCATIONS AND SIZES OF BOLTS, SLEEVES AND OPENINGS.

25. SUPPLY AND SET ANCHOR BOLTS, SLEEVES, PIPE HANGERS, JOISTS AND OTHER INSERTS AND OPENINGS AS INDICATED OR SPECIFIED ELSEWHERE.
FOR BEAMS AND COLUMNS: NO SLEEVES, DUCTS, PIPES OR OTHER OPENINGS SHALL PASS VERTICALLY OR HORIZONTALLY EXCEPT WHERE EXPRESSLY DETAILED ON STRUCTURAL DRAWINGS OR WHERE APPROVED IN ADVANCE BY ENGINEER.
FOR SLABS AND WALLS: ALL SLEEVES AND OPENINGS GREATER THAN 100 mm (4") IN ANY DIMENSION OR REQUIRING THE CUTTING OF ANY REINFORCEMENT, AND NOT INDICATED ON STRUCTURAL DRAWINGS, MUST BE APPROVED BY THE ENGINEER.
FOR MULTIPLE OPENINGS OR SLEEVES: IF WITHIN 600mm (24") OF EACH OTHER CONSULT ENGINEER FOR DIRECTION.

26. CAST IN ANCHOR BOLTS SHALL CONFORM TO THE LATEST CSA STANDARD G40.21 OR ASTM F1554 WITH A MINIMUM YIELD STRENGTH OF 250 MPa AND SHALL BE SET TRUE AS TO LOCATION, ELEVATION AND PROJECTION TO THE FOLLOWING TOLERANCES:
ANCHOR BOLT LOCATION = ± 3mm (1/8").
ANCHOR BOLT PROJECTION = ± 6mm (1/4").

27. CONSTRUCTION JOINTS FOR WALLS ARE BASED UPON VERTICAL JOINTS AT A MAXIMUM SPACING OF 10000mm (30'-0"). UNLESS CONTROL JOINTS ARE PROVIDED AS PER TYPICAL DETAIL. TOTAL LENGTH OF POUR TO BE DISCUSSED WITH ENGINEER PRIOR TO PROCEEDING.

28. CONSTRUCTION JOINTS FOR WALLS, SLABS, AND BEAMS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE CONSTRUCTION. GENERALLY JOINTS IN SLABS SHALL BE AT RIGHT ANGLES TO THE SPANS, AT MID SPAN IF POSSIBLE AND BE CLEAR OF SUPPORTS AND POINT LOADS.

29. INSERTS, FRAME-OUTS, SLEEVES, BRACKETS, CONDUITS AND FASTENING DEVICES, SHALL BE INSTALLED AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS IN A MANNER THAT SHALL NOT IMPAIR THE STRUCTURAL STRENGTH OF THE SYSTEM, BE SO INSTALLED THAT THEY SHALL NO REQUIRE THE CUTTING, BENDING, OR DISPLACEMENT OF THE REINFORCING OTHER THAN AS SHOWN ON THE TYPICAL DETAILS.

30. ELECTRICAL CONDUITS SHALL NOT PASS THROUGH A COLUMN, SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 SLAB THICKNESS OR WALL OR BEAM WHICH IT IS EMBEDDED, SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTER UNLESS APPROVED AND HAVE A MINIMUM CONCRETE COVER OF 25mm (1") AND UNLESS SPECIFICALLY PERMITTED OTHERWISE, SHALL NOT RUN HORIZONTALLY IN A CONCRETE WALL.

