PICKERING COLLEGE

Innovation Hub Construction Phase

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ISSUED FOR TENDER

NOVEMBER 6, 2026

Name of Practice:
Architecture Counsel
4 Clinton Place
Toronto, ON M6G 1J9

Name of Project:
Pickering College – Innovation Hub Construction Phase

Location:
16945 Bayview Ave, Newmarket ON, L3Y 3W7

Date:
2026-10-05

2024 Ontario Building Code Data Matrix
Part 11 – Renovation

Building Code Reference *

11.00	Building Code Version:	☐ Reg. 163/24 Last Amendment ☐ Reg. 447/24	
11.01	Project Type:	☐ Addition ☒ Renovation ☐ Addition and renovation ☐ Change of use Description: Interior renovation of workshop space	[A] 1.3.3.36
11.02	Major Occupancy Classification:	Occupancy: A2 Use: Primary and Secondary School	3.1.2.1.(3) 3.1.4.1.(1), and 11.2.1.
11.03	Superimposed Major Occupancies:	☒ No ☐ Yes Description:	11.2, 3.2.2.5. to 3.2.2.8. and 2.2.1.
11.04	Building Area (m²):	Description: Existing New Total Basement level 457.1m² 0m² 457.1m² Total 457.1m² 0m² 457.1m² Insert additional lines as needed	[A] 1.4.1.2., 11.2., and 11.3.
11.05	Building Height:	1 Storeys above grade 10.3 m (H) Above grade 1 Storeys below grade Insert additional lines as needed	[A] 1.4.1.2., 3.2.1., 3.2.2.2., and 11.3.
11.06	Number of Streets/ Firefighter Access:	1 street(s)	3.2.2.10., 3.2.5., 2.2.4.1., and 11.3.
11.07	Building Size:	☐ Small ☒ Medium ☐ Large ☐ > Large	11.2.1.1., and 11.2.1.1.B/S.
11.08	Existing Building Classification:	Change in Major Occupancy: ☐ Yes ☒ Not Applicable (no change of major occupancy) Construction Index: 0 Hazard Index: 0 Importance Category: ☐ Low ☐ Normal ☐ High ☐ Post-disaster Insert additional lines as needed	10.1.2., 11.2.1.1.A., 11.2.1.1.B to N, 4.1.2.1.(3), 2.3.1., and 9.3.2.1.(2)
11.09	Renovation Type:	☒ Basic Renovation ☐ Extensive Renovation	11.3.3.1., and 11.3.3.2.
11.10	Occupant Load	Floor Level/Area: Occupancy Type: Based On: Occupant Load (Persons): Basement level A2 Design 70 Insert additional lines as needed	3.1.17., 2.1.2.2., and 11.4.2.2.
11.11 a	Plumbing Fixture Requirements	Ratio: M:F = 50/50 Except as otherwise noted Floor Level/Area: Occupant Load: OBC Reference: WCs Required: WCs Provided: Basement level 70 /A 5 6 (2 washrooms are provided on the basement floor.) Insert additional lines as needed	3.7.4., 11.3.4., 11.3.5., 11.4.2.4., and 11.4.2.5.
11.11 b	Plumbing Fixture Requirements continued:	Floor Level/Area: Barrier-free Type Required: Barrier-free Type Provided: Universal Washrooms Required: Universal Washrooms Provided: Basement level 0 0 0 0 Insert additional lines as needed	Tables 3.8.2.3.A. and 3.8.2.3.B. This part of the school is not currently barrier-free. Barrier-free washrooms are provided in other areas of the school.
11.12	Barrier-free Design:	☐ Yes ☒No Existing building is not barrier-free Number: 0 Existing Barrier-free Entrances:	11.3.1.2., 11.3.2., 11.3.3.2.
11.13	Reduction in Performance Level:	Structural: ☒ No ☐ Yes By increase in occupant load: ☒ No ☐ Yes By change of major occupancy: ☒ No ☐ Yes Plumbing: ☒ No ☐ Yes Sewage systems: ☒ No ☐ Yes Extension of buildings of combustible construction: ☒ No ☐ Yes	11.4.2.1. 11.4.2.2. 11.4.2.3. 11.4.2.4. 11.4.2.5. 11.4.2.6.
11.14	Compensating Construction:	☒ No ☐ Yes Structural: ☐ No ☐ Yes (Describe) Increase in occupant load: ☐ No ☐ Yes (Describe) Change of major occupancy: ☐ No ☐ Yes (Describe) Plumbing: ☐ No ☐ Yes (Describe) Sewage systems: ☐ No ☐ Yes (Describe) Extension of buildings of combustible construction: ☐ No ☐ Yes (Describe)	11.4.3.1. 11.4.3.2. 11.4.3.3. 11.4.3.4. 11.4.3.5. 11.4.3.6. 11.4.3.7.
11.15	Compliance Alternatives Proposed:	☒ No ☐ Yes (list numbers and describe) (list numbers and describe) Insert additional lines as needed	11.5.1.
11.16	Alternative Solutions	(list numbers and describe) Insert additional lines as needed	[A] 1.2.1.1., and 12.2.1.
11.17	Notes:	The Pickering College Dining Hall Building is more than 5 years old. This renovation is subject to Part 11 of the OBC, per clause 11.2.1.1(3), the requirements of 3.2.2.1. to 3.2.2.83. are not applicable provided that they maintain the performance level of the existing building and there is no change of use. Insert additional lines as needed	

* *All references are to Division B of the OBC, unless preceded by [A] for Division A and [C] for Division C.*

