PROPOSED ADDITION OF INDUSTRIAL WAREHOUSE BUILDING
10533 KEELE STREET, VAUGHAN, ONTARIO

GENERAL NOTES:

1. All structural design and construction to be in accordance with the Ontario Building Code and references standards noted below including amendments. This includes elements designed by others such as miscellaneous metals, wall cladding, glazing,steel connection etc.
   All reinforced concrete design to **CSA-A23.3-19**
   All masonry design to **CSA-S304-14**
   All steel design to **CAN/CSA-S16-19**
   All light gauge steel to **CAN/CSA-S136-16**
   All wood design to **CAN/CSA-O86-19**
2. All means, methods, sequences and techniques of construction are the responsibility of the General Contractor.
3. The stability of the structure during construction is the complete responsibility of the General Contractor.
4. Prior to tender, all Contractors shall familiarize themselves with all contract documents and shall visit the site as required to ensure that the extent of the work is understood. THERE WILL NO EXTRAS ALLOWED DUE TO CONTRACTORS MIS-UNDERSTANDING THE EXTENT OF THE WORK.
5. All dimensions given and details shown on structural drawings must be site checked and co-ordinated with all consultant drawings and specifications. Report any inconsistencies to the Architect or Engineer before proceeding with the work. If discrepancies exist on the drawings which are not brought to the attention of the Architect or Engineer prior to construction, these will be interpreted by the Architect or Engineer and extras may not be allowed.
6. The structural drawings shall be read with the Architectural drawings and other contract documents. See other contract documents for location and dimensions of pits, bases, sumps, trenches, depressions, grooves, chamfers, etc., which may be required and are not shown of the structural drawings.
7. Structural drawings are not to be scaled.

FOUNDATION NOTES:

1. Refer to concrete notes for strength, air, etc. of concrete.
2. All foundation design based on geotechnical investigation by **GHD DATED ON APRIL 24, 2024.**
3. All foundations shall be placed on native material or engineered fill with the following minimum bearing capacities and surface frictions:

DESCRIPTION	SLS	ULS	SURFACE FRICTION
CONC. STRIP FOOTINGS & SPREAD FOOTINGS	160 kPa	200 kPa	

4. All bearing pressures shall be site verified by a qualified geotechnical engineer prior to concreting.
5. A representative of the Soils Inspection Company shall be present on site during the excavation and concreting of footings. Proper logsare to be kept of the soil conditions encountered, including bearing pressures, date, lengths, cut-off elevations, concrete data, etc.
6. Backfilling shall proceed against both sides of foundation walls simultaneously.If grade differential exists between finished grade and finished floor, provide temporary shoring to support wall until floor slab is in place.
7. All exterior foundations shall extend a minimum of 1200 mm below finished grade for frost protection. Step footings where required to maintain this condition or to meet elevations of adjacent footings. Stepped footings shall be 2 horiz: 1 vert.
8. It is the responsibility of the contractor to maintain frost protection during construction.
9. Excavations to depth of more than 1700 mm below grade are to be cut back at a slope of 3(H):1(V) or as specified by the soil engineer. Alternatively, support of excavation may be acheived using adequately braced sheeting.
10. A vibrator is to be used for all structural concrete and for all concrete which will remain exposed. This includes all foundations and foundation walls.
11. All foundation walls not exposed, including cap walls on trench footings, to have vertical control joints at 9000mm (30'-0") c/c. Exposed foundation walls to have vertical control joints at 7500mm c/c.
12. Provide 6mm polly for all bond breaks in trench footings.
13. Provide shop dwgs of control jnt location in fnd walls for approval prior to construction.
14. Trench footings are to be cast immediately after excavation and cleaning.

CONCRETE NOTES:

1. All concrete shall be 25 MPa at 28 days U.N.O. All reinforcing steel shall be deformed bars with a yield of 400 MPa (U.N.O.) meeting the requirements of CSA G30.18.
2. Maximum slump of concrete shall be 75mm unless otherwise noted or approved by the Engineer. Admixtures may be used in concrete, but advice as to type and purpose must be given to the Engineer prior to placing concrete.
3. Max. water/cement material ratio = 0.55.
4. Provide 5% to 7% air entrainment for all exterior concrete. If concrete is to be vibrated, consult the concrete supplier for guidance regarding initial air entrainment.
5. Grout under all base plates and wall plates shall be M-Bed by Sika or approved equal w/MIN strength of 50 MPa @ 28 days.
6. **COMPRESSIVE STRENGTH OF CONCRETE @ 28 DAYS:**

FOUNDATION WALLS (UNEXPOSED)	25 MPa	CLASS N
FOUNDATION WALLS (EXPOSED)	25 MPa	CLASS F-2
INTERIOR SLAB-ON-GRADE (Not exposed to freezing, thawing & de-icing chemicals)	25 MPa	CLASS N - CF
EXTERIOR SLAB-ON-GRADE, STEPS & PAVEMENT	32 MPa	CLASS C2
TRENCH, SPREAD & AUGURED FOOTINGS.	25 MPa	CLASS N
CONCRETE ON METAL DECK	25 MPa	CLASS N

7. Apply grey sealant Eucolastic 1SL by Euclid or 2C/2L by Sika with primer as recommended by the manufacturer.

CONCRETE SLAB-ON-GRADE NOTES:

1. All concrete for slabs on grade shall be 30 MPa at 28 days unless otherwise noted or approved.
2. Base course under slab shall be **GRANULAR B**. Compact base course as shown.

SLAB ON GRADE			GRANULAR BASE	
LOCATION	THICKNESS	REINFORCING	THICKNESS	COMPACTION
GROUND FLR.	152mm	SEE PLAN	254mm	100% SPMDD

3. Provide wet curing for all concrete slabs on grade for minimum of 7 (seven) days after placing concrete. Alternatively, a cure/seal compound may be used if prior approval is secured from the Engineer. Do not use chemical sealers where tile is to be installed.
4. If moist curing or cure seal compound is not applied as directed, the contractor shall be held responsible for any and all failures of the slab regardless of how these failures may be caused.
5. Provide sawcuts to all unreinforced slabs on grade to a minimum depth of 1/3 slab thickness or 38mm whichever is greater. Sawcuts are to be spaced at not more than 30 X slab thickness in any direction.
6. Provide a sawcut at not more than 2500 mm from any wall into which the slab is doweled, or from any potential point of restraint.
7. Sawcutting is to be carried out as soon as possible after the slabs are placed and ravelling of the cut edges is prevented. This is generally within 24 hrs. of placing the concrete.
8. Sawcuts are to be filled w/ load flex by SIKA, Euco QwikJoint UVR by Euclid or equal product with a minimum shore A hardness of 80 and Shore D hardness of 50.
9. FLOOR TO BE FINISHED TO A FLATNESS AND LEVELNESS OF FF35 and FL25 using laser screed
10. Pipes conduits etc not to be cast horizontaly in slab.
11. Provide 6mm poly vapour barrier under slab in all office areas.
12. Super P conforming to ASTM C494, TYPE A or F, may be added to concrete as directed by the concrete supplier.

REINFORCING STEEL NOTES:

1. All reinforcing to be deformed bars conforming to C.S.A. G30.18 Grade 400 unless noted otherwise.
   Alternative Reinforcement Option:
   a.) Reinforcement System Configuration to meet the requirements of **NCHRP 350.**
   b.) Reinforcing shall be **Glass Fibre Reinforced Polymer (GFRP) GRADE III.**
2. All reinforcing shall be accurately placed and supported by continuous metal or otherwise approved chairs. If required, additional bars or stirrups shall be provided by the contractor, at no cost, to secure main bars against displacement.
3. Reinforcing in footings, slabs on grade and other concrete members exposed to weather shall be supported in the designated position by solid pre-cast
4. **Minimum concrete cover for reinforcing:**
   a. Footings and other elements poured against earth ..... 75mm (3")
   b. Concrete poured in forms, but exposed to weather or earth:
      Bars Larger than 15M ..... 50mm (2")
      Bars 15M and smaller ..... 40mm (1 1/2")
   c. Concrete not exposed to earth or weather:
      Slabs and walls ..... 25mm (1")
      Beams & Girders ..... 40mm (1 1/2")
      Columns main steel ..... 50mm (2")
5. Splices at points of maximum tensile stress shall be avoided wherever possible. Such splices where used, shall be approved by the Engineer. Minimum lap shall be 36 bar DIA..
6. Continuous and temperature reinforcing bars shall be tension lap spliced at splice locations or at corners. Terminate continuous bars at non-continuous ends with standard hook.
7. Minimum clear distance between parallel bars shall be greater than the largest of the following:
   a. 1.5 times bar diameter
   b. 1.33 times maximum size of aggregate
   c. 25mm (1") minimum.

MASONRY NOTES:

1.0 Provide lintels as specified over all openings in masonry walls as shown or as required. See Arch. and Mechanical drawings for sizes and locations of openings and recesses. Where lintels are not shown, provide lintels in accordance with the standard schedule.

2.0 Lintels shall bear completely on solid concrete block wythe.

3.0 Concrete or steel beams bearing on masonry walls shall have a minimum of 200mm horizontal bearing on minimum of 400mm vertical of solid masonry. Concrete slabs shall have a minimum of 200mm bearing horizontal on minimum of 400mm vertical of solid masonry.

4.0 All intersecting masonry walls to have masonry bond or heavy-duty Blok-Lok (or equal) masonry reinforcing at maximum of 400mm c/c. vertically.

5.0 Mortar for masonry walls shall be type 'M' or 'S' as defined in **CSA Standard A179-14**. Mortar may be premixed conforming to the above specification.

6.0 All masonry shall be reinforced with Blok-Lok masonry reinforcing placed horizontally in the joints at not more than 400mm c/c vertically, unless otherwise noted or approved. For combination brick and block use adjustable Econo-Lok BL40 or BL20.

7.0 All collar and head joints shall be completely filled with mortar.

8.0 All reinforcing referred to is by Blok-Lok Limited or equal.

9.0 All inserts for masonry including metal ties, shall be Hot-dipped galvan-ized to minimum standard ASTM A153 Class B2 (458 g/s.m.). All galvanizing shall be done after fabrication.

10.0 All concrete block shall have a minimum ultimate compressive strength of 15.0 MPa based on the net area.

11.0 Provide vertical masonry control joints a maximum spacing of 2 times the wall height or 6000 mm whichever is less. See also Architectural drawings for special requirements. Place control joints at edges for windows or doors where possible or feasible.

12.0 Only Concave or Vee tooled joints are permissible for load-bearing masonry unless otherwise approved by the Engineer.

13.0 Reinforced masonry walls where shown or detailed on the drawings, shall be reinforced as shown. Grout for reinforced masonry walls shall be 15 MPa 'pea gravel' concrete with slump of 250mm. Vibrate or 'rod' grout to ensure that all voids are filled and reinforcing is fully encased.

14.0 Grouting shall be done in low lifts unless otherwise approved by the Engineer.

15.0 Reinforcing shall be placed in the center of the block unless indicated otherwise.

16.0 Reinforcing shall be new hi-bond deformed bars with minimum Fy=400 MPa (60 ksi). Minimum lap for reinforcing shall be 24 bar DIA.'s.

17.0 All design of masonry and related components shall shall conform to **CSA STANDARD CSA-S304.1-14**, including all revisions thereto. All Masonry Construction shall conform to **CSA Standard A371-14**, including all revisions thereto.

18.0 All connectors for masonry shall conform to **CSA Standard A370-14.**

STRUCTURAL STEEL NOTES:

1.1. All structural steel (except joists) shall be to CSA Specification G40.21-M350W.

WIDE FLANGE STEEL	G40.21-M350W
ANGLES, PLATES AND CHANNELS	G40.21-M300W
HOLLOW STRUCTURAL SECTIONS (HSS)	G40.21-CLASS C (U.N.O).

STEEL SPECIFICATIONS FOR JOISTS MAY VARY AT THE DISCRETION OF SUPPLIER

1.2. All structural steel shall be fabricated and erected to the requirements of **CSA STANDARD CAN/CSA-S16-19**, latest revised edition.

2.0 Provide minimum bearing of 200mm for all steel beams bearing on masonry,and 150mm for all joists bearing on masonry, unless otherwise detailed or approved.

3.0 Provide minimum bearing of 100mm for all steel beams bearing on structural steel and 65mm for all joists bearing on structural steel unless otherwise detailed or approved.

4.0 All bearing plates are to be centered under beams or joists unless otherwise detailed.

5.0 No structural steel shall be cut or altered in the field without the written approval of the Structural Engineer. Any work undertaken without this approval may be rejected or require additional reinforcing at the sole discretion of the Engineer.

6.0 Provide 16mm thick stiffeners to each side of beam webs over WF columns where beams are continuous over columns and where masonry abuts a column or beam. Provide 6.4mm bearing stiffeners over each flange of HSS columns where beams are continuous over.

7.1 Provide masonry anchors not less than 4 mm x 37 mm (3/16" x 1 1/2") at the top of all masonry walls at a maximum spacing of 2000mm (6'-6") c/c. and at all columns at a maximum spacing of 610mm c/c. (2'-0").

7.2 Provide masonry anchors to all interior columns as required above. If masonry anchors are not present where required, the structural steel contractor shall install same in the field at no cost to the owner.

8.1 Open web steel joists shall be designed, fabricated and installed in accordance with the above mentioned CSA Standard and with the Ontario Building Code, and shall be complete with bridging, anchorage, camber, etc., in accordance with this Standard. Provide extra bridging, if required, to ensure that bottom chords are stable under conditions of uplift due to wind.

8.2 All joists shall be designed by the joist supplier. All detail drawings and design sheets shall bear the Seal and Signature of a Professional Engineer Registered to practice in Ontario. Provide one copy of design sheets to the Engineer for record purposes only.

8.3 Unless otherwise approved, design all joists which run parallel in any bay and in all adjacent bays, so that web diagonals are aligned to allow passage of piping, conduit, etc. Deviations from this requirement will be allowed if coordinated with the General Contractor and approved in writing. See sprinkler and mechanical dwg's for bridging and web spacing requirements.

9.0 All joist shoes shall be 102 mm unless otherwise noted.

10.0 All connections shall be made with 20mm (3/4") DIA. A325 bolts. Shop connections may be welded. Joist connections to steel beams shall be welded unless reduction in top flange area due to bolted connection < 15%.

11.0 Anchor rods embedded in concrete may be G40.21 300W.

12.0 All structural steel shall receive one shop coat and field touchup of approved primer paint.

13.0 Provide pdf of all shop drawings for review by the Engineer prior to commencing fabrication of structural steel. Drawings in excess of the above number will be discarded or may not be marked. Any work carried out prior to receipt of the reviewed drawings by the contractor shall be done solely at the contractors own risk.

14.0 Provide dimensions in SI units on all erection drawings and detail drawings unless otherwise agreed upon by the Architect and Engineer.

15.0 All exposed, exterior steel & connections must be galvanised & galvafroid.

OPEN-WEB-STEEL-JOIST NOTES:

1. CONFORM TO CSA S16 AND CSA S136.
2. MATERIALS: TO CSA G40.21 OR ASTM A500.
3. DESIGN STEEL JOISTS FOR THE LOADS AND STIFFNESSES DESCRIBED ON THE STRUCTURAL DRAWINGS. IN ADDITION, DESIGN TOP AND BOTTOM JOIST CHORDS FOR 1.5 kN POINT LOAD APPLIED ANYWHERE ALONG THEIR LENGTH (UNLESS HIGHER LOAD IS INDICATED ON DRAWINGS). SEE PLAN FOR OTHER POINT LOADS, WALL LOADS, AND MECHANICAL LOADS.
4. DO NOT MODIFY STEEL JOISTS ON SITE.
5. ANCHOR BRIDGING TO FRAMING MEMBERS AND SUPPORTS AS PER TYPICAL DETAILS.
6. PROVIDE TIE JOISTS ("T.J.") AT COLUMNS FOR JOIST ERECTION STABILITY. BOTTOM CHORD ATTACHMENT MUST NOT INDUCE AXIAL LOAD IN JOIST.
7. SPECIAL JOISTS MARKED ("T.J.A.") CARRY AXIAL LOADS INDICATED ON PLANS. DESIGN AND CONNECT ACCORDINGLY.
8. WHEN SUSPENDING VERT. LOADS FROM TOP OR BOTTOM JOIST CHORDS, DISTRIBUTE HANGERS UNIFORMLY ALONG JOISTS. DO NOT CAUSE TWISTING OF JOISTS OR JOIST CHORDS. EXTEND HANGER RODS BETWEEN DOUBLE ANGLE CHORDS WHERE POSSIBLE; OTHERWISE ATTACH USING ONLY CLAMPS OR U-BOLTS IF THE APPLIED LOAD IS MORE THAN 1.5 kN, LOCATE SUSPENSION POINT NOT MORE THAN 100 (4") FROM JOIST PANEL POINT.
9. WHERE SEISMIC RESTRAINTS ARE REQUIRED FOR NON-STRUCTURAL ELEMENTS, APPLY LOADS IN THE PLANE OF THE JOISTS, AND DO NOT EXCEED 1.5 kN. DO NOT APPLY CONCENTRATED MOMENTS.
10. DO NOT APPLY LATERAL LOADS TO ANY JOISTS.

METAL DECK NOTES:

1.0 Metal deck shall be type P-3615 or P-3606 by CANAM or approved equal and shall be of sufficient thickness to support loading shown over spans indicated on drawings. Minimum material thickness shall be **0.76 (22 gauge) mm**. **(UNLESS NOTED OTHERWISE REFER TO ROOF FRAMING PLAN ON DWG. S5.)**

2.0 Metal decking shall be formed from zinc coated (ZF075) steel conforming to ASTM specification A653, Grade 'A' (latest revision). Zinc coating shall be as per CCSBI standard for Zinc Coated Sheet for Structural Building Products.

3.0 Where possible, all deck sheets shall span over 2 or more spans.

4.0 All metal deck shall be fastened to its supports by 20mm (3/4") DIA. fusion welds spaced as required for diaphragm loads shown on plans. The complete design of the deck & attachment to supports is the responsibility of the deck supplier. **(REFER TO DRAWING S5)**

5.0 The deck erector shall cut all openings in the metal deck and shall supply and install reinforcing as required for all openings in the deck up to 450mm DIA. or square. Openings larger than 450mm (18") DIA. shall be cut by the deck installer but reinforced by the Structural Steel Contractor.

7.0 Provide planking over metal deck during roofing or other operations to avoid damage to the metal deck. All damaged deck sheets shall be replaced immediately at no expense to the owner.

8.0 Deck supplier provide heavy gauge closer plate & trim support around columns as req'd.

9.0 Design roof deck for shear loads noted in plans

METAL STUD WALL NOTES:

1. SIZE & SPACING OF STUDS SHALL BE AS SHOWN ON DRAWINGS OR TO BE DESIGNED BY STUD SUPPLIER.
2. ERECTION, BRIDGING AND SHEATHING SHALL CONFIRM TO MANUFACTURER'S SPECIFICATIONS.
3. SUBMIT SHOP DRAWINGS PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL.
4. CONNECTION OF STUDS TO STEEL TO BE DESIGNED BY STUD SUPPLIER.
5. STUDS INSTALLATION TO BE INSPECTED BY STUD SUPPLIER. CERTIFICATION LETTER FOR STUD INSTALLATION TO BE SUBMITTED STAMPED BY P. ENG.

WALL PANEL NOTES:

1. Metal siding to be designed for interior or exterior wind pressure in conformance with the latest O.B.C. and structural commentaries.
2. It is the responsibility of the metal siding supplier to design panels to span between supports shown on structural drawings.
3. All panel to panel connections are to designed and supplied by metal siding suppler unless otherwise noted or shown on drawings.
4. Additional support such as cold form clips & hat sections, spacers, sag rods etc. not specified on structural drawings are to be designed and supplied by metal siding supplier.

CONCRETE FORMWORKS & FALSEWORK NOTES:

1. General Contractor to assume full responsibility for complete design and engineering of formwork including shorings, bracings, stripping and re-shoring.
2. All formwork and falsework shall be designed and supervised by a Registered Professional Engineer. Submit detail shop drawings stamped and signed by the Engineer, showing all pertinent information including removal of formwork and reshoring procedures.
3. Leave open one side of forms for the following structural units until all reinforcing steel is secured in place, reviewed and accepted by the Engineer's representative:
   a.) All Columns
   b.) Walls or deep beams containing heavy or complicated reinforcing.
4. Location and details for construction joints not shown on drawings shall be subject to Engineer's approval. Submit shop drawings for approval prior to construction.
5. Form openings in walls and slabs as shown on the drawings. Formed openings not shown but otherwise required shall be provided by the formwork contractor and be approved by the Engineer and Architect prior to proceeding with the work.
6. No sleeves, ducts, pipes or other openings shall pass through joists, beams or columns except where indicated or detailed on the structural drawings, or where approved by the Engineer.

