GENERAL NOTES

1. THESE DOCUMENTS ARE TO BE USED ONLY BY THE PARTY WITH WHOM DFE HAS ENTERED INTO A CONTRACT.
2. THE USE OF THESE DRAWINGS IS LIMITED TO THAT IDENTIFIED IN THE REVISION COLUMN.
3. CONFORM TO THE LATEST ONTARIO BUILDING CODE (OBC) INCLUDING ALL THE LATEST STANDARDS REFERENCED THEREIN, AND ANY APPLICABLE ACTS OF AUTHORITY. USE THE LATEST VERSIONs OF STANDARDS AND CODES LISTED BELOW.
4. DO NOT SCALE THESE DRAWINGS. ERRORS MADE BECAUSE OF SCALING THESE DRAWINGS ARE RESPONSIBILITY OF THE PARTY WHO USED THE DRAWINGS.
5. WHERE DISCREPANCIES EXIST, THE MOST STRINGENT SHALL PREVAIL. NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
6. STRUCTURAL DRAWINGS TO BE USED TOGETHER WITH ALL OTHER SPECIFICATIONS AND CONTRACT DOCUMENTS.
7. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF HOLES, SUMP PITS, TRENCHES, CURBS, BOLTS, SLEEVES, OPENINGS, ETC.
8. THE CONTRACTOR SHALL BECOME FAMILIARIZED WITH THE PROJECT ON SITE, INCLUDING EXISTING CONSTRUCTION. ANY ALTERATIONS FROM ASSUMED IN THE DRAWINGS MUST BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
9. THE ENGINEER MUST APPROVE SUBSTITUTIONS FOR SPECIFIED PRODUCTS AND MATERIALS.
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. THE CONTRACTOR SHALL PROVIDE DESIGN AND CONSTRUCTION OF HORIZONTAL AND VERTICAL SHORING AND TEMPORARY BRACING AS PER O.REG 213/91. THE CONTRACTOR SHALL PROVIDE BRACING, SHORING, SHEET PILING ETC. TO PROTECT EXISTING OR ADJACENT STRUCTURES AFFECTED BY THIS WORK.
12. AN INDEPENDENT INSPECTION AND TESTING COMPANY SHALL PROVIDE TESTS TO PROVE THAT CONSTRUCTION IS IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. REQUIRED TESTING SHALL BE AS PER THE TESTING AND INSPECTION TABLE BELOW.
13. DOYTCH & FILO ENGINEERING WILL PROVIDE GENERAL REVIEW OF CONSTRUCTION. DOYTCH & FILO ENGINEERING WILL REVIEW SHOP DRAWINGS FOR GENERAL CONFORMITY WITH THE CONTRACT DOCUMENTS PREPARED BY "DOYTCH & FILO". THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "DOYTCH & FILO" IS NOT RESPONSIBLE FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. REVIEWED SHOP DRAWINGS DO NOT RELIEVE CONTRACTORS FROM RESPONSIBILITY FOR THEIR MISTAKES.
14. SHOP DRAWINGS MUST BE SEALED BY PROFESSIONAL ENGINEER BEFORE BEING SUBMITTED TO DFE FOR REVIEW, U.N.O.
15. THE OWNER AND THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF CONSTRUCTION PROGRESS, AND THEY SHALL INVITE THE ENGINEER TO COMPLETE GENERAL REVIEWS.

TESTING AND INSPECTION

1. 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
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	

2. IT IS THE RESPONSIBILITY OF BOTH THE OWNER AND THE CONTRACTOR TO NOTIFY THE ENGINEER OF CONSTRUCTION PROGRESS AND INVITE THE ENGINEER TO COMPLETE GENERAL REVIEWS.
3. STRUCTURAL CONSULTANTS WILL PROVIDE GENERAL REVIEW OF CONSTRUCTION TO DETERMINE WHETHER THE CONSTRUCTION OF THAT WORK SHOWN ON THE DRAWINGS IS IN GENERAL CONFORMITY WITH THE PLANS, SKETCHES, DRAWINGS, AND SPECIFICATIONS FORMING PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR QUALITY CONTROL AND THE PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE CONTRACT. STRUCTURAL CONSULTANTS 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.

REQUIRED SUBMITTALS

1. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION WHERE APPLICABLE.
2. REVIEW OF THE SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND IS NOT AN APPROVAL OF THE DETAIL DESIGN INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT REL'IEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INFORMATION PERTAINING TO THE FABRICATION PROCESS TECHNIQUES OF CONSTRUCTION AND INSTALLATION AND FOR COORDINATION OF THE WORK OF ALL SUB-TRADES.
3. THE APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF THE FITTING OF BUILDING COMPONENTS. ANY DISCREPANCIES IN THE SHOP DRAWINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

ITEM	REEQ'D SUBMITTAL?	ENGINEER'S STAMP REQ'D?	NOTES
REBAR SHOP DRAWINGS	YES	NO	INCL CONC BLOCK REINF
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
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	
FALL ARREST ANCHORS	YES	YES	

FOUNDATIONS

2

1. GEOTECHNICAL DATA HAS BEEN OBTAINED FROM THE SOIL INVESTIGATION PERFORMED BY TERRAPROBE INC. AS REPORTED IN THEIR SOIL REPORT No. 11-13-3185, DATED OCTOBER 9, 2014.
2. ALL FOOTINGS SHALL BEAR DIRECTLY ON NATURALLY CONSOLIDATED, UNDISTURBED SOIL OR APPROVED STRUCTURAL FILL WITH A MINIMUM SOIL BEARING CAPACITY OF 250 kPa (SLS) AND 375kPa (ULS) AT MIN. 1.2m BELOW GROUND. WHERE REQUIRED, PROVIDE ENGINEERED FILL PER GEOTECHNICAL REPORT.
3. BOTTOM OF THE FOOTINGS SHALL BE BELOW THE LEVEL OF FREEZING DEPTH, BUT A MINIMUM 1200 mm (4'-0") BELOW FINISHED EXTERIOR GRADE, UNLESS NOTED OTHERWISE.
4. PROTECT ALL SOIL FROM FREEZING ADJACENT TO AND BELOW ALL FOUNDATIONS DURING CONSTRUCTION.
5. 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.
6. THE BEARING SOIL HAS MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER BEFORE POURING THE FOOTINGS.
7. ALL ORGANIC TOPSOIL AND LOOSE FILL TO BE REMOVED FROM THE SITE BEFORE CONSTRUCTION.
8. WHERE APPROVED, GRANULAR FILL UNDER ALL FOOTINGS ON GRADE SHALL BE COMPACTED IN 150 mm (6") LAYERS TO SPECIFIED IN THE SOILS REPORT STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
9. PLACE BOTTTOM OF NEW FOOTINGS AT THE SAME ELEVATION AS THE EXISTING ADJACENT FOOTINGS, UNLESS NOTED OTHERWISE. THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED 1 VERT. TO 2 HOR.(COORD. W/ SOIL'S CONSULTANT), AND MAX HEIGHT OF ONE STEP TO BE 600mm.
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 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 19 mm (3/4") CLEAR CRUSHED STONE OVER THE SUB-BASE AND THOROUGHLY ROLL AND CONSOLIDATE TO THE LEVELS REQUIRED.
11. FOUNDATION WALLS WITH BACKFILL ON BOTH SIDES TO BE BACKFILLED SYMMETRICALLY, UNLESS TEMPORARY SHORING FOR THE WALL IS PROVIDED.
12. ANY HORIZONTAL CONSTRUCTION JOINTS IN FOUNDATION WALLS TO BE APPROVED BY THE ENGINEER.
13. 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.

CAST-IN-PLACE CONCRETE AND REINFORCING

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

CONCRETE MIX PROPERTIES TABLE

CONCRETE	MIN.28 DAYS STRENGTH (MPa)	SLUMP mm	AIR CONTENT (%)	MAX. AGGREGATE SIZE (in)	EXPOSURE CLASS
EXPOSED FOUNDATION WALLS, RETAINING WALLS, CAISSONS	35	80 (±30)	4-7	3/4"	F-2
INTERIOR COLUMNS / WALLS/ PILE CAPS, FOUNDATION WALLS/ BEAMS	35	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 RECOMEND.	0	-	N
LEAN MIX CONCRETE	4	80 (±30)	0	-	N
SPREAD FOOTINGS	25	80 (±30)	4-7	3/4"	N
STRIP FOOTINGS, MATT PADS	25	80 (±30)	4-7	3/4"	N

CONCRETE MIX PROPERTIES TABLE FOR PARKING AREA

ELEMENT	MIN.28 DAYS STRENGTH (MPa)	EXPOSURE CLASS	NOTES
FOOTINGS	35	N	C-1 FOR FTGS WITH TOP REINFORCING
S.O.G. REINGORCED	35	C-1	
RETAINING/ EXTERIOR FOUNDATION WALLS ADJACENT TO DRIVE AISLES	35	C-1	
RETAINING/ EXTERIOR FOUNDATION WALLS (ALL OTHER LOCATIONS)	35	F-2	
ALL OTHER INTERIOR CONCRETE (COLUMNS, WALLS, SLABS AND STAIRS)	35	C-1	

