A. GENERAL

1. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2012 ONTARIO BUILDING CODE AND ANY APPLICABLE ACTS OF THE AUTHORITY HAVING JURISDICTION.
2. READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE SPECIFICATIONS, AND ALL OTHER CONTRACT DOCUMENTS.
3. VERIFY ALL STRUCTURAL DIMENSIONS WITH THE MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
4. THE MOST STRINGENT REQUIREMENT GOVERNS WHERE DISCREPANCIES OCCUR WITHIN THE CONTRACT DOCUMENTS, INCLUDING APPLICABLE CODES, STANDARDS AND ACTS.
5. REFER TO THE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF OPENINGS, DEPRESSIONS, CURBS, SLOPES, SLEEVES, EQUIPMENT BASES, HOUSEKEEPING PADS, AND EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
6. OPENINGS AND SLEEVES SHOWN ARE LOCATED AND DIMENSIONED FOR STRUCTURAL DETAILING PURPOSES ONLY. COORDINATE THE EXACT SIZES AND LOCATIONS WITH THE CONSULTANT AND APPLICABLE TRADES DURING CONSTRUCTION. REPORT ANY CONFLICTS TO THE CONSULTANT.
7. DO NOT CUT, DRILL OR ALTER STRUCTURAL MEMBERS WITHOUT PERMISSION FROM THE CONSULTANT, UNLESS NOTED ON THE DRAWINGS.
8. THE STRUCTURAL DRAWINGS ARE FOR THE COMPLETED PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY, TEMPORARY WORKS, AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
9. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS SHOWN ON THE DRAWINGS.

C. EXISTING CONDITIONS

1. EXISTING STRUCTURE AND DIMENSIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND ARE PROVIDED TO CONVEY DESIGN INTENT ONLY. THE DESIGN IS BASED ON THE INFORMATION CONTAINED IN THE RECORD DRAWINGS FOR THE EXISTING BUILDINGS, AND ON LIMITED SITE OBSERVATIONS. VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING THE WORK. NOTIFY THE CONSULTANT OF ANY DISCREPANCIES OR CONDITIONS ENCOUNTERED THAT COULD POTENTIALLY AFFECT THE WORK AND OBTAIN DIRECTION BEFORE PROCEEDING.
2. LOCATE ALL EXISTING BURIED UTILITIES AND STRUCTURES. REFER TO MECHANICAL, AND ELECTRICAL DOCUMENTS FOR APPROXIMATE LOCATION OF ALL PROPOSED AND KNOWN EXISTING SERVICES. REMOVE, RELOCATE OR PROVIDE PROTECTION DURING CONSTRUCTION, AS DIRECTED BY THE CONSULTANT.
3. PROTECT EXISTING STRUCTURES FROM DAMAGE DURING CONSTRUCTION. PATCH AND MAKE GOOD ALL EXISTING BUILDING ELEMENTS DISTURBED OR DAMAGED AS PART OF THE WORK.

D. DEMOLITION

1. THE DEMOLITION SEQUENCING NOTES ARE PROVIDED AS GUIDANCE TO THE CONTRACTOR, AND ONLY INDICATE THE SEQUENCE OF DEMOLITION WORK NECESSARY TO MAINTAIN STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE.
2. CARRY OUT ALL DEMOLITION, REMOVAL AND DISPOSAL IN ACCORDANCE WITH APPLICABLE PROVINCIAL AND LOCAL REGULATION.
3. PROTECT ADJACENT STRUCTURES, FINISHES AND SERVICES FROM DAMAGE DURING DEMOLITION WORK.
4. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO GUARD AGAINST MOVEMENT OR SETTLEMENT OF THE REMAINING STRUCTURE, INCLUDING ALL NECESSARY BRACING OR SHORING THAT IS REQUIRED.
5. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE AND MAKE MODIFICATIONS TO SUIT EXISTING SITE CONDITIONS.
6. SCAN CONCRETE FOR EMBEDDED CONDUIT OR SERVICES PRIOR TO DEMOLITION/SAW-CUTTING.
7. WHEN PERFORMING CONCRETE SLAB REMOVALS FOR MECHANICAL/ELECTRICAL SERVICE CONNECTIONS, CONTRACTOR SHALL TAKE CARE NOT TO UNDERMINE EXISTING CONCRETE SLAB. PROVIDE TEMPORARY SHORING AS REQUIRED.