REQUIRED SUBMITTALS

THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

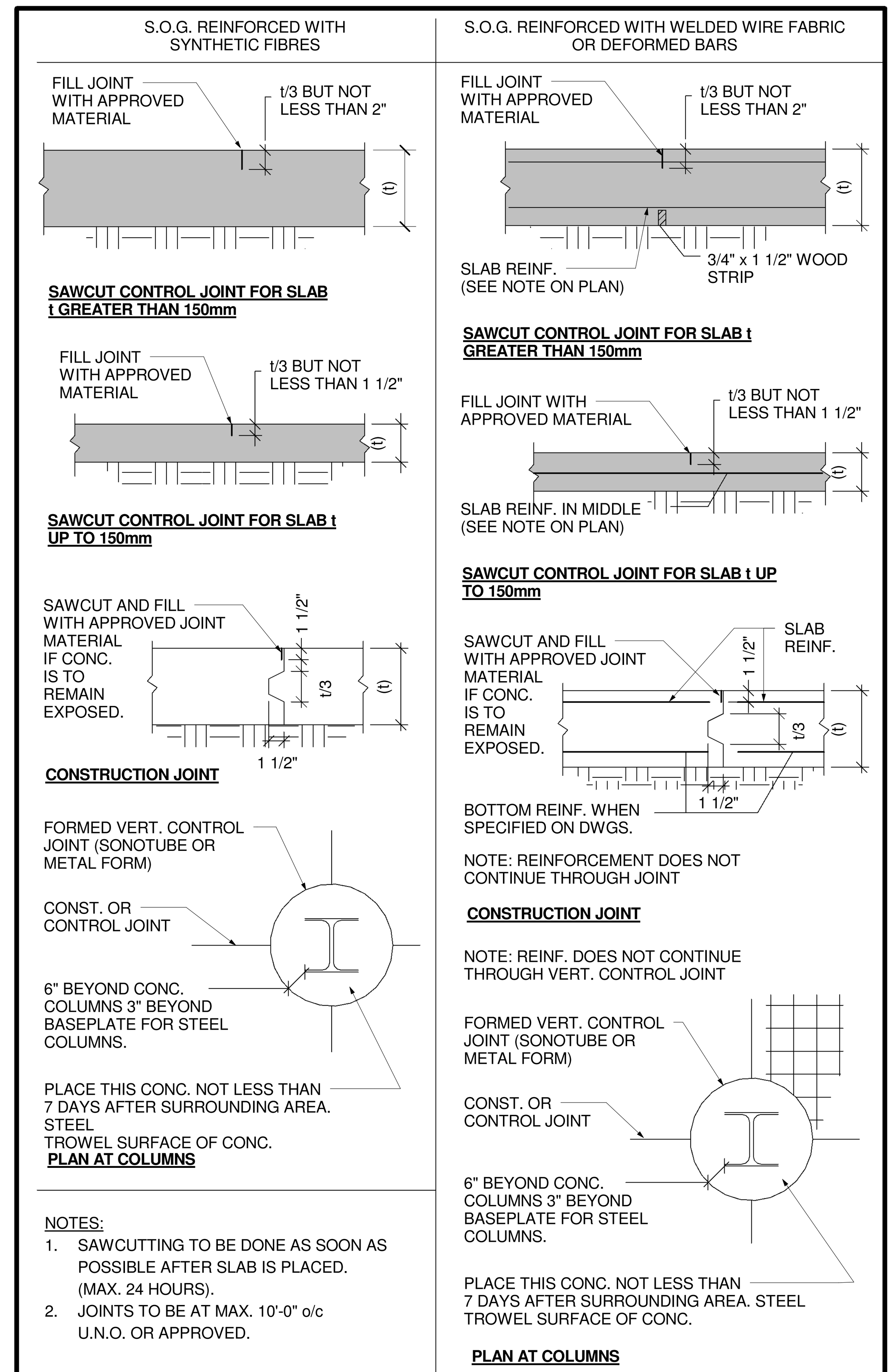
ITEM	REEQ'D SUBMITTAL?	ENGINEER'S STAMP REQ'D?	NOTES
REBAR SHOP DRAWINGS	YES	NO	
CONCRETE MIX DESIGNS	YES	NO	
MASONRY GROUT MIX DESIGN	YES	NO	
BLOCK MILL REPORT	YES	NO	
STRUCTURAL STEEL SHOP DRAWINGS	YES	YES	FOR CONNECTIONS ONLY
STEEL JOIST SHOP DRAWINGS	YES	YES	
STEEL JOIST CALCULATIONS	YES	YES	
MISCELLANEOUS STEEL SHOP DRAWINGS	YES	YES	STAMP FOR STAIRS, LADDERS AND GUARDS
STEEL DECK SHOP DRAWINGS	YES	YES	
COLD FORMED STEEL FRAMING SHOP DWGS.	YES	YES	
WOOD ROOF JOIST SHOP DRAWINGS	YES	YES	
WOOD ROOF JOIST CALCULATIONS	YES	YES	
ENGINEERED LUMBER	YES	YES	
FALL ARREST ANCHORS	YES	YES	
SEISMIC RESTRAINT OF NON-STRUCTURAL ITEMS	YES	YES	

