GENERAL NOTES

- 1. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL MATERIALS AND WORK ARE FENCED OFF FROM EXISTING PLAY AREA AND PARKING LOT ACCESS IS MAINTAINED.
- 2. AREA OF CONSTRUCTION TO BE COORDINATED WITH ARCHITECT AND SCHOOL BOARD PRIOR TO BEGINNING THE WORK.
- CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL CONNECTIONS FROM EXISTING SCHOOL.

TEX GRASS

ZEX GRASS

SCALE: 1:500

PROPERTY LINE

EX CONC

WALK

- PORTABLE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL FOUNDATIONS, FOOTINGS AND WOODEN STAIRS AS PER DETAILS TO ACCOMMODATE NEW PORTABLES BASED ON LOCATION OR EXISTING FOOTINGS FROM THE SITE WHERE PORTABLE IS BEING RELOCATED FROM. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING PORTABLE STRUCTURE AND COORDINATING LOCATIONS OF NEW SUPPORT PIERS.
- REFER TO AND COORDINATE WITH ELECTRICAL DOCUMENTS FOR EXTENT OF DEMOLITION AND NEW WORK. REPLACE ALL SOD AND / OR ASPHALT PAVING DISTURBED DUE TO ELECTRICAL WORK WITH NEW SOD AND / OR ASPHALT PAVING TO MATCH EXISTING WHERE REQUIRED. SEE SITE PLAN FOR EXISTING SURFACES TO BE REINSTATED.

SETBACK

ASPHALT WALK —

EX VERTICAL AXIS — WIND TURBINE

EX ASPHALT DRIVEWAY

6. PATCH, REPAIR, REPLACE AND MAKE GOOD ALL SURFACES DISTURBED BY CONSTRUCTION ACTIVITIES WITH MATERIALS TO MATCH EXISTING DISTURBED SURFACES.

CONSTRUCTION NOTES

PROPERTY LINE

PROPOSED

LIMITING DISTANCE

EXISTING

6-PAC

PORTABLE CLRM

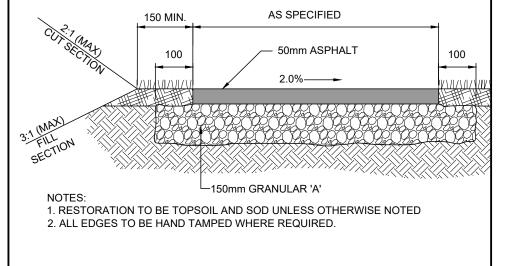
EXISTING

ST. JEAN DE BRÉBEUF CSS

ZEX GRASS

SHADED AREA DENOTES NEW ASPHALT . REFER TO DETAIL MAKE GOOD ALL SURFACES (SOD) DISTURBED

CUT BACK 1500m ± OF EXISTING SOD AROUND ENTIRE 4-PAC PORTABLE. RE-GRADE AND RE-SEED AS REQUIRED



TYP. ASPHALT WALKWAY DETAIL SCALE: NTS

SETBACK

EXISTING

6-PAC

PORTABLE CLRM

EX FIRE ROUTE

z EX GRASS 1

PORTABLE /CLRM/

EX ASPHALT DRIVEWAY

TEX GRASS

EX ASPHALT WALKWAY

ZEX GRASS \

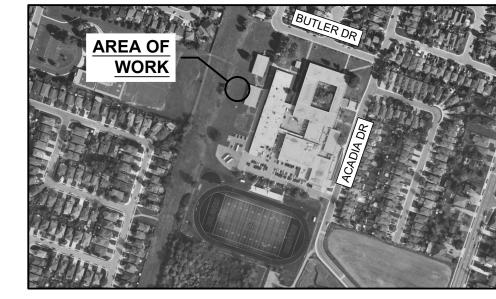
ZEX GRASS

EX CONC WALK

BUTLER

WASHROOM CALCULATION OBC Reference 3.7.4.3. (14) Male / Female Count at 50% / 50 % EX. OCCUPANT LOAD (Elementary School) 1611 Students + 140 Staff + 4PAC CLASSROOM ADDITION 1843 TOTAL TOTAL FEMALES 922 TOTAL FEMALE FIXTURES REQUIRED (1 PER 26 FEMALES) TOTAL FEMALE FIXTURES PROVIDED 922 TOTAL MALES TOTAL MALE FIXTURES REQUIRED (1 PER 30 MALES) TOTAL MALE FIXTURES PROVIDED





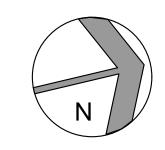
ZONING DATA FOR CITY OF HAI	MILTON	
ITEM DESCRIPTION	PERMITTED AG	CTUAL OR PROPOSED
ZONING DESIGNATION	I2-COMMUNITY INSTIT	rutional
NET LOT AREA (MIN)	NONE	29,014 sqm
MINIMUM YARD WHERE LOT LINE ABUTS A RESIDENTIAL ZONE LOT LINE	6.0 m	N/A
MAXIMUM BUILDING HEIGHT	10.5m	EX SCHOOL = 12m PROPOSED 4-PAC = 3.39m
REQUIRED PARKING SPACES:	EX SECONDARY SCHOOL: 63 EX CLASSROOM x 3 = 189 REQ'D PROPOSED 4-PAC ADDITION: 4 PORTABLE CLRM x 3 = 12 REQ'D TOTAL REQUIRED = 201	TOTAL = 182 PARKING SPACES PROVIDED 168 SPACES REQ'D AS PER COMMITTEE OF ADJUSTMENT APPLICATION HM/A-08:42 (200 ACADIA DR)

28 K TEL: NAI St. 4-P	905-664-87 ME OF PR Jean de B AC PORT	T EAST, 37 ROJEC rébeuf	UNIT B, STO T: Catholic Se	NEY CREEK, econdary So	chool	3					
	CATION:		ilton ON I	0W/4D0							
200	Acadia D	r, nam	ilton, ON L								
Item					24 Building (rix Parts 3 or					OBC References are to Division	
										[A] for Division A or [0	<u> </u>
1	Project Des 4-PAC PO	•	CLASSROOM	ADDITION		☐ New	☐ Part 1			Part 3	☐ Part 9
				611		Addition	11.1 to 11.	4	1.1.2	. [A]	1.1.2 [A] &
				e of Use		Alteration			+		9.10.1.3
2	Major Occu			P A DIVISION	2				+	2.1.(1)	9.10.2
3	Building Ar		332.5 m²							.2.[A]	1.4.1.2.[A]
4	Gross Area		332.5 m ²	hava amada . 4		Dalaw mada 1	`			.2.[A]	1.4.1.2.[A]
5	Number of s			bove grade 1		Below grade (,			.2.[A] & 3.2.1.1	1.4.1.2.[A] & 9.10.
6			ire Fighter Acc		Storey (2.2.2.	20 \			+	.10 & 3.2.5	9.10.20.
7				Division 2, 1 S					+	.2083	9.10.2.
8	Sprinkler Sy	ystern Pro	ρρυseu			building ed compartments			3.2.2	.2083	9.10.8.2
						ed floor areas			3.2.1		
					☐ basem	nent 🔲 in lie	u of roof rating		INDE		INDEX
					not red	quired					
9	Standpipe r	equired			☐ Yes	■ No			3.2.9		N/A
10	Fire Alarm r	equired			Yes	□ No			3.2.4		9.10.18
11	Water Serv	ice/Supp	y is Adequate		Yes	□ No			3.2.5	.7.	N/A
12	High Buildir	ıg			☐ Yes	■ No			3.2.6		N/A
13	Permitted C	onstructi	on [Combustib	ole	Non-combustib required	le 	Both	3.2.2	.2083	9.10.6
	Actual Cons	struction	[Combustib	ole 🔳	Non-combustib	le 🗆	Both			
14	Mezzanine(s) Area n	n 2 N/A						3.2.1	.1.(3)-(8)	9.10.4.1
15	Occupant lo		d on Classrooms	☐ m². Occupar	/person ncy <u>ASSEN</u>	design of MBLY Load	f building 92 persons	S	3.1.1	7	9.9.1.3
16	Barrier-free	Design		☐ Yes	s I No	(Explain) Existin	g School is Barı	ier Free	3.8		9.5.2
17	Hazardous	Substand	es	☐ Yes	s I No)			3.3.1	.2. & 3.3.1.19	9.10.1.3(4)
18	Require Fire Resistan	ce _		ontal Assemblie RR (Hours)	Hours		ed Design No. scription (SB-2)		3.2.2	.2083 & 3.2.1.4	9.10.8. 9.10.9.
	Rating (FRR)		Roof	-	Hours						
		-	Mezzanine FRF		Hours	Liste	N/A d Design No.		-		
				Members			cription (SB-2)		4		
		-	Floors Roof	-	Hours Hours				+		
			Mezzanine	<u> </u>	Hours		N/A		1		
19	Spatial Sep	aration -	Construction o	f Exterior Walls	 S				3.2.3		9.10.14
	Wall	Area o EBF (m ²)	f L.D.	L/H or H/L	Permitted Max. % of Openings	Proposed % of Openings	Min. FRR Required	Liste Desigr Descrip	or or	Construction Type Required	Cladding Type Required
	North	40.39	1.2	3:1 TO 10:1	7%	2.47%	45 min	Refer drawir		Combustible or Noncombustible	Noncombustible Metal Cladding
	South	40.39		3:1 TO 10:1	7%	2.47%	45 min	Refer drawir	to	Combustible or Noncombustible	Noncombustible Metal Cladding
	East	46.92		3:1 TO 10:1	16.46%	16.4%	45 min	Refer drawir	to	Combustible or Noncombustible	Noncombustible Metal Cladding
	West	46.92	3.85	3:1 TO 10:1	27.63%	16.4%	45 min	Refer drawir	to	Combustible or Noncombustible	Noncombustible Metal Cladding
	West EX 6-PAC	70±	8.5	OVER 10:1	100%	100% EX	-	Refer drawir	to	Combustible or Noncombustible	Combustible or Noncombustible
20	Travel D	istance to	Exits (Refer t	o Drawings)			Refer to dray	vinas for w	all asse	mbly construction & cla	ddina types.



LEGEND BS BASKETBALL NET / BACKSTOP BARRIER FREE CB CATCH BASIN
CLF CHAIN LINK FENCE CONC CONCRETE DEPRESSED CURB EX EXISTING FH FIRE HYDRANT FP FLAG POLE HYDRO POLE LD LIMITING DISTANCE LS LIGHT STANDARD MAX MAXIMUM MH MAN HOLE MIN MINIMUM SAN SANITARY STANDARD IRON BAR STM STORM T/R TO REMAIN W/M WATERMAIN

ENTRANCE TO BLDG. EXISTING TREE



ISSUED FOR BUILDING PERMIT REVISIONS

RAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST THE PROJECT: AND MUST REPORT ANY DISCREPANCIES TO THE ARCHITECTS BEFORE PROCEEDING WITH THE WORK THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDE ITHOUT THE WRITTEN APPROVAL OF THE ARCHITECTS.

JOHN I. GRGURIC

SJB CSS 4-PAC PORTABLE **CLASSROOM ADDITION**

200 Acadia Dr, Hamilton, ON L8W 1B8

SITE PLAN & **OBC MATRIX**

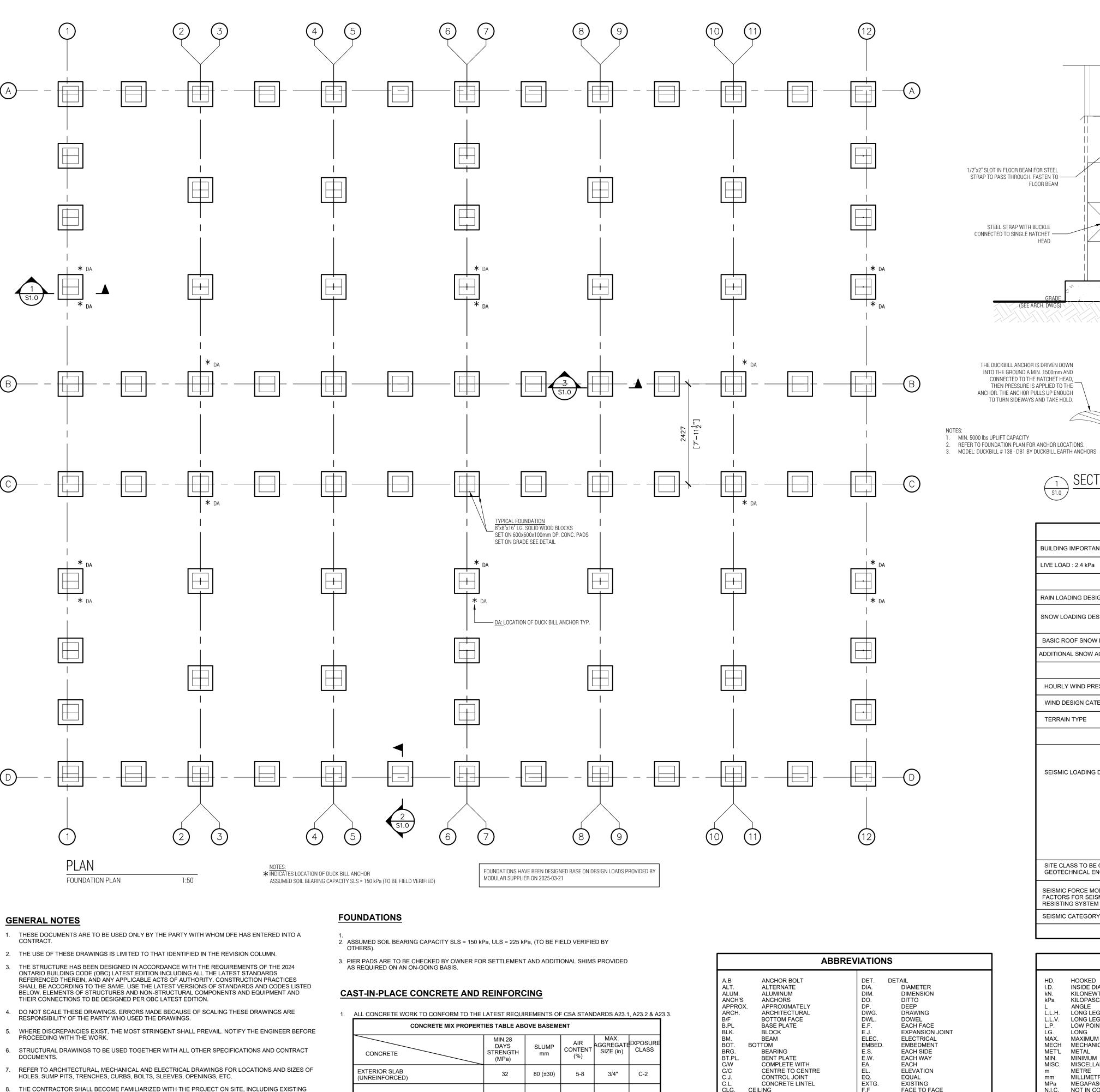
GRGURIC ARCHITECTS **INCORPORATED**

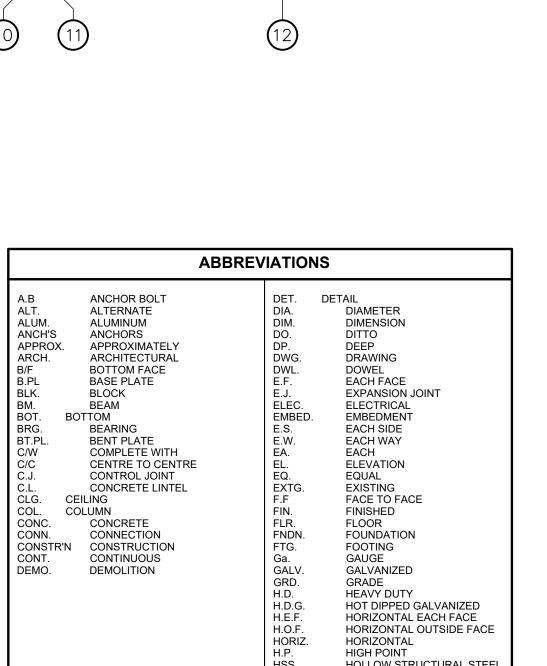
28 KING STREET EAST, UNIT B STONEY CREEK, ONTARIO, L8G 1J8 Tel. 905-664-8735 Fax. 905-664-8737

Web: www.2gai.com SCALE: PROJECT: AS NOTED 2024-24 START DATE DEC 2024

DRAWN CHECKED

EX CONC / WALK SITE PLAN C) A sign is to be posted within the new proposed 4-pac portable to restrict to a maximum of 23 persons per classroom **ACADIA DR**





RESISTING SYSTEM SEISMIC CATEGORY kN. kPa L.L.V. LONG LEG VERTICAL L.P. LOW POINT LG. MAX. MECH MECHANICAL MET'L METAL MIN. MISC. N.T.S. NOT TO SCALE OWSJ OPEN WEB STEEL JOIST PART'N PARTITION PL. PLATE HOLLOW STRUCTURAL STEEL

NOTE TO CONTRACTOR:

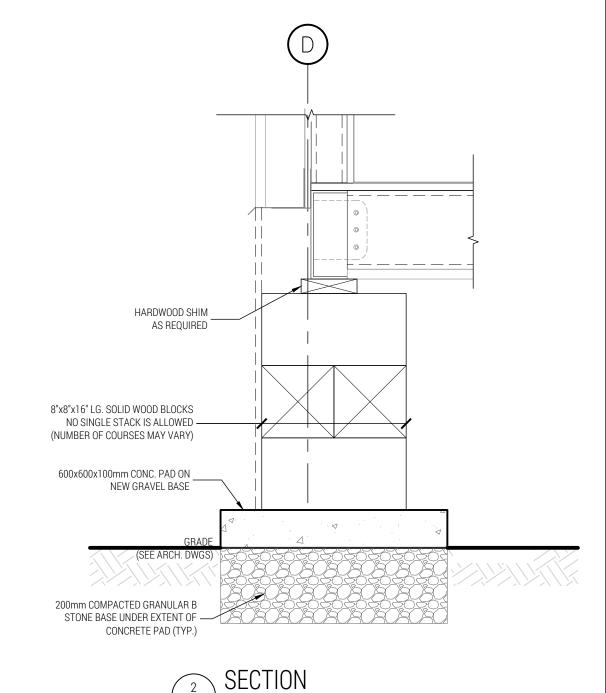
CONSTRUCTION TO ARRANGE FOR INSPECTION.

EXTERIOR GRADE 1/2"

- PLYWOOD GUSSET ON 3 SIDES c/w 6 NAILS PER BLOCK

> DO NOT SCALE DRAWINGS. CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

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



TYP. FOUNDATION PIER PLAN DETAIL (ISOMETRIC)

8"x8" WOOD BLOCKS

(NUMBER OF COURSES MAY VARY)

8x75mm WIDE STEEL STRAPS (TYP. ON BOTH SIDES)

FASTEN STRAP TO EACH BLOCK

FASTEN STRAP TO CONC. PAD

WITH 80mm EMBEDMENT

600x600x100mm CONC. PAD —

WITH 13mm Ø EPOXY ANCHORS -

FLOOR BEAM

DESIGN DATA TABLE

SPECIFIED SNOW LOADS

SPECIFIED WIND LOADS

SPECIFIED EARTHQUAKE LOADS

ADDITIONAL SNOW ACCUMULATION IS SHOWN ON THE DRAWINGS.

NORMAL

1.3 kPa

0.4 kPa

1.44 kPa

0.46 kPa

CATEGORY 2

'OPEN'

0.391 0.317

0.177

0.0814

0.0209

0.00644

0.206

0.247

1.5

1.3

R.C. REINFORCED CONCRETE

S.D.F. STEP DOWN FOOTING

S.L.V. SHORT LEG VERTICAL

S.O.G. SLAB ON GRADE

S.L.H SHORT LEG HORIZONTAL

U.N.O. UNLESS NOTED OTHERWISE

V.E.F. VERTICAL EACH FACE

W.W.M. WELEDED WIRE MESH

W.P. WORKING POINT

V.I.F. VERTICAL INSIDE FACE

V.O.F. VERTICAL OUTSIDE FACE

R.O. ROUGH OPENING

R.D. ROOF DRAIN

REINF. REINFORCED

REQ'D REQUIRED

STL. STEEL STIFF. STIFFENER

TYP TYPICAL

U/S UNDERSIDE

VERT. VERTICAL

@ SPACED AT

STRUCT. STRUCTURAL

TOP OF T.L.LTOP LOWER LAYER
T.U.L. TOP UPPER LAYER

HD. REFERENCE

Sa (0.2, X_D)

Sa (0.5, X_D)

Sa (1.0, X_D)

Sa (2.0, X_D)

Sa (5.0, X_D)

Sa (10.0, X_D)

 $PGV(X_D)$

PGA (X_D)

SITE CLASS

Rd

SC3

ABBREVIATIONS

24h RAIN

BUILDING IMPORTANCE

RAIN LOADING DESIGN DATA (1/50)

SNOW LOADING DESIGN DATA (1/50)

HOURLY WIND PRESSURE DESIGN DATA (1/50)

BASIC ROOF SNOW LOAD

WIND DESIGN CATEGORY

SEISMIC LOADING DESIGN DATA

SITE CLASS TO BE CONFIRMED BY

GEOTECHNICAL ENGINEER

HOOKED

ANGLE

MAXIMUM

MINIMUM

METRE

MILLIMETRE

NUMBER

ON CENTRE

OVERHEAD

MEGAPASCAL

MISCELLANEOUS

NOT IN CONTRACT

OUTSIDE DIAMETER

INSIDE DIAMETER

LONG LEG HORIZONTAL

KILONEWTON

KILOPASCAL

SEISMIC FORCE MODIFICATION FACTORS FOR SEISMIC FORCE

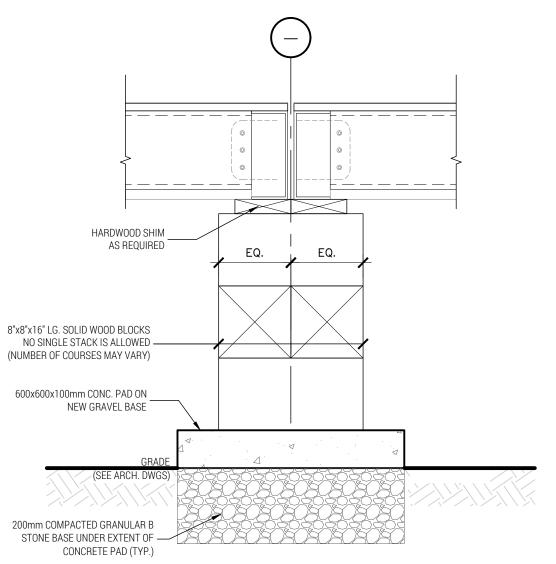
TERRAIN TYPE

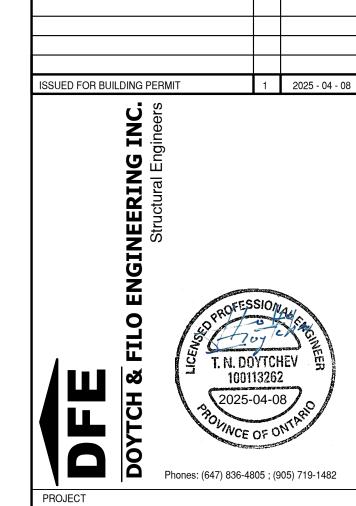
LIVE LOAD : 2.4 kPa

WITH 5/8" Ø LAG SCREWS

WITH 5" EMBEDMENT

EACH SIDE





SJB CSS PROPOSED 4-PAC PORTABLE **CLASSROOM ADDITION**

200 ACADIA DR., HAMILTON, ON, L8W 1B8

GENERAL NOTES GROUND FLOOR PLANS, SECTION AND

	D	ETAILS	
Design By:	TD/AF	Date:	2025-03-20
		Project No.:	24112903
Drawn By:	AF	Drawing No.:	04.0
Scale:	AS NOTED		S1.0

. DO NOT SCALE THESE DRAWINGS. ERRORS MADE BECAUSE OF SCALING THESE DRAWINGS ARE RESPONSIBILITY OF THE PARTY WHO USED THE DRAWINGS.	ALL CONCRETE WORK TO CONFORM TO THE	E LATEST REQU	IREMENTS O	F CSA STAN	IDARDS A23.	1, A23.2 & A2
. WHERE DISCREPANCIES EXIST, THE MOST STRINGENT SHALL PREVAIL. NOTIFY THE ENGINEER BEFOR PROCEEDING WITH THE WORK.	CONCRETE MIX PROPER		OVE BASEM	ENT	T MANY	T
STRUCTURAL DRAWINGS TO BE USED TOGETHER WITH ALL OTHER SPECIFICATIONS AND CONTRACT DOCUMENTS.	CONCRETE	MIN.28 DAYS STRENGTH (MPa)	SLUMP mm	AIR CONTENT (%)	MAX. AGGREGAT SIZE (in)	EXPOSURE CLASS
REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF HOLES, SUMP PITS, TRENCHES, CURBS, BOLTS, SLEEVES, OPENINGS, ETC.	OF EXTERIOR SLAB (UNREINFORCED)	32	80 (±30)	5-8	3/4"	C-2
THE CONTRACTOR SHALL BECOME FAMILIARIZED WITH THE PROJECT ON SITE, INCLUDING EXISTING CONSTRUCTION. ANY ALTERATIONS FROM ASSUMED IN THE DRAWINGS MUST BE REPORTED TO THE						

ENGINEER BEFORE PROCEEDING WITH THE WORK.

AND REGULATIONS FOR CONSTRUCTION PROJECTS - O.REG. 213/91.

AND THEY SHALL INVITE THE ENGINEER TO COMPLETE GENERAL REVIEWS.

9. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT

BRACING, SHORING, SHEET PILING ETC. TO PROTECT EXISTING OR ADJACENT STRUCTURES AFFECTED

10. THE CONTRACTOR SHALL PROVIDE DESIGN AND CONSTRUCTION OF HORIZONTAL AND VERTICAL

SHORING AND TEMPORARY BRACING AS PER O.REG 213/91. THE CONTRACTOR SHALL PROVIDE

11. THE OWNER AND THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF CONSTRUCTION PROGRESS,

- 1. ALL WOOD SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH CSA STANDARD
- 2.SAWN LUMBER PRODUCTS SHALL CONFORM TO THE REQUIREMENTS OF CSA 0141. ALL SAWN LUMBER IS TO BE SPF GRADE No.1/No.2 OR BETTER, UNLESS NOTED OTHERWISE. 3.NAILS AND SPIKES SHALL CONFORM TO THE CSA STANDARD B111 "WIRE NAILS, SPIKES

ELECTRICAL SPECIFICATIONS

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE, THE LATEST ONTARIO ELECTRICAL SAFETY CODE, ONTARIO BUILDING CODE AND THE ONTARIO FIRE CODE.
- 2. ALL FIRE ALARM EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH CAN/ULC-S524M AND SHALL BE TESTED IN ACCORDANCE WITH CAN/ULC S537M. ALL WORK SHALL BE PERFORMED BY AN APPROVED / CERTIFIED CONTRACTOR. ALL FIRE ALARM INSTALLATIONS AND EQUIPMENT SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE CAN/ULC S-524, CAN/ULC-S525, CAN/ULC-S526, CAN/ULC-S527, CAN/ULC-S528, CAN/ULC-S529, CAN/ULC-S530, AND SUBJECT TO THE LOCAL AUTHORITIES HAVING JURISDICTION. ALL TESTING AND VERIFICATION SHALL BE IN CONFORMANCE WITH CAN/ULC S-537. PROVIDE FINAL ACCEPTANCE, VERIFICATION TEST / REPORTS & CERTIFICATION OF ENTIRE SYSTEM. SUPPLY AND INSTALL ALL NECESSARY EQUIPMENT & MATERIALS TO ACCOMMODATE DEVICES WIRING, ETC. ALL WORK SHALL BE PERFORMED BY AN APPROVED / CERTIFIED CONTRACTOR.
- 3. ALL EMERGENCY/EXIT LIGHTING EQUIPMENT TO MEET CSA C22.2 NO.141-M.
- 4. THE WORK SHALL CONSIST OF FURNISHING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY TO COMPLETE ALL ELECTRICAL WORK AS INDICATED ON THE DRAWINGS AND THE SPECIFICATIONS. ALL EQUIPMENT AND LABOUR TO BE WARRANTED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK AS OUTLINED IN THE CONTRACT DOCUMENTS.
- PORTABLE SUPPLIER TO PROVIDE ENGINEERED STAMPED AND SIGNED DRAWINGS FOR PERMIT APPLICATION AND SHALL BE RETAIN A LICENSED ELECTRICAL CONTRACTOR TO PERFORM THE WORK AND ARRANGE AND PAY FOR ALL NECESSARY PERMITS, INSPECTIONS AND VERIFICATIONS AS REQUIRED BY CODE INCLUDING ELECTRICAL SAFETY AUTHORITY INSPECTION, FIRE ALARM SYSTEM RE-VERIFICATION BY EQUIPMENT MANUFACTURER, FIRE MARSHALS TESTING AND LOCAL BUILDING DEPARTMENT REVIEW.
- 6. CONTRACTOR TO PROVIDE FOUR (4) SETS OF WRITTEN OPERATING AND MAINTENANCE INSTRUCTIONS FOR SCHOOL BOARDS UPON COMPLETION OF WORK.
- CONTRACTOR SHALL PROVIDE TRAINING BY ALL EQUIPMENT SUPPLIERS TO INSTRUCT SCHOOL BOARD DESIGNATED PERSONNEL ON THE CARE, OPERATION, TESTING AND MAINTENANCE OF NEW EQUIPMENT AND SYSTEMS.
- 8. APPROPRIATE SHOP DRAWINGS TO BE SUBMITTED TO ARCHITECT AND CONSULTANT FOR REVIEW AND APPROVAL PRIOR TO ORDER PLACEMENT.
- 9. ALL CUTTING/PATCHING FOR ELECTRICAL WORK SHALL BE BY DESIGN-BUILDER, THE REPAIR OF ALL OPENINGS MADE IN FIRE SEPARATIONS SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. FILL ALL OPENINGS WITH APPROPRIATE LISTED FIRE STOP MATERIAL. (SPRAY FOAM PRODUCTS ARE NOT ALLOWED). ELECTRICAL CONTRACTOR TO LOCATE AND SIZE ALL OPENINGS REQUIRED.
- 10. VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND INCLUDE IN THE BID PRICE ALL WORK REQUIRED TO ACCOMMODATE THE EXISTING INSTALLATION.
- 11. COORDINATE WORK WITH ALL OTHER TRADES.
- 12. ALL WALL MOUNTED POWER, DATA AND TELEPHONE OUTLETS SHALL BE MOUNTED AT BUILDING STANDARD HEIGHT, UNLESS OTHERWISE SHOW ON ARCHITECTURAL DRAWINGS. COLOR AND FINISH OF DEVICES AND PLATES SHALL MATCH EXISTING IN FINISHED AREA, UNLESS OTHERWISE SELECTED BY THE ARCHITECT.
- 13. ALL WIRING SHALL BE RUN IN CONDUIT OR CABLE TO SUIT THE APPLICATION. ALL CONDUIT TO BE EMT CONDUIT C/W STEEL BOXES IN CONCEALED LOCATIONS & SERVICE ROOMS, WHITE WIRE MOLD C/W WIRE MOLD BOXES IF EXPOSED IN STUDENT OR TEACHER AREAS AND PVC DB TYPE II FOR UNDERGROUND APPLICATIONS. ALL CONDUIT SHALL BE 3/4"
- 14. CONCEAL NEW WIRING WHEREVER POSSIBLE. AC TYPE MAY BE USED IN CEILING SPACES, WALL CHASES ETC. SHORT RUN FROM OUTLET BOX TO DEVICE ONLY. ANY EXPOSED WIRING IN CEILING SPACES SHALL BE CSA FT6 RATED. SURFACE MOUNTED WORK IN ALL AREAS SHALL BE MINIMIZED. SEEK ARCHITECT'S APPROVAL.
- 15. ALL WIRE AND CABLE SHALL BE XLPE, RW90 OR RWU90 FOR UNDERGROUND APPLICATIONS, COPPER WITH 600V INSULATION SIZED ACCORDING TO THE APPLICATION. MINIMUM SIZE #12 AWG FOR POWER C/W CSA FT6 LABELED PLENUM RATED JACKET IF RUN EXPOSED IN CEILING SPACES. COLOR OF INSULATION TO MATCH EXISTING INSTALLATION.
- 16. CONDUIT INSTALLATION SHALL PROVIDE GROUND CONTINUITY. PROVIDE SEPARATE GROUND CONDUCTORS WHERE INDICATED ON DRAWINGS AND WHERE REQUIRED BY CODE.
- 17. A UPDATED AND/OR COMPLETE TYPEWRITTEN PANEL DIRECTORY SHALL BE PROVIDED FOR ALL PANELBOARDS. LABEL ALL ELECTRICAL EQUIPMENT WITH MECHANICALLY FASTENED LAMACOID NAMEPLATES, WHITEWITH BLACK LETTERS DEPICTING VOLTAGE, PHASE, FEED BREAKER NUMBER & LOCATION AND DEVICE NAME.
- 18. SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE QMQB, 600 VOLTS AND SHALL BE INDIVIDUALLY MOUNTED IN A NEMA 1 TYPE ENCLOSURE. SIZE SHALL BE AS INDICATED ON THE CONTRACT DRAWINGS. SWITCH SHALL BE SUITABLE AS SERVICE ENTRY EQUIPMENT. SWITCHES SHALL BE BY SQUARE D OR APPROVED EQUAL.
- 19. ALL FUSES SHALL BE BUSSMAN, CURRENT LIMITING TYPE LPS-RK, SIZE AS INDICATED ON THE CONTRACT DRAWINGS.
- 20. PANELBOARD SHALL BE CIRCUIT BREAKER DISTRIBUTION TYPE RATED 208 VOLTS, 400 AMPS, 3 PHASE, 4-WIRE, COPPER BUSES WITH BOLT ON MULTI-POLE CIRCUIT BREAKERS IN NEMA 3X ENCLOSURE. INTERRUPTING RATING SHALL BE 18,000 AMPERES, SYMMETRICAL. PROVIDE 400A, 3-POLE MAIN BREAKER, SIX(6) 100A, 3-POLE BRANCH BREAKER AND FOUR(4) 3-POLE SPACES FOR FUTURE BREAKERS.
- 21. CONDUCTOR SIZES ARE BASED ON CONNECTED EQUIPMENT HAVING A TEMPERATURE MARKING OF 75°C OR HIGHER. WHERE EQUIPMENT DOES NOT HAVE A TEMPERATURE MARKING OR IT HAS A MARKING LOWER THAN 75°C, INCREASE THE SIZE OF THE CONDUCTORS ACCORDINGLY, TO THE SATISFACTION OF THE CONSULTANT.
- 22. FOR WIRES IN CONDUIT, CONDUCTOR SIZES ARE BASED ON NOT MORE THAN 3 CURRENT CARRYING CONDUCTORS IN A CONDUIT. WHERE MORE THAN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A CONDUIT INCREASE THE CONDUCTOR SIZE ACCORDINGLY, TO THE SATISFACTION OF THE CONSULTANT.
- 23. TRENCH BACKFILLING: PROVIDE A BASE LAYER OF SAND AT LEAST 100MM (4") DEEP. TAMP SAND AROUND AND OVER CONDUITS, DUCTS AND CABLES, IN 150 MM (6") LAYERS TO A HEIGHT OF AT LEAST 300 MM (12") ABOVE TOP OF CONDUITS, DUCTS AND CABLES. COMPACT EACH SAND LAYER. FILL REMAINDER OF TRENCH IN 300 MM (12") LAYERS WITH GRANULAR 'A' MATERIAL, FREE FROM STONE. COMPACT EACH LAYER TO PREVENT UNDUE SETTLEMENT. DO NOT USE MATERIAL FROM EXCAVATION FOR BACKFILLING.

- 24. POWER: PROVIDE NEW 100A 600V/3PH CIRCUIT FROM THE EXISTING SWITCHBOARD '600-1' IN THE MAIN ELECTRICAL ROOM OF THE MAIN SCHOOL TO SUPPLY NEW 75KVA TRANSFORMER AND NEW EXTERIOR MOUNTED PANELBOARD 'PP-1'. PROVIDE NEW FEEDERS FROM NEW PANEL 'PP-1' TO EACH CLASSROOM PANEL. REFER TO DRAWING E1.01 AND TRENCH DETAILS FOR MORE INFORMATION.
- 25. LIGHTING: NEW LIGHT FIXTURES WITHIN THE PORTABLES TO BE SUPPLIED AND INSTALLED BY PORTABLE SUPPLIER.
- 26. EMERGENCY/EXIT LIGHTING: NEW EXIT AND EMERGENCY LIGHTING UNITS TO BE SUPPLIED AND INSTALLED BY PORTABLE SUPPLIER.
- 27. FIRE ALARM: PROVIDE NEW MIRCOM FIRE ALARM HORN/STROBE COMBOS, HEAT DETECTORS AND PULL STATIONS TO BE COMPATIBLE WITH THE EXISTING MIRCOM PANEL LOCATED IN CARETAKER OFFICE IN THE MAIN SCHOOL. PROVIDE NEW CONDUIT AND FEEDER FROM EXISTING 6-PAK TO NEW 4-PAK PORTABLE LOCATION. PROGRAM AND ADD ALL EQUIPMENT TO CONTROL THE NEW DEVICES. PROVIDE SECUREX TYPE CABLE WIRING AS REQUIRED TO CONNECT DEVICES TO THE EXISTING FIRE ALARM SYSTEM. RETAIN MIRCOM/ HAMILTON FIRE CONTROL TO RE-VERIFY FIRE ALARM SYSTEM, UPDATE PASSIVE GRAPHIC DIAGRAMS AND FOR DEVICE SPECIFICATIONS AND REQUIREMENTS. PROVIDE NEW UNDERGROUND CONDUIT DEDICATED FOR THE FIRE ALARM FROM THE EXTERIOR OF THE EXISTING 6-PAK PORTABLE TO NEW 4-PAK PORTABLE. NEW UNDERGROUND CONDUITS TO BE STUBBED UP AT THE PORTABLE LOCATION. CONTRACTOR TO ROUTE CONDUIT SO AS TO TERMINATE AT THE PORTABLE LOCATIONS. CONFIRM ALL REQUIREMENTS ON SITE PRIOR TO TENDERING.
- 28. PUBLIC ADDRESS: PROVIDE NEW UNDERGROUND CONDUIT FROM THE EXTERIOR OF THE MAIN SCHOOL TO THE NEW 4-PAK PORTABLE. PROVIDE NEW WIRING FROM THE MAIN PA PANEL IN THE MAIN OFFICE OF THE MAIN SCHOOL. NEW UNDERGROUND CONDUIT TO BE STUBBED UP AT THE PORTABLE LOCATIONS AS REQUIRED. CONTRACTOR TO ROUTE CONDUIT SO AS TO TERMINATE AT THE PORTABLE LOCATIONS. CONTRACTOR TO PROVIDE THE FOLLOWING:
 - PROVIDE TWO (2) NEW 16 PORT CAREHAWK SWITCHES IN NEW COMMUNICATION CLOSET, ONE FOR SPEAKERS, THE SECOND FOR PHONES.
 - PROVIDE TWO (2) CAT5 CABLES FROM THE PA MAIN CONTROL PANEL INSIDE THE EXISTING MAIN SCHOOL TO THE COMMUNICATIONS CLOSET, ONE TERMINATED IN THE SPEAKER SWITCH AND THE SECOND TERMINATED IN THE PHONE SWITCH. CONFIRM ROUTING ON SITE PRIOR TO TENDERING.
- PROVIDE NEW SPEAKERS IN EACH CLASSROOM AND CORRIDORS, EACH TO BE TERMINATED TO THE NEW DEDICATED CAREHAWK SWITCH IN THE COMMUNICATION CLOSET. PROVIDE NEW CAT 5E CABLE PER SPEAKER BACK TO NEW CAREHAWK SWITCH.
- PROVIDE NEW PHONES IN EACH CLASSROOM, EACH TO BE TERMINATED TO THE NEW DEDICATED CAREHAWK SWITCH IN THE COMMUNICATION CLOSET. PROVIDE NEW CAT 5E CABLE PER PHONE BACK TO RESPECTIVE CAREHAWK SWITCH.
- COORDINATE AND CONFIRM ALL REQUIREMENTS AND DEVICE SPECIFICATIONS WITH HAMILTON VIDEO AND SOUND (HVS). RETAIN HVS TO PROGRAM THE NEW SPEAKERS AND FINAL TESTING.
- 29. DATA: PROVIDE NEW DATA SERVICE FROM THE EXISTING IT RACK IN THE EXISTING 6-PAK PORTABLE. ALL NEW DATA OUTLETS IN THE CLASSROOMS OF THE NEW 4-PAK PORTABLE TO BE TERMINATED IN NEW PATCH PANELS IN THE NEW COMMUNICATION CLOSET IT RACK. REFER TO PORTABLE SUPPLIER FOR ALL DATA OUTLET LOCATIONS. PROVIDE NEW UNDERGROUND CONDUIT FROM THE EXTERIOR OF THE EXISTING 6-PAK TO THE NEW 4-PAK PORTABLE FOR NEW DATA LINES. NEW UNDERGROUND CONDUIT TO BE STUBBED UP AT THE PORTABLE LOCATION. CONTRACTOR TO ROUTE CONDUIT SO AS TO TERMINATE AT THE PORTABLE LOCATIONS.
- 29.1. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS WITH DATA SUBCONTRACTOR AND BOARD'S INFORMATION & COMMUNICATION TECHNOLOGY DEPARTMENT DAVID KNIGHT (905 525-2930 x 2990, dknight@hwdsb.on.ca) PRIOR TO INSTALLING ANY OUTLETS, CONDUIT ETC.
- 29.2. APPROVED CONTRACTORS
 - 29.2.1. THE FOLLOWING SCHOOL BOARD APPROVED NETWORK AND DATA SUBCONTRACTORS SHALL PROVIDE BIDS TO THE ELECTRICAL CONTRACTORS FOR THIS PROJECT:

29.2.1.1. SECURE SOLUTIONS

TONY WARD 905-869-0999

TONY@SECURESOLUTION.CA

29.2.1.2. NETWORK ACP

CARL STARKES

905-467-0898 CSTARKES@NETWORKACP.COM

29.2.1.3. 3TEC INC.

SCOTT WAINWRIGHT

905-573-3832 SCOTT@3TEC.CA

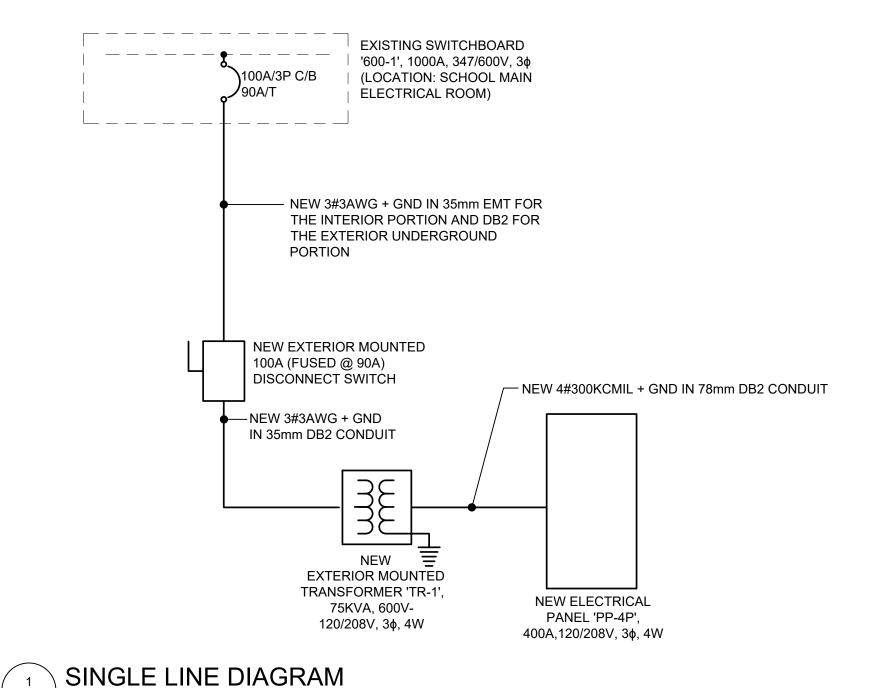
EL	ECTRICAL LEGEND	,	ABBREVIATIONS
	FLUSH MOUNTED, SURFACE	AC	ABOVE COUNTER
	MOUNTED PANELBOARDS.	AFF	ABOVE FINISHED FLOOR
	FIRE ALARM PULL STATION	A/T	TRIP AMPS FOR CIRCUIT BREAKER
2 0	FIRE ALARM BELL	С	CONDUIT
		C/B	CIRCUIT BREAKER
	FIRE ALARM HEAT DETECTOR	E/EX/EXIST	EXISTING TO REMAIN
•	FIRE ALARM SMOKE DETECTOR	EC	EMPTY CONDUIT
	DA ODEAUED	EMT	ELECTRICAL METALLIC TUBING
<u> </u>	PA SPEAKER	FA	FIRE ALARM
(PH)	PA TELEPHONE	G/GRD/GND	GROUND
	COMPUTER SYSTEM HUB LOCATION.	HP	HYDRO POLE
HUB	CONTRACTOR TO BRING ALL CAT6	MTD	MOUNTED
[ПОВ]	NETWORK CABLE RUNS TO THIS LOCATION. CONFIRM LOCATION WITH	N/NEW	NEW EQUIPMENT
	CLIENT PRIOR TO INSTALLATION.	NIC	NOT IN CONTRACT
Ш	DUPLEX RECEPTACLE 5-15R (OR AS	NTS	NOT TO SCALE
Ф	NOTED), 120VAC, 15A/1P.	ОС	ON CENTER
		Р	POLES
		PH	PHASE
		STD	STANDARD
		SWBD	SWITCHBOARD
		REL	TO BE RELOCATED
		REM	TO BE REMOVED
		TYP	TYPICAL
		UNF	UNFUSED
		UON	UNLESS OTHERWISE NOTED

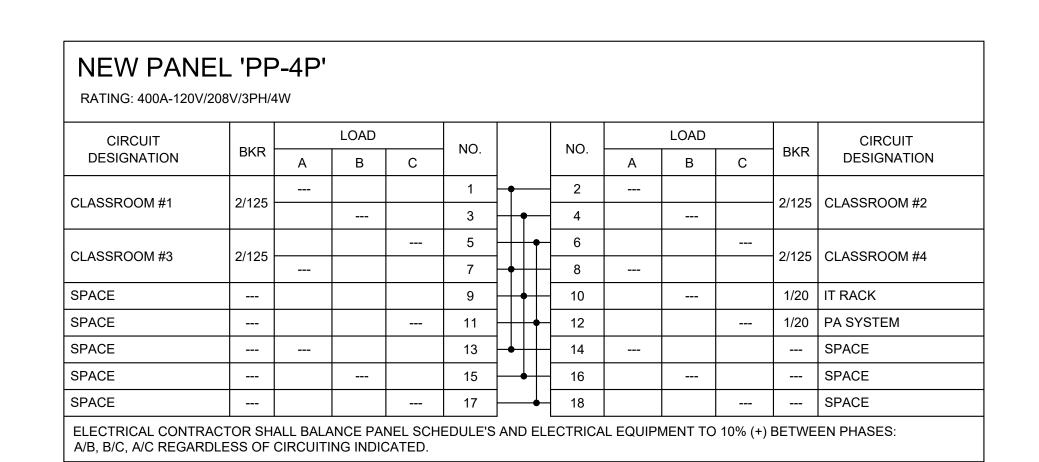
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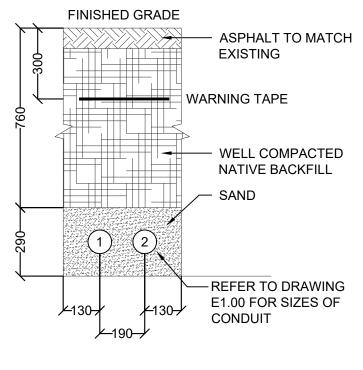
WP

WIRE

WEATHERPROOF



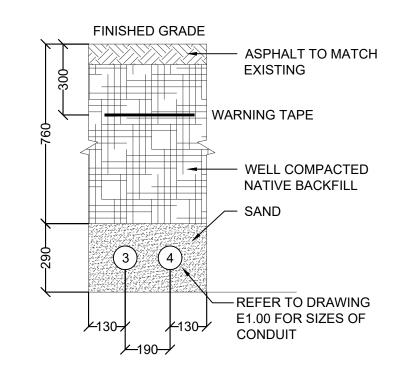




SCALE: N.T.S.

CONDUIT DESIGNATIONS: #1 - POWER #2 - PA

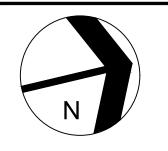


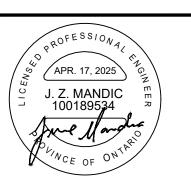


CONDUIT DESIGNATIONS: #3 - DATA #4 - FIRE ALARM









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ISSUED FOR PERMIT/TENDER	2025-04-14
REVISIONS	DATE
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THE PROJECT: AND MUST REPORT ANY DISCREPANCIES T THE ARCHITECTS BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDD THOUT THE WRITTEN APPROVAL OF THE ARCHITECTS.



SJB CSS 4-PAC PORTABLE **CLASSROOM ADDITION**

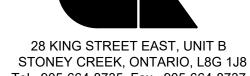
GEORGETOWN, ONTARIO, L7G 4A6

TEL: (416) 726-1648 | (905) 617-4808 E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca

200 Acadia Dr, Hamilton, ON L8W 1B8

ELECTRICAL SPECIFICATIONS, SCHEDULES AND **DETAILS**

GRGURIC ARCHITECTS INCORPORATED



Tel. 905-664-8735 Fax. 905-664-8737 Web: www.2gai.com

PROJECT: SCALE: AS NOTED START DATE APR 2025

DRAWN DRAWING: CHECKED

PRINT DATE 04/17/25

- EXISTING 1000A 600V/3PH SWITCHBOARD '600-1' LOCATED IN MAIN FOR NEW 4-PAK POWER. REFER TO SINGLE LINE DIAGRAM FRO MORE INFORMATION. CONFIRM EXACT ROUTING ON SITE PRIOR TO TENDERING.

- PROVIDE NEW WIRING FROM THIS EXISTING SWITCH TO NEW 4-PAK IT RACK. COORDINATE EXACT LOCATION OF IT RACK IN 4-PAK WITH HWCDSB.

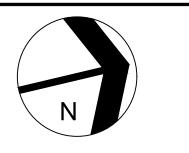
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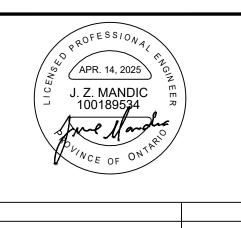
- ELECTRICAL ROOM TO REMAIN AS IS. PROVIDE ONE (1) NEW 100/3P BREAKER
- EXISTING MIRCOM FIRE ALARM PANEL TO REMAIN AS IS. PROVIDE NEW WIRING FOR NEW 4-PAK PORTABLE DEVICES CONNECTED TO EXISTING PORTABLE ZONE. NEW WIRING TO BE ROUTED FROM EXISTING 6-PAK CIRCUITRY TO NEW 4-PAK PORTABLES. PROVIDE BOOSTER PANEL IF REQUIRED FOR NEW DEVICES IN NEW 4-PAK
- EXISTING DUKANE CAREHAWK PA MAIN PANEL IN STAFF ROOM TO REMAIN AS IS. ALL NEW CABLES FOR THE PA EQUIPMENT IN THE NEW 4-PAK PORTABLES TO BE TERMINATED IN MAIN PANEL. NEW WIRING TO BE ROUTED FROM PANEL THROUGH THE CEILING SPACE OF THE CORRIDOR ON THE GROUND FLOOR.
- EXISTING IT RACK LOCATED IN EXISTING CLOSET OF EXISTING 6-PAK.

DRAWING NOTES:

- PROVIDE NEW UNDERGROUND DUCTBANK FROM THE EXTERIOR OF THE MAIN SCHOOL STUBBED UP IN NEW PORTABLE AS INDICATED:
 - 1 53mm (2") DIA. DB2 CONDUIT FOR PORTABLE POWER. 1 - 53mm (2") DIA. DB2 FOR PORTABLE P/A.
 - PROVIDE NEW PULL STRINGS FOR EACH RESPECTIVE CONDUIT FOR PULLING OF NEW CABLES. CONTRACTOR TO PROVIDE LOCATES OF THE AREA TO ENSURE NO DISRUPTION TO EXISTING SERVICES. REFER TO DETAIL 2/E0.01 FOR MORE INFORMATION.
- PROVIDE NEW UNDERGROUND DUCTBANK FROM THE EXISTING 6-PAK STUBBED UP IN NEW 4-PAK PORTABLES AS INDICATED:
 - 1 53mm (2") DIA. DB2 FOR PORTABLE FIRE ALARM. 1 - 53mm (2") DIA. DB2 FOR PORTABLE DATA.
 - PROVIDE NEW PULL STRINGS FOR EACH RESPECTIVE CONDUIT FOR PULLING OF NEW CABLES. CONTRACTOR TO PROVIDE LOCATES OF THE AREA TO ENSURE NO DISRUPTION TO EXISTING SERVICES. REFER TO DETAIL 3/E0.01 FOR MORE INFORMATION.
- PROVIDE NEW POWER FEEDER FROM SWITCHBOARD '600-1' IN THE MAIN ELECTRICAL ROOM FOR THE NEW 4-PAK PORTABLE. REFER TO SINGLE LINE DIAGRAM AND DRAWING E1.01 FOR MORE INFORMATION. CONFIRM ON SITE EXACT ROUTING PRIOR TO TENDERING.
- PROVIDE NEW WIRING FOR THE FIRE ALARM DEVICES IN THE NEW 4-PAK PORTABLE FED FROM THE EXISTING 6-PAK PORTABLE FIRE ALARM CIRCUITRY. NEW FEEDERS TO BE ROUTED VIA 53MM (2") DIA. DB2 UNDERGROUND CONDUIT FROM THE EXISTING 6-PAK. PROVIDE NEW PULL STRINGS AS REQUIRED FOR PULLING OF NEW CABLES. CONTRACTOR TO PROVIDE LOCATES OF THE AREA TO ENSURE NO DISRUPTION TO EXISTING SERVICES.







ISSUED FOR PERMIT/TENDER REVISIONS RAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST

THE PROJECT: AND MUST REPORT ANY DISCREPANCIES TO THE ARCHITECTS BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDE THOUT THE WRITTEN APPROVAL OF THE ARCHITECTS.

ENGINEERING 162 GUELPH STREET, UNIT 216, GEORGETOWN, ONTARIO, L7G 4A6 TEL: (416) 726-1648 | (905) 617-4808 E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca

SJB CSS 4-PAC PORTABLE **CLASSROOM ADDITION**

200 Acadia Dr, Hamilton, ON L8W 1B8

ELECTRICAL SITE PLAN

GRGURIC ARCHITECTS **INCORPORATED**

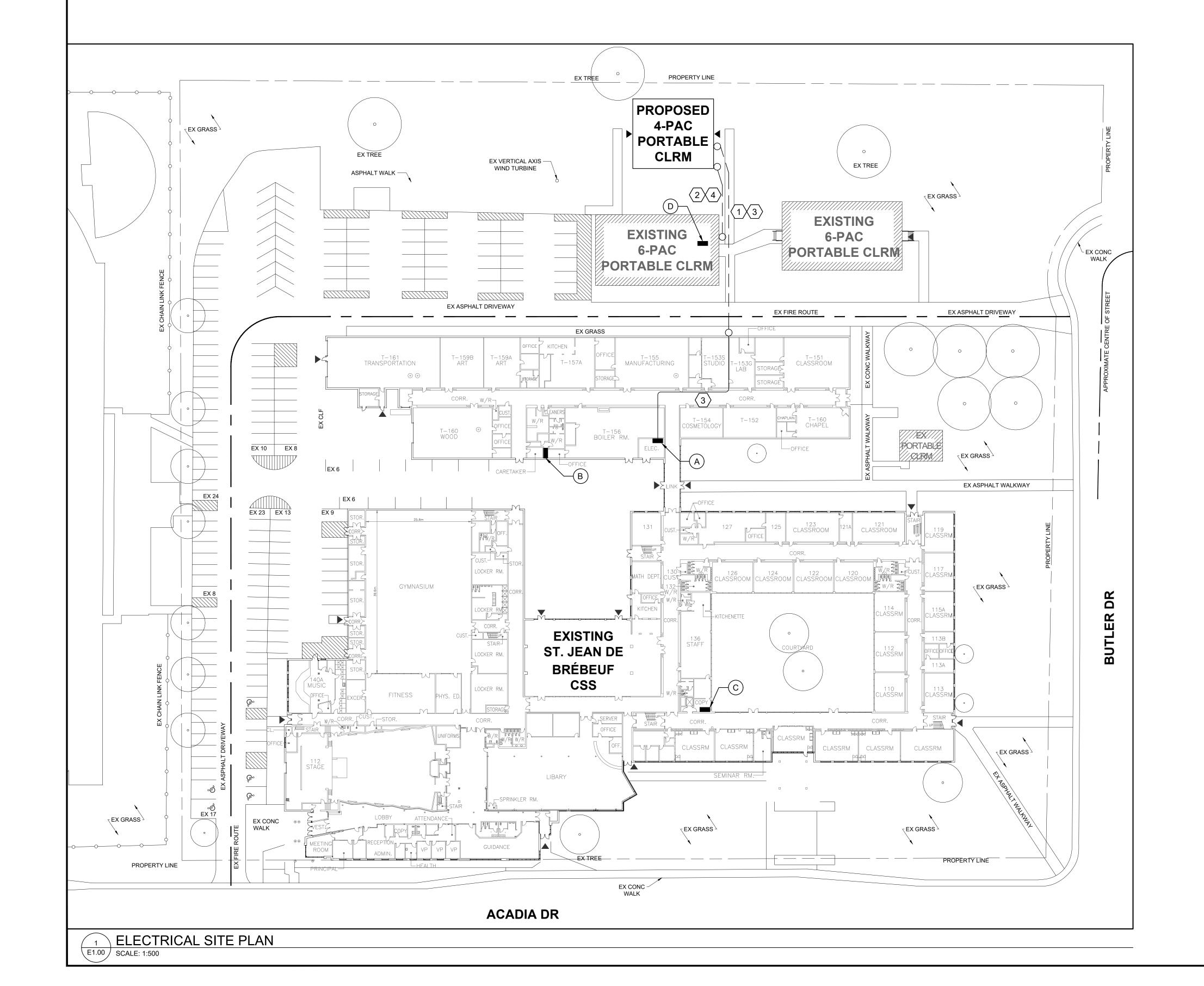


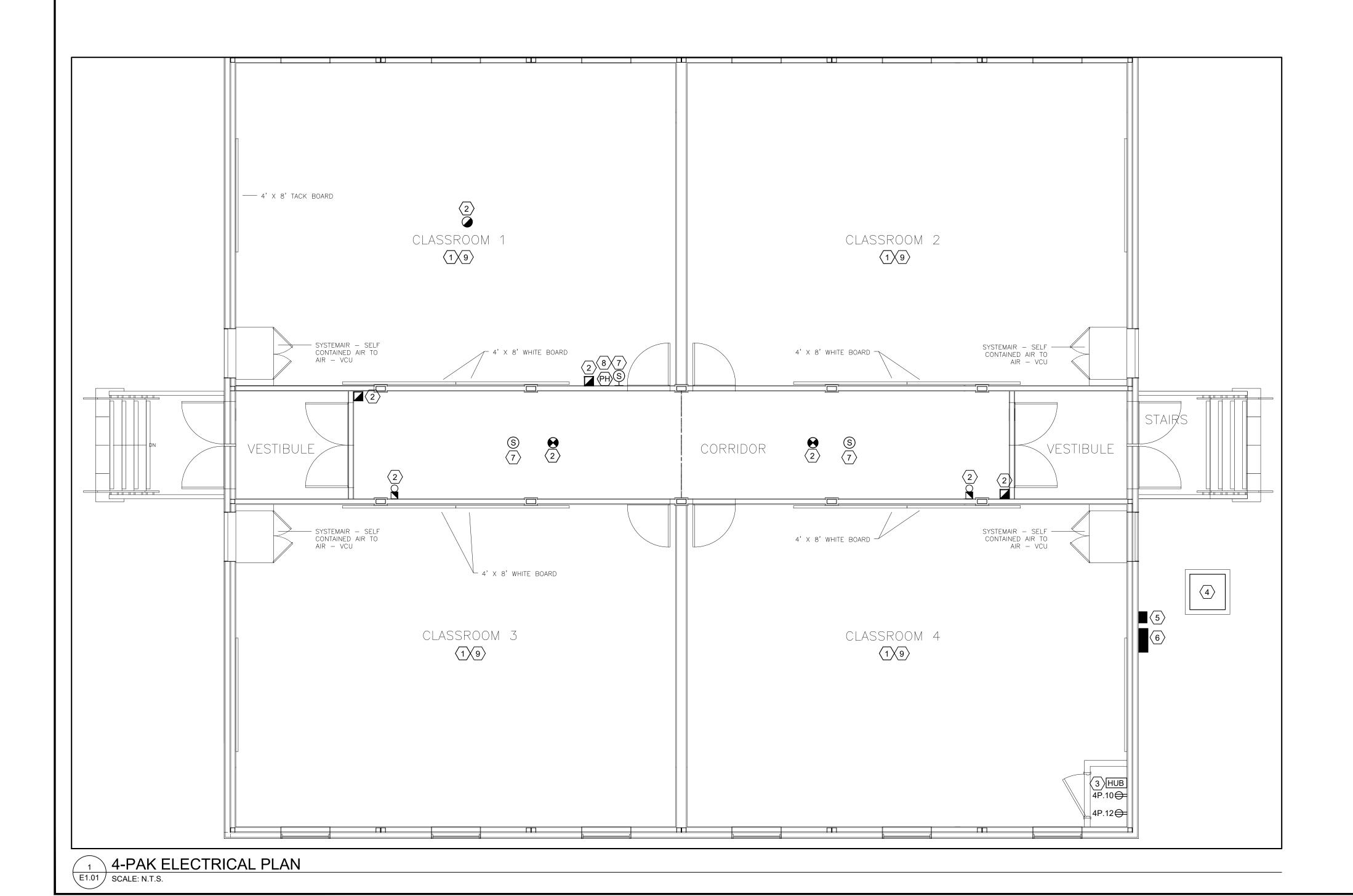
28 KING STREET EAST, UNIT B STONEY CREEK, ONTARIO, L8G 1J8 Tel. 905-664-8735 Fax. 905-664-8737 Web: www.2gai.com

SCALE: PROJECT: AS NOTED START DATE: APR 2025

DRAWN CHECKED

24056 PRINT DATE 04/14/25

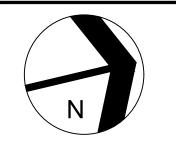


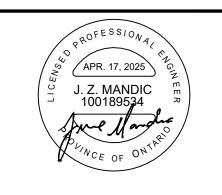


DRAWING NOTES:

- 1 TYPICAL LAYOUT OF CLASSROOM. ALL CLASSROOMS 1, 2, 3 & 4 ARE INCLUDED IN SCOPE OF WORK.
- PROVIDE NEW FIRE ALARM DEVICES AS INDICATED ON LAYOUT. NEW DEVICES TO BE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM. REFER TO SECTION #27 FOR MORE INFORMATION.
- PROPOSED LOCATION OF NEW COMMUNICATION CLOSET FOR IT, FIRE ALARM AND PA EQUIPMENT. CONTRACTOR TO PROVIDE NEW CONDUIT STUB UPS FOR ALL PA, FIRE ALARM, COMMUNICATION CONDUITS/CABLING. PROVIDE TWO DEDICATED DUPLEX RECEPTACLES FOR IT AND PA EQUIPMENT RESPECTIVELY. REFER TO ELECTRICAL SITE PLAN ON E1.00 DRAWING FOR CONDUIT REQUIREMENTS. COORDINATE EXACT LOCATION ON SITE WITH OWNER AND G.C.
- NEW EXTERIOR 75KVA 600V-208/120V,3PH,4W PAD MOUNTED TRANSFORMER LOCATED OUTSIDE OF RELOCATED 6-PACK PORTABLES. NEW TRANSFORMER TO BE C/W GROUNDING AND NECESSARY CLEARANCES AND A 150MM (6") HOUSEKEEPING PAD EXTENDING 100MM (4") AROUND THE TRANSFORMER. DRY TYPE TRANSFORMER SHALL BE MANUFACTURED BY HAMMOND OR EQUIVALENT. PRIMARY AND SECONDARY WINDINGS TO BE COPPER. TRANSFORMER MUST HAVE 305MM (12") CLEARANCE ON ALL SIDES OF THE WALL.
- NEW 100A/3P DISCONNECT SWITCH IN A NEMA 3X LOCKABLE ENCLOSURE. COORDINATE EXACT LOCATION OF ON SITE WITH HWCDSB PRIOR TO ANY WORK.
- NEW ELECTRICAL PANEL 'PP-4P', 400A,120/208V, 3φ, 4W, NEMA 3X WITH LOCKABLE ENCLOSURE. REFER TO PANEL SCHEDULE FOR BREAKER REQUIREMENTS. CONFIRM EXACT LOCATION WITH HWCDSB PRIOR TO ANY WORK.
- PROVIDE NEW PA SPEAKERS IN EACH CLASSROOM AND CORRIDORS AS INDICATED ON LAYOUT. PROVIDE NEW WIRING AND EQUIPMENT AS REQUIRED. REFER TO SECTION #28 FOR MORE INFORMATION.
- PROVIDE NEW PA PHONES IN EACH CLASSROOM AS INDICATED ON LAYOUT. PROVIDE NEW WIRING AND EQUIPMENT AS REQUIRED. REFER TO SECTION #28 FOR MORE INFORMATION.
- PROVIDE NEW DATA CABLES AND OUTLETS AS REQUIRED FOR EACH LOCATION. REFER TO PORTABLE SUPPLIER ELECTRICAL DRAWINGS FOR LOCATIONS AND REQUIREMENTS PRIOR TO TENDERING. REFER TO SECTION #28 FOR MORE INFORMATION.







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SM

ENGINEERING

162 GUELPH STREET, UNIT 216,
GEORGETOWN, ONTARIO, L7G 4A6
TEL: (416) 726-1648 | (905) 617-4808
E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca

SJB CSS 4-PAC PORTABLE CLASSROOM ADDITION

200 Acadia Dr, Hamilton, ON L8W 1B8

4-PAK PORTABLE ELECTRICAL PLAN

GRGURIC ARCHITECTS INCORPORATED



28 KING STREET EAST, UNIT B STONEY CREEK, ONTARIO, L8G 1J8 Tel. 905-664-8735 Fax. 905-664-8737 Web: www.2gai.com

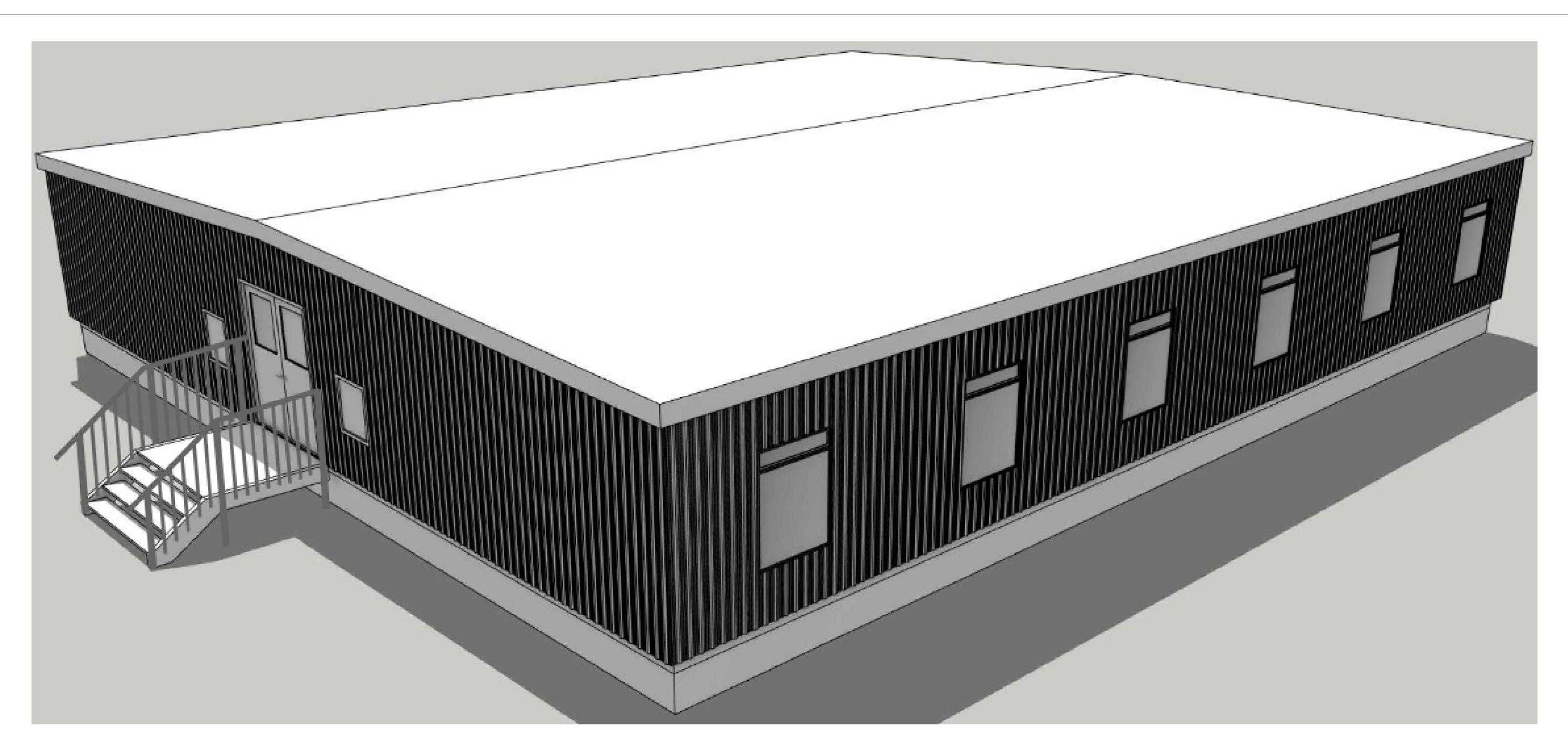
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START DATE:	24 0
APR 2025	

J.M.

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E1.0

PRINT DATE 04/17/25



ARCHITECTURAL DRAWINGS:

A0.0 - COVER PAGE

A0.1 - SITE PLAN - CATHEDRAL SCHOOL

A0.1.2- SITE PLAN - ST. JEAN DE BR• BEUF SCHOOL

A1.0 - MODULE LAYOUT

A1.1 - FLOOR PLAN

A1.1 - REFLECTED CEILING PLAN

A2.0 - ELEVATIONS

A3.0 - BUILDING SECTION

A3.1 - BUILDING SECTION

A4.0 - INTERIOR ELEVATIONS

A5.0 - DETAILS

A5.1 - DETAILS

A5.2 - DETAILS

A6.0 - SCHEDULES, ASSEMBLIES

COLOUR SELECTED:

SIDING: TAN

TRIMS: DARK BROWN

SCHOOL BUILDING AND THE PORTABLE CLASSROOMS.

REQUIREMENTS OF THE O.B.C. 3.7.4 FOR THE TOTAL OCCUPANT LOAD OF THE MAIN

1. SCHOOL ADMINISTRATOR TO CONFIRM THAT THE FACILITIES OF THE MAIN SCHOOL BUILDING COMPLY WITH THE

ARCHITECT:

atelier 292 architect inc.

292 MAIN STREET OTTAWA, ONTARIO CANADA K1S 1E1

ARCHITECT STAMP:



	WING STATUS	DATE YY.MM.DE
ISSUI	ED FOR PERMIT REVIEW	25.03.05
ISSUI	ED FOR PERMIT	25.03.24
REVISIO	NS:	
No.	REVISION	DATE



DRAWN BY:
C.SADDINGTON
BECC MODULAR
1295 CORMORANT ROAD,
ANCASTER, ON L9G 4V5

HAMILTON-WENTWORTH
CATHOLIC DISTRICT SCHOOL BOARD

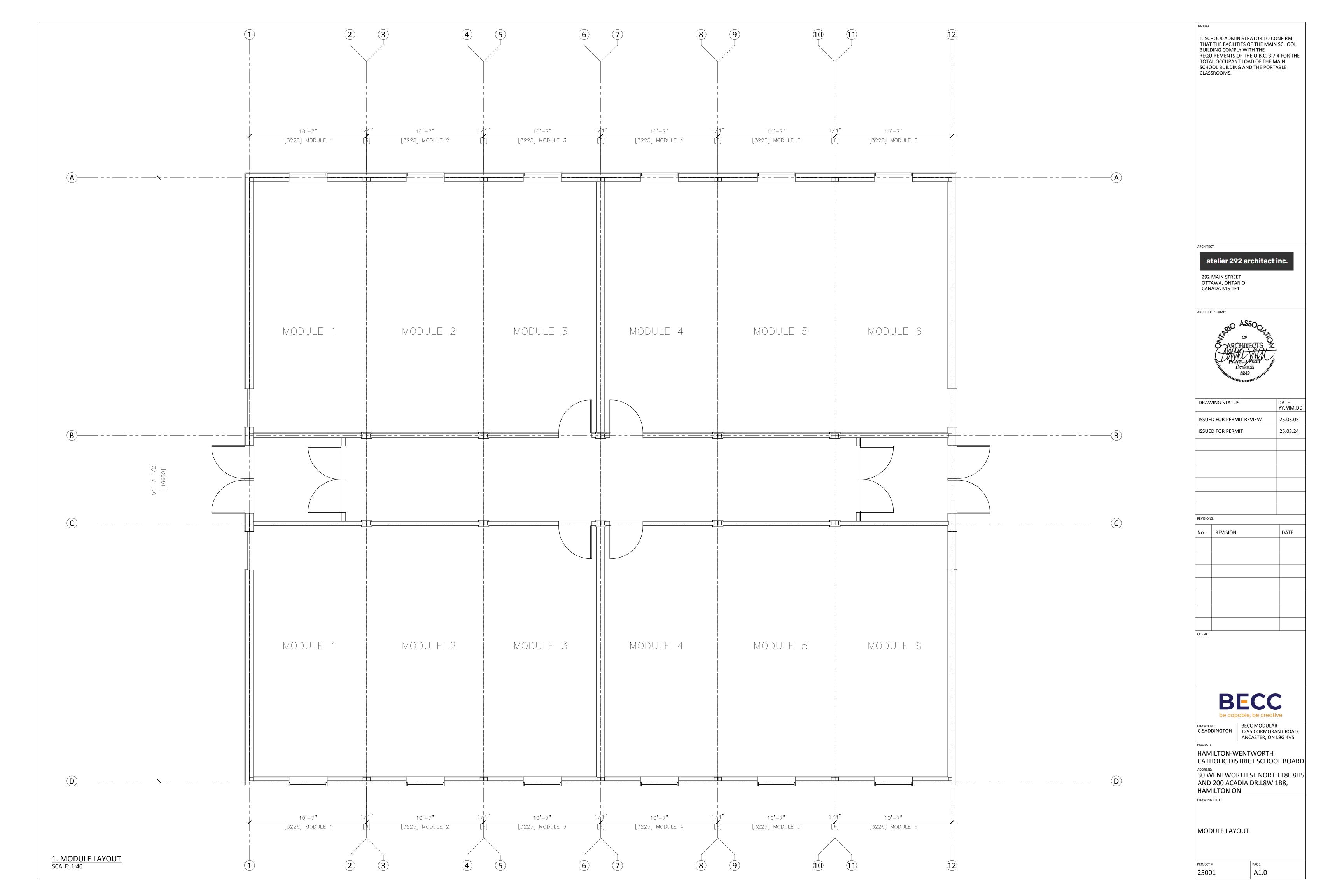
ADDRESS:
30 WENTWORTH ST NORTH L8L 8H5
AND 200 ACADIA DR.L8W 1B8,
HAMILTON ON

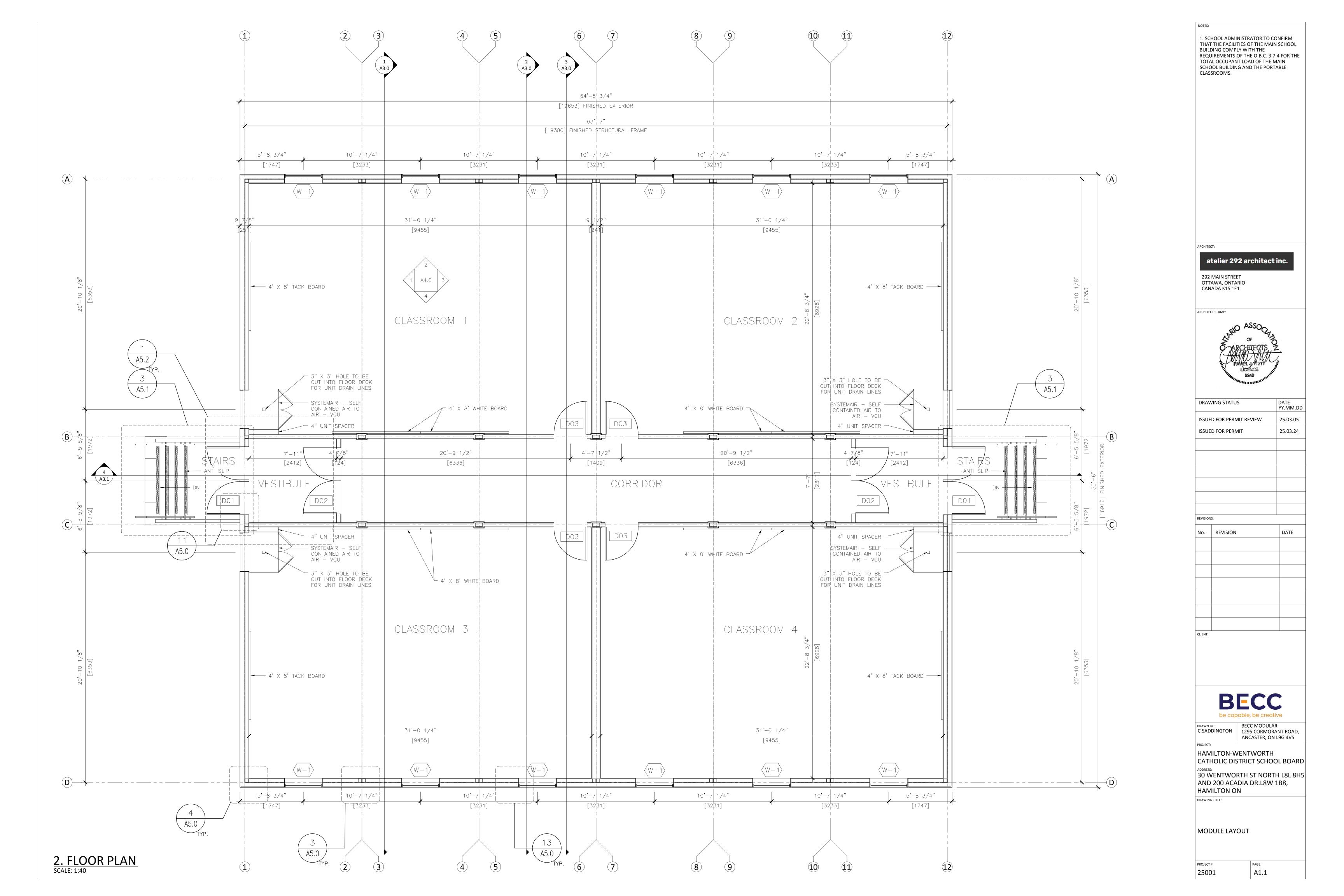
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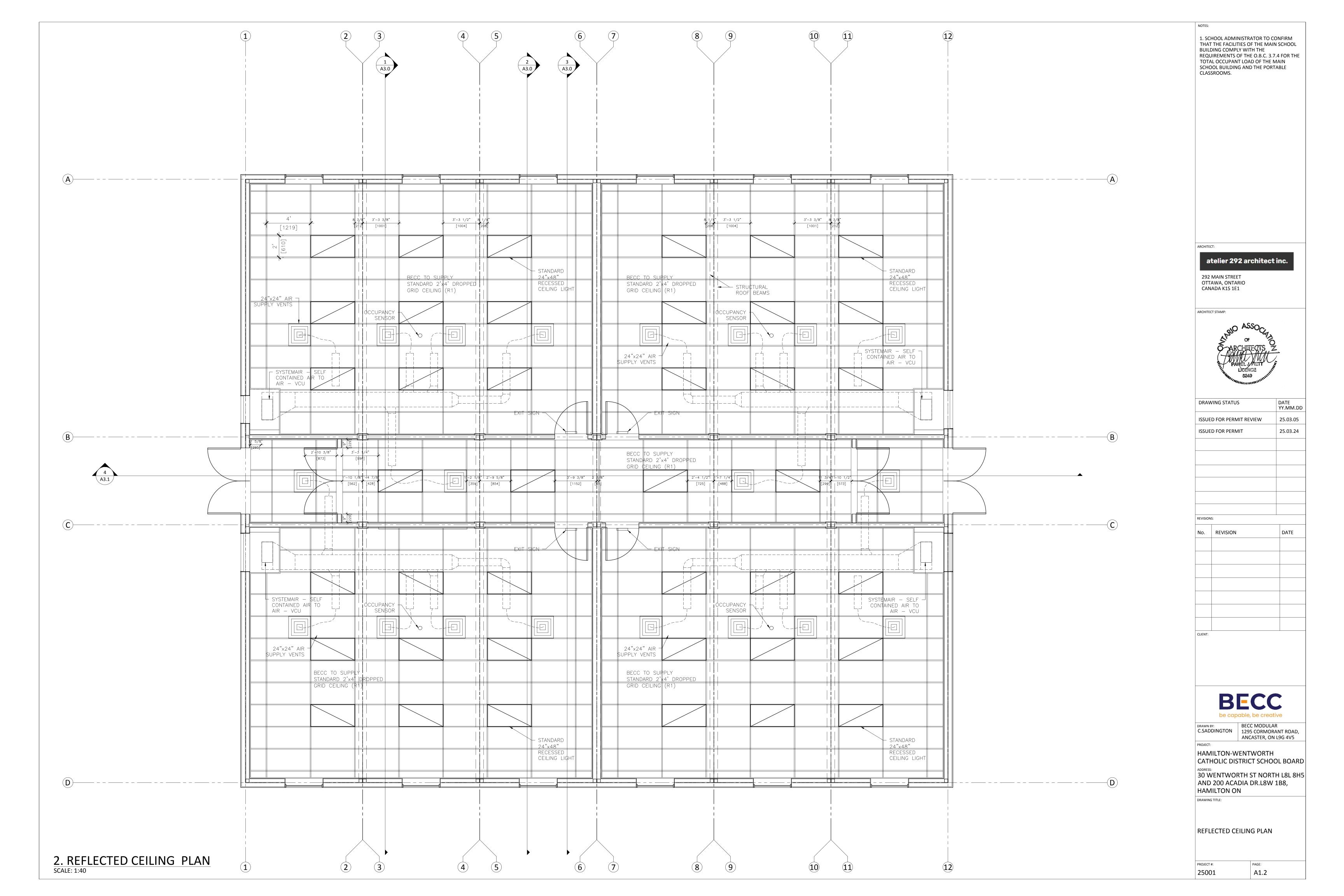
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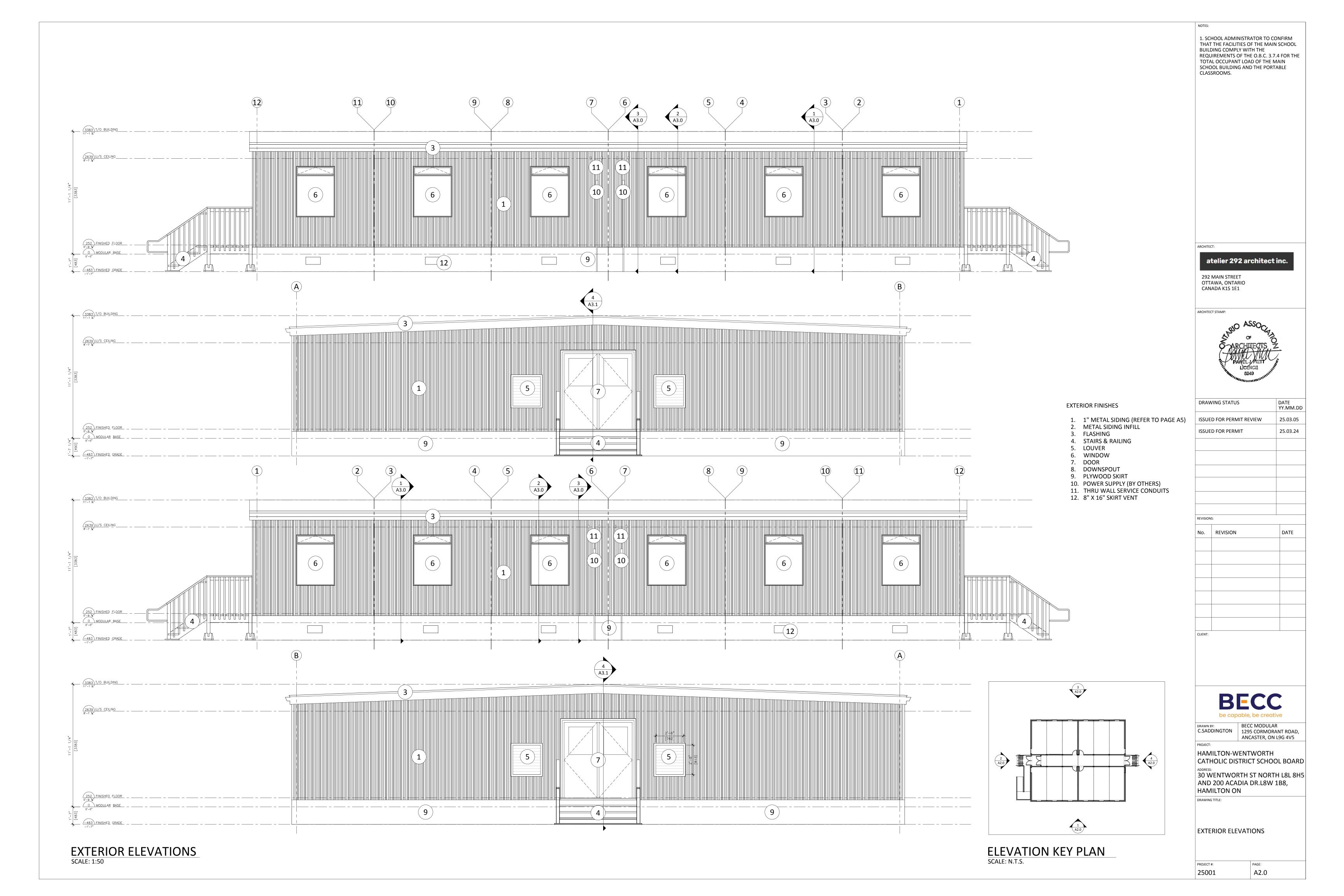
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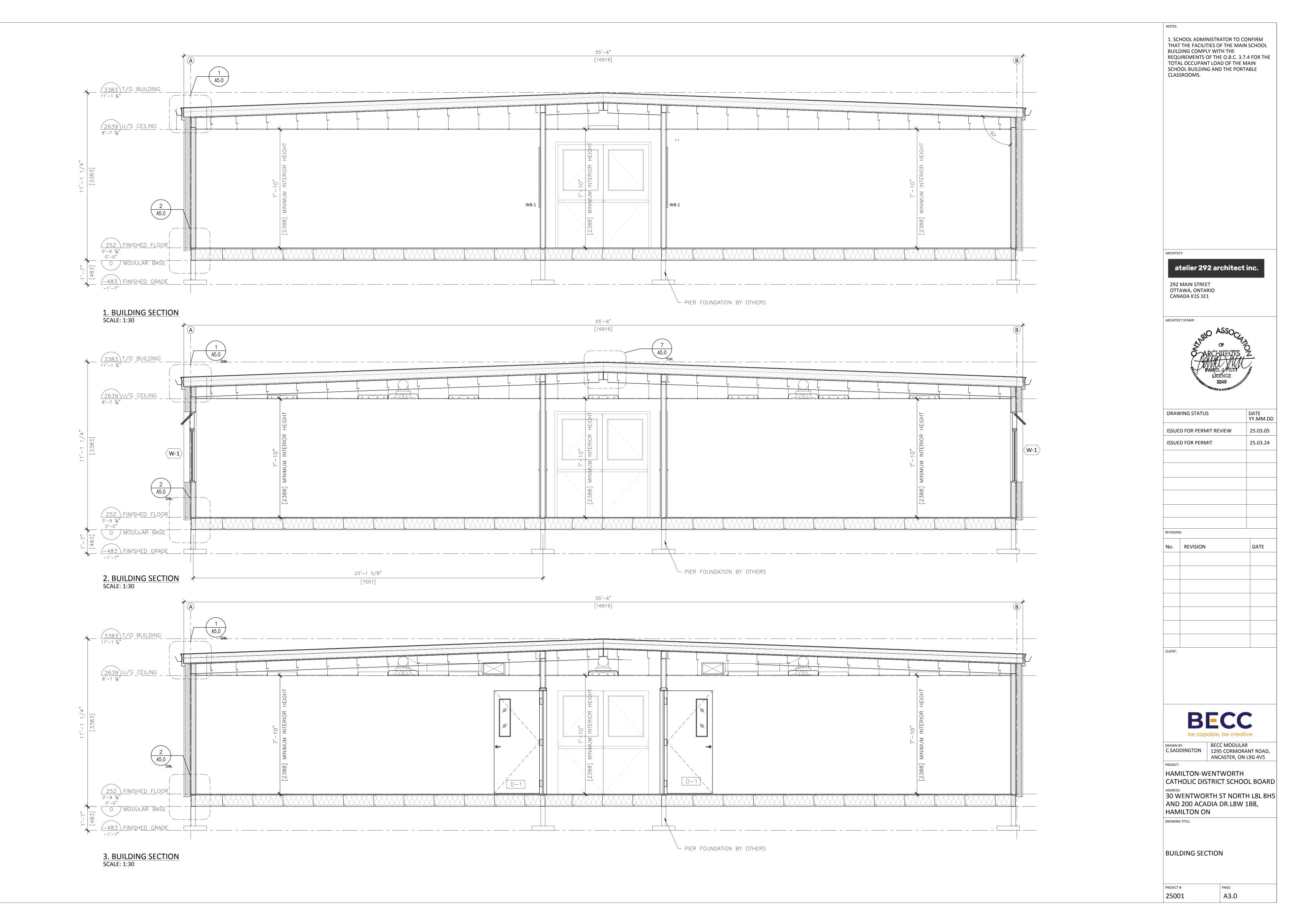
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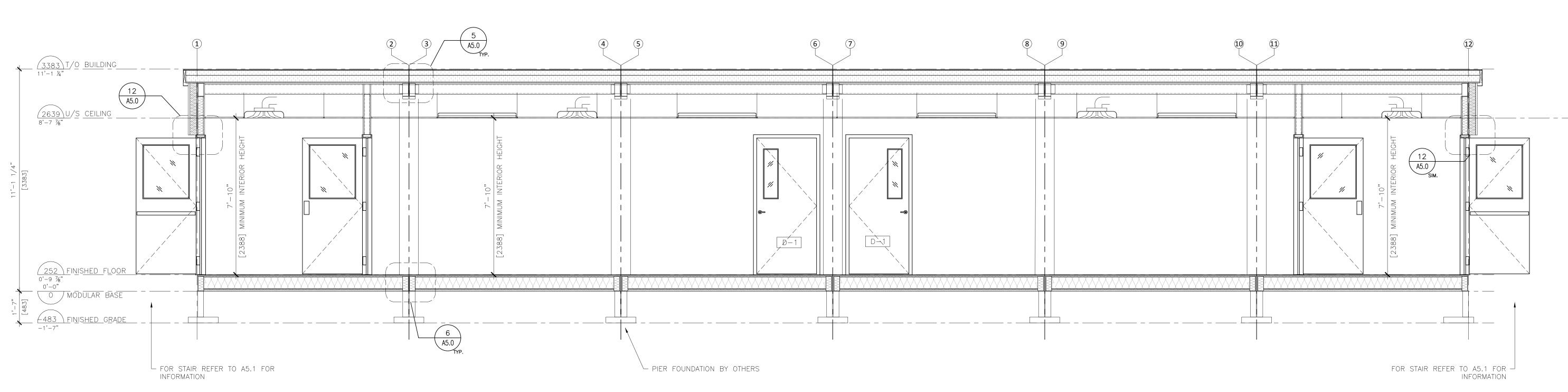












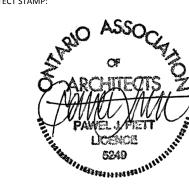
4. BUILDING SECTION SCALE: 1:30

1. SCHOOL ADMINISTRATOR TO CONFIRM THAT THE FACILITIES OF THE MAIN SCHOOL BUILDING COMPLY WITH THE REQUIREMENTS OF THE O.B.C. 3.7.4 FOR THE TOTAL OCCUPANT LOAD OF THE MAIN SCHOOL BUILDING AND THE PORTABLE CLASSROOMS.

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No.	REVISION	DATE

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C.SADDINGTON
BECC MODULAR
1295 CORMORANT ROAD,
ANCASTER, ON L9G 4V5

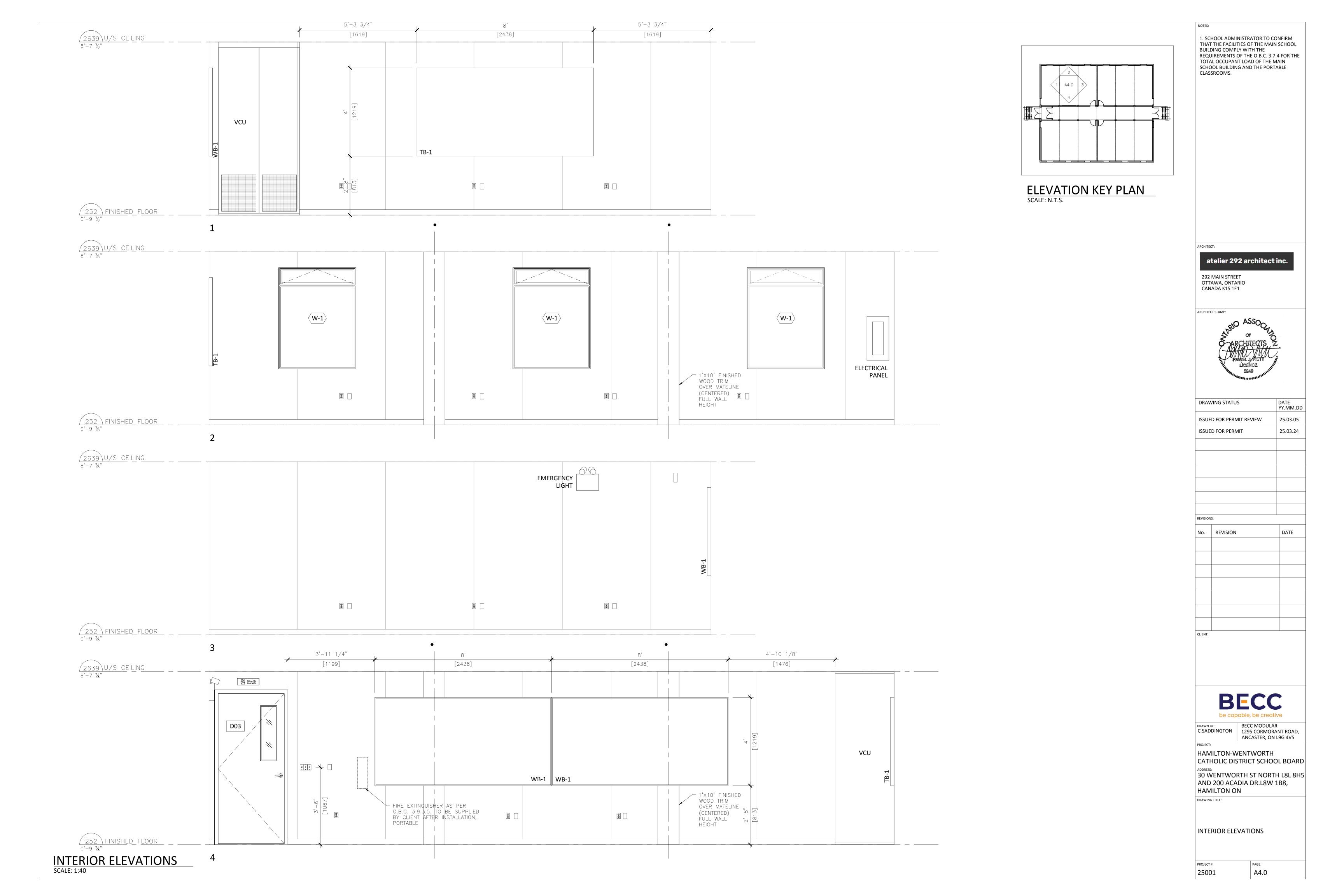
HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

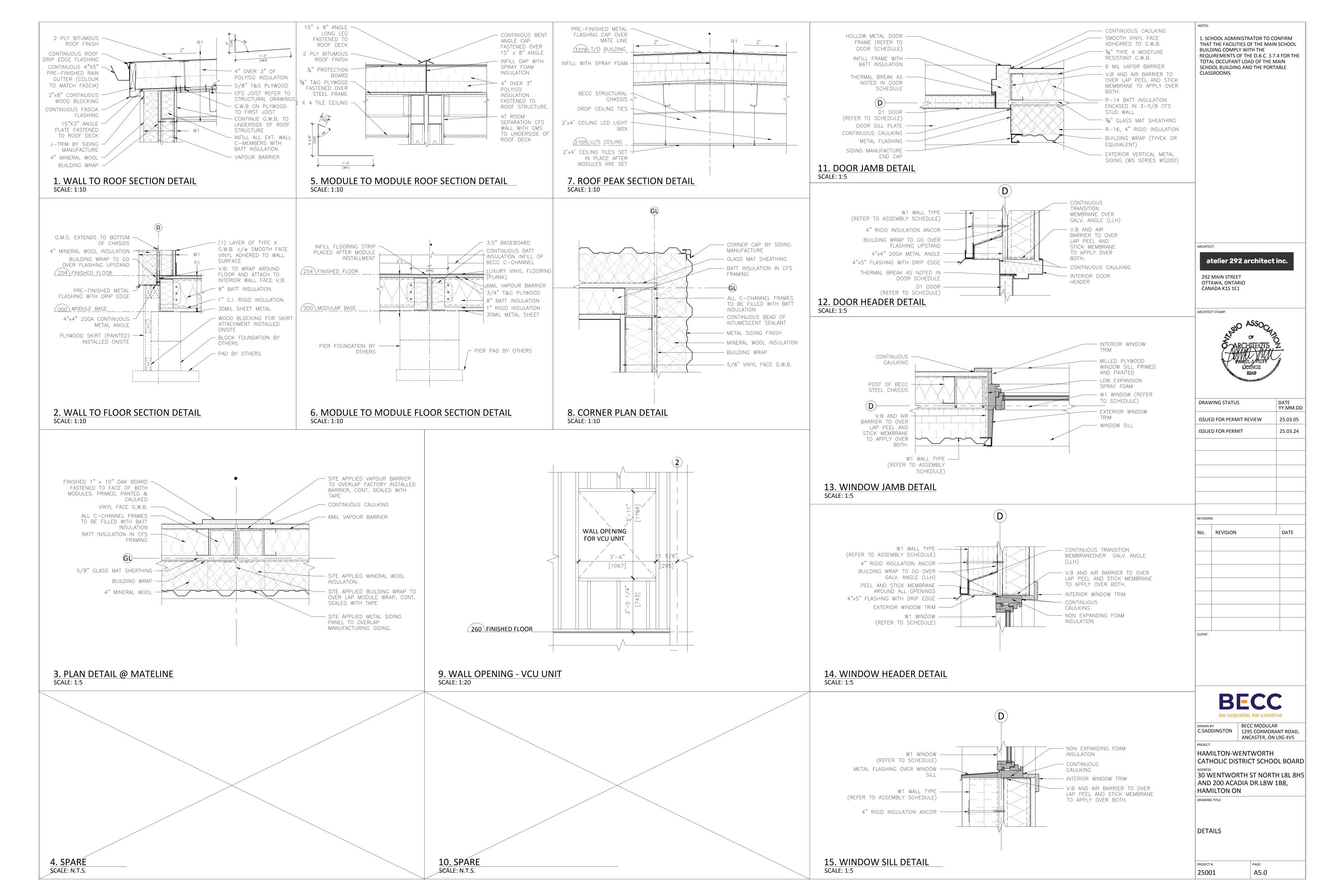
30 WENTWORTH ST NORTH L8L 8H5 AND 200 ACADIA DR.L8W 1B8, HAMILTON ON

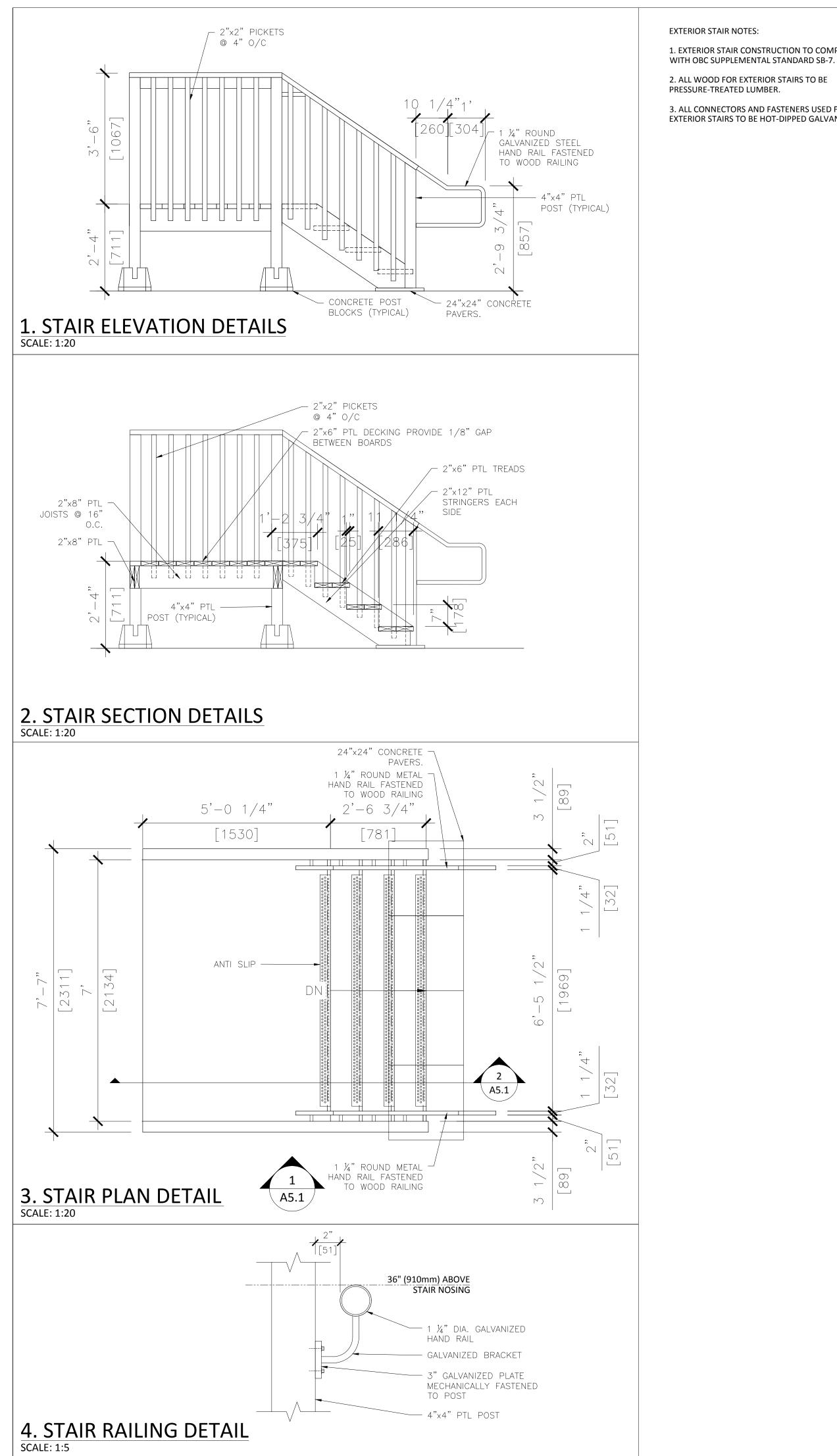
DRAWING TITLE:

BUILDING SECTION

25001 A3.1







EXTERIOR STAIR NOTES:

1. EXTERIOR STAIR CONSTRUCTION TO COMPLY

2. ALL WOOD FOR EXTERIOR STAIRS TO BE PRESSURE-TREATED LUMBER.

3. ALL CONNECTORS AND FASTENERS USED FOR EXTERIOR STAIRS TO BE HOT-DIPPED GALVANIZED.

1. SCHOOL ADMINISTRATOR TO CONFIRM THAT THE FACILITIES OF THE MAIN SCHOOL BUILDING COMPLY WITH THE REQUIREMENTS OF THE O.B.C. 3.7.4 FOR THE TOTAL OCCUPANT LOAD OF THE MAIN SCHOOL BUILDING AND THE PORTABLE CLASSROOMS.

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292 MAIN STREET OTTAWA, ONTARIO CANADA K1S 1E1

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DRAWN BY:
C.SADDINGTON
BECC MODULAR
1295 CORMORANT ROAD,
ANCASTER, ON L9G 4V5

HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

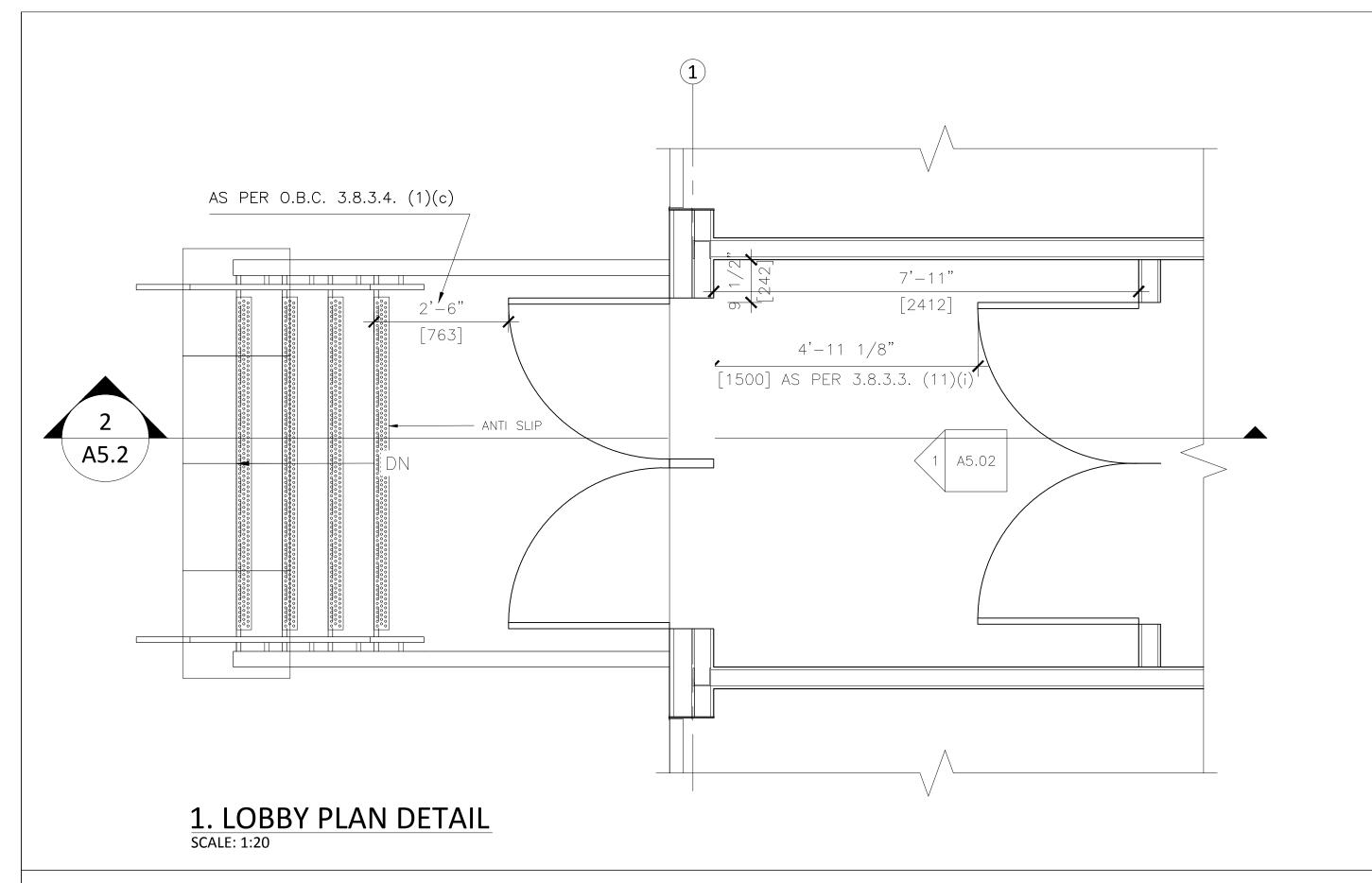
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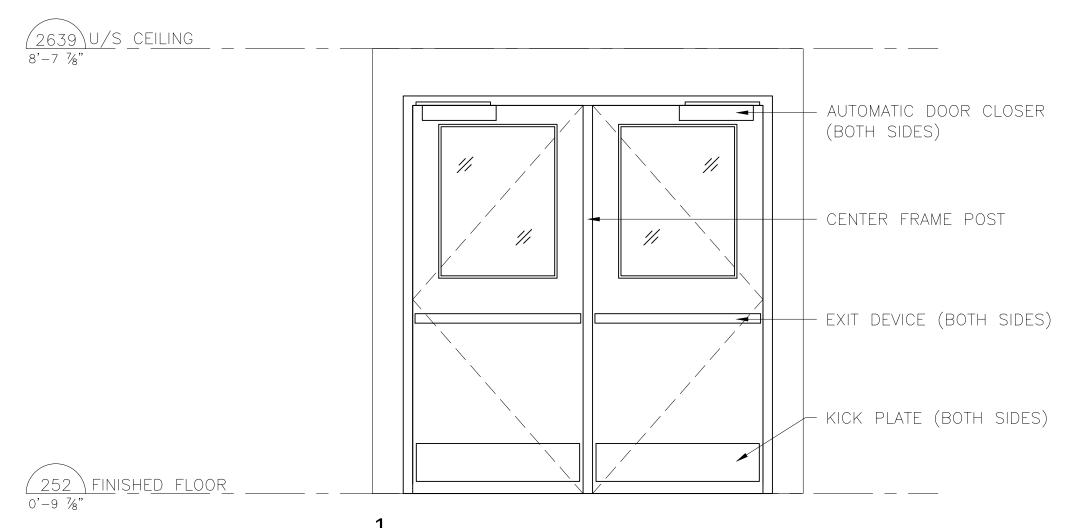
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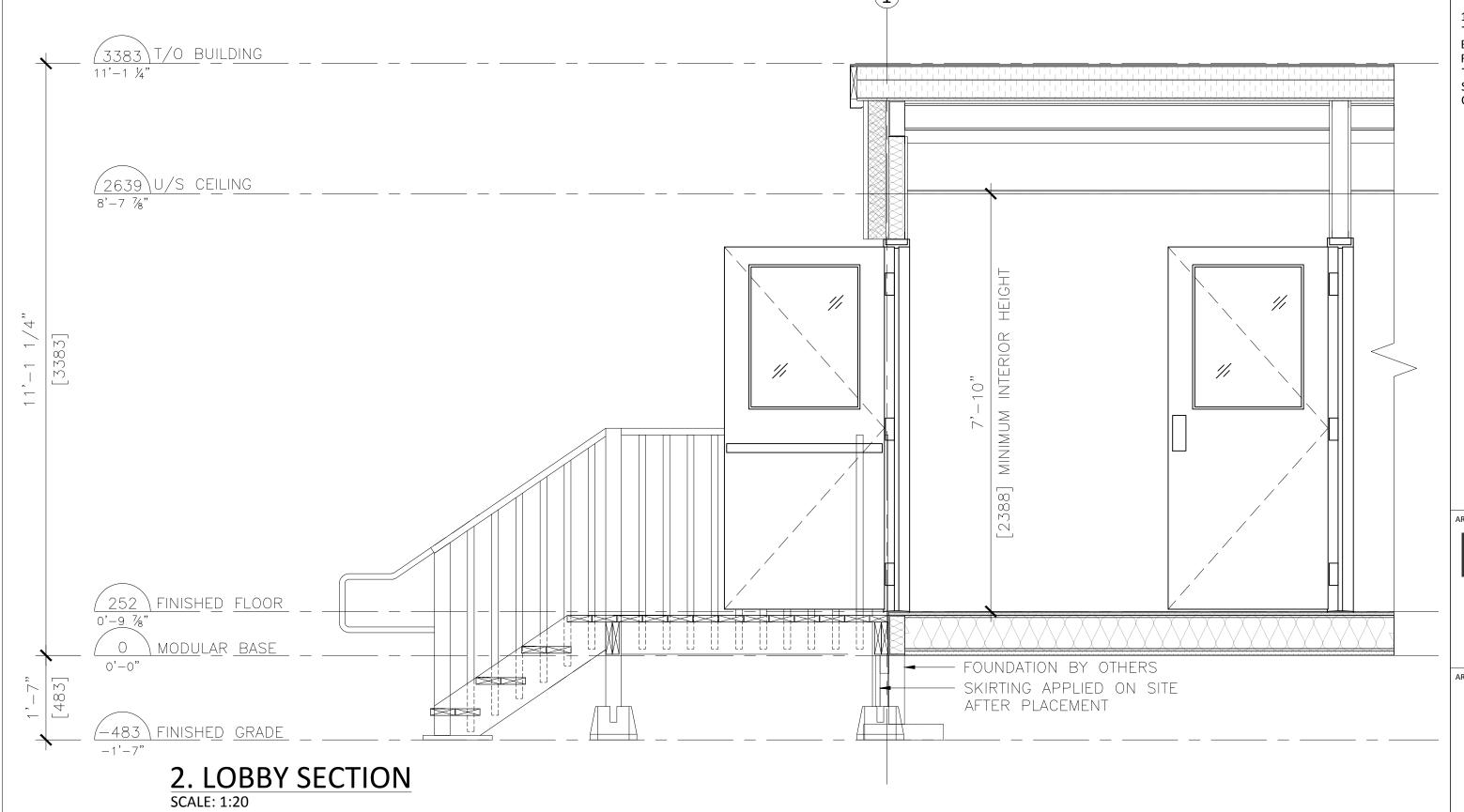
DETAILS

PROJECT #: 25001

A5.1







1. SCHOOL ADMINISTRATOR TO CONFIRM THAT THE FACILITIES OF THE MAIN SCHOOL BUILDING COMPLY WITH THE REQUIREMENTS OF THE O.B.C. 3.7.4 FOR THE TOTAL OCCUPANT LOAD OF THE MAIN SCHOOL BUILDING AND THE PORTABLE CLASSROOMS.

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DRAWN BY:
C.SADDINGTON
BECC MODULAR
1295 CORMORANT ROAD,
ANCASTER, ON L9G 4V5

HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

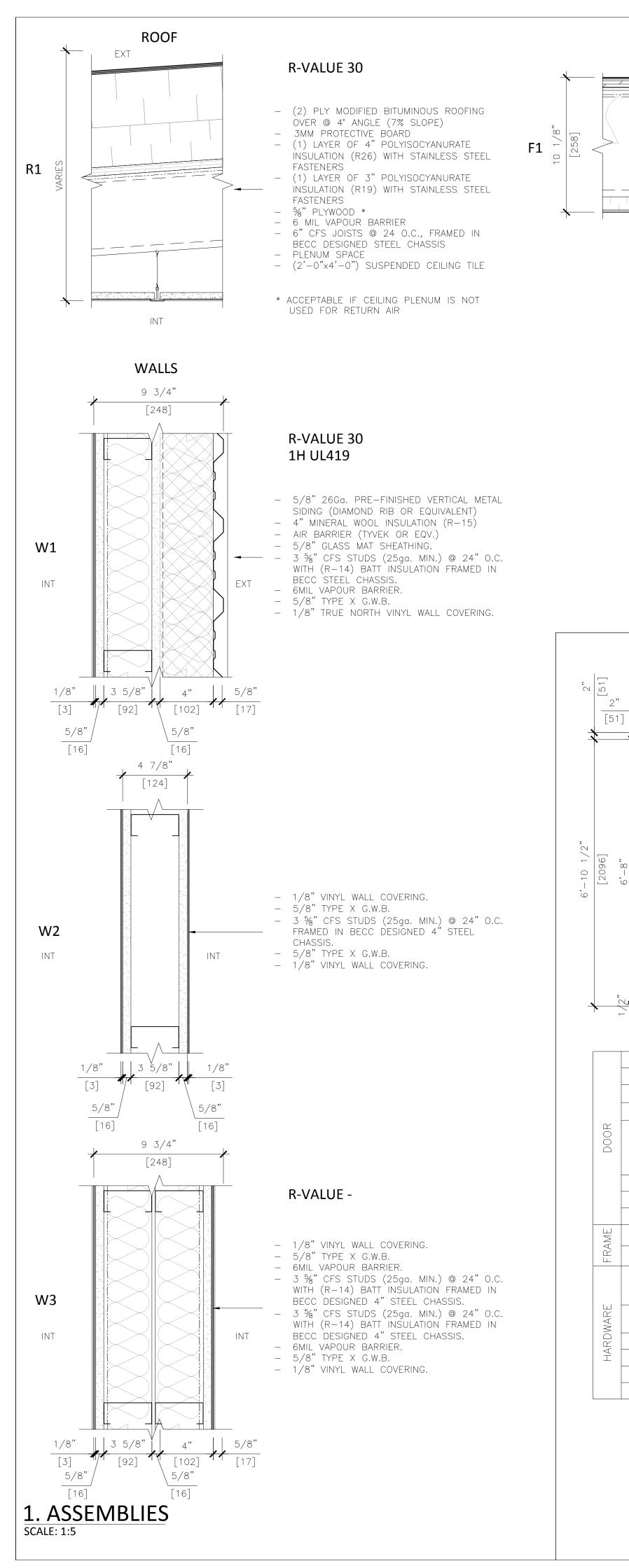
30 WENTWORTH ST NORTH L8L 8H5 AND 200 ACADIA DR.L8W 1B8,

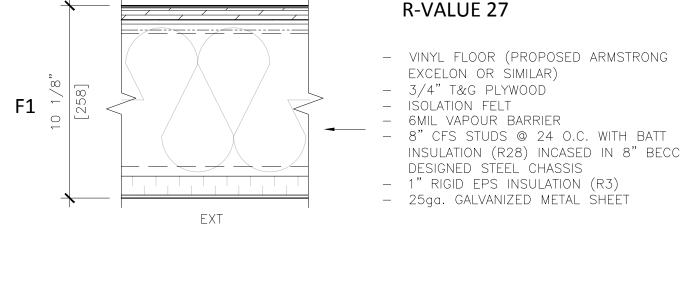
HAMILTON ON

DETAILS

25001 A5.2

3. LOBBY INTERIOR ELEVATION SCALE: 1:20





[1016]

[914]

- KICK PLATE

MARK D01

DESCRIPTION | CLASSROOM DOOR PANEL HEIGHT 6'-8" (2,032mm)

PANEL WIDTH 3'-0" (914mm)

PANEL MATERIAL | TEMPERED GLAZING

MANUFACTURER | KNELL'S OR SIMILAR

FRAMEWIDTH 0'-2" (51mm)

OPERATION LS

LATCH/HANDLE

FINISH PAINTED TO MATCH WINDOWS

FRAME MATERIAL | STEEL, THERMALLY BROKEN, INSULATED

STEEL HINGE

EXTERIOR: LATCH HANDLE,

INTERIOR: LATCH HANDLE

CLOSER | LCN 404XP HEAVY DUTY DOOR CLOSER

SWEEP | W-245 36" ALUMINUM BRUSH SWEEP

KICKPLATE | 80A 8" X 34.5" C32D KICK PLATE

THRESHOLD | CT-45A 36" ALUMINUM THERMALLY BROKEN

- LATCH HANDLE WITH CYLINDER

LOCK EXTERIOR

METAL INSULATED w/ 9" X 30" THERMAL

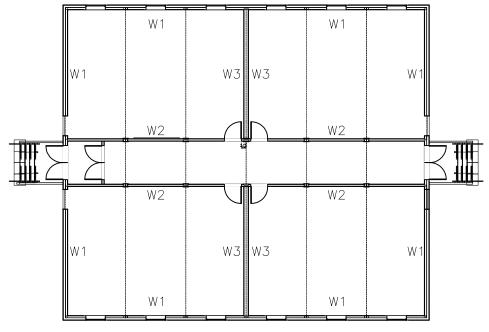
MAX U-069, MAX SHGC 0.45, MINVT/SHGC 1.10

(3) NRP 5 KNUCKLE 4 BALL BEARING STAINLESS

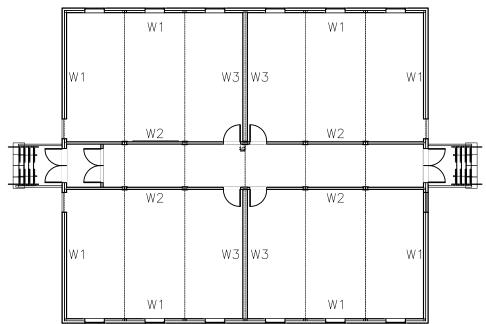
SIDE

FLOOR TYPE

INT



WALL SCHEDULE KEY PLAN SCALE: N.T.S.



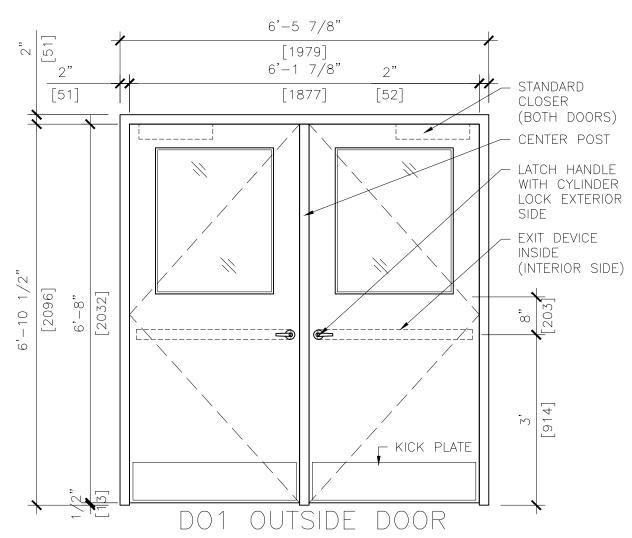
FIXED GLASS W - 1(3 REQUIRED) FINISHED FLOOR MANUFACTURE: POLLARD

[1067]

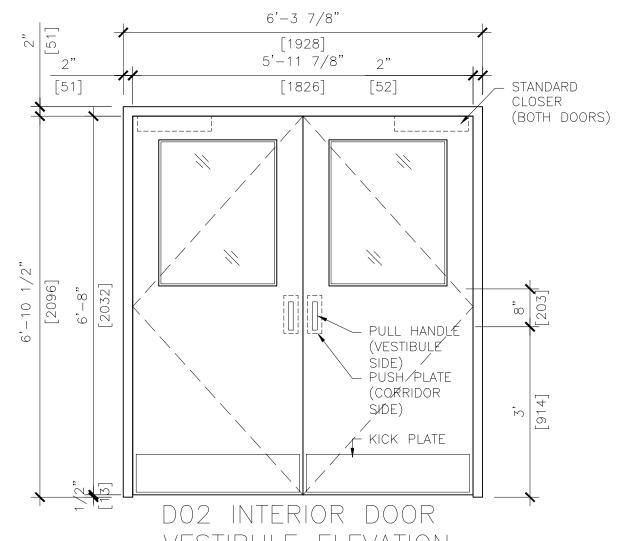
SIZE: 42" X55" FIXED WINDOW: 42" X 39.25" AWNING: 42" X 10" FRAME: WEATHERSIDE EXTERIOR VINYL GLASS: 2 UNITS w/ NC 180 LOW E, TEMPERED, ARGON HARDWARE: WHITE MULTI PT, NESTING SCREEN: FULL

MAX U = 0.29, SHGC 0.45, VT/SHGC 1.10

3. WINDOW SCHEDULE SCALE: 1:20



	EXTE	RIOR ELEVATION
	MARK	D01
	DESCRIPTION	BUILDING ENTRY DOUBLE DOOR
	PANEL HEIGHT	(2) - 6'-8" (2,032mm)
	PANEL WIDTH	(2) - 3'-0" (914mm)
D00R	EACH PANEL MATERIAL	METAL INSULATED w/ 24"W X 30"L THERMAL TEMPERED GLAZING MAX U-069, MAX SHGC 0.45, MINVT/SHGC 1.10
	FINISH	PAINTED TO MATCH WINDOWS
	OPERATION	LS / RS
	MANUFACTURER	KNELL'S OR SIMILAR
ш	FRAMEWIDTH	0'-2" (51mm) FRAME FOR DOUBLE DOOR
FRAME	CENTER FRAME	FOR DOOR LATCH
	FRAME MATERIAL	STEEL, THERMALLY BROKEN, INSULATED
	LATCH/HANDLE EACH DOOR	EXTERIOR: LATCH HANDLE, KEY CYLINDER (1 DOOR ONLY) INTERIOR: PANIC EXIT DEVICE
/ARE	EACH DOOR HINGE	(6) NRP 5 KNUCKLE 4 BALL BEARING STAINLESS STEEL HINGE
HARDWARE	STANDARD CLOSER	(2) LCN 404XP HEAVY DUTY DOOR CLOSER
	THRESHOLD	ALUMINUM THERMALLY BROKEN
	SWEEP	(2) W-245 36" ALUMINUM BRUSH SWEEP
	KICKPLATE	(2) 80A 8" X 34.5" C32D KICK PLATE



	MARK	D02						
	DESCRIPTION							
	PANEL HEIGHT							
	PANEL WIDTH	(2) - 3'-0" (914mm)						
DOOR	PANEL MATERIAL	METAL INSULATED w/ 24"W X 30"L THERMAL TEMPERED GLAZING MAX U-069, MAX SHGC 0.45, MINVT/SHGC 1.10						
	FINISH	PAINTED TO MATCH WINDOWS						
	OPERATION	LS / RS						
	MANUFACTURER	KNELL'S OR SIMILAR						
FRAME	FRAMEWIDTH	0'-2" (51mm) FRAME FOR DOUBLE DOOR						
FRA	FRAME MATERIAL	STEEL, THERMALLY BROKEN, INSULATED						
	LATCH/HANDLE *EACH DOOR	EXTERIOR: PULL HANDLE INTERIOR: PUSH PLATE						
ARE	EACH DOOR HINGE	(6) NRP 5 KNUCKLE 4 BALL BEARING STAINLESS STEEL HINGE						
HARDWARE	STANDARD CLOSER	(2) LCN 404XP HEAVY DUTY DOOR CLOSER						
I	THRESHOLD	ALUMINUM						
	SWEEP	(2) W-245 36" ALUMINUM BRUSH SWEEP						
	KICKPLATE	(2) 80A 8" X 34.5" C32D KICK PLATE						

1. SCHOOL ADMINISTRATOR TO CONFIRM THAT THE FACILITIES OF THE MAIN SCHOOL BUILDING COMPLY WITH THE REQUIREMENTS OF THE O.B.C. 3.7.4 FOR THE TOTAL OCCUPANT LOAD OF THE MAIN SCHOOL BUILDING AND THE PORTABLE CLASSROOMS.

atelier 292 architect inc.

292 MAIN STREET OTTAWA, ONTARIO CANADA K1S 1E1

ARCHITECT STAMP:



DRAWING STATUS YY.MM.DD ISSUED FOR PERMIT REVIEW 25.03.05 25.03.24 ISSUED FOR PERMIT REVISIONS: No. REVISION DATE

BECC MODULAR C.SADDINGTON 1295 CORMORANT ROAD,

ANCASTER, ON L9G 4V5 HAMILTON-WENTWORTH

CATHOLIC DISTRICT SCHOOL BOARD 30 WENTWORTH ST NORTH L8L 8H5

AND 200 ACADIA DR.L8W 1B8, HAMILTON ON

ASSEMBLIES & SCHEDULES

A6.0 25001

2. DOOR SCHEDULE SCALE: 1:20

	DRAWING LIST	
DWG No	DRAWING TITLE	DRAWING SCALE
M01	DRAWING LIST AND ELECTRICAL LEGENDS	N.T.S.
M02	ELECRICAL PLAN	1:50
M60	SPECIFICATIONS	N.T.S.

	FIRE ALARM LEGEND											
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION							
•	HEAT DETECTOR. CONN. TO BLD. FIRE ALARM CONTROL SYSTEM	CO	CO DETECTOR - AMERICAN SENSOR	N	FIRE ALARM HORN							
	SMOKE DETECTOR. CONN. TO BLD. F. ALARM CONTROL SYST.	coc	24 CO DETEC WALL/CEILING MOUNT., MACURO # CM-S1, OR APP. EQUAL	ă	FIRE ALARM COMBO HORN AND STROBE LIGHT							
☑ sa	120 VOLT SMOKE ALARM	CO SA	120 VOLT COMBO SMOKE AND CO ALARM	₩	FIRE ALARM STROBE LIGHT							
⊿ s	GUESTROOM SMOKE DETECTOR WITH INTELLIGENT SOUDER BASE	1₩1	EXIT LIGHT (CEILING) C/W FACES AND ARROWS AS INDICATED		FIRE ALARM PULL STATION							
₩ C	EXIT LIGHT (WALL) C/W FACE AND LIGHT		FIRE ALARM BELL	è	DUCT SMOKE DETECTOR							

		ELE	CTRICAL LEGEND		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
⊘	SINGLE PHASE MOTOR, H.P. AS INSCRIBED	Ψυ	15A, U-GROUND DUPLEX RECEPTACLE C/W USB PORT		125A 120/240V/1HP ELECTRICAL PANEL C/W MAIN BREAKER.
©	THREE PHASE MOTOR, H.P. AS INSCRIBED	φ	120V, U-GROUND DUPLEX RECEPTACLE		TRANSFORMER FROM 120V)24V
	DIRECT POWER CONNECTION TO EQUIPMET	Φ	120V, 20A, T-SLOT, U-GROUND DUPLEX RECEPTACLE		HORN STROBE FOR DOOR SIGNAL FOR HEARING IMPAIRED & ACC. UNITS
È	DISCONNECT SWITCH - FUSE AND SIZE AS NOTED	Ψ	120V, U-GR. SPLIT DUP. REC., ONE HALF ON SWITCH CONTROL	•	DOOR BELL (ACC UNIT) DISTURB SWITCH
Ճ	MOTOR STARTER SUPPLIED AND WIRED BY DIVISION 16	₩ _{GFCI}	120V, U-GR. DUP. REC, WITH GROUND FAULT INTERRUPTER	• •	PUSH BUTTON / EMERGENCY PUSH BUTTON
占	MOTOR STAR. SUPP. BY DIV.15 BUT ISTAL. & WIRED BY DIV. 16	GFCIGFCI	MOUNTED ABOVE COUNTER TOP, OR AS INSTR. ON JOB SITE	EV2	ROUGH-INS FOR FUTURE DUAL PORTS LEVEL 2 CHARGING STATION
	MAGNETIC STARTER	φ	120/ 240V., 1 Ph., 4 WIRE, 30A RECEPTACLE. CONNECT WITH 3	Φ CF	120V, U-GROUND DUPLEX RECEPTACLE FOR COFFEMAKER
JB	JUNCTION BOX	Y	# 10 BX AND GROUND WIRE OR 3 # 10 THW, 13 MM CONDUIT, 1170MM OR 150MM	⊕ MW	120V, U-GROUND DUPLEX RECEPTACLE FOR MICROWAVE
(ТС)ЈВ	IN SUITE TELECOMMUNICATION PANEL 120V OUTLET INSIDE THE	•	120/ 240V., 1 Ph., 4 WIRE, 50A RECEPTACLE. CONNECT WITH 3	Φ FG	120V, U-GROUND DUPLEX RECEPTACLE FOR REFRIGERATOR
(10)05	PANEL TO BE FED FROM SUITE PANEL	¥	# 8 BX AND GROUND WIRE OR 3 # 8 THW, 19 MM CONDUIT	#	120V, U-GROUND QUADPLEX RECEPTACLE
	ANNUNCIATOR C/W SOUNDER	호	15A, 125/250V RECEP. (CSA 6-15R) BY HUBBLE P&S 5671 PTAC	φ ws	RECEPTACLE FOR WASHER
M	ELECTRICAL METER	PTL	PUSH TO LOCK BY OTHERS	Φ dr	RECEPTACLE FOR DRYER
		OL	OCCUPIED WHEN LIT BY OTHERS	#	15A, 125V FLOOR - MOUNTED DUPLEX RECEPTACLE (TYP).

		SE	CURITY LEGEND		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
CR	SECURITY CARD READER ROUGH-IN	WR	WIRELESS RECEIVER	TE	TELEPHONE ENTRY UNIT
DC	DOOR CONTACT ROUGH-IN	ES	ELECTRIC STRIKE		CAMERA
ML	MAGNETIC LOCK	IC	INTERCOM	REX	REQUEST TO EXIST MOTION

	LIGHTING LEGEND												
SYMBOL DESCRIPTION		SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION								
* * * *	SINGLE POLE , SINGLE THROW TOGGLE SWITCH WITH ONE,	\$ DL	DOOR BELL (ACC UNITS)	무	EXTERIOR SINGLE HEAD LIGHT								
\$ \$ \$	TWO OR THREE GANG COVERPLATE RESPECTIVELY	\$ NL	ILLUMINATED LIGHT SWITCH IN GUEST W/R	os	WALL MOUNTED OCCUPANCY SENSOR								
\$ 3	THREE WAY SWITCH	□ОЮ	LIGHTING FIXTURE, CEILING AND WALL MNTD RESPECTIVELY	©S)	CEILING MOUNTED OCCUPANCY SENSOR								
\$ D	DIMMER SWITCH	• H	LIGHTING FIXTURE CONNECTED TO EMERG. LIGHTING CIRCUIT	\checkmark	EMERGENCY LIGHTING HEAD								
\$ LV	LOW VOLTAGE SWITCH	\$ K	SUITE LV KILL SWITCH OVER- RIDE FOR ALL SUITE LIGHTING	\cong	EMERGENCY BATTERY UNIT C/W 18 WATT LAMP HEAD LUMACELL								

COMMUNICATION DEVICES LEGEND										
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION					
▼	WALL MOUNTED TELEPHONE / TELECOMMUNICATION OUTLET	∇	WALL MOUNTED INTERCOM		ANY OF THE NOTED DEVICE TO BE FLUSH OUTLETS					
4	WALL MOUNTED TELEVISION OUTLET	77///	WALL MOUNTED VIDEO INTERCOM	WAP	WIRELESS ACCESS POINT					
•	WALL MOUNTED DATA OUTLET		WALL MOUNTED SUITE SECURITY PANEL							

	GENERAL LEGEND											
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION							
#	KEYED NOTE	1	MECH EQUIPMENT TAG, REFER TO MECH DRAWINGS	ER	EXISTING TO BE RECOLATED							
#	EQUIPMENT LABEL	RL	EXISTING IN RECOLATED LOCATION	C F	CEILING MOUNTED FLOOR MOUNTED							
5	BREAK	R	EXISTING TO BE REMOVED	NL	NIGHT LIGHT							
EX	EXISTING TO REMAIN											



AMP

2 15/04/2025 ISSUED FOR REVIEW

1 27/03/2025 ISSUED FOR PERMIT

No DATE DESCRIPTION

PROJECT LOGO AND ADDRESS

HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

30 WENTWORTH ST NORTH L8L 8H5 AND 200 ACADIA DR.L8W 1B8, HAMILTON ON

KEY PLAN

CONSTRUCTION NORTH

TRUE NORTH

DISCLAIMER

DO NOT SCALE DRAWINGS. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED WITHOUT ENGINEERS WRITTEN PERMISSION.
THE CONTRACT DOCUMENTS WERE PREPARED BY THE ENGINEER FOR THE ACCOUNT OF THE OWNER. THE MATERIAL CONTAINED HEREIN REFLECT THE ENGINEERS BEST JUDGEMENT IN LIGHT OF THE INFORMATION AVAILABLE TO THEM AT THE TIME OF PREPARATION.

ANY USE WHICH A THIRD PARTY MAKES OF THE CONTRACT DOCUMENTS, OR ANY RELIANCE ON OR DECISIONS TO BE MADE BASED ON THEM ARE THE RESPONSIBILITY OF SUCH THIRD PARTIES.
THE ENGINEER ACCEPTS NO RESPONSIBILITY FOR DAMAGE, IF ANY, SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS MADE OR ACTIONS ON THE CONTRACT DOCUMENTS.

JOB NUMBER 25010

SCALE N.T.S.

DATE 05/03/25

DRAWN BY RC

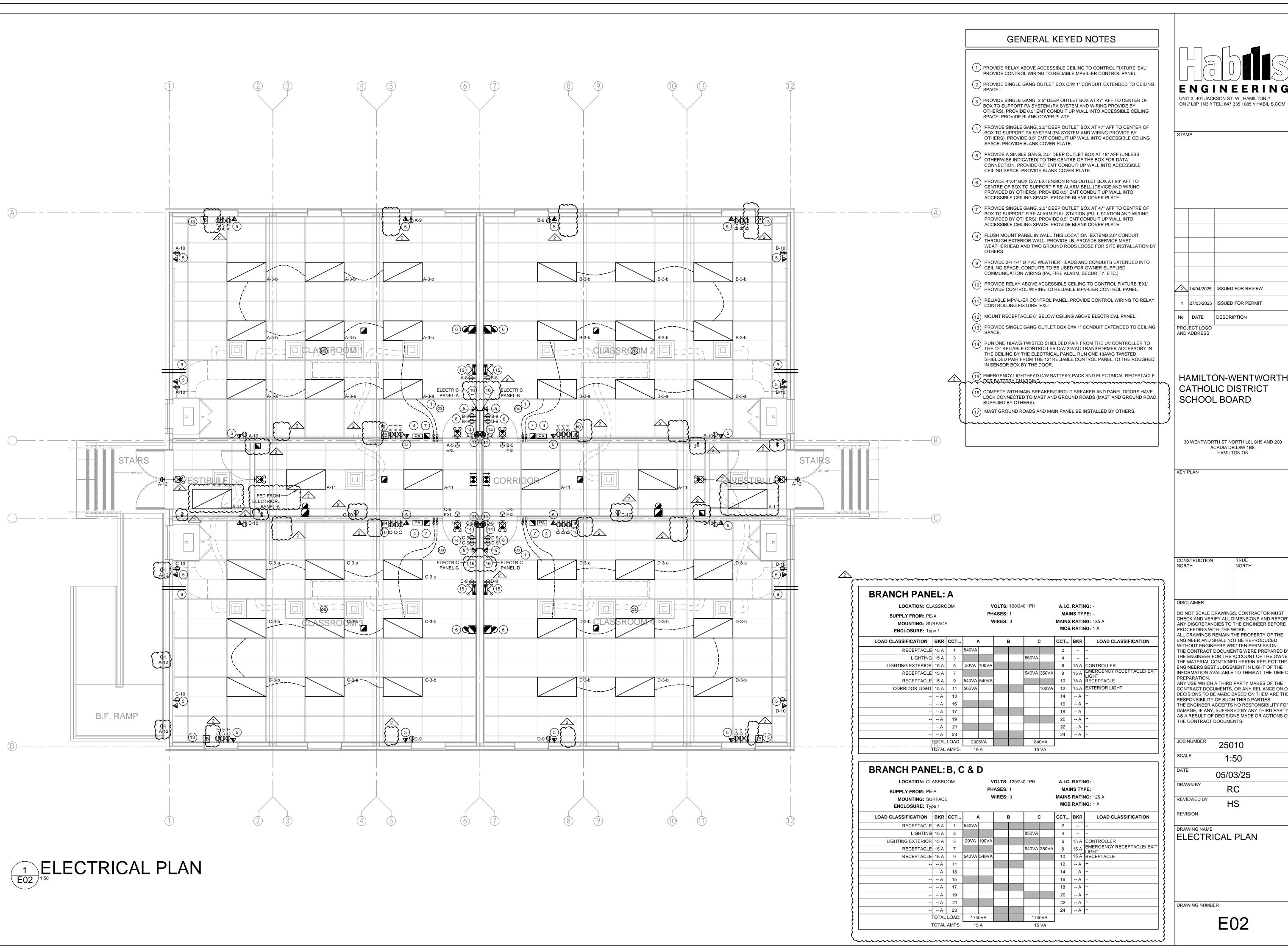
REVIEWED BY HS

REVISION

DRAWING LIST AND ELEC LEGENDS

DRAWING NUMBER

E01



2 14/04/2025 ISSUED FOR REVIEW

No DATE DESCRIPTION

AND ADDRESS

HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

30 WENTWORTH ST NORTH L8L 8H5 AND 200

ACADIA DR.L8W 1B8,

KEY PLAN

NORTH

DISCLAIMER

DO NOT SCALE DRAWINGS. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED

WITHOUT ENGINEERS WRITTEN PERMISSION. THE CONTRACT DOCUMENTS WERE PREPARED BY THE ENGINEER FOR THE ACCOUNT OF THE OWNER. THE MATERIAL CONTAINED HEREIN REFLECT THE ENGINEERS BEST JUDGEMENT IN LIGHT OF THE INFORMATION AVAILABLE TO THEM AT THE TIME OF PREPARATION. ANY USE WHICH A THIRD PARTY MAKES OF THE

CONTRACT DOCUMENTS, OR ANY RELIANCE ON OR DECISIONS TO BE MADE BASED ON THEM ARE THE RESPONSIBILITY OF SUCH THIRD PARTIES. THE ENGINEER ACCEPTS NO RESPONSIBILITY FOR DAMAGE, IF ANY, SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS MADE OR ACTIONS ON THE CONTRACT DOCUMENTS.

JOB NUMBER 25010 SCALE 1:50 05/03/25 DRAWN BY

REVISION

ELECTRICAL PLAN

DRAWING NUMBER

E02

- 1.0 GENERAL REQUIREMENTS
 1.1 THIS DIVISION SHALL INCLUDE THE SUPPLY OF ALL MATERIALS AND THE INSTALLATION OF ALL ELECTRICAL WORK INCLUDING ALL LABOR, EQUIPMENT, TOOLS, NECESSARY TO COMPLETE THE INSTALLATION IN THE BUILDING AND ON THE SITE, AS HEREIN SPECIFIED AND SHOWN ON THE DRAWINGS. PROVIDE A COMPLETE OPERATING SYSTEM
- THE WORK SHALL "GENERALLY" CONSIST OF THE FOLLOWING: LIGHT FIXTURES.
- LIGHT SWITCHES. RECEPTACLES.
- DISTRIBUTION PANEL HYDRO METER CABINET.
- MAIN DISCONNECT SWITCH. - OVERHEAD SECONDARY CABLES C/W WEATHERHEAD.
- SUPPLY AND INSTALLATION OF:
- LED LIGHTING. **EMERGENCY LIGHTING**
- DISTRIBUTION PANEL. WIRING, CONDUIT AND JUNCTION BOXES. POWER CONNECTIONS.
- RECEPTACLES.
- UNIVERSAL WASHROOM KIT
- LIGHT SWITCHES. OCCUPANCY SENSORS HAND DRYERS.
- MAIN DISCONNECT SWITCH HYDRO METER CABINET.
- OVERHEAD SECONDARY CABLES. USE ONLY SPECIFIED MATERIALS AND EQUIPMENT EXCEPT WHERE DESIGNATED "OR APPROVED ALTERNATE"
- ALL ALTERNATES TO SPECIFIED MATERIALS MUST BE APPROVED BY THE OWNER DURING TENDER STAGE AS PER BROCK
- 1.5 THIS DIVISION SHALL CONSULT ALL CONSTRUCTION DRAWINGS AND BE FAMILIAR WITH ALL CONDITIONS AFFECTING THE
- 1.6 WHEN REQUIRED BY THE CONSULTANT, EQUIPMENT SHALL BE RELOCATED UP TO 3 METERS WITHOUT ADDITIONAL CHARGE PROVIDED IT HAS NOT BEEN INSTALLED.
- ALL DIMENSIONS MUST BE CHECKED AND VERIFIED ON THE JOB SITE. 1.8 SUBMIT ELECTRONIC COPIES OF SHOP DRAWINGS TO THE CONSULTANT FOR REVIEW. PROVIDE ELECTRONIC COPIES OF
- OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT INSTALLED, C/W ALL TESTS AND BALANCING DATA, A COPY OF REVIEWED SHOP DRAWINGS, COMPLETE EXPLANATION OF RECOMMENDED MAINTENANCE PRACTICES, PRECAUTIONS AND CERTIFICATES OF GUARANTEES.
- 1.9 PRIOR TO SUBMITTING A TENDER CAREFULLY EXAMINE CONDITIONS AT THE SITE WHICH MAY OR WILL AFFECT THE WORK. REFER TO AND EXAMINE ALL CONTRACT DOCUMENTS TO DETERMINE FINISHED, PARTIALLY FINISHED AND UNFINISHED
- 1.10 COORDINATE DIVISION 26 WORK WITH THE WORK OF ALL TRADES TO ENSURE A PROPER AND COMPLETE INSTALLATION, NOTIFY ALL TRADES CONCERNED OF THE REQUIREMENT FOR OPENINGS, SLEEVES, INSERTS AND OTHER HARDWARE NECESSARY IN THEIR WORK FOR THE ELECTRICAL INSTALLATION, AND, WHERE ELECTRICAL WORK IS TO BE INTEGRATED WITH THE WORK OF OTHER TRADES OR IS TO BE INSTALLED IN CLOSE PROXIMITY WITH THE WORK OF OTHER TRADES, CAREFULLY COORDINATE THE WORK PRIOR TO INSTALLATION.
- 1.11 PROVIDE ALL NECESSARY SLEEVES, INSERTS, BEAM CLAMPS AND HANGERS LOCATE AND SECURELY PLACE SAME. CO— ORDINATE THE INSTALLATION OF THE FIXTURES WITH THE EXISTING STRUCTURE. DETAILS ON DRAWINGS ARE
- DIAGRAMMATIC. INCLUDE ALL ACCESSORIES REQUIRED. 1.12 IN THE EVENT THAT ANY DEVIATIONS FROM THE ELECTRICAL DRAWING S ARE NECESSARY, THIS DIVISION SHALL CONSULT WITH THE CONSULTANT AND OBTAIN WRITTEN APPROVAL BEFORE PROCEEDING.
- 1.13 MOUNTING C HEIGHT OF EQUIPMENT IS FROM FINISHED FLOOR TO CENTERLINE OF EQUIPMENT UNLESS SPECIFIED OR INDICATED OTHERWISE. IF MOUNTING HEIGHT OF EQUIPMENT IS NOT INDICATED, CO-ORDINATE WITH ONTARIO BUILDING CODE AND TOWN OF AURORA AODA STANDARDS BEFORE PROCEEDING WITH INSTALLATION.
- 1.14 FOR WORK BEYOND SCOPE OF THE CONTRACT SUBMIT A QUOTATION WITH A BREAK— DOWN OF MATERIALS, LABOR AND MARK— UPS AND OBTAIN A WRITTEN ORDER FROM THE GENERAL CONTRACTOR BEFORE PROCEEDING. ALL QUOTATIONS TO BE APPROVED BY THE CONSULTANT AND THE OWNER.
- 1.15 CONTRACTOR TO PROVIDE TWO SETS OF WHITE PRINTS AND AS THE JOB PROGRESSES, MARK THESE PRINTS TO ACCURATELY INDICATE INSTALLED WORK. HAVE THE WHITE PRINTS AVAILABLE FOR INSPECTION AT THE SITE AT ALL TIMES, AND PRESENT FOR SCRUTINY AT EACH JOB MEETING. TURN OVER AS—BUILT DRAWINGS VIA PDF TO CONSULTANT FOR REVIEW. CONSULTANT SHALL REVISE AUTOCAD DRAWINGS AND RETURN PDF FILES TO CONTRACTOR TO INCLUDE IN
- 0 & M MANUALS. CONSULTANT TO ALSO PROVIDE CLIENT WITH AUTOCAD FILES. 1.16 DO ALL CUTTING, PATCHING AND MAKING GOOD TO LEAVE IN A FINISHED CONDITION AND TO MAKE THE SEVERAL PARTS OF THE WORK COME TOGETHER. PROPERLY COORDINATE WORK TO KEEP CUTTING AND PATCHING TO A MINIMUM.
- 1.17 SUPPLY AND INSTALL WIRING DEVICES AS INDICATED ON THE DRAWINGS. 1.18 UNLESS INDICATED OTHERWISE IN THE GENERAL CONDITIONS, THE ELECTRICAL CONTRACTOR SHALL SUBMIT FLECTRONICALLY ONE MARKED UP SET OF RECORD DRAWINGS AS "AS BUILT" DRAWINGS AND ONE MAINTENANCE MANUAL, MAINTENANCE MANUAL SHALL INCLUDE, AS A MINIMUM, A COPY OF THE WARRANTY, THE SHOP DRAWINGS FOR
- THE EQUIPMENT AND FIXTURES, THE ELECTRICAL SAFETY AUTHORITY INSPECTION REPORT, AN INDEX OF CONTENTS AND 1.19 CONTRACTOR SHALL COORDINATE POWER REQUIREMENTS OF ALL EQUIPMENT SUPPLIED BY OWNER PRIOR TO SHOP
- DRAWING SUBMITTAL REPORT ANY DISCREPANCIES TO CONSULTANT. 1.20 CORE DRILLING AND PENETRATION IN FLOOR SLAB OR BLOCK/CONCRETE WALL ARE TO BE APPROVED BY OWNER PRIOR
- ANY WORK. INCLUDE COSTS FOR X— RAY AND SCAN AS REQUIRED. 1.21 COORDINATE WITH ARCHITECTURAL DIVISION FOR ALL CUTTING, PATCHING AND PAINTING PRIOR TO SUBMITTING TENDER. 1.22 ACCEPT THE RESPONSIBILITY TO PROTECT THOSE WORK IN TO THE PROJECT FROM ANY PHYSICAL DANCER DUE TO
- EXPOSED LIVE EQUIPMENT SUCH AS PANEL MAINS, OUTLETS, WIRING, ETC., SHIELD AND MARK ALL LIVE PARTS "LIVE—240 VOLTS". OR THE APPROPRIATE VOLTAGE.
- GENERAL CONDITIONS

 THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL LABOUR, MATERIAL, TOOLS, EQUIPMENT, ETC. REQUIRED TO
- COMPLETE ALL WORK SHOWN ON THE DRAWINGS AND HEREIN SPECIFIED. THE WORK SHALL BE IN ACCORDANCE WITH RULES AND REGULATIONS OF ALL AUTHORITIES HAVING LEGAL JURISDICTION OVER THE WORK. THIS CONTRACTOR SHALL PROVIDE ANY SMALL ITEMS OF WORK NOT SPECIFICALLY CALLED FOR BUT REQUIRED TO COMPLETE THE INTENDED
- 2.2 THE ENGINEER RESERVES THE RIGHT TO APPROVE THE QUALITY OF MATERIAL AND WORKMANSHIP, ALSO TO CALL FOR ANY TESTS WHICH ARE DEEMED NECESSARY DURING THE PROGRESS OF THE YORK AND A COMPLETE TEST OF EACH SYSTEM AT THE THE COMPLETION OF THE WORK. THE COST OF SUCH TESTS ARE NOT TO BE CONSIDERED AS EXTRAS
- HE WORK SHALL CONSIST OF, BUT SHALL NOT BE LIMITED TO THE FOLLOWING:
- 3.1 ALL NECESSARY CONDUIT WIRING AND CONNECTIONS FOR A COMPLETE INSTALLATION. 3.2 LIGHTING AND POWER DISTRIBUTION SY5TEM AS SHOWN ON THE DRAWINGS.
- 3.3 MOTOR CIRCUITS 3.4 COMPLETE CONDUIT SYSTEM FOR LOW VOLTAGE SYSTEM WHERE NOTED ON THE DRAWINGS.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL OBTAIN ALL PERMITS, INSPECTIONS, ETC. AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION OVER THIS WORK AND SHALL PAY FOR SAME. THESE COSTS SHALL BE INCLUDED
- 4.2 ALL PERMITS SHALL BE DELIVERED TO THE OWNER REPRESENTATIVE AS SOON AS BECOME AVAILABLE.
- DRAWINGS
 THIS CONTRACTOR SHALL PREPARE, AT HIS OWN EXPENSE. ANY LARGE SCALE WORKING DOINGS WHICH MAY BE
- REQUIRED BY THE EXAMINING AUTHORITIES. AS-BUILT DRAWINGS

 THIS CONTRACTOR SHALL KEEP A SEPARATE SET OF WHITE PRINTS ON THE SITE AND NOTE ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN. TWO SETS OF THESE PLANS ALONG WITH UPDATED ACAD 2022 DRAWINGS
- SHOWING ALL AS—BUILT CONDITIONS SHALL BE FOLDED TO THE ENGINEER AT THE COMPLETION OF THIS CONTRACT BEFORE APPLYING FOR FINAL PAYMENT 6.2 SUBMIT TO ENGINEERS THE FOLLOWING DOCUMENTS FOR REVIEW AND APPROVAL AT THE COMPLETION OF PROJECT: -ELECTRICAL SAFETY INSPECTION CERTIFICATE
- -EMERGENCY ILLUMINATION LEVEL PLOTS ON FLOOR PLANS -FIRE ALARM VERIFICATION REPORT
- SUBMIT SIX (6) COPIES OF MANUFACTURER'S SHOP DRAWINGS FOR ALL DEVICES, SYSTEMS AND SUCH FOR REVIEW BY

- EXAMINATION OF SITE
 THIS CONTRACTOR SHALL VISIT THE SITE OF THE PROJECT AND FAMILIARIZE -HIMSELF WITH THE SPECIFIC SITE 8.2 ANY DEVIATION AND / OR CONFLICTS ON SITE ESPECIALLY CONCERNING THE DISTRIBUTION DIAGRAM (S) AS SHOWN ON THE PLANS, SHALL BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING TENDER.
- CONSTRUCTION SCHEDULE
 THIS CONTRACTOR SHALL SCHEDULE AND PERFORM HIS WORK TO MEET THE COMPLETION SCHEDULE AS SET OUT BY THE PROJECT MANAGER.
- 10.1 NO ADDITIONAL MONEY OVER THE CONTRACT PRICE SHALL BE PAID UNLESS AN APPROVED CHANGE ORDER IS ISSUED BY THE ENGINEER. CLAIMS FOR EXTRAS SHALL BE SUBMITTED WITH A COMPLETE BREAKDOWN OF MATERIAL, LABOUR, HOURLY RATES, ETC. THERE SHALL BE NO EXTRA CLAIM FOR RELOCATION OF ANY EQUIPMENT WITHIN 10 FEET FROM
- 11.0 CLEAN UP
 11.1 THIS CONTRACTOR SHALL BE RESPONSIBLE TO PERIODICALLY REMOVE ALL DEBRIS AND TO KEEP THIS AREA CLEAN AT

ORIGINAL LOCATION.

- 12.1 ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING, OPENINGS, ETC. AND SHALL INFORM THE GENERAL CONTRACTOR OF SLEEVES OR OPENINGS REQUIRED DURING TENDERING SO THAT COSTS ARE INCLUDED AND SHALL INFORM THE GENERAL CONTRACTOR IN SUFFICIENT TIME TO PREVENT UNNECESSARY CUTTING. ANY DAMAGE DONE TO EXISTING FLOORS AND WALLS DURING REMOVAL OF EXISTING INSTALLATIONS SHALL BE PATCHED AND REPAIRED TO MATCH ADJACENT FINISHES.
- 13.0 EXISTING SLAB
 13.1 THIS CONTRACTOR SHALL NOT INSTALL RIGID CONDUIT AND FLOOR BOXES IN EXISTING STRUCTURE FLOOR SLABS OR FRAMING OR CUT EXISTING STRUCTURAL SLABS AND FRAMING FOR THIS PURPOSE IN SUCH A MANNER THAT THE STRUCTURAL INTEGRITY OF THE FLOOR IS WEAKENED, COORDINATE SUCH WORK WITH THE ARCHITECT OR STRUCTURAL
- 14.0 DELIVERY DATES
 14.1 THIS CONTRACTOR SHALL PLACE AN ORDER FOR ALL MATERIAL AND EQUIPMENT IMMEDIATELY AFTER SIGNING OF THE CONTRACT. HE SHALL SUBMIT A LIST OF DELIVERY DATES FOR EACH TYPE OF EQUIPMENT WITHIN TO DAYS OF THE AWARDING OF THE CONTRACT. THE LIST SHALL INCLUDE MANUFACTURER'S NAMES.
- 15.1 GROUNDING SHALL BE AS REQUIRED BY ELECTRICAL CODE AND THE APPROVAL OF ALL EQUIPMENT AND MATERIAL LINEESS SPECIFICALLY NOTED OTHERWISE SHALL BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL MATERIAL AND EQUIPMENT SHALL BE OF THE TYPE SUBJECT TO FACTORY MUTUAL. "UNDERWRITERS LABORATORIES OF CANADA" OR "CANADIAN STANDARDS ASSOCIATED INSPECTION AND APPROVAL" AND SHALL BEAR "U.L.C." OR "C.S.A." LABELS.

- 16.1 DEMONSTRATE THE FUNCTION AND OPERATION OF EACH SYSTEM IN MAINTENANCE STAFF OWNER AND CONSULTANT PRESENCE. CO-ORDINATE COMMISSIONING AND TRAINING SCHEDULE WITH ALL PARTIES
- 17.1 PROVIDE LAMACOID IDENTIFICATION NAMEPLATES. THESE SHALL BE BLACK WITH WHITE ENGRAVED LETTERS AND SHALL BE INSTALLED WITH SCREWS ON ALL EQUIPMENT, DISCONNECT SWITCHES, PANELS, ETC. INDICATING THE LOAD SERVED. EACH LIGHTING PANEL SHALL HAVE A TYPE WRITTEN DIRECTORY SHOWING LIGHTS OR EQUIPMENT CONNECTED TO EACH CIRCUIT. DIRECTORIES SHALL BE MOUNTED ON THE INSIDE OF THE PANEL DOOR WITH A TRANSPARENT PLASTIC COVER.
- 8.0 COORDINATION
 8.1 THIS CONTRACTOR SHALL BE RESPONSIBLE TO CO-ORDINATE THE INSTALLATION OF EQUIPMENT, CONDUIT WORK, LIGHTING FIXTURES, ETC. WITH OTHER TRADES AND THE PROJECT MANAGER PRIOR TO THE ACTUAL INSTALLATION.
- 19.1 ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIRS.
- .0 RESPONSIBILITY
 .1 THIS TRADE SHALL BE RESPONSIBLE FOR THIS WORK UNTIL THE COMPLETION AND FINAL ACCEPTANCE, FOR REPLACING
- ANY ITEM THAT MAY BE DEFECTIVE. DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY
- 1 THIS CONTRACTOR SHALL WARRANT ALL WORK AND EQUIPMENT INSTALLED UNDER THIS CONTRACT, AGAINST ALL DEFECTS OR WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE INSTALLATION BE
- 22.0 CONDUIT AND FITTINGS 22.1 CONDUIT SIZES SHALL BE AS INDICATED ON THE DRAWINGS AND SHALL NOT BE REDUCED IN SIZE WITHOUT AUTHORIZATION. CONDUIT IN FINISHED AREA SHALL BE CONCEALED. ALL CONDUIT SHALL BE INSTALLED PARALLEL TO BUILDING LINES, MAKE FINAL CONNECTIONS TO VIBRATING EQUIPMENT WITH FLEXIBLE CONDUIT.
- 22.2 CONDUITS SHALL BE INSTALLED AT A MINIMUM OF 6" (152MM) FROM UNINSULATED HEATING PIPES. 22.3 CLEAN INTERIOR OF ALL CONDUITS TO REMOVE WATER AND DEBRIS BEFORE PULLING WIRES.
- 22.4 BX CABLES SHALL BE USED FOR FINAL SHORT CONNECTIONS BETWEEN OUTLET AND OUTLET BOX IN CEILING SPACE TO CEILING MOUNTED LIGHTING FIXTURES OR TO FEED OUTLETS, RECEPTACLES IN THE DRYWALL PARTITIONS. BX CABLES
- ARE NOT ALLOWED TO RUN IN THE OPEN CEILING AREAS. 22.5 EMPTY FLEXIBLE STEEL CONDUIT 1/2" (13MM) MINIMUM DIAMETER AND A MAXIMUM OF 6 FEET (1830MM) OR (1.83M) LONG, WITH A FISH WIRE AS INDICATED IN THE DRAWINGS CAN ALSO BE USED.
- 22.6 FOR FIREPROOFING WHERE HOLES ARE DRILLED THROUGH FLOORS OR WALLS, THEY SHALL BE PACKED AROUND CONDUIT WITH "3M" BRAND FIRE BARRIER CAULK CP25 OR 303 PUTTY COMPOUND. MINIMUM CONDUIT SHALL BE 3/4" 19MM), UNLESS OTHERWISE NOTED.
- 22.7 CONDUITS AND ARMOURED CABLES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING. 22.8 SUPPLY AND INSTALL CONDUIT FOR WIRING AND CABLES WHERE THERE IS NO SUSPENDED CEILING CPACE.
- 23.0 PULL AND JUNCTION BOXES
 23.1 BOXES SHALL BE CODE GAUGE AND SIZES TO MEET THE ELECTRICAL CODE REQUIREMENT. SHEET STEEL BOXES FOR
- CONCEALED WORK AND CAST BOXES FOR EXPOSED WORK. 23.2 PROVIDE BARRIERS IN BOXES WHERE DIFFERENT VOLTAGE ARE USED
- 23.3 PROVIDE PULL BOXES ON CONDUIT AT 50—FOOT (15.255M) INTERVALS 23.4 BOXES SHALL BE SUPPORTED INDEPENDENTLY OF CONDUIT
- 24.0 INSTALLATION OF OUTLETS
 24.1 THE PLANS SHOW APPROXIMATE LOCATION OF OUTLETS, EXACT LOCATION SHALL BE COORDINATED ON THE SITE WITH OTHER TRADES, ARCHITECTURAL PLANS, ETC. OUTLETS INACCURATELY LOCATED SHALL BE RE—ADJUSTED OR RELOCATED AT THE CONTRACTOR'S EXPENSE. UNLESS OTHERWISE NOTED ON THE PLAN (S), LOCATE OUTLETS AS
- 24.2 RECEPTACLES, TELEPHONE OUTLETS 18" ABOVE FINISHED FLOOR
- 24.3 OUTLETS OVER COUNTER. 42" ABOVE FLOOR OR CO—ORDINATE ON JOB. 24.4 OUTLETS IN MECHANICAL, ELECTRICAL AND TELEPHONE ROOMS 47" (1200MM) ABOVE FLOOR.
- 24.5 LIGHT 8 SWITCHES 47" TO TOP FROM FINISHED FLOOR.
- 25.0 WIRE AND CABLE
 25.1 UNLESS OTHERWISE NOTED, ALL WIRES SHALL BE COPPER R90, RW90, RA90 OR RWU90 RATING AS REQUIRED ON SITE AND AS DICTATED BY CODE. ALUMINIUM WIRE SHALL NOT BE USED.
- 25.2 THE MINIMUM PERMISSIBLE SIZE FOR BRANCH CIRCUIT WIRING SHALL BE #12 (20M). EXCEPT FOR EMERGENCY LIGHTING
- 25.3 FOR BRANCH WIRING EXCEEDING 100 FEET (30.5M) TO FURTHEST OUTLET FROM A PANEL SHALL BE #10 AT 120 VOLTS. 25.4 WIRES AND CABLES SHALL BE RATED AT 600 VOLTS EXCEPT FOR LOW VOLTAGE CONTROL WIRING WHICH SHALL BE RATED
- 25.5 ALL WIRES SHALL BE NEW AND DELIVERED TO THE SITE OF THE PROJECT IN THEIR ORIGINAL PACKING. WIRES #10 AND BIGGER SHALL BE STRANDED. THIS DENOTES GAUGE #8, #6, #4, ETC. WIRES SHALL BE FACTORY IDENTIFIED. SHOWING
- SIZE, VOLTAGE RATING AND INSULATION TYPE 25.6 PROVIDE SEPARATE INSULATED GROUND CONDUCTOR FOR EACH FEEDER AND BRANCH CIRCUIT 25.7 FINAL CONNECTIONS TO LUMINAIRES SHALL ORIGINATE FROM AN OUTLET BOX. CONNECTIONS OF FIXTURE BODY TO
- FIXTURE BODY SHALL NOT BE ACCEPTABLE. 25.8 CODE APPROVED WIRE SHALL BE USED FOR FINAL LUMINAIRE OR APPLIANCE CONNECTIONS
- 26.1 ALL MATERIALS SHALL BE OF HIGH QUALITY COMMERCIAL GRADE AND SHALL BE CSA APPROVED. 26.2 ENSURE THAT MATERIALS AND EQUIPMENT ARE DELIVERED TO THE SITE AT THE PROPER TIME AND IN SUCH ASSEMBLIES AND SIZES SO AS TO ENTER INTO THE BUILDING AND TO BE MOVED INTO THE SPACES WHERE THEY ARE TO BE LOCATED WITHOUT DIFFICULTY. BE RESPONSIBLE FOR CUTTING AND PATCHING INVOLVED IN GETTING ASSEMBLIES INTO PLACE. 26.3 REPLACE WORK UNSATISFACTORY TO THE CONSULTANT WITHOUT EXTRA COST.
- 26.4 PROTECT FROM DAMAGE ALL EQUIPMENT DELIVERED TO THE SITE AND DURING INSTALLATION. ANY DAMAGE OR MARKING OF FINISHED SURFACES SHALL BE MADE GOOD TO THE SATISFACTION OF THE CONSULTANT.
- 26.5 ALL EQUIPMENT, MATERIALS AND WORKMANSHIP SHALL BE UNCONDITIONALLY GUARANTEED FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE. OBTAIN WRITTEN ORDER FROM OWNER BEFORE PROCEEDING.
- INSTALL EQUIPMENT, CONDUIT AND CABLES IN A WORKMANLIKE MANNER TO BEST SUIT SPACE, TO PRESENT A NEAT APPEARANCE AND TO FUNCTION PROPERLY TO THE SATISFACTION OF THE CONSULTANT. INSTALL EQUIPMENT AND
- APPARATUS REQUIRING MAINTENANCE, ADJUSTMENT OR EVENTUAL REPLACEMENT WITH DUE ALLOWANCE THEREFORE. 26.7 IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SUPPORT LITIGATING FIXTURES ADEQUATELY.
- 27.1 THE WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF ONTARIO ELECTRICAL SAFETY CODE, THE CANADIAN ELECTRICAL CODE, THE ONTARIO BUILDING CODE AND ALL AUTHORITIES HAVING JURISDICTION. 27.2 SUBMIT THE REQUISITE NUMBER OF SETS OF PLANS AND SPECIFICATIONS, TO THE ELECTRICAL SAFETY AUTHORITY.
- CONTRACTOR TO SET FINAL APPROVALS FROM ALL AUTHORITIES, C/W ESA CERTIFICATION AND PAY ALL FEES. 27.3 THIS DIVISION SHALL FIVE ALL NECESSARY NOTICES AND OBTAIN ALL NECESSARY PERMITS AND PAY ALL FEES. FURNISH ALL USUAL CERTIFICATES NEEDED AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATION S OF THE AUTHORITIES HAVING JURISDICTION, BEFORE FINAL PAYMENT OF CONTRACT IS MADE.
- 28.0 BASIC MATERIALS & METHODS
 28.1 EMT (THINWALL) CONDUIT, TO C.S.A. C22.2 NO. 83, COMPLETE WITH FACTORY MADE BENDS WHERE SITE BENDING IS NOT POSSIBLE AND JOINTS AND TERMINATIONS MADE WITH SET SCREW TYPE CONNECTORS, CONCRETE TIGHT WHERE REQUIRED. MAXIMUM ALLOWABLE SIZE SHALL BE 50mm DIAMETER
- SUITABLE LIQUID—TIGHT FLEXIBLE CONDUIT CONNECTORS AT TERMINATIONS. 28.3 INSTALL CONDUIT AND CONDUCTORS SHALL BE CONCEALED IN ALL FINISHED AREAS AND CONCEALED TO THE DEGREE MADE POSSIBLE BY FINISHES IN PARTLY FINISHED AND UNFINISHED AREAS. CONDUIT MAY BE EXPOSED IN UNFINISHED AREAS UNLESS OTHERWISE NOTED ON THE DRAWING S OR SPECIFIED HEREIN. 28.4 WHERE CONDUIT AND OR CONDUCTORS ARE EXPOSED ARRANGE SAME TO AVOID INTERFERENCE WITH OTHER WORK

28.2 GALVANIZED STEEL FLEXIBLE LIQUID—TIGHT METALLIC CONDUIT, TO C.S.A. C22.2 NO. 56, COMPLETE WITH PROPER AND

- AND PARALLEL TO BUILDING LINES. WHERE HORIZONTAL CONDUIT AND CONDUCTORS ARE EXPOSED, INSTALL AS HIGH AS POSSIBLE. DO NOT INSTALL CONDUIT AND/OR CONDUCTORS WITHIN 150mm OF FLUE OR HEATING PIPES OR EQUIPMENT. 28.5 CONDUCTORS SHALL BE COPPER "RW90" SINGLE CONDUCTOR TO C.S.A. C22.2, COLOR CODED, 75 DEC. C, RATED WITH APPROVED MANUFACTURED CONNECTORS AT JOINTS IN CONDUIT. THE CONDUIT WITHIN THE BUILDING SHALL BE EMT
- EXCEPT WHERE INDICATED OTHERWISE. 28.6 BRANCH CIRCUIT CONDUCTORS UP TO AND INCLUDING #10 AWG MAY BE SOLID. CONDUCTORS GREATER THEN #10 AWG SHALL BE STRANDED. ALL CONDUCTORS SHALL BE CONSTRUCTED OF HIGH CONDUCTIVITY COPPER. MINIMUM POWER
- CONDUCTOR SIZE SHALL BE § 12AWC. MINIMUM CONDUIT SIZE SHALL BE 21mm. 28.7 BRANCH WIRING FOR 120V SHALL BE #12 AWG UP TO 18m IN LENGTH MAXIMUM. ANY LENGTHS GREATER THAN 18m AND LESS THAN 36m SHALL BE #10 AWG. ANY LENGTH GREATER THAN 36m SHALL BE SIZED TO SUIT EQUIPMENT AND VOLTAGE
- 28.8 PROVIDE ALL REQUIRED STEEL PULL AND JUNCTION BOXES OF SUFFICIENT SIZE TO TAKE RACEWAY ENTERING THEM, CONDUCTORS, AND CONNECTIONS THERE TO WITHOUT CROWDING. PULL BOXES AND JUNCTION BOXES SHALL BE CONSTRUCTED OF GALVANIZED OR PRIME COATED STEEL, EACH SHALL BE SUITABLE IN ALL RESPECTS. FOR THE APPLICATIONS, AND COMPLETE WITH SCREW—ON HINGED COVERS AS REQUIRED, THE PHYSICAL SIZE OF PULL BOXES SHALL BE AS REQUIRED BY THE "CODE" TO SUIT THE NUMBER AND SIZE OF CONDUITS AND CONDUCTORS. PROVIDE PULL BOXES IN CONDUIT SYSTEMS WHEREVER NECESSARY TO FACILITATE CONDUCTOR INSTALLATIONS. GENERALLY, CONDUIT RUNS EXCEEDING 30M IN LENGTH. OR WITH MORE THAN TWO (2) 90 DEGREE BENDS SHALL BE EQUIPPED WITH A PULL BOX INSTALLED AT A CONVENIENT AND SUITABLE INTERMEDIATE LOCATION. PROVIDE BOXES WITH SCREWED COVERS
- UNLESS OTHERWISE INDICATED. 28.9 INSTALL SWITCHES, DEVICES, OUTLETS, AND RECEPTACLES FOR EXPOSED WORK IN FS AND FD CAST GALVANIZED STEEL
- 28.10 PROVIDE EACH DEVICE, FIXTURE, EQUIPMENT IN FINISHED AREAS WITH SUITABLE FLUSH MOUNTED OUTLET BOX
- COMPLETE WITH GROUND LUG AND ADAPTED TO THE RESPECTIVE LOCATION. 28.11 PROVIDE ELECTRO GALVANIZED STEEL SINGLE AND MULTI WANG FLUSH DEVICE BOXES FOR FLUSH INSTALLATIONS. PROVIDE ELECTRO GALVANIZED STEEL UTILITY BOXES FOR OUTLETS CONNECTED TO SURFACE MOUNTED EMT CONDUIT IN INTERIOR APPLICATIONS, PROVIDE 4" OCTAGONAL BOXES FOR LIGHTING FIXTURE OUTLETS AND SQUARE
- OUTLET BOXES WITH EXTENSION AND PLASTER RINGS FOR FLUSH MOUNTING IN FINISHED PLASTER WALL APPLICATIONS. 28.12 15A, 120V LIGHT SWITCHES SHALL BE TOGGLE TYPE SPECIFICATION GRADE HUBBELL MODEL §CSB 115W OR APPROVED EQUIVALENT. 28.13 ALL LIGHT SWITCHES SHALL HAVE STAINLESS STEEL COVER PLATE TO SUIT.

28.14 15A, 125V, 1PH, 3W GROUNDED DUPLEX RECEPTACLES SHALL BE HUBBELL MODEL #HBL5262W OR APPROVED

APPROVED EQUIVALENT. PROVIDE GFI RECEPTACLES WHERE INDICATED HUBBLE MODEL # GF15WL OR APPROVED 28.15 30A, 125/250V, SINGLE, TWISTLOCK RECEPTACLES SHALL BE HUBBELL MODEL #HBL27 1 0 OR APPROVED EQUIVALENT. 28.16 ALL COVER PLATES FOR RECEPTACLES IN FINISHED AREAS SHALL BE STAIN LESS STEEL BRUSHED FINISH. COVER PLATES.

EQUIVALENT. PROVIDE WEATHERPROOF RECEPTACLES WHERE INDICATED HUBBELL MODEL #HBL5262WWR OR

- IN UNFINISHED AREAS SHALL BE GALVANIZED METAL. 28.17 OCCUPANCY SENSORS FOR 120V LIGHTING FIXTURES SHALL BE HUBBELL MODEL #ATD 2000CRP C/W POWER PACK MODEL ECU 120A. ALL SENSORS SHALL BE SET TO 30 MINUTE "DELAY TO OFF" UNLESS OTHERWISE DIRECTED. ACCEPTABLE ALTERNATE MANUFACTURES ARE LEVITON AND WATTSTOPPER OR APPROVED EQUAL.
- 28.18 PRIOR TO ELECTRICAL ROUGH—IN, CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL AND MECHANICAL DIVISIONS FOR EXACT EQUIPMENT LOCATION. 28.19 WHERE ELECTRICAL MATERIAL OR DEVICES PASS THROUGH FIRE RATED SEPARATIONS, MAKE PENETRATIONS AND PROVIDE FIRE BARRIER SEALS WITH A FIRE RESISTANCE RATING EQUIPMENT TO THE RATING EQUIVALENT OF THE

SEPARATION. ACCEPTABLE MANUFACTURES SHALL BE 3M OR APPROVED EQUAL.

- 29.0 CONNECTORS FOR WIRES
 29.1 PROVIDE AN APPROVED TYPE WIRE CONNECTOR SIMILAR TO "IDEAL" OR "SUPER—NUT".
- 30.0 POWER DISTRIBUTION SYSTEM30.1 THE POWER DISTRIBUTION SYSTEM SHALL BE AS SHOWN ON THE PLANS AND AS HEREINAFTER SPECIFIED.
- 30.2 LIGHTING PANEL 30.3 PANEL BOARDS SHALL BE COMPLETE WITH COPPER BUS, HINGED LOCKABLE DOORS, DRIP HOODS, BOLT-ON TYPE, FULL SIZE BREAKERS. BALANCE LOAD ON ALL PHASES TO WITHIN 5%. PROVIDE "LOCK-ON" DEVICES FOR BREAKERS CONTROLLING NIGHT LIGHTS & EXIT LIGHTS, EMERGENCY LIGHTS, ALARM SYSTEM. THE INTERRUPTING CAPACITY SHALL BE 10KA FOR 120/208V PANELS AND 18KA FOR 347/600V PANELS (CONTRACTOR TO VERIFY).
- 31.0 MECHANICAL EQUIPMENT
 31.1 UNLESS OTHERWISE SHOWN ON PLANS, FOR MECHANICAL EQUIPMENT PROVIDED BY THE MECHANICAL TRADE REQUIRING ELECTRICAL POWER, THE ELECTRICAL TRADE SHALL PROVIDE:
- 31.2 THE NECESSARY POWER DISTRIBUTION EQUIPMENT AT THE ELECTRICAL ROOM.
- 31.3 THE NECESSARY CONDUIT AND WIRE TO THE MECHANICAL EQUIPMENT LOCATION. 31.4 A TERMINATING DISCONNECT SWITCH AND,
- 31.5 ANY MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THE WORT AS SHOWN ON THE DRAWINGS. 31.6 CO-ORDINATE EXACT LOCATIONS WITH THE MECHANICAL TRADE AND RELATED DRAWINGS.
- 31.7 ALL CONDUIT, WIRING, AND LABOUR FROM THE TERMINATING DISCONNECT SWITCH TO THE MECHANICAL EQUIPMENT INCLUDING STARTERS AND LOW VOLTAGE CONTROLS SHALL BE PROVIDED BY THE MECHANICAL TRADE. 31.8 UNLESS OTHERWISE INDICATED, ALL SPECIFIED ELECTRICAL HEATING EQUIPMENT TOGETHER WITH THE CONTROL
- THERMOSTATS, CONDUIT, WIRE, ETC. AND ELECTRICAL DISTRIBUTION EQUIPMENT SHALL BE PROVIDED BY THE FLECTRICAL TRADE
- 31.9 THE ELECTRICAL TRADE SHALL VERIFY ALL MOTOR CONNECTIONS FOR PROPER PHASE ROTATION, WHERE APPLICABLE.
- 32.0 WIRING DEVICES
 32.1 DUPLEX RECEPTACLES SHALL BE GROUNDING TYPE MINIMUM RATED FOR 15A. 120V, SPECIFICATION GRADE AND DECORA TYPE UNLESS OTHERWISE SPECIFIED ON PLANS. THESE SHALL HAVE BREAK—OFF LINE TO ALLOW FOR SPLIT WIRING OR 2 CIRCUITS. EQUIVALENT MANUFACTURER OF RECEPTACLES ARE AS FOLLOWS: "ARROW HART" AND "PASS & SEYMOUR", SPECIFICATION GRADE. GENERAL PURPOSE RECEPTACLE SHALL BE WHITE AND RECEPTACLES DEDICATED FOR ELECTRONIC EQUIPMENT SUCH AS COMPUTERS, COPIER ETC. SHALL BE GRAY IN COLOUR. 32.2 LIGHT SWITCHES SINGLE POLE/3—WAY AND 4—WAY AS SHOWN SHALL BE "WHITE" AND SPECIFICATION GRADE EQUAL TO
- HUBBELL 1200 SERIES. EQUIPMENT MANUFACTURER OF SWITCHES ARE AS FOLLOWS: "ARROW HART" AND "PASS & SEYMOUR", SPECIFICATION GRADE. 32.3 COVER—PLATES SHALL BE BRUSHED STAINLESS STEEL FINISH. VERIFY ANY SPECIAL FINISH WITH DESIGNER.
- 32.4 TELEPHONE COYER-PLATES SHALL BE AS ABOVE.
- 33.1 PROVIDE LUMINAIRES AND LAMPS AS INDICATED ON THE LUMINAIRE SCHEDULE AND / OR AS SPECIFIED UNDER THIS SECTION. THESE MUST AND SHALL BE COMPLETE WITH ALL NECESSARY PLASTER FRAMES, HANGERS, LAMPS, LOUVERS,
- 33.2 CONTRACTOR SHALL INCLUDE IN HIS TENDER THE LUMINAIRE (S) THAT ARE BEING SPECIFIED, IF AN ALTERNATE MANUFACTURER IS NAMED, IT IS MANDATORY THAT THE LUMINAIRE BE EQUIVALENT IN ALL RESPECTS, (I.E. SAME LENS, EQUIVALENT FRAME, PERFORMANCE, PAINT FINISH, BALLAST, CONSTRUCTION QUALITY, ETC.), ALTERNATE MANUFACTURERS OR ALTERNATE LUMINAIRE TYPES MUST BE OFFERED AS AN ALTERNATE ONLY, TO THE BASE BID, WITH A SEPARATE PRICE STATED IN THE TENDER. LOW BIDDER WILL BE DETERMINED ON THE BASIS OF THE SPECIFIED ITEMS
- NOT ON "AI TERNATE SAVINGS" 33.3 CO-ORDINATE THE MOUNTING AND LOCATION OF LUMINAIRES WITH OTHER TRADES TO AVOID CONFLICTS. 33.4 LUMINAIRES IN MECHANICAL AND ELECTRICAL ROOMS SHALL BE INSTALLED AFTER ALL EQUIPMENT IS IN PLACE, THIS CONTRACTOR SHALL REMOVE AND DISPOSE OF LIGHTING LUMINAIRES NOT BEING RE—USED UNDER NO SCHEME WHETHER SHOWN ON DOING OR NOT.
- 34.0 VOICE/DATA CONDUIT SYSTEM
 34.1 PROVIDE CONDUIT SYSTEM FOR WIRING UNDER THIS CONTRACT AS SHOWN ON THE PLANS.

33.5 INCLUDE FOR THIRD PARTY FUNCTIONAL TESTING OF ALL LIGHTING CONTROL DEVICES AND SYSTEMS.

- 34.2 CONDUIT (OTHER THAN INCOMING) SHALL BE (EMT) THINWALL WITH PVC END BUSHING AT BOTH ENDS AND 90 DEG ELBOW. THE CONDUIT SYSTEM SHALL BE CLOSED SYSTEM FROM OUTLETS TO THE SERVER ROOM. 34.3 A MAXIMUM OF 2 LONG RADIUS 90 DEGREE BENDS SHALL BE PROVIDED BETWEEN PULL BOXES.
- 35.0 MISCELLANEOUS
 35.1 PROVIDE EMERGENCY LIGHTING, TIME SWITCHES, DOOR BELL SYSTEM, NIGHT LIGHTS SIGN CIRCUITS AND ANY OTHER EQUIPMENT AND / OR CONDUIT WIRE AND CONNECTIONS AS SHOWN ON THE DRAWINGS.
- 36.0 ELECTRICAL DISTRIBUTION
 36.1 THE PANELBOARD SHALL BE AS SCHEDULED ON DRAWINGS AND AS SPECIFIED HEREIN AFTER. DISTRIBUTION PANELBOARDS 1 20/240V, 1 PHASE 3W. PANELBOARDS FOR DISTRIBUTION OF POWER AND LIGHTING CIRCUITS SHALL BE SUITABLE FOR 120/240V, 1 PHASE, 3W OPERATION AS INDICATED, WITH AMPACITY AND CIRCUITS AS SHOWN AND WITH BOLT—ON CIRCUIT BREAKERS HAVING AN INTERRUPTING CAPACITY AT RATED VOLTAGE TO MEET AVAILABLE FAULT CURRENT AS INDICATED ON DRAWINGS. SERIES RATING OF BREAKERS WILL NOT BE ACCEPTABLE TO ACHIEVE FAULT CURRENT INDICATED ON DRAWING S. CABINETS SHALL "CODE" QUALITY, GALVANIZED STEEL WITH ALL REQUIRED KNOCK—OUTS, MINIMUM 100mm GUTTERS ON ALL FOUR SIDES, AND REMOVABLE BOX ENDS. TRIMS SHALL INCLUDE

ADJUSTABLE CONCEALED FASTENERS, CONCEALED, HINGED, LOCKABLE DOORS AND SUITABLE DIRECTORY. TRIM

REQUIREMENTS SHALL SUIT THE PANEL LOCATION. PANELS SHALL BE IN NEMA—1 ENCLOSURE. PANELBOARD BUSSING

- SHALL BE COPPER FLAT BARS. BUS: COPPER, HALF CAPACITY GROUND BAR AND FULL (200) CAPACITY NEUTRAL BAR, BRACED FOR INTERRUPTING CAPACITY AS INDICATED. CIRCUIT BREAKERS: BOLT-ON, QUICK - MAKE, QUICK-BREAK, THERMAL AND MAGNETIC TRIPS, TRIP INDICATING, TRIP FREE HANDLE. COMMON OPERATING HANDLE ON MULTIPOLE BREAKER. ACCEPTABLE MANUFACTURERS ARE SCHNEIDER GROUP (FPE LTD., SQUARE D), EATON AND SIEMENS LTD. 36.2 ALL SINGLE POLE BREAKERS PROVIDED FOR RECEPTACLE CIRCUITS SHALL BE RATED AT 15 AMPS, UNLESS OTHERWISE NOTED. WHERE A 2 OR 3 POLE CIRCUIT IS INDICATED ON THE DRAWINGS, THE BREAKERS SHALL HAVE A COMMON TRIP:
- EXTENSION HANDLES WILL NOT BE ACCEPTED. BREAKERS SPECIFIED FOR USE ON POWER FEEDER CIRCUITS SHALL HAVE A FRAME SIZE AND TRIP RATING AS SCHEDULED OR OTHERWISE INDICATED. 36.3 PROVIDE NEW BREAKERS FOR ALL CIRCUITS TO SUIT PANEL AS REQUIRED. THE BREAKERS SHALL FEATURE BOLT—ON CONSTRUCTION AND A QUICK— MAKE, QUICK — BREAK ACTION, BE PROVIDED WITH AN ARC QUENCHINC DEVICE AND HAVE TRIP — FREE HANDLES. THEY SHALL PROVIDE INVERSE TIME THERMAL OVERLOAD PROTECTION COMBINED WITH INSTANTANEOUS MAGNETIC TRIP HAVING AN INTERRUPTING RATINC OF NOT LESS THAN 22,000 AMPS FOR 120/240V
- BREAKERS. BREAKERS SHALL BE EATON, SIEMENS, SCHNEIDER CANADA OR APPROVED EQUAL. LIGHTNING ARRESTER SHALL BE SUITABLE FOR 240/120V SINGLE—PHASE SYSTEM BY STANDARD OF ACCEPTANCE SHALL
- EQUAL TO INTERMATIC AC2401 OR REVIEWED EQUIVALENT. 36.5 SAFETY SWITCHES SHALL BE HEAWY DUTY SERIES SAFETY SWITCHES. EACH SAFETY SWITCH SHALL BE FRONT OPERATED WITH RED HANDLE SUITABLE FOR PADLOCKING IN THE "OFF" POSITION AND ARRANGED SO THAT THE ENCLOSURE COVER CANNOT BE OPENED WITH THE HANDLE IN THE "ON" POSITION. OPERATING MECHANISMS SHALL BE QUICK — MAKE, QUICK —BREAK, POSITIVE ACTING WITH VISIBLE BLADES, AND A LINE TERMINAL SHIELD, FUSIBLE UNITS SHALL BE COMPLETE WITH FUSE CLIPS SUITABLE FOR H.R.C., CLASS "J" FUSES UNLESS OTHERWISE NOTED. EACH UNIT SHALL ALSO BE EQUIPPED WITH SOLDERLESS LUGS AND A FRONT COVER NAMEPLATE IDENTIFYING THE CATALOGUE NUMBER AND ELECTRICAL CHARACTERISTICS. ENCLOSURES FOR SAFETY SWITCHES SHALL BE, UNLESS OTHERWISE NOTED, EEMAC 1 ENCLOSURES OR EEMAC 4X FOR OUTDOOR WEATHERPROOF INSTALLATIONS. THE AMPERE RATING, NUMBER OF POLES, AND FUSE REQUIREMENTS FOR SAFETY SWITCHES SHALL BE AS SPECIFIED ON THE DRAWINGS. THE DISCONNECT SWITCHES SHALL BE SELECTED SO THAT THEY WILL FIT INTO THE SPACE AVAILABLE AND MEET THE REQUIREMENTS OF THE ONTARIO ELECTRICAL SAFETY CODE. ELECTRICAL INTERLOCK: MECHANICALLY OPERATED FROM SWITCH
- MECHANISM, RATED 120/240V AC, 15A, 1 NO AND 1 NC CONTACT. THE MAIN DISCONNECT SWITCH SHALL BE SERVICE ENTRANCE RATED AS INDICATED. ACCEPTABLE MANUFACTURERS, ARE EATON, SQUARE D OR SIEMENS. 36.6 HAND DRYER SHALL BE TOUCH FREE TYPE. THE DRYER COMES WITH 1450 WATT/ 12OV AC WHICH HAS THE CAPACITY TO DRY HANDS APPROXIMATELY IN 1.0 SEC. THE HIGH POWER UNIT SHALL COME WITH 1.0 YEARS WARRANTY OR MORE WITH VANDAL PROOF FEATURE. BLAST TYPE WITH 19000 LFM AIR VELOCITY, CERTIFIED BY CSA (C), NOMINAL SIZE 241 mmW x 279mmH x 172mmD. MATERIAL SHALL BE ONE PIECE GALVANIZED STEEL WITH A PORCELAIN ENAMEL FINISH WHITE ANTI
- 36.7 GROUND RODS SHALL BE COPPER CLAD 20mm DIAMETER, 3m LONG. GROUNDING CONDUCTORS SHALL BE AS INDICATED ON THE DRAWINGS AND ALL POLES AND PANELS SHALL BE PROPERLY INTERCONNECTED AND BONDED. 36.8 PROVIDE COMPLETE SYSTEMS OF ELECTRIC SERVICE GROUNDING AS OUTLINED HEREIN AS SPECIFIED AND DETAILED ON THE DRAWINGS, GROUNDING SHALL COMPLY WITH THE REQUIREMENTS OF ALL GROUNDING REGULATIONS REQUIRED BUT NOT SPECIFIED HEREIN OR DETAILED ON THE DRAWINGS. WHERE CONDUIT SYSTEMS ARE USED FOR GROUNDS. PROVIDE ALL NECESSARY BUSHING S. STUDS AND JUMPERS AS MAY BE REQUIRED TO MAINTAIN EFFECTIVE CONTINUITY

ACID AND SCRATCH RESISTANT, COMAC CORPORATION INC MODEL \$C -2001 00000 OR APPROVED EQUIVALENT.

- OF GROUND. PROVIDE SEPARATE GROUND CONDUCTORS IN ALL CONDUITS. BOND THE GROUND WIRE TO ALL BOXES AND LUMINAIRES. TEST ALL RECEPTACLES FOR PROPER GROUND CONNECTIONS WITH A NEON LAM P TYPE POLARITY TESTER. 36.9 LIGHTING CONTROL PUSHBUTTON STATIONS C/W WEATHERPROOF EEMAC BOX AND COVER FOR 'ON/OFF' OPERATION. ONE STATION FOR BASEBALL LIGHTING AND ONE STATION FOR SOCCER LIGHTING. ACCEPTABLE MANUFACTURES: EATON, ALLEN-BRADLEY, SCHNEIDER OR APPROVED EQUIVALENT.
- CONTACTS, MINIMUM 2N.O. AND 2N.C. CONTROL TRANSFORMER, FUSED PRIMARY AND SECONDARY, 120 VOLT OUTPUT. ACCEPTABLE MANUFACTURERS: EATON, ALLEN — BRADLEY, BE CANADA, SCHNEIDER, SQUARE D OR APPROVED EQUIVALENT.
- 36.11 TIMER SHALL BE STEEL, EEMAC 12 ENCLOSURE. (ASTRONOMIC DIAL WITH 3 NO/3 NC 5 AMP 120 VOLT CONTACTS, ADJUSTABLE SETTING S WITH 1 "ON" 1 "OFF" PER DAY) MANUAL BYPASS SWITCH 120 VOLT MOTOR WITH SPRING RESERVE, ACCEPTABLE MANUFACTURERS: TORK, INTERMATIC, PARAGON.

36.10 CONTRACTOR SHALL BE EEMAC TYPE, ELECTRICALLY HELD, HEAVY DUTY, DESIGNED FOR THE APPLICATION. AUXILIARY

- 36.12 PROVIDE 120/24OV, 3 PHASE, 4 WIRE SERVICE ENTRANCE FEEDER GENERALLY AS SHOWN ON THE DRAWINGS. THIS CONTRACTOR SHALL FULLY COORDINATE THE WORK AND MEET ALL REQUIREMENTS OF ALECTRA UTILITIES HYDRO.
- 36.13 PROVIDE 1 RUNS OF THREE PHASE, 4 WIRE SECONDARY CONDUCTORS IN CONCRETE ENCASED DUCTBANK COMPRISING OF COLOR CODED, 600V, CU., XLPE INSULATED WIRE TO C.S.A. 36.14 COORDINATE SERVICE ENTRANCE CONNECTION WITH ALECTRA UTILITIES HYDRO. 36.15 PROVIDE HYDRO METER CABINET 1200x1200MM C/W BACK PLATE INSIDE ELECTRICAL ROOM TO ALECTRA UTILITIES HYDRO REQUIREMENTS. PROVIDE 120V CONVENIENCE RECEPTACLE FOR USE BY HYDRO AUTHORITY. CONNECT THE METERING
- CABINET AS REQUIRED WITH CONDUIT AND PROVIDE SLACK COILED CONDUCTORS IN THE CABINET. THE PROVISION OF METERS, WIRING AND CONNECTIONS WILL BE CARRIED OUT BY THE UTILITY. 36.16 WORK BY ALECTRA UTILITIES HYDRO:
- DIRECT BURIED DUCT AND POLE RISER CONDUIT CABLE TERMINATIONS ON RISER POLE AND TRANSFORMER
- TRANSFORMER INSTALLATION WORK BY DIVISION 26:
- PRIMARY CONCRETE ENCASED DUCT BANK AND PRIMARY CABLE TRANSFORMER FOUNDATION, GROUNDING AND BOLLARDS
- SECONDARY CONCRETE ENCASED DUCT BANK AND CABLES 36.17 THE CONTRACTOR SHALL APPLY TO ESA AND ALECTRA UTILITIES HYDRO CONSTRUCTION DEPARTMENT WITH 48 HOURS NOTICE. THE CONTRACTOR WILL THEN SCHEDULE CONSTRUCTION INSPECTIONS WITH THE CONSTRUCTION DEPARTMENT. 36.18 THIS CONTRACTOR SHALL SUPPLY AND INSTALL SECONDARY CONDUCTORS FROM THE HYDRO PAD MOUNT.
- TRANSFORMER TO THE SERVICE ENTRANCE FOUIPMENT LOCATED IN THE UTILITY ROOM 36.19 COORDINATE SERVICE ENTRANCE CONNECTION WITH ALECTRA UTILITIES HYDRO. PROVIDE GROUNDING CONDUCTOR NUMBER #2/0 BARE COPPER IN 21MM DIA, CONDUIT FROM THE MAIN GROUND TO THE WATERLINE AT THE STREET SIDE OF THE INCOMING WATER METER OR AS REQUIRED BY THE SUPPLY AUTHORITY.

- 37.0 IDENTIFICATION
 37.1 THIS DIVISION SHALL CLEARLY IDENTIFY ALL ELECTRICAL EQUIPMENT. ALL EXISTING REVISED PANEL DIRECTORIES SHALL BE TYPEWRITTEN AND ALL OTHER EQUIPMENT SHALL BE PERMANENTLY IDENTIFIED WITH ETCHED LAMICOID PLATES 1"
- ENGRAVED WHITE SECURED TO CLEAN SURFACES. 37.2 CONTRACTOR TO PROVIDE TYPEWRITTEN PANEL SCHEDULE UPDATED WITH NEW CIRCUITS AND INFORMATION LABELED WHEN PROJECT IS COMPLETE.
- 38.1 BEFORE ENERGIZING ANY SYSTEMS, INSPECT AND CLEAN THE INSIDE OF PANEL BOARDS, AND CABINETS TO ENSURE THAT THEY ARE COMPLETELY FREE FROM DUST AND DEBRIS. CLEAN ALL POLISHED, PAINTED AND PLATED WORK BRIGHT. CLEAN ALL EMERGENCY AND EXIT LIGHTING FIXTURES. REMOVE ALL DEBRIS, SURPLUS MATERIAL AND ALL TOOLS. CARRY OUT ADDITIONAL CLEANING OPERATING OF SYSTEMS AS SPECIFIED IN OTHER SECTIONS OF THIS DIVISION. CLEAN UP ALL DEBRIS ON SITE ON A DAILY BASIS AND REMOVE AND DISPOSE OF OFF SITE BEFORE THE FINAL COMPLETION OF THE
- 38.2 UPON COMPLETION OF WORK ALL EQUIPMENT SHALL BE THOROUGHLY CLEANED, CONNECTIONS TIGHTENED, COVERS SECURED, AND IN SATISFACTORY OPERATING CONDITION, WITH CORRECT PHASE ROTATION. CARRY OUT INSULATION RESISTANCE (MEGGER) TESTS, GROUND CONTINUITY AND RESISTANCE TESTS, SATISFACTORY TO THE CONSULTANT. BALANCE ALL 1 PHASE LOADS ON EXISTING PANEL BEING USED FOR NEW CONNECTIONS. AND IMBALANCE SHALL NOT EXCEED 5 AT ANY LOAD. PERFORM ADDITIONAL TESTING AS REQUIRED BY THE CONSULTANT TO CONFIRM THAT ALL EQUIPMENT IS CONNECTED AND OPERATING IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS.
- 39.0 TESTING
 39.1 TEST ALL SYSTEMS TO THE SATISFACTION OF THE OWNER.



2 15/04/2025 | ISSUED FOR REVIEW

No DATE DESCRIPTION

1 | 27/03/2025 | ISSUED FOR PERMIT

PROJECT LOGO AND ADDRESS

> HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

30 WENTWORTH ST NORTH L8L 8H5 AND 200 ACADIA DR.L8W 1B8, HAMILTON ON

KEY PLAN

CONSTRUCTION NORTH

DISCLAIMER

PREPARATION

REVISION

DO NOT SCALE DRAWINGS. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED WITHOUT ENGINEERS WRITTEN PERMISSION. THE CONTRACT DOCUMENTS WERE PREPARED BY THE ENGINEER FOR THE ACCOUNT OF THE OWNER. THE MATERIAL CONTAINED HEREIN REFLECT THE ENGINEERS BEST JUDGEMENT IN LIGHT OF THE

INFORMATION AVAILABLE TO THEM AT THE TIME OF

CONTRACT DOCUMENTS, OR ANY RELIANCE ON OR

DECISIONS TO BE MADE BASED ON THEM ARE THE

THE ENGINEER ACCEPTS NO RESPONSIBILITY FOR

DAMAGE, IF ANY, SUFFERED BY ANY THIRD PARTY

AS A RESULT OF DECISIONS MADE OR ACTIONS ON

ANY USE WHICH A THIRD PARTY MAKES OF THE

RESPONSIBILITY OF SUCH THIRD PARTIES.

THE CONTRACT DOCUMENTS.

JOB NUMBER 25010 N.T.S. 05/03/25 DRAWN BY REVIEWED BY

SPECIFICATIONS

DRAWING NUMBER

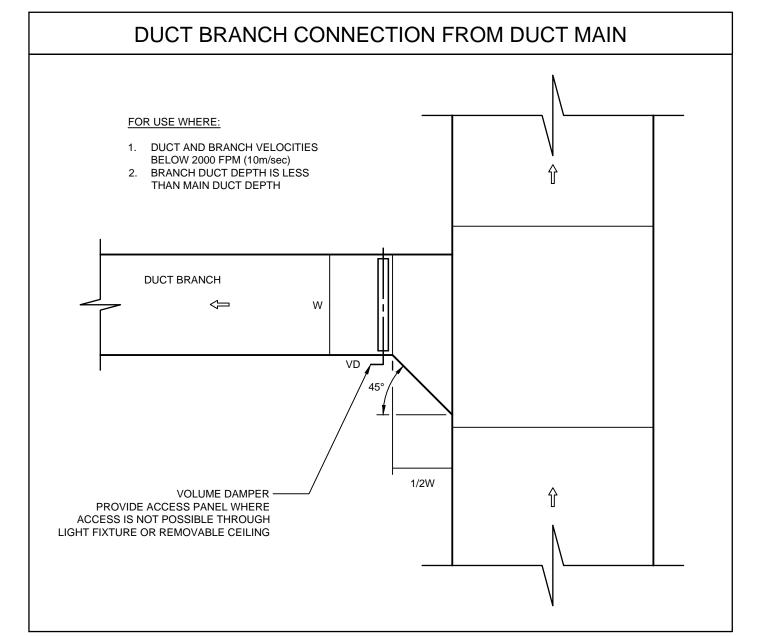
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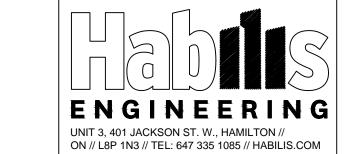
DWG No	DRAWING TITLE	DRAWING SCALE
M01	DRAWING LIST, MECHANICAL LEGEND AND SCHEDULES	N.T.S.
M02	MECHANICAL PLAN	1:50
M60	SPECIFICATIONS	N.T.S.

DESCRIPTION SUPPLY DUCT UP / DOWN RETURN DUCT UP / DOWN SUPPLY / RETURN GRILLE	(T) (G) (W)	THERMOSTAT GAS METER
RETURN DUCT UP / DOWN SUPPLY / RETURN GRILLE		GAS METER
SUPPLY / RETURN GRILLE	W	
	-	WATER METER
	(\$)	SWITCH
SIDE WALL SUPPLY / RETURN / EXHAUST GRILLE	\(\times \)	SANITARY RISER
NEW RECTANGULAR DUCT		CONTROL VALVE
NEW ROUND DUCT	M	SHUT OFF VALVE
SINGLE LINE SUPPLY	D¥d	CIRCUIT BALANCING VALVE
SINGLE LINE RETURN /	N	CHECK FLOW CONTROL VALVE
BALANCING DAMPER	Ф ў	PRESSURE GAGE
FIRE DAMPER	? [CAP / PLUG
INSULATION	>	FLOW DIRECTION
CLEARANCE OUTLINE	?	PIPE BREAK
SQUARE PLATE DIFFUSER	©	PUMP
(SIZE IS TO SCALE ON PLANS)	lÀl	STRAINER
DOMESTIC COLD WATER	Ф	THERMOMETER
	<u>. </u>	UNION
DOMESTIC RECIRC WATER	~	SIAMESE CONNECTION
SANITARY	FHC	FIRE HOUSE CABINET
SANITARY BELOW FLOOR		ROOF DRAIN
STORM WATER		SCUPPER DRAIN
STORM WATER		PARKING DRAIN
FIRE		FLOOR DRAIN
SPRINKLER (P1)	•	HUB DRAIN
SPRINKLER	⊕/=	IN / ABOVE FLOOR CLEAN
STAND PIPE	೧/ ೧	ELBOW DOWN / EX. ELBOW
GAS	0/0	DOWN ELBOW UP / EX. ELBOW UP
GAS BELOW FLOOR	₽	P-TRAP
DRAIN	⊕/=	IN / ABOVE FLOOR CLEAN
PIPE HEAT TRACE	HD	OUT HUB FLOOR DRAIN
DUCT CONTINUATION	FFD	FUNNEL FLOOR DRAIN
AIR FLOW DIRECTION	СТЕ	CONNECT TO EXISTING
EQUIPMENT TAG	TYP	TYPICAL
AID DIFFUSED (COULT)	FDC	FIRE DEPARTMENT
AIR DIFFUSER / GRILLE / LOUVER TAG	OED	OPEN ENDED DUCT
KEYED NOTE	R/A	RETURN AIR
CO2 SENSOR		SUPPLY AIR
		RAIN WATER LEADER
	NEW ROUND DUCT SINGLE LINE SUPPLY DUCT SINGLE LINE RETURN / EXHAUST DUCT BALANCING DAMPER FIRE DAMPER INSULATION CLEARANCE OUTLINE SQUARE PLATE DIFFUSER (SIZE IS TO SCALE ON PLANS) DOMESTIC COLD WATER DOMESTIC RECIRC WATER SANITARY SANITARY SANITARY BELOW FLOOR STORM WATER BELOW FLOOR FIRE SPRINKLER (P1) SPRINKLER STAND PIPE GAS GAS BELOW FLOOR DRAIN PIPE HEAT TRACE DUCT CONTINUATION AIR FLOW DIRECTION EQUIPMENT TAG KEYED NOTE	NEW ROUND DUCT SINGLE LINE SUPPLY DUCT SINGLE LINE RETURN / EXHAUST DUCT BALANCING DAMPER FIRE DAMPER C INSULATION CLEARANCE OUTLINE SQUARE PLATE DIFFUSER (SIZE IS TO SCALE ON PLANS) DOMESTIC COLD WATER DOMESTIC RECIRC WATER SANITARY SANITARY SANITARY SANITARY SANITARY STORM WATER BELOW FLOOR FIRE STORM WATER STORM WATER STORM WATER BELOW FLOOR FIRE O GAS O GAS DRAIN D P P P P P P P P P P P P

	UNIT VENTILATOR SCHEDULE																		
	BASIS OF DESIGN	OF DESIGN SUPPLY FAN DX COOLING		D)	DX HEATING ELEC			EL	ELECTRICAL		PHYSICAL		SOUND						
TAG	MANUFACTURER / MODEL	S/A FLOW (CFM)	ESP (IN WC)	O/A FLOW (CFM)	ERV (Y/N)	CAPACITY TOT. / SENS. (MBH)	EAT / LAT (F)	EER	CAP. (MBH)	EAT / LAT (F)	СОР	(KW)	V - PH	MCA (A)	MOCP (A)	WxHxD (IN)	WT (LBS)	SOUND POWER LEVEL (dBA)	NOTES
UV-1	SYSTEM AIR / SOPHMORE	1200	0.5	350	Υ	33.5 / 23.9	AHRI	12.0	25	AHRI	3.5	12.5	240/1	-	90	44"X32"X91"	1200	INTELIGENTLY QUIET	1
NOTES:																			
41" w : EXTE	MOTOR SHALL BE 3/4" H x 46" h EXTERIOR LOU\ RIOR LOUVER PREPAIN WITH E.S. PROGRAMMA	/ER C/W	/ 22 Ga. \) MATCH	WALL. S I EXTER	LEEVE.	TAL SIDING.	CFM.												

GRILLES AND DIFFUSERS & LOUVRE SCHEDULE					
TAG	MANUFACTURER / MODEL	TYPE	FRAME	FINISH	NOTES
S-1	EH PRICE / SPD SERIES	SQUARE PLAQUE DIFFUSER	T-BAR	B12	1
NOTES: 1. PROVIDE BLANK OFFS FOR DIFFUSERS AS REPRESENTED BY 2W (2 WAY) AND 3W (3 WAY) ON PLANS BELOW EACH DIFFUSER WHEN APPLICABLE.					





STAMP

STAMP

27/03/2025

M. J. DEMARIN

100082185

1 27/03/2025 ISSUED FOR PERMIT

PROJECT LOGO AND ADDRESS

No DATE DESCRIPTION

HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

30 WENTWORTH ST NORTH L8L 8H5 AND 200 ACADIA DR.L8W 1B8, HAMILTON ON

KEY PLAN

CONSTRUCTION TRUE NORTH N

DISCLAIMER

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PREPARATION.

ANY USE WHICH A THIRD PARTY MAKES OF THE CONTRACT DOCUMENTS, OR ANY RELIANCE ON OR DECISIONS TO BE MADE BASED ON THEM ARE THE RESPONSIBILITY OF SUCH THIRD PARTIES.

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JOB NUMBER 25010

SCALE N.T.S.

DATE 05/03/25

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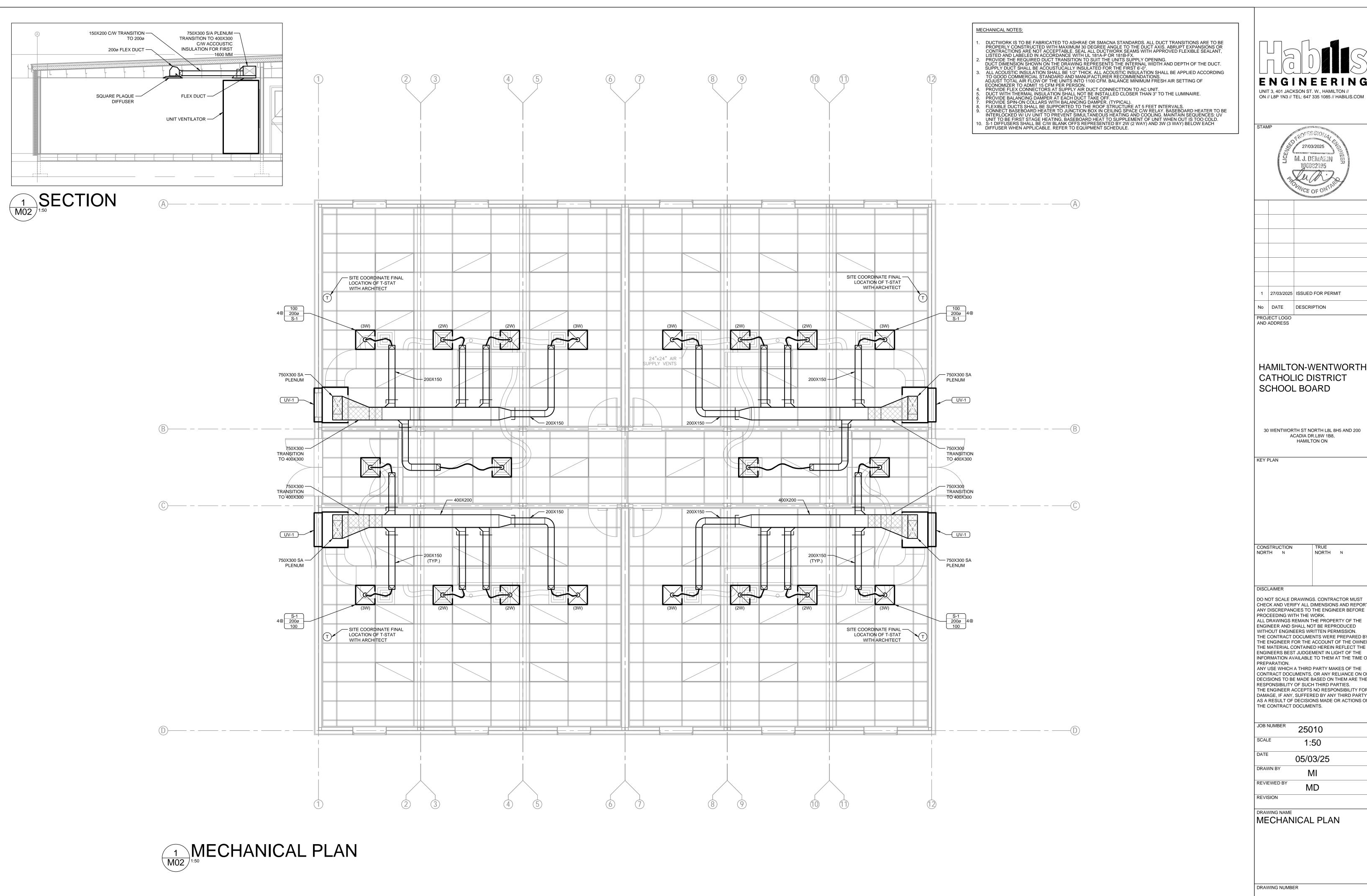
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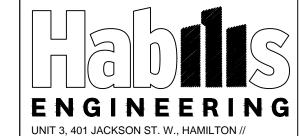
DRAWING LIST, MECH LEGEND AND SCHEDULES

DRAWING NUMBER

REVISION

M01





27/03/2025 M. J. DEMARIN

1 27/03/2025 ISSUED FOR PERMIT

No DATE DESCRIPTION PROJECT LOGO

AND ADDRESS

HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

30 WENTWORTH ST NORTH L8L 8H5 AND 200 ACADIA DR.L8W 1B8, HAMILTON ON

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JOB NUMBER 25010 SCALE 1:50 DATE 05/03/25 DRAWN BY REVIEWED BY REVISION

MECHANICAL PLAN

M02

- <u>GENERAL</u>
- 1.1. COMPLETE THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ONTARIO BUILDING CODE, ONTARIO FIRE CODE, C.S.A. STANDARDS, U.L.C., N.F.P.A., O.S.H.A. AND OTHER CODES AS REQUIRED
- 1.2. WHEREVER THE WORDS "PROVIDE" OR "SUPPLY AND INSTALL" ARE USED, IT SHALL BE UNDERSTOOD TO MEAN "PROVIDE AND INSTALL, INCLUSIVE OF ALL LABOUR, MATERIALS, INSTALLATION, TESTING, AND CONNECTIONS" FOR THE ITEM TO WHICH IT REFERENCES.
- 1.3. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, C.S.A. CERTIFIED AND MANUFACTURED TO THE STANDARDS
- 1.4. MAKE SITE VISIT(S) AS NECESSARY BEFORE TENDER TO ESTABLISH AND VERIFY ALL EXISTING CONDITIONS. MAKE ALLOWANCE FOR ANY NEW OR EXISTING SERVICE AND EQUIPMENT RELOCATIONS NECESSARY TO COMPLETE THE WORK AND INCLUDE IN THE TENDER PRICE. NO CLAIM FOR EXTRA PAYMENT SHALL BE MADE FOR EXISTING WORK MADE NECESSARY BY CIRCUMSTANCES ENCOUNTERED DUE TO CONDITIONS WHICH WERE VISIBLE UPON, OR REASONABLY INFERABLE FROM AN EXAMINATION OF THE SITE PRIOR TO SUBMISSION OF THE BID.
- 1.5. THE DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC PERFORMANCE DRAWINGS ONLY, INTENDED TO SHOW THE GENERAL INTENT OF THE WORK, NOT THE DETAILS OF INSTALLATION. CO-ORDINATE THE ROUTING AND INSTALLATION OF ALL MECHANICAL SERVICES WITH ALL EXISTING CONDITIONS, STRUCTURE AND THE WORK OF ALL
- 1.6. PROVIDE SLEEVING DRAWINGS SHOWING ALL OPENINGS IN THE STRUCTURE WITH ALL REQUIRED DIMENSIONS.
- 1.7. PROVIDE INSTALLATION DRAWINGS OF ALL WORK WITH DIMENSIONS, DRAWN TO SCALE AND CO-ORDINATED WITH ALL TRADES AND DIVISIONS. SHOW ALL REQUIREMENTS FOR EQUIPMENT INSTALLED, AREA ACCESS, CLEARANCES AND CONNECTIONS BY OTHER TRADES.
- 1.8. PROVIDE STRUCTURAL LOADS WITH ALL DETAILS NECESSARY FROM INSTALLATION OF INSERTS AND ALL CONCRETE CONSTRUCTION ITEMS INCLUDING PADS, CURBS, SILLS, BASINS, ANCHORS, INSERTS ETC.
- 1.9. DO NOT SCALE MECHANICAL DRAWINGS. REFER TO ARCHITECTURAL OR INTERIOR DESIGN DRAWINGS FOR THE EXACT LOCATION OF ANY DEVICES, FIXTURES, ETC. OBTAIN ALL SITE DIMENSIONS FROM SITE MEASUREMENTS.
- 1.10. MAKE APPLICATION, PROVIDE, OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND INSPECTIONS.
- 1.11. ENSURE THAT FEDERAL TAXES ARE INCLUDED WHERE REQUIRED, H.S.T. TO BE SHOWN AS EXTRA.
- 1.12. PROVIDE A COMPLETE ITEMIZED BREAKDOWN OF MATERIAL, LABOUR, OVERHEAD, PROFIT, ETC. WHEN SUBMITTING QUOTATIONS FOR CHANGE NOTICES ON THIS PROJECT. THE HOURLY LABOUR RATE SHALL BE INCLUSIVE OF ALL CHARGES FOR SUPERVISION, VARIABLE LABOUR FACTORS, HAND TOOLS, PAYROLL BURDENS, HEIGHT FACTORS, WARRANTIES, STORAGE, RENTALS, ADDITIONAL BONDING, PARKING, CLEAN-UP, AS-BUILT DRAWINGS, HOISTING, FREIGHT AND DELIVERY, BUT EXCLUSIVE OF OVERHEAD AND PROFIT.
- I.13. PROVIDE A WRITTEN WARRANTY FOR ALL MATERIALS, EQUIPMENT AND LABOUR FOR A ONE-YEAR PERIOD TO BEGIN AT THE TIME WHEN THE WORK IS DESIGNATED ACCEPTABLE BY THE CONSULTANT.
- 1.14. PROVIDE SHOP DRAWINGS (4 COPIES) OF ALL PRODUCTS FOR REVIEW.
- 1.15. CO-ORDINATE ALL SHUTDOWNS OF EXISTING BASE BUILDING SYSTEMS WITH THE LANDLORD OR REPRESENTATIVE. ADVISE THE LANDLORD OR REPRESENTATIVE AT LEAST 48 HOURS PRIOR TO ANY SHUTDOWN AND PAY FOR ANY COSTS INCURRED INCLUDING PREMIUM TIME OUTSIDE OF NORMAL WORKING HOURS.
- 1.16. CO-ORDINATE THE MECHANICAL WORK WITH ALL OTHER TRADES.
- 1.17. PROVIDE IN THE TENDER PRICE ANY COSTS FOR PREMIUM TIME OUTSIDE OF NORMAL WORKING HOURS TO COMPLETE THE WORK ON SCHEDULE AND TO MAINTAIN ALL EXISTING MECHANICAL SYSTEMS IN OPERATION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY INTERRUPTIONS OR DISRUPTIONS TO THE EXISTING SERVICES. ALL EXISTING BUILDING SERVICES MUST BE KEPT OPERATIONAL AT ALL TIMES. INTERRUPTIONS SHALL BE PERFORMED ONLY AFTER REGULAR OFFICE HOURS. ARRANGE WORK SUCH THAT INTERRUPTIONS IN SERVICES OCCUR ONLY AT SCHEDULED TIMES SUITABLE TO THE LANDLORD.
- 1.18. CHECK AND VERIFY EXISTING ELECTRICAL VOLTAGE AND ENSURE THAT ALL MECHANICAL EQUIPMENT SUPPLIED IS SUITABLE FOR THE AVAILABLE VOLTAGE.
- 1.19. ALL POWER WIRING BY ELECTRICAL CONTRACTOR, CONTROL AND INTERLOCK WIRING BY MECHANICAL CONTRACTOR. VERIFY LOCATIONS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL CONTRACTOR BEFORE WORK COMMENCES.
- 1.20. PROVIDE STARTERS WITH REQUIRED OVERLOAD PROTECTION FOR ALL MECHANICAL EQUIPMENT. PROVIDE LINE VOLTAGE REVERSE ACTING THERMOSTATS WHERE SPECIFIED. STARTERS AND LINE VOLTAGE THERMOSTATS SHALL BE TURNED OVER TO DIVISION 16 FOR INSTALLATION. WHERE SWITCHES ARE USED ON FINISHED WALLS PROVIDE TO MATCH LIGHTING SWITCH AND TYPE.
- 1.21. PROVIDE ALL DEMOLITION, CLEAN-UPS, STORAGE, LIFTING, FLASHING, DRILLING, CUTTING AND PATCHING AS REQUIRED. ALL CUTTING AND PATCHING REQUIRED TO THE EXISTING BUILDING STRUCTURE FOR THE WORK SHALL BE INCLUDED UNDER THIS CONTRACT, AND BE ACCEPTABLE TO THE LANDLORD. PROVIDE X-RAY OF SLAB PRIOR TO CORING AND CUTTING OF FLOOR, AND OBTAIN APPROVAL FROM BASE BUILDING STRUCTURAL ENGINEER PRIOR TO DRILLING. SUBMIT WRITTEN CONFIRMATION THAT X-RAY HAS BEEN PERFORMED, AND THAT RESULTS HAVE BEEN ACCEPTED BY BASE BUILDING STRUCTURAL ENGINEER. OBTAIN WRITTEN APPROVAL FROM THE LANDLORD BEFORE ANY CUTTING IS CARRIED OUT.
- 1.22. PROVIDE ALL EQUIPMENT PADS, CURBS, SILLS, BASINS, ANCHORS, INSERTS, SUPPORTS, SLEEVES, ETC. AS REQUIRED FOR MECHANICAL EQUIPMENT AND PIPING.
- 1.23. PROVIDE ACCESS AS REQUIRED IN WALLS AND CEILINGS. ENSURE THAT ACCESS IS PROVIDED FOR ALL EQUIPMENT. PROVIDE ACCESS DOORS COMPATIBLE WITH THE ADJACENT FINISHES AND WITH FIRE RATING EQUAL TO SURFACES IN WHICH INSTALLED. PROVIDE ACCESS PANELS IN PLASTER AND DRYWALL SURFACES WITH RECESSED DOOR WITH WELDED METAL LATH READY TO ACCEPT PLASTER/ DRYWALL INSERT AND WITH A PLASTER GROMMET FOR DOOR KEY ACCESS. MIFAB SERIES CAD-DW OR EQUIVALENT.
- 1.24. RE-USE AND RELOCATE EXISTING MATERIALS SUCH AS PIPING, FIXTURES, DUCTWORK, DIFFUSERS, EQUIPMENT ETC. WHERE SHOWN. CAP AND DISCONNECT ALL EXISTING PIPING AND DUCTWORK NOT REQUIRED AT CEILING, WALLS OR FLOOR, OR TO A LOCATION AS DIRECTED BY THE LANDLORD. MAINTAIN INTEGRITY OF ALL INSULATION INCLUDING VAPOUR BARRIERS WHEN CONNECTING TO EXISTING SERVICES. MAINTAIN THE INTEGRITY OF ALL EXISTING SYSTEMS ASSOCIATED WITH THE BUILDING SYSTEM IN PLACE. UNLESS NOTED OTHERWISE OBTAIN PERMISSION FROM THE LANDLORD AND REMOVE FROM THE SITE ALL MATERIALS WHICH ARE NOT TO REMAIN OR BE RE-USED.
- 1.25. ADJUST THE LOCATION OF DEVICES AND/OR EQUIPMENT (UP TO 10'-0" IN ANY DIRECTION) AS DIRECTED BY THE LANDLORD AND OR THE ARCHITECT AND OR INTERIOR DESIGNER WITHOUT ADJUSTMENT TO THE CONTRACT PRICE, PROVIDED THAT THE CHANGES ARE REQUESTED BEFORE INSTALLATION.
- 1.26. NO ALTERNATIVES FOR EQUIPMENT SHALL BE ACCEPTED WITHOUT WRITTEN APPROVAL OF THE CONSULTANT.
- 1.27. IDENTIFY ALL SYSTEMS AND LABEL ALL EQUIPMENT WITH LAMACOID LABELS. IDENTIFY REMOTE CONTROLS FOR ALL PERTINENT EQUIPMENT INCLUDING ALL ASSOCIATED DISCONNECTS.
- 1.28. PRODUCTS NOT SPECIFICALLY SPECIFIED SHALL BE OF A QUALITY CONSISTENT WITH THE REMAINDER OF THE
- 1.29. PROVIDE OVERSIZED PIPE HANGERS AND INSULATION SHIELDS FOR INSULATED COLD PIPE. PROVIDE PLASTIC COATED PIPE HANGERS WHERE HANGER IS IN DIRECT CONTACT WITH COPPER PIPE.
- 1.30. PROVIDE ALL MISCELLANEOUS METALS REQUIRED FOR MECHANICAL WORK.
- 1.31. PROVIDE DI-ELECTRIC FITTINGS TO SEPARATE ALL DISSIMILAR METALS.
- 1.32. PROVIDE AND INSTALL PIPING WITH ALL NECESSARY EXPANSION LOOPS, OFFSETS, GUIDES, JOINTS, ANCHORS ETC. AS
- MAY BE REQUIRED SO THAT PIPING WILL NOT BE OVERSTRESSED DURING EXPANSION AND CONTRACTION. 1.33. PROVIDE FLASHING AND COUNTER FLASHING FOR ALL DUCTS, PIPES, ETC., PASSING THROUGH EXTERIOR WALLS, WATERPROOF FLOORS AND ROOF.
- 1.34. PATCH AND SEAL ALL OPENINGS IN FLOORS, WALLS AND PARTITIONS. SEAL ALL VERTICAL SLEEVES AND CORE DRILLED OPENINGS THROUGH ROOF, MECHANICAL ROOMS AND FLOORS ETC, WITH PERMANENTLY RESILIENT WATERPROOF SILICONE BASE SEALING COMPOUND.
- 1.35. IDENTIFY ALL PIPING WITH STENCILED LETTERS OR COLOR CODES AND DIRECTIONAL ARROWS.

- 1.36. PROVIDE MANUFACTURER'S START-UP OF ALL MAJOR EQUIPMENT. MANUFACTURER REPRESENTATIVE TO PROVIDE WRITTEN CONFIRMATION THAT EQUIPMENT IS PROPERLY INSTALLED AND TESTED IN ACCORDANCE WITH MANUFACTURER'S REPRESENTATIVES.
- 2. COMPLETION OF CONTRACT
- 2.1. ALL EQUIPMENT MUST BE CLEANED AND TESTED BEFORE FINAL ACCEPTANCE BY CONSULTANT.
- 2.2. PRIOR TO CONTACTING THE CONSULTANT FOR FINAL INSPECTION, THE CONTRACTOR MUST CORRECT ALL DEFICIENCIES AS SPECIFIED ON THE DEFICIENCY LIST.
- 2.3. PROVIDE A WRITTEN WARRANTY FOR ONE YEAR CONVERING ALL EQUIPMENT, MATERIALS AND WORKMANSHIP FROM THE DATE OF ACCEPTANCE OF THE INSTALLATION BY THE OWNER. INCLUDE IN THE OPERATION AND MAINTENANCE
- 2.4. ANY DEFECTS OR DEFICIENCIES WHICH ORIGINATE OR BECOME EVIDENT DURING THE WARRANTY PERIOD MUST BE REPAIRED OR CORRECTED AT NO COST TO THE OWNER.
- 3. <u>AS-BUILT DRAWINGS</u>
- 3.1. AT THE COMPLETION OF WORK AND BEFORE FINAL ACCEPTANCE, PROVIDE AS-BUILT DRAWINGS OF THE INSTALLATION IN AUTO CAD FORMAT. DRAWING FILES CAN BE OBTAINED FROM THE CONSULTANT
- 3.2. INCORPORATE ALL CHANGES AND DEVIATIONS FROM THE TENDER DRAWINGS, UTILIZING NORMAL RECOGNIZED DRAFTING PROCEDURES THAT MATCH THE ORIGINAL DRAFTING METHODOLOGY.
- 3.3. ALL CONCEALED PIPING RUNS, VALVE AND DAMPER LOCATIONS, SERVICE LOCATIONS, ETC. MUST BE REFLECTED ON
- 3.4. REMOVE THE MECHANICAL ENGINEER'S STAMP AND COMPANY NAME FROM ALL DRAWINGS.
- 3.5. CLEARLY INDICATE THE WORDS "AS-BUILT" IN THE TITLE BLOCK COLUMN OF THE DRAWINGS AS WELL AS THE MECHANICAL CONTRACTOR'S NAME AND ADDRESS.
- 3.6. SUBMIT A PRINT TO CONSULTANT TO REVIEW. WHEN FOUND ACCEPTABLE BY THE CONSULTANT, SUBMIT THREE (3) SETS OF PRINTS TOGETHER WITH AUTO CAD DISKS FOR PRESENTATION TO LANDLORD AND TENANT.
- 4. OPERATION AND MAINTENANCE MANUALS
- 4.1. PROVIDE THREE (3) SETS OF OPERATION AND MAINTENANCE MANUALS, ONE COPY IS TO BE PROVIDED TO THE LANDLORD. INCLUDE THE FOLLOWING INFORMATION IN THE OPERATION AND MAINTENANCE MANUALS:
- TECHNICAL DATA, PRODUCT DATA, SUPPLEMENTED BY BULLETINS, COMPONENT ILLUSTRATIONS, EXPLODED VIEWS, TECHNICAL DESCRIPTIONS OF ITEMS, AND PARTS LISTS. ADVERTISING OR SALES LITERATURE IS NOT
- THE CONSULTANTS REVIEWED SHOP DRAWINGS.
- CERTIFICATE(S) OF ACCEPTANCE FROM AUTHORITIES HAVING JURISDICTION.
- VERIFICATION REPORTS AND CERTIFICATE(S) FOR ANY NEW LIFE SAFETY COMPONENTS OR TIE-INS TO ANY BASE BUILDING SYSTEMS.
- AIR BALANCING REPORTS
- WRITTEN GUARANTEE.
- AS-BUILT DRAWINGS.
- 4.1. REVIEW INFORMATION PROVIDED IN THE MAINTENANCE INSTRUCTIONS AND MANUALS WITH THE TENANT'S OPERATING PERSONNEL AND THE LANDLORD'S OPERATING PERSONNEL WHERE BASE BUILDING SYSTEMS ARE REVISED, TO ENSURE A COMPLETE UNDERSTANDING OF THE MECHANICAL EQUIPMENT AND SYSTEMS AND THEIR OPERATION.

- 5.1. PROVIDE COMPLETE PLUMBING AND DRAINAGE SYSTEMS INCLUDING ALL NECESSARY LABOUR. SERVICES. PRODUCTS. MATERIALS AND EQUIPMENT.
- 5.2. PROVIDE ALL WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO PLUMBING CODE AND ALL AUTHORITIES HAVING JURISDICTION INCLUDING ALL APPLICABLE BY-LAWS.
- 5.3. SANITARY DRAINAGE AND VENT PIPING 3" AND LARGER SHALL BE CSA CLASS 4000 CAST IRON SOIL PIPE AND FITTINGS MECHANICAL JOINTS AND STAINLESS STEEL COUPLINGS. SYSTEM XFR 15-50 PIPING AND FITTINGS BY IPEX IN ACCORDANCE WITH CAN/ULC \$102.2 AND CSA B181.2. IS ACCEPTABLE IN LIEU OF CAST IRON PIPING ABOVE GRADE, PROVIDE APPROVED FIRESTOP DEVICES AND MATERIALS WHERE PENETRATING FLOORS. PVC DR 35 PIPING WITH SOLVENT JOINTS IS ACCEPTABLE FOR BURIED DRAIN PIPING.
- 5.4. ABOVE GROUND SANITARY DRAINAGE AND VENT PIPING 2" AND SMALLER SHALL BE DWV COPPER PIPE WITH DRAINAGE FITTINGS AND 95/5 TIN/ANTIMONY SOLDER JOINTS. SYSTEM XFR 15-50 PIPING AND FITTINGS BY IPEX IN ACCORDANCE WITH CAN/ULC S102.2 AND CSA B181.2. IS ACCEPTABLE IN LIEU OF COPPER DRAINAGE PIPING, PROVIDE APPROVED FIRESTOP DEVICES AND MATERIALS WHERE PENETRATING FLOORS. PVC DR 35 GRAVITY SEWER PIPE WITH SOLVENT JOINTS IS ACCEPTABLE FOR BELOW GRADE DRAINAGE PIPING.
- 5.5. ABOVE GROUND STORM DRAINAGE PIPING SHALL BE DWV COPPER PIPE WITH DRAINAGE FITTINGS AND 95/5 TIN/ANTIMONY SOLDER JOINTS. PIPING 3" AND LARGER SHALL BE CSA CLASS 4000 CAST IRON SOIL PIPE AND FITTINGS WITH MECHANICAL JOINTS AND STAINLESS STEEL COUPLINGS. SYSTEM XFR 15-50 PIPING AND FITTINGS BY IPEX IN ACCORDANCE WITH CAN/ULC S102.2 AND CSA B181.2. IS ACCEPTABLE IN LIEU OF COPPER OR CAST IRON PIPING ABOVE GRADE, PROVIDE APPROVED FIRESTOP DEVICES AND MATERIALS WHERE PENETRATING FLOORS. PVC DR 35 GRAVITY SEWER PIPE WITH SOLVENT JOINTS IS ACCEPTABLE FOR BELOW GRADE DRAINAGE PIPING.
- 5.6. PROVIDE REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTER ON CONNECTIONS TO ANY EQUIPMENT, PLUMBING FIXTURES, ETC. PIPE DISCHARGE FROM BACKFLOW PREVENTER TO NEAREST FLOOR DRAIN.
- 5.7. INSTALL CLEANOUTS IN SANITARY AND STORM DRAINAGE PIPING AS REQUIRED BY PLUMBING CODES AND ALL AUTHORITIES HAVING JURISDICTION. INSTALL CLEANOUTS AT THE BASE OF ALL STACKS AND AT EACH MAJOR CHANGE OF DIRECTION ON HORIZONTAL PIPE RUNS. PROVIDE ACCESS PANELS IN DRYWALL ENCLOSURES TO ACCESS CLEANOUTS AT BASE OF ALL STACKS.
- 5.8. WHERE ROOMS ARE PROVIDED WITH NEW FLOOR FINISHES, PROVIDE SUITABLE EXTENSIONS TO RAISE ALL EXISTING CLEANOUT COVERS AND FLOOR DRAIN GRATES TO MATCH THE NEW FINISHED FLOOR ELEVATION. REFER TO ARCHITECTURAL DRAWINGS TO DETERMINE WHERE NEW FLOOR FINISHES ARE PROVIDED.
- 5.9. PROVIDE AIR CHAMBERS MINIMUM 600 MM (24") LONG ON SUPPLIES AT EACH FIXTURE, SAME SIZE AS SUPPLY PIPE TO THE FIXTURE. AIR CHAMBERS ARE NOT REQUIRED WHERE MECHANICAL SHOCK STOPS ARE SPECIFIED.
- 5.10. PROVIDE TRAPPED COPPER CONDENSATE DRAINS FOR ALL MECHANICAL EQUIPMENT AS REQUIRED. FOR ROOFTOP AIR CONDITIONING UNITS, PROVIDE 12" X 12" CONCRETE SPLASH PAD ON ROOF, TERMINATE CONDENSATE DRAIN ABOVE
- 5.11. PROVIDE TRAP SEAL PRIMERS FOR ALL FLOOR DRAINS INCLUDING ALL NECESSARY PIPING AND APPURTENENCES AND CONNECT TO NEAREST AVAILABLE DOMESTIC COLD WATER SUPPLY IN ACCORDANCE WITH LOCAL AUTHORITY STANDARDS.
- 5.12. PROVIDE AND COVER ALL HORIZONTAL DRAINAGE PIPING AND FITTINGS WITH RIGID PREFORMED 1" FIBRE GLASS INSULATION, COMPLETE WITH VAPOUR BARRIER. DO NOT USE STAPLES. MAINTAIN THE INTEGRITY OF ALL EXISTING THERMAL INSULATION WHEN CONNECTING NEW PIPING TO EXISTING PIPING. PROVIDE PVC JACKETTING FOR ALL EXPOSED PIPE INSULATION.
- 5.13. ABOVE GROUND DOMESTIC WATER PIPING SHALL BE TYPE "L" HARD COPPER WITH WROUGHT COPPER FITTINGS AND 95/5 TIN/ANTIMONY SOLDER JOINTS. TYPE 'K' PIPING SHALL BE USED BELOW GROUND.
- 5.14. PROVIDE AND COVER ALL DOMESTIC WATER PIPING, VALVES, FITTINGS, APPURTENANCES, ETC. WITH RIGID PREFORMED FIBRE GLASS INSULATION. PROVIDE VAPOUR BARRIER FOR COLD WATER PIPING. INSULATION SHALL BE 1" THICK FOR COLD WATER PIPING AND FOR HOT WATER AND HOT WATER RECIRCULATING PIPING. DO NOT USE STAPLES. ENSURE COMPLETE COVERAGE AND SEAL WITH AN APPROVED VAPOUR BARRIER CEMENT. MAINTAIN THE INTEGRITY OF ALL EXISTING THERMAL INSULATION WHEN CONNECTING NEW PIPING TO EXISTING PIPING. PROVIDE PVC JACKETTING FOR ALL EXPOSED PIPE INSULATION.

- 5.15. APPLY ONE-PIECE MOLDED TYPE PVC JACKET TO ALL INSULATED PIPING SERVICES IN EXPOSED AREAS. USE SOLVENT WELD ADHESIVE COMPATIBLE WITH INSULATION TO SEAL LAP AND JOINTS. JACKETING TO BE PAINTED BY GENERAL
- 5.16. PROVIDE BALL VALVES AT PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EQUIPMENT TO BE REMOVED FOR SERVICING. PROVIDE BALL VALVES ON ALL MAIN AND BRANCH DOMESTIC WATER PIPING LINES. PROVIDE GLOBE VALVES ON ALL HOT WATER RETICULATING PIPING LINES AND EQUIPMENT. PROVIDE CHECK VALVES ON SUPPLY SIDE OF EQUIPMENT.
- 5.17. PROVIDE REDUCED PRESSURE BACK FLOW PREVENTERS ON DOMESTIC WATER SUPPLY PIPING TO ALL EQUIPMENT. PROVIDE PRESSURE REDUCING VALVES AS REQUIRED.
- 5.18. PROVIDE FLOW RESTRICTORS IN PLUMBING DRAINS TO GREASE INTERCEPTORS WHERE REQUIRED BY CODE AND
- 5.19. PROVIDE ALL PLUMBING VENT PIPING IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE. COORDINATE LOCATION OF NEW PLUMBING VENTS WITH ARCHITECTURAL DRAWINGS, ALL VENT PIPING SHALL BE CONCEALED WITHIN WALLS OR ABOVE CEILINGS. TERMINATE PLUMBING VENTS MINIMUM 1.0 M ABOVE, AND MINIMUM 3.5 M FROM ALL OPERABLE WINDOWS OR DOORS, AND AIR INTAKES.
- 5.20. PROVIDE BACKFLOW PREVENTERS ON ALL EQUIPMENT CONNECTIONS TO DOMESTIC WATER AND FIRE PROTECTION WATER PIPING, HOSE BIBBS, MAKE-UP WATER CONNECTIONS, ETC. AS REQUIRED BY THE CSA B64.10.1 BACKFLOW
- 6. FIRE PROTECTION
- 6.1. PROVIDE FIRE PROTECTION, SPRINKLER WORK, EQUIPMENT AND DEVICES IN ACCORDANCE WITH THE REQUIREMENTS OF ALL CODES, GOVERNING UNDERWRITER, BASE BUILDING STANDARDS, LOCAL BYLAWS AND TO THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION.
- 6.2. ALL LIFE SAFETY, STANDPIPE, SPRINKLERS AND FIRE PROTECTION SERVICES MUST BE MAINTAINED IN OPERATION AT
- 6.3. PROVIDE AND INSTALL PORTABLE FIRE EXTINGUISHERS INCLUDING BRACKETS AND TAGS IN ACCORDANCE WITH NFPA 10CAN4-S508 AND THE ONTARIO FIRE CODE. IN FINISHED OCCUPIED AREAS (OFFICE AREAS, MEETING ROOMS, ETC), PROVIDE SEMI-RECESSED FIRE EXTINGUISHER CABINETS RECESSED INTO DRYWALL PARTITION WALLS. CABINETS SHALL BE SUITABLE FOR INSTALLATION IN 4" (100 MM) THICK WALLS, WITH 1" (25MM) CASING TURN BACK (NATIONAL FIRE EQUIPMENT MODEL 102RS OR EQUIVALENT). PROVIDE STORED PRESSURE RECHARGEABLE TYPE EXTINGUISHERS WITH SHUT OFF NOZZLE YLC LABELLED FOR A, B AND C CLASS PROTECTION. PROVIDE SIZE 2.25 KG OR A SIZE AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- 6.4. FOR ALL PROJECTS, PROVIDE FIRE EXTINGUISHERS LOCATED SO THAT COMPLETE COVERAGE OF THE SPACE IN THE SCOPE OF WORK IS PROVIDED, USING A MAXIMUM TRAVEL DISTANCE OF 22 METERS (75 FEET) FOR EACH EXTINGUISHER. IN ADDITION TO THE REQUIREMENTS ABOVE, PROVIDE ADDITIONAL FIRE EXTINGUISHERS IN SERVER ROOMS, AND KITCHENETTES.
- 6.5. PROVIDE SCHEDULE 40 BLACK STEEL FIRE LINE PIPING COMPLETE WITH FITTINGS, HANGERS AND ACCESSORIES AS REQUIRED. VICTAULIC TYPE FITTINGS ARE PERMITTED ONLY IN ACCESSIBLE LOCATIONS.
- 6.6. SPRINKLER WORK SHALL BE PERFORMED BY A CONTRACTOR APPROVED BY THE LANDLORD.
- 6.7. PROVIDE, PRIOR TO INSTALLATION, COPIES OF THE WORKING DRAWINGS, HYDRAULIC DESIGN, AND CALCULATIONS TO THE INSURANCE UNDERWRITER AND AUTHORITIES HAVING JURISDICTION. ALL DRAWINGS AND CALCULATIONS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ASSUME ANY ADDITIONAL COSTS THAT MAY BE INCURRED TO MODIFY OR COMPLETE THE SYSTEM SHOULD THE AUTHORITIES HAVING JURISDICTION REQUIRE CHANGES. ANY AND ALL COSTS PERTAINING TO PREPARATION AND APPROVALS SHALL BE BORNE BY THE CONTRACTOR.
- 6.8. PROVIDE NEW SPRINKLER HEADS TO MATCH EXISTING COMPLETE WITH RELATED PIPING. RE-USE EXISTING SPRINKLER HEADS AND PIPING IN ACCORDANCE WITH NEW SPACE REQUIREMENTS.
- 6.9. PROVIDE THE REQUIRED NUMBER OF SPRINKLER HEADS AND ALL NECESSARY COMPONENTS AS REQUIRED BY NFPA13 AND ALL GOVERNING AUTHORITIES.
- 6.10. CO-ORDINATE SPRINKLER SYSTEM CHANGES WITH STRUCTURAL, ARCHITECTURAL, ELECTRICAL, PLUMBING AND DUCTWORK. PROVIDE ADDITIONAL SPRINKLER HEADS WHERE REQUIRED.
- 6.11. ADJUST NEW AND EXISTING SPRINKLER PIPING AND HEADS TO CONFORM TO NEW CEILING HEIGHTS AND CEILING TYPE INCLUDING ANY AREAS WHERE CEILINGS HAVE BEEN REMOVED.
- 6.12. PROVIDE ADDITIONAL SPRINKLER HEADS AS REQUIRED ABOVE AND BELOW DUCTWORK AND STRUCTURAL COMPONENTS ETC. IN AREAS WITHOUT CEILINGS.
- 6.13. IN AREAS WITH FLOATING CEILINGS OR WITH CEILING PROJECTIONS, SPRINKLER PIPING SHALL BE CONCEALED BEHIND ADJACENT WALLS, CEILING SPACES, STRUCTURAL ELEMENTS, ETC. SO AS NOT TO BE VISIBLE. ALL PIPING DROPS FOR THESE AREAS SHALL BE CONCEALED IN SUCH A MANNER. HORIZONTAL PIPING SERVING SPRINKLER HEADS SHALL BE INSTALLED AT LOW LEVEL AS CLOSE TO THE TOP OF THE FLOATING CEILING OR CEILING PROJECTION AS POSSIBLE SO AS NOT TO BE VISIBLE.
- 6.14. PROVIDE HIGH TEMPERATURE SPRINKLER HEADS IN ALL ELECTRICAL ROOMS, EMERGENCY GENERATOR ROOMS ETC. ENSURE THAT SPRINKLER HEADS ARE LOCATED WITHIN REQUIRED DISTANCES FROM HEAT PRODUCING EQUIPMENT
- 7. HEATING, VENTILATING, AIR CONDITIONING
- 7.1. PROVIDE ALL DUCTWORK IN ACCORDANCE WITH THE STANDARDS OF GOOD WORKMANSHIP AND THE LATEST GUIDELINES OF ASHRAE AND SMACNA. SEAL DUCTWORK TO CLASS C WITH TRANSVERSE JOINTS AND CONNECTIONS TREATED WITH SEALING COMPOUND. SEAL EXPOSED DUCTWORK (LOCATED IN FINISHED SPACES) INTERNALLY AND WITH A MINIMUM AMOUNT OF SEALANT EXPOSED ON THE OUTSIDE.
- 7.2. PROVIDE BALANCING DAMPERS FOR ALL NEW DUCTWORK AT THE BRANCH CONNECTIONS. PROVIDE VOLUME DAMPERS FOR ALL SUPPLY AIR DIFFUSERS. PROVIDE SPIN-ON FITTING WITH BALANCING DAMPER AT EACH FLEXIBLE DUCT CONNECTION AT SUPPLY DUCT TAKE-OFF.
- 7.3. COMPLETELY CLEAN INTERIOR SURFACES OF ALL DUCTWORK AND VENTILATION SYSTEM COMPONENTS (I.E. FANS, COILS, ETC.). ALL COMPONENTS SHALL BE RENDERED VISIBLY CLEAN. WORK SHALL BE COMPLETED PRIOR TO AIR
- 7.4. PROVIDE DUCT ACCESS DOORS FOR ALL COILS, FIRE, CONTROL AND BALANCING DAMPERS, AS REQUIRED.
- 7.5. INSULATE ALL NEW EXHAUST AIR DUCTWORK WITH 1" THICK FIBREGLASS 3 LB/CU.FT. DENSITY REINFORCED, FOIL FACED FLEXIBLE DUCT INSULATION WITH VAPOUR SEAL FROM LOUVRE TO 10 FEET UPSTREAM (SEAL ALL PERIMETER CONNECTIONS). INSULATE OUTDOOR AIR INTAKE DUCTS IN A SIMILAR MANNER FROM EXTERIOR LOUVRE TO CONNECTION TO HEATING UNIT. APPLY CANVAS JACKET IN EXPOSED AREAS.
- 7.6. PROVIDE 2" THICK INTERNAL ACOUSTIC INSULATION ON ALL NEW SUPPLY AND RETURN DUCTWORK WHICH IS EXPOSED TO OUTDOORS. ACOUSTIC INSTALLATION SHALL BE FLEXIBLE COATED DUCTLINER, 1.5 LB/CU.FT. DENSITY. DUCTWORK SHALL BE SEALED WITH SILICONE SEALER, AND PAINTED WITH TWO COATS OF WEATHER AND CORROSION RESISTANT
- 7.7. PROVIDE FLEXIBLE DUCTS EQUAL TO FLEXMASTER UNINSULATED TRIPLE LOCK ALUMINUM FASTENED WITH STAINLESS STEEL GEAR DRIVE CLAMPS. MAXIMUM LENGTH OF FLEXIBLE DUCTS SHALL BE 10 FT.
- 7.8. PROVIDE FLEXIBLE CONNECTIONS BETWEEN ALL DUCTWORK AND EQUIPMENT INCLUDING FANS, FAN COIL UNITS AND HEAT PUMP UNITS, AIR CONDITIONING UNITS, ETC.
- 7.9. PROVIDE VIBRATION ISOLATION FOR ALL SUSPENDED AND FLOOR MOUNTED EQUIPMENT.
- 7.10. PROVIDE RIGID OPEN END TRANSFER DUCTS COMPLETE WITH 1" THICK ACOUSTIC INSULATION WHERE SHOWN WITHIN THE CEILING SPACE. DIMENSIONS OF DUCTS ON THE DRAWINGS ARE INSIDE CLEAR SIZES. INCREASE DUCTWORK SIZES TO SUIT ACOUSTIC INSULATION
- 7.11. PROVIDE 1" THICK ACOUSTIC DUCT LINING FOR NEW DUCTWORK MINIMUM 10' 0" DOWNSTREAM OF BY-PASS BOXES, FAN COIL UNITS, AND FOR TRANSFER DUCTS WHERE INDICATED ON THE DRAWINGS. DIMENSIONS OF DUCTS ON THE DRAWINGS ARE INSIDE CLEAR SIZES. INCREASE DUCTWORK SIZES TO SUIT ACOUSTIC INSULATION.
- 7.12. PROVIDE ULC LABELLED FIRE DAMPERS IN DUCTWORK WHERE SHOWN AND WHERE REQUIRED BY CODES AND BY AUTHORITIES HAVING JURISDICTION.

- 7.13. PROVIDE DIFFUSERS, GRILLES AND REGISTERS AS REQUIRED, SELECTED FOR LOW NOISE LEVELS, COMPATIBLE WITH CEILING TYPES AND FINISHES. RELOCATE AND RE-USE EXISTING DIFFUSERS AND GRILLES AS REQUIRED. PROVIDE SUPPORT GRID FOR DIFFUSERS AND GRILLES WHERE REQUIRED.
- 7.14. PROVIDE ALL INTAKE AND EXHAUST LOUVRES AS INDICATE ON THE DRAWINGS. LOUVRES SHALL BE AS FOLLOWS:
- 8. EXTERIOR LOUVRES SHALL BE HIGH PERFORMANCE DRAINABLE FIXED MULLION LOUVRES, 4 INCH, EQUAL TO
- 9. HEADS. SILLS AND JAMBS SHALL BE ONE PIECE STRUCTURAL MEMBERS OF 6063-T52 ALLOY WITH INTEGRAL CAULKING SLOT AND RETAINING BEADS. MULLIONS SHALL BE SLIDING INTERLOCK WITH INTERNAL DRAINS. BLADES TO BE ONE PIECE EXTRUSIONS WITH GUTTERS DESIGNED TO CATCH AND DIRECT WATER TO JAMB AND MULLION DRAINS. ALL EXTRUSIONS SHALL BE MINIMUM 2.06 MM THICK. CLOSED COMPRESSION PVC COMPRESSION GASKETS SHALL BE PROVIDED BETWEEN BOTTOM OF MULLION OR JAMB AND THE TOP OF THE SILL TO PROVIDE LEAK TIGHT CONNECTIONS. ALL FASTENERS SHALL BE MADE OF ALUMINUM OR STAINLESS STEEL. LOUVRES TO BE PROVIDED WITH 15.87 MM FLATTENED MESH, ALUMINUM BIRDSCREEN WITH A 1.4 , THICK EXTRUDED ALUMINUM FRAME. SCREENS AND SCREEN FRAMES TO BE STANDARD MILL FINISH.
- 10. LOUVRE MANUFACTURER SHALL SUBMIT TEST DATA ON A 1.22 M X 1.22 M UNIT SHOWING THAT THE LOUVRE CONFORMS TO THE FOLLOWING:
- FREE AREA MINIMUM 0.741 M2.

CONSTRUCTION SPECIALTIES MODEL A4097.

- II. FREE AREA VELOCITY AT WATER PENETRATION OF 0.01 OZ/FT2 MINIMUM 5.28 M/S.
- III. INTAKE PRESSURE DROP AT 0.01 OZ./ FT2 FREE AREA INTAKE VELOCITY MAX. 23.8 PA.
- IV. EXHAUST PRESSURE DROP AT 5.08 M/S FREE AREA VELOCITY MAX. 45.5 PA.
- V. LOUVRES SHALL BE FINISHED WITH KYNAR 500/ HYLAR 5000 COATING OR EQUIVALENT, MINIMUM 1 MIL. THICK FULL STRENGTH 70% RESIN FLUOROPOLYMER COATING APPLIED TO EXTERIOR ELEMENTS ONLY. PROVIDE 5- YEAR LIMITED WARRANTY AGAINST FAILURE OF THE FINISH.
- 8. TESTING, BALANCING, ADJUSTING AND COMMISSIONING
- 8.1. PROVIDE TESTING, BALANCING AND COMMISSIONING OF ALL SYSTEMS. COMMISSIONING SHALL INCLUDE PUTTING INTO SERVICE, ADJUSTING, CALIBRATING AND VERIFYING ALL SYSTEMS, BOTH NEW AND EXISTING.
- 8.2. PROVIDE AN INDEPENDENT BALANCING COMPANY ACCEPTABLE TO THE CONSULTANT TO TEST, BALANCE AND ADJUST THE AIR AND WATER SYSTEMS.
- 8.3. AIR SYSTEMS:
- 1. PROVIDE AN AIR BALANCE IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS AND AABC STANDARDS. AIR BALANCING SHALL BE PERFORMED WITH CLEAN FILTERS INSTALLED. MECHANICAL CONTRACTOR SHALL CLEAN ALL AIR SYSTEM FILTERS (NEW AND EXISTING) PRIOR TO AIR BALANCING. SUBMIT THREE (3) COPIES OF THE AIR BALANCE REPORT TO THE CONSULTANT FOR REVIEW.
- 2. PROVIDE BALANCING AND ADJUSTING OF ALL AIR SYSTEMS TO ACHIEVE SPECIFIED DESIGN VALUES (+/-5%).
- 3. PROVIDE DATA IN THE BALANCING REPORT WHICH INDICATES AIR VOLUMES AT EACH OUTLET, STATIC PRESSURES, FAN DATA, MOTOR DATA AND COIL DATA.
- 4. PROVIDE DUCT TRAVERSE READINGS FOR EACH AIR HANDLING UNIT AND FAN (WITH DUCTED CONNECTIONS AND
- 5. IDENTIFY PRESSURE DROP ACROSS FILTERS FOR ALL AIR HANDLING UNITS. 6. ADJUST THE AIR PATTERN FOR ALL DIFFUSERS AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE
- 6.1. VERIFY THE OPERATION OF ALL CONTROL DEVICES, INCLUDING VARIABLE VOLUME BOXES
- 8. PROVIDE BALANCING AND ADJUSTING OF ALL HYDRONIC SYSTEMS TO ACHIEVE SPECIFIED FLOW RATES. SUBMIT
- THREE (3) COPIES OF THE FLUID BALANCE REPORT TO THE CONSULTANT FOR REVIEW. 9. PROVIDE BALANCING AND ADJUSTING OF ALL HYDRONIC SYSTEMS TO ACHIEVE SPECIFIED FLOW RATES.
- 10. PROVIDE DATA IN THE BALANCING REPORT WHICH INDICATES FLOW RATES, MOTOR DATA, OPERATING CURVES,
- OPERATING TEMPERATURES AND OPERATING PRESSURES FOR ALL PUMPS, COILS AND HEAT EXCHANGERS. 11. MARK BALANCING VALVES INDICATING THE BALANCED POSITION.

12. VERIFY OPERATION OF ALL CONTROL VALVES INCLUDING PERIMETER HEATING.

9. <u>CONTROLS</u>

9.1. PROVIDE ALL CONTROLS, INCLUDING WIRING, APPROVED PLENUM CABLE, FITTINGS, THERMOSTATS, RELAYS, AUTOMATIC CONTROL VALVES, TRANSFORMERS, DAMPERS, FIRE STATS, FREEZE STATS, SWITCHES AND ACCESSORIES AS REQUIRED FOR COMPLETELY OPERATIONAL SYSTEMS. PROVIDE ALL NECESSARY CONNECTIONS, INTERLOCKS AND

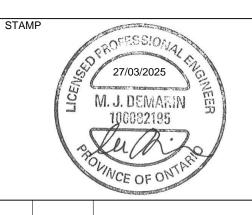
COMPONENTS FROM MAINS TO DAMPERS, CONTROL VALVES, THERMOSTATS OR ANY OTHER DEVICES AS REQUIRED.

- 9.2. ALL EXPOSED WIRING SHALL BE INSTALLED IN RIGID CONDUIT. WIRING INSTALLED ABOVE ACCESSIBLE CEILINGS SHALL BE SECURED TO STRUCTURAL MEMBERS. WIRING SHALL NOT BE SECURED TO MECHANICAL OR ELECTRICAL EQUIPMENT OR DEVICES, AND SHALL NOT BE REST ON CEILING TILES. ALL THERMOSTAT WIRING LOCATED WITHIN PARTITION WALLS SHALL BE INSTALLED IN RIGID CONDUIT.
- 9.3. FOR PNEUMATIC CONTROL SYSTEMS PROVIDE COPPER TUBING WITHIN CEILING SPACE EXCEPT FOR CONNECTIONS TO
- 9.4. THERMOSTATS FOR INDIVIDUAL DEVICES MAY BE LOCATED IN THE CEILING SPACE AND MUST BE RELOCATED AND EXTENDED DOWN WALLS TO FINAL LOCATIONS UNDER THE TENANT CONTRACT. PROVIDE ALL CONNECTIONS AND DEVICES NECESSARY TO INTERLOCK OR MAINTAIN THE INTENT OF ALL PERIMETER HVAC SYSTEMS AND ASSOCIATED ZONE CONTROL OF PERIMETER HEATING SYSTEM AS REQUIRED. VERIFY OPERATION OF ALL THERMOSTATS AND CONTROLS AFTER RELOCATION OF THERMOSTATS AND DEVICES. THERMOSTATS ARE NOT TO BE LOCATED ABOVE ELECTRICAL DIMMER SWITCHES OR ADJACENT TO HEAT PRODUCING DEVICES. ADJUST HEIGHT OF THERMOSTATS TO
- 9.5. WHERE THERMOSTATS ARE TO BE INSTALLED ON CONCRETE COLUMNS, CONCRETE WALLS, ETC THAT ARE NOT FURRED OUT WITH DRYWALL FINISHES, PROVIDE WIRE MOULD OVER THERMOSTAT WIRING/ PNEUMATIC TUBING TO CONCEAL WIRING/ TUBING FROM CEILING PENETRATION TO THERMOSTAT LOCATION. REFER TO ARCHITECTURAL OR INTERIOR DESIGN DRAWINGS FOR WALL FINISHES.
- 9.6. ALL CONTROL WORK SHALL BE PERFORMED BY A CONTROL CONTRATOR APPROVED BY LANDLORD.

AVOID INTERFERENCE WITH SYSTEMS FURNITURE OR OTHER FURNISHINGS AS REQUIRED.



ON // L8P 1N3 // TEL: 647 335 1085 // HABILIS.COM



27/03/2025 ISSUED FOR PERMIT

No DATE DESCRIPTION

AND ADDRESS

HAMILTON-WENTWORTH CATHOLIC DISTRICT

SCHOOL BOARD

30 WENTWORTH ST NORTH L8L 8H5 AND 200 ACADIA DR.L8W 1B8,

HAMILTON ON

KEY PLAN

NORTH N

DISCLAIMER

NORTH N

DO NOT SCALE DRAWINGS, CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED WITHOUT ENGINEERS WRITTEN PERMISSION. THE CONTRACT DOCUMENTS WERE PREPARED BY THE ENGINEER FOR THE ACCOUNT OF THE OWNER. THE MATERIAL CONTAINED HEREIN REFLECT THE FNGINEERS BEST JUDGEMENT IN LIGHT OF THE | INFORMATION AVAILABLE TO THEM AT THE TIME OF PREPARATION

ANY USE WHICH A THIRD PARTY MAKES OF THE

RESPONSIBILITY OF SUCH THIRD PARTIES

CONTRACT DOCUMENTS, OR ANY RELIANCE ON OR

DECISIONS TO BE MADE BASED ON THEM ARE THE

THE ENGINEER ACCEPTS NO RESPONSIBILITY FOR

DAMAGE, IF ANY, SUFFERED BY ANY THIRD PARTY

AS A RESULT OF DECISIONS MADE OR ACTIONS ON

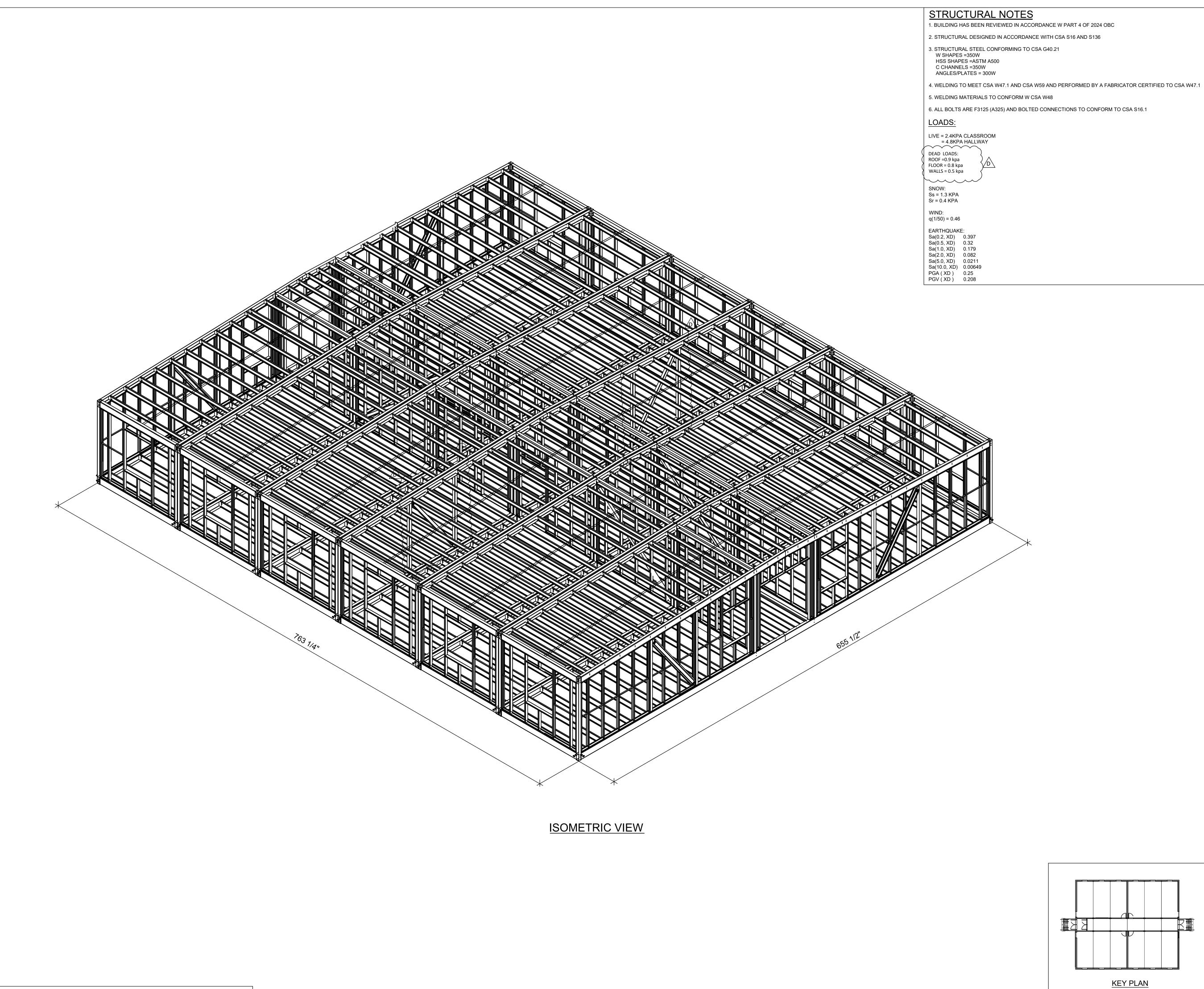
THE CONTRACT DOCUMENTS. JOB NUMBER 25010 N.T.S. 05/03/25 DRAWN BY REVIEWED BY

SPECIFICATIONS

REVISION

DRAWING NUMBER

M60



BRENT ROBERT
JEROL TECHNOLOGIES INC.

JEROL TECHNOLOGIES INC EMAIL ID : brent@jerol.ca

EOR STAMP:



DRAWING STATUS	DATE YY.MM.DD
ISSUED FOR ENGINEER REVIEW	25.03.20
REVISED AS PER EOR MARKUPS	25.03.25
REVISED AS PER EOR MARKUPS	25.04.01
REVISED AS PER EOR MARKUPS	25.04.04

REVISED AS PER EOR MARKUPS		25.04.04
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No.	REVISION	DATE
Α	ISSUED FOR ENGINEER REVIEW	25.03.20
В	FOR EOR APPROVAL	25.03.25
С	FOR EOR APPROVAL	25.04.01
D	FOR EOR APPROVAL	25.04.04



DRAWN BY:
VJ
BECC MODULAR
1295 CORMORANT ROAD,
ANCASTER, ON L9G 4V5

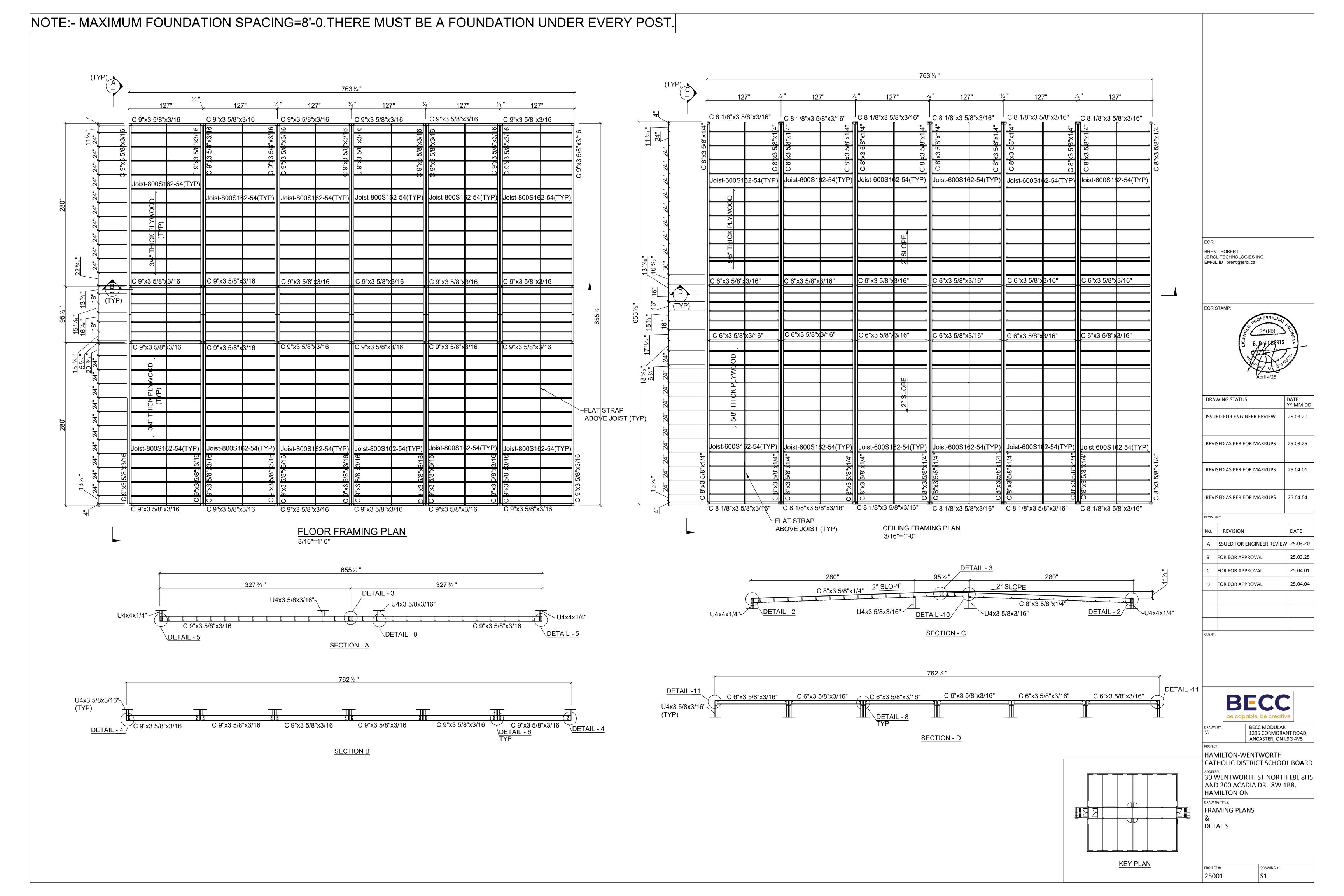
HAMILTON-WENTWORTH
CATHOLIC DISTRICT SCHOOL BOARD

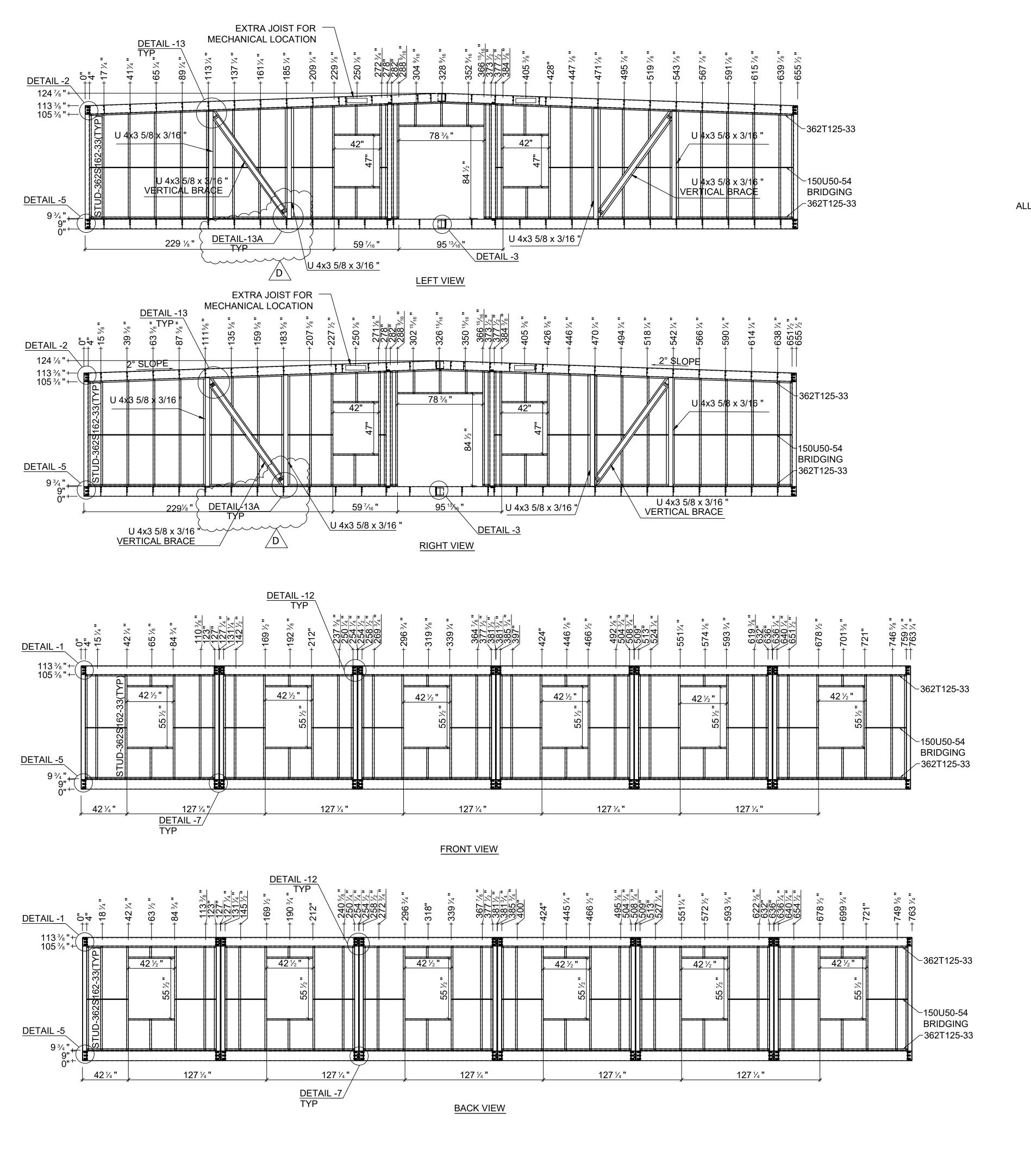
ADDRESS: 30 WENTWORTH ST NORTH L8L 8H5 AND 200 ACADIA DR.L8W 1B8, HAMILTON ON

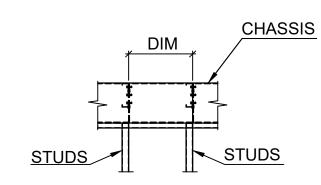
DRAWING TITLE:

ISOMETRIC VIEW

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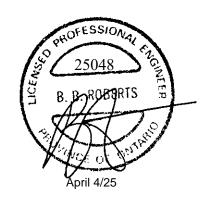
TYPICAL WALL DETAIL

TYP DIMENSION LOCATING DETAILS ALL DIMENSIONS ARE TAKEN FROM BACK OF STUDS

> BRENT ROBERT JEROL TECHNOLOGIES INC. EMAIL ID : brent@jerol.ca

EOR STAMP:

DRAWING STATUS



DATE

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ISSUI	25.03.20		
REVI	25.03.25		
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REVISIONS:			
No.	REVISION	DATE	
Α	ISSUED FOR ENGINEER REVIEW	25.03.20	
В	FOR EOR APPROVAL	25.03.25	
С	FOR EOR APPROVAL	25.04.01	
D	FOR EOR APPROVAL	25.04.04	

1233 COMMONAINT NOP	DRAWN BY:	BECC MODULAR 1295 CORMORANT ROA ANCASTER, ON L9G 4V5
1		

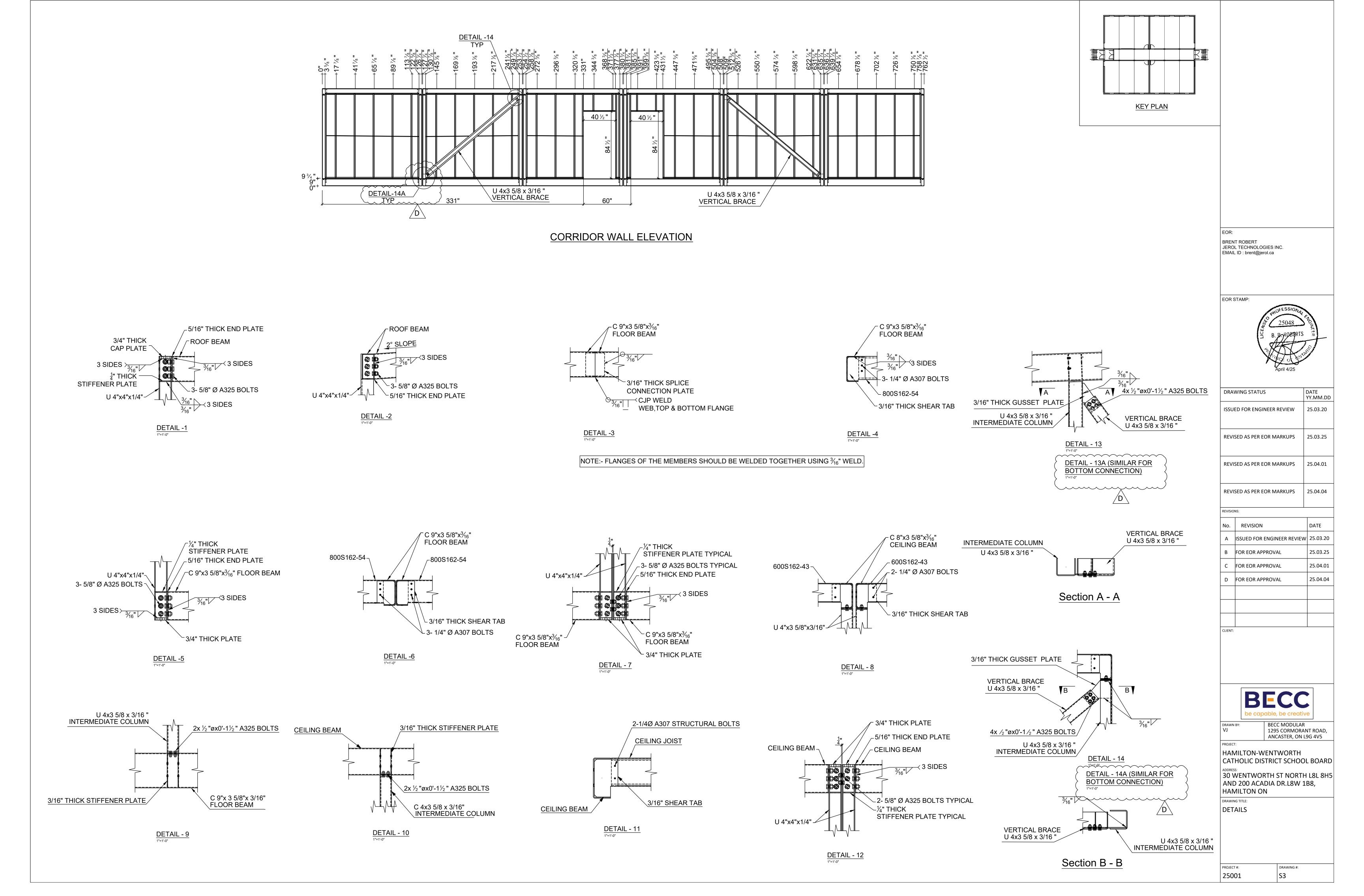
HAMILTON-WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD

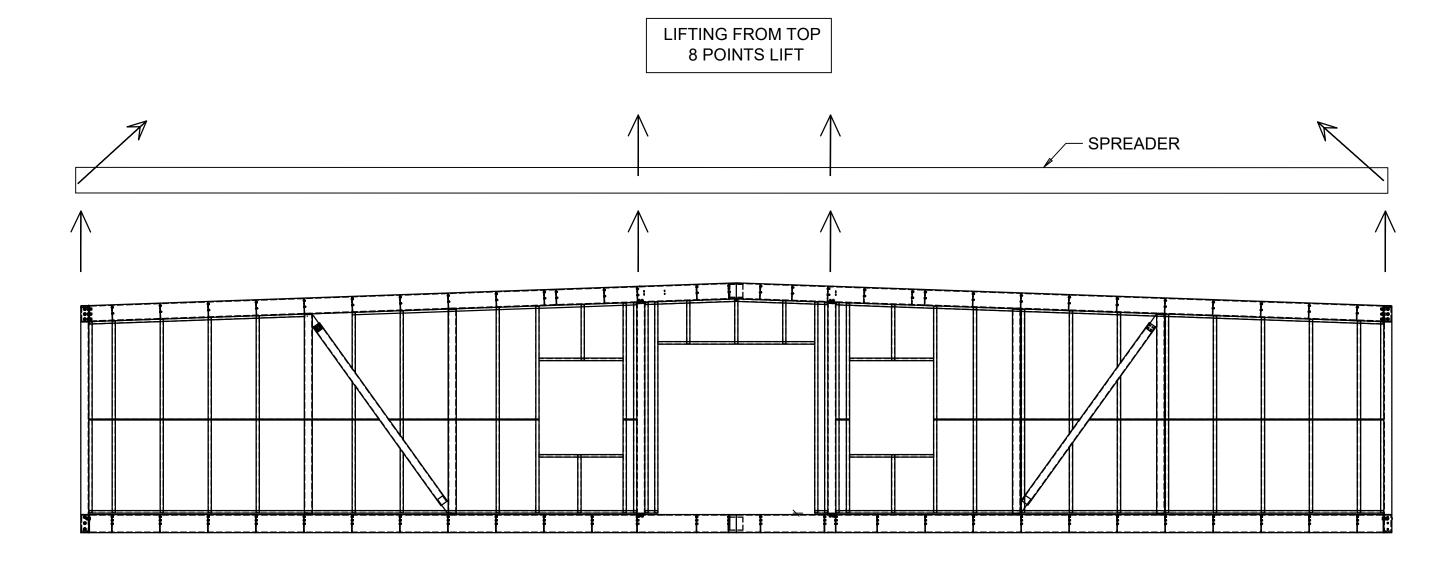
30 WENTWORTH ST NORTH L8L 8H5 AND 200 ACADIA DR.L8W 1B8, **HAMILTON ON**

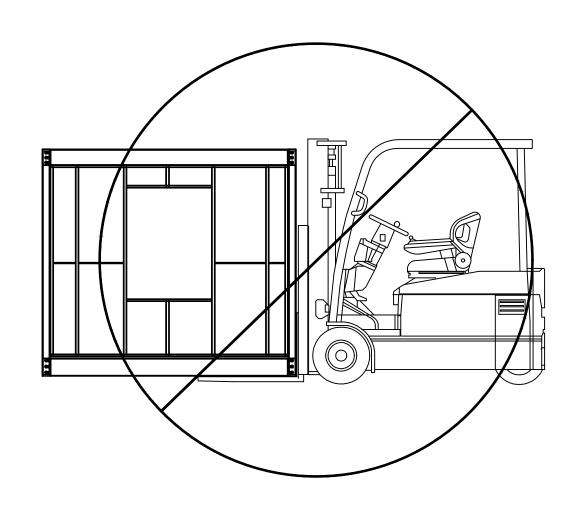
KEY PLAN

WALL ELEVATIONS

25001





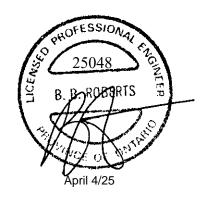


PORKLIFT LIFTING NOT ALLOWED SCALE: N.T.S

BRENT ROBERT JEROL TECHNOLOGIES INC. EMAIL ID : brent@jerol.ca

EOR STAMP:

DRAWING STATUS



DATE YY.MM.DD

	25.03.20		
REV	25.03.25		
REVI	25.04.01		
REV	REVISED AS PER EOR MARKUPS		
REVISIO	DNS:		
No.	REVISION	DATE	
Α	ISSUED FOR ENGINEER REVIEW	25.03.20	
В	FOR EOR APPROVAL	25.03.2	
С	FOR EOR APPROVAL	25.04.0	
D	FOR EOR APPROVAL	25.04.0	

BECC MODULAR 1295 CORMORANT ROAD, ANCASTER, ON L9G 4V5

HAMILTON-WENTWORTH
CATHOLIC DISTRICT SCHOOL BOARD

30 WENTWORTH ST NORTH L8L 8H5
AND 200 ACADIA DR.L8W 1B8, HAMILTON ON

DRAWING TITLE:
LIFTING METHOD

25001