E. MATERIALS

1. STRUCTURAL STEEL:
   1. W & WWF SECTIONS, CHANNELS & ANGLES: CSA-G40.20/G40.21, GRADE 350W OR A992, GRADE 50 (345 MPa)
   2. HSS SHAPES: CSA-G40.20/G40.21, GRADE 350W CLASS C OR ASTM A500 (GRADE C)
   3. PLATES, RODS, BARS: CSA-G40.20/G40.21, GRADE 300W
   4. STRUCTURAL BOLTS: ASTM F3125 GRADE A325 OR A490
   5. NUTS & WASHERS: ASTM A563 & ASTM F436
2. NON-SHRINK GROUT: NON-METALLIC, 40 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.

K. STRUCTURAL STEEL

1. PERFORM WORK IN ACCORDANCE WITH CSA-S16 AND THE CISC CODE OF STANDARD PRACTICE.
2. CONNECTIONS ARE SHOWN ON THE STRUCTURAL DRAWINGS TO INDICATE DESIGN INTENT. REFER TO SPECIFICATIONS FOR CONNECTION DESIGN, DETAILING, FABRICATION, AND ERECTION REQUIREMENTS. ALL CONNECTIONS ARE BEARING TYPE WITH A MINIMUM OF 2-19 (3/4") ⌀ BOLTS UNLESS NOTED OTHERWISE.
3. DESIGN CONNECTIONS FOR FORCES INDICATED ON THE STRUCTURAL DRAWINGS. WHERE CONNECTION FORCES ARE NOT PROVIDED, DESIGN CONNECTIONS FOR THE FOLLOWING FORCES:
   1. BEAM ENDS: FACTORED SHEAR FORCE OF 50% OF THE MAXIMUM UNIFORMLY DISTRIBUTED LOAD CAPACITY OF THE BEAM IN BENDING.
   2. FULL-MOMENT CAPACITY OF SMALLEST MEMBER JOINED FOR MOMENT CONNECTIONS. NOTE "STUB" DENOTES A MOMENT CONNECTION FOR CANTILEVER MEMBER.
   3. FULL CROSS-SECTIONAL CAPACITY OF MEMBER AT SPLICE LOCATIONS.
4. DO NOT CUT HOLES OR OTHERWISE MODIFY STRUCTURAL MEMBERS ON SITE.
5. PROVIDE MINIMUM 10 (3/8") BEAM WEB STIFFENER PLATES (BOTH SIDES) AT ALL CONCENTRATED LOAD POINTS.
6. OBTAIN CONSULTANT'S PERMISSION TO SPLICE MEMBERS, OTHER THAN AT LOCATIONS INDICATED ON THE DRAWINGS.
7. ALL EXPOSED EXTERIOR STEEL TO BE HOT-DIPPED GALVANIZED. TOUCH-UP FIELD WELDS AND DAMAGED SURFACES WITH TWO COATS OF ZINC-RICH TOUCH-UP PAINT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
8. CONNECT HANGERS FOR MECHANICAL AND ELECTRICAL SERVICES AND OTHER NON-STRUCTURAL ELEMENTS NOT TO CAUSE TWISTING OF STEEL MEMBERS OR EXCESSIVE BENDING OF MEMBER FLANGES.
9. ALL BOLTS ARE TO BE INSTALLED SNUG-TIGHT, AS DEFINED IN CSA S16.
10. GRIND SMOOTH ALL WELDS AND FLAME-CUT EDGES EXPOSED TO VIEW.
11. PERFORM WELDING IN ACCORDANCE WITH CSA W59 AND CSA-S16 USING WELDERS CERTIFIED BY THE CANADIAN WELDING BUREAU TO CSA W47.1 DIVISION 1 OR 2.