BACKFILLING NOTES:

1. **BACKFILLING TO BE PROVIDED AS PER SOIL CONSULTANT RECOMENDATIONS.**
2. **AT GRADE WALL CONDITION BACKFILL EACH SIDE AF WALL SIMULTANEOUSLY.**
3. **ALL VERTICAL ELEMENTS SHOULD BE BRACED BY SLAB ON GRADE & CONCRETE SLAB ABOVE OR TEMPORARY SHORING BEFORE BACKFILLING.**

RENOVATION NOTES:

1. CONTRACTOR SHOULD VISIT THE SITE BEFORE SUBMITTING PRICE AND SHOULD CHECK EXISTING CONDITIONS, DIMENSIONS, LOCATION OF MECHANICAL EQUIPMENT, CONDUITS, PIPES (INCLUDING UNDERGROUND) ETC.
2. CONTRACTOR MUST ADVISE THE STRUCTURAL ENGINEER IN CASE OF ANY INTERFERENCE OF THE NEW AND EXISTING STRUCTURAL, AND IN CASE IF THE EXISTING STRUCTURAL SHOWN ON THIS PROJECT DO NOT AGREE WITH EXISTING AS-BUILT STRUCTURES ON SITE.
3. CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY SHORING TO SUPPORT THE EXISTING STRUCTURE UNTIL INSTALLATION OF NEW STRUCTURE MEMBERS ARE COMPLETED.
4. SHORING TO BE DESIGNED, SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

INSPECTION AND TESTING NOTES:

1. Inspections are to be carried out by an Independent Testing and Inspection company for the following work:
   a) Prior to placing concrete for foundations, for soil at founding elevation and for bearing value.
   b). Strength tests for concrete for footings, walls, slabs, etc., as required by the Ontario Building Code.
   c). Compaction tests for fill under floor slabs and at excavations for walls, footings, etc.
   d). Structural steel, including welding, bolt tensions, alignment, plumb, etc.
2. Copies of test reports are to be submitted to the Engineer,Municipality and Owner.

STRUCTURAL DESIGN DATA

1.0 DESIGN CRITERIA (ONT. REG. 332/12)

WIND LOAD:
- **HOURLY WIND PRESSURE (1/50) q=0.44 kPa**
- **Ce, Cp, Cg, Ct, Iw FACTORS AS PER O.B.C. 2024 REQUIREMENTS.**

WIND	N/S	E/W
BASE SHEAR (KN)	265	126
OVERTURNING MOMENT (KN.M)	2320	1102
MAXIMUM STOREY DRIFT	1/888	1/1386

SEISMIC LOAD:
- **Sa(0.2) = 0.318; Sa(0.5) = 0.291; Sa(1.0) = 0.171; Sa(2.0) = 0.0812; Sa(5.0) = 0.0213; Sa(10.0) = 0.00665**
- **Rd = 1.5; Ro = 1.3**
- **SITE CLASS 'D',**
- **Ie = 1.0**
- **Ta = 0.2s; S(Ta) = 0.318**
- **Mv = 1.0**
- **TYPE OF IRREGULARITIES: NONE**
- **GOVERNING BASE SHEAR: Vmax = (⅔)S(0.2)IeW/(RdRo), S(0.5)IeW/(RdRo) = 0.15W**
- **SEISMIC CATEGORY: SC2**

SEISMIC	N/S	E/W
BASE SHEAR (KN)	260	260
OVERTURNING MOMENT (KN.M)	2281	2281

- **SEISMIC FORCE RESISTING SYSTEM (SFRS) IS CONVENTIONAL CONSTRUCTION OF BRACED FRAMES.**
- **THE SFRS DIAPHRAGMS & THEIR CONNECTIONS HAVE BEEN DESIGNED IN COMPLIANCE WITH CAN/CSA S16-19 CLAUSE 27.10 & OBC 2024 ARTICLE 4.1.8.15.**
- **THE SFRS BRACE FRAMES & THEIR CONNECTIONS HAVE BEEN DESIGNED IN COMPLIANCE WITH CAN/CSA S16-19 CLAUSE 27.10.**
- **THE SFRS FOUNDATIONS HAS BEEN DESIGNED IN COMPLIANCE WITH CSA 23.3-19 CLAUSE 21.8 AND O.B.C. 2024 ARTICLE 4.1.8.16.**
- **CONNECTION DETAILS FOR ALL MECHANICAL EQUIPMENT: PIPES, DUCTS, ROOF TOP UNITS ETC. TO BE DESIGNED BY MECHANICAL ENGINEER FOR SEISMIC FORCES IN ACCORDANCE WITH DIVISION B, ARTICLE 4.1.8.17 OF OBC 2024.**
- **FLOW CONTROL ROOF DRAINAGE SYSTEM IS PROVIDED ON THE ROOF. ALL LOADING CONDITIONS ASSOCIATED WITH STORM WATER MANAGEMENT HAVE BEEN TAKEN INTO ACCOUNT IN THE DESIGN OF STRUCTURE IN ACCORDANCE WITH O.B.C. 2024 ARTICLE 4.1.6.4.**

DEAD LOADS (ROOF LEVEL):

BUILT-UP ROOFING	= 0.40 kPa
STEEL DECK	= 0.10 kPa
MECHANICAL/ELECTRICAL	= 0.20 kPa
STEEL JOISTS + BEAMS	= 0.20 kPa
SPRINKLER	= 0.20 kPa
TOTAL DEAD LOAD	= 1.10 kPa

DEAD LOADS (MEZZ. FLOOR):

COMP. FLR. STEEL DECK	= 1.90 kPa
MECHANICAL/ELECTRICAL	= 0.20 kPa
SUSPENDED CEILING	= 0.20 kPa
STEEL JOISTS + BEAMS	= 0.30 kPa
PARTITIONS	= 1.00 kPa
SPRINKLER	= 0.20 kPa
TOTAL DEAD LOAD	= 3.80 kPa

LIVE LOAD (MEZZANINE FLOOR) = 4.80 kPa

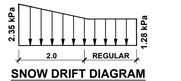
LIVE LOAD (ROOF LEVEL) = 1.0 kPa OR SNOW LOAD WHICHEVER GOVERNS

SNOW LOAD DESIGN COEFFICIENT:
- **Cb = 0.8, Cw = 1.0, ULS Is = 1.0, SLS Is = 0.9**
- **Ca = 1.0, Cs = 1.0**
- **Ss = 1.1 kPa, Sr = 0.4 kPa**

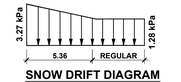
LOADS ON GUARDS: (REFER TO ONT. REG. 332/12 ARTICLE 4.1.5.14 (1)(2)(4) & 4.1.5.16)

1. **HANDRAIL AT EXIT AND STAIRS**
   0.75 kN/m OR 1.0 kN AT ANY POINT HORIZONTAL OR 1.5 kN/m VERTICAL WHICHEVER RESULTS IN THE MORE CRITICAL LOADING CONDITION. INDIVIDUAL ELEMENTS INCLUDING SOLID PANELS AND PICKETS SHALL BE 0.5 kN APPLIED TO AN AREA OF 100mm BY 100mm LOCATED AT ANY POINT. WHICHEVER RESULTS IN THE MORE CRITICAL LOADING CONDITION.
2. **WALLS AND PARAPETS ACTING AS GUARDS**
   ALL OF ABOVE AND MINIMUM OF 0.5 kPa LATERAL LOAD. WHICHEVER RESULTS IN THE MORE CRITICAL LOADING CONDITION.

2.0 ROOF SNOW LOAD BUILD-UP



SNOW DRIFT DIAGRAM AROUND ROOFTOP UNITS



SNOW DRIFT DIAGRAM AROUND ROOF PARAPETS

SHOP DRAWING NOTES:

1. The General Contractor is responsible for the submittal of the required 'SHOP' drawings for this project.
2. The General Contractor shall submit a shop drawing schedule to allow for timely review of all shop drawings by the Architect and Engineer.
3. It is the responsibility of the General Contractor to notify Soscia Professional Engineers Inc. of the impending arrival of shop drawings to be reviewed, at least two business days in advance of their arrival, for timely review and approval.
4. All shop drawings submitted to the Architect and Engineer for their review, must first be reviewed by the General Contractor. SHOP DRAWINGS WILL NOT BE REVIEWED BY THE ARCHITECT AND/OR ENGINEER IF THEY ARE NOT CHECKED AND APPROVED BY THE GENERAL CONTRACTOR.
5. Shop Drawings submitted shall bear the seal and signature of a Licensed Professional Engineer, registered in Ontario.
6. ALL SHOP DRAWINGS SUBMISSIONS SHALL BE REVIEWED BY THE ARCHITECT AND ENGINEER, SOLELY FOR THEIR CONFORMANCE WITH THE DESIGN INTENT AND THE CONSTRUCTION DOCUMENTS.
7. The Architect and Engineer are not responsible for any aspects of a shop drawing submission that affect or are affected by the means, methods, techniques, sequences and operations of construction, safety precautions and programs incidental thereto.
8. All shop drawing submittals shall include pdf (one for Arch.and Eng.) for approval by the Architect and Engineer. Only these requested drawings will be reviewed, for Environmental reasons.
9. Reproductions of the Contract documents, in whole or in part, for the purpose of preparation of shop drawing is not acceptable.

FIELD REVIEW BY SOSCIA PROFESSIONAL ENGINEERS:

1. SOSCIA PROFESSIONAL ENGINEERS PROVIDES FIELD REVIEW ONLY FOR THE WORK SHOWN ON THESE STRUCTURAL DRAWINGS. THIS REVIEW IS NOT A "FULL TIME" REVIEW BUT IS CONDUCTED WITH SUCH FREQUENCY AS SOSCIA DEEMS APPROPRIATE TO OBSERVE VARIOUS STAGES OF THE WORK AND TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY SOSCIA PROFESSIONAL ENGINEERS. FIELD REVIEW BY SOSCIA PROFESSIONAL ENGINEERS IS NOT CARRIED OUT FOR THE CONTRACTOR'S BENEFIT, NOR DOES IT MAKE SOSCIA PROFESSIONAL ENGINEERS GUARANTORS OF THE CONTRACTOR'S WORK. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. SOSCIA SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

   SOSCIA WILL REVIEW SHOP DRAWINGS PERTAINING TO WORK SHOWN ON SOSCIA'S DRAWINGS. THE EXTENT OF THIS REVIEW IS AT THE SOLE DISCRETION OF SOSCIA'S ENGINEER AND IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMANCE WITH THE STRUCTURAL DESIGN CONCEPT. THE REVIEW IS NOT AN APPROVAL OF THE DESIGN, DETAILS, AND DIMENSIONS INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR OR SUBCONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OR SUBCONTRACTOR OF HIS OR HER RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.
2. PROVIDE 24 HOURS ADVANCE NOTICE OF EACH REQUIRED FIELD REVIEW. FIELD REVIEWS SHALL BE SCHEDULED TO BE CARRIED OUT DURING NORMAL BUSINESS HOURS UNLESS SPECIAL ARRANGEMENTS ARE MADE WITH SOSCIA ENGINEERING.
3. THE WORK TO BE REVIEWED SHALL BE GENERALLY COMPLETE.

All measurements to be confirmed in field by Contractor. Errors & Omissions to be reported to the Structural Engineer prior to proceeding with the work. Responsibility for coordination of all work remains with the General Contractor.

ISSUED or REVISIONS

No.	DATE	DESCRIPTION	BY
1.	JUNE 19, 2026	ISSUED FOR PERMIT REVIEW & COORDINATION	

GENERAL NOTES:

1. CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON THE JOB & MUST CHECK AND VERIFY LOCATION AND SIZES OF ALL NEW & EXISTING ELEMENTS (COLUMNS, WALLS, SLABS & OTHER STRUCTURAL OR ARCHITECTURAL ELEMENTS) AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, LATEST EDITION, AND ALL OTHER ACTS ADMINISTERED BY ALL AUTHORITIES HAVING JURISDICTION.
3. THESE DRAWINGS MUST BE READ IN THE CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
4. THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
5. SITE MEASURES TO BE TAKEN FOR DESIGNED ELEMENTS IN RELATION WITH EXISTING ELEMENTS PRIOR TO CONSTRUCTION, SHOP DRAWINGS TO BE FORWARDED TO THE ENGINEER.
6. THE STABILITY OF THE STRUCTURE IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING AND SHORING DURING CONSTRUCTION.
7. THIS DRAWING IS NOT TO BE SCALED. THIS DRAWING CONTAINS COPYRIGHT MATERIAL BELONGING TO THE ENGINEER.
8. ALL DIMENSIONS GIVEN ARE IN METRIC.

SOSCIA
PROFESSIONAL ENGINEERS INC.
10376 Yonge Street, Suite 307
Richmond Hill, ON. L4C 3B8
Website: www.sosciaeng.ca
Tel: 905-237-5410
Fax: 905-237-5413

PROJECT NAME:
PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

PROJECT SITE:
10533 KEELE STREET, VAUGHAN, ONTARIO

DRAWING TITLE:
STRUCTURAL DESIGN DATA & GENERAL SPECIFICATIONS

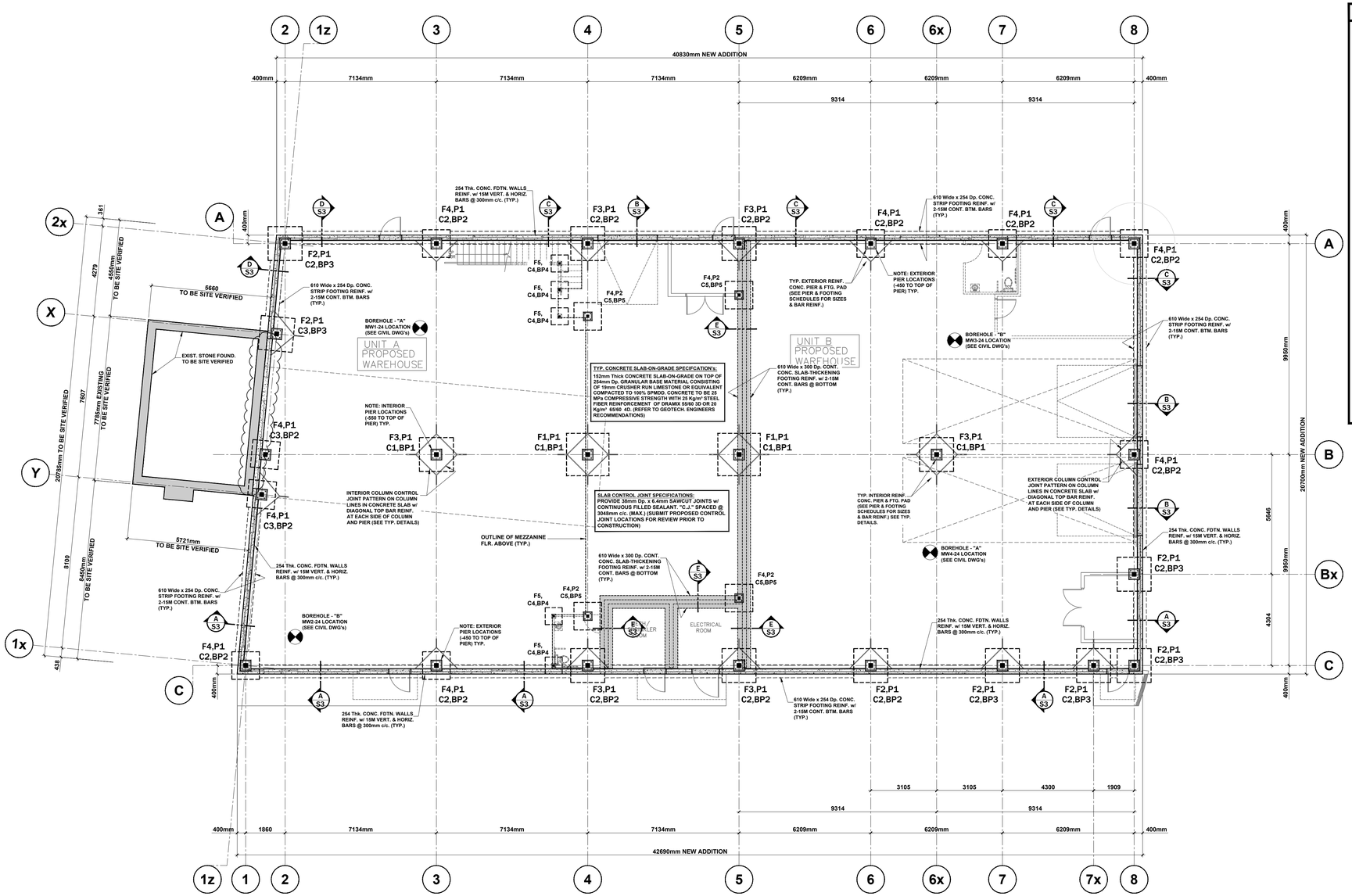
LICENSED PROFESSIONAL ENGINEER — JUNE 19, 2026 — S. SOSCIA — PROVINCE OF ONTARIO

Note: Not to be use for construction unless, sealed & signed by the structural engineer.

SCALE:	AS NOTED	DATE:	JUNE 3, 2026
PROJ. ENG.:	S. Soscia	DESIGNED BY:	P. Leyesa
DRAWN BY:	AC.	REVIEWED BY:	S. Soscia

PROJECT NUMBER: **24-020**

DRAWING NUMBER: **S1**



FOUNDATION LAYOUT PLAN

1 / S2

SCALE: 1:100

CONCRETE SCHEDULE (U.N.O)

DESCRIPTION	CONC. STRENGTH (28 DAYS)	REMARKS
PIERS, FOOTINGS & WALLS	25 MPa	
CONCRETE SLAB-ON-GRADE	32 MPa	
RETAINING WALLS	25 MPa	F2 MIX, 4% - 7% AIR
ALL EXTERIOR STRUCTURE EXPOSED TO DEICING SALT	35 MPa	C1 MIX, 5% - 8% AIR
SIDEWALK PAVEMENT EXPOSED TO DEICING SALT	32 MPa	C2 MIX, 5% - 8% AIR

SPREAD FOOTING PAD SCHEDULE

FOOTING TYPE	NOMINAL FOOTING SIZE			FOOTING REINFORCEMENT (BOTTOM REINF. ONLY BOTHWAYS)	
	LENGTH	WIDTH	DEPTH		
F1	2000mm	2000mm	400mm	15M BARS @ 150c/c. (BLL)	15M BARS @ 150c/c. (BUL)
F2	1600mm	1600mm	350mm	15M BARS @ 200c/c. (BLL)	15M BARS @ 200c/c. (BUL)
F3	1600mm	1600mm	300mm	15M BARS @ 250c/c. (BLL)	15M BARS @ 250c/c. (BUL)
F4	1300mm	1300mm	300mm	15M BARS @ 300c/c. (BLL)	15M BARS @ 300c/c. (BUL)
F5	800mm	800mm	200mm	15M BARS @ 300c/c. (BLL)	15M BARS @ 300c/c. (BUL)

CONCRETE PIER SCHEDULE

PIER MARKING	PIER SIZE	VERTICAL BARS	HORIZONTAL TIES	PIER PROFILE
P1	500mm x 500mm	8 - 20M BARS	10M TIES @ 300mm c/c. + 2 TIES @ TOP	38, 500, 500
P2	400mm x 400mm	8 - 15M BARS	10M TIES @ 300mm c/c. + 2 TIES @ TOP	38, 400, 400

TYPICAL NOTES:

a. PIER SCHEDULE DENOTES MINIMUM SIZE AND REINFORCEMENT OF PIERS REQUIRED.
b. PIER REINFORCEMENT MUST BE PLACED OUTSIDE OF ANCHOR BOLTS.
c. NO ANCHOR BOLT SHALL BE PLACED OUTSIDE OF PIERS REBAR CAGE.
d. DOWELS TO MATCH CONCRETE PIER VERTICAL REINFORCEMENT.
e. FOR BASE PLATES AND ANCHOR BOLTS SEE COLUMN SCHEDULE.

COLUMN & BASE PLATE SCHEDULE

MARKING	COLUMN SIZE	BASE PLATE DIMENSIONS	BASE PLATE PROFILE
C1,BP1	203mm x 203mm x 8.0mm	400 x 400 x 22 Thk. STL. BASE PLATE + 4 - 19mm DIA. A307 ANCHOR BOLTS x 508mm Lg. + 76mm HOOK	40, 400, 400
C1,BP2 C2,BP2 C3,BP2	203mm x 203mm x 8.0mm 203mm x 203mm x 6.4mm 203mm x 203mm x 12.7mm	400 x 400 x 19 Thk. STL. BASE PLATE + 4 - 19mm DIA. A307 ANCHOR BOLTS x 508mm Lg. + 76mm HOOK	40, 400, 400
BP3 AT "X-BRACING" LOCATIONS ONLY	"C2" & "C3" HSS COLUMN's (SEE PLAN FOR LOCATIONS)	400 x 400 x 22 Thk. STL. BASE PLATE + 4 - 19mm DIA. x 610mm Long HEX HEAD ANCHOR BOLTS (AT "X-BRACING" LOCATIONS ONLY)	40, 400, 400
C4,BP4	89mm x 89mm x 4.8mm	203 x 203 x 12.7 Thk. STL. BASE PLATE + 4 - 16mm DIA. A307 ANCHOR BOLTS x 203mm Lg. + 76mm HOOK	38, 203, 203
C5,BP5	127mm x 127mm x 6.4mm	300 x 300x 19 Thk. STL. BASE PLATE + 4 - 19mm DIA. A307 ANCHOR BOLTS x 203mm Lg. + 76mm HOOK	300, 300

TYPICAL NOTES:

a. PROVIDE NON-SHRINK GROUT 38mm Thk. AT U/S OF ALL BASE PLATES. GROUT TO HAVE A MINIMUM STRENGTH OF 50 MPa @ 28 DAYS.
b. ALL ANCHOR BOLTS TO HAVE A MINIMUM ULTIMATE STRENGTH OF 450 MPa.
c. PROVIDE 6.4mm Thk. LEVELING PLATES OR LEVELING SCREWS AT ALL U/S OF BASE PLATES. COLUMN BASE PLATES ARE NOT TO BE ALIGNED USING ANY KIND OF SHIM.
d. WELD BASE PLATES TO COLUMNS TO DEVELOP TENSILE CAPACITY OF ANCHOR RODS.
e. FOR HSS COLUMNS EXTENDED ABOVE THE ROOF LEVEL SEE FRAMING ELEVATIONS.

GENERAL CONTRACTOR NOTE:

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY ALL DIMENSIONS ON ARCHITECTURAL DRAWINGS & REPORT ALL DISCREPANCIES & OMISSIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER, PRIOR TO CONSTRUCTION. (DO NOT SCALE THESE DRAWINGS).