STRUCTURAL ABBREVIATIONS

A.B	ANCHOR BOLT	I.D.	INSIDE DIAMTER
ALT.	ALTERNATE	kN.	KILONEWTON
ALUM.	ALUMINUM	kPa	KILOPASCAL
ANCH'S	ANCHORS	L	ANGLE
APPROX.	APPROXIMATELY	L.L.H.	LONG LEG HORIZONTAL
ARCH.	ARCHITECTURAL	L.L.V.	LONG LEG VERTICAL
B/F	BOTTOM FACE	L.P.	LOW POINT
B.PL	BASE PLATE	LG.	LONG
BLK.	BLOCK	MAX.	MAXIMUM
BM.	BEAM	MECH	MECHANICAL
BOT.	BOTTOM	MET'L	METAL
BRG.	BEARING	MIN.	MINIMUM
BT.PL.	BENT PLATE	MISC.	MISCELLANEOUS
C/W	COMPLETE WITH	m	METRE
C/C	CENTRE TO CENTRE	mm	MILLIMETRE
C.J.	CONTROL JOINT	MPa	MEGAPASCAL
CLG.	CEILING	N.I.C.	NOT IN CONTRACT
COL.	COLUMN	N.T.S.	NOT TO SCALE
CONC.	CONCRETE	No.	NUMBER
CONN.	CONNECTION	O.C.	ON CENTRE
CONSTR'N	CONSTRUCTION	O.D.	OUTSIDE DIAMETER
CONT.	CONTINUOUS	O.H.	OVERHEAD
DEMO.	DEMOLITION	OWSJ	OWEN WEB STEEL JOIST
DET.	DETAIL	OPNG.	OPENING
DIA.	DIAMETER	PART'N	PARTITION
DIM.	DIMENSION	PL.	PLATE
DO	DIDO	R.C.	REINFORCED CONCRETE
DP.	DEEP	R.D.	ROOF DRAIN
DWG.	DRAWING	R.O.	ROUGH OPENING
DWL.	DOWEL	REF.	REFERENCE
E.F.	EACH FACE	REINF.	REINFORCED
E.J.	EXPANSION JOINT	REQ'D	REQUIRED
ELEC.	ELECTRICAL	S.C.	SAWCUT
E.S.	EACH SIDE	SECT.	SECTION
E.W.	EACH WAY	S.L.H	SHORT LEG HORIZONTAL
EA.	EACH	S.L.V.	SHORT LEG VERTICAL
EL.	ELEVATION	S.O.G.	SLAB ON GRADE
EQ.	EQUAL	S.S.	STAINLESS STEEL
EXIST.	EXISTING	STL.	STEEL
F.F	FACE TO FACE	STIFF.	STIFFENER
FIN.	FINISHED	STRUCT.	STRUCTURAL
FL.	FLOOR	T/O	TOP OF
FNDN.	FOUNDATION	T.L.L	TOP LOWER LAYER
FTG.	FOOTING	T.U.L.	TOP UPPER LAYER
Ga.	GAUGE	TYP	TYPICAL
GALV.	GALVANIZED	U.N.O.	UNLESS NOTED OTHERWISE
GRD.	GRADE		
HORIZ.	HORIZONTAL	U/S	UNDERSIDE
H.D.	HEAVY DUTY	VERT.	VERTICAL
H.D.G.	HOT DIPPED GALVANIZED	V.E.F.	VERTICAL EACH FACE
H.E.F.	HORIZONTAL EACH FACE	V.I.F.	VERTICAL INSIDE FACE
H.P.	HIGH POINT	V.O.F.	VERTICAL OUTSIDE FACE
HSS	HOLLOW STRUCTURAL STEEL	W.P.	WORKING POINT
		W.W.M.	WELEDED WIRE MECH
		@	SPACED AT