M. POST INSTALLED ANCHORS

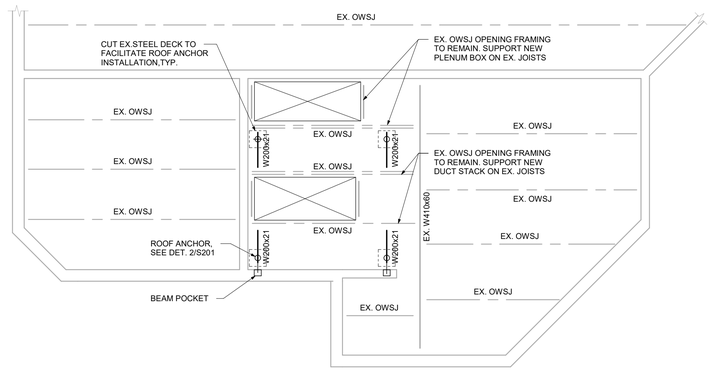
1. ALTERNATIVES TO THE SPECIFIED HILTI PRODUCTS OUTLINED IN THE MATERIAL REQUIREMENTS AND DRAWINGS MAY BE ACCEPTED BY THE CONSULTANT PROVIDED:
   1. TESTING DATA IS PROVIDED DEMONSTRATING THAT THEIR PERFORMANCE (INCLUDING CAPACITY IN CRACKED CONCRETE AND CAPACITY REDUCTIONS DUE TO SPACING AND EDGE DISTANCE) IS EQUIVALENT TO THE HILTI PRODUCTS SPECIFIED.
2. USE DRILLING AND INSTALLATION TOOLS AND PROCEDURES PER MANUFACTURER'S RECOMMENDATIONS. DO NOT CORE DRILL UNLESS SPECIFICALLY NOTED ON DRAWINGS. HOLE DIAMETERS NOT TO EXCEED THOSE REQUIRED BY MANUFACTURER.
3. WHERE CORE DRILLING IS SPECIFIED, CLEAN AND ROUGHEN HOLES PER MANUFACTURER'S RECOMMENDATION.
4. ARRANGE FOR THE ANCHOR MANUFACTURER TO CONDUCT ON SITE TRAINING FOR INSTALLATION OF ALL THE PRODUCTS SPECIFIED, AND FOR ALL CONDITIONS ENCOUNTERED (E.G. HORIZONTAL, INCLINED, OVERHEAD). ALL INSTALLERS MUST COMPLETE THE SUPPLIER CERTIFIED INSTALLER TRAINING PROGRAM.
5. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND THEIR PROXIMITY TO CONCRETE EDGES; THEREFORE, ALL ANCHORS MUST BE INSTALLED WITH CLEARANCES AND EDGE DISTANCES INDICATED ON DRAWINGS.
6. DO NOT CUT REINFORCEMENT TO ACCOMMODATE DRILLED ANCHORS AND DOWELS. SCAN THE STRUCTURE TO LOCATE REINFORCEMENT PRIOR TO FABRICATING STRUCTURAL STEEL FASTENED BY DRILLED ANCHORS.
7. UNLESS OTHERWISE NOTED ON DRAWINGS, EMBEDMENT LENGTHS FOR POST-INSTALLED HILTI ANCHORS TO BE:
   1. EXPANSION ANCHORS (HILTI KB-TZ AND HILTI KB-3)
      12mm (1/2")f: 83mm (3-1/4")
      16mm (5/8")f: 102mm (4")
      19m (3/4")f: 121mm (4-3/4")
   2. ADHESIVE ANCHORS INTO CONCRETE (HILTI HIT HY-200 AND HIT HY-70)
      12mm (1/2")f: 114mm (4-1/2")
      16mm (5/8")f: 143mm (5-5/8")
      19m (3/4")f: 171mm (6-3/4")
8. DO NOT BEND POST INSTALLED DOWELS AND RODS AFTER INSTALLATION.
9. DO NOT WELD TO PLATES FASTENED WITH ADHESIVE ANCHORS AFTER THE ADHESIVE IS PLACED.