FOUNDATION PLAN NOTES:

1. ALL FOOTINGS SHALL FOUNDED ON NATURAL UNDISTURBED NATIVE SOIL CAPABLE OF SAFETY SUSTAINING A BEARING PRESSURE OF 160 kPa (SLS) AND 200 kPa (ULS). REFER TO SOILS REPORT BY GHD, DATED ON APRIL 29, 2024.
2. SOIL AT THE UNDERSIDE OF THE FOOTING IS TO BE INSPECTED AND APPROVED BY SOIL CONSULTANT PRIOR TO PLACING CONCRETE.
3. ALL REINFORCING STEEL TO BE DEFORMED BARS TO CONFORM TO CSA G30.18-M92 WITH MIN. Fy=400 MPa U/N. STIRRUPS AND TIES TO BE DEFORMED BARS TO CONFORM TO CSA G30.18 WITH MIN. Fy=350 MPa.
4. THE MINIMUM DEPTH OF SOIL COVER REQUIRED FOR FOOTINGS FOR ADEQUATE FROST PROTECTION IS TO BE 1500mm MIN. BELOW FINISHED GRADE.
5. CONCRETE COVER FOR FOOTING REINFORCING STEEL SHALL BE:
   TOP: 50mm
   BOTTOM: 76mm
6. CONCRETE COVER FOR WALLS:
   OUTSIDE: WITH FORM 38mm, WITHOUT FORM AGAINST EARTH 75mm,
   INSIDE: 25mm (BUT NOT LESS THAN BAR DIAMETER).
7. THE LINE OF SLOPE BETWEEN ADJACENT FOOTING IS TO BE A MAX. OF 2 HORIZ. TO 1 VERT. STEPS TO BE 600mm MAX. COORDINATE WITH GEOTECHNICAL CONSULTANT ON SITE.
8. ALL SLAB ON GRADE SHOULD BE CONSTRUCTED ON COMPACTED GRANULAR MATERIAL AND TO BE APPROVED BY SOIL CONSULTANT.
9. CONCRETE SLAB-ON-GRADE SEE PLAN FOR DETAILS.
10. CONCRETE COMPRESSIVE STRENGTH FOR FOOTINGS TO BE 25 MPa AT 28 DAYS.
11. CONCRETE COMPRESSIVE STRENGTH FOR FOUNDATION WALLS & PIERS TO BE 25 MPa AT 28 DAYS.
12. CONCRETE COMPRESSIVE STRENGTH FOR SLAB-ON-GRADE TO BE 32 MPa AT 28 DAYS.
13. ALL CONCRETE WORK SHALL CONFORM TO CAN/CSA-A23.3-M90 AND CAN/CSA-A23.2-M90.
14. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL DRAWINGS.
15. CONCRETE CONTRACTOR TO SET ALL LOOSE MEMBERS THAT ARE TO BE EMBEDDED IN THE CONCRETE. SEE STRUCTURAL, ARCHITECTURAL AND MECHANICAL DRAWINGS.
16. FORMWORK CONTRACTOR TO FORM ALL HOLES, CHASES etc. AND TO SET INSERTS, ANCHOR BOLTS AND OTHER EMBEDDED MEMBERS ARE REQUIRED TO BE HELD IN PLACE BY THE FORMWORK BEFORE POURING THE CONCRETE. SEE STRUCTURAL, ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION.
17. REINFORCING BARS IN FOOTINGS AND SLABS ON EARTH AND CONCRETE MEMBERS EXPOSED FOR ARCHITECTURAL REASONS TO WEATHER, SHALL BE SUPPORTED IN DESIGNATED POSITION BY MEANS OF PRECAST CONCRETE SUPPORTS OR EQUIPMENT.
18. ALL POURED CONCRETE TO BE VIBRATED THOROUGHLY.
19. PROVIDE CONTROL JOINT AT OUTSIDE FACE OF FOUNDATION WALL AT 9144mm c/c. (TYPICAL UNLESS NOTED OTHERWISE).
20. CENTER LINE OF COLUMN SHOULD BE AT CENTER OF FOOTINGS (TYPICAL UNLESS NOTED OTHERWISE).
21. NO TRENCH POUR INTERRUPTION IS ALLOWED AT COLUMN FOOTING LOCATIONS. CONTRACTOR TO CENTER POUR INTERRUPTIONS IN BETWEEN ADJACENT COLUMNS.
22. DOWELS FROM THE FOOTINGS SHOULD MATCH PIER & WALL VERTICAL REINFORCEMENTS.
23. ALL SLOPES, SUMPS, PITS, PIPES & ETC. LOCATION COORDINATE WITH MECHANICAL, SERVICES & ARCHITECTURAL DRAWINGS AND GENERAL CONTRACTOR.

All measurements to be confirmed in field by Contractor. Errors & Omissions to be reported to the Structural Engineer prior to proceeding with the work. Responsibility for coordination of all work remains with the General Contractor.

ISSUED or REVISIONS

No.	DATE	DESCRIPTION	BY
1.	JUNE 19, 2026	ISSUED FOR PERMIT REVIEW & COORDINATION	

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7. THIS DRAWING IS NOT TO BE SCALED. THIS DRAWING CONTAINS COPYRIGHT MATERIAL BELONGING TO THE ENGINEER.
8. ALL DIMENSIONS GIVEN ARE IN METRIC.

IMPORTANT NOTE:

PROVIDE CERTIFIED SHOP FABRICATION DRAWINGS TO SOSCIA PROFESSIONAL ENGINEERING INC., FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENCED IN ONTARIO.

SOSCIA
PROFESSIONAL ENGINEERS INC.
10376 Yonge Street, Suite 307
Richmond Hill, ON. L4C 3B8
Website: www.sosciaeng.ca
Tel: 905-237-5410
Fax: 905-237-5413

PROJECT NAME:

PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

PROJECT SITE:

10533 KEELE STREET, VAUGHAN, ONTARIO

DRAWING TITLE:

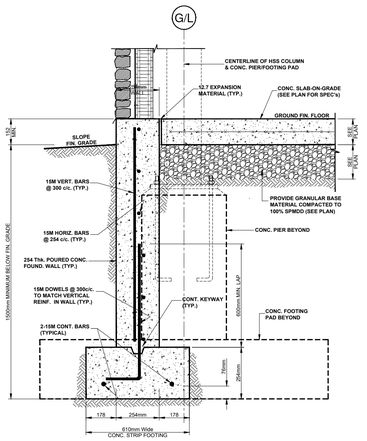
FOUNDATION PLAN

LICENCED PROFESSIONAL ENGINEER — JUNE 19, 2026 — S. SOSCIA — PROVINCE OF ONTARIO

Note: Not to be use for construction unless, sealed & signed by the structural engineer.

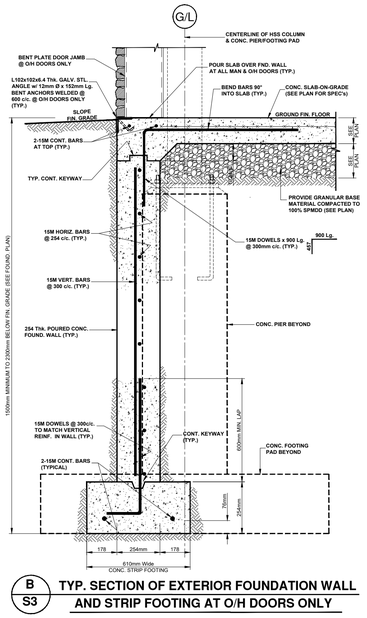
SCALE: AS NOTED	DATE: JUNE 3, 2026
PROJ. ENG.: S. Soscia	DESIGNED BY: P. Leyesa
DRAWN BY: AC.	REVIEWED BY: S. Soscia
PROJECT NUMBER: 24-020	

DRAWING NUMBER: **S2**

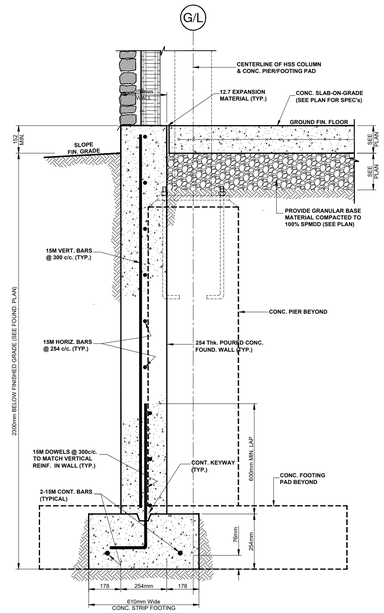


A / S3 1.5m Dp. REINF. FOUND. WALL/FOOTING SECTION

DO NOT SCALE

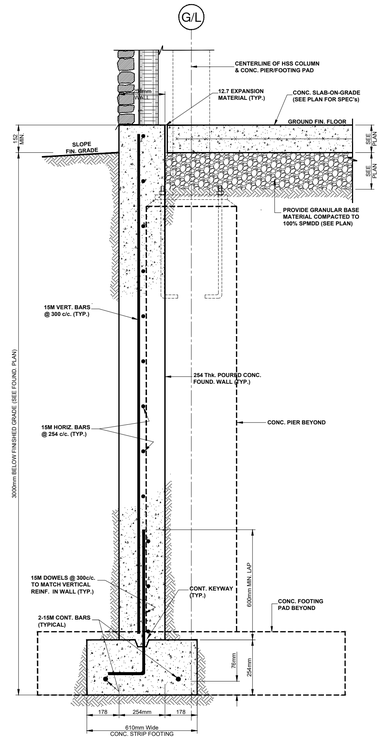


B / S3 TYP. SECTION OF EXTERIOR FOUNDATION WALL AND STRIP FOOTING AT O/H DOORS ONLY



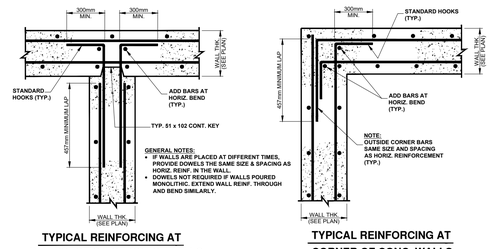
C / S3 2.3m Dp. REINF. FOUND. WALL/FOOTING SECTION

DO NOT SCALE



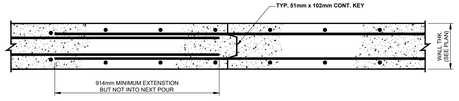
D / S3 3.0m Dp. REINF. FOUND. WALL/FOOTING SECTION

DO NOT SCALE



TYPICAL REINFORCING AT INTERSECTION OF CONC. WALLS

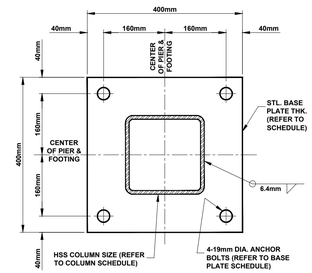
TYPICAL REINFORCING AT CORNER OF CONC. WALLS



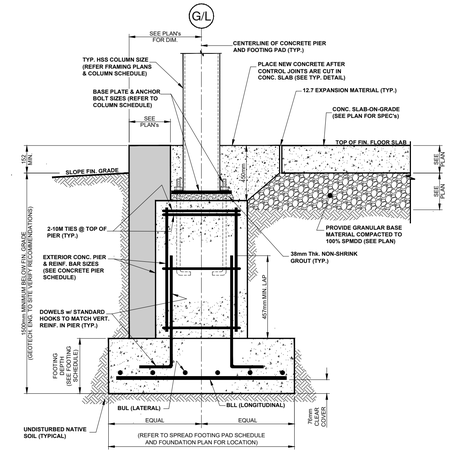
TYP. CONSTRUCTION JOINT IN CONC. WALLS

STANDARD REINFORCED POURED CONCRETE WALL DETAILS

(NOTE: APPLY DETAILS IF REQUIRED)

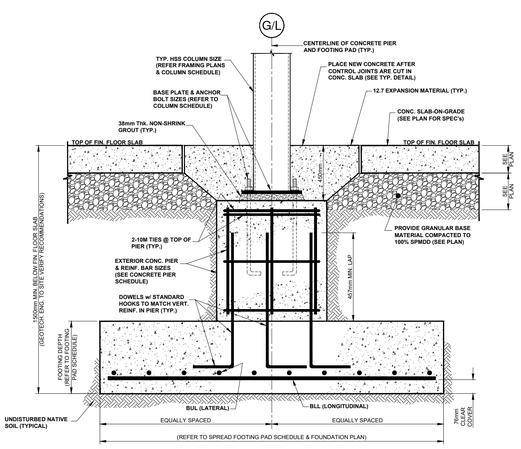


TYP. DETAIL OF BASE PLATE PROFILE FOR COLUMNS WITH "BP1", "BP2" & "BP3"



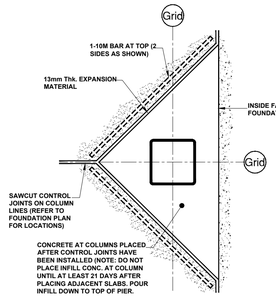
G / S3 TYP. SECTION OF EXTERIOR CONC. PIER AND FOOTING PAD

DO NOT SCALE

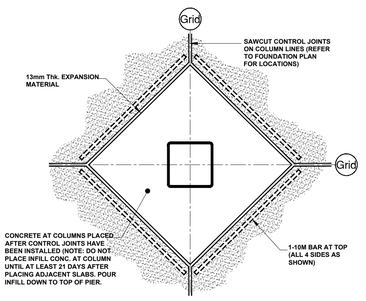


F / S3 TYP. SECTION OF INTERIOR CONC. PIER AND FOOTING PAD

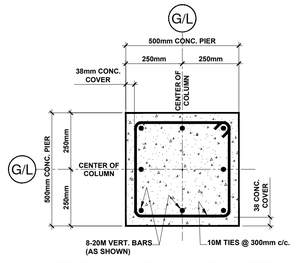
DO NOT SCALE



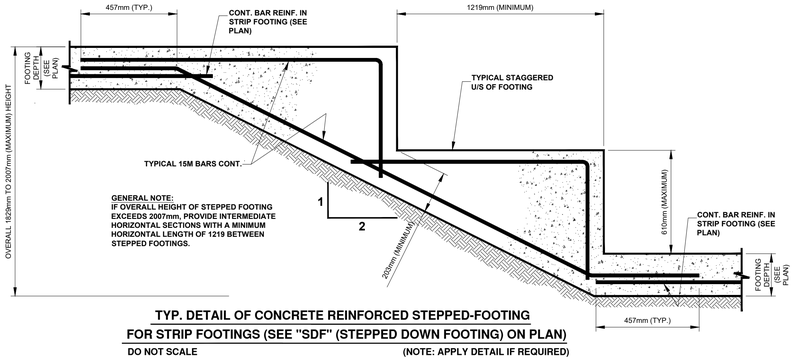
TYP. DETAIL OF CONC. SLAB-ON-GRADE JOINTS & REINF. AT EXTERIOR COLUMNS



TYP. DETAIL OF CONC. SLAB-ON-GRADE JOINTS & REINF. AT INTERIOR COLUMNS

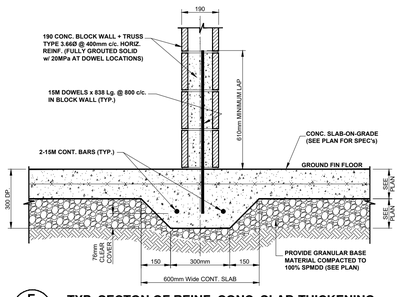


CONC. PIER TYPE - "P1" REINF. DETAIL



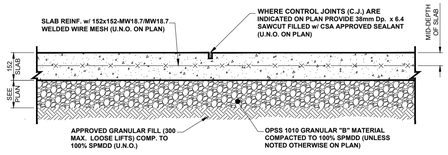
TYP. DETAIL OF CONCRETE REINFORCED STEPPED-FOOTING FOR STRIP FOOTINGS (SEE "SDF" (STEPPED DOWN FOOTING) ON PLAN)

DO NOT SCALE (NOTE: APPLY DETAIL IF REQUIRED)

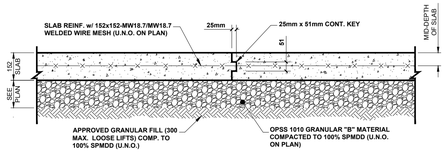


E / S3 TYP. SECTON OF REINF. CONC. SLAB-THICKENING FOR NON-LOAD BEARING BLOCK DEMISING WALLS

DO NOT SCALE



TYP. SECTION OF CONTROL JOINT IN 152mm CONC. SLAB-ON-GRADE



TYP. SECTION OF CONSTRUCTION JOINT IN CONC. SLAB-ON-GRADE

GENERAL CONTRACTOR NOTE:

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7. THIS DRAWING IS NOT TO BE SCALED. THIS DRAWING CONTAINS COPYRIGHT MATERIAL BELONGING TO THE ENGINEER.
8. ALL DIMENSIONS GIVEN ARE IN METRIC.

IMPORTANT NOTE:

PROVIDE CERTIFIED SHOP FABRICATION DRAWINGS TO SOSCIA PROFESSIONAL ENGINEERING INC., FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENCED IN ONTARIO.

SOSCIA
PROFESSIONAL ENGINEERS INC.
10376 Yonge Street, Suite 307
Richmond Hill, ON. L4C 3B8
Website: www.sosciaeng.ca
Tel: 905-237-5410
Fax: 905-237-5413

PROJECT NAME:

PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

10533 KEELE STREET, VAUGHAN, ONTARIO

PROJECT SITE:

TYPICAL FOUNDATION DETAILS and SECTIONS

DRAWING TITLE:

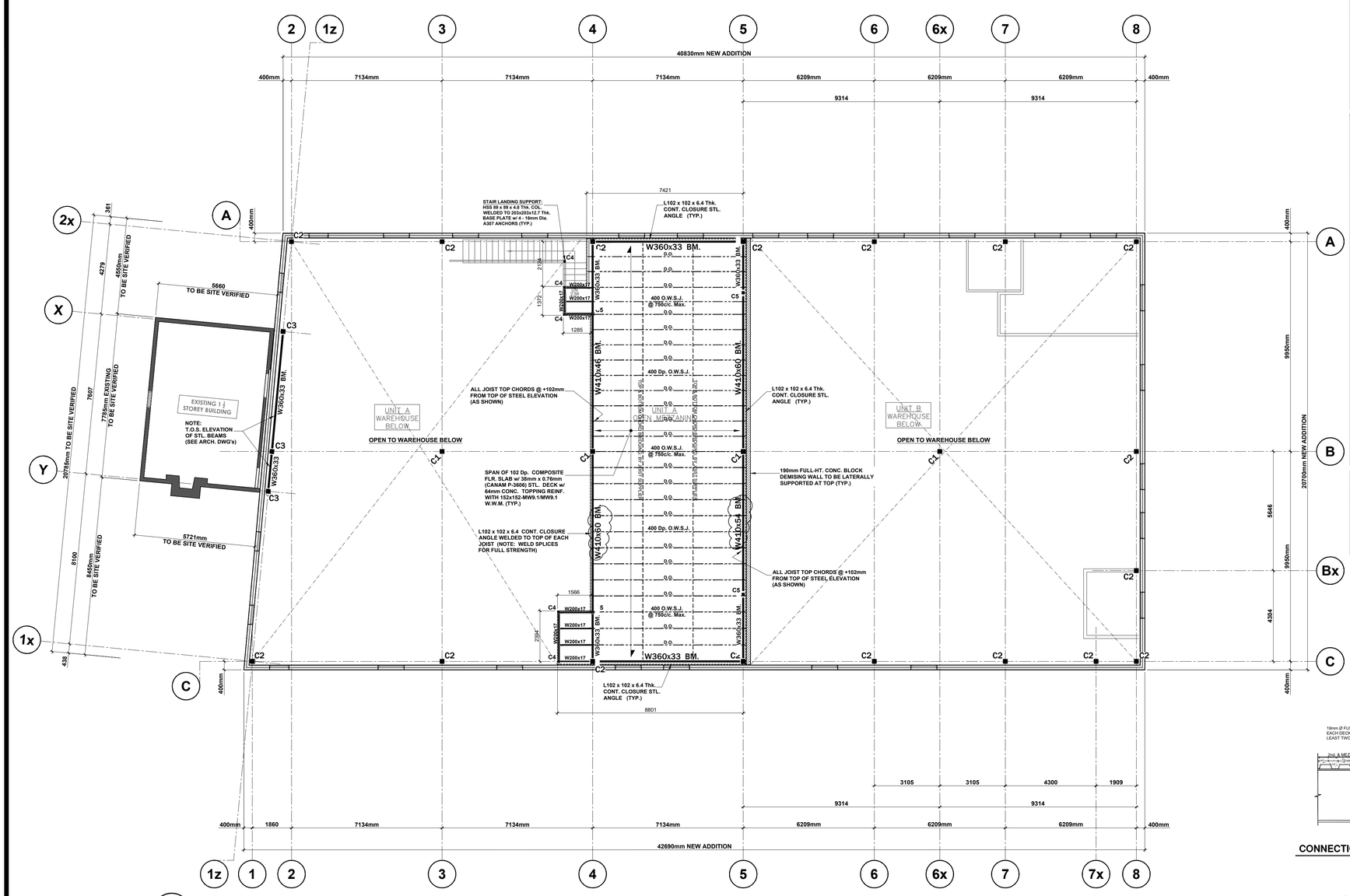
LICENSED PROFESSIONAL ENGINEER — JUNE 19, 2026 — S. SOSCIA — PROVINCE OF ONTARIO

Note: Not to be use for construction unless, sealed & signed by the structural engineer

SCALE:	AS NOTED	DATE:	JUNE 3, 2026
PROJ. ENG.:	S. Soscia	DESIGNED BY:	P. Leyesa
DRAWN BY:	AC.	REVIEWED BY:	S. Soscia
PROJECT NUMBER:	24-020		

S3

DRAWING NUMBER:



COMPOSITE SLAB CONSTRUCTION NOTES:

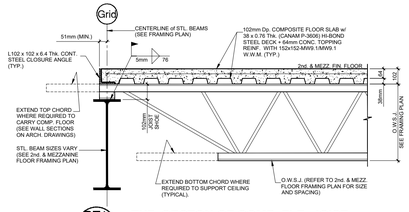
1. STUDS SHALL BE 19mm (3/4") DIAMETER x 100mm (4") AFTER WELDING STUDS SHALL HAVE A MINIMUM CLEAR COVER OF 1" AND A MAXIMUM COVER OF 38mm (1 1/2").
2. UNLESS OTHERWISE NOTED ON PLANS OR DETAILS STUDS, SHALL BE SPACED IN ACCORDANCE WITH THE GENERAL NOTES.
3. REGARDLESS OF STUD SPACING STEEL DECK SHALL BE CONNECTED TO STEEL BEAM AT A MAXIMUM 300mm (12") c/c. WHERE STUD SPACING EXCEEDS THIS LIMIT 19mm (3/4") DIAMETER FUSION WELDS SHALL BE USED FOR ATTACHMENT.
4. STEEL DECK HAS BEEN DESIGNED FOR CONTINUOUS SPANS AND PLACEMENT OF STUDS SHALL BE BY WELDING THROUGH THE DECK WHEN DECK RUNS PERPENDICULAR TO THE BEAM. WHEN DECK RUNS PARALLEL TO BEAM THE DECK MAY BE SEPARATED TO ALLOW WELDING OF THE STUDS DIRECTLY TO THE BEAM. MINIMUM BEARING FOR THE DECK MUST BE MAINTAINED.
5. SEE GENERAL SPECIFICATIONS FOR STEEL DECK PROPERTIES.

