

GENERAL NOTES		GN-001CS
1	GENERAL	
1.1	CHECK DIMENSIONS ON STRUCTURAL DRAWINGS AGAINST ARCHITECTURAL DRAWINGS AND EXISTING SITE CONDITIONS. REPORT INCONSISTENCIES TO CONSULTANT BEFORE PROCEEDING WITH THE WORK.	
1.2	READ DRAWINGS IN CONJUNCTION WITH SPECIFICATIONS.	
1.3	DO NOT EXCEED DURING CONSTRUCTION DESIGN LOADS SHOWN ON PLANS REDUCED AS NECESSARY UNTIL MATERIALS REACH DESIGN STRENGTH.	
1.4	DO NOT SCALE DRAWINGS.	
1.5	DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ELEVATIONS ARE IN METRES UNLESS NOTED OTHERWISE.	
2	DESIGN	
2.1	DESIGN IS IN ACCORDANCE WITH THE ONTARIO BUILDING CODE, 2012 (R2019) EDITION.	
2.2	DESIGN STANDARDS	
2.2.1	CONCRETE MEMBERS ARE DESIGNED IN ACCORDANCE WITH CSA STANDARD A23.3-14.	
2.2.2	STRUCTURAL STEEL IS DESIGNED IN ACCORDANCE WITH CSA STANDARD S16-14.	
3	MATERIALS	
3.1	CONCRETE: SEE SCHEDULE OF CONCRETE PROPERTIES AND SPECIFICATION.	
3.2	STRUCTURAL STEEL: UNLESS NOTED OTHERWISE TO CSA G40.21/G40.21-13 OR ASTM STANDARD A992/A992M-15. W AND WWF SHAPES: GRADE 350W CHANNELS AND ANGLES: GRADE 300W HOLLOW STRUCTURAL SECTIONS: 350W CLASS C OR ASTM STANDARD A1085-15 ANCHOR RODS: ASTM F1554 GRADE 36	
3.3	REINFORCING STEEL: TO CONFORM TO CSA G30-18-09(R2014) GRADE 400W UNLESS NOTED OTHERWISE	
3.3.1	REINFORCING BAR AREAS ARE 100, 200, 300, 500, 700, 1000, 1500 AND 2500 SQ. MM FOR BAR DESIGNATIONS 10M, 15M, 20M, 25M, 30M, 35M, 45M AND 55M RESPECTIVELY.	
3.3.2	STRENGTH: DEFORMED REINFORCING BARS: 400 MPa. WELDED WIRE FABRIC: 440 MPa	
4	STRUCTURAL ADEQUACY OF EXISTING BUILDING	
4.1	UPON COMPLETION OF THE STRUCTURAL MODIFICATIONS AND UPGRADES DETAILED ON THE DRAWINGS AND SPECIFICATIONS PREPARED FOR THIS PROJECT, THE EXISTING REINFORCED STRUCTURE AND SUPPORTING MEMBERS WILL HAVE ADEQUATE CAPACITY TO SUPPORT THE ADDITIONAL LOADS IMPOSED BY THE PROPOSED RENOVATIONS.	
4.2	WHERE SUPPLEMENTARY REINFORCING HAS NOT BEEN SPECIFIED TO EXISTING STRUCTURAL MEMBERS, THESE MEMBERS ARE EITHER NOT AFFECTED BY THE PROPOSED RENOVATIONS OR THEY HAVE BEEN ANALYZED AND CONFIRMED TO BE ADEQUATE AS-IS.	

CONCRETE ANCHORS, INSERTS, BOLTS		GN-012CS
1	GENERAL	
1.1	THE FOLLOWING REFERENCE STANDARDS SHALL GOVERN THE WORK OF THIS SECTION: 1.1.1 CSA A23.3-14, DESIGN OF CONCRETE STRUCTURES	
2	PRODUCTS	
2.1	TORQUE CONTROLLED EXPANSION ANCHORS 2.1.1 EXPANSION ANCHOR: PROVIDE EXPANSION ANCHORS OF SIZE SHOWN ON DRAWINGS INCLUDING MATCHING NUTS AND WASHERS: .1 FOR DRY LOCATIONS: - KWIK BOLT 3 CARBON STEEL ZINC PLATED, BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO 2 FOR WET OR HIGH HUMIDITY LOCATIONS OR LOCATIONS EXTERIOR TO THE CONDITIONED BUILDING ENVELOPE: KWIK BOLT 3 TYPE 304 STAINLESS STEEL, BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO 3 FOR LOCATIONS EXPOSED TO CHLORIDES OR OTHER CORROSIVE MATERIALS: - KWIK BOLT 3 TYPE 316 STAINLESS STEEL, BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO 2.1.2 SLEEVE ANCHOR: PROVIDE SLEEVE ANCHORS OF SIZE SHOWN ON DRAWINGS, INCLUDING MATCHING NUTS AND WASHERS: .1 FOR DRY LOCATIONS: - HSL3 CARBON STEEL BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO 2 FOR WET OR HIGH HUMIDITY LOCATIONS OR LOCATIONS EXTERIOR TO THE CONDITIONED BUILDING ENVELOPE: HSL3 STAINLESS STEEL BY HILTI (CANADA) CORPORATION, MISSISSAUGA, ONTARIO 2.2 ADHESIVE ANCHORS IN DRILLED HOLE: 2.2.1 ANCHOR ROD: PROVIDE ANCHOR RODS OF SIZE, TYPE AND EMBEDMENT LENGTH SHOWN ON DRAWINGS INCLUDING MATCHING NUTS AND MATCHING WASHERS. 2.2.2 REINFORCING BAR: PROVIDE REINFORCING BAR AS ANCHOR ROD WHERE SPECIFIED ON DRAWING. 2.2.3 CORROSION PROTECTION: PROVIDE CORROSION PROTECTION SPECIFIED ON DRAWINGS 2.2.4 ADHESIVE: PROVIDE THE ADHESIVE SPECIFIED ON THE DRAWINGS.	
3	EXECUTION	
3.1	DRILLED-IN ANCHORS 3.1.1 ARRANGE FOR MANUFACTURER'S TECHNICAL REPRESENTATIVE TO BE PRESENT DURING INSTALLATION OF FIRST FEW ANCHORS OF EACH TYPE. SUBMIT SITE REPORTS BY MANUFACTURER TO CONSULTANT WITHIN ONE WEEK OF EACH VISIT. INDICATE IN REPORTS ANCHOR SIZES AND TYPES INSTALLED, LOCATIONS, AND WHETHER INSTALLATION PROCEDURES WERE IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS. 3.1.2 INSTALL ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS. 3.1.3 INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER. 3.1.4 DO NOT DRILL HOLES LARGER IN DIAMETER THAN INDICATED IN MANUFACTURER'S PRINTED INSTRUCTIONS. 3.1.5 PROVIDE MANUFACTURER'S STANDARD EMBEDMENT LENGTH INTO SOLID CONCRETE, UNLESS OTHERWISE NOTED ON DRAWINGS. 3.1.6 DO NOT CUT REINFORCEMENT TO ACCOMMODATE ANCHORS. 3.1.7 RELOCATE ANCHORS, AT NO ADDITIONAL COST TO CONTRACT, WHEN OBSTRUCTIONS PREVENT DRILLING HOLES TO REQUIRED DEPTH IN LOCATIONS INDICATED ON DRAWINGS. 3.1.8 OBTAIN CONSULTANT'S APPROVAL OF NEW LOCATION BEFORE DRILLING HOLE. FILL ABANDONED HOLES WITH SPECIFIED GROUT. 3.1.9 TIGHTEN EXPANSION ANCHORS USING TORQUE WRENCH UNLESS FINGER-TIGHT IS INDICATED ON DRAWINGS.	
4	FIELD QUALITY CONTROL	
4.1	ARRANGE FOR INSPECTION AND TESTING COMPANY TO RANDOMLY SELECT AND PULL TEST ANCHORS AS FOLLOWS: 4.1.1 5% OF EACH TYPE AND SIZE OF ANCHOR INSTALLED ON A WEEKLY BASIS, BUT NOT LESS THAN ONE ANCHOR OF EACH TYPE AND SIZE. 4.1.2 PULL TEST TO TWICE THE ALLOWABLE DESIGN TENSION CAPACITY OF THE ANCHOR GIVEN BY THE MANUFACTURER. 4.1.3 SUBMIT REPORTS OF PULL TESTS TO CONSULTANT ON WEEKLY BASIS. INDICATE ON REPORT EACH ANCHOR LOCATION, TEST LOAD AND MODE OF FAILURE, IF APPLICABLE. NOTIFY CONSULTANT IMMEDIATELY IF ANCHOR FAILS PULL TEST.	

DESIGN LOAD		GN-002CS
1.	UNIT FLOOR AND ROOF LOADINGS, SOIL BEARING PRESSURES AND FOUNDATION LOADS GIVEN ON PLANS ARE UNFACTORED. MEMBER FORCES GIVEN ON DRAWINGS ARE FACTORED.	
2.	GRAVITY LOADS: SUPERIMPOSED DEAD LOADS AND LIVE LOADS ARE GIVEN ON PLANS.	
3.	SNOW LOAD PARAMETERS, OBC 2012 (R2019) - NORTH YORK, ONTARIO Ss = 1.2 Sr = 0.4 Is SLS = 1.25 Is SLS = 0.9	
4.	RAIN LOAD PARAMETER, OBC 2012 (R2019) - NORTH YORK, ONTARIO ONE DAY RAINFALL = 108 mm	
5.	WIND LOAD PARAMETERS, OBC, 2012 (R2019) - NORTH YORK, ONTARIO q (110) = 0.34 kPa q (150) = 0.44 kPa lw SLS = 1.25 lw SLS = 0.75	
6.	SEISMIC LOAD PARAMETERS, OBC, 2012 (R2019) - NORTH YORK, ONTARIO Sa (0.2) = 0.195 Sa (0.5) = 0.107 Sa (1.0) = 0.056 Sa (2.0) = 0.0289 SITE CLASSIFICATION = D Ie = 1.5 Fg = 1.2 Fv = 1.51 IeFaSa(0.2) = 0.35	