TYPICAL ABBREVIATIONS

@	AT	GA	GAUGE	R	RISER
#	NUMBER	GALV	GALVANIZED	RA	RETURN AIR
%	PERCENT(AGE)	GB	GRAB BAR	RAD	RADIUS
		GFA	GROSS FLOOR AREA	RCP	REFLECTED CEILING PLAN
AC	AIR CONDITIONING	GL	GRID LINE	RD	ROOF DRAIN
ACP	ACOUSTIC PANEL	GFRC	GLASS FIBRE REINFORCED CONCRETE	REC	RECEPTACLE
ACT	ACOUSTIC CEILING TILE	GL	GLASS / GLAZING (SEE GLASS TYPES)	REQ'D	REQUIRED
ADJ	ADJUSTABLE	GWB	GYPSUM BOARD	RFL	RESILIENT FLOORING
ADO	AUTOMATIC DOOR OPERATOR			RH	RIGHT-HAND
AFF	ABOVE FINISHED FLOOR	H	HUMIDISTAT	RHR	RIGHT-HAND REVERSE
AL	ALUMINUM	HB	HOSE BIB	RM	ROOM
ALN	ALIGN	HD	HEAT DETECTOR	RO	ROUGH OPENING
AP	ACCESS PANEL	HDR	HAND DRYER	RUB	RUBBER WALL BASE
APPROX	APPROX(IMATELY)	HM	HOLLOW METAL	RWL	RAIN WATER LEADER
AR	'REQUEST FOR ASSISTANCE' BUTTON	HR	HOUR	RWS	ROLLER WINDOW SHADE
ARCH	ARCHITECTURE(AL)	HSS	HOLLOW STRUCTURAL STEEL		
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	HT	HEIGHT	S	SOUTH
AUTO	AUTOMATIC	HW	HOT WATER	S/A	SUPPLY AIR
AUX	AUXILIARY			SA	SECURITY ACCESS
AVB	AIR & VAPOUR BARRIER	IC	INTERCOM	SAFB	SOUND ATTENUATION FIRE BLANKETS
AV/IT	AUDIO VIDEO / INFORMATION TECHNOLOGY	ID	INSIDE DIAMETER	SAN	SANITARY
AVM	AIR, VAPOUR, & MOISTURE BARRIER	INCL	INCLUDING	SC	SCUPPER
		INFO	INFORMATION	SCW	SOLID CORE WOOD
BD	BOARD	INS	INSULATION (SEE INSULATION TYPES)	SCR	SCREEN
BF	BARRIER FREE	INT	INTERIOR	SD	SOAP DISPENSER
BLDG	BUILDING			SEC	SECTION
BLKHD	BULKHEAD	JC	JANITOR'S CLOSET	SHF	SHELF
BRK	BRICK	JT	JOINT	SIM	SIMILAR
BSMT	BASEMENT			SP	SPRINKLER
BTM	BOTTOM	KP	KEY PAD	SPEC	SPECIFICATION
		KS	KEY SWITCH	SQ	SQUARE
CA	CLEAR ANODIZED			SSG	STRUCTURAL SILICONE GLAZING
C/C	CENTRE TO CENTRE	LAV	LAVATORY	SSM	SOLID SURFACING MATERIAL
CG	CORNER GUARD	LD	LIMITING DISTANCE	SST	STAINLESS STEEL
CH	COAT HOOK	LVL	LEVEL	ST	STONE
CJ	CONTROL JOINT	LT	LIGHT FIXTURE	STOR	STORAGE
C/L	CENTRE LINE	LH	LEFT-HAND(ED)	STRUC	STRUCTURAL
CLG	CEILING	LHR	LEFT-HAND REVERSE		
CMU	CONCRETE MASONRY UNIT	LIN	LINEAR	T	TREAD(S)
COL	COLUMN	LP	LOW POINT	TB	TACK BOARD
CONC	CONCRETE	LS	LIGHT SWITCH	TOC	TOP OF CURB
CONST	CONSTRUCTION			TEL	TELEPHONE
CONT	CONTINUOUS	M	METRE	TEMP	TEMPERATURE
CORR	CORRIDOR	m3	CUBIC METRE	TER	TERRAZZO
CP	CONTROL PANEL	MAX	MAXIMUM	T&G	TONGUE & GROOVE
CPT	CARPET / CARPET TILE	MDF	MEDIUM DENSITY FIBREBOARD	TGL	TRIPLE GLAZING
CR	CARD READER	MECH	MECHANICAL	TH	THERMOSTAT
CSA	CANADIAN STANDARDS ASSOCIATION	MED	MEDIUM	THK	THICK
CU	CUBIC	MET	METAL	TO	TOP OF
C/W	COMPLETE WITH	MEZZ	MEZZANINE	TP	TOILET PAPER DISPENSER
CW	COLD WATER	MFR	MANUFACTURER(R)	TRANS	TRANSITION
		MIN	MINIMUM	TWF	THROUGH WALL FLASHING
DA	DATA OUTLET	MIR	MIRROR(ED)	TWSI	TACTILE WALKING SURFACE INDICATOR
DET	DETAIL	MISC	MISCELLANEOUS	TYP	TYPICAL
DF	DRINKING FOUNTAIN	mm	MILLIMETER		
DGL	DOUBLE GLAZING (INSULATED) (SEE DGL TYPES)	MOD-BIT	MODIFIED BITUMEN	U/C	UNDERCUT
DIA	DIAMETER	MTG	MOUNTING	U/G	UNDER GROUND
DIM	DIMENSION	MW	MILLWORK (#)	UL	UNDERWRITERS' LABORATORIES USA
DIST	DISTANCE			ULC	UNDERWRITERS' LABORATORIES CANADA
DIV	DIVISION	N	NORTH	U/P	UTILITY (HYDRO) POLE
DN	DOWN	NBC	NATIONAL BUILDING CODE	UR	URINAL
DR	DOOR	ND	NAPKIN DISPOSAL (SANITARY)	U/S	UNDERSIDE
DRB	DOOR RELEASE BUTTON	NFA	NET FLOOR AREA		
DW	DISHWASHER	NFC	NATIONAL FIRE CODE	VB	VAPOUR BARRIER
DWG	DRAWING	NFHB	NON-FREEZE HOSE BIB	VCT	VINYL COMPOSITE TILE
		NIC	NOT IN CONTRACT	VERT	VERTICAL
E	EAST	NO	NUMBER	VEST	VESTIBULE
EA	EACH	NOM	NOMINAL	V.I.F.	VERIFY IN FIELD
EAA	EMERGENCY AUDIBLE ALERT	NTS	NOT TO SCALE	VTF	VINYL TILE FLOORING
ELEC	ELECTRIC(AL)	NV	NAPKIN VENDOR (SANITARY)	VWC	VINYL WALL COVERING
ELEV	ELEVATION (DATUM)				
EQ	EQUAL	OBC	ONTARIO BUILDING CODE	W	WINDOW
EW	EMERGENCY EYE WASH	O/C	ON CENTRE	W/	WITH
EXG	EXISTING	OD	OUTSIDE DIAMETER	WA	WAVE ACTUATOR
EXP JT	EXPANSION JOINT	OH	OVERHEAD	WAP	WIRELESS ACCESS POINT
EXT	EXTERIOR	OWL	OCCUPIED WHEN LIT INDICATOR	WB	WHITE BOARD
				WBPT	WHITE BOARD PAINT(ED)
FAPS	FIRE ALARM PULL STATION	PA	PUBLIC ADDRESS	WC	WATER CLOSET
FAAP	FIRE ALARM ANUNCIATOR PANEL	PB	PUSH BUTTON (DOOR OPERATOR)	WD	WOOD
FASS	FIRE ALARM SPEAKER/STROBE	PCONC	POLISHED CONCRETE	WD-FL	WOOD FLOORING
FASP	FIRE ALARM SPEAKER	PCT	PORCELAIN CERAMIC TILE	WF	WIDE FLANGE
FAST	FIRE ALARM STROBE	P.LAM	PLASTIC LAMINATE	WI	WROUGHT IRON
FD	FLOOR DRAIN	PLY	PLYWOOD	WP	WATERPROOFING
FDN	FOUNDATION	POL	POLISHED	WPM	WATERPROOF MEMBRANE
FEC	FIRE EXTINGUISHER CABINET	PR	'PRESS TO RESET' BUTTON	WR	WASHROOM
FFL	FINISHED FLOOR LEVEL	PREFAB	PREFABRICATE(ED)	WS	WEATHERSTRIP
FHC	FIRE HOSE CABINET	PREFIN	PREFINISHED		
FIN	FINISH(ED)	PT	PAINT(ED)		
FL	FLOOR	PTD	PAPER TOWEL DISPENSER		
FLM	FILM	PTL	PUSH TO LOCK		
FR	FIRE RATED	PTWR	PAPER TOWEL DISPENSER / WASTE RECEPTACLE		
FRR	FIRE RESISTANCE RATING	PVC	POLYVINYL CHLORIDE		
FTG	FOOTING	PVG	PAVING		

GENERAL DEMOLITION NOTES

1. THE INTENT OF THIS DRAWING IS TO OUTLINE THE SCOPE OF WORK FOR THE DEMOLITION REQUIRED FOR THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL DEMOLITION FOR THE PROJECT IS PERFORMED AS REQUIRED FOR INSTALLATION OF NEW WORK.
2. COORDINATE PHASING OF DEMOLITION WITH SITE PROJECT / CONSTRUCTION MANAGER.
3. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AV/IT/SECURITY DRAWINGS FOR ADDITIONAL ASSOCIATED DEMOLITION WITHIN SCOPE OF THIS PROJECT.
4. REFER TO ALL DRAWINGS FOR FULL EXTENT OF WORK ASSOCIATED WITH THE INSTALLATION OF SERVICES, ETC., SHOWN ON ALL DRAWINGS. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AV/IT/SECURITY DRAWINGS FOR ALL ASSOCIATED DEMOLITION WORK. (EXAMPLES: PLUMBING/HEATING MODIFICATIONS IN EXISTING BUILDING, INSTALLATION OF NEW DUCTS IN EXISTING BUILDING, ETC.).
5. CONSTRUCTION IS NOT TO INTERFERE WITH USE OF EXISTING AREAS. WHICH ARE TO REMAIN OPERATIONAL. MAINTAIN FREE AND SAFE PASSAGE TO AND FROM EXISTING AREAS.
6. DURING DEMOLITION AND CONSTRUCTION, ANY DAMAGE TO EXISTING FINISHES, MILLWORK, FLOORING, CEILING, ETC. OTHER THAN INDICATED IN THESE DRAWINGS SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE TENANT. IF THE SCOPE OF DEMOLITION IS UNCLEAR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
7. REMOVE CAREFULLY, BUBBLE WRAP AND STORE FOR REUSE ANY LIGHT FIXTURES, ELECTRICAL DEVICES, BOXES AND ASSOCIATED WIRING ON SURFACES TO BE DEMOLISHED OR MODIFIED (REFER TO ELEC. DWGS). HAND OVER TO OWNER ANY ITEMS THAT ARE NOT TO BE REUSED. ALL OTHER DEMOLISHED ITEMS TO BE REMOVED FROM THE SITE IN A TIMELY MANNER.
8. WHERE EXISTING WALLS AND BUILDING FITTINGS ARE BEING REMOVED, MAKE GOOD SUBSTRATES TO RECEIVE NEW SPECIFIED MATERIALS AND FINISHES.
9. PATCH, REPAIR & MAKE GOOD EXISTING FLOOR TO BE SMOOTH, LEVEL, AND VOID OF WAVES, MATERIAL BUMPS OR DEPRESSIONS. READY EXISTING FLOOR TO ACCEPT NEW SPECIFICATIONS AND FLOOR MANUFACTURER'S REQUIREMENTS. SEE FINISH SCHEDULE. PROVIDE SELF-LEVELING CONCRETE TOPPING AS REQUIRED TO MAKE FLOORING SURFACE FLUSH AND SLOPED TO DRAINS.
10. WHERE NEW CEILING MATERIALS ARE INDICATED, INSTALL A COMPLETELY NEW CEILING SYSTEM. SEE INTERIOR FINISHES SCHEDULE & REFLECTED CEILING PLAN.
11. REMOVE OR CAP ALL EXISTING ABANDONED PIPES IN WALLS & FLOORS.
12. INSPECT EXISTING DOORS (INCLUDING FRAMES AND HARDWARE) NOTED AS "TO REMAIN" AND ENSURE THAT ALL COMPONENTS ARE IN GOOD WORKING ORDER. REPAIR OR REPLACE, TO MATCH, ANY DAMAGED OR DEFECTIVE COMPONENTS.
13. PROTECT EXISTING GLAZING AND FRAMES TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
14. GC RESPONSIBLE TO REMOVE AND DISPOSE ALL LEFT-OVER ITEMS, INCLUDING CONSTRUCTION EQUIPMENT AND MATERIALS FROM THE AREA OF CONSTRUCTION.