MEZZANINE FLOOR (COMPOSITE SLAB) STL. DECK FRAMING NOTES:

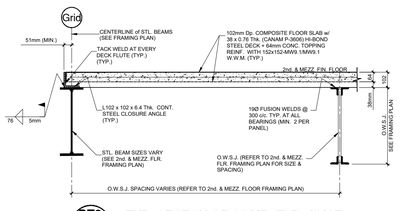
1. SEE GENERAL REQUIREMENTS AND TYPICAL DETAILS AND SECTIONS ON DRAWINGS.
2. SEE DRAWING S1 FOR FOUNDATION AND STEEL COLUMN SCHEDULES.
3. STEEL FLOOR DECK SHALL BE:
   a.) COMPOSITE SLAB, AND 38mm (1 1/2") Dp. STL. DECK
   b.) FORMED FROM SHEET STEEL CONFORMING TO CSSBI 12M, ZINC COATED STRUCTURAL QUALITY, MINIMUM GRADE "A", WITH A BASE STEEL NOMINAL THICKNESS OF 0.76mm (0.03") U.N.O. AND ZINC COATING DESIGNATION OF "WIPED COAT".
   c.) FORMED WITH INTEGRAL LOCKED LUGS TO SUPPORT A MECHANICAL LOCK BETWEEN CONCRETE AND STEEL.
   d.) MINIMUM 3 SPAN CONTINUOUS.
4. ALL STEEL FLOOR DECKS TO BE ARC ATTACHED TO SUPPORTING STEEL WITH 19mm (3/4") FUSION WELDS SPACED AT 300mm (12") CENTRES, AND ALL INTERLOCKING SIDE JOINTS ARE TO BE MECHANICALLY CLINCHED TOGETHER AT 450mm (1'-6") MAX.
5. STEEL CONTRACTOR TO PROVIDE TRIMMERS AROUND OPENINGS IN STEEL DECK TO SUIT ELECTRICAL AND MECHANICAL WORK.
6. ALL OPENINGS 450mm (1'-6") AND SMALLER SHALL BE REINFORCED ADEQUATELY BY THE STEEL DECK CONTRACTOR.
7. **COMPOSITE FLOOR DECK**: CONTRACTOR SHALL FURNISH, INSTALL, AND WELD IN POSITION SHEET METAL FLASHING TO FORM EDGES OF CONCRETE SLAB AND TO CLOSE OFF BETWEEN FLOOR UNITS AND COLUMNS.
8. **COMPOSITE FLOOR DECK**:
   a.) PROVIDE AND INSTALL (64mm) 2 1/2" Thk. CONCRETE ON (38mm) 1 1/2" Dp. STEEL FLOOR DECK (TOTAL THICKNESS = 2 1/2" + 1 1/2" = (102mm) 4" Dp., REINFORCED WITH ONE LAYER 152 x 152 - MW18.7 x MW18.7 WELDED WIRE FABRIC PLACED 25mm (1") FROM THE TOP.
   b.) PROVIDE ADDITIONAL LAYER OF WELDED WIRE FABRIC IN CONCRETE SLAB UNDER MASONRY WALLS. WELDED WIRE FABRIC SHALL BE A MINIMUM 1200mm (4'-0") WIDE CENTERED UNDER PARTITION WALL.
9. **MEZZANINE FLOOR SPECIFIED DESIGN LOADS (UNFACTORED):**
   LIVE LOAD = 4.80 kPa
   DEAD LOAD = 3.80 kPa
   TOTAL LOAD = 8.60 kPa
10. WHERE STEEL DECK CHANGES DIRECTION OF SPAN OR IS BEING CUT AT A SKEW, STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE AND INSTALL STEEL ANGLES OF SUFFICIENT SIZE FOR THE SUPPORT OF THE DECK EDGE.
11. PIPES, DUCTWORKS, ELECTRICAL CABLES, Etc. SHALL NOT BE HUNG FROM THE FLOOR SLAB. ALL HANGERS SHALL BE HUNG FROM THE TOP CHORD OF JOISTS OR BEAMS.
12. FOR FURTHER STRUCTURAL NOTES REFER TO GENERAL SPECIFICATIONS AND TYPICAL DETAIL DRAWINGS.
13. O.W.S.J. MANUFACTURER TO ENSURE SIZE OF OPENINGS THROUGH WEBS TO ACCOMMODATE MECHANICAL DUCT WORK SYSTEM, REFER TO MECHANICAL DRAWINGS FOR LOCATIONS, PRIOR TO FABRICATION.
14. ALL SECOND FLOOR O.W.S.J. SHOES ARE 102mm (4") Dp. (UNLESS NOTED OTHERWISE).
15. PROVIDE L102 x 102 x 6.4 Thk. (L4" x 4" x 1/2") CONT. STEEL ANGLE AROUND PERIMETER OF STL. FLOOR DECK.
16. PROVIDE 10M BARS @ 200mm c/c. x 1200mm Lg. (BENT DOWN 500mm) DOWELS AROUND MASONRY WALLS AT COMPOSITE FLOOR SLAB LEVEL.

H.S.S. COLUMN SCHEDULE

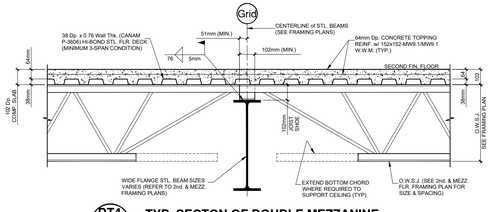
MARK	COLUMN SIZE
C1	HSS 203mm x 203mm x 8.0mm Wall Thk.
C2	HSS 203mm x 203mm x 6.4mm Wall Thk.
C3	HSS 203mm x 203mm x 12.7mm Wall Thk.
C4	HSS 89mm x 89mm x 4.8mm Wall Thk.
C5	HSS 127mm x 127mm x 6.4mm Wall Thk.



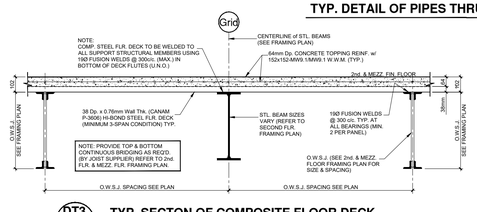
DT1 S4 **TYP. SECTON OF COMP. FLR. JOIST BEARING PERPENDICULAR TO BEAM**



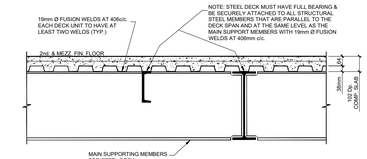
DT2 S4 **TYP. SECTON OF COMP. FLR. JOIST BEARING PARALLEL TO BEAM**



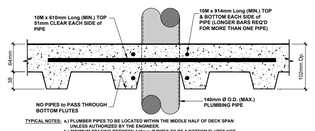
DT4 S4 **TYP. SECTON OF DOUBLE MEZZANINE FLOOR JOISTS BEARING ON STL. BEAM**



DT3 S4 **TYP. SECTON OF COMPOSITE FLOOR DECK BEARING ON BEAM & JOISTS (PERPENDICULAR)**



CONNECTIONS TO STRUCT. MEMBERS (PARALLEL TO DECK)



TYPICAL NOTES: a.) PLUMBER PIPES TO BE LOCATED WITHIN THE MIDDLE HALF OF DECK SPAN UNLESS AUTHORIZED BY THE ENGINEER.
b.) MINIMUM SPACING BETWEEN 140mm Ø PIPES TO BE 3 BOTTOM FLUTES NOT TO BE PENETRATED.
c.) FOR PIPES LARGER THAN 140mm Ø LOCATION IS SHOWN ON PLAN. DECK SHALL BE REINFORCED BY DECK MANUFACTURER TO MAINTAIN THE DESIGN STRENGTH; UNLESS ADDITIONAL STRUCTURAL FRAMING HAS BEEN PROVIDED.

TYP. DETAIL OF PIPES THRU' COMPOSITE FLR. SLAB

GENERAL CONTRACTOR NOTE:
THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY ALL DIMENSIONS ON ARCHITECTURAL DRAWINGS & REPORT ALL DISCREPANCIES & OMISSIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER, PRIOR TO CONSTRUCTION. (DO NOT SCALE THESE DRAWINGS).

All measurements to be confirmed in field by Contractor. Errors & Omissions to be reported to the Structural Engineer prior to proceeding with the work. Responsibility for coordination of all work remains with the General Contractor.

ISSUED or REVISIONS

No.	DATE	DESCRIPTION	BY
1.	JUNE 19, 2026	ISSUED FOR PERMIT REVIEW & COORDINATION	

GENERAL NOTES:

1. CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON THE JOB & MUST CHECK AND VERIFY LOCATION AND SIZES OF ALL NEW & EXISTING ELEMENTS (COLUMNS, WALLS, SLABS & OTHER STRUCTURAL OR ARCHITECTURAL ELEMENTS) AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, LATEST EDITION, AND ALL OTHER ACTS ADMINISTERED BY ALL AUTHORITIES HAVING JURISDICTION.
3. THESE DRAWINGS MUST BE READ IN THE CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
4. THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
5. SITE MEASURES TO BE TAKEN FOR DESIGNED ELEMENTS IN RELATION WITH EXISTING ELEMENTS PRIOR TO CONSTRUCTION, SHOP DRAWINGS TO BE FORWARDED TO THE ENGINEER.
6. THE STABILITY OF THE STRUCTURE IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING AND SHORING DURING CONSTRUCTION.
7. THIS DRAWING IS NOT TO BE SCALED. THIS DRAWING CONTAINS COPYRIGHT MATERIAL BELONGING TO THE ENGINEER.
8. ALL DIMENSIONS GIVEN ARE IN METRIC.

IMPORTANT NOTE:

PROVIDE CERTIFIED STEEL CONNECTION SHOP FABRICATION DRAWINGS TO SOSCIA PROFESSIONAL ENGINEERING INC., FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENCED IN ONTARIO.

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Website: www.sosciaeng.ca
Tel: 905-237-5410
Fax: 905-237-5413

PROJECT NAME:
PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

PROJECT SITE:
10533 KEELE STREET, VAUGHAN, ONTARIO

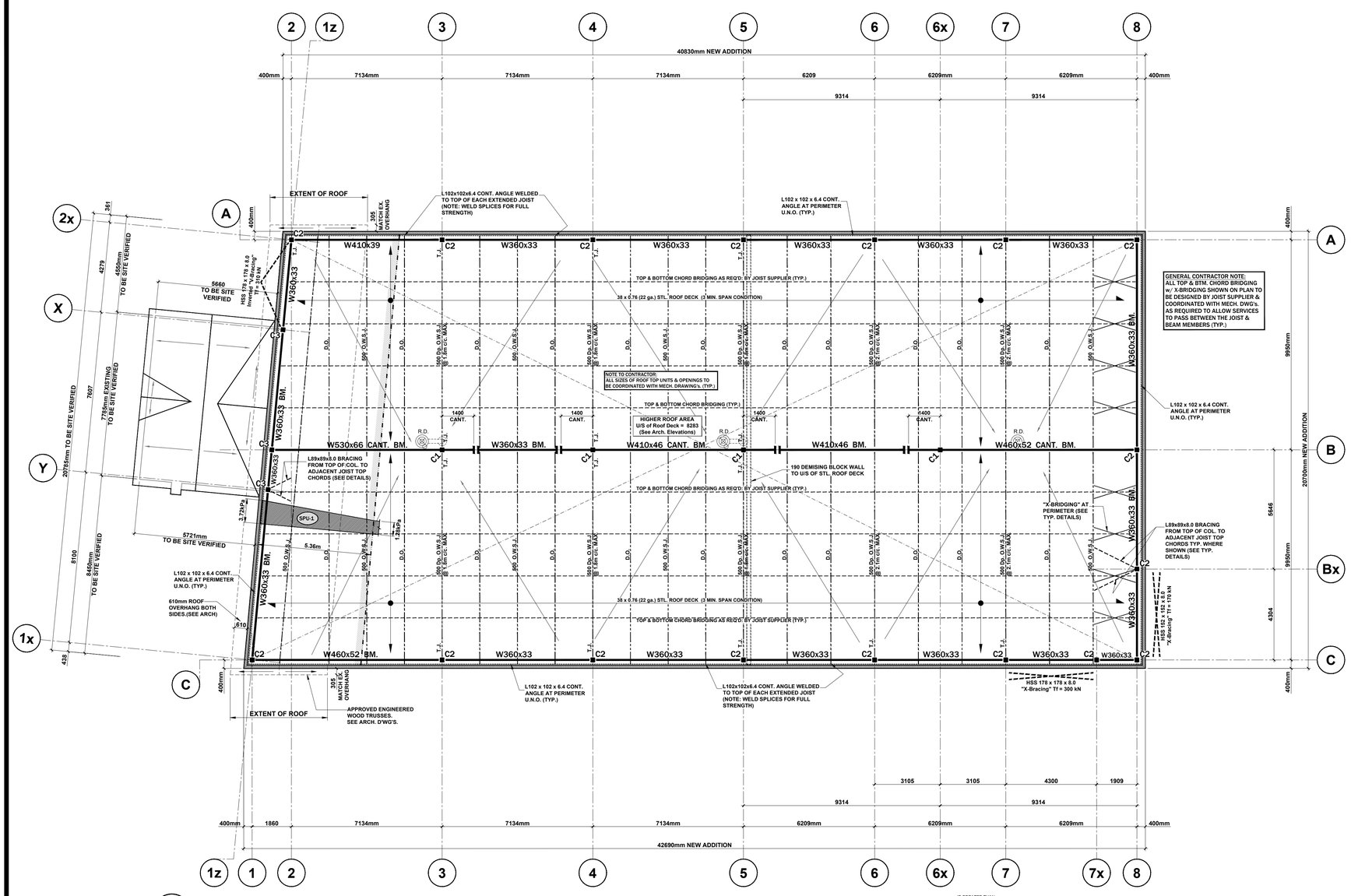
DRAWING TITLE:
MEZZANINE FRAMING PLAN

LICENSED PROFESSIONAL ENGINEER — JUNE 19, 2026 — S. SOSCIA — STRUCTURAL — PROVINCE OF ONTARIO

Note: Not to be use for construction unless, sealed & signed by the structural engineer

SCALE:	AS NOTED	DATE:	JUNE 3, 2026
PROJ. ENG.:	S. Soscia	DESIGNED BY:	P. Leyesa
DRAWN BY:	AC.	REVIEWED BY:	S. Soscia
PROJECT NUMBER:	24-020		

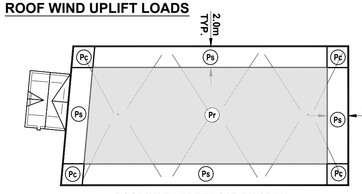
DRAWING NUMBER:
S4



3 / S5 ROOF FRAMING PLAN

SCALE:

ROOF WIND UPLIFT LOADS

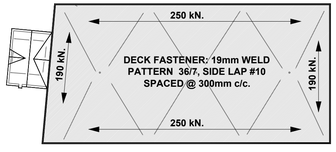


ROOF WIND UPLIFT LOAD DIAGRAM

ROOF GROSS WIND UPLIFT LOADS			
MARK / DATA	ZONE (Pc)	ZONE (Ps)	ZONE (Pr)
	CORNERS	SIDES	ROOF
WIND PRESSURE	-3.00 kPa	-1.80 kPa	-1.40 kPa

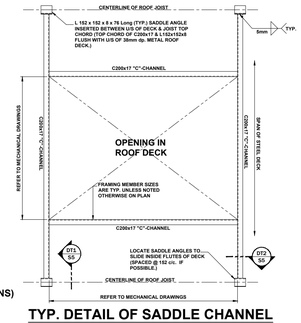
TYP. ROOF WIND UPLIFT LOADS NOTE:

LOADS ARE GROSS DESIGN UPLIFT LOADS. (DEAD LOADS HAVE NOT BEEN DEDUCTED)



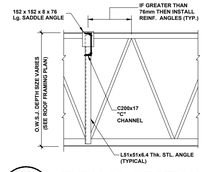
NOTE:
- PROVIDE 19mm WELDS SPACED @ 150mm c/c. AT PERIMETER
- PROVIDE PERIMETER ANGLE OR BENT PLATE (REFER TO SECTIONS)

TYPICAL STEEL DECK DIAPHRAGM



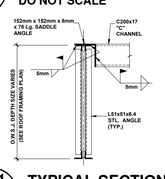
TYP. DETAIL OF SADDLE CHANNEL FRAMING AT ROOF OPENINGS

TYPICAL NOTES:
1. ALL FRAMING MEMBERS FOR ROOF OPENINGS SHALL BE C200x17 WITH L152 x 152 x 9.5 x 100 Lg. CLIP ANGLES WELDED ON TOP CHORD OF O.W.S.J. (UNLESS NOTED OTHERWISE)
2. REFER TO ARCH. DRAWINGS AND MECHANICAL DRAWINGS FOR ALL ROOF OPENINGS.



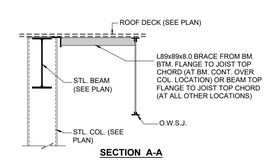
DT2 / S5 **TYPICAL SECTION**

DO NOT SCALE

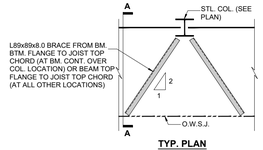


DT1 / S5 **TYPICAL SECTION**

DO NOT SCALE



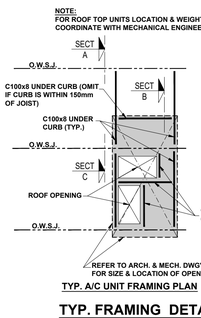
SECTION A-A



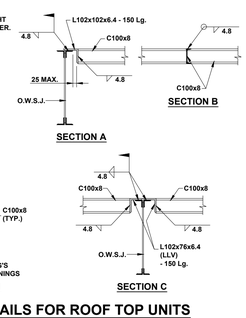
TYP. PLAN

TYPICAL BRACING DETAILS FROM COLUMN-TO-JOIST TOP CHORD

NOTE:
FOR ROOF TOP UNITS LOCATION & WEIGHT COORDINATE WITH MECHANICAL ENGINEER.



TYP. A/C UNIT FRAMING PLAN



TYP. FRAMING DETAILS FOR ROOF TOP UNITS

GENERAL CONTRACTOR NOTE:
THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY ALL DIMENSIONS ON ARCHITECTURAL DRAWINGS & REPORT ALL DISCREPANCIES & OMISSIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER, PRIOR TO CONSTRUCTION. (DO NOT SCALE THESE DRAWINGS).