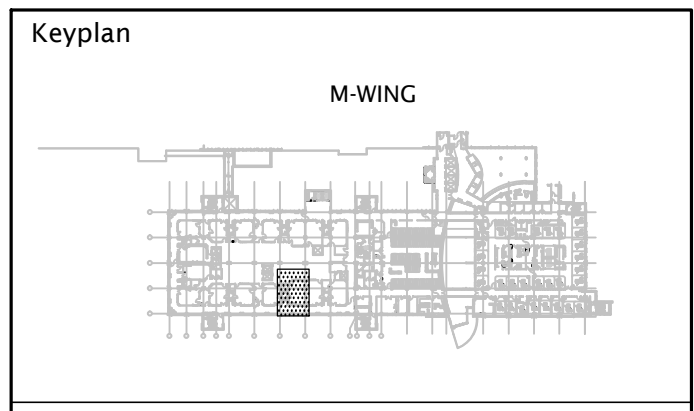
STRUCTURAL STEEL NOTES		GN-006CS
1	GENERAL	
1.1	THE FOLLOWING REFERENCE STANDARDS SHALL GOVERN THE WORK OF THIS SECTION: 1.1.1 ASTM A108-13, SPECIFICATION FOR STEEL BAR, CARBON AND ALLOY, COLD FINISHED 1.1.2 CSA S16-14, DESIGN OF STEEL STRUCTURES 1.1.3 CSA S136-16, NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 1.1.4 CSA W47-1.09(R2014), CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL 1.1.5 CSA W59-13, WELDED STEEL CONSTRUCTION 1.1.6 CSA W178.1-14, CERTIFICATION OF WELDING INSPECTION ORGANIZATIONS 1.1.7 CSA W178.2-14, CERTIFICATION OF WELDING INSPECTORS 1.2 DESIGN OF CONNECTIONS SHALL BE BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. 1.3 DESIGN CRITERIA 1.3.1 AXIAL LOADED MEMBERS THAT MEET AT A JOINT SHALL HAVE THEIR CENTROIDAL AXES INTERSECT AT A COMMON POINT UNLESS SHOWN OTHERWISE. 1.3.2 DESIGN AND DETAIL ALL CONNECTIONS AS FLEXIBLE EXCEPT WHERE NOTED OTHERWISE ON THE DRAWINGS. CONNECTIONS MAY BE WELDED OR BOLTED. 1.3.3 PROVIDE CONNECTIONS ADEQUATE TO RESIST REACTION OF BEAM, WHEN IT IS LOADED TO MAXIMUM FLEXURAL CAPACITY UNDER UNIFORMLY DISTRIBUTED LOAD, UNLESS REACTION OR CONNECTION DETAIL IS SHOWN ON DRAWINGS. FOR COMPOSITE BEAM CONSTRUCTION, USE FLEXURAL CAPACITY OF COMPOSITE SECTION BASED ON 100 PERCENT SHEAR CONNECTION OF BEAM TO SLAB. 1.3.4 WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT DESIGN FORCES ARE NOT INDICATED, DESIGN MOMENT CONNECTION FOR THE FULL MOMENT CAPACITY OF THE WEAKER MEMBER JOINED. 1.3.5 FOR BOLTED CONNECTIONS USE SMUG TIGHT HIGH STRENGTH BOLTS, ASTM F3125 GRADES A325 OR A490 EXCEPT USE PRETENSIONED HIGH STRENGTH BOLTS IN LOCATIONS SPECIFIED IN CSA-S16 CLAUSE 22.2.2 .1 SLIP CRITICAL CONNECTIONS WHERE SLIPPAGE CANNOT BE TOLERATED. .2 SHEAR CONNECTIONS PROPORTIONED IN ACCORDANCE WITH SEISMIC REQUIREMENTS. .3 ALL ELEMENTS RESISTING CRANE LOADS. .4 CONNECTIONS SUBJECT TO IMPACT OR CYCLIC LOADING. .5 CONNECTIONS WHERE THE BOLTS ARE SUBJECT TO TENSILE LOADING. .6 CONNECTIONS USING OVERSIZE OR LONG SLOTTED HOLES (UNLESS SPECIFICALLY DESIGNED TO ACCOMMODATE MOVEMENT). 1.3.6 PROVIDE CONNECTIONS FOR MEMBERS THAT ARE PART OF THE LATERAL LOAD RESISTING SYSTEM ADEQUATE TO RESIST FORCES SHOWN ON DRAWINGS, WHERE SEISMIC DESIGN GOVERNS, THE FORCES HAVE BEEN ADJUST TO MEET THE REQUIREMENTS OF CLAUSE 27.	
1.4	SUBMITTALS 1.4.1 SUBMIT STRUCTURAL SHOP DRAWINGS .1 EACH SHOP DRAWING SUBMITTED SHALL BEAR THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER RESPONSIBLE FOR CONNECTION DESIGN.	
2	PRODUCTS	
2.1	MATERIAL 2.1.1 PROVIDE NEW MATERIALS IN ACCORDANCE WITH REFERENCE STANDARDS, OF STRENGTH AND QUALITY NOTED IN GENERAL NOTES. 2.1.2 STUDS: ASTM A108 2.1.3 GALVANIZING: HOT-DIP TO ASTM A153 / A153M-16 STANDARD SPECIFICATION FOR ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE. 2.1.4 PAINT: .1 INTERIOR: SHOP COAT FOR STEEL THAT WILL NOT RECEIVE A FINISH COAT: TO CISC/CPMA STANDARD 1-73A. A QUICK-DRYING ONE-COAT PAINT FOR USE ON STRUCTURAL STEEL. .2 INTERIOR: PRIME PAINT: TO MEET THE REQUIREMENTS OF CISC/CPMA STANDARD 2-75, A QUICK DRYING PRIMER FOR USE ON STRUCTURAL STEEL. .3 EXTERIOR: ZINC-RICH PAINT READY MIX TO SPPC-PAINT 20 STANDARD	
3	EXECUTION	
3.1	PROVIDE WELDED STIFFENER PLATES MINIMUM 10 mm THICK ON BOTH SIDES OF WEB OF BEAMS AT POINTS OF CONCENTRATED LOADS INCLUDING BEAMS SUPPORTING COLUMNS OR BEAMS SUPPORTED ON TOP OF COLUMNS.	
3.2	ALL EXPOSED WELDS SHALL BE CONTINUOUS AND GROUND SMOOTH.	
3.3	PROVIDE STRUCTURAL STEEL FOR LATERAL SUPPORT OF MASONRY WALLS.	
3.4	CLEAN STEEL, IN ACCORDANCE WITH PAINT SYSTEM SPECIFIED. ZINC-RICH PAINT REQUIRES CLEANING TO SSPC-SP6, COMMERCIAL BLAST CLEANING.	
3.5	PAINTING 3.5.1 PAINT INTERIOR STEEL SURFACES WITH INTERIOR PAINT SPECIFIED 3.5.2 PAINT EXTERIOR STEEL SURFACES WITH EXTERIOR PAINT SPECIFIED. 3.5.3 DO NOT PAINT: .1 SURFACES AND EDGES WITHIN 50 mm OF FIELD WELDS .2 SURFACES ENCASED IN OR IN CONTACT WITH CONCRETE .3 SURFACES TO BE SPRAY FIREPROOFED. 3.5.4 AFTER ERECTION IS COMPLETE GIVE ONE COAT TOUCH-UP PAINT TO FIELD BOLTS, FIELD CONNECTIONS, BURNT AREAS AND DAMAGED AREAS. USE SAME PAINT AS SHOP PAINT.	
3.6	GALVANIZE LINTELS, BRICK SUPPORT ANGLES, ARCHITECTURAL BLOCK SUPPORT ANGLES AND OTHER MEMBERS INDICATED AS GALVANIZED ON DRAWINGS AFTER SHOP WELDING IS COMPLETE.	
3.7	COMPLY WITH THE REQUIREMENTS OF REFERENCE STANDARDS AND REQUIREMENTS OF REGULATORY AUTHORITIES IN ERECTION OF STRUCTURAL STEEL.	
3.8	PROVIDE MINIMUM BEARING FOR ALL STEEL BEAMS: 3.8.1 200 mm (8") ON CONCRETE AND MASONRY 3.8.2 100 mm (4") ON STEEL	
4	FIELD QUALITY CONTROL	
4.1	INSPECTION AND TESTING COMPANY SHALL PERFORM: 4.1.1 INSPECTION OF ERECTION AND FIT-UP INCLUDING PLACING, PLUMBING AND LEVELLING; 4.1.2 INSPECTION OF BOLTED CONNECTIONS INCLUDING VERIFICATION OF BOLT GRADE AND FIT-UP; 4.1.3 INSPECTION OF WELDED JOINTS; 4.1.4 GENERAL INSPECTION OF FIELD CUTTING AND ALTERATIONS; 4.1.5 GENERAL INSPECTION OF COATING TOUCH-UP.	

STRUCTURAL DRAWING LIST	
S101	GENERAL NOTES
S102	TYPICAL DETAILS
S201	PARTIAL EXISTING SECOND FLOOR FRAMING PLAN
S202	PARTIAL EXISTING THIRD FRAMING PLAN
S203	SECTIONS, DETAILS AND EQUIPMENT SUPPORT FRAME SCHEDULE

DATE	ISSUED FOR	REV
2020-03-02	COSTING SUBMISSION	A
2020-03-23	PERMIT	B
JULY 28, 2020	TENDER	0

This drawing has been prepared solely for the use of Sunnybrook Health Sciences Centre and there are no representations of any kind made by NORR Limited Architects and Engineers to any party with whom NORR Limited Architects and Engineers has not entered into a contract.

This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Architect or Engineer.



exp Services Inc.
 T: +1 905.696.3217 F: +1 905.696.0167
 220 Commerce Valley Drive West, Suite 110
 Markham, ON L3T 0A8
 Canada
 www.exp.com

H. H. ANCUS & ASSOCIATES LIMITED
Consulting Engineers
 1127 Leslie Street
 Dan Mills, Ontario
 M3C 2J6
 (416) 443-8200
 Fax: (416) 443-8290

Seal(s)

North Arrow

NORR
 NORR Architects & Engineers Limited
 175 Bloor Street East
 North Tower, 15th Floor
 Toronto, ON, Canada M4W 3R8
 norr.com

Project Manager L.B.	Drawn J.I.
Project Leader L.B.	Checked L.B.