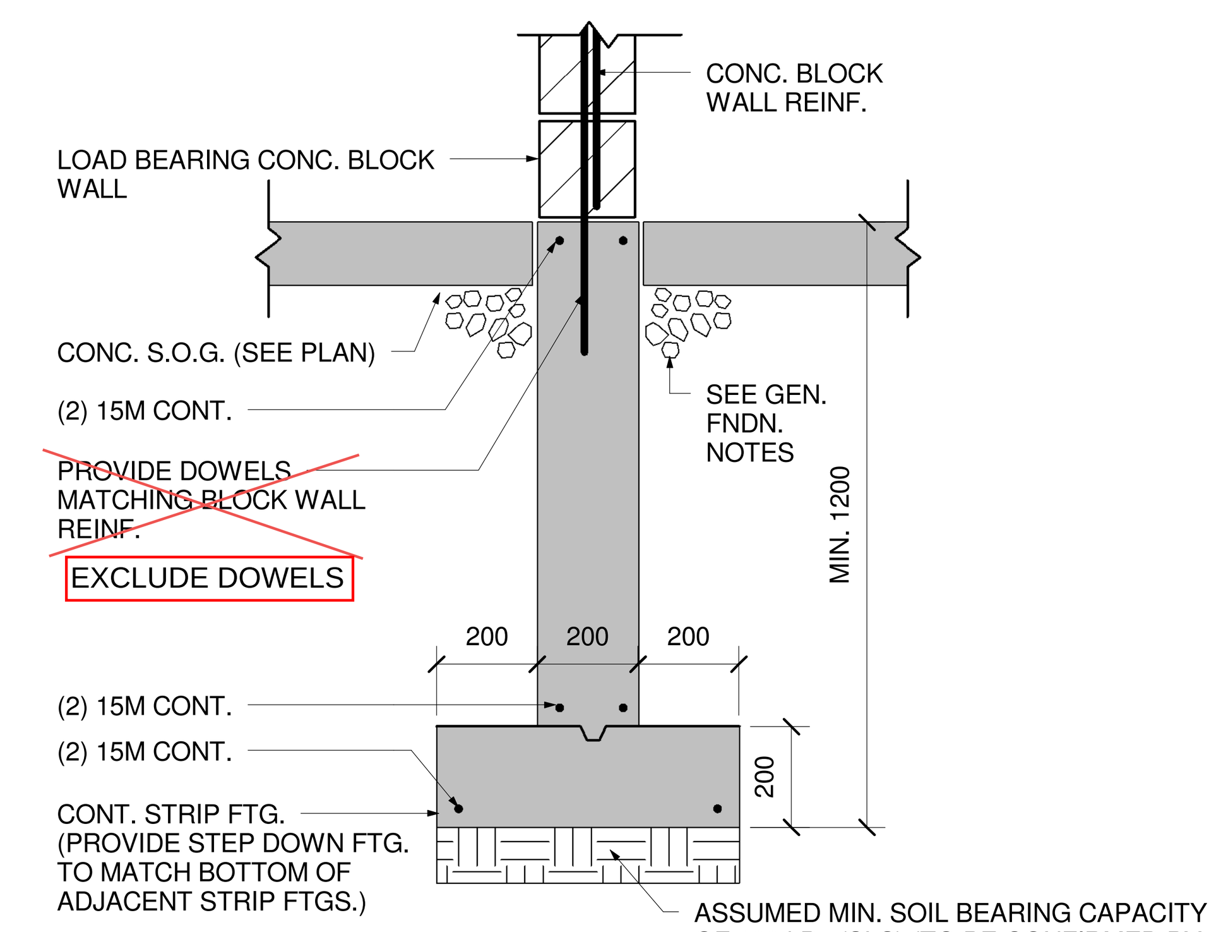
STRUCTURAL DRAWING LIST

S1.0 GENERAL NOTES
S2.2 FOUNDATION PLAN
S3.0 FOUNDATION DETAILS
S3.1 SCHEDULES, MEZZANINE PLAN AND DETAILS



NOTES:
1. SAWCUTTING TO BE DONE AS SOON AS POSSIBLE AFTER SLAB IS PLACED. (MAX. 24 HOURS).
2. JOINTS TO BE AT MAX. 10'-0" o/c U.N.O. OR APPROVED.

TYP. SLAB ON GRADE DETAILS (N.T.S.)



TYP. SECTION DETAIL

@ STRIP FOOTING SUPPORTING INTERIOR LOAD BEARING BLOCK WALL (N.T.S.)

NOTE TO CONTRACTOR:

DO NOT SCALE DRAWINGS. CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

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ADDENDUM #3	4	JAN. 13/17
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ISSUED FOR TENDER	1	JUN. 09/16

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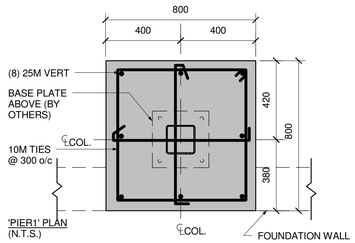
PROJECT
PARKHILL DEVELOPMENT BUILDING 2
8300 PARKHILL DR. MILTON, ON

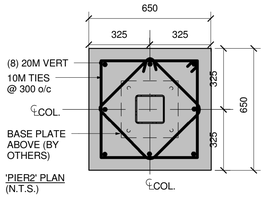
DRAWING
GENERAL NOTES

Project Manager:	DXF	Date:	JUNE 2016
Design By:	TND	Project No.:	41506-100
Drawn By:	JDG	Drawing No.:	S1.0
Scale:	As indicated		