ROOF FRAMING PLAN NOTES:

1. FOR TOP OF STEEL ELEVATION & SLOPES SEE ARCHITECTURAL DRAWINGS.
2. ALL JOISTS AND DECK SHOULD BE DESIGNED BY SUPPLIER TO RESIST UPLIFT PRESSURE DUE TO WIND IN ACCORDANCE WITH NBC SUPPLEMENT CH#4. SEE ROOF WIND UPLIFT DIAGRAM.
3. ALL JOISTS TO SUPPORT SPRINKLER LINES TO BE DESIGNED FOR ADDITIONAL LOAD OF 0.6 kN/m ALONG JOIST. COORDINATE WITH THE FIRE CONSULTANT FOR LOCATION ALL SPRINKLER LINE CONNECTIONS TO BE AT JOIST TOP CHORD ONLY (AT PANEL POINT).
4. FOR MECHANICAL EQUIPMENT ALLOW AN ADDITIONAL MINIMUM 1.33 kN POINT LOAD ON JOIST ANYWHERE ALONG THE JOIST SPAN U/N.
5. ALL LOADS SHOWN ON PLAN ARE UNFACTORED LOADS (UNLESS NOTED OTHERWISE).
6. FABRICATION AND ERECTION OF STRUCTURAL STEEL TO CONFORM TO THE STANDARD CAN/CSA S16-14 "LIMIT STATE DESIGN OF STEEL STRUCTURES".
7. WELDING SHALL CONFORM TO STANDARDS W47.1, W48.1 AND W59.1 LATEST EDITION.
8. ALL EXPOSED STEEL TO BE HOP DIP GALVANIZED.
9. ALL STRUCTURAL STEEL TO BE 350W FOR W & HSS SHAPES, 300W FOR CHANNELS, ANGLES & PLATES AND CONFORM TO CAN/CSA G40.21.
10. BRIDGING, BRACING AND ANCHORAGE TO CONFORM TO CAN/CSA S16-14, NBC LATEST EDITION.
11. PROVIDE 38mm x 22Ga. STEEL DECK (TYPICAL U/N). CONNECTED TO SUPPORTING MEMBERS WITH 20mm DIA. PUDDLE WELD, TRANSVERSE WELD PATTERN 914/4, SIDE LAP BUTTON PUNCH @ 600mm c/c. & PERIMETER WELD @ 300mm c/c.
12. ALL JOISTS TO HAVE 102mm DEEP SHOES U/N. ALL JOISTS TO BE WELDED TO SUPPORTING STEEL. SIZE AND SPACING AS SHOWN ON PLAN.
13. ALL JOISTS MARKED "T.J." ARE THE JOIST TO HAVE DOUBLE ANGLE AT TOP AND BOTTOM CHORD, AND THE BOTTOM CHORD TO BE EXTENDED AND CONNECTED TO COLUMNS OR BEAMS.
14. PROVIDE TIE JOIST AS SHOWN ON PLAN.
15. FRAME ALL OPENINGS IN THE ROOF WITH C100x8 - TYPICAL UNLESS OTHERWISE NOTED.
16. H.P. AND L.P. DENOTES HIGH AND LOW POINTS.
17. STEEL DECK AT PERIMETER WALLS TO BE AT HIGH POINT U/N.
18. PROVIDE L76 x 76 x 6.4 WELDED ON TOP OF JOIST, BEAM OR OUTRIGGERS - CONTINUOUS ALL AROUND ROOF PERIMETER. PERIMETER ANGLE TO BE WELDED TO COLUMN OR POST & STUB WHERE INTERRUPTED.
19. IN CASE WHEN JOIST BRIDGING INTERFERE WITH MECHANICAL OPENING OR A/C UNIT FRAME, BRIDGING SHOULD BE CUT & ADDITIONAL "X-BRIDGING" SHOULD BE PROVIDED BETWEEN JOISTS EACH SIDE OF CUT.
20. ALL H.S.S. MEMBERS SHOULD HAVE 6mm THICK CAP PLATE.
21. ALL MASONRY WALLS TO BE FILL SOLID AT VERTICAL BARS LOCATION WITH 20 MPa GROUT.
22. ALL BEAMS & STEEL JOISTS BEARING ON BLOCK WALLS SHALL HAVE 200 x 20 x 190mm BEARING PLATE C/W 2-12mm DIA. - 300mm LG. ANCHORS EACH END FOR 190mm MASONRY WALLS. FILL SOLID MINIMUM 2 COURSES BELOW BEAM BEARING.
23. DESIGN JOISTS FOR ADDITIONAL LOAD OF 1.2 kPa AT CONCRETE PAVERS ON TOP OF ROOF. EXACT LOCATION TO BE COORDINATED WITH ARCHITECT.
24. IF REQUIRED: CONNECTION DETAILS FOR ALL SUSPENDED EQUIPMENT, PIPES, DUCTS ETC., TO BE DESIGNED BY MECHANICAL ENGINEER OR MECHANICAL CONTRACTOR IN ACCORDANCE WITH SEISMIC RESTRAINT REQUIREMENTS AS PER DIV. B, 4.1.8.18 OF O.B.C. 2012.

TYP. ROOF SPRINKLER NOTES:

1. SPRINKLER DESIGNER NOTES : SPRINKLER LINES TO BE MIN. 300mm CLEAR FROM BRIDGING, REFER TO FINAL JOIST SHOP DRAWINGS FOR LOCATION OF BRIDGING LINES. SPRINKLER LINES TO BE HUNG FROM JOIST TOP CHORD PANEL POINT ONLY, TYP. UNLESS NOTED OTHERWISE.
   100mm- or SMALLER IGNORE
   a.) 150mm DIA. w = 0.47 kN/M
   b.) 200mm DIA. w = 0.75 kN/M
   } PLUS ADD'L 0.45kN AT HANG PTS.
   (200mm DIA. MAIN TO BE HUNG FROM EVERY JOIST, TYP. UNLESS NOTED ON PLAN)
2. STRUCTURAL STEEL SUPPLIER TO PROVIDE SUPPORT FRAMING FOR ALL OPENINGS WHERE FRAMING IS NOT ALREADY SHOWN.
3. REFER TO MECHANICAL, ARCHITECTURAL AND ELECTRICAL DRAWING FOR ALL LOCATIONS OF PIPE SLEEVES AND DUCTS.
4. ROOF JOIST DESIGN:
   MAKE ALLOWANCE FOR SNOW PILING AROUND MECH. UNITS SEE JOIST LOADING DIAGRAM FOR DETAILS.

H.S.S. COLUMN SCHEDULE

MARK	COLUMN SIZE
C1	HSS 203mm x 203mm x 8.0mm Wall Thk.
C2	HSS 203mm x 203mm x 6.4mm Wall Thk.
C3	HSS 203mm x 203mm x 12.7mm Wall Thk.
C4	HSS 89mm x 89mm x 4.8mm Wall Thk.

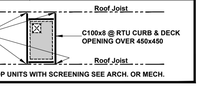
SNOW PILE-UP LOAD DIAGRAM SCHEDULE:

MARK	SNOW ACCUMULATION DIAGRAMS	REMARKS
SPU-1	2.27kPa, 1.28kPa, 5.36m (U.N.O)	LOCATED AT HIGH PARAPET (SEE PLAN)
SPU-2	2.34kPa, 1.28kPa, 2.00m (U.N.O)	LOCATED AROUND ROOF TOP UNITS (SEE PLAN)

MECHANICAL UNIT SCHEDULE:

MARK	MARK	MARK	REMARKS
SEE MECH.	AS SHOWN	C100x8	GENERAL CONTRACTOR TO COORDINATE LOADS & LOCATION w/ MECH. DWG's (TYP.)

NOTE: JOIST DESIGNED FOR PD = 1.33kN (0.3 Kips) PL = 1.0kN (0.23 Kips)



1. MECHANICAL ROOF TOP UNITS WITH SCREENING SEE ARCH. OR MECH.

All measurements to be confirmed in field by Contractor. Errors & Omissions to be be reported to the Structural Engineer prior to proceeding with the work. Responsibility for coordination of all work remains with the General Contractor.

ISSUED or REVISIONS

No.	DATE	DESCRIPTION	BY
1.	JUNE 19, 2026	ISSUED FOR PERMIT REVIEW & COORDINATION	

GENERAL NOTES:

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3. THESE DRAWINGS MUST BE READ IN THE CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
4. THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
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IMPORTANT NOTE:

PROVIDE CERTIFIED STEEL CONNECTION SHOP FABRICATION DRAWINGS TO SOSCIA PROFESSIONAL ENGINEERING INC., FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENCED IN ONTARIO.

SOSCIA
PROFESSIONAL ENGINEERS INC.
10376 Yonge Street, Suite 307
Richmond Hill, ON. L4C 3B8
Website: www.sosciaeng.ca
Tel: 905-237-5410
Fax: 905-237-5413

PROJECT NAME:

PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

10533 KEELE STREET, VAUGHAN, ONTARIO

PROJECT SITE:

ROOF FRAMING PLAN

DRAWING TITLE:

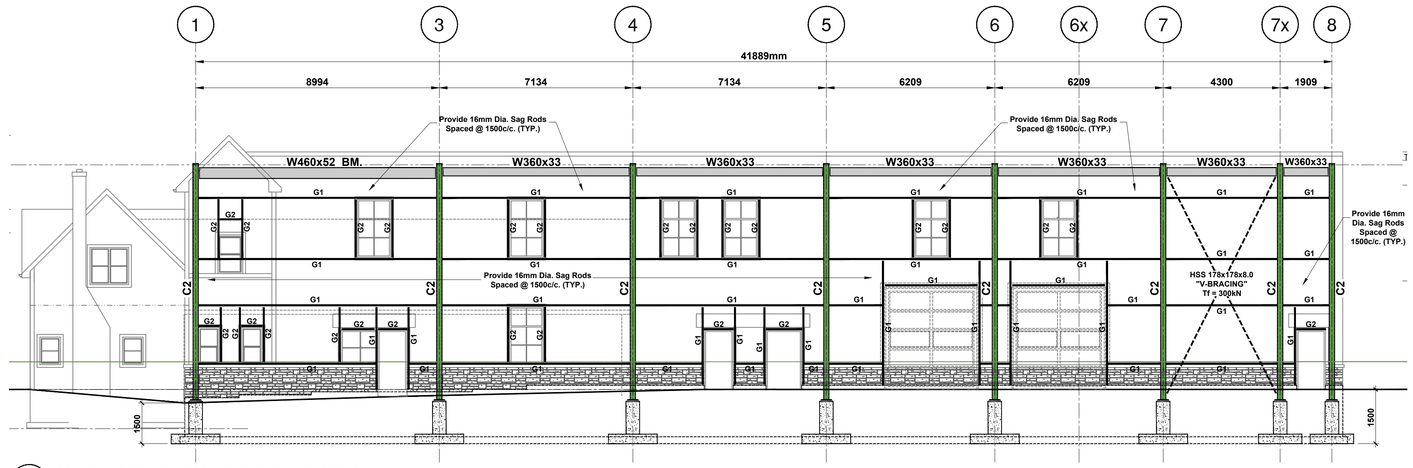
LICENSED PROFESSIONAL ENGINEER — JUNE 19, 2026 — S. SOSCIA — STRUCTURAL — PROVINCE OF ONTARIO

Note: Not to be use for construction unless, sealed & signed by the structural engineer.

SCALE: AS NOTED	DATE: JUNE 3, 2026
PROJ. ENG.: S. Soscia	DESIGNED BY: P. Leyesa
DRAWN BY: AC.	REVIEWED BY: S. Soscia
PROJECT NUMBER: 24-020	

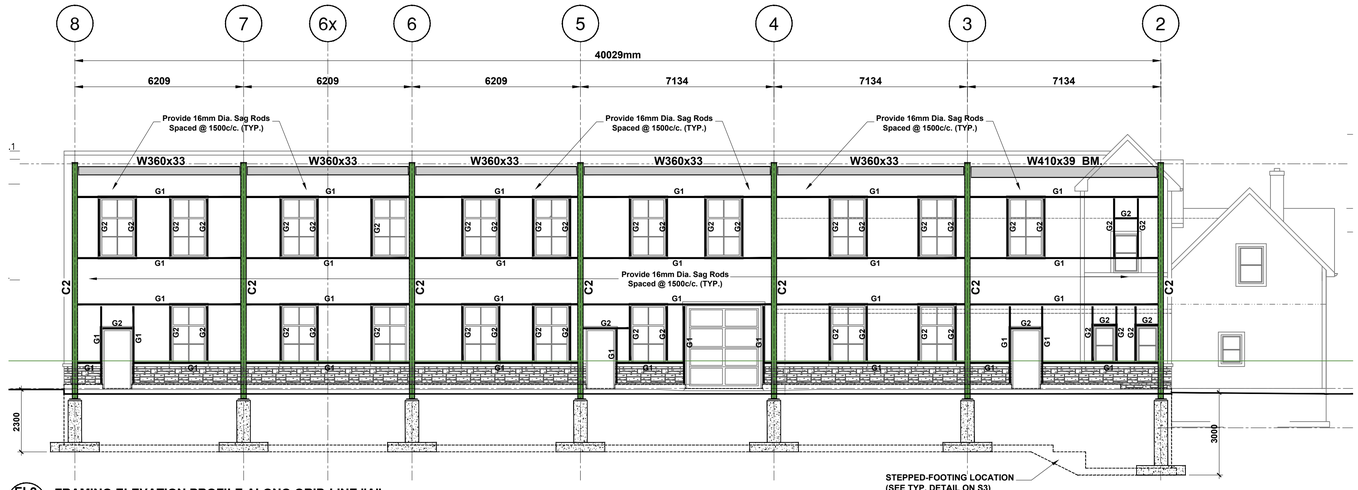
S5

DRAWING NUMBER:



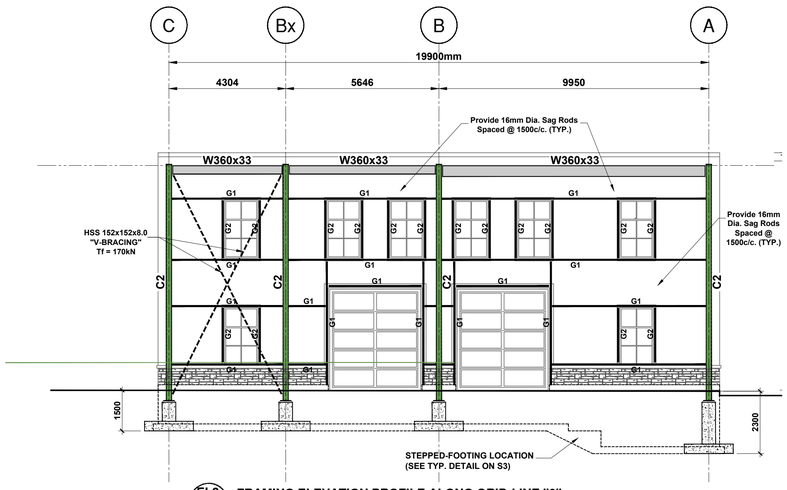
EL1 / S6 **FRAMING ELEVATION PROFILE ALONG GRID-LINE "C"**

DO NOT SCALE



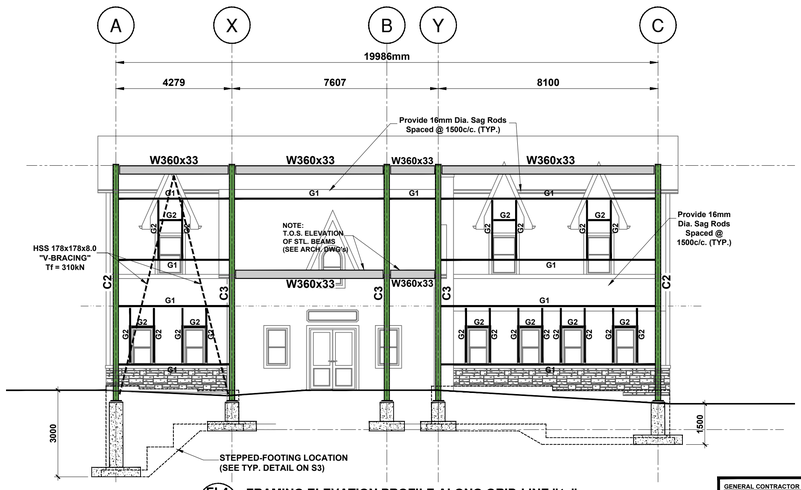
EL2 / S6 **FRAMING ELEVATION PROFILE ALONG GRID-LINE "A"**

DO NOT SCALE



EL3 / S6 **FRAMING ELEVATION PROFILE ALONG GRID-LINE "8"**

DO NOT SCALE



EL4 / S6 **FRAMING ELEVATION PROFILE ALONG GRID-LINE "1z"**

DO NOT SCALE

TYPICAL BRACED FRAMING NOTES

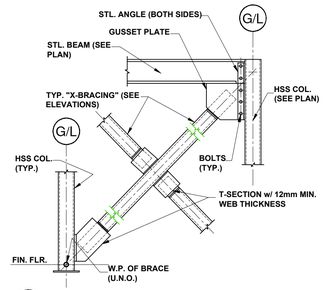
1. REFER TO FRAMING PLANS ON DRAWING No.S4 FOR LOCATIONS & FACTORED TENSILE & COMPRESSIVE LOADS FOR ALL DIAGONAL CROSS BRACING DETAILS: "Tf or Cf = kN".
2. KNIFE PLATES, BASE PLATES, STIFFENERS ETC. HAVE NOT BEEN SHOWN ON THE ELEVATIONS, AND ARE THE RESPONSIBILITY OF THE CONNECTION ENGINEER.
3. REFER TO FOUNDATION PLAN FOR BASE PLATE AND CONCRETE PEDESTAL SIZES.
4. ALL STEEL GUSSET PLATES ARE TO BE DETAILED BY THE STEEL FABRICATOR TO ENSURE THAT THE NEUTRAL AXIS OF ALL STEEL MEMBERS INTERSECT AT A CONCURRENT POINT.
5. ALL COLUMNS IN BRACE AND NON-BRACE BAYS TO BE CONTINUOUS FULL HEIGHT. SPLICING IS NOT PERMITTED.
6. SUBMIT ALL CONNECTION DETAILS AND DESIGNS FOR BRACING SYSTEM INDICATING THE CONNECTION RESISTANCES TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO SUBMISSION OF SHOP DRAWINGS.

STEEL GIRT SCHEDULE

MARK	MEMBER SIZE
G1	C230x20 VERT. & HORIZ. MEMBER (SEE ELEV's)
G2	C200x17 VERT. & HORIZ. MEMBER (SEE ELEV's)

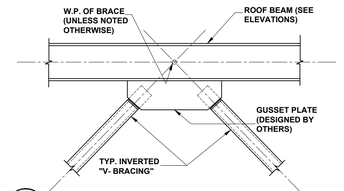
H.S.S. COLUMN SCHEDULE

MARK	COLUMN SIZE
C1	HSS 203mm x 203mm x 8.0mm Wall Thk.
C2	HSS 203mm x 203mm x 6.4mm Wall Thk.
C3	HSS 203mm x 203mm x 12.7mm Wall Thk.
C4	HSS 89mm x 89mm x 4.8mm Wall Thk.



XB1 / S6 **DETAIL OF "X-BRACING" CONNECTION**

DO NOT SCALE



XB2 / S6 **DETAIL OF INVERTED V-BRACING @ STL. BEAM**

DO NOT SCALE

GENERAL CONTRACTOR NOTE:

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY ALL DIMENSIONS ON ARCHITECTURAL DRAWINGS & REPORT ALL DISCREPANCIES & OMISSIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER, PRIOR TO CONSTRUCTION. (DO NOT SCALE THESE DRAWINGS).

All measurements to be confirmed in field by Contractor. Errors & Omissions to be reported to the Structural Engineer prior to proceeding with the work. Responsibility for coordination of all work remains with the General Contractor.

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10376 Yonge Street, Suite 307
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PROJECT NAME:

PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

10533 KEELE STREET, VAUGHAN, ONTARIO

PROJECT SITE:

ELEVATION FRAMING SECTION PROFILES

DRAWING TITLE:

LICENSED PROFESSIONAL ENGINEER — JUNE 19, 2026 — S. SOSCIA — STRUCTURAL — PROVINCE OF ONTARIO

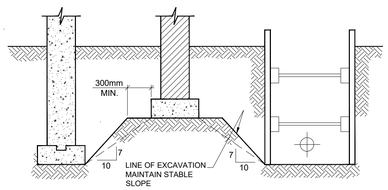
Note: Not to be use for construction unless, sealed & signed by the structural engineer

SCALE:	AS NOTED	DATE:	JUNE 3, 2026
PROJ. ENG.:	S. Soscia	DESIGNED BY:	P. Leyesa
DRAWN BY:	AC.	REVIEWED BY:	S. Soscia
PROJECT NUMBER:	24-020		

S6

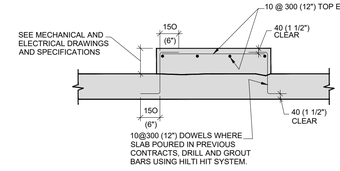
DRAWING NUMBER:

NOTE:
BEFORE CONSTRUCTION OF FOOTINGS, EXAMINE INVERT ELEVATIONS OF UNDERGROUND SERVICES, ETC. FOOTINGS IN THE VICINITY SHALL BE LOWERED TO SATISFY THE MAX. SLOPE OF 7 TO 10

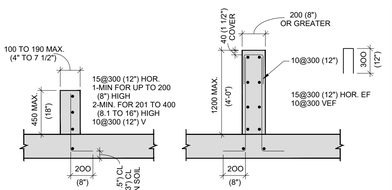


NOTE:
ADJUST FOOTING ELEVATIONS SHOWN ON DRAWINGS IF NECESSARY TO MAINTAIN THE MAX. 7 TO 10 SLOPE BETWEEN FOOTINGS AND ADJACENT EXCAVATIONS FOR DRAINS OR OTHER ITEMS

TYP. DETAIL of SLOPE BETWEEN ADJACENT EXCAVATIONS

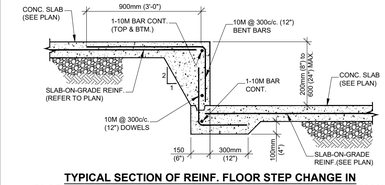


TYPICAL DETAIL OF MECHANICAL HOUSEKEEPING PAD

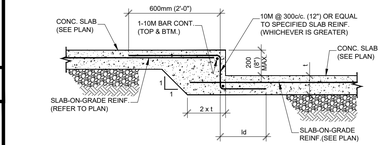


NOTE:
SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF CURBS NOT SHOWN ON STRUCTURAL DRAWINGS.