Client

Sunnybrook
 HEALTH SCIENCES CENTRE
 2075 BAYVIEW AVENUE, TORONTO, ON.
 M4N 3M5

Project
**M-WING LEVEL 2
 HYBRID OR SUITE**

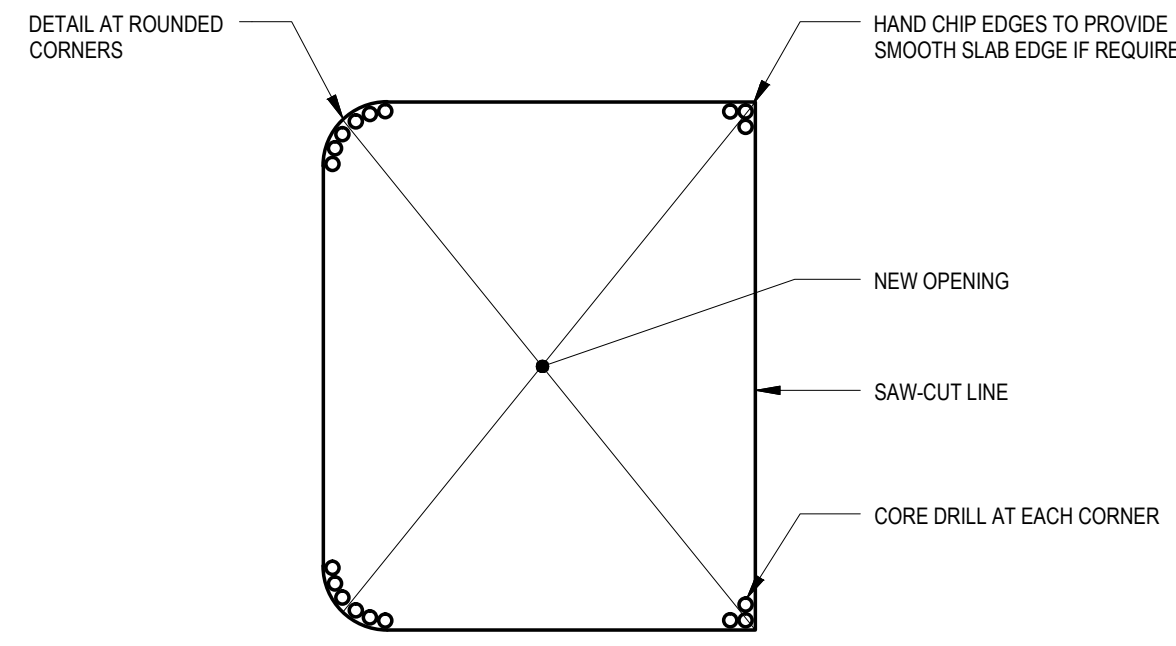
Drawing Title
GENERAL NOTES

Scale: N.T.S.
 Check Scale (may be photo reduced)

Project No. **ONBL19-0186**
 (exp. STR2019-060)

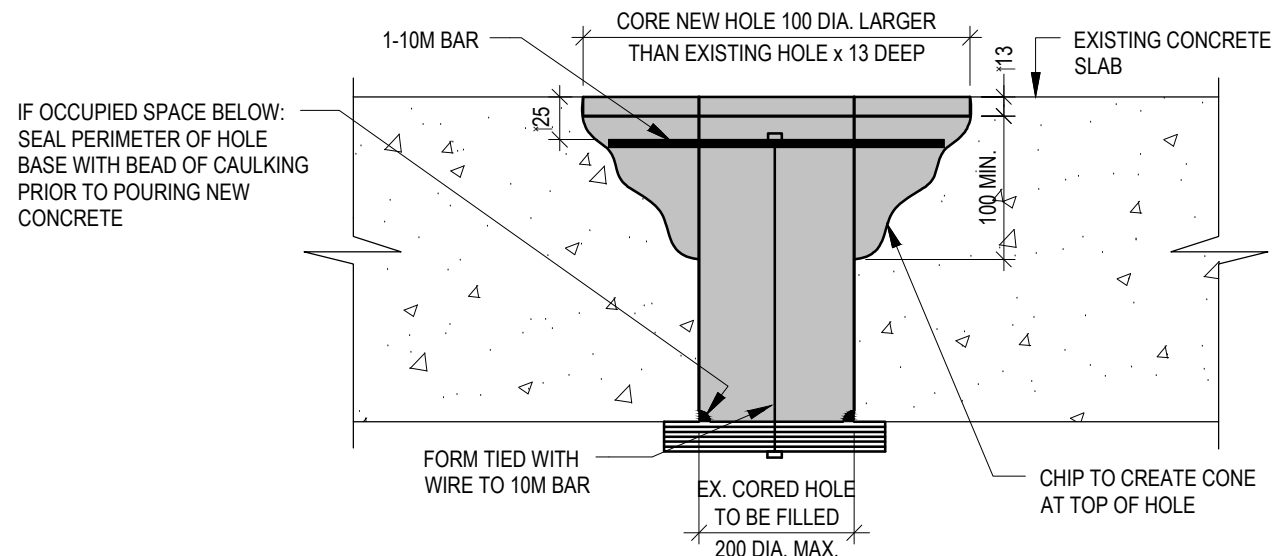
Drawing No. **S101**

TYPICAL DETAIL FOR CUTTING A NEW OPENING THROUGH EXISTING CONCRETE SLAB R-001



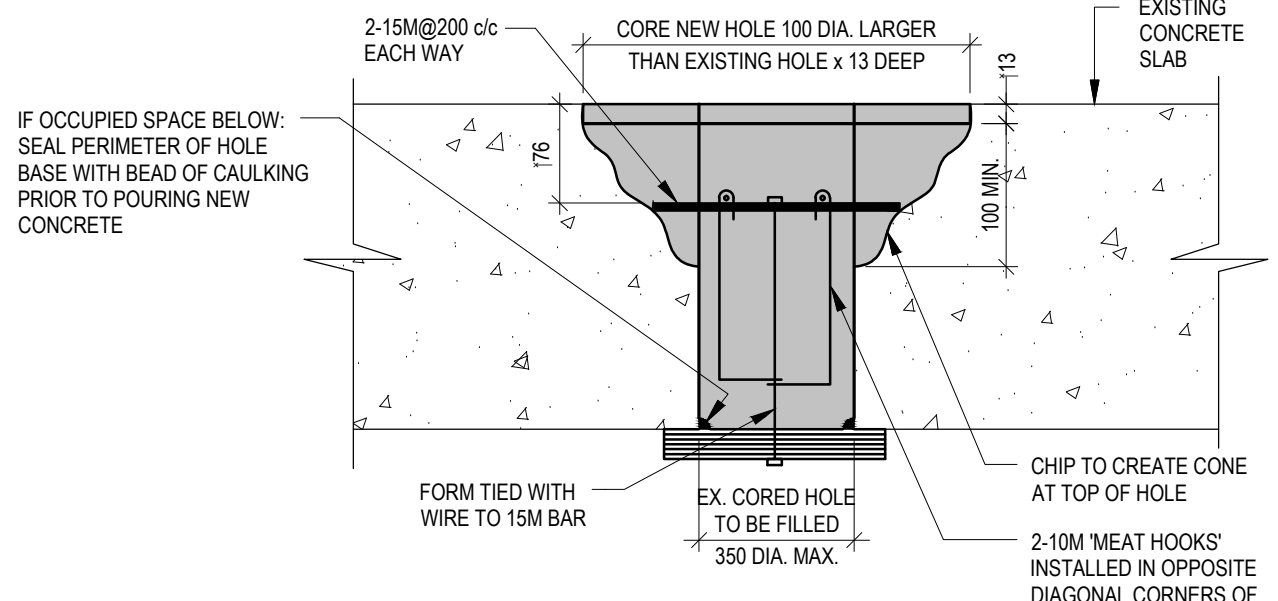
- NOTES:**
1. MARK OUTLINE OF NEW OPENING ON EXISTING SLAB.
 2. CORE DRILL HOLES AT EACH CORNER.
 3. SAW-CUT BETWEEN CORE-DRILLED HOLES, OR CORE DRILL ENTIRE PERIMETER. DO NOT DRILL OR CUT BEYOND LIMITS OF THE OPENING DIMENSIONS.

TYPICAL DETAIL FOR INFILL OF EXISTING CORED HOLES R-002



- NOTES:**
1. DO NOT DAMAGE EXISTING REBAR WHEN CORING OR CHIPPING.
 2. CONCRETE: PREMIXED NON-METALLIC, SHRINKAGE COMPENSATING FLOWABLE GROUT. (SEE SPECIFICATIONS)

EXISTING HOLE INFILL OF 200mm Ø MAX.



- NOTES:**
1. DO NOT DAMAGE EXISTING REBAR WHEN CORING OR CHIPPING.
 2. CONSULT WITH STRUCTURAL ENGINEER FOR EX. HOLES GREATER THAN 350mm Ø.
 3. CONCRETE: PREMIXED NON-METALLIC, SHRINKAGE COMPENSATING FLOWABLE GROUT. (SEE SPECIFICATIONS)

EXISTING HOLE INFILL OF 350mm Ø MAX.

