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. THE STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2012 ONTARIO BUILDING CODE (OBC) LATEST EDITION INCLUDING ALL THE LATEST STANDARDS REFERENCED THEREIN, AND ANY APPLICABLE ACTS OF AUTHORITY. CONSTRUCTION PRACTICES SHALL BE ACCORDING TO THE SAME. USE THE LATEST VERSIONS OF STANDARDS AND CODES LISTED BELOW. ELEMENTS OF STRUCTURES AND NON-STRUCTURAL COMPONENTS AND EQUIPMENT AND THEIR CONNECTIONS TO BE DESIGNED PER OBC LATEST EDITION.
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	
PRECAST SHOP DRAWINGS	YES	YES	

COLD FORM STEEL FRAMING [BY OTHERS]

1. ALL COLD FORMED STEEL FRAMING SHALL BE DESIGNED BY CFS SUPPLIER IN CONFORMANCE WITH THE REQUIREMENTS OF LATEST CSA S136-16 .
2. DESIGN ALL COLD FORMED STEEL FRAMING MEMBERS FOR THE GRAVITY AND LATERAL LOADINGS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH THE 2012 OBC LATEST EDITION. ALL CFS WALLS, NOT SHOWN ON STRUCTURAL DRAWINGS NOT SUPPORTING STRUCT. FRAMING THAT MEET CRITERIA OF LOAD BEARING PER OBC, SUCH AS ACTING AS OR SUPPORTING GUARDS, SUPP. EQUIPMENT ETC. TO BE DESIGNED PER OBC.
3. CONFORM TO THE DEFLECTION REQUIREMENTS OF LATEST CSA S304 FOR STUDS SUPPORTING MASONRY VENEER.
4. SHOP DRAWINGS FOR ALL COLD FORMED STRUCTURAL STEEL FRAMING INCLUDING CONNECTION, BRACING, AND BRIDGING DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE FABRICATION.
5. SHOP DRAWINGS FOR ALL COLD FORMED STRUCTURAL STEEL FRAMING SHALL SHOW BOTH DESIGN AND INSTALLATION REQUIREMENTS. RETAIN A LICENSED PROFESSIONAL ENGINEER OF THE PROVINCE OF ONTARIO TO PREPARE, SEAL AND SIGN ALL SHOP DRAWINGS; AND TO PERFORM FIELD REVIEW.
6. STEEL SHALL MEET THE REQUIREMENTS OF LATEST ASTM A653 STANDARD SPECIFICATION FOR STEEL SHEET, ZINC COATED (GALVANIZED) BY THE HOT-DIP PROCESS, STRUCTURAL (PHYSICAL) QUALITY. STEEL STUDS 18 ga. AND LIGHTER SHALL HAVE MINIMUM YIELD STRENGTH OF 230MPa (33ksi). HEAVIER STUDS SHALL HAVE MINIMUM YIELD STRENGTH OF 345MPa (50ksi).

FOUNDATIONS

1. GEOTECHNICAL DATA HAS BEEN OBTAINED FROM THE SOIL INVESTIGATION PERFORMED BY LANDTEK LINITED AS REPORTED IN THEIR SOIL LETTER REPORT, DATED DECEMBER 19, 2022
2. ALL FOOTINGS SHALL BEAR DIRECTLY ON NATURALLY CONSOLIDATED, UNDISTURBED SOIL, WITH A MINIMUM SOIL BEARING CAPACITY OF 120 kPa (SLS) AND 180 kPa (ULS) AT MIN. 1.2m BELOW GROUND.
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 / SLABS	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)	0	3/4"	N
STRIP FOOTINGS, MATT PADS	25	80 (±30)	0	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 LATEST 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 LATEST CSA STANDARD A23.1, UNLESS NOTED OTHERWISE.

CONCRETE AND REINFORCING (cont'd)

14. CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH LATEST CSA A23.1.
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 LATEST 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		
WALLS	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		
SLABS AND BEAMS	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	
WALLS	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 LATEST 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 LATEST ASTM A108.
5. WELDING MATERIALS TO CONFORM TO LATEST CSA W48.
6. WELDING OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF LATEST 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 LATEST STANDARD S16:
   a. INTERIOR STRUCTURAL STEEL SHALL BE PRIMED AND PAINTED AS PER LATEST CSA/CAN-S16.
   b. EXPOSED STEEL TO BE HOT DIP GALVANIZED IN ACCORDANCE TO LATEST 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.

METAL DECK

1. DESIGN METAL DECK IN CONFORMANCE WITH THE REQUIREMENTS OF LATEST CSA S136 FOR THE LOADS INDICATED ON THE DRAWINGS
2. UNLESS NOTED OTHERWISE, ROOF DECK SHALL BE 38 mm x 0.91 mm (1.5" x .036") VIC WEST STEEL INC. RD 938 (OR APPROVED EQUAL), MINIMUM 3 SPANS CONTINUOUS.
3. UNLESS NOTED OTHERWISE, FLOOR DECK SHALL BE 38 mm x 0.76 mm (1.5"x .030") VIC WEST STEEL INC. HB938 (OR APPROVED EQUAL), MINIMUM 3 SPANS CONTINUOUS.
4. METAL DECK SHALL BE LIGHT ZINC COATED STRUCTURAL STEEL SHEET FABRICATED AND ERECTED IN ACCORDANCE WITH LATEST CSSBI 10M, CAN/CSA-S136. THE MINIMUM ZINC COATING DESIGNATION SHALL BE ZF075 (U.N.O.).
5. DECK SHALL OVERLAP A MINIMUM OF 50 mm (2") AT ALL END JOINTS AND HAVE A MINIMUM BEARING LENGTH OF 50 mm (2") ON ALL STRUCTURAL STEEL.
6. DECK HAS BEEN DESIGNED FOR DIAPHRAGM ACTION AND SHALL BE FASTENED AS FOLLOWS U.N.O.:
   WELD DECK TO SUPPORTING STEEL WITH 20 mm (3/4") DIAMETER PLUG WELD AT
   TRANSVERSE WELD SPACING =300 mm (12") O.C.
   PERIMETER WELD SPACING =300 mm (12") O.C.
   SIDE LAP BUTTON PUNCHING =300 mm (12") O.C.
   LONGITUDINAL WELD SPACING =300 mm (12") O.C
7. DECK WELDS SHALL BE TOUCHED UP WITH APPROVED PAINT BY THE DECK ERECTOR.
8. STEEL DECK WORK SHALL INCLUDE THE SUPPLY AND INSTALLATION OF ALL SHEET STEEL ANGLES, COVER PLATES, CLOSURES, STIFFENERS AND ANY OTHER ACCESSORIES REQUIRED.
9. CUT OPENINGS AND REINFORCE EDGES AS REQUIRED FOR PIPES, DUCTS, ETC.
   A. THE MAXIMUM SIZE OF AN UNREINFORCED OPENING IS 150 mm (6").
   B. REINFORCE ALL OPENINGS LARGER THAN 150mm (6"), BUT NOT EXCEEDING 450 mm (18"), AS INDICATED BY THE METAL DECK SUPPLIER.
   C. FOR OPENINGS GREATER THAN 450mm (18") NOT SHOWN ON THE DRAWINGS, CONTACT ENGINEER FOR DIRECTION.
10. HANGER WIRE FOR SUSPENDED CEILINGS SHOULD PIERCE BOTH SIDES OF THE FLUTE AND BE LOOPED AROUND AND TIED.

OPEN WEB STEEL JOISTS

1. OPEN WEB STEEL JOISTS (OWSJ'S) SHALL CONFORM TO CSA STANDARDS S16 AND CAN/CSA-S136.
2. WELDING OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARD W59 AND SHALL BE UNDERTAKEN BY A FABRICATOR AND ERECTOR FULLY APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA STANDARD W47, DIVISION 1 AND DIVISION 2. FABRICATOR TO SUPPLY CERTIFICATION OF FUSION WELDING AND WELDING MAY ONLY BE CARRIED OUT IN ACCORDANCE WITH OWNER'S SAFETY REGULATIONS REGARDING WELDING.
3. JOISTS TO BE DESIGNED FOR THE LOADS AS SPECIFIED ON DRAWINGS AND IN ACCORDANCE WITH THE 2012 OBC. DESIGN OF JOISTS SHALL ALSO INCLUDE ALL LOADS FROM MECHANICAL EQUIPMENT SUCH AS ROOF TOP UNITS, DUCTS AND PIPING.
4. SHOP DRAWINGS OF JOIST DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE FABRICATION. JOIST DESIGN AND DETAILS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. JOIST DESIGN CALCULATIONS SHALL BE SUBMITTED FOR RECORD PURPOSES.
5. PROVIDE SUFFICIENT CAMBER TO JOISTS TO ENSURE "0" CAMBER AFTER APPLICATION OF ALL DEAD LOADS SHOWN. ADJUST STIFFNESS AND REQUIRED CAMBER OF JOISTS ADJACENT TO MASONRY WALLS, STEEL BEAMS OF SHORTER SPAN AND THE LIKE TO PERMIT THE PROPER FASTENING OF THE STEEL DECK. AS A GUIDE, LIMIT THE DIFFERENTIAL DEFLECTION OF THE ADJACENT JOIST, UNDER ALL DEAD LOADS, TO L/120, WHERE 'L' IS THE SPAN OF THE STEEL DECK PERPENDICULAR TO THE JOISTS.
6. "TJ" ON PLANS DENOTES "TIE JOIST". BOTTOM CHORD TO BE FRAMED INTO COLUMNS, BEAMS OR WALLS. ALL JOISTS AT COLUMNS TO BE TIE JOISTS UNLESS OTHERWISE NOTED. TIE JOIST CONNECTIONS SHALL BE BOLTED.
7. WHERE TIE JOISTS ARE INDICATED, DESIGN TOP AND BOTTOM CHORDS AND CONNECT TO COLUMNS TO SAFELY DEVELOP LOADS SHOWN OR A MINIMUM OF A 25 kN SPECIFIED LOAD IN TENSION OR COMPRESSION.
8. DESIGN AND INSTALLATION OF ALL OWSJ BRIDGING SHALL BE IN ACCORDANCE WITH CSA S16. COMBINED DIAGONAL AND HORIZONTAL BRIDGING SHALL BE PROVIDED AT THE ENDS OF BRIDGING LINES AS REQUIRED. ENDS OF BRIDGING LINES SHALL BE ANCHORED TO STEEL, MASONRY OR OTHERWISE SHOWN AND BE CAPABLE OF RESISTING AN AXIAL LOAD OF AT LEAST 3 kN.
9. BRIDGING SHOWN ON THE DRAWINGS IS INTENDED AS A GUIDELINE ONLY. DESIGN AND PROVIDE BRIDGING FOR ALL OWSJ AND TRUSSES AS PER CSA S16.
10. OWSJ'S SHALL HAVE 100 mm (4") SHOE (U.N.O.)
11. FOR OWSJ BEARING ON MASONRY, JOIST SUPPLIER SHALL DESIGN AND SUPPLY ALL BEARING PLATES AND BEARING PRESSURE SHALL NOT EXCEED 1.2 MPa (175 psi).
12. ALL STEEL JOISTS SHALL BE WELDED TO STEEL BEAMS OR BEARING PLATES WITH A MINIMUM 50 mm x 5 mm (2" x 3/16") FILLET ON BOTH SIDES OF SHOES.
13. ALL HANGERS, STUB COLUMNS, TRAPEZE BARS, ETC. THAT SUPPORT MECHANICAL, ELECTRICAL OR STRUCTURAL EQUIPMENTS, PIPES, DUCTS, CATWALKS, ETC. MUST BE CONNECTED TO AN OWSJ PANEL POINT OR WHERE THE WEB OF THE JOIST MEETS THE CHORD OF THE JOIST.

NON-STRUCTURAL AND SECONDARY STRUCTURAL ELEMENTS

1. "NON-STRUCTURAL" OR "SECONDARY STRUCTURAL" ELEMENTS ARE NOT PART OF THE STRUCTURAL DESIGN SHOWN ON THESE DRAWINGS. SUCH ELEMENTS ARE DESIGNED, DETAILED AND REVIEWED IN THE FIELD BY OTHERS. THEY APPEAR ON DRAWINGS OTHER THAN THESE DRAWINGS OF DFE INC., WHERE STRUCTURAL ENGINEERING RESPONSIBILITY IS REQUIRED FOR THESE ELEMENTS, THIS SHALL BE PROVIDED BY SPECIALTY STRUCTURAL ENGINEERS, WHO SHALL ALSO PROVIDE ANY LETTERS REQUIRED BY BUILDING PERMIT AUTHORITIES.
2. EXAMPLES OF NON-STRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:
3. A. ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, FLAG POSTS, CANOPIES, CEILINGS, MILLWORK, ETC.
   B. LANDSCAPE ELEMENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, ETC.
   C. CLADDING, GLAZING, WINDOW MULLIONS, NON - VERTICAL LOAD INTERIOR AND EXTERIOR STUD WALLS, INCLUDING WALLS SERVING AS OR SUPPORTING GUARDS.
   D. ARCHITECTURAL PRECAST, PRECAST CLADDING.
   E. SKYLIGHTS.
   F. MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS, AND THEIR ATTACHMENT DETAILS.
   G. WINDOW WASHING EQUIPMENT AND ITS ATTACHMENTS.
   H. ESCALATORS, ELEVATORS, AND CONVEYING SYSTEMS.
   I. GLASS BLOCK AND ITS ATTACHMENTS.
   J. BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
   K. NON - VERTICAL LOAD BEARING MASONRY, INCLUDING WALLS SERVING AS OR SUPPORTING GUARDS.
   L. NON- STRUCTURAL CONCRETE TOPPINGS.
4. SHOP DRAWINGS FOR NON-STRUCTURAL ELEMENTS WHICH MAY AFFECT THE PRIMARY STRUCTURAL SYSTEM SHALL BE SUBMITTED TO DFE INC. THESE DRAWINGS WILL BE REVIEWED ONLY FOR THE EFFECT OF THE ELEMENT ON THE PRIMARY STRUCTURAL SYSTEM.
5. THE DESIGN WIND LOADS TO BE USED FOR GLAZING, EXTERIOR STUDS AND EXTERIOR CLADDING SHAL BE CALCULATED BY OTHERS BASED ON WIND LOAD SHOWN IN DESIGN DATA TABLE AND PER OBC LATEST EDITION AND COMMENTARIES TO OBC. THE LOADS TO BE DEFINED FOR ULTIMATE LIMIT STATES AND SERVICABILITY LIMIT STATES.
6. FOR STONE OR MASONRY CLADDING, SEISMIC FORCES MAY GOVERN.
7. THE DESIGN WIND LOAD TO BE USED FOR INTERIOR STUDS AND PARTITIONS IS 0.5 kPa (UNFACTORED) UNLESS NOTED OTHERWISE.
8. THE MAXIMUM ALLOWABLE DEFLECTIONS FOR GLAZING, STUDS, PARTITIONS AND CLADDING UNDER THE WIND LOADS SHOWN ABOVE SHALL MEET THE ARCHITECTURAL SPECIFICATIONS, THE NATIONAL BUILDING CODE AND THE MANUFACTURER'S SPECIFICATIONS.

NOTE TO CONTRACTOR:

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THE OWNER/ARCHITECT/CONTRACTOR IS ADVISED THAT D.F.ENGINEERING INC. CANNOT CERTIFY ANY COMPONENT OF THE SITE WORKS NOT INSPECTED DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY D.F.ENGINEERING INC. PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR INSPECTION.

ISSUED FOR BUILDING PERMIT / TENDER	1	2023 - 11 - 24

DFE
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PROJECT

BANBURY ELEMENTARY SCHOOL
CHILDCARE ADDITION

141 BANBURY RD., BRANTFORD, ON

DRAWING

GENERAL NOTES

Design By:	TD/AF	Date:	2023-04-20
		Project No.:	22012501
Drawn By:	AF	Drawing No.:	S0.0
Scale:	AS NOTED		

MASONRY

1. CONCRETE MASONRY UNITS SHALL CONFORM TO THE LATEST CSA CAN/CSA-A165 AND SHALL HAVE A MINIMUM COMPRESIVE STRENGTH OF 15MPa BASED ON NET CROSS-SECTIONAL AREA.

2. REINFORCING BARS SHALL CONFORM TO CAN/CSA G30.18 GRADE 400W FOR REINFORCING STEEL WITH MINIMUM YIELD STRENGTH OF FY = 400 MPa.

3. TYPE S MORTAR SHALL BE USED THROUGHOUT FOR LOAD BEARING BLOCK. TYPE N MORTAR SHALL BE USED FOR BRICK VENEER OR DECORATIVE NON-LOAD BEARING BLOCK.
   MORTAR TYPE S - MIN. COMPRESSIVE STRENGTH - 12.0 MPa
   MORTAR TYPE N - MIN. COMPRESSIVE STRENGTH - 7.5 MPa
   GROUT SHALL CONFORM TO CAN/CSA A179
   GROUT MIN. COMPRESSIVE STRENGTH - 20 MPa

4. ALL MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF LATEST CSA STANDARDS CAN/CSA-A370, CAN/CSA-A371 AND CSA S304.

5. ALL MASONRY WALLS SHALL BE HORIZONTALLY REINFORCED. MINIMUM REQUIREMENTS WITH (4.76 mm Ø) HEAVY DUTY "LADDER" TYPE JOINT REINFORCEMENT (OR APPROVED EQUAL) AND CONTINUOUS REINFORCEMENT AT EVERY SECOND COURSE (400 mm/16").
   a. ALL JOINT REINFORCEMENT SHALL BE HOT-DIPPED GALVANIZED.
   b. REINFORCEMENT SHALL BE LAPPED A MINIMUM OF 300mm (12") AT ALL JOINTS.
   c. PREFABRICATED CORNER AND TEE REINFORCEMENT SHALL BE USED AT ALL WALL INTERSECTIONS.
   d. REINFORCEMENT SHALL BE PLACED AS TO PROVIDE 16 mm (5/8") MORTAR COVER ON THE EXTERIOR FACE OF WALL AND 12 mm (1/2") COVER ON THE INTERIOR FACE OF WALL.

6. UNLESS NOTED OTHERWISE, PROVIDE CONTINUOUS BOND BEAMS (REINFORCED WITH 1-15M) AT UNDERSIDE OF EACH FLOOR, ROOF AND AT TOP OF PARAPETS. ALSO PROVIDE BOND BEAMS AT TOP AND BOTTOM OF OPENINGS AND EXTEND 600mm PAST CORNERS. REINFORCE BOTTOM BOND BEAM WITH 1-15M. REINFORCE TOP BOND BEAM AS FOLLOWS:
   - SPANS LESS THAN 1500 mm
   200 mm DEEP BOND BEAM c/w 1-15M FULL LENGTH
   - SPANS 1500 mm TO 3000 mm
   400 mm DEEP BOND BEAM c/w 2-15M FULL LENGTH

7. IN SEISMIC ZONES, IN ADDITION TO NOTE # 6 PROVIDE CONTINUOUS BOND BEAMS (REINFORCED WITH 1-15M) AT MAXIMUM VERTICAL INTERVALS OF 2400 mm O/C.

8. ALL TIES FOR MASONRY VENEER SHALL BE DESIGNED AND SUPPLIED BY THE MASONRY CONTRACTOR IN ACCORDANCE WITH LATEST CSA STANDARDS S304 AND CAN/CSA-A370.

9. ALL BLOCK MASONRY UNITS SHALL BE CONSTRUCTED WITH FULL HEAD JOINTS, AND FULL BED JOINTS UNDER THE FULL BEARING AREAS OF THE FACE SHELLS, AND UNDER WEBS SURROUNDING THOSE CELLS TO BE FILLED WITH GROUT.

10. WHERE MASONRY THICKNESS CHANGES, GROUT 100% SOLID MIN. 200mm (8") THE LOWER/THICKER PORTION OF THE WALL.

11. GROUT 100% SOLID BLOCKS AT PARAPETS.

12. THE INTERSECTION OF ALL MASONRY WALLS SHALL BE TOOTHED OR CONTINUOUSLY REINFORCED WITH JOINT REINFORCEMENT.

13. ALL MASONRY BENEATH CONCENTRATED LOADS (SUCH AS BEAMS, LINTELS, AND JOISTS) SHALL BE SOLID BLOCKS OR 100% GROUTED BLOCKS FOR A MINIMUM DEPTH OF 400 mm (16") OR 3 TIMES THE LENGTH OF BEARING AND PROJECTING A MINIMUM OF 200 mm (8") OR THE LENGTH OF BEARING BEYOND EACH EDGE OF BEARING, UNLESS OTHERWISE NOTED OR SHOWN.

14. MAINTAIN SUPPORT OF MASONRY LINTELS FOR A MINIMUM OF SEVEN DAYS OR UNTIL SUFFICIENT STRENGTH IS GAINED TO SAFELY SUPPORT LOADS IMPOSED.

15. WHERE STEEL BEARING PLATES ARE SHOWN ON THE DRAWINGS, THEY SHALL BE ANCHORED WITH A MINIMUM OF TWO 15M X 300mm LONG + 75mm HOOKED ANCHOR RODS WELDED TO THE PLATES AND EMBEDDED INTO GROUT FILL AS NOTED ABOVE

16. SEE PLANS AND SCHEDULES REGARDING LINTEL SIZES FOR MASONRY WALLS AND VENEER.
    FOR ALL OPENINGS OR RECESSES IN MASONRY NOT SHOWN ON DRAWINGS GREATER THAN 300mm (12") AND UP TO 1200mm (4 FT.), INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES OR EQUIPMENT, PROVIDE ONE L89X89X6.4 (3 1/2 X 3 1/2 X 1/4") ANGLE FOR EACH 100 mm (4") THICKNESS OF WALL.

17. ALL MASONRY WALLS SHALL BE ADEQUATELY BRACED DURING CONSTRUCTION UNTIL ADEQUATE DIAPHRAGM ACTION CAN BE DEVELOPED BY INSTALLED FLOOR AND ROOF STRUCTURAL COMPONENTS.

18. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY CONTROL JOINTS. SPACING OF CONTROL JOINTS IN ALL WALLS SHALL BE CONSTRUCTED AS PER PLAN, BUT SHALL NOT EXCEED 6000 mm (20'-0") O.C. ALL REINFORCING TO BE DISCONTINUOUS AT CONTROL JOINTS. CONTROL JOINTS SHALL BE CAULKED WITH FOAM BACKER ROD AND SHALL NOT BE FILLED WITH MORTAR.

19. REINFORCED MASONRY:
    a. CELLS TO BE REINFORCED SHALL BE KEPT CLEAN OF MORTAR.
    b. GROUT FOR REINFORCED CELLS, BOND BEAMS, LINTELS AND CELLS CONTAINING DOWELS, ANCHOR BOLTS AND INSERTS PER NOTE #3.
    c. PROVIDE MINIMUM 2-15M VERTICALS FULL HEIGHT AT ALL WALL ENDS, CORNERS, INTERSECTIONS AND OPENINGS UNLESS OTHERWISE NOTED ON DRAWINGS.
    d. PROVIDE 1-15M VERTICAL FULL HEIGHT EACH SIDE OF MOVEMENT JOINTS.
    e. DOWELS FROM FOUNDATIONS TO MATCH VERTICAL REINFORCEMENT IN WALL.
    f. PROVIDE THE FOLLOWING LAPS FOR THE REINFORCEMENT INDICATED:
       - 10M BARS = 450 mm (18")
       - 15M BARS = 600 mm (24")
       - 20M BARS = 900 mm (36")
    EMBEDDED ITEMS ARE NOT TO INTERFERE WITH THE INTEGRITY OF THE MASONRY WALL OR LOCATION OF REINFORCEMENT. PROVIDE FULLY GROUTED LINTEL BEAM FOR CONDUITS AND PIPES RUNNING HORIZONTALLY WITHIN WALL.

20. PROVIDE COLD WEATHER PROTECTION AS REQUIRED BY CAN/CSA-A371.

21. PROVIDE MOVEMENT JOINTS PER ARCHITECTURAL DRAWINGS. MAXIMUM DISTANCE BETWEEN MOVEMENT JOINTS TO BE 6000mm (20'-0"). COORDINATE LOCATION WITH ENGINEER.

BRICK VENEER LINTEL SCHED.
(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'-0 TO 6'-0)	L127x89x8 (LLV)	L5" x 3 1/2" x 5/16" (LLV)	
1801 TO 2400 (6'-0 TO 8'-0)	L152x89x8 (LLV)	L6" x 3 1/2" x 5/16" (LLV)	

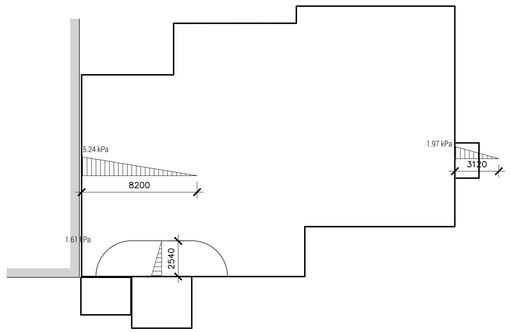
NOTES:
1. LINTEL BEARING LENGTH TO BE MIN. 6".
2. ALL STRUCTURAL STEEL MEMBERS TO BE HOT DIPPED GALVANIZED.
3. SEE ARCHITECTURAL DRAWINGS FOR SPANS.

ABBREVIATIONS

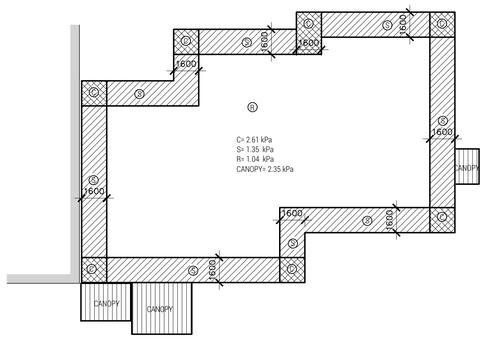
A.B.	ANCHOR BOLT	HD.	HOOKED
ALT.	ALTERNATE	I.D.	INSIDE DIAMETER
ALUM.	ALUMINUM	kN.	KILONEWTON
ANCH'S	ANCHORS	kPa	KILOPASCAL
APPROX.	APPROXIMATELY	L	ANGLE
ARCH.	ARCHITECTURAL	L.L.H.	LONG LEG HORIZONTAL
B/F	BOTTOM FACE	L.L.V.	LONG LEG VERTICAL
B.PL.	BASE PLATE	L.P.	LOW POINT
BLK.	BLOCK	LG.	LONG
BM.	BEAM	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	PARTN	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.	WELDED WIRE MESH
H.P.	HIGH POINT	@	SPACED AT
HSS	HOLLOW STRUCTURAL STEEL		

DESIGN DATA TABLE		
BUILDING IMPORTANCE	HIGH	
FLOOR AND ROOF DESIGN LIVE LOADS ARE NOTED ON FRAMING PLANS		
SPECIFIED SNOW LOADS		
RAIN LOADING DESIGN DATA (1/50)	24h RAIN	103mm
SNOW LOADING DESIGN DATA (1/50)	Ss	1.3 kPa
	Sr	0.4 kPa
BASIC ROOF SNOW LOAD	S	1.66 kPa
ADDITIONAL SNOW ACCUMULATION IS SHOWN ON THE DRAWINGS.		
SPECIFIED WIND LOADS		
HOURLY WIND PRESSURE DESIGN DATA (1/50)	0.42 kPa	
WIND DESIGN CATEGORY	CATEGORY 2	
TERRAIN TYPE	'OPEN'	
SPECIFIED EARTHQUAKE LOADS		
SEISMIC LOADING DESIGN DATA	Sa (0.2)	0.155
	Sa (0.5)	0.089
	Sa (1.0)	0.049
	Sa (2.0)	0.0240
	Sa (5.0)	0.0059
	Sa (10.0)	0.0024
SITE CLASS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER	SITE CLASS	'D'
SEISMIC FORCE MODIFICATION FACTORS FOR SEISMIC FORCE RESISTING SYSTEM	Rd	1.5
	Ro	1.5
SEISMIC HAZARD INDEX	IeFaSa (0.2)	0.25

NOTES:
1. THE FOUNDATION WALLS HAVE BEEN DESIGNED ASSUMING THAT THEY ARE NOT SUBJECT TO HYDROSTATIC PRESSURE. G.C. TO PROVIDE PROPER DRAINAGE IF UNDERGROUND WATER EXISTS.



SNOW ACCUMULATION DIAGRAM



GROSS SPECIFIED WIND UPLIFT

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ISSUED FOR BUILDING PERMIT / TENDER	1	2023 - 11 - 24

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PROJECT

BANBURY ELEMENTARY SCHOOL
CHILDCARE ADDITION

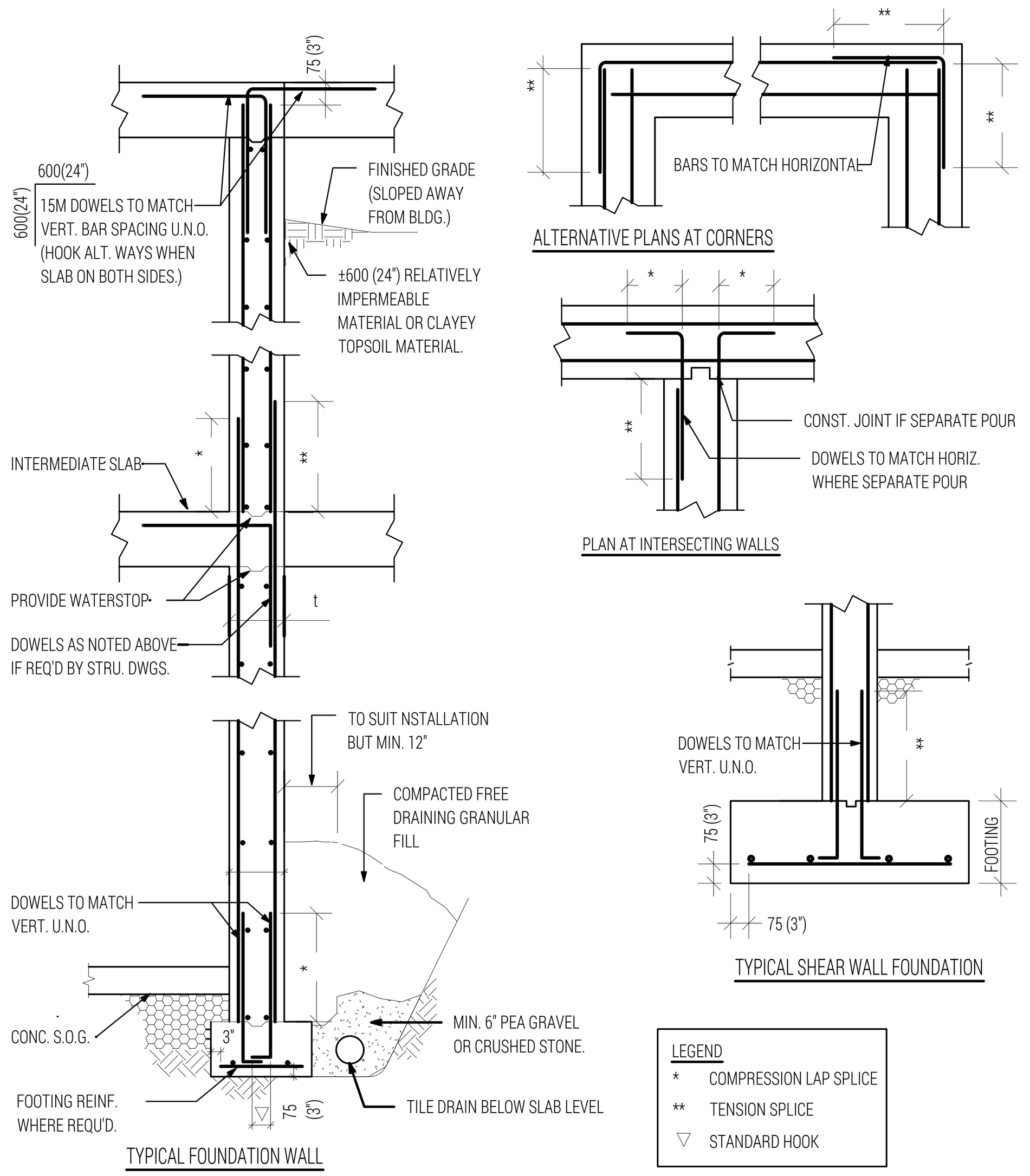
141 BANBURY RD., BRANTFORD, ON

DRAWING

GENERAL NOTES

Design By:	TD/AF	Date:	2023-04-20
		Project No.:	22012501
Drawn By:	AF	Drawing No.:	S0.1
Scale:	AS NOTED		

CONCRETE WALLS

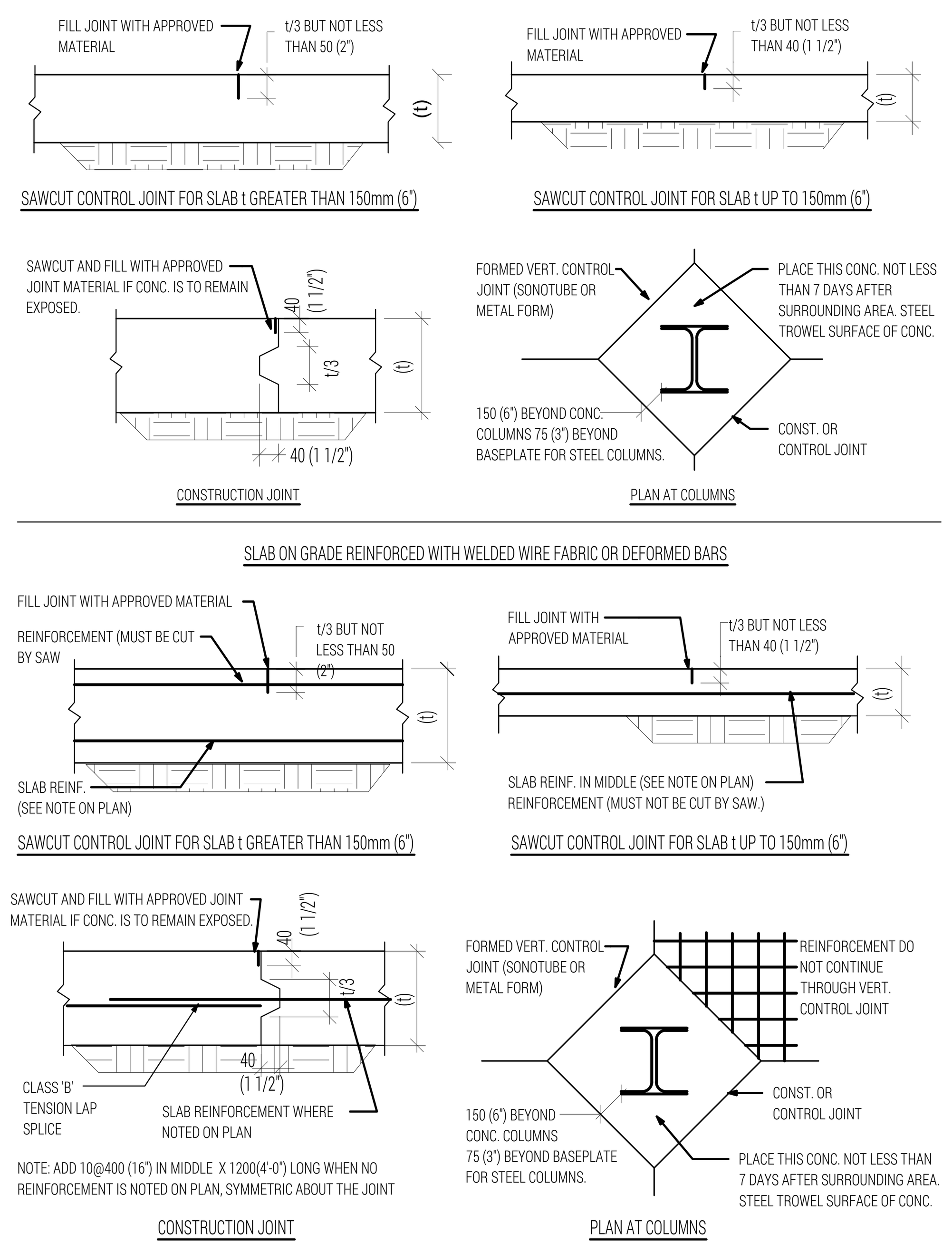


LEGEND
- * COMPRESSION LAP SPLICE
- ** TENSION SPLICE
- ▽ STANDARD HOOK

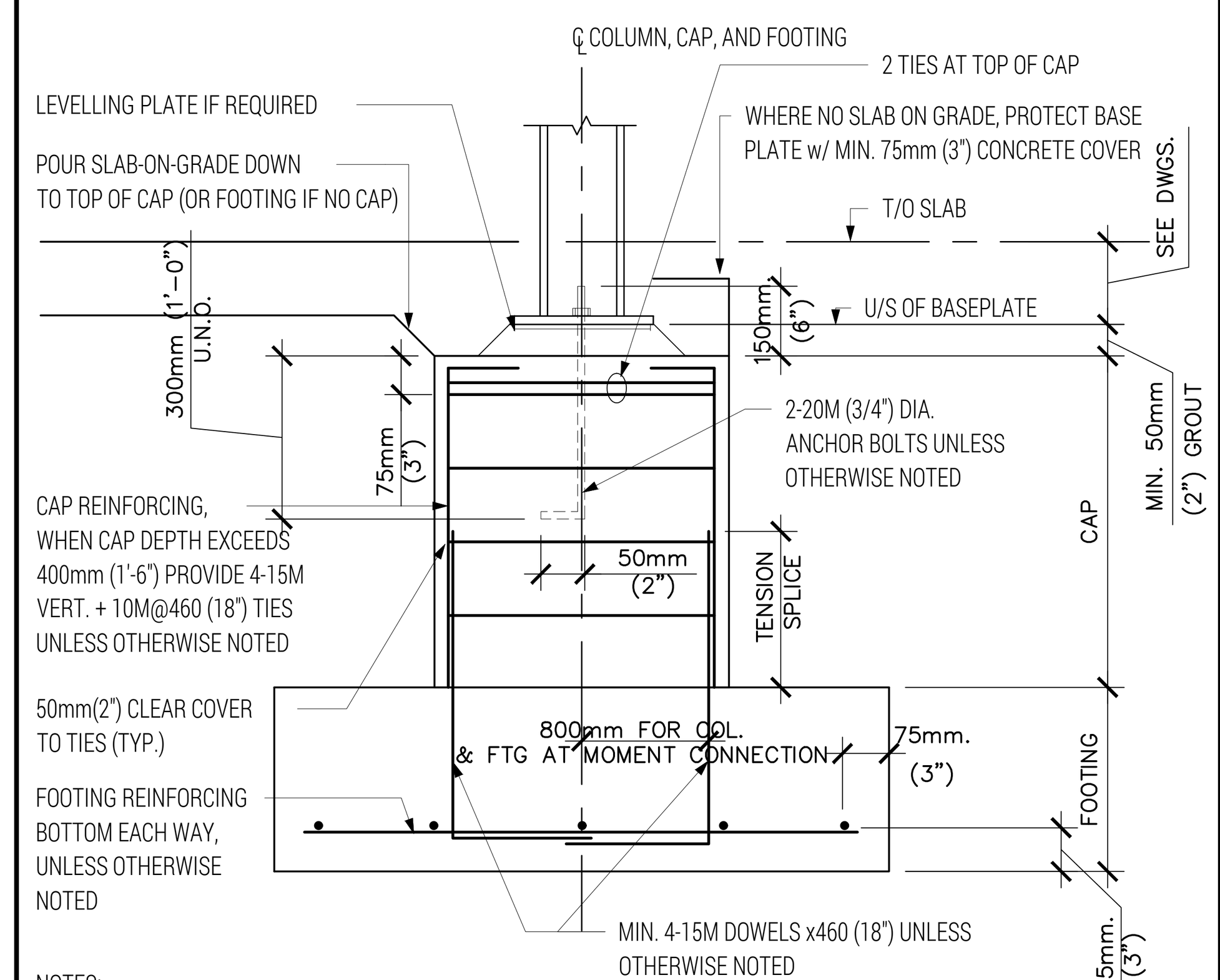
MINIMUM REINFORCEMENT FOR CONCRETE WALLS TO BE AS FOLLOWS (UNLESS NOTED)					
t	150	200	250	300	350
VERT. HORIZ.	10@440 ℄ 10@320 ℄	10@460 EF 10@460 EF	10@460 EF 10@400 EF	10@440 EF 10@320 EF	10@380 EF 10@280 EF
t	6"	8"	10"	12"	14"
VERT. HORIZ.	10@17" ℄ 10@12" ℄	10@18" EF 10@18" EF	10@18" EF 10@15" EF	10@17" EF 10@12" EF	10@14" EF 10@11" EF

NOTES:
1. LAP HORZ. WALL REINF. WITH BASIC TENSION SPLICE
2. PROVIDE A MIN. OF 2-15M BARS IN ALL HEADS, SILLS, & 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 (I.E.:-NO FORM USED), PERMISSION and INSTRUCTIONS MUST BE OBTAINED FROM THE STRUCTURAL CONSULTANT.

TYPICAL SLAB ON GRADE DETAILS

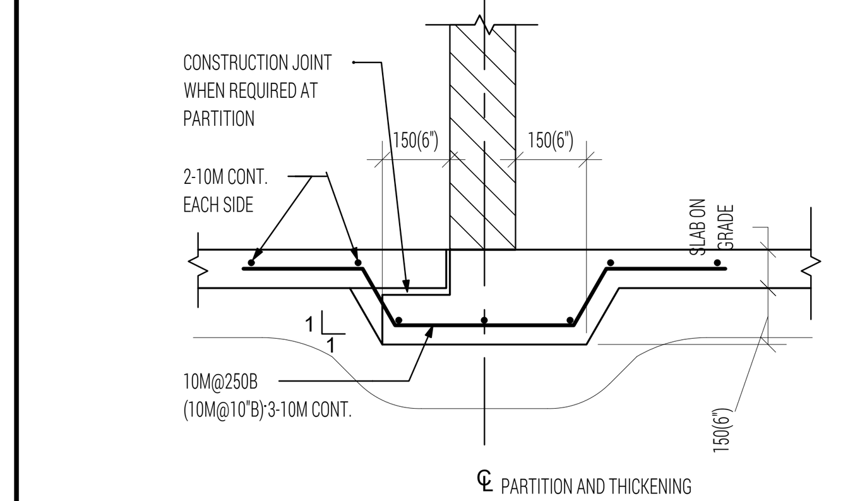


TYPICAL STEEL COLUMN FOUNDATION



NOTES:
1. FOOTINGS SHALL BE PLACED ON UNDISTRIBUTED SOIL WITH A MINIMUM BEARING CAPACITY AS NOTED ON THE DRAWINGS
2. GROUT UNDER BASE PLATES SHALL BE AN APPROVED PROPRIETARY BRAND PRE-MIXED, NON-METALLIC, NON-SHRINK, GROUT UNLESS OTHERWISE APPROVED.
3. REFER ALSO TO GENERAL NOTES, AND CAST-IN-PLACE CONCRETE NOTES
4. LEVELING PLATES WHEN REQURED SHALL BE AS FOLLOW:
   10mm (3/8") THK PLATE FOR B.PL. MAX SIZE OF 300mm (12")
   12mm (1/2") THK PLATE FOR B.PL. MAX SIZE OF 600mm (24")

TYPICAL THICKENED SLAB ON GRADE DETAIL



NOTE TO CONTRACTOR:

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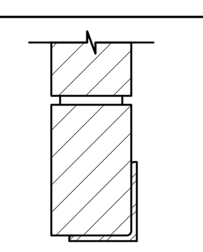
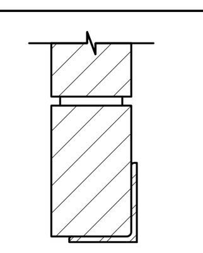
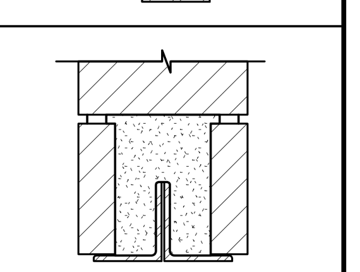
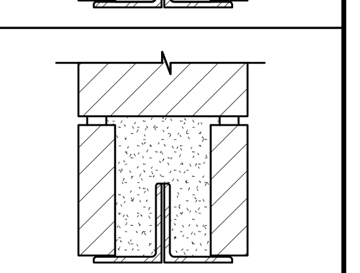
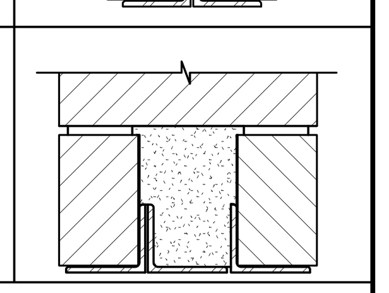
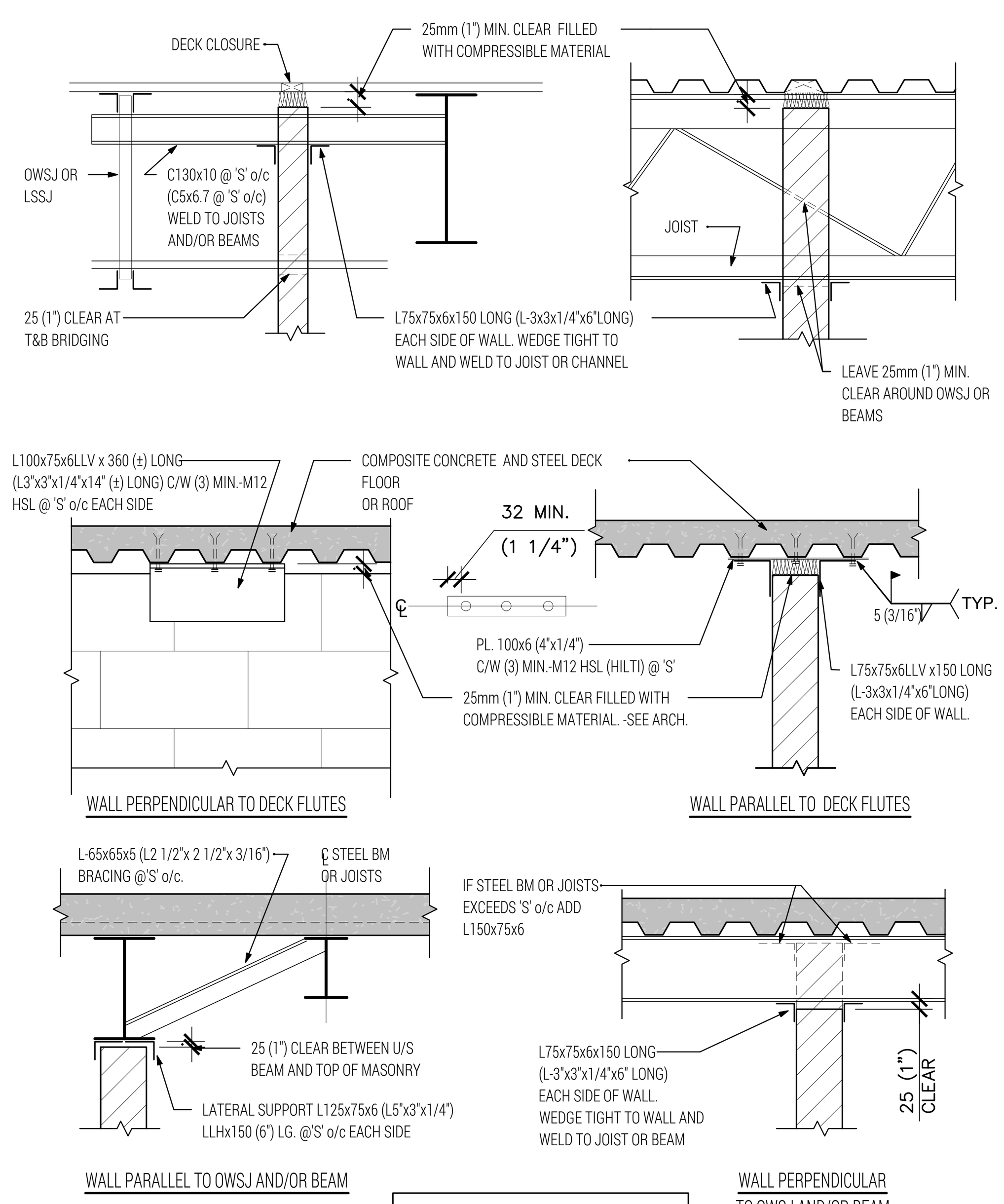
THE OWNER/ARCHITECT/CONTRACTOR IS ADVISED THAT D.F.ENGINEERING INC. CANNOT CERTIFY ANY COMPONENT OF THE SITE WORKS NOT INSPECTED DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY D.F.ENGINEERING INC. PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR INSPECTION.

NON-LOAD BEARING BLOCK LINTEL SCHED.

WIDTH	<1220 (<4'-0") VER 1	<1220 (<4'-0") VER 2	<1830 (<6'-0") VER 1	<1830 (<6'-0") VER 2	<2440 (<8'-0") VER 1	<2440 (<8'-0") VER 2	<3080 (<10'-0")	<3660 (<12'-0")	SECTION DETAIL
100 (4")	(1) L89x89x6 (1) L3 1/2x3 1/2x1/4	(2) Ls 45x45x5 (2) Ls 1 3/4x1 3/4x3/16	(1) L 125x89x8 (L.L.V.) (1) L 5x3 1/2x5/16 (L.L.V.)	(2) Ls 55x35x6 (2) Ls 2 1/2x1 1/2x1/4	(1) L 125x89x8 (L.L.V.)	(1) L 5x3 1/2x5/16 (L.L.V.)			
150 (6")	(1) L 125x89x8 (L.L.V.) (1) L 5x3 1/2x5/16 (L.L.V.)	(2) Ls 65x65x6 (2) Ls 2 1/2x2 1/2x1/4	(1) L 125x125x8 (L.L.V.) (1) L 5x5x5/16 (L.L.V.)	(2) Ls 89x65x6 (2) Ls 3 1/2x2 1/2x1/4	(1) L 125x125x8 (L.L.V.) (1) L 5x5x5/16 (L.L.V.)	(2) Ls 89x65x6 (2) Ls 3 1/2x2 1/2x1/4	(1) L 125x125x8 (L.L.V.) (1) L 5x5x5/16 (L.L.V.)		
200 (8")	(2) Ls 89x89x6	(2) Ls 3 1/2x3 1/2x1/4	(2) Ls 125x89x8 (L.L.V.)	(2) Ls 5x3 1/2x5/16 (L.L.V.)	(2) Ls 125x89x8 (L.L.V.)	(2) Ls 5x3 1/2x5/16 (L.L.V.)	W200x21 + PL 175x6 BOT. W8x14 + PL 7x1/4 BOT.	W200x21 + PL 175x6 BOT. W8x14 + PL 7x1/4 BOT.	
250 (10")	(2) Ls 102x89x6 (L.L.H.)	(2) Ls 4x3 1/2x1/4 (L.L.H.)	(2) Ls 102x102x8	(2) Ls 4x4x5/16	(2) Ls 152x102x8 (L.L.V.)	(2) Ls 6x4x5/16 (L.L.V.)	W200x21 + PL 225x6 BOT. W8x14 + PL 9x1/4 BOT.	W200x21 + PL 225x6 BOT. W8x14 + PL 9x1/4 BOT.	
300 (12")	(3) Ls 89/89x6	(3) Ls 3 1/2x3 1/2x1/4	(3) Ls 125/89x8 (L.L.V.)	(3) Ls 5x3 1/2x5/16 (L.L.V.)					

NOTES:
1. STRUCTURAL STEEL SHALL BE G40.21.
2. BEARING LENGTH = 6" AT EACH END.
3. CONNECT ANGLES @ 24" o/c BY WELDING or BOLTING FOR ANGLES WITH A TOTAL LENGTH OF 6'-0" OR MORE.

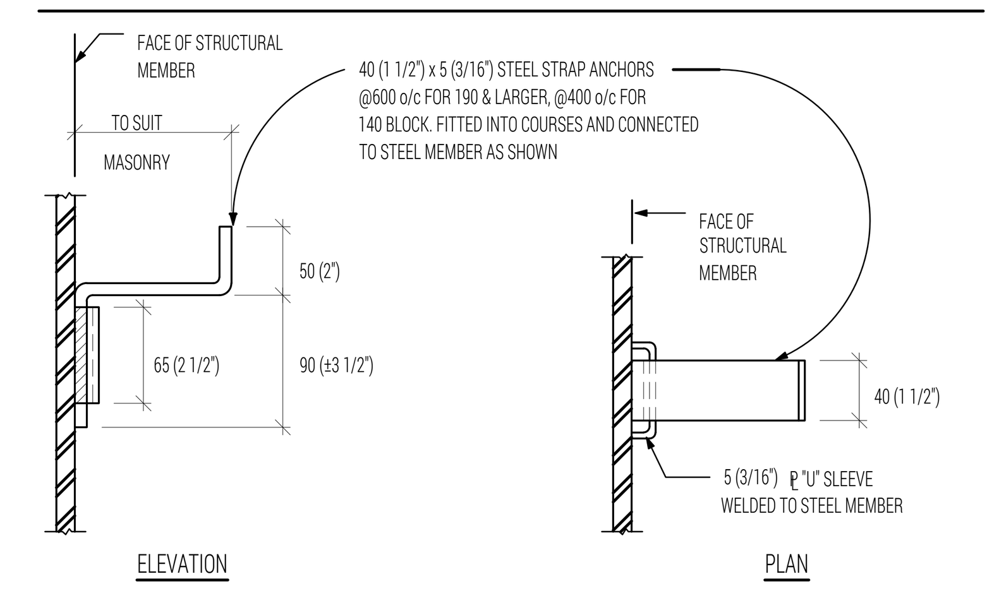
LATERAL SUPPORT AT TOP OF NON-LOADBEARING MASONRY WALLS



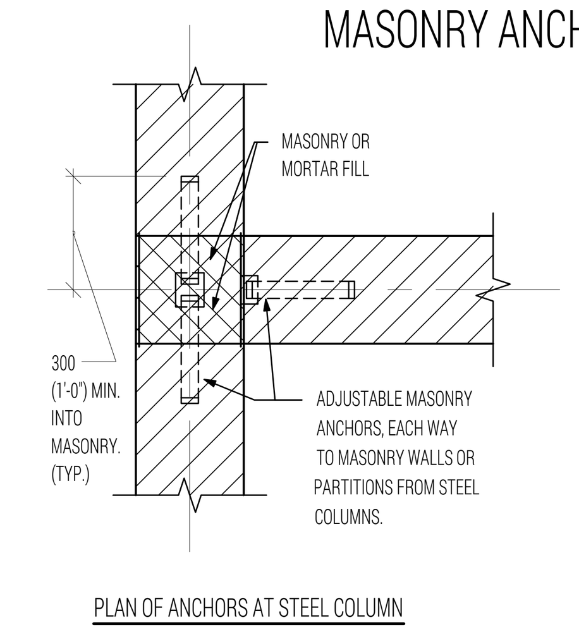
MASONRY WALL SIZES:	
BLOCK WIDTH	SPACING 'S'
90 BLOCK	800 (2'-8")
140 BLOCK	1200 (4'-0")
190 BLOCK OR LARGER	1500 (5'-0")

NOTE: RESTRAIN TOP OF WALLS PER SPECIFIC TRADE DETAILS IF FLOOR/ROOF FRAMING DIFFERS FROM SHOWN ABOVE

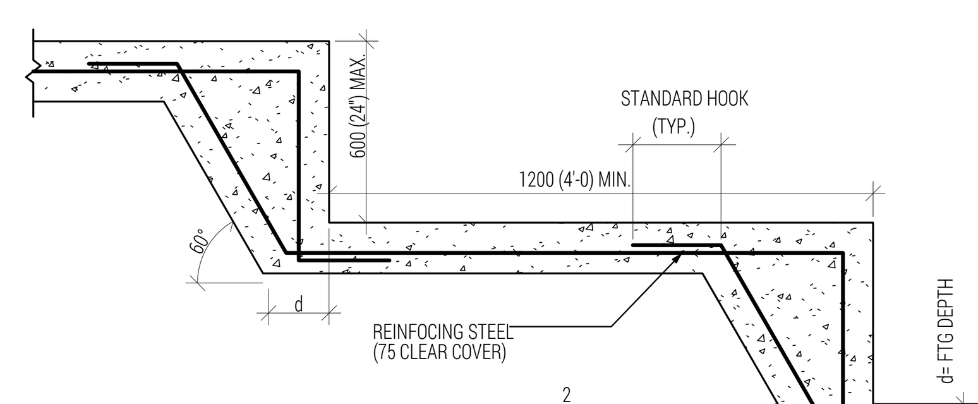
ADJUSTABLE MASONRY ANCHORS TO STRUCTURAL STEEL



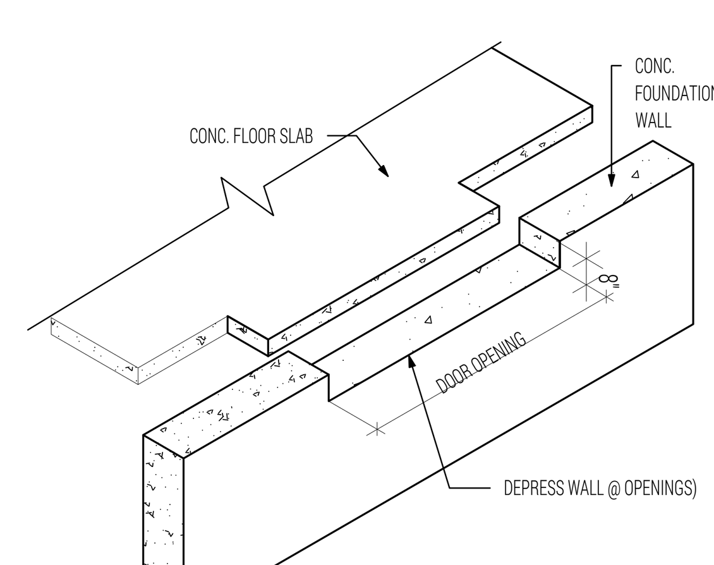
MASONRY ANCHOR DETAILS



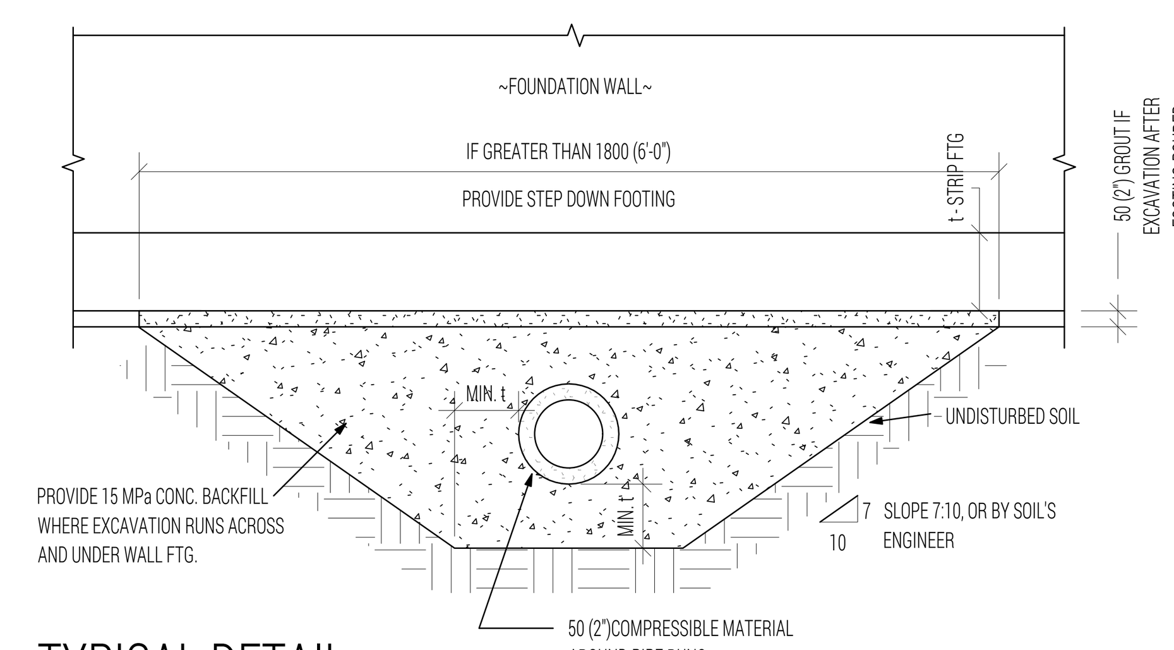
NOTE: ALTERNATIVE SUITABLE PROPRIETARY BRANDS OF ADJUSTABLE MASONRY ANCHORAGE MECHANISMS MAY BE APPROVED FOR USE, SUCH AS: BLOK-LOK COLUMN-LOK, MECHANISMS MAY BE APPROVED FOR USE, SUCH AS: BLOK-LOK COLUMN-LOK, BLOK-LOK TYPE C WITH BL304 TIES, OR BLOK-LOK TYPE `B' ANCHORS WITH BLT1 TIES. SUBMIT DETAILS FOR APPROVAL BEFORE PROCEEDING.



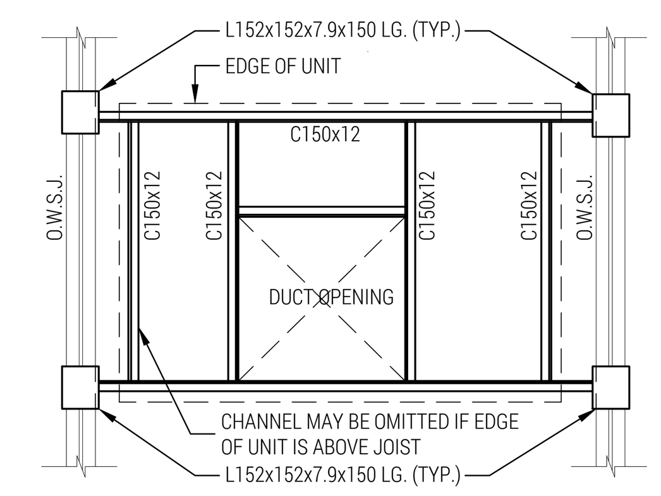
TYPICAL DETAIL
STEPPED DOWN STRIP FOOTING



TYPICAL DETAIL
FOUNDATION WALL DEPRESSION AT DOOR OPENING

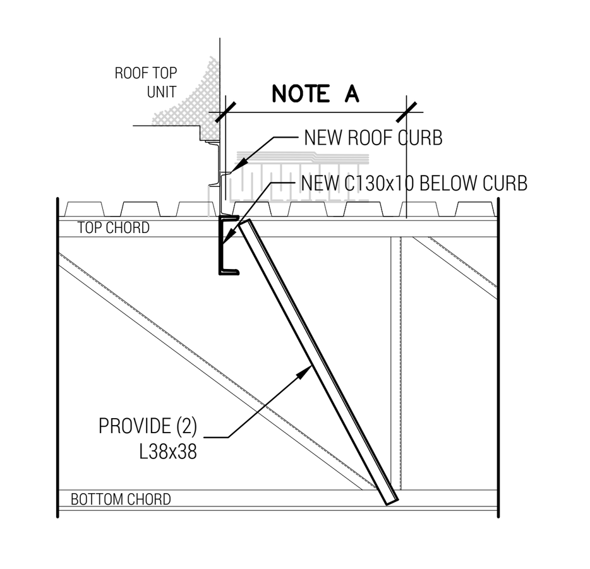


TYPICAL DETAIL
PIPE UNDER STRIP FOOTING



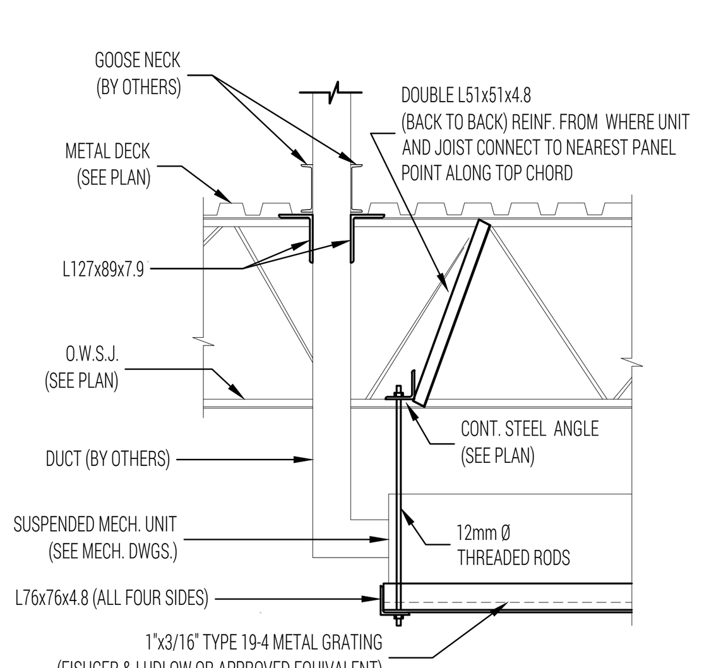
NOTES: STEEL JOIST MANUFACTURER TO ENSURE WEB OF JOIST IS SUITABLY DESIGNED AT PONT LOAD LOCATIONS AND INFORM CONTRACTOR IF ADDITIONAL STEEL ANGLE IS REQUIRED FOR WEB REINFORCING.

TYP. FRAMING PLAN DETAIL
FOR MECHANICAL UNITS ABOVE DECK AND FRAMING AROUND OPENINGS — N.T.S



NOTE A
PROVIDE (2) L38x38x5 (L1.5x1.5x3/16") DIAGONAL AT CHANNEL FRAMING IF NOT WITHIN 150mm (6") OF OWSJ PANEL POINT

TYP. SECTION DETAIL
JOIST REINFORCEMENT FOR CONCENTRATED LOAD — N.T.S



TYP. SECTION DETAIL
FOR UNITS SUSPENDED BELOW JOISTS — N.T.S

ISSUED FOR BUILDING PERMIT / TENDER	1	2023 - 11 - 24

DFE
DOYTCH & FILO ENGINEERING INC.
Structural Engineers
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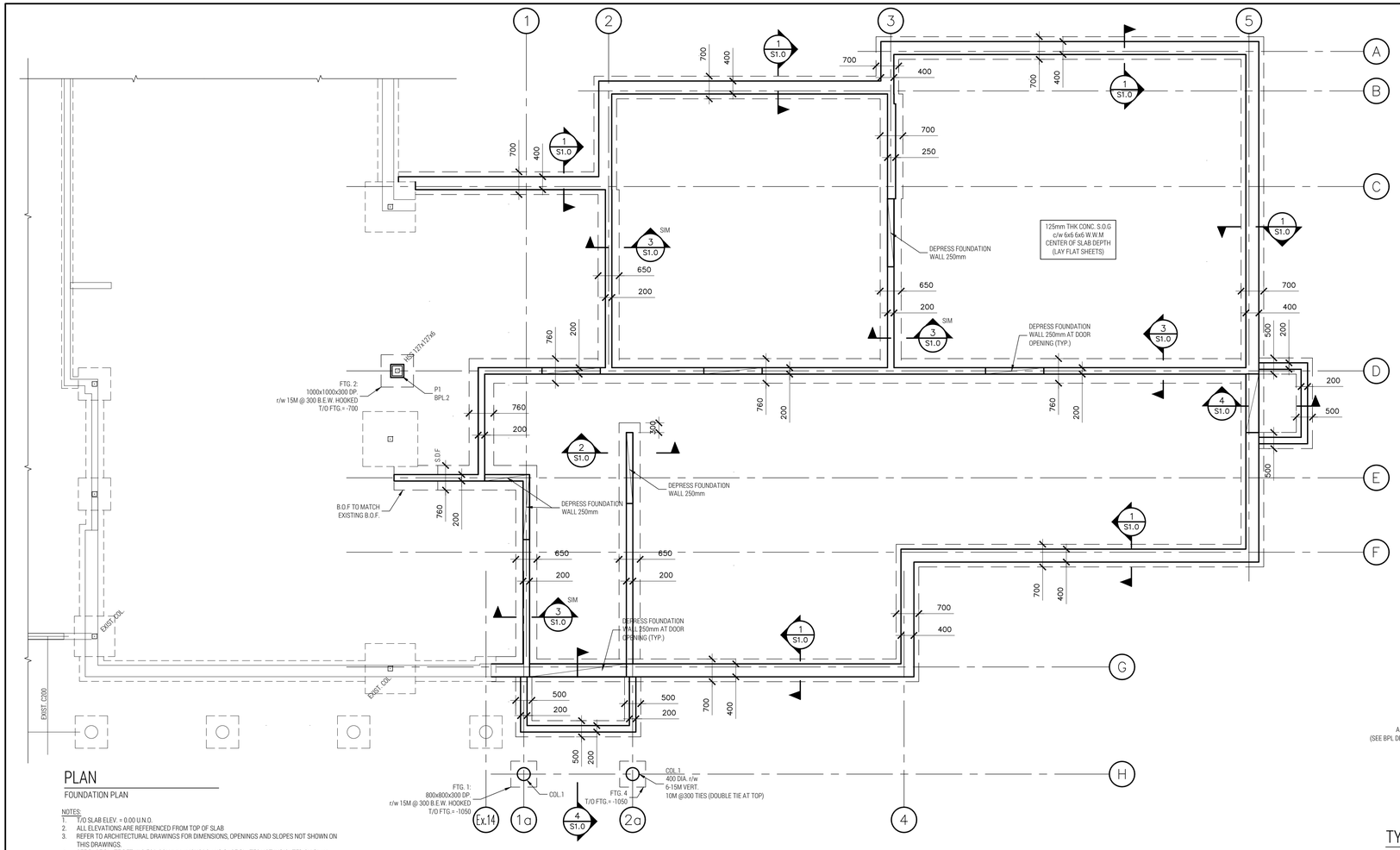
LICENSED PROFESSIONAL ENGINEER
T. N. DOYTCHEV
100113262
2023-11-16
PROVINCE OF ONTARIO

PROJECT
BANBURY ELEMENTARY SCHOOL CHILDCARE ADDITION
141 BANBURY RD., BRANTFORD, ON

DRAWING
TYPICAL DETAILS

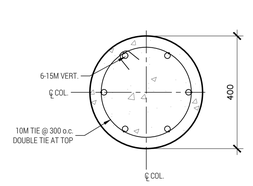
Design By:	TD/AF	Date:	2023-04-20
		Project No.:	22012501
Drawn By:	AF	Drawing No.:	S0.2
Scale:	AS NOTED		



PLAN

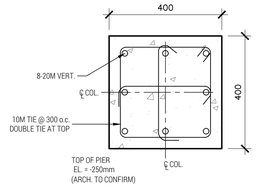
FOUNDATION PLAN

NOTES:
1. T/O SLAB ELEV. = 0.00 U.N.O.
2. ALL ELEVATIONS ARE REFERENCED FROM TOP OF SLAB
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, OPENINGS AND SLOPES NOT SHOWN ON THIS DRAWINGS.
4. SEE BASE PLATE DETAILS FOR COLUMN ANCHORS AND BASE PLATES NOT INDICATED ON PLAN.
5. ALL FOOTINGS ARE SYMMETRIC TO THE WALLS/COLUMNS U.N.O.



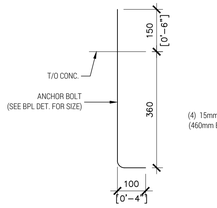
COLUMN "1" PLAN

1:10

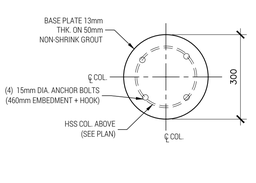


PIER "1" PLAN

1:10

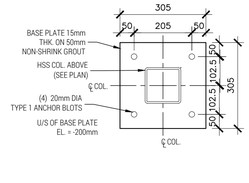


TYPE 1 ANCHOR BOLT



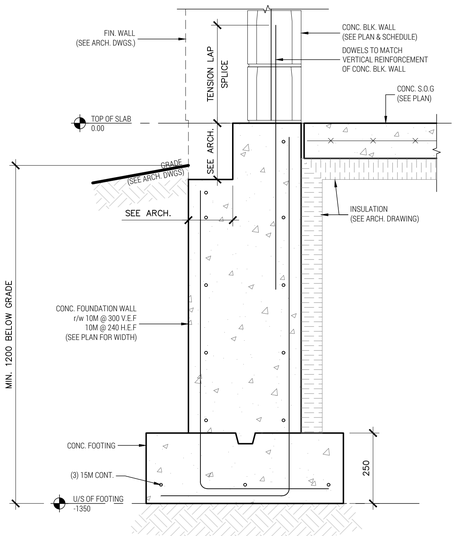
BASE PLATE 'BPL.1' PLAN

1:10



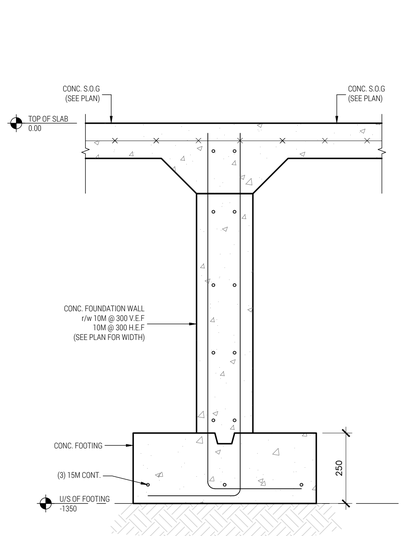
BASE PLATE 'BPL.2' PLAN

1:10



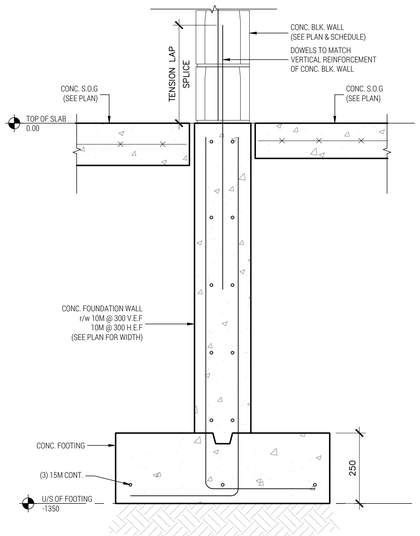
1 S1.0 SECTION

1:10



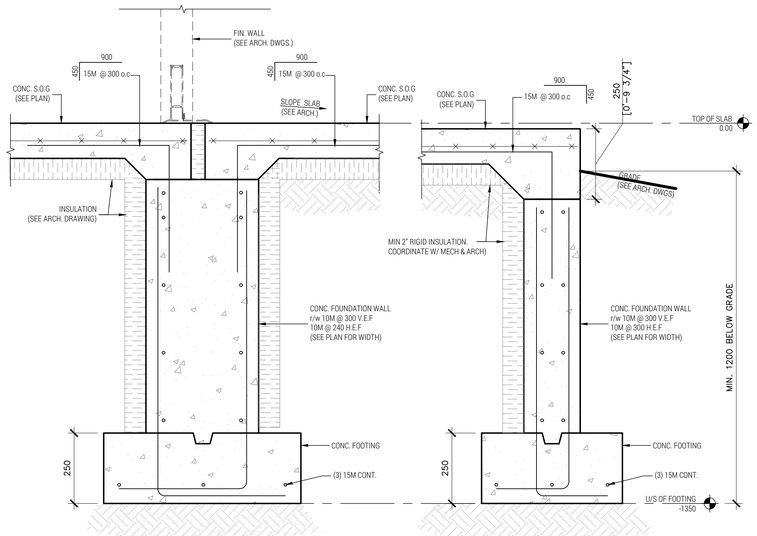
2 S1.0 SECTION

1:10



3 S1.0 SECTION

1:10



4 S1.0 SECTION

1:10

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ISSUED FOR BUILDING PERMIT / TENDER	1	2023 - 11 - 24

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PROJECT

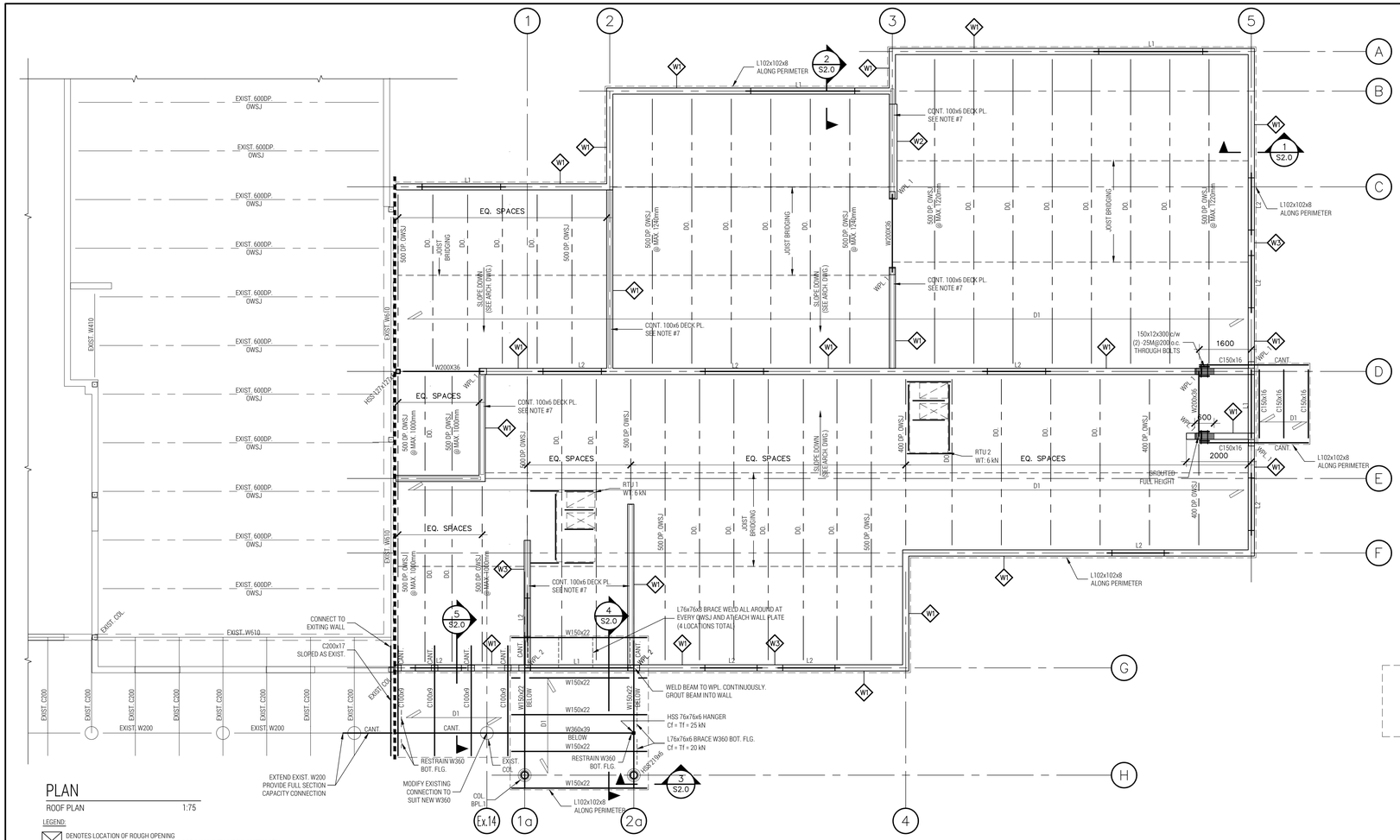
BANBURY ELEMENTARY SCHOOL
CHILDCARE ADDITION

141 BANBURY RD., BRANTFORD, ON

DRAWING

FOUNDATION PLANS, AND SECTIONS

Design By:	TD/AF	Date:	2023-04-20
		Project No.:	22012501
Drawn By:	AF	Drawing No.:	S1.0
Scale:	AS NOTED		



PLAN
ROOF PLAN 1:75

LEGEND:

DENOTES LOCATION OF ROUGH OPENING NOT SHOWN AND CO-ORDINATE ALL FLOOR OPENINGS WITH MECH. CONTRACTOR.

DENOTES LOCATION OF 40mm GAP (MOVEMENT JOINT)

DESIGN LOADS:
ROOF DEAD LOAD = 1.72 kPa
ROOF SNOW LOAD = 1.66kPa + SNOW ACCUMULATION (REFER TO DWG S0.1)
REFER TO MECHANICAL DRAWINGS FOR ROOF TOP UNIT WEIGHTS AND LOCATIONS.

NOTES:

1. LOW POINT LINE ALONG GL. "C" u/s ROOF DECK EL.= +3755 (SEE ARCH. DWGS.)
2. ELEVATIONS ON PLAN ARE REFERENCED FROM u/s ROOF DECK.
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, OPENINGS AND SLOPES NOT SHOWN ON THIS DRAWINGS.
4. SEE BASE PLATE DETAILS FOR COLUMN ANCHORS AND BASE PLATES NOT INDICATED ON PLAN.
5. LOCATION OF MECHANICAL EQUIPMENT AND MECHANICAL EQUIPMENT LOADS ARE TO BE CONFIRMED BY MECHANICAL CONTRACTOR BEFORE STRUCTURAL STEEL IS FABRICATED. REFER TO MECHANICAL DRAWINGS. MECHANICAL EQUIPMENT AND PIPING MUST BE HUNG FROM O.W.S.J. PANEL POINTS.
6. FRAME ALL ROOF OPENINGS AND MECHANICAL UNITS AS SHOWN ON TYPICAL DETAIL U.N.O.
7. CONTINUOUS DECK PLATES ARE COMPLETED WITH 16 DIA. ANCHORS 300 LONG + 50 HOOK AT 600 o.c. FILL TOP 2 BLOCK COURSES SOLID AT ANCHOR LOCATIONS AND TOP COURSE SOLID FULL LENGTH AT DECK PLATE.

ALL INTERIOR NON-LOAD CONCRETE BLOCK WALL TO BE W4 (SEE CONCRETE BLOCK WALL SCHEDULE)

D1 - 38x0.76mm LZC 'RD938 VICWEST' METAL DECK (3-SPAN CONT.)

CONCRETE BLOCK WALL SCHEDULE

MARK	DESCRIPTION
W1 (ALL LOAD BEARING U.N.O.)	- 190mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 800 VERT. - HEAVY DUTY BLOCK-LOK TRUSS / LADDER AT EVERY SECOND COURSE
W2 (LOAD BEARING)	- 240mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 600 VERT. - HEAVY DUTY BLOCK-LOK TRUSS / LADDER AT EVERY SECOND COURSE
W3 (LOAD BEARING)	- 190mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 20M @ 200 VERT. - HEAVY DUTY BLOCK-LOK TRUSS / LADDER AT EVERY SECOND COURSE
W4 (NON-LOAD BEARING) NOT SHOWN	- 190mm CONC. BLOCK OR 240mm CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa - 10M @ 1000 VERT. - HEAVY DUTY BLOCK-LOK TRUSS / LADDER AT EVERY SECOND COURSE

NOTES:
1. FULLY GROUT ALL REINFORCED CORES.
2. ALL WALLS NOTED FULLY GROUTED ARE TO BE 100% FILLED WITH GROUT.
3. CO-ORDINATE ALL WALL OPENINGS WITH ARCH. DWGS. AND MECHANICAL CONTRACTOR.
4. PROVIDE ADDITIONAL BAR/ MATCHING WALL REINF. SIZE, FULL HEIGHT @ ALL WALL ENDS. INTERSECTIONS AND OPENINGS UNLESS OTHERWISE NOTED ON DRAWINGS.
5. PROVIDE STANDARD TENSION SPLICES FOR ALL HORIZONTAL AND VERTICAL WALL REINFORCEMENT.
6. ALL BARS CONNECTING BETWEEN FLOORS TO BE TIED TOGETHER (REFER TO SECTION DETAILS).
7. SOLID FILLED VOIDS TO BE MADE WITH 20MPa FLOWABLE GROUT (MORTAR FILL NOT PERMITTED).
8. PROVIDE DOWELS FROM THE FOOTING TO WALLS ABOVE TO MATCH VERTICAL WALL REINFORCEMENT.

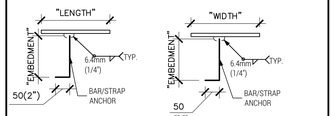
LINTEL SCHEDULE

MARK	SIZE	BEARING	DETAIL
L1	HSS 203x152x10 LSV + 10 mm PL	W PL 180 x 12 x 200 c/w 2-15M ROD 300" LG.	WELD WALL REINF. TO LINTEL
L2	W200x36	W PL 180 x 12 x 200 c/w 2-15M ROD 300" LG.	WELD WALL REINF. TO LINTEL

WALL PLATE SCHED.

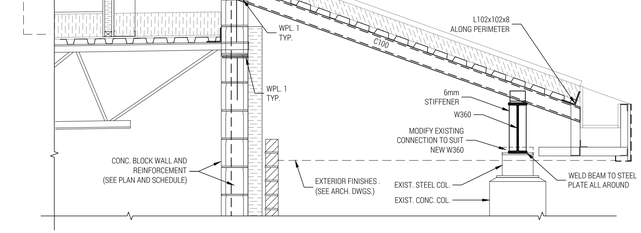
MARK	DESCRIPTION
WPL.1	180 x 10 x 200 c/w (2) 15mmØ x 300 EMBEDMENT ANCHOR ROD FULLY GROUT (2) MASONRY COURSES 600mm LG. (SEE GENERAL NOTES)
WPL.2	180 x 12 x 360 c/w (4) 15M x 600 EMBEDMENT ANCHOR ROD FULLY GROUT CELLS BELOW
WPL.3	-

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) 6.4mmx40mm LG. FILLET WELDS (EACH SIDE)

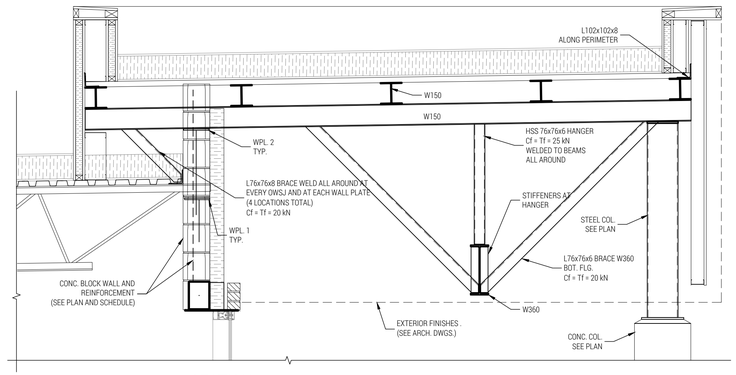


TYP. ELEVATION DETAIL @ WALL PLATE (N.T.S.)

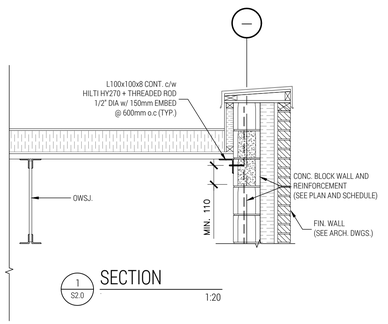
TYP. SECTION DETAIL @ CONT. WELD PLATE (N.T.S.)



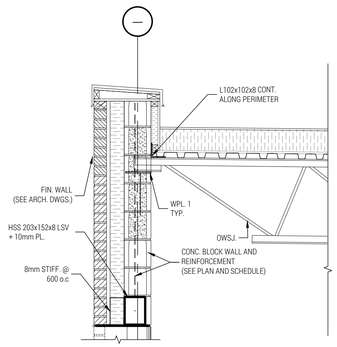
5 S2.0 SECTION 1:20



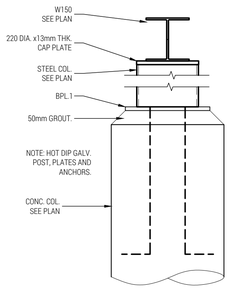
4 S2.0 SECTION 1:20



1 S2.0 SECTION 1:20



2 S2.0 SECTION 1:20



3 S2.0 SECTION 1:10

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.

THE OWNER/ARCHITECT/CONTRACTOR IS ADVISED THAT D.F.ENGINEERING INC. CANNOT CERTIFY ANY COMPONENT OF THE SITE WORKS NOT INSPECTED DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY D.F.ENGINEERING INC. PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR INSPECTION.

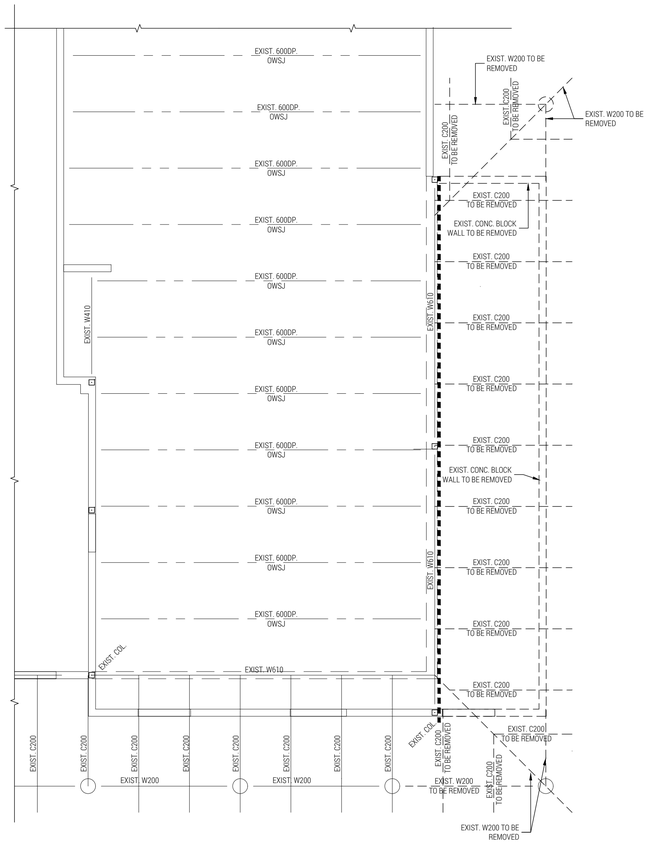
ISSUED FOR BUILDING PERMIT / TENDER	1	2023 - 11 - 24

DOYTCH & FILO ENGINEERING INC.
Structural Engineers
LICENCED PROFESSIONAL ENGINEER T. N. DOYTCHEV 100113282 2023-11-16 PROVINCE OF ONTARIO
Phones: (647) 836-4805 ; (905) 719-1482

PROJECT
BANBURY ELEMENTARY SCHOOL
CHILDCARE ADDITION
141 BANBURY RD., BRANTFORD, ON

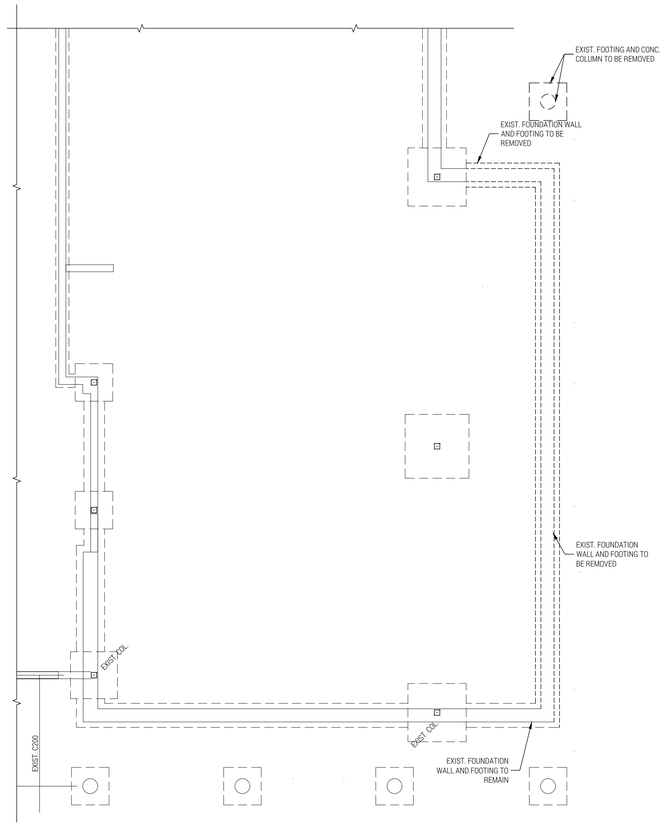
DRAWING
ROOF FRAMING PLANS, SCHEDULES, AND DETAILS

Design By:	TD/AF	Date:	2023-04-20
		Project No.:	22012501
Drawn By:	AF	Drawing No.:	S2.0
Scale:	AS NOTED		



PLAN

ROOF DEMO. PLAN 1:75



PLAN

FOUNDATION DEMO. PLAN

NOTE TO CONTRACTOR:

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ISSUED FOR BUILDING PERMIT / TENDER	1	2023 - 11 - 24

DFE
DOYTCH & FILO ENGINEERING INC.
Structural Engineers

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T. N. DOYTCHEV
100113262
2023-11-16
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PROJECT

BANBURY ELEMENTARY SCHOOL
CHILDCARE ADDITION

141 BANBURY RD., BRANTFORD, ON

DRAWING

DEMOLITION PLANS

Design By:	TD/AF	Date:	2023-04-20
		Project No.:	22012501
Drawn By:	AF	Drawing No.:	S3.0
Scale:	AS NOTED		