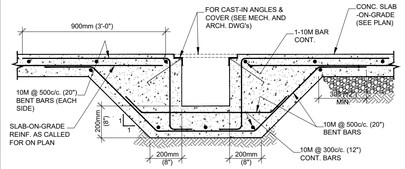
TYP. DETAILS OF CONCRETE CURBS ON SLABS



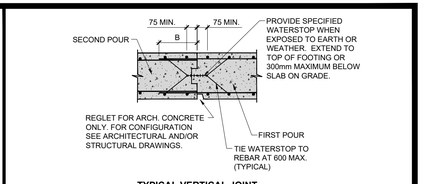
TYPICAL SECTION OF REINF. FLOOR STEP CHANGE IN SLAB-ON-GRADE LEVEL OF 200mm (8") MIN. TO 600mm (24") MAX.



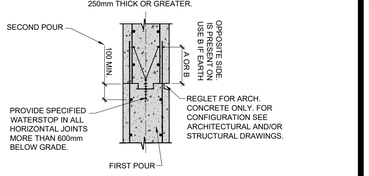
TYPICAL SECTION OF REINF. FLOOR STEP CHANGE IN SLAB-ON-GRADE LEVEL OF 200mm (8") MAX.



TYPICAL SECTION OF REINF. CONCRETE TRENCH DRAIN IN SLAB-ON-GRADE

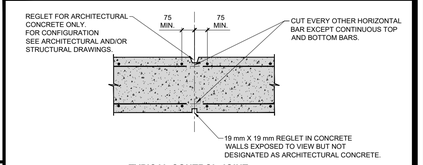


TYPICAL VERTICAL JOINT



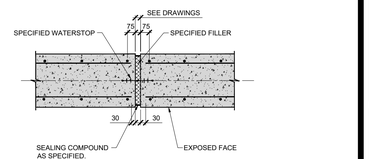
TYPICAL HORIZONTAL JOINT

TYPICAL CONSTRUCTION JOINTS IN WALLS



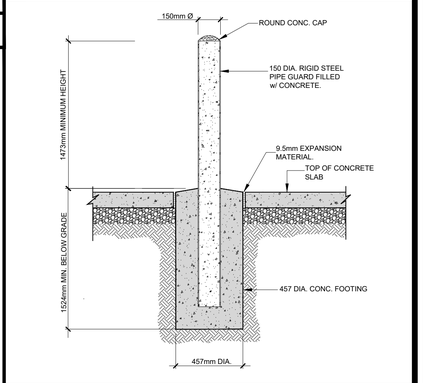
TYPICAL CONTROL JOINT

NOTES:
1. AS A MINIMUM PROVIDE CONTROL JOINTS IN ALL FOUNDATION WALLS AT 30 TIMES THE WALL THICKNESS.

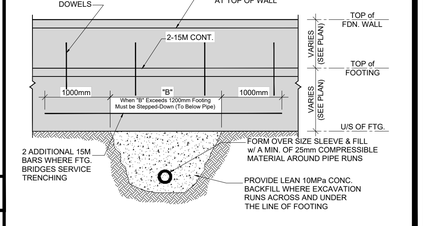


TYPICAL EXPANSION JOINT

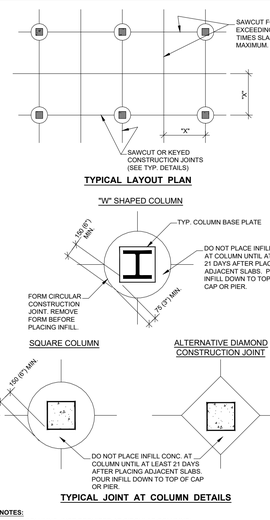
TYP. CONTROL & EXPANSION JOINTS IN FOUNDATION CONCRETE WALLS



TYP. CONCRETE FILLED STEEL BOLLARD DETAIL



TYP. SEWER TRENCH BACKFILL DETAIL BELOW WALL FTG.



TYPICAL LAYOUT PLAN

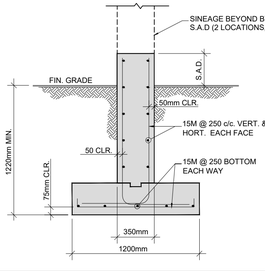
"W" SHAPED COLUMN

SQUARE COLUMN | ALTERNATIVE DIAMOND CONSTRUCTION JOINT

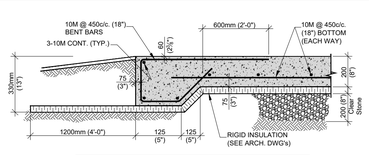
TYPICAL JOINT AT COLUMN DETAILS

GENERAL NOTES:
1. FORM AROUND COLUMNS. (NOT REQUIRED AT CIRCULAR COLUMNS).
2. PLACE SLAB AREA NO LARGER THAN CAN BE FINISHED IN ONE DAY.
3. SAWCUT CONTROL JOINTS AS SOON AS CONCRETE HAS SET SUFFICIENTLY TO AVOID RAVELING EDGES. USE EARLY ENTRY SAW COMMENCE SAWCUTTING AS SOON AS CONCRETE CAN SUPPORT WEIGHT OF SAW AND OPERATOR WITHOUT MARRING CONCRETE SURFACE AND WITH 2 HRS. COMPLETION OF FINAL FINISHING.
4. SAWCUT AT COLUMN CENTRELINES. FOR BAYS EXCEEDING "X" SAWCUT ALSO INTO PANELS NOT EXCEEDING "X", UNLESS OTHERWISE NOTED ON PLANS.
5. LIMIT RATIO OF LENGTH TO WIDTH OF ANY SAWCUT PANEL TO 1.5 MAXIMUM.
6. FILL SAWCUT JOINTS WITH SEMI-RIGID EPOXY, IN ACCORDANCE WITH SPECIFICATION.

TYPICAL CONCRETE SLAB-ON-GRADE - AREA PLACEMENT



TYPICAL DETAIL OF SINEAGE FOUNDATION

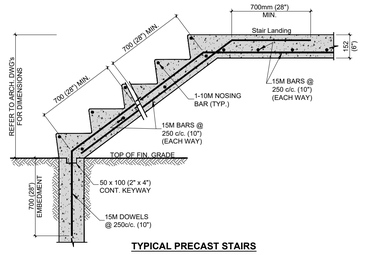


GENERAL NOTES:
- USE 35 MPa CLASS C1 CONCRETE WITH 5% AIR ENTRAINMENT.
- ALL REINFORCING BARS TO BE EPOXY COATED.
- SEE ARCHTECTURAL DRAWINGS FOR SIZE & LOCATION OF PAD.

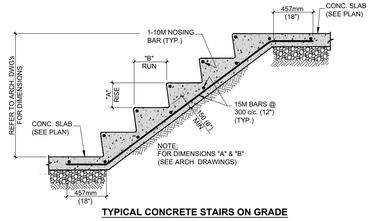
TYPICAL FOOTINGS ADJACENT TO EXCAVATION

EDGE OF ADJACENT EXCAVATION FOR FOOTINGS, SUMPS, BASEMENT, SITE SERVICES, ETC.

TYPICAL SECTION OF EXTERIOR REINFORCED CONCRETE COMPACTOR OR LOADING DOCK PAD



TYPICAL PRECAST STAIRS

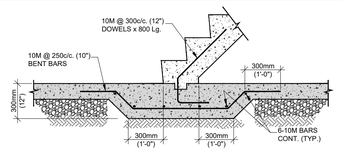


TYPICAL CONCRETE STAIR DETAILS

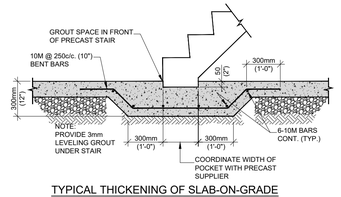
TYPICAL CONCRETE STAIRS ON GRADE

TYPICAL DETAIL OF SUMP/ACCESS PIT (U.N.O.)

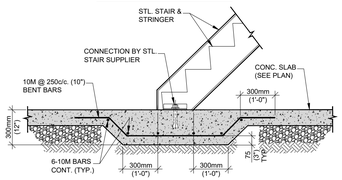
NOTE: SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZE, LOCATION AND WATERPROOFING REQUIREMENTS.



TYPICAL CAST-IN-PLACE STAIRS SUPPORTED ON GRADE

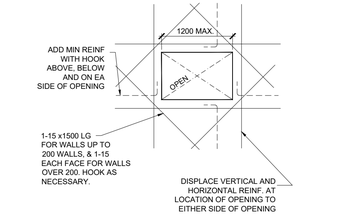


TYPICAL THICKENING OF SLAB-ON-GRADE UNDER PRECAST STAIRS



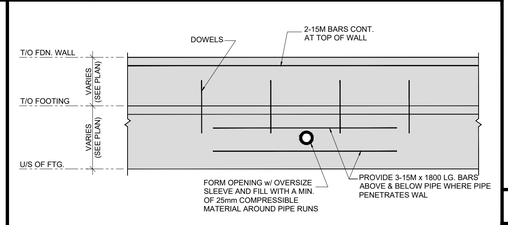
TYPICAL THICKENING OF SLAB-ON-GRADE UNDER STEEL STAIRS

TYP. STAIR SUPPORT DETAILS AT SLAB-ON-GRADE

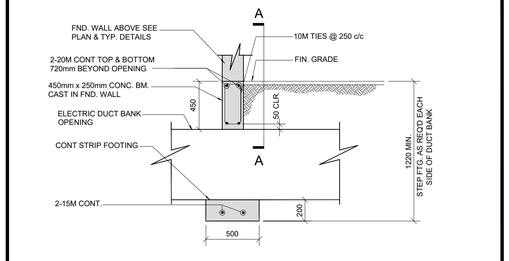


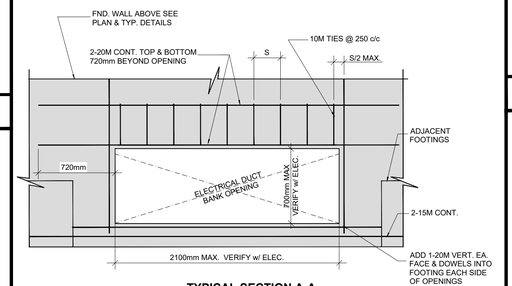
TYP. DETAIL OF REINF. AT OPENINGS OR RECESSES IN CONCRETE WALLS

TYPICAL SECTIONS OF REINF. CONCRETE STEPS, AND TRENCH DRAIN IN SLAB-ON-GRADE



TYPICAL SECTION OF SERVICE THROUGH FOOTING





TYPICAL SECTION A-A

TYP. SECTIONS OF ELECTRICAL DUCT BANK THROUGH FOOTING

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ISSUED or REVISIONS

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8. ALL DIMENSIONS GIVEN ARE IN METRIC.

IMPORTANT NOTE:

PROVIDE CERTIFIED SHOP FABRICATION DRAWINGS TO SOSCIA PROFESSIONAL ENGINEERING INC., FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENCED IN ONTARIO.

SOSCIA
PROFESSIONAL ENGINEERS INC.
10376 Yonge Street, Suite 307
Richmond Hill, ON. L4C 3B8
Website: www.sosciaeng.ca
Tel: 905-237-5410
Fax: 905-237-5413

PROJECT NAME:
PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

10533 KEELE STREET, VAUGHAN, ONTARIO
PROJECT SITE:

TYPICAL DETAILS and SECTIONS
DRAWING TITLE:

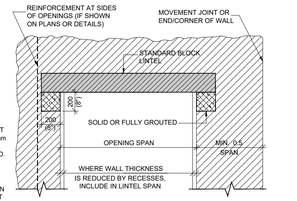
LICENSED PROFESSIONAL ENGINEER — JUNE 19, 2026 — S. SOSCIA — STRUCTURAL — PROVINCE OF ONTARIO

Note: Not to be use for construction unless, sealed & signed by the structural engineer

SCALE:	AS NOTED	DATE:	JUNE 3, 2026
PROJ. ENG.:	S. Soscia	DESIGNED BY:	P. Leyesa
DRAWN BY:	AC.	REVIEWED BY:	S. Soscia
PROJECT NUMBER:	24-020		

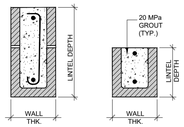
DRAWING NUMBER:
S7

STANDARD MASONRY LINTELS IN NON-LOADING BEARING WALLS



GENERAL NOTES:

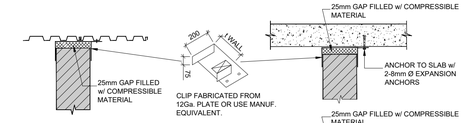
1. LINTELS DESCRIBED ON THIS TYPICAL DETAIL ARE FOR NON-LOAD BEARING WALLS. THE LINTELS SHALL ONLY BE USED IN LOAD BEARING MASONRY WALL IF REVIEWED BY THE ENGINEER.
2. DO NOT USE MASONRY LINTELS FOR OPENINGS WHERE MOVEMENT JOINT OR WALL END OR CORNER IS LOCATED LESS THAN 0.5 OF THE LINTEL SPAN AWAY FROM THE FACE OF THE OPENING.
3. PROVIDE 200mm MINIMUM LENGTH OF BEARING AT EACH END. PROVIDE A MINIMUM LENGTH OF 200mm AND A MINIMUM DEPTH OF 400mm OF 100% SOLID MASONRY BELOW THE LINTEL BEARING EACH END.
4. HORIZONTAL BAR REINF. SHALL EXTEND 200mm BEYOND FACE OF OPENING.
5. FILL LINTEL BLOCKS WITH 20MPa CONC. GROUT. IN CONFORMANCE WITH CSA STANDARDS. IT IS NOT ACCEPTABLE TO FILL LINTELS WITH MORTAR.
6. STANDARD LINTELS ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS, REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENING LOCATIONS.
7. SEE FRAMING PLANS FOR SPECIAL LINTELS.

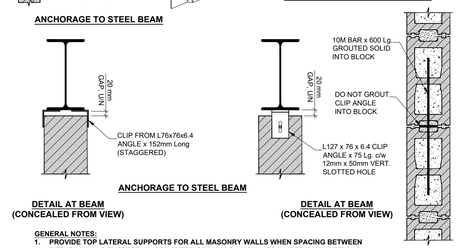


MASONRY LINTEL DETAILS

WALL THICKNESS	SPAN	BLOCK LINTEL DEPTH	REINF: TOP & BTM.
90mm (4")	UP TO 1200 (4'-0)	190	1-10
	1200(4'-0) TO 1800(6'-0)	N/A	N/A
	1800(6'-0) TO 2400(8'-0)	N/A	N/A
	2400(8'-0) TO 3000(10'-0)	N/A	N/A
140mm (6")	UP TO 1200 (4'-0)	190	1-10
	1200(4'-0) TO 1800(6'-0)	190	1-10
	1800(6'-0) TO 2400(8'-0)	390	1-10 +1-10@200(8") "J"
	2400(8'-0) TO 3000(10'-0)	N/A	N/A
190mm (8")	UP TO 1200 (4'-0)	190	1-15
	1200(4'-0) TO 1800(6'-0)	190	1-15
	1800(6'-0) TO 2400(8'-0)	390	1-10 +1-10@200(8") "J"
	2400(8'-0) TO 3000(10'-0)	390	1-10 +1-10@200(8") "J"
240mm (10")	UP TO 1200 (4'-0)	190	1-15
	1200(4'-0) TO 1800(6'-0)	190	1-15
	1800(6'-0) TO 2400(8'-0)	390	1-10 +1-10@200(8") "J"
	2400(8'-0) TO 3000(10'-0)	390	1-10 +1-10@200(8") "J"
290mm (12")	UP TO 1200 (4'-0)	190	1-15
	1200(4'-0) TO 1800(6'-0)	190	1-15
	1800(6'-0) TO 2400(8'-0)	390	1-10 +1-10@200(8") "J"
	2400(8'-0) TO 3000(10'-0)	390	1-10 +1-10@200(8") "J"

DETAILS OF ANCHORAGE SUPPORT AT TOP OF MASONRY WALLS TO METAL DECK, STEEL BEAMS AND CONCRETE SLAB



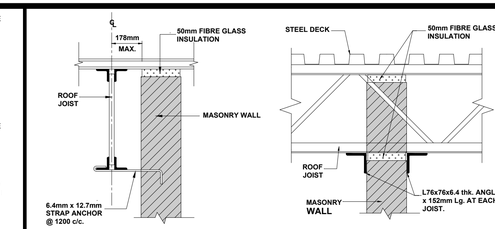


DETAIL AT BEAM (CONCEALED FROM VIEW)

DETAIL AT BEAM (CONCEALED FROM VIEW)

GENERAL NOTES:

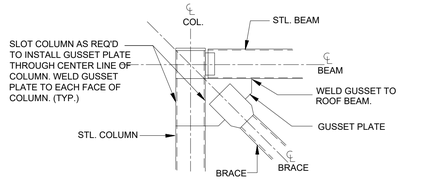
1. **PROVIDE TOP LATERAL SUPPORTS FOR ALL MASONRY WALLS WHEN SPACING BETWEEN RETURN WALLS EXCEEDS 20t FOR EXTERIOR WALLS, AND 36t FOR INTERIOR PARTITIONS.**
2. **SPACING OF LATERAL SUPPORTS SHALL NOT EXCEED 1200mm o/c.**



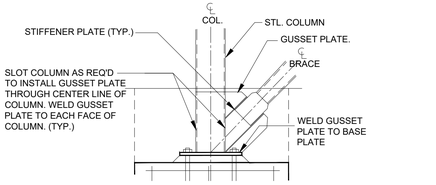
GENERAL NOTES:

1. THE TOPS OF ALL MASONRY PARTITION WALLS ARE TO BE LATERALLY SUPPORTED IN ACCORDANCE WITH THESE DETAILS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR PARTITION DIMENSIONS INCLUDING THICKNESS AND HEIGHT AND ALL FIRE-RATING REQUIREMENTS.
3. PROVIDE MINIMUM REINFORCEMENT OR MASONRY PARTITIONS, REFER TO PLAN AND GENERAL NOTES.

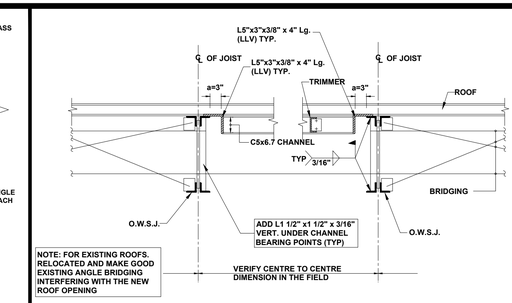
TYP. SECTIONS OF LATERAL SUPPORT FOR NON-LOAD BEARING MASONRY DEMISING WALLS



TYP. VERT. BRACE CONNECTION TO COLUMN & ROOF BEAM



TYP. VERT. BRACE CONNECTION TO COLUMN BASE PLATE

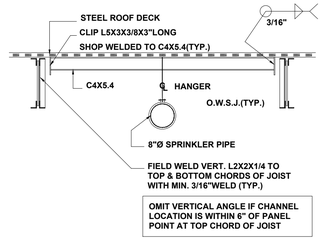


NOTE: FOR EXISTING ROOFS. RELOCATED AND MAKE GOOD EXISTING ANGLE BRIDGING INTERFERING WITH THE NEW ROOF OPENING

TYP. DETAIL FOR FRAMING OPENING IN NEW OR EXIST. ROOF

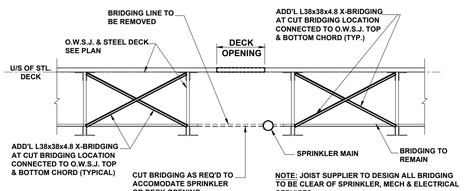
SPRINKLER PIPE SUPPORT NOTES:

1. **SPRINKLER PIPES WHICH ARE MOUNTED DIRECTLY AND PARALLEL TO THE JOISTS OR STEEL MEMBERS SHALL NOT EXCEED 4" (100 MM) IN DIAMETER.**
2. **SPRINKLER PIPES WITH DIAMETR OF 5" AND 6" (125 AND 150 MM), MOUNTED PARALLEL TO JOISTS OR STEEL MEMBERS, SHALL BE LOCATED AT THE MID-POINT BETWEEN TWO JOISTS OR STEEL MEMBERS AND ARE TO BE SUPPORTED BY CROSS BARS TIED TO THE PANEL POINTS OF THE O.W.S.J. ONLY.**
3. **SPRINKLER PIPES SHALL NOT EXCEED 6" (150 MM) IN DIAMETER UNLESS APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.**
4. **DESIGN JOISTS TO CARRY SPRINKLER PIPE UNDER JOISTS FOR THE FOLLOWING:-**
   5" (125 MM) DIAMETER: 24 PLF (0.35 KN/M)
   6" (150 MM) DIAMETER: 32 PLF (0.47 KN/M)
   8" (200 MM) DIAMETER: 51 PLF (0.75 KN/M)

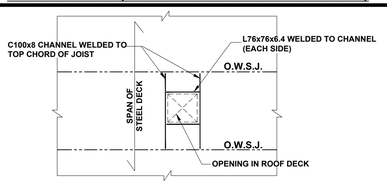


NOTE: CHANNEL, CLIP ANGLES & VERT. ANGLES TO BE SUPPLIED & INSTALLED BY SPRINKLER CONTRACTOR

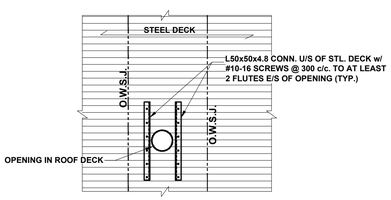
TYPICAL DETAIL OF CHANNEL TRIMMER TO SUPPORT 8" DIA. SPRINKLER PIPE



TYP. DETAIL OF JOIST HORIZ. BRIDGING ANGLES INTERRUPTION (LOCATIONS TO BE SITE VERIFIED)

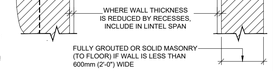


TYP. DETAIL OF DECK SUPPORT FOR SIZES 400mm to 800mm SQ. OR ROUND OPENINGS



TYP. DETAIL OF DECK SUPPORT FOR SIZES 150mm TO 400mm SQ. OR ROUND OPENINGS

STANDARD STEEL LINTELS IN NON-LOADING BEARING WALLS



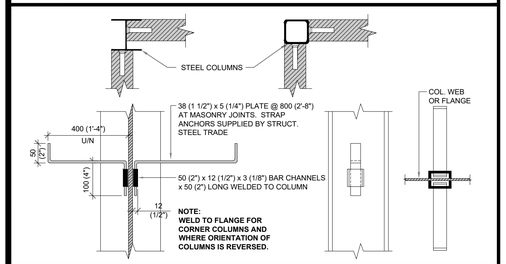
GENERAL NOTES:

1. LINTELS DESCRIBED ON THIS TYPICAL DETAIL ARE FOR NON-LOAD BEARING WALLS. THE LINTELS SHALL ONLY BE USED IN LOAD BEARING MASONRY WALL IF REVIEWED BY THE ENGINEER.
2. FOR OPENINGS OVER 600mm IN WIDTH, BOLT DOUBLE ANGLES BACK-TO-BACK USING 16mm DIA. BOLTS AT 450mm c/c. PROVIDE BOLTS 75mm FROM EACH END. ALTERNATIVELY, PROVIDE 6mm x 50mm Long FILLET WELDS AT 450mm c/c. TOP AND BOTTOM.
3. PROVIDE STEEL PACKING PLATES UNDER THE ENDS OF LINTELS AS REQUIRED TO ENSURE EVEN BEARING.
4. LINTELS IN EXTERIOR WALLS EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED.
5. VERTICAL CONTROL JOINTS SHALL NOT BE LOCATED IN LINE WITH WALL OPENINGS. REFER TO TYPICAL DETAILS FOR CONTROL JOINTS IN MASONRY WALLS.
6. STANDARD LINTELS ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS, REFER TO ARCHITECTURAL, MECHANCIAL AND ELECTRICAL DRAWINGS FOR OPENING LOCATIONS.
7. SEE FRAMING PLANS FOR SPECIAL LINTELS.