STRUCTURAL GUIDELINES FOR DRILLING, CUTTING & CORING THROUGH EXISTING CONCRETE STRUCTURE R-003

- 1. GENERAL**
- 1.1 ALL OPENINGS THROUGH EXISTING STRUCTURE REQUIRED FOR MECHANICAL AND ELECTRICAL SERVICES ARE TO BE LOCATED AND CUT IN ACCORDANCE WITH THE REQUIREMENTS STIPULATED HEREIN. ALL PROPOSED NEW CORES AND OPENINGS THROUGH EXISTING STRUCTURE MUST BE REVIEWED ON SITE BY THE STRUCTURAL CONSULTANT PRIOR TO PROCEEDING WITH CUTTING OR CORING.
 - 1.2 GENERAL CONTRACTOR IS RESPONSIBLE FOR SUBMITTING COORDINATED SLEEVING AND CORING DRAWINGS SHOWING LOCATION, SIZE AND SPACING FOR PROPOSED NEW OPENINGS FOR ALL MECHANICAL AND ELECTRICAL SERVICES AND ALL EXISTING OPENINGS WITHIN THREE FEET OF NEW ONES. THE COORDINATED DRAWINGS SHALL BE PREPARED ON STRUCTURAL FRAMING PLAN BACKGROUNDS. ALL OPENINGS TO BE REFERENCED TO GRID LINES. INDIVIDUAL SUBMISSIONS OF DRAWINGS SHOWING MECHANICAL CORES ONLY OR ELECTRICAL CORES ONLY WILL NOT BE ACCEPTED. DO NOT DRILL OR CUT HOLES THROUGH EXISTING STRUCTURE PRIOR TO SUBMISSION OF SLEEVING DRAWINGS AND FINAL REVIEW BY STRUCTURAL CONSULTANT.
 - 1.3 PRIOR TO DRILLING FOR ANCHOR BOLTS OR CUTTING HOLES IN EXISTING REINFORCED CONCRETE STRUCTURES LOCATE ALL TOP AND BOTTOM EXISTING REINFORCING STEEL USING 'HILTI FERROSCAN' OR 'GRAFSCAN RADAR' RADAR DETECTION SYSTEMS. RESULTS OBTAINED BY X-RAY WILL NOT BE ACCEPTED. ALLOW CONSULTANT TO REVIEW ALL RESULTS BEFORE PROCEEDING.
 - 1.4 CUTTING NEW RECTANGULAR OPENINGS THROUGH EXISTING STRUCTURE: CORE DRILL AT CORNERS OF OPENING AND SAW CUT OR CORE DRILL AROUND PERIMETER. DO NOT OVER CUT BEYOND MINIMUM DIMENSION REQUIRED.
 - 1.5 WHERE HOLES ARE IN A GROUP, SPACE AT LEAST 3 TIMES THE DIAMETER OF THE LARGER ADJACENT HOLE, CENTER TO CENTER.
 - 1.6 DO NOT CUT ANY EXISTING REINFORCING STEEL WITHOUT WRITTEN AUTHORIZATION BY STRUCTURAL CONSULTANT.
- 2. PROCEDURE FOR REVIEW OF NEW OPENINGS THROUGH EXISTING STRUCTURE**
- 2.1 GENERAL CONTRACTOR TO SUBMIT COORDINATED CORING DRAWINGS TO ALL CONSULTANTS FOR REVIEW.
 - 2.2 MARK PROPOSED CORE LOCATION ON EXISTING STRUCTURE.
 - 2.3 SCAN EXISTING STRUCTURE TO IDENTIFY ALL REINFORCING STEEL IN AREA OF PROPOSED CORES. SCANNING CONTRACTOR SHALL CLEARLY MARK AND DISTINGUISH BETWEEN ALL TOP AND BOTTOM BARS.
 - 2.4 ALLOW STRUCTURAL CONSULTANT TO REVIEW EACH PROPOSED CORE LOCATION AND REINFORCING STEEL SCAN RESULTS ON SITE. ADJUSTMENTS TO FINAL POSITION OF CORE MAY BE NECESSARY TO MINIMIZE EFFECTS TO EXISTING REINFORCING STEEL.

LINTEL SCHEDULE AND NOTES M-002

NON-LOAD BEARING PARTITIONS

BLOCK LINTELS	MAX CLEAR SPAN	140 BLOCK		190 BLOCK		240 BLOCK		290 BLOCK	
		b	d	b	d	b	d	b	d
	UP TO 1200	140	190	190	190	240	190	240	190
	1201 TO 1800	140	190	190	190	240	190	240	190
	1801 TO 2300	140	190	190	190	240	190	240	190
		> 2300 USE STEEL LINTEL							

- NOTES:**
1. CONCRETE FILL: 20 MPa MIN. STRENGTH WITH 150 SLUMP
 2. BEARING LENGTH: 200 MIN. AT EACH END.

STEEL LINTELS

MAX CLEAR SPAN	140 BLOCK		190 BLOCK		240 BLOCK		290 BLOCK	
	BEAM	PLATE	BEAM	PLATE	BEAM	PLATE	BEAM	PLATE
2300 TO 2600	S200x27	130x10	S200x27	180x10	S200x27	230x10	S200x27	280x10

NOTES:

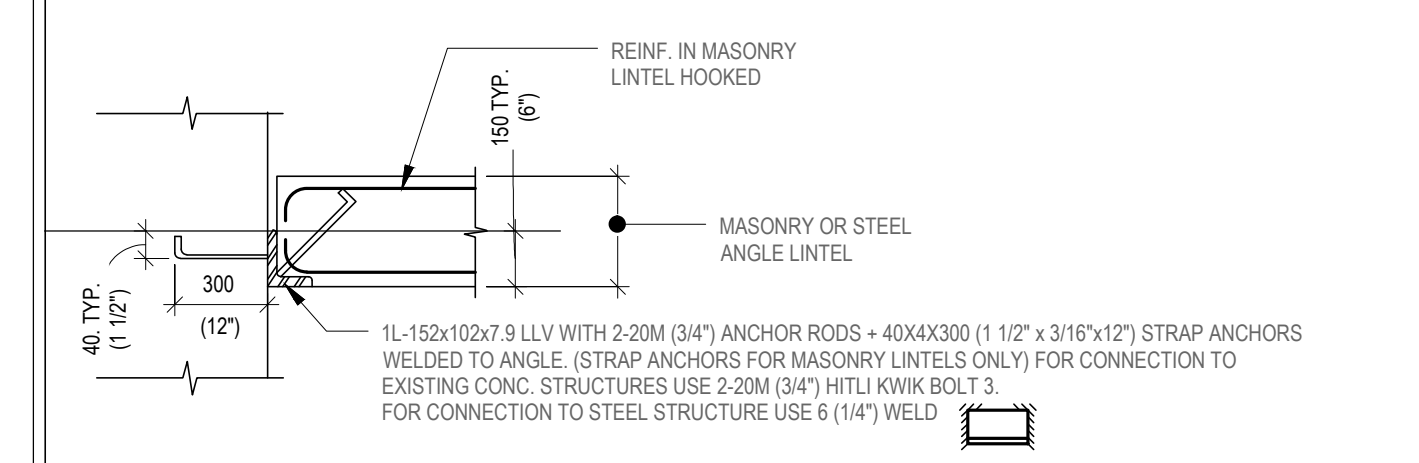
1. BEARING LENGTH: 150 MIN. EACH END. BEAR PLATE ON BUTTER COAT OF CEMENT MORTAR EACH END.

BRICK AND BLOCK WYTHES

MAX CLEAR SPAN	1-100 THICK WYTH		2-100 THICK WYTH		3-100 THICK WYTH		4-100 THICK WYTH		5-100 THICK WYTH	
	L	L	L	L	L	L	L	L	L	L
UP TO 1500	L 189x89x7.9	L 189x89x7.9	L 189x89x7.9	L 189x89x7.9	L 189x89x7.9	L 189x89x7.9	L 189x89x7.9	L 189x89x7.9	L 189x89x7.9	L 189x89x7.9
1501 TO 2300	L 127x89x7.9	L 127x89x7.9	L 127x89x7.9	L 127x89x7.9	L 127x89x7.9	L 127x89x7.9	L 127x89x7.9	L 127x89x7.9	L 127x89x7.9	L 127x89x7.9
2301 TO 2600	L 152x89x7.9	L 152x89x7.9	L 152x89x7.9	L 152x89x7.9	L 152x89x7.9	L 152x89x7.9	L 152x89x7.9	L 152x89x7.9	L 152x89x7.9	L 152x89x7.9

- NOTES:**
1. LONG LEGS VERTICAL
 2. BEARING LENGTH 150 MIN. EACH END. SET STEEL ANGLE LINTELS WITH ENDS WRAPPED WITH 6mm POLYETHYLENE SHEET ON 10GA. GALV. STEEL PLATES ON MASONRY EA. END.
 3. CONNECT ANGLES BACK TO BACK AT 600 o/c BY WELDING OR BOLTING ANGLES GREATER THAN 1800 LONG USE 16 DIA. BOLTS
 4. FOR LOCATIONS & SIZES OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.

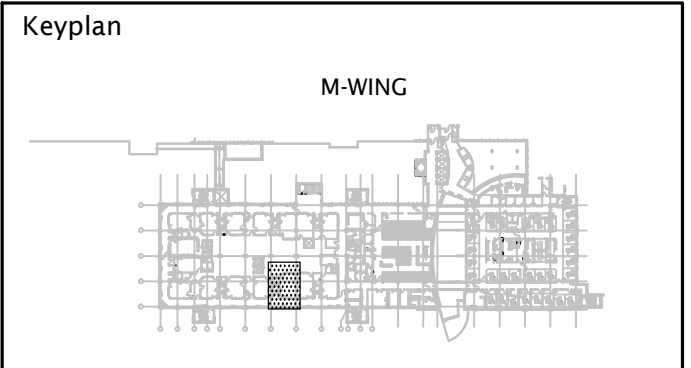
LINTEL CONNECTION TO CONCRETE OR STEEL STRUCTURE



DATE	ISSUED FOR	REV
2020-03-02	COSTING SUBMISSION	A
2020-03-23	PERMIT	B
JULY 28, 2020	TENDER	0

This drawing has been prepared solely for the use of Sunnybrook Health Sciences Centre and there are no representations of any kind made by NORR Limited Architects and Engineers to any party with whom NORR Limited Architects and Engineers has not entered into a contract.

This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Architect or Engineer.



exp Services Inc.
 T: +1 905.696.3217 F: +1 905.696.0167
 220 Commerce Valley Drive West, Suite 110
 Markham, ON L3T 0A8
 Canada
 www.exp.com

H. H. ANCUS & ASSOCIATES LIMITED
Consulting Engineers
 1127 Leslie Street
 Dan Mills, Ontario
 M3C 2J6
 (416) 443-8200
 Fax: (416) 443-8290

Seal(s)

2020.03.23
L. P. BOWEN
 100130877

REGISTERED PROFESSIONAL ENGINEER
 PROVINCE OF ONTARIO

North Arrow

NORR

NORR Architects & Engineers Limited

175 Bloor Street East
 North Tower, 15th Floor
 Toronto, ON, Canada M4W 3R8
 norr.com

Project Manager L.B.	Drawn J.I.
Project Leader L.B.	Checked L.B.