REFLECTED CEILING PLAN DEMOLITION NOTES

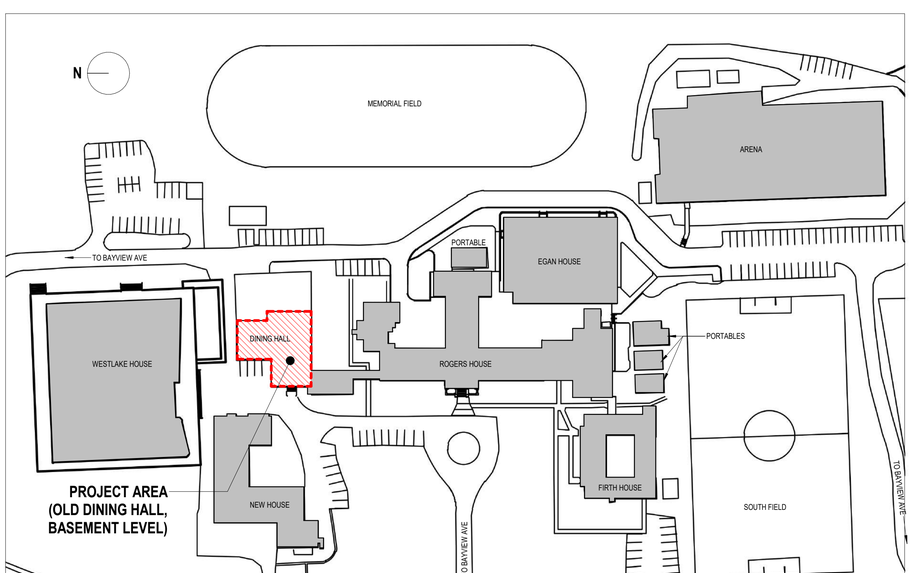
1. DRAWINGS SHALL BE SITE VERIFIED FOR DETAILED LAYOUT AND DIMENSIONS. ALL DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSULTANT.
2. EXISTING FIRE-RATED CEILING TO REMAIN.
3. EXISTING SPRINKLER SYSTEM TO REMAIN.
4. EXISTING HEAT DETECTORS AND ALARMS TO REMAIN.
5. ALL ELECTRICAL/DATA/PHONE/CABLE TELEVISION DEMOLITION TO BE COORDINATED WITH OWNER ON SITE.
6. REMOVE CAREFULLY, BUBBLE WRAP AND STORE FOR REUSE ANY LIGHT FIXTURES, ELECTRICAL DEVICES, BOXES, AND ASSOCIATED WIRING ON SURFACES TO BE DEMOLISHED OR MODIFIED (REFER TO ELEC. DWGS). HAND OVER TO OWNER OR LANDLORD ANY ITEMS THAT ARE NOT TO BE REUSED AS REQUESTED BY THE OWNER OR LANDLORD. ALL OTHER DEMOLISHED ITEMS ARE TO BE REMOVED FROM THE SITE IN A TIMELY MANNER.
7. PROVIDE DUST-FREE, INSULATED GYPSUM WALLBOARD HOARDING AS REQ'D. REVIEW THE LOCATION OF ALL HOARDING WITH THE OWNER ON THE SITE BEFORE COMMENCING WORK.

GENERAL PARTITION NOTES

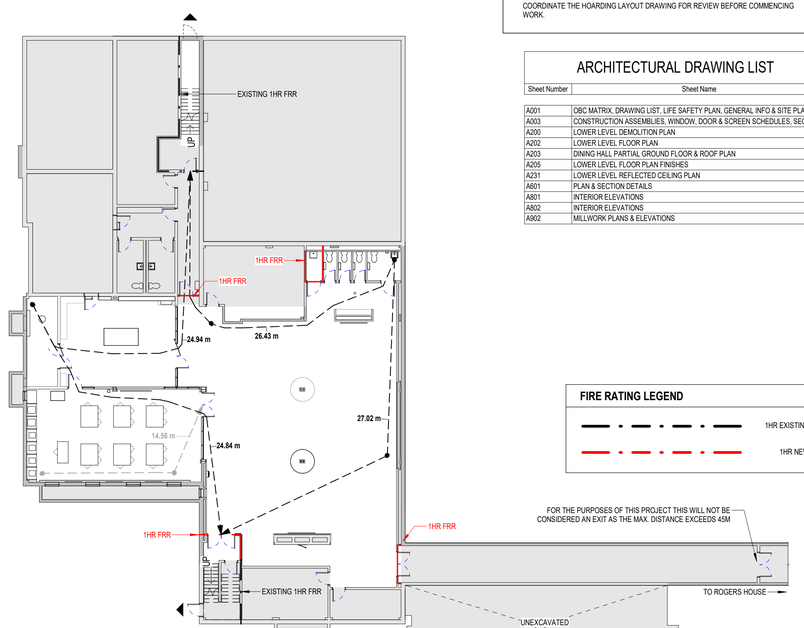
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. REPORT ANY DISCREPANCIES TO THE DESIGNER FOR CLARIFICATION.
2. ALL THE NUMERAL DIMENSIONS ARE HARD DIMENSIONS. CONTRACTOR TO REPORT ANY DISCREPANCIES TO DESIGNER ONCE PARTITIONS HAVE BEEN CHALKED ON SITE.
3. NEW PARTITIONS ARE TO BE CHALKED ON SITE AND APPROVED BY THE DESIGNER PRIOR TO INSTALLATION OF FLOOR AND CEILING TRACK.
4. CONTRACTOR SHALL BE RESPONSIBLE TO FULFILL ALL REQUIREMENTS OF DESIGN / LISTED ASSEMBLIES, INCLUDING APPROVED MATERIALS AND CONSTRUCTION METHODS.
5. PARTITION WALLS TO CARRY TO U/S OF SLAB UNLESS OTHERWISE NOTED.
6. PROVIDE GWB ABOVE ALL SCREENS AND DOORS TO U/S OF SLAB UNLESS NOTED OTHERWISE. STC RATING OF ADJACENT WALL TO BE CARRIED.
7. THE CONTRACTOR IS TO ENSURE VARYING PARTITION THICKNESS TO COORDINATE WITH DOOR FRAME SIZES. REPORT ANY DISCREPANCIES TO DESIGNER FOR CLARIFICATION.
8. PROVIDE ABUSE-RESISTANT GYPSUM WALL BOARD IN CORRIDORS, LOBBIES, AND WAITING AREAS TO A MINIMUM OF 1600MM ABOVE FINISHED FLOOR.
9. PROVIDE TWO LAYERS OF 9MM GYPSUM WALL BOARD AT ALL CURVED PARTITIONS.
10. PROVIDE MOISTURE AND MOULD-RESISTANT BOARD AT ALL WASHROOMS AND JANITOR'S CLOSETS. PROVIDE TILE BACKER BOARD WHERE TILES ARE SPECIFIED.
11. PROVIDE CONCEALED CONTINUOUS BLOCKING AT PARTITIONS AS REQUIRED. REFER TO PLANS, SECTIONS, AND INTERIOR ELEVATIONS FOR LOCATIONS OF MILLWORK, VANITIES, SINKS, WASHROOM ACCESSORIES, AND ANY OTHER ITEMS THAT REQUIRE BLOCKING.
12. STAGGER DRYWALL SEAMS WHEN 2 OR MORE LAYERS OF DRYWALL ARE REQUIRED.
13. WALLS NOTED AS "0-HR / NON-RATED FIRE SEPARATION ASSEMBLIES" ARE TO BE "SMOKE SEALED" AT ALL OPENINGS.
14. REINFORCE STUDS AT DUCT OPENINGS.
15. THE CONTRACTOR IS TO REPAIR DAMAGE TO EXISTING PARTITIONS AND/OR EXISTING FIRE SEPARATIONS WITHIN THE AREA OF SCOPE OF WORK SHOWN AS TO REMAIN. RATINGS ARE TO MATCH EXISTING.
16. PROVIDE HEAVY GAUGE STUDS WHEN REQUIRED, REVIEW WITH CONSULTANT PRIOR TO INSTALL.
17. ALL OPENINGS TO BE PREPARED TO ACCEPT NEW WINDOWS AND DOORS AS PER MANUFACTURER'S SPECIFICATIONS.
18. PROVIDE RATED ASSEMBLY WHERE NOTED ON LIFE SAFETY PLANS; OTHERWISE, NON-RATED ASSEMBLY IS ACCEPTABLE.
19. PROVIDE 13MM AIR SPACE BETWEEN FURRING WALL STUDS & EXISTING STRUCTURE/WALL ASSEMBLY. REFER TO PLANS FOR PARTITIONS WITH LARGER AIR SPACE.
20. REPAINT ENTIRE WALL TO MATCH EXISTING WHEREVER NEW WORK REPAIRS HAVE BEEN COMPLETED OR WHERE ANY DAMAGE TO EXISTING FINISHES HAS OCCURRED DURING CONSTRUCTION. VERIFY ALL FINISHES TO BE MATCHED ON SITE.
21. SOUND BATTS IN PARTITIONS ARE TO CONTINUE BEHIND POWER AND DATA OUTLETS WITHOUT INTERRUPTION.
22. STAGGER OUTLETS OCCURRING ON OPPOSITE SIDES OF THE SAME PARTITION TO MAINTAIN ACOUSTICAL INTEGRITY.
23. THE CONTRACTOR IS TO ENSURE THAT ALL DRYWALL IS FLUSH, CLEAN, AND FREE OF DUST PRIOR TO APPLICATION OF ALL NEW FINISHES.
24. IF NOT ANNOTATED, ASSUME PARTITION TYPE TO BE 'P2A'.
25. ACOUSTIC PARTITIONS:
   a. TO ACHIEVE PARTITION STC RATING, THE FULL PERIMETER OF THE PARTITION TO BE SEALED TO THE SURROUNDING STRUCTURE WITH NON-HARDENING ACOUSTIC SEALANT. ALL PENETRATIONS FOR ELECTRICAL, MECHANICAL SYSTEMS, OR ANY OTHER SERVICES SHALL MAINTAIN THE STC RATING OF THE PARTITION.
   b. PROVIDE ACOUSTIC SEALS AROUND ALL PENETRATIONS IN ACOUSTIC WALL ASSEMBLIES.
   c. FOR GAPS LESS THAN 12MM, SEAL BOTH SIDES OF EACH GAP WITH NON-HARDENING CAULKING. CELL FOAM MATERIAL (E.G., BACKER ROD) TO BE USED TO FILL THE GAPS PRIOR TO CAULKING IF NECESSARY.
   d. FOR GAPS MORE THAN 12MM, REFER TO ARCHITECTURAL AND MECHANICAL FOR SEAL DETAIL. REVIEW WITH CONSULTANT IF REQUIRED.
   e. DO NOT LOCATE ELECTRICAL OUTLET BOXES BACK-TO-BACK IN THE SAME STUD CAVITY OF ANY STC-RATED PARTITION. WHERE BOXES MUST BE PLACED, WRAP BOXES IN PUTTY PAD OR APPROVED ALTERNATIVE. REFER TO ELECTRICAL.
   f. ALL DRAINPIPES TO BE WRAPPED, REFER TO MECHANICAL.
   g. CREATE A DISCONTINUITY IN PARTITION GYPSUM BOARDS INTERSECTING WITH ANOTHER PARTITION, TO REDUCE FLANKING NOISE TRANSFER. REFER TO ARCHITECTURAL DETAIL.
   h. UNLESS OTHERWISE NOTED, STEEL STUDS IN STC-RATED SINGLE-STUD PARTITIONS MUST BE 25 GAUGE. PROVIDE RESILIENT CHANNEL IF HEAVIER STUDS ARE USED.

GENERAL CONSTRUCTION NOTES:

1. ARCHITECTURAL DRAWINGS AND SPECIFICATIONS ARE TO BE READ IN CONJUNCTION WITH SCOPES OF WORK, SPECIFICATIONS, AND THE MECHANICAL, ELECTRICAL, AND ACOUSTIC DOCUMENTS.
2. DRAWINGS SHALL BE SITE VERIFIED FOR DETAILED LAYOUT AND DIMENSIONS. GENERAL CONTRACTOR IS TO NOTIFY ARCHITECT IMMEDIATELY IF EXISTING AS-BUILT CONSTRUCTION DIFFERS FROM THESE DRAWINGS.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS REQUIRED BY RELEVANT AUTHORITIES PRIOR TO COMMENCEMENT OF WORK.
4. COORDINATE ALL MATTERS OF SECURITY OR SITE ACCESS WITH LANDLORD AND/OR THEIR REPRESENTATIVES.
5. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT LOCAL BUILDING CODES, THE NATIONAL FIRE CODE, AND ALL OTHER STANDARDS OR BY-LAWS FROM AUTHORITIES HAVING JURISDICTION.
6. SUBMIT REQUIRED CHANGES TO THE ARCHITECT FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
7. PROVIDE MODIFICATIONS TO THE EXISTING LIFE SAFETY SYSTEMS AS SHOWN ON THE DRAWINGS AND AS REQUIRED TO COMPLETE NEW WORK. PROVIDE TESTING AND VERIFICATIONS AS REQUIRED. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR COORDINATION, SPECIFICATIONS, AND LOCATIONS.
8. MAKE GOOD ANY EXISTING WORK AND/OR FINISHES THAT ARE MODIFIED OR AFFECTED BY NEW CONSTRUCTION. REPAIR AND FINISH TO MATCH NEW ANY SURFACES (WALL, FLOORS, CEILING, ETC.) THAT ARE DAMAGED BY THE INSTALLATION OR DEMOLITION OF ANY ITEMS THAT ARE PART OF THIS CONTRACT.
9. VERIFY ALL ROUGH OPENING DIMENSIONS ON SITE.
10. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AV/IT/SECURITY DRAWINGS FOR OTHER APPLICABLE NOTES.
11. CONTRACTOR IS TO PROVIDE MECHANICAL AND ELECTRICAL INTERFERENCE DRAWINGS TO COORDINATE THE LOCATIONS OF NEW AND RELOCATED SERVICES, DEVICES, ETC. WITH THE EXISTING CONDITIONS TO THE CONSULTANTS FOR REVIEW PRIOR TO STARTING WORK.
12. EXISTING SERVICES AND UTILITIES MUST BE ADJUSTED TO SUIT THE INTENT OF NEW WORK.
13. ALL EXISTING SPRINKLERS THROUGHOUT THE BUILDING ARE TO BE ADJUSTED TO SUIT THE NEW DESIGN BY THE FIRE PROTECTION CONTRACTOR. SPRINKLER DRAWINGS TO BE SUBMITTED & APPROVED BY LOCAL MUNICIPALITY PRIOR TO PROCEEDING WITH THE WORK.
14. ALL NEW CONDUIT AND PIPING FOR ELECTRICAL AND MECHANICAL ITEMS ARE TO BE CONCEALED WITHIN WALLS OR THE ACCESS FLOOR CAVITY WHEREVER POSSIBLE, UNLESS OTHERWISE NOTED. LAYOUT AND VERIFY ALL LOCATIONS WITH CONSULTANTS BEFORE COMMENCING INSTALLATION. ALL EXPOSED CONDUIT AND PIPING ARE TO BE INSTALLED TIGHT TO THE CEILING SLAB. GANGED TOGETHER NEAT AND ORDERLY WHERE POSSIBLE AND INTERSECT AT 90°. REFER ALSO TO MECHANICAL AND ELECTRICAL DRAWINGS.
15. ALL NEW INTERIOR PARTITIONS ARE TO EXTEND TO U/S OF EXISTING STRUCTURE UNLESS NOTED OTHERWISE. PROVIDE TIEBACKS & ADDITIONAL BRACING AS REQUIRED TO SUIT HEIGHT SPANS OF STUDS.
16. MAINTAIN ALL EXISTING FIRE RATINGS OF EXISTING WALLS/FLOORS/CEILINGS; PATCH, REPAIR AND MAKE GOOD OF ALL MATERIALS AS REQUIRED TO MAINTAIN INTEGRITY OF FIRE RATING. SITE VERIFY EXISTING FIRE-RATINGS; ADVISE ARCHITECT OF ALL WORK.
17. ALL CONSTRUCTION ASSEMBLIES NOTING FRAMING OF STRUCTURAL STEEL STUDS ARE TO BE DESIGNED BY PROFESSIONAL ENGINEER. SHOP DRAWINGS (STAMPED BY P.ENG) ARE TO BE SUBMITTED & APPROVED PRIOR TO PROCEEDING WITH THE WORK.
18. ALL STRUCTURAL SUPPORTS AND FRAMING NOT TO BE BY MISCELLANEOUS METAL ARE TO BE DESIGNED BY PROFESSIONAL ENGINEER. SHOP DRAWINGS (STAMPED BY P.ENG) ARE TO BE SUBMITTED & APPROVED PRIOR TO PROCEEDING WITH THE WORK. TBLK DISCLAIMER.
19. WASHROOMS, WATER PROOFING MEMBRANE TO BE PROVIDED AT FULL FLOOR EXTENT.
   a. EXTEND MEMBRANE UP WALLS FULL HEIGHT AT WASHROOMS WITH SHOWERS.
   b. EXTEND MEMBRANE UP WALLS 1200MM AFF AT ALL OTHER WASHROOMS
20. ALL EXISTING HANDRAILS AND GUARDS TO REMAIN, UNLESS NOTED OTHERWISE. PATCH, CLEAN AND PAINT.
21. WHERE NEW FINISHES ARE TO BE INSTALLED AROUND EXISTING SERVICES, GC TO REVIEW CUT LINE/SEAM LINES WITH CONSULTANT PRIOR TO INSTALLATION.
22. WALL TYPES ARE GENERIC. PROVIDE FURRING AROUND COLUMNS, MECHANICAL AND ELECTRICAL ITEMS/DEVICES AS REQUIRED. EXISTING WALL TYPES AS INDICATED ON DRAWINGS TAKE FROM BASE BUILDING DRAWINGS AND MAY NOT REFLECT SITE CONDITIONS ACCURATELY.
23. PROVIDE ALL CONSTRUCTION HOARDING AND SIGNAGE AS REQUIRED TO COMPLETE REQUIRED PHASING AND SEPARATION OF WORK. HOARDING IS TO BE SEALED, INSULATED STUD WALL CONSTRUCTION UNLESS OTHERWISE APPROVED WITH THE OWNER. ALL HOARDING IS TO PROVIDE DUST-FREE PROTECTION TO ALL NEIGHBOURING AREAS, AND SUCH IS TO INCLUDE SEALED BULKHEADS ABOVE EXISTING CEILINGS AS REQUIRED. PROVIDE EXISTING DOORS & EXISTING SIGNAGE IN CONSTRUCTION HOARDING TO EGRESS DOORS AS REQUIRED BY CODE. VERIFY AND COORDINATE THE HOARDING LAYOUT DRAWING FOR REVIEW BEFORE COMMENCING WORK.



2 A001 SITE PLAN
1 : 1000



1 A001 LOWER LEVEL LIFE SAFETY PLAN - DEMO PHASE
1 : 200

FIRE RATING LEGEND

1HR EXISTING

1HR NEW

ARCHITECTURAL DRAWING LIST

Sheet Number	Sheet Name
A001	OBC MATRIX, DRAWING LIST, LIFE SAFETY PLAN, GENERAL INFO & SITE PLAN
A003	CONSTRUCTION ASSEMBLIES, WINDOW, DOOR & SCREEN SCHEDULES, SECTION
A200	LOWER LEVEL DEMOLITION PLAN
A202	LOWER LEVEL FLOOR PLAN
A203	DINING HALL PARTIAL GROUND FLOOR & ROOF PLAN
A205	LOWER LEVEL FLOOR PLAN FINISHES
A231	LOWER LEVEL REFLECTED CEILING PLAN
A601	PLAN & SECTION DETAILS
A801	INTERIOR ELEVATIONS
A802	INTERIOR ELEVATIONS
A902	MILLWORK PLANS & ELEVATIONS

Architecture Counsel

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	DATE	REVISION
2	2026.11.06	ISSUED FOR TENDER
1	2026.10.06	ISSUED FOR PERMIT

ONTARIO ASSOCIATION OF ARCHITECTS

INTERIOR PARTITION ASSEMBLIES

TYPE	DIAGRAM	DESCRIPTION	TOTAL DIM.	FIRE RATING	REF. LISTING	ACOUSTIC	COMMENTS
P1		- 6X8X16 CONCRETE BLOCK TO MATCH EXISTING	150mm	1HR			
P2a		- 16mm GWB-1 - 92mm METAL STUDS @ 610mm O.C. - 75mm INS-1 - 16mm GWB-1	124mm	1HR	SA-870717 CGC SA-200	STC - 49	PROVIDE GWB-4 WHERE WALLS ARE REQUIRED TO BE FIRE RERATED. PROVIDE GWB-1 AT ALL OTHER LOCATIONS.
P3		- 16mm GWB-1 - 152mm METAL STUDS @ 610mm O.C. - 16mm GWB-1	184mm	1HR	ULC W453	STC - 41	PROVIDE GWB-4 WHERE WALLS ARE REQUIRED TO BE FIRE RERATED. PROVIDE GWB-1 AT ALL OTHER LOCATIONS.
P3a		- 16mm GWB-1 - 152mm METAL STUDS @ 610mm O.C. - 152mm INS-1 - 16mm GWB-1	184mm	1HR	ULC W453	STC - 51	PROVIDE GWB-4 WHERE WALLS ARE REQUIRED TO BE FIRE RERATED. PROVIDE GWB-1 AT ALL OTHER LOCATIONS.
F1		- 16mm GWB-2, TYPE X - 41mm FURRING CHANNELS @ 405mm O.C. - 13mm AIR SPACE B/W EXG. STRUCTURE	57mm				
F2a		- 16mm GWB-1 - 92mm METAL STUDS @ 405mm O.C. - 90mm INS-1 - 13mm AIR SPACE B/W EXG. STRUCTURE	108mm				
F3a		- 16mm GWB-1 - 152mm METAL STUDS @ 405mm O.C. - 150mm INS-1 - 13mm AIR SPACE B/W EXG. STRUCTURE	168mm				
EW1		- METAL FLASHING MET-1 - 12mm EXTERIOR SHEATHING W/ VPM-1 - 152mm METAL STUDS @ 405mm O.C. C/W 152mm INS-1 INSULATION - AVB-1 - 16mm GWB-1	180mm				

CEILING TYPES

TYPE	DIAGRAM	DESCRIPTION
C1		**GWB CEILING** - EXISTING STRUCTURE - SUSPENSION CABLES - 38mm CARRYING CHANNELS @ 1200mm O.C. - 22mm FURRING CHANNELS @ 405mm O.C. - 16mm GWB-1, PROVIDE 16mm GWB-3 AT WASHROOMS AND JANITOR CLOSET, PROVIDE 16mm GWB-4 WHERE FIRE RATING IS REQUIRED
C2		**ACOUSTIC CEILING TILES** - EXISTING CONCRETE STRUCTURE - METAL SUSPENSION SYSTEM - ACT-1 (REF. TO RCP FOR TILE SIZE & PATTERN)
C3		**TECTUM BLADES CEILING** - EXISTING STRUCTURE TO BE PAINTED - EXG AND NEW SERVICES TO BE PAINTED - SUSPENSION SYSTEM C/W STEEL CHANNEL & AIRCRAFT CABLES - ACB-1 TECTUM BLADES - PANEL JOINTS TO BE STAGGERED - REF. TO RCP FOR SPACING
C4		**FIXED SOUND-APSORPTIVE PANEL SYSTEM** - EXG EXPOSED CONCRETE DECK OR C1 GWB CEILING - ACP-1 TECTUM PANELS - PANEL JOINTS TO BE STAGGERED

FLOOR THRESHOLD

TYPE	DESCRIPTION
TH1	**EXG TO CONC-1** CONC-1 — EXG LINOLEUM FLOORING STAINLESS STEEL TRIM OR MANUFACTURER'S PROPRIETARY THRESHOLD

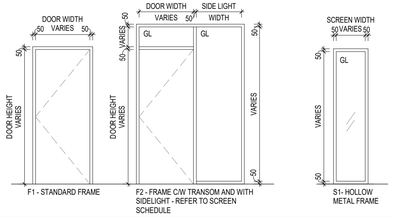
MATERIAL LEGEND

ACB-1	ARMSTRONG TECTUM BLADES AND BAFFLES, SQUARE EDGES, SIZE: 50mm THK x 460mm H, COLOUR: ALLOW FOR UP TO (4) COLOURS TO BE SELECTED AT A LATER DATE FROM MANUFACTURER'S FULL RANGE
ACP-1	FIXED SOUND-ABSORPTIVE PANEL SYSTEM, TECTUM FINALE PANELS BY ARMSTRONG, THICKNESS 38mm, LENGTH 1220MM, WIDTH 610mm, COLOUR: NATURAL. PAINTED FASTENERS TO MATCH PANEL COLOUR. BOTH LONG AND SHORT EDGES BEVELLED. DRYWALL GRID MOUNTING TYPE
AVB-1	AIR/VAPOUR BARRIER
BL-1	GLAMOURLINE DARKSOURCE, 4-PLY VINYL, COLOUR: FOR LATER LATER SELECTION BY CONSULTANT FROM MANUFACTURER'S FULL RANGE, HOUSING AND HEMBAR: CLEAR ANODIZED
CONC-1	EXISTING CONCRETE W/ LEVELLING COMPOUND UP TO 25mm THK AS REQUIRED THROUGHOUT THE SPACE C/W EPOXY FLOOR FINISH. EPOXY FLOOR FINISH, EPOXY FLOORING, SIKAFLOOR MORRITEX BROADCAST SYSTEM, COLOUR TBD. ALLOW FOR CUSTOM COLOUR
FLM-1 FLM-2	50mm SAFETY FILM STRIP, 3M FASARA CLOUD SH2FGCL WHITEBOARD WALL FINISH, 3M DI-NOC WHITEBOARD FINISH, WH-111, 920mm x 10m, 3M ID 7000008067. PROVIDE LEVEL 4 GWB FINISH TO ACCEPT WHITEBOARD FILM
GL-1 GL-2 GL-3	13mm, TEMPERED, CLEAR GLASS 45MIN FIRE RATED 6mm, MIRROR
GWB-1 GWB-3 GWB-4 GWB-5 GWB-6	GYPSUM WALL BOARD, PLAIN GYPSUM WALL BOARD, GLASS SCRIM MOISTURE RESISTANT GYPSUM WALL BOARD TYPE-X GYPSUM WALL BOARD; ABUSE RESISTANT 16mm CEMENT BOARD TILE BACKER
INS-1	MINERAL FIBRE SEMI-RIGID INSULATION (ROCKWOOL CAVITY ROCK)
MET-1	18 GA FLAT GALVANIZED STEEL EXTERIOR CLADDING, COLOUR TO BE SELECTED FROM MANUFACTURER'S STANDARD FINISHES. ACCEPTABLE MANUFACTURERS: VICWEST, AGWAY
MET-2 MET-3	STAINLESS STEEL 304 COUNTERTOP W/ BACKSPLASH AND MARINE EDGE COLD-ROLLED STEEL, POWDERCOAT TO MATCH PT-1a, SATIN FINISH
PCT-1	PORCELAIN CERAMIC TILE, OLYMPIA TILE, LOOP SERIES, BEIGE MATTE, 30 CM X 60 CM (EX.LP.BGE.1224.MT)
PLAM-1	PLASTIC LAMINATE, WILSONART, COLOUR: LINEN D427-60, FINISH: MATTE
PT-1a PT-1b PT-1c PT-2 PT-3	WALL PAINT, EGGSHELL FINISH, RESERVED CEILING PAINT, MATTE FINISH, RESERVED DRY-FALL PAINT FOR EXPOSED SERVICES AND STRUCTURE, MATTE FINISH, RESERVED DOOR / DOOR FRAME PAINT, SEMI-GLOSS FINISH, RESERVED 1HR RATED INTUMESCENT PAINT
RFL-1	VINYL STAIR TREADS AND NOSINGS, TARKETT, ANGLEFIT RUBBER TREAD WITH INTEGRATED RISER, TEXTURE: HAMMERED, COLOUR: GREY HAZE WG
RUB-1	RUBBER BASE, TARKETT MANDALAY 4.5", COLOUR: TBD
VPM-1	VAPOUR-PERMEABLE MEMBRANE
WB-1	WHITEBOARD, ASI 1/2" 'ES' PORCELAIN ENAMEL COATED MAGNETIC WRITING SURFACE, LOW GLOSS, WHITE
WD-1 WD-2 WD-2a	SOLID MAPLE BUTCHER BLOCK COUNTERTOP, 38mm THK, CLEAR SEALANT SOLID, WHITE OAK, RIFT CUT, SEALED (CLEAR), MATTE FINISH VENEER, WHITE OAK, RIFT CUT, SEALED (CLEAR), MATTE FINISH

SYMBOL LEGEND

- WALL SECTION REFERENCE — INDICATES SECTION / DETAIL NUMBER; INDICATES REFERENCE TO A SIMILAR DETAIL DRAWING; INDICATES DRAWING SHEET NUMBER
- BUILDING SECTION REFERENCE
- GRID LINE
- PROJECT ELEVATION
- GEODETIC ELEVATION
- REVISION NUMBER
- CENTRELINE MARK
- MATERIAL / FINISH TAG
- MILLWORK TAG
- DOOR TAG
- DETAIL REFERENCE — INDICATES REFERENCE TO A SIMILAR DETAIL DRAWING
- BUILDING ELEVATION REFERENCE — INDICATES DETAIL NUMBER; INDICATES DRAWING SHEET NUMBER
- INTERIOR ELEVATION REFERENCE
- ROOM NAME & ROOM NUMBER TAG
- WALL & INTERIOR PARTITION TYPE
- TRIM TYPE
- CEILING TYPE — CEILING HEIGHT ELEVATION A.F.F.
- ROOF TYPE
- WINDOW & SCREEN TYPE
- FLOORING TYPE
- BASE TYPE
- THRESHOLD TYPE

FRAME TYPES

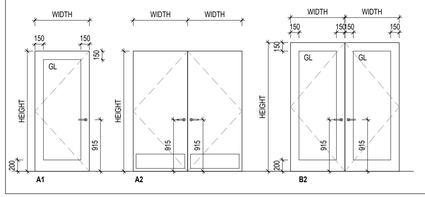


INT. SCREEN TYPE

BASE TYPES

TYPE	DIAGRAM	DESCRIPTION
B1	REF. TO FLOOR PLANS FOR PARTITION TYPE; RUBBER BASE; PERIMETER CAULKED FOR ACOUSTIC SEAL AT PARTITIONS; FLOOR FINISH — RUBBER BASE SECTION 13mm REVEAL; RUBBER BASE; FLOOR FINISH; 115; DOOR FRAME; TRIM RUBBER BASE TIGHT AGAINST DOOR FRAME — RUBBER BASE ELEVATION	

DOOR TYPES



ABBREVIATION LEGEND

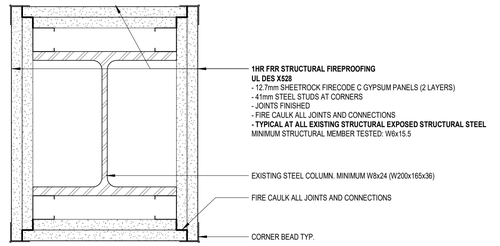
HM	HOLLOW METAL
PT	PAINTED
SCW	SOLID CORE WOOD
WD	WOOD
GL	GLAZING

DOOR SCHEDULE

DOOR NUMBER	DOOR TYPE	DOOR WIDTH	DOOR HEIGHT	DOOR MATERIAL	DOOR FINISH	GLASS TYPE	FRAME MATERIAL	FRAME FINISH	FRAME TYPE	FIRE RATING (MIN)	COMMENTS	Level
D01A	A1	965	2134	SCW	WD-2a	N/A	HM	PT		45 MIN	JANITOR CLOSET	LOWER LEVEL
D01B	A1	760	2134	SCW	WD-2a	N/A	HM	PT			SINGLE STALL WASHROOM, PROVIDE 25mm UNDERCUT	LOWER LEVEL
D01C	A1	760	2134	SCW	WD-2a	N/A	HM	PT			SINGLE STALL WASHROOM, PROVIDE 25mm UNDERCUT	LOWER LEVEL
D01D	A1	760	2134	SCW	WD-2a	N/A	HM	PT			SINGLE STALL WASHROOM, PROVIDE 25mm UNDERCUT	LOWER LEVEL
D01E	A1	965	2134	SCW	WD-2a	N/A	HM	PT			SINGLE STALL WASHROOM, PROVIDE 25mm UNDERCUT	LOWER LEVEL
D02A	B2	854	2388	SCW	WD-2a	GL-1	HM	PT			KEY	LOWER LEVEL
D02B	A1	965	2134	SCW	WD-2a	N/A	HM	PT			KEY	LOWER LEVEL
D03A	B2	850	2390	SCW	WD-2a	GL-1	HM	PT			KEY	LOWER LEVEL
D03B	A2	1700	2134	SCW	WD-2a	N/A	HM	PT				LOWER LEVEL
D04a	B2	965	2134	SCW	WD-2a	GL-2	HM	PT		45 MIN	PANIC BAR, KEY CARD	LOWER LEVEL
D04b	B2	965	2134	SCW	WD-2a	GL-2	HM	PT		45 MIN	KEY CARD	LOWER LEVEL
D05	A2	1700	2134	HM	PT	N/A	HM	PT		45 MIN	PANIC BAR	LOWER LEVEL
D06	A2	965	2134	SCW	WD-2a	GL-2	HM	PT		45 MIN	PANIC BAR, KEY CARD	LOWER LEVEL

DOOR NOTES:

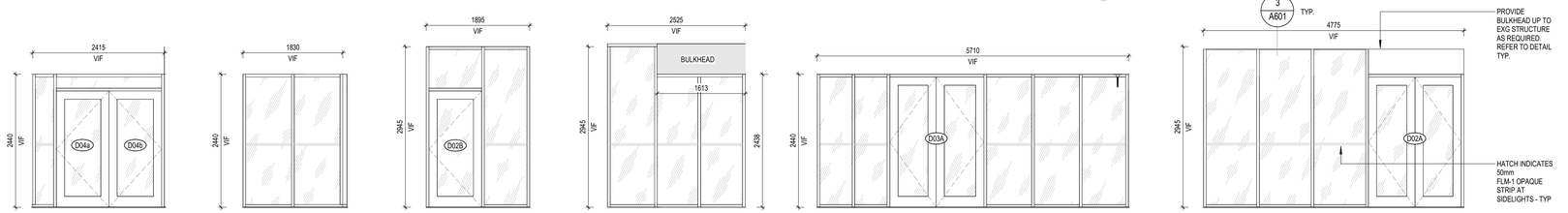
1. DOOR HARDWARE BY CASH ALLOWANCE
2. SOLID CORE WOOD (SCW) DOORS ACCEPTABLE MANUFACTURERS:
   A. BAILLARGEON BY MASONITE ARCHITECTURAL
   B. LAMBTON DOORS
3. HOLLOW METAL (HM) DOORS ACCEPTABLE MANUFACTURERS:
   A. ALL STEEL DOORS 2000 LTD.
   B. APEX INDUSTRIES INC.
   C. ARTEK DOOR (1985) LTD.
   D. DAYBAR INDUSTRIES LTD.
   E. FLEMING-BARON DOOR PRODUCTS.
   F. M.J. DALEY MANUFACTURING CO. LTD.
   G. TRILLIUM STEEL DOORS LIMITED.
   H. VISION HOLLOW METAL LIMITED.



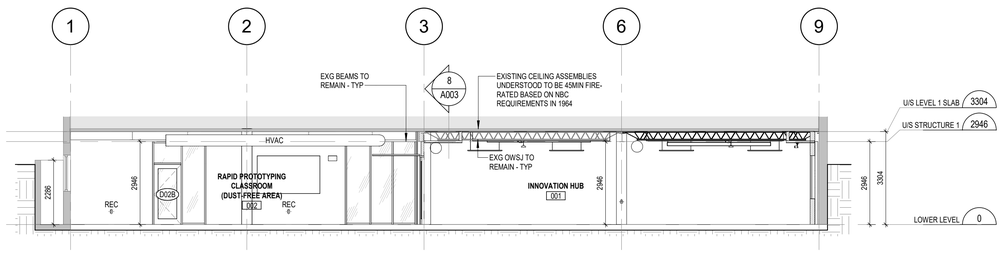
10 A003 PLAN DETAIL - STRUCTURAL FIREPROOFING
1 : 5

SCREEN SCHEDULE (WIP)

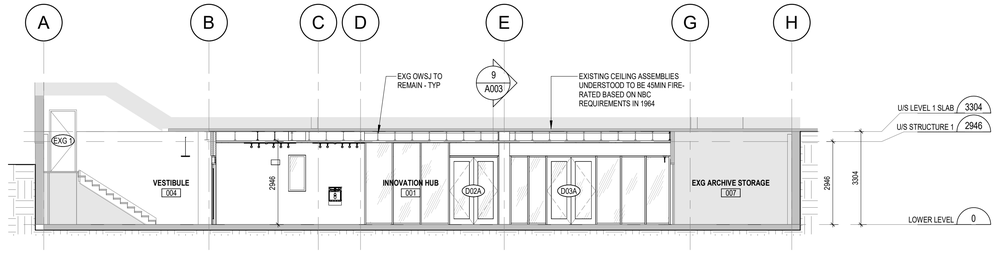
MARK	WIDTH	HEIGHT	FRAME MATERIAL	GLAZING TYPE	FRR	COMMENTS
S202	4774	2946	HM	GL-1		
S203	1281	2440	HM	GL-1		
S204	2546	2946	HM	GL-1		
S205	1896	2946	HM	GL-1		
S206	1830	2440	HM	GL-2	1 HR	
S207	2414	2440	HM	GL-2	1 HR	



7 A003 S207 1 : 50
6 A003 S206 1 : 50
5 A003 S205 1 : 50
4 A003 S204 1 : 50
3 A003 S203 1 : 50
2 A003 S202 1 : 50



9 A003 BUILDING SECTION B
1 : 100



8 A003 BUILDING SECTION A
1 : 100

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HATCH LEGEND

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

2	2026.11.06	ISSUED FOR TENDER
1	2026.10.06	ISSUED FOR PERMIT
	DATE	REVISION

ONTARIO ASSOCIATION OF ARCHITECTS — OLIVER ANTHONY BECK LICENCE 6729

PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

CONSTRUCTION ASSEMBLIES, WINDOW, DOOR & SCREEN SCHEDULES, SECTION

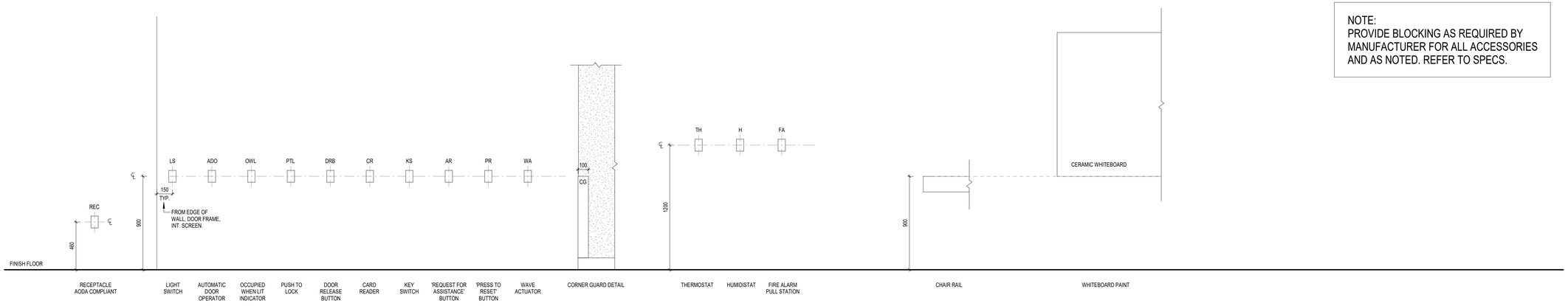
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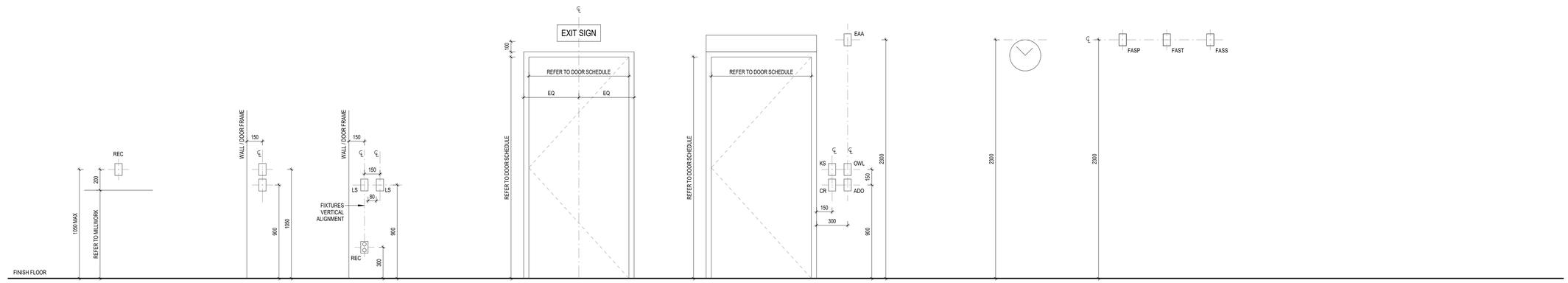
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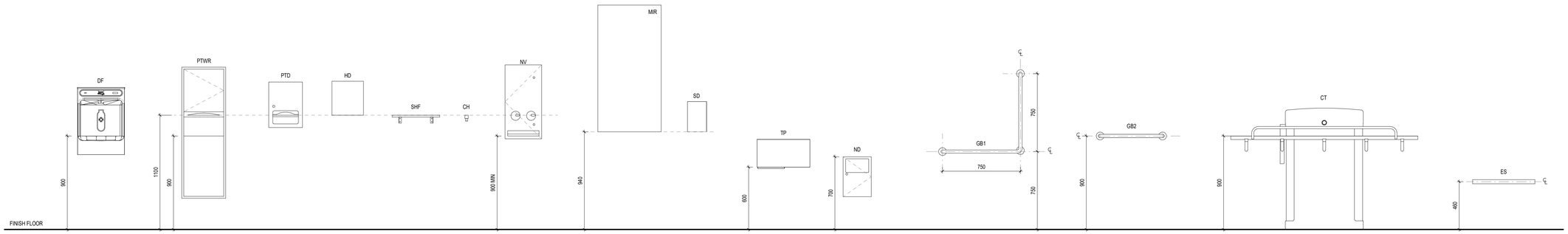
A003

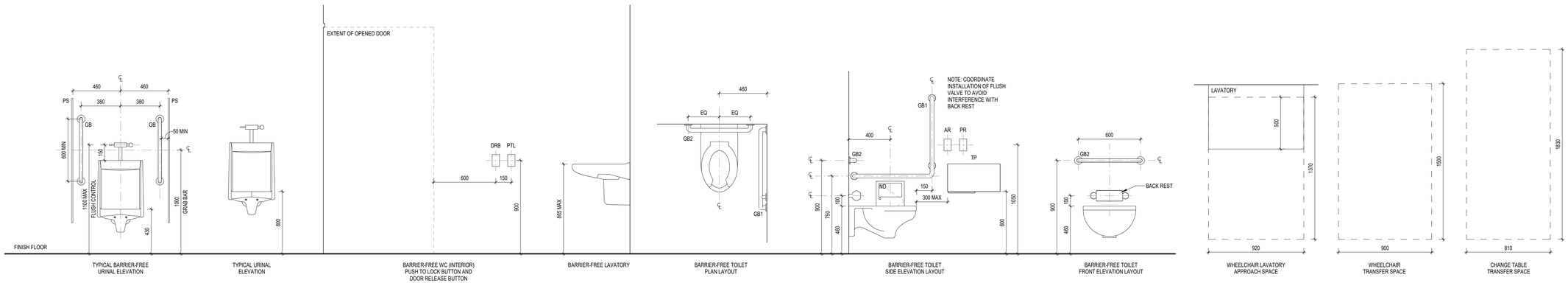
2026-11-10 5:44:35 PM Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt

NOTE:
PROVIDE BLOCKING AS REQUIRED BY MANUFACTURER FOR ALL ACCESSORIES AND AS NOTED. REFER TO SPECS.