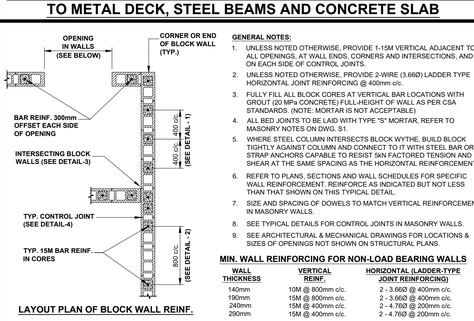
STANDARD STEEL LINTELS SCHEDULE

WALL THICKNESS	SPAN	ANGLE SIZE	DETAIL
90mm (4") VENEER	UP TO 1200 (4'-0")	89x89x6.4	89
	1200 (4'-0") TO 1800 (6'-0")	127x89x6.4	
	1800 (6'-0") TO 2400 (8'-0")	127x89x6.4	
	2400 (8'-0") TO 3000 (10'-0")	152x89x9.5	
140mm (6")	UP TO 1200 (4'-0")	2-64x64x6.4	100x10 (4"x3/8") STEEL PLATE "65505959" 64 64
	1200 (4'-0") TO 1800 (6'-0")	2-89x64x6.4	
	1800 (6'-0") TO 2400 (8'-0")	2-89x64x7.9 w/ 100x10 PLATE	
	2400 (8'-0") TO 3000 (10'-0")	---	
190mm (8")	UP TO 1200 (4'-0")	2-76x89x6.4	89 89
	1200 (4'-0") TO 1800 (6'-0")	2-89x89x6.4	
	1800 (6'-0") TO 2400 (8'-0")	2-102x89x7.9	
	2400 (8'-0") TO 3000 (10'-0")	2-152x89x7.9	
240mm (10")	UP TO 1200 (4'-0")	2-76x102x6.4	102 102
	1200 (4'-0") TO 1800 (6'-0")	2-102x102x6.4	
	1800 (6'-0") TO 2400 (8'-0")	2-102x102x9.5	
	2400 (8'-0") TO 3000 (10'-0")	2-152x102x7.9	
290mm (12")	UP TO 1200 (4'-0")	3-76x89x6.4	89 89 89
	1200 (4'-0") TO 1800 (6'-0")	3-89x89x6.4	
	1800 (6'-0") TO 2400 (8'-0")	3-102x89x7.9	
	2400 (8'-0") TO 3000 (10'-0")	3-127x89x7.9	

STANDARD STL. LINTELS IN NON-LOADING BEARING WALLS



TYPICAL DETAIL FOR ANCHORAGE OF ABUTTING MASONRY WALLS TO STEEL COLUMNS



LAYOUT PLAN OF BLOCK WALL REINF.

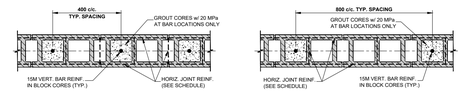
GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, PROVIDE 1-15M VERTICAL ADJACENT TO ALL OPENINGS, AT WALL ENDS, CORNERS AND INTERSECTIONS, AND ON EACH SIDE OF CONTROL JOINTS.
2. UNLESS NOTED OTHERWISE, PROVIDE 2-WIRE (3.66Ø) LADDER TYPE HORIZONTAL JOINT REINFORCING @ 400mm c/c.
3. FULLY FILL ALL BLOCK CORES AT VERTICAL BAR LOCATIONS WITH GROUT (20 MPa CONCRETE) FULL-HEIGHT OF WALL AS PER CSA STANDARDS. (NOTE: MORTAR IS NOT ACCEPTABLE)
4. ALL BED JOINTS TO BE LAID WITH TYPE "S" MORTAR, REFER TO MASONRY NOTES ON DWG. S1.
5. WHERE STEEL COLUMN INTERSECTS BLOCK WYTHE, BUILD BLOCK TIGHTLY AGAINST COLUMN AND CONNECT TO IT WITH STEEL BAR OR STRAP ANCHORS CAPABLE TO RESIST 5kN FACTORED TENSION AND SHEAR AT THE SAME SPACING AS THE HORIZONTAL REINFORCEMENT.
6. REFER TO PLANS, SECTIONS AND WALL SCHEDULES FOR SPECIFIC WALL REINFORCEMENT. REINFORCE AS INDICATED BUT NOT LESS THAN THAT SHOWN ON THIS TYPICAL DETAIL.
7. SIZE AND SPACING OF DOWELS TO MATCH VERTICAL REINFORCEMENT IN MASONRY WALLS.
8. SEE TYPICAL DETAILS FOR CONTROL JOINTS IN MASONRY WALLS.
9. SEE ARCHITECTURAL & MECHANICAL DRAWINGS FOR LOCATIONS & SIZES OF OPENINGS NOT SHOWN ON STRUCTURAL PLANS.

MIN. WALL REINFORCING FOR NON-LOAD BEARING WALLS

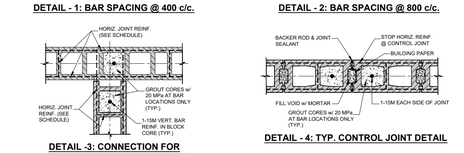
WALL THICKNESS	VERTICAL REINF.	HORIZONTAL (LADDER-TYPE JOINT REINFORCING)
140mm	10M @ 800mm c/c.	2 - 3.66Ø @ 400mm c/c.
190mm	15M @ 800mm c/c.	2 - 3.66Ø @ 400mm c/c.
240mm	15M @ 400mm c/c.	2 - 4.76Ø @ 200mm c/c.
290mm	15M @ 400mm c/c.	2 - 4.76Ø @ 200mm c/c.

TYPICAL PLAN VIEW OF MASONRY WALL DETAILS



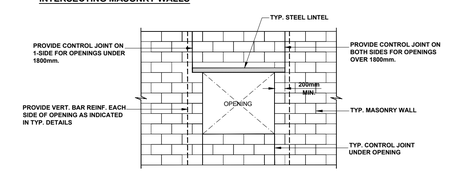
DETAIL - 1: BAR SPACING @ 400 c/c.

DETAIL - 2: BAR SPACING @ 800 c/c.

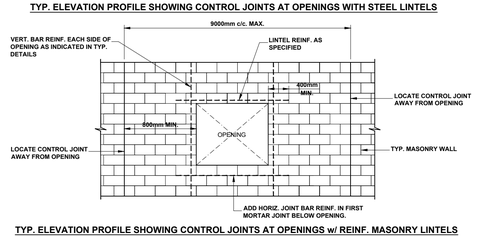


DETAIL -3: CONNECTION FOR INTERSECTING MASONRY WALLS

DETAIL - 4: TYP. CONTROL JOINT DETAIL



TYP. ELEVATION PROFILE SHOWING CONTROL JOINTS AT OPENINGS WITH STEEL LINTELS



TYP. ELEVATION PROFILE SHOWING CONTROL JOINTS AT OPENINGS w/ REINF. MASONRY LINTELS

TYPICAL DETAILS OF BAR REINFORCING AND CONTROL JOINTS IN MASONRY WALLS

All measurements to be confirmed in field by Contractor. Errors & Omissions to be reported to the Structural Engineer prior to proceeding with the work. Responsibility for coordination of all work remains with the General Contractor.

ISSUED or REVISIONS

No.	DATE	DESCRIPTION	BY
1.	JUNE 19, 2026	ISSUED FOR PERMIT REVIEW & COORDINATION	

GENERAL NOTES:

1. CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON THE JOB & MUST CHECK AND VERIFY LOCATION AND SIZES OF ALL NEW & EXISTING ELEMENTS (COLUMNS, WALLS, SLABS & OTHER STRUCTURAL OR ARCHITECTURAL ELEMENTS) AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, LATEST EDITION, AND ALL OTHER ACTS ADMINISTERED BY ALL AUTHORITIES HAVING JURISDICTION.
3. THESE DRAWINGS MUST BE READ IN THE CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
4. THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
5. SITE MEASURES TO BE TAKEN FOR DESIGNED ELEMENTS IN RELATION WITH EXISTING ELEMENTS PRIOR TO CONSTRUCTION. SHOP DRAWINGS TO BE FORWARDED TO THE ENGINEER.
6. THE STABILITY OF THE STRUCTURE IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING AND SHORING DURING CONSTRUCTION.
7. THIS DRAWING IS NOT TO BE SCALED. THIS DRAWING CONTAINS COPYRIGHT MATERIAL BELONGING TO THE ENGINEER.
8. ALL DIMENSIONS GIVEN ARE IN METRIC.

IMPORTANT NOTE:

PROVIDE CERTIFIED STEEL CONNECTION SHOP FABRICATION DRAWINGS TO SOSCIA PROFESSIONAL ENGINEERING INC., FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENCED IN ONTARIO.

SOSCIA
PROFESSIONAL ENGINEERS INC.

10376 Yonge Street, Suite 307
Richmond Hill, ON. L4C 3B8
Website: www.sosciaeng.ca
Tel: 905-237-5410
Fax: 905-237-5413

PROJECT NAME:

PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

10533 KEELE STREET, VAUGHAN, ONTARIO

PROJECT SITE:

TYP. STL. FRAMING & MASONRY WALL DETAILS AND SECTIONS

DRAWING TITLE:

LICENSED PROFESSIONAL ENGINEER — JUNE 19, 2026 — S. SOSCIA — STRUCTURAL — PROVINCE OF ONTARIO

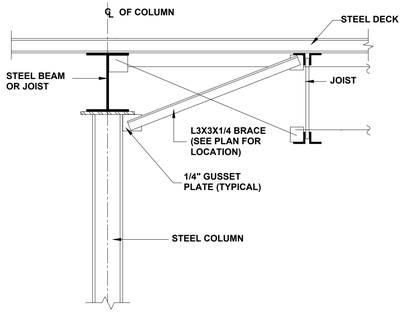
Note: Not to be use for construction unless, sealed & signed by the structural engineer

SCALE:	AS NOTED	DATE:	JUNE 3, 2026
PROJ. ENG.:	S. Soscia	DESIGNED BY:	P. Leyesa
DRAWN BY:	AC.	REVIEWED BY:	S. Soscia

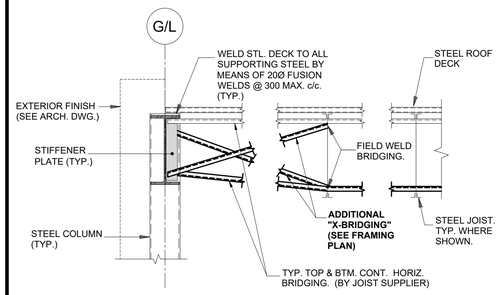
PROJECT NUMBER: 24-020

S8

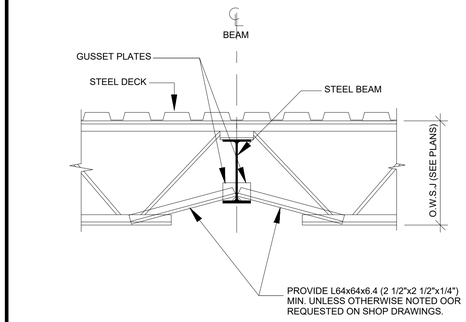
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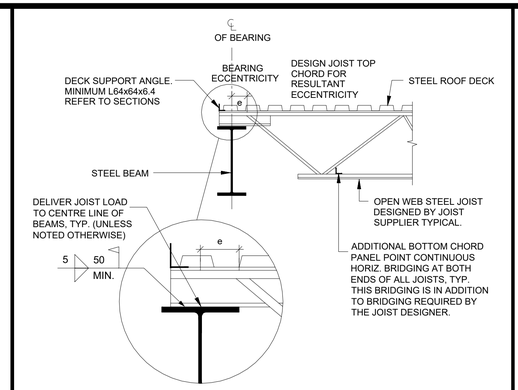
TYPICAL STL. COLUMN TIED TO TOP CHORD OF JOISTS



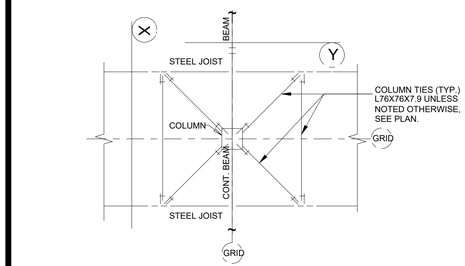
TYP. STEEL DECK AND HORIZONTAL BRIDGING DETAIL



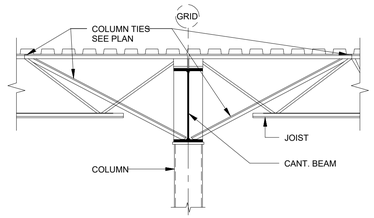
TYPICAL TIE JOISTS AT STEEL BEAM (NO COLUMN)



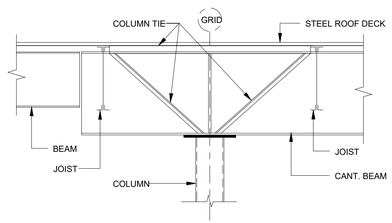
TYPICAL STEEL JOIST BEARING ON EXTERIOR BEAMS



COLUMN TIE PLAN DETAIL

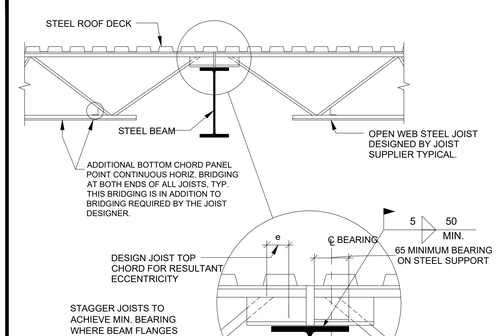


COLUMN TIE DETAIL "Y"

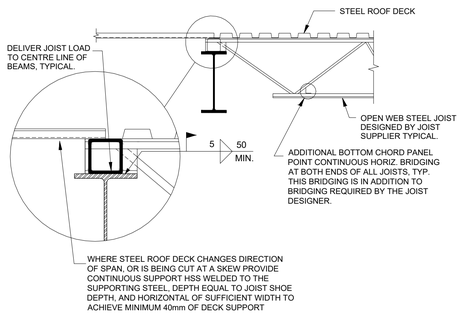


COLUMN TIE DETAIL "X"

TYPICAL STL. COLUMN TIE DETAILS (NO JOIST AT COLUMN)

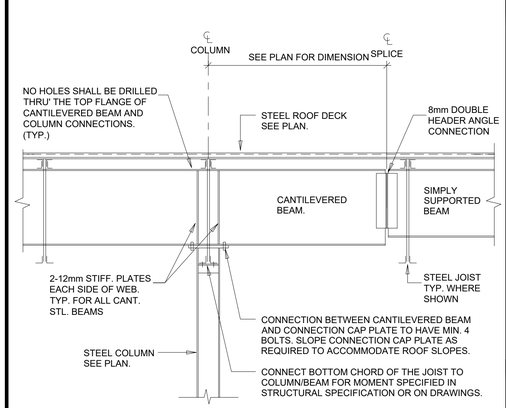


STL. JOIST BEARING ON INTERIOR BEAMS

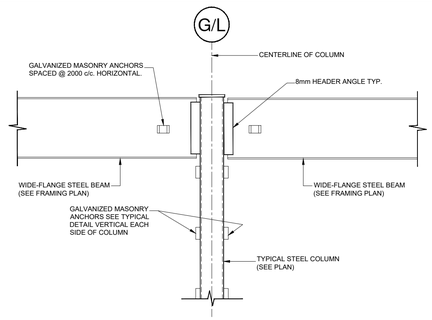


STL. JOIST AND DECK BEARING ON BEAM

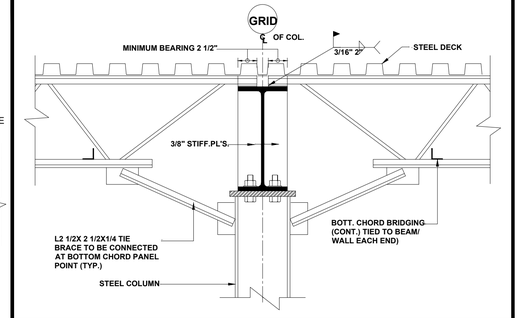
TYPICAL STRUCTURAL STEEL JOIST DETAILS



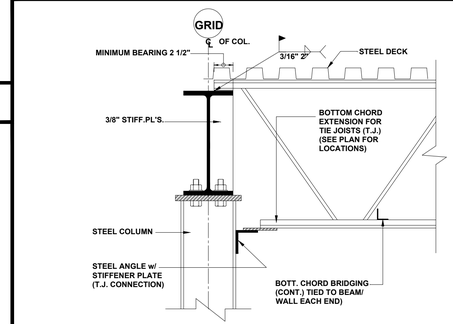
TYPICAL CANTILEVERED STEEL BEAM DETAIL



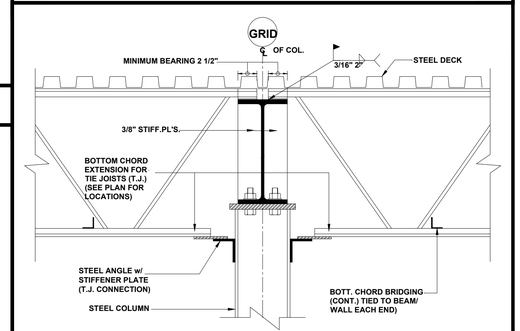
TYPICAL STEEL BEAM - TO - COLUMN CONNECTION DETAIL



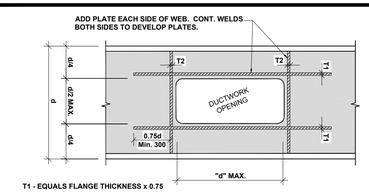
TYPICAL STEEL JOIST (T.J.) TO COLUMN WHEN BEAM DEPTH IS LARGER THAN JOIST



TYPICAL EXTERIOR (T.J.) JOIST BEARING ON STL. BEAM

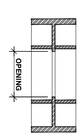


TYP. INTERMEDIATE (T.J.) JOISTS BEARING ON STL. BEAM

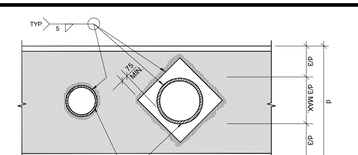


T1 - EQUALS FLANGE THICKNESS x 0.75
T2 - EQUALS WEB THICKNESS

TYP. REINFORCING AT HOLE IN BEAM FOR DUCTWORK



TYP. BEAM SECTION

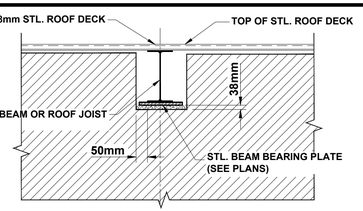


STANDARD PIPE, 100 LG. OR 25mm >. EA. SIDE PLACE HOLE IN MIDDLE THIRD OF BEAM DEPTH AND MIDDLE THIRD OF SPAN.

NOTE: HOLES THROUGH COLUMN WEB FOR PIPES SHALL NOT EXCEED d/3 AND SHALL BE REINFORCED TO RESTORE COLUMN SECTION.

TYP. REINFORCING AT HOLE IN BEAM FOR PIPES

TYPICAL DETAILS OF REINFORCING FOR OPENINGS IN WIDE FLANGE BEAMS



TYP. MASONRY PARTITION POCKETS AT JOIST OR BEAMS

All measurements to be confirmed in field by Contractor. Errors & Omissions to be reported to the Structural Engineer prior to proceeding with the work. Responsibility for coordination of all work remains with the General Contractor.