BLDG.2 FOUNDATION PLAN

1 : 175





NOTES:

1. FIN. FLOOR EL. = 211.58
2. T/O INTERIOR FTG. EL. ± 211.33 OR 211.13 @ R.W.L.
3. T/O PERIMETER TRENCH FTGS. EL. = 211.13
4. T/O PERIMTER FOOTINGS EL. = 211.13
5. T/O TRENCH FOOTINGS EL. @ LOADING DOCKS = 210.08 (ALONG GRID 2)
6. T/O FOOTINGS EL. @ LOADING DOCK = 210.08 (ALONG GRID 2)
7. ALL ELEVATIONS ARE NOTED AS GEODETIC AND MUST BE COORDINATED WITH ARCH.
8. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, OPENINGS AND SLOPES NOT SHOWN ON THIS DRAWING.
9. IF FLOOR SLAB OPTION 2 IS CHOSEN FOR CONRETE S.O.G. CONTRACTOR TO PROVIDE MANUFACTURER'S SPECIFICATIONS TO MTE CONSULTANTS FOR REVIEW.

FLOOR SLAB
152 CONC. S.O.G. c/w 15kg/m3 STEEL FIBRES, 60lbs/100sf TRAPROCK FLOOR HARDENER

SAWCUTS @ 10' MAX AS SPECIFIED IN NOTE 2 OF TYP. SAWCUT DETAIL

SAWCUTS (TYP. AT ALL GRIDS) REFER TO TYPICAL DETAILS

152mm Foundation Slab

500mm WIDE TRENCH FTG. (TYP. @ 230mm FNDN. WALLS)

LEVELER PIT (SEE TYP. DET.)

MIN. 3700DP.

MIN. 2000 DP.

MIN. 2500mm DP.

PROVIDE 4-15M U-BARS @ END OF FOUNDATION WALL

STRIP FOORING SUPPORTING INTERIOR LOAD BEARING BLOCK WALL (SEE TYP. DETAILS)

230 FNDN. WALL

MIN. 8000 DP.

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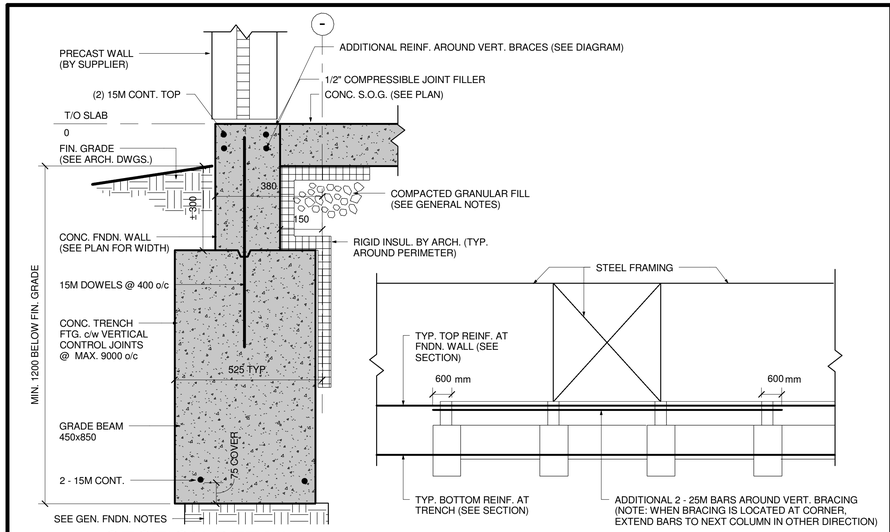
10/05/2017
PROVINCE OF ONTARIO

CLIENT

PROJECT
PARKHILL DEVELOPMENT BUILDING 2
8300 PARKHILL DR. MILTON, ON

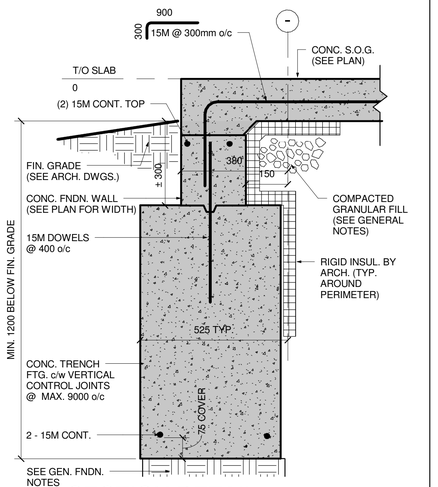
DRAWING
FOUNDATION PLAN

Project Manager:	DXF	Date:	JUNE 2016
Design By:	TND	Project No.:	41506-100
Drawn By:	JDG	Drawing No.:	S2.2
Scale:	As indicated		

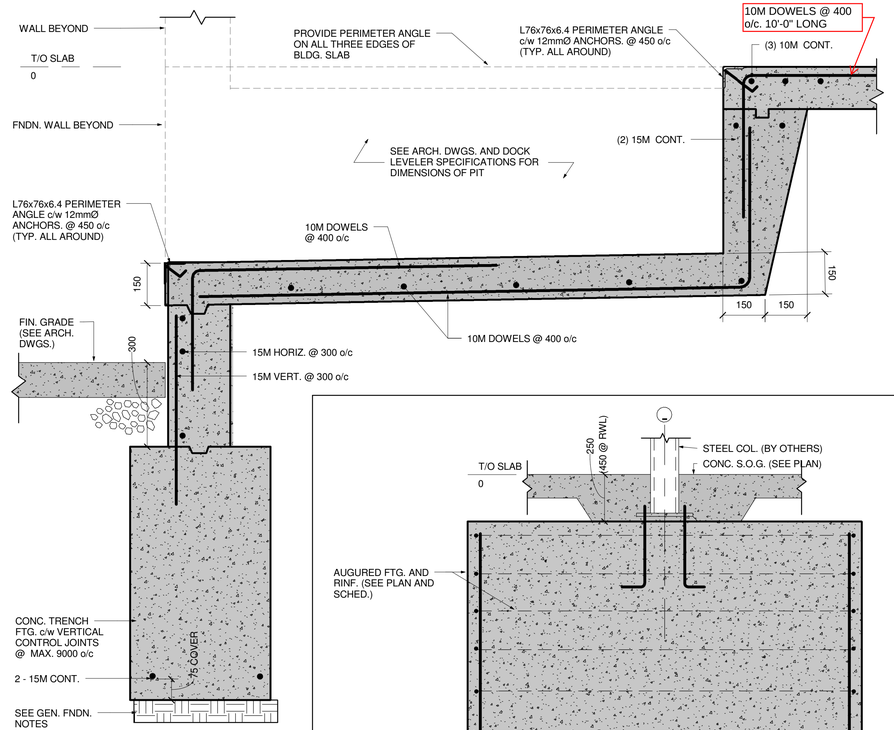


ADDITIONAL REINF. AROUND VERT. BRACES DIAGRAM (N.T.S.)

1 SECTION DETAIL
1 : 10



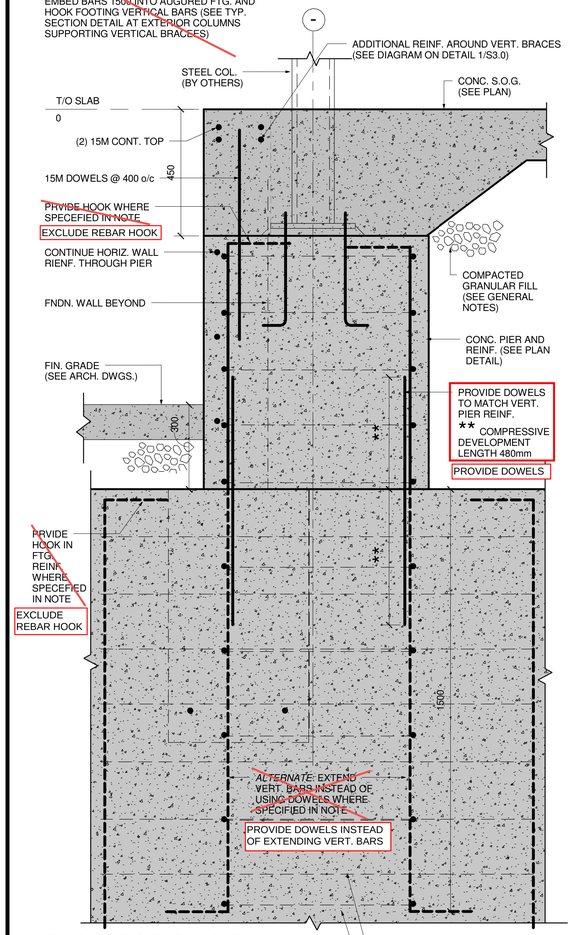
2 SECTION DETAIL
1 : 10



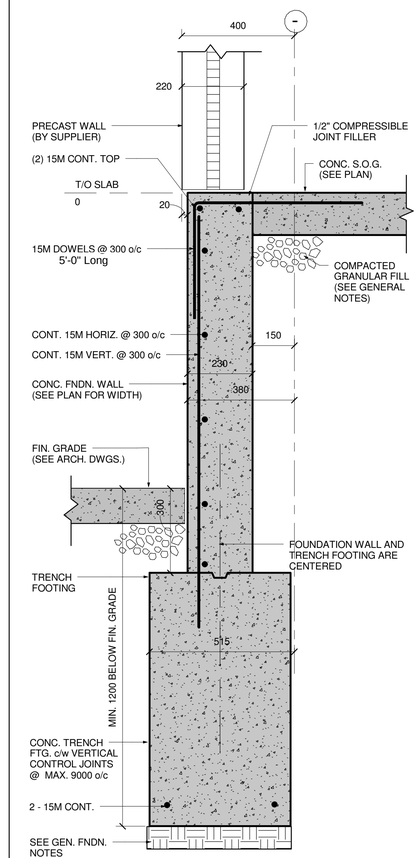
4 SECTION DETAIL
1 : 10

TYP. SECTION DETAIL
AT INTERIOR COLUMNS (N.T.S.)

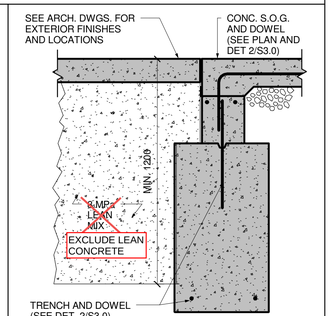
NOTE: AT PIERS FOR COLUMNS WITH VERTICAL BRACE, PROVIDE 300mm HOOK EACH END OF (8) 25M VERT. BARS AND EMBED BARS 1500 INTO AUGURED FTG. AND HOOK FOOTING VERTICAL BARS (SEE TYP. SECTION DETAIL AT EXTERIOR COLUMNS SUPPORTING VERTICAL BRACES)



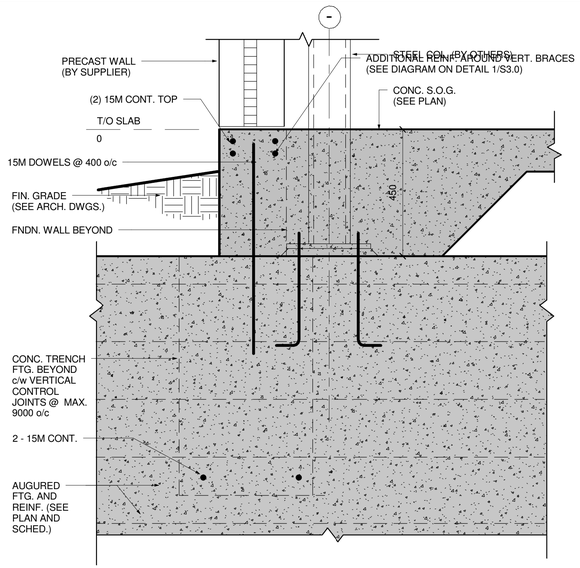
TYP. SECTION DETAIL
AT EXTERIOR COLUMNS WALLS ALONG RAMPS (N.T.S.)



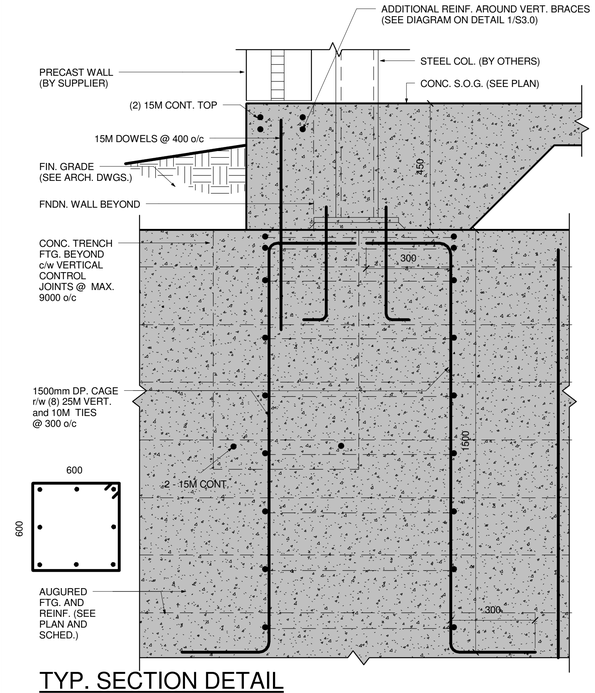
5 SECTION DETAIL
1 : 10



TYP. SECTION DETAIL
AT FROST SLAB (N.T.S.)