2. WELDED WIRE FABRIC SHALL CONFORM TO CAN/CSA G30.5 WITH A MINIMUM YIELD STRENGTH OF FY = 450 MPa. WELDED WIRE FABRICK SHEETS SHALL BE LAPPED A MINIMUM OF 150mm (6") AT JOINTS (U.N.O.).
3. REINFORCING BARS SHALL CONFORM TO CAN/CSA G30.18 GRADE 400W FOR REINFORCING STEEL WITH MINIMUM YIELD STRENGTH OF FY = 400 MPa.
4. INSTALLATION OF THE REINFORCING STEEL SHALL CONFORM TO THE REINFORCING STEEL INSTITUTE OF CANADA "MANUAL OF STANDARD PRACTICE".
5. 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")

6. EMBEDMENT OF DOWELS SHALL BE MIN. EQUAL TO TENSION SPLICE LENGTH, UNLESS NOTED OTHERWISE.
7. REINFORCING BARS TO BE SYMMETRIC OVER SUPPORTS AND SYMMETRIC IN SPANS, UNLESS NOTED OTHERWISE.
8. REINFORCING STEEL SHALL BE FIXED IN PLACE DURING PLACEMENT OF CONCRETE. BAR SUPPORTS SHALL SHALL BE STEEL, CONCRETE OR PLASTIC.
9. THE REINFORCING STEEL SHALL BE CLEANED FROM OIL, GREASE, RUST AND DEBRIS BEFORE PLACEMENT OF CONCRETE.
10. CONCRETE PROPERTIES:
    a. ALL CONCRETE SHALL HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 35MPa UNLESS OTHERWISE SPECIFIED.
11. THE SLUMP SHOWN IN THE TABLE MAY BE INCREASED WHEN SUPER-PLASTICIZER IS USED.
12. 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.
13. CONCRETE FORMWORK TOLERANCES SHALL CONFORM TO CSA STANDARD A23.1, UNLESS NOTED OTHERWISE.

CONCRETE AND REINFORCING (cont'd)

14. CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH CSA A23.1 SECTION 7.4.
15. VIBRATE ALL CONCRETE AT THE TIME OF POURING.
16. CONTROL JOINTS IN SLABS ON GRADE SHALL BE MIN. t/3 (SEE TYP DETAIL). MAX. DISTANCE BETWEEN CONTROL JOINTS IN SLABS-ON-GRADE SHALL BE LESS THAN THE GREATER OF 25 x t OR 3000 mm (10'-0") UNLESS NOTED OTHERWISE.
17. SUPPLY AND SET ANCHOR BOLTS, P.C. CONNECTIONS, 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. DO NOT MAKE HOLES IN SLABS CLOSER THAN 24" TO EDGE OF COLUMNS.
18. 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").
19. 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.
20. 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.
21. 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.
22. 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.
23. CONFORM TO THE CONCRETE COVER REQUIREMENTS OF CSA A23.1 AND THE FOLLOWING, UNLESS NOTED OTHERWISE:
    - FOR CONCRETE CAST AGAINST EARTH AND PERMANENTLY EXPOSED TO EARTH - 75mm

NOTES:
a. THE SLAB COVERS IN TABLE 1, 2 AND 3 ARE FOR CONCRETE NOT PROTECTED BY A MEMBRANE OR A CORROSION INHIBITOR. FOR PARKING GARAGE SLABS - SEE TABLE 4.
b. FOR COLUMN COVERS (TO MAIN REINFORCEMENT) EXCEEDING 63mm WITH 4 HOUR FIRE RATING PROVIDE WIRE MESH USING 1.57mmØ 100mm EA WAY.
c. THE COVER FOR A BUNDLE OF BARS SHALL BE THE SAME AS THAT FOR A SINGLE BAR WITH AN EQUIVALENT AREA.
d. PROVIDE COVER FOR MINIMUM 2 HOURS FIRE RATING UNLESS OTHERWISE NOTED
e. REINFORCED CONCRETE WALLS WHICH MAY BE EXPOSED TO FIRE ON BOTH SIDES SIMULTANEOUSLY SHALL HAVE THE MINIMUM COVER REQUIREMENTS FOR COLUMNS.

TABLE 1
MINIMUM CONCRETE COVER FOR ELEMENTS NOT EXPOSED TO CHLORIDES NOR FREEZING AND THAWING (mm)

	ELEMENTS	COMMENTS	BAR SIZE	FIRE RATING <= 2	FIRE RATING 3	FIRE RATING 4
WALLS	FOUNDATION WALLS, RETAINING WALLS	NOT CAST AGAINST CONC. FORMWORK (CAST AGAINST LAGGING, CAISSON, WALL)	ALL BAR SIZES	50		
	FOUNDATION WALLS, SHEAR WALLS (e) RETAINING WALLS AND MISC. WALLS		Ø <= 25M	25		
			30M	30		
			35M	35		
COLUMNS	COLUMNS		Ø <= 30M	40		55
			35M			
SLABS AND BEAMS	SLABS		Ø <= 25M	25	35	40
			30M	30		
			35M	35		
	BEAMS		Ø <= 25M	30		40
			30M			
			35M	35		
			45M	45		

TABLE 2
MINIMUM CONCRETE COVER FOR ELEMENTS EXPOSED TO FREEZING AND THAWING (mm)

	ELEMENTS	COMMENTS	BAR SIZE	FIRE RATING <= 3	FIRE RATING 4
WALLS	FOUNDATION WALLS, RETAINING WALLS	NOT CAST AGAINST CONC. FORMWORK (CAST AGAINST LAGGING, CAISSON, WALL)	ALL BAR SIZES	50	
	FOUNDATION WALLS, SHEAR WALLS (e) RETAINING WALLS AND MISC. WALLS		Ø <= 25M	40	
			30M	45	
			35M	55	
COLUMNS	COLUMNS		Ø <= 30M	45	55
			35M	55	
SLABS AND BEAMS	SLABS AND BEAMS		Ø <= 25M	40	
			30M	45	
			35M	55	
			45M	70	

TABLE 3
MINIMUM CONCRETE COVER FOR ELEMENTS EXPOSED TO CHLORIDES (mm)

	ELEMENTS	COMMENTS	BAR SIZE	FIRE RATING <=4
WALLS	FOUNDATION WALLS, SHEAR WALLS AND MISC. WALLS (e)		Ø <= 25M	60
			30M	60
			35M	70
			45M	90
COLUMNS	COLUMNS		Ø <= 30M	60
			35M	
			45M	80
			55M	105
SLABS AND BEAMS	SLABS AND BEAMS		Ø <= 25M	60
			30M	
			35M	70
			45M	90

TABLE 4
MINIMUM CONCRETE COVER FOR ELEMENTS OF PARKING GARAGE PROTECTED BY MEMBRANE AND CORROSION INHIBITOR "MI"

	ELEMENTS	COMMENTS	BAR SIZE	TOP COVER NORM./SEVERE FIRE RATING <=4	BOT. COVER NORM./SEVERE FIRE RATING <=2	BOT. COVER 3	BOT. COVER 4
SLABS AND BEAMS	SLAB AND BEAMS		Ø <= 20M	40	30	35	40
			25M		40		
			30M	45			
			35M	55			