Client

HEALTH SCIENCES CENTRE
 2075 BAYVIEW AVENUE, TORONTO, ON.
 M4N 3M5

Project

**M-WING LEVEL 2
 HYBRID OR SUITE**

Drawing Title

TYPICAL DETAILS

Scale: N.T.S.

Check Scale (may be photo reduced)

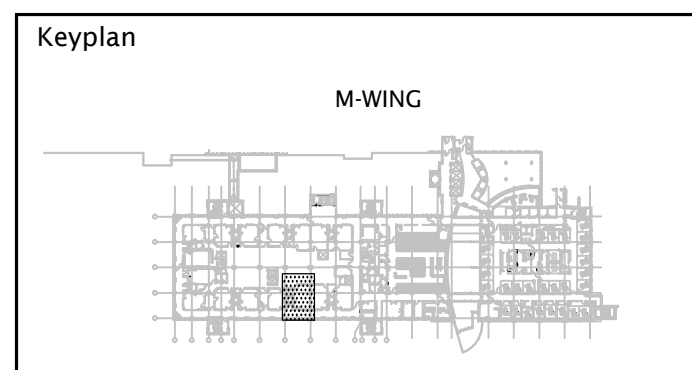
Project No. ONBL19-0186
 (exp. STR2019-060)

Drawing No.

DATE	ISSUED FOR	REV
2020-03-02	COSTING SUBMISSION	A
2020-03-23	PERMIT	B
JULY 28, 2020	TENDER	0

This drawing has been prepared solely for the use of Sunnybrook Health Sciences Centre and there are no representations of any kind made by NORR Limited Architects and Engineers to any party with whom NORR Limited Architects and Engineers has not entered into a contract.

This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Architect or Engineer.



exp Services Inc.
 T: +1.905.695.3217 | F: +1.905.695.0167
 220 Commerce Valley Drive West, Suite 110
 Markham, ON L3T 0A8
 Canada
 www.exp.com

H. H. ANGUS & ASSOCIATES LIMITED
 Consulting Engineers
 1127 Leslie Street
 Don Mills, Ontario M3C 2J6
 (416) 443-8200
 Fax: (416) 443-8290

Seal(s)

North Arrow

NORR
 NORR Architects & Engineers Limited
 175 Bloor Street East
 North Tower, 15th Floor
 Toronto, ON, Canada M4W 3R8
 norr.com

Project Manager L.B.	Drawn J.I.
Project Leader L.B.	Checked L.B.

Client

Sunnybrook
 HEALTH SCIENCES CENTRE
 2075 BAYVIEW AVENUE, TORONTO, ON.
 M4N 3M5

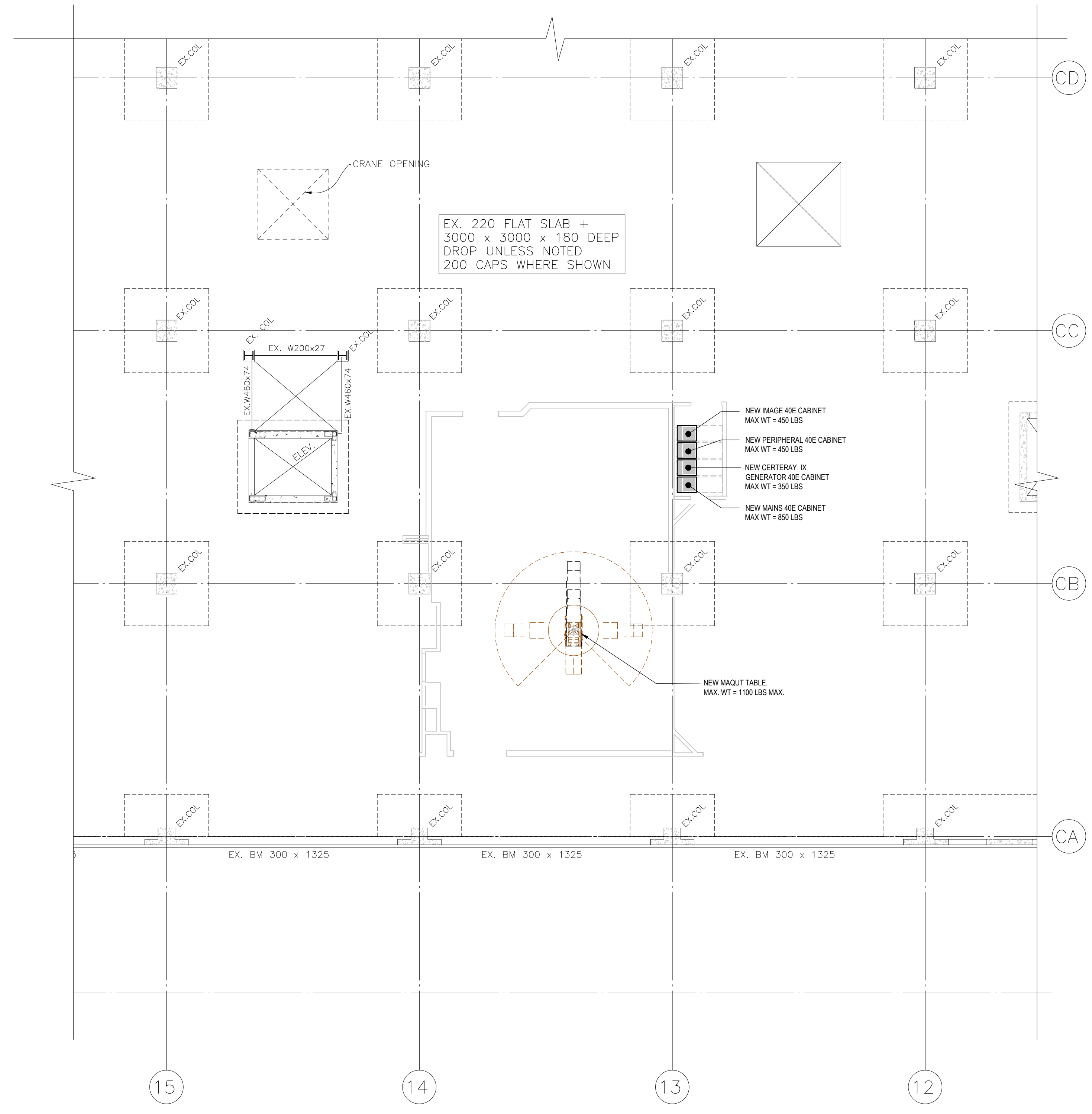
Project
**M-WING LEVEL 2
 HYBRID OR SUITE**

Drawing Title
**PARTIAL EXISTING SECOND FLOOR
 FRAMING PLAN**

Scale: 1:100
 Check Scale (may be photo reduced)

Project No. **ONBL19-0186**
 (exp. STR2019-060)
 Drawing No.

S201

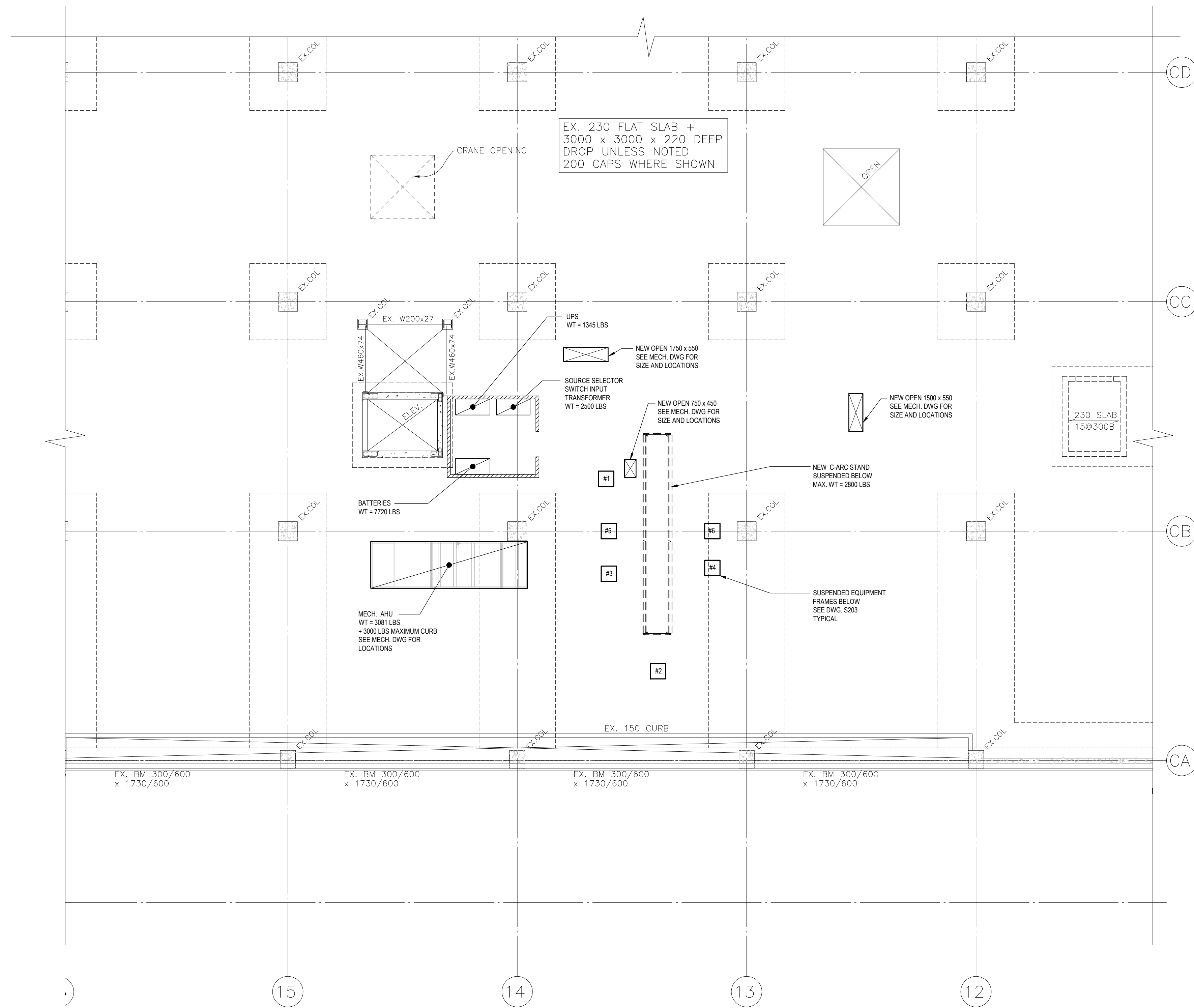


EX. 220 FLAT SLAB +
 3000 x 3000 x 180 DEEP
 DROP UNLESS NOTED
 200 CAPS WHERE SHOWN

- NEW IMAGE 40E CABINET
MAX WT = 450 LBS
- NEW PERIPHERAL 40E CABINET
MAX WT = 450 LBS
- NEW CERTARAY IX
GENERATOR 40E CABINET
MAX WT = 350 LBS
- NEW MAINS 40E CABINET
MAX WT = 850 LBS

NEW MAOUT TABLE
 MAX WT = 1100 LBS MAX.

- PART SECOND FLOOR FRAMING PLAN NOTES**
 SCALE 1:100
- TOP OF STRUCTURAL SLAB 0 mm BELOW FINISHED SECOND FLOOR EXCEPT AS CROSSED AND NOTED.
 - LIVE LOAD IS 4.8 kPa EXCEPT AS CROSSED AND NOTED. SUPERIMPOSED DEAD LOAD ON SECOND FLOOR SLAB IS 2.4 kPa INCLUDING PARTITION LOAD OF 1.2 kPa.
 - SEE GENERAL NOTES AND TYPICAL DETAILS ON DRAWING S101 & S102.

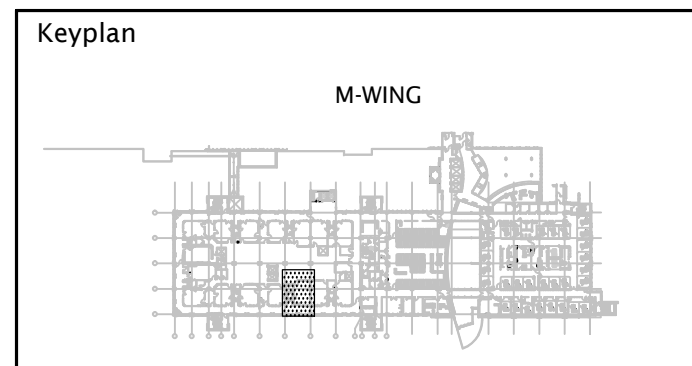


- PARTIAL THIRD FLOOR FRAMING PLAN NOTES**
SCALE 1:100
- ELEVATION OF LEVEL 3 EAST IS + 733 mm ABOVE THIRD FLOOR DATUM.
 - TOP OF STRUCTURAL SLAB 0 mm BELOW FINISHED FLOOR.
 - LIVE LOAD IS 4.8 kPa EXCEPT AS CROSSED AND NOTED, SUPERIMPOSED DEAD LOAD ON THIRD FLOOR SLAB IS 2.4 kPa INCLUDING PARTITION LOAD OF 1.2 kPa.
 - SEE GENERAL NOTES AND TYPICAL DETAILS ON DRAWING S101 & S102.

DATE	ISSUED FOR	REV
2020-03-02	COSTING SUBMISSION	A
2020-03-23	PERMIT	B
JULY 28, 2020	TENDER	0

This drawing has been prepared solely for the use of Sunnybrook Health Sciences Centre and there are no representations of any kind made by NORR Limited Architects and Engineers to any party with whom NORR Limited Architects and Engineers has not entered into a contract.

This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Architect or Engineer.



exp Services Inc.
 T: +1.905.695.3217 | F: +1.905.695.0167
 220 Commerce Valley Drive West, Suite 110
 Markham, ON L3T 0A8
 Canada
 www.exp.com

H. H. ANGUS & ASSOCIATES LIMITED
Consulting Engineers
 1127 Leslie Street
 Don Mills, Ontario (416) 443-8200
 M3C 2J6 Fax: (416) 443-8290

Seal(s)

North Arrow

NORR

NORR Architects & Engineers Limited

175 Bloor Street East
 North Tower, 15th Floor
 Toronto, ON, Canada M4W 3R8
 norr.com

Project Manager L.B.	Drawn J.I.
Project Leader L.B.	Checked L.B.

Client

Sunnybrook
 HEALTH SCIENCES CENTRE
 2075 BAYVIEW AVENUE, TORONTO, ON.
 M4N 3M5

Project

**M-WING LEVEL 2
 HYBRID OR SUITE**

Drawing Title

**PARTIAL EXISTING THIRD FLOOR
 FRAMING PLAN**



Project No. **ONBL19-0186**
 (exp. STR2019-060)

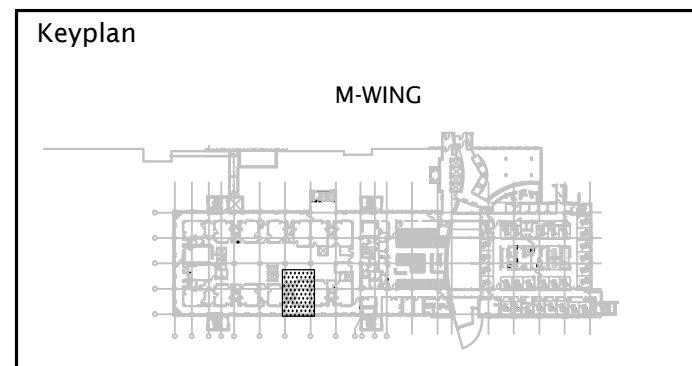
Drawing No.

S202

DATE	ISSUED FOR	REV
2020-03-02	COSTING SUBMISSION	A
2020-03-23	PERMIT	B
JULY 28, 2020	TENDER	0

This drawing has been prepared solely for the use of Sunnybrook Health Sciences Centre and there are no representations of any kind made by NORR Limited Architects and Engineers to any party with whom NORR Limited Architects and Engineers has not entered into a contract.

This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Architect or Engineer.



exp Services Inc.
 T: +1.905.695.3217 | F: +1.905.695.0167
 220 Commerce Valley Drive West, Suite 110
 Markham, ON L3T 0A8
 Canada
 www.exp.com

H. H. ANGUS & ASSOCIATES LIMITED
Consulting Engineers
 1127 Leslie Street
 Don Mills, Ontario (416) 443-8200
 M3C 2J6 Fax: (416) 443-8290

Seal(s) North Arrow

NORR
 NORR Architects & Engineers Limited
 175 Bloor Street East
 North Tower, 15th Floor
 Toronto, ON, Canada M4W 3R8
 norr.com

Project Manager L.B.	Drawn J.I.
Project Leader L.B.	Checked L.B.

Client

Sunnybrook
 HEALTH SCIENCES CENTRE
 2075 BAYVIEW AVENUE, TORONTO, ON.
 M4N 3M5

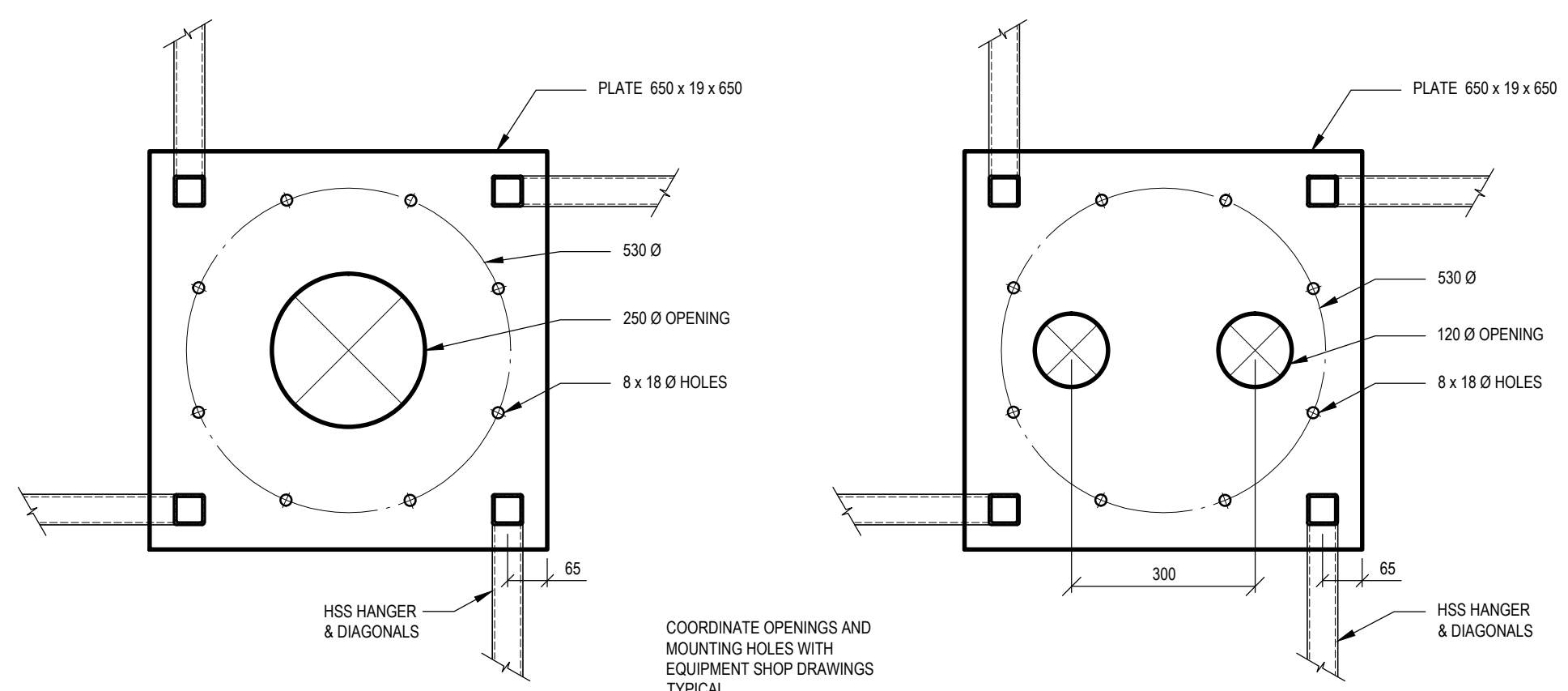
Project
**M-WING LEVEL 2
 HYBRID OR SUITE**

Drawing Title
**SECTIONS, DETAILS AND
 EQUIPMENT SUPPORT FRAME SCHEDULE**

Scale: AS NOTED
 Check Scale (may be photo reduced)

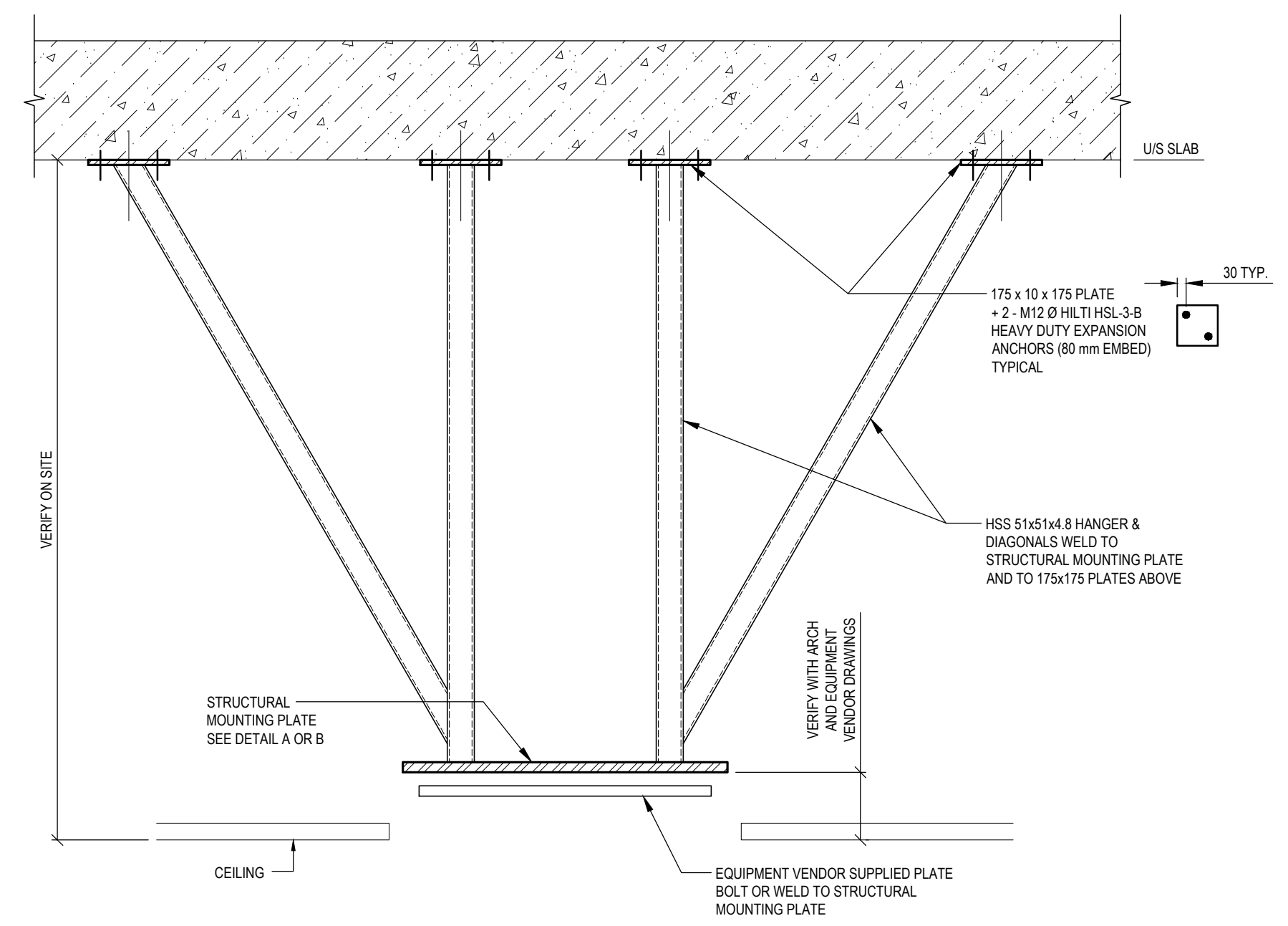
Project No. **ONBL19-0186**
 (exp. STR2019-060)

Drawing No.
S203

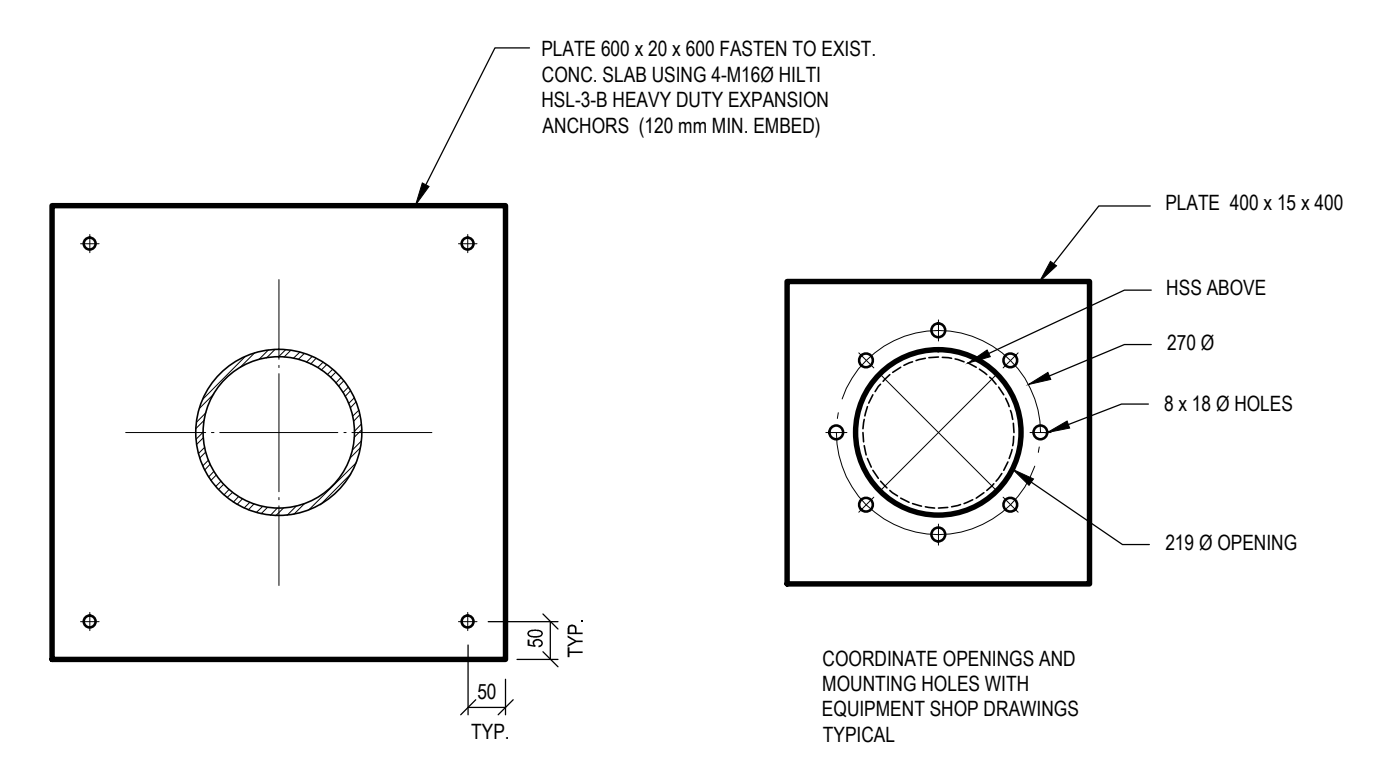


DETAIL A
SCALE 1:10

DETAIL B
SCALE 1:10



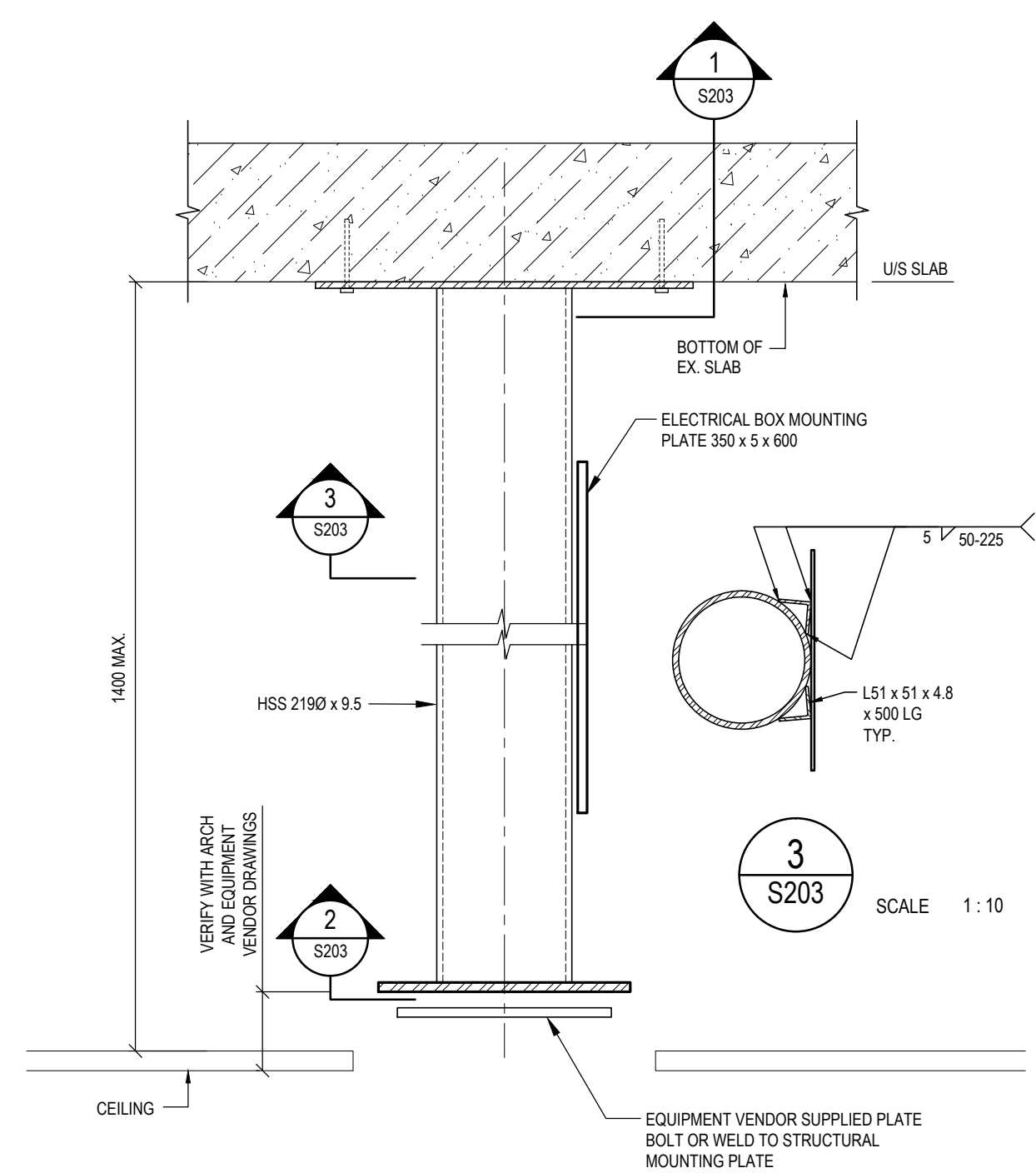
TYPICAL SECTION FRAME TYPE 1
SCALE 1:10



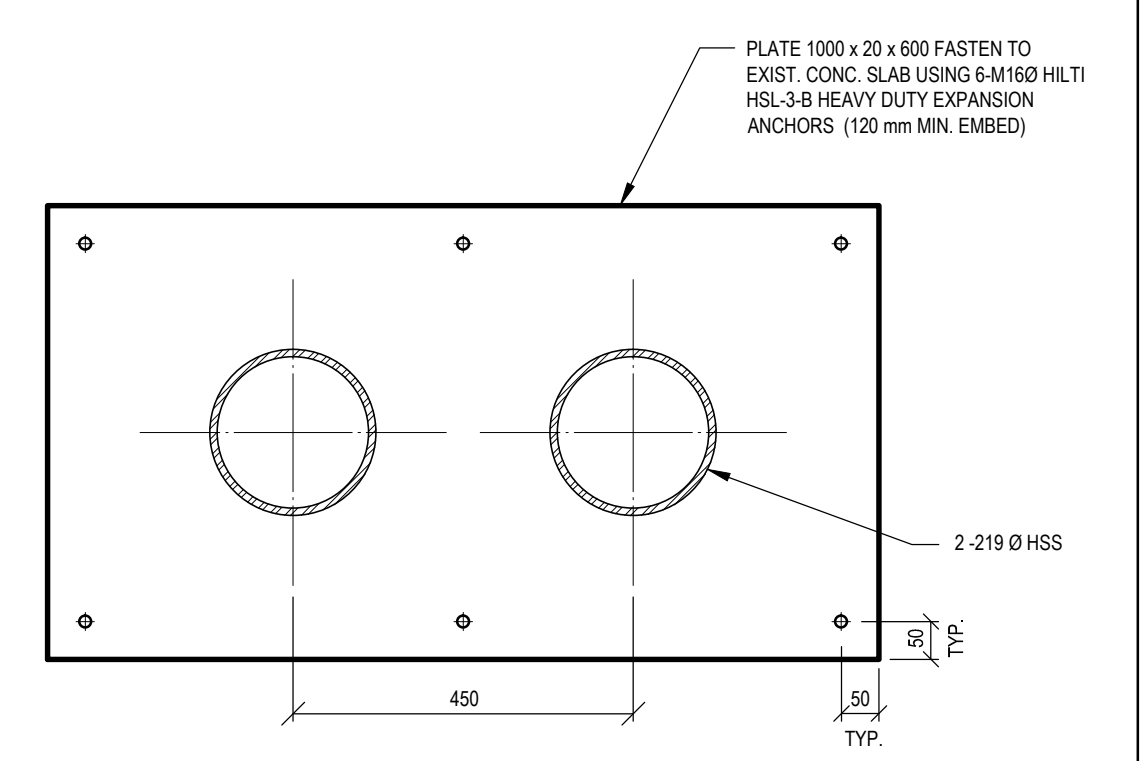
1 TOP PLATE
S203 SCALE 1:10

2 S203 SCALE 1:10

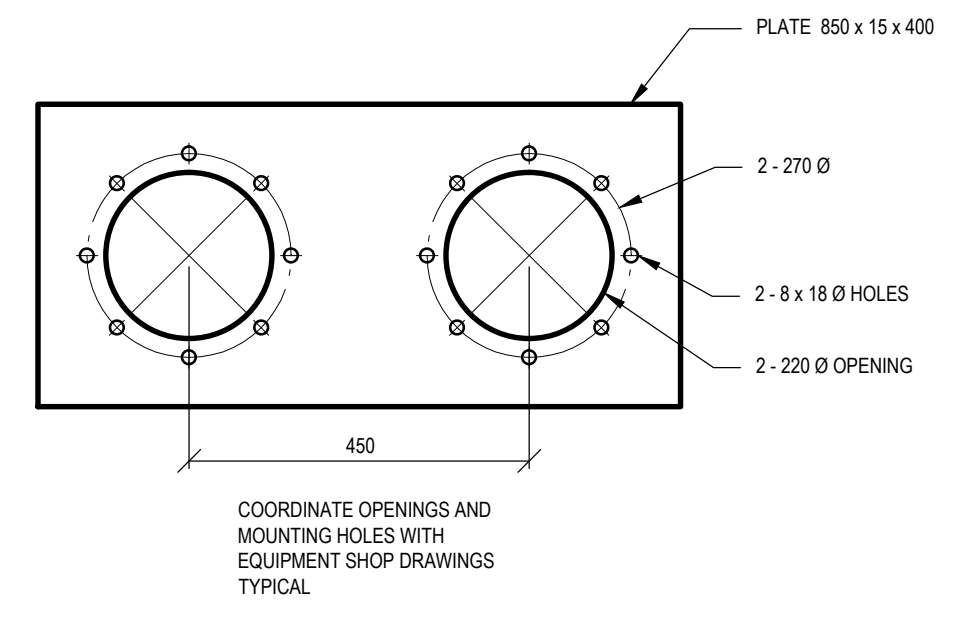
DETAIL C



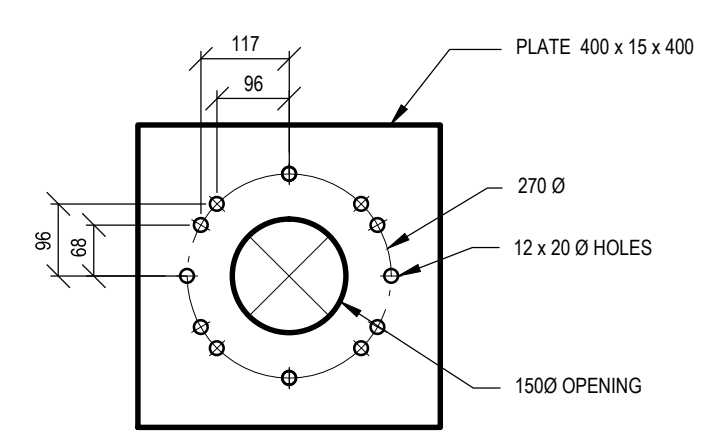
TYPICAL SECTION FRAME TYPE 2
SCALE 1:10



TOP PLATE



DETAIL D
SCALE 1:10



DETAIL E
SCALE 1:10

- EQUIPMENT SUPPORT FRAMING NOTES:**
- REFER TO ARCHITECTURAL EQUIPMENT PLAN DRAWINGS FOR LOCATIONS AND QUANTITY.
 - COORDINATE INSTALLATION WITH WITH EQUIPMENT SUPPLIER
 - PROVIDE WELDED CONNECTION BETWEEN HANGER AND MOUNTING PLATES.
 - RADAR SCAN EXISTING SLAB SOFFIT TO CONFIRM LOCATION OF REINFORCING STEEL PRIOR TO FABRICATION OF TOP PLATES. REPORT ANY INTERFERENCES WITH ANCHOR BOLT LAYOUT TO CONSULTANT PRIOR TO PROCEEDING.
 - UNFACTORED DESIGN LOADS ARE AS SPECIFIED BY THE EQUIPMENT VENDOR
 - CONTRACTOR TO PROVIDE ALL BOLTS, NUTS AND WASHERS FOR ANCHORING VENDOR EQUIPMENT TO STRUCTURAL MOUNTING PLATES. INCLUDE ONE BOLT PER EACH BOLT HOLE SHOWN IN PLATE DETAILS ABOVE. INCLUDE FOUR NUTS AND FOUR WASHERS PER BOLT.

EQUIPMENT SUPPORT FRAME SCHEDULE					
Frame #	Equipment Description	Unfactored Design Load (lbs)	Unfactored Design Moment (ft-lbs)	Detail	Comments
1	Anesthesia Boom	1471	5579	B	Frame Type 1
2	Nursing Station Boom (Surgery Arm)	677	5816	A	Frame Type 1 (Note A)
3	Dual Surgical Light + Dual Monitor Arm	939	2338	C	Frame Type 2
4	Dual Surgical Light / Monitor Boom	825	2338	D	Frame Type 2 (Similar)
5	Xray Shield Arm	91	342	E	Frame Type 2 (Note B)
6	Xray Shield Arm	91	342	E	Frame Type 2 (Note B)

NOTE A.: ARRANGE BRACE LAYOUT TO NOT EXTEND THROUGH EXISTING PARTITION TO THE NORTH.
 NOTE B.: FOR XRAY SHIELD ARMS USE HSS 178 X 9.5