P. GENERAL REVIEW

1. WALTERFEDY WILL PERFORM PERIODIC FIELD REVIEWS OF A REPRESENTATIVE SAMPLE OF THE WORK TO CONFIRM THAT THE WORK FOR WHICH WE ARE RESPONSIBLE IS IN GENERAL CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS. REFER TO PLANS AND SPECIFICATIONS FOR LOADING AND PERFORMANCE REQUIREMENTS.
2. COOPERATE WITH CONSULTANTS AND INDEPENDENT INSPECTION AND TESTING AGENCIES RETAINED TO PERFORM FIELD REVIEW. PROVIDE ACCESS AND ASSISTANCE AS REQUIRED FOR THE SAFE PERFORMANCE OF THEIR WORK.
3. GENERAL REVIEW OF WORK DESIGNED BY OTHER PROFESSIONAL ENGINEERS (STAMPED SHOP DRAWINGS) IS TO BE PERFORMED BY THE ENGINEER RESPONSIBLE FOR THAT DESIGN. SUBMIT FIELD REVIEW REPORTS TO THE CONSULTANT.
4. PROVIDE REASONABLE NOTICE FOR FIELD REVIEWS AND INSPECTIONS OF COMPLETED WORK, PRIOR TO CONCEALING OR ATTACHING TO THE WORK.
5. FIELD REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ACCURACY, QUALITY AND CONFORMANCE OF THE WORK WITH THE CONTRACT DOCUMENTS.

Q. SUBMITTALS

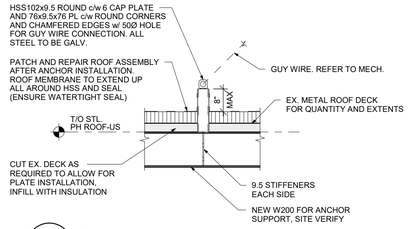
1. SUBMIT THE FOLLOWING ERECTION AND FABRICATION SHOP DRAWINGS TO THE CONSULTANT FOR REVIEW PRIOR TO FABRICATION:
   1. STEEL ERECTION AND CONNECTION DESIGN
   2. ALL TESTING AND FIELD REPORTS PREFORMED BY OTHERS
2. SHOP DRAWINGS WILL BE REVIEWED SOLELY TO ASCERTAIN GENERAL CONFORMANCE WITH THE DESIGN CONCEPT. THE CONSULTANT'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWING OR RESPONSIBILITY FOR MEETING THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.




1 / S201 PARTIAL ROOF FRAMING PLAN

Scale: 1 : 100

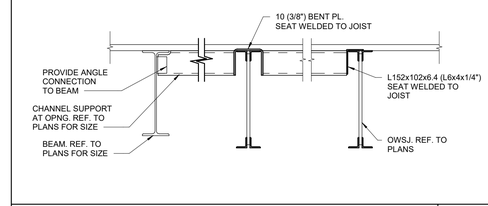
ROOF PLAN NOTES:
1. DESIGN LOADS:
   1. DL = SELF WEIGHT
   2. SDL = 1.2 kPa
   3. SL = 1.28 kPa
   4. PROPOSED STACK = 7kN




2 / S201 DETAIL

Scale: 1 : 25

NOTE: ANCHOR SUPPORT HAS BEEN DESIGNED FOR A MAXIMUM FACTORED TENSION FORCE OF 16kN AND ONLY FOR THE ATTACHEMENT OF THE DUCT STACK GUY WIRES

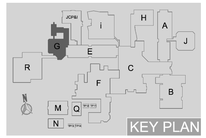



**CHANNEL SUPPORT AT ROOF OPENING** | **S103**

CLIENT LOGO

mohawk COLLEGE

KEYPLAN




TRUE NORTH PROJECT NORTH

| No. | ISSUANCE | DATE |
|---|---|---|
| 1 | ISSUED FOR 90% OWNER REVIEW | 2024.08.30 |
| 2 | ISSUED FOR BID | 2024.10.04 |

CLIENT

MOHAWK COLLEGE

135 FENNEL AVE. WEST, HAMILTON ONT. L9C 0E5

PROJECT

MOHAWK COLLEGE G-WING COOLING TOWER REPLACEMENT

TITLE

GENERAL NOTES, PARTIAL PLANS, AND DETAILS

WALTERFEDY

TORONTO | CALGARY | **KITCHENER** | HAMILTON

800.685.1378 **walterfedy.com**

SEAL

LICENSED PROFESSIONAL ENGINEER P. A. MOTTOLA 100154828 2024-0177-10 2024.10.04 PROVINCE OF ONTARIO



| | |
|---|---|
| SCALE : | As indicated |
| DATE : | 2024.09.09 |
| PROJECT NO : | 2024-0177-10 |
| DRAWN BY : | HM |
| CHECKED BY : | PM |

SHEET NO :

**S201**