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL AND JOIST DESIGN CONNECTIONS AND DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST CSA STANDARD S16.
   a. REFER ALSO TO NOTES UNDER PLANS.
2. STRUCTURAL STEEL SHALL CONFORM TO CAN/CSA-G40.20, AND CAN/CSA-G40.21
   a. GRADE 350W CLASS C FOR H.S.S.
   b. GRADE 350W FOR W SHAPES, S SHAPES, AND TEES.
   c. GRADE 300W FOR CHANNELS, ANGLES, PLATES, RODS
3. BOLTED CONNECTIONS SHALL USE ASTM A325 BOLTS. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325. ANCHOR RODS SHALL BE FABRICATED FROM STEEL ROD CONFORMING TO CSA STANDARD G40.21 GRADE 300W.
4. SHEAR STUDS TO CONFORM ASTM A108.
5. WELDING MATERIALS TO CONFORM TO CSA W48.
6. WELDING OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARD W59.
7. FILLET WELDS SHALL BE 6mm (1/4") MIN. U.N.O. BOLTS SHALL BE A325 19mm (3/4") MIN. U.N.O. BOLTED CONNECTIONS SHALL HAVE MIN. OF TWO BOLTS IN EACH CONNECTED PIECE. BOLTED CONNECTIONS SHALL BE DESIGNED AS BEARING CONNECTIONS U.N.O.
8. STEEL COATINGS - STRUCTURAL STEEL SHALL BE CLEANED AND PREPARED TO CONFORM TO CSA STANDARD S16:
   a. INTERIOR STRUCTURAL STEEL SHALL BE PRIMED AND PAINTED AS PER CSA/CAN-S-16.
   b. EXPOSED STEEL TO BE HOT DIP GALVANIZED IN ACCORDANCE TO CAN/CSA-G164. TOUCH UP OF WELDS AND CUTS OF GALVANIZED MEMBERS TO BE DONE WITH A MINIMUM OF 3 COATS OF ZINC RICH PAINT.
   c. INTERIOR STEEL MREMBERS THAT ARE TO BE PROTECTED BY A CEMENTIOUS FIRE PROOFING SHALL BE CLEANED AND REMAIN UNCOATED.
9. FABRICATOR SHALL DESIGN CONNECTIONS IN ACCORDANCE WITH THE 2012 OBC FOR THE FORCES SHOWN ON THE DRAWINGS. BEAM CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM OF 50% OF THE BEAM SHEAR CAPACITY IF FACTORED DESIGN FORCES ARE NOT SHOWN ON THE DRAWINGS.
10. MOMENT FRAMES CONNECTIONS TO BE CONTINUOUS COLUMN / INTERRUPTED BEAM TYPE U.N.O.
11. WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT VALUES ARE NOT INDICATED, DESIGN CONNECTIONS FOR 100% SECTION CAPACITY OF THE SMALLER MEMBER JOINED.
12. COLUMN CAP PLATES TO BE MIN. 16mm (5/8") THICK U.N.O. COLUMN BASE PLATES TO BE MIN. 20mm (3/4") THICK U.N.O. HSS COLUMNS TO HAVE MIN. 10mm (3/8") THICK CAP PLATE WELDED ALL-AROUND U.N.O.
13. ALL BEAMS CANTILEVERED OR CONTINUOUS OR SUPPORTED OVER A COLUMN OR OTHER SUPPORT, AND BEAMS SUPPORTING POINTS OF CONCENTRATED LOAD, SHALL HAVE A MIN. OF 2-10 mm (3/8") STIFFENERS EACH SIDE OF WEB U. N.O.
14. TOP OF COLUMNS WHICH ARE NOT BRACED BY JOISTS OR BEAMS SHALL BE BRACED DIAGONALLY TO THE ROOF OR FLOOR BY A MINIMUM OF 4-L76 x 76 x 6.4 mm (L3 x 3 x 1/4") ANGLES FOR INTERIOR COLUMNS; A MINIMUM 2-L76 x 76 x 6.4mm (L3 x 3 x 1/4") ANGLES FOR EXTERIOR COLUMNS. BRACING SHALL BE BETWEEN TOP OF COLUMN AND TOP CHORD OF JOISTS.
15. COLUMNS BUILT INTO MASONRY, ABUTTED BY, OR FACED WITH MASONRY WALLS SHALL HAVE ADJUSTABLE ANCHORS AT 400 mm (16") O.C. SPACED VERTICALLY. WHERE STEEL PROVIDES LATERAL BRACING ONLY TO MASONRY, ANCHORS SHALL ALLOW VERTICAL MOVEMENT BETWEEN STEEL MEMBERS AND MASONRY.
16. BEARING PLATES ARE TO BE CENTRED BELOW ALL BEAMS OR LINTELS U.N.O ON THE DRAWINGS. WELD TO BEARING PLATE WITH A MINIMUM 50 mm x 5 mm (2" x 3/16") FILLET ON BOTH SIDES OF BEAM.
17. STEEL BEAMS AND LINTELS SHALL HAVE 200 mm (8") MINIMUM END BEARING ON MASONRY AND 65 mm (2 1/2") MINIMUM BEARING ON STEEL UNLESS INDICATED OTHERWISE.
18. WHERE BACK-TO-BACK ANGLES ARE USED AS LINTELS OR SUPPORTS, STITCH WELD TOGETHER AT A MAXIMUM SPACING OF 300mm (12") O.C.
19. ALL ROOF OPENINGS TO BE REINFORCED BY FRAMES PER TYP. DETAIL UNLESS NOTED OTHERWISE. MAXIMUM SPAN 2000 mm (6'-8"). FOR LARGER OPENING CONSULT STRUCTURAL ENGINEER. COORDINATE WITH MECHANICAL, ELECTRICVAL AND SUB-TRADES TO AVOID INTERFERENCE WITH STRUCTURAL MEMBERS.
20. PROVIDE TEMPORARY BRACING TO KEEP STRUCTURE SAFE AND PLUMB UNTIL PERMANENT BRACING SHOWN ON DRAWINGS INCLUDING FLOORS AND ROOFS IS CONSTRUCTED.

TOWN OF MILTON
PLANNING AND DEVELOPMENT
BUILDING PERMIT: 22-3935
BUILDING: REVIEWED
mickhail.girgis JUL 6, 2022
PLAN EXAMINER DATE
Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relives the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province on Ontario, By-laws of the Region of Halton and Town of Milton

RECEIVED
TOWN OF MILTON
JUN 15, 2022
22-3935
BUILDING DIVISION

NOTE TO CONTRACTOR:

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ISSUED AS PER CITY COMMENTS	2	2022 - 06 - 13
ISSUED FOR BUILDING PERMIT AND TENDER	1	2021 - 02 - 24

DFE
DOYTCH & FILO ENGINEERING INC.
Structural Engineers
Phones: (647) 836-4805 ; (905) 719-1482

LICENSED PROFESSIONAL ENGINEER
T. N. DOYTCHEV
100113262
2022-06-13
PROVINCE OF ONTARIO

PROJECT
HOLY FAMILY CEMETERY ADMINISTRATION BUILDING
2523 LOWER BASE LINE ROAD, MILTON, ON

DRAWING
GENERAL NOTES

Design By:	TD/AF	Date:	2020-10-12
		Project No.:	19050301
Drawn By:	AF	Drawing No.:	S0.0
Scale:	AS NOTED		

LUMBER

1. SAWN LUMBER PRODUCTS SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARD O141. ALL SAWN LUMBER IS TO BE SPF GRADE NO. 2 OR BETTER, UNLESS NOTED OTHERWISE.

2. PREFABRICATED WOOD I-JOISTS SHALL BE TRUSJOIST-TJI SERIES AS MANUFACTURED BY WEYERHAEUSER, OR APPROVED EQUIVALENT. ALL CUTTING OF FLANGES OR HOLES IN WEBS ARE TO BE IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS UNLESS NOTED OTHERWISE.

3. STRUCTURAL COMPOSITE LUMBER SHALL BE THE FOLLOWING (OR APPROVED EQUIVALENT) UNLESS NOTED OTHERWISE ON THE DRAWINGS:
LAMINATED STRAND LUMBER (LSL): TIMBERSTRAND GRADE 1.55E AS MANUFACTURED BY WEYERHAEUSER.
LAMINATED VENEER LUMBER (LVL): MICROLLAM GRADE 1.9E AS MANUFACTURED BY WEYERHAEUSER.
PARALLEL STRAND LUMBER (PSL): PARALLAM GRADE 2.0E AS MANUFACTURED BY WEYERHAEUSER.
REPLACEMENT WITH A HIGHER GRADE IS NOT ALWAYS A SUITABLE EQUIVALENT. CONTACT ENGINEER FOR ADEQUATE SUBSTITUTIONS.

4. GLUE-LAMINATED MEMBERS:
A. CONFORM TO CAN/CSA-O122
B. MANUFACTURER IS TO BE QUALIFIED UNDER CSA STANDARD O177
C. ALL CONNECTIONS AND END BEARING ASSEMBLIES ARE TO CONFORM TO CSA STANDARD S16.
D. SPECIES AND GRADE SHALL BE AS NOTED ON THE DRAWINGS.
E. GLUE-LAMINATED MEMBERS ARE NOT TO BE CUT OR FIELD MODIFIED IN ANY WAY.
F. COAT END GRAIN OF ALL GLUE-LAMINATED MEMBERS WITH ONE COAT OF APPROVED END SEALER.

5. NAILS AND SPIKES SHALL CONFORM TO THE CSA STANDARD B111 "WIRE NAILS, SPIKES AND STAPLES".

6. ALL STEEL BEARING, SIDE PLATES, CONNECTOR PLATES, AND GLULAM RIVETS SHALL CONFORM TO THE CSA STANDARD G40.21

7. ALL BOLTS AND THREADED ROD CONNECTING WOOD MEMBERS SHALL CONFORM TO ASTM A307.

8. JOISTS HANGERS SHALL BE MINIMUM 0.879 mm (0.0346") GALVANIZED STEEL AND SHALL CONFORM TO THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS "ACCEPTANCE CRITERIA FOR JOIST HANGERS AND SIMILAR DEVICES".

9. PRESERVATIVE-TREATED LUMBER OF 38 mm (1.5") SMALLER DIMENSION SHALL NOT BE INCISED.

10. NAILING REQUIREMENTS:

CONSTRUCTION DETAIL	MIN. LENGTH OF NAILS mm (")	MIN. NUMBER OR SPACING OF NAILS
FLOOR / CEILING JOIST TO PLATE	82 (3 1/4)	2
BUILT-UP HEADERS / LINTELS - ALONG LENGTH - SPACING OF ROWS	76 (3)	300mm (12") O.C. 64mm (2 1/2") O.C.
STUD TO WALL PLATE - END NAIL - TOE NAIL	82 (3 1/4") 64 (2 1/2")	2 4
DOUBLE STUDS AT OPENINGS, OR STUD WALLS	76 (3)	750mm (30" O.C.)
BOTTOM WALL PLATE TO JOISTS OR BLOCKING	82 (3 1/4)	400mm (16") O.C.
LINTELS TO STUDS - EA. END	82 (3 1/4)	50mm (2") O.C. VERT. EACH PLY
ROOF RAFTER / TRUSS TO PLATE	82 (3 1/4)	3
ROOF RAFTER TO RIDGE BOARD - TOE OR END NAIL	82 (3 1/4)	3
COLLAR TIE TO RAFTER (U.N.O.)	76 (3)	3
WALL SHEATHING TO STUDS - ALONG EDGES - INTERMEDIATE SUPPORTS	51 (2) 51 (2)	150mm (6") O.C. 300mm (12") O.C.