ISSUED or REVISIONS

No.	DATE	DESCRIPTION	BY
1.	JUNE 19, 2026	ISSUED FOR PERMIT REVIEW & COORDINATION	

GENERAL NOTES:

1. CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON THE JOB & MUST CHECK AND VERIFY LOCATION AND SIZES OF ALL NEW & EXISTING ELEMENTS (COLUMNS, WALLS, SLABS & OTHER STRUCTURAL OR ARCHITECTURAL ELEMENTS) AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, LATEST EDITION, AND ALL OTHER ACTS ADMINISTERED BY ALL AUTHORITIES HAVING JURISDICTION.
3. THESE DRAWINGS MUST BE READ IN THE CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
4. THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
5. SITE MEASURES TO BE TAKEN FOR DESIGNED ELEMENTS IN RELATION WITH EXISTING ELEMENTS PRIOR TO CONSTRUCTION. SHOP DRAWINGS TO BE FORWARDED TO THE ENGINEER.
6. THE STABILITY OF THE STRUCTURE IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING AND SHORING DURING CONSTRUCTION.
7. THIS DRAWING IS NOT TO BE SCALED. THIS DRAWING CONTAINS COPYRIGHT MATERIAL BELONGING TO THE ENGINEER.
8. ALL DIMENSIONS GIVEN ARE IN METRIC.

IMPORTANT NOTE:

PROVIDE CERTIFIED STEEL CONNECTION SHOP FABRICATION DRAWINGS TO SOSCIA PROFESSIONAL ENGINEERING INC., FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENCED IN ONTARIO.

SOSCIA
PROFESSIONAL ENGINEERS INC.

10376 Yonge Street, Suite 307
Richmond Hill, ON. L4C 3B8
Website: www.sosciaeng.ca
Tel: 905-237-5410
Fax: 905-237-5413

PROJECT NAME:

PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

10533 KEELE STREET, VAUGHAN, ONTARIO

PROJECT SITE:

TYPICAL STEEL FRAMING DETAILS AND SECTIONS

DRAWING TITLE:

I - LICENSED PROFESSIONAL ENGINEER - JUNE 19, 2026 - S. SOSCIA - STRUCTURAL - PROVINCE OF ONTARIO

Note: Not to be use for construction unless, sealed & signed by the structural engineer.

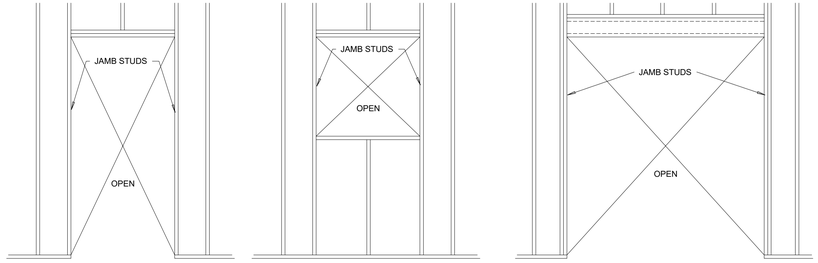
SCALE:	AS NOTED	DATE:	JUNE 3, 2026
PROJ. ENG.:	S. Soscia	DESIGNED BY:	P. Leyesa
DRAWN BY:	AC.	REVIEWED BY:	S. Soscia
PROJECT NUMBER:	24-020		

S9

DRAWING NUMBER:

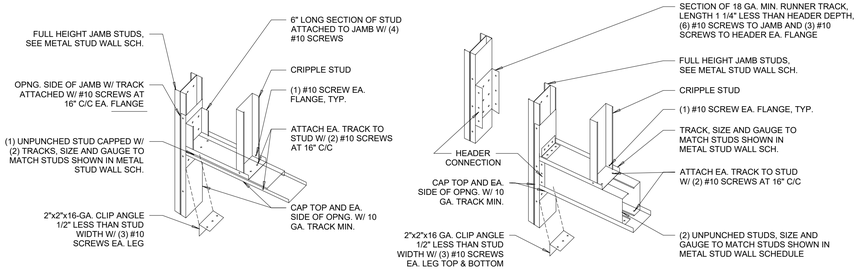
TYPICAL METAL STUD NOTES:

1. STUD SIZES SHALL BE AS SHOWN ON DRAWINGS OR TO BE DESIGNED BY STUD SUPPLIER.
2. ERECTION, BRIDGING AND SHEATHING SHALL CONFORM TO MANUFACTURER'S SPECIFICATIONS.
3. SUBMIT SHOP DRAWINGS PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL.
4. ALL STUD TO STUD OR STUD TO STEEL CONNECTIONS TO BE DESIGNED BY METAL STUD SUPPLIER.



SINGLE DOOR **SINGLE WINDOW** **DOUBLE DOOR**

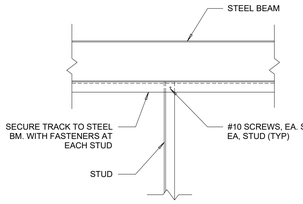
2 TYPICAL METAL STUD WALL OPENING DETAILS



LAY-IN HEADER

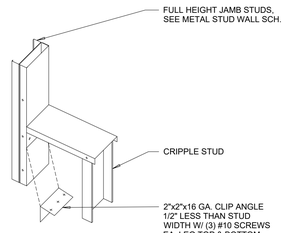
BOXED HEADER AT LOAD-BEARING OPENINGS, AND AT NON-LOAD BEARING DOUBLE OPENINGS 5'-10" OR LARGER

8 TYPICAL STUD WALL HEADER OPENING DETAILS



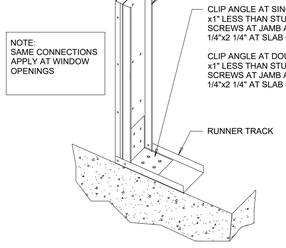
NOTE: DO NOT USE SLIDE TRACK CONNECTIONS TO BOTTOM OF BEAM

3 TYPICAL STUD TO BEAM DETAIL

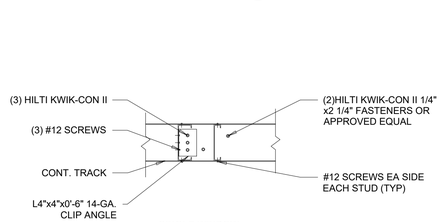


NOTE:
SAME CONNECTIONS APPLY AT WINDOW OPENINGS

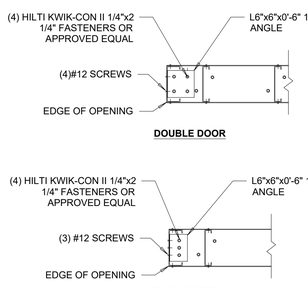
4 TYP. SILL TRACK CONNECTION DETAIL



6 TYP. DOOR JAMB ANCHORAGE DETAIL



SINGLE WINDOW



DOUBLE DOOR

SINGLE DOOR

10 TYPICAL TRACK and CONCRETE ANCHORAGE DETAILS

EXTERIOR LIGHT GAUGE FRAMING NOTES:

1. SUBMIT COMPLETE DATA ON ALL PRODUCTS, LIGHT GAUGE STUDS, MANUF.'S STANDARD DETAILS, MANUF.'S TEST DATA ON ALL FASTENERS WITH VERIFIED TEST CAPACITIES, ALLOWABLE AND ULTIMATE.
2. TRACK CLASS SHALL MATCH STUD CLASS, I.E. USE 18-GA. STUDS W/ 18-GA. TRACK.
3. WALL STUDS SHALL INCLUDE HORIZONTAL WALL BRACING AT VERTICAL CENTERS AS STANDARD WITH THE MANUFACTURER OR 48" O.C. MIN.
4. ALL STUDS SHALL INCLUDE MANUF.'S STANDARD CONNECTION TO STEEL BEAMS WITH A MINIMUM LATERAL CAPACITY OF 800 LBS/STUD OR A MIN. ULTIMATE CAPACITY OF 1800 LBS/STUD. NO VERTICAL SLIP CONNECTIONS ARE REQUIRED AT FLOOR OR ROOF LEVELS.
5. EXTERIOR WALL STUD SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF COLD-FORMED STEEL FRAMING, PER SPECIFICATION SECTION.

MEMBER DEPTH:
MEMBER DEPTHS ARE GIVEN IN 1/100 INCHES
(EXAMPLE: 6" = 600 x 1/100")

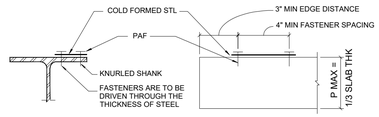
STYLE:
THE FOUR ALPHA CHARACTERS UTILIZED BY THE DESIGNATOR SYSTEM ARE:
S = STUD OR JOIST SECTIONS
T = TRACK SECTIONS
U = CHANNEL SECTIONS
F = FURRING CHANNEL SECTIONS
(EXAMPLE: STUD OR JOIST SECTION = S)

600 S 162 - 54

MATERIAL THICKNESS:
MATERIAL THICKNESSES ARE GIVEN IN 1/1000 INCHES
(EXAMPLE: 54 MILS = 0.054", 1 MIL = 1/1000")

FLANGE WIDTH:
FLANGE WIDTHS ARE GIVEN IN 1/100 INCHES
(EXAMPLE: 1 5/8" = 1.625" = 162 x 1/100")

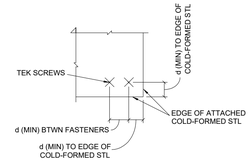
TYPICAL METAL STUD ANNOTATION



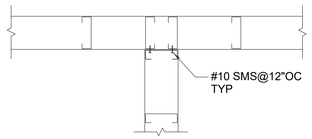
IN STEEL **IN CONCRETE**

TYPICAL CF-P POWDER ACTUATED FASTENER (PAF)

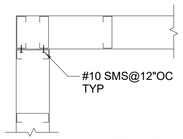
TEK SCREW SIZE	d
#6, #8	1/2"
#10	5/8"
#12	3/4"



TYPICAL CF-P TEK SCREW SPACING



TYPICAL WALL INTERSECTION



TYPICAL WALL CORNER

TYPICAL COLD FORMED WALL FRAMING INFORMATION

COLD FORMED STEEL NOTES:

1. CONFORM TO CSA STANDARD S136 REQUIREMENTS FOR THE DESIGN, FABRICATION, AND ERECTION OF COLD FORMED STEEL.
2. COLD FORMED STEEL SECTION: TO THE REQUIREMENTS OF ASTM A446
   (a) GRADE A, 33 KSI MINIMUM YIELD FOR 0.048" MATERIAL AND THINNER, AND
   (b) GRADE D, 50 KSI MINIMUM YIELD FOR 0.060" MATERIAL AND THICKER. BASED ON FRAMING MEMBERS PRODUCED BY BAILEY METAL PRODUCTS LIMITED, OR APPROVED EQUIVALENT.
3. FRAMING BOLTS AND ANCHOR BOLTS: TO THE REQUIREMENTS OF ASTM A307 UNLESS NOTED OTHERWISE.
4. WELDING: TO THE REQUIREMENTS OF CSA STANDARD W59, UNDERTAKEN BY A FABRICATOR QUALIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA STANDARD W47.1 AND W55.3.
5. SCREWS: SELF-DRILLING, SELF-TAPPING No.10-16 BY BUILDEX TEKS UNLESS NOTED OTHERWISE.
6. GALVANIZED: MINIMUM G40, HOT DIPPED GALVANIZED COATING CONFORMING TO ASTM 653.

COLD FORMED STEEL ERECTION NOTES

1. DESIGN LOADINGS SHOWN ON PLAN.
2. SEE SECTIONS AND DETAILS FOR BAILEY STUD SIZES AND SPACING.
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
4. SPLICING OF FRAMING MEMBERS BETWEEN END SUPPORTS IS NOT PERMITTED.
5. CONFORM TO THE REQUIREMENTS OF THE ONTARIO BUILDING CODE AND THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS (LATEST EDITION) DURING CONSTRUCTION.

Design Criteria For Specified Cold Formed Steel Framing (CFSF)

COLD FORMED METAL FRAMING USED FOR EXTERIOR CLADDING SUPPORT IS A PERFORMANCE SPECIFIED SYSTEM DESIGNED AND PROVIDED BY THE CONTRACTOR (CFSF CONTRACTOR). REFER TO SPECIFICATIONS FOR PROFESSIONAL ENGINEERING AND SUBMITTAL REQUIREMENTS. CONTRACTOR SHALL DESIGN ALL MEMBERS AND CONNECTIONS FORMING A COMPLETE SYSTEM FOR THE DEAD, SNOW AND WIND FORCES INDICATED IN THE DESIGN CRITERIA SECTION. IN ADDITION TO THOSE FORCES THE FOLLOWING CONSTRAINTS SHALL BE MET:

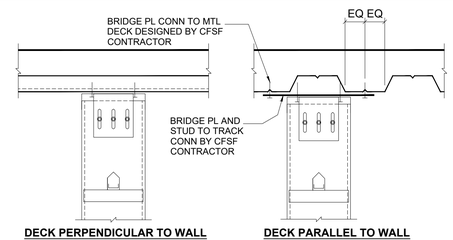
1. FRAMING MEMBERS WILL BE THE DEPTH NOTED ON WALL SECTION ON THE ARCHITECTURAL DRAWINGS.
2. MINIMUM STUD THICKNESS BASED ON THE ATTACHMENT OF CLADDING MATERIAL IS GIVEN IN THE FOLLOWING TABLE:

MATERIAL ATTACHED TO STUDS	MIN. MIL THICKNESS	MAX. STUD SPACING
WELDED BRICK LEDGE	68	1'-4" c/c.
BRICK BACKUP	43	1'-4" c/c.
METAL PANELS	54	1'-4" c/c.
ALL OTHERS	33	1'-4" c/c.

COLD FORMED STEEL TRACK THICKNESS SHALL BE EQUAL TO OR GREATER THAN THE WALL STUDS ATTACHED TO IT.

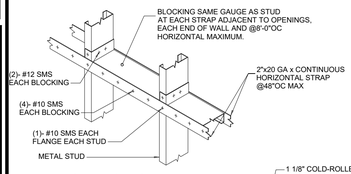
DO NOT BASE BIDS ON THE ABOVE MINIMUM THICKNESSES. VARY THICKNESS, FLANGE WIDTH, YIELD STRESS, AND SPACING AS REQUIRED TO SATISFY PERFORMANCE CRITERIA.

3. FRAMING MEMBERS WILL DELIVER FORCES TO THE STRUCTURAL FRAME AT THE LOCATIONS, DIRECTIONS, AND MAGNITUDES NOTED IN THE DETAILS. VARIATIONS PROPOSED BY THE CONTRACTOR/CFSF ENGINEER TO ACCOMMODATE PREFABRICATION AND ALTERNATE SCHEMES WILL BE SUBJECT TO THE EOR'S REVIEW AND APPROVAL. CONTRACTOR SHALL COMPENSATE M/M FOR THIS REVIEW.
4. LOADS:
   - WIND LOADS GIVEN IN THESE DOCUMENTS ARE BASED ON A COMPONENT AND CLADDING TRIBUTARY AREA OF 10 SQUARE FEET. REDUCTION IN LOADS BASED ON TRIBUTARY AREA ARE ALLOWED AS PERMITTED IN THE GOVERNING BUILDING CODE.
   - CFSF ENGINEER IS RESPONSIBLE FOR CALCULATING CUMULATIVE FORCES AT WINDOW JAMBS AND MULLIONS FROM DISTRIBUTED LOADS PROVIDED IN THESE DOCUMENTS. COORDINATE MULLION AND JAMB LOCATIONS WITH THE GENERAL CONTRACTOR.
   - CFSF CONTRACTOR SHALL ACCOUNT FOR ANY ECCENTRICITY AT CONNECTIONS OF WINDOW HEADER TRACK OR SILL PLATE WHICH COULD CAUSE ECCENTRIC LOADS ON COLD FORMED METAL FRAMING.
5. DEFLECTION CRITERIA
   a. MAX. HORIZONTAL DEFLECTION:
      - FOR STUDS SUPPORTING METAL PANELS = SPAN/240
      - FOR STUDS SUPPORTING MASONRY VENEER = SPAN/600
      - FOR STUDS SUPPORTING STUCCO AND PLASTER = SPAN/360
      - FOR STUDS SUPPORTING OTHER = SPAN/240
   b. MAX. VERTICAL DEFLECTION:
      - FOR EXTERIOR SOFFIT STUDS SUPPORTING STUCCO OR PLASTER = SPAN/360
   c. PER IBC TABLE 1604.3 FOOTNOTE "F", WIND LOAD IS PERMITTED TO BE TAKEN AS 0.7 TIMES THE COMPONENT AND CLADDING LOADS FOR THE PURPOSE OF DETERMINING DEFLECTION LIMITS EXCEPT AT COLD FORMED STEEL FRAMING SUPPORTING MASONRY VENEER.
   d. MAX. VERTICAL LIVE LOAD DEFLECTION LIMITS USED IN DESIGN OF STRUCTURAL MEMBERS AT VERTICAL SLIP CONNECTIONS:
      - PERIMETER BEAMS AT STUD INFILL FRAMING = 3/8"
      - PERIMETER BEAMS AT STUD BY-PASS FRAMING = 3/4"
      - INTERIOR FRAMING = SPAN/360
6. ADDITIONAL CRITERIA FOR CFSF.
   - PROVIDE DOUBLE JAMB STUDS MINIMUM AT ALL OPENINGS.
   - PROVIDE 1 ROW AT MID-HEIGHT (MIN.) HORIZONTAL STUD BRIDGING
   - PROVIDE 1 STUD AT EACH SIDE OF MASONRY CONTROL JOINTS (REFER TO ARCH. FOR LOCATIONS)
7. WINDOW MULLIONS APPLY CONCENTRATED LOADS TO STUD WALLS SUPPORTING WINDOWS. DESIGN FOR THE EFFECT OF CONCENTRATED LOADS. DESIGN FOR THE EFFECTS OF ECCENTRICITY OF CONNECTION SHOWN IN THE WINDOW SHOP DRAWINGS.
8. ALL CFSF CONNECTIONS TRANSFERRING FORCE SHALL BE TIGHT, WITH MINIMAL DEFORMATION AND PLAY (REFER TO SPECIFICATIONS FOR REQUIREMENTS)
9. AT CFSF SUPPORTING METAL PANEL, METAL PANEL SHALL BE CONNECTED AT EVERY WALL STUD.

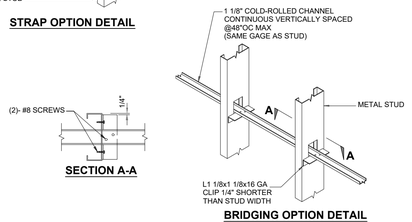


DECK PERPENDICULAR TO WALL **DECK PARALLEL TO WALL**

TYP. METAL STUD DEFLECTION TRACK AT STL. DECK SLAB



STRAP OPTION DETAIL



SECTION A-A

BRIDGING OPTION DETAIL

NOTE:
REQUIRED WHERE RIGID WALL FINISH DOES NOT CONTINUE FULL HEIGHT OF EITHER OR BOTH SIDES OF STUDS

TYPICAL LATERAL BRIDGING DETAILS AT METAL STUDS

All measurements to be confirmed in field by Contractor. Errors & Omissions to be reported to the Structural Engineer prior to proceeding with the work. Responsibility for coordination of all work remains with the General Contractor.

ISSUED or REVISIONS

No.	DATE	DESCRIPTION	BY
1.	JUNE 19, 2026	ISSUED FOR PERMIT REVIEW & COORDINATION	

GENERAL NOTES:

1. CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS ON THE JOB & MUST CHECK AND VERIFY LOCATION AND SIZES OF ALL NEW & EXISTING ELEMENTS (COLUMNS, WALLS, SLABS & OTHER STRUCTURAL OR ARCHITECTURAL ELEMENTS) AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, LATEST EDITION, AND ALL OTHER ACTS ADMINISTERED BY ALL AUTHORITIES HAVING JURISDICTION.
3. THESE DRAWINGS MUST BE READ IN THE CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
4. THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
5. SITE MEASURES TO BE TAKEN FOR DESIGNED ELEMENTS IN RELATION WITH EXISTING ELEMENTS PRIOR TO CONSTRUCTION. SHOP DRAWINGS TO BE FORWARDED TO THE ENGINEER.
6. THE STABILITY OF THE STRUCTURE IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING AND SHORING DURING CONSTRUCTION.
7. THIS DRAWING IS NOT TO BE SCALED. THIS DRAWING CONTAINS COPYRIGHT MATERIAL BELONGING TO THE ENGINEER.
8. ALL DIMENSIONS GIVEN ARE IN METRIC.

IMPORTANT NOTE:

PROVIDE CERTIFIED SHOP FABRICATION DRAWINGS TO SOSCIA PROFESSIONAL ENGINEERING INC., FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION. ALL SHOP DRAWINGS ARE TO BE CERTIFIED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENCED IN ONTARIO.

SOSCIA
PROFESSIONAL ENGINEERS INC.

10376 Yonge Street, Suite 307
Richmond Hill, ON. L4C 3B8
Website: www.sosciaeng.ca
Tel: 905-237-5410
Fax: 905-237-5413

PROJECT NAME:
PROPOSED ALTERATIONS & ADDITION OF INDUSTRIAL WAREHOUSE BUILDING

10533 KEELE STREET, VAUGHAN, ONTARIO

PROJECT SITE:

TYPICAL DETAILS and SECTIONS

DRAWING TITLE:

LICENCED PROFESSIONAL ENGINEER — JUNE 19, 2026 — S. SOSCIA — STRUCTURAL — PROVINCE OF ONTARIO

Note: Not to be use for construction unless, sealed & signed by the structural engineer

SCALE: AS NOTED	DATE: JUNE 3, 2026
PROJ. ENG.: S. Soscia	DESIGNED BY: P. Leyesa
DRAWN BY: AC.	REVIEWED BY: S. Soscia

PROJECT NUMBER: 24-020

S10

DRAWING NUMBER: