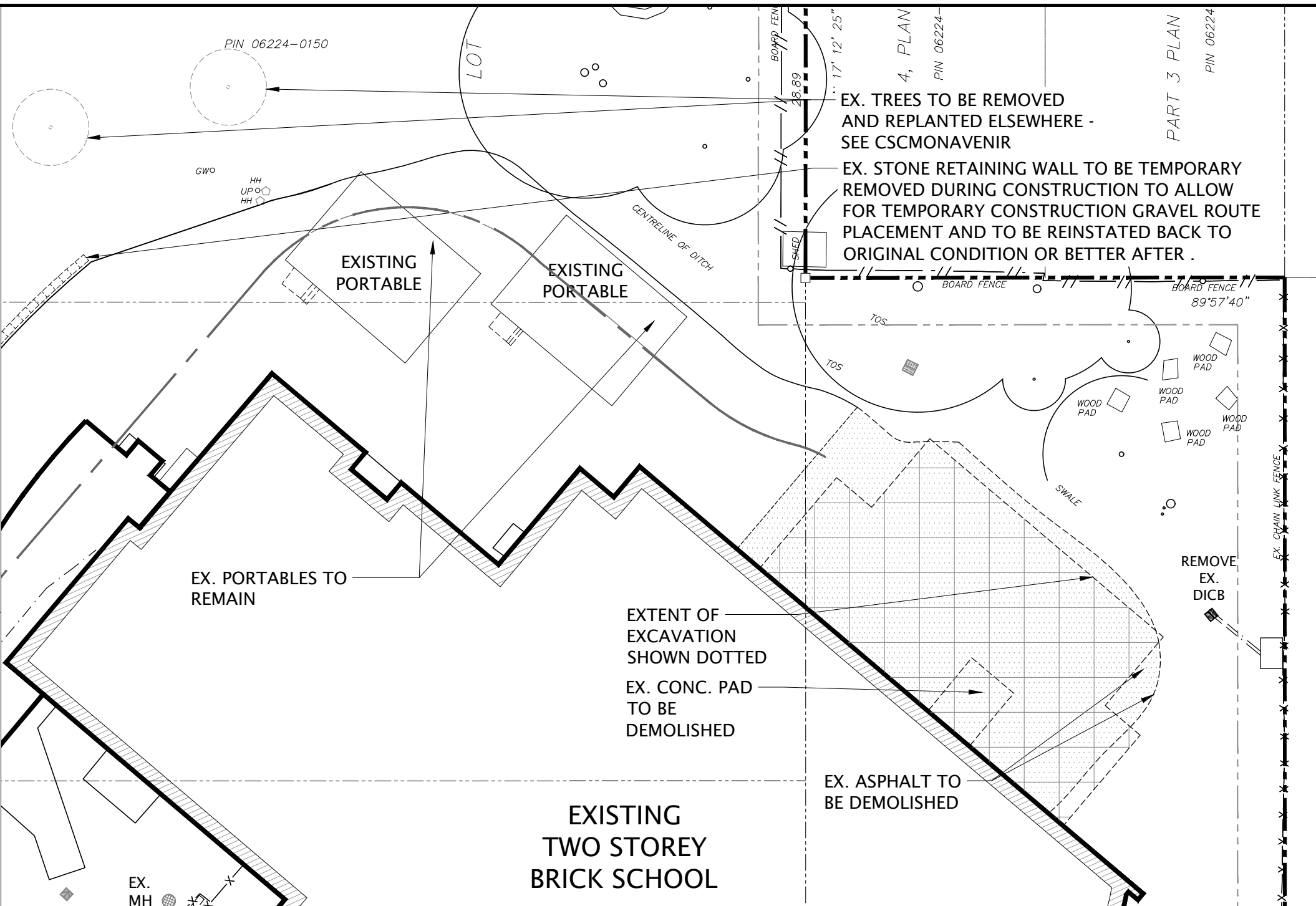
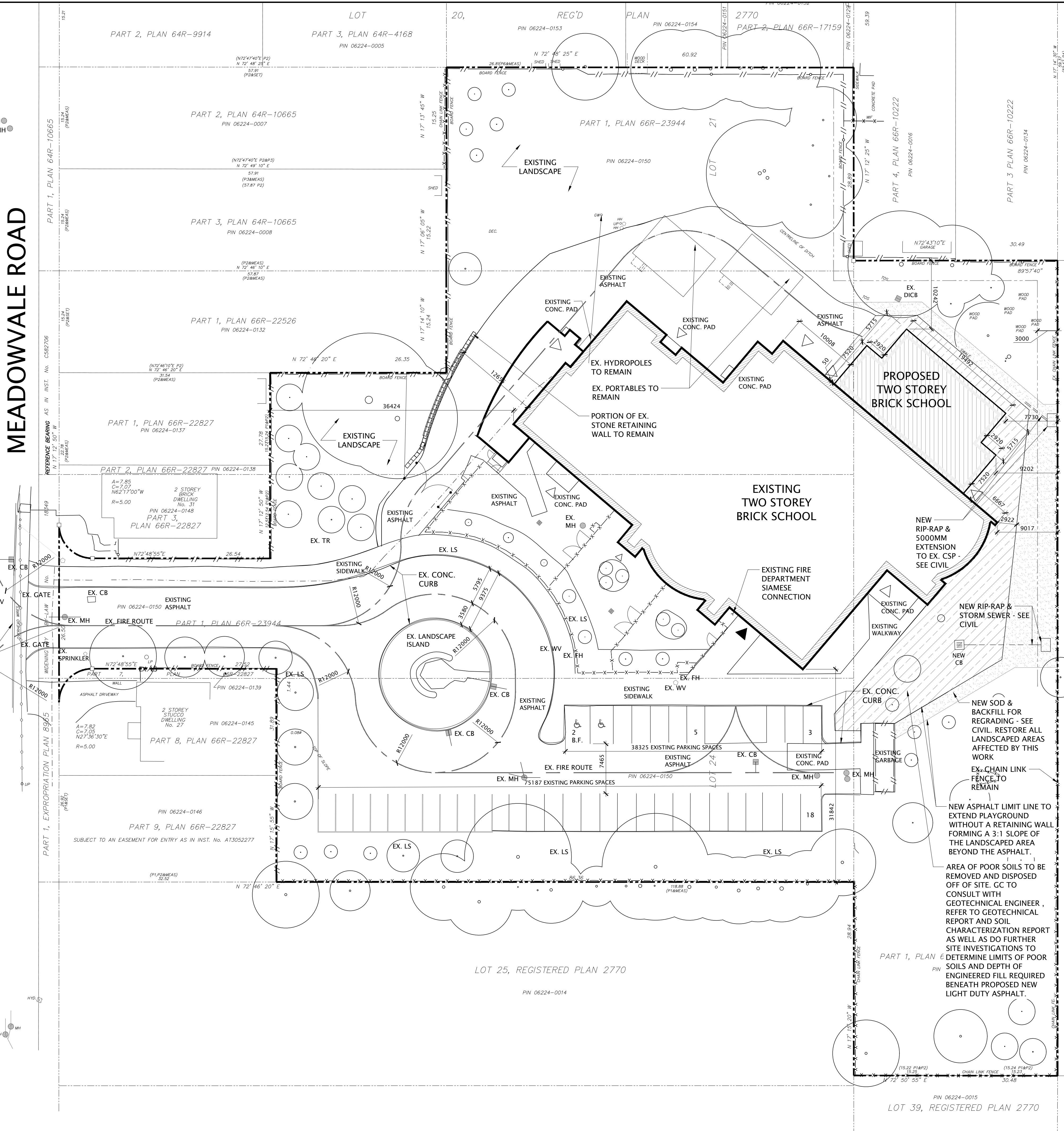


MEADOWVALE ROAD



2 SITE PLAN - DEMOLITION
SCALE - 1:300

GENERAL NOTES:
1. ON SITE CONSTRUCTION WASTE COLLECTION IS TO BE ARRANGED THROUGH A PRIVATE CONTRACTOR...
2. THE STORAGE OF WASTE IN OUTDOOR AREAS OR FREE STANDING BINS IS NOT PERMITTED.
3. MAINTAIN HARD SURFACE ACCESS FROM MAIN ROAD TO EXISTING SCHOOL THROUGHOUT CONSTRUCTION PERIOD.
4. LOCATION AND RELOCATION OF CONSTRUCTION HOARDING TO BE COORDINATED WITH OWNER...
5. CONTRACTOR IS RESPONSIBLE TO REPAIR ANY DAMAGED EX. ASPHALT AND LANDSCAPE AREAS DUE TO CONSTRUCTION.
6. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWINGS BY CIVIL, LANDSCAPE, MECHANICAL AND ELECTRICAL.

LEGEND table with symbols for fire hydrant, catch basin, manhole, hydro pole, etc., and hatching for new building addition, sod, asphalt removal, etc.

3 SITE STATISTICS

Table with columns for LOT AREA, GROSS FLOOR AREA, LOT COVERAGE, etc., comparing existing and proposed values.

1 SITE PLAN - NEW
SCALE - 1:300

Project information including: ISSUED FOR TENDER REVIEW BY CLIENT, DO NOT SCALE DRAWINGS, GENERAL NOTES (1-6), TRUE NORTH, PROJECT NORTH, Kingsland + ARCHITECTS INC., ONTARIO ASSOCIATION OF ARCHITECTS, MonAvenir CONSEIL SCOLAIRE CATHOLIQUE, ÉC SAINT-MICHEL Classrooms Addition, 29 MEADOWVALE ROAD, SCARBOROUGH, ONTARIO M1C 1R7, DRAWING TITLE: SITE PLAN - NEW & DEMOLITION & SITE STATISTICS, PROJECT NO: A22008, SCALE: 1:300, DRAWN: T.E./S.J., CHECKED: B.F., DATE: 22/07/21, FILES: A22008 - A1-0 SITE PLAN.DWG

HOARDING FENCE ASSEMBLY STANDARDS:

FOR CHAIN LINK HOARDING TYPE 1 & 2:







- (a) THE MESH SHALL HAVE OPENINGS NO LARGER THAN 50 MILLIMETRES;
- (b) THE MESH SHALL BE FASTENED SECURELY BOTH TO VERTICAL STEEL POSTS AND TO TOP AND BOTTOM HORIZONTAL STEEL RAILS OR 9-GAUGE STEEL WIRE; AND
- (c) THE VERTICAL STEEL POSTS SHALL BE SPACED AT NOT MORE THAN 3600MM OC AND EITHER EMBEDDED AT LEAST 600 MM INTO THE GROUND OR SECURED WITH MIN. 9.4MM THICK SOLID STEEL GROUND STANDS.
- (d) PROVIDE APPROPRIATE PRECAST CONCRETE HOARDING BLOCKS STAGING WHERE INDICATED IN PLAN.
- (e) PROVIDE HIGH-DENSITY POLYETHYLENE KNIT SCREENING OR EQUIVALENT WHERE NECESSARY TO REDUCE DUST AND DEBRIS TRANSFER FROM CONSTRUCTION AREA TO EXISTING SCHOOL.

HOARDING FENCE GENERAL NOTES:

THE HOARDING IS TO BE SUPPLIED, INSTALLED AND MAINTAINED IN GOOD CONDITION BY THE GC AT HIS OWN COST PRIOR TO ANY DEMOLITION, TOPSOIL STRIPPING, PRESERVING, OR ANY CONSTRUCTION ACTIVITIES ON SITE. THE HOARDING IS TO BE MAINTAINED IN GOOD REPAIR THROUGHOUT ALL PHASES OF SERVING AND CONSTRUCTION ON THE SITE. GC TO LIAISE WITH CITY TO COMPLETE A HOARDING INSPECTION IN ADVANCE OF CONSTRUCTION ACTIVITIES.

LEGEND:

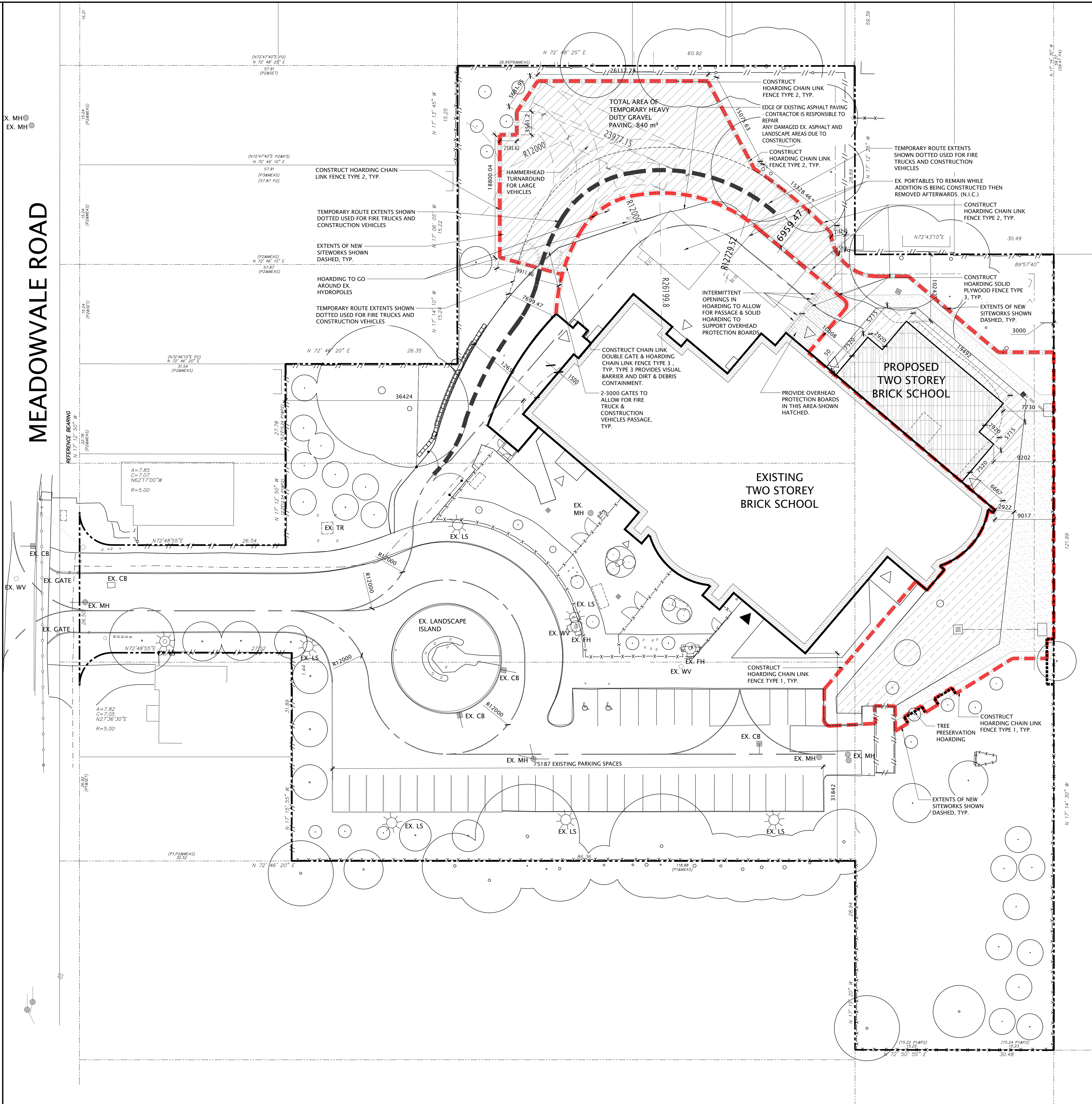
HOARDING FENCES TYPES:

-  HOARDING CHAIN LINK FENCE TYPE 1 MIN. 1800MM HIGH, BEFORE AND DURING NEW ADDITON BUILDING CONSTRUCTION, TYP.
-  HOARDING CHAIN LINK FENCE TYPE 2 MIN. 1800MM HIGH ANCHORED ON APPROPRIATE PRECAST CONCRETE BLOCKS STAGING, BEFORE AND DURING NEW ADDITON BUILDING CONSTRUCTION, TYP.
-  HOARDING SOLID PLYWOOD FENCE TYPE 3 MIN. 1800MM HIGH ANCHORED ON APPROPRIATE PRECAST CONCRETE BLOCKS STAGING W/ OVERHEAD PROTECTION BEFORE AND DURING NEW ADDITON BUILDING CONSTRUCTION, TYP.
-  TREE PRESERVATION HOARDING BEFORE AND DURING NEW ADDITON BUILDING CONSTRUCTION, TYP.
-  TEMPORARY GRAVELLED AREA BEFORE AND DURING NEW ADDITON BUILDING CONSTRUCTION, TYP.
-  EXTENTS OF NEW SITWORKS

GENERAL NOTE:

ALL HOARDING , GRAVEL ROUTE & GC STAGING AREA TO BE COMPLETED IN PHASE 1: JULY 2024 - AUGUST 2024.

MEADOWVALE ROAD

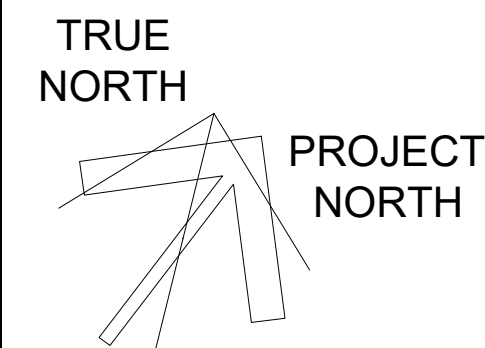


NO.	DATE	REVISION
1	24/07/21	ISSUED FOR TENDER
2	24/04/24	ISSUED FOR TENDER REVIEW BY CLIENT
3	24/07/24	ISSUED FOR TENDER
4	20/08/24	ISSUED FOR TENDER

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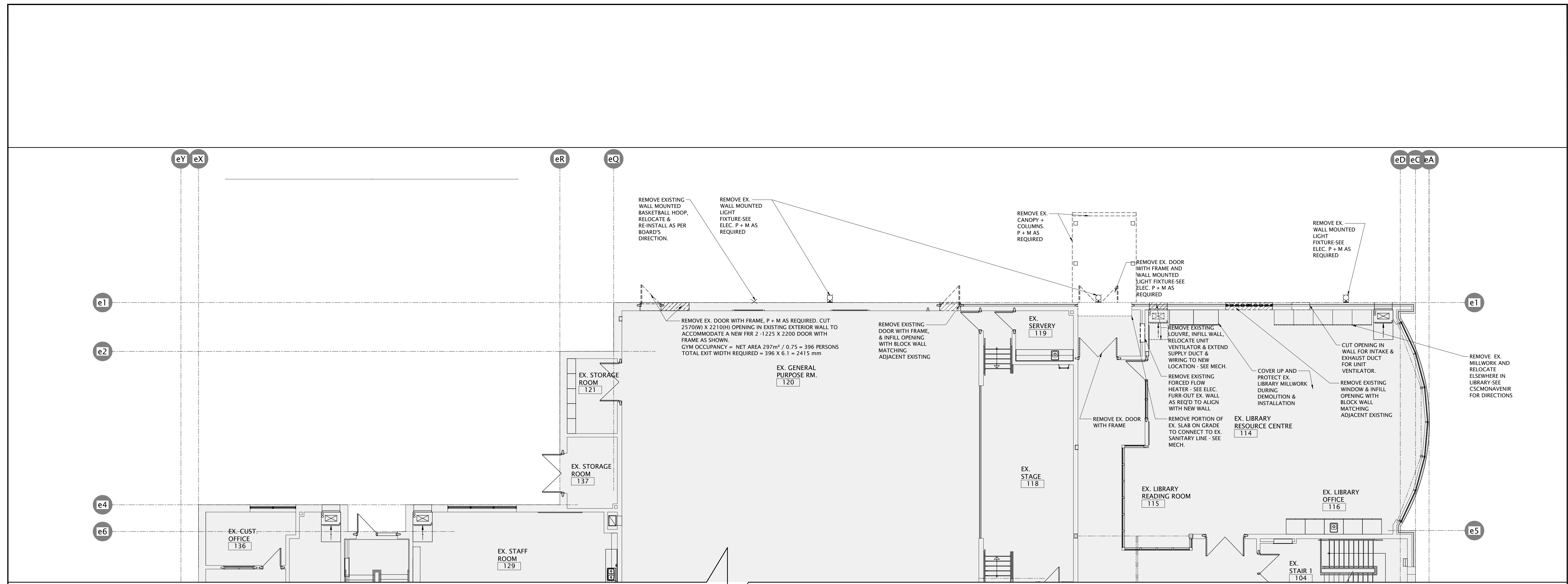


ÉC SAINT-MICHEL
Classrooms Addition

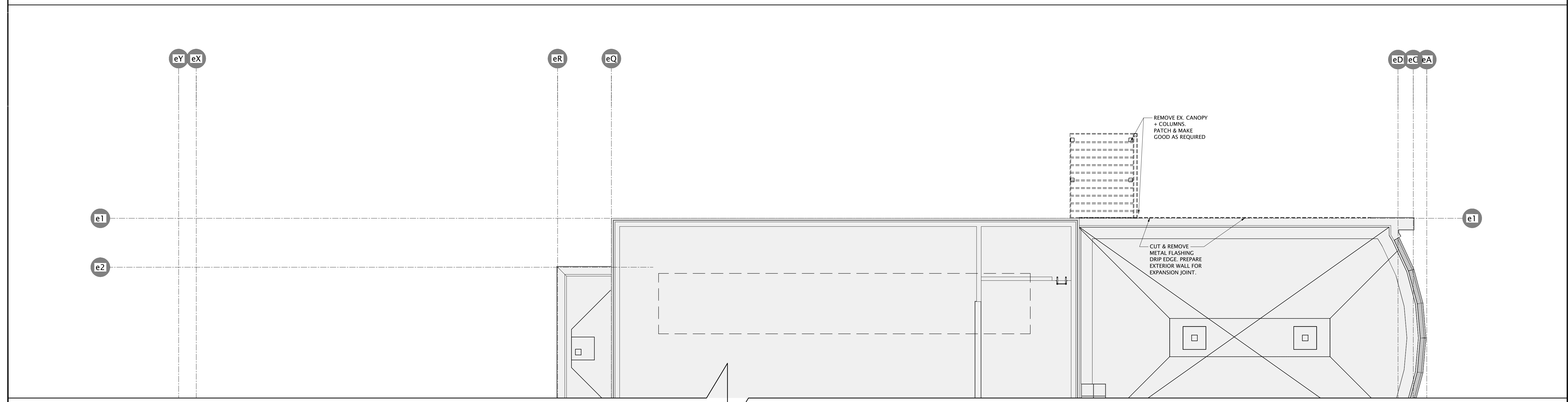
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
CONSTRUCTION & TREE
PRESERVATION & HOARDING PLAN

PROJECT NO: A22008	SCALE: 1:300
DRAWN: T.E/ S.J.	DRAWING NO. REV.
CHECKED: C.K.	A1-1
DATE: 20/07/21	2



1 PARTIAL GROUND FLOOR PLAN - DEMOLITION
SCALE - 1:100



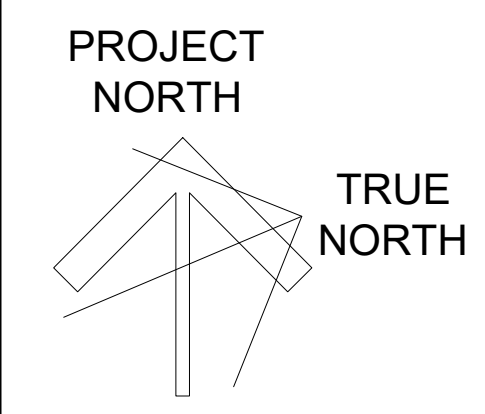
2 PARTIAL SECOND FLOOR PLAN - DEMOLITION
SCALE - 1:100

NO.	DATE	REVISION
11	24/APR	ISSUED FOR TENDER
10	24/APR	ISSUED FOR TENDER
9	20/SEP	ISSUED FOR TENDER

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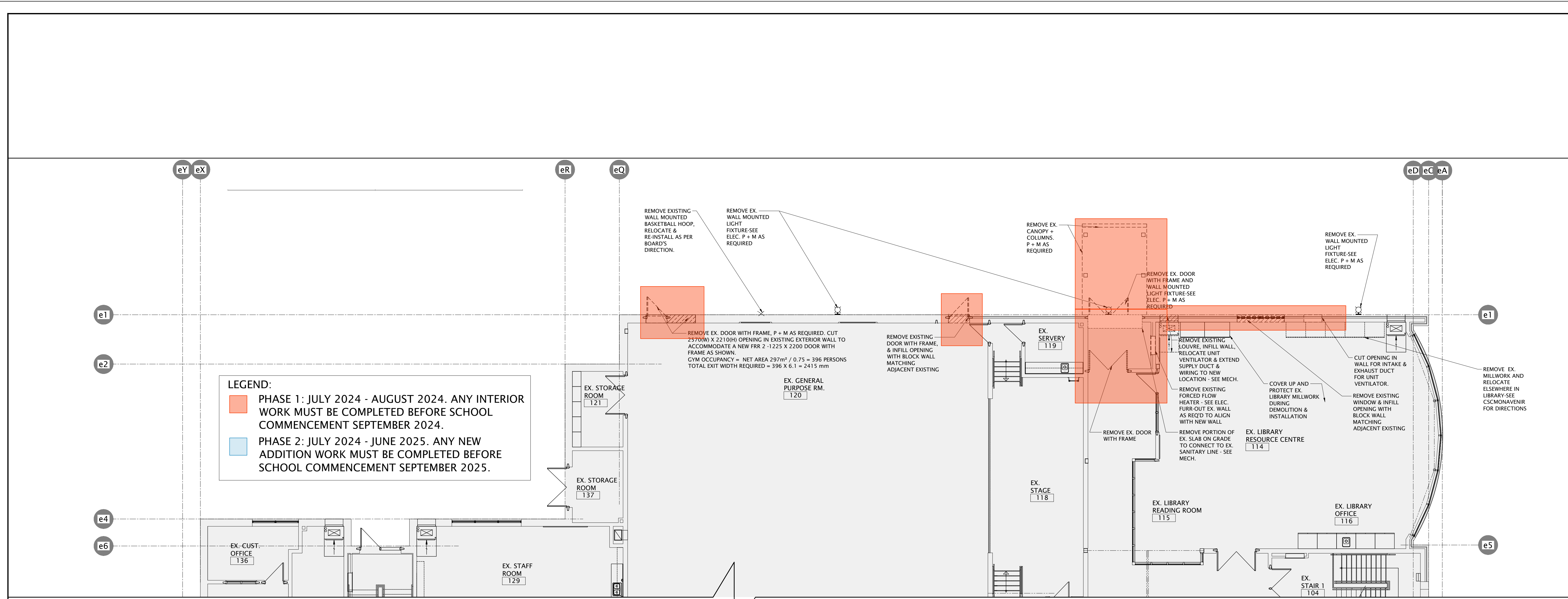
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ÉEC SAINT-MICHEL
Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
PARTIAL GROUND FLOOR PLAN & SECOND FLOOR PLAN - DEMO

PROJECT NO. A22008	SCALE: 1:100
DRAWN: T.E.	DRAWING NO. REV. A2-0 11
CHECKED: C.K.	
DATE: 22/07/21	

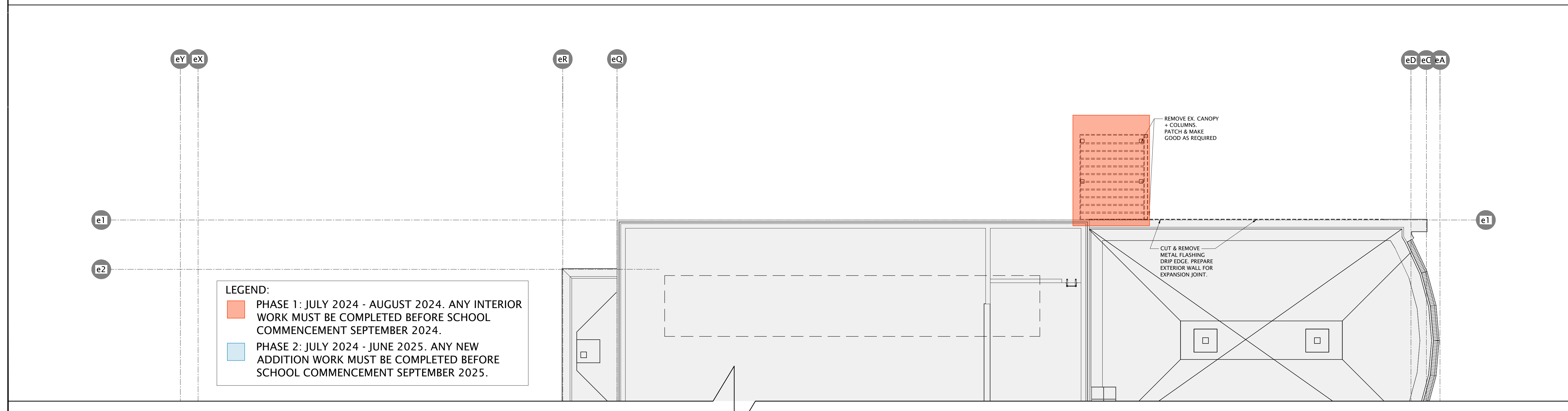


LEGEND:

PHASE 1: JULY 2024 - AUGUST 2024. ANY INTERIOR WORK MUST BE COMPLETED BEFORE SCHOOL COMMENCEMENT SEPTEMBER 2024.

PHASE 2: JULY 2024 - JUNE 2025. ANY NEW ADDITION WORK MUST BE COMPLETED BEFORE SCHOOL COMMENCEMENT SEPTEMBER 2025.

1 PARTIAL GROUND FLOOR PHASING PLAN - DEMOLITION
SCALE - 1:100



LEGEND:

PHASE 1: JULY 2024 - AUGUST 2024. ANY INTERIOR WORK MUST BE COMPLETED BEFORE SCHOOL COMMENCEMENT SEPTEMBER 2024.

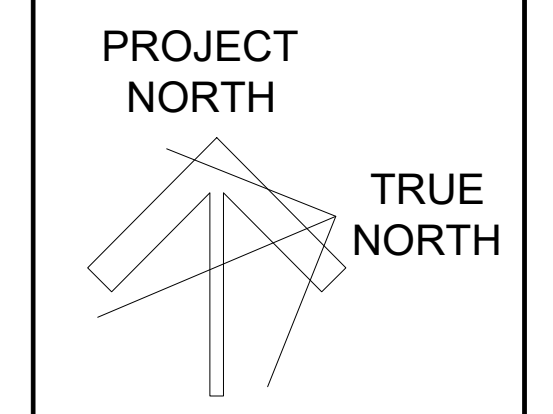
PHASE 2: JULY 2024 - JUNE 2025. ANY NEW ADDITION WORK MUST BE COMPLETED BEFORE SCHOOL COMMENCEMENT SEPTEMBER 2025.

2 PARTIAL SECOND FLOOR PHASING PLAN - DEMOLITION
SCALE - 1:100

NO.	DATE	REVISION
1	24/04/24	ISSUED FOR TENDER

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SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
PARTIAL GROUND FLOOR PHASING PLAN & SECOND FLOOR PHASING PLAN - DEMO

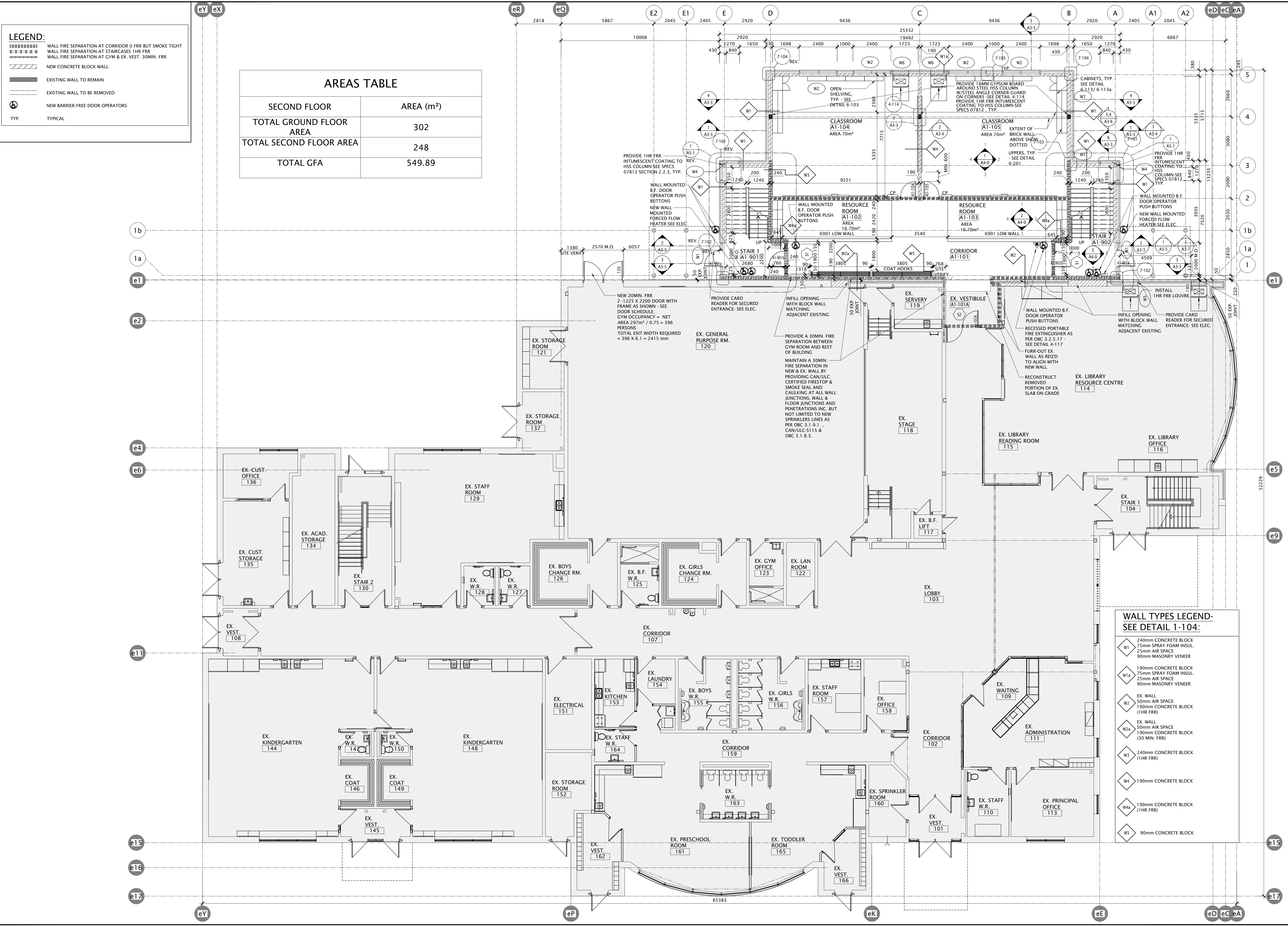
PROJECT NO: A22008	SCALE: 1:100
DRAWN: T.E.	DRAWING NO. REV. A2-0a 1
CHECKED: C.K.	
DATE: 22/07/21	

LEGEND:

- WALL FIRE SEPARATION AT CORRIDOR OR FRR BUT SMOKE TIGHT
- WALL FIRE SEPARATION AT STAIRCASES 1HR FRR
- WALL FIRE SEPARATION AT GYM & EX. VEST. 30MIN. FRR
- NEW CONCRETE BLOCK WALL
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- NEW BARRIER FREE DOOR OPERATORS
- TYP. TYPICAL

AREAS TABLE

FLOOR	AREA (m ²)
TOTAL GROUND FLOOR AREA	302
TOTAL SECOND FLOOR AREA	248
TOTAL GFA	549.89

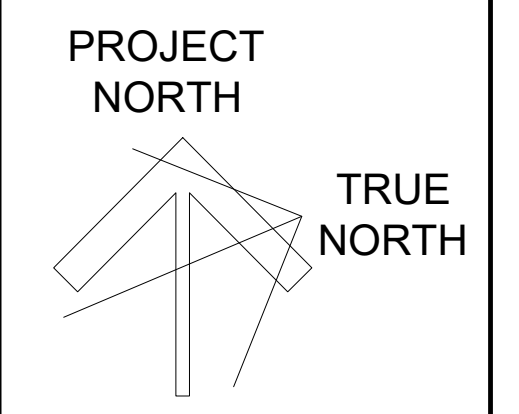


WALL TYPES LEGEND - SEE DETAIL 1-104:

- W1 240mm CONCRETE BLOCK 75mm SPRAY FOAM INSUL. 25mm AIR SPACE 90mm MASONRY VENER
- W1a 190mm CONCRETE BLOCK 75mm SPRAY FOAM INSUL. 25mm AIR SPACE 90mm MASONRY VENER
- W2 EX. WALL 50mm AIR SPACE 190mm CONCRETE BLOCK (1HR FRR)
- W2a EX. WALL 50mm AIR SPACE 190mm CONCRETE BLOCK (30 MIN. FRR)
- W3 240mm CONCRETE BLOCK (1HR FRR)
- W4 190mm CONCRETE BLOCK
- W4a 190mm CONCRETE BLOCK (1HR FRR)
- W5 90mm CONCRETE BLOCK

NO.	DATE	ISSUED FOR	REVISION

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MonAvenir
CONSEIL SCOLAIRE CATHOLIQUE

ÉEC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
OVERALL EXISTING & NEW GROUND FLOOR PLAN

PROJECT NO: A22008	SCALE: 1:100
DRAWN: B.F./T.E.	DRAWING NO. REV. A2-1 9
CHECKED: C.K.	DATE: 22/07/21

FILES: A22008 - A2-1 GROUND FLOOR PLAN

LEGEND:

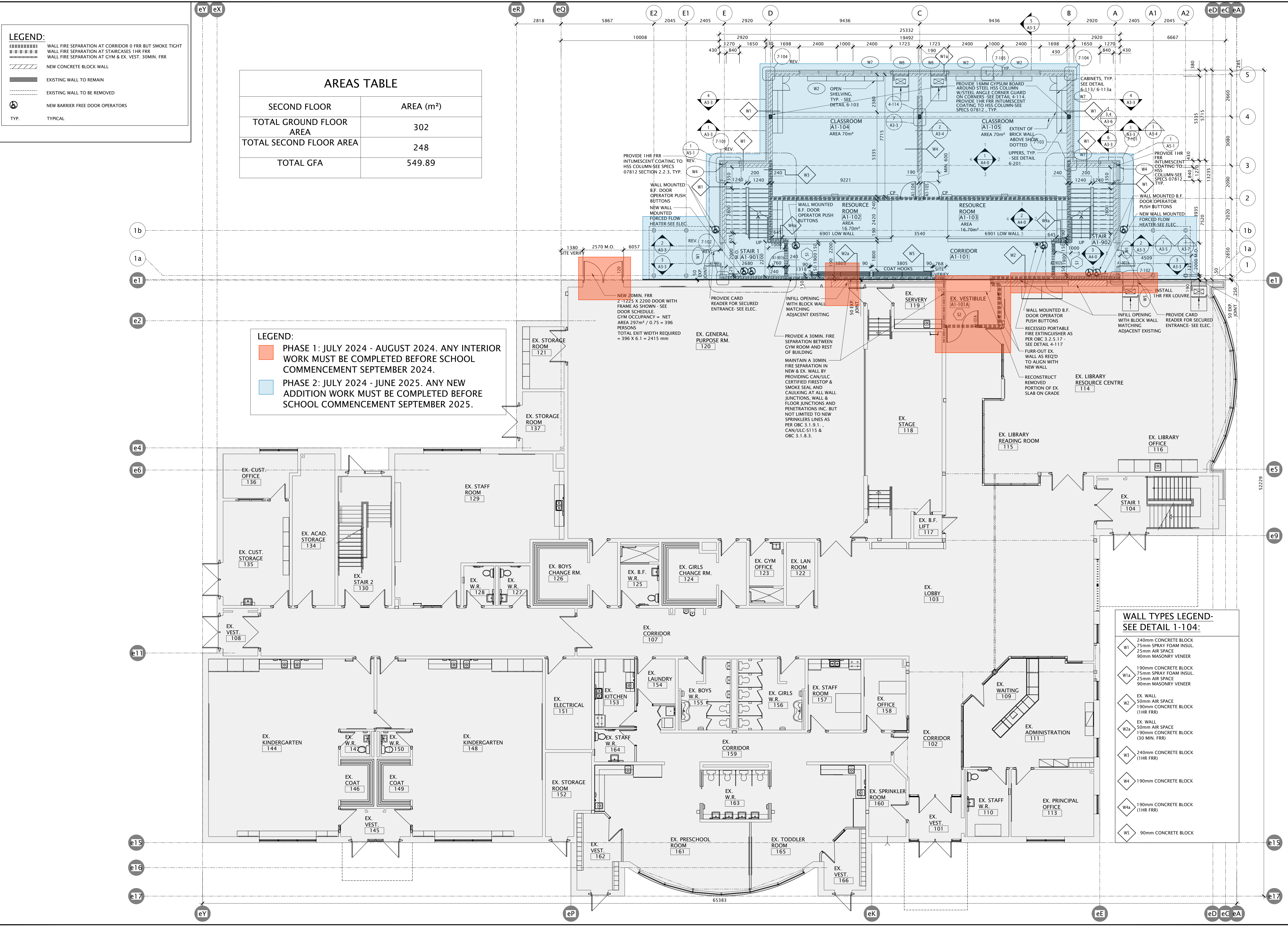
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- WALL FIRE SEPARATION AT STAIRCASES 1HR FRR
- WALL FIRE SEPARATION AT GYM & EX. VEST. 30MIN. FRR
- NEW CONCRETE BLOCK WALL
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE REMOVED
- NEW BARRIER FREE DOOR OPERATORS
- TYP. TYPICAL

AREAS TABLE

FLOOR	AREA (m ²)
TOTAL GROUND FLOOR AREA	302
TOTAL SECOND FLOOR AREA	248
TOTAL GFA	549.89

LEGEND:

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- PHASE 2: JULY 2024 - JUNE 2025. ANY NEW ADDITION WORK MUST BE COMPLETED BEFORE SCHOOL COMMENCEMENT SEPTEMBER 2025.



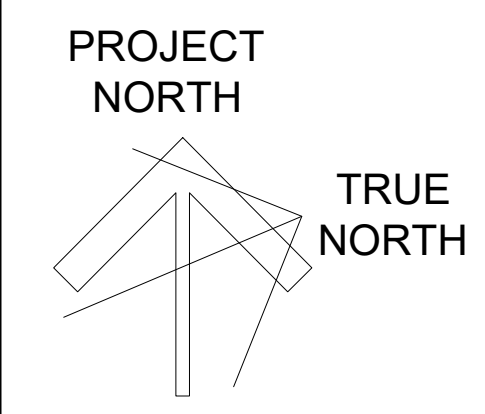
WALL TYPES LEGEND - SEE DETAIL 1-104:

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- W3 240mm CONCRETE BLOCK (1HR FRR)
- W4 190mm CONCRETE BLOCK
- W4a 190mm CONCRETE BLOCK (1HR FRR)
- W5 90mm CONCRETE BLOCK

NO.	DATE	ISSUED FOR	REVISION

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SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
OVERALL EXISTING & NEW
GROUND FLOOR
PHASING PLAN

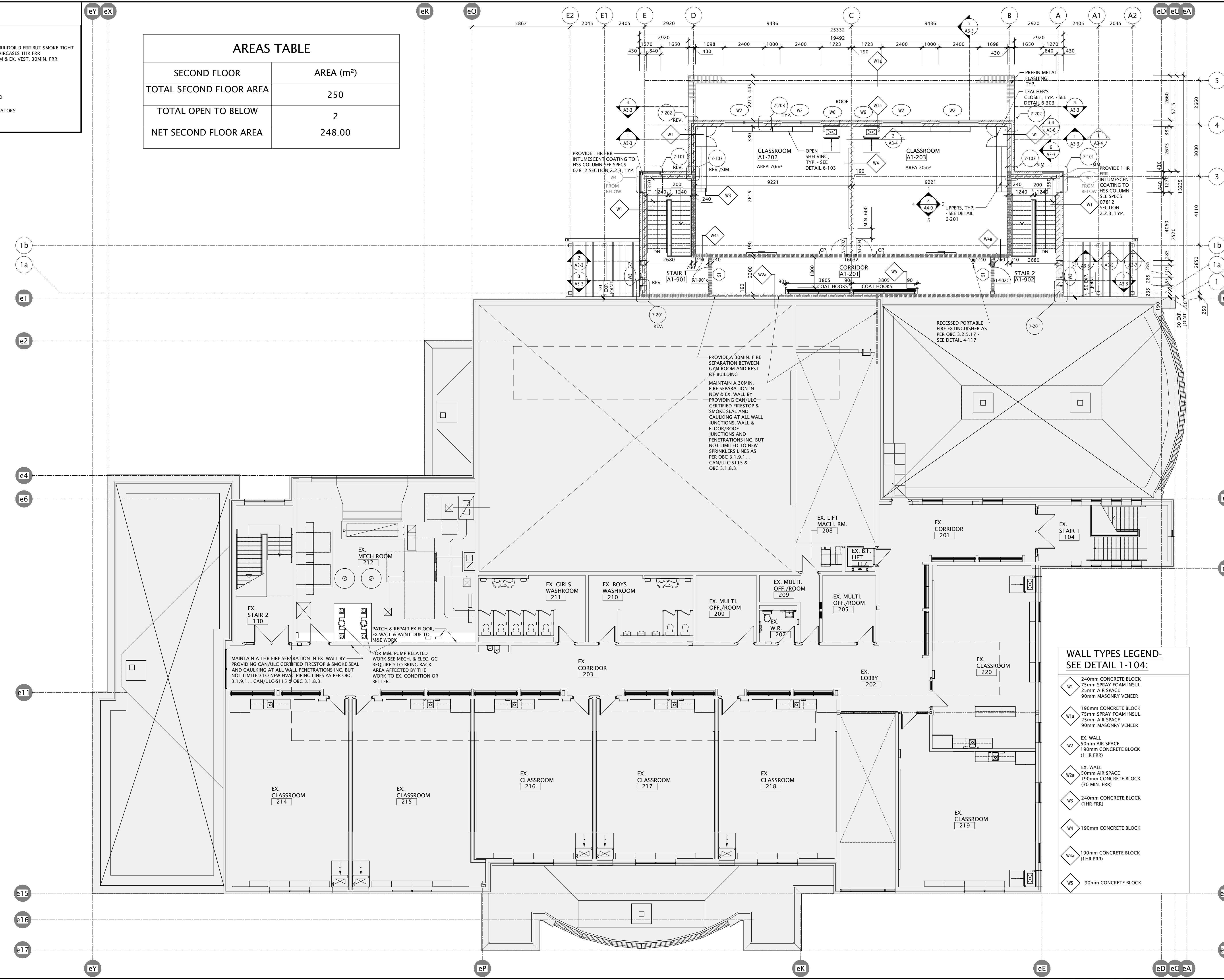
PROJECT NO: A22008	SCALE: 1:100
DRAWN: B.F./T.E.	DRAWING NO. REV. A2-1a 1
CHECKED: C.K.	DATE: 22/07/21

LEGEND:

	WALL FIRE SEPARATION AT CORRIDOR OR FRR BUT SMOKE TIGHT
	WALL FIRE SEPARATION AT STAIRCASES 1HR FRR
	WALL FIRE SEPARATION AT GYM & EX. VEST. 30MIN. FRR
	NEW CONCRETE BLOCK WALL
	EXISTING WALL TO REMAIN
	EXISTING WALL TO BE REMOVED
	NEW BARRIER FREE DOOR OPERATORS
	TYP. TYPICAL

AREAS TABLE

SECOND FLOOR	AREA (m ²)
TOTAL SECOND FLOOR AREA	250
TOTAL OPEN TO BELOW	2
NET SECOND FLOOR AREA	248.00



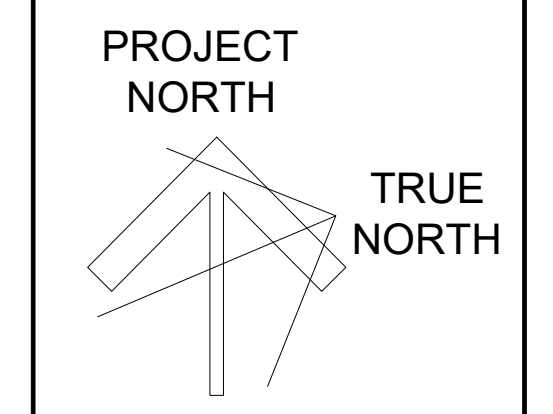
WALL TYPES LEGEND-SEE DETAIL 1-104:

	240mm CONCRETE BLOCK 75mm SPRAY FOAM INSUL. 25mm AIR SPACE 90mm MASONRY VENEER
	190mm CONCRETE BLOCK 75mm SPRAY FOAM INSUL. 25mm AIR SPACE 90mm MASONRY VENEER
	EX. WALL 50mm AIR SPACE 190mm CONCRETE BLOCK (1HR FRR)
	EX. WALL 50mm AIR SPACE 190mm CONCRETE BLOCK (30 MIN. FRR)
	240mm CONCRETE BLOCK (1HR FRR)
	190mm CONCRETE BLOCK
	190mm CONCRETE BLOCK (1HR FRR)
	90mm CONCRETE BLOCK

NO.	DATE	REVISION
1	11/24/18	ISSUED FOR TENDER
2	04/07/19	ISSUED FOR TENDER
3	09/20/19	ISSUED FOR TENDER

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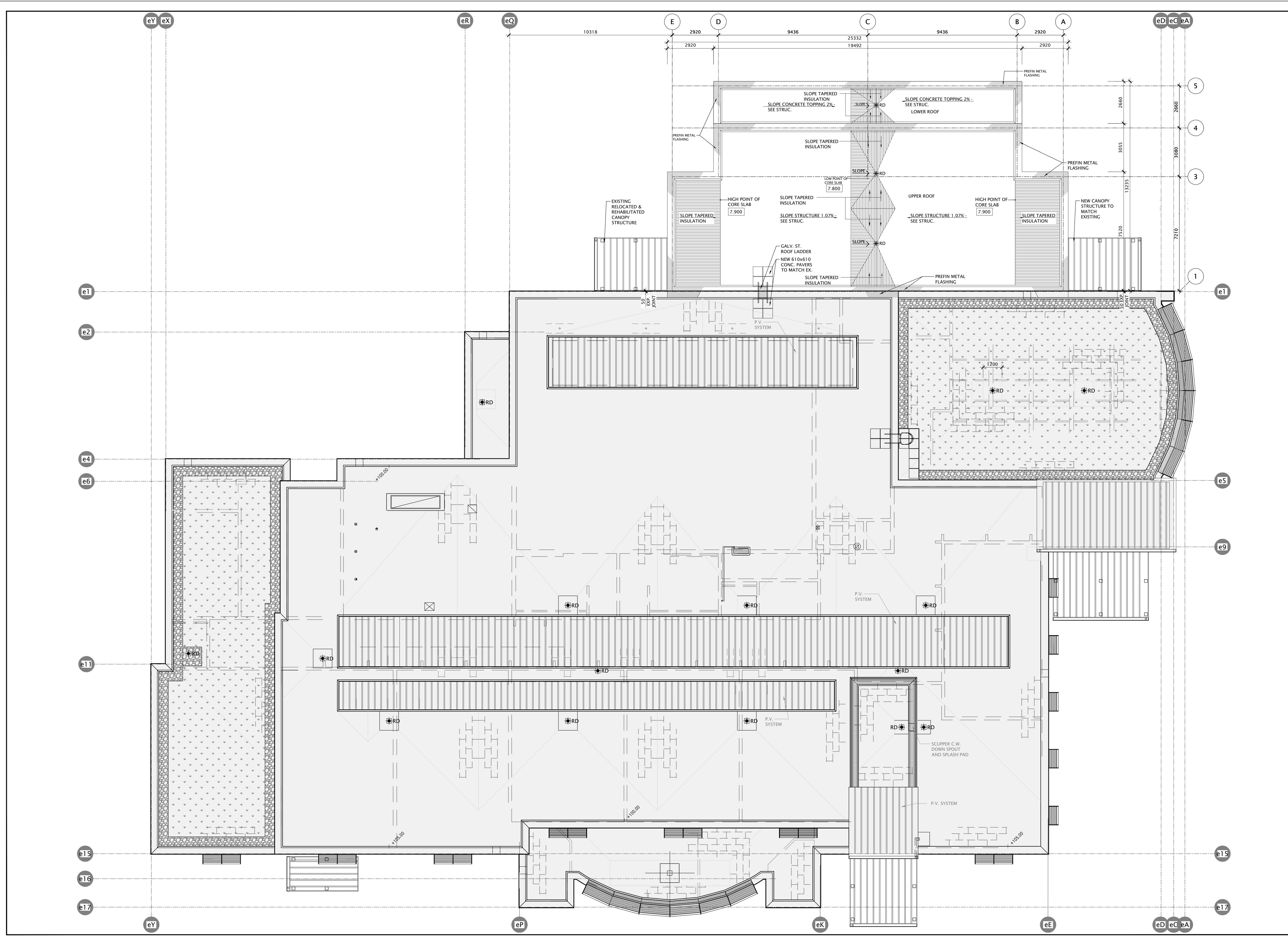
MonAvenir
CONSEIL SCOLAIRE CATHOLIQUE

ÉC SAINT-MICHEL
Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
OVERALL EXISTING & NEW SECOND FLOOR PLAN

PROJECT NO: A22008	SCALE: 1:100
DRAWN: B.F./T.E.	DRAWING NO. REV. A2-2 11
CHECKED: C.K.	DATE: 22/07/21

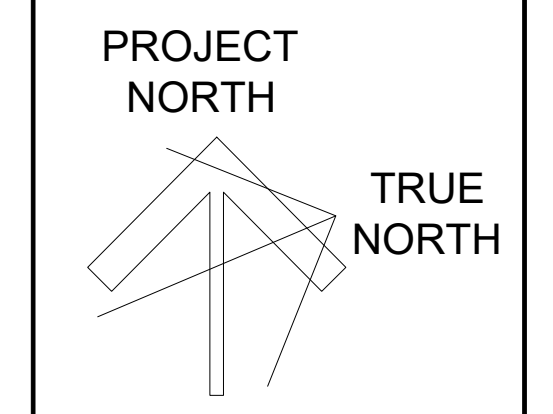
FILES: A22008 - A2-2 SECOND FLOOR PLAN



NO.	DATE	ISSUED FOR	REVISION

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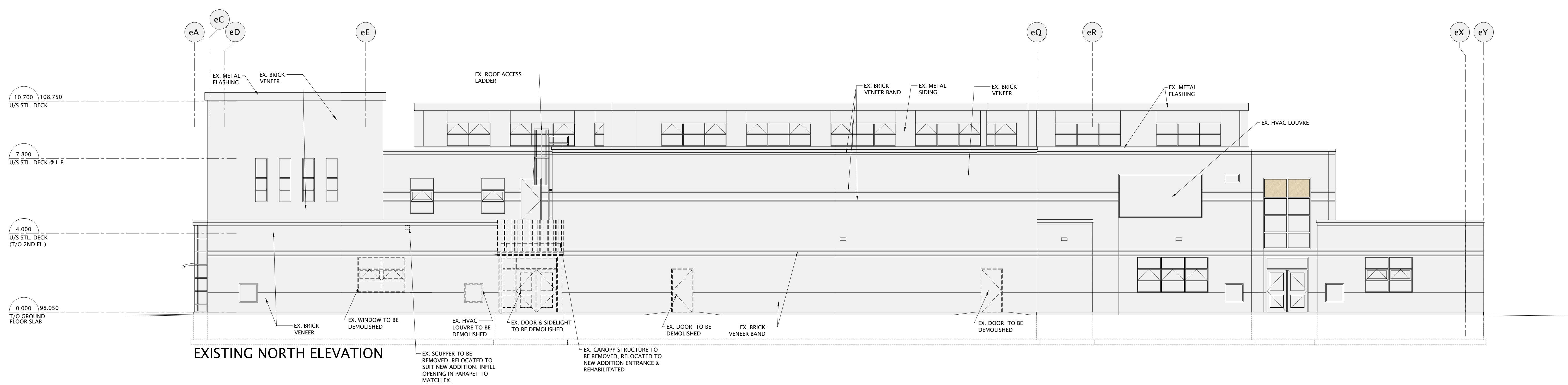


ÉC SAINT-MICHEL
Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
OVERALL EXISTING & NEW ROOF PLAN

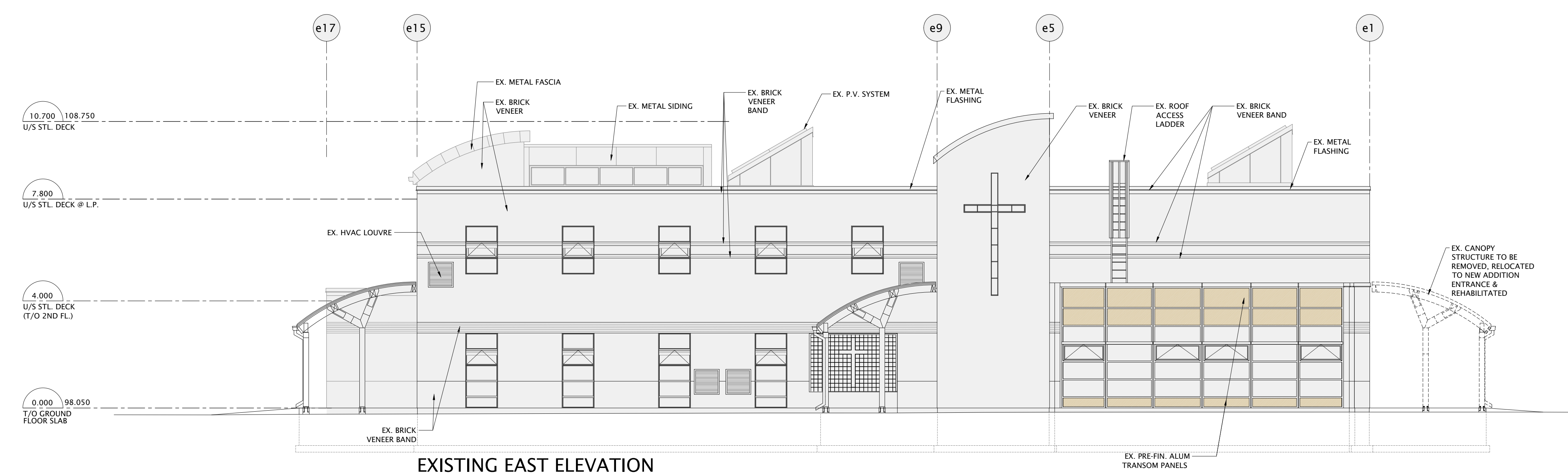
PROJECT NO: A22008	SCALE: 1:100
DRAWN: T.E. / D.T.	DRAWING NO. REV. A2-3 6
CHECKED: C.K.	DATE: 22/07/21

FILES: A22008 - A2-3 ROOF PLANDWG



EXISTING NORTH ELEVATION

EX. SCUPPER TO BE REMOVED, RELOCATED TO SUIT NEW ADDITION. INFILL OPENING IN PARAPET TO MATCH EX.
 EX. CANOPY STRUCTURE TO BE REMOVED, RELOCATED TO NEW ADDITION ENTRANCE & REHABILITATED



EXISTING EAST ELEVATION

NO.	DATE	REVISION
1	22/07/21	ISSUED FOR TENDER
2	24/07/21	ISSUED FOR TENDER REVIEW BY CLIENT
3	20/SEP	ISSUED FOR TENDER

DO NOT SCALE DRAWINGS. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE JOB. ALL DRAWINGS REMAIN THE PROPERTY OF THE ARCHITECTS.

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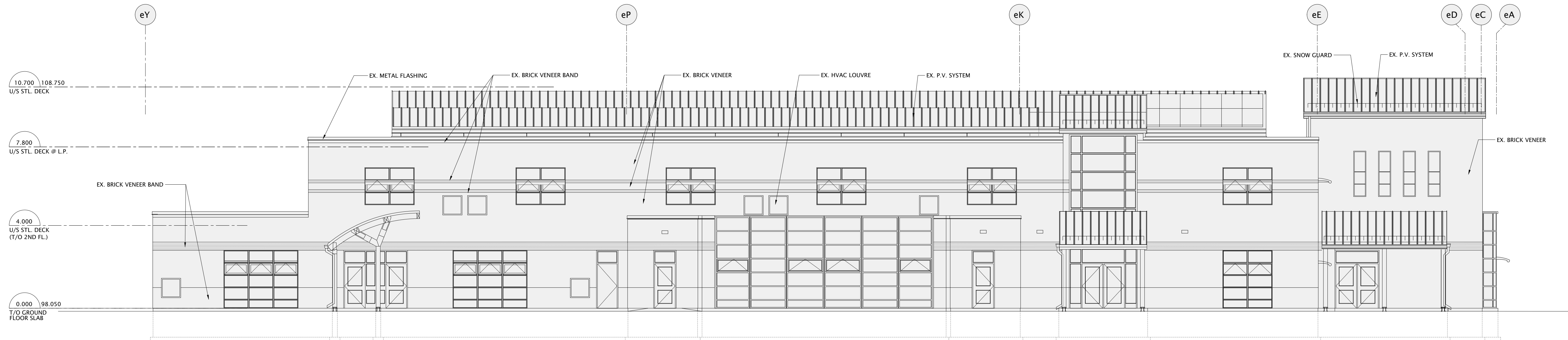


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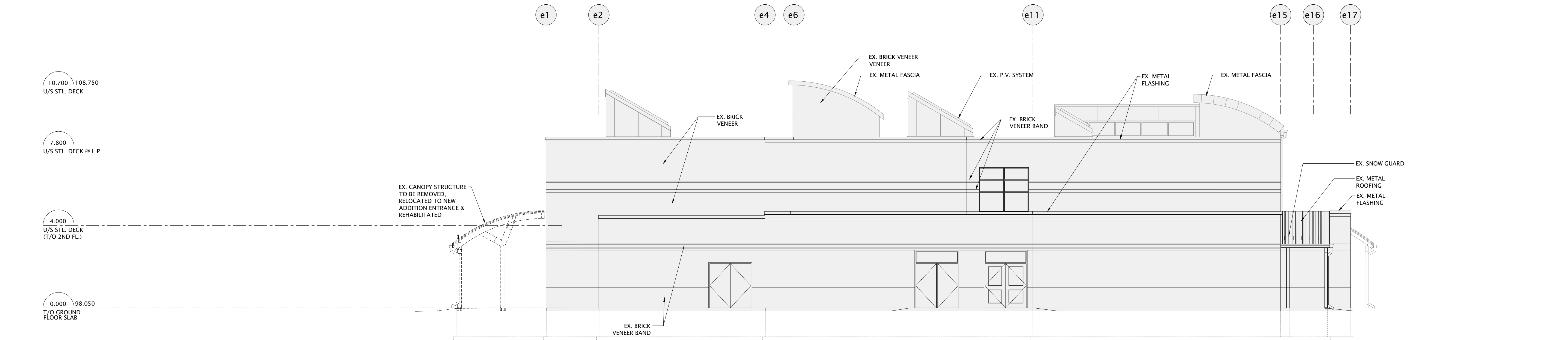
ÉEC SAINT-MICHEL
 Classrooms Addition
 29 MEADOWVALE ROAD,
 SCARBOROUGH, ONTARIO
 M1C 1R7

DRAWING TITLE:
NORTH & EAST EXISTING BUILDING ELEVATIONS & DEMOLITION

PROJECT NO: A22008	SCALE: 1:300
DRAWN: T.E/ S.J.	DRAWING NO. REV. A3-0 8
CHECKED: C.K.	DATE: 22/07/21



EXISTING SOUTH ELEVATION



EXISTING WEST ELEVATION

ISSUED FOR TENDER	NO DATE:
REVISION	

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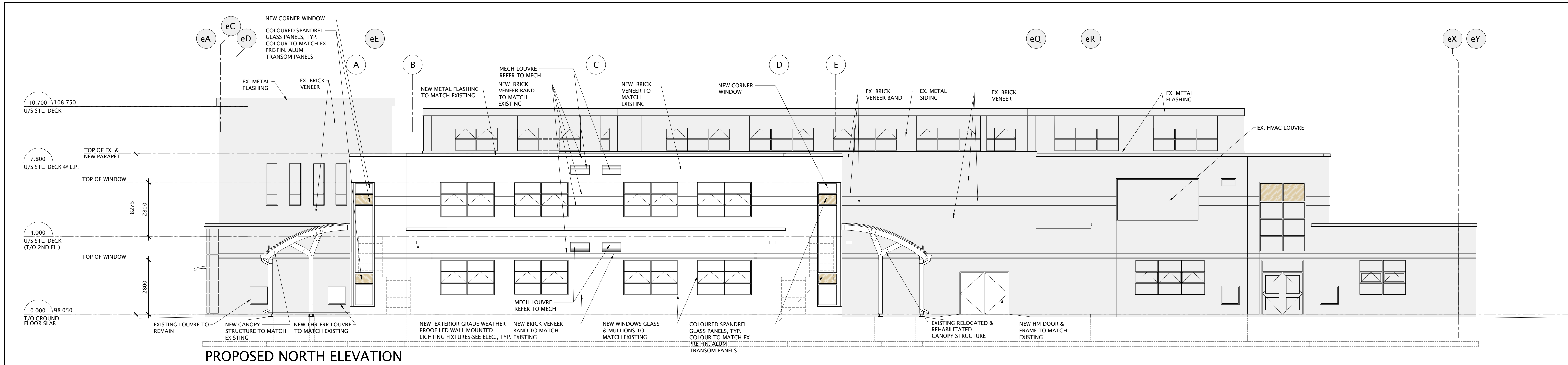
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CONSEIL SCOLAIRE CATHOLIQUE

ÉC SAINT-MICHEL
Classrooms Addition

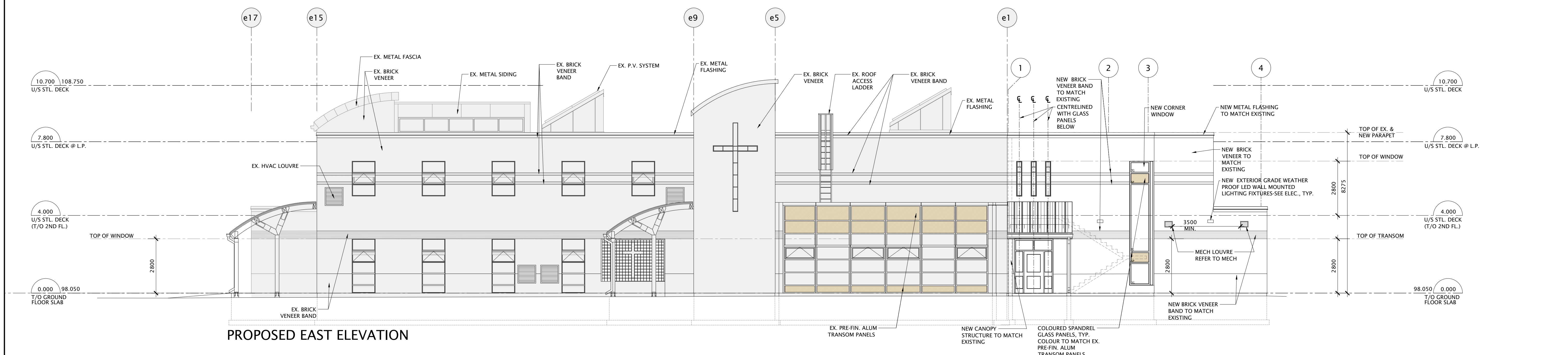
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M1C 1R7

DRAWING TITLE:
SOUTH & WEST EXISTING BUILDING ELEVATIONS & DEMOLITION

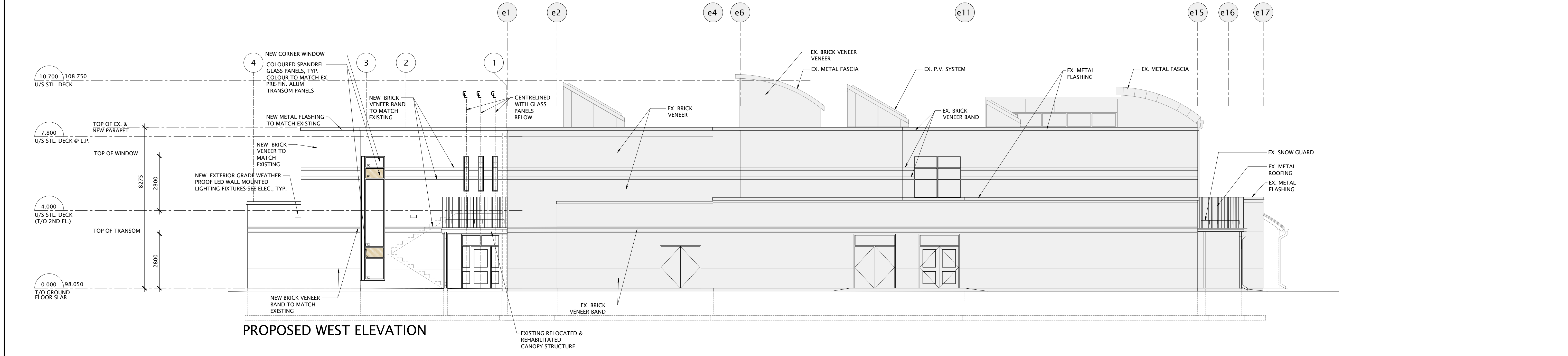
PROJECT NO: A22008	SCALE: 1:300
DRAWN: T.E/ S.J.	DRAWING NO. REV. A3-1 6
CHECKED: B.F.	
DATE: 22/07/21	



PROPOSED NORTH ELEVATION



PROPOSED EAST ELEVATION



PROPOSED WEST ELEVATION

NO.	DATE	REVISION
7	24/04/2024	ISSUED FOR TENDER

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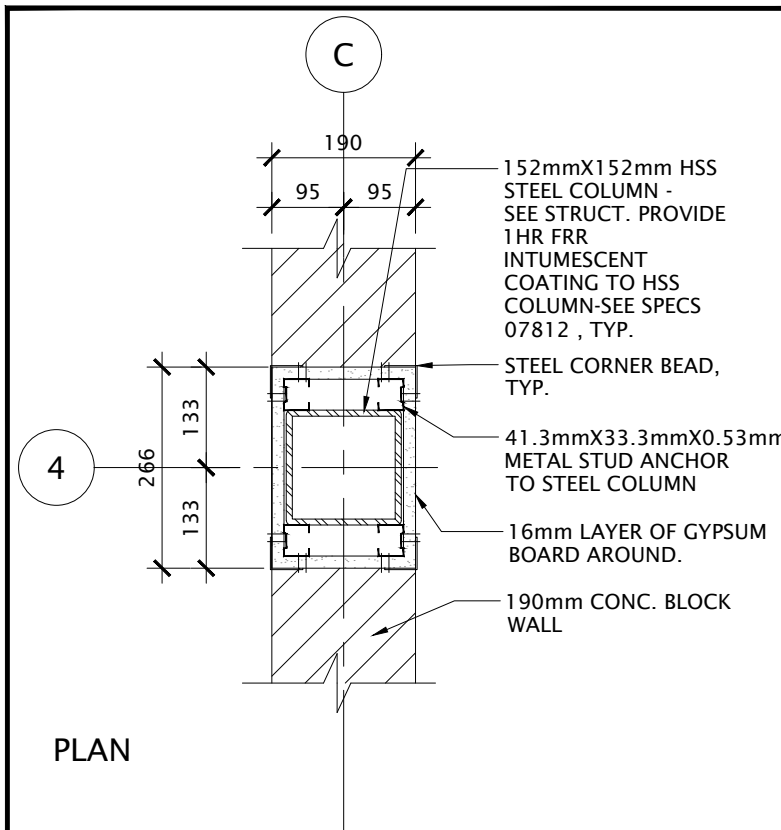
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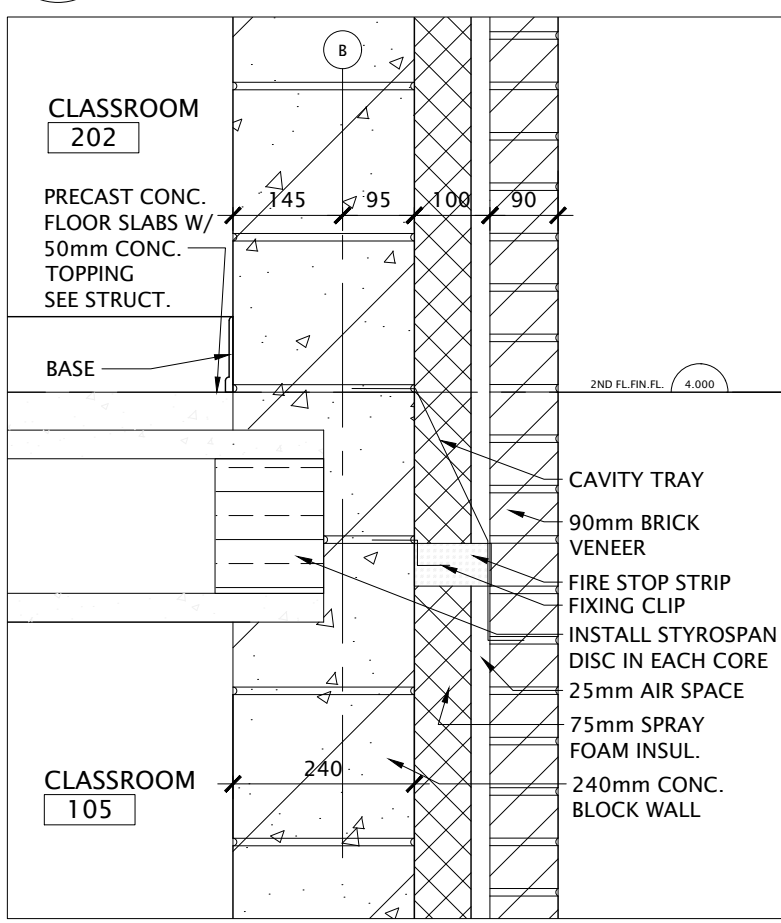
DRAWING TITLE:
NORTH, EAST & WEST PROPOSED BUILDING ELEVATIONS

PROJECT NO: A22008	SCALE: 1:300
DRAWN: T.E / S.J.	DRAWING NO. REV. A3-2 7
CHECKED: B.F.	DATE: 22/07/21



- NOTES**
- GYPSUM BOARD SHALL BE APPLIED VERTICALLY WITHOUT HORIZONTAL JOINTS.
- GYPSUM BOARD SHALL BE ATTACHED TO STEEL STUDS WITH SCREWS SPACED NOT MORE THAN 305MM OC.
 - STUDS SHALL BE FABRICATED OF GALVANIZED STEEL NOT LESS THAN 0.53MM THICK AND NOT LESS THAN 41.3MM WIDE WITH LEGS NOT LESS THAN 33.3MM LONG AND SHALL BE 12.7MM LESS THAN THE ASSEMBLY HEIGHT.
 - CORNER BEADS SHALL:
 - BE FABRICATED OF GALVANIZED STEEL THAT IS NOT LESS THAN 0.41MM THICK.
 - HAVE LEGS NOT LESS THAN 31MM LONG.
 - BE ATTACHED TO THE GYPSUM BOARD OR STUD WITH 25.4MM SCREWS SPACED NOT MORE THAN 305MM OC.
 - HAVE THE ATTACHING FASTENERS PENETRATE THE STEEL STUD MEMBER.

7 DETAIL 4-114: GYPSUM BOARD CLADDING @ 1HR FRR STEEL COLUMN
A3-3 SCALE: 1:10



8 DETAIL 7-502: 1HR FRR @ SECOND FLOOR
A3-3 SCALE: 1:10

PROPOSED ASSEMBLIES COMPLYING WITH OBC SB-10 TABLE SB 5.7-2017		
OPAQUE ELEMENTS	ASSEMBLY MAX. U-VALUE	INSULATION MIN. RSI-VALUE
ROOF	U-0.087	12.5
WALLS, ABOVE GRADE (MASS)	U-0.261	3.5 ci
WALLS, BELOW GRADE (CONCRETE FOUNDATION WALLS)	C-0.284	3.5 ci
FLOORS (CONCRETE CORE SLAB)	U-0.215	4.1 ci
SLAB ON GRADE FLOORS (UNHEATED)	F-0.794	2.6 FOR 1200mm

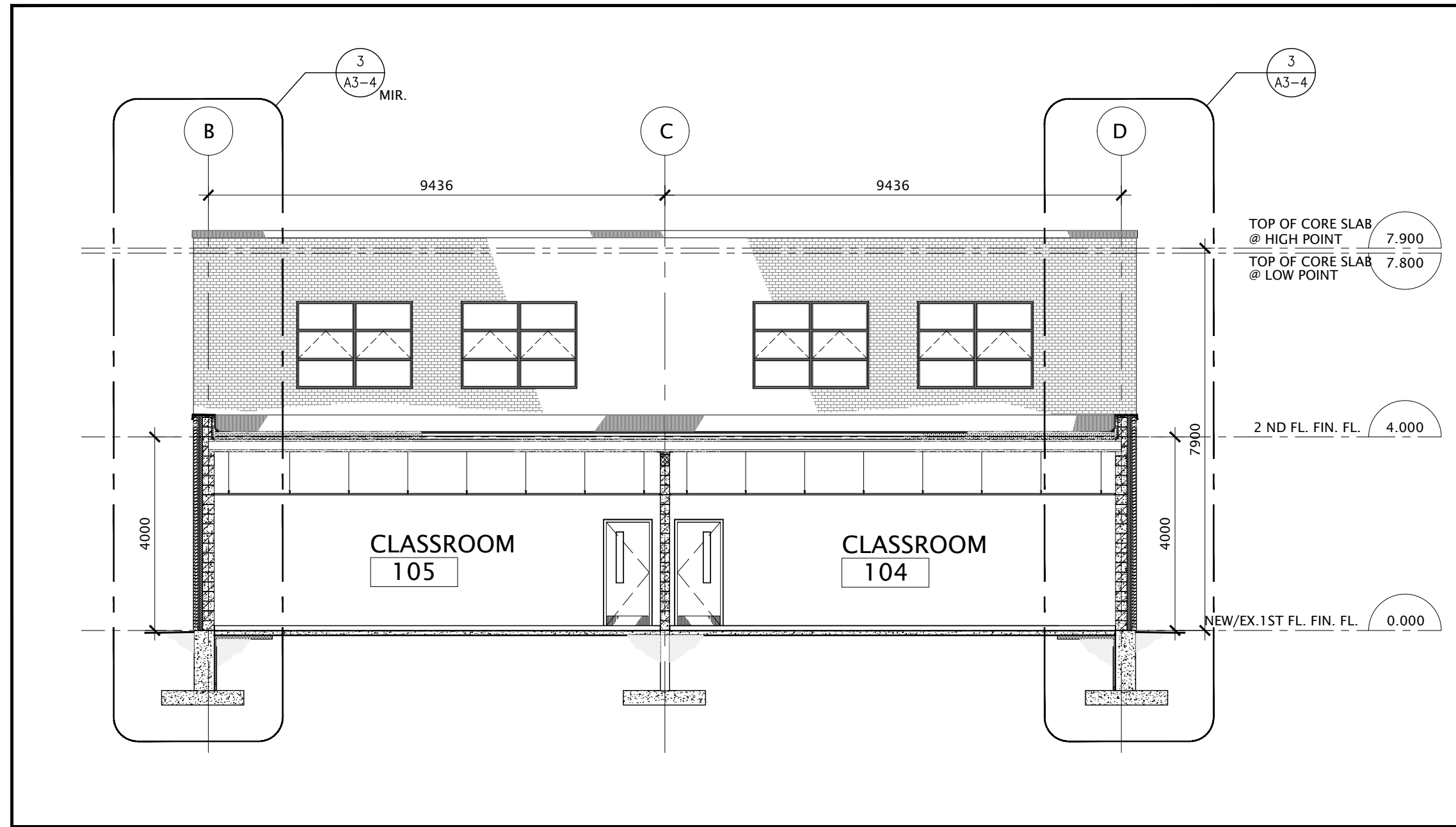
NOTE: ASSEMBLIES AIR & THERMAL BRIDGING BARRIERS TO BE CONSTRUCTED AS PER OBC SB-10 CHAPTER 2 SECTION 1.1.1.4.

PROPOSED FENESTRATION COMPLYING WITH OBC SB-10 TABLE SB 5.7-2017 ASSEMBLY			
FENESTRATION	MAX. U-VALUE	MAX. SHGC	MIN. VT/SHCC
METAL FRAMING FIXED WINDOW	U-1.94		
METAL FRAMING OPERABLE WINDOW	U-2.04	0.45	1.10
METAL FRAMING ENTRANCE DOOR	U-3.94		

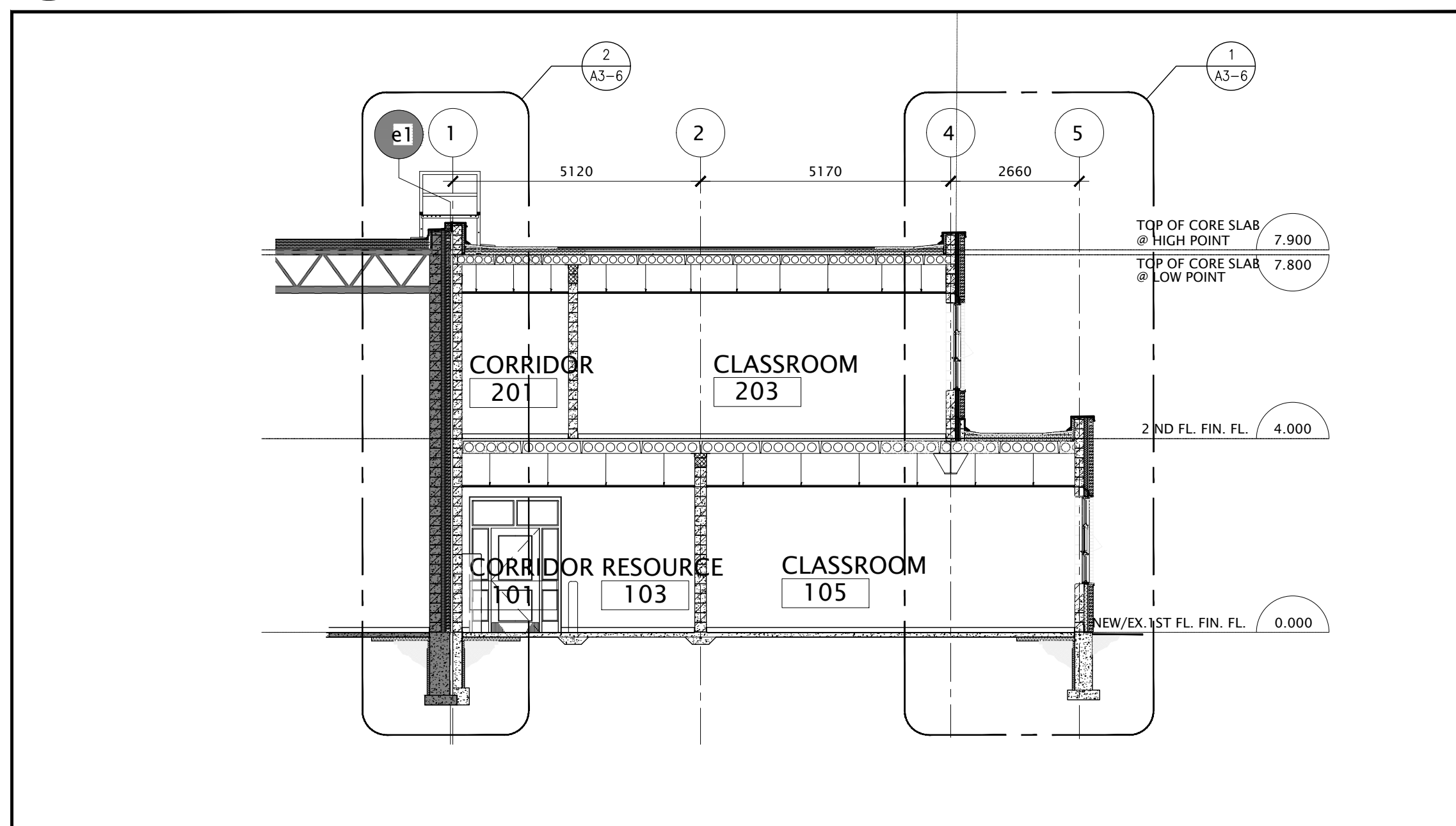
NOTE: ASSEMBLIES AIR & THERMAL BRIDGING BARRIERS TO BE CONSTRUCTED AS PER OBC SB-10 CHAPTER 2 SECTION 1.1.1.4.

GENERAL NOTES:
ALL STEEL STRUCTURAL MEMBERS TO BE PAINTED WITH 1HR INTUMESCENT PAINTING AS PER SPECS SECTION 07812

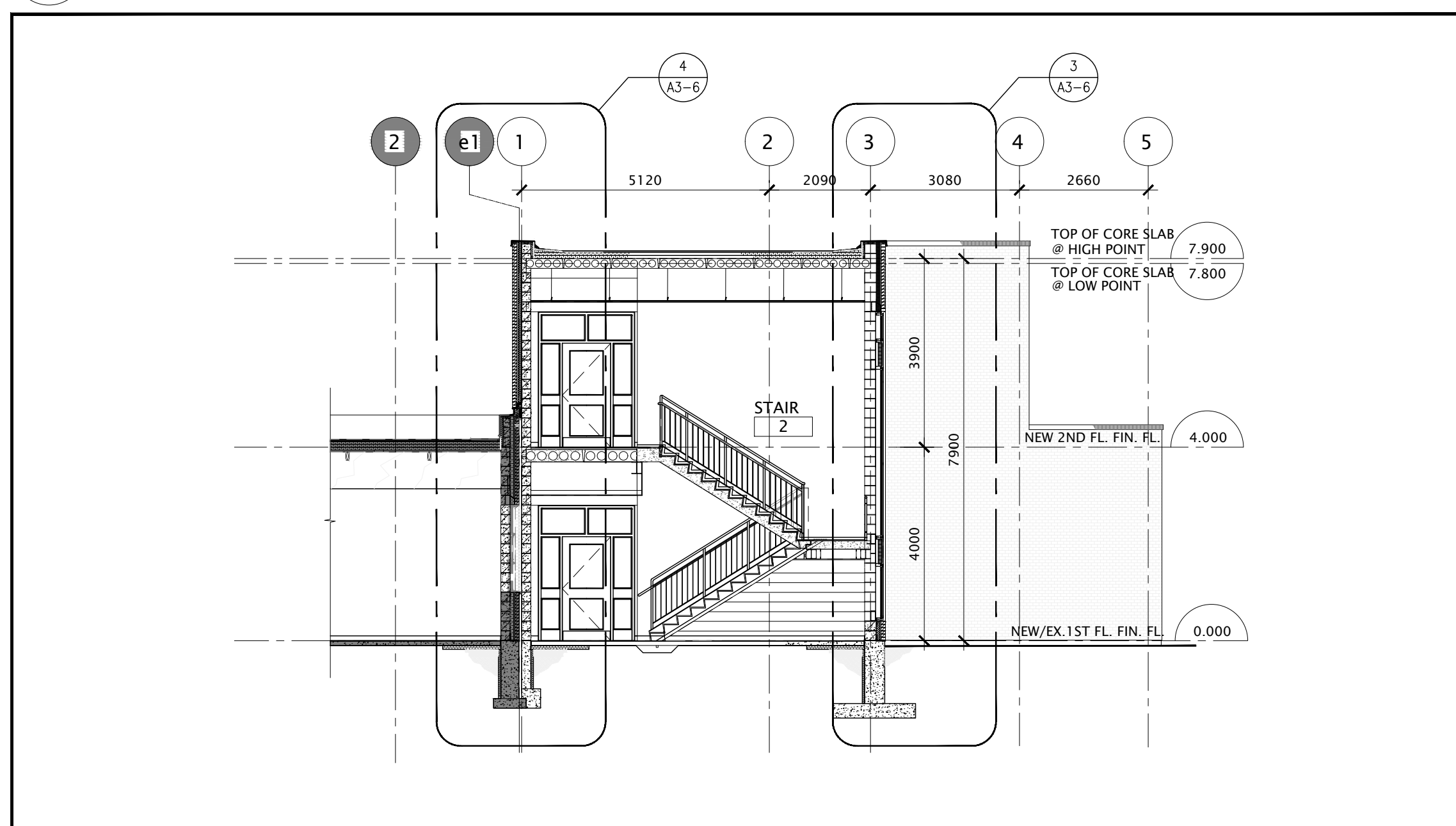
9 ASSEMBLIES ENERGY EFFICIENCY VALUES
A3-3 SCALE: 1:10



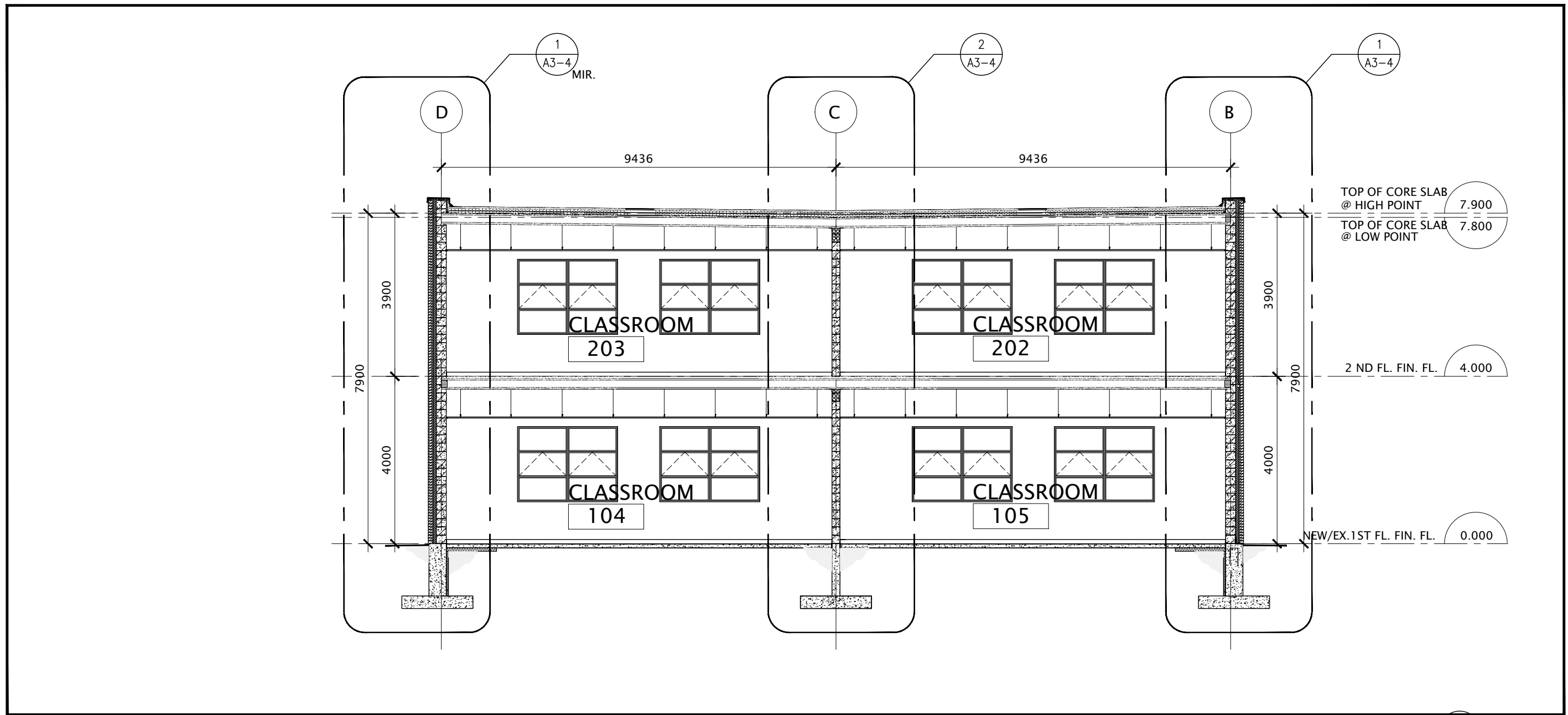
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A3-3 SCALE: 1:100



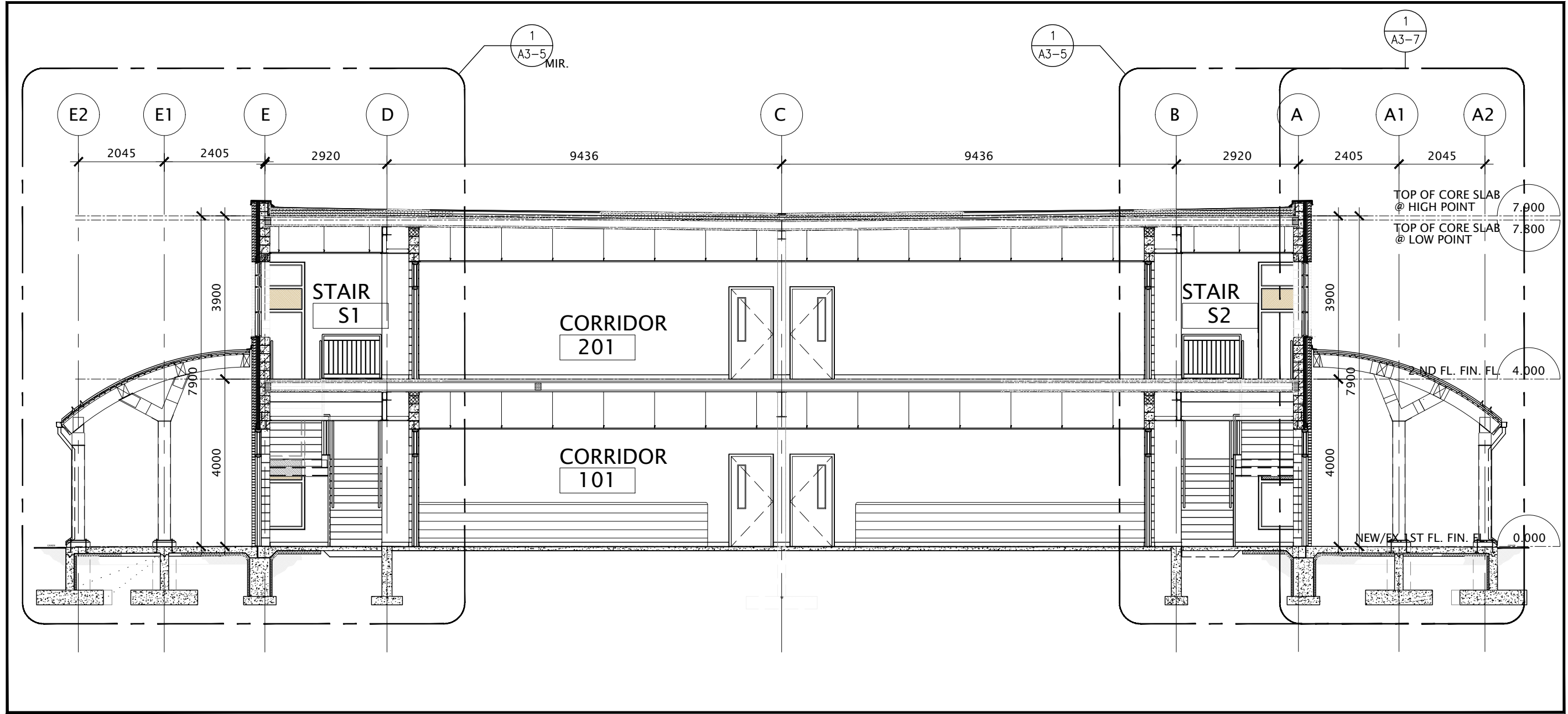
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A3-3 SCALE: 1:100



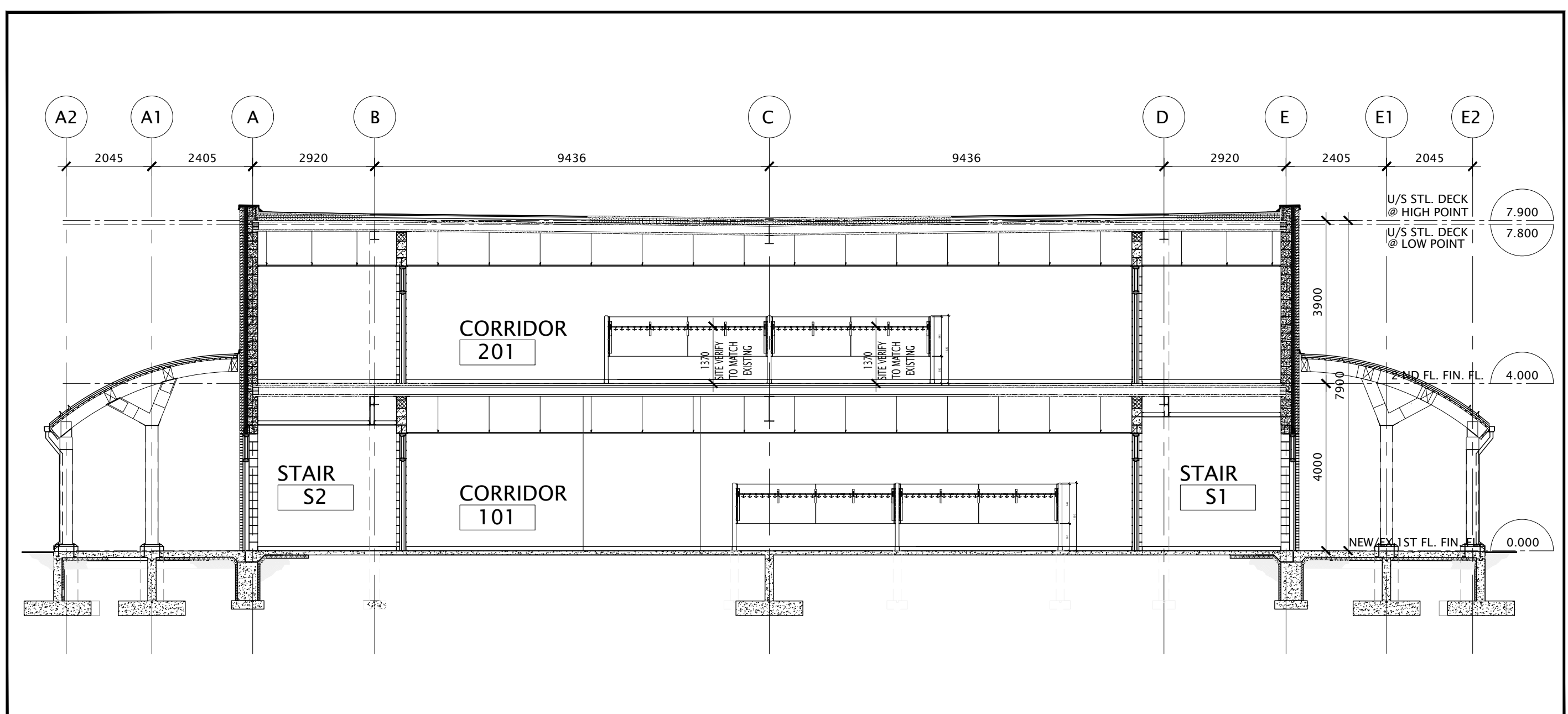
6 BUILDING SECTION
A3-3 SCALE: 1:100



1 BUILDING SECTION
A3-3 SCALE: 1:100



2 BUILDING SECTION
A3-3 SCALE: 1:100



3 BUILDING SECTION
A3-3 SCALE: 1:100

NO.	DATE	REVISION

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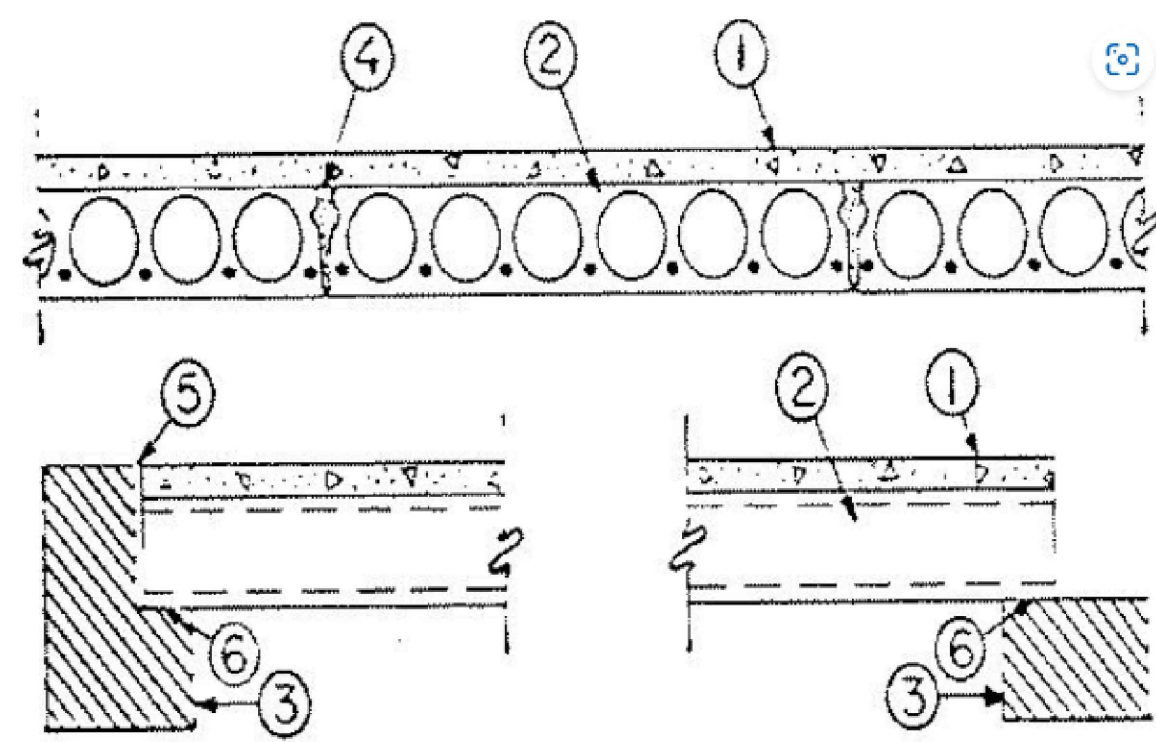
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ÉEC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
BUILDING SECTIONS & DETAILS

PROJECT NO: A22008	SCALE: AS NOTED
DRAWN: D.T. / T.E.	DRAWING NO: A3-3
CHECKED: C.K.	REV: 8
DATE: JULY 2022	



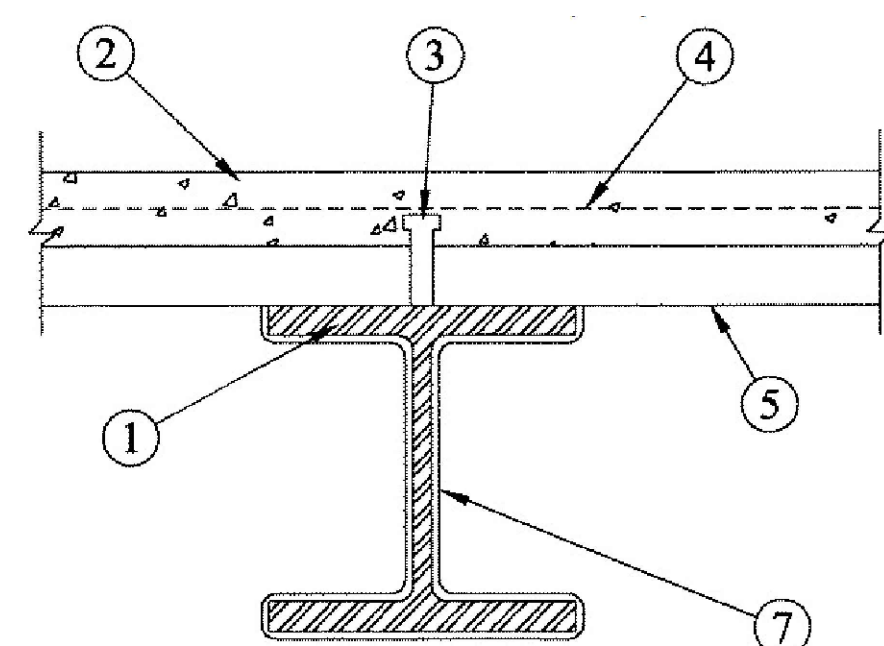
Restrainted End Detail
Unrestrained End Detail

SECTION DETAILS FOR DESIGN NO. BXUV7 . J957 ACCORDING TO CAN/ULC-S101 FOR 1 HR FRR FOR CONC. HOLLOWCORE SLAB AND BEAMS ASSEMBLY COMPONENTS (REFER TO ULC WEBSITE: <https://qa.ulprospector.com/en/profile?e=14200>);

1. CONCRETE TOPPING — 3000 PSI COMPRESSIVE STRENGTH, 110 TO 153 PCF UNIT WEIGHT. FOR 1A, 1H (REFER TO ULC WEBSITE)
2. PRECAST CONCRETE UNIT — NOMINAL 10 IN. THICK UNITS, NORMAL WEIGHT AGGREGATE. CROSS SECTION SIMILAR TO THE ABOVE ILLUSTRATION. SEE A3-3 FOR BUILDING SECTIONS.
3. END DETAILS — RESTRAINED AND UNRESTRAINED. SEE STRUC.
4. JOINT — CLEARANCE BETWEEN SLABS AT BOTTOM. FULL LENGTH, 1/16 IN. MIN, 5/16 IN. MAX. GROUTED FULL LENGTH WITH SAND-CEMENT GROUT (3500 PSI MIN COMPRESSIVE STRENGTH) TO A MAX DEPTH OF 4-1/2 IN. THIS DEPTH MAY BE MAINTAINED BY PLACING A COMPRESSIBLE MATERIAL IN THE BOTTOM OF THE JOINT BEFORE APPLYING GROUT. NOTE: A 3/4 IN. LATERAL EXPANSION JOINT TO BE PROVIDED THE FULL LENGTH AND DEPTH OF THE SLABS EVERY 14 FT. EXPANSION SHOULD BE OBTAINED WITH NONCOMBUSTIBLE, COMPRESSIBLE MATERIAL, FOR EXAMPLE, 24 SHEETS OF 1/16 IN. THICK CERAMIC FIBER PAPER (TOTAL THICKNESS EQUALS 1-1/2 IN.).
5. END CLEARANCE — CLEARANCE FOR EXPANSION AT EACH END OF SLABS SHALL BE EQUAL TO (3/16 PLUS OR MINUS 1/16 IN.) L/17 IN., WHERE 'L' IS EQUAL TO LENGTH OF SPAN IN FEET.
6. MIN BEARING — 1-1/2 IN.
7. BEAM — (NOT SHOWN) — W8X28 MIN SIZE. SEE STRUC. THE PRECAST CONCRETE UNITS SHALL BE WELDED TO THE TOP FLANGE OF THE BEAM BY MEANS OF WELD PLATES (SPACED 48 IN. O.C MAX) INCORPORATED IN THE UNITS.
8. SPRAY APPLIED FIRE RESISTIVE MATERIALS* — (NOT SHOWN) — APPLIED BY MIXING WITH WATER AND SPRAYING IN ONE OR MORE COATS TO THE FINAL 7/16 IN. THICKNESS ON THE STEEL BEAM FOLLOWING THE BEAM CONTOUR. SURFACES OF THE BEAM SHALL BE CLEAN AND FREE OF DIRT, LOOSE SCALE AND OIL. MIN AVG AND MIN IND DENSITY OF 15/14 PCF RESPECTIVELY. MIN AVG AND MIN IND DENSITY OF 22/19 PCF RESPECTIVELY FOR TYPES 2/106, 2/106/C, 2/106/HY. MIN AVG AND MIN IND DENSITY OF 19/18 PCF RESPECTIVELY FOR TYPE 7GP AND 7HD. FOR METHOD OF DENSITY DETERMINATION, REFER TO DESIGN INFORMATION SECTION.

NOTE:
 1. FOR CONCRETE HOLLOWCORE SLAB COVER THICKNESSES AND FIRE RATINGS REFER TO STRUC.

4 DETAIL 4-115: MIN. 1HR FRR CONC. HOLLOWCORE SLAB ASSEMBLY
 SCALE: N.T.S.



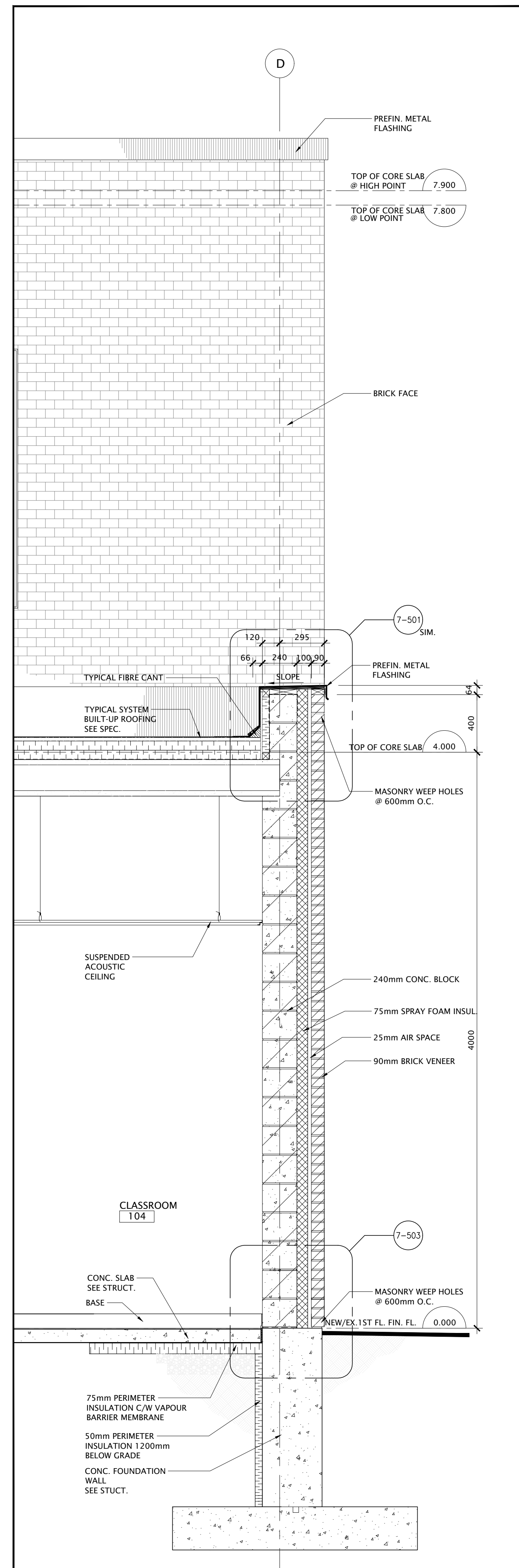
SECTION DETAIL FOR DESIGN NO. BXUV7 . N634 ACCORDING TO CAN/ULC-S101 FOR 1 HR FRR FOR STEEL BEAMS ASSEMBLY COMPONENTS (REFER TO ULC WEBSITE: <https://qa.ulprospector.com/en/profile?e=14415>);

1. STEEL BEAM — MINIMUM BEAM SIZES AS SHOWN IN TABLE BELOW/SEE STRUC. BEAMS SHALL BE FREE OF DIRT, LOOSE SCALE AND OIL. BEAMS SHALL BE PRIMED WITH A METAL ALKYD PRIMER AT A NOMINAL THICKNESS OF 2 MIL OR AN EPOXY PRIMER AT A NOMINAL THICKNESS OF 1 MIL.
2. NORMAL WEIGHT OR LIGHTWEIGHT CONCRETE — COMPRESSIVE STRENGTH 3000 PSI. FOR NORMAL WEIGHT CONCRETE EITHER CARBONATE OR SILICEOUS AGGREGATE MAY BE USED. UNIT WEIGHT 145 LBS/CU FT. FOR NORMAL WEIGHT CONCRETE AND 110 LBS/CU FT. FOR LIGHTWEIGHT CONCRETE. MIN CONCRETE THICKNESS, AS MEASURED FROM TOP PLANE OF STEEL FLOOR AND FORM UNITS IS 2-1/2 IN. SEE STRUC.
3. SHEAR CONNECTOR — (OPTIONAL) — STUDS, 3/4 IN. DIAM HEADED TYPE OR EQUIVALENT PER AISC SPECIFICATIONS WELDED TO THE TOP FLANGE OF BEAM THROUGH THE STEEL FLOOR UNITS. END CLEARANCE — CLEARANCE FOR EXPANSION AT EACH END OF SLABS SHALL BE EQUAL TO (3/16 PLUS OR MINUS 1/16 IN.) L/17 IN., WHERE 'L' IS EQUAL TO LENGTH OF SPAN IN FEET.
4. WELDED WIRE FABRIC — 6X5-10/10 SWG.
5. STEEL FLOOR FORM UNITS — 1-1/2, 2 OR 3 IN. DEEP FLUTED UNITS, WELDED TO BEAM.
6. MINERAL WOOL INSULATION — (NOT SHOWN) — MIN 4 PCF MINERAL WOOL INSULATION CUT INTO PIECES AND TIGHTLY PACKED INTO, AND COMB AND FILLING THE SPACES BETWEEN THE FLUTES OF THE STEEL FLOOR AND FORM UNITS AND THE TOP FLANGE OF THE BEAM. MINERAL WOOL IS NOT REQUIRED WHEN THE TOP FLANGE OF THE BEAM IS PROTECTED WITH INTUMESCENT COATING AT THE SAME THICKNESS SHOWN IN THE TABLE IN ITEM 7.
7. INTUMESCENT FIRE RESISTIVE MATERIALS — COATING SPRAY OR BRUSH APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AT THE MIN DRY THICKNESS AS SHOWN IN THE TABLE BELOW. THE THICKNESS SHOWN BELOW INCLUDES THE PRIMER THICKNESS. WHEN MINERAL WOOL ITEM 6 IS USED, THE TOP SURFACE OF THE BEAM NEED NOT BE PROTECTED WITH COATING. FOR PRODUCTS REFER TO ULC WEBSITE.

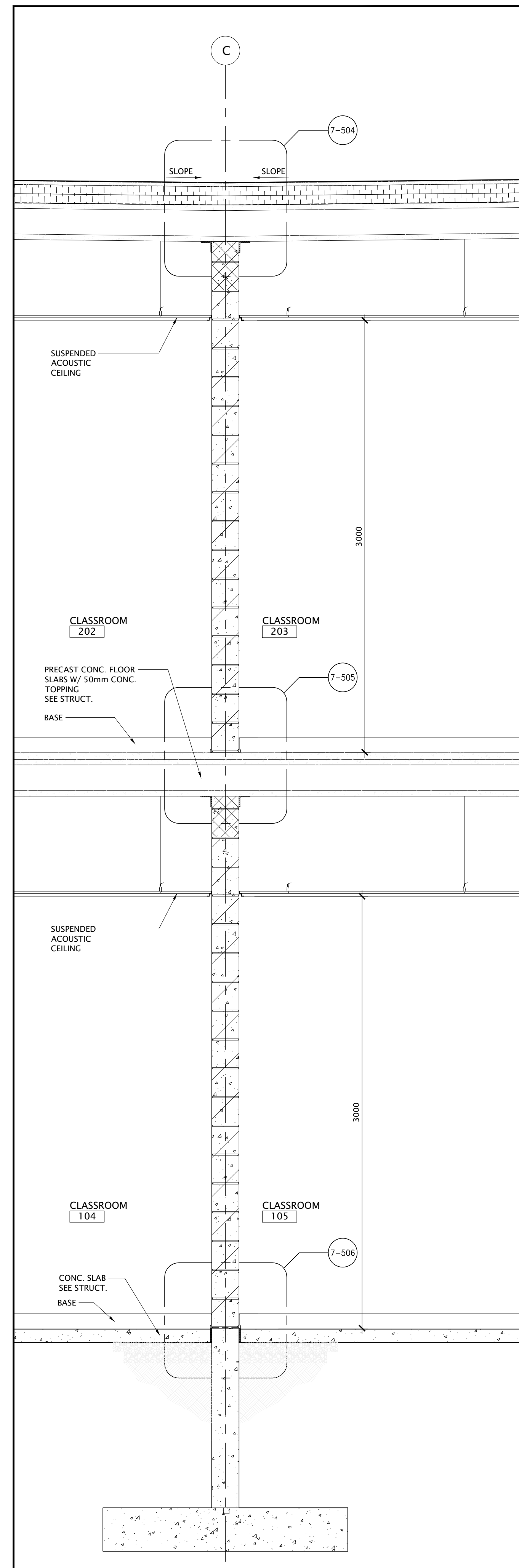
NOTE: FOR BEAM SIZES — SEE STRUC. BELOW ARE MIN. BEAM SIZES.

BEAM SIZE	W/D	RESTRAINED		MIN. DRY		MIN. DRY	
		BEAM RATING	THICKNESS (NW CONC.)	MIN. DRY (NW CONC.)	MIN. DRY (LW CONC.)	MIN. DRY (NW CONC.)	MIN. DRY (LW CONC.)
			MILS	MM	MILS	MM	
W8X24	0.70	1	35	0.88	35	0.88	
W8X24	0.70	1-1/2	59	1.48	60	1.52	
W8X24	0.70	2	98	2.47	100	2.53	
W8X28	0.81	1	22	0.56	24	0.60	
W8X24	0.70	1	35	0.88	35	0.88	
W8X24	0.70	1-1/2	35	0.88	35	0.88	
W8X24	0.70	2	69	1.74	70	1.78	

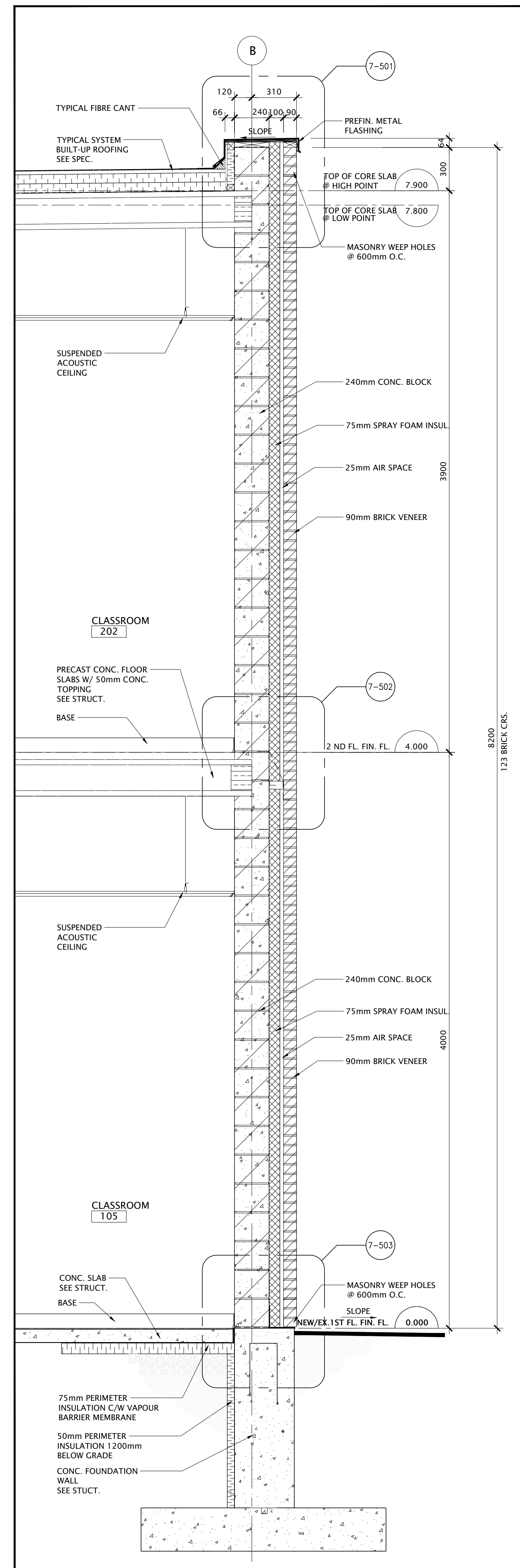
5 DETAIL 4-116: MIN. 1HR FIREPROOFING @ STEEL BEAM
 SCALE: N.T.S.



3 WALL SECTION
 SCALE: 1:20



2 WALL SECTION
 SCALE: 1:20



1 WALL SECTION
 SCALE: 1:20

NO.	DATE	ISSUED FOR TENDER	REVISION
7	24/08		

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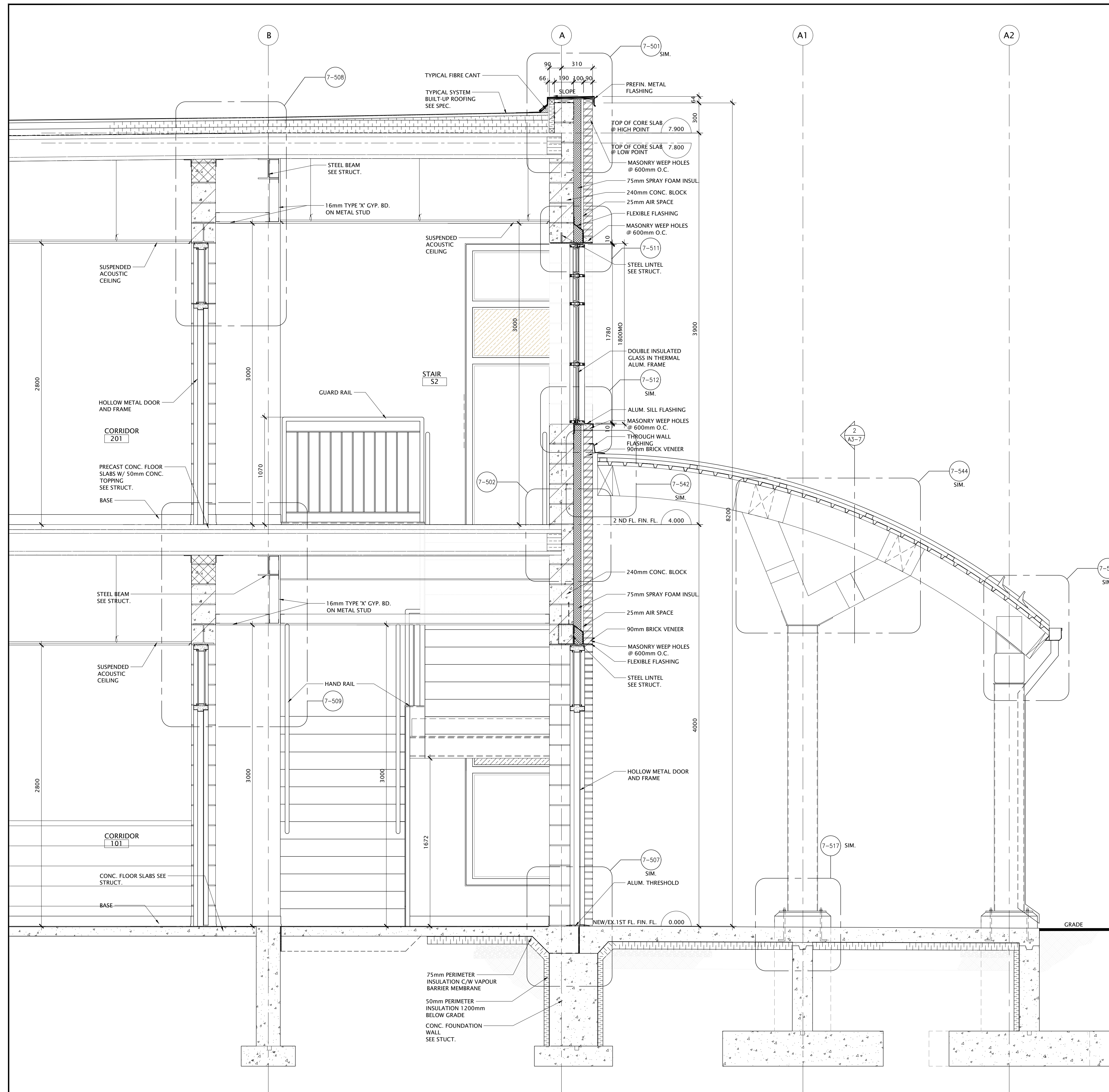
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DRAWING TITLE:
WALL SECTIONS & DETAILS

PROJECT NO: A22008	SCALE: 1:20
DRAWN: D.T.	DRAWING NO. / REV. A3-4 / 7
CHECKED: B.F.	DATE: August 2022



1 WALL SECTION
A3-5 SCALE: 1:20

NO.	DATE	ISSUED FOR	REVISION

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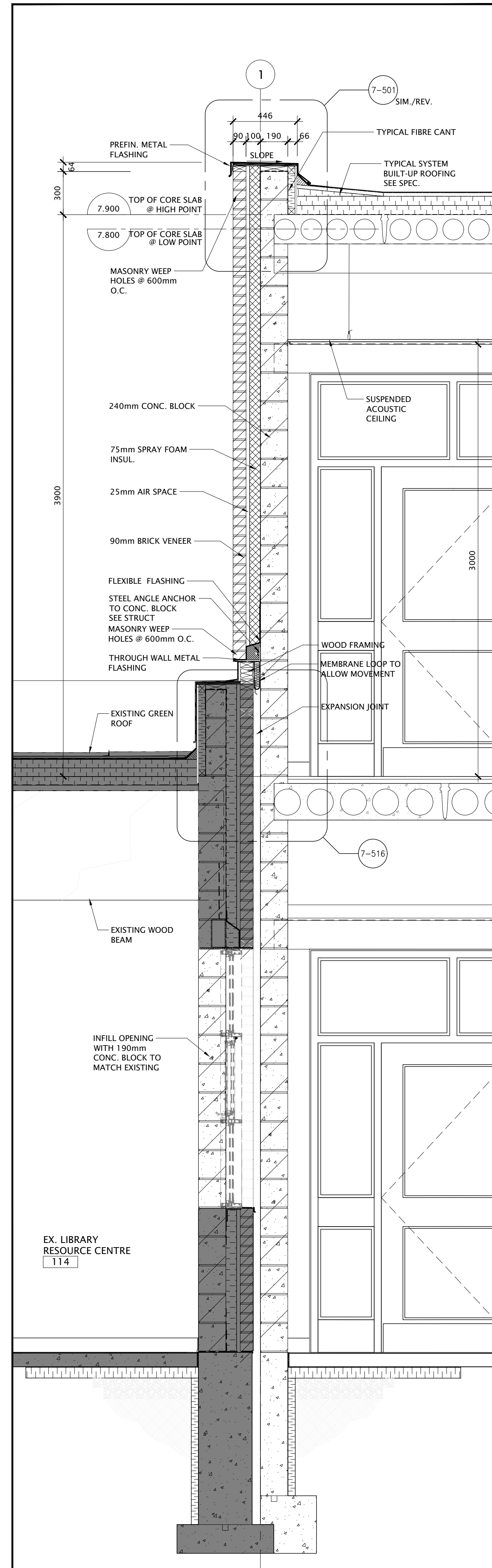
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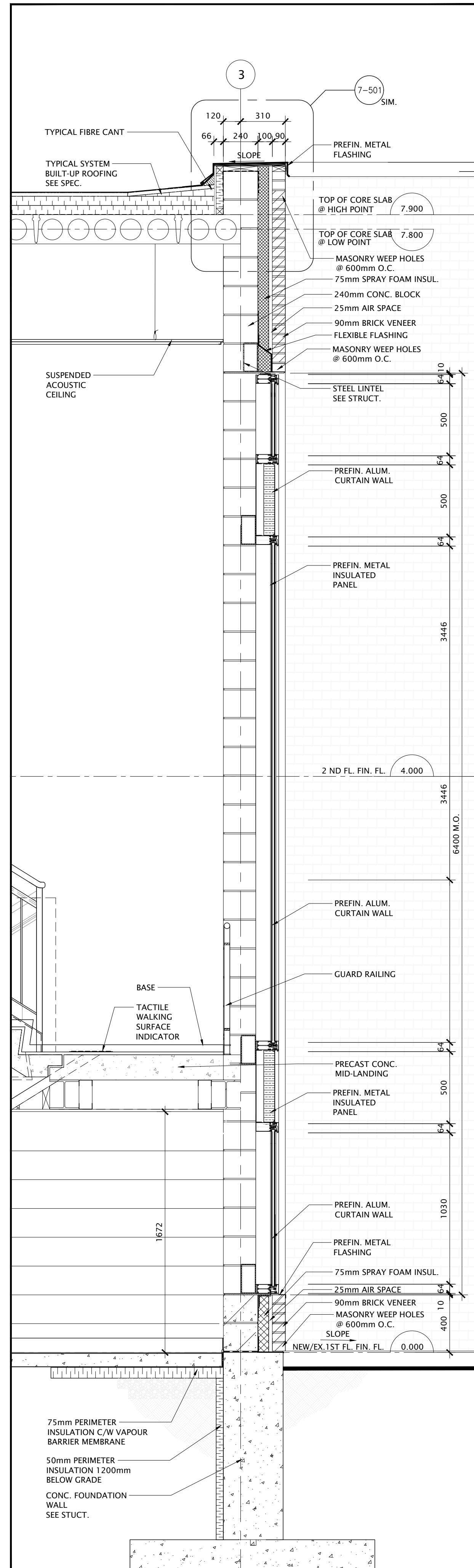
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DRAWING TITLE:
WALL SECTIONS

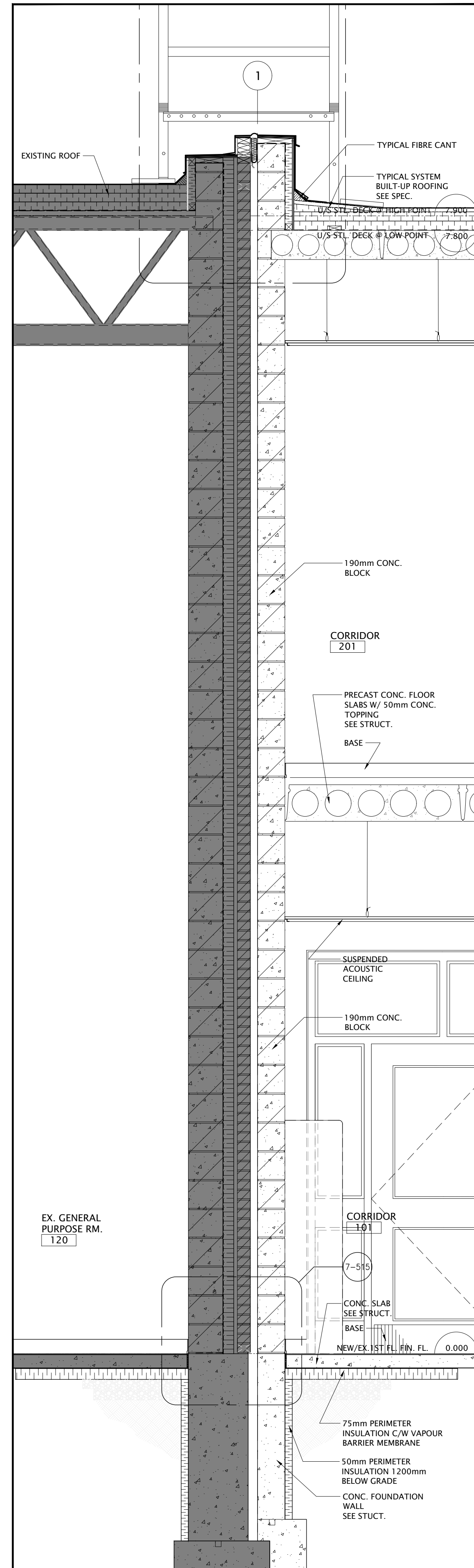
PROJECT NO: A22008	SCALE: 1:20
DRAWN: K+	DRAWING NO. REV. A3-5 6
CHECKED: K+	DATE: August 2022



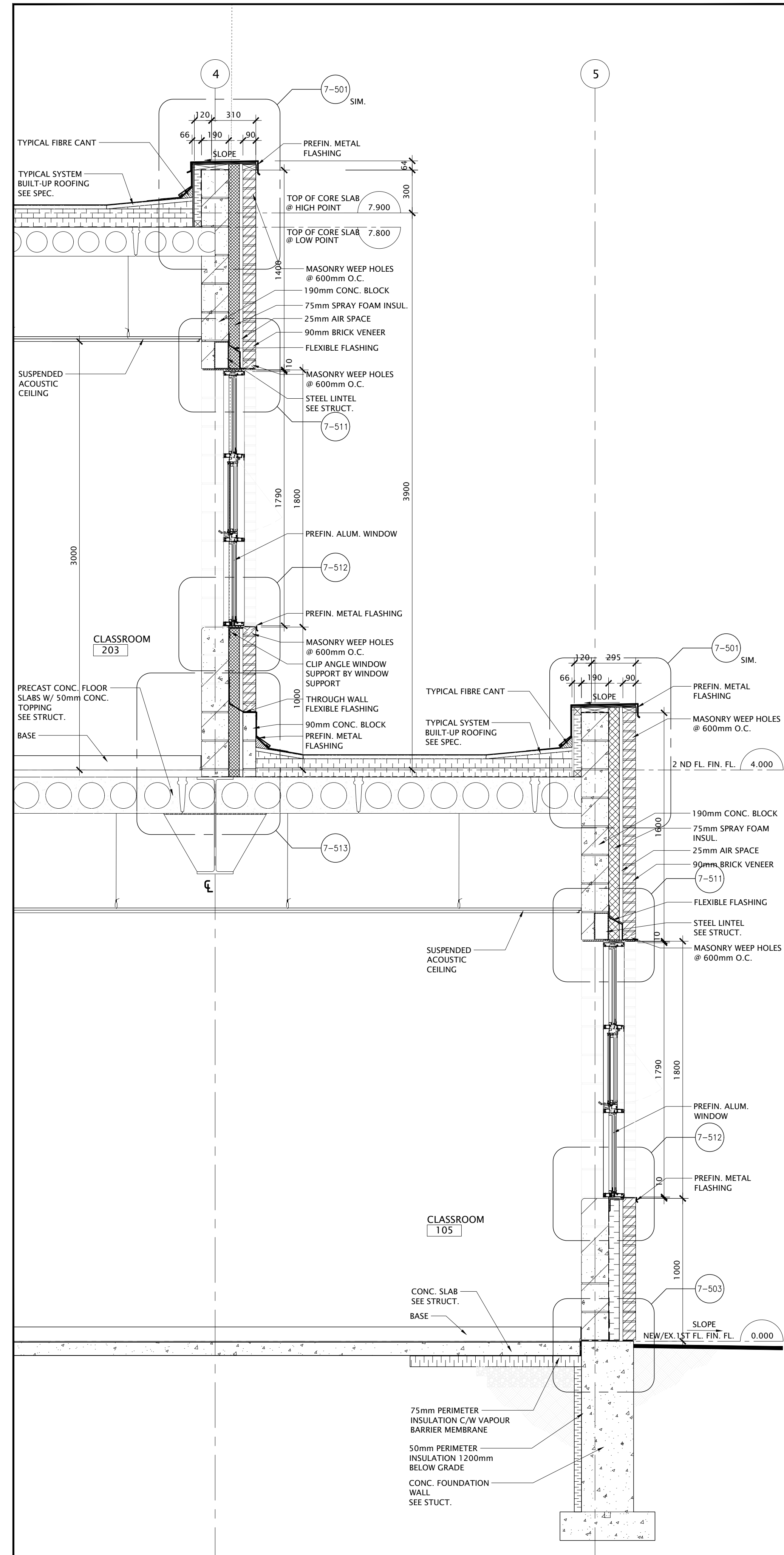
4 WALL SECTION
A3-6 SCALE: 1:20



3 WALL SECTION
A3-6 SCALE: 1:20



2 WALL SECTION
A3-6 SCALE: 1:20



1 WALL SECTION
A3-6 SCALE: 1:20

NO.	DATE	REVISION
7	24/03/2024	ISSUED FOR TENDER

DO NOT SCALE DRAWINGS. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE JOB. ALL DRAWINGS REMAIN THE PROPERTY OF THE ARCHITECTS.

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 6. ALL DIMENSIONS GIVEN ARE IN METRIC.

Kingsland + ARCHITECTS INC.

KINGSLAND + ARCHITECTS INC.
219 Dufferin Street, Suite 308B
Toronto, Ontario M5K 3J1
ph 416.203.7799
fax 416.203.7763

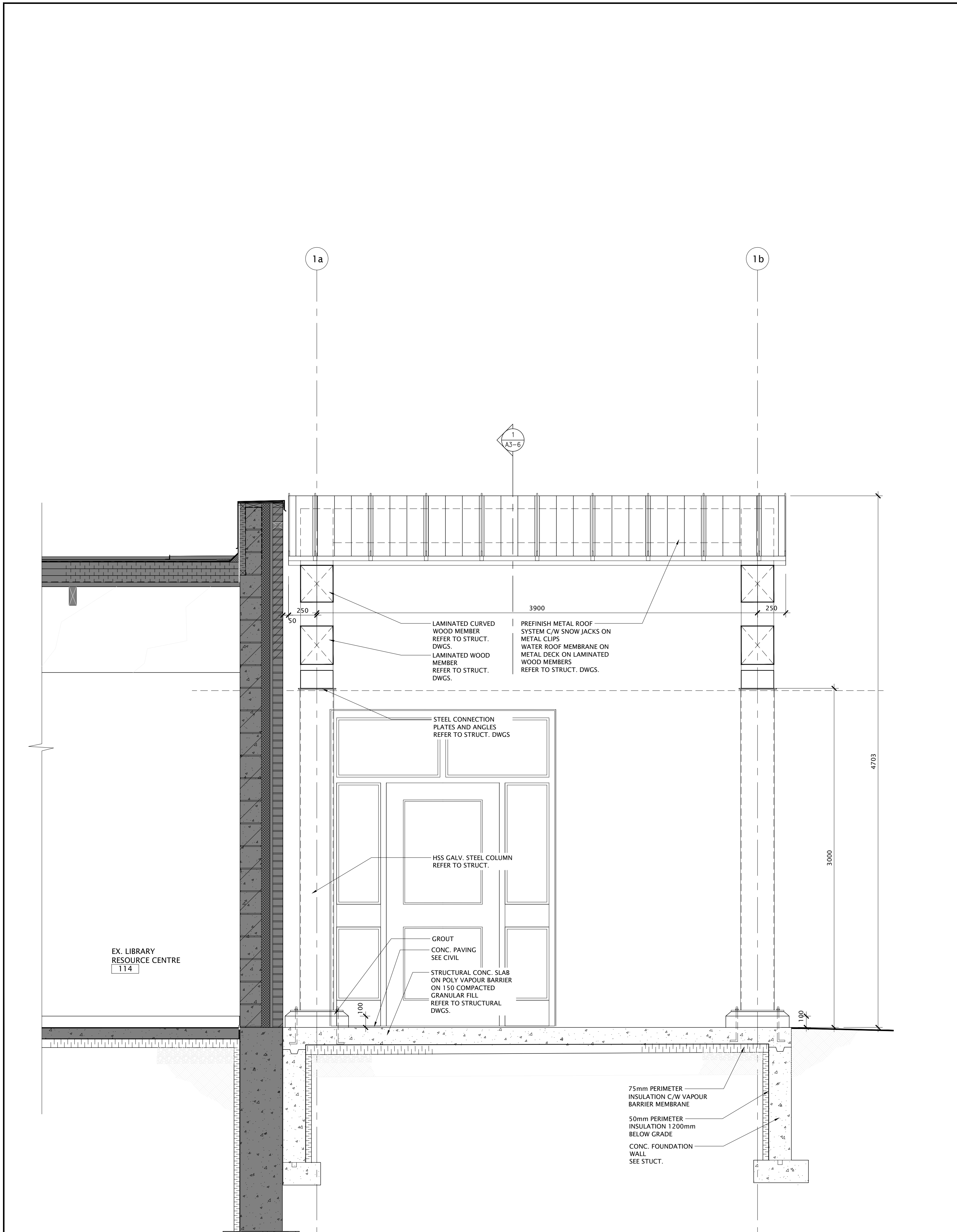


MonAvenir
CONSEIL SCOLAIRE CATHOLIQUE

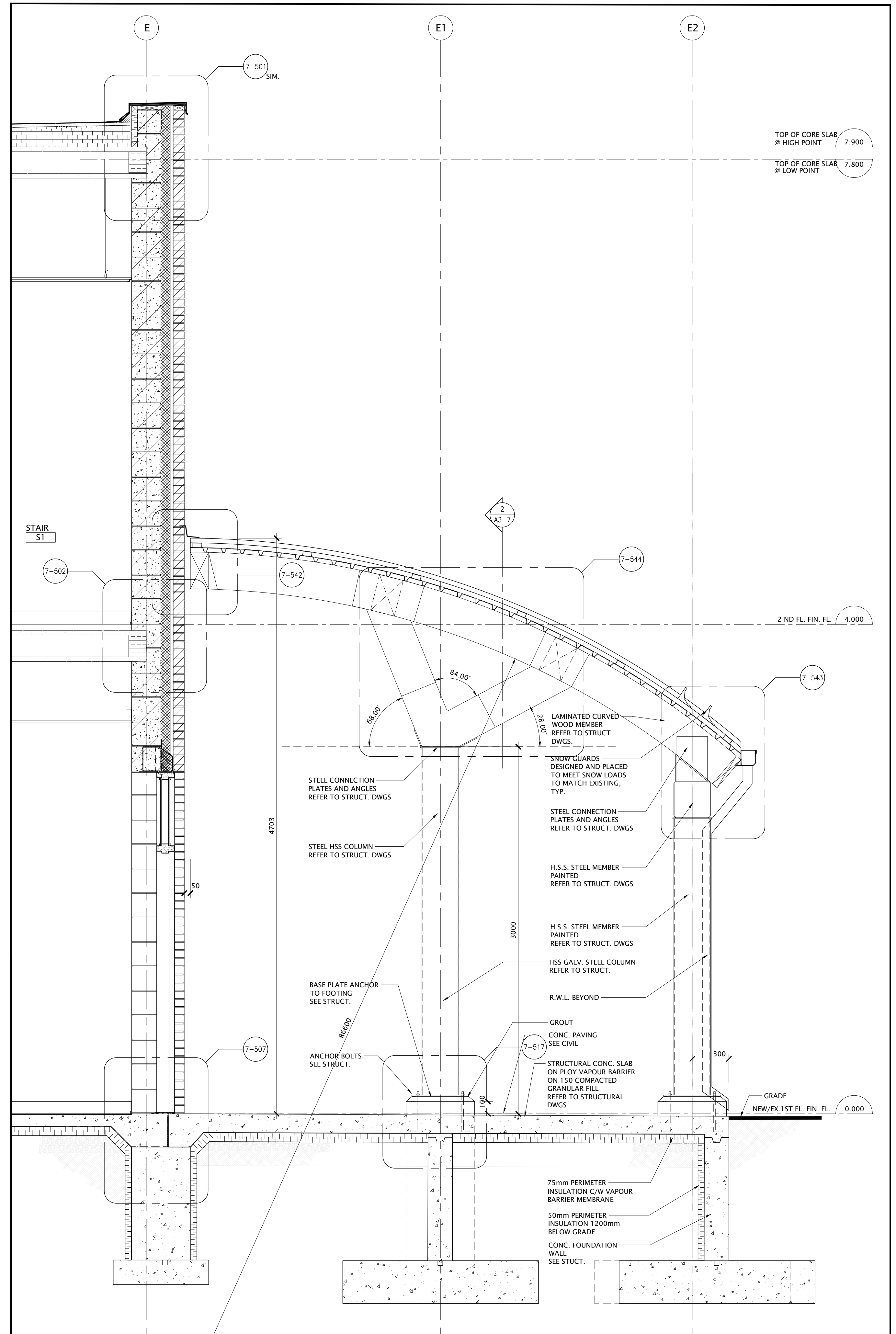
ÉEC SAINT-MICHEL
Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
WALL SECTIONS

PROJECT NO: A22008	SCALE: 1:20
DRAWN: D.T. / T.E.	DRAWING NO. / REV. A3-6 / 7
CHECKED: C.K.	DATE: August 2022



2 WALL SECTION
A3-7 SCALE: 1:20



1 WALL SECTION
A3-7 SCALE: 1:20

NO.	DATE	ISSUED FOR	REVISION
15	24/08/22	ISSUED FOR TENDER	

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Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
WALL SECTIONS

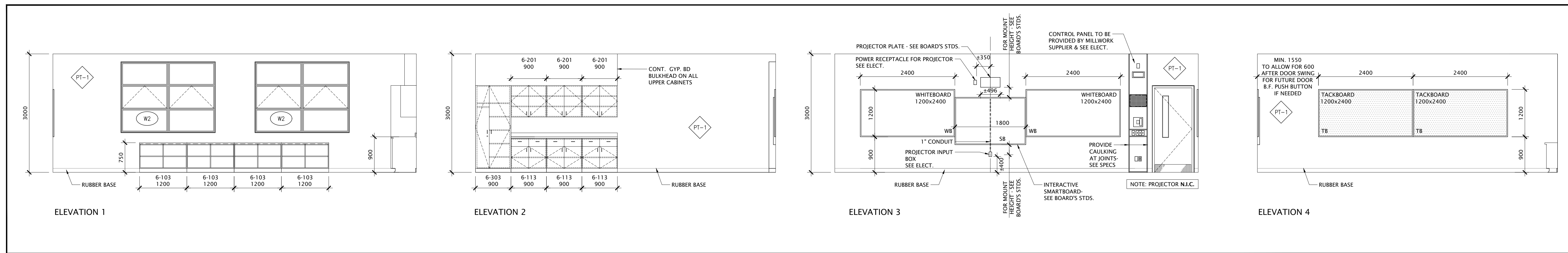
PROJECT NO: A22008	SCALE: 1:20
DRAWN: D.T.	DRAWING NO.: A3-7
CHECKED: B.F.	REV.: 5
DATE: August 2022	

NO.	DATE	REVISION
3	24/08/22	ISSUED FOR TENDER

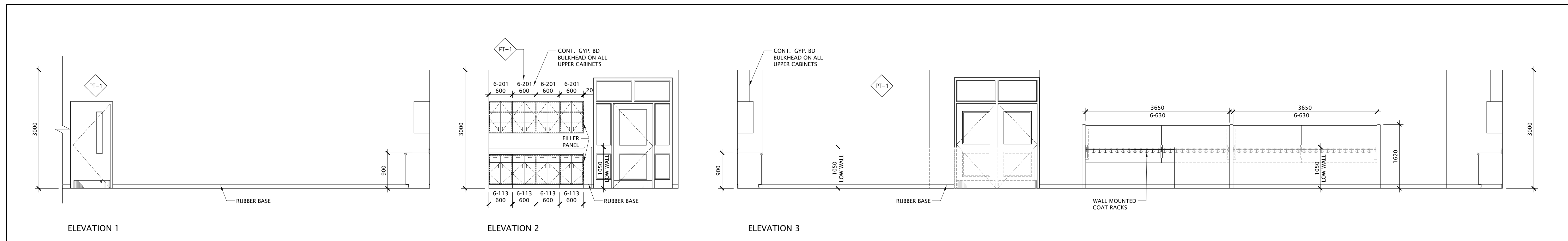
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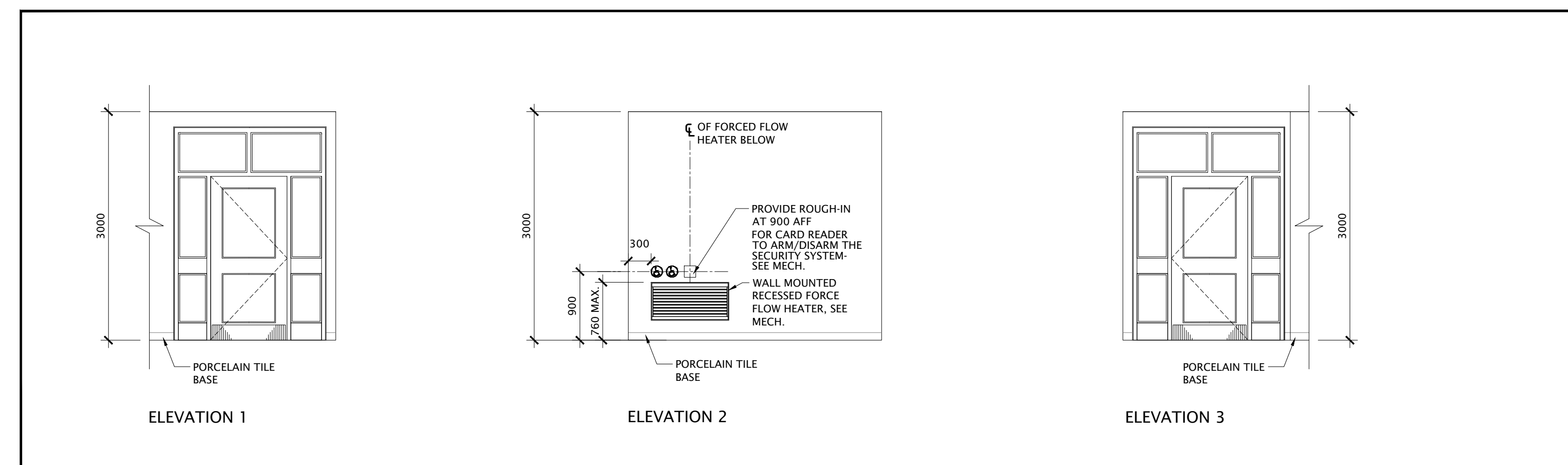
1 CLASSROOM 105 & 203
SCALE: 1:50



2 RESOURCE ROOM 103 & CORRIDOR 101
SCALE: 1:50

ABBREVIATIONS LEGEND:

GB	GRAB BARS	TG	TEMPERED GLASS
KP	KICK PLATE	TDD	PAPER TOWEL DISPENSER & DISPOSAL
MIR	MIRROR	TTD	TOILET TISSUE DISPENSER
POR	PORCELAIN	TYP.	TYPICAL
PT	PAINT		
PTD	PAPER TOWEL DISPENSER		
SD	SOAP DISPENSER		
TB	TACKBOARDS		



3 STAIR 2 FOYER
SCALE: 1:50

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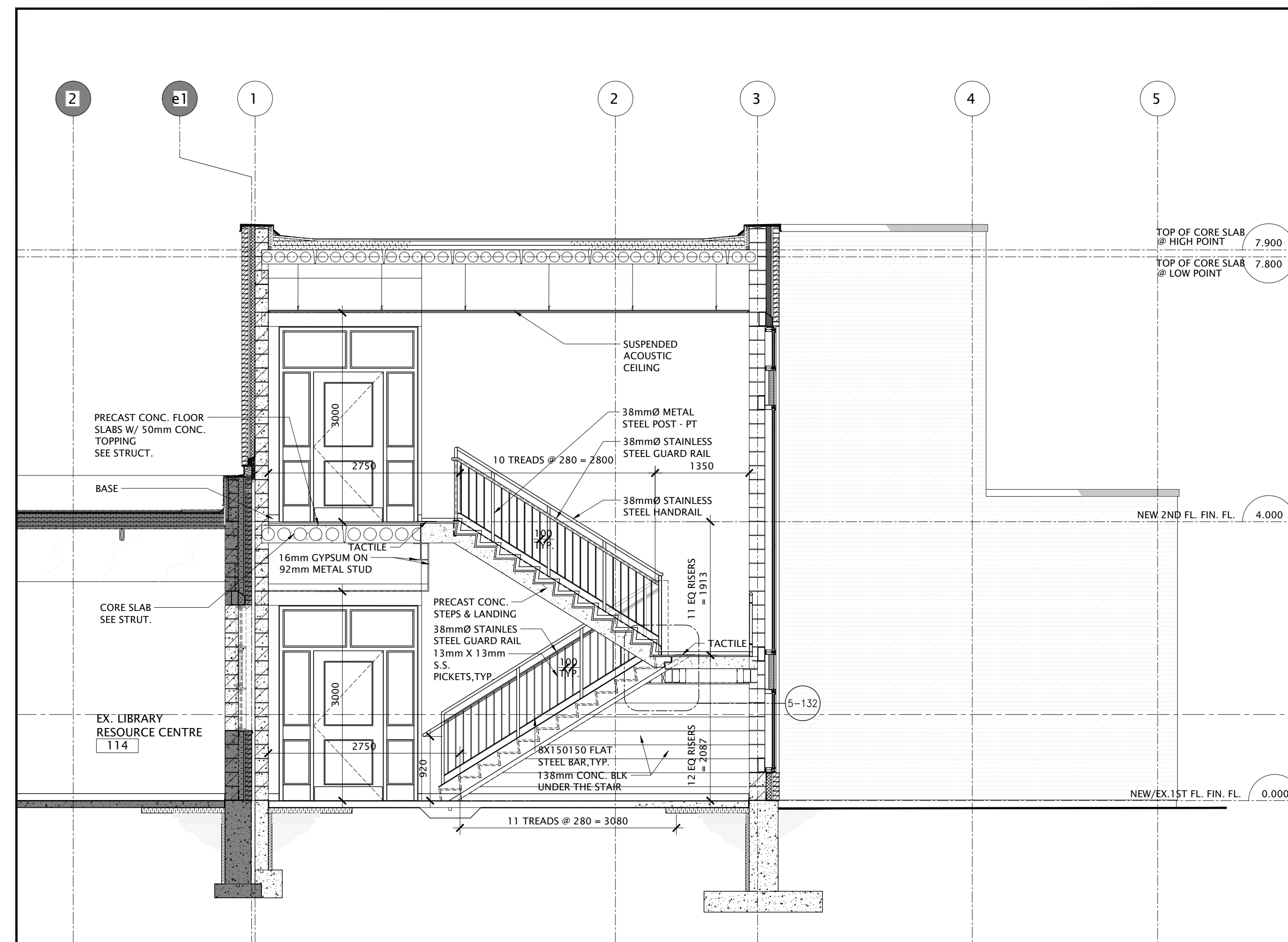
MonAvenir
CONSEIL SCOLAIRE CATHOLIQUE

ÉC SAINT-MICHEL
Classrooms Addition

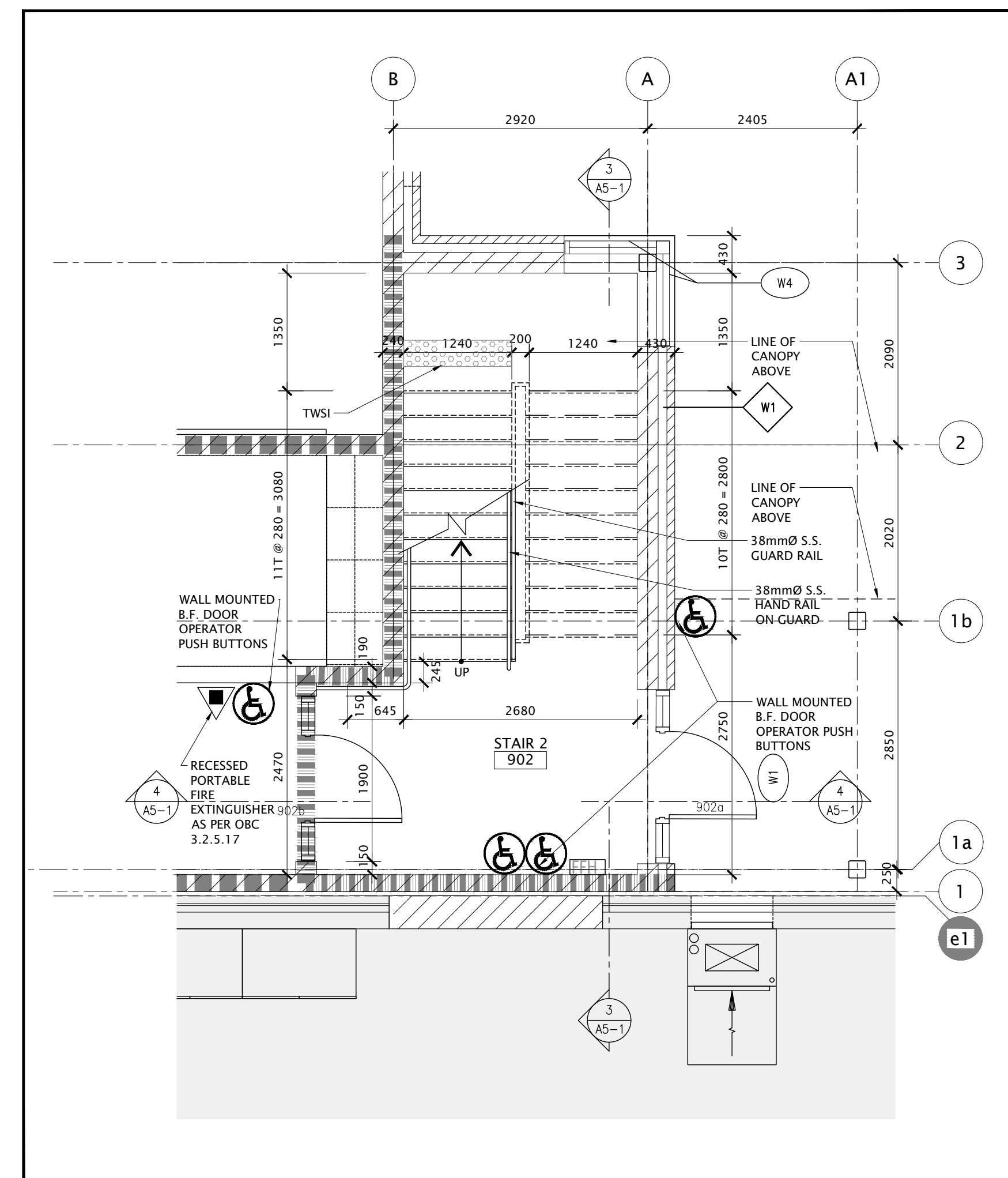
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
INTERIOR ELEVATIONS

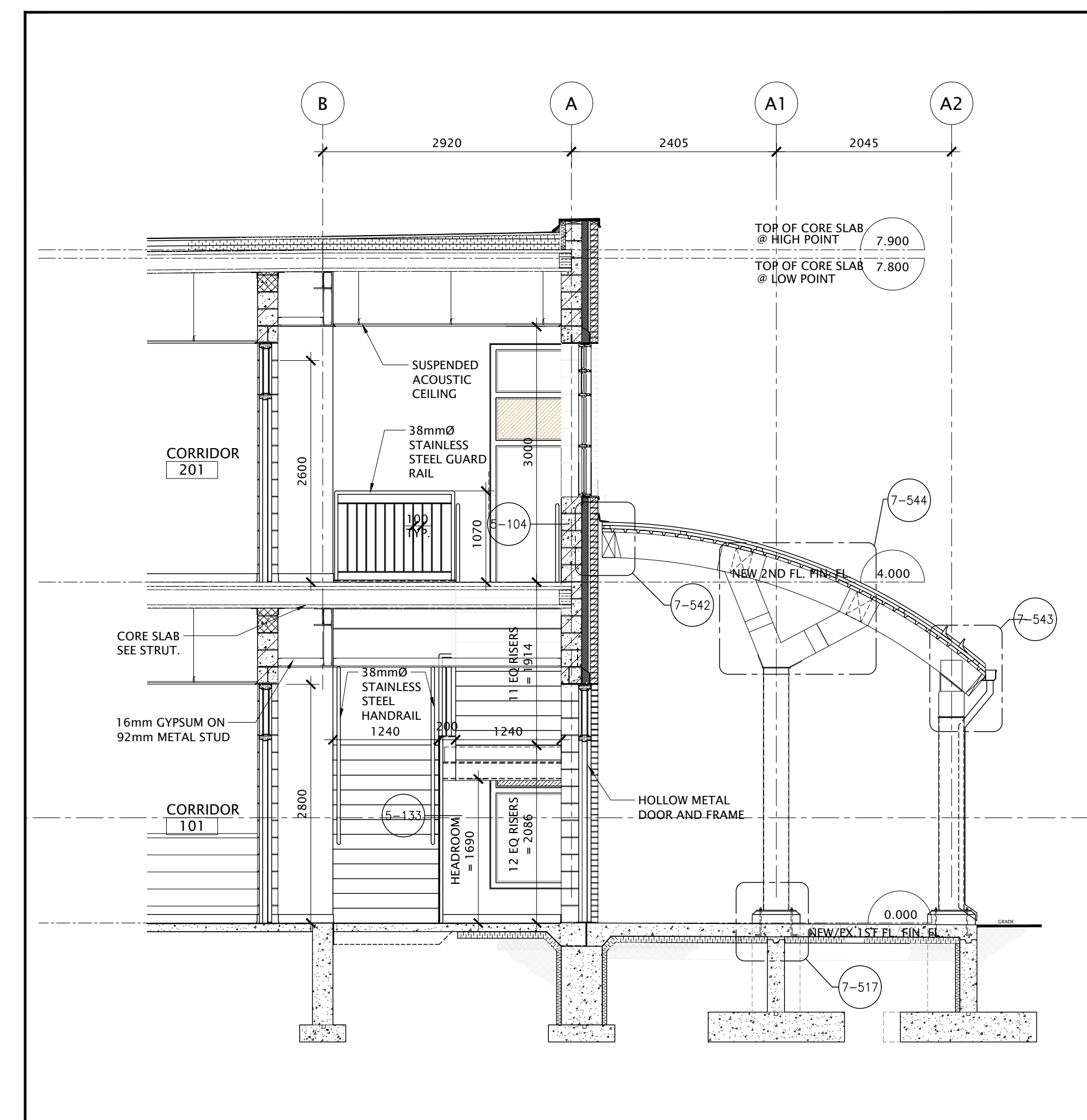
PROJECT NO: A22008	SCALE: 1:50
DRAWN: T.E.	DRAWING NO. REV. A4-0 3
CHECKED: C.K.	DATE: August 2022



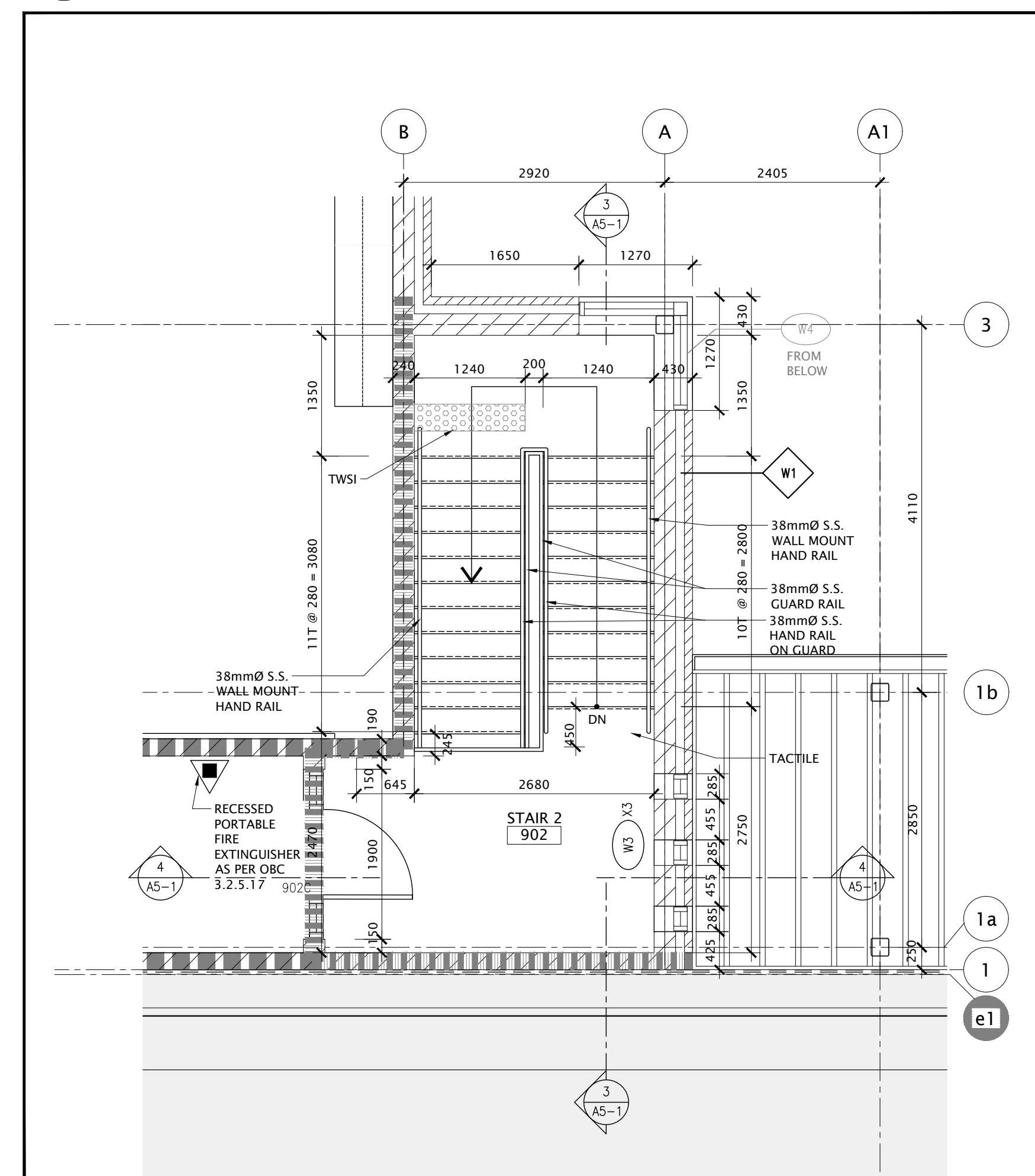
3 STAIR SECTION
A5-1 SCALE: 1:50



1 FIRST FLOOR - STAIR
A5-1 SCALE: 1:50



4 STAIR SECTION
A5-1 SCALE: 1:50



2 SECOND FLOOR - STAIR
A5-1 SCALE: 1:50

NO.	DATE	REVISION
15	24/08/2024	ISSUED FOR TENDER

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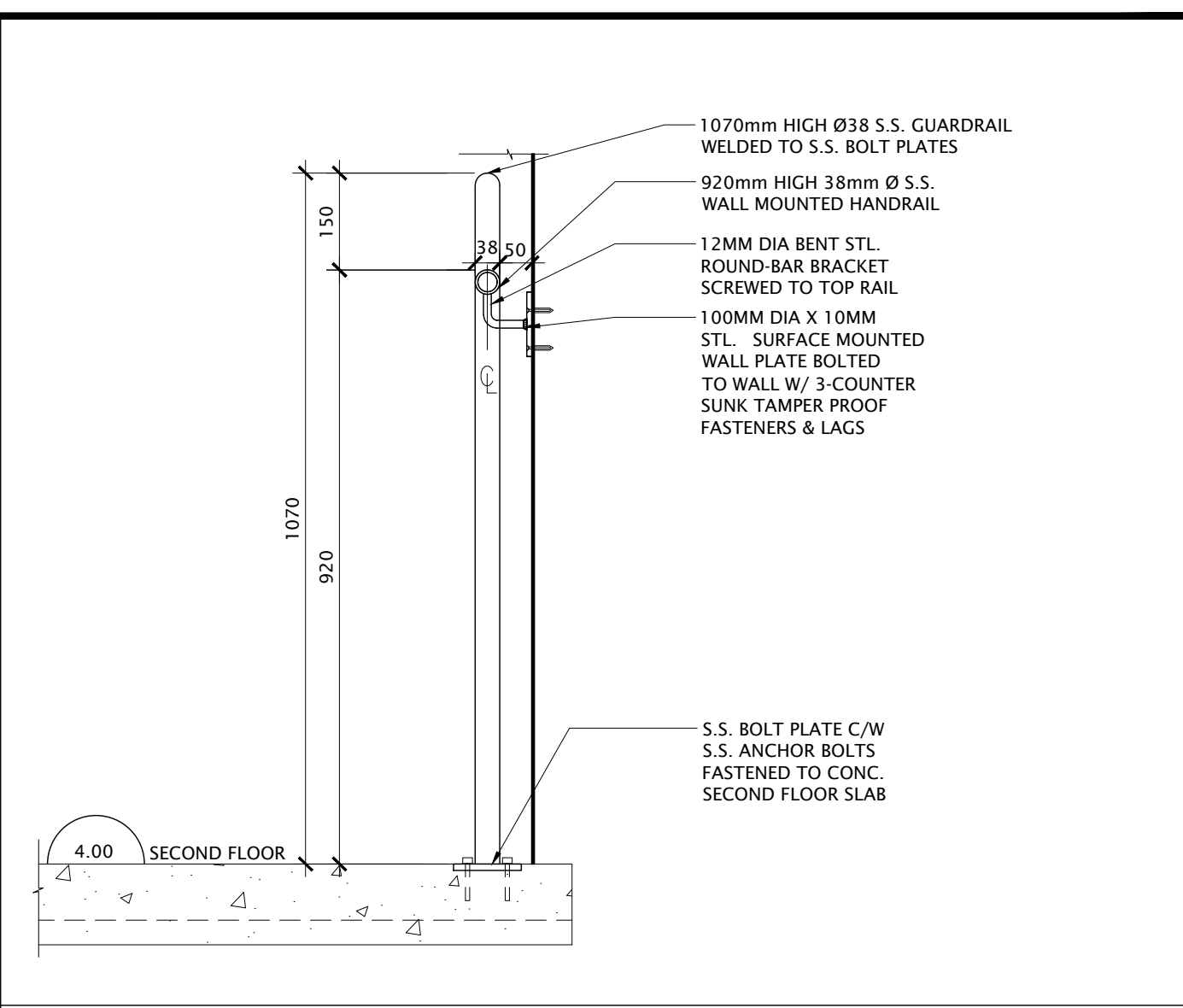
MonAvenir
CONSEIL SCOLAIRE CATHOLIQUE

ÉEC SAINT-MICHEL
Classrooms Addition

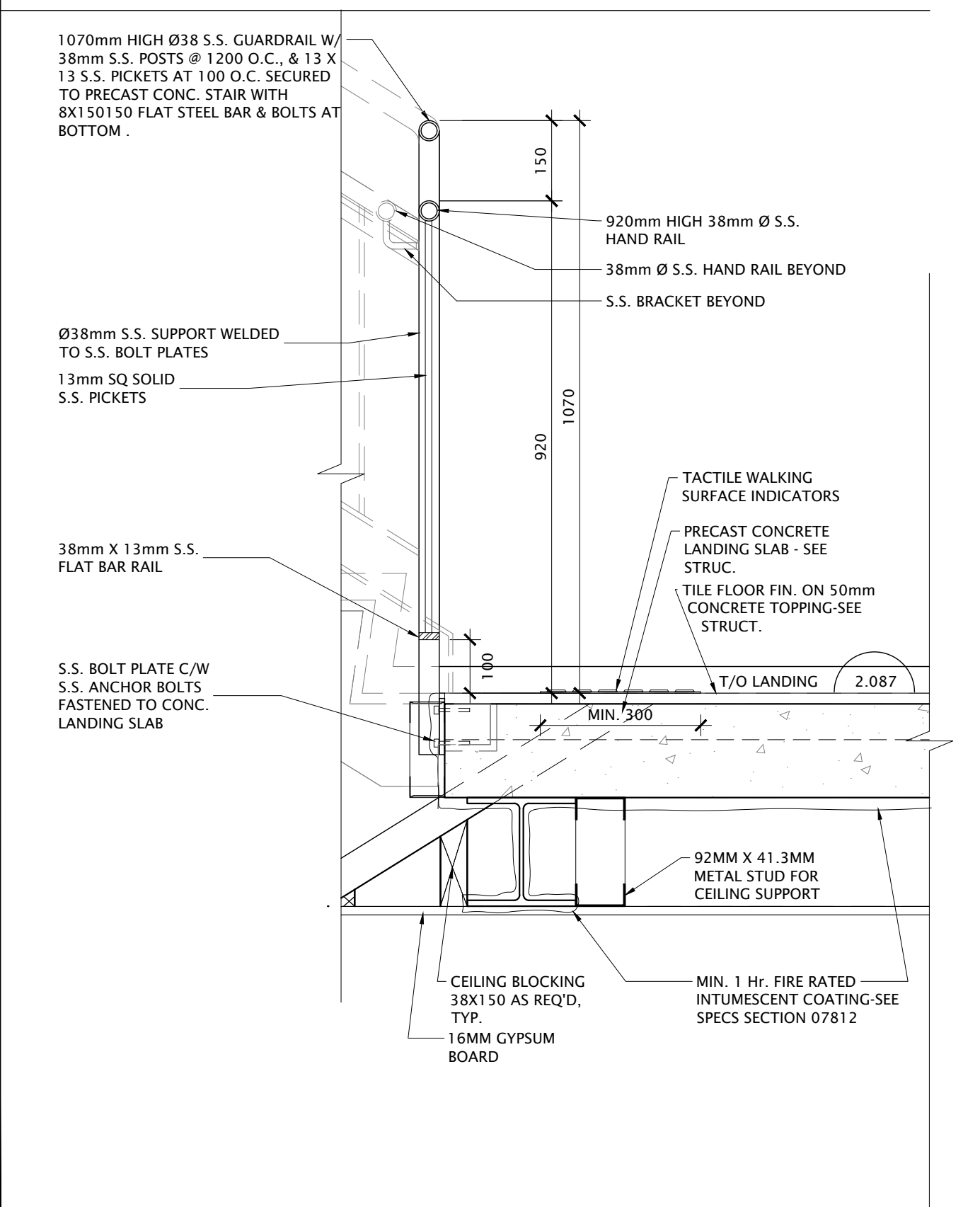
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
STAIR PLANS &
SECTIONS AND
DETAILS

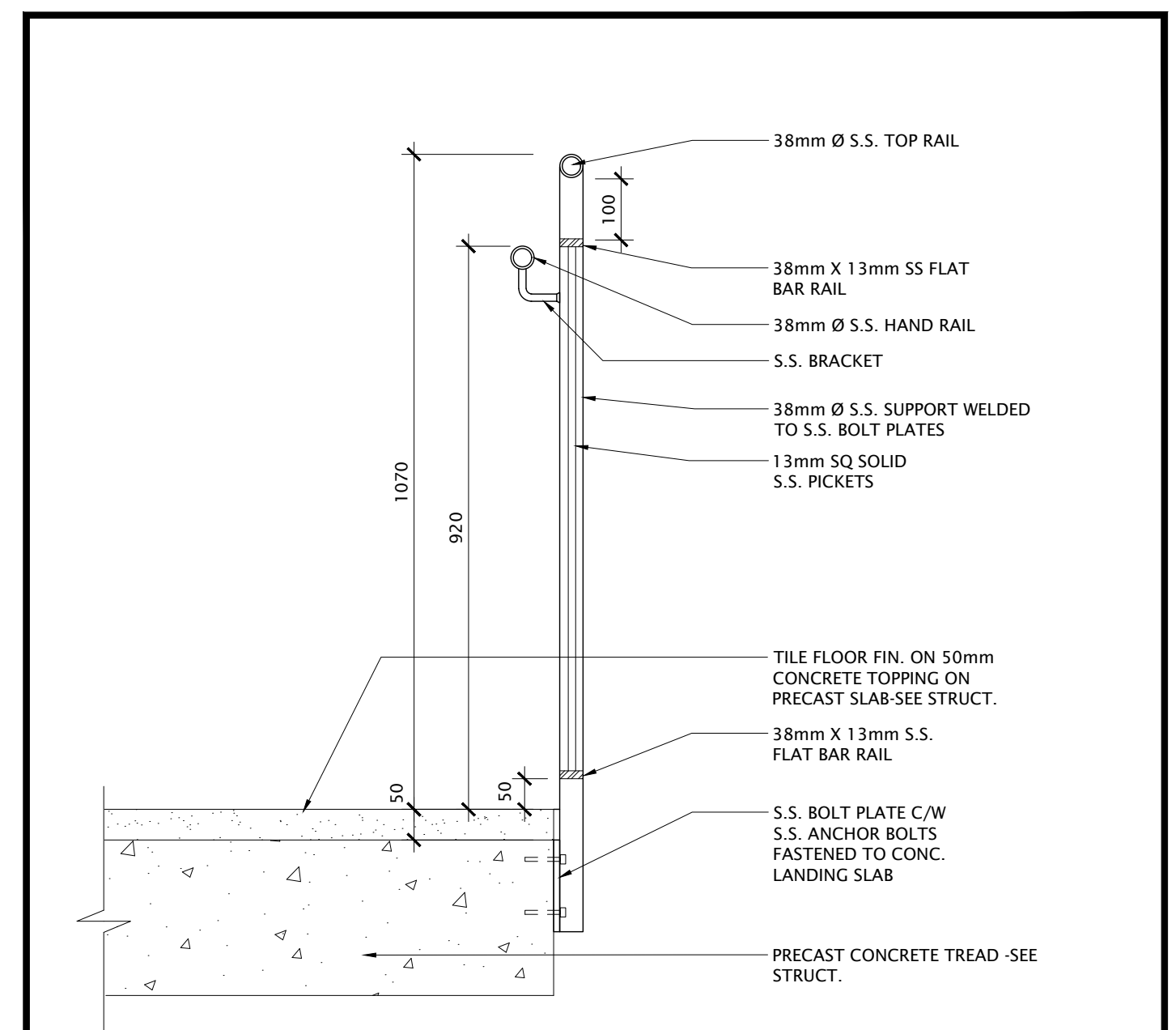
PROJECT NO. A22008	SCALE: 1:50
DRAWN: D.T. / T.E.	DRAWING NO. A5-1
CHECKED: C.K.	REV. 5
DATE: August 2022	



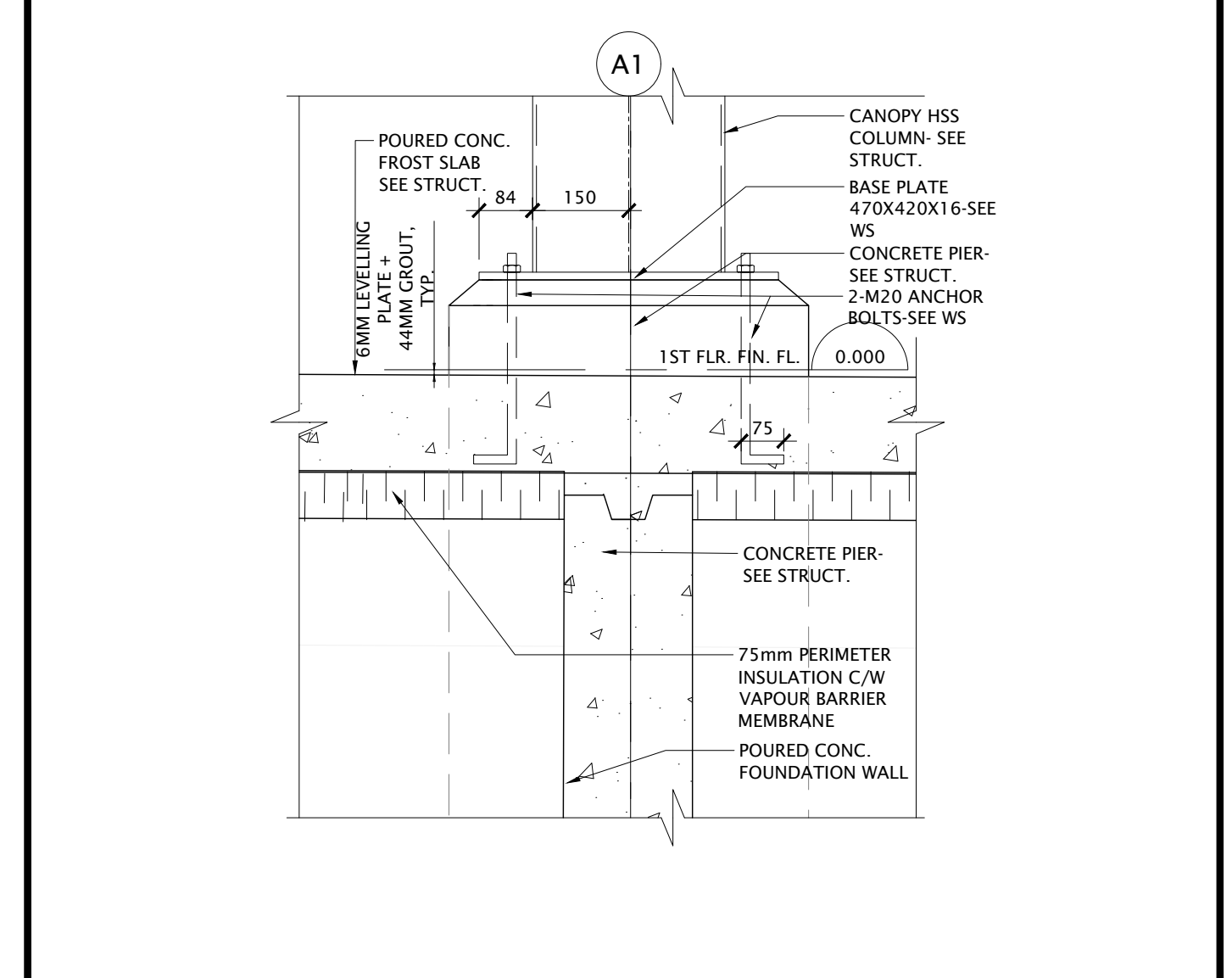
6 DETAIL 5-104
A5-2 SCALE: 1:10



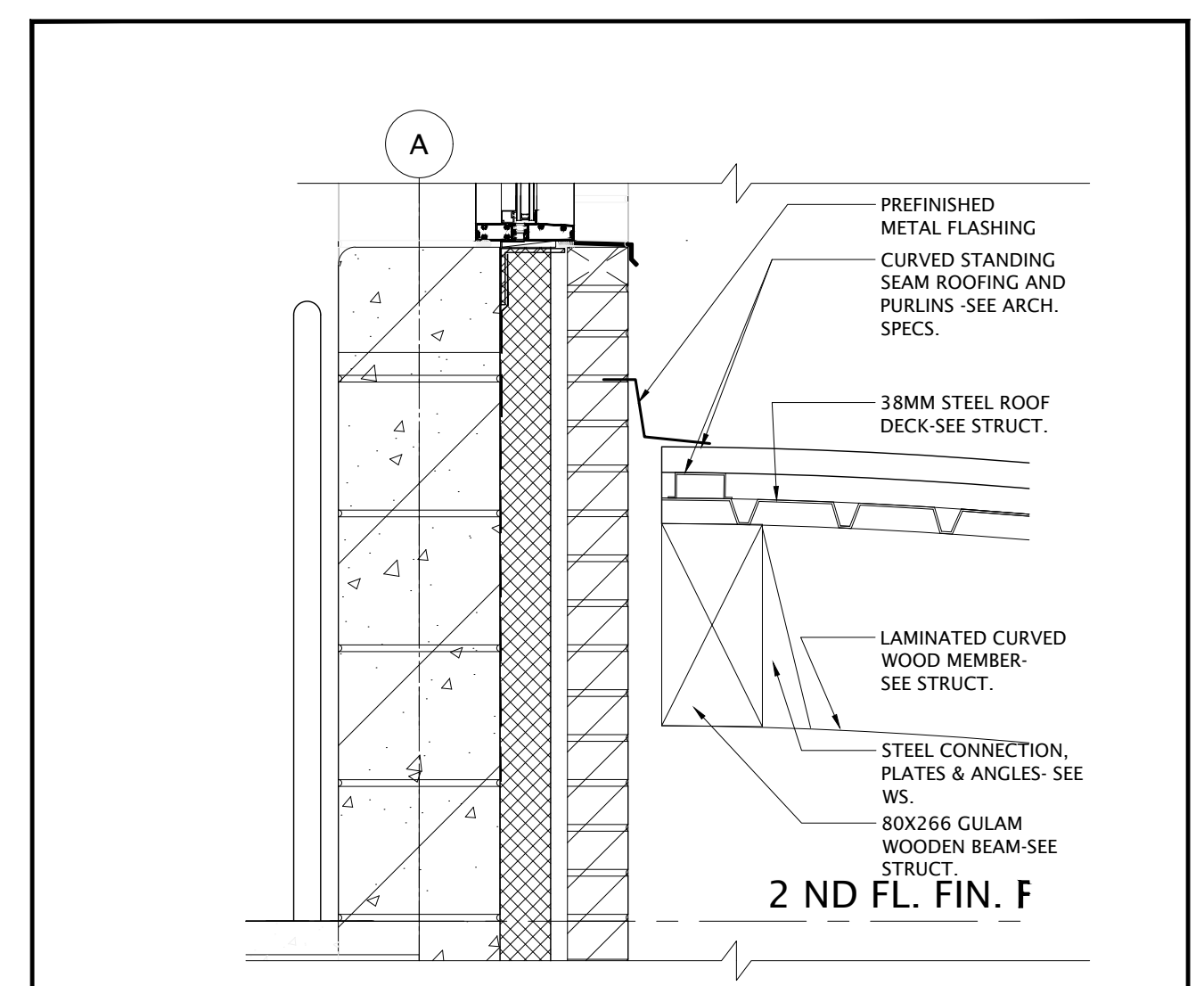
7 DETAIL 5-132
A5-2 SCALE: 1:10



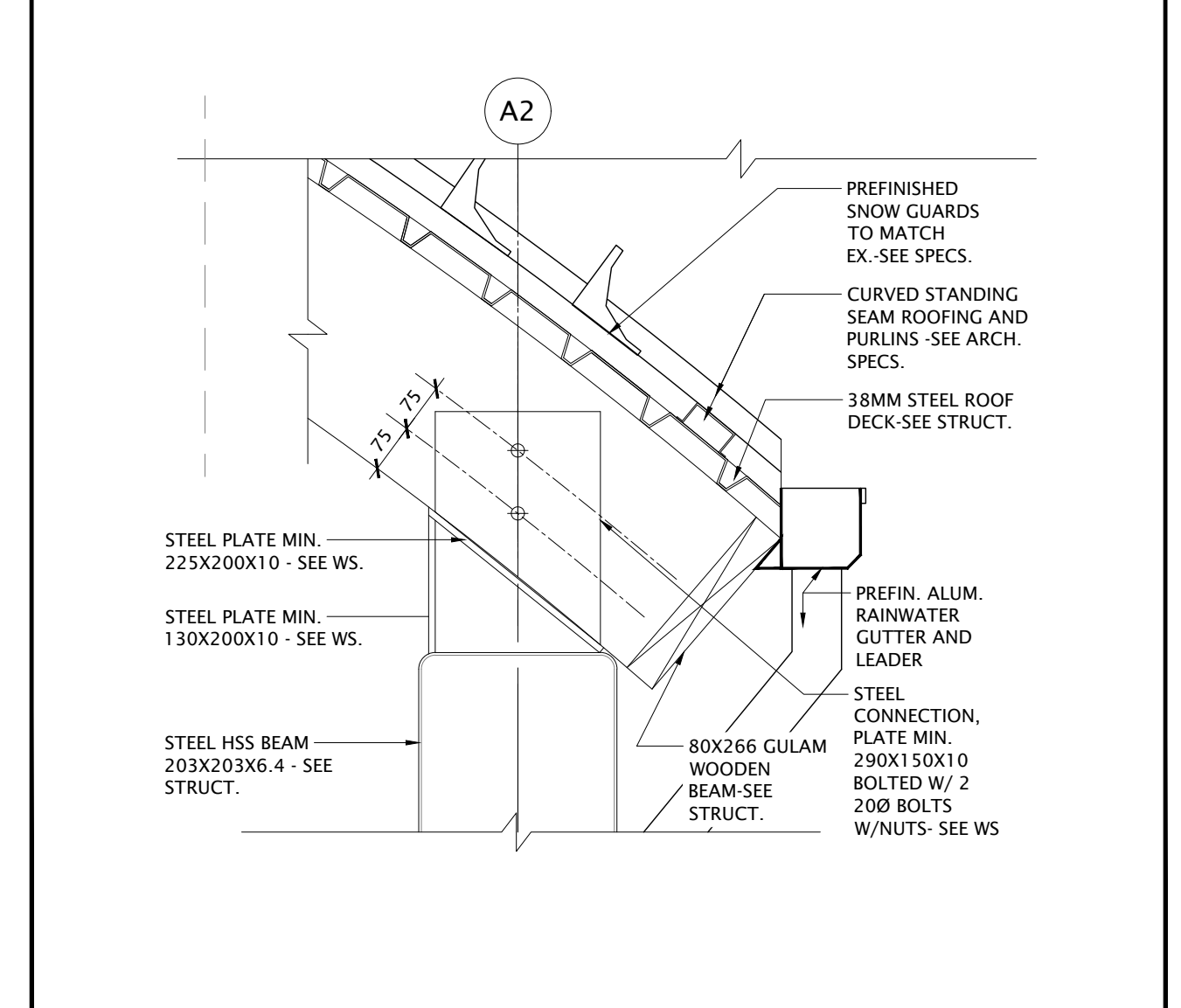
4 DETAIL 5-133
A5-2 SCALE: 1:10



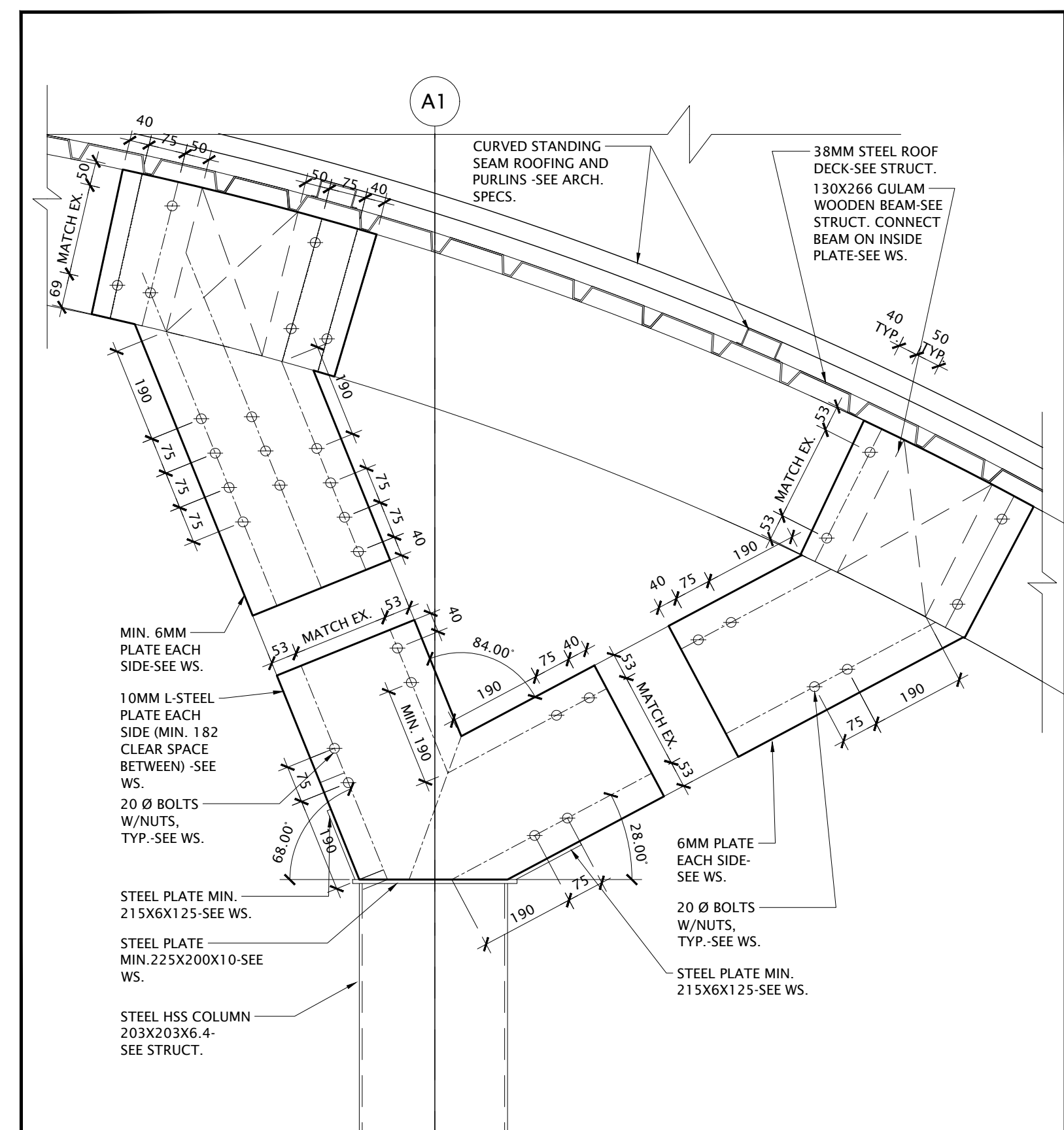
5 DETAIL 7-517
A5-2 SCALE: 1:10



2 DETAIL 7-542
A5-2 SCALE: 1:10



3 DETAIL 7-543
A5-2 SCALE: 1:10



1 DETAIL 7-544
A5-2 SCALE: 1:10

GENERAL NOTES:
WS: TO BE CONFIRMED BY THE WOOD SUPPLIER/CONNECTION DESIGNER DURING THE SHOP DRAWING PHASE.

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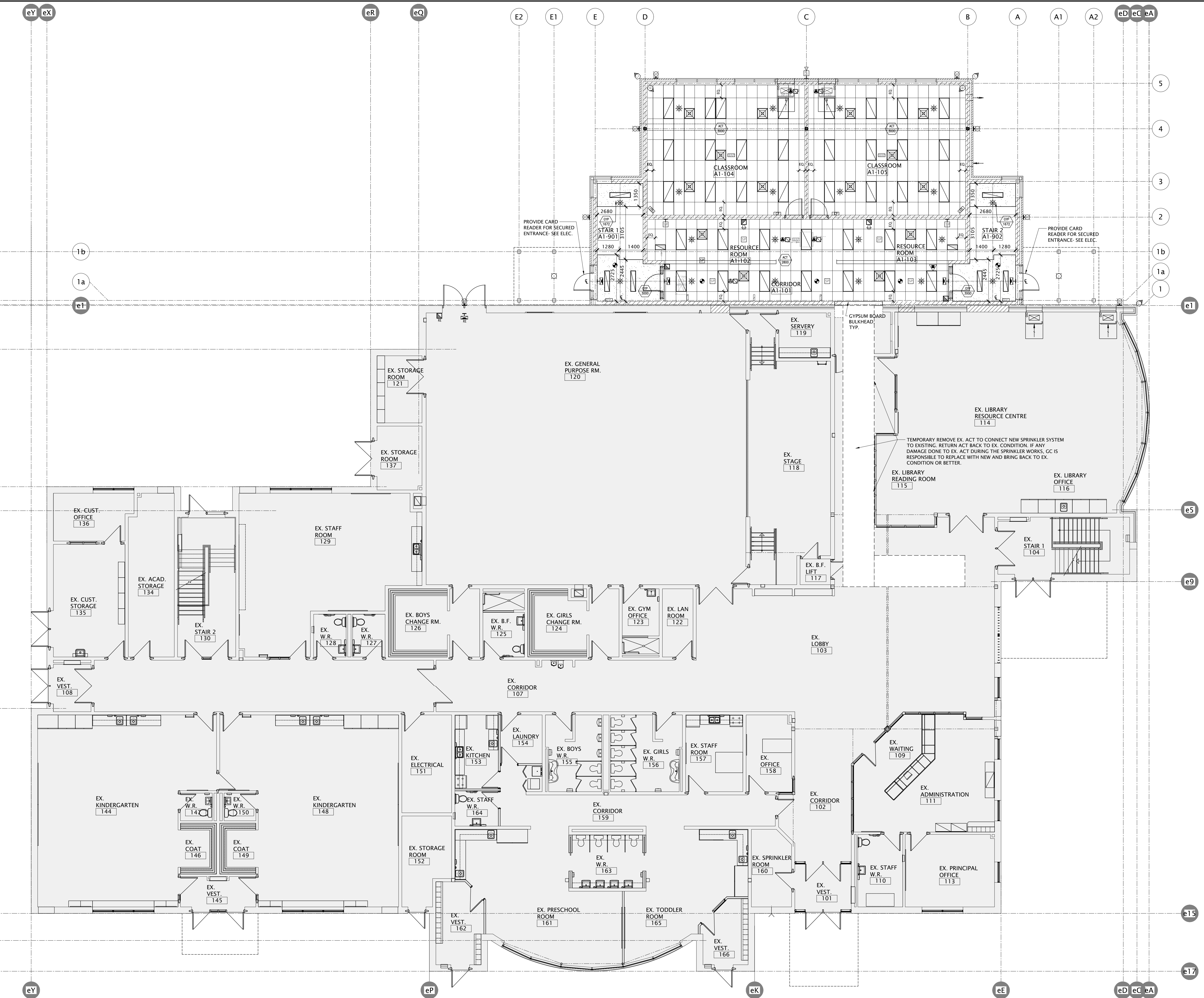
ÉEC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
HANDRAILS & GUARDRAILS AND CANOPY DETAILS

PROJECT NO: A22008	SCALE: 1:10
DRAWN: D.T. / T.E.	DRAWING NO. REV. A5-2 5
CHECKED: C.K.	DATE: August 2022

REFLECTED CEILING PLAN LEGEND	
	NEW DIFFUSER - SEE MECH.
	NEW RETURN AIR - SEE MECH.
	EXHAUST FAN 1 / RETURN - SEE MECH.
	EXHAUST FAN 2 - SEE MECH.
	EXHAUST FAN 3 - SEE MECH.
	EXHAUST/RETURN AIR GRILLE - SEE MECH.
	PULL STATION - SEE ELEC.
	FIRE ALARM HORN / STROBE - SEE ELEC.
	NEW RADIANT CEILING PANELS - SEE MECH.
	NEW FLUORESCENT LIGHT - SEE ELEC.
	NEW RECESSED SLEEK TYPE FLUORESCENT LIGHT - SEE ELEC.
	NEW LINEAR SUSPENDED FLUORESCENT LIGHT - SEE ELEC.
	NEW RECESSED MTD. LIGHT - SEE ELEC.
	HEAT DETECTOR - SEE ELEC.
	SMOKE DETECTOR - SEE ELEC.
	SMOKE ALARM - SEE ELEC.
	CEILING MOUNTED POTLIGHT - SEE ELEC.
	CORNER/WALL MOUNTED, LOW VOLTAGE OCCUPANCY SENSOR, AS SCHEDULED
	MOTION DETECTOR - SEE ELEC.
	SPRINKLER HEAD - SEE SPRINKLER SYSTEM DESIGN DRAWING FP-01
	CCTV CAMERA - SEE ELEC.
	WEATHER PROOF WALL MOUNTED LED LIGHTING - SEE ELEC.
	PA SPEAKER - FLUSH - SEE ELEC.
	PA WALL MOUNTED EXTERIOR SPEAKER - SEE ELEC.
	EMERGENCY LIGHTING - SEE ELEC.
	CEILING MOUNTED DIRECTIONAL EXIT SIGN - SEE ELEC.
	EMERGENCY LIGHTING WALL MOUNTED EXIT SIGN - SEE ELEC.
	WALL OR CEILING MOUNTED EMERGENCY LIGHTING DUAL HEAD REMOTE HEAD - SEE ELEC.
	CEILING MOUNTED WIRELESS ACCESS POINT - SEE ELEC.
	WALL MOUNTED FORCED FLOW HEATER - SEE MECH.
	CONTROL PANEL - SEE ELEC.
	DIRECT POWER CONNECTION COMPLETE UNFUSED DISCONNECT SWITCH
	CEILING MOUNTED HEAT PUMP - SEE MECH.
	CEILING MOUNTED ERV - SEE MECH.
	CEILING FINISHES CEILING HEIGHT
	PAINT REFERENCE
	NEW 610 x 1220 ACOUSTIC CEILING TILES ON T-BAR GRID
	SMOOTH GYPSUM BOARD CEILING
	EXPOSED CEILING
	METAL SIDING SOFFIT



NO.	DATE	REVISION
1	24/07/22	ISSUED FOR TENDER
2	24/07/22	ISSUED FOR TENDER
3	20/08/22	ISSUED FOR TENDER
4	24/07/22	ISSUED FOR TENDER
5	24/07/22	ISSUED FOR TENDER

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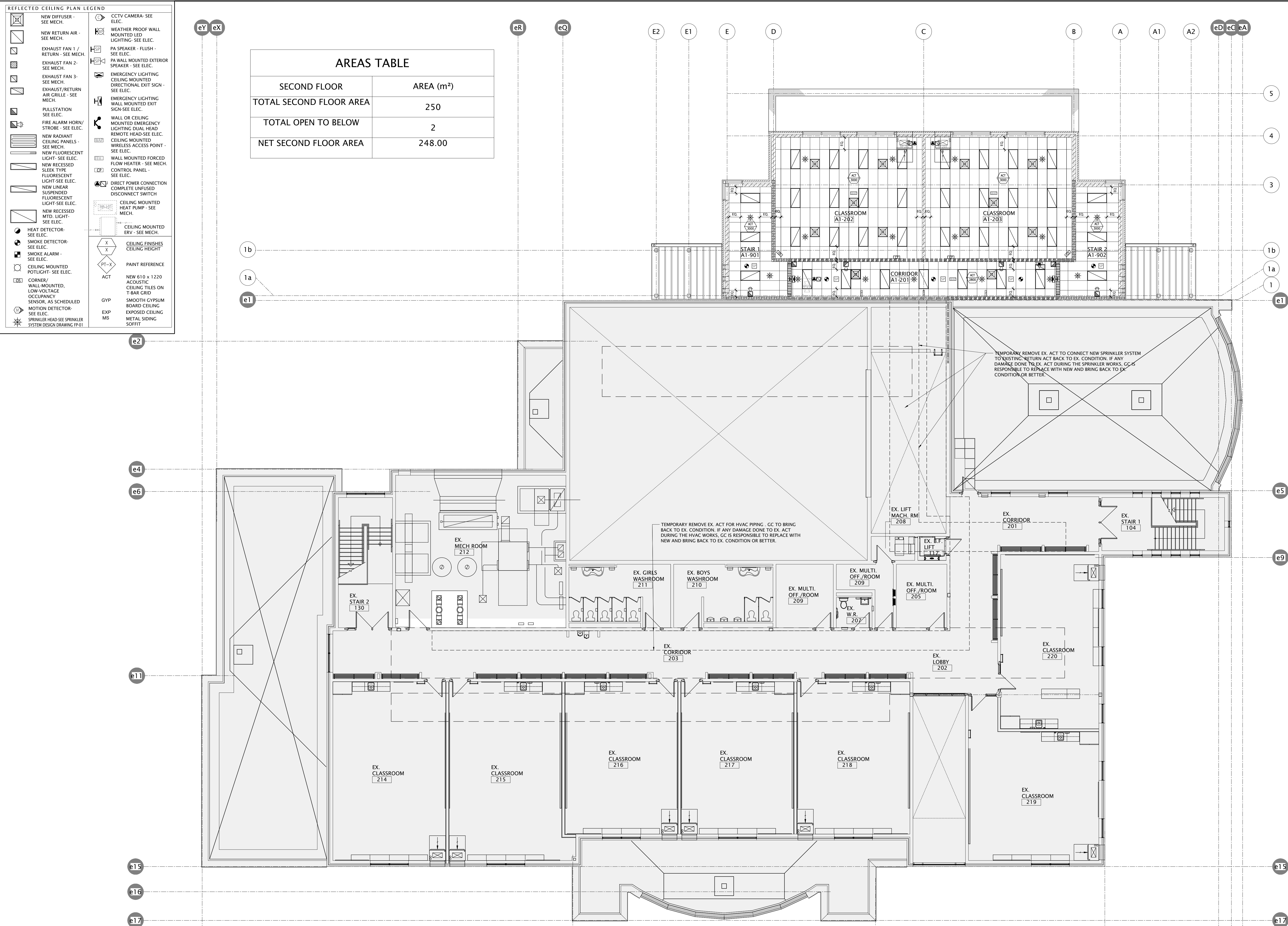
ÉC SAINT-MICHEL
Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
NEW GROUND FLOOR REFLECTED CEILING PLANS

PROJECT NO: A22008	SCALE: 1:100
DRAWN: TE	DRAWING NO. REV. A6-0 5
CHECKED: K+	DATE: 21/07/22

REFLECTED CEILING PLAN LEGEND	
	NEW DIFFUSER - SEE MECH.
	NEW RETURN AIR - SEE MECH.
	EXHAUST FAN 1 / RETURN - SEE MECH.
	EXHAUST FAN 2 - SEE MECH.
	EXHAUST FAN 3 - SEE MECH.
	EXHAUST/RETURN AIR GRILLE - SEE MECH.
	PULL STATION - SEE ELEC.
	FIRE ALARM HORN / STROBE - SEE ELEC.
	NEW RADIANT CEILING PANELS - SEE MECH.
	NEW FLUORESCENT LIGHT - SEE ELEC.
	NEW RECESSED SLEK TYPE FLUORESCENT LIGHT - SEE ELEC.
	NEW LINEAR SUSPENDED FLUORESCENT LIGHT - SEE ELEC.
	NEW RECESSED MTD. LIGHT - SEE ELEC.
	HEAT DETECTOR - SEE ELEC.
	SMOKE DETECTOR - SEE ELEC.
	SMOKE ALARM - SEE ELEC.
	CEILING MOUNTED POTLIGHT - SEE ELEC.
	CORNER / WALL MOUNTED, LOW VOLTAGE OCCUPANCY SENSOR, AS SCHEDULED
	MOTION DETECTOR - SEE ELEC.
	SPRINKLER HEAD - SEE SPRINKLER SYSTEM DESIGN DRAWING FP-01
	CCTV CAMERA - SEE ELEC.
	WEATHER PROOF WALL MOUNTED LED LIGHTING - SEE ELEC.
	PA SPEAKER - FLUSH - SEE ELEC.
	PA WALL MOUNTED EXTERIOR SPEAKER - SEE ELEC.
	EMERGENCY LIGHTING WALL MOUNTED DIRECTIONAL EXIT SIGN - SEE ELEC.
	EMERGENCY LIGHTING WALL MOUNTED EXIT SIGN - SEE ELEC.
	WALL OR CEILING MOUNTED EMERGENCY LIGHTING DUAL HEAD REMOTE HEAD - SEE ELEC.
	CEILING MOUNTED WIRELESS ACCESS POINT - SEE ELEC.
	WALL MOUNTED FORCED FLOW HEATER - SEE MECH.
	CONTROL PANEL - SEE ELEC.
	DIRECT POWER CONNECTION COMPLETE UNFUSED DISCONNECT SWITCH
	CEILING MOUNTED HEAT PUMP - SEE MECH.
	CEILING MOUNTED ERV - SEE MECH.
	CEILING FINISHES CEILING HEIGHT
	PAINT REFERENCE
	NEW 610 x 1220 ACOUSTIC CEILING TILES ON T-BAR GRID
	SMOOTH GYPSUM BOARD CEILING
	EXPOSED CEILING
	METAL SIDING SOFFIT

AREAS TABLE	
SECOND FLOOR	AREA (m ²)
TOTAL SECOND FLOOR AREA	250
TOTAL OPEN TO BELOW	2
NET SECOND FLOOR AREA	248.00



NO.	DATE	REVISION
1	24/04/2024	ISSUED FOR TENDER
2		
3		

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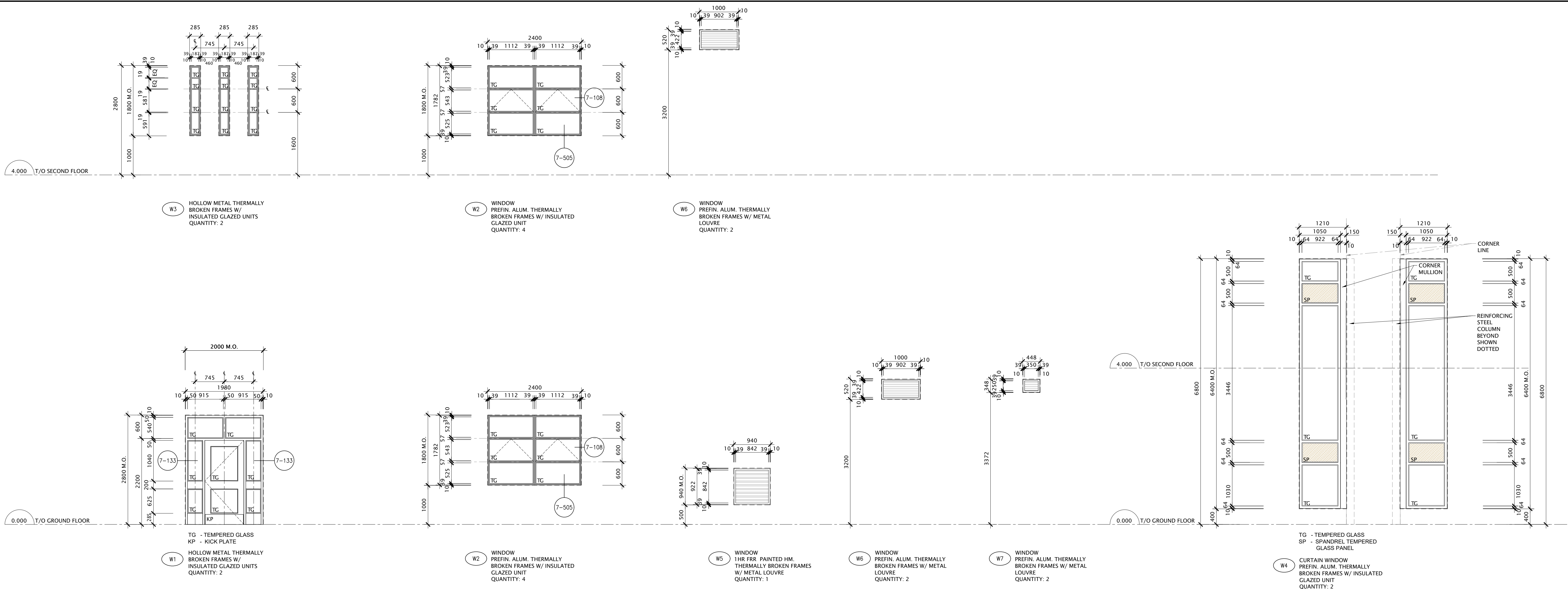
MonAvenir
CONSEIL SCOLAIRE CATHOLIQUE

ÉEC SAINT-MICHEL
Classrooms Addition

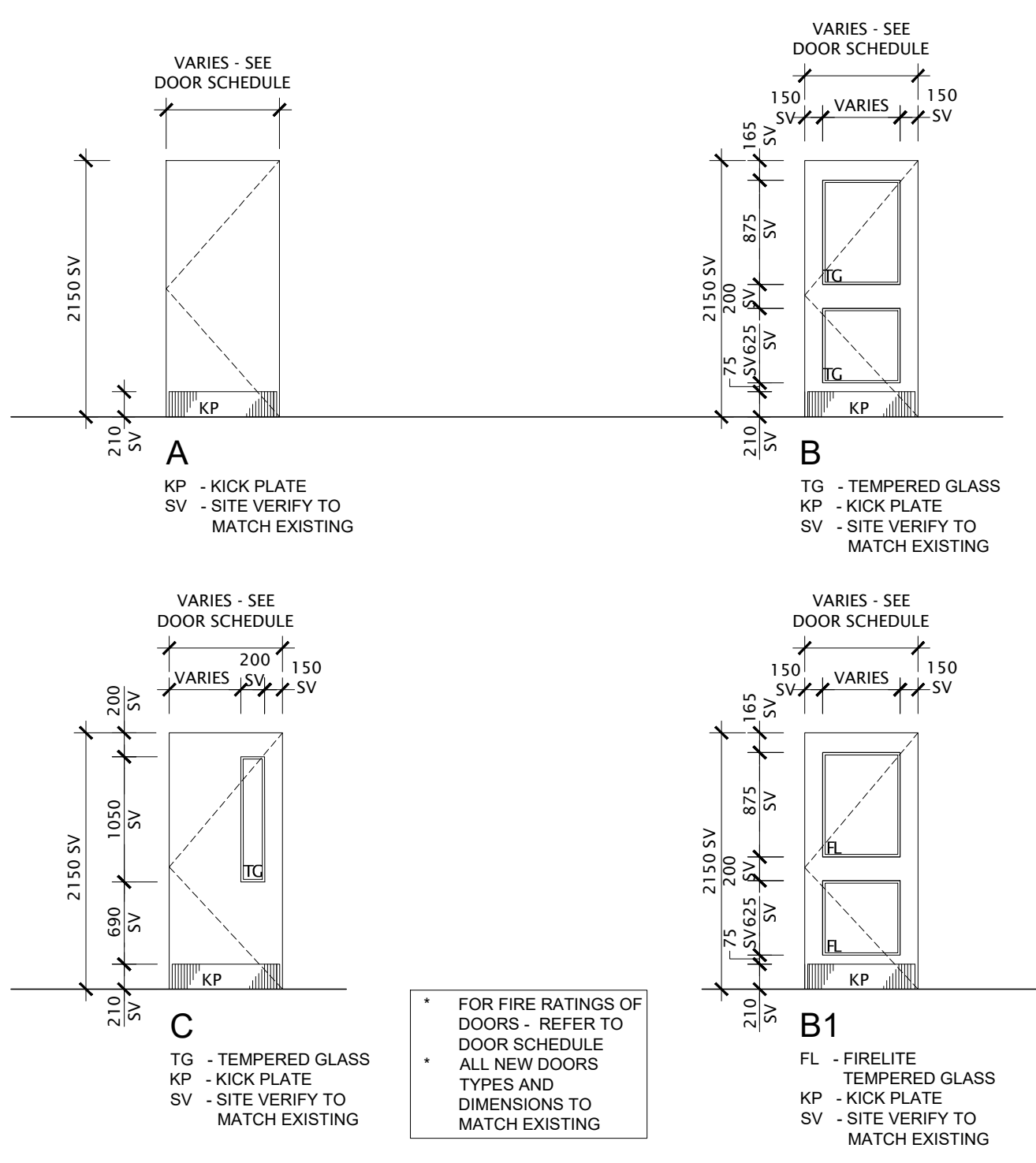
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
NEW SECOND FLOOR REFLECTED CEILING PLANS

PROJECT NO: A22008	SCALE: 1:100
DRAWN: TE	DRAWING NO. REV. A6-1 3
CHECKED: K+	
DATE: 21/07/22	

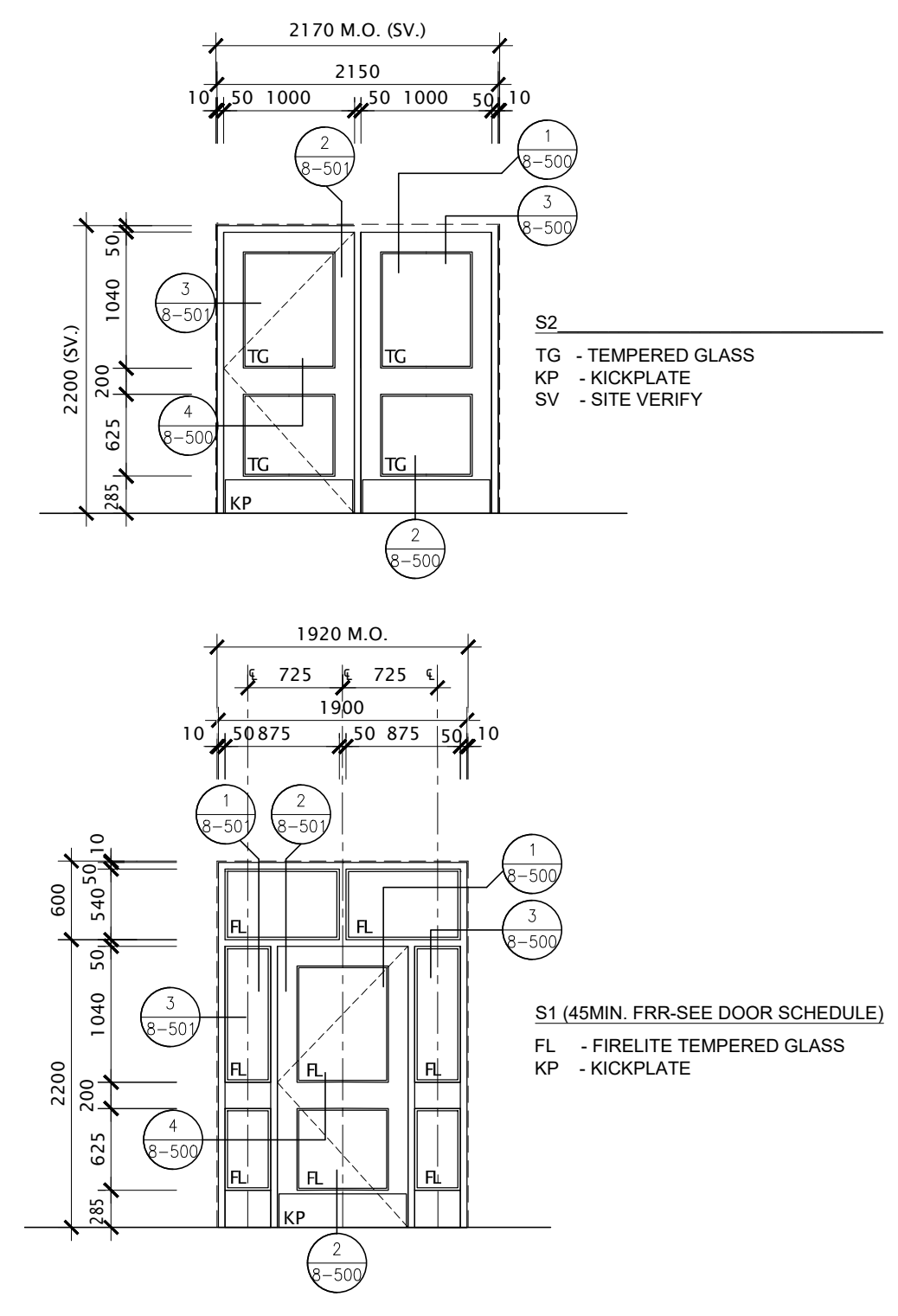


1 WINDOWS SCHEDULE
A8-0 SCALE: 1:50



2 DOOR TYPES
A8-0 SCALE: 1:50

3 HM DOORS AND SCREENS SCHEDULE
A8-0 SCALE: 1:50



NO.	DATE	REVISION
3	24/APR	ISSUED FOR TENDER
		NO DATE

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fax 416.203.7763



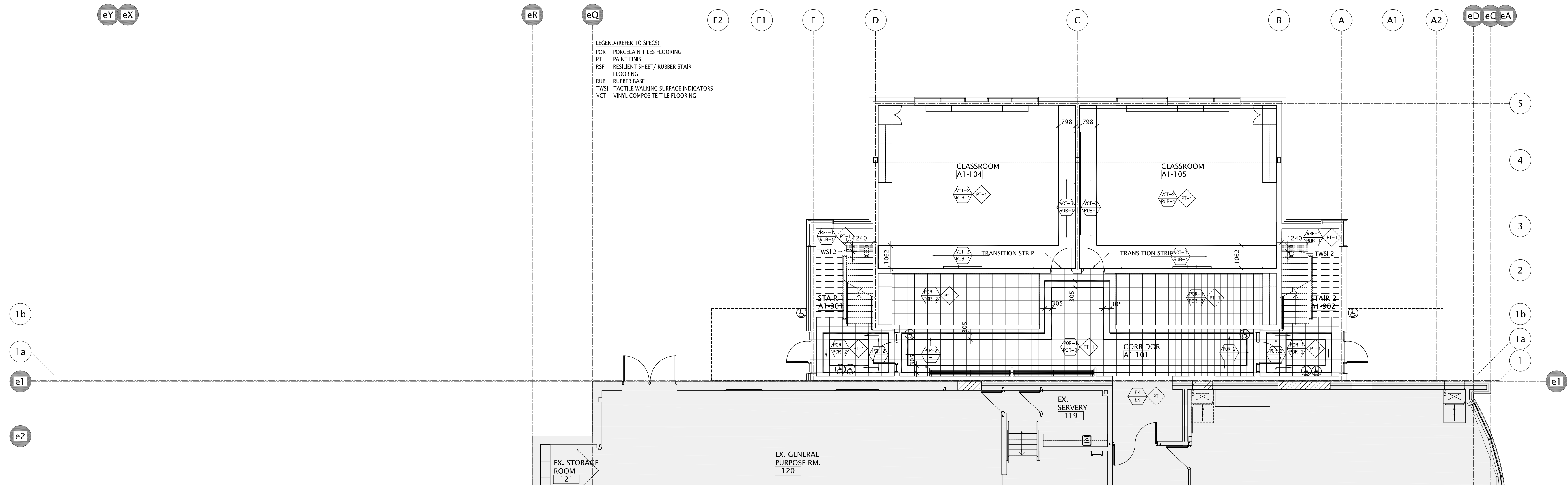
MonAvenir
CONSEIL SCOLAIRE CATHOLIQUE

ÉEC SAINT-MICHEL
Classrooms Addition

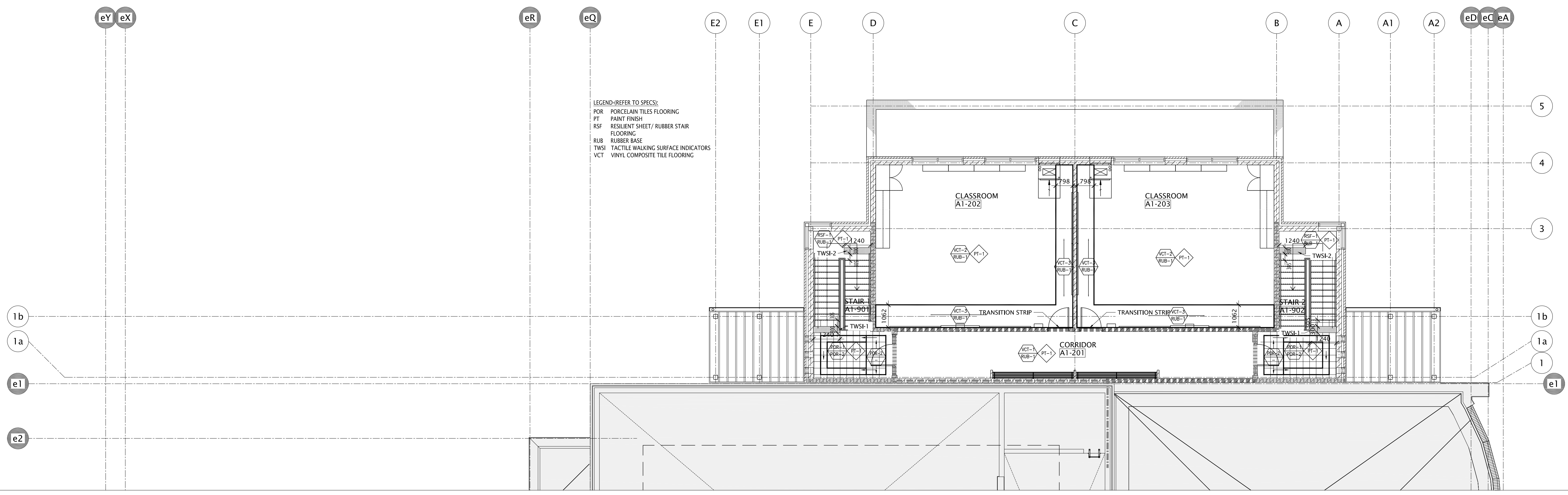
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
WINDOWS SCHEDULE, DOOR TYPES & HM DOORS AND SCREENS SCHEDULE

PROJECT NO: A22008	SCALE: 1:50
DRAWN: TE	DRAWING NO. REV. A8-0 3
CHECKED: K+	DATE: 21/07/22



1 PARTIAL GROUND FLOOR PLAN - FINISHES
 A9-0 SCALE - 1:100

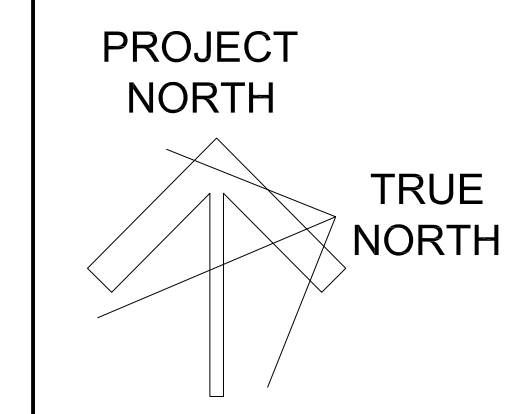


2 PARTIAL SECOND FLOOR PLAN - FINISHES
 A9-0 SCALE - 1:100

NO. DATE:	ISSUED FOR TENDER	REVISION
3 20/07/21		

DO NOT SCALE DRAWINGS. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE JOB. ALL DRAWINGS REMAIN THE PROPERTY OF THE ARCHITECTS.

- GENERAL NOTES**
1. 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.
 2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
 3. THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
 4. ALL DIMENSIONS, SHOWN ON THE DRAWINGS, SHALL BE CHECKED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 5. THE STABILITY OF THE STRUCTURAL FRAME IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING DURING CONSTRUCTION.
 6. ALL DIMENSIONS GIVEN ARE IN METRIC.



Kingsland + ARCHITECTS INC.

KINGSLAND + ARCHITECTS INC
 219 Dufferin Street, Suite 300B
 Toronto, Ontario M5K 3J1
 ph 416.203.7799
 fax 416.203.7783



MonAvenir
 CONSEIL SCOLAIRE CATHOLIQUE

ÉEC SAINT-MICHEL
 Classrooms Addition

29 MEADOWVALE ROAD,
 SCARBOROUGH, ONTARIO
 M1C 1R7

DRAWING TITLE:
 PARTIAL FLOOR PLANS - FINISHES

PROJECT NO:	SCALE:
A22008	1:100
DRAWN:	DRAWING NO. REV.
T.E.	A9-0 3
CHECKED:	
B.F.	
DATE:	
22/07/21	

WANITA ROAD
(BY REGD PLAN 2770)

SURVEYOR'S REAL PROPERTY REPORT - PART 1
 PLAN OF SURVEY AND TOPOGRAPHY OF
PART OF LOTS 21, 22, 23, 24 AND 48
REGISTERED PLAN 2770
 CITY OF TORONTO

0 5 10 15 20 25 METRES
 SCALE 1 : 250

J. H. Gelbloom Surveying Limited
 Ontario Land Surveyor 2019

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 the written permission of J. H. Gelbloom Surveying Limited is strictly prohibited.

SURVEYOR'S REAL PROPERTY REPORT - PART 2
 REGISTERED EASEMENTS AND/OR RIGHT-OF-WAY
 None

NOTABLES
 - Note the location of the Fences around the Subject Property.
 - Note the location of the Sheets, Sidewalk and Wood Deck around the
 Subject Property.
 - Note the location of the Bell Box and Driveway along Meadowvale Road

LEGEND

■	Survey Monument Found
□	Survey Monument Set
SB	Standard Iron Bar
IB	Iron Bar
PB	Plastic Bar
CC	Cut Cross
CP	Concrete Pin
1006	H. Flinn Ltd., O.L.S.
1176	D.C. Roberts, O.L.S.
BSP	Borough of Scarborough Public Works
OSM	Omani Muryi Surveying Ltd., O.L.S.
(OU)	Origin Unknown
P1	Plan 66R-23944
P2	Plan 66R-22827
P3	Plan 64R-10665
P4	Plan 64R-10222
P5	Plan 66R-17159
P6	Plan 66R-27443
FF	Finished Floor
BF	Board Fence
CLF	Chain Link Fence
WIF	Wrought Iron Fence
MH	Maintenance Hole
CS	Catch Basin
WV	Water Valve
HYD	Hydrant
GW	Gas Wire
LP	Utility Pole
HH	Hand Hole
LP	Light Pole
DEC	Deciduous
CON	Coniferous
TOS	Top of Slope
BOS	Bottom of Slope
TOC	Top of Curb
BBC	Bottom of Curb
BB	Bell Box

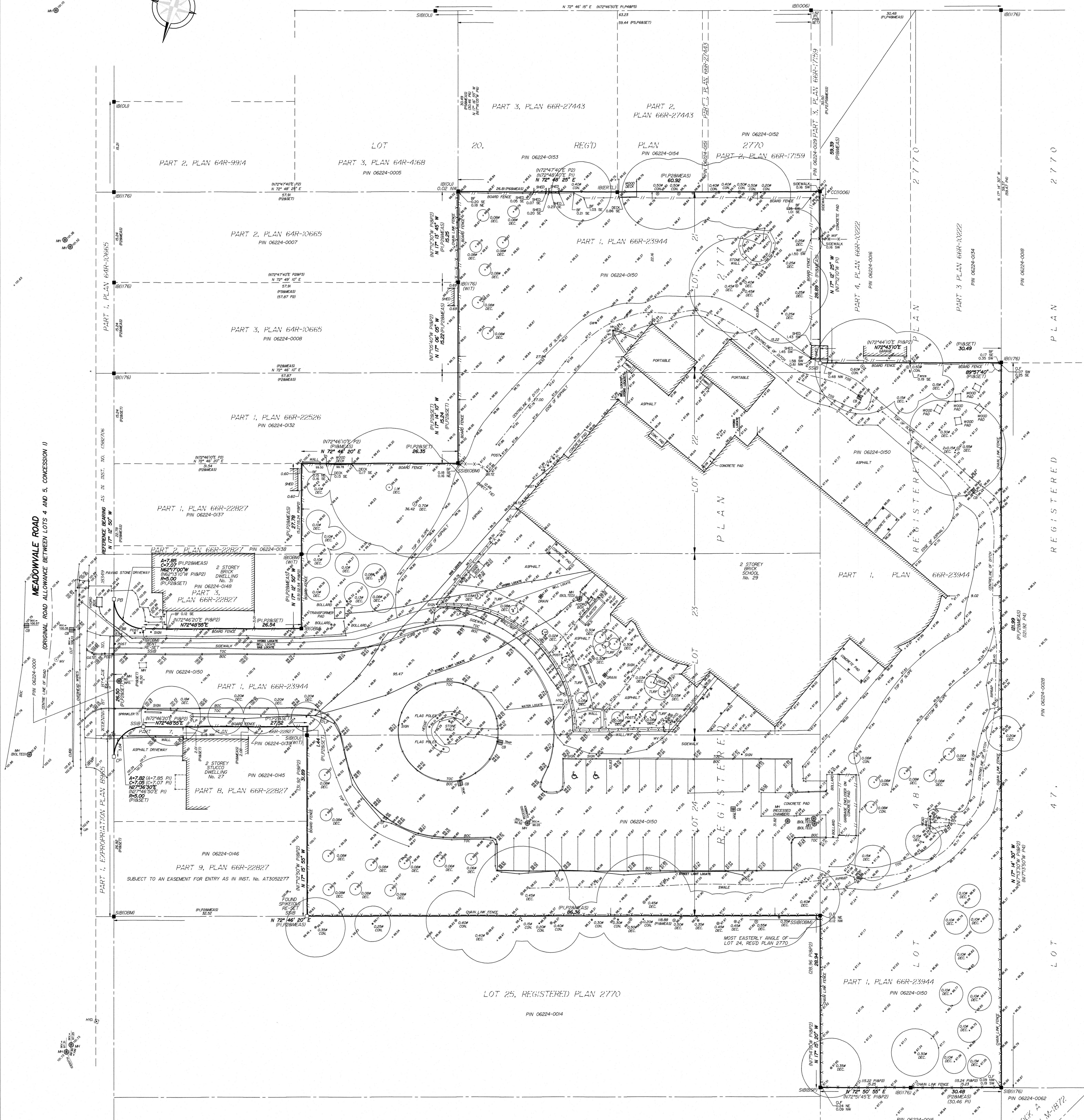
BENCHMARK
 Elevations are Referenced to the City of Toronto Benchmark No. I202000170
 having an Elevation of 94.954 m.

NOTE
 This REPORT can be updated by this office, however NO ADDITIONAL
 PRINTS OF THIS ORIGINAL REPORT will be issued, subsequent to the
 DATE OF CERTIFICATION.
 All building lines are perpendicular to property lines unless otherwise noted.

This REPORT was prepared for Corseil Scolaire Catholique MonAvenir
 and the undersigned accepts no responsibility for use by other parties.

NOTE
 Distances shown on this plan are in metres and can be converted to
 feet by dividing by 0.3048.

BEARING NOTE
 Bearings are Astronomic, and are Referenced to the Eastern limit of
 Meadowvale Road as shown on Plan 66R-22827, having a Bearing
 of N 17° 12' 50" W.



BEARING NOTE
 Bearings are Astronomic, and are Referenced to the Eastern limit of
 Meadowvale Road as shown on Plan 66R-22827, having a Bearing
 of N 17° 12' 50" W.

SURVEYOR'S CERTIFICATE
 I certify that:
 1. The survey and plan are correct and in accordance with the Surveyors
 Act, the Surveyors Regulation, and the Regulations made under them.
 2. The survey was completed on the 25th day of April, 2019.

**ASSOCIATION OF ONTARIO
 LAND SURVEYORS
 PLAN SUBMISSION FORM
 2081790**

Date: **April 30, 2019**

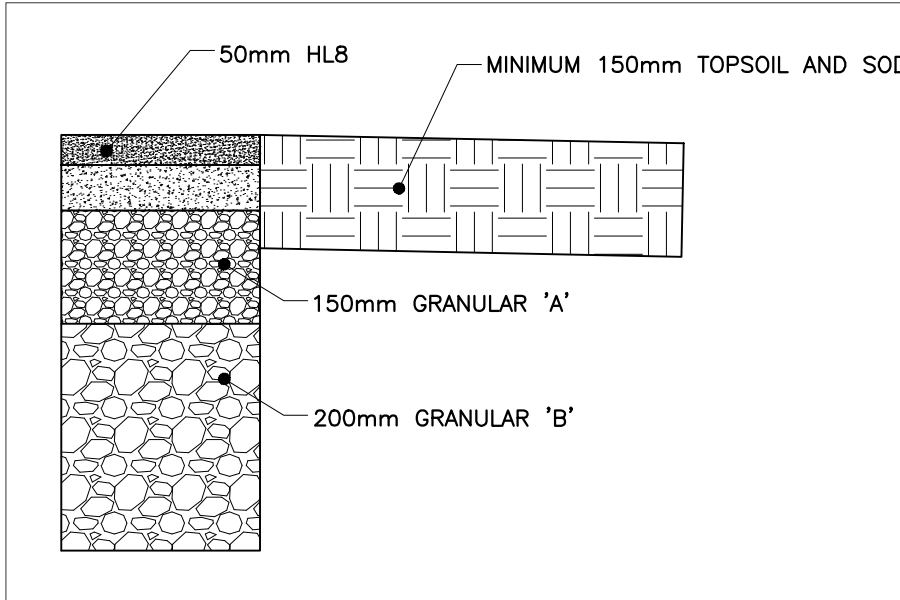
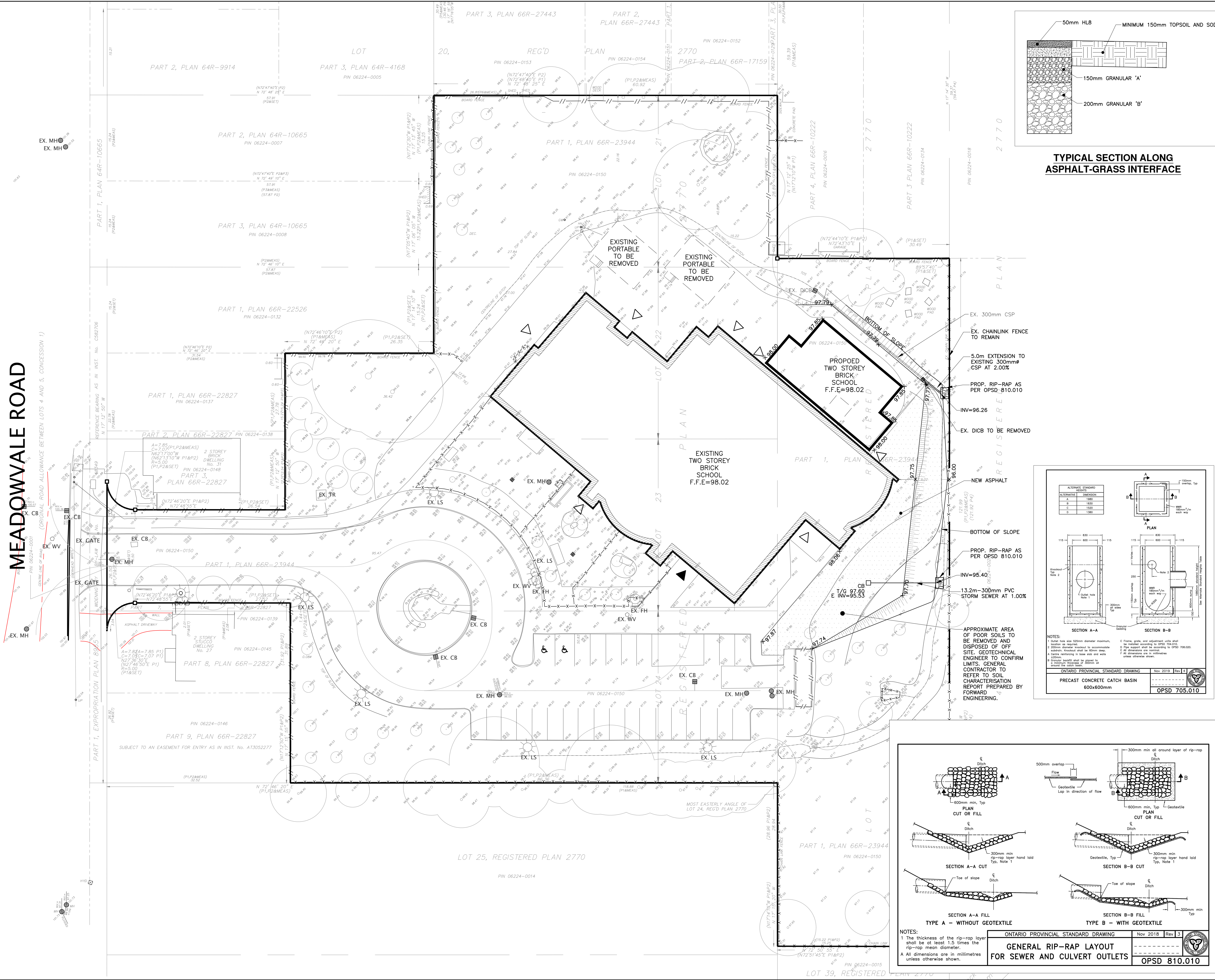
Surveyor: **A. Majid**
 Andrew Majid, O.L.S.

Party: **JK** Checked By: **AK** Drawn By: **AR** Project: **19-025**

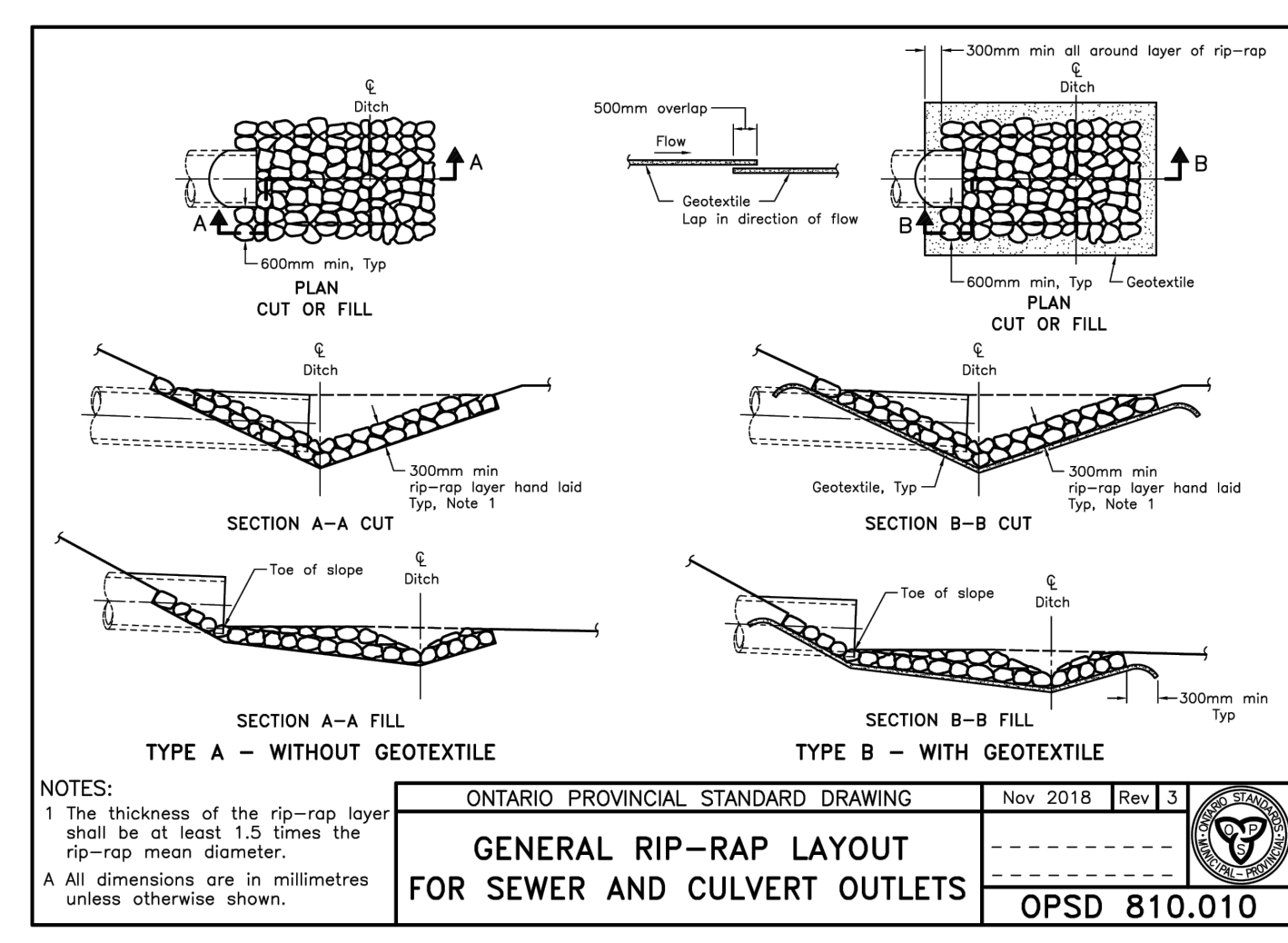
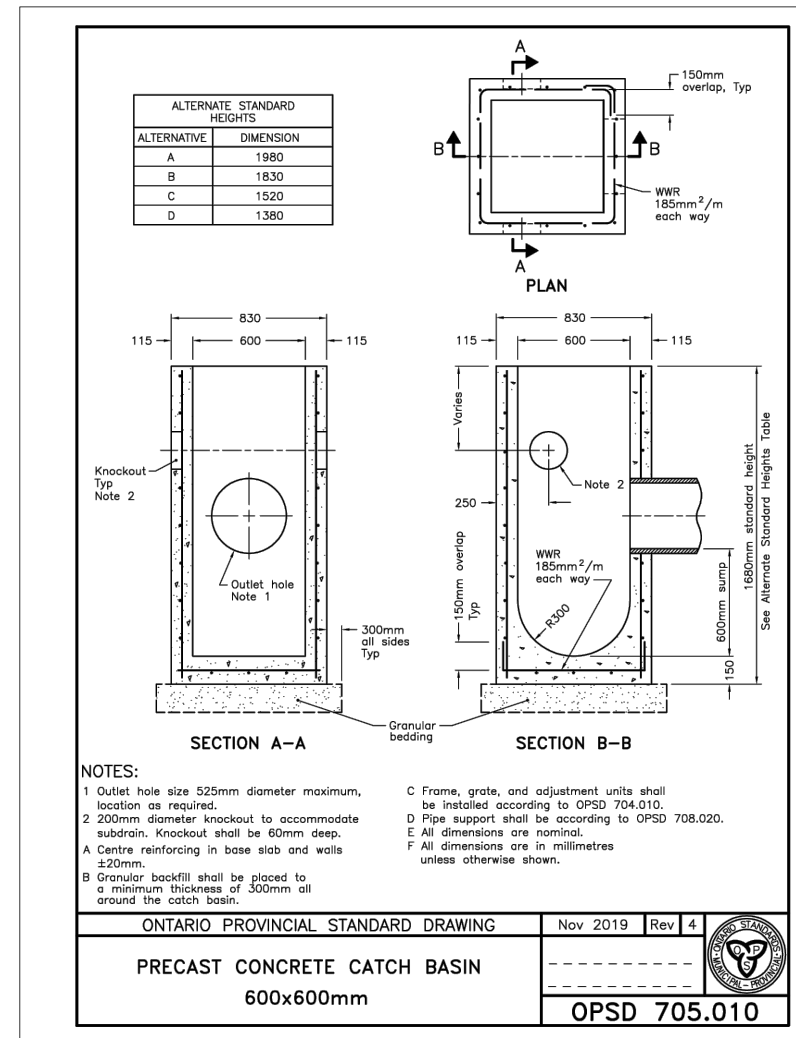
J. H. Gelbloom Surveying Limited
 Ontario Land Surveyor
 476 Warden Road, Unit 102, Oakville, Ont. L6K 3W4
 office@jgsurveying.ca
 Phone (905) 338-8210 Fax (905) 338-8448

MEADOWVALE ROAD

(ORIGINAL ROAD ALLOWANCE BETWEEN LOTS 4 AND 5, CONCESSION 1)



TYPICAL SECTION ALONG ASPHALT-GRASS INTERFACE



KEY PLAN

NO.	DESCRIPTION	DATE	BY
1	ADDED ASPHALT DETAIL	APR.01,2024	S.D.L
2	ADDED SUB EXCAVATION AREA ON EAST SIDE	FEB.08,2024	S.D.L
3	ISSUED FOR TENDER	MAY.19,2023	S.D.L
4	ISSUED FOR CLIENT REVIEW	OCT.24,2022	S.D.L

REVISIONS

CANDEVCON LIMITED
CONSULTING ENGINEERS AND PLANNERS

3558 GOREWAY DRIVE
SCARBOROUGH, ONTARIO L4P 0W7
TEL: (905) 754-0800 FAX: (905) 754-8611

S. D. LANG
REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO
APRIL 1, 2024

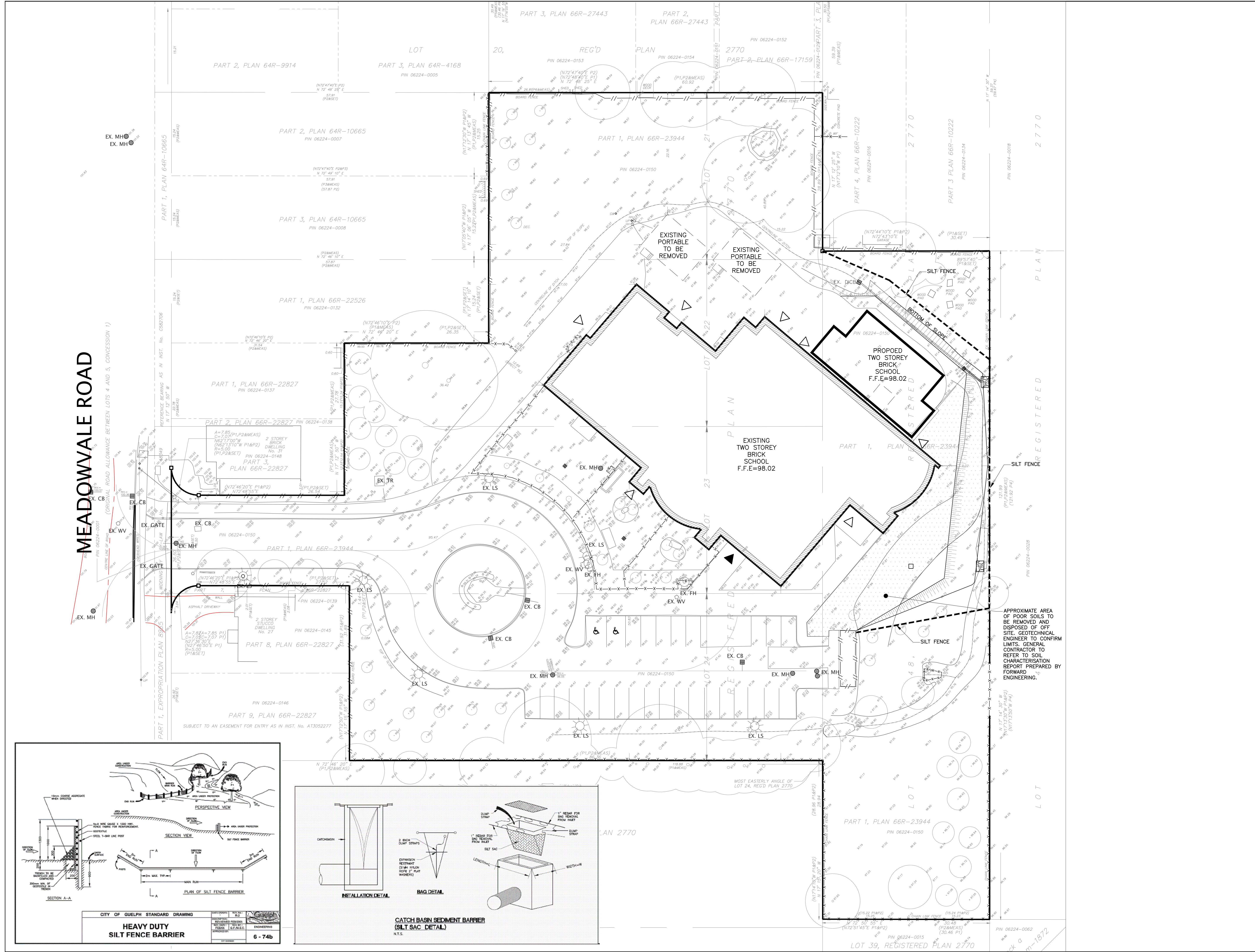
NORTH POINT

ÉÉC SAINT-MICHEL CLASSROOM ADDITON

29 MEADOWVALE ROAD
SCARBOROUGH, ONTARIO
M1C 1R7

GRADING PLAN

DRAWN BY: R.V.M	PROJECT No. W22082
CHECKED BY: S.D.L	DRAWING No.
SCALE: 1:300	G-1
DATE: AUGUST 08, 2022	



KEY PLAN

NO.	DESCRIPTION	DATE	BY
1	ADDED SEDIMENT CONTROL DETAIL	APR.01,2024	S.D.L
2	ADDED SUB EXCAVATION AREA ON EAST SIDE	FEB.08,2024	S.D.L
3	ISSUED FOR TENDER	MAY.19,2023	S.D.L
4	ISSUED FOR CLIENT REVIEW	OCT.24,2022	S.D.L

REVISIONS

306 CANDEVCON LIMITED
CONSULTING ENGINEERS AND PLANNERS

3358 GOREWAY DRIVE
TEL. (905) 794-0800

BRAMPTON, ONTARIO L6P 0W7
FAX. (905) 794-9811

S. D. LANG
REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO
APRIL 1, 2023

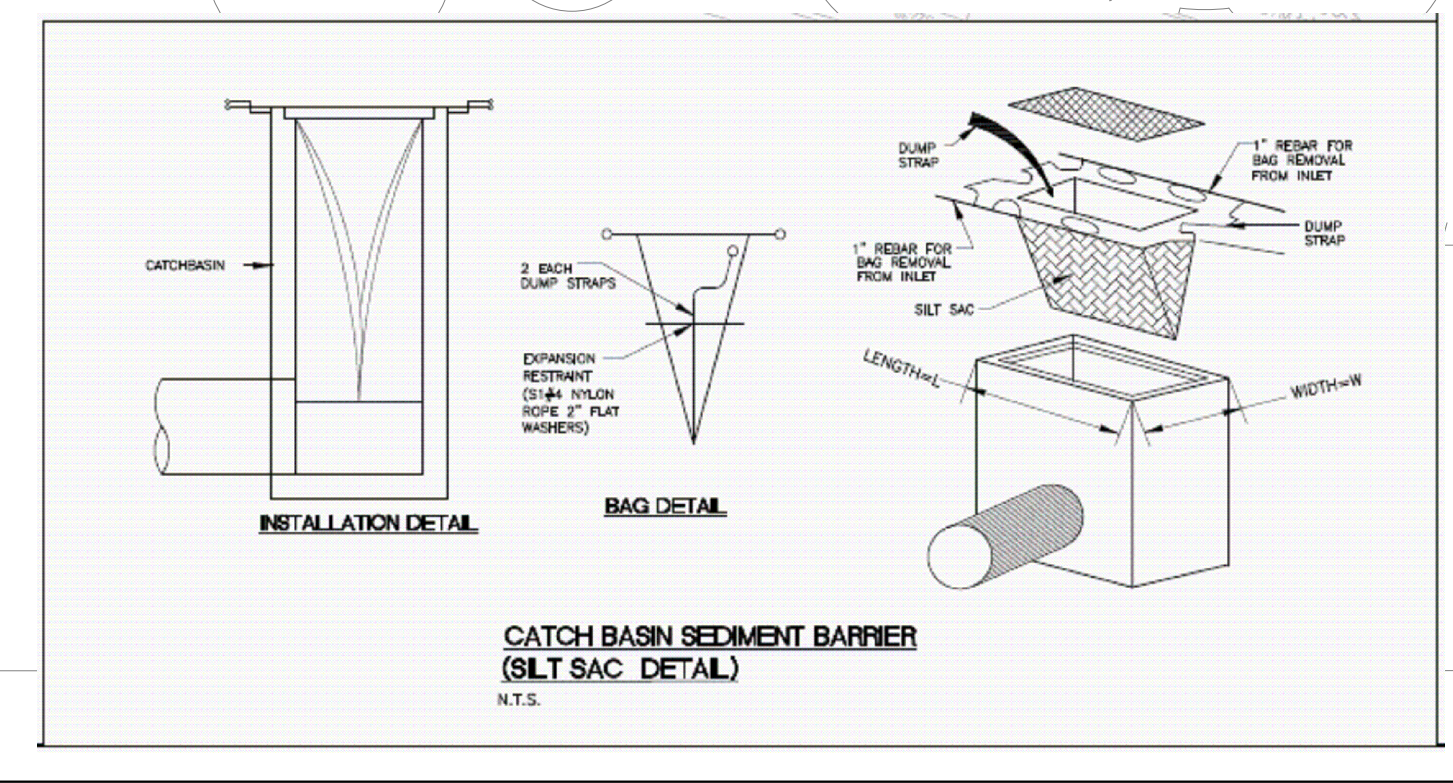
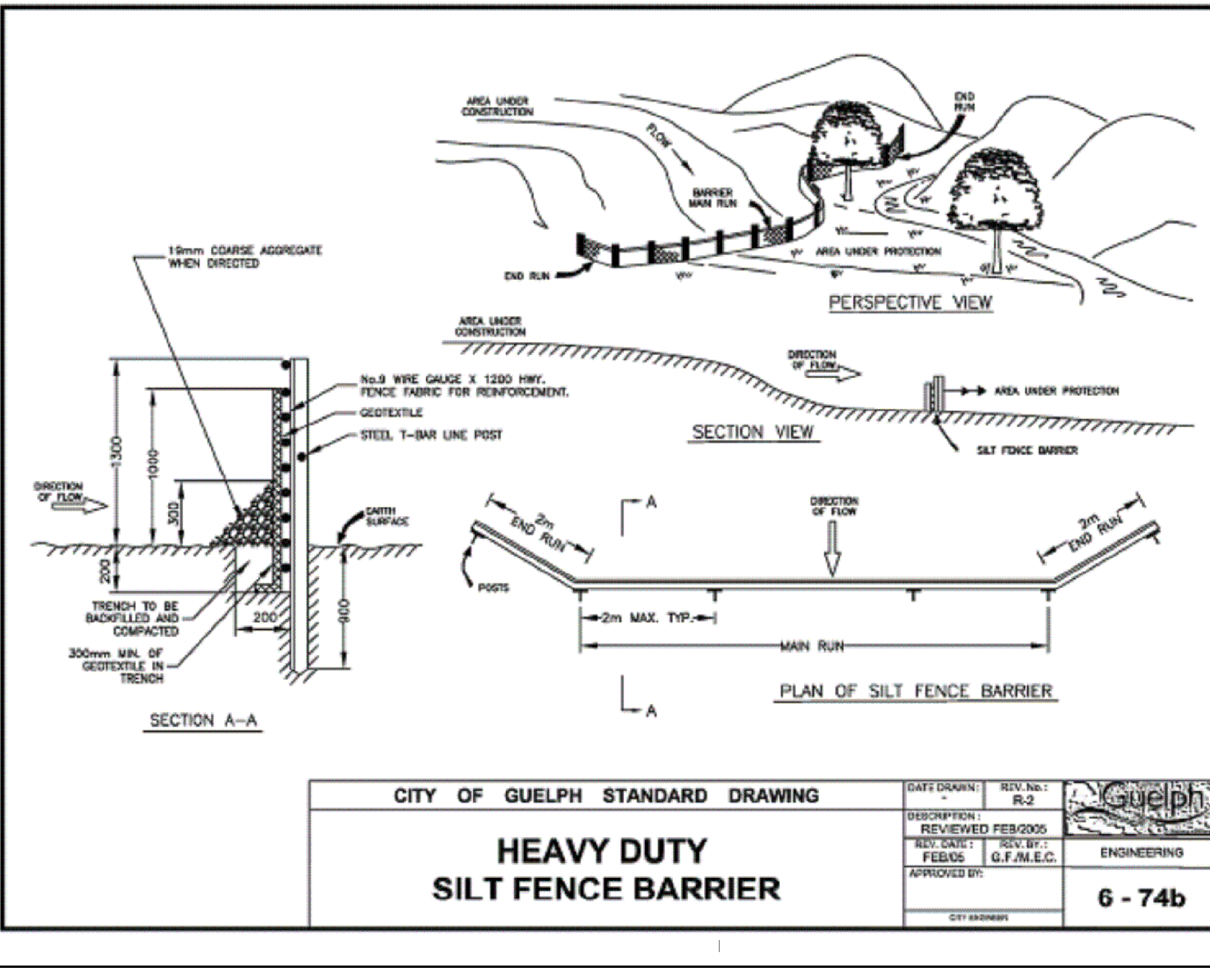
NORTH POINT

ÉC SAINT-MICHEL
CLASSROOM ADDITON

29 MEADOWVALE ROAD
SCARBOROUGH, ONTARIO
M1C 1R7

EROSION AND SEDIMENT CONTROL PLAN

DRAWN BY:	R.V.M	PROJECT No.	W22082
CHECKED BY:	S.D.L	DRAWING No.	
SCALE:	1:300	ESC-1	
DATE:	AUGUST 08, 2022		



CONCRETE MIX SCHEDULE

EXPOSURE	ELEMENT	MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (MP ¹)	EXPOSURE CLASSIFICATION	NOTES
GENERAL NON-EXPOSED CONCRETE (i.e. NOT EXPOSED TO CHLORIDES NOR FREEZE AND THAW)	FOOTINGS	25	N	
	COLUMNS	25	N	
	SHEAR WALLS	25	N	
	OTHER WALLS (NOT IDENTIFIED AS SHEAR WALLS)	25	N	
	SLAB ON GRADE Z	25	N	
	LEAN MIX	5	N	
	TOPPING	25	N	
EXTERIOR EXPOSED CONCRETE EXCLUDING PARKING (i.e. EXPOSED TO FREEZE AND THAW BUT NOT CHLORIDES)	FOUNDATION/RETAINING WALLS	25	F-2	
	COLUMNS	25	F-2	
	SHEAR WALLS	25	F-2	
	OTHER WALLS (NOT IDENTIFIED AS SHEAR WALLS)	25	F-2	
GROUT	MASONRY FILL/BOND BEAMS	15 (FINE GROUT)		CONFORM TO REQUIREMENTS OF CSA A173

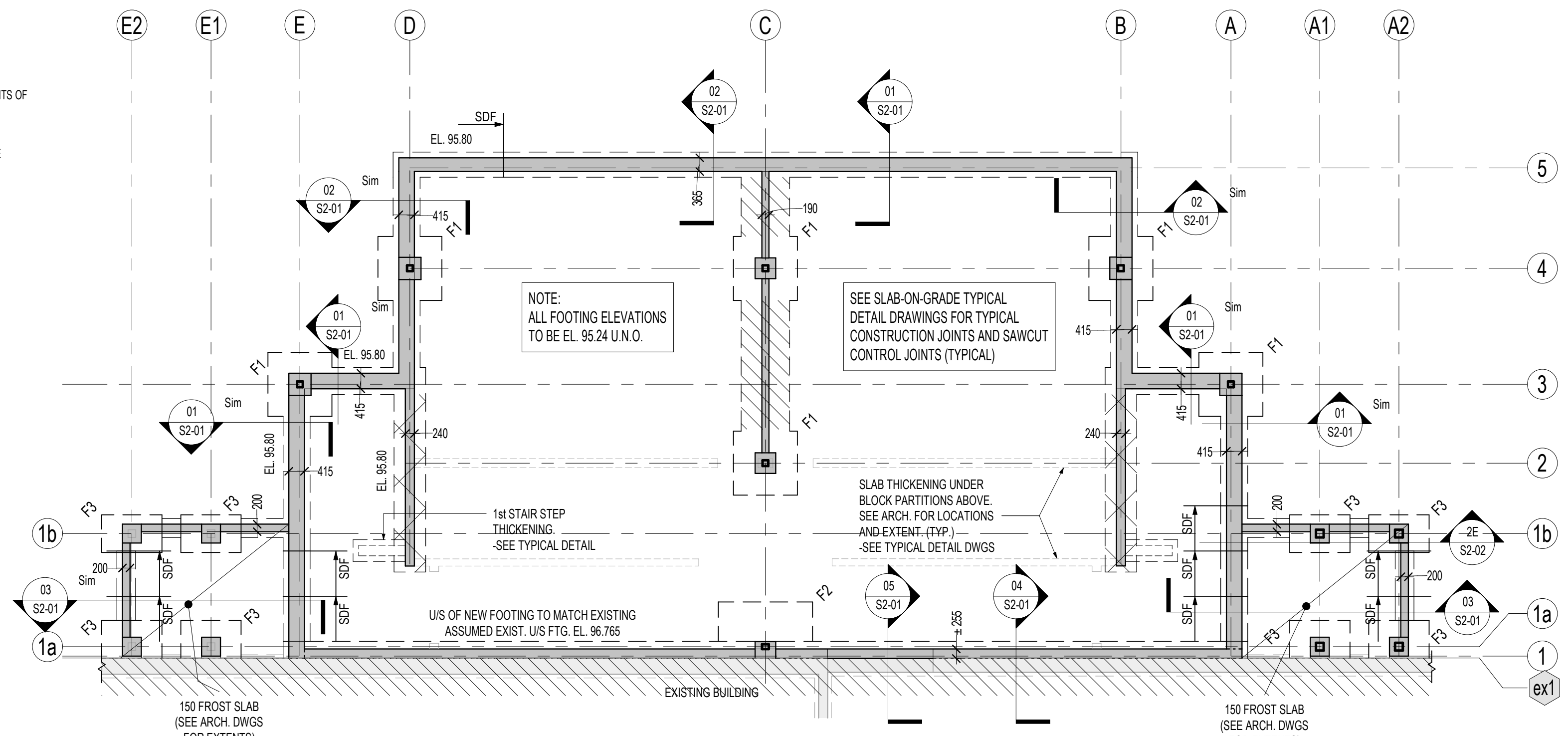
- STRENGTH SPECIFIED AT 28 DAYS U.N.O. IN DRAWINGS AND SCHEDULES.
- REINFORCED WITH SYNTHETIC FIBERS ADDED AT BATCHING PLANT - SEE SPECIFICATIONS

LOWER ELEVATIONS AT UNDERSIDE OF COLUMN AND WALL FOOTINGS, WHERE REQUIRED, BUT LIMITED TO SUIT STORM / SANITARY, WATER / FIRE LINES AND ELECTRICAL DUCT BANKS. THE MAXIMUM SLOPE FROM THE PIPE EXCAVATION TO THE UNDERSIDE OF ADJACENT FOOTING ELEVATIONS SHALL NOT EXCEED 7 VERTICAL TO 10 HORIZONTAL.

WHERE MECHANICAL SERVICE PIPES PASS THROUGH LOAD BEARING FOUNDATION WALLS, PROVIDE STEEL SLEEVES (MIN. 500) LARGER THAN PIPE (TYPICAL)

DESIGN CRITERIA NOTES

- GENERAL**
 - THE PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2012 OBC (O. REG. 33212 AS AMENDED) INCLUDING CLAUSES 4.1.6 (1), 4.1.6 (4), 4.1.7 AND 4.1.8.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR WHO IS SUPPLYING AND INSTALLING EQUIPMENT, THAT ALL ELEMENTS OF STRUCTURES LISTED IN TABLE 4.1.8.18 OF THE OBC 2012 ARE DESIGNED IN ACCORDANCE WITH CLAUSE 4.1.8.18.
 - BUILDING IMPORTANCE CATEGORY (SNOW, WIND, AND EARTHQUAKE) IS HIGH.
 - STIFF ELEMENTS NOT PART OF SFRS SHALL BE SEPARATED FROM THE STRUCTURE AS PER OBC CLAUSE 4.1.8.3 (6a). EXAMPLES INCLUDE, BUT NOT LIMITED TO MASONRY PARTITIONS, BRICK VENEER, PRECAST CLADDING ETC. IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO PROVIDE SHOP DRAWINGS, STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER DEMONSTRATING COMPLIANCE. PROVIDE MINIMUM 15mm SEPARATION UNLESS NOTED OTHERWISE.
 - MISCELLANEOUS METAL, PRECAST AND STAIR FABRICATORS SHALL:
 - PROVIDE SHOP DRAWINGS TO THE ARCHITECT PRIOR TO FABRICATION; STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER.
 - DESIGN ALL GUARDS TO MEET LATERAL LOADS DESCRIBED IN OBC 4.1.5.14.
 - DESIGN ALL HANDRAILS TO MEET LOADS DESCRIBED IN OBC 3.4.6.5 (12).
 - DESIGN ALL STAIRS TO SUPPORT A MINIMUM LIVE LOAD OF 4.8kPa.
 - ARCHITECTURAL PRECAST FABRICATOR SHALL:
 - PROVIDE SHOP DRAWINGS TO THE ARCHITECT PRIOR TO FABRICATION, STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER.
 - WHERE PRECAST IS USED AS A GUARD DESIGN THE PRECAST AND CONNECTIONS TO MEET LATERAL LOADS DESCRIBED IN OBC 4.1.5.14.
- LATERAL LOADS ON STRUCTURE**
 - WIND**
 - $q(150) = 0.47 \text{ kPa}$
 - $C_e = 0.7 (h/12)^{0.3}$
 - $C_g = 2.0$
 - $C_p = \text{AS PER FIGURE 1-15 OF USER'S GUIDE - NBC 2010 STRUCTURAL COMMENTARIES (PART 4 OF DIVISION B)}$
 - SNOW**
 - $S_s = 1.2$
 - $S_r = 0.4$
 - EARTHQUAKE**
 - $S_a(0.2) = 0.219$
 - $S_a(0.5) = 0.116$
 - $S_a(1.0) = 0.080$
 - $S_a(2.0) = 0.0290$
 - SFRS CONSISTS OF CONVENTIONAL MASONRY SHEAR WALLS. METHOD OF ANALYSIS - STATIC
- FOUNDATION WALLS**
 - WALLS RETAINING EARTH ARE DESIGNED TO SAFELY WITHSTAND HORIZONTAL EARTH PRESSURE
 - $P = K (W_h + q)$
 - $K = 0.45$
 - $W_h = 22kN/m^3$
 - $q = 12kPa$
 - $h = \text{DEPTH IN METRES}$
 - THE WALLS HAVE BEEN DESIGNED ASSUMING FREE DRAINING BACKFILL OR THE USE OF A DRAINAGE CORE TO PREVENT THE BUILD-UP OF HYDROSTATIC PRESSURE.



FOUNDATION PLAN

1:100

- ALL FOOTINGS SHALL BE FOUNDED ON UNDISTURBED NATIVE SILT TILL/CLAYEY SILT TILL STRATUM CAPABLE OF SUSTAINING 150kPa (SL) AND 225kPa (ULS).
- REFER TO SOILS REPORT NO. G4665-A DATED AUGUST 22, 2022, PREPARED BY FORWARD ENGINEERING & ASSOCIATES INC.
- SOIL AT THE UNDERSIDE OF THE FOOTINGS IS TO BE INSPECTED AND APPROVED BY A REPRESENTATIVE OF A SOILS CONSULTANT BEFORE PLACING CONCRETE.
- UNDERSIDE OF WALL FOOTINGS TO BE AT ELEVATIONS AS NOTED.
- SLAB - ON - GRADE TO BE 100 mm THICK REINFORCED SYNTHETIC FIBRES (SEE SPECIFICATION)
- TOP OF SLAB - ON - GRADE TO BE AT FINISHED FLOOR DATUM ELEVATION, 96.0m EXCEPT AS CROSSED AND NOTED. TOS = TOP OF SLAB.
- CENTRELINES OF COLUMNS, CAPS AND FOOTINGS ARE COINCIDENT UNLESS OTHERWISE NOTED.
- PROVIDE SLAB DEPRESSIONS, OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS, AS REQUIRED BY THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS.
- SDF = STEP DOWN FOOTING.
- UNLESS OTHERWISE NOTED, ALL WALL FOOTINGS TO BE 300 mm DEEP WITH 150 mm PROJECTIONS EACH SIDE.
- FILL REQUIRED ON BOTH SIDES OF FOUNDATION WALLS SHALL BE PLACED AND COMPACTED SIMULTANEOUSLY ON BOTH SIDES TO EQUALIZE SOIL PRESSURE.
- THE PROJECT SUPERINTENDENT MUST NOTIFY THIS OFFICE 24 HOURS PRIOR TO PLACING STRUCTURAL CONCRETE, INCLUDING STRIP FOOTINGS.
- SEE ALSO TYPICAL NOTES AND DETAILS.
- SEE COLUMN SCHEDULE FOR COLUMNS, AND COLUMN FOOTINGS.
- CONCRETE STRENGTHS - SEE CONCRETE SCHEDULE.
- REFER TO SITE PREPARATION NOTES ON THIS DRAWING.

SITE PREPARATION NOTES FOR SLAB-ON-GRADE (WITHIN BUILDING ENVELOPE)

- THE AREA WITHIN THE BUILDING SHALL BE STRIPPED OF THE UPPER LAYER SOIL, FILL, ORGANICALLY CONTAMINATED MATERIAL AND RUBBLE AND TO A MINIMUM OF 200mm (8") BELOW THE UNDERSIDE OF THE SLAB ON GRADE.
- THE EXPOSED SUB-GRADE SHALL BE EXAMINED AND APPROVED BY THE SOIL CONSULTANT.
- THE ENTIRE AREA SHALL BE PROOF ROLLED WITH A HEAVY COMPACTOR TO A MINIMUM OF 95% STANDARD PROCTOR MAX. DRY DENSITY AND TO THE APPROVAL OF THE SOIL CONSULTANT.
- ANY LOOSE OR SOFT SPOTS ENCOUNTERED SHALL BE SUB-EXCAVATED AND BACKFILLED WITH COMPACTED APPROVED MATERIAL.
- FILL REQUIRED TO RAISE THE GRADES SHALL BE COMPRISED OF APPROVED GRANULAR 'B' TYPE 1 CONFORMING TO OPSS 1010, PLACED IN SUCCESSIVE LOOSE 200mm (8") LAYERS EACH COMPACTED TO AT LEAST 95% OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY.
- THE LAYER IMMEDIATELY BELOW THE SLAB-ON-GRADE SHALL BE 150mm (6") OF 19mm CLEAR STONE COMPACTED TO MIN. 98% STANDARD PROCTOR MAX. DRY DENSITY.
- ALL PROCEDURES, EQUIPMENT AND MATERIALS SHALL BE APPROVED BY THE SOIL CONSULTANT WHO SHALL CONDUCT SUFFICIENT TESTS TO ENSURE THAT THE SPECIFIED MATERIALS AND DENSITIES ARE ACHIEVED.
- THE CONTRACTOR SHALL CO-ORDINATE WITH THE SOIL CONSULTANT AND ARRANGE A SUITABLE PROGRAM FOR SAMPLING AND INSPECTIONS, ETC. AND NOTIFY THE ARCHITECT ACCORDINGLY.
- EXISTING ON-SITE MATERIAL MAY BE USED WITHIN THE BUILDING AREA FOR BACKFILLING IN TRENCHES AGAINST FOUNDATION WALLS OR UNDER SLABS-ON-GRADE, PROVIDED THE EXCAVATED MATERIAL DOES NOT BECOME WET. THE EXCAVATED MATERIALS WILL BE SENSITIVE TO MOISTURE CONTENT, AND THE USE OF GRANULAR 'B' IS PREFERRED.
- REFER TO THE SPECIFICATION AND THE SOIL REPORT FOR PREPARATION OF AREAS OUTSIDE THE BUILDING ENVELOPE.

STEEL COLUMN SCHEDULE													
TO/ FROM	SECTION	SECTION	SECTION	SECTION	SECTION	SECTION	SECTION	SECTION	SECTION	SECTION	SECTION	SECTION	SECTION
TO P/C ROOF (HP)													
TO SECOND FLOOR													
TO GROUND FLOOR	HSS152x152x6.4	HSS203x203x6.4	HSS203x203x6.4	HSS203x203x6.4	HSS203x203x6.4	HSS152x152x6.4	HSS178x177x6.4	HSS152x152x6.4	HSS152x152x6.4	HSS152x152x6.4	HSS152x152x6.4	HSS152x152x6.4	HSS152x152x6.4
US B. PL. -350 (U.N.O.)													
BASE PLATE SIZE	325x20x325	350x20x350	350x20x350	350x20x350	350x20x350	325x20x325	350x20x350	325x20x325	325x20x325	325x20x325	325x20x325	350x20x350	350x20x350
ANCHOR RODS	(4)-AR1	(4)-AR2	(4)-AR2	(4)-AR2	(4)-AR2	(4)-AR1	(4)-AR1	(4)-AR1	(4)-AR1	(4)-AR1	(4)-AR1	(4)-AR2	(4)-AR2
PIER SIZE	590x590	500x500	500x500	500x500	500x500	590x590	550x450	550x550	590x590	590x590	590x590	500x500	500x500
VERTICAL REINF. TIES	10-15V 10@300T	8-20V 10@300T	8-20V 10@300T	8-20V 10@300T	8-20V 10@300T	10-15V 10@300T	8-15V 10@300T	8-15V 10@300T	10-15V 10@300T	10-15V 10@300T	10-15V 10@300T	8-20V 10@300T	8-20V 10@300T
FACTORED LOADING (kN)	50	50	50	50	50	300	450	550	300	300	50		
Column Locations	A-3	A1-1a	A1-1b	A2-1a	A2-1b	B-4	C-1a	C-2	C-4	D-4	E-3	E1-1a	E1-1b
	M	M	M	M	M							M	M

STEEL COLUMN SCHEDULE NOTES:

- FOR GRADE OF STRUCTURAL STEEL SEE GENERAL NOTES AND SPECIFICATION.
- LOADS FOR COLUMNS REPRESENT THE FACTORED LOAD IN KILOWEIGHTS APPLIED AT THE BASE OF THE COLUMN AND DO NOT INCLUDE THE WEIGHT OF THE FOUNDATION.
- BASE PLATE AND / OR CAP PLATE DIMENSION GIVEN LAST TO BE PARALLEL WITH COLUMN WEB.
- REFER ALSO TO TYPICAL NOTES AND DETAIL DRAWINGS.
- REFER TO STEEL COLUMN / ANCHOR ROD SCHEDULE AND TYPICAL COLUMN BASE DETAILS FOR ANCHOR RODS AND FOR COLUMN BASE PLATE SIZES.
- FOR ALL COLUMNS ABUTTING MASONRY, PROVIDE ADJUSTABLE MASONRY ANCHORS AS PER TYPICAL DETAIL. SEE TYPICAL DETAIL DRAWINGS.

FOOTING SCHEDULE				
FOOTING NUMBER	FOOTING LENGTH	FOOTING WIDTH	FOOTING THICKNESS	FOOTING REINF. B.E.W./H.E.E. U.N.O.
F1	1700	1700	300	6-15M
F2	1500	2500	400	7-20M
F3	1000	1600	350	6-20M T&B TR. & 4-20M T&B LG.

FOOTING PROJECTION SCHEDULE

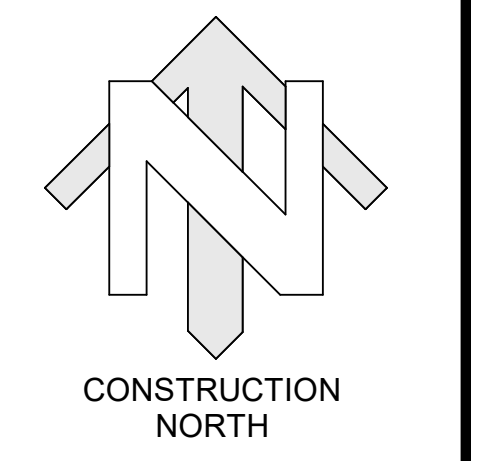
- FOOTINGS SHOWN THUS ON PLAN INDICATE 300mm FOOTING PROJECTION:- REINF. W/ 15@300B TRANS. & 3-15B LONG.
-
- FOOTINGS SHOWN THUS ON PLAN INDICATE 500mm FOOTING PROJECTION:- REINF. W/ 15@250B TRANS. & 4-15B LONG.
-
- NOTE: TRANS. REINF. HOOKED EACH END

DRAWING LIST	
Sheet Number	Sheet Name
S1-01	FOUNDATION PLAN
S1-02	SECOND FLOOR / LOW ROOF FRAMING PLAN
S1-03	ROOF FRAMING PLAN AND ROOF SECTIONS
S2-01	FOUNDATION SECTIONS
S2-02	SECOND FLOOR SECTIONS
S3-01	GENERAL NOTES
S3-02	TYPICAL DETAILS
S3-03	TYPICAL DETAILS
S3-04	TYPICAL DETAILS
S3-05	TYPICAL DETAILS
S3-06	TYPICAL DETAILS AN GENERAL NOTES

NOTE: EXISTING CONDITIONS AS SHOWN ON THE STRUCTURAL DRAWINGS ARE BASED UPON INFORMATION AVAILABLE AT THE TIME THAT DRAWINGS WERE PREPARED AND ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE. ANY VARIATIONS ARE TO BE REPORTED AND INSTRUCTIONS RECEIVED BEFORE PROCEEDING.

NO.	DATE	ISSUED FOR	REVISION
5	MARCH 2024	ISSUED FOR TENDER	
4	JAN 31/2023	ISSUED FOR PERMIT	
3	DEC 09/2022	ISSUED FOR 90% CLIENT REVIEW	
2	OCT 10/2022	ISSUED FOR 60% CLIENT REVIEW	
1	OCT 10/2022	ISSUED FOR CLIENT REVIEW	

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.



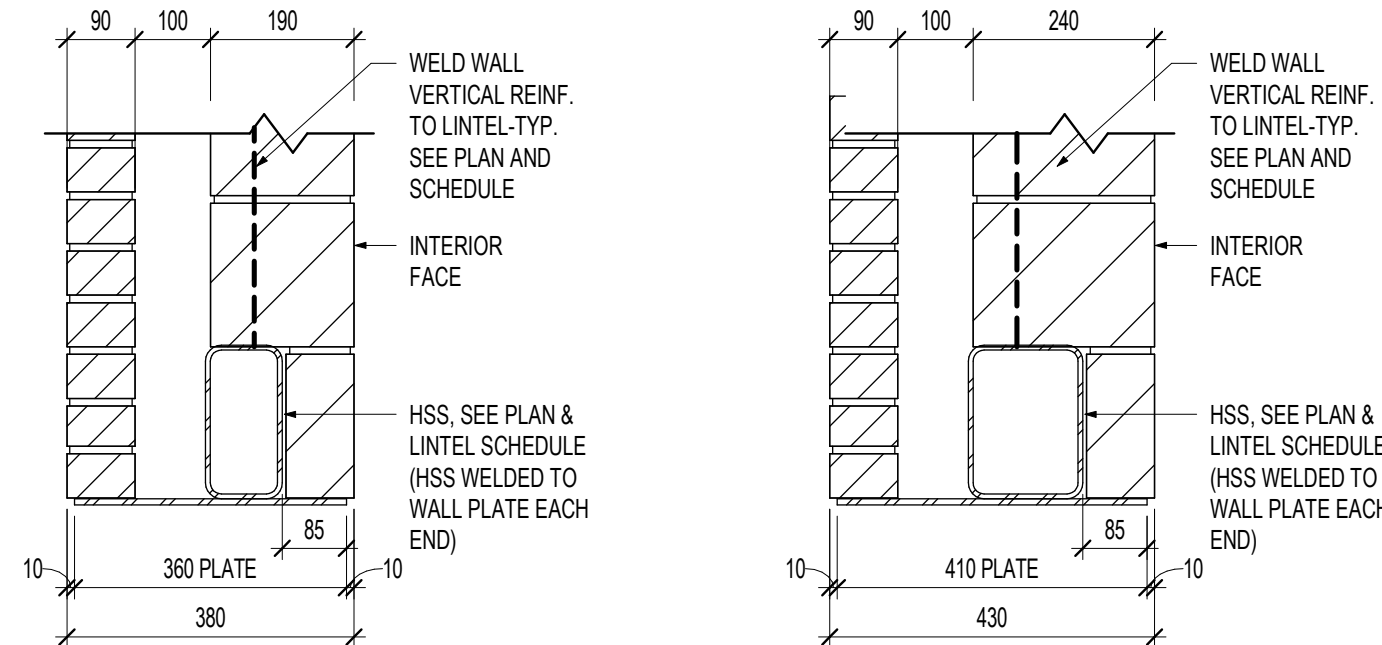
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Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
FOUNDATION PLAN

PROJECT NO: 20220316	SCALE: As indicated
DRAWN: AE	DRAWING NO. / REV. S1-01 / 5
CHECKED: JG	DATE: MARCH 2024



NOTE: BOTTOM PLATES TO TERMINATE 10mm CLEAR OF SUPPORTING MASONRY-VERIFY WITH ARCH.

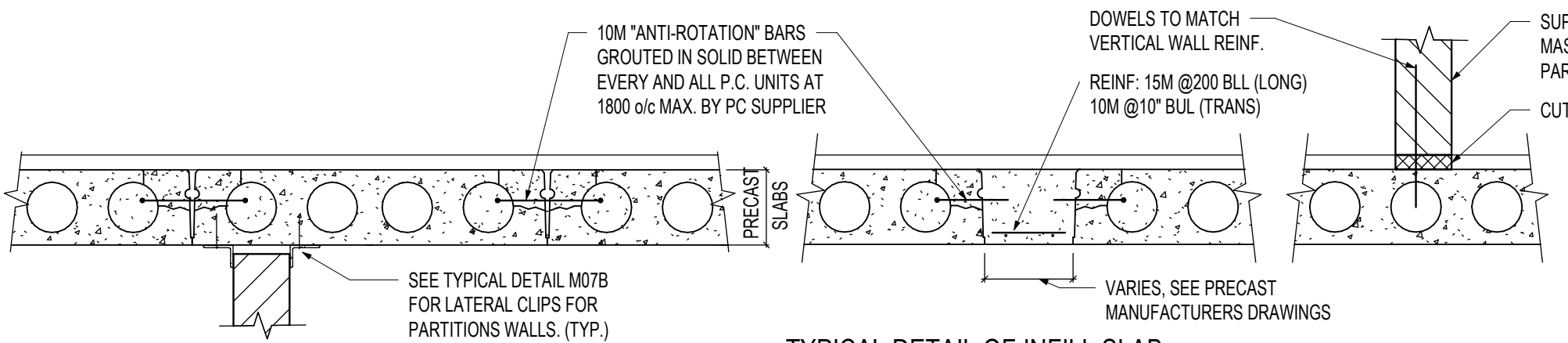
DL1 S1-02
DETAIL 1:10

DL2 S1-02
DETAIL 1:10

LINTEL SCHEDULE			
REFER TO LINTEL NOTES A07 ON TYPICAL DETAIL DRAWINGS SEE ALSO SPECIFICATION			
MARK	MATERIAL	TYPE	REMARKS
L1	HSS 203x102x6.4 + 360x8mm BOTTOM PLATE	WP1 E.E. **	SEE DL1/S1-02
L2	HSS 203x152x6.4 + 410x8mm BOTTOM PLATE	WP2 E.E. **	SEE DL2/S1-02
L3	HSS 203x152x7.9 + 410x8mm TOP PLATE	WP2 ONE END **	OTHER END CONNECT TO COL. CENTRE HSS WITH BLOCK
L4	(2)-L 102x102x6.4 + LOOSE L89x89x6.4		

T₁ = 10kN M TORSION CONNECTION
ALL EXTERIOR LINTELS SUPPORTING FACE BRICK TO BE GALVANIZED
** WELDED TO LINTEL EACH END.

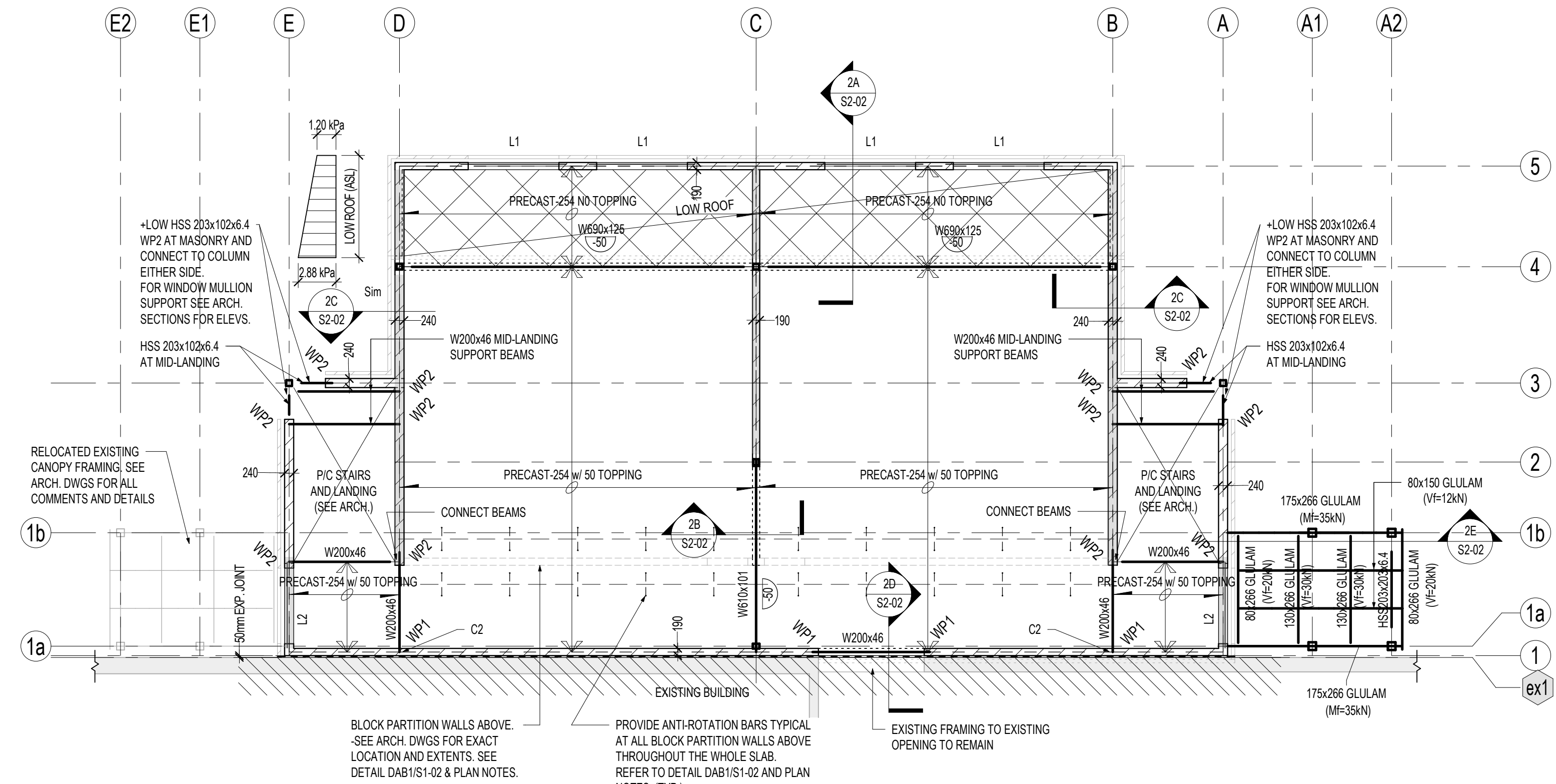
WALL PLATE SCHEDULE (LAST DIMENSION PARALLEL TO WEB)		
MARK	MATERIAL	REMARKS
WP1	180x15x180	(2)130 A.BOLTS x 150 LG. JL
WP2	200x15x200	(2)130 A.BOLTS x 150 LG. JL



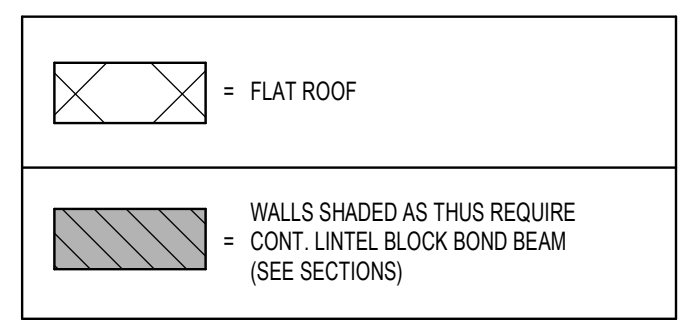
TYPICAL DETAIL OF INFILL SLAB
SEE P.C. MANUFACTURER'S DRAWINGS FOR LOCATION AND QUANTITY (SEE ALSO SPECIFICATION) P.C. MANUFACTURER TO SUPPLY REINFORCING BARS AND CONCRETE

NOTE:
1. PARTITIONS ARE TO BE CONSTRUCTED PRIOR TO INSTALLATION OF TOPPING.
2. SEE ALSO FLOOR LOADING SCHEDULE.
3. IF BLOCK PARTITIONS ARE INSTALLED AFTER TOPPING IS POURED, GENERAL CONTRACTOR TO NOTE AND COORDINATE THE AFFECT OF POST PARTITION ERECTION ON THE CAMBER OF THE CORESLABS. IN ADDITION, DOWELS MUST BE PROVIDED FROM CORESLAB INTO WALL ABOVE MIN. 10M@1200 U.N.O. IN NOTES SCHEDULES, TYPICAL DETAILS ETC.

DAB1 S1-02
NTS



SECOND FLOOR / LOW ROOF FRAMING PLAN
1:100



SECOND FLOOR LOADING SCHEDULE		
LOADING	SUPERIMPOSED DEAD LOAD (kPa)	LIVE LOAD (kPa)
CLASSROOM *	1.54	2.40
CORRIDOR / STAIRS *	1.8	4.80
LOW ROOF AREA *	1.06	1.56 + ASL

* AS NOTED ON SCHEDULE
HOLLOWCORE SLABS SHALL BE DESIGNED TO RESIST THE UNIFORM LOADING ABOVE AND IN ADDITION SHALL SUPPORT MASONRY PARTITION LOADS.
(CO-ORDINATE WITH ARCHITECTURAL DRAWINGS)
140 PARTITION, 6.7kN/m and 190 PARTITIONS, 8.5kN/m

- TOP OF PRECAST SLAB TO BE 50mm BELOW FINISHED FLOOR DATUM. ELEVATION 4000mm, EXCEPT AS CROSSED AND NOTED. T.O.S. = TOP OF SLAB.
- TOPS OF STEEL BEAMS TO BE AT UNDERSIDE OF PRECAST SLABS - 254mm, EXCEPT AS SHOWN THUS ON (C) PLAN.
- REFER TO LOADING SCHEDULE ON THIS DRAWING.
- HOLLOWCORE SLABS SHALL BE DESIGNED TO SUPPORT THE SPECIFIED DEAD AND LIVE LOADS AND IN ADDITION SHALL SUPPORT MASONRY PARTITION LOADS. (CO-ORDINATE WITH ARCHITECTURAL DRAWINGS AND LOADING SCHEDULE).
- HOLLOWCORE SLABS SHALL HAVE A FIRE RATING OF 2 HOURS.
- SUBMIT DETAILS FOR ALL OPENINGS, OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS, TO THE STRUCTURAL CONSULTANT FOR REVIEW.
- LOCATIONS OF MECHANICAL EQUIPMENT AND MECHANICAL EQUIPMENT LOADS ARE TO BE CONFIRMED BY THE MECHANICAL CONTRACTOR BEFORE PROCEEDING.
- AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO INSPECT STRUCTURAL STEEL IN THE SHOP AND IN THE FIELD FOR WELDING, CONNECTIONS, BOLT TORQUES, AND GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS.
- NON - LOAD BEARING PARTITIONS SHALL BE A MINIMUM OF 25mm CLEAR OF STRUCTURE.
- WALL PLATES (WP) SHALL HAVE LAST DIMENSION PARALLEL TO BEAM OR JOIST WEB. SEE WALL PLATES SCHEDULE.
- SEE LINTEL SCHEDULE ON THIS DRAWING.
- THE PROJECT SUPERINTENDENT MUST CONTACT THIS OFFICE 24 HOURS PRIOR TO PLACING STRUCTURAL CONCRETE FOR A REVIEW OF PREPARATIONS.
- SEE TYPICAL NOTES, TYPICAL DETAILS, COLUMN SCHEDULE AND ALL OTHER DRAWINGS.
- PROVIDE A MAXIMUM 50mm BONDED, NON - COMPOSITE, TOPPING SLAB ON PRECAST HOLLOWCORE SLABS, UNLESS OTHERWISE NOTED. TOP SURFACE IS TO BE FLAT (SEE SPECIFICATION FOR PREPARATION).
- PARTITIONS ABOVE PRECAST HOLLOWCORE SLABS ARE TO BE CONSTRUCTED BEFORE TOPPING IS PLACED.
- FOR CONCRETE BASE AT LOCKERS. SEE ARCHITECTURAL DRAWINGS.
- PROVIDE 100mm HOUSE KEEPING PADS IN MECHANICAL ROOM (SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION).
- PROVIDE MIN 100x100 CURBS AROUND ALL OPENINGS AND AT DOORS IN MECHANICAL ROOM FLOOR. REINF: 10M@300 DOWELS FROM BASE SLAB + 1-10M CONT. (REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS).
- REFER TO ARCHITECTURAL DRAWINGS FOR FIRE PROOFING OF BEAMS AND COLUMNS.
- REFER TO CONCRETE MIX SCHEDULE ON S1-01.
- IF ANY ASPECT OF THE PRECAST HOLLOWCORE SLAB CONSTRUCTION, PROPOSED BY THE CONTRACTOR FOR USE ON THIS PROJECT, VARIES FROM THAT SHOWN ON THE TENDER DRAWINGS AND THE VARIATION REQUIRES THE RE-DESIGN OF THE BASE BUILDING ELEMENTS AND/OR THE REVISION TO OR ADDITION OF MATERIALS TO ACCOMMODATE SUCH VARIANCE AND THE OWNER, THE ARCHITECT AND THE STRUCTURAL CONSULTANT ARE IN AGREEMENT WITH THE PROPOSED VARIATION, THEN THE CONTRACTOR REQUESTING THE VARIATION SHALL PAY FOR ALL EXTRA COSTS, INCLUDING RE-DESIGN, ASSOCIATED WITH THE CHANGE.

MASONRY CORE FILL SCHEDULE M20

MASONRY CORE FILL SCHEDULE			
TYPE	SIZE	REINF	REMARKS
C1	1 x 400	2-15 VERT. CONT.	
C2	1 x 600	3-15 VERT. CONT.	
C3	1 x 800	4-15 VERT. CONT.	
C4	1 x 400 x 400	4-15 VERT. CONT.	

1 DENOTES THE WALL THICKNESS

- MASONRY CORE FILLS NOTES:**
- PROVIDE CORE FILLS AS NOTED ON PLAN AND PROVIDE REINFORCEMENT AS SHOWN IN SCHEDULE.
 - CORE FILLS EXTEND FULL HEIGHT OF WALL, FLOOR TO FLOOR UNLESS NOTED.
 - INSTALL ALL REINFORCEMENT FULL HEIGHT BETWEEN FLOORS AND GROUT CORE SOLID FULL HEIGHT BETWEEN FLOORS UNLESS NOTED.
 - WHERE CORE FILL CONTIGUOUS TO NEXT FLOOR ABOVE, EXTEND INDICATED VERTICAL REINFORCEMENT TO PROVIDE SPECIFIED CLASS "B" TENSION LAP SPICE WITH REINFORCEMENT OF CORE ABOVE, WHERE MASONRY WALLS START ON TOP OF STEEL BEAMS, PROVIDE WELDABLE REINFORCING DOWELS TO MATCH REINFORCING NOTED IN THIS SCHEDULE, OR EQUIVALENT DDL DEFORMED BAR ANCHORS.
 - PROVIDE 15M DOWELS IN FOUNDATION WALLS FOR ALL WALL REINFORCEMENT UNLESS NOTED OTHERWISE.
 - REFER TO M04 FOR LAP LENGTHS FOR VERTICAL BARS AND DOWELS.
 - REFER TO CORE FILLS SCHEDULE FOR DETAILS AND REINFORCEMENT.
 - PROVIDE CORE FILL C1 AT EACH SIDE OF OPENINGS UNLESS OTHERWISE NOTED ON PLANS AND/OR SECTIONS.
 - PROVIDE C1 AT UNSUPPORTED ENDS OF WALLS UN.
 - PROVIDE C1 AT EACH SIDE OF CONTROL JOINTS UN.
 - PROVIDE CORE FILL C4 AT ALL WALL CORNERS UN OTHERWISE IN PLANS AND/OR SECTIONS.
 - PROVIDE TITHEWALL BLA CONTROL JOINT BY BLOCK-LOK OR EQUIVALENT FOR ALL VERTICAL CONTROL JOINTS IN EXTERIOR MASONRY WALLS EXCEEDING 1m IN HEIGHT.
 - 190mm MASONRY WALL REINFORCING - 15M@800 O.C.
240mm MASONRY WALL REINFORCING - 15M@600 O.C.
 - REINFORCE ALL MASONRY SILLS, INTERIOR AND EXTERIOR, AS PER THE REINFORCING INDICATED IN THIS SCHEDULE. GROUT TOP TWO COURSES OF ALL SILLS SOLID, FULLY GROUT ALL EXTERIOR SILLS.

MECHANICAL LINTEL SCHEDULE

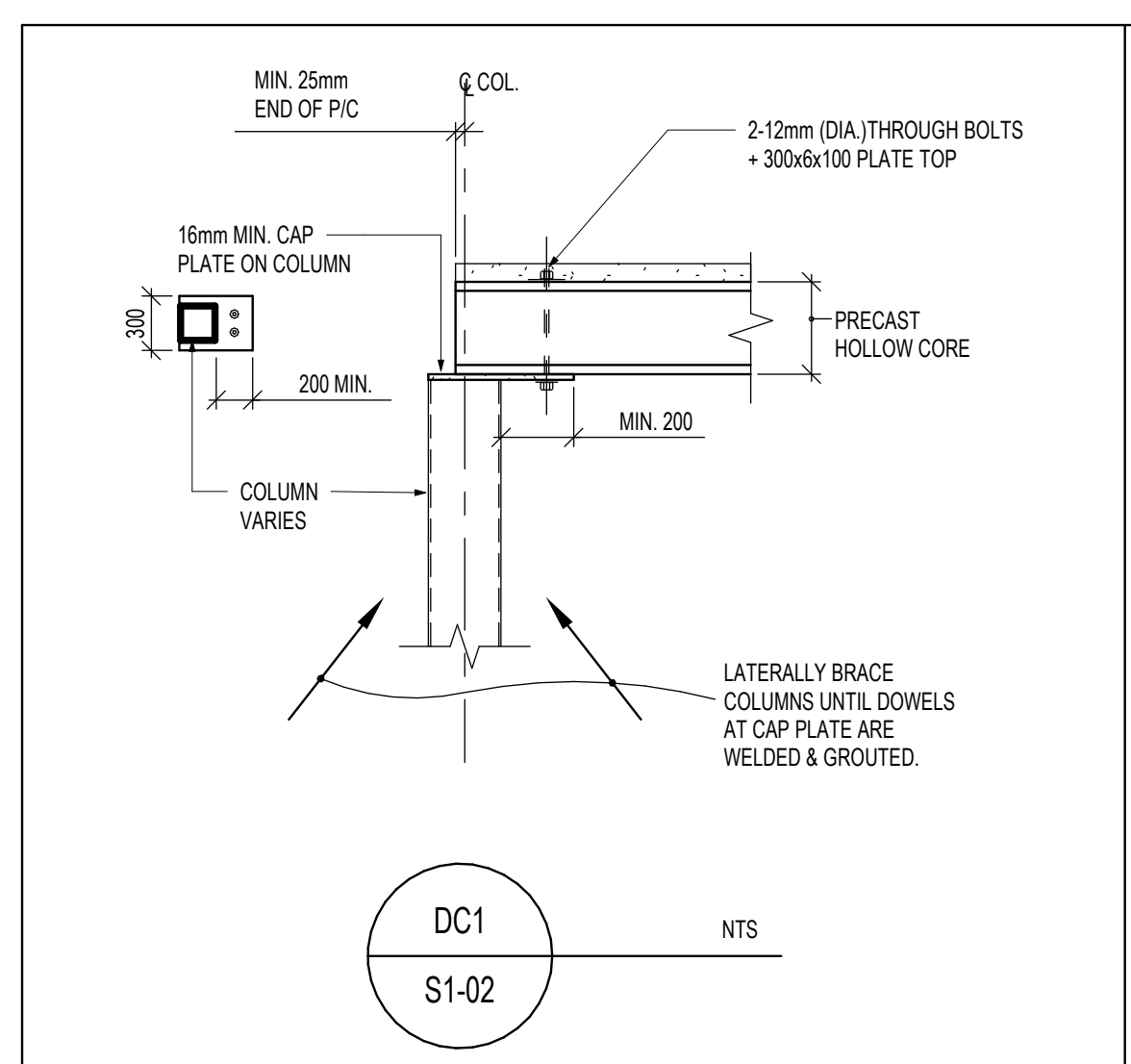
LINTELS IN LOAD BEARING WALLS OVER MECHANICAL DUCTS ETC.					
MARK	WALL THICKNESS	CLEAR SPAN	MATERIAL	TYPE	NOTES
ML1	190	200-550	175x8 PLATE	---	CAVITY WALLS UNLESS NOTED EXTERIOR WALLS GALVANIZED UNLESS NOTED
ML2	190	550-1220	24-90x90x6	JL	
ML3	240	200-550	225x8 PLATE	---	
ML4	240	550-1220	24-100x100x8	JL	
ML5	290	200-550	275x8 PLATE	---	
ML6	290	550-1220	34-90x90x6	JL	
ML7	190 + 90	200-550	175x8 PLATE + 80x8 PLATE	---	
ML8	190 + 90	550-1220	24-90x90x6 + 14-90x90x6	JL	
ML9	240 + 90	200-550	225x8 PLATE + 80x8 PLATE	---	
ML10	240 + 90	550-1220	24-100x100x8 + 14-90x90x6	JL	
ML11	290 + 90	200-550	275x8 PLATE + 80x8 PLATE	---	
ML12	290 + 90	550-1220	34-90x90x6 + 14-90x90x6	JL	

- FOR LINTELS MARKED ML ON DRAWINGS.
- FOR SPANS LESS THAN 200mm - NO LINTEL REQUIRED.
- FOR SPANS GREATER THAN 120mm, SEE PLANS AND MAIN LINTEL SCHEDULE.

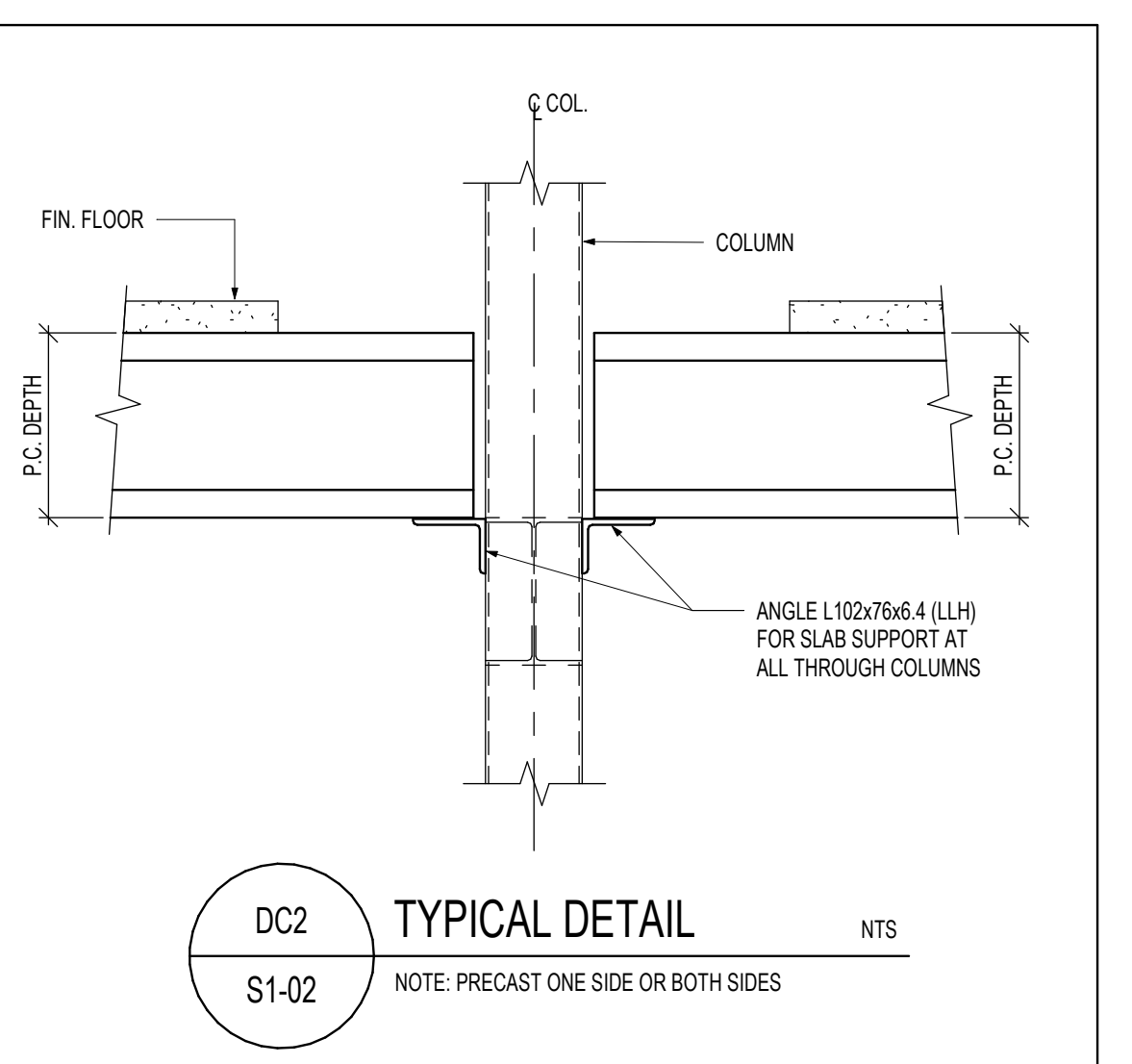
WHILE EVERY EFFORT HAS BEEN MADE TO SHOW ALL LINTELS WHICH OCCUR IN LOAD BEARING MASONRY WALLS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE CORRECT SIZES AND QUANTITY OF LINTELS ARE PROVIDED.

LINTELS IN NON-LOAD BEARING WALLS AND PARTITIONS ARE GENERALLY NOT SHOWN ON THE DRAWINGS. ALL SUCH LINTELS SHALL BE PROVIDED AS REQUIRED AND SHALL CONFORM TO THE NOTES & TYPICAL DETAILS ON THE STRUCTURAL DRAWINGS.

PROVIDE MECHANICAL LINTELS IN ACCORDANCE WITH TYPICAL DETAILS AND NOTES FOR ALL DUCTS AND PIPES PASSING THROUGH MASONRY WALLS.



TYPICAL AT TOPS OF ALL EXTERIOR COLUMNS SUPPORTING PRECAST
DC1 S1-02 NTS

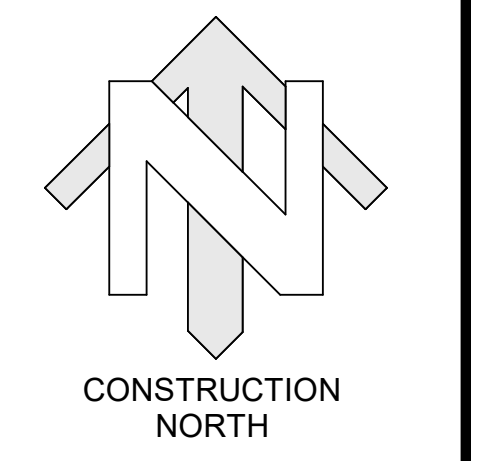


FOR PRECAST SLAB SUPPORT AT ALL "THROUGH COLUMNS"
DC2 S1-02 NTS
NOTE: PRECAST ONE SIDE OR BOTH SIDES

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2	OCT 17/2022	ISSUED 90% FOR CLIENT REVIEW	
1	OCT 10/2022	ISSUED FOR CLIENT REVIEW	

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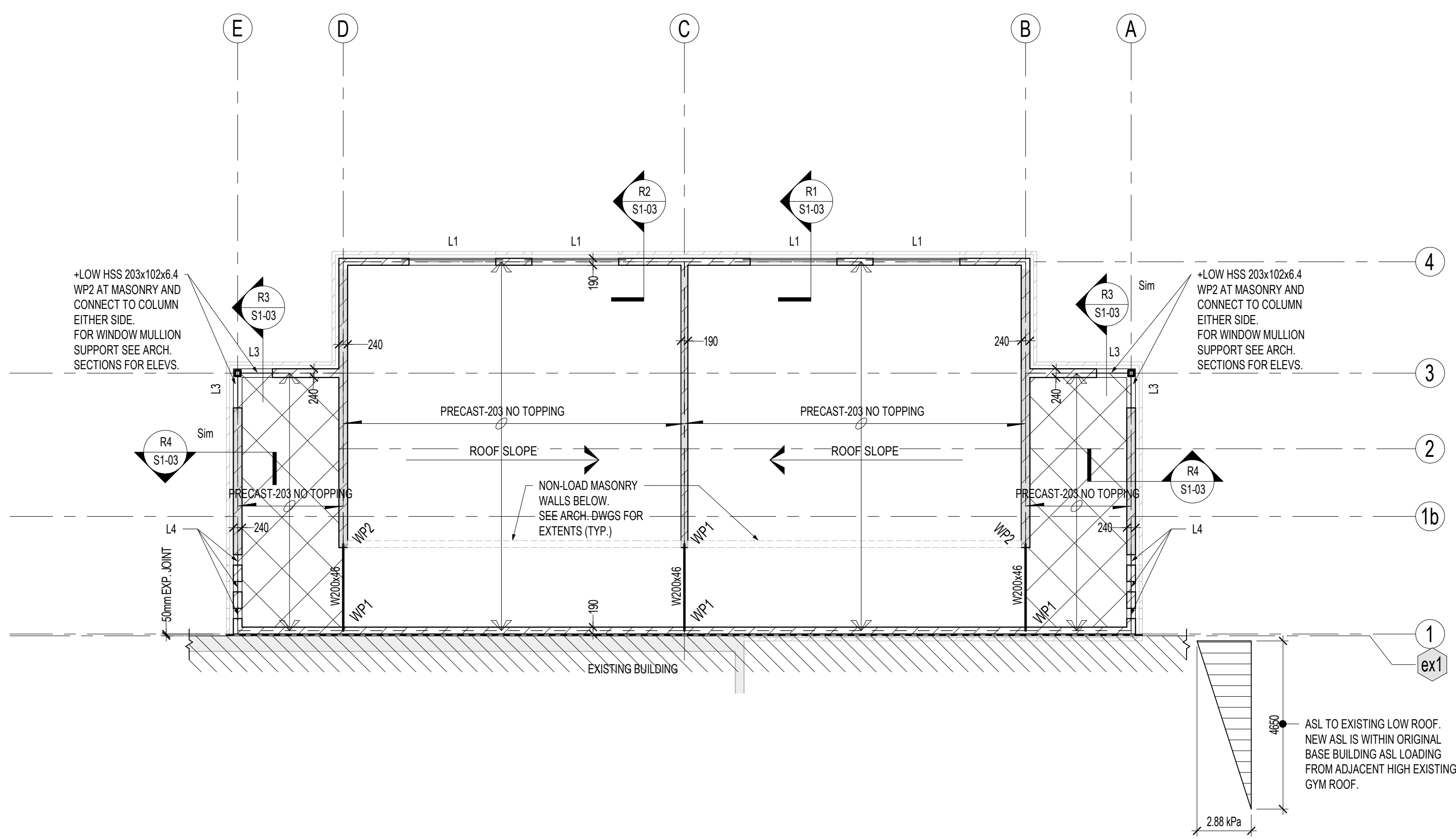
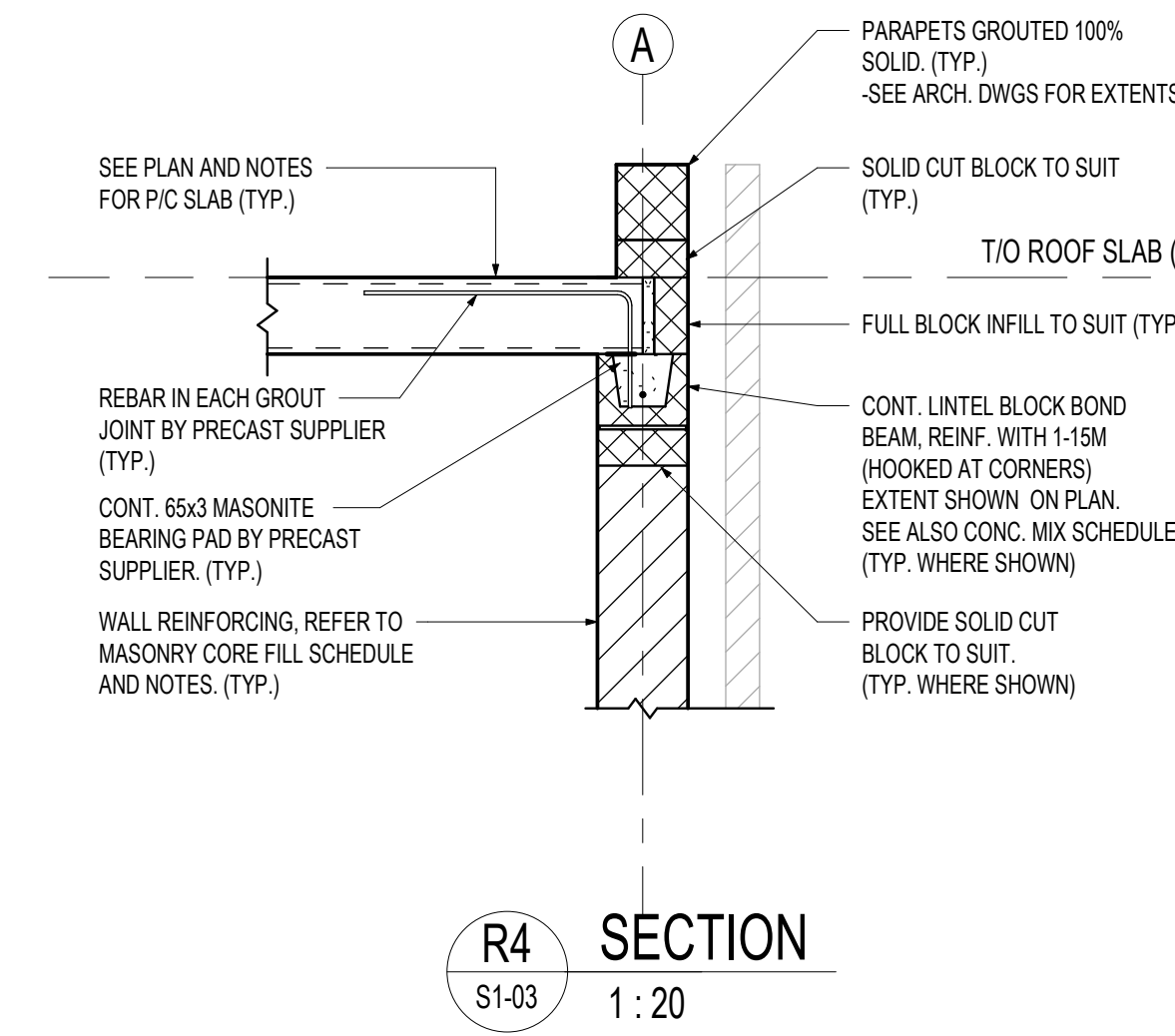
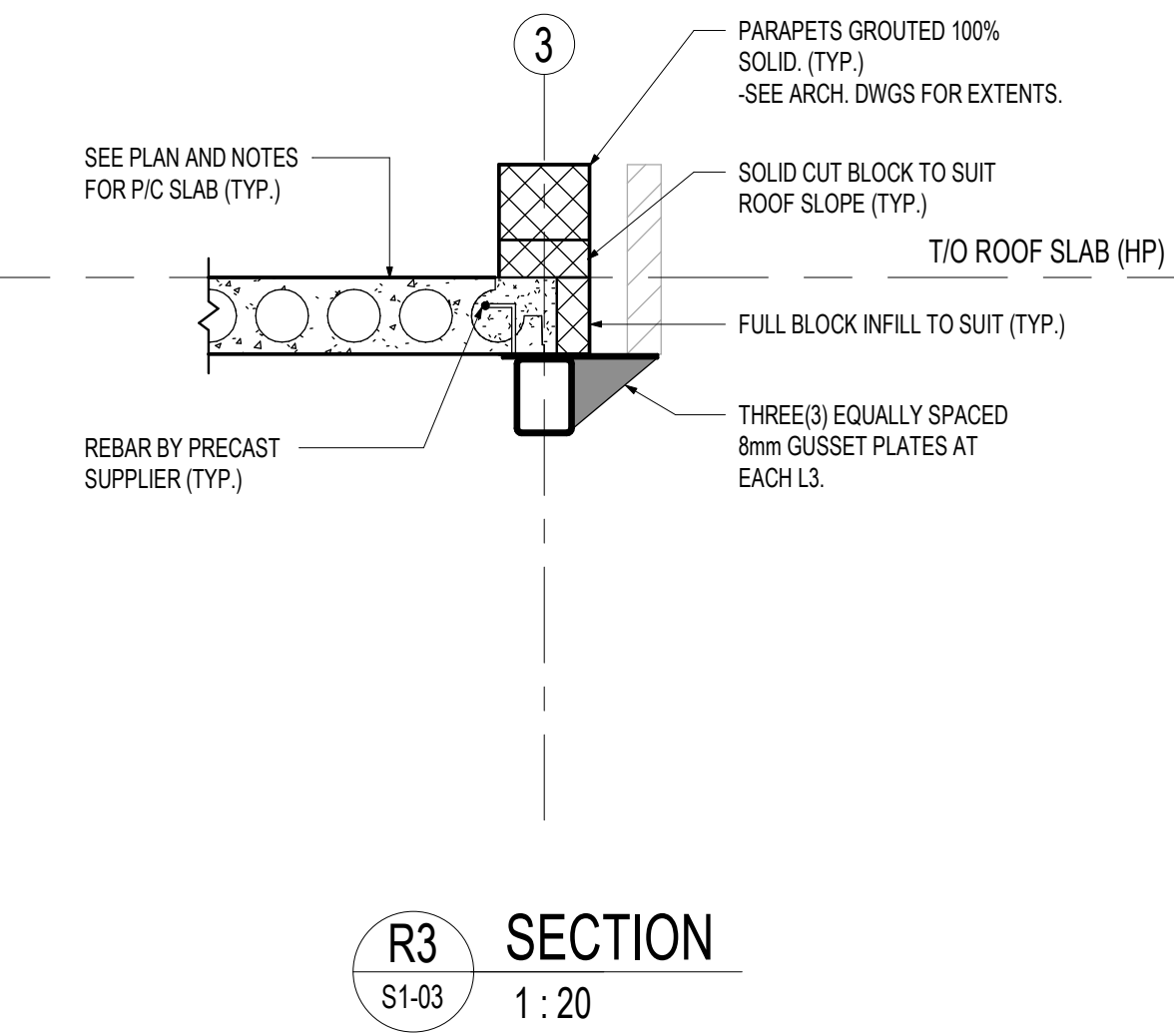
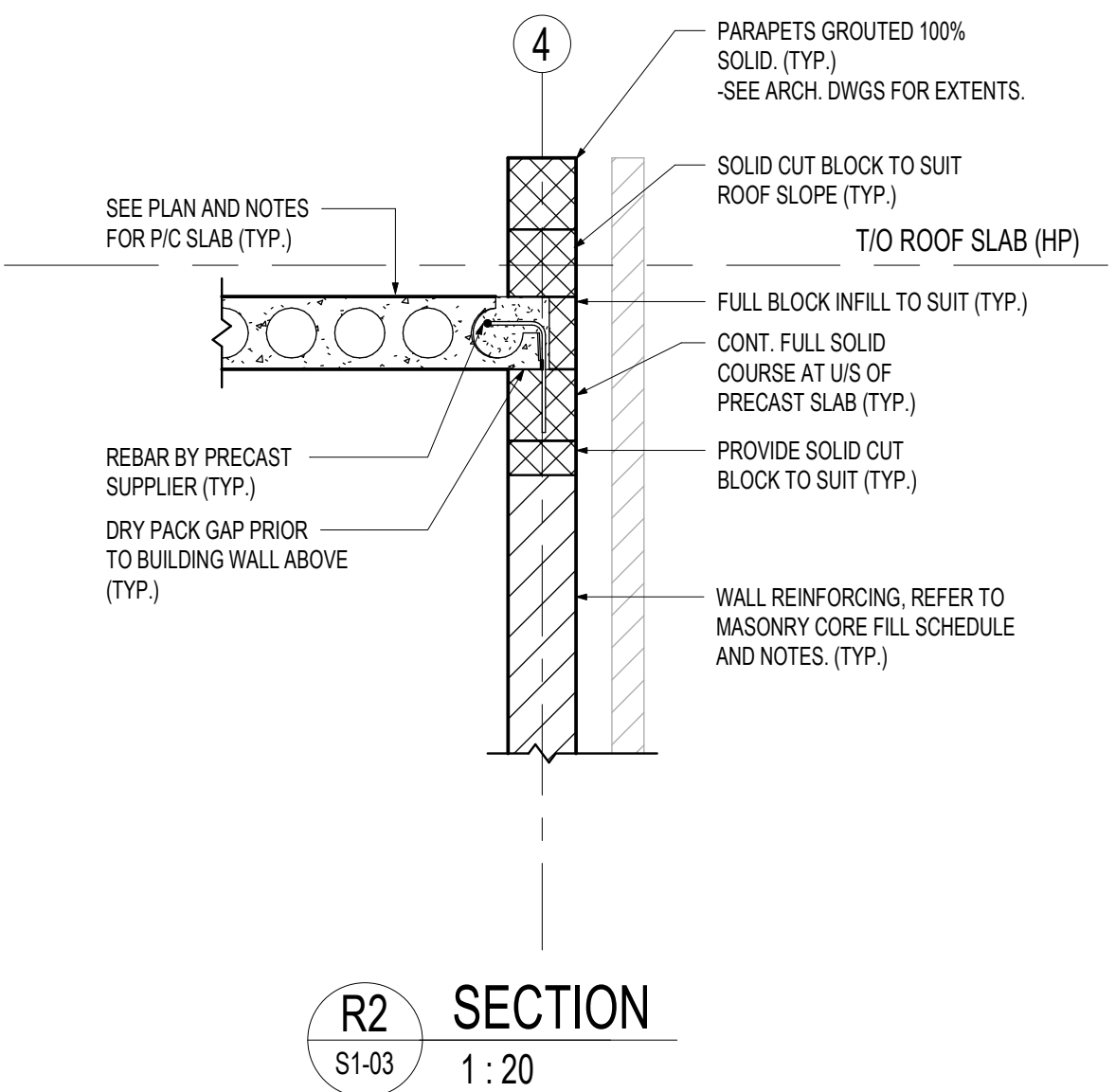
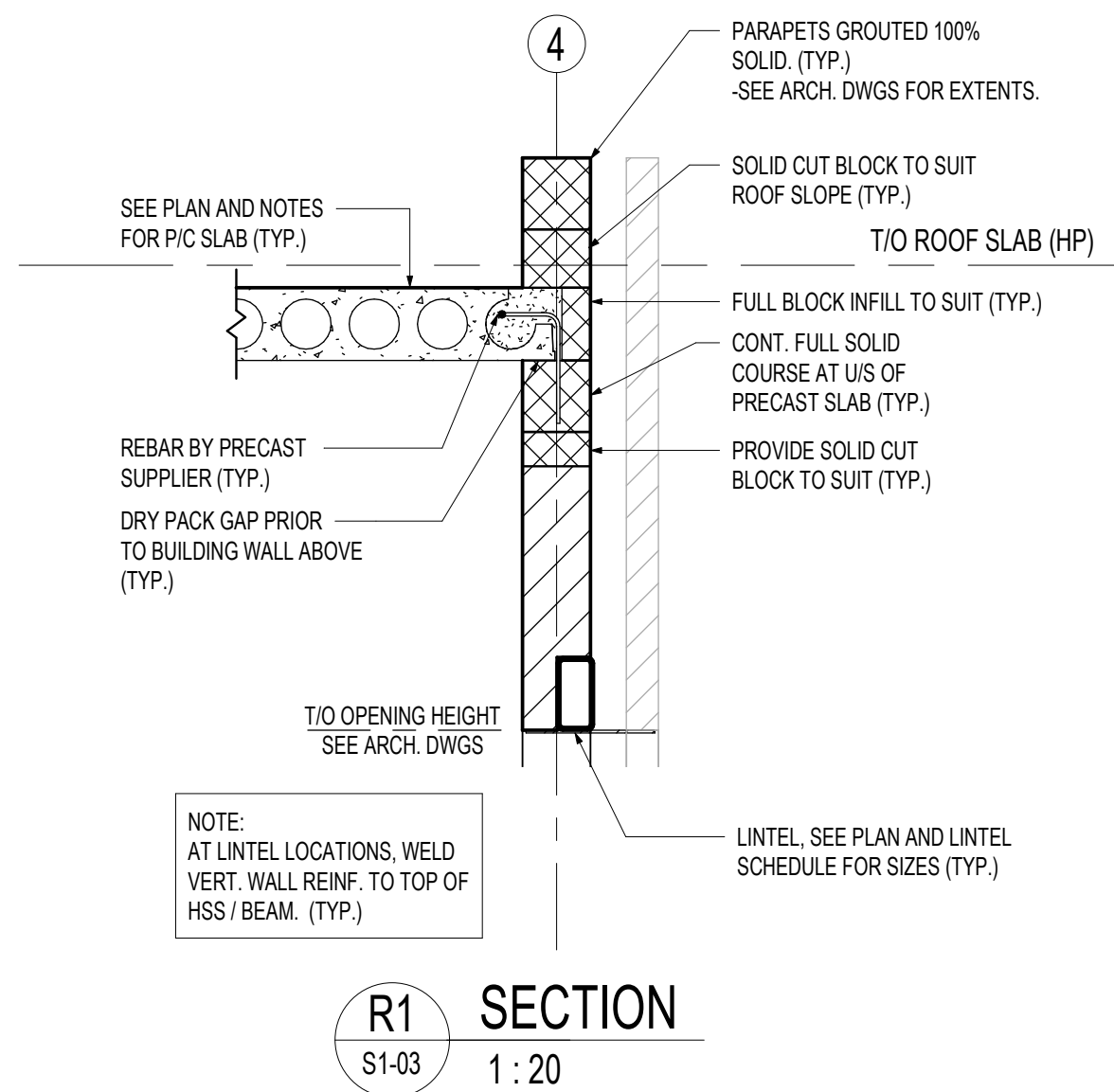


ÉEC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
SECOND FLOOR / LOW ROOF FRAMING PLAN

PROJECT NO: 20220316	SCALE: As indicated
DRAWN: AE	DRAWING NO. / REV. S1-02 / 5
CHECKED: JG	DATE: MARCH 2024



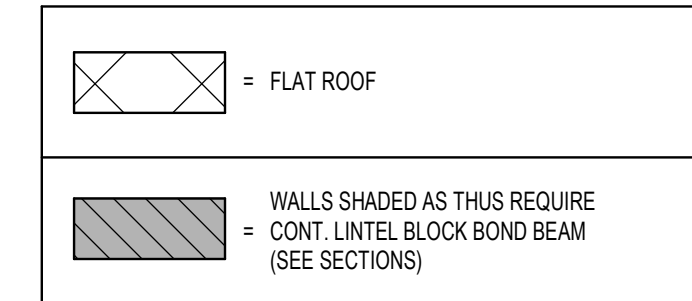
ROOF FRAMING PLAN
1:100

ROOF LOADING SCHEDULE		
LOADING	SUPERIMPOSED DEAD LOAD (kPa)	SNOW LOAD (kPa)
GENERAL ROOF	1.42	1.56

IN ADDITION TO UNIFORM LOADING SHOWN, REFER TO ROOF PLAN FOR ADDITIONAL LOADING FOR ACCUMULATED SNOW LOADS (ASL) AS SHOWN AND FOR POINT LOADS OF BRACINGS AND MECHANICAL EQUIPMENT.

NOTE: ROOFING ASPHALT AND GRAVEL RIGID INSULATION = 0.42 kPa HAS BEEN INCLUDED

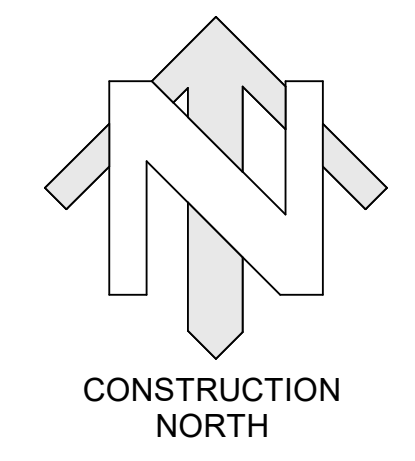
- TOP OF CONCRETE SLABS AND STEEL DECK IS TO BE SLOPED TO DRAIN AS SHOWN ON ARCHITECTURAL DRAWINGS.
- TOPS OF STEEL BEAMS TO BE AT UNDERSIDE OF PRECAST SLABS EXCEPT AS NOTED. (SLOPE AS REQUIRED.)
- PRECAST SLABS TO BE DESIGNED TO SUPPORT SPECIFIED DEAD AND SNOW LOADS.
- PRECAST SLABS SHALL HAVE A FIRE RATING OF 2-HOURS.
- LOCATION OF MECHANICAL EQUIPMENT AND MECHANICAL EQUIPMENT LOADS ARE TO BE CONFIRMED BY MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS. MECHANICAL EQUIPMENT AND PIPING MUST BE HUNG FROM OWSJ PANEL POINTS AND HANGER SPACING SHALL NOT EXCEED 3.0 m.
- SUBMIT DETAILS FOR ALL OPENINGS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS TO STRUCTURAL CONSULTANT FOR REVIEW.
- AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO INSPECT STRUCTURAL STEEL AND STEEL DECK IN THE SHOP AND IN THE FIELD FOR WELDING, CONNECTIONS, BOLT TORQUES AND GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS.
- NON-LOAD BEARING PARTITIONS SHALL BE A MINIMUM OF 25 mm CLEAR OF STRUCTURE.
- WALL PLATES (WP) SHALL HAVE LAST DIMENSION PARALLEL TO BEAM OR JOIST WEB. SEE SCHEDULE ON DRAWINGS.
- SEE LINTEL SCHEDULE AND WALL PLATE SCHEDULE ON S1-02.
- SEE TYPICAL NOTES, TYPICAL DETAILS, COLUMN AND FOOTING SCHEDULE AND ALL OTHER DRAWINGS.
- SEE SPECIFICATION FOR GRADE OF STRUCTURAL STEEL AND STEEL DECK.



NOTE: EXISTING CONDITIONS AS SHOWN ON THE STRUCTURAL DRAWINGS ARE BASED UPON INFORMATION AVAILABLE AT THE TIME THAT DRAWINGS WERE PREPARED AND ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE. ANY VARIATIONS ARE TO BE REPORTED AND INSTRUCTIONS RECEIVED BEFORE PROCEEDING.

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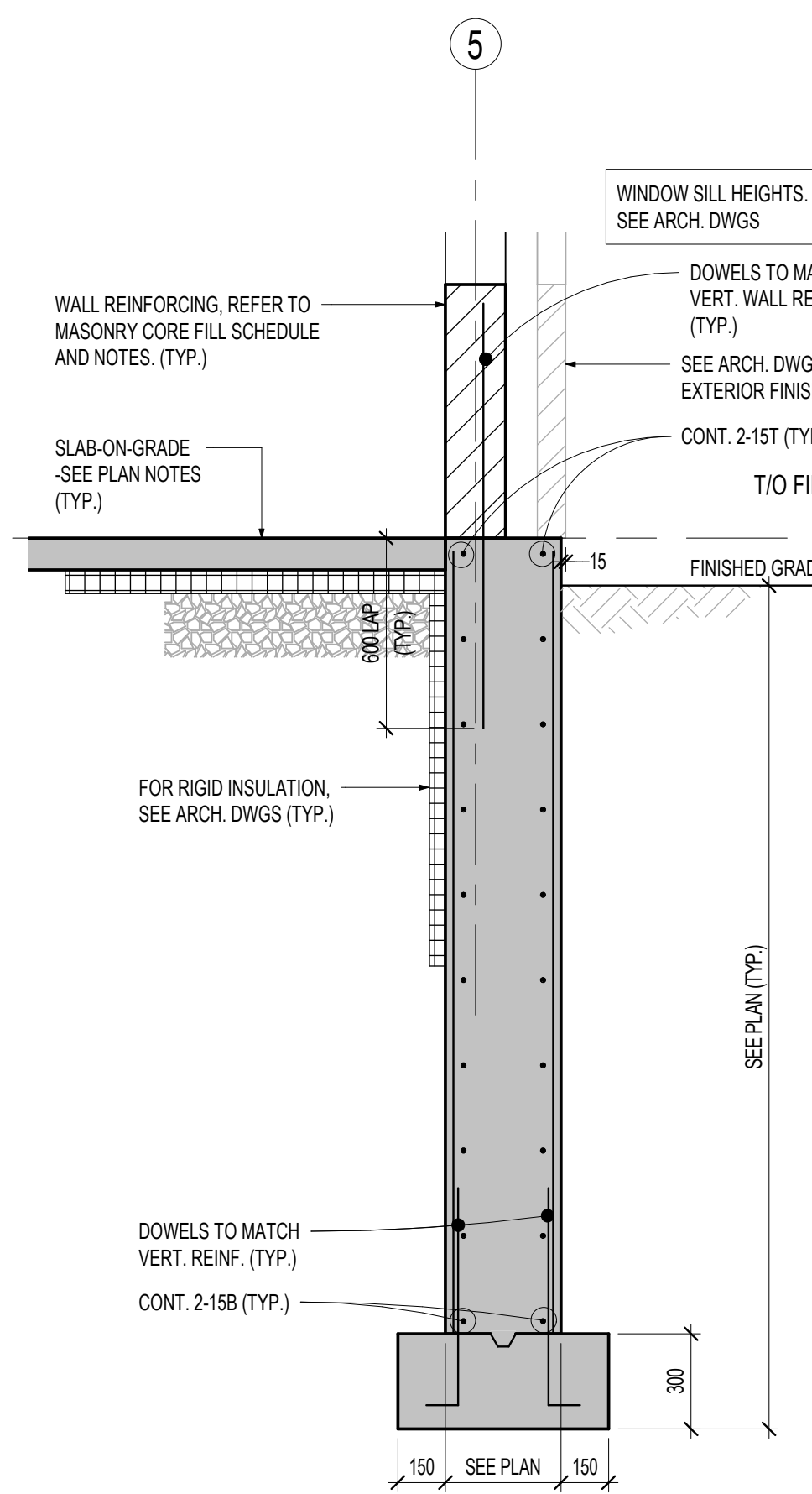


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Classrooms Addition

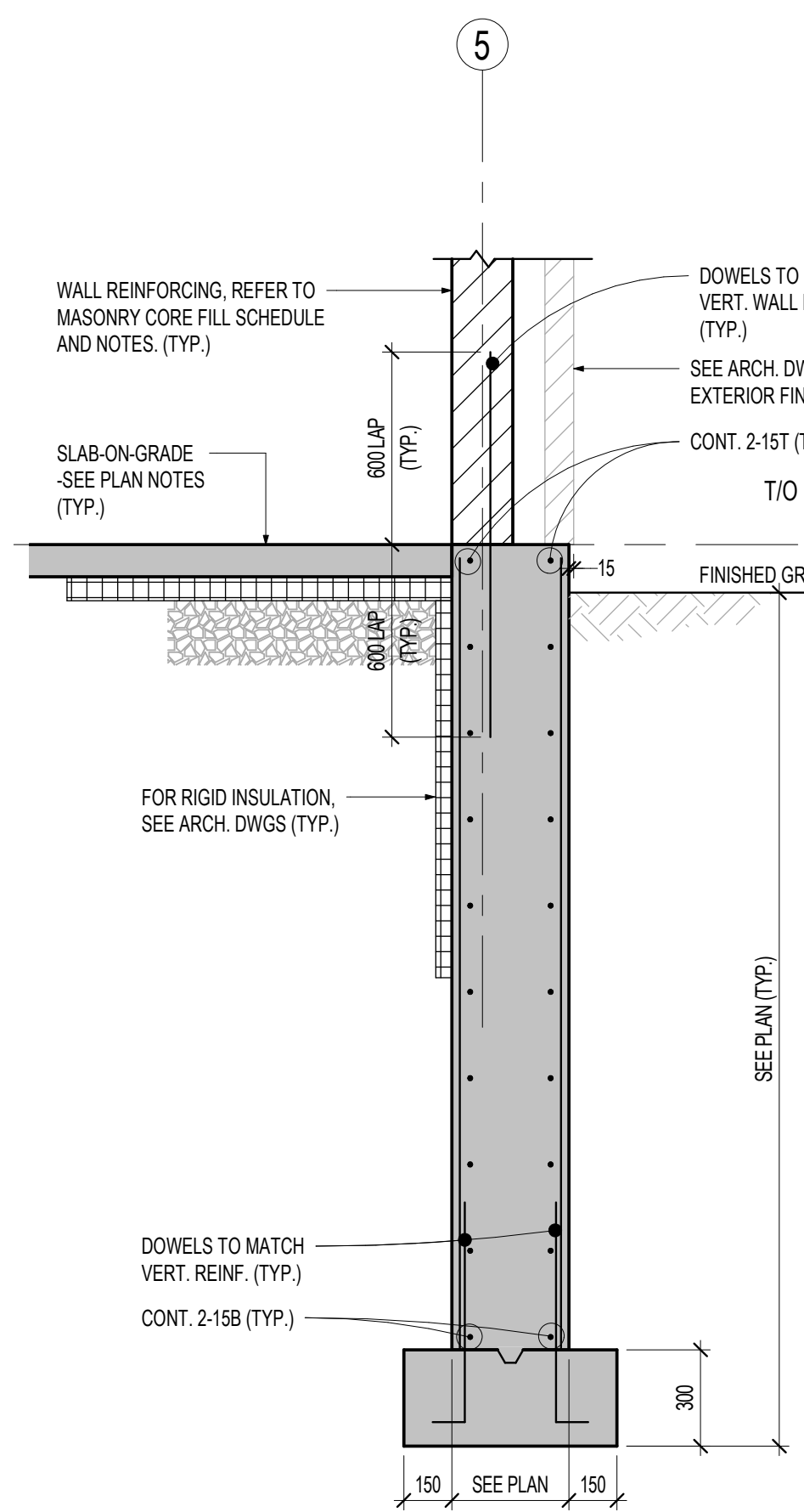
29 MEADOWVALE ROAD,
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DRAWING TITLE:
ROOF FRAMING PLAN AND
ROOF SECTIONS

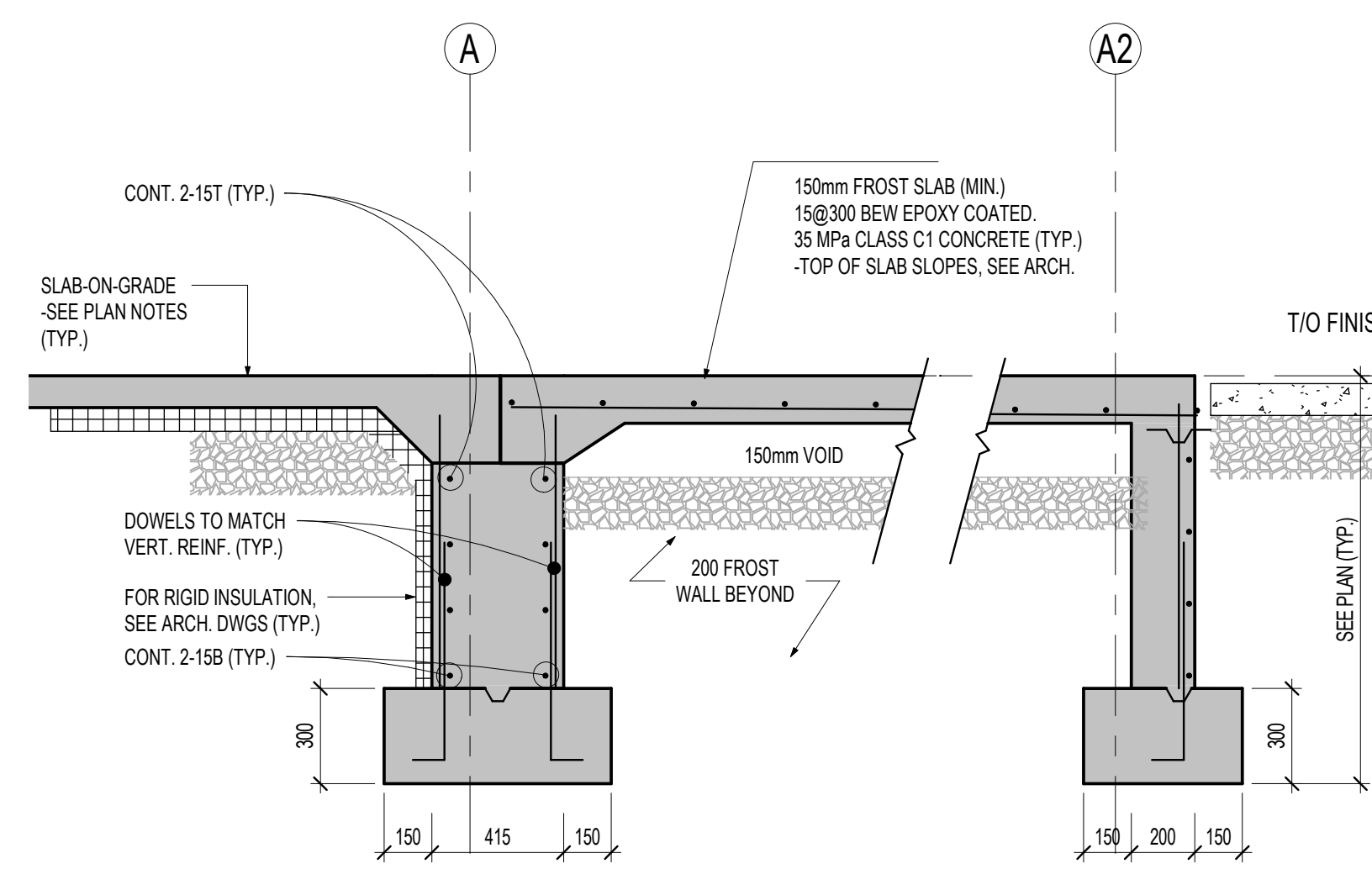
PROJECT NO: 20220316	SCALE: As indicated
DRAWN: AE	DRAWING NO. REV. S1-03 5
CHECKED: JG	DATE: MARCH 2024



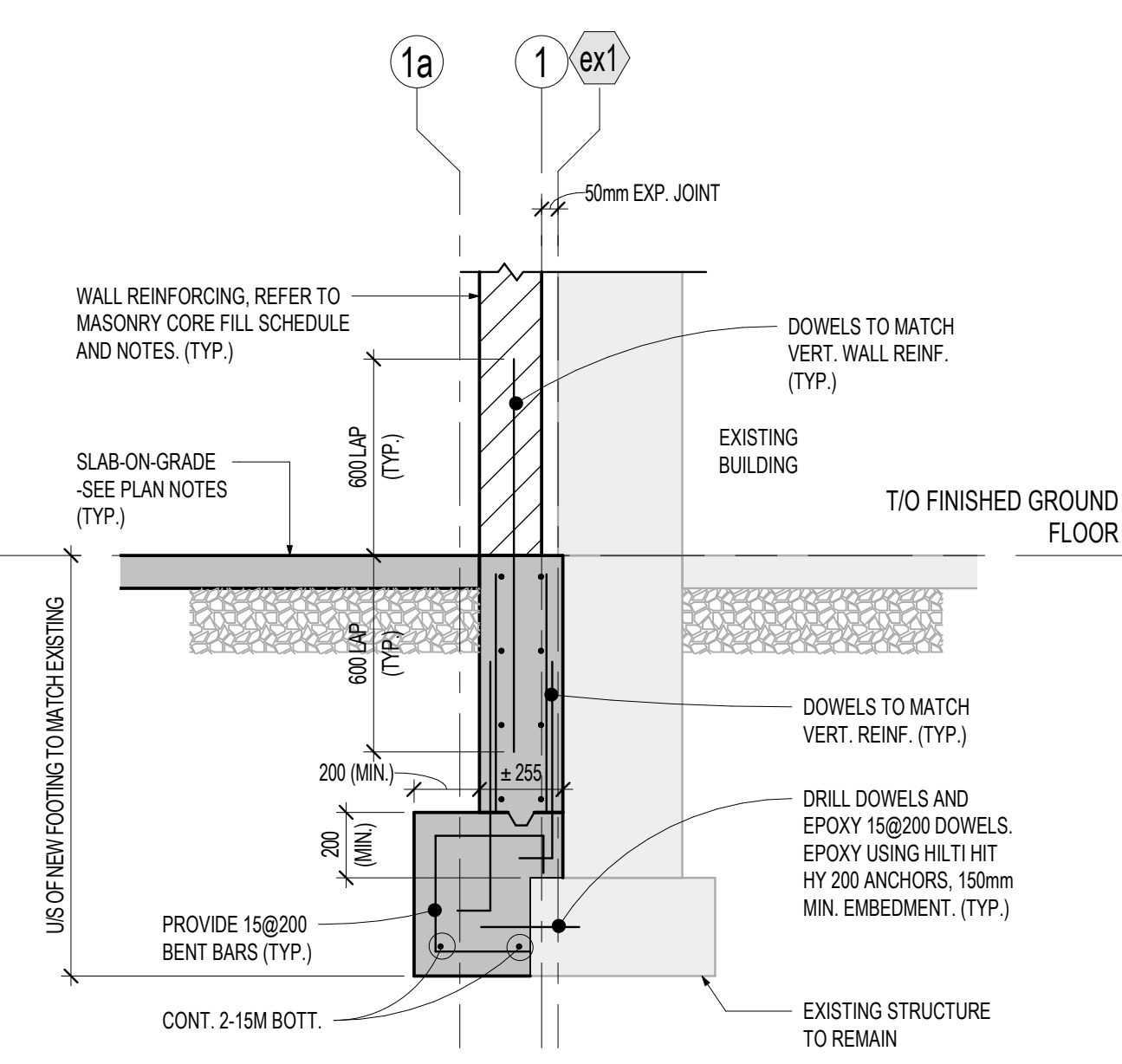
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S2-01 1:20



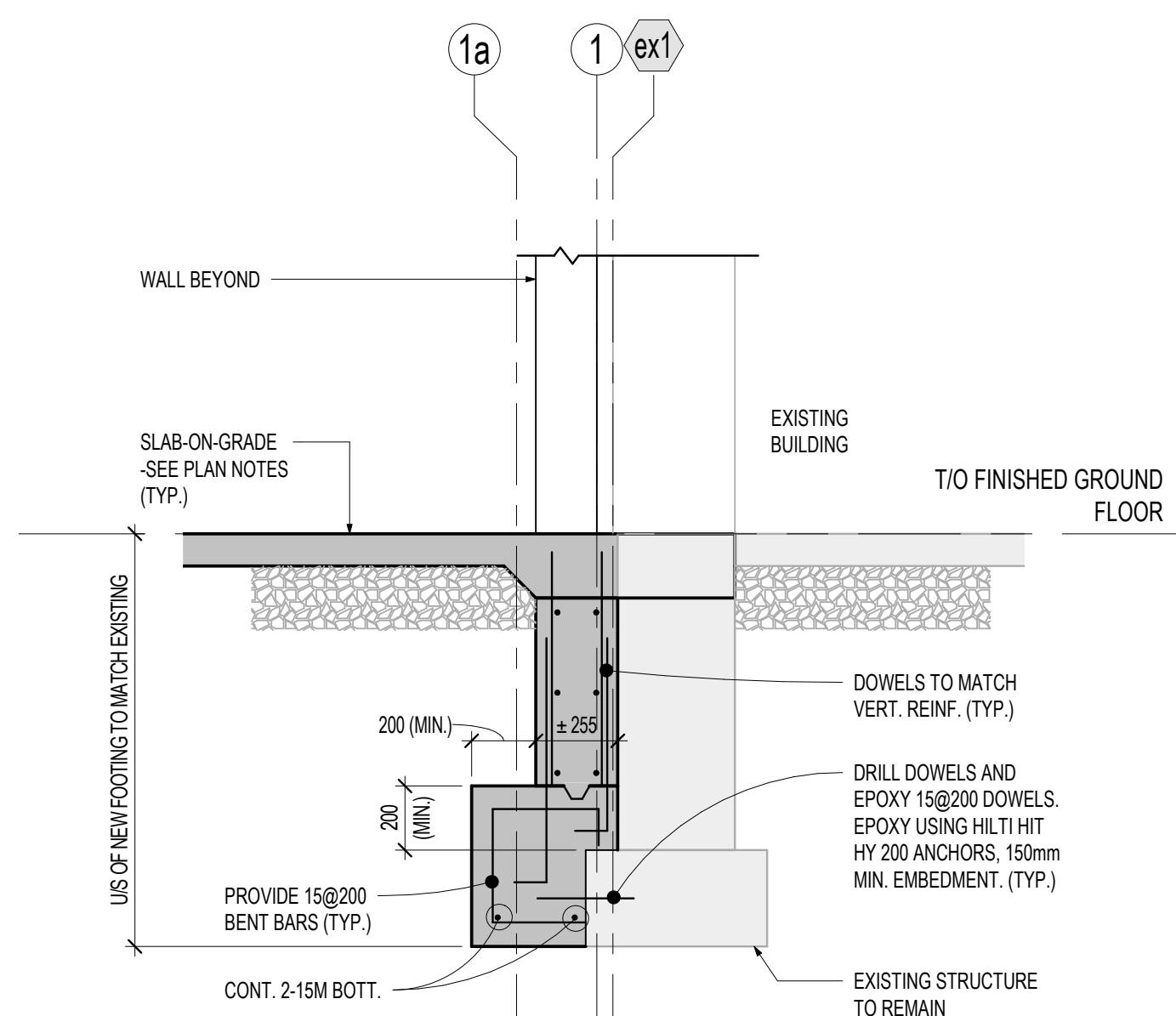
02 SECTION
S2-01 1:20



03 SECTION
S2-01 1:20



04 SECTION
S2-01 1:20



05 SECTION
S2-01 1:20

NOTE:
TYPICAL FOUNDATION WALL REINFORCING (UNLESS NOTED OTHERWISE ON SECTIONS OR SHEAR WALL ELEVATIONS)
10M @460 VEF
10M @320 HEF

FOR 190mm/200mm WALLS:
10M @320 VERT. CENTRE OF WALL
10M @200 HORIZ. CENTRE OF WALL

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		ISSUED/REVISION

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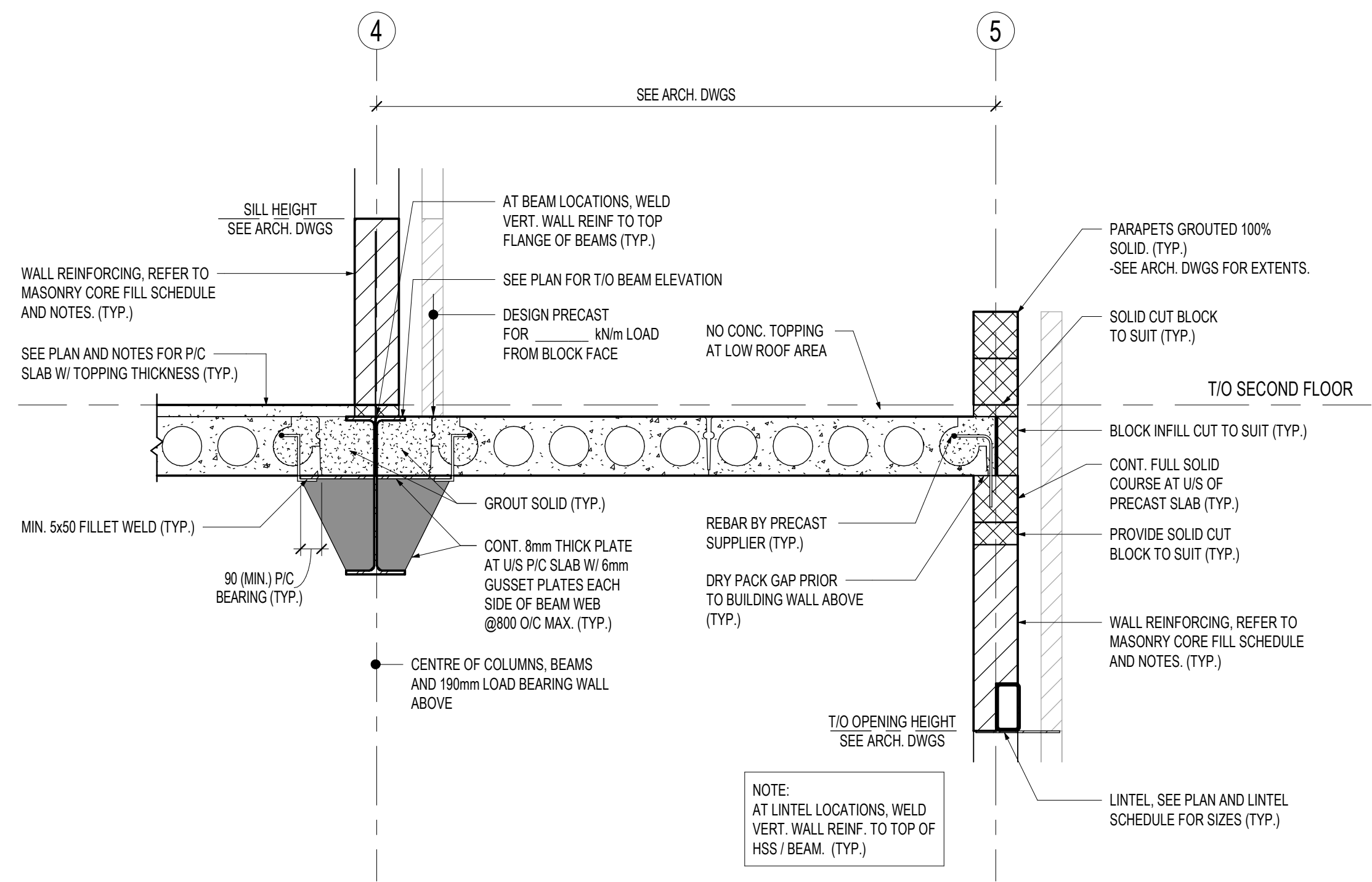


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CONSEIL SCOLAIRE CATHOLIQUE

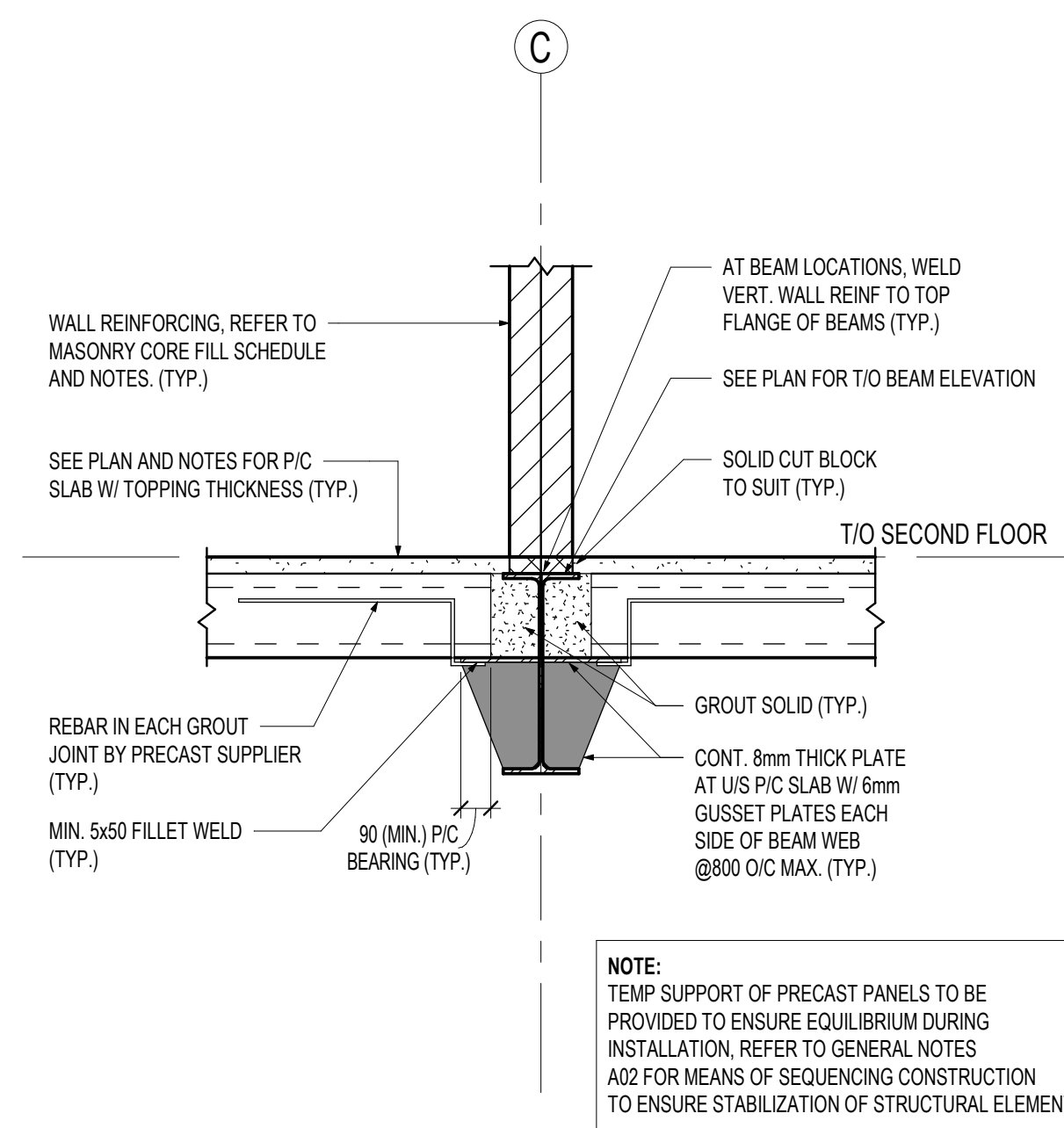
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DRAWING TITLE:
FOUNDATION SECTIONS

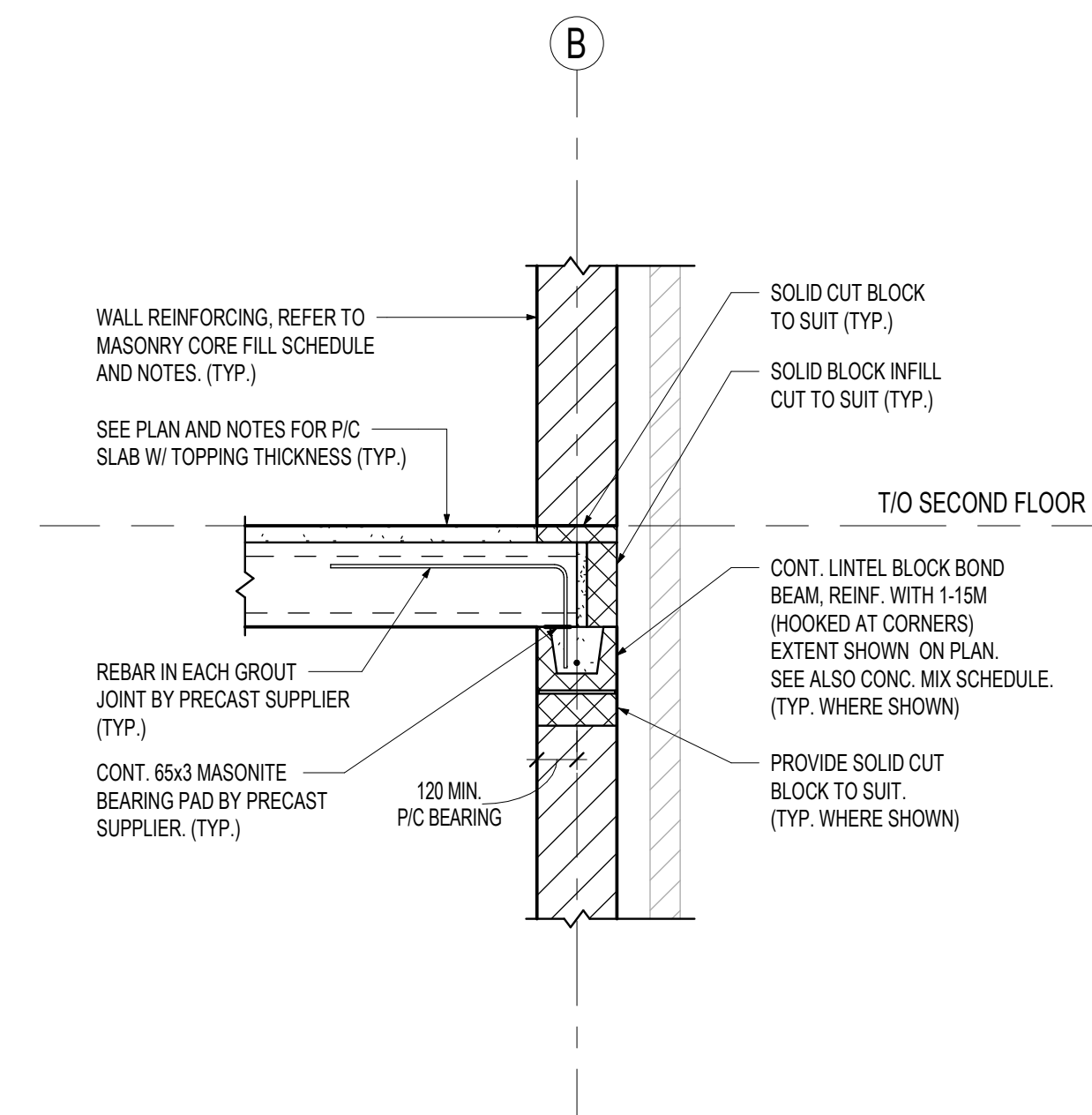
PROJECT NO:	20220316	SCALE:	As indicated
DRAWN:	AE	DRAWING NO.:	S2-01
CHECKED:	JG	REV.:	5
DATE:	MARCH 2024		



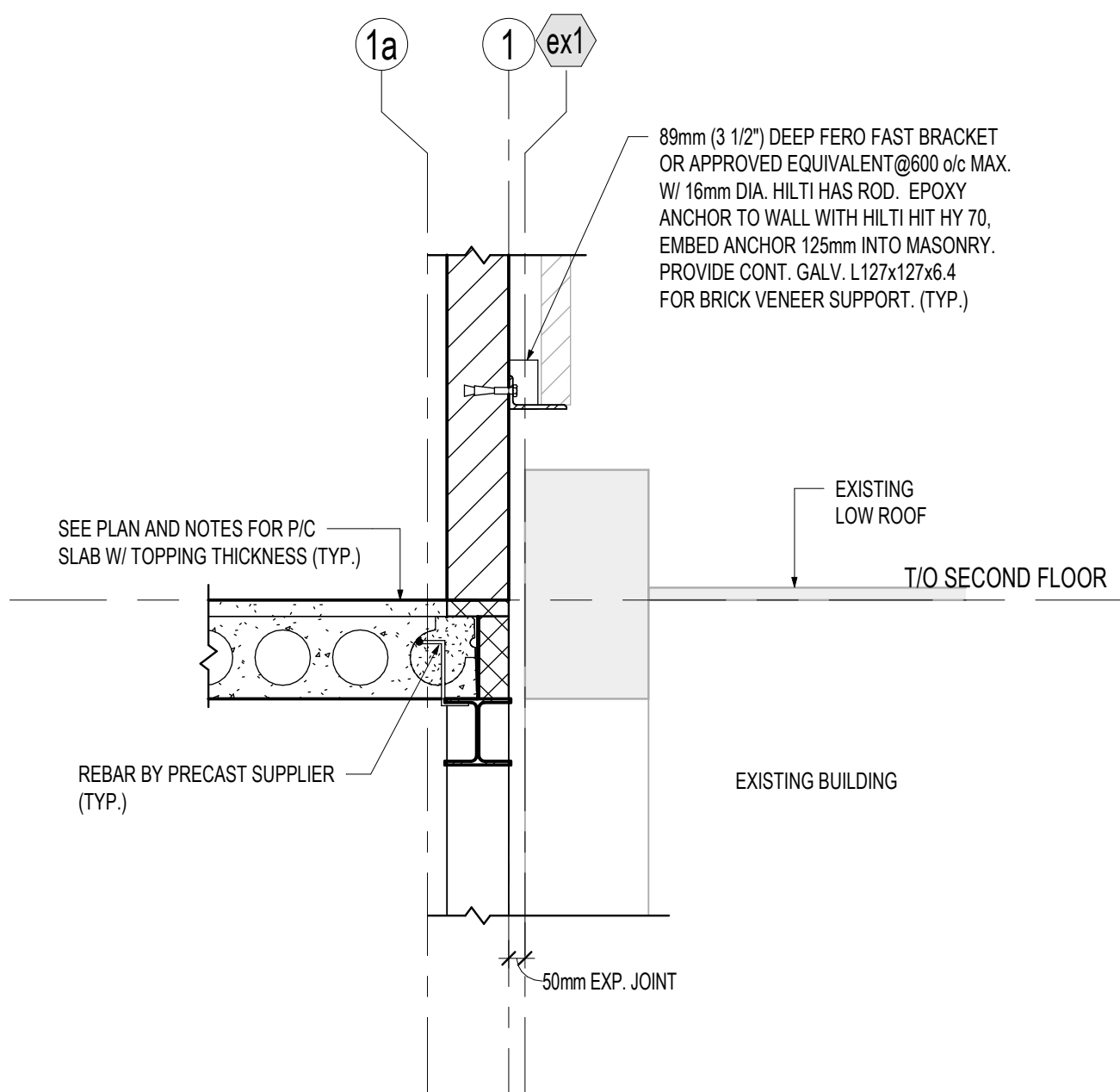
2A SECTION
S2-02 1:20



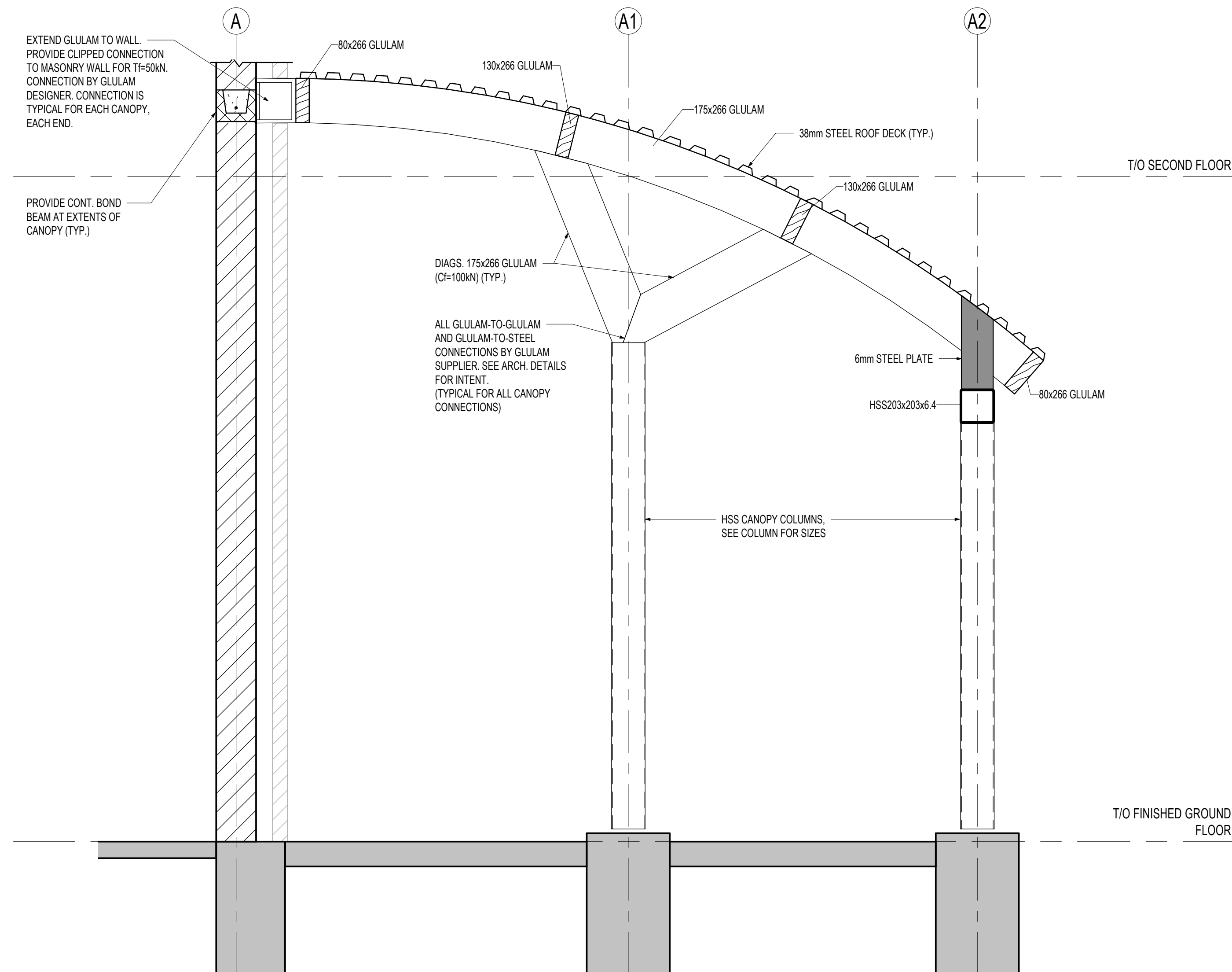
2B SECTION
S2-02 1:20



2C SECTION
S2-02 1:20



2D SECTION
S2-02 1:20



2E SECTION
S2-02 1:20

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5		ISSUED REVISION

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SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
SECOND FLOOR SECTIONS

PROJECT NO: 20220316	SCALE: 1:20
DRAWN: AE	DRAWING NO. / REV. S2-02 / 5
CHECKED: JG	DATE: MARCH 2024

STANDARD ABBREVIATIONS	A01	GENERAL NOTES	A02	CAST-IN-PLACE CONCRETE NOTES	A03.1	CAST-IN-PLACE CONCRETE NOTES	A03.2
<p>@ -At ADJ -Adjustable AFB -Asphalt Impregnated Fibre Board ALT -Allamale ARCH -Architectural A, ROD(A, R) -Anchor Rod ASL -Accumulated Snow Loading</p> <p>B (BOT) -Bottom BEW -Bottom Each Way BLOS -Building BL -Bottom Lower Layer BM -Beam BM/L -Bottom Middle Layer BNT -Base Nominal Thickness B.O.F. -Bottom of Footing BP -Baseplate BSMT -Basement BUL -Bottom Upper Layer</p> <p>C -Standard Channel CA -Camber Above CANT -Cantilever C/C (c/c) -Centre to Centre CJ -Control Joint CL -Centreline COL -Column COMP -Compressible CONC -Concrete CONST -Construction CONST JT (CJT) -Construction Joint CONT (CONTIN) -Continuous CW -Complete With</p> <p>D FR -Douglas Fir DET -Detail DIAG -Diagonal Ø (DIA) -Diameter DM -Dimension DJ -Double Joist DL -Dead Load DO -Ditto DWG -Drawing DWL -Down DTL -Double Tee</p> <p>E-W -East-West EA -Each EE -Each End EF -Each Face ELECT -Electrical ELEV (EL) -Elevator EQ -Equal ES -Each Side EW -Each Way EXIST -Existing EXP JT -Expansion Joint EXT -Exterior</p> <p>FDN -Foundation FF -Far Face FIN -Finished FL -Floor FMC -Full Moment Connection FT -Foot / Feet FTG -Footing</p> <p>GA -Gauge GALV -Galvanized GEN -General</p> <p>H (HOR) -Horizontal HEF -Horizontal Each Face HIF -Horizontal Inside Face HO -Horizontal Outside Face ARCH -Architectural HSS -Horizontally Slotted Connection HSSC -Hollow Structural Section</p> <p>IF -Inside Face INT -Interior INVT -Invert JT -Joint</p> <p>kg -Kilogram kN/m -Kilo Newton Metres kN/m² -Kilo Newton per Square Metre kN/m³ -Kilo Newton per Metre kPa -Kilo Pascals</p> <p>L -Angle LB -Pounds LG -Long LL -Line Load / Lower Layer LLH -Long Leg Horizontal LLV -Long Leg Vertical LSSJ -Long Span Steel Joists LVL -Laminated Veneer Lumber</p> <p>m -Metre MAX -Maximum MEDH -Mechanical MEZZ -Mezzanine MIN -Minimum MISC -Miscellaneous ML -Middle Layer MLL -Middle Lower Layer mm -Millimetre MS -Minimum MSP -Mega Pascals MUL -Middle Upper Layer</p> <p>N-S -North-South NE -Near Face NIC -Not in Contact No. (f) -Number NTS -Not to Scale</p> <p>OWS -Open Web Steel Joist</p> <p>Pa -Pascal PC -Precast PL -Plate PLF -Pounds per Lineal Foot PREL -Preliminary PROJ -Projection PSF -Pounds per Square Foot PSI -Pounds per Square Inch PT -Parallel Strand Lumber PSL -Pressure Treated</p> <p>R -Reaction RAD -Radius REF -Reference REIN^F -Reinforcing REQD -Required REV -Revision/Revised Rt -Factored Vertical Reaction RW -Reinforced With</p> <p>S -Standard Beam SDF -Step Down Footing SDL -Superimposed Dead Load SECT -Section SL -Slab SO -Square SOG -Slope on Grade S.P.F. -Spruce/Pine/Fir SPEC -Specifications ST -Steel STD -Standard STR -Straight STRUCT -Structural</p> <p>T -Top TEMP -Temperature TI -Factored Tension Force TJ -Tie Joist TLL -Top Lower Layer TLM -Top Lower Torsional Moment TML -Top Middle Layer TOP -Top of Deck T.O.F. -Top of Footing TOS, T/S -Top of Slab TOST -Top of Steel TSF -Tons per Square Foot TUL -Top Upper Layer TYP -Typical</p> <p>UL -Upper Layer UN -Unless Noted UN.O -Unless Noted Otherwise US -Upside USD -Underside of Deck</p> <p>V (VERT) -Vertical VPF -Vertically Braced Framing VPF -Vertical Each Face VIF -Vertical Inside Face VOF -Vertical Outside Face VSC -Vertically Slotted Connection</p> <p>W -Wide Flange Beam WLF -Welded Wide Flange Beam WWF (WWM) -Welded Wire Fabric Mesh</p>		<p>1. GENERAL 1.1. DESIGN AND CONSTRUCTION IS TO CONFORM TO THE REQUIREMENTS OF THE 2012 ONTARIO BUILDING CODE, AND ANY APPLICABLE REQUIREMENTS OR BY-LAW OF THE AUTHORITY HAVING JURISDICTION. REFER ALSO TO TYPICAL DETAILS, NOTES UNDER PLANS AND SCHEDULES ON THE STRUCTURAL DRAWINGS, AND TO THE SPECIFICATION, ALL CODES, MANUALS, STANDARDS AND SPECIFICATIONS REFERRED TO SHALL BE THE SPECIFIC DESIGN REFERENCED IN APPLICABLE BUILDING CODE INCLUDING ALL REVISIONS AND ADDENDA. ALL DIMENSIONS, OTHER THAN PURELY STRUCTURAL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE CHECKED AGAINST THE ARCHITECTURAL DRAWINGS AND ANY INCONSISTENCIES REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. STRUCTURAL DRAWINGS MUST NOT BE SCALED. 1.2. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF OPENINGS, TRENCHES, PITS, SLUMPS, EQUIPMENT, SLEEVES, DEPRESSIONS, GROOVES AND CHAMFERS NOT INDICATED ON THE STRUCTURAL DRAWINGS. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ABOVE ITEMS WHERE SHOWN ON THE STRUCTURAL DRAWINGS ARE INDICATED ONLY APPROXIMATELY AS TO SIZE AND LOCATION. 1.3. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, NO PROVISION HAS BEEN MADE IN THE DESIGN FOR CONDITIONS OCCURRING DURING CONSTRUCTION. THE CONTRACTOR IS TO PROVIDE ALL NECESSARY BRACING AND SHORING REQUIRED FOR STRESSES AND INSTABILITY OCCURRING FROM ANY CAUSE DURING CONSTRUCTION. THE CONTRACTOR SHALL ACCEPT FULL RESPONSIBILITY FOR ALL SUCH MEASURES. IT SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL NECESSARY BRACING, SHORING, SHEET PILING OR OTHER TEMPORARY SUPPORTS OF SAFEGUARD ALL EXISTING OR ADJACENT STRUCTURES AFFECTED BY THIS WORK. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR CONSULTANTS REVIEW.</p> <p>2. SHOP DRAWINGS, PLACING DIMENSIONS AND BAR LISTS 2.1. FOR ALL STRUCTURAL COMPONENTS SHOWN ON THE STRUCTURAL DRAWINGS, SUBMIT COPIES OF SHOP DRAWINGS AS DIRECTED FOR REVIEW BY THE STRUCTURAL CONSULTANT. SHOP DRAWINGS TO SHOW COMPLETE INFORMATION FOR THE FABRICATION AND ERECTION OF THE STRUCTURAL COMPONENTS. 2.2. REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL CONSULTANT IS ONLY TO ASSESS THAT THE SUBMITTED SHOP DRAWINGS REFLECT THE INTENT OF THE STRUCTURAL DESIGN. 2.3. REVIEW BY THE STRUCTURAL CONSULTANT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR SEEING THAT THE WORK IS COMPLETE, ACCURATE AND IN CONFORMITY WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS.</p> <p>3. INSPECTION AND TESTING 3.1. A SOLS CONSULTANT AND AN INDEPENDENT INSPECTION AND TESTING COMPANY ARE TO BE ENGAGED TO CARRY OUT THE FOLLOWING SERVICES 3.1.1. BEARING SOIL - REFER TO NOTES ON STRUCTURAL DRAWINGS AND ALSO TO THE SOIL REPORT. 3.1.2. FILL UNDER SLAB ON GRADE - CONFORM THAT FILL MATERIAL USED IS SATISFACTORY AND THAT THE REQUIRED DEGREE OF COMPACTION HAS BEEN ATTAINED. 3.1.3. CAST-IN-PLACE AND PRECAST CONCRETE - ROUTINE INSPECTION OF MATERIALS, INCLUDING SLUMP, CYLINDER AND AIR ENTRAINMENT TESTS AND REINFORCING ROD TESTS WHEN REQUIRED OR DIRECTED IN ACCORDANCE WITH CSA STANDARD A23.2. 3.1.4. THE PROJECT SUPERINTENDENT IS TO ADVISE THE STRUCTURAL CONSULTANT A MINIMUM OF 24 HOURS IN ADVANCE OF A CONCRETE POUR FOR A REVIEW OF PREPARATIONS. 3.1.5. STRUCTURAL STEEL AND OWSJ - ROUTINE SHOP AND FIELD INSPECTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS CSA S16. 3.1.6. STEEL DECK - SEE STEEL DECK NOTES. 3.1.7. MASONRY - WHEN REQUIRED OR DIRECTED, CONCRETE BLOCKS SHALL BE TESTED IN ACCORDANCE WITH ASTM C140 BRICKS IN ACCORDANCE WITH CAN/CSA A82 AND MORTAR AND/OR GROUT IN ACCORDANCE WITH CSA A179. 3.2. ALL INSPECTION AND TESTING SERVICES ARE TO BE PERFORMED BY COMPANIES CERTIFIED BY THE CANADIAN STANDARDS ASSOCIATION AND FOR WELDING, INSPECTORS ARE TO BE CERTIFIED BY THE CANADIAN WELDING BUREAU.</p> <p>4. FOUNDATIONS 4.1. REFER TO NOTES UNDER FOUNDATION PLANS, ALL EXTERIOR FOOTINGS OR OTHER FOOTINGS EXPOSED TO FREEZING IN THE FINISHED BUILDING SHALL BE FOUND AT A MINIMUM OF 1200mm (4'-0") BELOW FINISHED GRADE, UNLESS OTHERWISE NOTED. FOOTINGS EXPOSED TO FROST ACTION DURING CONSTRUCTION SHALL BE PROTECTED BY A MINIMUM OF 1200mm (4'-0") OF EARTH OR ITS EQUIVALENT SUFFICIENT TO PREVENT FREEZING. 4.2. THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS FOR FOOTINGS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10, MAXIMUM STEP APPROX. 600mm (2'-0"). 4.3. PIER DEPTHS AND FOOTING ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE BASED UPON INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THE STRUCTURAL DRAWINGS. 4.4. IF ACTUAL JOB SITE OR SOIL CONDITIONS VARY FROM THOSE ASSUMED, THEN WRITTEN DIRECTIONS MUST BE OBTAINED FROM THE STRUCTURAL CONSULTANT BEFORE PROCEEDING WITH THE WORK. 4.5. KEEP EXCAVATIONS CONTINUOUSLY DRY BEFORE CONCRETE IS PLACED. IF THE SOIL IS SOFTENED BY WATER, THE EXCAVATION SHALL BE EXTENDED BELOW THE SOFTENED MATERIAL AND THE BOTTOM OF THE FOOTINGS LOWERED TO SUIT.</p> <p>5. BACKFILLING AND COMPACTION 5.1. SLABS ON-GRADE AND ALL STRUCTURAL ELEMENTS FRAMING INTO WALLS WHICH RETAIN EARTH MUST BE IN PLACE BEFORE BACKFILLING. 5.2. AT FOUNDATION WALLS WITH GRADE BOTH SIDES, UNLESS ADEQUATELY SHORED, BACKFILL AND COMPACT EACH SIDE OF WALL SIMULTANEOUSLY. 5.3. UNDER SLAB ON-GRADE, REMOVE SOFT SPOTS, ORGANIC AND FOREIGN MATTER IN THE SUB-GRADE, (WHERE SUB-GRADE CONSISTS OF COMPACTED FILL, REFER TO SPECIFIC NOTES ON THE DRAWINGS). 5.4. BACKFILL UNDER SLAB ON-GRADE, IN FOOTING EXCAVATIONS AND IN TRENCHES ONLY WITH APPROVED MATERIAL, UNLESS SPECIFICALLY NOTED OTHERWISE. BACKFILLING SHALL BE CARRIED OUT IN MAXIMUM OF 200mm (8") THICK LIFTS OF LOOSE FILL EACH COMPACTED TO A MINIMUM OF 96% STANDARD PROCTOR MAXIMUM DRY DENSITY. 5.5. UNLESS OTHERWISE NOTED IN GEOTECHNICAL REPORT, PROVIDE IMMEDIATELY UNDER SLABS ON-GRADE A MINIMUM OF 200mm (8") OF COMPACTED (MTC) GRANULAR B² MATERIAL, COMPACTION TO ACHIEVE A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY.</p>		<p>1. GENERAL 1.1. PROVIDE ALL LABOUR, MATERIALS, TOOLS AND EQUIPMENT REQUIRED TO CARRY OUT THE WORK. 1.2. REFER ALSO TO GENERAL NOTES, NOTES UNDER PLANS AND SCHEDULES, TYPICAL DETAILS AND SPECIFICATION.</p> <p>2. PRODUCTS 2.1. PORTLAND CEMENT, WATER AND AGGREGATES SHALL CONFORM TO CSA STANDARD A23.1. 2.2. PROVIDE AN APPROVED WATER REDUCING ADDITIVE IN ALL CONCRETE. PROVIDE AN APPROVED AIR ENTRAINING ADDITIVE IN ALL CONCRETE WHICH WILL BE EXPOSED TO A FREEZE/THAW CYCLE AND/OR THE ACTION OF DE-ICING SALT. ADMIXTURES SHALL CONFORM TO CSA STANDARD A23.1. 2.3. FORMWORK SHALL CONFORM TO CSA STANDARD A23.1 AND CSA STANDARD S269.1 AND FALSEWORK SHALL CONFORM TO CSA S269.1. IF SO INSTRUCTED, THE DESIGNS FOR THE FORMWORK SHALL BE SUBMITTED FOR REVIEW BEFORE CONSTRUCTION. FORMWORK DRAWINGS AND DESIGN SHALL BEAR THE STAMP OF A LICENSED PROFESSIONAL ENGINEER. 2.4. PROVIDE SLAB AND BEAM FORMS WITH AN UPWARD CAMBER AS INDICATED ON PLANS THUS WHERE CAMBERS ARE NOT NOTED ON PLANS, CAMBER SLABS AND BEAMS FOR SPAN/50 AT INTERIOR BAYS, AND CANTILEVER LENGTH/250 AT CANTILEVER. CAMBER SHOULD BE THE UNDERSIDE AND TOP OF CONCRETE IN A PARABOLIC PROFILE, WHILE MAINTAINING THE INDICATED STRUCTURAL THICKNESS OF MEMBERS. 2.5. PROVIDE STANDARD ADJUSTABLE MASONRY ANCHOR SLOTS FOR ALL MASONRY FACING OR ABUTTING CONCRETE FACES. 2.6. PROVIDE AND/OR INSTALL STANDARD ADJUSTABLE INSERTS AND ALL OTHER CAST-IN INSERTS AS REQUIRED BY THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATION. 2.7. REINFORCING STEEL UNLESS SPECIFICALLY NOTED, SHALL BE FOLDING BARS CONFORMING TO CAN/CSA - G30.18M GRADE 400 (S8000 PSI). WELDED WIRE FABRIC TO BE SUPPLIED IN FLAT SHEETS ONLY, UNLESS APPROVED OTHERWISE. 2.8. REINFORCING SHALL BE DETAILED, BENT, PLACED AND SUPPORTED TO CONFORM TO A23.1 DETAILING MANUAL AND THE MANUAL OF STANDARD PRACTICE PUBLISHED BY THE INSTITUTE OF CANADA. 2.9. DRY-PAK GROUT TO BE 1 PART PORTLAND CEMENT TO 1 1/2 PARTS SAND TO 2 PARTS OF 8 mm PEA GRAVEL WITH ONLY SUFFICIENT WATER TO DAMPEN MIXTURE. COMPRESSIVE STRENGTH 50MPa AT 28 DAYS. 2.10. NON-SHRINK GROUT TO BE AN APPROVED PRE-MIXED PROPRIETARY PRODUCT. 2.11. PROVIDE APPROVED EXTRUDED PVC WATERSTOPS OF SIZE AND STYLE INDICATED, WITH PRE-WELDED CORNERS AND INTERSECTIONS. SEE ALSO TYPICAL DETAILS. 2.12. CURING AND SEALING COMPOUNDS WHERE APPROVED FOR USE TO CONFORM TO ASTM STANDARD C309. GENERALLY ALL CONCRETE SURFACES ARE TO BE SEALED UNLESS NOTED OTHERWISE. COMPOUNDS ARE TO BE COMPATIBLE WITH APPLIED FINISHES. 2.13. SHEAR REINFORCEMENT AT SLAB CONNECTION AS SHOWN ON DRAWINGS AND DETAILS, SHALL BE STURDIALSB AS MANUFACTURED BY DECON®. THE COMPLETE AND FINISHED STURDIALSB SHALL BE ICC ES EVALUATED AND WELDING SHALL TAKE PLACE IN A ICC ES APPROVED AND AUDITED FACILITY. STURDIALSB SHALL CONFORM TO THE LATEST UPDATE OF ASTM A1044.</p> <p>3. EXECUTION 3.1. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE @ 28 DAYS SHALL BE AS NOTED ON THE DRAWINGS (20MPa MINIMUM). 3.2. SLUMP AT THE POINT OF DISCHARGE SHALL BE CONSISTENT AT 80 mm ±30mm (3" ± 1 1/8") UNLESS NOTED OTHERWISE. GREATER SLUMPS ARE NOT ACCEPTABLE. 3.3. CONCRETE MIXING, TRANSPORTATION, HANDLING AND PLACING SHALL CONFORM TO CSA STANDARD A23.1. 3.4. CONSTRUCTION JOINTS FOR WALLS ARE BASED UPON VERTICAL JOINTS AT A MAXIMUM SPACING OF 1000mm (3'-0") UNLESS CONTROL JOINTS ARE PROVIDED AS PER DETAIL C7W2. TOTAL LENGTH OF FOUR TO BE DISCUSSED WITH ENGINEER PRIOR TO PROCEEDING. 3.5. CONSTRUCTION JOINTS FOR WALLS, SLABS, AND BEAMS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE CONSTRUCTION. GENERALLY JOINTS IN SLABS SHALL BE AT RIGHT ANGLES TO THE SPANS, AT MID-SPAN IF POSSIBLE AND CLEAR OF SUPPORTS AND POINT LOADS. 3.6. INSERTS, FRAME-OUTS, SLEEVES, BRACKETS, CONDUITS AND FASTENING DEVICES, SHALL BE INSTALLED AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS IN A MANNER THAT SHALL NOT IMPAIR THE STRUCTURAL STRENGTH OF THE SYSTEM. BE SO INSTALLED THAT THE SHALL NOT REQUIRE THE CUTTING, BENDING, OR DISPLACEMENT OF THE REINFORCING OTHER THAN AS SHOWN ON THE TYPICAL DETAILS. 3.7. ELECTRICAL CONDUIT SHALL NOT PASS THROUGH A COLUMN, SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 SLAB THICKNESS OR WALL OR BEAM IN WHICH IT IS EMBEDDED, SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTRE UNLESS APPROVED AND HAVE A MINIMUM CONCRETE COVER OF 25 mm (1") AND UNLESS SPECIFICALLY PERMITTED OTHERWISE, SHALL NOT RUN HORIZONTALLY IN A CONCRETE WALL. 3.8. OPENINGS AND DRIVEN FASTENERS REQUIRED IN THE CONCRETE AFTER THE CONCRETE IS PLACED SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE PROCEEDING. 3.9. FINISHING, REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED FINISH TO EXPOSED CONCRETE. ALL HONEYCOMBING SHALL BE CUT OUT AND FILLED. FLOOR FINISHES SHALL BE AS REQUIRED BY THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND SHALL CONFORM TO CSA STANDARD A23.1. 3.10. TOLERANCES FOR PLACING STRUCTURAL CONCRETE, REINFORCING STEEL, CAST-IN HARDWARE AND FOR FLOOR AND ROOF FINISHES SHALL BE AS SPECIFIED IN CSA STANDARD A23.1. 3.11. MINIMUM REINFORCING FOR ANY CONCRETE WALL TO BE AS SHOWN ON TYPICAL DETAIL FOR CONCRETE WALLS. 3.12. MINIMUM REINFORCING FOR ANY SUSPENDED SLAB SHALL BE TEMPERATURE BARS BOTTOM EACH WAY PLUS 10M @ 400 (16#) DOWELS 600x600 (2'-0" x 2'-0") TOP AROUND PERIMETER. REFER TO TYPICAL DETAIL OF ONE WAY SLABS. 3.13. PERFORM SURVEYS OF SLABS AS INDICATED IN SPECIFICATIONS.</p>	<p>3.14. GENERAL REQUIREMENTS FOR CUTTING AND DRILLING INTO CONCRETE (A) DO NOT DRILL INTO CORE THROUGH, SAW-CUT OR CHIP THE CONCRETE STRUCTURE WITHOUT WRITTEN AUTHORIZATION BY THE STRUCTURAL CONSULTANT. (B) UNLESS NOTED OTHERWISE, PRIOR TO CUTTING, CORING OR DRILLING INTO THE CONCRETE STRUCTURE, LOCATE EXISTING CONCRETE REINFORCEMENT AND EMBEDDED SERVICES AT THAT LOCATION USING SUITABLE SCANNING DEVICE (I.E. X-RAYS, GROUND PENETRATION RADAR (GPR), LOCAL CHIPPING OF SLAB - ONLY WHERE APPROVED BY THE STRUCTURAL CONSULTANT, ETC.) AS AUTHORIZED BY PROPERTY MANAGER IF APPLICABLE. (C) GPR SCANNING MUST BE DONE BY TRAINED TECHNICIANS WITH AT LEAST 5 YEARS OF EXPERIENCE AS SUCH. (D) GPR SCANNING DEVICES MUST BE CAPABLE OF ACCURATELY LOCATING REBAR IN A CONCRETE SLAB TO A MINIMUM DEPTH OF 300 mm, THIN A HORIZONTAL TOLERANCE OF ± 25 mm AND A VERTICAL (DEPTH) TOLERANCE OF THE LARGER OF ± 25 mm OR ± 15% OF THE REBAR DEPTH. (E) AFTER ALL THE EXISTING REINFORCEMENT AND SERVICES HAVE BEEN LOCATED, NOTIFY THE STRUCTURAL CONSULTANT, WHO WILL REVIEW AND APPROVE THE PROPOSED LOCATION OF OPENINGS, CORES OR DRILLED HOLES. MAKE ANY NECESSARY ADJUSTMENTS TO THE HOLE LOCATIONS AS DIRECTED BY THE STRUCTURAL CONSULTANT. (F) THE REVIEW BY THE STRUCTURAL CONSULTANT IS LIMITED ONLY TO THE LOCATION OF THE PROPOSED CORES OR DRILLED HOLES THROUGH THE EXISTING STRUCTURE AND IT IS BASED ON THE ASSUMPTION THAT THE X-RAY OR SCAN RESULTS LOCATING SLAB REINFORCEMENT AND EMBEDDED SERVICES ARE COMPLETE AND ACCURATE. STEPHENSON ENGINEERING LTD. TAKES NO RESPONSIBILITY FOR THE ACCURACY OF THE X-RAY OR SCAN RESULTS. (G) CORE DRILL NEW HOLES FOR PIPES TO A DIAMETER NOT LARGER THAN THE OUTSIDE PIPE DIAMETER PLUS 25MM. DO NOT CUT EXISTING REINFORCEMENT OR SERVICES WITHOUT PRIOR APPROVAL OF THE CONSULTANT. (H) WHERE RECTANGULAR OPENINGS ARE TO BE CUT, PRE-DRILL THE CORNERS USING A 100 MM DIAMETER CORE DRILL OR DRILL A SERIES OF HOLES TO PREVENT OVER CUTTING OF THE CORNERS.</p> <p>4. QUALITY CONTROL 4.1. FOR INSPECTION AND TESTING, SEE GENERAL NOTES AND/OR SPECIFICATION.</p>		

STRUCTURAL STEEL NOTES	A04A	LOAD BEARING MASONRY NOTES	A06	LOAD BEARING MASONRY NOTES	A06	ALTERATIONS AND / OR CONNECTIONS TO EXISTING STRUCTURE	A15
<p>1. GENERAL 1.1. STRUCTURAL STEEL DESIGN DETAILS AND CONNECTIONS SHALL CONFORM TO CSA STANDARD S16 AND SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER EXPERIENCED IN THIS TYPE OF WORK. 1.2. REFER ALSO TO GENERAL NOTES, NOTES UNDER PLANS AND TO THE SPECIFICATION. 1.3. WELDING SHALL CONFORM TO CSA STANDARD W59 AND BE PERFORMED BY A FABRICATOR CERTIFIED TO CSA W47.1. 1.4. BEAM CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM OF FACTORED VERTICAL SHEAR FORCE OF 50% OF THE BEAM SHEAR CAPACITY, UNLESS OTHERWISE NOTED, AND IN NO CASE BE LESS THAN THE LOADS SHOWN ON OR IMPLIED BY THE DRAWINGS. WHERE BOLTED CONNECTIONS ARE UTILIZED, A MINIMUM OF TWO BOLTS PER CONNECTION SHALL BE USED. 1.5. MEMBER CONNECTIONS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER FOR FORCES AND MOMENTS INDICATED. SHOP DRAWINGS (AND CALCULATIONS) BEARING THE STAMP AND SIGNATURE OF THE REGISTERED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION AND ERECTION.</p> <p>2. PRODUCTS 2.1. STRUCTURAL STEEL SECTIONS SHALL CONFORM TO CSA G40.20/G40.21 2.1.1. S SHAPES, PLATES AND RODS - GRADE 300 W 2.1.2. HSS SECTIONS - GRADE 300W (CLASS UN) 2.1.3. WWF SHAPES, WT SHAPES AND W SHAPES, CHANNELS, ANGLES - GRADE 350W 2.2. BOLTS FOR CONNECTIONS TO CONFORM TO ASTM F1552/F1554, GRADE A325, UNLESS NOTED. 2.3. ANCHOR RODS FOR BASE PLATES, BEARING PLATES AND WELD PLATES TO CONFORM TO ASTM F1554, GRADE 36, UNLESS NOTED. 2.4. NUTS AND WASHERS TO CONFORM TO ASTM A563 AND ASTM F436. 2.5. SHEAR STUDS WHERE REQUIRED TO CONFORM TO ASTM A108. WELDING TO CONFORM TO CSA W59. 2.6. WELDING MATERIALS TO CONFORM TO CSA W48. 2.7. SURFACE PREPARATION AND PRIMER PAINT FOR STRUCTURAL STEEL MEMBERS INSIDE VAPOUR BARRIER TO CONFORM TO CISC/CPMA 17/8a OR CISC/CPMA 2.75 (IF EXPOSED TO WEAR, UNLESS NOTED ON DRAWINGS OR SPECIFICATIONS). 2.8. HOT DIP GALVANIZING WITH A MINIMUM ZINC COATING OF 600g/m² UNLESS OTHERWISE SPECIFIED.</p> <p>3. EXECUTION 3.1. FABRICATION, HANDLING AND ERECTION TO CONFORM TO CAN/CSA - S16. 3.2. PROVIDE A MINIMUM OF 2-12 mm (1/2") DIAMETER BY 250 (10") LONG WALL ANCHORS FOR ALL BEAM AND JOIST WALL PLATES ON MASONRY, OR AN APPROVED EQUAL, UNLESS OTHERWISE NOTED. BEAMS AND JOIST SHOES TO BE WELDED TO BEARING PLATES. 3.3. PROVIDE ADJUSTABLE ANCHORS TO ALL STEEL TO BE BUILT INTO, ABUTTED BY, OR FACED WITH MASONRY (REFER ALSO TO TYPICAL DETAILS IF SHOWN). SPACING OF ANCHORS TO BE: FOR VERTICAL SPACING _____ 600 (24") MAX. CENTRES. FOR HORIZONTAL SPACING _____ 10 TIMES WALL THICKNESS (MAX. 2000 (8'-8") CENTRES). (* NOTE, USE BACK-UP WITH THE THICKNESS ONLY, FOR CAVITY WALLS.) 3.4. WHERE STEEL PROVIDES LATERAL BRACING ONLY TO MASONRY (I.E. DOES NOT SUPPORT MASONRY) ANCHORS SHALL PERMIT DIFFERENTIAL VERTICAL MOVEMENT BETWEEN STRUCTURAL MEMBERS AND MASONRY. 3.5. PROVIDE 1.78X76X6 4MM ANGLE SEATS FOR ALL STEEL DECK AT LOCATIONS WHERE THE CONNECTION TO SUPPORTING FRAMING IS INTERRUPTED. (E.G. AT COLUMNS). 3.6. CLEAN, PREPARE SURFACES AND SHOP PRIME STRUCTURAL STEEL WITH ONE COAT OF SPECIFIED PRIMER PAINT IN ACCORDANCE WITH CAN/CSA - S16, EXCEPT WHERE MEMBERS ARE TO BE ENCASED IN CONCRETE, OR TO RECEIVE SPRAY APPLIED FIRE PROOFING. FIELD "TOUCH-UP" BOLTS, WELDS, BURNED OR SCRAPED SURFACES AFTER ERECTION. 3.7. PROVIDE ALL NECESSARY TEMPORARY BRACING TO KEEP STRUCTURE SAFE AND PLUMB. BRACING SHOWN ON STRUCTURAL DRAWINGS IS PERMANENT FOR FINISHED BUILDING ONLY. 3.8. CO-ORDINATE WITH MECHANICAL AND ELECTRICAL CONSULTANTS AND SUB-TRADES WHOSE WORK MAY AFFECT DETAILING, FABRICATION AND ERECTION OF THE STEEL STRUCTURE. 3.9. TOLERANCES: VARIATION FROM PLUMB AND LEVEL, EXTERIOR COLLARS INCLUDING AXES AT ELEVATOR SHAFTS, AND SPANDELR BEAMS INCLUDING ANGLES _____ ±1.000 MAX. 25 mm (1 1/8") IN 10'-0" MAX. 1") OTHER PIECES _____ ±.500 (1/4" IN 10'-0") 3.10. NO HOLES OTHER THAN THOSE SHOWN ON SHOP DRAWINGS SHALL BE MADE IN ANY STEEL MEMBER WITHOUT WRITTEN PERMISSION OF THE STRUCTURAL CONSULTANT.</p> <p>4. QUALITY CONTROL 4.1. AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO INSPECT STRUCTURAL STEEL AND STEEL DECK IN THE SHOP AND IN THE FIELD FOR WELDING, CONNECTIONS, BOLT TORQUES, AND GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. 4.2. SEE SPECIFICATIONS FOR ADDITIONAL INSPECTION AND TESTING REQUIREMENTS.</p>		<p>1. GENERAL 1.1. UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS, THE FOLLOWING INDICATES THE MINIMUM REQUIREMENTS APPLICABLE TO STRUCTURAL LOAD BEARING MASONRY. 1.2. REFER ALSO TO ARCHITECTURAL DRAWINGS AND / OR THE SPECIFICATION FOR REQUIREMENTS OTHER THAN STRUCTURAL, AND FOR NON-LOAD BEARING WALLS AND PARTITIONS. 1.3. MASONRY CONSTRUCTION TO CONFORM TO CSA STANDARD S304.1.</p> <p>2. PRODUCTS 2.1. CONCRETE BLOCKS TO BE MODULAR UNITS AS SHOWN ON THE ARCHITECTURAL DRAWINGS AND /OR SPECIFICATION, AND UNLESS OTHERWISE NOTED SHALL BE: 2.1.1. FOR BEARING WALLS AND EXTERIOR EXPOSED WALLS USE NORMAL WEIGHT LOAD BEARING UNITS. STANDARD HOLLOW _____ TYPE H / 15 / A / M. 75% SOLID _____ TYPE S / 15 / A / M. 100% SOLID _____ TYPE S / 15 / A / M. 2.1.2. FOR INTERIOR ABOVE GRADE WALLS USE EITHER: 2.1.2.1. LIGHTWEIGHT LOAD BEARING BLOCKS. STANDARD HOLLOW _____ TYPE H / 15 / C / M. 75% AND 100% SOLID _____ TYPE S / 15 / C / M. 2.1.2.2. ULTRA LIGHT (OR EQUIVALENT) BLOCKS. STANDARD HOLLOW _____ TYPE H / 15 / D / M. (REFER TO ARCHITECTURAL DRAWINGS AND SCHEDULES FOR LOCATIONS AND TYPES). 2.2. CLAY BRICKS: TO CONFORM TO ONE OR MORE OF CSA STANDARDS A82 (SERIES) SEE ARCHITECTURAL DRAWINGS AND / OR SPECIFICATIONS FOR TYPES AND STYLES OF BRICKS REQUIRED. UNLESS OTHERWISE NOTED, THE MINIMUM COMPRESSIVE STRENGTH (BRICK FLATWISE) GROSS AREA SHALL BE 20 MPa. 2.3. MORTAR: TO CONFORM TO CSA A179. FOR LAYING ALL LOAD BEARING CONCRETE BLOCKS _____ USE TYPE "S" MORTAR UNLESS NOTED. FOR LAYING ALL CLAY BRICKS _____ USE TYPE "N" MORTAR UNLESS NOTED. 2.4. MASONRY GROUT: TO CONFORM TO CSA A179. THE SLUMP SHALL BE 200mm TO 250mm (8" TO 10") AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH FOR "FINE" GROUT SHALL BE 50MPa. 2.5. MASONRY CONNECTORS (ANCHORS, FASTENERS AND TIES): SHALL CONFORM TO CSA A370, AND BE INSTALLED TO COMPLY WITH CSA A371. SPACING, STRENGTH AND GALVANIZING OF STRIP TIES, DOWEL ANCHORS, BAR ANCHORS, ROD ANCHORS, STRAP ANCHORS, WALL AND PARTITION ANCHORS SHALL COMPLY WITH CSA A370. 2.6. HORIZONTAL JOINT REINFORCEMENT FOR ALL MASONRY WALLS: THE FOLLOWING ARE MINIMUM REQUIREMENTS: 2.6.1. CONFORM TO CSA STANDARDS A370 AND A371. 2.6.2. REINFORCEMENT SHALL BE AN APPROVED CONTINUOUS "LADDER" TYPE, PREFABRICATED WITH 3.6mm DIAMETER (9 GAUGE) LONGITUDINAL AND CROSS WIRES. 2.6.3. SPACING - PROVIDE REINFORCING IN THE TOP COURSE IMMEDIATELY BELOW FLOOR AND ROOF BEARING LEVELS AND THE FIRST TWO COURSES ABOVE AND BELOW EVERY WALL OPENING. THE REINFORCING SHALL EXTEND 600mm (24") BEYOND SUCH OPENINGS. FOR THE REMAINDER OF WALLS, THE VERTICAL SPACING SHALL NOT EXCEED 400mm (16"). 2.6.4. SHALL BE MIN. OF 150mm (6") FOR KNURLED WIRE AND 300mm (12") FOR PLAIN WIRE. LAPS SHALL BE STAGGERED A MINIMUM OF 750mm (30") FROM COURSE TO COURSE. REINFORCING SHALL NOT PASS THROUGH A VERTICAL CONTROL JOINT UNLESS OTHERWISE SHOWN. 2.6.5. CORROSION RESISTANT: JOINT REINFORCING FOR ALL WALLS IN CONTACT WITH SOIL, EXTERIOR WALLS AND WALLS IN A MOST ENVIRONMENT SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION TO ASTM A153.458 g/m² meter (1.5 sq. oz. foot). 2.6.6. COMPOSITE AND CAVITY WALLS: WHERE COURSING OF WYTHES DO NOT ALIGN OF WHERE IT IS DESIRABLE AND PERMITTED TO BUILD ONE WYTHE BEFORE THE OTHER, REINFORCING SHALL BE AN APPROVED ADJUSTABLE TYPE WITH A BOX OR EYE SECTION WHICH EXTENDS INTO THE COLLAR JOINT OR CAVITY AND RESTRAINS THE TRANSVERSE MOVEMENT OF THE TWO WYTHES. FOR CAVITY WALLS WITH RIGID INSULATION, EXTENSION SHALL BE DESIGNED TO HOLD THE INSULATION IN PLACE BY USE OF PLASTIC WEDGES OR APPROVED EQUAL. GALVANIZED HOOK STYLE "BOX TIES" OR "PIN TIES" SHALL EXTEND INTO THE FACE WYTHE TO COMPLETE THE ASSEMBLY. 2.6.7. PROVIDE ALL PREFABRICATED CORNER AND TEE SECTIONS. 2.7. COMPOSITE WALLS - SHALL HAVE THE VERTICAL COLLAR JOINTS BETWEEN WYTHES COMPLETELY FILLED WITH MORTAR OR GROUT. 2.8. BOND BEAMS - MADE FROM LITTEL BLOCKS, OR HALF WEB BLOCKS, WHERE SHOWN ON STRUCTURAL DRAWINGS SHALL CONFORM TO CSA A371. 2.9. GROUTING - BY FILLING HOLES OF HOLLOW UNITS AND REINFORCED HOLLOW UNITS SHALL CONFORM TO CSA A179 (MORTAR IS NOT ACCEPTABLE). 2.10. EXPANSION AND CONTROL JOINTS: SHALL BE PROVIDED. SEE ARCHITECTURAL DRAWINGS AND OR SPECIFICATION FOR DETAILS.</p>		<p>3. EXECUTION 3.1. BEARING ON MASONRY: 3.1.1. MINIMUM BEARING ON MASONRY UNLESS OTHERWISE NOTED - BEAMS (STEEL, CONC., WOOD) _____ 200mm (8") NOMINAL LITTELS (STEEL, CONC., WOOD) _____ 150mm (6") NOMINAL JOISTS (STEEL, WOOD) _____ 100mm (4") NOMINAL SLABS (CAST-IN-PLACE, PRECAST) _____ 100mm (4") NOMINAL STEEL DECKING (ON WELD PLATE) _____ 100mm (4") NOMINAL 3.1.2. MASONRY BEARINGS SHALL BE OF SOLID BLOCKS (OR GROUTED SOLID) OR BRICKS LAID IN MORTAR. ALL JOINTS ARE TO BE FULLY FILLED WITH TYPE "S" MORTAR. 3.1.3. MIN. SIZE OF SOLID BEARINGS AT BEAMS AND LITTELS UNLESS NOTED SHALL BE EQUAL TO THE BEARING / WALL PLATE (WP) LENGTH AND FOR A DEPTH EQUAL TO THE BEARING / WALL PLATE (WP) LENGTH, AND IN NO CASE LESS THAN 400mm x 200 DEPTH (16" x 8"), SYMMETRICAL UNDER BEARING POINT. 3.1.4. PROVIDE A MINIMUM OF ONE CONTINUOUS COURSE 200mm (8") OF SOLID OR GROUTED VOID BLOCKS OR BRICKS LAID IN MORTAR AT THE TOP COURSE IMMEDIATELY BELOW ALL FLOOR AND ROOF BEARING LEVELS. 3.2. TOLERANCES: UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS AND / OR SPECIFICATION, SHALL CONFORM TO CSA A371. 3.3. COLD WEATHER CONSTRUCTION - REQUIREMENTS AND PROTECTION SHALL CONFORM TO CSA A371 AND UNDER NO CIRCUMSTANCES SHALL MASONRY CONSTRUCTION BE PERMITTED WHEN THE AIR TEMPERATURE FALLS BELOW -12°C.</p> <p>4. QUALITY CONTROL 4.1. WHEN REQUESTED SAMPLING AND TESTING SHALL CONFORM TO CSA STANDARDS S304.1 AND ASTM C140. REFER ALSO TO GENERAL NOTES.</p>	<p>ALTERATIONS AND / OR CONNECTIONS TO EXISTING STRUCTURE 1. COORDINATE PROPOSED SCHEDULE OF WORK WITH ALL THE SUBTRADES, CONSULTANTS AND OWNER. 2. SUBMIT PROPOSED SEQUENCE OF WORK TO CONSULTANT FOR REVIEW PRIOR TO START OF WORK. 3. INSPECT THE EXISTING BUILDING AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS. NOTE DETAILS SHOWN ARE BASED ON INFORMATION FROM EXISTING BUILDING DRAWINGS ONLY. 4. CHECK ALL DRAWINGS AGAINST ACTUAL SITE CONDITIONS PRIOR TO FABRICATING ANY STRUCTURAL STEEL. REPORT DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK. 5. PRIOR TO FABRICATION OF STRUCTURAL STEEL, OPEN UP ALL AREAS TO ALLOW THE INSTALLATION OF THE NEW STRUCTURAL WORK, AS WELL AS THE CONNECTION OF NEW WORK TO THE EXISTING WORK. TAKE ANY AND ALL NECESSARY FIELD MEASUREMENTS. MODIFY INSTALLATION METHODS AND METHODS OF CONNECTING TO SUIT SITE CONDITIONS FOUND AND TO THE APPROVAL OF THE CONSULTANT. CARRY OUT LOCAL REPAIRS TO THE EXISTING WORK AS NECESSARY AND AS DIRECTED BY THE CONSULTANT. 6. SHORE EXISTING WORK AS REQUIRED UNTIL ALL NEW WORK HAD BEEN COMPLETED AND REVIEWED BY THE CONSULTANT. 7. SHORE FLOORS AS REQUIRED TO SUPPORT CRANES, HOSTS AND OTHER CONSTRUCTION EQUIPMENT. 8. CONFORM TO ALL THE APPLICABLE CODES AND BYLAWS CONCERNING SAFETY, NOISE AND VIBRATIONS. 9. DO NOT CUT CONCRETE REINFORCEMENT UNLESS REVIEWED AND APPROVED BY THE CONSULTANT. 10. PERFORM CONCRETE SCANS (SEE NOTE #10 BELOW) AND MODIFY THE LAYOUT OF NEW THROUGH BOLTS, DRILLED ANCHORS AND OTHER ANCHORING DEVICES AS REQUIRED TO AVOID DAMAGING EXISTING CONCRETE REINFORCEMENT. 11. UNLESS NOTED OTHERWISE, ALL DOWELS ARE TO BE EPOXIED INTO THE EXISTING STRUCTURE USING HILTI HIT-RE-500 SYSTEM ADHESIVE SYSTEM, OR APPROVED ALTERNATIVE. 12. CUTTING OPENINGS AND HOLES IN EXISTING STRUCTURES: (A) PRIOR TO CUTTING AND CORING ANY OPENINGS IN EXISTING BUILDING, PROVIDE THE CONSULTANT WITH A SLEEVING DRAWINGS INDICATING THE SIZE AND LOCATION OF THE PROPOSED NEW OPENINGS RELATIVE TO THE EXISTING GRID LINES. EXISTING OPENINGS IN THE VICINITY OF THE NEW OPENING MUST ALSO BE SHOWN. (B) UNLESS SPECIFICALLY NOTED OTHERWISE, LOCATE EXISTING REINFORCEMENT AND ANY EMBEDDED SERVICES BY AN APPROPRIATE CONCRETE SCANNING METHOD (SEE NOTE #13) (C) AFTER ALL THE EXISTING REINFORCEMENT AND SERVICES HAVE BEEN LOCATED, NOTIFY THE CONSULTANT WHO WILL REVIEW AND APPROVE THE PROPOSED OPENING/ HOLE LOCATIONS PRIOR TO CUTTING/DRILLING. MAKE ANY NECESSARY ADJUSTMENTS TO THE HOLE LOCATIONS AS DIRECTED BY THE CONSULTANT. (D) CORE DRILL NEW HOLES FOR PIPES TO A DIAMETER NOT LARGER THAN THE OUTSIDE PIPE DIAMETER PLUS 25MM. DO NOT CUT EXISTING REINFORCEMENT OR SERVICES WITHOUT PRIOR APPROVAL OF THE CONSULTANT. (E) WHERE RECTANGULAR OPENINGS ARE TO BE CUT, PRE-DRILL THE CORNERS USING A 100 MM DIAMETER CORE DRILL OR DRILL A SERIES OF HOLES TO PREVENT OVER CUTTING OF THE CORNERS. (F) IN ANY AREAS WHERE THE CONSULTANT PERMITS THE CUTTING OF EXISTING REINFORCEMENT, THE CONTRACTOR SHALL EXAMINE THE CORE/OPENING AFTER DRILLING/CUTTING TO DETERMINE THE SIZE, COVER AND ORIENTATION OF ANY REINFORCEMENT THAT WAS CUT. THE CONTRACTOR IS TO MARK THIS INFORMATION ON THE SLEEVING DRAWING AND FORWARD A COPY OF IT TO THE CONSULTANT FOR HIS RECORDS.</p> <p>13. CONCRETE SCANS (A) LOCATE EXISTING CONCRETE REINFORCEMENT USING SUITABLE SCANNING DEVICE AS AUTHORIZED BY PROPERTY MANAGER (I.E. X-RAYS, GROUND PENETRATION RADAR (GPR), LOCAL CHIPPING OF SLAB - ONLY WHERE APPROVED BY THE STRUCTURAL CONSULTANT, ETC.) (B) GPR SCANNING MUST BE DONE BY TRAINED TECHNICIANS WITH AT LEAST 5 YEARS OF EXPERIENCE AS SUCH. (C) GPR SCANNING DEVICES MUST BE CAPABLE OF ACCURATELY LOCATING REBAR IN A CONCRETE SLAB TO A MINIMUM DEPTH OF 300 mm, WITHIN A HORIZONTAL TOLERANCE OF ± 25 mm AND A VERTICAL (DEPTH) TOLERANCE OF THE LARGER OF ± 25 mm OR ± 15% OF THE REBAR DEPTH. (D) THE REVIEW OF REBAR SCANS OR X-RAYS BY THE STRUCTURAL CONSULTANT IS LIMITED TO THE LOCATION OF THE PROPOSED CORES OR DRILLED HOLES THROUGH THE EXISTING STRUCTURE ONLY, BASED ON THE ASSUMPTION THAT THE X-RAY OR SCAN RESULTS ARE ACCURATE. STEPHENSON ENGINEERING LTD. TAKES NO RESPONSIBILITY FOR THE ACCURACY OF THE X-RAY OR SCAN RESULTS.</p>		

TYPICAL CONCRETE COVER TABLE

VERTICAL ELEMENTS	PROJECT SPECIFIC COMMENTS	BAR SIZE	CONCRETE EXPOSURE							
			NO CHLORIDES WITH FREEZE THAW			NO CHLORIDES OR FREEZE THAW				
			COVER TO ALL FACES (mm)		COVER TO ALL FACES (mm)		COVER TO ALL FACES (mm)			
		FIRE RATING (7)		FIRE RATING (7)		FIRE RATING (7)				
		< 2 HR		4 HR		< 2 HR		4 HR		
WALLS	ANY WALLS EXPOSED TO FIRE ON ONE SIDE ONLY (FOUNDATION, ELEVATOR AND STAIRS, DEMISING WALLS, FIRE SEPARATION WALLS)	0 ≤ 25M								
ELEMENTS EXPOSED TO EARTH		PROJECT SPECIFIC COMMENTS	BAR SIZE		COVER (mm)					
PERMANENTLY EXPOSED TO SOIL			ALL SIZES		GREATER OF 60mm OR 2xØ		GREATER OF 40mm OR 1.5Ø			
CAST AGAINST AND PERMANENTLY EXPOSED TO SOIL			ALL SIZES		75					

TABLE NOTES

- CONCRETE COVER SHALL BE MEASURED FROM THE DEEPEST POINT OF TEXTURED CONCRETE SURFACE TO THE NEAREST DEFORMATION OF REINFORCEMENT. REINFORCEMENT INCLUDES TIES, STIRRUPS AND MAIN BARS.
- FOR FIRE RATING INFORMATION, REFER TO ARCHITECTURAL DRAWINGS.
- ALL LOAD BEARING ELEMENTS (WALLS AND COLUMNS) IMMEDIATELY BELOW A FLOOR ASSEMBLY MUST HAVE A FIRE-RESISTANCE RATING NOT LESS THAN THAT FOR THE SUPPORTED ASSEMBLY.

COMPRESSION-TENSION DEVELOPMENT AND LAP LENGTHS $F_y = 400 \text{ MPa}$ C02A

NOTES

- STANDARD ABBREVIATIONS ON PLANS AND SCHEDULES SHOULD BE AS FOLLOWS
- CLS - COMPRESSION LAP SPICE
- CDL - COMPRESSION DEVELOPMENT LENGTH
- HEL - HOOK EMBEDMENT LENGTH

COMPRESSION LAP SPICE AND DEVELOPMENT LENGTHS ($F_y = 400 \text{ MPa}$)

CLS: COMPRESSION LAP SPICE LENGTH (mm)

UNCOATED BLACK BAR									
	10M	15M	20M	25M	30M	35M	45M	55M	
20MPa	300	440	590	730	880	1030			NOT PERMITTED

CDL: COMPRESSION DEVELOPMENT LENGTH (mm)

UNCOATED BLACK BAR									
f'_c	10M	15M	20M	25M	30M	35M	45M	55M	
20MPa	250	340	420	540	640	770	940	1210	
25MPa	220	310	370	460	570	690	840	1080	
30MPa	200	280	340	440	530	630	770	990	
35MPa	200	280	340	440	530	630	770	990	
40MPa	200	280	340	440	530	630	770	990	
> 40 MPa	SEE MINIMUM VALUES FOR $f'_c = 40 \text{ MPa}$								

NOTES

- IF BUNDLED BARS ARE USED THE VALUES IN THE TABLES MUST BE INCREASED:
 - MULTIPLY BY 1.1 (TWO BAR BUNDLES)
 - MULTIPLY BY 1.2 (THREE BAR BUNDLES)
 - MULTIPLY BY 1.33 (FOUR BAR BUNDLES)
- FOR EMBEDMENTS ENCLOSED IN SPIRALS, MULTIPLY BY 0.75, BUT NOT LESS THAN 200mm.

HEL: MINIMUM TENSION EMBEDMENT LENGTH WITH STANDARD HOOK (mm)

UNCOATED BLACK BAR									
f'_c	10M	15M	20M	25M	30M	35M	45M	55M	
20MPa	220	340	450	560	670	780	1010	1230	
25MPa	200	300	400	500	600	700	900	1100	
30MPa	180	270	370	460	550	640	830	1010	
35MPa	170	250	340	420	510	590	770	930	
40MPa	160	240	320	400	470	550	720	870	
45MPa	150	220	300	370	450	520	680	820	
50MPa	150	210	280	350	420	490	640	780	
55MPa	150	200	270	340	400	470	610	750	

NOTES

- FOR EPOXY COATED BARS THE VALUES IN THE TABLES MUST BE INCREASED:
 - MULTIPLY BY 1.2 (WHEN CLEAR COVER GREATER THAN 3 X BAR DIAMETER AND CLEAR SPACING GREATER THAN 6 X BAR DIAMETER)
 - MULTIPLY BY 1.5 (WHEN COVER OR SPACING ARE LESS THAN ABOVE)
- VALUES PROVIDED ARE BASED ON NORMAL WEIGHT CONCRETE AND MUST BE INCREASED FOR LIGHTWEIGHT CONCRETES:
 - MULTIPLY BY 1.2 (FOR SEMI-LOW DENSITY CONCRETE)
 - MULTIPLY BY 1.3 (FOR LOW-DENSITY CONCRETE)
- FOR 35M AND SMALLER BARS MULTIPLY THE VALUES IN THE TABLE BY 0.7 (BUT NOT LESS THAN 150mm) WHERE THE SIDE COVER (NORMAL TO THE PLANE OF THE HOOK) IS AT LEAST 60mm, AND FOR 30" HOOKS WHERE COVER ON THE BAR EXTENSION BEYOND THE HOOK IS AT LEAST 50mm.
- FOR 35M AND SMALLER BARS MULTIPLY THE VALUES IN THE TABLE BY 0.8 (BUT NOT LESS THAN 150mm) WHERE THE HOOK IS ENCLOSED WITHIN AT LEAST THREE(3) TIES OR STIRRUPS SPACED ALONG A LENGTH EQUAL TO THE INSIDE DIAMETER OF THE HOOK AT A SPACING NOT MORE THAN 3 TIMES THE BAR DIAMETER.

TENSION DEVELOPMENT AND LAP SPICE LENGTHS $F_y = 400 \text{ MPa}$ C02B

NOTES

- STANDARD ABBREVIATIONS ON PLANS AND SCHEDULES SHOULD BE AS FOLLOWS
- TLS - TENSION LAP SPICE
- TDL - TENSION DEVELOPMENT LENGTH

TENSION LAP SPICE AND DEVELOPMENT LENGTHS ($F_y = 400 \text{ MPa}$)

TLS: TENSION LAP SPICE LENGTH (CLASS B) (mm)

f'_c	UNCOATED BLACK BAR											
	10M		15M		20M		25M		30M		35M	
	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
20MPa	550	420	820	630	1090	840	1710	1310	2050	1570	2390	1840
25MPa	490	380	740	570	960	750	1530	1170	1830	1410	2130	1640
30MPa	450	350	670	520	890	690	1390	1070	1670	1290	1950	1500
35MPa	420	320	620	480	830	640	1290	990	1550	1190	1800	1390
40MPa	390	300	580	450	770	600	1210	930	1450	1110	1690	1300
45MPa	370	300	550	420	730	560	1140	880	1370	1050	1590	1230
50MPa	350	300	520	400	690	530	1080	830	1300	1000	1510	1160
55MPa	330	300	500	380	660	510	1030	790	1240	950	1440	1110
60MPa	320	300	480	370	630	490	990	760	1180	910	1380	1060
64MPa	310	300	460	360	610	470	960	740	1150	880	1340	1030

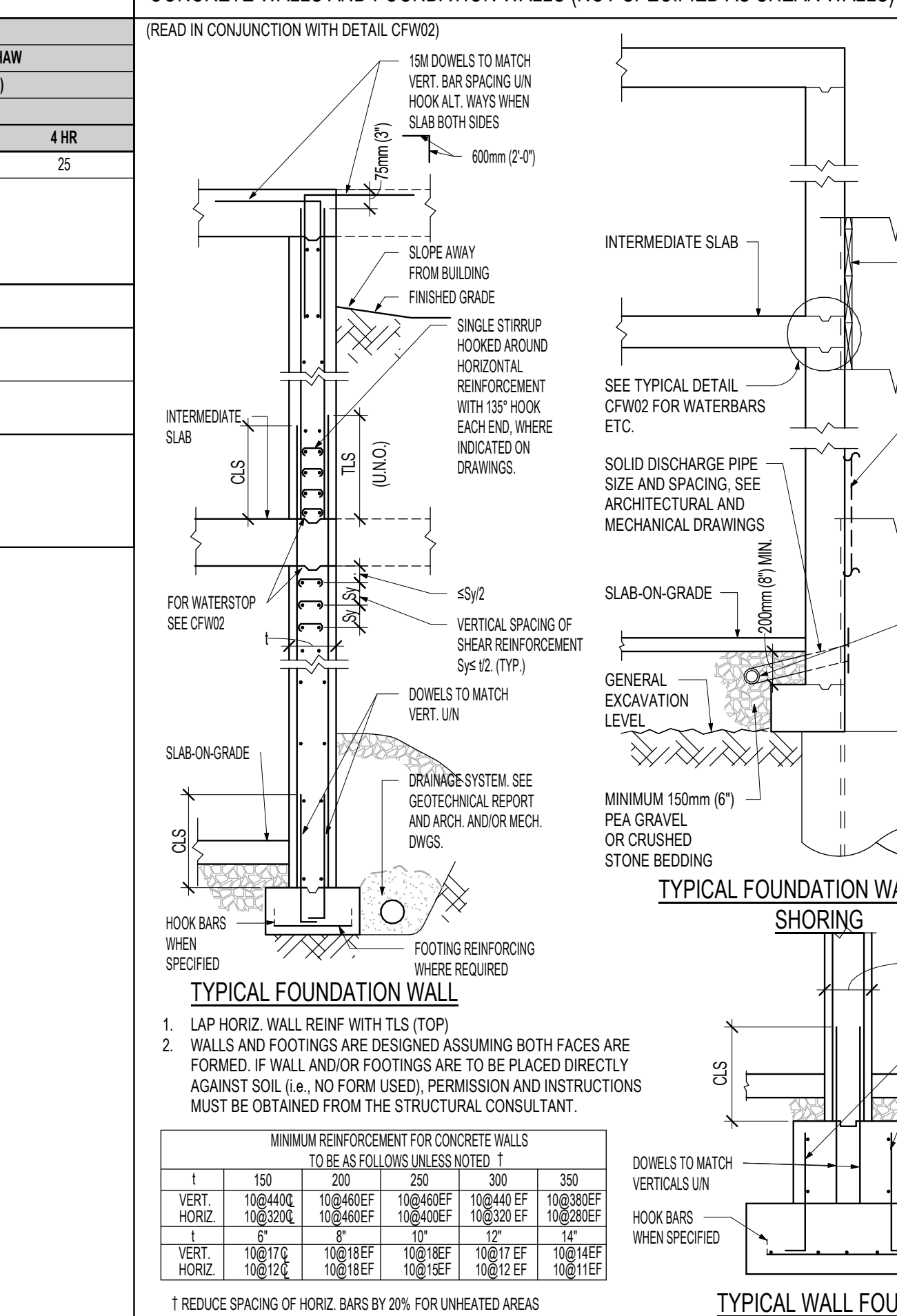
TDL: TENSION DEVELOPMENT LENGTH (mm) CLASS "A" LAP SPICE

f'_c	UNCOATED BLACK BAR											
	10M		15M		20M		25M		30M		35M	
	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
20MPa	420	330	630	490	840	650	1310	1010	1570	1210	1840	1410
25MPa	380	300	570	440	750	580	1170	900	1410	1080	1640	1260
30MPa	350	300	520	400	690	530	1070	830	1290	990	1500	1160
35MPa	320	300	480	370	640	490	990	770	1190	920	1390	1070
40MPa	300	300	450	350	600	460	930	720	1110	860	1300	1000
45MPa	300	300	420	330	560	430	880	680	1050	810	1230	940
50MPa	300	300	400	310	530	410	830	640	1000	770	1160	900
55MPa	300	300	380	300	510	390	790	610	950	730	1110	850
60MPa	300	300	370	300	490	380	760	590	910	700	1060	820
64MPa	300	300	360	300	470	360	740	570	880	680	1030	790

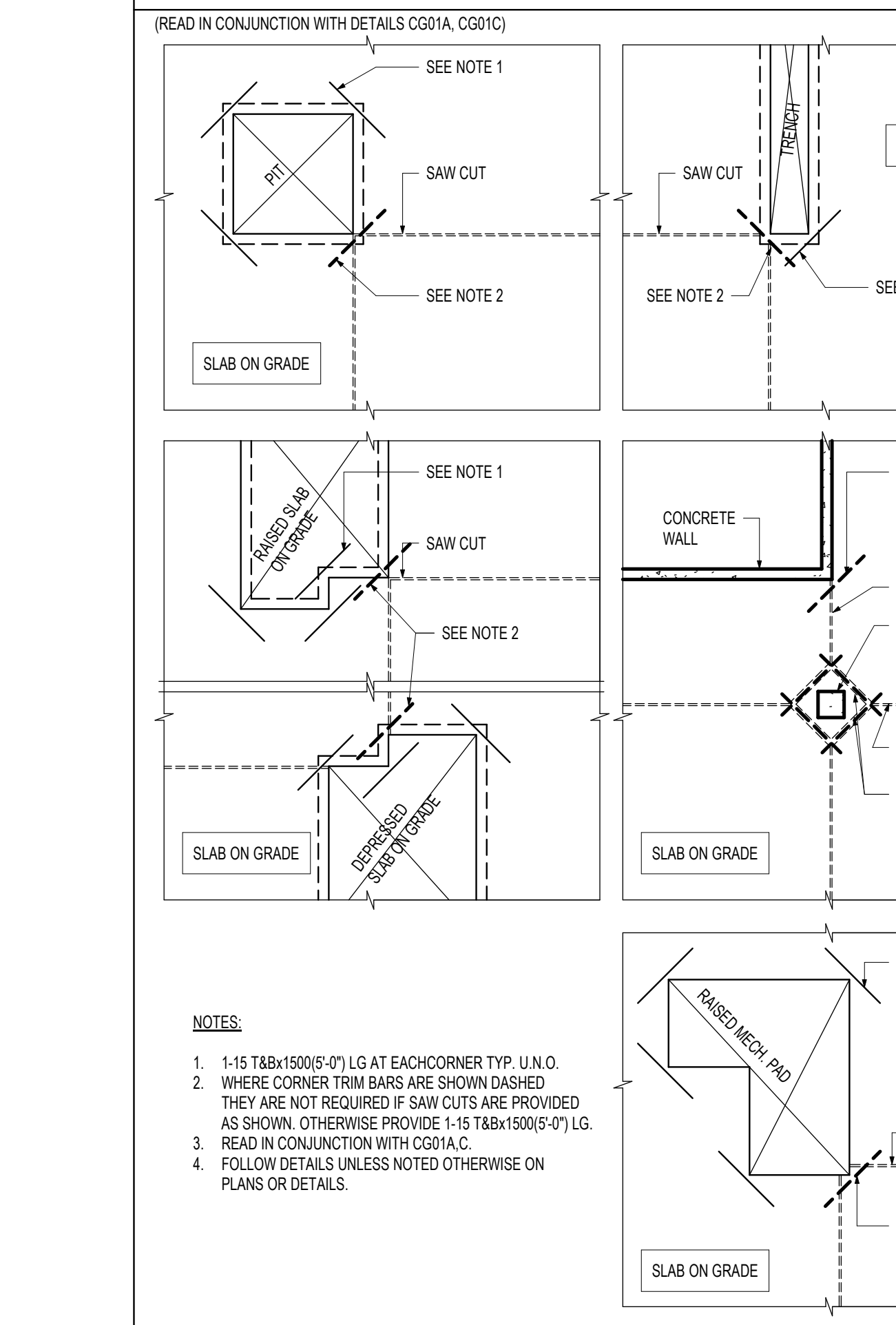
NOTES

- FOR EPOXY COATED BARS THE VALUES IN THE TABLES MUST BE INCREASED:
 - MULTIPLY BY 1.2 (WHEN CLEAR COVER GREATER THAN 3 X BAR DIAMETER AND CLEAR SPACING GREATER THAN 6 X BAR DIAMETER)
 - MULTIPLY BY 1.5 (WHEN COVER OR SPACING ARE LESS THAN ABOVE)
- VALUES PROVIDED ARE BASED ON NORMAL WEIGHT CONCRETE AND MUST BE INCREASED FOR LIGHTWEIGHT CONCRETES:
 - MULTIPLY BY 1.2 (FOR SEMI-LOW DENSITY CONCRETE)
 - MULTIPLY BY 1.3 (FOR LOW-DENSITY CONCRETE)
- IF BUNDLED BARS ARE USED THE VALUES IN THE TABLES MUST BE INCREASED:
 - MULTIPLY BY 1.1 (TWO BAR BUNDLES)
 - MULTIPLY BY 1.2 (THREE BAR BUNDLES)
 - MULTIPLY BY 1.33 (FOUR BAR BUNDLES)

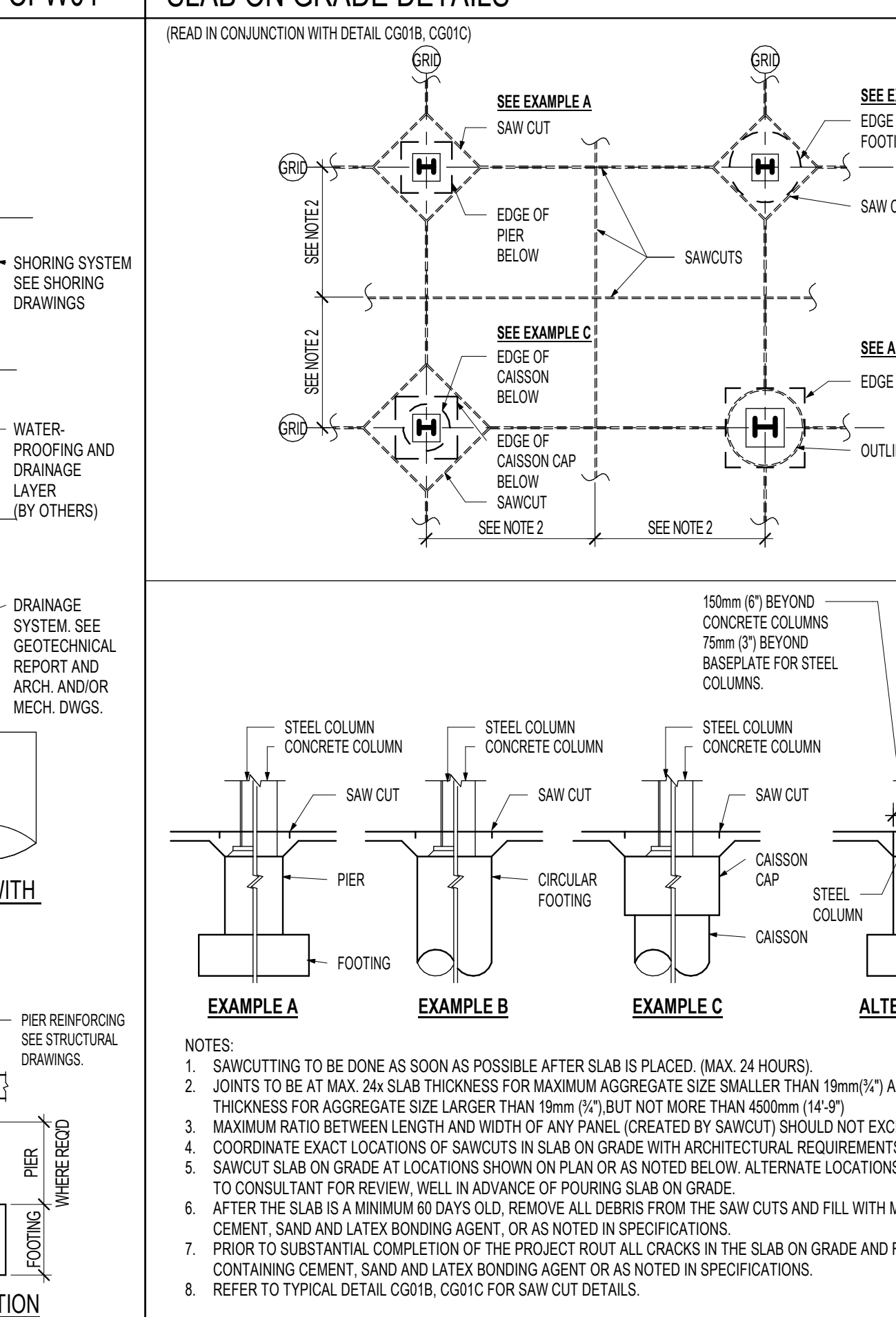
CONCRETE WALLS AND FOUNDATION WALLS (NOT SPECIFIED AS SHEAR WALLS) CFW01



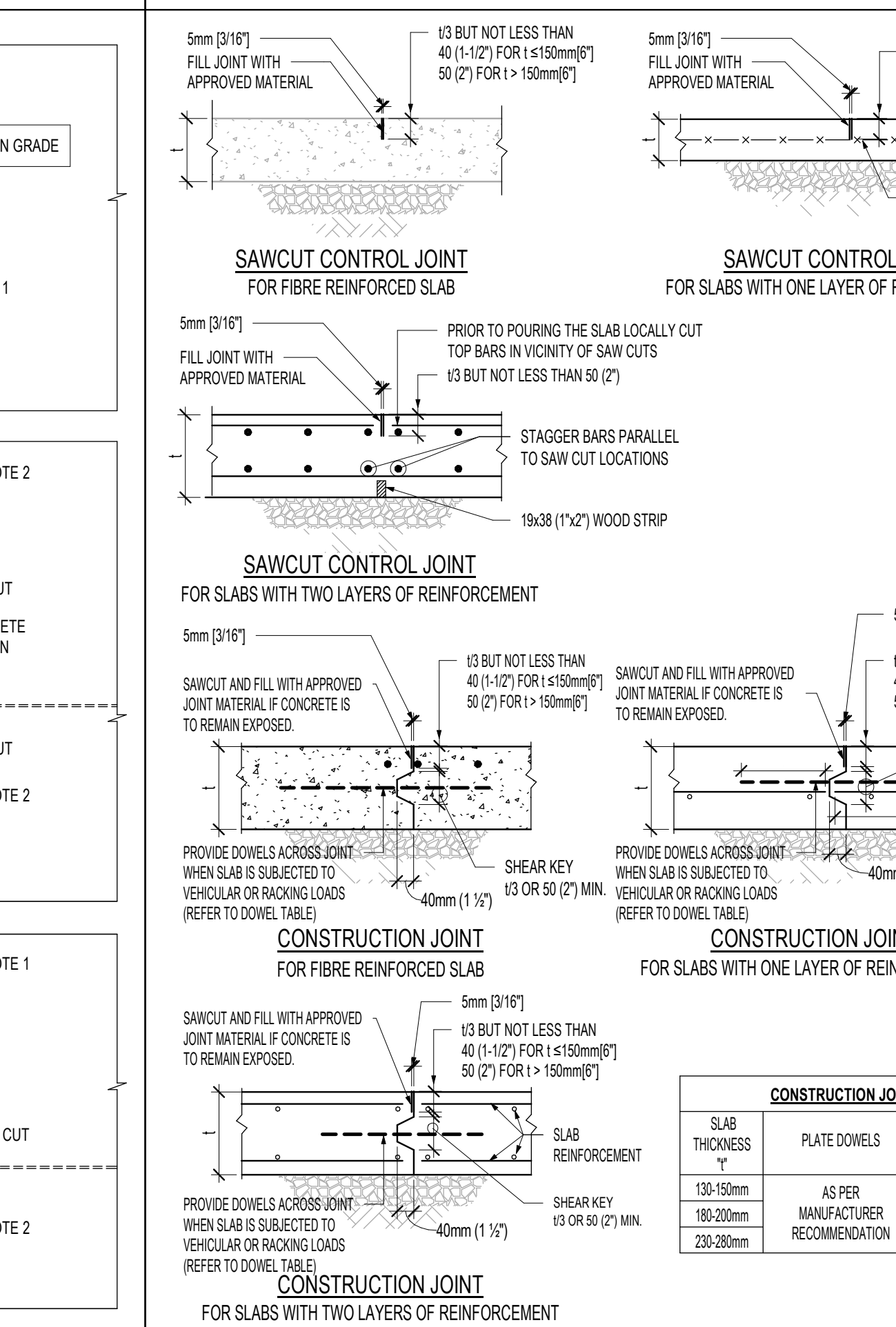
SLAB ON GRADE DETAILS CG01B



SLAB ON GRADE DETAILS CG01A



SLAB ON GRADE DETAILS CG01C



THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

ISSUED FOR TENDER
 ISSUED FOR PERMIT
 ISSUED FOR 90% CLIENT REVIEW
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 DATE

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ÉEC SAINT-MICHEL
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29 MEADOWVALE ROAD,
 SCARBOROUGH, ONTARIO
 M1C 1R7

DRAWING TITLE:
TYPICAL DETAILS

PROJECT NO:
20220316

SCALE:
 1:1

DRAWN:
 AE

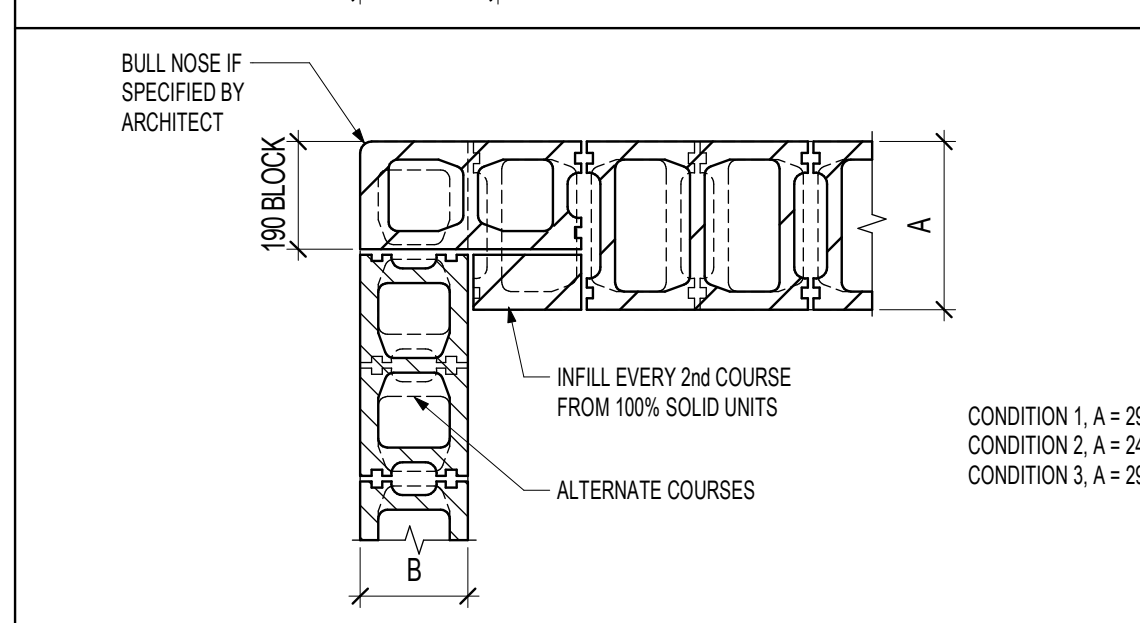
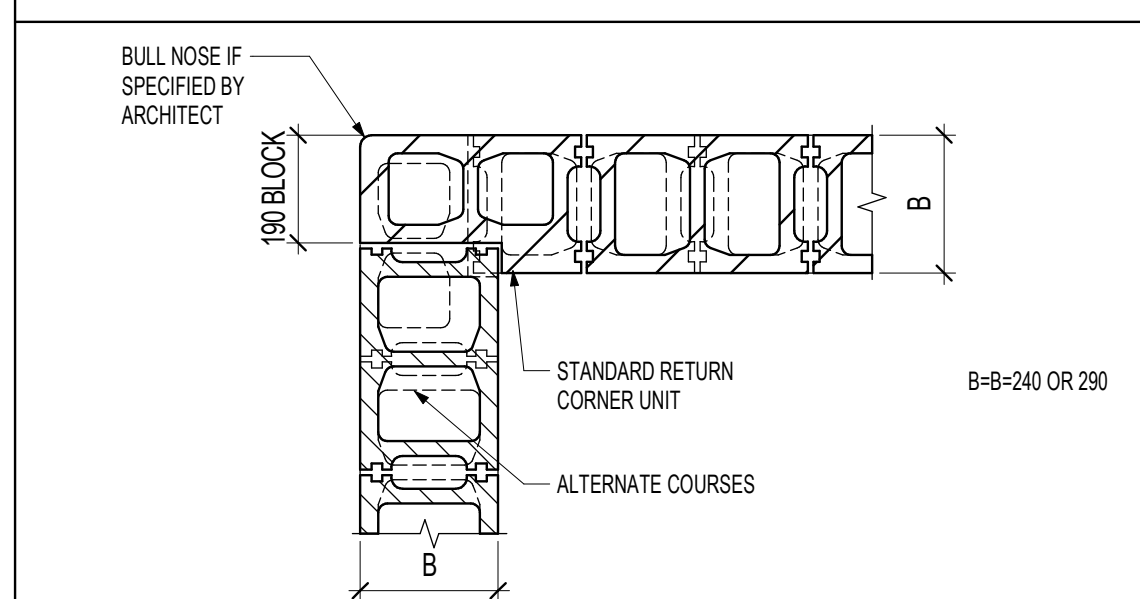
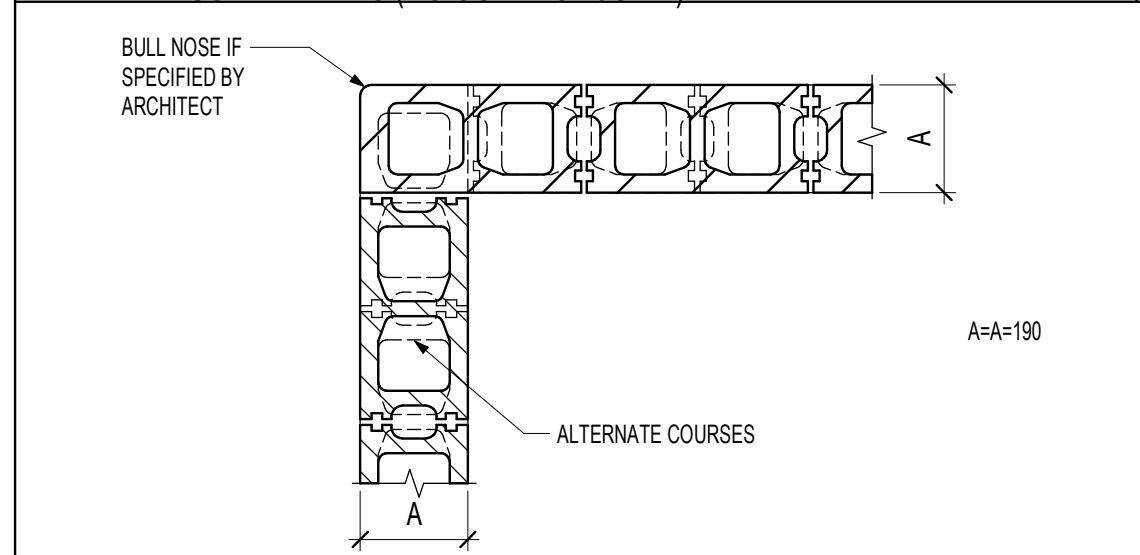
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DATE:
 MARCH 2024

DRAWING NO. REV.
S3-02 5

TYPICAL DETAIL OF CONSTRUCTED CORNERS IN SINGLE WYTHE MASONRY WALLS (NO CONTROL JOINT)

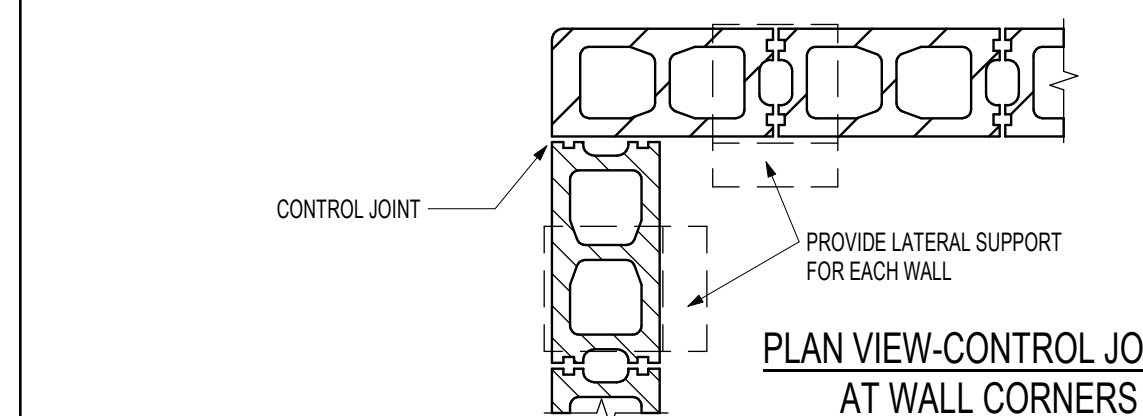
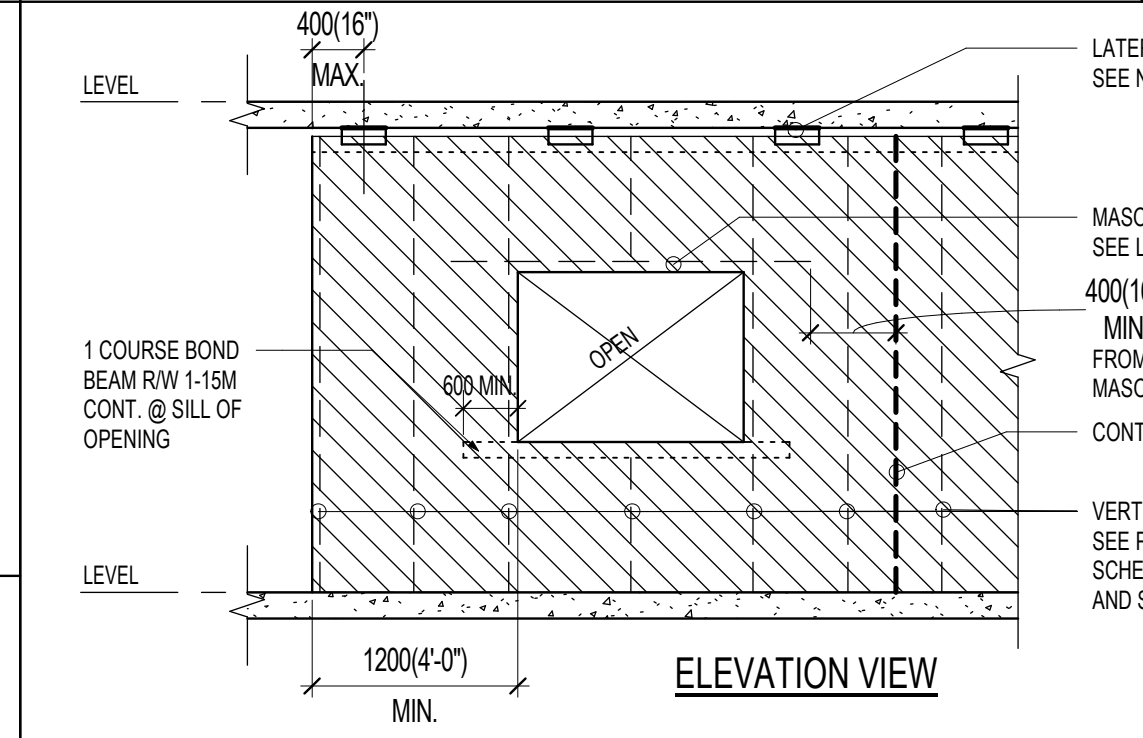
M06



NOTE:
1. PROVIDE PREFABRICATED CORNERS FOR HORIZONTAL JOINT REINFORCING (TYPICAL)
2. REFER TO TYPICAL LOAD BEARING MASONRY NOTES AND TO THE SPECIFICATION FOR MASONRY MATERIALS AND FOR HORIZONTAL JOINT REINFORCING

TYPICAL MASONRY WALL REINFORCING SCHEDULE NOTES AND DETAIL

M07



- NOTES:**
- ADD 390 DEEP HORIZONTAL BOND BEAM R/W 1-15 T&B AT EACH FLOOR AND ROOF LEVEL.
 - PROVIDE VERTICAL REINFORCEMENT AS NOTED ABOVE AND ADD 1-15M AT END OR CORNER OF WALL, SIDES OF DOOR AND WINDOW OPENINGS, AND CONTROL AND EXPANSION JOINTS. VERTICAL REINFORCEMENT TO BE FULL HEIGHT OF WALL AND ALL CELLS WITH VERTICAL REINFORCEMENT TO BE FILLED SOLID WITH GROUT.
 - REFER TO M14 FOR TYPICAL LATERAL SUPPORT DETAIL AT PARTITIONS FOR STEEL STRUCTURES AND M07B FOR TYPICAL LATERAL SUPPORT DETAIL AT PARTITIONS FOR CONCRETE STRUCTURES.
 - REFER TO TYPICAL DETAIL M07B FOR CONNECTION OF MASONRY WALL ABUTTING CONCRETE OR MASONRY WALL FACING CONCRETE.
 - PROVIDE DOWELS. SIZE AND SPACING TO MATCH VERTICAL WALL REINFORCEMENT. REFER TO M04 FOR REQUIRED LAP LENGTHS.
 - COMPLETELY FILL REINFORCED CELLS WITH GROUT.

NON LOAD-BEARING MASONRY PARTITION REINFORCING SCHEDULE | FaSa(0.2)<0.35

M07A

INTERIOR PARTITIONS IN BASEMENT (DIFFERENTIAL PRESSURE 0.25kPa)

BLOCK	MAXIMUM HEIGHT	VERTICAL REINFORCING	HORIZONTAL REINFORCEMENT
140	3000 (10'-0")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE
190	4000 (14'-8")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE
240	5800 (19'-4")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE

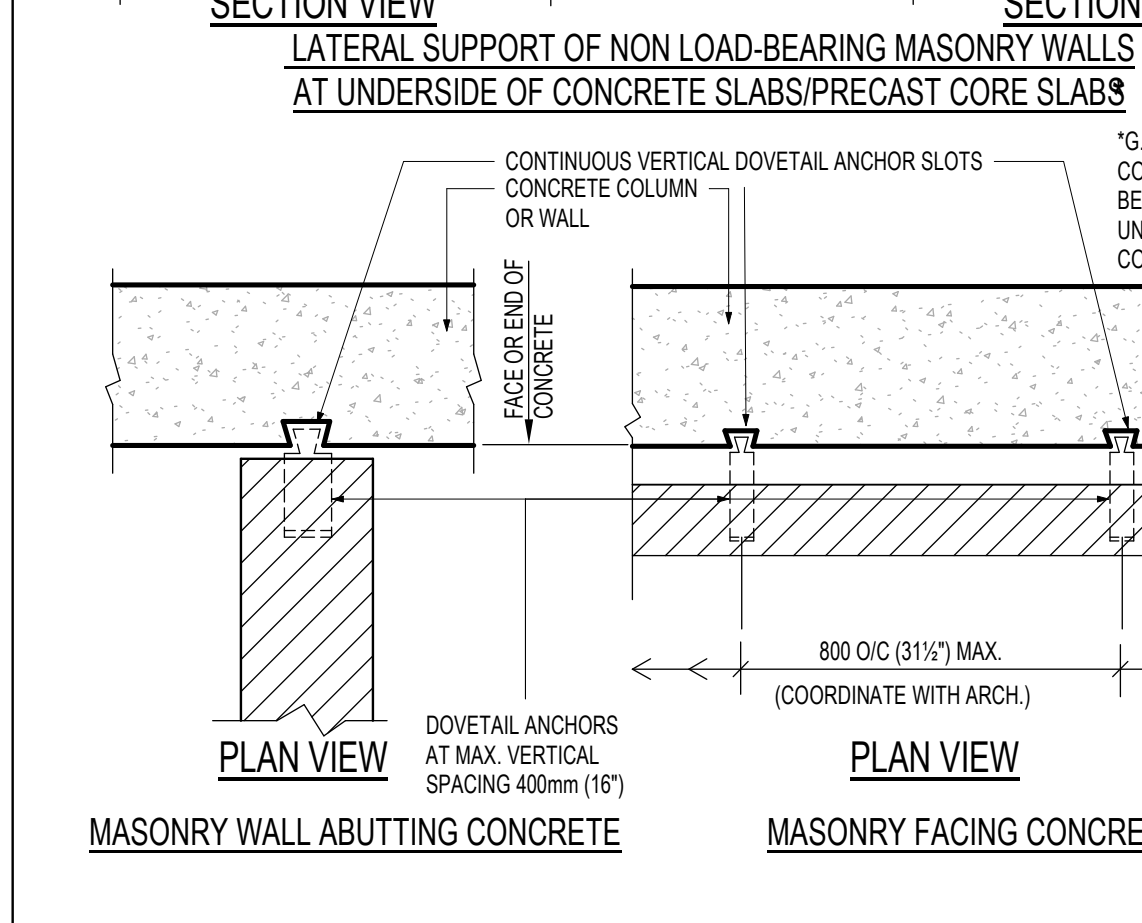
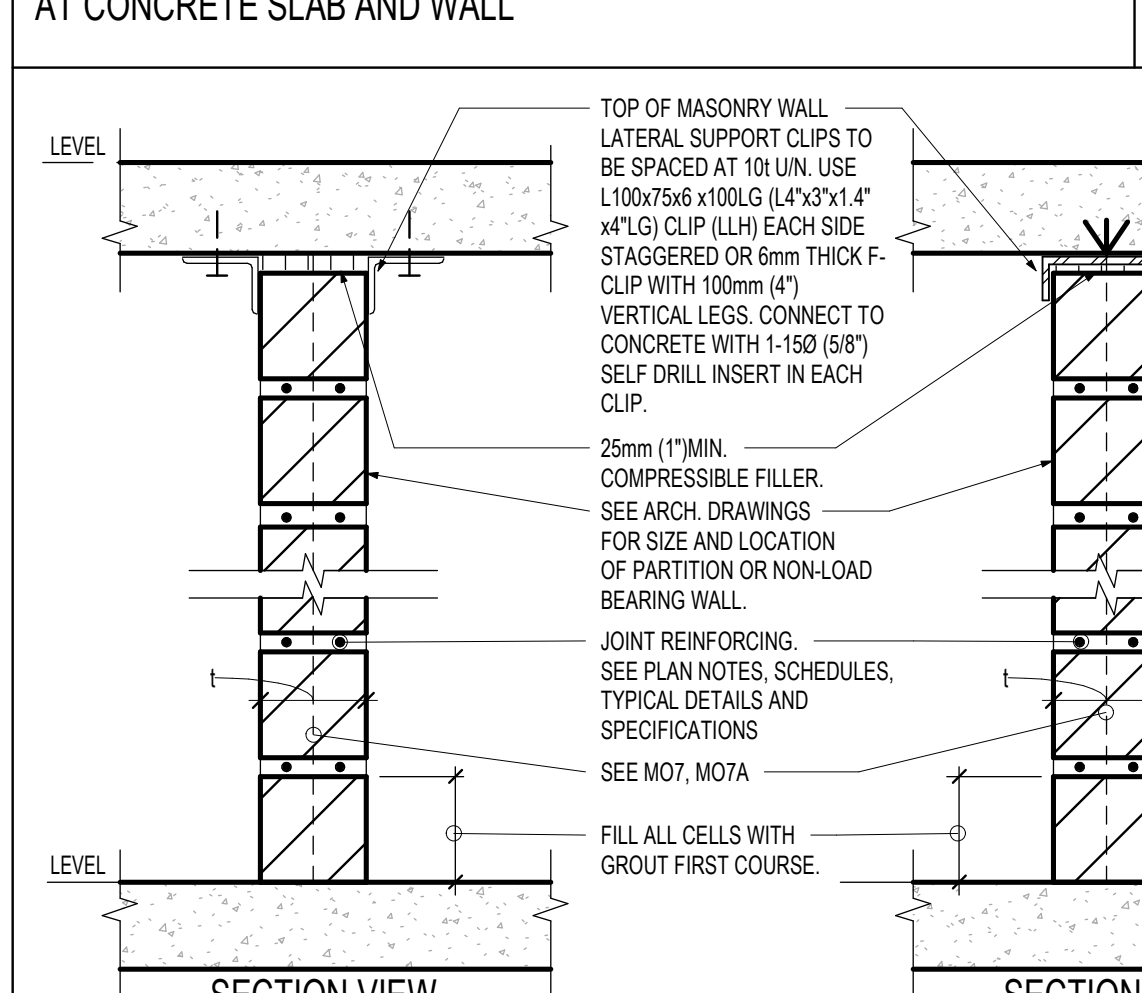
INTERIOR PARTITIONS ABOVE GRADE (DIFFERENTIAL PRESSURE 0.5kPa)

BLOCK	MAXIMUM HEIGHT	VERTICAL REINFORCING	HORIZONTAL REINFORCEMENT
140	NA	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE
190	3000 (10'-0")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE
240	3800 (12'-8")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE

NOTES:
-MINIMUM 930MM WIDE PIER BETWEEN ADJACENT OPENINGS. PIER MUST BE CONTINUOUS FROM BASE OF PARTITION TO LATERAL SUPPORT POINT AT TOP OF PARTITION.
-AVERAGE OPENING SIZE ON EITHER SIDE OF PIER LIMITED TO 1400mm FOR REINFORCED PARTITIONS
-FOR UNREINFORCED PARTITIONS, MAX. OPENING WIDTH MUST NOT EXCEED PIER LENGTH.
-REINFORCING SCHEDULE APPLIES FOR PARTITIONS WALLS UP TO 100m ABOVE GRADE
-PARTITION WALL REINFORCING DOES NOT APPLY FOR SHAFTS WHERE PRESSURES EXCEED NOTED DIFFERENTIAL PRESSURES NOTED ABOVE.
-IF ANY OF THESE CONDITIONS ARE NOT MET, CONTRACTOR TO PROVIDE ENGINEER STAMPED SHOP DRAWINGS OF REINFORCING FOR CONSULTANT REVIEW
-REFER TO TD M07B FOR LATERAL SUPPORT DETAILS FOR CONCRETE CONSTRUCTION, M14 FOR STEEL CONSTRUCTION. LATERAL SUPPORTS TO BE SPACED AT 10' UNLESS NOTED OTHERWISE. ALLOWABLE PARTITION HEIGHTS ARE BASED ON 15MPa NORMAL DENSITY BLOCK w/ TYPE 'S' MORTAR.

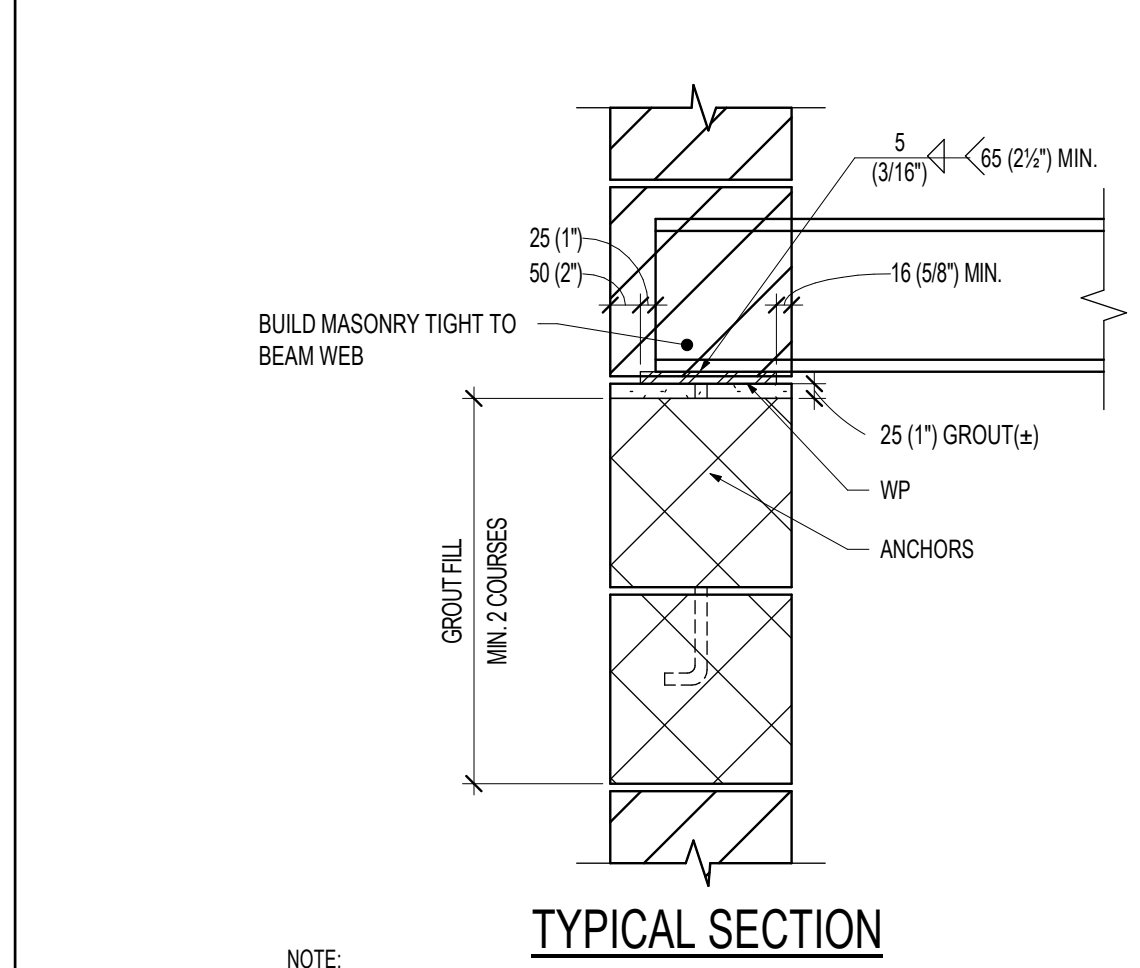
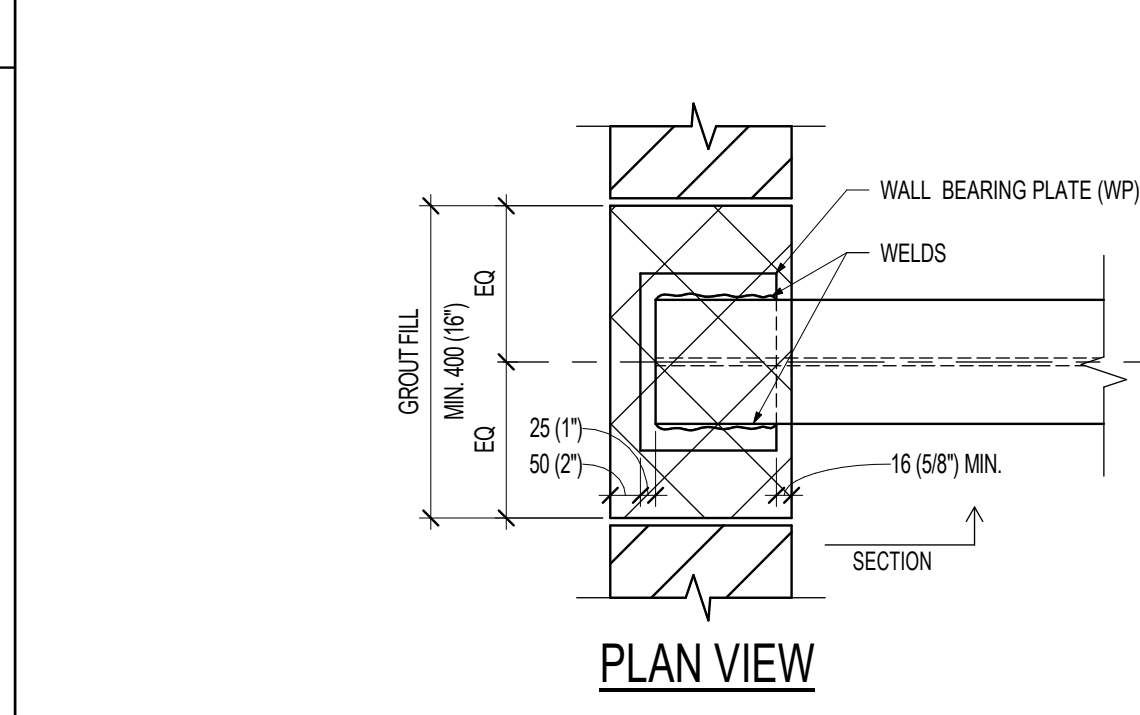
DETAILS OF NON LOAD-BEARING MASONRY WALLS AT CONCRETE SLAB AND WALL

M07B



TYPICAL STEEL BEAM BEARING ON MASONRY WALL (PERPENDICULAR)

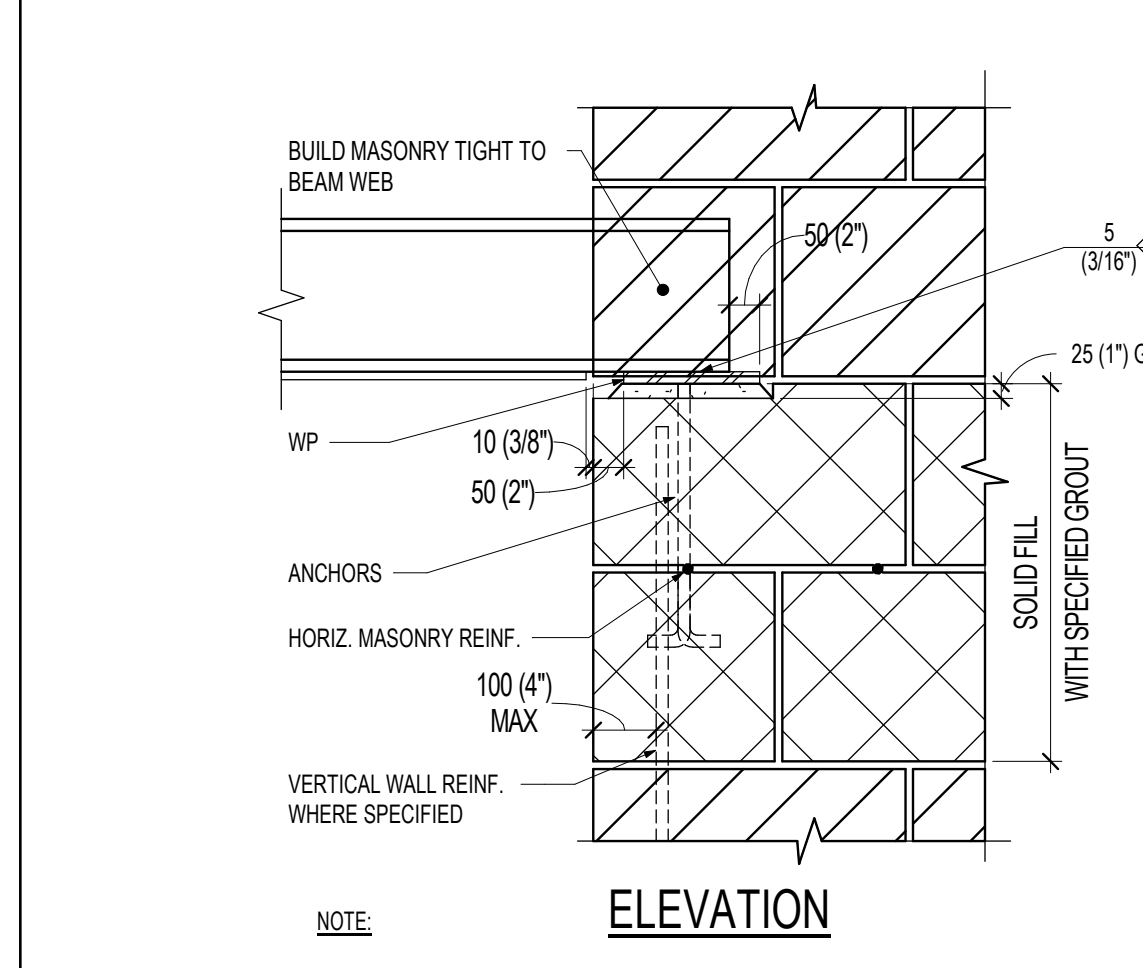
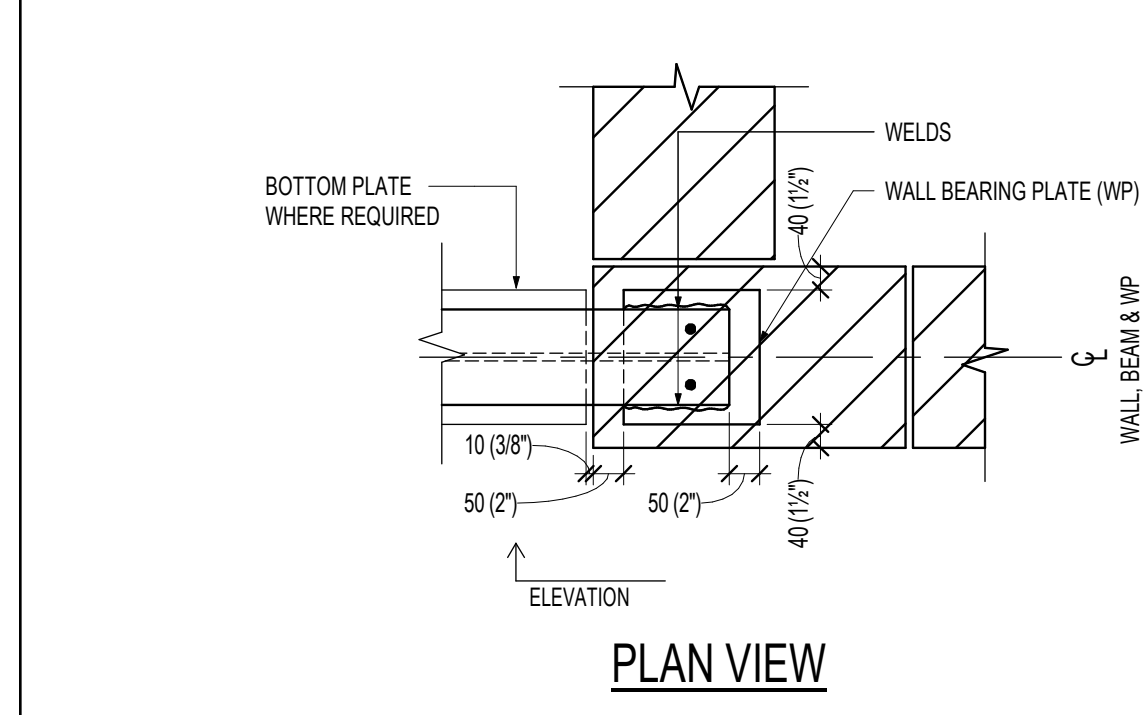
M08



NOTE:
REFER TO TYPICAL DETAILS, TYPICAL NOTES, SPECIFICATION PLANS AND SCHEDULES FOR:
• WP SIZE AND SIZE/NUMBER OF ANCHORS
• VERTICAL WALL REINFORCING
• GROUT MIX AND EXTENT OF GROUT

TYPICAL STEEL BEAM BEARING ON END OR CORNER OF MASONRY WALL (MINIMUM REQUIREMENTS)

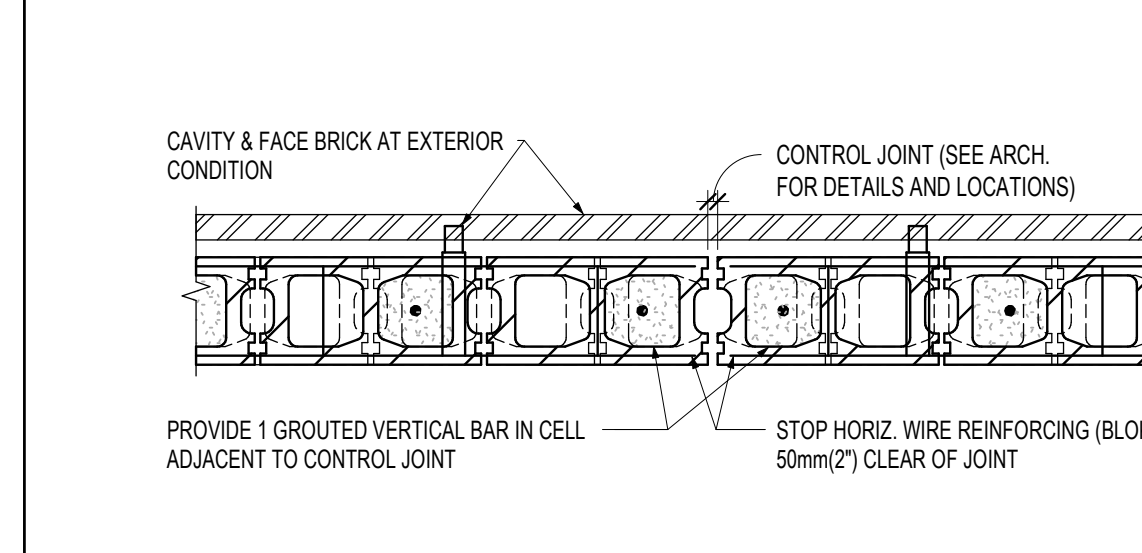
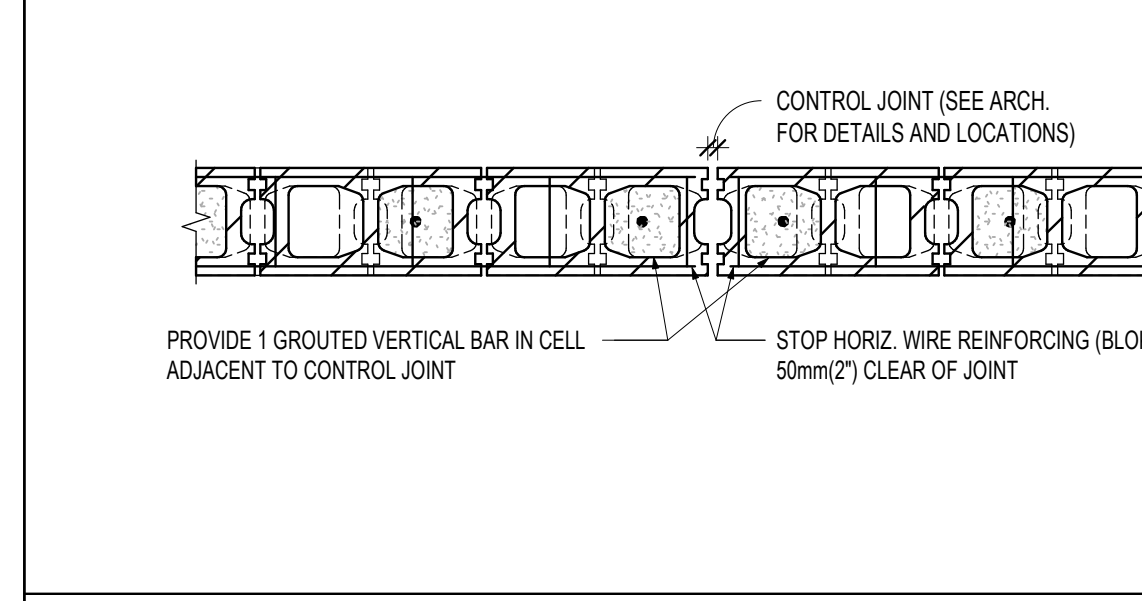
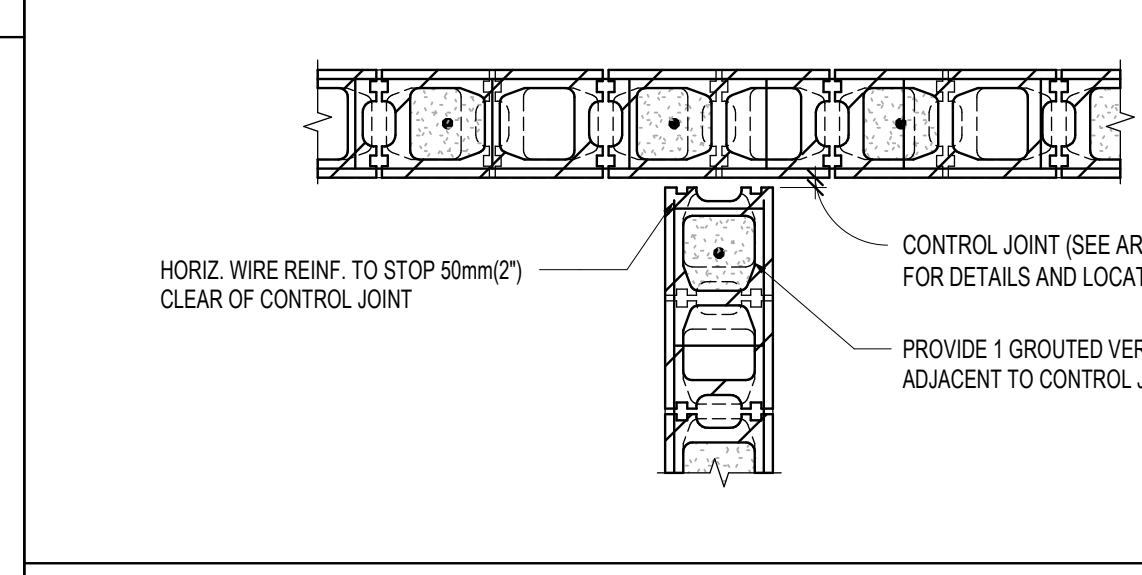
M09



NOTE:
REFER TO TYPICAL DETAILS, TYPICAL NOTES, SPECIFICATION PLANS AND SCHEDULES FOR:
• WP SIZE AND SIZE/NUMBER OF ANCHORS
• VERTICAL WALL REINFORCING
• GROUT MIX AND EXTENT OF GROUT

TYPICAL DETAIL AT CONTROL JOINT IN REINFORCED MASONRY WALL

M10



NOTE:
1. AT MASONRY LINTEL BOND BEAM STOP HORIZ. BARS 50mm (2") CLEAR OF CONTROL JOINT. UNLESS OTHERWISE NOTED.
2. SEE PLANS AND TYPICAL NOTES FOR VERTICAL REINFORCING AND GROUT

NO.	DATE	ISSUED FOR	REVISION
5	MARCH 2024	ISSUED FOR TENDER	
4	JAN 31/2023	ISSUED FOR PERMIT	
3	DEC 09/2022	ISSUED FOR 90% CLIENT REVIEW	
2	OCT 12/2022	ISSUED FOR 60% CLIENT REVIEW	
1	OCT 12/2022	ISSUED FOR CLIENT REVIEW	

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

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ÉEC SAINT-MICHEL
Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
TYPICAL DETAILS

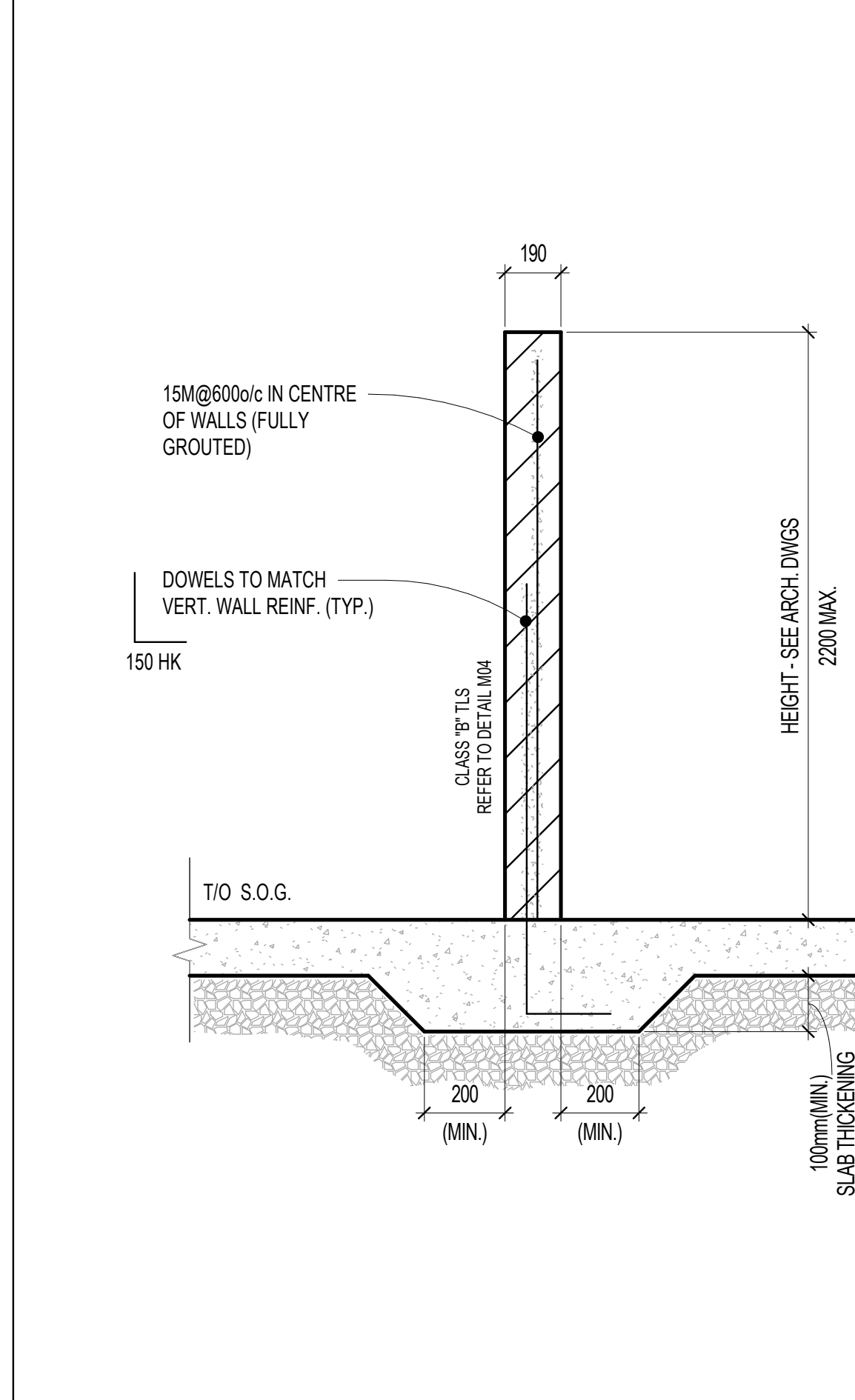
PROJECT NO: 20220316
SCALE: 1:1

DRAWN: AE
CHECKED: JG
DATE: MARCH 2024

DRAWING NO: S3-04
REV: 5

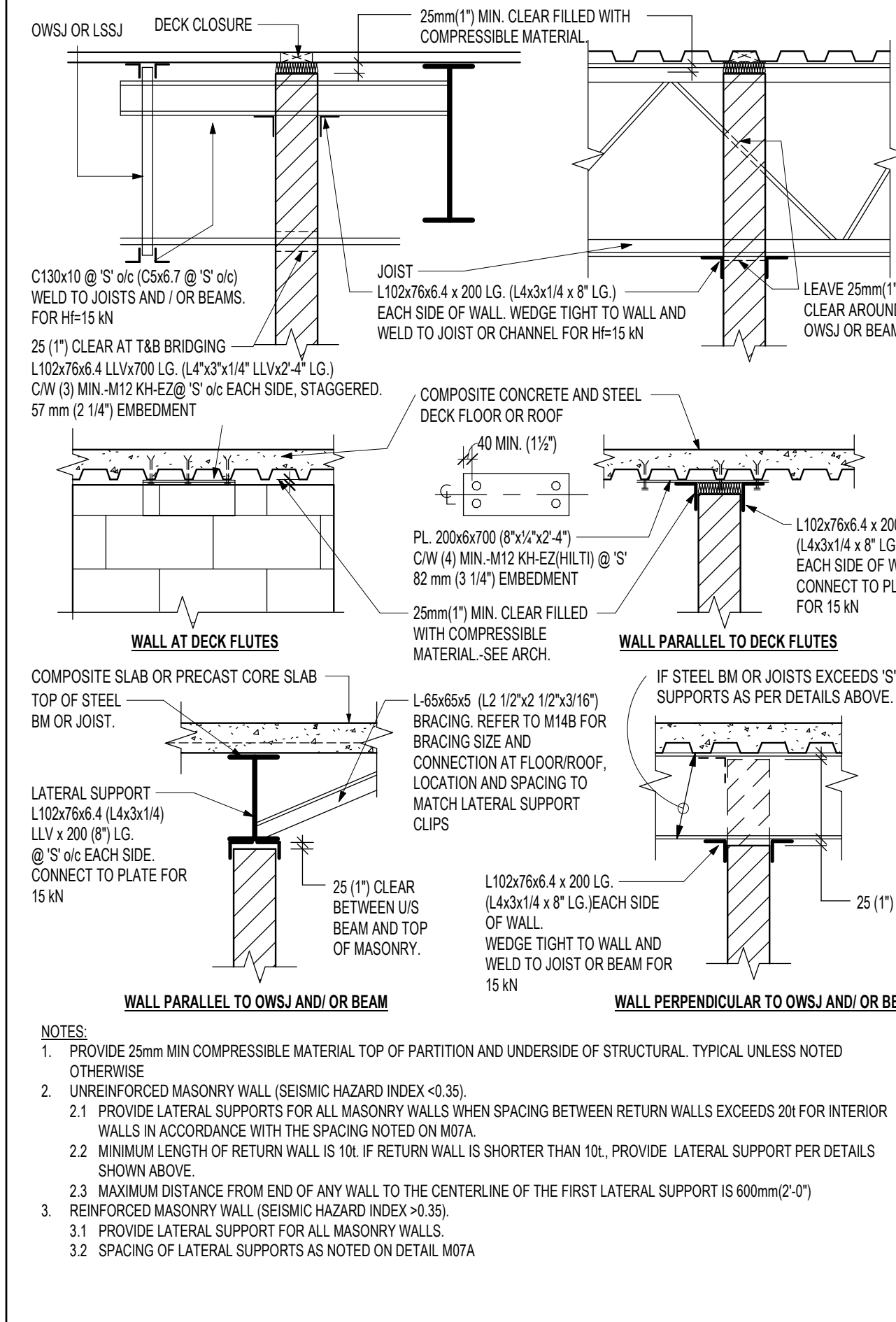
TYPICAL LOW BLOCK PARTITION WALL SUPPORT DETAIL

M12



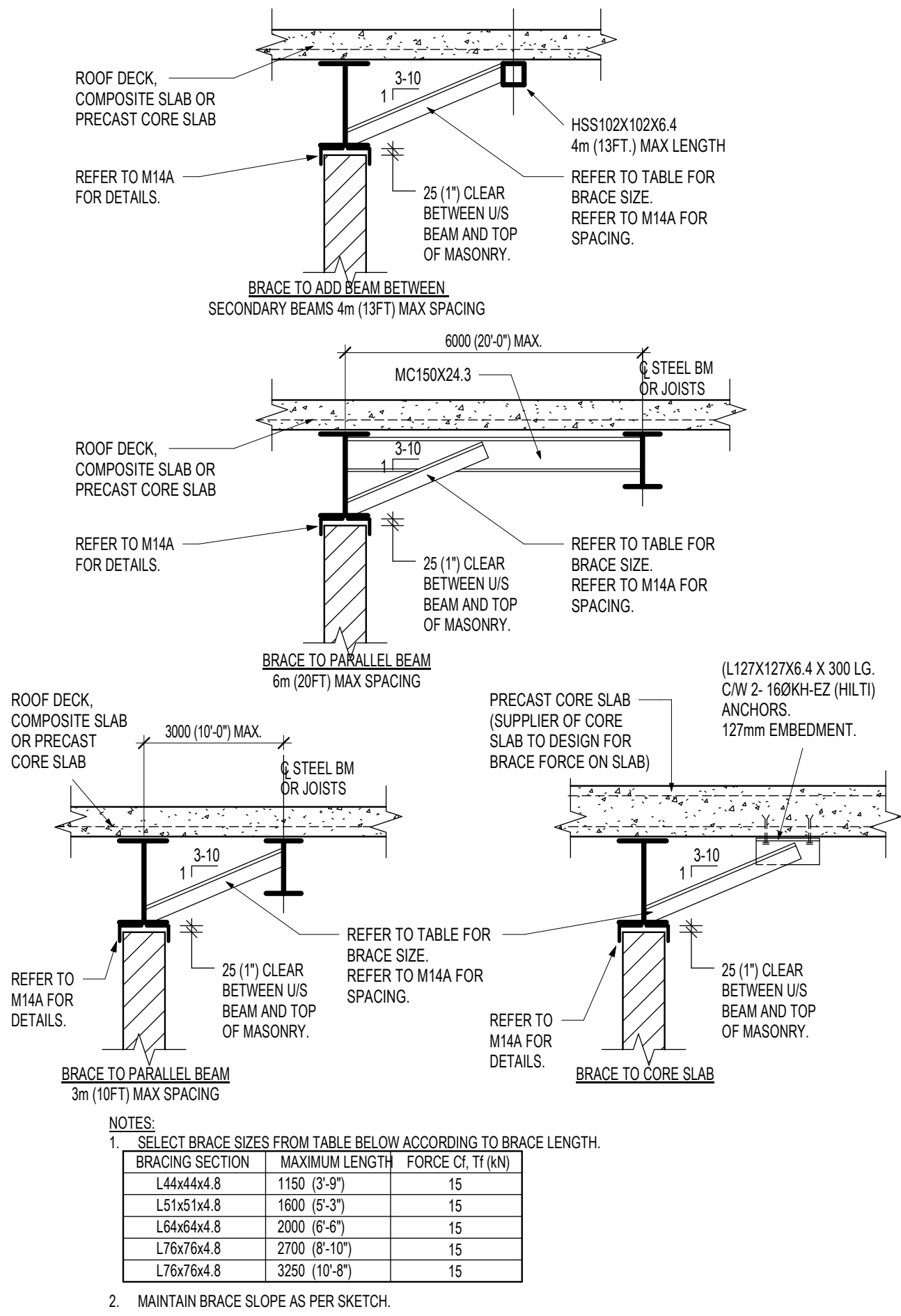
TYPICAL LATERAL SUPPORT AT PARTITIONS

M14A



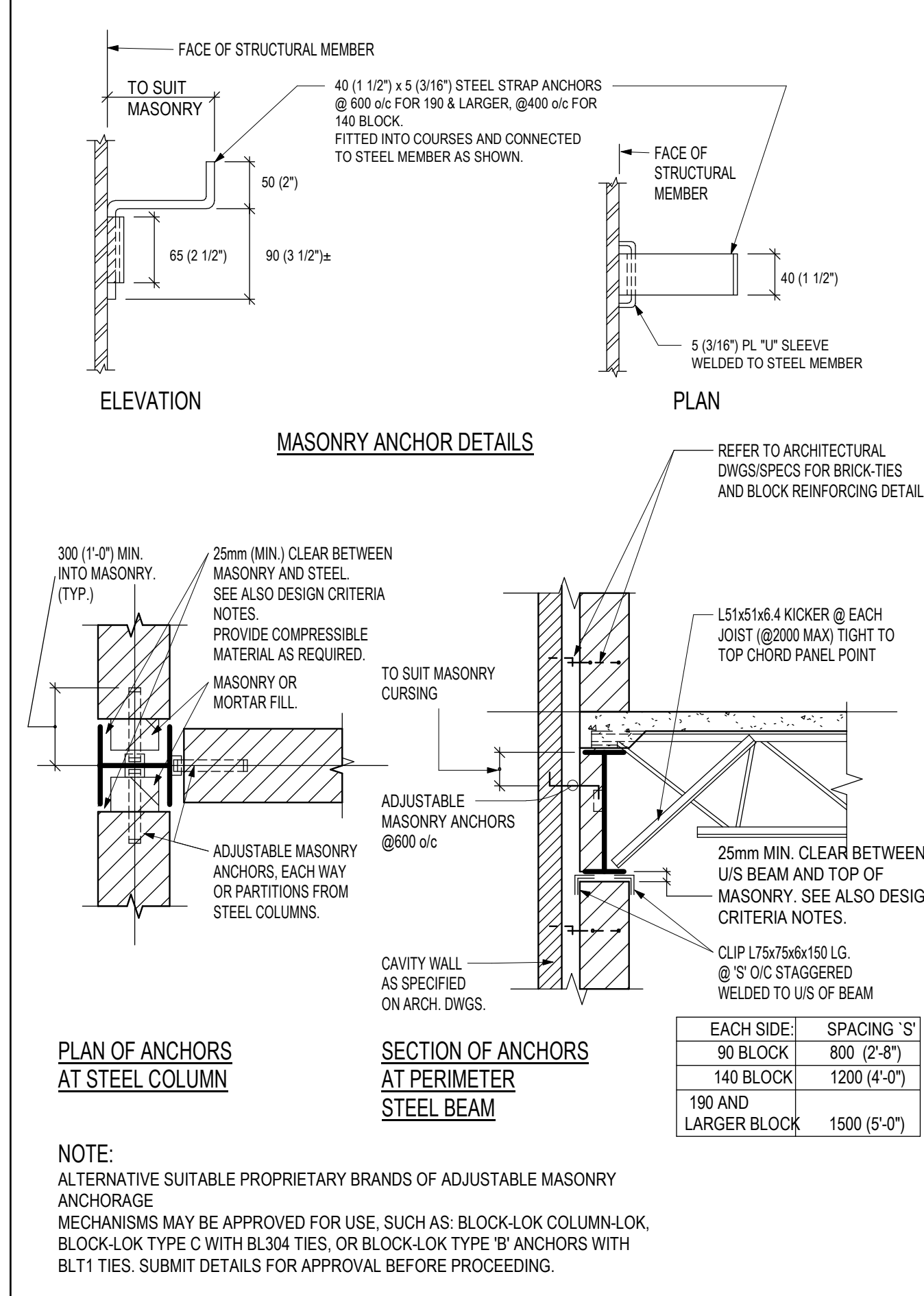
TYPICAL BRACE SUPPORTING PARTITIONS

M14B



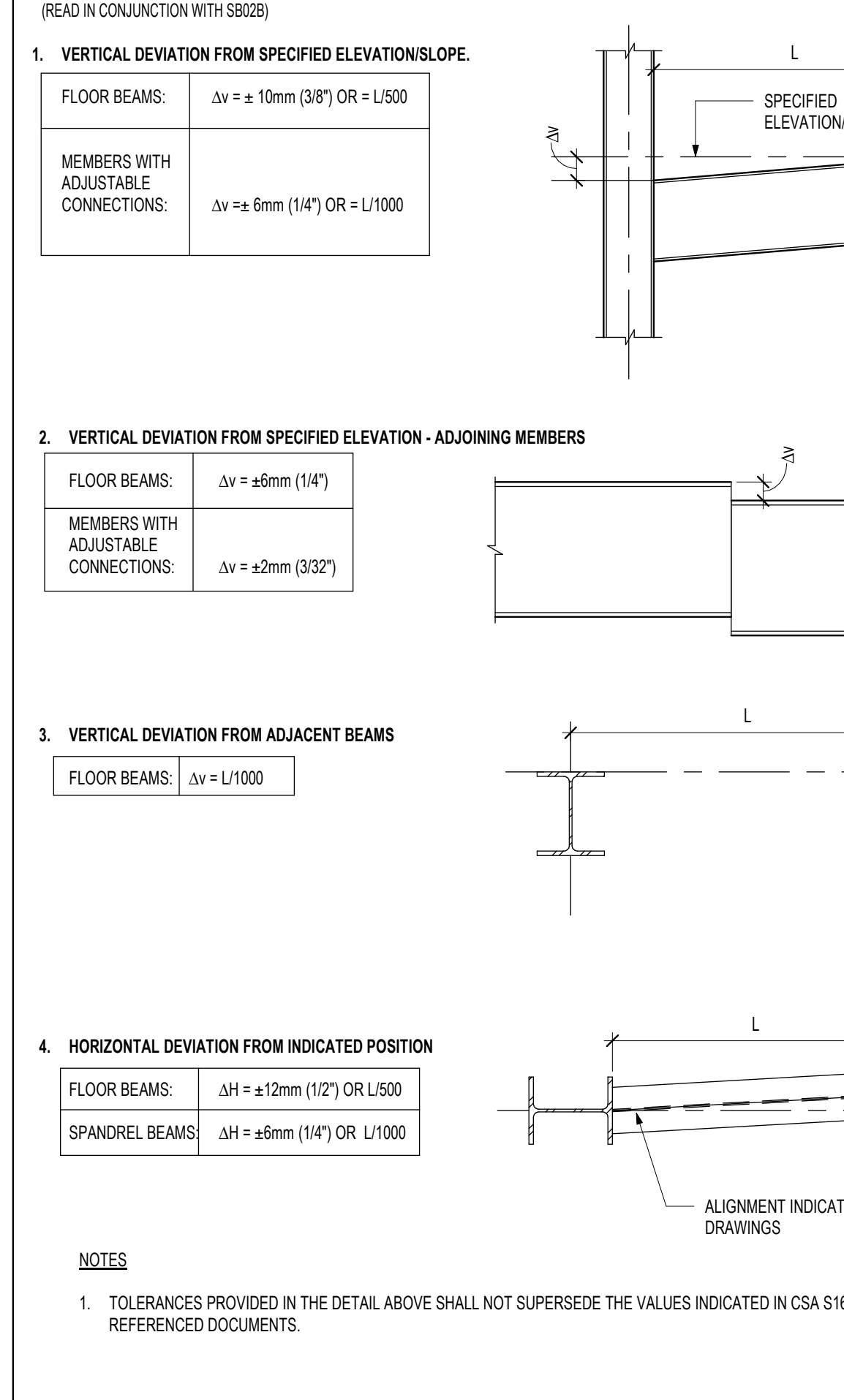
ADJUSTABLE MASONRY ANCHORS TO STRUCTURAL STEEL

M15



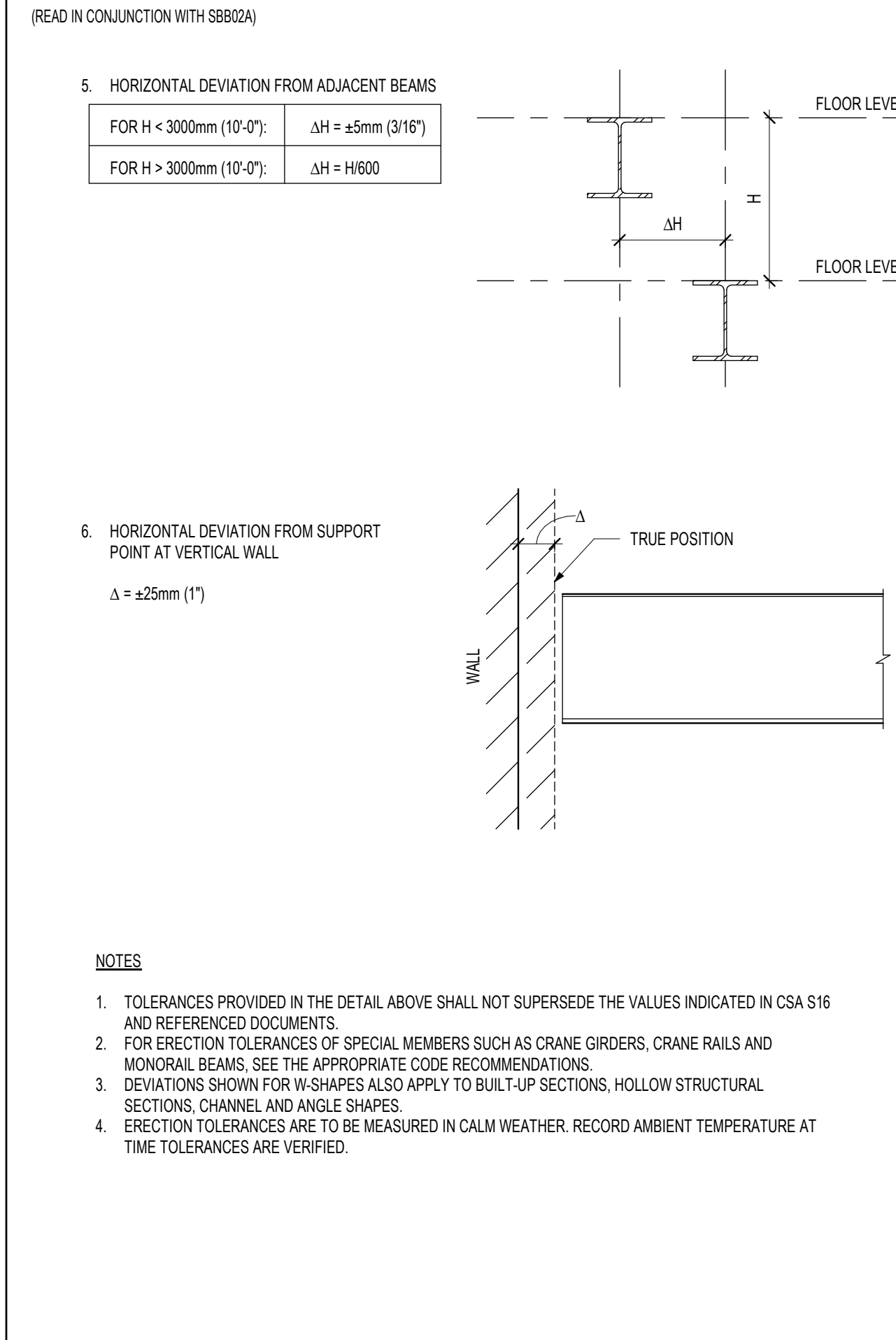
ERECTION TOLERANCES FOR STEEL BEAMS

SB02A



ERECTION TOLERANCES FOR STEEL BEAMS

SB02B



NO.	DATE	ISSUED FOR	REVISION
5	MARCH 2024	ISSUED FOR TENDER	
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SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
TYPICAL DETAILS

PROJECT NO: 20220316	SCALE: 1 : 1
DRAWN: AE	DRAWING NO.: S3-05
CHECKED: JG	REV: 5
DATE: MARCH 2024	

STEEL DECK NOTES	A05	TOLERANCES ON ANCHOR ROD PLACEMENT	SAB01	ANCHOR ROD DETAILS	SAB02	STEEL GRAVITY COLUMN BASE DETAIL	SC02
<p>1. GENERAL</p> <p>1.1. DESIGN, FABRICATION, HANDLING AND ERECTION SHALL CONFORM TO THE FOLLOWING STANDARDS:</p> <p>1.1.a. CSA-S136</p> <p>1.1.b. CSSBI 10M STANDARD FOR STEEL ROOF DECK.</p> <p>1.1.c. CSSBI 12M STANDARD FOR COMPOSITE STEEL DECK.</p> <p>1.1.d. ASTM A653 SPECIFICATIONS FOR STEEL SHEET, ZINC COATED (GALVANIZED) OR ZINC-IRON ALLOY COATED (GALVANNEAL) BY THE HOT DIP PROCESS.</p> <p>1.1.e. WELDING SHALL CONFORM TO CSA STANDARD W59 AND BE PERFORMED BY A FABRICATOR CERTIFIED TO CSA STANDARD W47.1.</p> <p>1.2. THE STEEL DECK SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER. SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP AND SIGNATURE OF THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION AND ERECTION.</p> <p>1.3. NO HANGERS OR BRACKETS SHALL BE HUNG DIRECTLY FROM THE FLOOR OR ROOF DECK. ALL POINT LOADS MUST BE APPLIED DIRECTLY TO STRUCTURAL STEEL FRAMING UNLESS OTHERWISE SHOWN OR APPROVED BY THE STRUCTURAL CONSULTANT.</p> <p>1.4. WHEREVER STRUCTURAL FRAMING PERMITS, STEEL DECK SHALL BE DESIGNED AND FABRICATED TO SPAN CONTINUOUSLY OVER AT LEAST 4 SUPPORTS (3 SPANS). PROVIDE AN ADEQUATE INCREASE IN THICKNESS OF METAL TO COMPENSATE FOR CONTINUITY WHEREVER FEWER SUPPORTS MAY OCCUR. END LAPS TO BE 50mm (2") MIN. AND BE LOCATED OVER SUPPORTS.</p> <p>1.5. ROOF DECK SHALL BE FORMED WITH INTEGRAL RIBS IN ORDER TO SAFELY SUPPORT THE LOADS GIVEN ON THE DRAWINGS OVER THE SPANS REQUIRED. DECK THICKNESS GIVEN ON DRAWINGS IS MINIMUM ASSUMED ALLOWABLE THICKNESS AND MUST BE DESIGNED BY THE DECK SUPPLIER.</p> <p>1.5.a. DEFLECTION OF ROOF DECK UNDER LIVE OR SNOW LOAD ONLY SHALL NOT EXCEED 1/300TH OF SPAN.</p> <p>1.6. FLOOR DECK SHALL BE FORMED WITH INTEGRAL RIBS AND EMBOSMENTS FOR COMPOSITE ACTION WITH CONCRETE SLAB IN ORDER TO SAFELY SUPPORT THE LOADS GIVEN ON THE DRAWINGS OVER THE SPANS REQUIRED. IN ADDITION, THE DECK SHALL SAFELY SUPPORT ALL CONSTRUCTION LOADS WITH NO SHORING UNITS. CONCRETE IS SET. DECK THICKNESS GIVEN ON DRAWINGS IS MINIMUM ALLOWED.</p> <p>1.6.a. DEFLECTION OF COMPOSITE FLOOR UNDER LIVE LOAD ONLY SHALL NOT EXCEED 1/300TH OF SPAN.</p> <p>1.7. DESIGN AND DETAIL ON SHOP DRAWINGS ALL CONNECTIONS TO SUPPORTING MEMBERS FOR ALL COMBINATIONS OF DIAPHRAGM SHEAR AND UPLIFT FORCES ACTING ON THE ROOF DECK.</p> <p>2. PRODUCTS</p> <p>2.1. UNLESS OTHERWISE NOTED ROOF DECK AND / OR COMPOSITE DECK SHALL BE FORMED OF METALLIC COATED SHEET STEEL CONFORMING TO ASTM A653M. STRUCTURAL QUALITY GRADE '230' WITH A 275Z ZINC COATING (GALVANNEAL).</p> <p>2.2. UNLESS OTHERWISE NOTED DECK SHALL BE SINGLE FLUTED ELEMENT WITH INTEGRAL RIBS OF DEPTH AND MIN. BASE NOMINAL THICKNESS (BNT) AS NOTED ON THE DRAWINGS. DECK SHALL HAVE INTERLOCKING SIDE JOINTS BETWEEN PANELS. (MIN. BNT: 0.76mm (0.30").</p> <p>2.3. COVER PLATES, CELL CLOSURES, FLASHINGS AND REINFORCING STIFFENERS FOR UNSUPPORTED EDGES TO BE SUPPLIED OF SIMILAR MATERIAL AND ZINC COATING TO THAT FOR DECK. UNLESS NOTED.</p> <p>2.4. PRIMER PAINT TO BE ZINC RICH, READY MIX TO CAN, CGSB-1.181 FOR FIELD 'TOUCH-UP' OF WELD BURNS AFTER DECK IS INSTALLED.</p> <p>2.5. UNLESS OTHERWISE SHOWN FOR OPENINGS THROUGH ROOF DECK FROM 150mm (6") TO 1875mm (75") ACROSS THE FLUTES THE DECK SUPPLIER SHALL PROVIDE NOT LESS THAN A 51x51x16 ANGLE (2x2x 1/4 L) REINFORCEMENT TO FRAME ACROSS EACH SIDE OF THE OPENING PERPENDICULAR TO THE FLUTES. WELDED TO AT LEAST TWO FLUTES EACH SIDE OF THE OPENING.</p> <p>2.6. FOR ROOF OPENINGS OVER 450mm (18") ACROSS THE FLUTES AND FOR AREAS OF CONCENTRATED LOAD, REINFORCE IN ACCORDANCE WITH STRUCTURAL FRAMING DETAILS SHOWN ON PLANS OR TYPICAL DETAILS.</p> <p>3. EXECUTION</p> <p>3.1. SUPPLY AND PLACE STEEL PACKING AS REQUIRED TO PRODUCE AN EVEN BEARING PRESSURE AT SUPPORTS.</p> <p>3.2. FOR STEEL ROOF DECK, UNLESS OTHERWISE DETERMINED DURING THE DIAPHRAGM AND UPLIFT CONNECTION DESIGN OR SPECIFIED OTHERWISE IN THE SPECIFICATIONS OR ENGINEERING DRAWINGS, THE MINIMUM ATTACHMENT OF THE DECK TO THE BEARING SURFACES AND THE MINIMUM SIDE LAP CONNECTIONS BETWEEN DECK UNITS SHALL BE:</p> <p>3.2.A. FOR 30mm DEEP DECK PROFILES, CONNECT THE FIRST, THIRD, FIFTH AND SEVENTH LOW CORRUGATIONS (8/4 CONFIGURATION), AND EACH SUPPORT PARALLEL TO FLUTE DIRECTION AT 300mm (12") MAXIMUM CENTERS. CONNECTIONS SHALL BE MADE USING EITHER AN ARC SPOT WELD WITH 20mm (3/4") NOMINAL TOP DIAMETER, OR MECHANICALLY FASTENED USING HILTI POWDER ACTUATED FASTENERS (X-HSN24, HILTI X-ENP19, OR EQUIVALENT).</p> <p>3.2.B. FOR 75mm DEEP DECK PROFILES, CONNECT THE FIRST, THIRD AND FIFTH LOW CORRUGATIONS (2/3 CONFIGURATION), AND EACH SUPPORT PARALLEL TO FLUTE DIRECTION AT 300mm (12") MAXIMUM CENTERS. CONNECTIONS SHALL BE MADE USING EITHER AN ARC SPOT WELD WITH 20mm (3/4") NOMINAL TOP DIAMETER, OR MECHANICALLY FASTENED USING HILTI POWDER ACTUATED FASTENERS (X-HSN24, HILTI X-ENP19, OR EQUIVALENT).</p> <p>3.2.C. FOR ROOF DECKS, SIDE LAPS OF ADJACENT NESTABLE UNITS SHALL BE CRIMPED TOGETHER AT 900mm (36") CENTERS, OR FASTENED WITH HILTI M HW SCREWS (SLO1, SLO2, OR EQUIVALENT).</p> <p>3.3. FOR STEEL FLOOR DECK, UNLESS OTHERWISE DETERMINED DURING THE DIAPHRAGM CONNECTION DESIGN OR SPECIFIED OTHERWISE IN THE SPECIFICATIONS OR ENGINEERING DRAWINGS, THE MINIMUM ATTACHMENT OF THE DECK TO THE BEARING SURFACES AND THE MINIMUM SIDE LAP CONNECTIONS BETWEEN DECK UNITS SHALL BE:</p> <p>3.3.A. SIDE LAPS OF ADJACENT FLOOR UNITS SHALL BE CRIMPED TOGETHER AT 600mm (24") MAXIMUM ON CENTRE, BUT NOT EXCEEDING THE SPACING REQUIRED FOR THE APPLICABLE ULC FIRE RATED ASSEMBLY.</p> <p>3.3.B. DECK SUPPORTS PARALLEL AND PERPENDICULAR TO FLUTES SHALL BE WELDED WITH 20mm (3/4") WELDS AT 300mm (12") MAXIMUM SPACING, BUT NOT EXCEEDING THE SPACING REQUIRED FOR THE APPLICABLE ULC FIRE RATED ASSEMBLY.</p> <p>3.3.C. THE REQUIRED PUDDLE WELDS AT SUPPORTS MAY BE SUBSTITUTED WITH POWDER ACTUATED FASTENERS THAT PROVIDE EQUIVALENT DIAPHRAGM SHEAR CAPACITY PER METRE.</p> <p>3.4. INSTALL ALL POWDER ACTUATED AND SCREW FASTENERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>3.5. WELD STUD SHEAR CONNECTORS THROUGH DECK WHERE REQUIRED BY DRAWINGS.</p> <p>3.6. 'TOUCH-UP' GALVANIZED OR GALVANNEAL SURFACES WITH SPECIFIED PRIMER AT WELDS AND SCRAPES, ETC., BOTH UPPER AND LOWER SURFACES.</p> <p>3.7. DO NOT SUSPEND CEILING OR MECHANICAL/ELECTRICAL SERVICES FROM US OF STEEL DECK.</p> <p>4. QUALITY CONTROL</p> <p>4.1. AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO BE ENGAGED TO CARRY OUT AND REPORT ON THE FOLLOWING INSPECTION SERVICES:</p> <p>4.1.a. SECTION PROFILE, GAUGE AND STEEL GRADE.</p> <p>4.1.b. ZINC COATINGS.</p> <p>4.1.c. WELDED JOINTS.</p> <p>4.1.d. BEARINGS.</p> <p>4.1.e. SIDE LAP CONNECTIONS.</p> <p>4.1.f. TOUCH-UP PRIMER.</p> <p>4.1.g. FIELD CUTTING AND/OR ALTERATIONS.</p> <p>4.2. REFER ALSO TO THE GENERAL NOTES, SPECIFICATIONS, AND TERMS OF REFERENCE FOR ADDITIONAL INFORMATION.</p>		<p>n = TOTAL NUMBER OF COLUMNS</p>					

TOLERANCES ON ANCHOR ROD PLACEMENT	SAB01	ANCHOR ROD DETAILS	SAB02	STEEL GRAVITY COLUMN BASE DETAIL	SC02
<p>1.0. INSTALLATION OF ANCHOR RODS EMBEDDED ITEMS</p> <p>1.1. COMPLY WITH THE REQUIREMENTS OF CISC CODE OF STANDARD PRACTICE FOR STRUCTURAL STEEL (CURRENT EDITION) AND AS FOLLOWS.</p> <p>1.2. ANCHOR RODS AND FOUNDATION RODS SHALL BE SET IN ACCORDANCE WITH THE ERECTION DIAGRAMS. THEY MUST NOT VARY FROM THE DIMENSIONS SHOWN ON THE ERECTION DIAGRAMS BY MORE THAN THE FOLLOWING:</p> <p>(a) 3mm CENTRE TO CENTRE OF ANY TWO RODS WITHIN AN ANCHOR ROD GROUP.</p> <p>(b) 6mm CENTRE TO CENTRE OF ADJACENT ANCHOR GROUPS.</p> <p>(c) MAXIMUM ACCUMULATION OF 6mm PER 30 000mm ALONG THE ESTABLISHED COLUMN LINE OF MULTIPLE ANCHOR GROUPS, BUT NOT TO EXCEED A TOTAL OF 25mm. THE ESTABLISHED COLUMN LINE IS THE ACTUAL FIELD LINE MOST REPRESENTATIVE OF THE CENTRES OF THE AS-BUILT ANCHOR ROD GROUPS ALONG LINE OF COLUMNS.</p> <p>(d) 6mm FROM THE CENTRE OF ANY ANCHOR GROUP TO THE ESTABLISHED COLUMN LINE THROUGH THAT GROUP.</p> <p>1.3. THE TOLERANCES ABOVE ALSO APPLY TO OFFSET DIMENSIONS, SHOWN ON THE CONSTRUCTION DRAWINGS, MEASURED PARALLEL AND PERPENDICULAR TO THE NEAREST ESTABLISHED COLUMN LINE FOR INDIVIDUAL COLUMNS SHOWN ON THE DRAWINGS TO BE OFFSET FROM ESTABLISHED COLUMN LINES.</p>					

ANCHOR ROD DETAILS	SAB02	STEEL GRAVITY COLUMN BASE DETAIL	SC02

STEEL GRAVITY COLUMN BASE DETAIL	SC02

STEEL MOMENT COLUMN BASE DETAIL	SC04

3 MARCH 2024 ISSUED FOR TENDER
 4 JAN 31 2023 ISSUED FOR PERMIT
 5 DEC 09 2022 ISSUED FOR 50% CLIENT REVIEW
 6 OCT 17 2022 ISSUED 90% FOR CLIENT REVIEW
 7 OCT 17 2022 ISSUED FOR CLIENT REVIEW
 8 OCT 17 2022 ISSUED FOR CLIENT REVIEW
 9 OCT 17 2022 ISSUED FOR CLIENT REVIEW
 10 OCT 17 2022 ISSUED FOR CLIENT REVIEW

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DRAWING TITLE:
**TYPICAL DETAILS AN
 GENERAL NOTES**

PROJECT NO: 20220316
 SCALE: 1:1
 DRAWN: AE
 DRAWING NO: REV.
 CHECKED: JG
 DATE: MARCH 2024
 S3-06 5

2024-03-01 3:01:45 PM

MECHANICAL LEGEND	
HEATING, VENTILATION AND AIR CONDITIONING (HVAC)	
	RIGID DUCTWORK
	EXTERNALLY INSULATED DUCTWORK
	FLEXIBLE ROUND DUCTWORK
	SUPPLY DUCTWORK RISER UP
	EXHAUST/RETURN DUCTWORK RISER UP
	SUPPLY DUCTWORK RISER DOWN
	EXHAUST/RETURN DUCTWORK RISER DOWN
	BALANCING DAMPER
	SPLITTER DAMPER
	DOOR UNDERCUT
	DOOR GRILLE
	CAPPED DUCTWORK
	SPIN-ON FITTING WITH BALANCING DAMPER
	SUPPLY AIR DIFFUSER
	RETURN/EXHAUST AIR GRILLE
	FLEXIBLE CONNECTION
	SUPPLY AIR GRILLE - WALL-MOUNTED
	RETURN AIR GRILLE - WALL-MOUNTED
	FLEXIBLE DUCT CONNECTION TO RIGID DUCTWORK
	SQUARE ELBOW WITH AIR TURNING VANES
	FUSIBLE LINK FIRE DAMPER WITH ACCESS DOOR IN DUCT
	MOTORIZED DAMPER
	BACK DRAFT DAMPER
	BALANCING DAMPER
	BRANCH TAKE-OFF WITH ADJUSTABLE SPLITTER DAMPER IN SUPPLY DUCT
	OPEN ENDED DUCT WITH BALANCING DAMPER AND BELLMOUTH INLET
	AIR HANDLING UNIT SILENCER AS PER SILENCER SCHEDULE
	— DENOTES DIFFUSER/GRILLE SIZE — DENOTES DIFFUSER TYPE — DENOTES AIRFLOW RATE (IN L/S)
	THERMOSTAT TIED TO THE BAS SYSTEM
	STANDALONE THERMOSTAT
	PUMP
	LOW TEMPERATURE SUPPLY - HEAT PUMP LOOP
	LOW TEMPERATURE RETURN - HEAT PUMP LOOP
	LOW TEMPERATURE REVERSE RETURN - HEAT PUMP LOOP
	REFRIGERATION LINE - LIQUID
	REFRIGERATION LINE - GAS
	CONDENSATE LINE
	NATURAL GAS LINE
	NATURAL GAS VENT LINE
	ISOLATION VALVE, TYPE AS PER SPECIFICATION
	BALANCING VALVE
	STRAINER
	PRESSURE REDUCING VALVE
	AUTOMATIC 2-WAY CONTROL VALVE
	AUTOMATIC 3-WAY CONTROL VALVE
	CHECK VALVE
	UNION
	MANUAL AIR VENT
	DENOTES EXISTING PIPING/DUCTWORK TO BE REMOVED
	DENOTES EXISTING PIPING/DUCTWORK TO REMAIN
	DENOTES NEW PIPING/DUCTWORK
	PRESSURE GAUGE
	THERMOMETER
	PIPE UP
	PIPE DOWN

MECHANICAL LEGEND																																																																			
HEATING, VENTILATION AND AIR CONDITIONING (HVAC)																																																																			
	WALL FIN HEATER																																																																		
	CV-A DENOTES TYPE																																																																		
	7000 DENOTES HEAT OUTPUT IN WATTS																																																																		
	0.15 DENOTES FLOW RATE IN L/S																																																																		
	FORCED FLOW HEATER																																																																		
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GENERAL NOTES:

- ALL DEMOLITION AND NEW WORK SHALL BE COORDINATED WITH ALL TRADES PRESENT ON SITE. CONSTRUCT NEW SERVICES AND LOCATE NEW EQUIPMENT IN SUCH A WAY THAT IT DOES NOT CONFLICT WITH WORK OF OTHER DIVISIONS AND/OR THE OPERATION/MAINTENANCE OF WORK/MATERIAL SUPPLIED BY OTHER DIVISIONS.
- IT IS MANDATORY FOR THE MECHANICAL CONTRACTOR TO VISIT THE SITE PRIOR TO BIDDING AND REVIEW EXISTING CONDITIONS AND DEMOLITION SCOPE OF WORK TO SUIT EXISTING ARCHITECTURAL, ELECTRICAL, STRUCTURAL AND MECHANICAL SITE CONDITIONS, DRAWINGS, SPECIFICATIONS AND ALL CONTRACT DOCUMENTS. NO EXTRA WILL SUBSEQUENTLY BE ALLOWED TO COVER ANY SUCH ERROR, OMISSION AND/OR OVERSIGHT FOR NOT HAVING MADE A THOROUGH INSPECTION OF THE GROUNDS, EXISTING CONDITIONS, DRAWINGS, SPECIFICATION AND DESIGN INTENT. THE MECHANICAL CONTRACTOR SHALL NOTE THAT THE EXISTING BUILDING WILL REMAIN IN OPERATION THROUGHOUT DEMOLITION/CONSTRUCTION. ALLOW FOR ANY WORK REQUIRED TO BE DONE WHICH MAY AFFECT POWER SUPPLY AND OPERATION OF THE BUILDING TO BE CARRIED OUT AFTER HOURS OR AT A TIME CONVENIENT TO THE BUILDING MANAGEMENT. PROVIDE TEMPORARY SERVICES AS REQUIRED TO ENSURE CONTINUED OPERATION AT ALL TIMES.
- CAREFULLY EXAMINE OTHER EXISTING UTILITY LINES SUCH AS GAS, WATER ETC. PRIOR TO STARTING ANY WORK.
- THESE DRAWINGS SHALL BE READ & PRICED IN CONJUNCTION WITH ALL DRAWINGS AND SPECIFICATIONS FORMING THE CONTRACT AS WELL AS ALL OTHER DOCUMENTS FORMING THIS BID. NO EXTRA COST WILL BE ACCEPTED IN FAILURE TO OBTAINING AND/OR REVIEW OF SUCH DOCUMENTS. REFER TO ARCHITECTURAL AND ELECTRICAL LAYOUTS IN CONJUNCTION FOR EXACT LOCATION OF ALL EQUIPMENT. REPORT ANY DISCREPANCIES TO THE MECHANICAL ENGINEER PRIOR TO COMMENCING WORK. NO EXTRA WILL BE PROVIDED AS A RESULT OF A FAILURE TO DO SO.
- IT IS MANDATORY THAT ALL WORK COMPLY WITH ALL APPLICABLE CODES AND, BASE BUILDING (BOARD) STANDARDS, AND THE STANDARDS SET BY ANY AND ALL LOCAL AUTHORITIES HAVING JURISDICTION.
- ARRANGE FOR ALL INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION AS MANDATED BY CODES OR THE REQUIREMENTS OF THE AUTHORITIES. ATTEND ALL INSPECTIONS AND FURNISH ALL MATERIALS AND LABOUR REQUIRED TO COMPLETE THE INSPECTIONS TO THE SATISFACTION OF THE AUTHORITIES.
- IN THE EVENT OF ANY DISCREPANCY BETWEEN THE MECHANICAL DRAWINGS AND SPECIFICATIONS, ALLOW FOR THE HIGHEST-PRICED OPTION IN THE TENDER PRICE.
- FURNISH ALL MATERIAL AND EQUIPMENT AS SPECIFIED, EXCEPT WHERE SPECIFIC APPROVAL FOR SUBSTITUTION IS GIVEN IN WRITING BY THE OWNER.
- ALLOW FOR PIPE FREEZING OF THE EXISTING SERVICES AS REQUIRED FOR ISOLATION PURPOSES.
- ALLOW FOR DRAINING, FLUSHING AND FILLING OF ALL EXISTING SYSTEMS AS REQUIRED TO SUIT THE DEMOLITION AND NEW SCOPE OF WORK.

DRAWING LIST	
DRAWING NUMBER	DESCRIPTION
M1	MECHANICAL LEGEND AND NOTES
M2	FIRST FLOOR KEY PLAN
M3	SECOND FLOOR KEY PLAN
M4	NEW PLUMBING & DRAINAGE PLAN
M5	NEW HVAC PLAN
M6	NEW HVAC PIPING PLAN - ADDITION
M7	NEW HVAC PIPING PLAN - EXISTING SCHOOL
M8	SCHEDULES

BUILDING AUTOMATION SYSTEM WORK

ALL WORK ASSOCIATED WITH THE DEMOLITION AND/OR RELOCATION OF THE EXISTING BUILDING AUTOMATION SYSTEM AS WELL AS ALL NEW BUILDING AUTOMATION WORK RELATED TO THE NEW HVAC EQUIPMENT WILL BE COMPLETED BY THE DESIGNATED CONTROLS CONTRACTOR FOR THE SCHOOL.

THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ENGAGING THE CONTROLS CONTRACTOR. ALL COSTS OF THE CONTROLS CONTRACTOR SHALL BE INCLUDED FOR IN THE BASE TENDER PRICE.

THE CONTROLS CONTRACTOR FOR THIS SCHOOL IS:

SETPPOINT BUILDING AUTOMATION INC.
400 SPINNAKER WAY UNIT-1
CONCORD, ONTARIO L4K 5Y9
OFFICE - 905.669.8012 X-202
CELL - 416.989.9675
CONTACT: JIM BOWIE

PHASE 1 - SUMMER WORK

THE CONTRACTOR SHALL COMPLETE ALL DEMOLITION AND NEW WORK INSIDE THE EXISTING SCHOOL DURING THE SUMMER TIME IN ADVANCE OF STUDENTS RETURNING TO SCHOOL. THIS INCLUDES:

- ALL CONNECTION WORK OF THE NEW UNDERGROUND SERVICES AT THE CONNECTION OF THE NEW ADDITION TO THE EXISTING SCHOOL.
- ALL WORK INSIDE THE EXISTING LIBRARY.
- ALL WORK INSIDE THE EXISTING SECOND FLOOR MECHANICAL ROOM.
- ALL NEW PIPING TO BE INSTALLED ABOVE THE CEILING BETWEEN THE EXISTING SECOND FLOOR MECHANICAL ROOM AND THE NEW ADDITION. ALL NEW PIPING IS TO BE INSTALLED ABOVE THE EXISTING DROP CEILINGS.

NO.	DATE	REVISION
7	04/02/24	ISSUED FOR TENDER
6	02/28/24	ISSUED FOR TENDER
5	07/01/23	ISSUED FOR TENDER
4	02/22/23	RE-ISSUED FOR PERMIT
3	02/10/23	ISSUED FOR PERMIT
2	01/20/23	ISSUED FOR 85% DESIGN REVIEW
1	10/21/22	ISSUED FOR 60% DESIGN REVIEW

DO NOT SCALE DRAWINGS. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE JOB. ALL DRAWINGS REMAIN THE PROPERTY OF THE ARCHITECTS.

GENERAL NOTES

- 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.
- THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
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- THE STABILITY OF THE STRUCTURAL FRAME IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING DURING CONSTRUCTION.
- ALL DIMENSIONS GIVEN ARE IN METRIC.

MECHANICAL & ELECTRICAL CONSULTANT:
SURI & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

1022 WHITE CLOVER WAY
MISSISSAUGA, ONTARIO
L5V 1G8
T (905) 290-7881
F (289) 327-3400

ELECTRICAL
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Kingsland + ARCHITECTS INC.

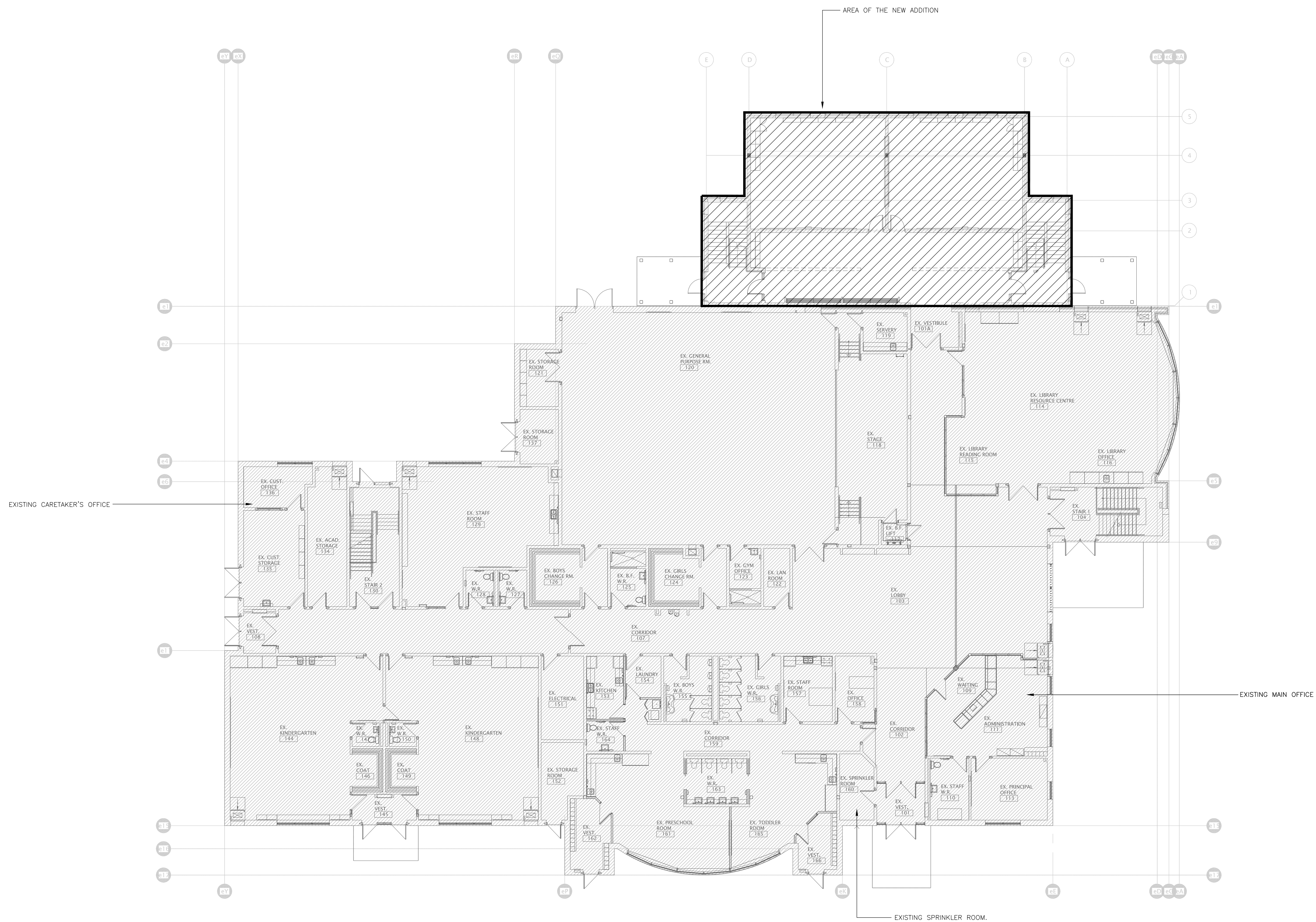
KINGSLAND + ARCHITECTS INC
219 Dufferin Street, Suite 308
Toronto, Ontario M5K 3J1
ph 416.203.7799
fax 416.203.7763



ÉEC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE: MECHANICAL LEGEND AND NOTES	
PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO: REV.
CHECKED: R.S.	M1
DATE: -	



1 FIRST FLOOR KEY PLAN
M2 SCALE: 1:150

NO.	DATE	REVISION
7	04/02/24	ISSUED FOR TENDER
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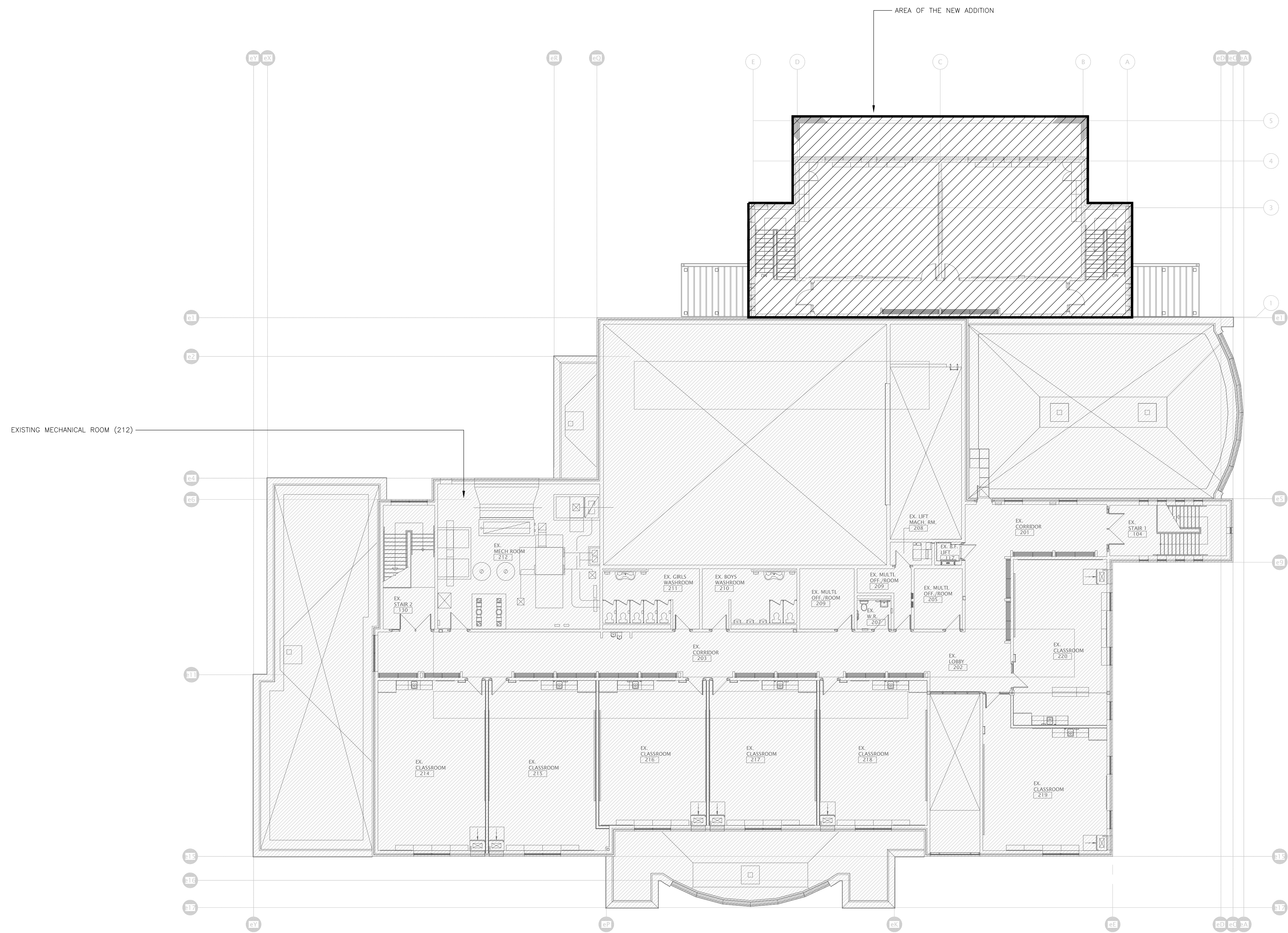
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M1C 1R7

DRAWING TITLE:
FIRST FLOOR KEY PLAN

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO.: REV.
CHECKED: R.S.	M2
DATE: -	

DATE PLOTTED: Thursday, April 4, 2024



1 SECOND FLOOR KEY PLAN
 M3 SCALE: 1:150

NO.	DATE	REVISION
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6	02/28/24	ISSUED FOR TENDER
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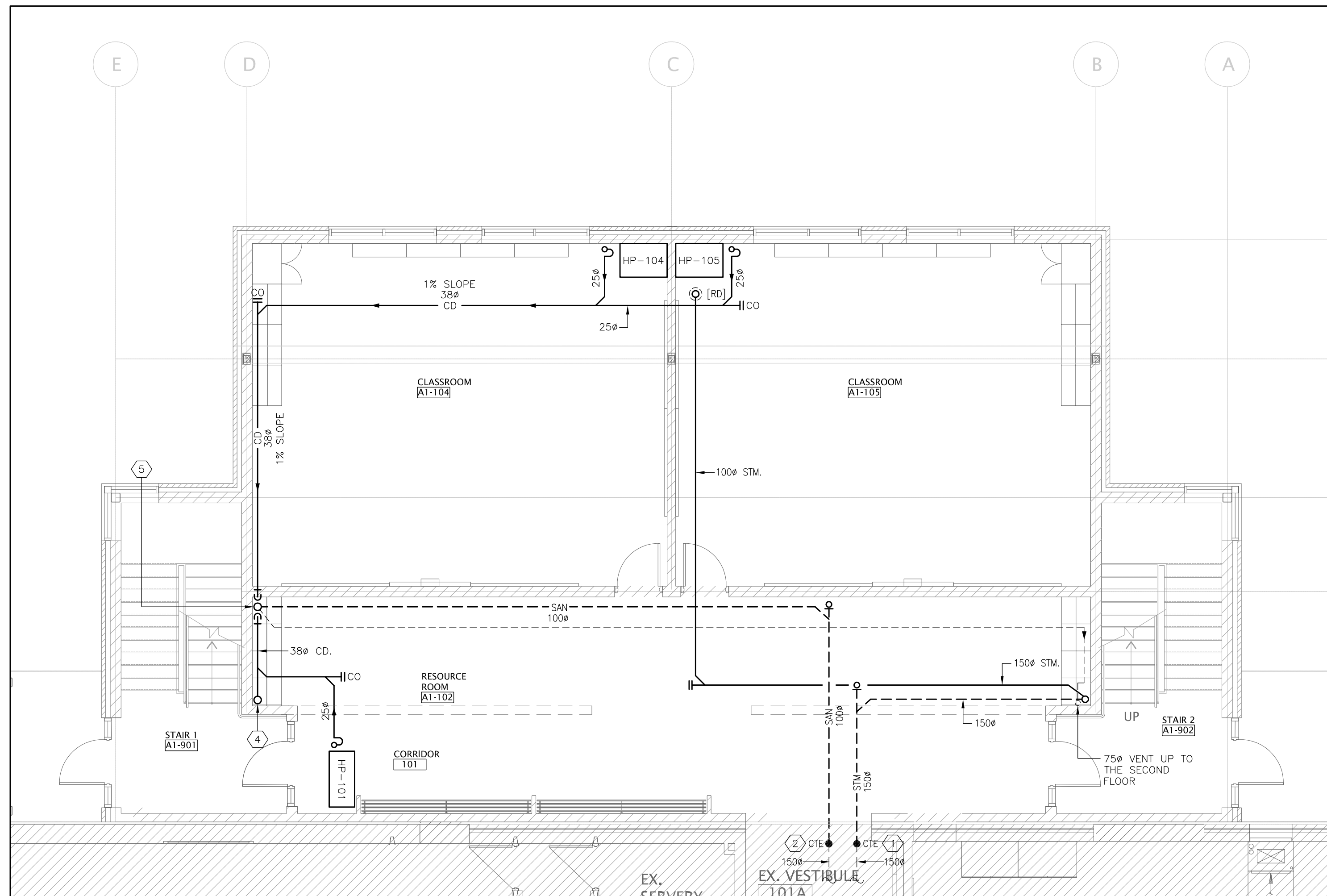
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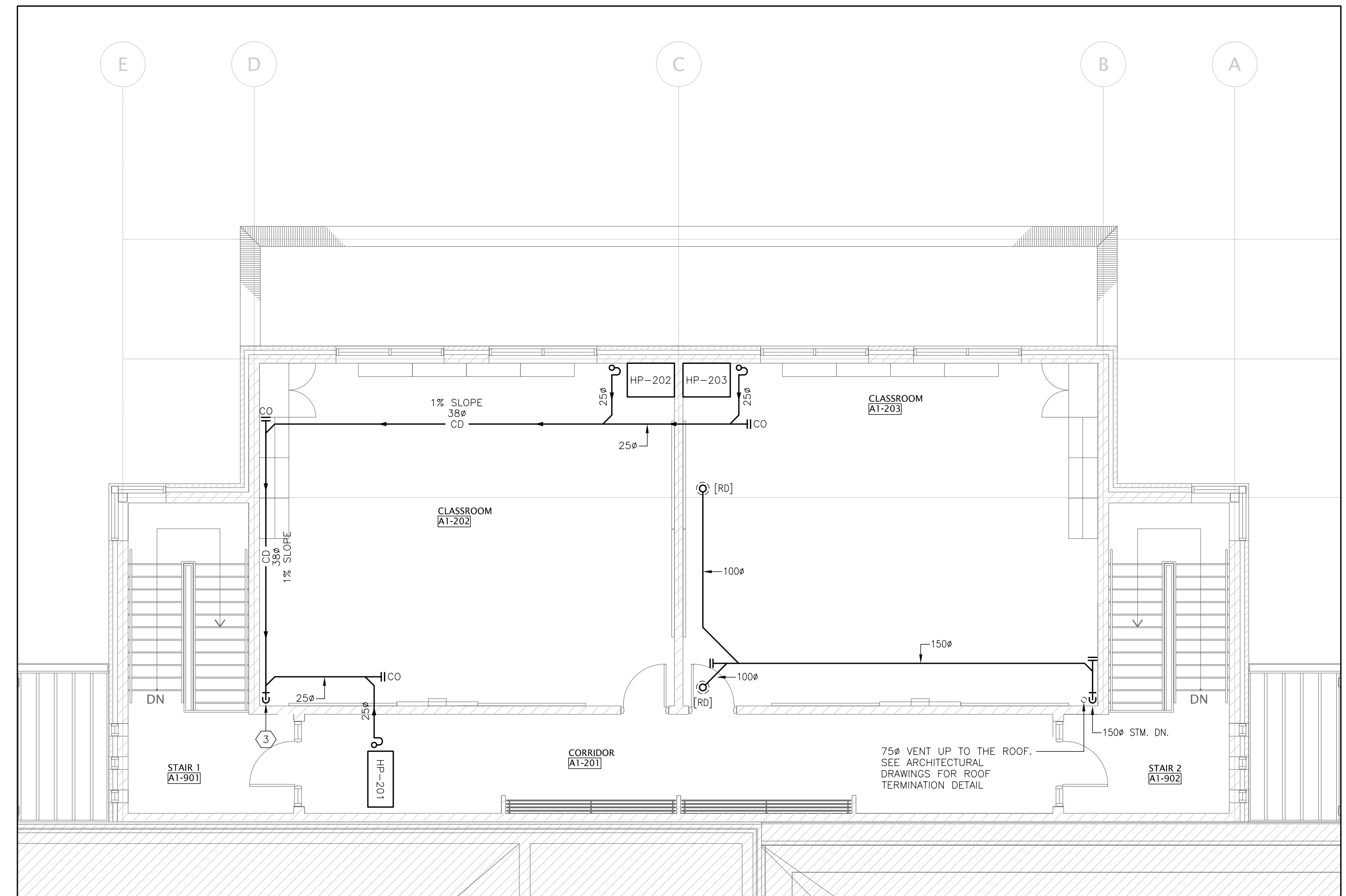
DRAWING TITLE:
 SECOND FLOOR KEY PLAN

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO: REV.
CHECKED: R.S.	M3
DATE: -	

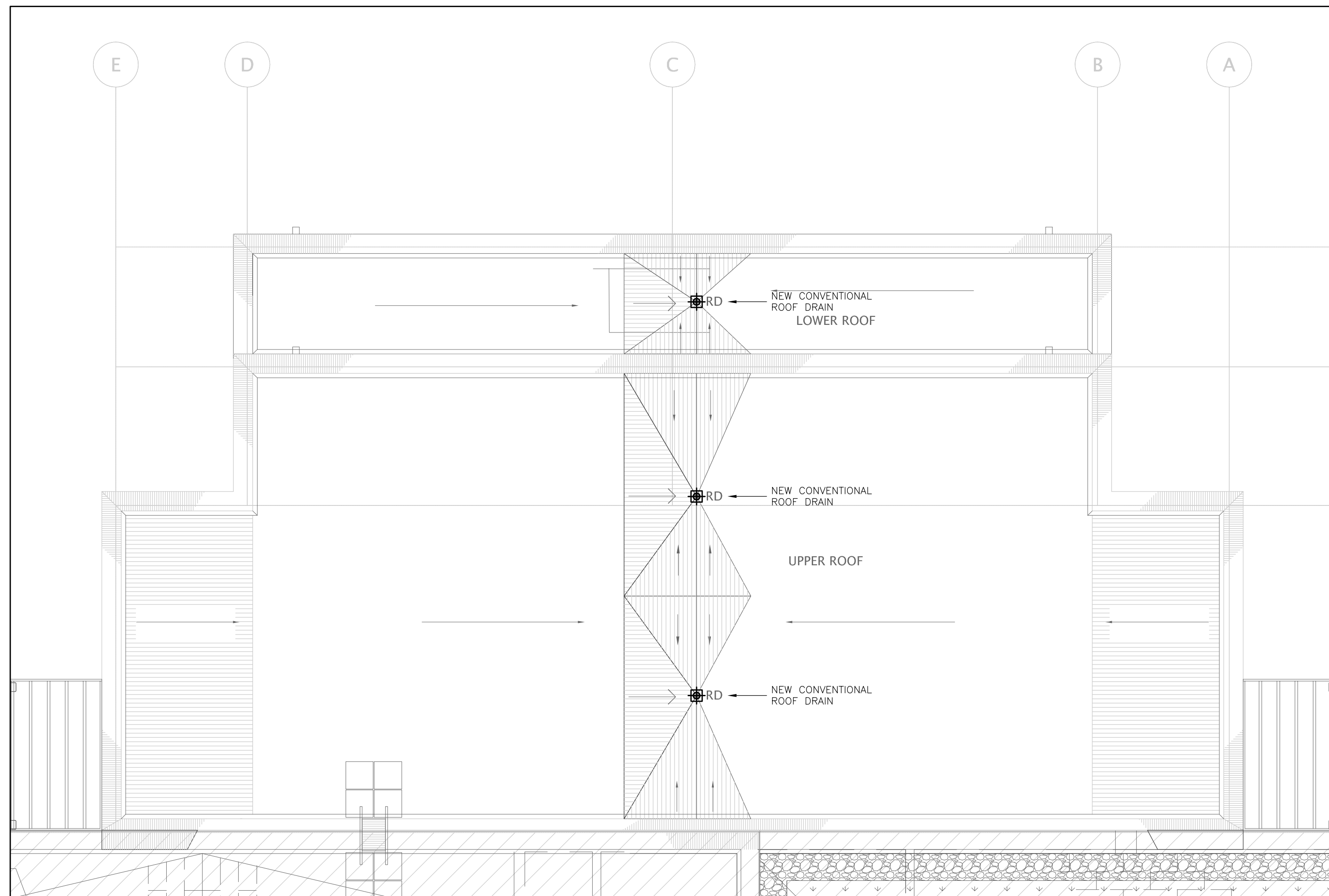
DATE PLOTTED: Thursday, April 4, 2024



1 NEW PLUMBING & DRAINAGE PLAN - FIRST FLOOR ADDITION
M4 SCALE: 1:75



2 NEW PLUMBING & DRAINAGE PLAN - SECOND FLOOR ADDITION
M4 SCALE: 1:75



3 NEW ROOF DRAINAGE PLAN - ADDITION
M4 SCALE: 1:75

DRAWING NOTES:

- 1 CONNECT THE NEW 1500 BURIED STORM TO THE EXISTING 1500 BURIED STORM PIPING AT INVERT 97.5, PRIOR TO STARTING ANY WORK AND AT THE ONSET OF THE PROJECT, CAMERA SCOPE THE EXISTING DRAIN AND VERIFY ITS EXACT LOCATION AND DEPTH. ADVISE THE ENGINEER OF THE FINDINGS PRIOR TO STARTING ANY NEW UNDERGROUND WORK OR FLOOR CUTTING.
- 2 CONNECT THE NEW 1000 BURIED SANITARY TO THE EXISTING 1000 BURIED SANITARY PIPING AT INVERT 97.5, PRIOR TO STARTING ANY WORK AND AT THE ONSET OF THE PROJECT, CAMERA SCOPE THE EXISTING DRAIN AND VERIFY ITS EXACT LOCATION AND DEPTH. ADVISE THE ENGINEER OF THE FINDINGS PRIOR TO STARTING ANY NEW UNDERGROUND WORK OR FLOOR CUTTING.
- 3 RUN 380 CONDENSATE DRAIN DOWN TO THE FIRST FLOOR CEILING SPACE.
- 4 380 CONDENSATE FROM THE SECOND FLOOR TO THE FIRST FLOOR CEILING SPACE, DRAIN TO THE NEW FUNNEL FLOOR DRAIN ALONGSIDE WITH THE 380 CONDENSATE FROM THE FIRST FLOOR HEAT PUMPS.
- 5 PROVIDE A NEW 750 FUNNEL FLOOR DRAIN TO SERVE THE CONDENSATE FROM ALL HEAT PUMPS, PROVIDE A NEW 500 CONDENSATE DRAIN COMBINING THE 380 CONDENSATE DRAIN FROM THE FIRST FLOOR AND THE SECOND FLOOR. VENT THE FLOOR DRAIN AS PER OBC. PROVIDE AN ELECTRONIC TRAP SEAL PRIMER.

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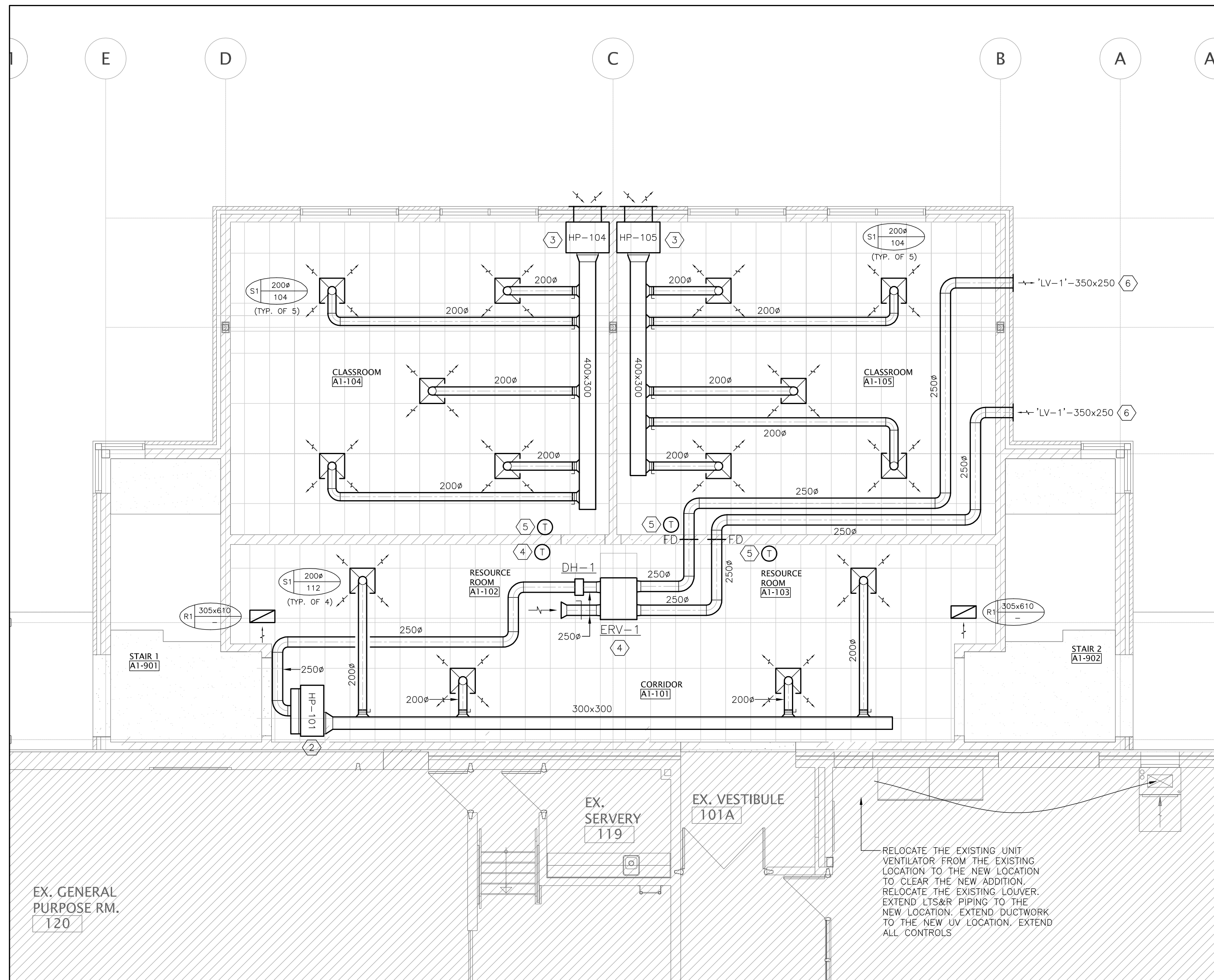
ÉC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
NEW PLUMBING & DRAINAGE
PLAN

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO.: REV.
CHECKED: R.S.	M4
DATE:	-

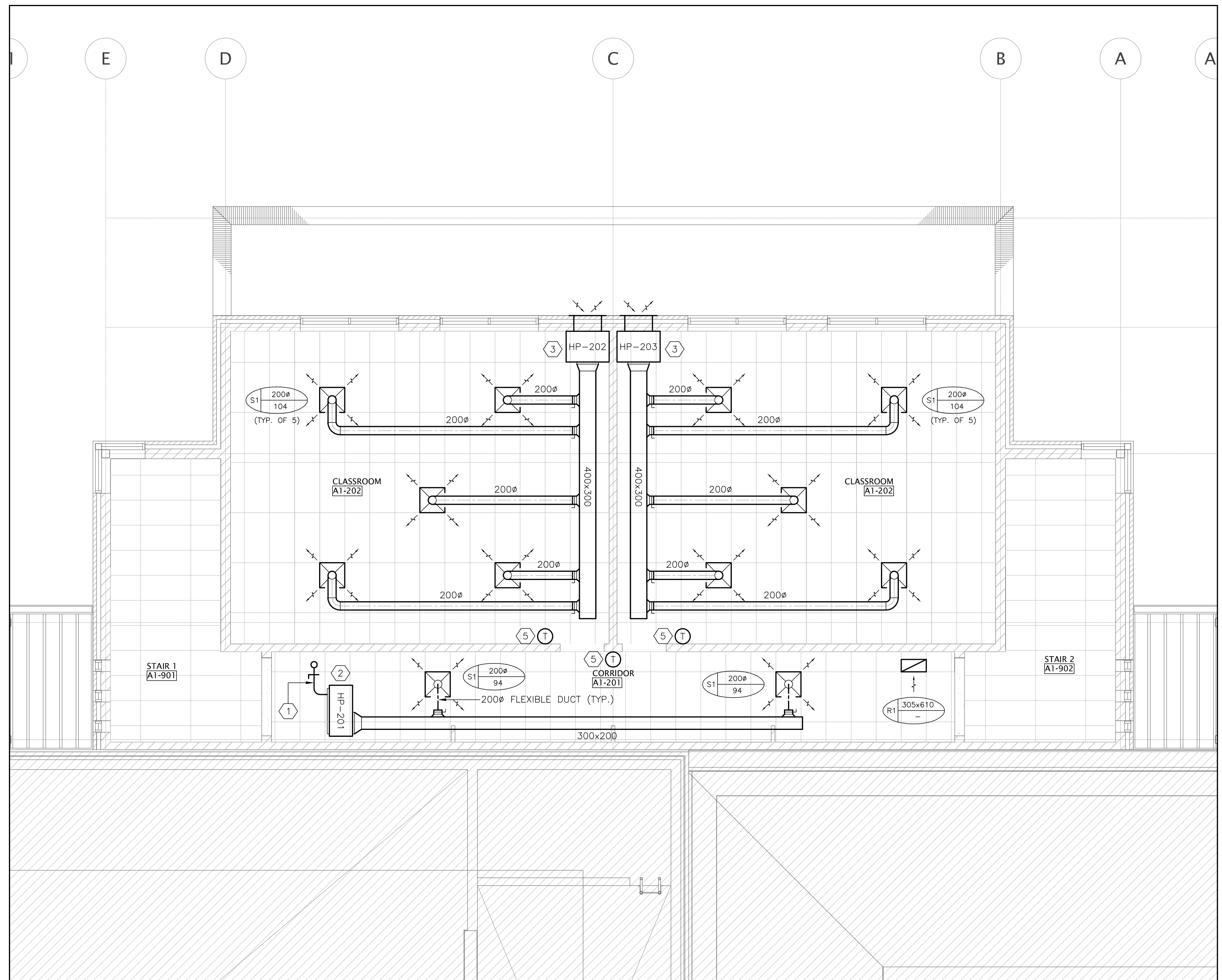
DATE PLOTTED: Thursday, April 4, 2024



1 NEW HVAC PLAN - FIRST FLOOR ADDITION
M5 SCALE: 1:75

DRAWING NOTES:

- 1 PROVIDE A NEW 150mm DUCT THROUGH THE ROOF FOR THE FRESH AIR INTAKE FOR HEAT PUMP HP-201. PROVIDE A MOTORIZED DAMPER (INTERLOCKED WITH THE ENABLE/DISABLE OF THE HEAT PUMP) AND BALANCING DAMPER ON THE DUCTWORK. EXTERNALLY INSULATED THE FULL LENGTH OF DUCTWORK. CONNECT DUCTWORK TO THE RETURN AIRSTREAM OF THE HEAT PUMP. BALANCE THE FRESH AIR INTAKE TO 30 CFM/14 LPS WHEN THE HEAT PUMP IS OPERATIONAL.
- 2 PROVIDE A NEW IN-CEILING HORIZONTAL HEAT PUMP AS SCHEDULED. PROVIDE NEW DUCTWORK, DIFFUSERS AND RETURN GRILLES AS SHOWN. PROVIDE NEW LOW TEMPERATURE SUPPLY & RETURN PIPING AND CONDENSATE PIPING TO EACH HEAT PUMP - SEE DRAWINGS M4 AND M6 FOR FULL EXTENT OF PIPING. EACH HEAT PUMP SHALL BE CONTROLLED BY A NEW WALL-MOUNTED BAS TEMPERATURE SENSOR.
- 3 PROVIDE A NEW FLOOR-MOUNTED VERTICAL HEAT PUMP AS SCHEDULED. PROVIDE NEW DUCTWORK, EXTERIOR LOUVER AND DIFFUSERS AS SHOWN. PROVIDE NEW LOW TEMPERATURE SUPPLY & RETURN PIPING AND CONDENSATE PIPING TO EACH HEAT PUMP - SEE DRAWINGS M4 AND M6 FOR FULL EXTENT OF PIPING. EACH HEAT PUMP SHALL BE CONTROLLED BY A NEW WALL-MOUNTED BAS TEMPERATURE SENSOR.
- 4 PROVIDE A NEW IN-CEILING ENERGY RECOVERY VENTILATOR AS SCHEDULED. PROVIDE NEW DUCTWORK, DUCT HEATER, DIFFUSERS AND EXTERIOR LOUVERS AS SHOWN. LOCATE THE ERV'S CONTROLLER ON THE WALL OF RESOURCE ROOM (102).
- 5 PROVIDE A NEW BAS SPACE TEMPERATURE SENSOR TO CONTROL THE HEAT PUMP SERVING EACH RESPECTIVE SPACE.
- 6 PROVIDE NEW EXTERIOR LOUVERS AS SCHEDULED. SPACE THE TWO (2) LOUVERS 3.5 METERS APART (MINIMUM).



2 NEW HVAC PLAN - SECOND FLOOR ADDITION
M5 SCALE: 1:75

NO.	DATE	REVISION
7	04/02/24	ISSUED FOR TENDER
6	02/28/24	ISSUED FOR TENDER
5	07/01/23	ISSUED FOR TENDER
4	02/22/23	RE-ISSUED FOR PERMIT
3	02/10/23	ISSUED FOR PERMIT
2	01/20/23	ISSUED FOR 85% DESIGN REVIEW
1	10/21/22	ISSUED FOR 60% DESIGN REVIEW

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4. ALL DIMENSIONS, SHOWN ON THE DRAWINGS, SHALL BE CHECKED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
5. THE STABILITY OF THE STRUCTURAL FRAME IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING DURING CONSTRUCTION.
6. ALL DIMENSIONS GIVEN ARE IN METRIC.

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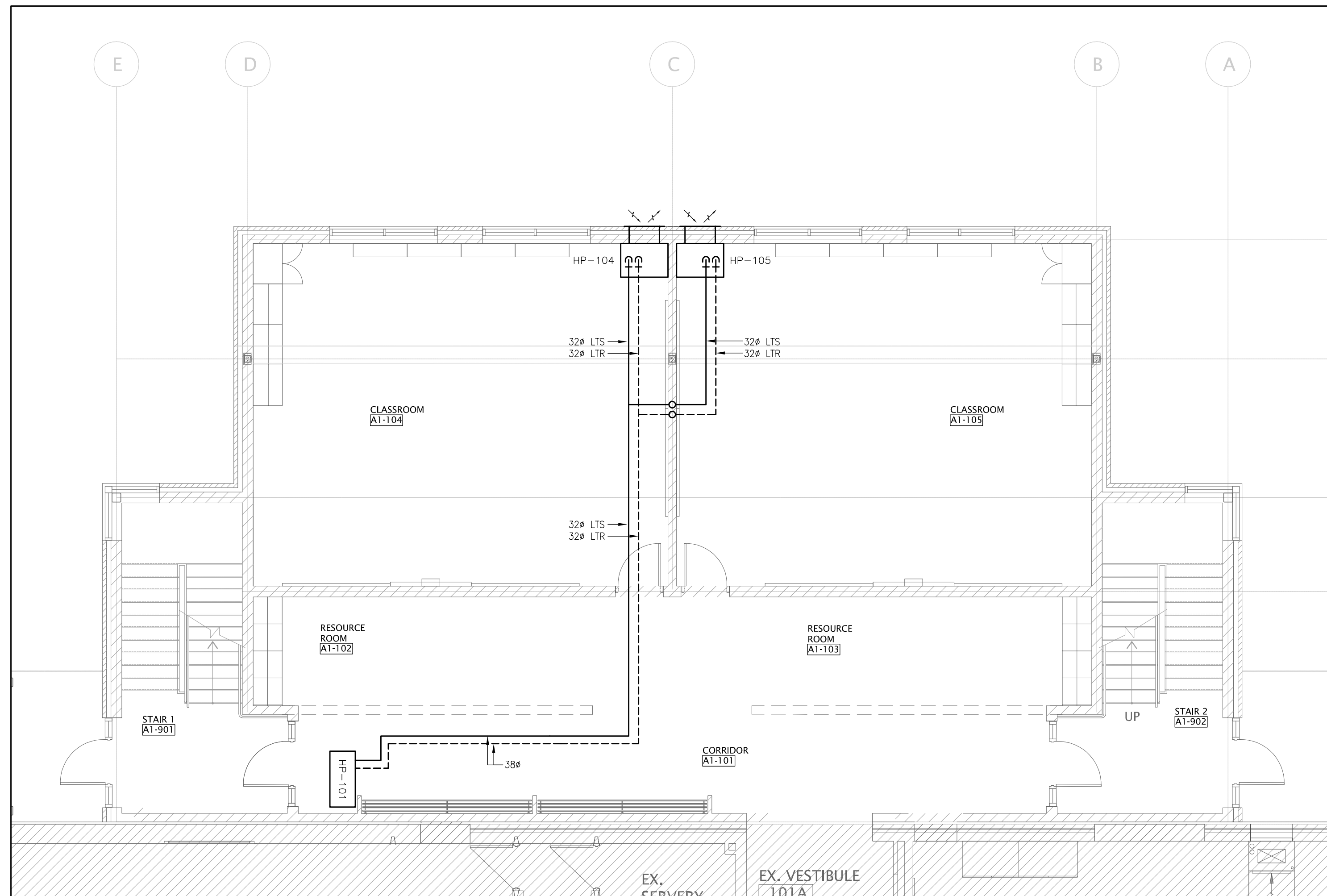
ÉEC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

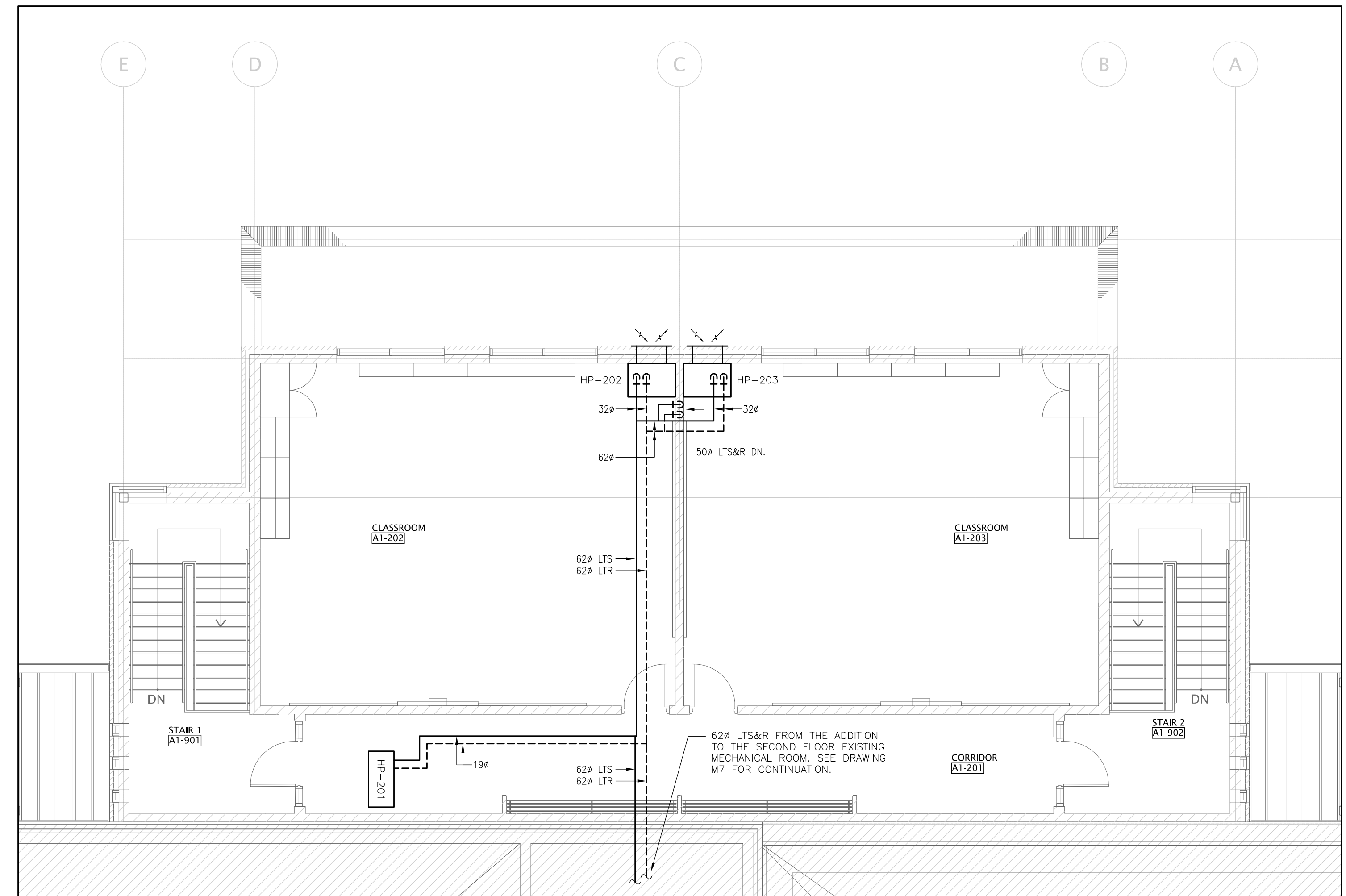
DRAWING TITLE:
NEW HVAC PLAN

PROJECT NO: 22-192	SCALE: M5
DRAWN: R.S.	DRAWING NO.: REV.
CHECKED: R.S.	
DATE: -	

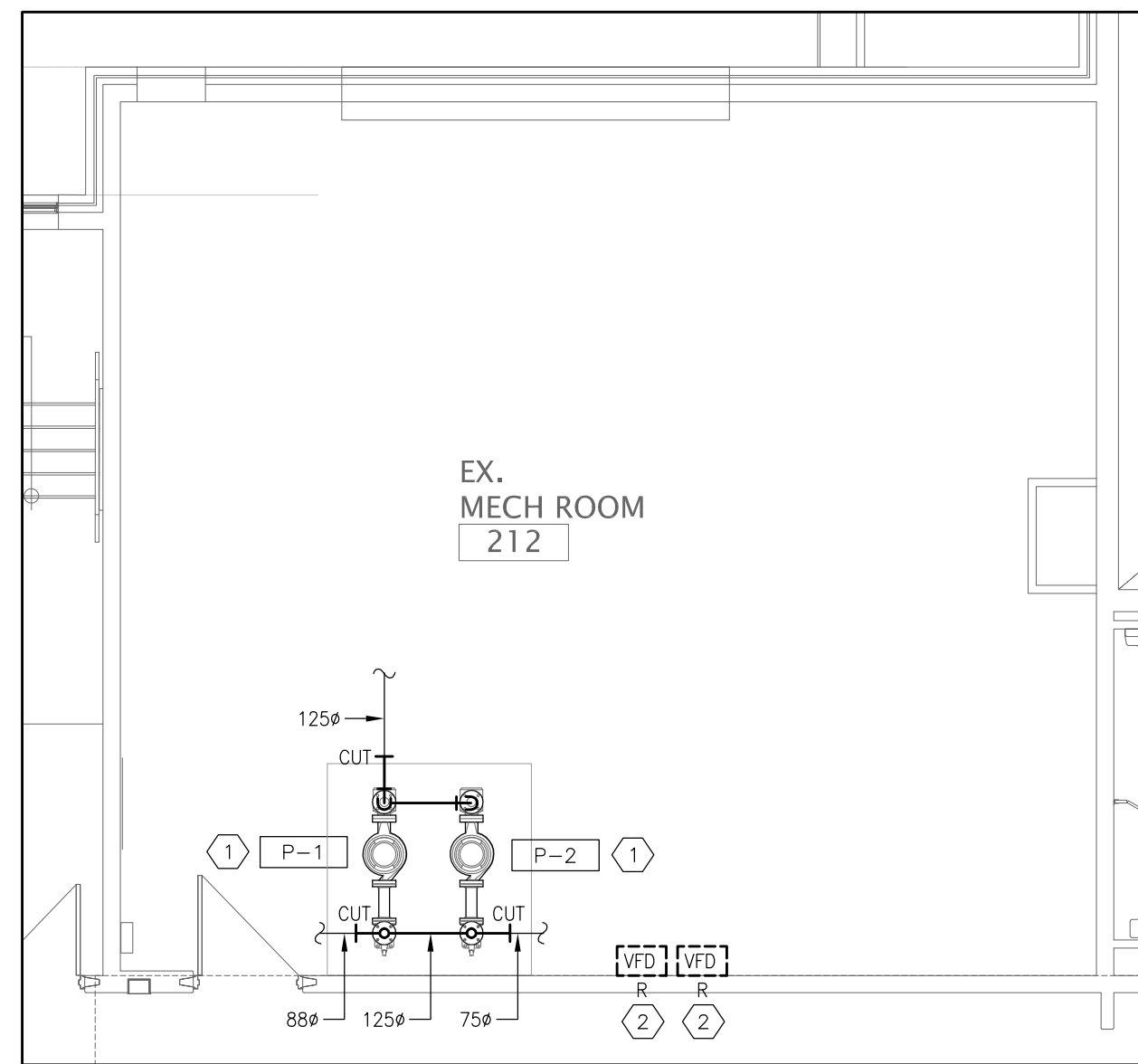
DATE PLOTTED: Thursday, April 4, 2024



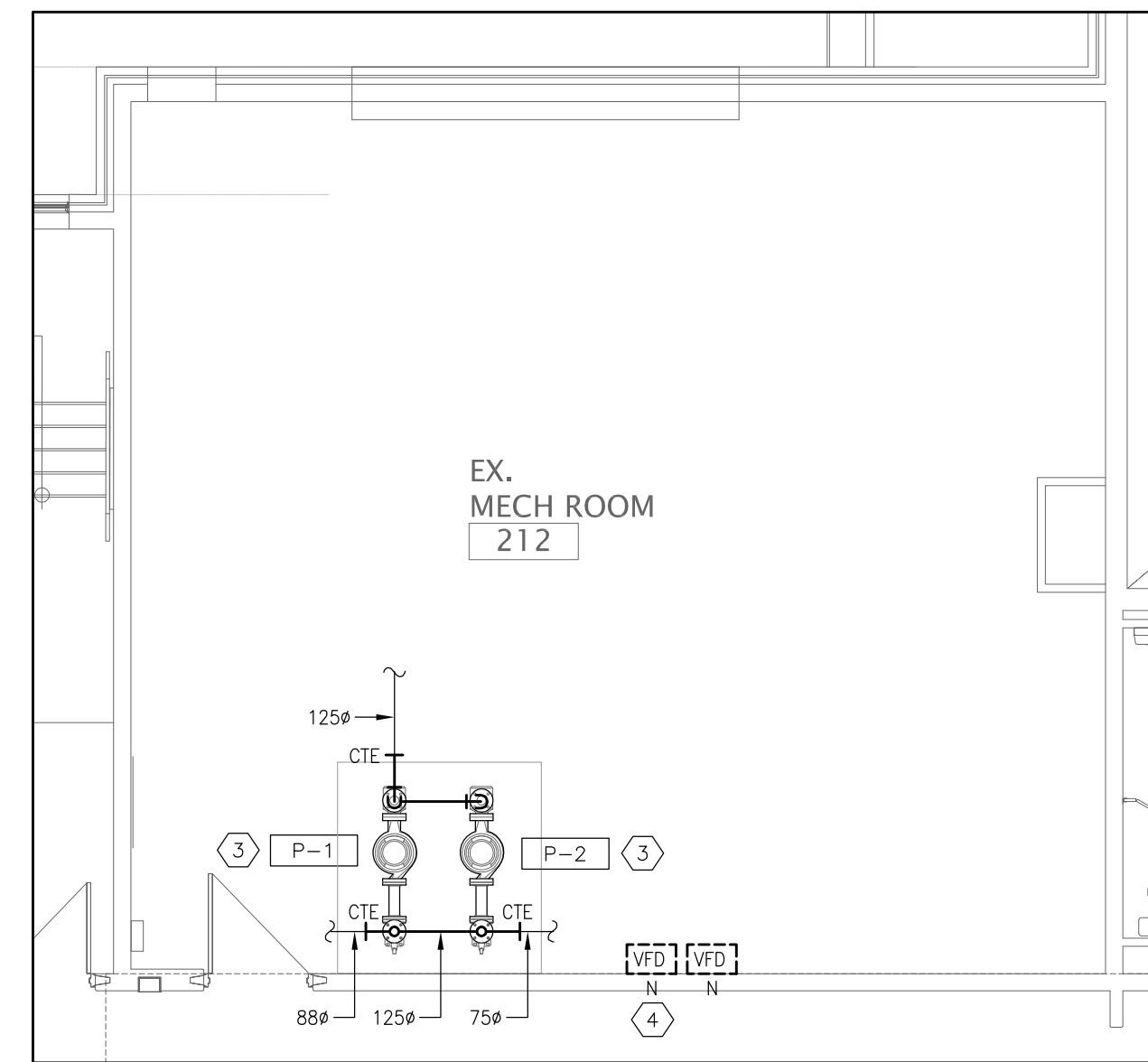
1 NEW HVAC PIPING PLAN - FIRST FLOOR ADDITION
ME SCALE: 1:75



2 NEW HVAC PIPING PLAN - SECOND FLOOR ADDITION
ME SCALE: 1:75



3 EXISTING PIPING PLAN - MECHANICAL ROOM 212
ME SCALE: 1:75



4 NEW PIPING PLAN - MECHANICAL ROOM 212
ME SCALE: 1:75

DRAWING NOTES:

- 1 REMOVE THE EXISTING PUMPS P-1 & P-2 AND REPLACE WITH NEW UPGRADED PUMPS P-1 AND P-2 AS SCHEDULED. REMOVE EXISTING PIPING TO THE EXTENT SHOWN. DISCONNECT FROM THE EXISTING 25" PIPING OFF OF THE HEADER SERVING THE BAS SENSORS AND CHEMICAL TREATMENT.
- 2 REMOVE THE EXISTING VFDs AND REPLACE WITH NEW.
- 3 PROVIDE NEW PUMPS P-1 AND P-2 AS SCHEDULED. RE-CONNECT TO THE EXISTING PIPING. RECONNECT TO THE EXISTING 25" PIPING OFF OF THE HEADER SERVING THE BAS SENSORS AND CHEMICAL TREATMENT.
- 4 PROVIDE NEW VFDs FOR PUMPS P-1 AND P-2 AS PER SPECIFICATION.

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5	07/01/23	ISSUED FOR TENDER
4	02/22/23	RE-ISSUED FOR PERMIT
3	02/10/23	ISSUED FOR PERMIT
2	01/20/23	ISSUED FOR 85% DESIGN REVIEW
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Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
NEW HVAC PIPING PLAN -
ADDITION

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO: REV.
CHECKED: R.S.	M6
DATE: -	

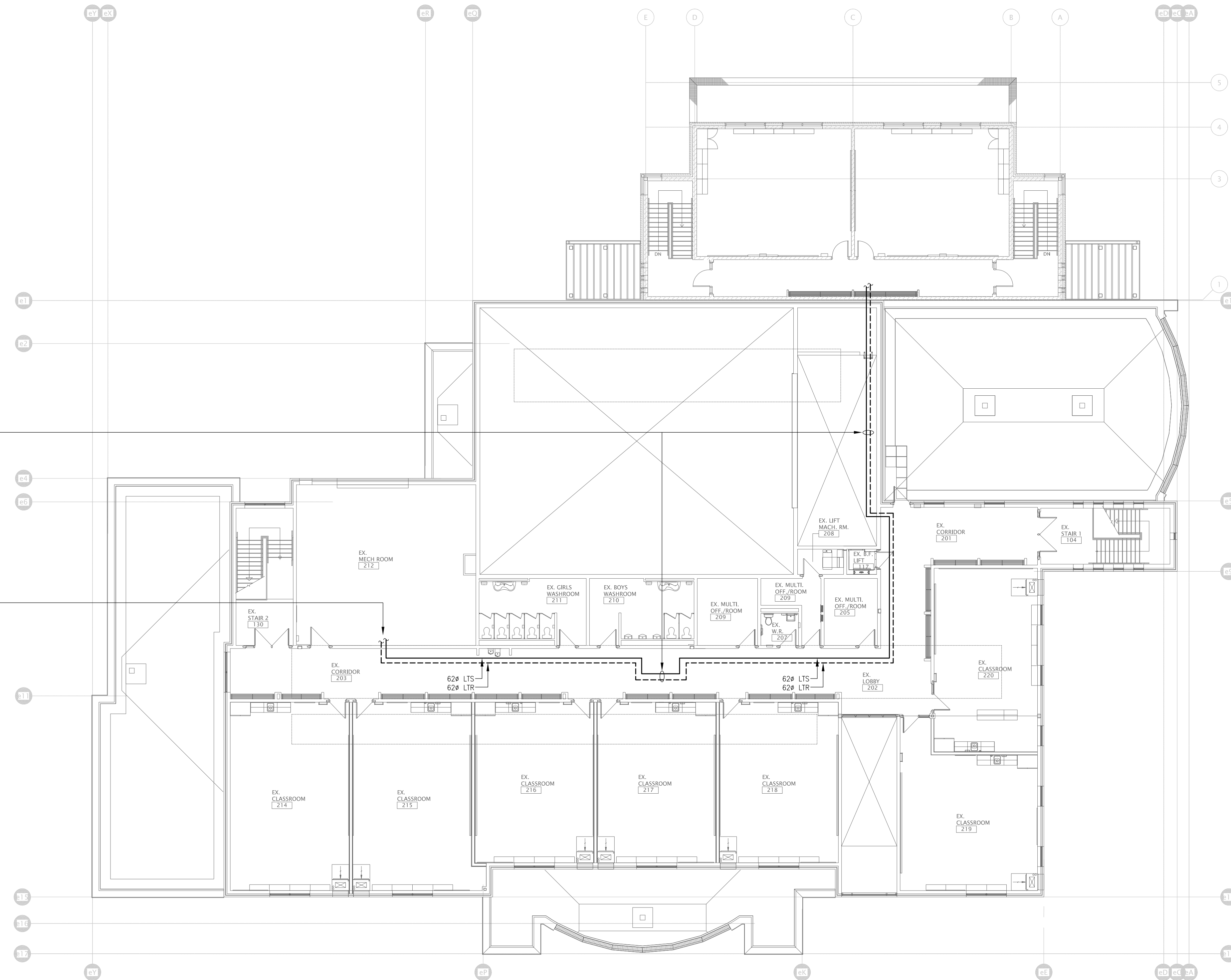
DATE PLOTTED: Thursday, April 4, 2024

NOTES:

1. PROVIDE NEW LOW TEMPERATURE SUPPLY & RETURN PIPING (LTS&R) ROUTED GENERALLY AS SHOWN. LOCATE ALL PIPING ABOVE THE DROP CEILING. PROVIDE ALL NECESSARY OFFSETS NECESSARY TO ROUTE THROUGHOUT THE CEILING SPACE AROUND ALL EXISTING OBSTRUCTIONS. SITE VERIFY AND ROUTE PIPING DOWN THE PATH WITH THE LEAST AMOUNT OF OBSTRUCTIONS. SUPPORT ALL PIPING FROM THE STRUCTURE.
2. IN THE STAGE AREA, INSTALL PIPING AS CLOSE TO THE UNDERSIDE OF THE ROOF STRUCTURE AS POSSIBLE.

PROVIDE NEW 62# LTS&R PIPING FROM THE NEW ADDITION TO THE EXISTING MECHANICAL ROOM ON THE SECOND FLOOR. ROUTE PIPING ABOVE THE CEILING.

SEE DRAWING M6 FOR CONTINUATION



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 Classrooms Addition

29 MEADOWVALE ROAD,
 SCARBOROUGH, ONTARIO
 M1C 1R7

DRAWING TITLE:
 NEW HVAC PIPING PLAN –
 EXISTING SCHOOL

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO.: REV.
CHECKED: R.S.	M7
DATE: -	

1 NEW HVAC PIPING PLAN – EXISTING SCHOOL, SECOND FLOOR
 SCALE: 1:150

DATE PLOTTED: Thursday, April 4, 2024

HEAT PUMP SCHEDULE												
TAG	AREA SERVED	MAKE & MODEL	TOTAL AIRFLOW	FRESH AIR	ESP	HEATING CAPACITY	COOLING CAPACITY	FLOW RATE	VOLTAGE	AMPS	WEIGHT	NOTES
HP-101	CORRIDOR (A1-101) RESOURCE ROOMS (A1-102) & (A1-103)	DAIKIN WGCH024	950 CFM 448 LPS	200 CFM 94 LPS	0.25" WG 62 Pa	28,952 BTU/HR 8.5 KW	23,166 BTU/HR 6.8 KW	6.0 GPM 0.38 LPS	208V/1Ø	MCA: 18.2A MOCP: 30A	182 LBS	HORIZONTAL, CEILING-SUSPENDED WATER SOURCE HEAT PUMP; C/W HOSE KIT. TO OPERATE WITH NEW ENERGY RECOVERY VENTILATOR ERV-1 AND DUCT HEATER DH-1
HP-104	CLASSROOM (A1-104)	AIRDALE SMW36BAMNAXNN003	1100 CFM 519.2 LPS	350 CFM 166 LPS	0.50" WG 124 Pa	42,800 BTU/HR 12.6 KW	34,700 BTU/HR 10.2 KW	9.0 GPM 0.57 LPS	208V/1Ø	MCA: 27.5A MOP: 40A	652 LBS	VERTICAL, FLOOR-MOUNTED WATER SOURCE HEAT PUMP, C/W 2-STAGE (R-410A) COOLING, DIRECT DRIVE CENTRIFUGAL FAN, EXTERIOR LOUVER (BRONZE FINISH C/W BIRDSCREEN), POWERED EXHAUST FAN, ENERGY RECOVERY WHEEL
HP-105	CLASSROOM (A1-105)	AIRDALE SMW36BAMNAXNN003	1100 CFM 519.2 LPS	350 CFM 166 LPS	0.50" WG 124 Pa	42,800 BTU/HR 12.6 KW	34,700 BTU/HR 10.2 KW	9.0 GPM 0.57 LPS	208V/1Ø	MCA: 27.5A MOP: 40A	652 LBS	VERTICAL, FLOOR-MOUNTED WATER SOURCE HEAT PUMP, C/W 2-STAGE (R-410A) COOLING, DIRECT DRIVE CENTRIFUGAL FAN, EXTERIOR LOUVER (BRONZE FINISH C/W BIRDSCREEN), POWERED EXHAUST FAN, ENERGY RECOVERY WHEEL
HP-201	CORRIDOR (A1-201)	DAIKIN WGCH012	200 CFM 94 LPS	30 CFM 14 LPS	0.25" WG 62 Pa	12,000 BTU/HR 3.5 KW	12,000 BTU/HR 3.5 KW	3.0 GPM 0.19 LPS	208V/1Ø	MCA: 18.2A MOCP: 30A	182 LBS	HORIZONTAL, CEILING-SUSPENDED WATER SOURCE HEAT PUMP; C/W HOSE KIT.
HP-202	CLASSROOM (A1-202)	AIRDALE SMW36BAMNAXNN003	1100 CFM 519.2 LPS	350 CFM 166 LPS	0.50" WG 124 Pa	42,800 BTU/HR 12.6 KW	34,700 BTU/HR 10.2 KW	9.0 GPM 0.57 LPS	208V/1Ø	MCA: 27.5A MOP: 40A	652 LBS	VERTICAL, FLOOR-MOUNTED WATER SOURCE HEAT PUMP, C/W 2-STAGE (R-410A) COOLING, DIRECT DRIVE CENTRIFUGAL FAN, EXTERIOR LOUVER (BRONZE FINISH C/W BIRDSCREEN), POWERED EXHAUST FAN, ENERGY RECOVERY WHEEL
HP-203	CLASSROOM (A1-203)	AIRDALE SMW36BAMNAXNN003	1100 CFM 519.2 LPS	350 CFM 166 LPS	0.50" WG 124 Pa	42,800 BTU/HR 12.6 KW	34,700 BTU/HR 10.2 KW	9.0 GPM 0.57 LPS	208V/1Ø	MCA: 27.5A MOP: 40A	652 LBS	VERTICAL, FLOOR-MOUNTED WATER SOURCE HEAT PUMP, C/W 2-STAGE (R-410A) COOLING, DIRECT DRIVE CENTRIFUGAL FAN, EXTERIOR LOUVER (BRONZE FINISH C/W BIRDSCREEN), POWERED EXHAUST FAN, ENERGY RECOVERY WHEEL

NOTES:
1. HEAT PUMP SHALL BE CONNECTED TO AND SHALL BE CONTROLLED BY THE EXISTING BAS SYSTEM.

ENERGY RECOVERY VENTILATOR SCHEDULE											
EQUIPMENT DESIGNATION	MANUFACTURER	MODEL NO.	UNIT SIZE	UNIT WEIGHT	TOTAL AIRFLOW	TEMPERATURE RECOVERY EFFICIENCY	SOUND PRESS. (dB)	ASSOCIATED DUCT HEATER	CONTROLLED BY	MCA	VOLTAGE MOCP
ERV-1	LOSSNAY	LGH-F300RX5-E	40"Lx34.5"W x12.5"H	73 LBS	300 CFM	65.5% (@ FULL SPEED)	34	DH-1	BAS	1.8A	208V/1Ø/60 15A

NOTES:
1. UNIT IS TO BE C/W AND INTERLOCKED WITH THE CORRESPONDING ELECTRIC DUCT HEATER.
2. UNIT TO BE INTERLOCKED WITH THE CORRESPONDING MOTORIZED DAMPERS ON THE O/A AND E/A DUCTWORK.
3. UNIT IS TO BE C/W REMOTE WALL MOUNTED STANDALONE CONTROLLER LOCKED IN POLYCARBONATE ENCLOSURE AT THE LOCATION SHOWN ON THE LAYOUT.

DUCT HEATER SCHEDULE										
EQUIPMENT DESIGNATION	MANUFACTURER	MODEL NO.	UNIT SIZE (mm)	HEATING CAPACITY	COLLAR SIZE	MINIMUM AIRFLOW	CONTROLLED BY	VOLTAGE MOCP	NOTES	
DH-1	THERMOLEEC	TER-8-3-208	292x254x343	3.0 KW	8"Ø	90 CFM	INTERLOCKED W/ ERV; BAS	208V/1Ø/60 20A	C/W SCR CONTROLS	

NOTES:
1. UNIT IS TO BE C/W WITH ALL REQUIRED CONTROLS AND SAFETY DEVICES.
2. UNIT IS TO BE C/W REMOTE DUCT MOUNTED TEMPERATURE SENSOR SET TO 70°F.
3. UNIT TO BE INTERLOCKED WITH THE CORRESPONDING ERV UNIT.

DIFFUSER, GRILLES AND LOUVER SCHEDULE										
DESIGNATION	MANUFACTURER	MODEL NO.	TYPE	SIZE	NECK SIZE	COLOUR/FINISH	FIRE RATED	VOLUME CONTROL	NOTES	
'S1'	EH PRICE OR EQUAL	SPD-B12	SUPPLY AIR	610x610	SEE DRAWING	WHITE (B12)	NO	YES	SEE NOTES 1, 2 BELOW; SUITABLE FOR T-BAR	
'R1'	EH PRICE OR EQUAL	80-B12	RETURN AIR GRILLE	305x610	-	WHITE (B12)	NO	-	SEE NOTES 1, 2 BELOW; SUITABLE FOR T-BAR; C/W FRAME AND CORE	
'LV-1'	EH PRICE OR EQUAL	DE439	LOUVER	SEE DRAWING	-	DARK BRONZE ANODIZED	-	-	SEE NOTES 1, 2 BELOW; C/W BIRDSCREEN DRAINABLE LOUVER SUITABLE FOR EXTERIOR INSTALL	

NOTES:
1. SUBMIT SHOP DRAWINGS FOR ALL DIFFUSERS, GRILLES AND LOUVERS PRIOR TO ORDERING.
2. PROVIDE A PHYSICAL COLOUR CHIP TO THE ARCHITECT DURING SHOP DRAWING SUBMISSION FOR APPROVAL PRIOR TO ORDERING.

PUMP SCHEDULE										
TAG	MAKE	MODEL	SYSTEM	TYPE	CAPACITY L/S [GPM]	HEAD kPa [FT]	RPM	MOTOR HP	ELECTRICAL (V/PH/Hz)	REMARKS
P-1 & P-2	ARMSTRONG OR EQUAL	4380-3x3x6	LOW TEMPERATURE CIRCULATION PUMPS	SPLIT COUPLED VERTICAL IN-LINE	18.9 [300]	269 [90]	3600	15.0	575/3/60	C/W VFD

NOTES:
1. PROVIDE ALL VALVES AND ACCESSORIES AS PER PUMP SCHEMATICS.
2. PROVIDE SUCTION GUIDE, TRIPLE DUTY VALVE AND WALL-MOUNTED VFD FOR EACH PUMP.

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	NO. DATE:	REVISION

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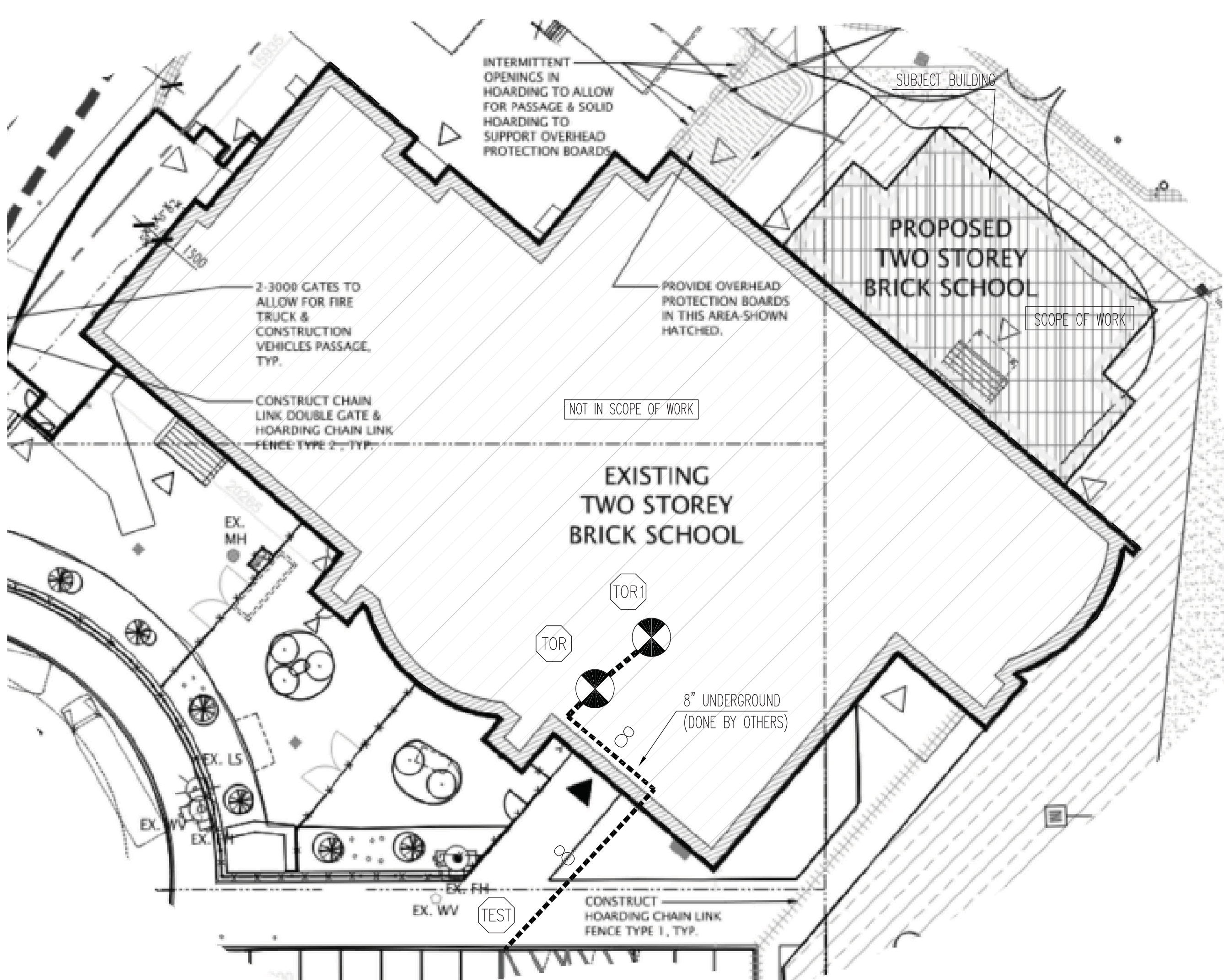


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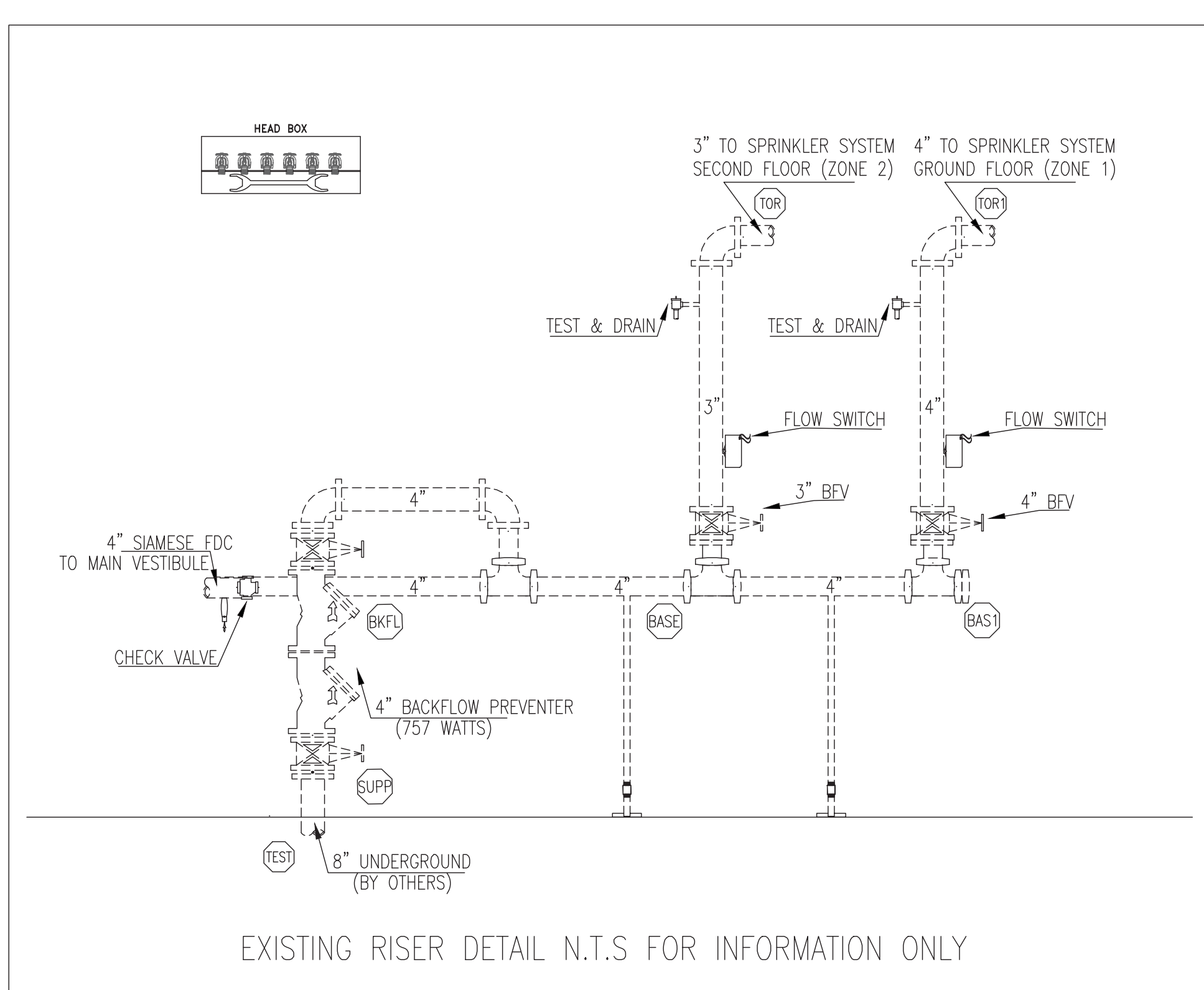
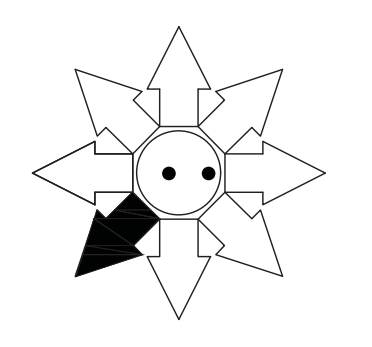
29 MEADOWVALE ROAD,
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DRAWING TITLE: SCHEDULES	
PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO: REV.
CHECKED: R.S.	M8
DATE: -	

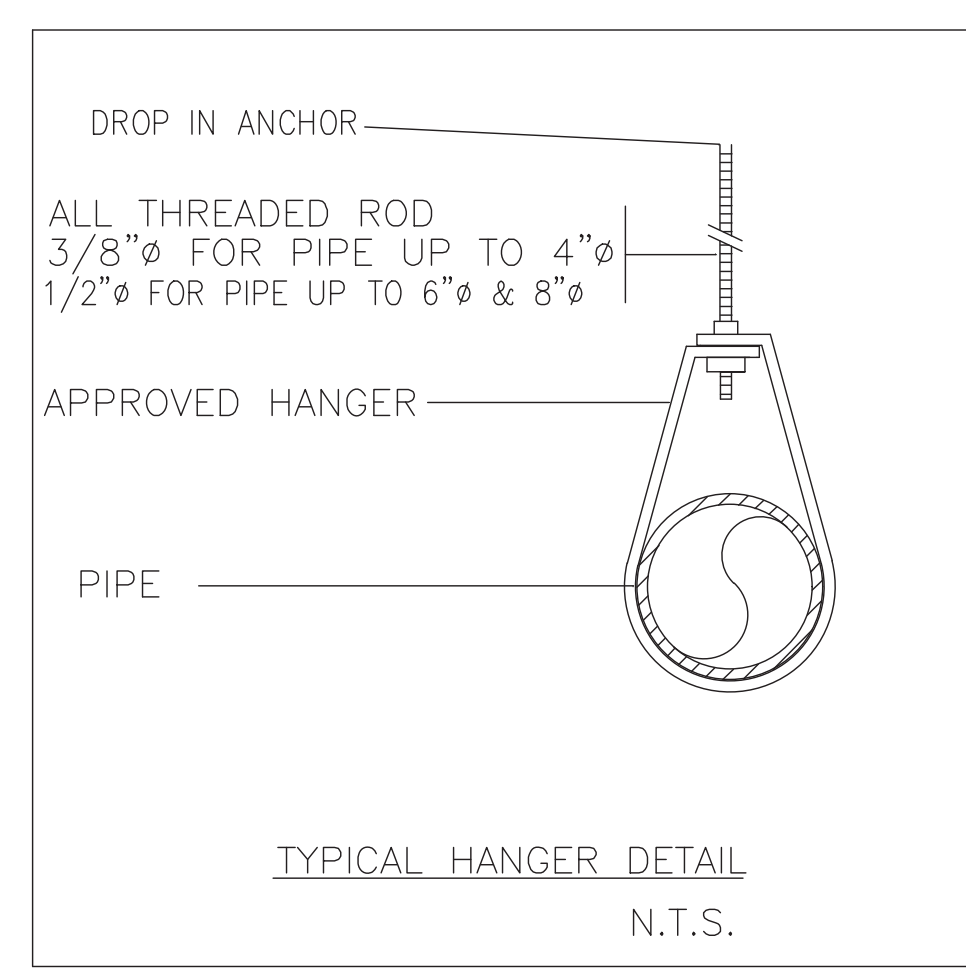
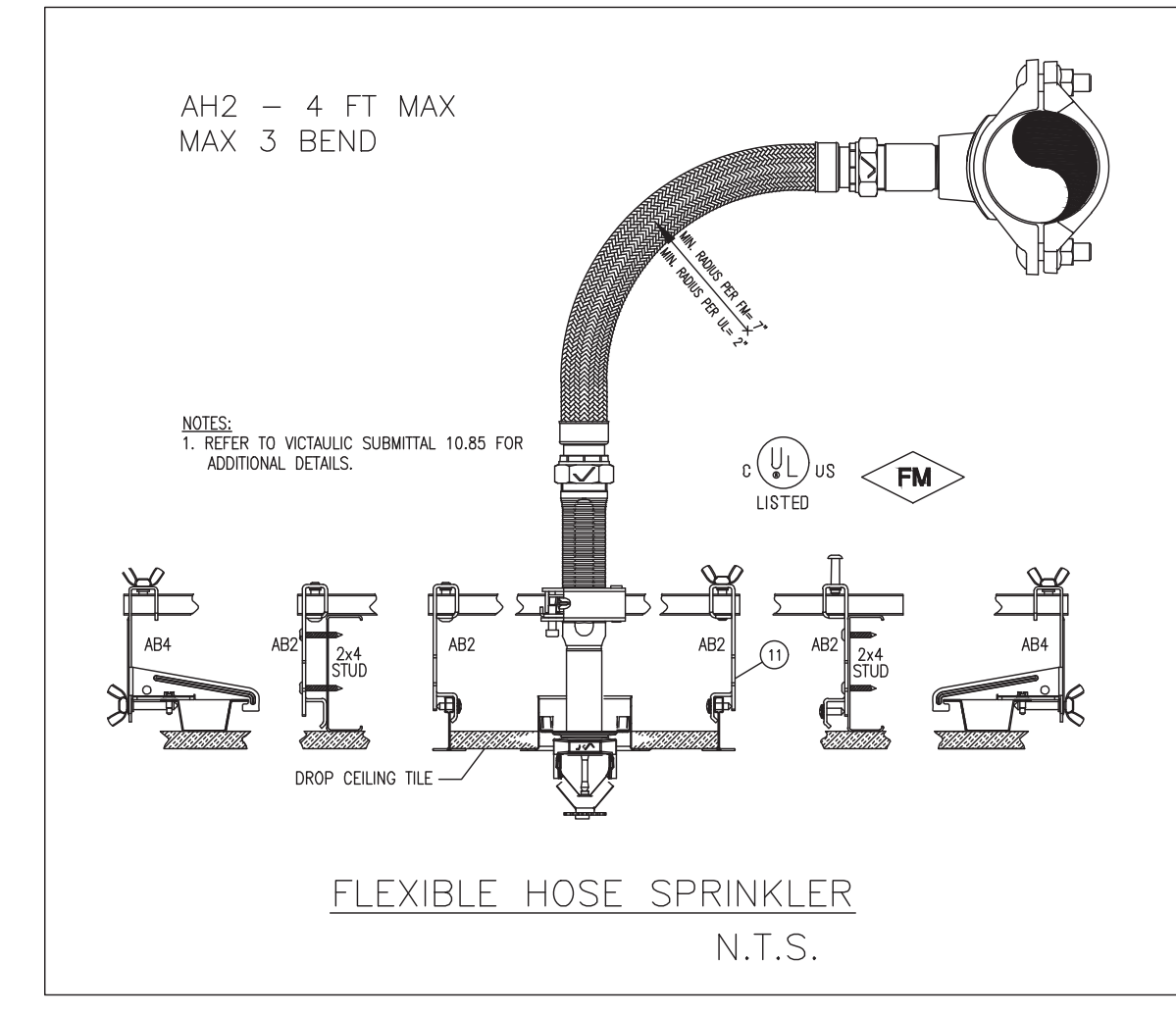
DATE PLOTTED: Thursday, April 4, 2024



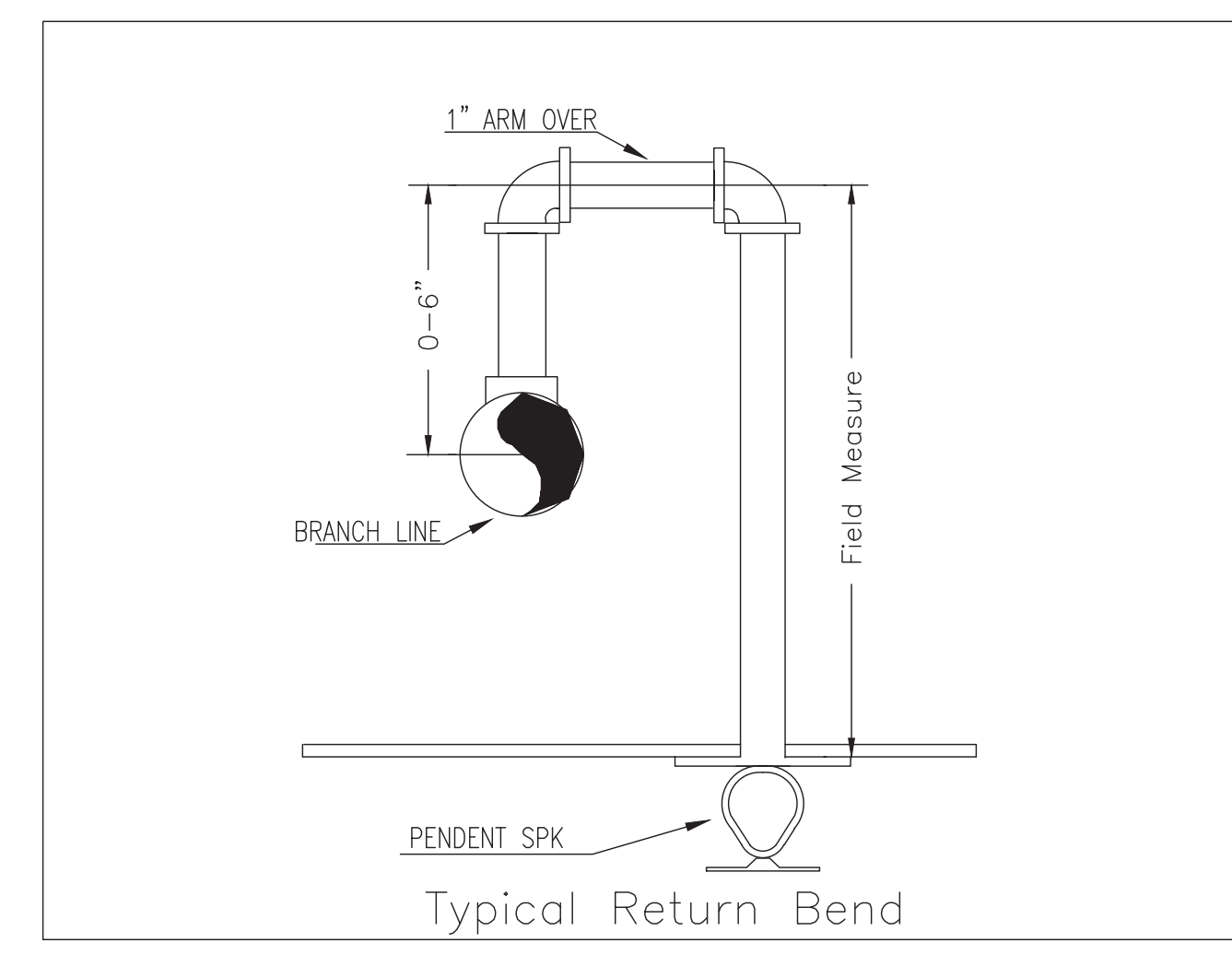
SITE PLAN - NOT TO SCALE



EXISTING RISER DETAIL N.T.S FOR INFORMATION ONLY



TYPICAL HANGER DETAIL N.T.S.



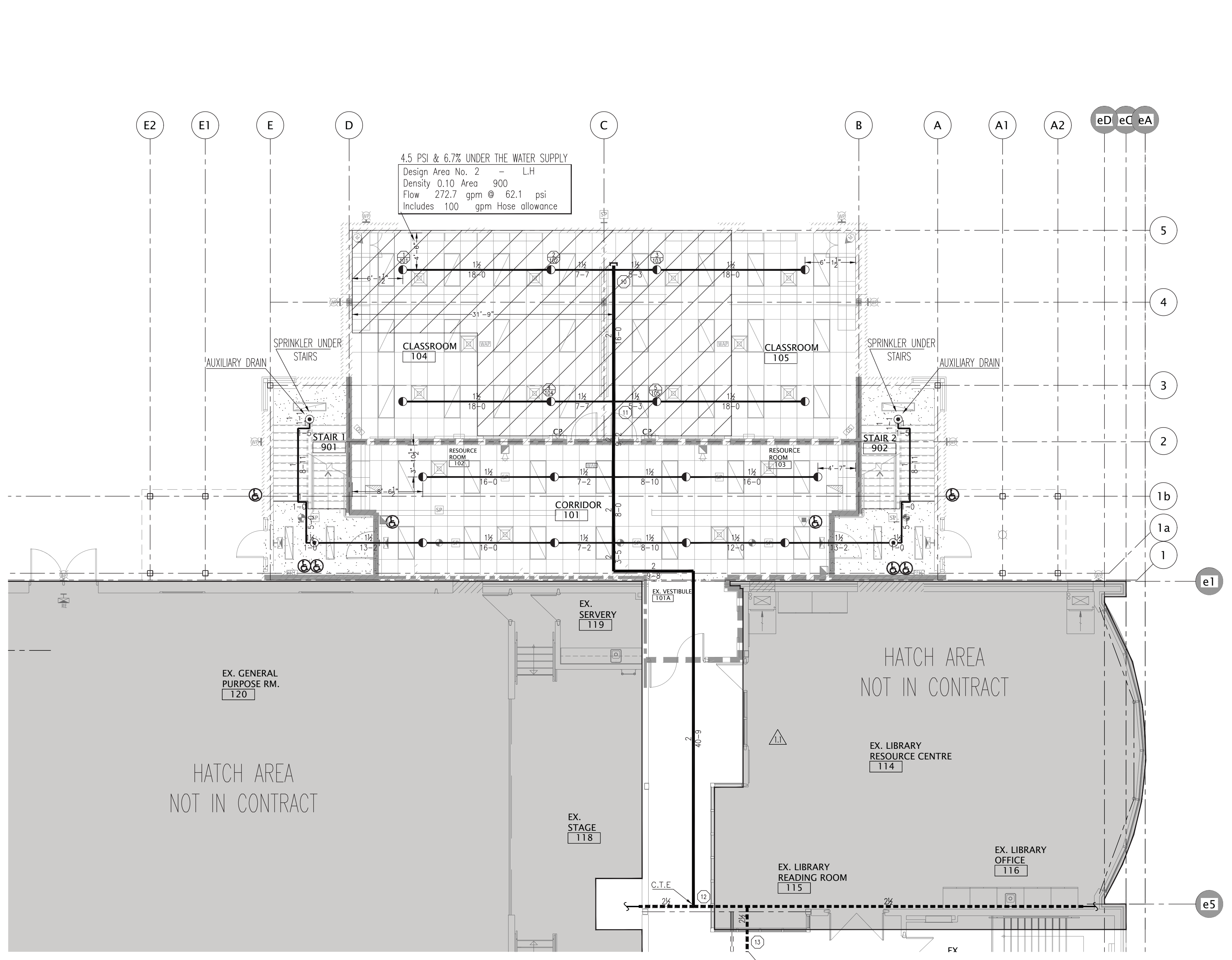
Typical Return Bend

SCOPE OF WORK:
 DESIGN SPRINKLER SYSTEM IN NEW SCHOOL ADDITION FOR ST. MICHEL FRENCH CATHOLIC ELEMENTARY SCHOOL @ 29 MEADOWVALE ROAD, TORONTO, TO MEET NFPA 13-2013 STANTARD AND ONTARIO BUILDING CODE 2012.

DESIGN CRITERIA:
 CLASSROOMS 104 & 105 GROUND FLOOR:
 DESIGN IS BASED UPON LIGHT HAZARD OCCUPANCY WITH DENSITY OF 0.10 OVER 1500 SQ/FT. DESIGN AREA REDUCED BY 40% TO 900 SQ/FT BASED ON 10'-0" CEILING HEIGHT AND QUICK RESPONSE HEADS AS PER NFPA 13 -2013 11.2.3.2.3.1.
 CLASSROOMS 202 & 203 SECOND FLOOR:
 DESIGN IS BASED UPON LIGHT HAZARD OCCUPANCY WITH DENSITY OF 0.10 OVER 1500 SQ/FT. DESIGN AREA REDUCED BY 40% TO 900 SQ/FT BASED ON 10'-0" CEILING HEIGHT AND QUICK RESPONSE HEADS AS PER NFPA 13 -2013 11.2.3.2.3.1.

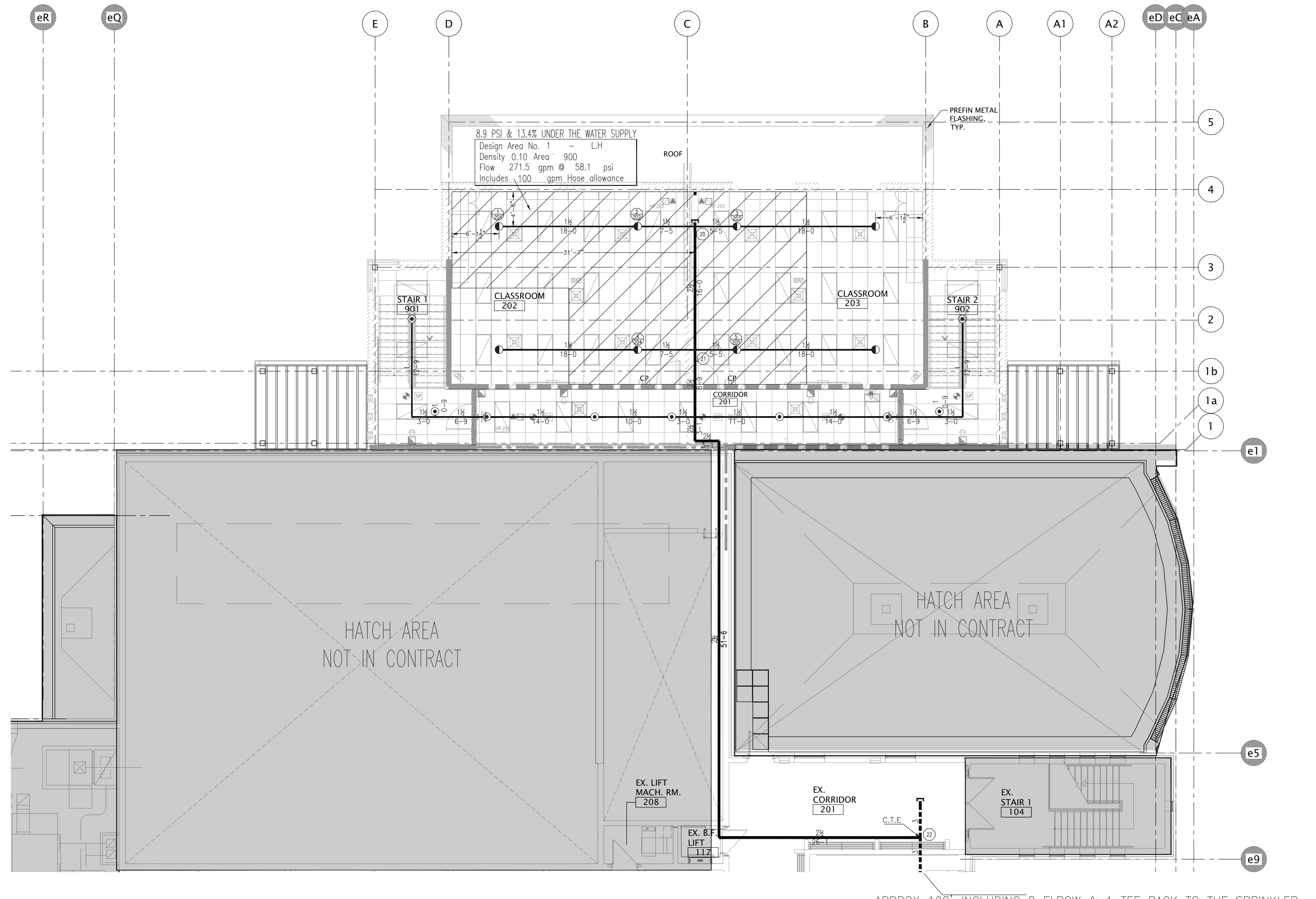
NOTES:
 *ALL PIPING TO BE INSTALLED AND TESTED AS PER NFPA STANDARD.
 *ALL MATERIAL INSTALLED TO BE UL LISTED APPROVED.
 *ALL HANGERS TO BE INSTALLED AS PER NFPA STANDARD.
 *SPRINKLER COVERAGE'S: 225 SQ.FT MAX FOR LIGHT HAZARDS AREA USING 1" QUICK RESPONSE HEADS.
 *SPRINKLER COVERAGE'S: 324 SQ.FT MAX FOR LIGHT HAZARDS AREA USING EXTENDED COVERAGE 1/2" QUICK RESPONSE HEADS.
 *DRAWING SUBJECT TO CITY OF TORONTO FIRE DEPARTMENT, BUILDING DEPARTMENT & OWNER APPROVALS.
 *FINAL LOCATION AND ELEVATION OF PIPES TO BE CO-ORDINATED ON SITE.
 *ALL DIMENSIONS ARE CENTERLINE TO CENTERLINE.
 *ALL CONTROL VALVES TO BE ELECTRICALLY SUPERVISED AND CONNECTED TO THE FIRE ALARM SYSTEM BY OTHERS.
 *ALL WATER FLOW SWITCHES AND PRESSURE ALARM SWITCHES SHALL TO BE CONNECTED TO THE FIRE ALARM SYSTEM BY OTHERS.
 *ALL ELECTRICAL WIRING, ELECTRICAL TRACING AND PIPE INSULATION FOR ALL WET SPRINKLER LINES LOCATED IN UNHEATED AREAS BY OTHERS.
 ALL PIPING 1" AND SMALLER TO BE SCH 40. ALL PIPING 1 1/2" AND LARGER TO BE SCH 10.
 *THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE BUILDING SITE AND REPORT ANY DISCREPANCIES TO THE PREMISES DEPARTMENT PRIOR TO PROCEEDING WITH WORK.
 *DO NOT SCALE DRAWING.
 *OWNERS TO ENSURE ADEQUATE HEAT OF 4 DEGREES CELSIUS TO PREVENT ALL PIPING FROM FREEZING.
 *FLEX PIPE TO BE USED FOR THE INSTALLATION OF DROPS.
 *CORING, CUTTING, PATCHING OF WALLS AND CEILING TO BE DONE BY OTHERS.
 *FLOW TEST DATA TAKEN, AS FOLLOW: JACON FIRE PROTECTION INC. AT SPRINKLER BASE OF RISER

STATIC PRESSURE: 72 PSI
 FLOW: 397.00 USGPM @ 61.00 PSI



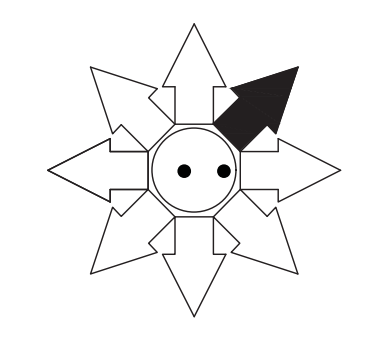
GROUND FLOOR

APPROX 30'-5" INCLUDING 2 ELBOW & 1 TEE TO NODE 12-13
 APPROX 20'-5" INCLUDING 1 ELBOW FROM NODE 13-14
 APPROX 37'-8" INCLUDING 2 ELBOWS FROM NODE 14 BACK TO THE SPRINKLER RISER TOR1 GROUND FLOOR. SEE RISER DETAIL FOR CONTINUATION



SECOND FLOOR

APPROX 128' INCLUDING 8 ELBOW & 1 TEE BACK TO THE SPRINKLER RISER 2 SECOND FLOOR. SEE RISER DETAIL FOR CONTINUATION



EPI Fire Protection & Security
 675 GARYRAY DRIVE, TORONTO, M9L 1R2
 TELEPHONE: 1(416) 746-2225
 EMAIL: SERVICES@EPI-FPS.CA
 WEB SITE: WWW.EPI-FPS.CA

Revisions:	Date:	General Notes
1. ISSUE FOR PERMIT	01.29.24	<ol style="list-style-type: none"> All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor. All Dimensions Shown are Center to Center. High Temperature Heads are to be Field Located Where Required. All Pipes and Hangers are to be Installed per NFPA #13. Hangers are to be U.L. Listed and F.M. Approved.

Drawing Legend		Number of Sprinklers	
Symbol	Description	Total This Sheet	Total This Job
○	Hydraulic Reference Points		
[18 m]	Elev. Below Top of Steel		
[18+]	Elev. Above Finished Floor		
+ (05 20-0)	Elev. of Top of Steel		
○	Ceiling Height		
—	Denotes Hanger Location		
○	Rise up or down		
●	NEW SPRINKLER PIPE		
---	EXISTING SPRINKLER PIPE		

CLASSROOMS ADDITION	
Drawing Title	Engineer Stamp
Contract No. J30329	
Drawn By M.BASSILY	
Date JANUARY 29 2024	
Approval By AHJ	

Job: ST. MICHEL CATHOLIC ELEMENTARY SCHOOL
 29 MEADOWVALE ROAD
 TORONTO, ONTARIO M1C 1R7
 Contractor: EPI FIRE PROTECTION & SECURITY
 675 GARYRAY DRIVE
 TORONTO, ONTARIO - M9L 1R2

LIGHTING LEGEND	
A1	STANDARD TYPE 'A1' LIGHT FIXTURE AS SCHEDULED
A1	TYPE 'A1' LIGHT FIXTURE AS SCHEDULED, CONNECTED TO THE EMERGENCY POWER SOURCE (INVERTER)
B1	WALL-MOUNTED TYPE 'B1' LIGHT FIXTURE AS SCHEDULED
\$	LOW-VOLTAGE, TOGGLE LIGHT SWITCH.
\$D	LOW-VOLTAGE, TOGGLE & DIMMER LIGHT SWITCH, AS SPECIFIED.
\$K	LOW-VOLTAGE, KEY-SWITCH TYPE LIGHT SWITCH, AS SPECIFIED.
\$MS	LOW-VOLTAGE, KEY-SWITCH TYPE, MASTER LIGHT SWITCH, AS SPECIFIED. CONTROLS ALL CORRIDOR, WASHROOM AND VESTIBULE LIGHTING
\$OS	LOW-VOLTAGE LIGHT SWITCH COMPLETE WITH INTEGRAL OCCUPANCY SENSOR, AS SPECIFIED.
OS	CORNER/WALL-MOUNTED, LOW-VOLTAGE OCCUPANCY SENSOR, AS SCHEDULED
OS	CEILING-MOUNTED, LOW-VOLTAGE OCCUPANCY SENSOR, AS SCHEDULED
OH	EXTERIOR-GRADE, WALL-MOUNTED LIGHT FIXTURE
OH	EXTERIOR-GRADE, LIGHT STANDARD COMPLETE WITH CONCRETE BASE
EM	EMERGENCY LIGHTING BATTERY UNIT C/W NO REMOTE HEADS
EM	EMERGENCY LIGHTING BATTERY UNIT C/W DUAL-HEAD REMOTE HEADS
EM	EMERGENCY LIGHTING DUAL-HEAD REMOTE HEAD
EM	EMERGENCY LIGHTING, WALL-MOUNTED EXIT SIGN
EM	EMERGENCY LIGHTING, CEILING-MOUNTED EXIT SIGN

POWER DEVICES & EQUIPMENT LEGEND	
⊕	SINGLE RECEPTACLE MOUNTED AT STANDARD HEIGHT; USE AND RATING FOR THE PURPOSE INTENDED
⊕	SINGLE RECEPTACLE MOUNTED AT HIGH LEVEL; USE AND RATING FOR THE PURPOSE INTENDED
⊕	15A, 120V DUPLEX RECEPTACLE MOUNTED AT STANDARD HEIGHT. 'T' DENOTES 20A, T-SLOT TYPE RECEPTACLE
⊕	15A, 120V DUPLEX RECEPTACLE MOUNTED AT HIGH LEVEL. 'T' DENOTES 20A, T-SLOT TYPE RECEPTACLE
⊕	15A, 120V, GFI DUPLEX RECEPTACLE MOUNTED AT HIGH LEVEL. 'T' DENOTES 20A, T-SLOT TYPE RECEPTACLE
⊕	DIRECT POWER CONNECTION
□	UNFUSED DISCONNECT SWITCH
□	FUSED DISCONNECT SWITCH
⊕	DIRECT POWER CONNECTION COMPLETE UNFUSED DISCONNECT SWITCH
□	BLANK COVERPLATE COMPLETE WITH WIRING, CONDUIT, AND BACKBOX
⊕	ROUND JUNCTION BOX COMPLETE WITH COVERPLATE
⊕	SQUARE JUNCTION BOX COMPLETE WITH COVERPLATE
■	RECESSED ELECTRICAL PANEL, AS SCHEDULED
■	SURFACE-MOUNTED ELECTRICAL PANEL, AS SCHEDULED
CC-1	DEVICE/EQUIPMENT CONNECTED TO CIRCUIT #1 IN PANEL 'CC'

COMMUNICATIONS (VOICE/DATA) LEGEND	
▽	DATA OUTLET (2 CABLES PER DROP) MOUNTED AT STANDARD HEIGHT COMPLETE WITH CATEGORY 6, FT6 CABLING (2 CABLES) TO THE DESIGNATED HUB ROOM
▽	TELEPHONE OUTLET (2 CABLES PER DROP) MOUNTED AT STANDARD HEIGHT COMPLETE WITH CATEGORY 6, FT6 CABLING (2 CABLES) TO THE TELEPHONE SWITCH
▽	DATA OUTLET (2 CABLES PER DROP) MOUNTED AT HIGH LEVEL COMPLETE WITH CATEGORY 6, FT6 CABLING (2 CABLES) TO THE DESIGNATED HUB ROOM
▽	TELEPHONE OUTLET (2 CABLES PER DROP) MOUNTED AT HIGH LEVEL COMPLETE WITH CATEGORY 6, FT6 CABLING (2 CABLES) TO THE DESIGNATED TELEPHONE SWITCH
WAP	WIRELESS ACCESS POINT COMPLETE WITH CATEGORY 6, FT6 CABLING TO THE DESIGNATED HUB ROOM

SYSTEMS DEVICE & EQUIPMENT LEGEND	
■	MODULAR CONTROL PANEL, SUPPLIED AND INSTALLED BY DIVISION 26
■	DOOR OPERATOR ACTUATOR BUTTON
KS	KEY SWITCH, TIED TO THE DOOR OPERATOR SYSTEM
HD	HAND DRYER, SUPPLIED AND INSTALLED BY DIVISION 26
PL	PUSH-TO-LOCK BUTTON TIED TO THE WASHROOM DOOR OPERATOR SYSTEM
OH	'OCCUPIED-WHEN-LIT' LED ANNUNCIATOR TIED TO THE WASHROOM DOOR OPERATOR SYSTEM
EH	VISUAL INDICATOR TIED TO THE CALL-FOR-ASSISTANCE SYSTEM
E	EMERGENCY PUSH-BUTTON TIED TO THE CALL-FOR-ASSISTANCE SYSTEM
EH	AUDIBLE/VISUAL INDICATOR TIED TO THE CALL-FOR-ASSISTANCE SYSTEM

FIRE ALARM SYSTEM LEGEND	
⊕	RATE-OF-RISE HEAT DETECTOR
⊕	FIXED TEMPERATURE HEAT DETECTOR
⊕	SMOKE DETECTOR
⊕	120V SMOKE ALARM C/W BATTERY BACKUP
⊕	PULL STATION C/W TAMPERPROOF, POLYCARBONATE COVER
⊕	FIRE ALARM HORN
⊕	FIRE ALARM HORN/STROBE
⊕	DUCT SMOKE DETECTOR
TL	REMOTE TROUBLE INDICATOR
FS	SPRINKLER/STANDPIPE FLOW SWITCH
SV	SPRINKLER/STANDPIPE SERVICED VALVE
SC	SENTRONIC CLOSER DEVICE
⊕	FIRE ALARM ANNUNCIATOR
⊕	FIRE ALARM CONTROL PANEL

ACCESS CONTROL SYSTEM LEGEND	
CR	CARD READER
ES	ELECTRIC STRIKE
MS	ALPHONE MASTER STATION
SMS	ALPHONE SUB-MASTER STATION
DS	ALPHONE DOOR STATION
LC	LOCAL DOOR CONTACT SUPPLIED AND INSTALLED BY DIVISION 16; TIED TO THE LOCAL DOOR ALARM SYSTEM
EH	AUDIBLE/VISUAL ANNUNCIATOR TIED TO THE LOCAL DOOR ALARM SYSTEM

SECURITY SYSTEM LEGEND	
⊕	MOTION DETECTOR
DC	MAGNETIC DOOR CONTACT TIED TO THE INTRUSION ALARM SYSTEM - WALL-MOUNTED
KP	KEYPAD
ES	ELECTRIC STRIKE
⊕	CCTV CAMERA

CLOCK SYSTEM LEGEND	
⊕	ANALOG CLOCK, 120V PLUG-IN TYPE COMPLETE WITH SINGLE RECEPTACLE - WALL-MOUNTED
⊕	ANALOG CLOCK, 120V PLUG-IN TYPE COMPLETE WITH SINGLE RECEPTACLE - WALL-MOUNTED
⊕	DIGITAL CLOCK TIED TO THE MASTER CLOCK SYSTEM - WALL-MOUNTED
⊕	DUAL-FACE DIGITAL CLOCK TIED TO THE MASTER CLOCK SYSTEM - WALL-MOUNTED
⊕	ANALOG CLOCK, BATTERY OPERATED - WALL-MOUNTED
⊕	DUAL-FACE ANALOG CLOCK, BATTERY OPERATED - WALL-MOUNTED
MC	MASTER CLOCK SYSTEM CONTROLLER

AUDIO/VISUAL SYSTEM LEGEND	
AV	EMPTY BACKBOX COMPLETE WITH BLANK COVERPLATE AND 25mmC UP TO THE ACCESSIBLE CEILING SPACE PROVISION FOR FUTURE AV CABLING

PUBLIC ADDRESS (P.A.) SYSTEM LEGEND	
S	P.A. SPEAKER - FLUSH CEILING-MOUNTED
SH	P.A. SPEAKER - WALL-MOUNTED
S	P.A. SPEAKER, DUAL-FACE TYPE - WALL-MOUNTED
SH	P.A. EXTERIOR HORN - WALL-MOUNTED
⊕	WEATHERPROOF PROGRAM BELL C/W ENCLOSURE
HS	P.A. HANDSET - WALL-MOUNTED
HS	P.A. HANDSET - DESK-MOUNTED
\$PC	P.A. PRIVACY CALL SWITCH
\$HS	P.A. HANDSET C/W INTEGRAL PRIVACY CALL SWITCH
ACC	P.A. ADMINISTRATIVE HANDSET
NR	P.A. NIGHT RINGER
A	P.A. LOCKDOWN 'AMBER' STROBE
B	P.A. INCOMING CALL 'BLUE' STROBE
VC	P.A. WALL-MOUNTED VOLUME CONTROL SWITCH
⊕	P.A. RED LOCKDOWN BUTTON C/W POLYCARBONATE LIFT-ABLE COVER
SC	P.A. SPEAKER C/W INTEGRATED CALL SWITCH
⊕	P.A. COMBINATION SPEAKER AND CLOCK UNIT - WALL-MOUNTED
PA	P.A. HEAD-END EQUIPMENT RACK
SR	P.A. SATELLITE EQUIPMENT RACK

ACRONYM LEGEND	
ACRONYM	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
CTE	CONNECT TO EXISTING
ER	DENOTES EXISTING DEVICE OR EQUIPMENT TO BE RELOCATED
EX	DENOTE EXISTING DEVICE OR EQUIPMENT TO REMAIN
GFI	DENOTE DEVICE OR EQUIPMENT WITH GFI PROTECTION
HL	DENOTES DEVICE OR EQUIPMENT AT HIGH LEVEL
LV	LOW VOLTAGE
N	DENOTES NEW DEVICE OR EQUIPMENT
NL	DENOTES NIGHT LIGHT FIXTURE
R	DENOTES EXISTING DEVICE OR EQUIPMENT TO BE REMOVED
RE	DENOTES RELOCATED POSITION OF AN EXISTING DEVICE OR EQUIPMENT
RP	DENOTES EXISTING DEVICE OR EQUIPMENT TO BE REPLACED
RT	DENOTES ROOFTOP DEVICE OR EQUIPMENT
T	T-SLOT, 20A DEVICE
TP	DENOTES TAMPERPROOF DEVICE OR EQUIPMENT
WG	DENOTES DEVICE OR EQUIPMENT WITH A WIREGUARD
WP	DENOTES WEATHERPROOF TYPE DEVICE OR EQUIPMENT

GENERAL NOTES	
1.	IT IS MANDATORY FOR THE ELECTRICAL CONTRACTOR TO VISIT THE SITE PRIOR TO BIDDING AND REVIEW EXISTING CONDITIONS AND DEMOLITION SCOPE OF WORK TO SUIT EXISTING ARCHITECTURAL, STRUCTURAL AND MECHANICAL SITE CONDITIONS, DRAWINGS, SPECIFICATIONS AND ALL CONTRACT DOCUMENTS. NO EXTRA WILL SUBSEQUENTLY BE ALLOWED TO COVER ANY SUCH ERROR, OMISSION AND/OR OVERSIGHT FOR NOT HAVING MADE A THOROUGH INSPECTION OF THE GROUNDS, EXISTING CONDITIONS, DRAWINGS, SPECIFICATION AND DESIGN INTENT. THE ELECTRICAL CONTRACTOR SHALL NOTE THAT THE EXISTING BUILDING WILL REMAIN IN OPERATION THROUGHOUT DEMOLITION/CONSTRUCTION. ALLOW FOR ANY WORK REQUIRED TO BE DONE WHICH MAY AFFECT POWER SUPPLY AND OPERATION OF THE BUILDING TO BE CARRIED OUT AFTER HOURS OR AT A TIME CONVENIENT TO THE BUILDING MANAGEMENT. PROVIDE TEMPORARY SERVICES AS REQUIRED TO ENSURE CONTINUED OPERATION AT ALL TIMES.
2.	CAREFULLY EXAMINE OTHER EXISTING UTILITY LINES SUCH AS GAS, WATER ETC. PRIOR TO START THE ELECTRICAL CONSTRUCTION WORKS AND COORDINATE WITH OTHER TRADES AND REPORT OF ANY DISCREPANCY PRIOR TO PROCEEDING.
3.	THESE DRAWINGS SHALL BE READ & PRICED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AS WELL AS ALL OTHER DOCUMENTS FORMING THIS BID. INCLUDE FOR THE SUPPLY AND INSTALLATION OF POWER, SYSTEMS, AND LIGHTING AS PER THE COMPLETE CONSTRUCTION DOCUMENTS. NO EXTRA COST WILL BE ACCEPTED IN FAILURE TO OBTAINING AND/OR REVIEW OF SUCH DOCUMENTS. REFER TO ARCHITECTURAL, ELECTRICAL, STRUCTURAL AND MECHANICAL LAYOUTS IN CONJUNCTION FOR EXACT LOCATION OF ALL EQUIPMENT. REPORT ANY DISCREPANCIES TO THE ELECTRICAL ENGINEER PRIOR TO COMMENCING WORK. NO EXTRA WILL BE PROVIDED AS A RESULT OF A FAILURE TO DO SO.
4.	IT IS MANDATORY THAT ELECTRICAL WORK CONFORM TO ALL APPLICABLE CODES (INCLUDING THE ONTARIO BUILDING, FIRE, AND ONTARIO ELECTRICAL SAFETY CODE), SCHOOL BOARD STANDARDS, AND THE STANDARDS SET BY ANY AND ALL LOCAL AUTHORITIES HAVING JURISDICTION.
5.	ALL ELECTRICAL WORK SHALL BE INSPECTED BY THE ELECTRICAL SAFETY AUTHORITY (ESA), ARRANGE AND PAY FOR ALL INSPECTIONS REQUIRED FOR THE DURATION OF THE PROJECT.
6.	THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR HIRING A FIRE WATCH AS REQUIRED BY CODE LOCAL AUTHORITIES HAVING JURISDICTION, AND DURING ANY ALTERATION OR DOWNTIME OF THE FIRE ALARM SYSTEM, FIRE WATCH SHALL BE PRESENT THROUGHOUT THE DOWNTIME DURATION.
7.	THE ELECTRICAL CONTRACTOR SHALL LABEL ALL NEW AND EXISTING LIGHT SWITCHES, RECEPTACLES AND JUNCTION BOXES COVERPLATES WITH THE PANEL NAME AND BREAKER IT IS FED FROM. ALL LABELING OF ELECTRICAL DEVICES SHALL BE DONE SO WITH A LABELMAKER ONLY. NO HAND WRITTEN LABELS WILL BE PERMITTED.
8.	WHERE NEW DEVICES/SYSTEMS ARE PROPOSED ON EXISTING BLOCK WALLS, UTILIZE WIREMOLD 500/700 SERIES AS RACEWAY FOR ALL NEW WIRING. PROVIDE WIREMOLD BACKBOXES FOR SURFACE MOUNTED, INTERIOR APPLICATIONS. THE USE OF SHEET METAL BOXES WILL NOT BE PERMITTED.
9.	IN THE EVENT OF ANY DISCREPANCY BETWEEN THE ELECTRICAL DRAWINGS AND SPECIFICATIONS, ALLOW FOR THE HIGHEST-PRICED OPTION IN THE TENDER PRICE.
10.	ALL WIRING USED ON THIS PROJECT SHALL BE RUN IN RACEWAYS. NO USE OF ARMoured (BX) CABLE WILL BE PERMITTED WITH THE EXCEPTION OF RUNS NOT TO EXCEED 5' BETWEEN A LIGHT FIXTURE AND THE RESPECTIVE JUNCTION BOX.

DRAWING LIST	
DRAWING NUMBER	DESCRIPTION
E1	ELECTRICAL LEGEND AND NOTES
E2	FIRST FLOOR KEY PLAN
E3	SECOND FLOOR KEY PLAN
E4	EXISTING ELECTRICAL DEMOLITION PLANS
E5	NEW POWER & SYSTEMS PLANS
E6	NEW LIGHTING PLANS
E7	SCHEDULES & SCHEMATICS
E8	SCHEDULES & SCHEMATICS

PUBLIC ADDRESS SYSTEM	
THE EXISTING PUBLIC ADDRESS SYSTEM VENDOR SERVICING THE SCHOOL IS 'BARRIE COMMUNICATIONS EQUIPMENT LTD.'. BARRIE COMMUNICATIONS IS RESPONSIBLE FOR SUPPLYING ALL PUBLIC ADDRESS SYSTEM DEVICES, MASTER CLOCK SYSTEM DEVICES AND CABLING REQUIRED FOR THIS PROJECT. THE BIDDING ELECTRICAL CONTRACTOR SHALL INCLUDE FOR ALL COSTS ASSOCIATED WITH BARRIE COMMUNICATIONS AS PART OF THEIR BASE TENDER PRICE. ALL ROUGH-INS FOR THE PUBLIC ADDRESS SYSTEM AND CLOCK SYSTEM SHALL BE COMPLETED BY THE ELECTRICAL CONTRACTOR AS PART OF THE BASE TENDER PRICE.	

VOICE, DATA, SECURITY AND ACCESS CONTROL SYSTEM	
ALL ROUGH-INS (CONDUIT AND BACKBOX) FOR THE VOICE, DATA, SECURITY AND ACCESS CONTROL SYSTEMS SHALL BE COMPLETED BY THE ELECTRICAL CONTRACTOR AS PART OF THE BASE TENDER PRICE. THE VOICE, DATA, SECURITY AND ACCESS CONTROL VENDORS WILL BE RETAINED BY THE SCHOOL BOARD THROUGH THE ALLOCATED CASH ALLOWANCE.	

PHASE 1 - SUMMER WORK	
THE CONTRACTOR SHALL COMPLETE ALL DEMOLITION AND NEW WORK INSIDE THE EXISTING SCHOOL DURING THE SUMMER TIME IN ADVANCE OF STUDENTS RETURNING TO SCHOOL. THIS INCLUDES:	
1. ALL DEMOLITION WORK AT THE CONNECTION OF THE NEW ADDITION TO THE EXISTING SCHOOL.	
2. ALL WORK INSIDE THE EXISTING LIBRARY.	
3. ALL WORK INSIDE THE EXISTING SECOND FLOOR MECHANICAL ROOM.	
4. ALL WORK INSIDE THE EXISTING GYMNASIUM TO RELOCATE THE EXIT.	
5. ALL NEW FEEDERS, CABLING, CONDUIT, ETC. WORK INSIDE THE EXISTING BUILDING REQUIRED FOR SERVICING THE NEW ADDITION (FIRE ALARM, PUBLIC ADDRESS, SECURITY, ACCESS CONTROL, VOICE/DATA, ELECTRICAL PANEL FEEDER, ETC.)	

NO.	DATE	REVISION
7	04/02/24	ISSUED FOR TENDER
6	02/28/24	ISSUED FOR TENDER
5	07/01/23	ISSUED FOR TENDER
4	02/22/23	RE-ISSUED FOR PERMIT
3	02/10/23	ISSUED FOR PERMIT
2	01/20/23	ISSUED FOR 85% DESIGN REVIEW
1	10/21/22	ISSUED FOR 60% DESIGN REVIEW

DO NOT SCALE DRAWINGS. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE JOB. ALL DRAWINGS REMAIN THE PROPERTY OF THE ARCHITECTS.

- GENERAL NOTES**
- 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.
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 - THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
 - ALL DIMENSIONS, SHOWN ON THE DRAWINGS, SHALL BE CHECKED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 - THE STABILITY OF THE STRUCTURAL FRAME IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING DURING CONSTRUCTION.
 - ALL DIMENSIONS GIVEN ARE IN METRIC.

MECHANICAL & ELECTRICAL CONSULTANT:
SURI & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

1022 WHITE CLOVER WAY
MISSISSAUGA, ONTARIO
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T (905) 299-7861
F (905) 297-3400

ELECTRICAL MECHANICAL LIGHTING COMMUNICATION SECURITY

Kingsland + ARCHITECTS INC.

KINGSLAND + ARCHITECTS INC
219 Dufferin Street, Suite 308
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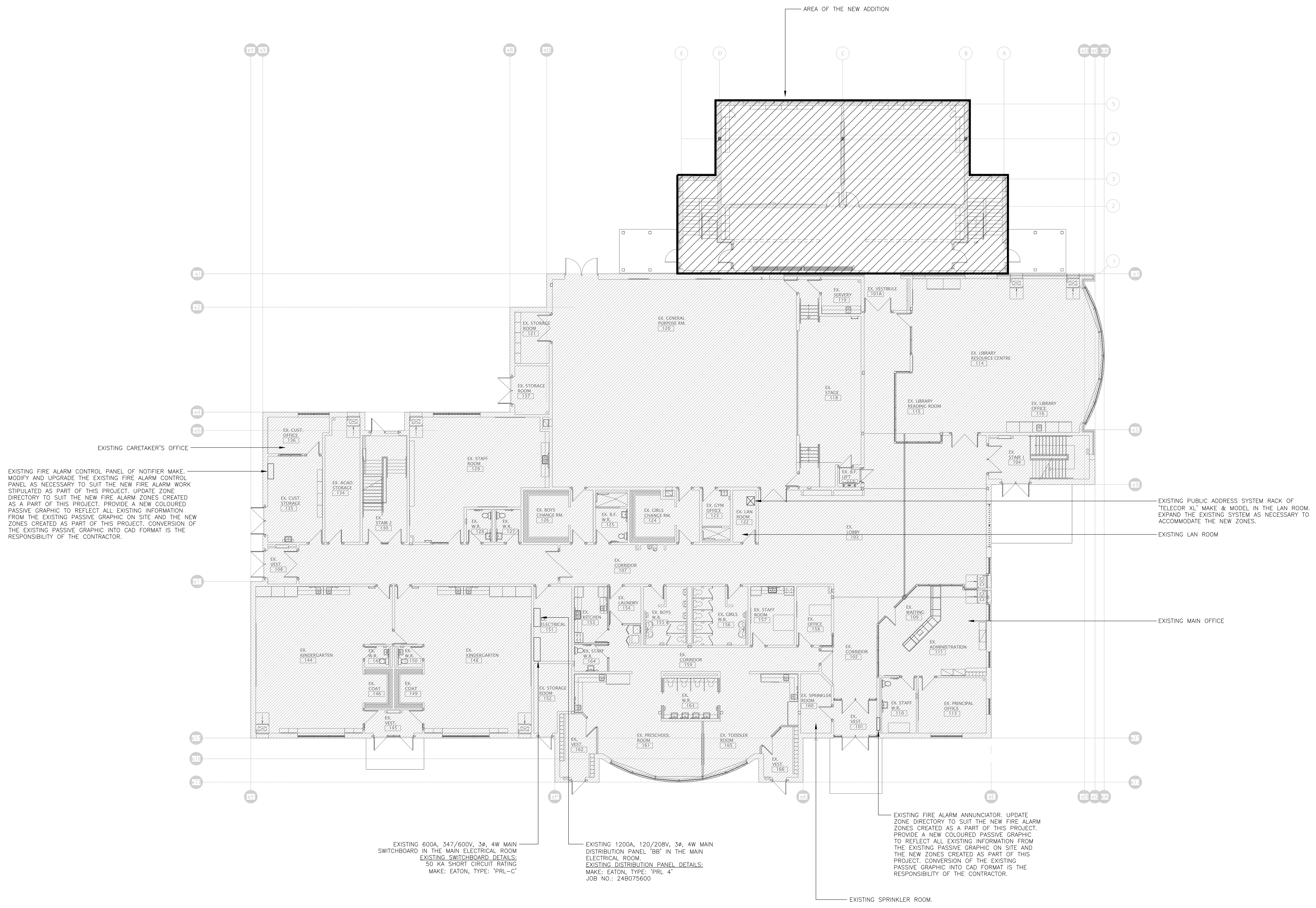
ÉEC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
ELECTRICAL LEGEND AND NOTES

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO.: REV.
CHECKED: R.S.	E1
DATE: -	

DATE PLOTTED: Thursday, April 4, 2024



1 FIRST FLOOR KEY PLAN
E2 SCALE: 1:150

7	04/02/24	ISSUED FOR TENDER	NO. DATE:
6	02/28/24	ISSUED FOR TENDER	REVISION
5	07/01/23	ISSUED FOR TENDER	
4	02/22/23	RE-ISSUED FOR PERMIT	
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 6. ALL DIMENSIONS GIVEN ARE IN METRIC.

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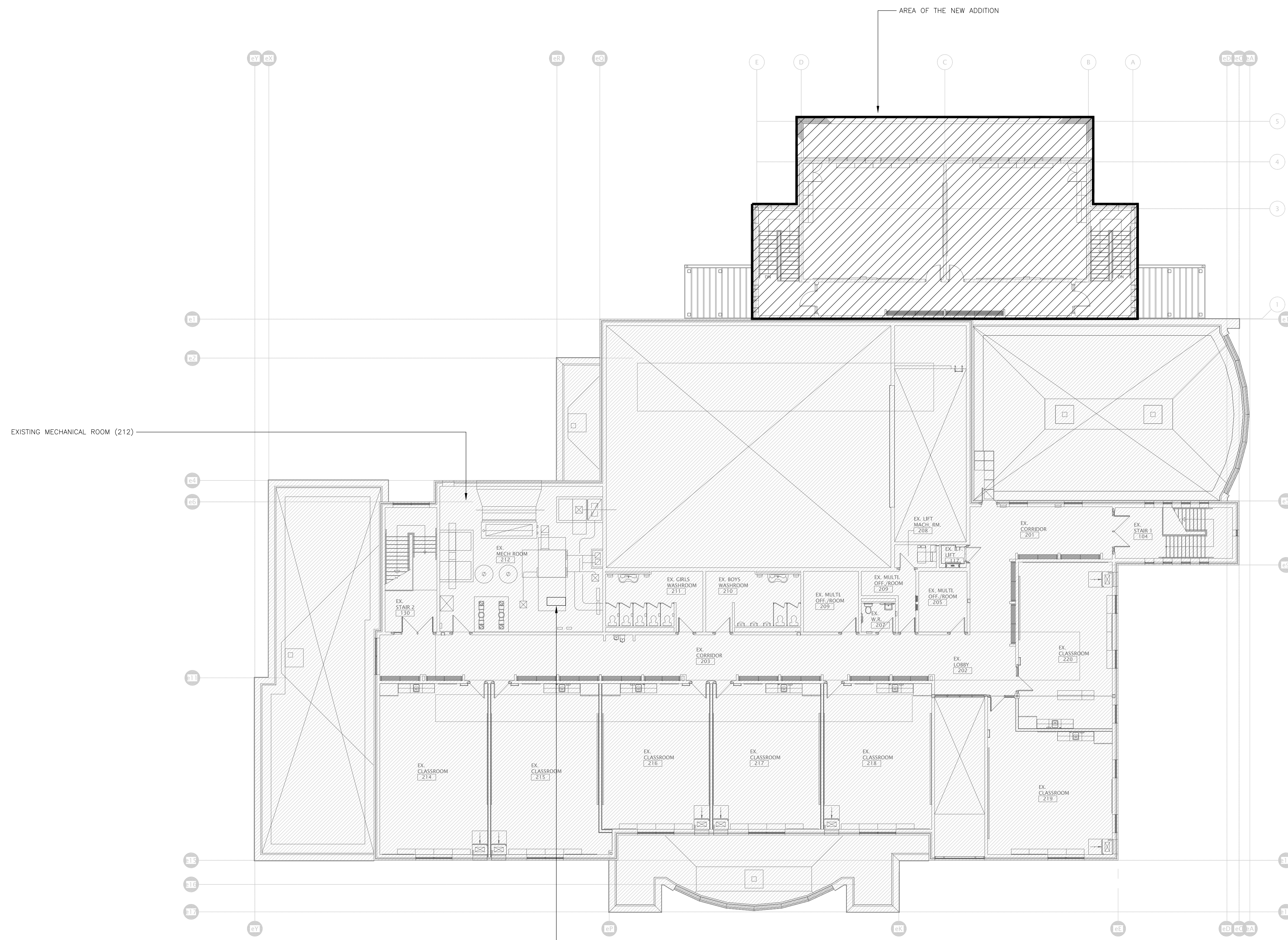


ÉEC SAINT-MICHEL Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
FIRST FLOOR KEY PLAN

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO: REV.
CHECKED: R.S.	E2
DATE:	

DATE PLOTTED: Thursday, April 4, 2024



1 SECOND FLOOR KEY PLAN
E3 SCALE: 1:150

NO.	DATE	REVISION
7	04/02/24	ISSUED FOR TENDER
6	02/28/24	ISSUED FOR TENDER
5	07/01/23	ISSUED FOR TENDER
4	02/22/23	RE-ISSUED FOR PERMIT
3	02/10/23	ISSUED FOR PERMIT
2	01/20/23	ISSUED FOR 85% DESIGN REVIEW
1	10/21/22	ISSUED FOR 60% DESIGN REVIEW

DO NOT SCALE DRAWINGS. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE JOB. ALL DRAWINGS REMAIN THE PROPERTY OF THE ARCHITECTS.

- GENERAL NOTES**
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 6. ALL DIMENSIONS GIVEN ARE IN METRIC.

MECHANICAL & ELECTRICAL CONSULTANT:
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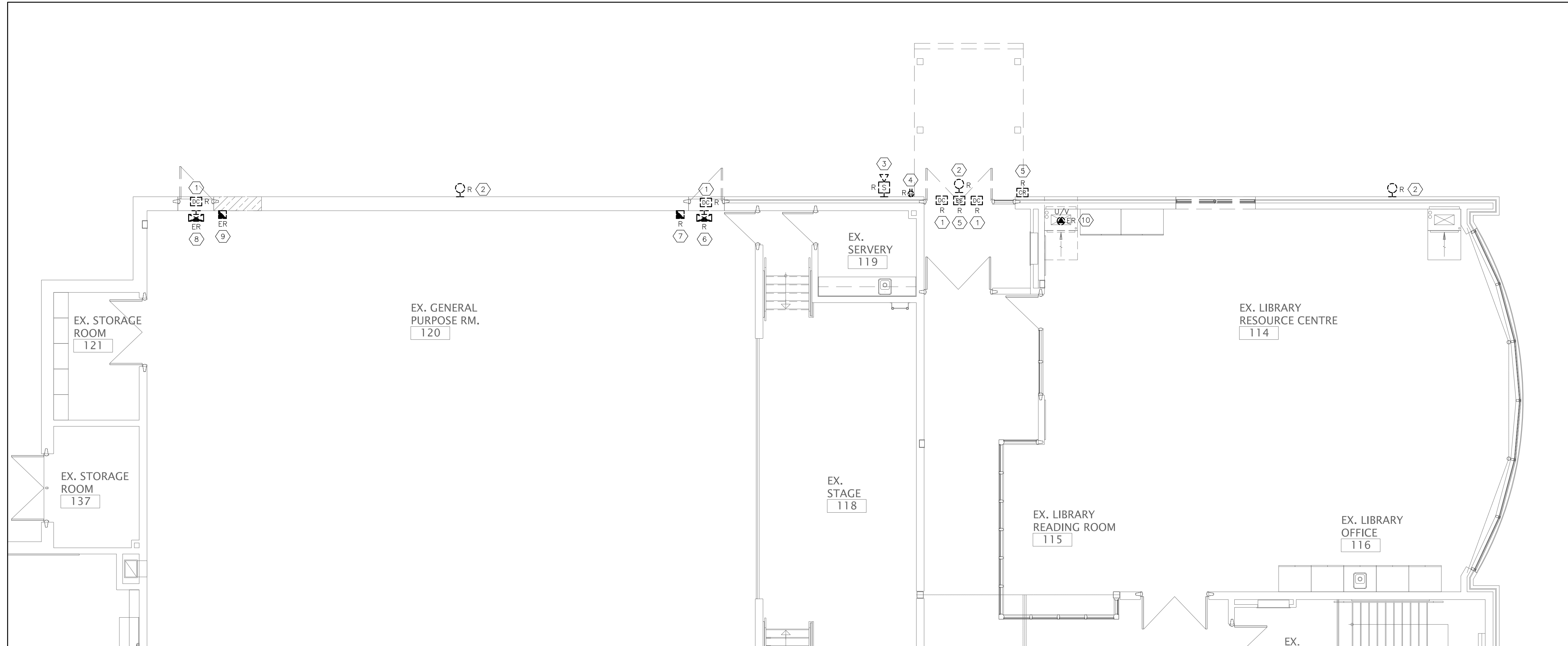


ÉC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE: SECOND FLOOR KEY PLAN	
PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO.: REV.
CHECKED: R.S.	E3
DATE: -	

DATE PLOTTED: Thursday, April 4, 2024



1 NEW POWER & SYSTEMS PLAN – FIRST FLOOR ADDITION
 E4 SCALE: 1:75

DRAWING NOTES:

- 1 REMOVE THE EXISTING DOOR CONTACT. REMOVE ALL REDUNDANT WIRING/RACEWAYS TO THE SOURCE.
- 2 REMOVE THE EXISTING WALL-MOUNTED LIGHT FIXTURE. REMOVE ALL REDUNDANT WIRING/RACEWAYS.
- 3 REMOVE THE EXISTING PA HORN. REMOVE ALL REDUNDANT WIRING/RACEWAYS.
- 4 REMOVE THE EXISTING OUTDOOR RECEPTACLE. REMOVE ALL REDUNDANT WIRING/RACEWAYS.
- 5 REMOVE THE EXISTING CARD READER AND ELECTRIC STRIKE. REMOVE ALL REDUNDANT WIRING/RACEWAYS.
- 6 REMOVE THE EXISTING EXIT SIGN. REMOVE ALL REDUNDANT WIRING/RACEWAYS.
- 7 REMOVE THE EXISTING PULL STATION. REMOVE ALL REDUNDANT WIRING/RACEWAYS.
- 8 RELOCATE THE EXISTING EXIT SIGN AND WIREGUARD TO SUIT THE NEW ENLARGED DOOR OPENING. MODIFY WIRING/RACEWAYS AS REQUIRED.
- 9 RELOCATE THE EXISTING FIRE ALARM PULL STATION TO SUIT THE NEW ENLARGED DOOR OPENING. MODIFY WIRING/RACEWAYS AS REQUIRED.
- 10 DISCONNECT POWER CONNECTION TO THE EXISTING UNIT VENTILATOR. EXTEND WIRING/RACEWAYS TO THE NEW UNIT VENTILATOR LOCATION. SEE NEW PLAN FOR LOCATION.

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3	02/10/23	ISSUED FOR PERMIT
2	01/20/23	ISSUED FOR 85% DESIGN REVIEW
1	10/21/22	ISSUED FOR 60% DESIGN REVIEW

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GENERAL NOTES

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2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
3. THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
4. ALL DIMENSIONS, SHOWN ON THE DRAWINGS, SHALL BE CHECKED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
5. THE STABILITY OF THE STRUCTURAL FRAME IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING DURING CONSTRUCTION.
6. ALL DIMENSIONS GIVEN ARE IN METRIC.

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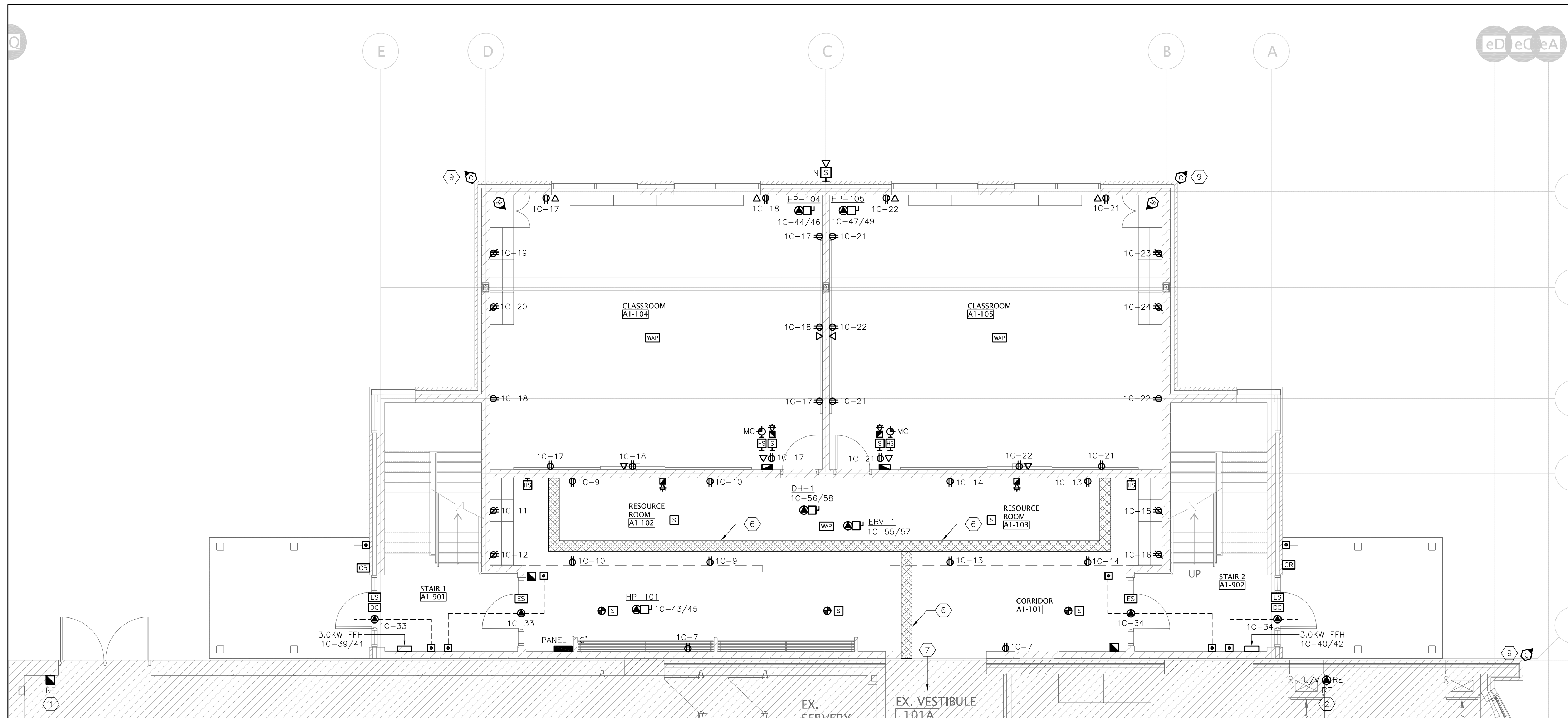
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 M1C 1R7

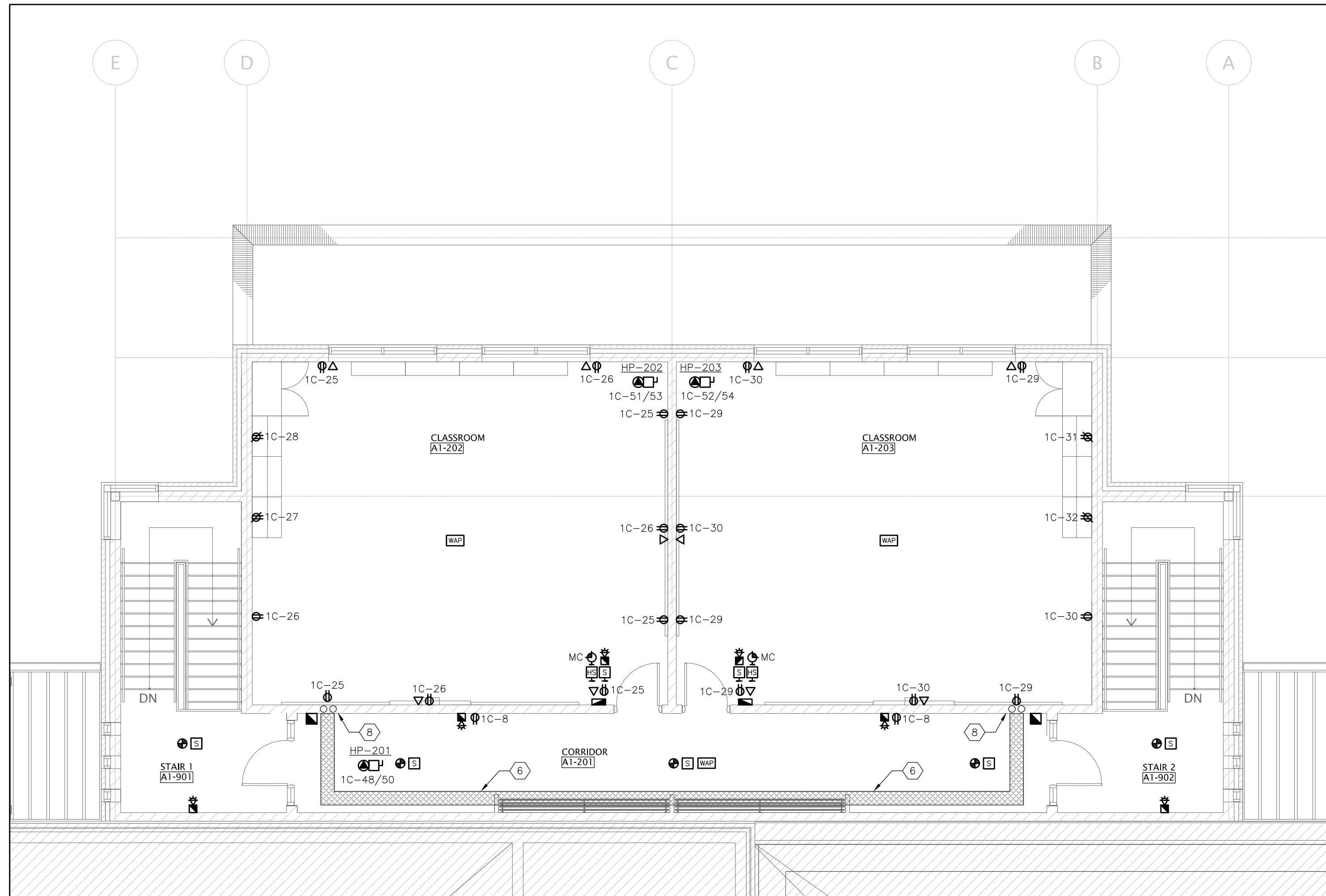
DRAWING TITLE:
 EXISTING ELECTRICAL
 DEMOLITION PLANS

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO: REV.
CHECKED: R.S.	E4
DATE: -	

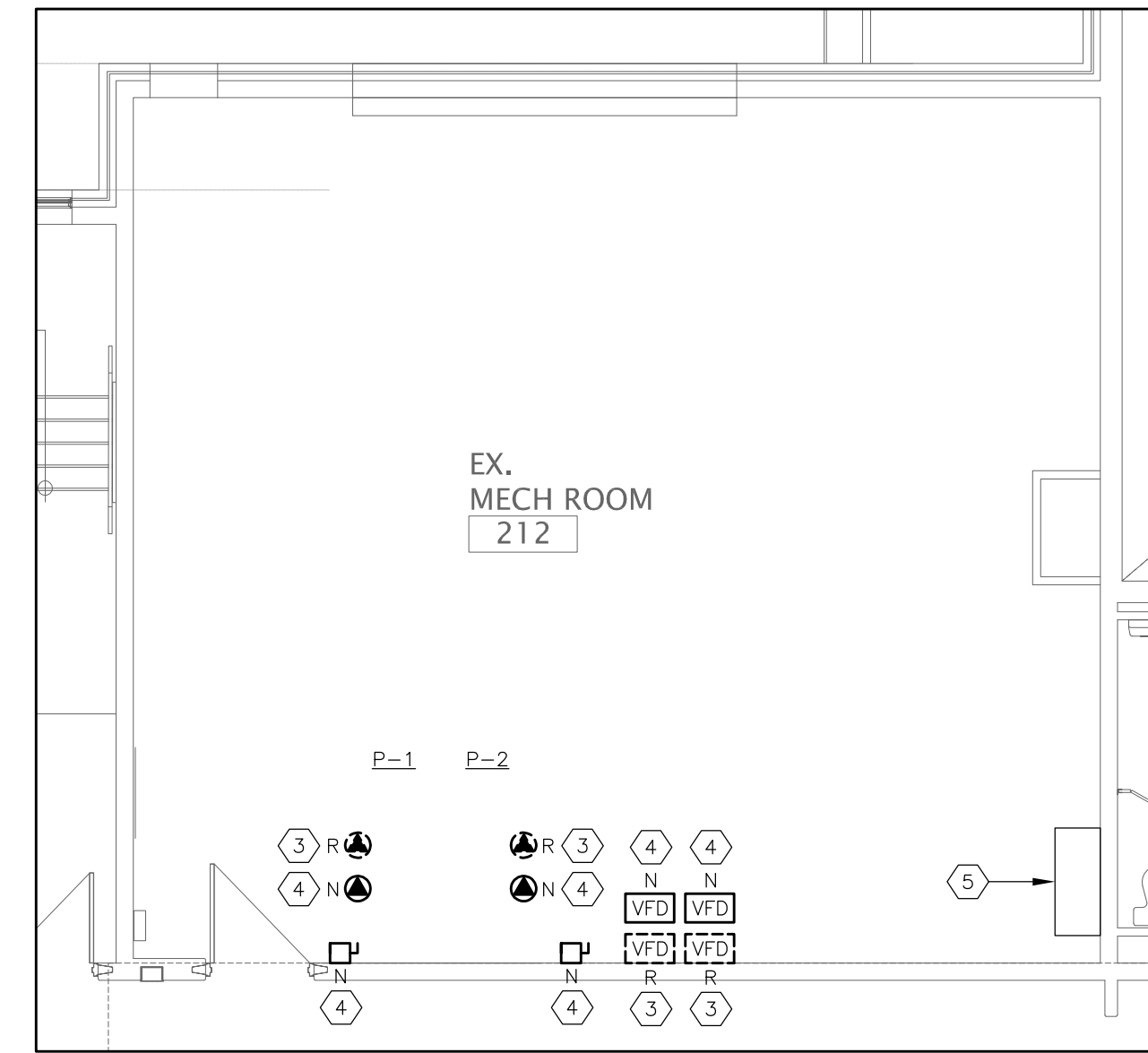
DATE PLOTTED: Thursday, April 4, 2024



1 NEW POWER & SYSTEMS PLAN - FIRST FLOOR ADDITION
SCALE: 1:75



2 NEW POWER & SYSTEMS PLAN - SECOND FLOOR ADDITION
SCALE: 1:75



3 EXISTING & NEW POWER & SYSTEMS PLAN - MECHANICAL ROOM 212
SCALE: 1:75

GENERAL NOTES:

- ALL DEVICES, EQUIPMENT AND MATERIALS SHOWN ARE NEW AND TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. ALL ROUGH-INS SHALL BE RECESSED IN THE NEW WALLS. ALL RACEWAYS SHALL BE CONCEALED IN THE WALLS OR ABOVE THE DROP CEILINGS.
- ALL NEW RECEPTACLES SHALL BE OF "TAMPER RESISTANT" TYPE. LOCATE AS PER HEIGHTS SHOWN ON THE ARCHITECTURAL DRAWINGS. CONNECT TO THE CIRCUIT(S) NOTED.
- FOR ALL FIRE ALARM WORK, SUPPLY AND INSTALL DEVICES AS PER CAN/ULC-S524 AND VERIFY AS PER CAN/ULC-S537.
 - CONNECT ALL INITIATING FIRE ALARM DEVICES IN CORRIDOR (101), RESOURCE ROOMS (102) AND (103) AND CLASSROOMS (104 AND (105) TO THE NEW FIRE ALARM ZONE, FZ-12.
 - CONNECT ALL FIRE ALARM DEVICES IN CORRIDOR (201) AND CLASSROOMS (202) AND (203) TO FIRE ALARM ZONE FZ-13.
 - CONNECT ALL INITIATING FIRE ALARM DEVICES IN STAIR #1 TO FIRE ALARM ZONE FZ-14.
 - CONNECT ALL INITIATING FIRE ALARM DEVICES IN STAIR #2 TO FIRE ALARM ZONE FZ-15.
 - PROVIDE MINIMUM TWO (2) NEW SIGNALING CIRCUIT DEDICATED FOR THE NEW ADDITION SIGNALING DEVICES FROM THE FIRE ALARM CONTROL PANEL.
- COORDINATE ALL POWER ROUGH-INS AND FINAL CONNECTIONS WITH THE MECHANICAL CONTRACTOR FOR ALL MECHANICAL EQUIPMENT PRIOR TO COMMENCING ROUGH-IN; SEE MECHANICAL DRAWINGS FOR APPROXIMATE EQUIPMENT LOCATION.
- COORDINATE ALL POWER ROUGH-INS AND FINAL CONNECTIONS WITH THE DOOR HARDWARE INSTALLER FOR ALL DOOR OPERATORS PRIOR TO COMMENCING ROUGH-IN. ALL RACEWAYS AND LOW-VOLTAGE WIRING FOR THE DOOR OPERATORS AND ASSOCIATED KEY SWITCHES SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- PROVIDE J-HOOKS IN THE ADDITION AND THE EXISTING SCHOOL AS REQUIRED TO SUPPORT LOW-VOLTAGE CABLING IN AREAS NOT EQUIPPED WITH CABLE TRAYS. IN THE ASSOCIATED CABLING TRAY.
- ALL PUBLIC ADDRESS (SPEAKERS AND HANDSETS), DIGITAL CLOCKS AND ALL ASSOCIATED CABLING SHALL BE SUPPLIED AND INSTALLED BY THE PUBLIC ADDRESS SYSTEM VENDOR (BARRIER COMMUNICATIONS) AS PART OF THE BASE TENDER PRICE. ALL PROGRAMMING SHALL BE COMPLETED BY BARRIER COMMUNICATIONS FOR A COMPLETE AND OPERATIONAL SYSTEM AS PART OF THE BASE TENDER PRICE.
- ALL VOICE, DATA AND SECURITY ROUGH-INS SHALL BE COMPLETED BY THE ELECTRICAL CONTRACTOR AS PART OF THE BASE TENDER PRICE. ALL CABLING AND DEVICE INSTALLATION WILL BE COMPLETED BY THE RESPECTIVE LOW-VOLTAGE CONTRACTORS RETAINED THROUGH THE CASH ALLOWANCE. ALL WIRELESS ACCESS POINTS ARE TO BE SUPPLIED BY THE SCHOOL BOARD AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- ALL MODULAR CONTROL PANELS ARE TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- FORCED FLOW HEATERS IN THE STAIRCASES ARE TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. HEATERS SHALL BE OUELLET OAC04000-T OR APPROVED EQUAL COMPLETE WITH WHITE FINISH AND SURFACE MOUNTING BOX.

DRAWING NOTES:

- RELOCATED FIRE ALARM PULL STATION FROM THE OLD EXIT FROM THE GYM. MODIFY/EXTEND ALL WIRING/RACEWAYS AS REQUIRED. INSTALL AS PER CAN/ULC-S524 AND VERIFY AS PER CAN/ULC-S537. VERIFY DEVICE IMMEDIATELY AFTER RELOCATION.
- RELOCATED POWER CONNECTION FOR THE UNIT VENTILATOR. MODIFY/EXTEND ALL WIRING/RACEWAYS AS REQUIRED.
- DISCONNECT AND REMOVE POWER CONNECTION TO THE EXISTING PUMPS P-1 & P-2 IN ENTIRETY. REMOVE ALL ASSOCIATED WIRING/RACEWAYS TO PANEL "DP-CC". REMOVE ALL ASSOCIATED VFDs AND DISCONNECT SWITCHES. REMOVE THE EXISTING BREAKER IN THE PANEL.
- PROVIDE NEW POWER CONNECTION (THROUGH THE NEW VFD), WIRING, RACEWAY AND LOCAL DISCONNECT SWITCH TO THE NEW PUMPS P-1 AND P-2. PROVIDE NEW 15A-3P BREAKERS (ONE FOR EACH PUMP) IN PANEL "DP-CC". SEE DRAWING E7 FOR FEEDER SIZE.
- EXISTING 400A, 347/600V, 3Ø, 4W DISTRIBUTION PANEL "DP-CC" TO REMAIN. REMOVE THE EXISTING 2 X 25A-3P BREAKERS SERVING PUMPS P-1 AND P-2 AND PROVIDE 2 X NEW 40A-3P BREAKERS TO SERVE THE UPGRADED PUMPS P-1 AND P-2. EXISTING PANEL IS OF EATON "PRL 4" MAKE & MODEL.
- PROVIDE A NEW CABLE TRAY THROUGHOUT THE ADDITION ON THE FIRST FLOOR AND SECOND FLOOR AS SHOWN. CABLE TRAY SHALL BE LEGRAND CABLOFIL (941122) OR EQUAL. CABLE TRAY SHALL BE 12" WIDE X 6" HIGH, BLACK FINISH, STAINLESS STEEL 316L.
- SUPPLY, INSTALL AND EXTEND THE NEW CABLE TRAY 80' INTO THE EXISTING CORRIDOR. EXACT ROUTING TO BE CONFIRMED ON SITE WITH THE ENGINEER DURING CONSTRUCTION. CABLE TRAY SHALL BE LEGRAND CABLOFIL (941122) OR EQUAL. CABLE TRAY SHALL BE 12" WIDE X 6" HIGH, BLACK FINISH, STAINLESS STEEL 316L.
- PROVIDE 2 X 2" EMPTY CONDUITS (C/W PULL STRINGS) BETWEEN THE FIRST AND SECOND FLOOR CEILING SPACE TO TRANSFER LOW-VOLTAGE CABLING FROM THE SECOND FLOOR TO THE FIRST FLOOR.
- PROVIDE A CCTV CAMERA ROUGH-IN COMPLETE WITH CONDUIT TO THE ACCESSIBLE CEILING SPACE AT ALL LOCATIONS SHOWN. CCTV CAMERA IS TO BE SUPPLIED AND INSTALLED THROUGH THE CASH ALLOWANCE. INCLUDE FOR ONE (1) ADDITIONAL ROUGH-IN BEYOND THE QUANTITY SHOWN AT GRIDLINES E9 AND EA (SEE DRAWING E2 FOR LOCATION; IT IS AT THE CORNER OF THE EXISTING STAIRCASE).

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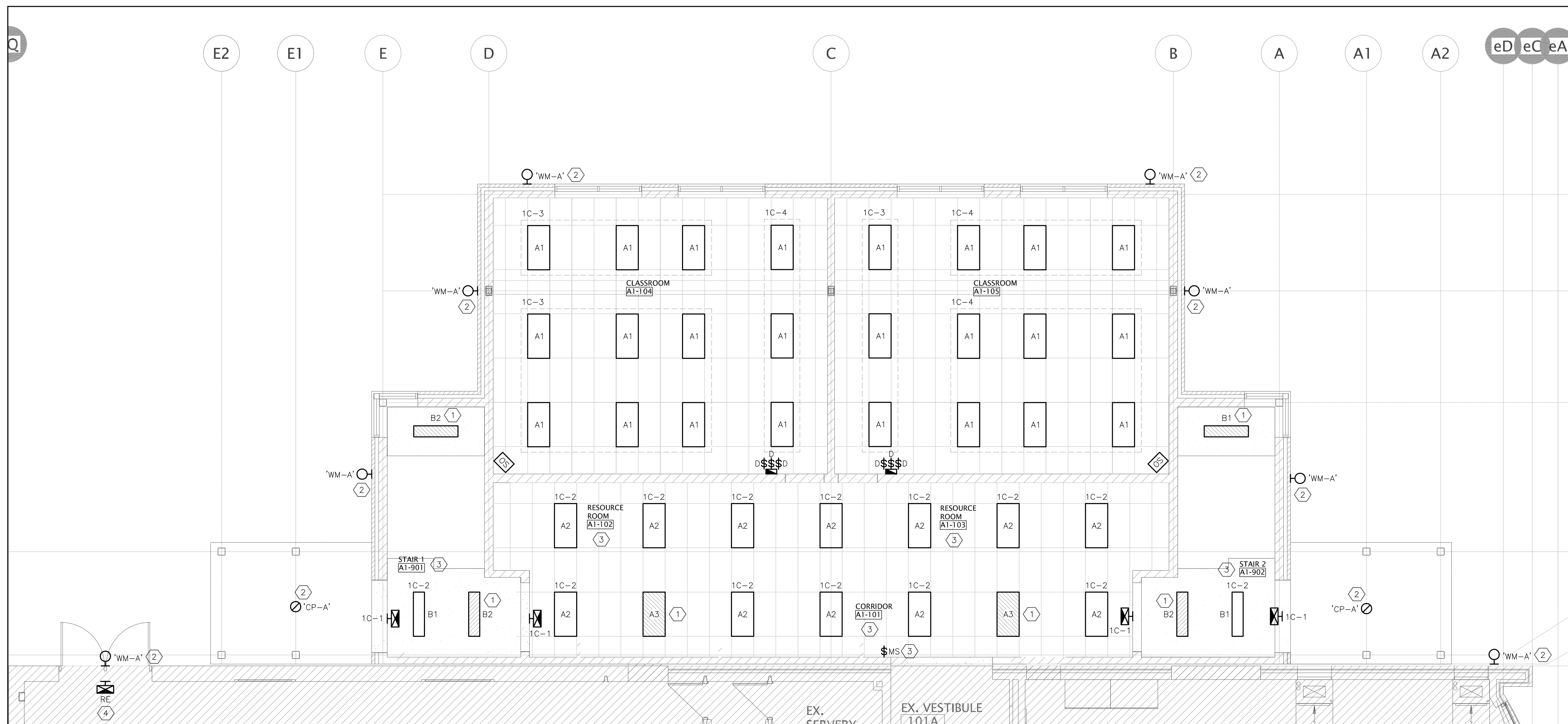


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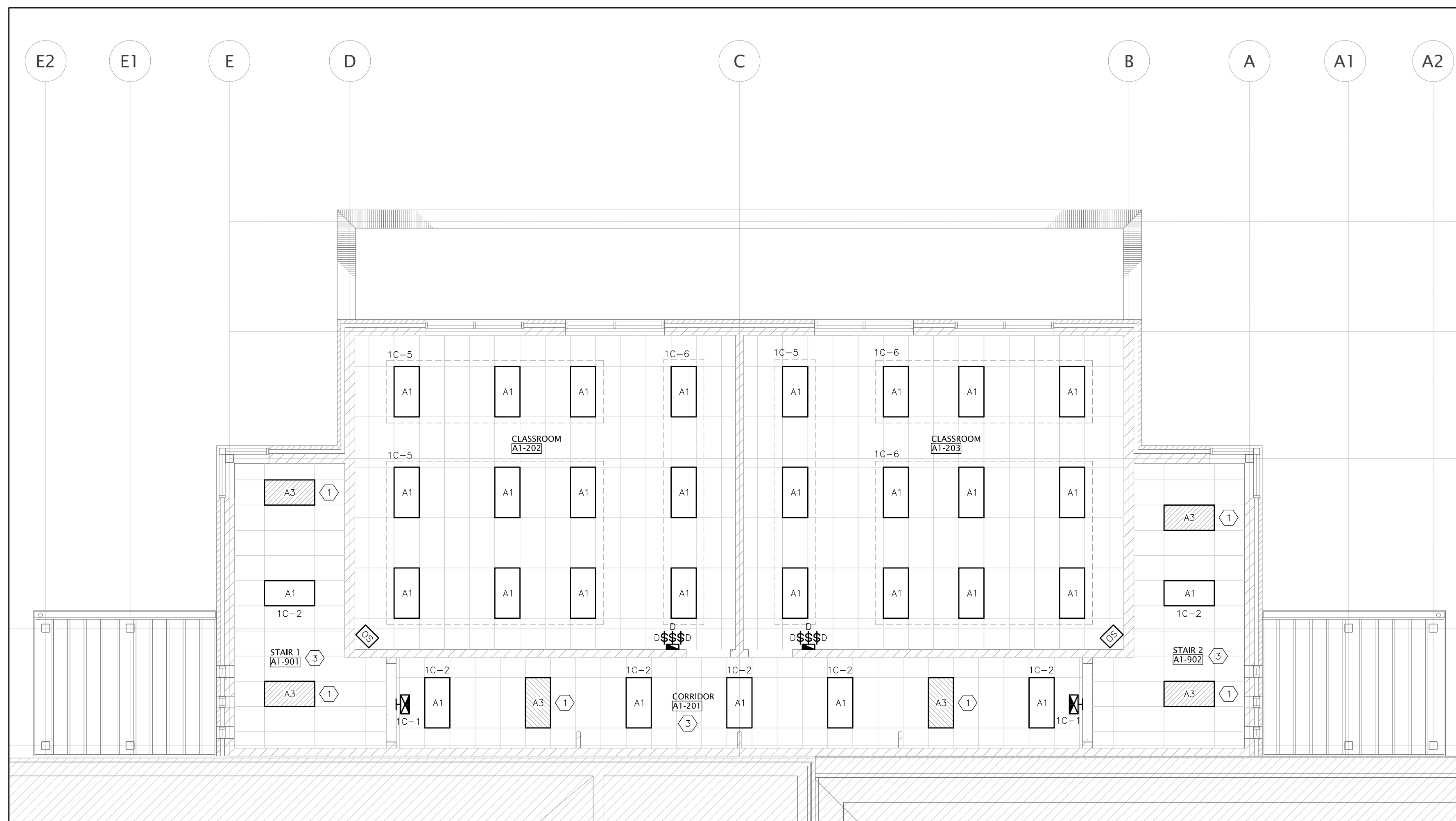
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
NEW POWER & SYSTEMS
PLANS

PROJECT NO: 22-192	SCALE: E5
DRAWN: R.S.	DRAWING NO.: REV.
CHECKED: R.S.	
DATE: -	



1 NEW LIGHTING PLAN - FIRST FLOOR ADDITION
E6 SCALE: 1:75



2 NEW LIGHTING PLAN - FIRST FLOOR ADDITION
E6 SCALE: 1:75

GENERAL NOTES:

1. ALL DEVICES, EQUIPMENT AND MATERIALS SHOWN ARE NEW UNLESS OTHERWISE NOTED AND TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
2. PROVIDE NEW DEVICES, EQUIPMENT AND SYSTEMS AS SHOWN. PROVIDE TWO (2) SAFETY CHAINS PER LIGHT FIXTURE FASTENED TO THE BUILDING STRUCTURE TO SUPPORT THE FIXTURE INDEPENDENT OF THE GRID SYSTEM.
3. SEE THE 'LIGHTING CONTROL SCHEDULE' FOR THE DETAILS AND SPECIFICATION OF ALL LIGHTING CONTROL DEVICES (SWITCHES AND OCCUPANCY SENSORS). ALL LIGHTING CONTROLS SHALL BE LOW-VOLTAGE, UNLESS NOTED OTHERWISE. ALL LIGHTING CONTROLS ARE TO BE COMMISSIONED ON SITE BY ACUITY'S REPRESENTATIVE. SEE THE 'LIGHTING CONTROL SCHEDULE' FOR LIGHTING ZONES REQUIRING 0-10V WIRING AND DIMMING CAPABILITY.
4. INSTALL ALL NEW LIGHT SWITCHES ONTO THE NEW MODULAR CONTROL PANEL WHERE PRESENT.
5. TEST ALL EMERGENCY LIGHTING AFTER INSTALLATION TO ENSURE CONTINUED OPERATION FOR A PERIOD OF 30 CONTINUOUS MINUTES OR LONGER. PROVIDE A LETTER CERTIFYING THE SAME TO THE CONSULTANT AFTER VERIFICATION.

DRAWING NOTES:

- ① CONNECT THE SELECT LIGHT FIXTURES TO THE EXISTING INVERTER SET SERVING THE SCHOOL. CONNECT ALL LIGHTS TO A NEW INVERTER-BACKED DEDICATED CIRCUIT. PROVIDE NEW WIRING/RACEWAYS TO THE INVERTER PANEL IN THE SECOND FLOOR MECHANICAL ROOM (212) WHERE THE EXISTING INVERTER SET IS LOCATED.
- ② CONNECT THE NEW EXTERIOR LIGHT FIXTURES TO THE EXISTING EXTERIOR LIGHTING CIRCUIT SERVING THE DEMOLISHED EXTERIOR WALL-MOUNTED LIGHTS. AT THE ONSET OF THE PROJECT, SITE VERIFY THE LIGHTING CIRCUIT VOLTAGE OF THE PERIMETER EXTERIOR LIGHTING AND ADVISE THE ENGINEER OF THE FINDINGS PRIOR TO SHOP DRAWING SUBMISSION OF THE NEW LIGHTING.
- ③ CONNECT ALL NON-EMERGENCY LIGHT FIXTURES IN THE CORRIDORS, STAIR 1, STAIR B, RESOURCE ROOM 102 AND RESOURCE ROOM 103 TO THE NEW LOW-VOLTAGE MASTER SWITCH ON THE GROUND FLOOR OF THE ADDITION. LIGHT FIXTURES SHALL ALSO BE CONTROLLED BY THE BUILDING AUTOMATION SYSTEM FOR AUTOMATIC ON/OFF.
- ④ RELOCATED EXIT SIGN AND WIREGUARD CENTERED ABOVE THE NEW DOUBLE-DOOR EXIT FROM THE GYM TO THE EXTERIOR FROM THE OLD EXIT FROM THE GYM. MODIFY/EXTEND ALL WIRING/RACEWAYS AS REQUIRED.

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M1C 1R7

DRAWING TITLE:
NEW LIGHTING PLANS

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO.: REV.
CHECKED: R.S.	E6
DATE:	

DATE PLOTTED: Thursday, April 4, 2024

ROOM/ZONE	LIGHT SWITCH	OCCUPANCY SENSORS	POWER PACK REQUIREMENTS	NOTES
CLASSROOM (A1-104)	3 x nPODM DX GY	1 x nWV PDT 16 KIT	3 x nPP16D 3 x nPP20 PL	PROVIDE 0-10V DIMMING OF THE SINGLE LIGHTING ZONE 50% OF THE RECEPTACLES, SPACED THROUGHOUT THE ROOM, SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR IN THE ROOM
CLASSROOM (A1-105)	3 x nPODM DX GY	1 x nWV PDT 16 KIT	3 x nPP16D 3 x nPP20 PL	PROVIDE 0-10V DIMMING OF THE SINGLE LIGHTING ZONE 50% OF THE RECEPTACLES, SPACED THROUGHOUT THE ROOM, SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR IN THE ROOM
CLASSROOM (A1-202)	3 x nPODM DX GY	1 x nWV PDT 16 KIT	3 x nPP16D 3 x nPP20 PL	PROVIDE 0-10V DIMMING OF THE SINGLE LIGHTING ZONE 50% OF THE RECEPTACLES, SPACED THROUGHOUT THE ROOM, SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR IN THE ROOM
CLASSROOM (A1-203)	3 x nPODM DX GY	1 x nWV PDT 16 KIT	3 x nPP16D 3 x nPP20 PL	PROVIDE 0-10V DIMMING OF THE SINGLE LIGHTING ZONE 50% OF THE RECEPTACLES, SPACED THROUGHOUT THE ROOM, SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR IN THE ROOM
CORRIDOR (A1-101) RESOURCE ROOM (A1-102) RESOURCE ROOM (A1-103) CORRIDOR (A1-201) STAIR 1 (A1-901) STAIR 2 (A1-902)	1 x nPOD KEY MNTN STS	-	1 x nPP16D	NO DIMMING REQUIRED; LIGHTING ZONES SHALL BE CONTROLLED BY THE BAS SYSTEM FOR AUTOMATIC TURN-OFF AFTER OCCUPIED HOURS.

- NOTES:
- THE PROPOSED LIGHTING CONTROL SYSTEM IS BASED ON ACUITY'S nLIGHT SYSTEM. ALL PRODUCTS LISTED ABOVE BELONG TO THE ACUITY PRODUCT LINE.
 - THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL DEVICES LISTED ABOVE.
 - PRIOR TO PRICING, THE CONTRACTOR IS EXPECTED TO FAMILIARIZE THEMSELVES WITH THE INSTALLATION OF THE SPECIFIED LIGHTING CONTROL SYSTEM AND INCLUDE FOR ALL MATERIAL AND LABOUR REQUIRED FOR A COMPLETE AND OPERATIONAL LIGHTING CONTROL SYSTEM.
 - THE FULL LIGHTING CONTROL SYSTEM SHALL BE COMMISSIONED BY THE MANUFACTURER ON SITE UPON COMPLETE INSTALL. THE COST FOR THE COMMISSIONING SHALL BE INCLUDED FOR IN THE TENDER PRICE.
 - ALL 0-10V AND CAT5E WIRING/CABLING REQUIRED FOR THE BASIS OF THE LIGHTING CONTROL SYSTEM IS TO BE SUPPLIED AND INSTALLED UNDER THIS CONTRACT. ALL CAT5E CABLING SHALL BE PROCURED THROUGH ACUITY ONLY. USE OF ALTERNATE CABLING IS NOT PERMITTED. ALL 0-10V WIRING IS TO BE AS APPROVED BY ACUITY.
 - THE OPERATION OF THE ENTIRE LIGHTING CONTROL SYSTEM SHALL BE IN COMPLIANCE WITH ASHRAE 90.1.

1 LOW-VOLTAGE LIGHTING & RECEPTACLE CONTROL SCHEDULE
E7 SCALE: N.T.S.

FIXTURE LOCATION	FIXTURE TYPE	MOUNTING CONFIGURATION	VOLTAGE	FIXTURE SIZE	LUMEN PACKAGE	COLOUR TEMPERATURE	LED COLOUR RENDERING	DIMMING	MAKE & MODEL	NOTES
INTERIOR	'A1'	RECESSED; T-BAR CEILING	120V	2'x4'	4800 LUMENS	4000K	80 CRI	0-10V 1% MINIMUM	MARK ARCHITECTURAL LIGHTING WHSPR-2X4-80CRI -40K-4800LM-MIN1-MVOLT-SWC-ZT	-
INTERIOR	'A2'	RECESSED; T-BAR CEILING	120V	2'x4'	4000 LUMENS	4000K	80 CRI	0-10V 1% MINIMUM	MARK ARCHITECTURAL LIGHTING WHSPR-2X4-80CRI -40K-4000LM-MIN1-MVOLT-SWC-ZT	-
INTERIOR	'A3'	RECESSED; T-BAR CEILING	347V	2'x4'	4000 LUMENS	4000K	80 CRI	0-10V 1% MINIMUM	MARK ARCHITECTURAL LIGHTING WHSPR-2X4-80CRI -40K-4000LM-MIN1-347-SWC-ZT	-
INTERIOR	'B1'	RECESSED; T-BAR CEILING	120V	1'x4'	4000 LUMENS	4000K	80 CRI	0-10V 1% MINIMUM	MARK ARCHITECTURAL LIGHTING WHSPR-1X4-80CRI -40K-4000LM-MIN1-MVOLT-SWC-ZT	-
INTERIOR	'B2'	RECESSED; T-BAR CEILING	347V	1'x4'	4000 LUMENS	4000K	80 CRI	0-10V 1% MINIMUM	MARK ARCHITECTURAL LIGHTING WHSPR-1X4-80CRI -40K-4000LM-MIN1-347-SWC-ZT	-
EXTERIOR	'WM-A'	WALL-MOUNTED	347V	-	2965 LUMENS	3000K	>70 CRI	NO AUX. DIMMING REQUIRED	LITHONIA DSXW1-20C-350-40K-T3M-HVOLT-PIR1FC3V-VG-DDBXD	TYPE III, MEDIUM DISTRIBUTION; C/W INTEGRAL OCCUPANCY SENSOR; 23 WATTS
EXTERIOR	'CP-A'	WALL-MOUNTED	347V	-	3620 LUMENS	3000K	>70 CRI	NO AUX. DIMMING REQUIRED	LITHONIA VCPG LED-V4-P1-30K-15M-347-PM-WG-PIR3FC3V-DDBXD	TYPE T5M (TYPE V, MEDIUM) DISTRIBUTION; C/W INTEGRAL OCCUPANCY SENSOR; 27 WATTS

- NOTES:
- SUBMIT A COMPLETE SET OF PHOTOMETRICS FOR THE INTERIOR AND EXTERIOR AT THE TIME OF SHOP DRAWING SUBMISSION.
 - ALL RECESSED TROFFER LIGHT FIXTURES SHALL BE SUPPORTED USING TWO SAFETY CHAINS (EACH) FASTENED TO THE BUILDING STRUCTURE.
 - APPROVED EQUALS: EATON OR HUBBELL ONLY.

2 LIGHT FIXTURE SCHEDULE
E7 SCALE: N.T.S.

EQUIPMENT DESCRIPTION	STARTER LOCATION	STARTER TYPE	MCA/HP/KW	VOLTS/PH./FREQUENCY	BREAKER SIZE OR FUSE SIZE	FEEDER SIZE	PANEL AND CCT. NOS.	REMARKS	FIRE ALARM FAN SHUTDOWN [AHU/EF ONLY]	TIED TO BAS SYSTEM?
HEAT PUMP, HP-101	INTEGRAL TO UNIT	INTEGRAL	-	208V/1PH/60Hz	30A-3P	2#10 RW90+G IN 21mmC	PANEL '1C'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH.	YES	YES
HEAT PUMP, HP-104	INTEGRAL TO UNIT	INTEGRAL	-	208V/1PH/60Hz	40A-2P	2#8 RW90+G IN 27mmC	PANEL '1C'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH.	YES	YES
HEAT PUMP, HP-105	INTEGRAL TO UNIT	INTEGRAL	-	208V/1PH/60Hz	40A-2P	2#8 RW90+G IN 27mmC	PANEL '1C'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH.	YES	YES
HEAT PUMP, HP-201	INTEGRAL TO UNIT	INTEGRAL	-	208V/1PH/60Hz	30A-3P	2#10 RW90+G IN 21mmC	PANEL '1C'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH.	YES	YES
HEAT PUMP, HP-202	INTEGRAL TO UNIT	INTEGRAL	-	208V/1PH/60Hz	40A-2P	2#8 RW90+G IN 27mmC	PANEL '1C'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH.	YES	YES
HEAT PUMP, HP-203	INTEGRAL TO UNIT	INTEGRAL	-	208V/1PH/60Hz	40A-2P	2#8 RW90+G IN 27mmC	PANEL '1C'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH.	YES	YES
ENERGY RECOVERY VENTILATOR, ERV-1	INTEGRAL TO UNIT	INTEGRAL	-	208V/1PH/60Hz	20A-2P	2#10 RW90+G IN 21mmC	PANEL '1C'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH.	YES	YES
DUCT HEATER, DH-1	INTEGRAL TO UNIT	INTEGRAL	-	208V/1PH/60Hz	20A-2P	2#10 RW90+G IN 21mmC	PANEL '1C'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH.	YES	YES
PUMP P-1	MECH. ROOM 212	VFD	-	575V/3PH/60Hz	40A-3P	3#8 RW90+G IN 27mmC	EXISTING PANEL 'DP-CC'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH INDEPENDENT OF VFD.	NO	YES
PUMP P-2	MECH. ROOM 212	VFD	-	575V/3PH/60Hz	40A-3P	3#8 RW90+G IN 27mmC	EXISTING PANEL 'DP-CC'	ELECTRICAL DIVISION SHALL PROVIDE POWER CONNECTION TO THE UNIT. PROVIDE LOCAL DISCONNECT SWITCH INDEPENDENT OF VFD.	NO	YES

- PROVIDE POWER CONNECTION TO ALL MECHANICAL EQUIPMENT LISTED IN THE SCHEDULE FOR A FULL OPERATIONAL SYSTEM. REFER TO MECHANICAL LAYOUTS AND SCHEDULES FOR EXACT LOCATION OF EQUIPMENT. PROVIDE SEPARATE BREAKER FOR INDIVIDUAL MECHANICAL EQUIPMENT. SIZE AS INDICATED IN THE SCHEDULE.
- ALL LOOSE STARTERS (MANUAL OR MAGNETIC TYPE AS STATED) SHALL BE SUPPLIED AND INSTALLED BY DIVISION 26. STARTER LOCATIONS SHALL BE VERIFIED AND CO-ORDINATED WITH DIVISION 23 AND CONSULTANT ON SITE. INTEGRAL STARTER WILL BE BUILT-IN THE MECHANICAL EQUIPMENT AND SUPPLIED & INSTALLED BY THE EQUIPMENT MANUFACTURER. ACCEPTABLE MANUFACTURER FOR LOOSE STARTERS SHALL BE CUTLER HAMMER, SIEMENS SQUARE D AND KLOCKNER MOELLER. ALL MAGNETIC STARTER SHALL BE C/W OVERLOAD PROTECTION, H/O/A SWITCH AND GREEN-RUN AND RED-STOP PILOT LAMPS. ALL MANUAL STARTERS SHALL BE C/W OVERLOAD PROTECTION AND GREEN-RUN AND RED-STOP PILOT LAMP.
- PROVIDE A LOCAL DISCONNECT SWITCH FOR ALL MECHANICAL EQUIPMENT IN THIS SCHEDULE, UNLESS IT IS NOTED THAT THE DISCONNECT SWITCH IS TO BE PROVIDED BY THE EQUIPMENT MANUFACTURER. DISCONNECT SWITCH SHALL BE SEPARATE FROM THE STARTER SERVING THE RESPECTIVE EQUIPMENT. NOTE THAT DISCONNECT SWITCHES ARE NOT ILLUSTRATED ON THE FLOOR PLAN (FOR CLARITY), HOWEVER MUST BE SUPPLIED AND INSTALLED BY DIVISION 26 FOR ALL MECHANICAL EQUIPMENT LISTED IN THE ABOVE SCHEDULE.
- THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR REVIEWING ALL MECHANICAL SHOP DRAWINGS WITH RESPECT TO RELEVANT ELECTRICAL INFORMATION PRIOR TO THE SHOP DRAWINGS BEING SUBMITTED TO THE MECHANICAL AND ELECTRICAL ENGINEER FOR REVIEW. NO EQUIPMENT SHALL BE ORDERED PRIOR TO SUBMITTING SHOP DRAWINGS BACK APPROVED BY BOTH THE MECHANICAL AND ELECTRICAL ENGINEER. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR WORKING WITH EACH MANUFACTURER OR MECHANICAL EQUIPMENT AND GATHERING THE 'MCA' AND 'MOP' OF ALL EQUIPMENT AND LISTING IT ON THE SHOP DRAWING FOR EACH MECHANICAL EQUIPMENT PRIOR TO SUBMITTING SHOP DRAWINGS FOR REVIEW.
- THE STARTER LOCATION AND TYPE LISTED ABOVE IS FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS FOR EXACT EQUIPMENT LOCATIONS AND MANUFACTURER CUT SHEETS AND EQUIPMENT DATA SHEETS FOR STARTER INFORMATION. NO EXTRA WILL BE PERMITTED AS A RESULT OF A FAILURE TO DO SO.
- WHERE NOTED THAT AN AIR HANDLING UNIT/EXHAUST FAN IS TO HAVE FIRE ALARM FAN SHUTDOWN, PROVIDE THE NECESSARY WIRING, CONDUIT AND RELAYS TO TIE THE EQUIPMENT TO THE FIRE ALARM SYSTEM FOR SHUTDOWN ON A GENERAL ALARM.
- COORDINATE COIL VOLTAGE FOR ALL STARTERS WITH THE CONTROLS CONTRACTOR WHERE THE EQUIPMENT IS NOTED TO BE TIED TO THE BAS SYSTEM.

3 MECHANICAL EQUIPMENT WIRING SCHEDULE
E7 SCALE: N.T.S.

NEW PANEL '1C'	TYPE: MAINS: MAIN BKR:	200A 200A-3P	MOUNTING: SURFACE-MOUNTED LOCATION: CORRIDOR (A1-101)			
WATTS	DESCRIPTION	PROT.	CIRCUITS	PROT.	DESCRIPTION	WATTS
EXIT SIGNS	15A	1	2	15A	CORRIDOR LIGHTING	
INTERIOR LIGHTING	15A	3	4	15A	INTERIOR LIGHTING	
INTERIOR LIGHTING	15A	5	6	15A	INTERIOR LIGHTING	
CORRIDOR RECEPTACLES	15A	7	8	15A	CORRIDOR RECEPTACLES	
RECEPTACLES	15A	9	10	15A	RECEPTACLES	
RECEPTACLES	15A	11	12	15A	RECEPTACLES	
RECEPTACLES	15A	13	14	15A	RECEPTACLES	
RECEPTACLES	15A	15	16	15A	RECEPTACLES	
RECEPTACLES	15A	17	18	15A	RECEPTACLES	
RECEPTACLES	15A	19	20	15A	RECEPTACLES	
RECEPTACLES	15A	21	22	15A	RECEPTACLES	
RECEPTACLES	15A	23	24	15A	RECEPTACLES	
RECEPTACLES	15A	25	26	15A	RECEPTACLES	
RECEPTACLES	15A	27	28	15A	RECEPTACLES	
RECEPTACLES	15A	29	30	15A	RECEPTACLES	
RECEPTACLES	15A	31	32	15A	RECEPTACLES	
DOOR OPERATORS	15A	33	34	15A	DOOR OPERATORS	
SPARE	15A	35	36	15A	SPARE	
SPARE	20A	37	38	20A	SPARE	
STAIR 1 FORCED FLOW HEATER	20A	39	40	20A	STAIR 2 FORCED FLOW HEATER	
HEAT PUMP, HP-101	2P	41	42	2P		
HEAT PUMP, HP-105	40A	47	48	30A	HEAT PUMP, HP-201	
HEAT PUMP, HP-202	40A	51	52	40A	HEAT PUMP, HP-203	
ENERGY RECOVER VENTILATOR, ERV-1	2P	55	56	20A		
SPARE	15A	59	60	15A	SPARE	
SPARE	15A	55	56	15A	SPARE	
SPARE	15A	57	58	15A	SPARE	
SPARE	15A	59	60	15A	SPARE	
SPARE	15A	61	62	15A	SPARE	
SPARE	15A	63	64	15A	SPARE	
SPARE	15A	65	66	15A	SPARE	
SPARE	15A	67	68	15A	SPARE	
SPARE	15A	69	70	15A	SPARE	
SPARE	15A	71	72	15A	SPARE	
SPARE	15A	73	74	15A	SPARE	
SPARE	15A	75	76	15A	SPARE	
SPARE	15A	77	78	15A	SPARE	
SPARE	15A	79	80	15A	SPARE	
SPARE	15A	81	82	15A	SPARE	
SPARE	15A	83	84	15A	SPARE	

- NOTES:
- PROVIDE PANELBOARD C/W COVERS, COPPER BUS & DRIPHOOD.
 - PROVIDE PRINTED PANEL DIRECTORY WITH CIRCUIT NUMBER, TYPE AND LOCATION OF ALL LOADS. ALL SPARE BREAKERS SHALL BE LABELED WITH PENCIL FOR FUTURE UPDATE. PROVIDE LABEL INSIDE PANEL COVER STATING YEAR OF INSTALLATION, PANEL SOURCE LOCATION, OVERCURRENT PROTECTION AND FEEDER SIZE.

NO.	DATE	REVISION
7	04/02/24	ISSUED FOR TENDER
6	02/28/24	ISSUED FOR TENDER
5	07/01/23	ISSUED FOR PERMIT
4	02/22/23	RE-ISSUED FOR PERMIT
3	02/10/23	ISSUED FOR PERMIT
2	01/20/23	ISSUED FOR 85% DESIGN REVIEW
1	10/21/22	ISSUED FOR 60% DESIGN REVIEW

DO NOT SCALE DRAWINGS. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE JOB. ALL DRAWINGS REMAIN THE PROPERTY OF THE ARCHITECTS.

- GENERAL NOTES
- 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.
 - THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS, AND SPECIFICATIONS.
 - THE DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
 - ALL DIMENSIONS, SHOWN ON THE DRAWINGS, SHALL BE CHECKED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 - THE STABILITY OF THE STRUCTURAL FRAME IS DEPENDENT ON THE FULL INTERACTION OF ALL STRUCTURAL COMPONENTS. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING DURING CONSTRUCTION.
 - ALL DIMENSIONS GIVEN ARE IN METRIC.

MECHANICAL & ELECTRICAL CONSULTANT:
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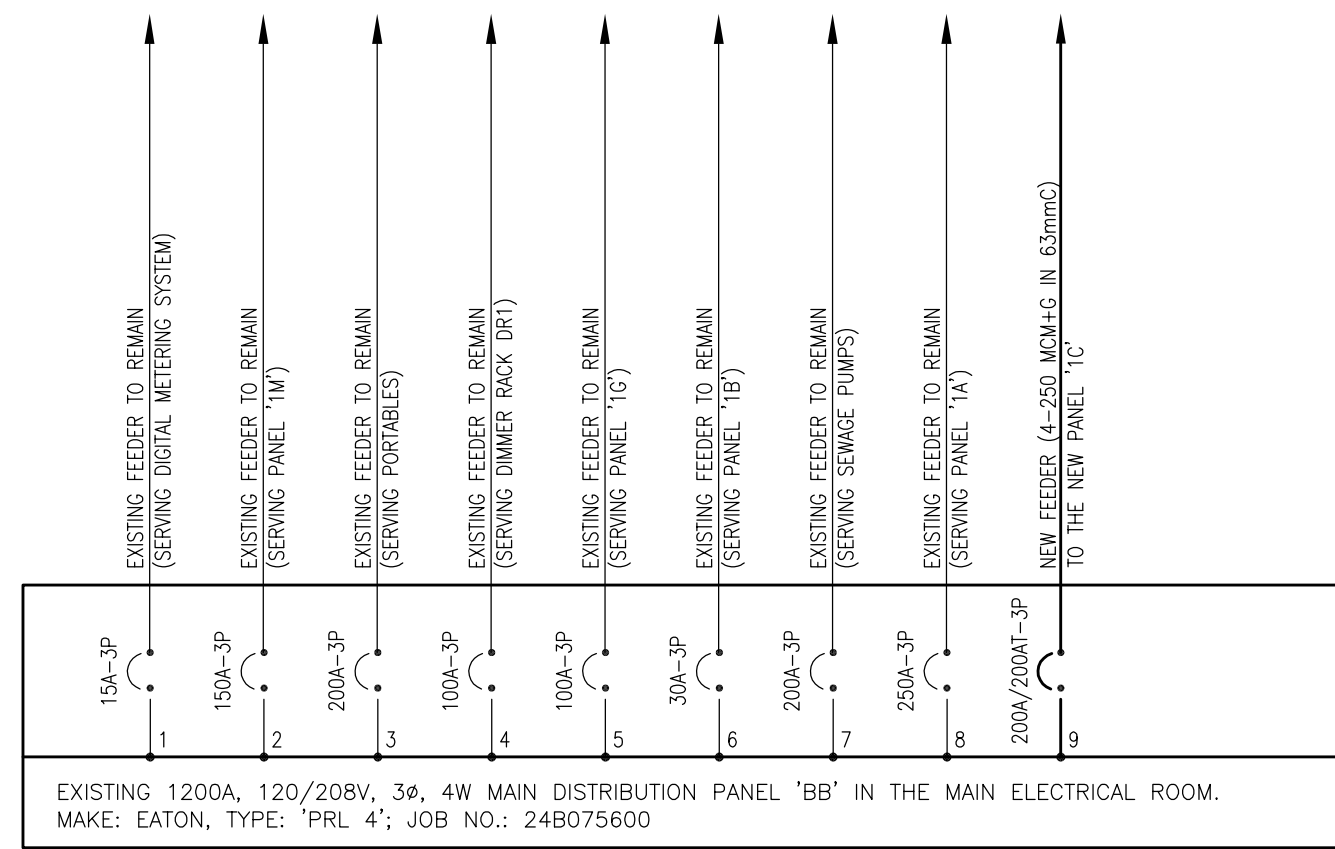
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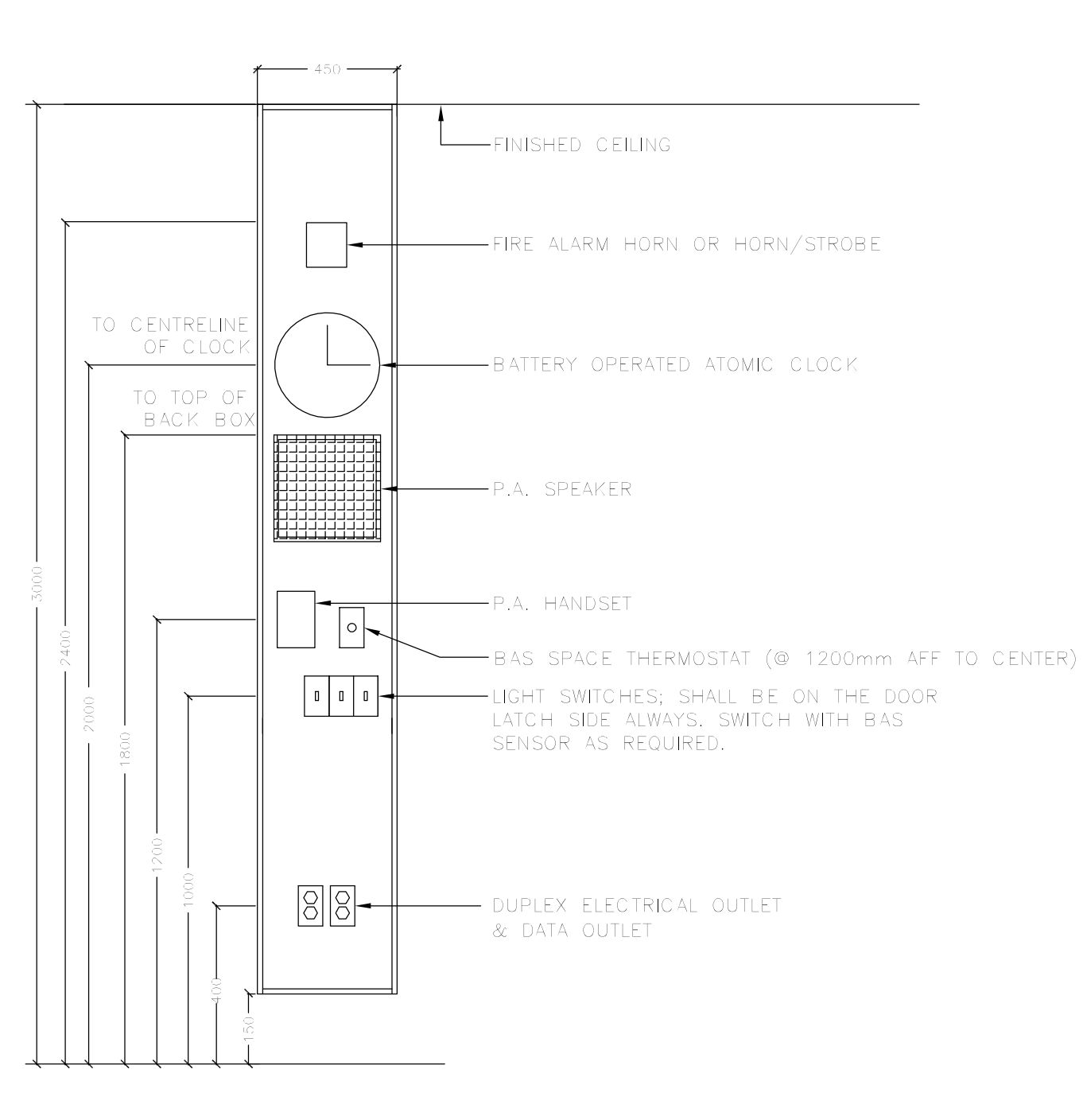
ÉEC SAINT-MICHEL
Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE: SCHEDULES & SCHEMATICS	
PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO: REV.
CHECKED: R.S.	E7
DATE: -	



- NOTES:**
- ALL POWER SHUTDOWN WORK SHALL BE DONE DURING 'OFF' HOURS OF BUILDING OPERATION (FOR PRICING PURPOSES, ASSUME THE WORK WILL BE COMPLETED ON WEEKEND HOURS). COORDINATE SCHEDULING WITH THE PROJECT SUPERVISOR AND CARETAKING STAFF PRIOR TO COMMENCING WORK. INCLUDE FOR ALL MATERIAL AND LABOUR REQUIRED TO COMPLETE SERVICES AND DELIVER A COMPLETELY OPERATIONAL SYSTEM.
 - MODIFY/EXTEND EXISTING CONDUITS AND FEEDER CABLES/WIRING AS REQUIRED TO FACILITATE INSTALLATION OF THE NEW FEEDERS.
 - PROVIDE GROUNDING AND BONDING OF ELECTRICAL EQUIPMENT AS PER ONTARIO ELECTRICAL SAFETY CODE AND ESA APPROVAL.
 - PROVIDE A COMPLETELY NEW SHORT CIRCUIT, COORDINATION AND ARC FLASH STUDY AS PER SPECIFICATIONS FOR THE ENTIRE ELECTRICAL DISTRIBUTION SYSTEM (EXISTING AND NEW). PROVIDE SIGNAGE AT ALL ELECTRICAL EQUIPMENT AS PER RECOMMENDATION OF STUDY; REMOVE ALL EXISTING ARC FLASH LABELS ON ALL EXISTING EQUIPMENT. MAKE ALL ADJUSTMENT TO EQUIPMENT SPECIFICATIONS AND BREAKERS ON SITE AS REQUIRED TO COMPLY WITH RECOMMENDATIONS. PROVIDE A FRAMED 18"X24" SINGLE LINE DIAGRAM. POST IN THE ELECTRICAL ROOM.
 - PROVIDE LAMACOD LABELS ON ALL NEW BREAKERS. EXACT WORDING IS TO BE ADVISED BY THE CONSULTANT AT THE TIME OF CONSTRUCTION.
 - INCLUDE, IN THE TENDER PRICE, FOR A FIRE WATCH PERSONNEL FOR THE ENTIRE DOWNTIME DURATION OF THE FIRE ALARM SYSTEM AT THE SCHOOL. PROVIDE PERSONNEL AS PER REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. NOTE THAT THE FIRE WATCH MUST BE TRAINED AND EQUIPPED WITH FIRE EXTINGUISHING EQUIPMENT.
 - THE 200A-3P BREAKER FOR PANEL '1C' IS NEW AND SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. BREAKER SHALL BE OF 'LSI' TYPE AND 50 KA SHORT CIRCUIT RATED. ROUTE THE NEW FEEDER FOR PANEL '1C' FROM THE EXISTING MAIN ELECTRICAL ROOM ABOVE THE EXISTING CEILINGS IN THE CORRIDOR TO THE NEW PANEL.

1 PROPOSED SINGLE LINE DIAGRAM
E8 SCALE: N.T.S.



- NOTES:**
- THE CONTROL PANEL IS TO BE SUPPLIED AND INSTALLED BY DIVISION 26 (ELECTRICAL CONTRACTOR). LOCATE DEVICES AS SHOWN.
 - SUBMIT SHOP DRAWINGS FOR EACH CONTROL PANEL IN EACH CLASSROOM. EACH SHOP DRAWING SHALL BE PREPARED GIVEN THE DEVICES PRESENT IN EACH ROOM. SHOP DRAWINGS SHALL NOT BE GENERIC.
 - CONTROL PANELS SHALL BE CONSTRUCTED OF A STRUCTURALLY SOUND 6063 T5 ALLOY SATIN ANODIZED ALUMINUM FRAME, .08MM THICK WITH HIGH PRESSURE PLASTIC LAMINATE FACED PANELS OF LIGHTWEIGHT PARTICLE CORE AND A 0.5 MM PLASTIC LAMINATE BACKING SHEET.
 - PANEL SHALL BE INTERSPEC.
 - LAMINATE COLOUR SHALL BE SELECTED AT THE SHOP DRAWING STAGE BY THE OWNER AND ARCHITECT FROM THE STANDARD SELECTION OFFERINGS.

2 MODULAR CONTROL PANEL (MCP) DETAIL
E8 SCALE: N.T.S.

INTEGRATED PA & IN-HOUSE PHONE SYSTEM ZONING SCHEDULE

FLOOR	ROOM DESCRIPTION	WALL HANDSET STATION	DESK HANDSET STATION	ADMIN HANDSET STATION	CALL SWITCH	WALL SPEAKER	CEILING SPEAKER	HORN SPEAKER	ZONE NUMBER	REMARKS
FIRST FLOOR	RESOURCE ROOM (A1-102)	✓					✓		1	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING.
	RESOURCE ROOM (A1-103)	✓					✓		2	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING.
	CLASSROOM (A1-104)	✓				✓			3	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING.
	CLASSROOM (A1-105)	✓				✓			4	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING.
	CORRIDOR (A1-101)						✓		5	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING.
	CLASSROOM (A1-202)	✓				✓			6	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING.
	CLASSROOM (A1-203)	✓				✓			7	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING.
	CORRIDOR (A1-201)						✓		8	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING.
STAIRCASE	STAIR (A1-901) & (A1-902)					✓		9	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING.	
EXTERIOR	ALL EXTERIOR, BUILDING-MOUNTED HORNS							✓	45	PROVIDE NEW 2-PAIR DEDICATED ZONE WIRING HOMERUN FROM EACH HORN TO THE P.A. RACK.

GENERAL NOTES:

- THE PA CONTRACTOR (BARRIE COMMUNICATIONS) SHALL RUN DEDICATED ZONE CABLING FROM EACH ZONE LISTED ABOVE TO THE P.A. RACK. TERMINATIONS AND CROSS CONNECTS AT THE P.A. RACK SHALL BE COMPLETED BY THE PA CONTRACTOR.
- THE PA CONTRACTOR SHALL SUPPLY AND INSTALL NEW P.A. HANDSETS, SPEAKERS AND HORNS AS SCHEDULED ABOVE AND AS SHOWN ON THE PLANS.
- TEST AND ENSURE ALL DEVICES WORK UPON COMPLETION OF INSTALL WORK.

3 NEW PUBLIC ADDRESS SYSTEM ZONING SCHEDULE
E8 SCALE: N.T.S.

FIRE ALARM ZONE SCHEDULE

ZONE		ALARM/TROUBLE ZONE NUMBER	DESCRIPTION
ALARM	TROUBLE		
✓	✓	FZ-1	GROUND FLOOR
✓	✓	FZ-2	ELEVATOR SHAFT
✓	✓	FZ-3	GYM
✓	✓	FZ-4	EXISTING STAIR A
✓	✓	FZ-5	EXISTING STAIR B
✓	✓	FZ-6	SECOND FLOOR
✓	✓	FZ-7	STORAGE ROOM 152
✓	✓	FZ-8	STORAGE ROOM 137
✓	✓	FZ-9	PORTABLES
✓	✓	FZ-10	GROUND FLOOR FLOW SWITCH
✓	✓	FZ-11	SECOND FLOOR FLOW SWITCH
✓	✓	FZ-12*	NORTH CLASSROOM ADDITION - GROUND FLOOR
✓	✓	FZ-13*	NORTH CLASSROOM ADDITION - SECOND FLOOR
✓	✓	FZ-14*	NORTH CLASSROOM ADDITION - NEW STAIR 1
✓	✓	FZ-15*	NORTH CLASSROOM ADDITION - NEW STAIR 2
	✓	SZ-1	GROUND FLOOR SPRINKLER SUPERVISED VALVE
	✓	SZ-2	SECOND FLOOR SPRINKLER SUPERVISED VALVE
	✓	SZ-3	BACKFLOW PREVENTER INLET SUPERVISED VALVE
	✓	SZ-4	BACKFLOW PREVENTER OUTLET SUPERVISED VALVE
	✓	SZ-5	INVERTER TROUBLE

NOTES:

- * DENOTES NEW FIRE ALARM ZONE TO SERVE THE NEW INITIATING DEVICES IN THE RESPECTIVE AREA.
- ** DENOTES NEW FIRE ALARM ZONE TO SERVE THE NEW SPRINKLER FLOW SWITCHES FOR THE NEW ADDITION. COORDINATE WORK WITH THE FIRE PROTECTION CONTRACTOR.
- *** DENOTES NEW FIRE ALARM ZONE TO SERVE THE NEW SPRINKLER SUPERVISED VALVES FOR THE NEW ADDITION. COORDINATE WORK WITH THE FIRE PROTECTION CONTRACTOR.

4 FIRE ALARM ZONING SCHEDULE
E8 SCALE: N.T.S.

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ÉC SAINT-MICHEL
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29 MEADOWVALE ROAD,
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DRAWING TITLE:
SCHEDULES & SCHEMATICS

PROJECT NO: 22-192	SCALE:
DRAWN: R.S.	DRAWING NO: REV.
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