11. ALL STUD WALLS SHALL BE ANCHORED TO THE FOUNDATION OR FLOOR SLAB WITH 16 mm (5/8") DIAMETER ANCHOR BOLTS AT 1200 mm (4 FT.) O.C. MAXIMUM U.N.O.

12. RETIGHTEN ALL BOLTED CONNECTIONS SIX MONTHS AFTER FIRST INSTALLATION, AND EVERY SIX MONTHS THEREAFTER UNTIL NO APPRECIABLE CHANGE IS EVIDENT.

13. ALL LUMBER FOR WOOD TRUSSES SHALL BE KILN DRIED AND WELL SEASONED IN ORDER TO PREVENT POSSIBLE DISTORTION OR DEFORMATION OF THE TRUSSES.

14. DESIGN OF WOOD TRUSS SYSTEM:
A. PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE DETAILS AND DESIGN LOADS SHOWN ON THE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS, AND SHALL CONFORM TO THE REQUIREMENTS OF CSA O86.1 AND THE WOOD DESIGN MANUAL PUBLISHED BY THE CANADIAN WOOD COUNCIL.
B. TRUSS PLATES SHALL CONFORM TO THE CSA STANDARD S347 "METHOD OF TEST FOR EVALUATION OF TRUSS PLATES USED IN LUMBER JOINTS".
C. DETAIL TRUSSES TO BEAR FLAT ON THE BOTTOM CHORD AT ALL BEARING WALLS.
D. DEFLECTION CRITERIA: VARIABLE LOADS = L/360, TOTAL LOAD = L/180
E. DESIGN OF PERMANENT LATERAL BRACING OF WEB MEMBERS.
F. TRUSSES SHALL BE DESIGNED TO SUPPORT THEIR SELF WEIGHT PLUS THE SUPERIMPOSED TOP AND BOTTOM CHORD LOADS AS SHOWN ON THE DRAWINGS OR AS REQUIRED BY TPIC (WHICHEVER IS GREATER)

15. SHOP DRAWINGS OF THE ROOF TRUSSES INCLUDING LAYOUT OF THE TRUSSES, BRIDGING, BRACING, AND BEARING DETAILS (INCLUDING HOLD-DOWN CLIPS) SHALL BEAR THE STAMP OF A LICENSED PROFESSIONAL ENGINEER OF THE PROVINCE OF ONTARIO AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE FABRICATION.
TRUSS SHOP DRAWINGS ARE TO INDICATE THE LOCATION OF ALL GIRDER TRUSSES AND GIRDER TRUSS SUPPORT LOCATIONS AND REACTIONS. ADDITIONAL COLUMNS TO SUPPORT GIRDER TRUSSES MAY BE REQUIRED.

16. WOOD TRUSSES SHALL BE TEMPORARILY BRACED DURING ERECTION TO KEEP THEM PLUMB, IN ALIGNMENT AND SECURE UNTIL PERMANENT BRACING, DECKING AND/OR SHEATHING CAN BE INSTALLED. TEMPORARY BRACING SHALL BE MINIMUM 38X89 mm (2"x4") LUMBER.

17. PERMANENT DIAGONAL BRACING SHALL BE PROVIDED ON ALL WEB MEMBERS THAT REQUIRE LATERAL BRACING AS INDICATED ON THE TRUSS SHOP DRAWINGS. PERMANENT DIAGONAL BRACING TO BE SPECIFIED BY THE BUILDING ENGINEER, AND INSTALLED AS PER THE STRUCTURAL DRAWINGS. SPACING OF DIAGONAL BRACING SHALL NOT EXCEED 6 M (20') AS RECOMMENDED BY TPIC.

18. SITE REVIEW OF ROOF TRUSS SYSTEM: THE TRUSS SYSTEM SHALL BE INSPECTED BY THE TRUSS DESIGN ENGINEER RETAINED BY THE TRUSS SUPPLIER. SUBMIT INSPECTION REPORTS TO THE ARCHITECT AND THE ENGINEER AS REQUIRED FOR RECORD PURPOSES.

19. FOR ALL WOOD CONSTRUCTION NOT DETAILED, FOLLOW SECTION 9.23 "WOOD-FRAME CONSTRUCTION" OF THE 2012 OBC.

20. ROWS OF BRIDGING OR BLOCKING MUST NOT BE MORE THAN 6'-10" FROM EACH SUPPORT AND INTERMEDIATE LOCATIONS SO THAT THE DETANCE BETWEEN ROWS DOES NOT EXCEED 6'-10".

21. PROVIDE DOUBLE FLOOR JOIST UNDER PARALLEL PARTITION WALLS

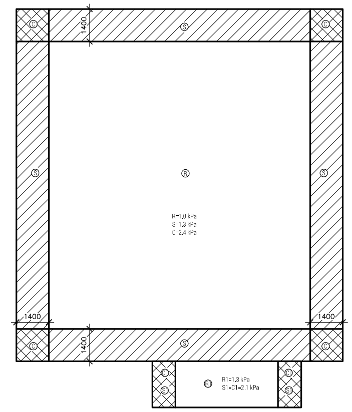
ABBREVIATIONS

A.B	ANCHOR BOLT	HD.	HOOKED
ALT.	ALTERNATE	I.D.	INSIDE DIAMETER
ALUM.	ALUMINUM	kN.	KILONEWTON
ANCH'S	ANCHORS	kPa	KILOPASCAL
APPROX.	APPROXIMATELY	L	ANGLE
ARCH.	ARCHITECTURAL	L.L.H.	LONG LEG HORIZONTAL
B/F	BOTTOM FACE	L.L.V.	LONG LEG VERTICAL
B.PL	BASE PLATE	L.P.	LOW POINT
BLK.	BLOCK	LG.	LONG
BM.	BEAM	MAX.	MAXIMUM
BOT.	BOTTOM	MECH	MECHANICAL
BRG.	BEARING	MET'L	METAL
BT.PL.	BENT PLATE	MIN.	MINIMUM
C/W	COMPLETE WITH	MISC.	MISCELLANEOUS
C/C	CENTRE TO CENTRE	m	METRE
C.J.	CONTROL JOINT	mm	MILLIMETRE
CLG.	CEILING	MPa	MEGAPASCAL
COL.	COLUMN	N.I.C.	NOT IN CONTRACT
CONC.	CONCRETE	N.T.S.	NOT TO SCALE
CONN.	CONNECTION	No.	NUMBER
CONSTR'N	CONSTRUCTION	O.C.	ON CENTRE
CONT.	CONTINUOUS	O.D.	OUTSIDE DIAMETER
DEMO.	DEMOLITION	O.H.	OVERHEAD
DET.	DETAIL	OWSJ	OPEN WEB STEEL JOIST
DIA.	DIAMETER	PART'N	PARTITION
DIM.	DIMENSION	PL.	PLATE
DO.	DITTO	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
EMBED.	EMBEDMENT	S.D.F.	STEP DOWN FOOTING
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	STL.	STEEL
EXTG.	EXISTING	STIFF.	STIFFENER
F.F	FACE TO FACE	STRUCT.	STRUCTURAL
FIN.	FINISHED	T/O	TOP OF
FLR.	FLOOR	T.L.L	TOP LOWER LAYER
FNDN.	FOUNDATION	T.U.L.	TOP UPPER LAYER
FTG.	FOOTING	TYP	TYPICAL
Ga.	GAUGE	U.N.O.	UNLESS NOTED OTHERWISE
GALV.	GALVANIZED	U/S	UNDERSIDE
GRD.	GRADE	VERT.	VERTICAL
H.D.	HEAVY DUTY	V.E.F.	VERTICAL EACH FACE
H.D.G.	HOT DIPPED GALVANIZED	V.I.F.	VERTICAL INSIDE FACE
H.E.F.	HORIZONTAL EACH FACE	V.O.F.	VERTICAL OUTSIDE FACE
H.O.F.	HORIZONTAL OUTSIDE FACE	W.P.	WORKING POINT
HORIZ.	HORIZONTAL	W.W.M.	WELEDED WIRE MESH
H.P.	HIGH POINT	@	SPACED AT
HSS	HOLLOW STRUCTURAL STEEL		

DESIGN DATA TABLE

BUILDING IMPORTANCE	NORMAL	
FLOOR AND ROOF DESIGN LIVE LOADS ARE NOTED ON FRAMING PLANS		
SPECIFIED SNOW LOADS		
RAIN LOADING DESIGN DATA (1/50)	24h RAIN	108mm
SNOW LOADING DESIGN DATA (1/50)	Ss	1.3 kPa
	Sr	0.4 kPa
BASIC ROOF SNOW LOAD	S	1.44 kPa
ADDITIONAL SNOW ACCUMULATION IS SHOWN ON THE DRAWINGS.		
SPECIFIED WIND LOADS		
HOURLY WIND PRESSURE DESIGN DATA (1/50)	0.43 kPa	
WIND DESIGN CATEGORY	CATEGORY 2	
TERRAIN TYPE	'OPEN'	
SPECIFIED EARTHQUAKE LOADS		
SEISMIC LOADING DESIGN DATA	Sa (0.2)	0.191
	Sa (0.5)	0.103
	Sa (1.0)	0.054
	Sa (2.0)	0.026
	Sa (5.0)	0.0064
	Sa (10.0)	0.0025
SITE CLASS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER	SITE CLASS	'D'
SEISMIC FORCE MODIFICATION FACTORS FOR SEISMIC FORCE RESISTING SYSTEM	Rd	3.0
	Ro	1.7
SEISMIC HAZARD INDEX	IeFaSa (0.2)	0.237

NOTES:
1. 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.
2. PRECAST CONTRACTOR: DESIGN FORCES ON P.C. WALLS CAN BE REQUESTED FROM ENGINEER OF RECORD.



GROSS SPECIFIED WIND UPLIFT
ADMINISTRATION BUILDING -

TOWN OF MILTON
PLANNING AND DEVELOPMENT
BUILDING PERMIT: 22-3935
BUILDING: REVIEWED
mickhail.girgis JUL 6, 2022
PLAN EXAMINER DATE
Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relives the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province on Ontario, By-laws of the Region of Halton and Town of Milton

RECEIVED
TOWN OF MILTON
MAY 13, 2022
22-3935
BUILDING DIVISION

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ISSUED FOR BUILDING PERMIT	1	2022-04-06

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Structural Engineers
Phones: (647) 836-4805 ; (905) 719-1482

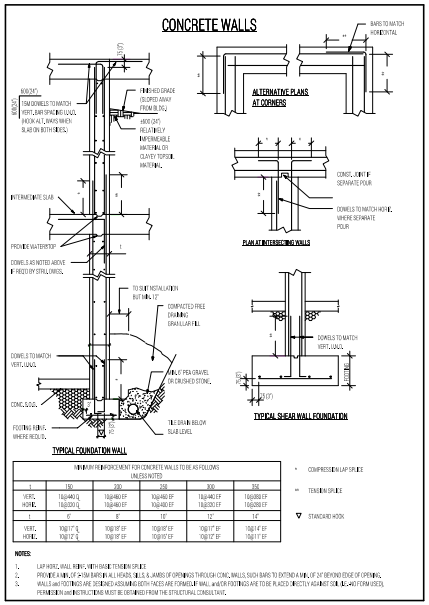
LICENSED PROFESSIONAL ENGINEER
T. N. DOYTCHEV
100113262
2020-02-24
PROVINCE OF ONTARIO

PROJECT
HOLY FAMILY CEMETERY
ADMINISTRATION BUILDING
2523 LOWER BASE LINE ROAD, MILTON, ON

DRAWING
GENERAL NOTES

Design By:	TD/AF	Date:	2020-10-12
		Project No.:	19050301
Drawn By:	AF	Drawing No.:	S0.1
Scale:	AS NOTED		

CONCRETE WALLS



MINIMUM REINFORCEMENT FOR CONCRETE WALLS TO BE AS FOLLOWS UNLESS NOTED						
1	150	200	250	300	350	
VERT. HORIZ.	15@400 (1) 15@300 (1)	15@480 EF 15@480 EF	10@480 EF 15@480 EF	15@480 EF 15@300 EF	15@380 EF 15@300 EF	
1	0	6"	12"	12"	12"	
VERT. HORIZ.	10@17" ⅓ 10@17" ⅓	10@18" EF 10@18" EF	10@18" EF 10@18" EF	10@17" EF 10@18" EF	15@14" EF 15@17" EF	

* COMPRESSION LAP SPLICE

** TENSION SPLICE

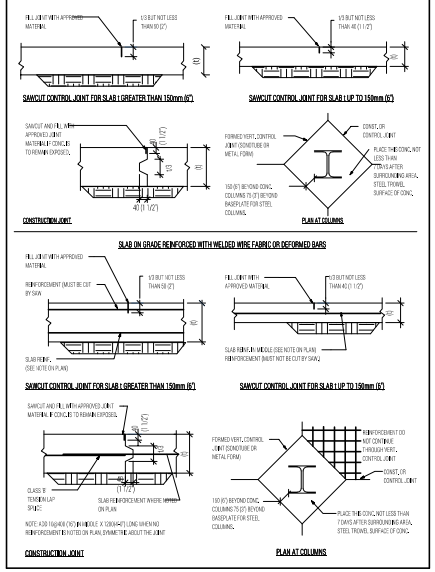
▽ STANDARD HOOK

NOTES:

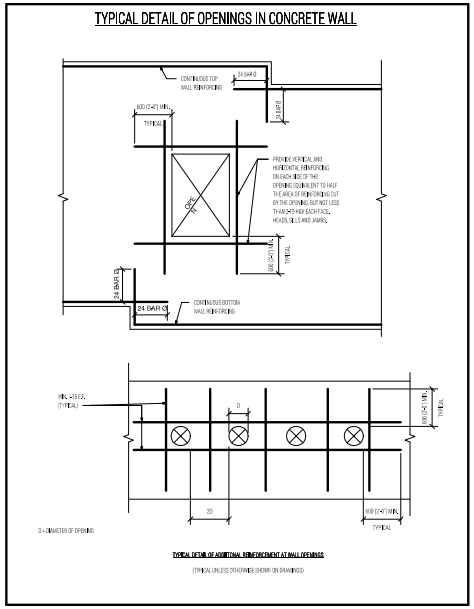
1. LAP HORIZ. WALL REINF. WITH BASE TENSION SPLICE.
2. PROVIDE 4 NO. 25 M BARS ON ALL HORIZ. SIDES & JAMBS OF OPENINGS THROUGH CONC. WALLS, SUCH BARS TO EXTEND A MIN. OF 24" BEYOND EDGE OF OPENING.
3. WALLS AND FOOTINGS ARE DESIGNED ASSUMING BOTH FACES ARE FORMED (IF WALL, and/OR FOOTINGS ARE TO BE PLACED DIRECTLY AGAINST SOIL (E.G.=NO FORM USED), PERMISSION and INSTRUCTIONS MUST BE OBTAINED FROM THE STRUCTURAL CONSULTANT.

TYPICAL SLAB ON GRADE DETAILS

SLAB ON GRADE REINFORCED WITH SYNTHETIC FIBRES



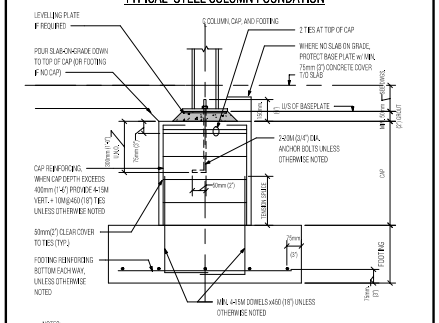
TYPICAL DETAIL OF OPENINGS IN CONCRETE WALL



TYPICAL DETAIL OF ADDITIONAL REINFORCEMENT AT WALL OPENINGS

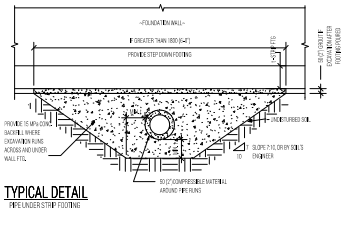
(TYPICAL UNLESS OTHERWISE SHOWN ON DRAWINGS)

TYPICAL STEEL COLUMN FOUNDATION

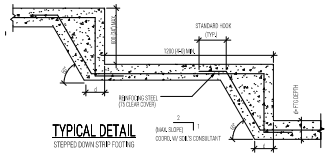


NOTES:

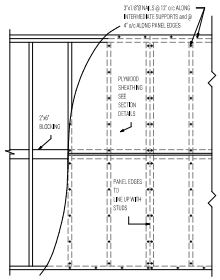
1. FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL WITH A MINIMUM BEARING CAPACITY AS NOTED ON THE DRAWINGS.
2. GROUT UNDER BASE PLATES SHALL BE AN APPROVED PROPRIETARY BRAND PREMIXED, NON-METALLIC, NON-SHRINK, GROUT UNLESS OTHERWISE APPROVED.
3. REFER ALSO TO GENERAL NOTES, AND CAST-IN-PLACE CONCRETE NOTES



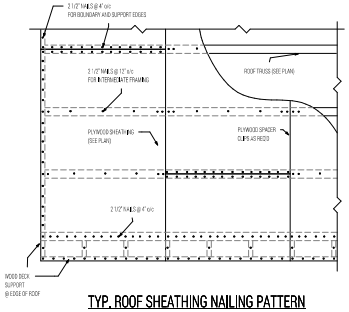
TYPICAL DETAIL
PIPE UNDER STRIP FOOTING



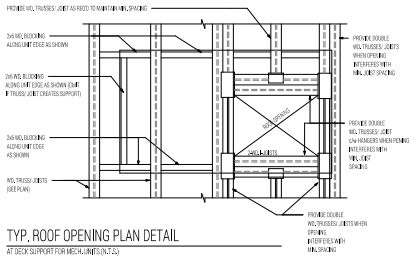
TYPICAL DETAIL
STEPPED DOWN STRIP FOOTING



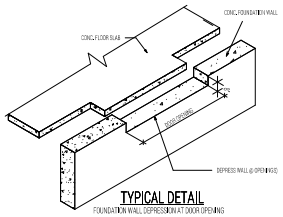
TYP. NAILING PATTERN AT EXTERIOR WALL
N.T.S.



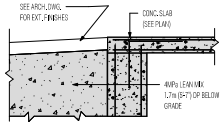
TYP. ROOF SHEATHING NAILING PATTERN
N.T.S.



TYP. ROOF OPENING PLAN DETAIL
AT DECK SUPPORT FOR MECHANINFS (N.T.S.)



TYPICAL DETAIL
FOUNDATION WALL DEPRESSION AT DOOR OPENING



TYPICAL DETAIL
FROST SLAB (N.T.S.)

TOWN OF MILTON
PLANNING AND DEVELOPMENT
BUILDING PERMIT
22-3693
BUILDING: REVIEWED
michael.gogis JUL 6, 2022
PLANS EXAMINER DATE
Neither the issuance of a permit nor carrying out of inspections by the Town of Milton gives the owner from the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province on Ontario, Bylaws of the Region of Halton and Town of Milton.

RECEIVED
TOWN OF MILTON
MAY 19, 2022
22-3693
BUILDING DIVISION

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ISSUED FOR BUILDING PERMIT	1	2022-06-06

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LICENSED PROFESSIONAL ENGINEER
L.H. DOYTCHEV
100113202
2020-09-24
PROVINCE OF ONTARIO

PROJECT

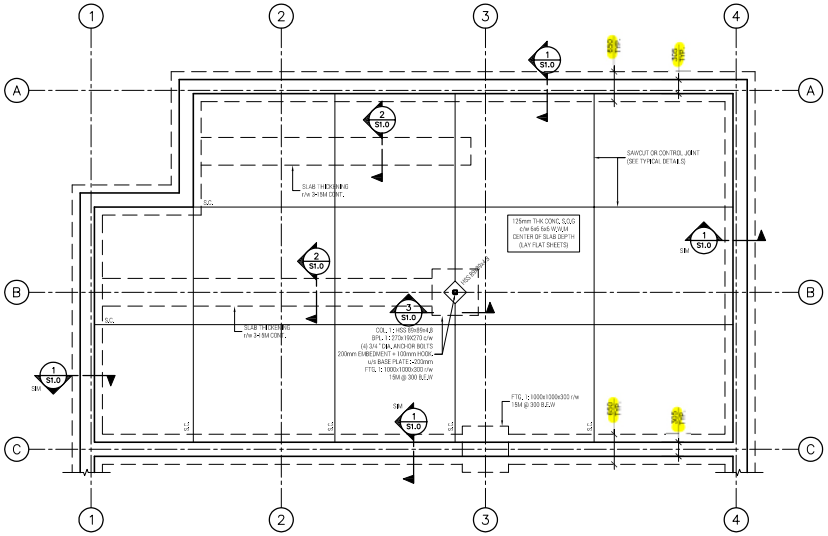
HOLY FAMILY CEMETERY ADMINISTRATION BUILDING

2523 LOWER BASE LINE ROAD, MILTON, ON

DRAWING

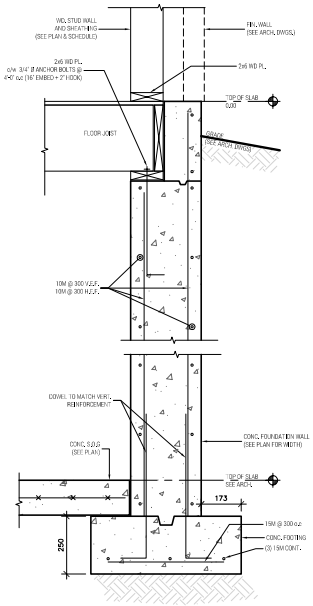
TYPICAL DETAILS

Design By:	TD/AF	Date:	2020-10-12
		Project No.:	19050301
Drawn By:	AF	Drawing No.:	S0.2
Scale:	AS NOTED		

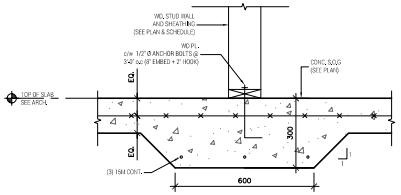


PLAN

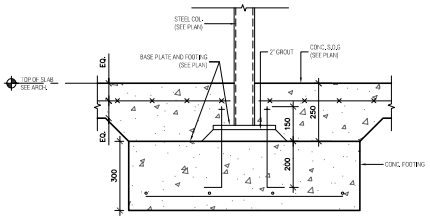
BASEMENT FOUNDATION PLAN 1:50



1 / S1.0 SECTION 1:10



2 / S1.0 SECTION 1:10



3 / S1.0 SECTION 1:10

TOWN OF MILTON
PLANNING AND DEVELOPMENT
BUILDING PERMIT
22-3693
BUILDING: REVIEWED
michael.pirgis JUL 6, 2022
PLAN EXAMINER DATE
Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieve the owner from full compliance with the Building Code (Ontario) and the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, Bylaws of the Region of Halton and Town of Milton.

RECEIVED
TOWN OF MILTON
MAY 13 2022
22-3693
BUILDING DIVISION

NOTE TO CONTRACTOR:

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ISSUED FOR BUILDING PERMIT	1	2022-06-06

DFE
DOYTCH & FILO ENGINEERING INC.
Structural Engineers
LICENSED PROFESSIONAL ENGINEER
L.H. DOYTCHEV
100113262
2020-05-26
PROVINCE OF ONTARIO
Phone: (647) 830-4805 : (905) 719-1482

PROJECT

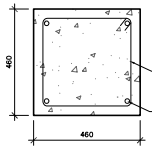
HOLY FAMILY CEMETERY ADMINISTRATION BUILDING

2523 LOWER BASE LINE ROAD, MILTON, ON

DRAWING

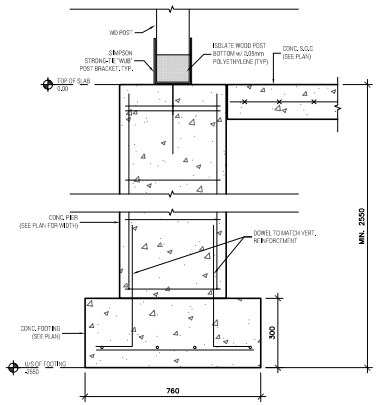
FOUNDATION PLANS, AND SECTIONS

Design By:	TD/AF	Date:	2020-10-12
		Project No.:	19050301
Drawn By:	AF	Drawing No.:	S1.0
Scale:	AS NOTED		



PIER "1" PLAN

1:10



5 / S2.2 SECTION

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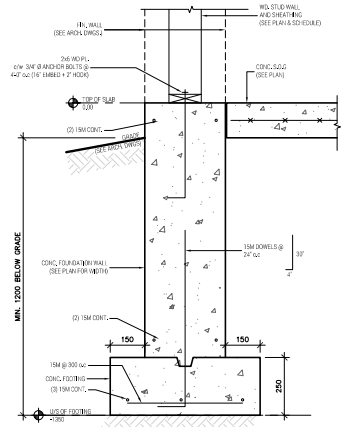
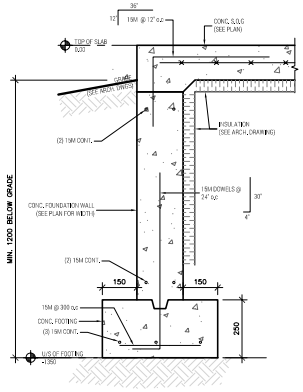


7 / S2.2 SECTION

1:10



4 / S2.2 SECTION

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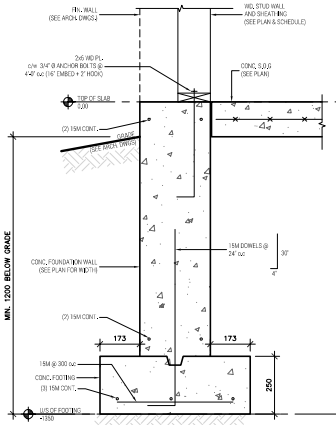

1 / S2.2 SECTION

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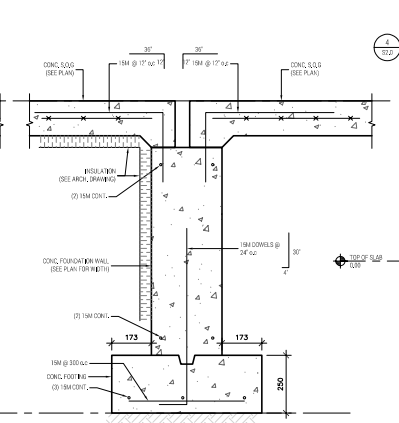
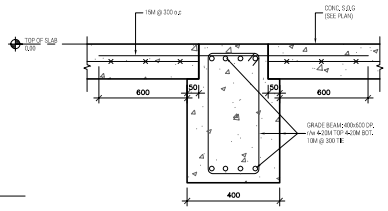


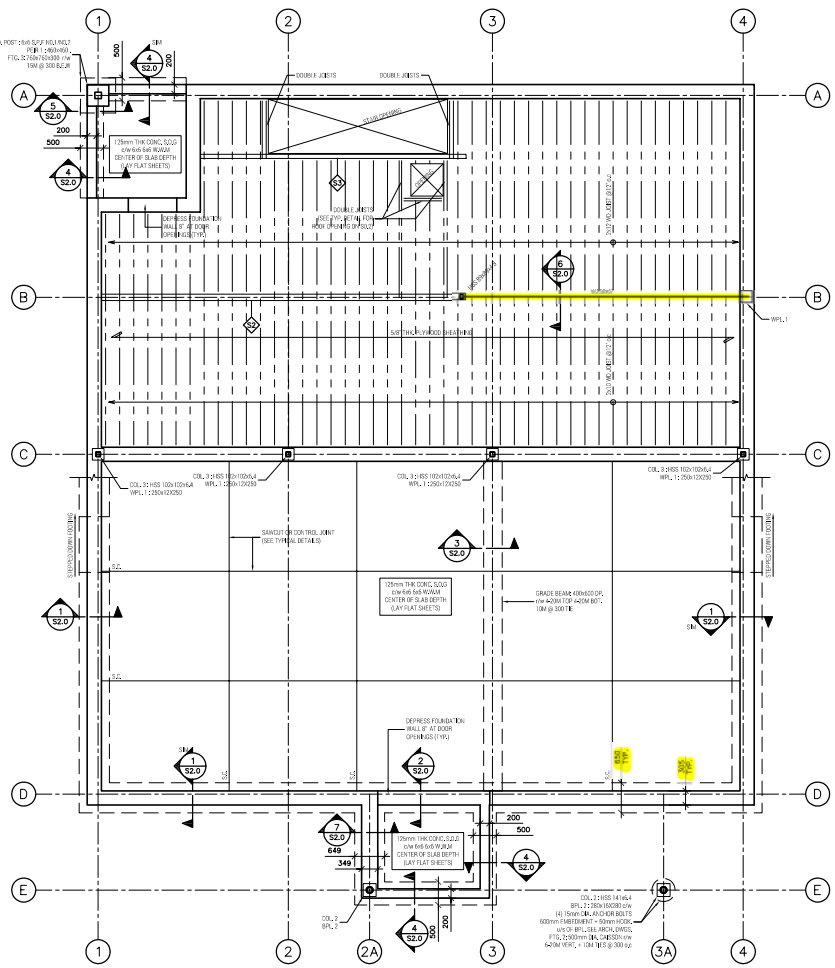
2 / S2.2 SECTION

1:10



3 / S2.2 SECTION

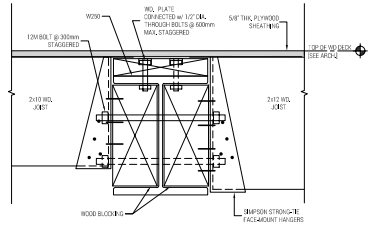
1:10



PLAN

GROUND FLOOR PLAN

1:50



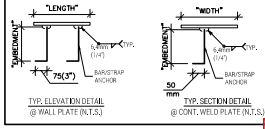
6 / S2.2 SECTION

1:5

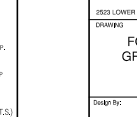
WALL PLATE SCHED.

MARK:	DESCRIPTION
WPL.1	12mm THK. x 250 LS. x 250 WIDE c/w (4) 15M x 300 EMBEDMENT ANCHOR ROD + 75 HOOK

NOTES:
1. CONCRETE FILL SOLID (3) MASONRY COURSES MIN. BENEATH ALL BEARING PLATES.
2. PLATE DIMENSION NOTED AS 'LENGTH' TO BE PARALLEL WITH BEAM WEB.
3. FIELD WELD BEAM TO BEARING PLATE w/ (2) 6.4mm x 40mm LG. FILLET WELDS (EACH SIDE)



TYP. ELEVATION DETAIL @ WALL PLATE (N.T.S.)



TYP. SECTION DETAIL @ CONT. WELD PLATE (N.T.S.)

TOWN OF MILTON
PLANNING AND DEVELOPMENT
BUILDING PERMIT 22-3935
BUILDING REVIEWED
michelle grzyn JUL 6, 2022
PLAN EXAMINER DATE
Subject to acceptance at a permit our carrying out of inspections by the Town of Milton advises the owner from all responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code and other applicable laws, such as Planning, Zoning and Environment Protection Acts, Ontario Water Resources of the Region of Halton and Town of Milton.

RECEIVED
TOWN OF MILTON
MAY 13, 2022
22-3935
BUILDING DIVISION

NOTE TO CONTRACTOR:

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ISSUED FOR BUILDING PERMIT	1	2022-06-06

DFE
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Structural Engineers
Phone: (647) 830-4805 : (905) 719-1482

LICENSED PROFESSIONAL ENGINEER
L.H. DOYTCHEV
100113262
2020-02-26
PROVINCE OF ONTARIO

PROJECT

HOLY FAMILY CEMETERY ADMINISTRATION BUILDING

2523 LOWER BASE LINE ROAD, MILTON, ON

DRAWING

FOUNDATION PLANS, GROUND FLOOR PLAN, AND SECTIONS

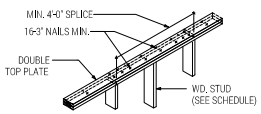
Design By:	TD/AF	Date:	2020-10-12
		Project No.:	19050301
Drawn By:	AF	Drawing No.:	S2.0
Scale:	AS NOTED		

WOOD STUD WALL SCHEDULE

MARK	STUD SIZE & SPACING	REMARKS
S1	2x6 SPF NO.1/NO.2 GRADE @12" o/c	1/2" PLYWOOD SHEATHING ON EXTERIOR SIDE OF BLDG.
S2	2x6 SPF NO.1/NO.2 GRADE @16" o/c	-
S3	2x4 SPF NO.1/NO.2 GRADE @16" o/c	-

NOTES:

1. REFER TO PLANS FOR LOCATIONS
2. SEE SHEAR WALL ELEVATION DETAIL FOR ADDITIONAL INFO.
3. PROVIDE WD. BLOCKING @ MAX. 4'-0" o/c.
4. FOR INTERIOR LOAD BEARING STUD WALLS 1/2" PLYWOOD SHEATHING TO BE APPLIED ON ONE SIDE OF WALL.
5. PROVIDE DOUBLE TOP PLATE ON ALL WALLS U.N.O. (SEE TYPICAL DETAIL BELOW)



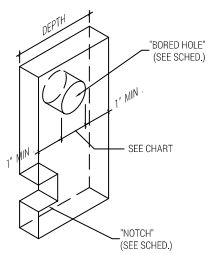
TYP. SPLICE DETAIL FOR DOUBLE TOP PLATE

ALLOWABLE CUTS IN LOAD BEARING STUDS

STUD SIZE	NOTCH	BORED HOLE
2x6 (LOAD BEARING)	NOT ALLOWED WITHOUT ENGINEERS APPROVAL	1½"Ø MAX.
2x4 (NON-LOAD BEARING)	1/3 DEPTH MAX.	1¼"Ø MAX.
2x6 (NON-LOAD BEARING)	1/3 DEPTH MAX.	2"Ø MAX.

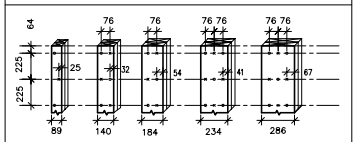
NOTE:

1. DO NOT DRILL HOLES THROUGH POSTS



TYP. STUD BORED HOLE and NOTCH DIAGRAM

BUILT-UP WD. POST NAILING



NOTES:

1. • INDICATES NAIL HEAD (N.T.S.)
2. • INDICATES NAIL FROM BEHIND (N.T.S.)
3. USE 16d NAILS THROUGHOUT
4. USE 75mm NAILS @ 2-PLY POSTS, 115mm NAILS @ 3-PLY POSTS, 152mm NAILS @ 4-PLY POST and 181mm NAILS @ 5-PLY POST
5. ADJACENT NAILS ARE TO BE DRIVEN FROM OPPOSITE SIDES OF COLUMN
6. 38x89 COLUMNS REQUIRE ONE ROW OF STAGGERED NAILS
7. BEGIN NAILING PATTERN @ MAX. 64mm FROM T/O POST
8. VERTICAL SPACING OF NAILS IS MAX. 225

WOOD LINTEL SCHEDULE

MARK	LINTEL	POST
L1	(4) 2x12 SPF NO.1/NO.2	(2) 2x6 JACK (2) 2x6 KING
L2	(2) 2x8 SPF NO.1/NO.2	(2) 2x6 JACK (3) 2x6 KING
L3	(3) 2x10 SPF NO.1/NO.2	(3) 2x6 JACK (2) 2x6 KING
L4	(3) 2x8 SPF NO.1/NO.2	(2) 2x6 JACK (2) 2x6 KING
L5	(2) 2x8 SPF NO.1/NO.2	(2) 2x6 JACK (2) 2x6 KING

NOTES:

1. REFER TO PLAN FOR LINTEL AND POST LOCATIONS
2. LINTEL BEARING LENGTH TO BE 3" MIN.
3. SEE ARCH. DRAWINGS FOR SPANS
4. ALL LINTELS WILL REQUIRE POSTS AS PER SCHEDULE U.N.O ON PLAN

BRICK VENEER LINTEL SCHEDULE (MAX. 4" THICKNESS)

MAX. CLEAR SPAN	SIZE	REMARKS
UP TO 1200 (4'-0")	L89x89x7.9 L3 1/2" x 3 1/2" x 5/16"	- -
1201 TO 1800 (4'-01" TO 6'-0")	L127x89x7.9 (LLV) L5" x 3 1/2" x 5/16" (LLV)	- -
1801 TO 2400 (6'-01" TO 8'-0")	L52x89x7.9 (LLV) L6" x 3 1/2" x 5/16" (LLV)	- -

NOTES:

1. LINTEL BEARING LENGTH TO BE MIN. 6".
2. ALL STRUCTURAL STEEL MEMBERS TO BE HOT DIPPED GALVANIZED
3. SEE ARCHITECTURAL DRAWINGS FOR SPANS.

TOWN OF MILTON
PLANNING AND DEVELOPMENT
BUILDING PERMIT: 22-3835
BUILDING REVIEWED
mickhal.girgis JUL 6, 2022
PLAN EXAMINER DATE
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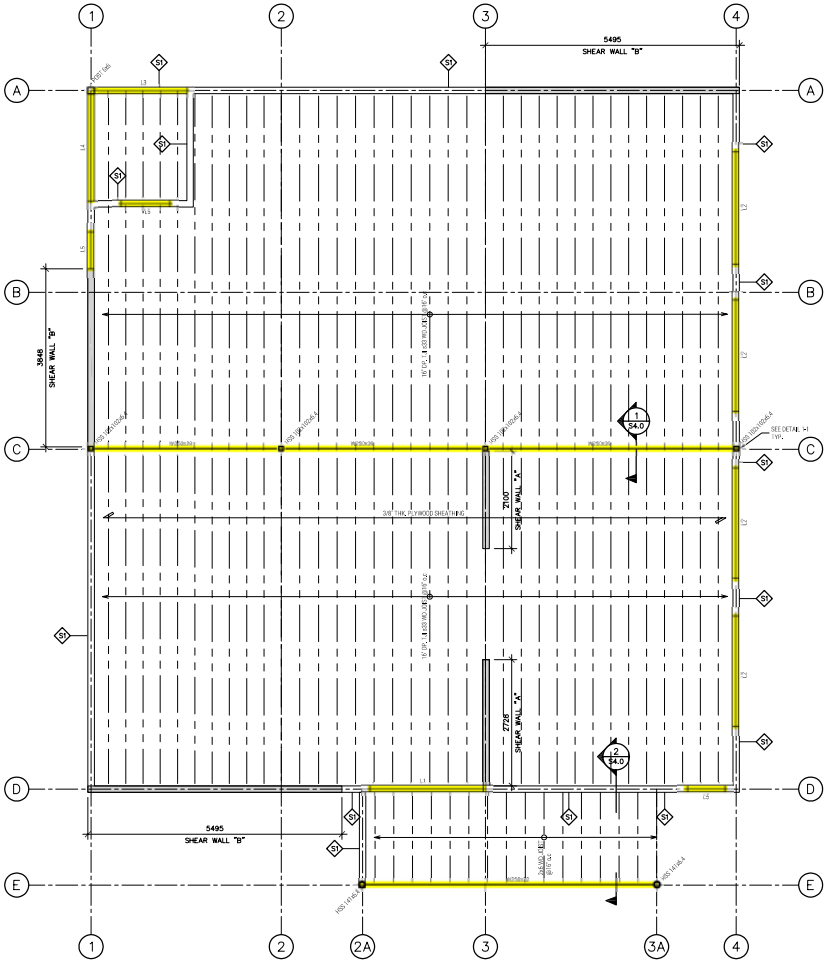
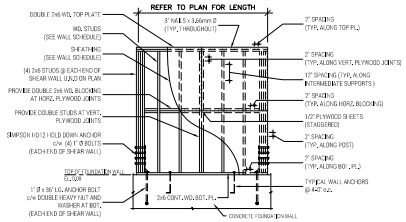
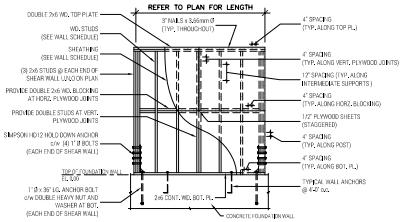


PLAN

ROOF PLAN 1:50



A S3.0 SHEAR WALL "A" ELEV. DETAIL 1:20



B S3.0 SHEAR WALL "B" ELEV. DETAIL 1:20

RECEIVED
TOWN OF MILTON
MAY 13, 2022
22-3835
BUILDING DIVISION

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ISSUED FOR BUILDING PERMIT	1	2022-06-06

DFE
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Structural Engineers
Phone: (647) 839-4805 ; (905) 719-1482

LICENSED PROFESSIONAL ENGINEER
L. H. DOYTCHEV
100113292
2020-09-24
PROVINCE OF ONTARIO

PROJECT

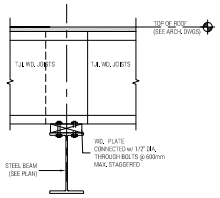
HOLY FAMILY CEMETERY ADMINISTRATION BUILDING

2523 LOWER BASE LINE ROAD, MILTON, ON

DRAWING

ROOF FRAMING PLANS, SCHEDULES, AND DETAILS

Design By:	TD/AF	Date:	2020-10-12
		Project No.:	19050301
Drawn By:	AF	Drawing No.:	S3.0
Scale:	AS NOTED		



1 / S4.0 SECTION
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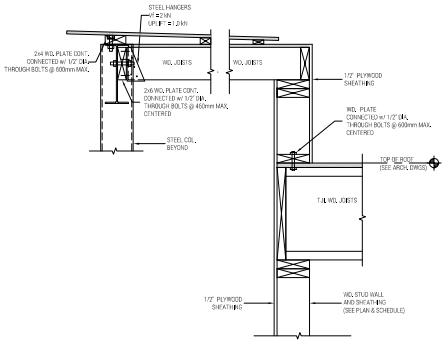

2 / S4.0 SECTION
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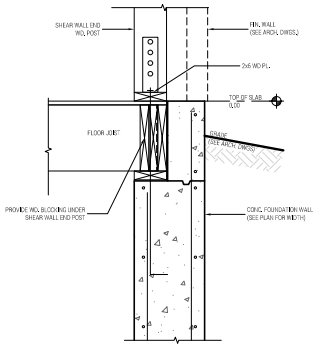
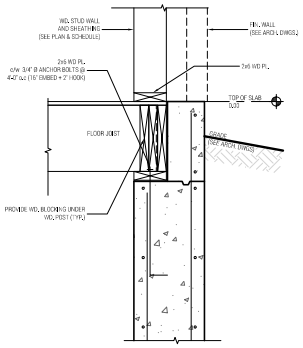
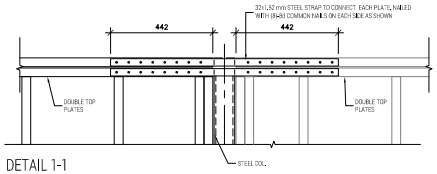


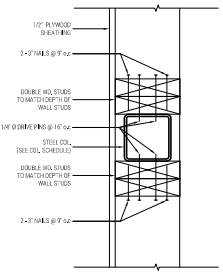
DETAIL 3-3
AT SHEAR WALL END POST
1:10



DETAIL 4-4
AT WOOD POST
1:10



DETAIL 1-1
TOP PLATES CONNECTION
1:10



DETAIL 2-2
AT STUD WALL TO COL.
CONNECTION
1:5

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ISSUED FOR BUILDING PERMIT	1	2022-04-06

DFE
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Structural Engineers
LICENSED PROFESSIONAL ENGINEER
T. H. DOYTCHEV
100113282
2020-05-26
PROVINCE OF ONTARIO
Phones: (647) 839-4805 ; (905) 719-1482

TOWN OF MILTON
PLANNING AND DEVELOPMENT
BUILDING PERMIT: 22-3935
BUILDING: REVIEWED
michael.grigis JUL 6, 2022
PLAN EXAMINER DATE
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RECEIVED
TOWN OF MILTON
MAY 13, 2022
22-3935
BUILDING DIVISION

PROJECT
HOLY FAMILY CEMETERY
ADMINISTRATION BUILDING
2523 LOWER BASE LINE ROAD, MILTON, ON

DRAWING
SECTIONS
AND
DETAILS

Design By:	TD/AF	Date:	2020-10-12
		Project No.:	19050301
Drawn By:	AF	Drawing No.:	S4.0
Scale:	AS NOTED		