TYP. SECTION DETAIL
AT EXTERIOR COLUMNS WALLS (N.T.S.)



TYP. SECTION DETAIL
AT EXTERIOR COLUMNS SUPPORTING VERTICAL BRACES (N.T.S.)

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10/05/2017
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PROJECT
PARKHILL DEVELOPMENT BUILDING 2
8300 PARKHILL DR. MILTON, ON

DRAWING
FOUNDATION DETAILS

Project Manager:	DXF	Date:	JUNE 2016
Design By:	TND	Project No.:	41506-100
Drawn By:	JDG	Drawing No.:	S3.0
Scale:	As indicated		

AUGURED FOOTING SCHEDULE

MARK	FTG. DIA. (mm)	VERT. REINF.	TIES	REMARKS
F1	2440 (96")	(18) 25M	15M @ 300 o/c	MIN. 1400mm DEEP U.N.O.
F2	2130 (84")	(14) 25M	15M @ 300 o/c	MIN. 1400mm DEEP
F3	2440 (96")	(16) 25M	15M @ 300 o/c	MIN. 1400mm DEEP
F4	2130 (84")	(12) 25M	15M @ 300 o/c	MIN. 1200mm DEEP
F5	1830 (72")	(16) 20M	15M @ 300 o/c	MIN. 1200mm DEEP
F6	1675 (66")	(15) 20M	15M @ 300 o/c	MIN. 1200mm DEEP
F7	2440 (96")	(18) 25M	15M @ 300 o/c	MIN. 8000mm DEEP U.N.O.
F8	2440 (96")	(18) 25M	15M @ 300 o/c	MIN. 1900mm DEEP

AUGURED FOOTING NOTES:

1. PROVIDE TEMPORARY LINERS AS REQUIRED TO PREVENT CAVING INTO EXCAVATION.
2. FOUNDING DEPTH OF FOOTING TO BE VERIFIED ON SITE BY GEOTECHNICAL ENGINEER BEFORE CONCRETE IS POURED.
3. ALL LOOSE MATERIAL AT BOTTOM OF FOOTING SHALL BE REMOVED TO OBTAIN A HORIZONTAL, SOLID AND CLEAN BEAING SURFACE.
4. ALL FOOTINGS SHALL BE CENTERED ON SUPPORTED COLUMNS AND WALLS U.N.O.
5. EVERY FOOTING SHALL BE ACCURATELY CENTERED AT THE GROUND SURFACE AND SHALL BE INSTALLED WITHIN THE FOLLOWING TOLERANCES:
   - MAX. PERMISSIBLE DEVIATION FOM PLUMB O FROM REQ'D LOCATION AT THE TOP OF CAISSON SHALL BE 2% OF CAISSON LENGTH, OR 16mm (WHICHEVER IS LESS)
   - THE CENTER OF ANY HORIZONTAL CROSS-SECTION OF THE FTG. SHALL NOT VARY MORE THAN 1% OF THE FTG. LENGTH FROM A LINE JOINING THE CENTER OF THE TOP AND CENTER OF BOTTOM.
6. ANY FTG. OFF CENTER OR OUT OF PLUMB BEYOND THE TOLERANCES NOTED SHALL BE CORRECTED OR REPLACED AS DIRECTED BY THE STRUCTURAL ENGINEER.
7. COMPRESSIVE STRENGTH OF CONC. AT 28 DAYS SHALL BE 25 MPA U.N.O.
8. EA. SHAFT SHALL BE POURED ONE CONTINUOUS OPERATION WITH A MAX. FREE FALL OF 300mm
9. EA. FTG. EXCAVATION SHALL BE INSPECTED AND APPROVED BY THE SOIL ENGINEER BEFORE POURING CONC.

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PARKHILL DEVELOPMENT BUILDING 2
8300 PARKHILL DR. MILTON, ON

DRAWING
SCHEDULES, MEZZANINE PLAN AND DETAILS

Project Manager:	DXF	Date:	JUNE 2016
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Drawn By:	JDG	Drawing No.:	S3.1
Scale:	As indicated		