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ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE
6729

PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

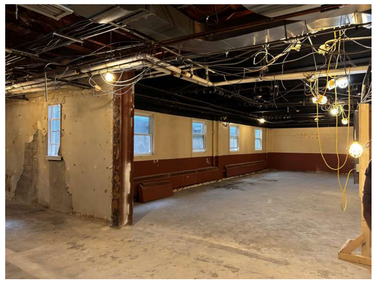
TYPICAL MOUNTING HEIGHTS

Scale:	1 : 20
Drawn by:	CL / TB
Reviewed by:	Checker
Job number:	25168
Plot date:	2026.11.06

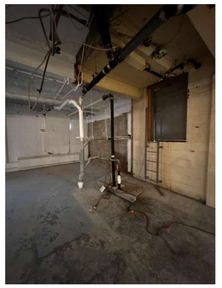
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A004

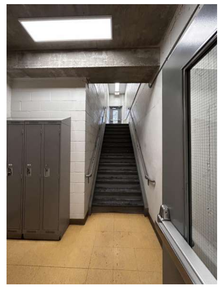
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1.



2.



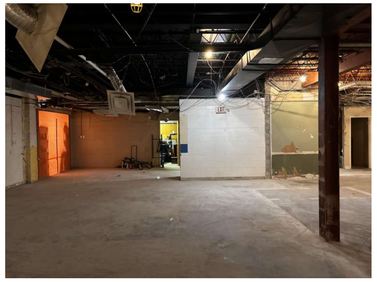
3.



4.



5.



6.

DEMOLITION & SITE PREPARATION NOTES

GENERAL NOTES

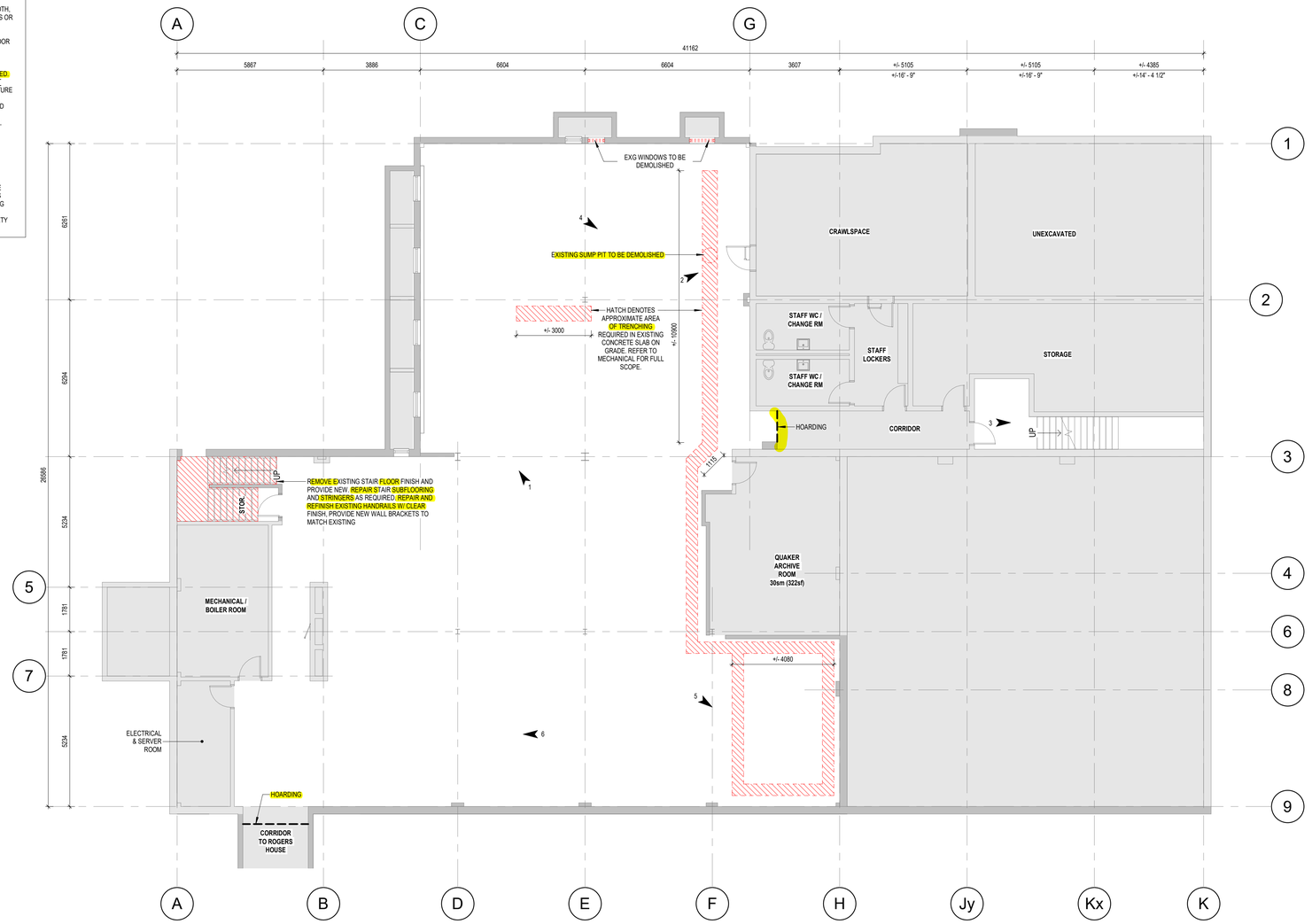
1. THE INTENT OF THIS DRAWING IS TO OUTLINE THE SCOPE OF WORK FOR THE DEMOLITION REQUIRED FOR THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL DEMOLITION FOR THE PROJECT IS PERFORMED AS REQUIRED.
2. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL DRAWINGS FOR ADDITIONAL ASSOCIATED DEMOLITION WITHIN THE SCOPE OF THIS PROJECT.
3. DURING DEMOLITION AND CONSTRUCTION, ANY DAMAGE TO EXG. ITEMS TO REMAIN SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER. ITEMS INCLUDE BUT ARE NOT LIMITED TO, INTERIOR & EXTERIOR FINISHES, ROOFING, WINDOWS, FLOORING, CEILING, MILLWORK, ETC. IF THE SCOPE OF DEMOLITION IS UNCLEAR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
4. WHERE EXG. SURFACES ARE DISTURBED DUE TO DEMOLITION OR ALTERATION AND NOT REQUIRED TO BE COVERED WITH NEW FINISHES, SUCH SURFACES SHALL BE MADE GOOD TO MATCH EXG. MATERIALS AND FINISHES.
5. WHERE EXG. WALLS AND BUILDING FITMENTS ARE BEING REMOVED, MAKE GOOD SUBSTRATES TO RECIEVE NEW SPECIFIED MATERIALS AND FINISHES.
6. WHERE EXG. FINISHES ARE BEING MAINTAINED, CONTRACTOR TO PROVIDE PROTECTION THOUGHOUT CONSTRUCTION.
7. MAINTAIN INTEGRITY OF EXG. FIRE RATINGS THROUGHOUT, WHERE APPLICABLE. PATCH, REPAIR & MAKE GOOD OF ALL MATERIALS AS REQUIRED. SITE VERIFY EXG. FIRE-RATINGS & APPLICABLE ULC/BUILDING CODE CONSTRUCTION ASSEMBLIES.
8. ALL BIDDERS SHALL VISIT THE SITE AND THOROUGHLY EXAMINE EXG. CONDITIONS IN ORDER TO FAMILIARIZE THEMSELVES WITH THE EXTENT OF THE DEMOLITION AND REMOVAL OF WORK REQUIRED TO PROPERLY EXECUTE THE DEMOLITION PORTION OF THE CONTRACT. IF THE SCOPE OF DEMOLITION IS UNCLEAR, NOTIFY ARCHITECT FOR CLARIFICATIONS PRIOR TO SUBMITTING TENDER BID.
9. WHERE CEILINGS ARE TO BE DEMOLISHED, SALVAGE AND RETURN TO OWNER ALL EXISTING CEILING MOUNTED EQUIPMENT INCLUDING BUT NOT LIMITED TO LIGHTS, SIGNAGE ETC. DEMOLISH UNUSED CONDUIT AND WIRES TO SOURCE.

ARCHITECTURAL:

1. WINDOWS & DOORS:
   - A. PROTECT ALL EXG. WINDOWS AND DOORS TO REMAIN.
   - B. PATCH, REPAIR AND MAKE GOOD INTERIOR FINISHES, AT PERIMETER OF ALL WINDOWS AND DOOR OPENINGS.
2. FLOORING:
   - A. PATCH, REPAIR & MAKE GOOD EXG. FLOOR TO BE SMOOTH, LEVELLED AND VOID OF WAVES, MATERIALS AND BUMPS OR DEPRESSIONS. READY EXG. FLOOR TO ACCEPT NEW SPECIFICATIONS AND FLOOR MANUFACTURER'S REQUIREMENTS. SEE FINISH SCHEDULE. REFER TO FLOOR FINISHES PLAN AND SPECIFICATIONS.
3. WALLS & WALL BASE:
   - A. REMOVE ALL WALL BASE.
   - B. PATCH, REPAIR & FILL ALL EXG. WALLS TO BE MAINTAINED.
4. MISCELLANEOUS ITEMS, SIGNAGE, FURNITURE, EQUIPMENT
   - A. ALL EXG. MISC. ITEMS, SIGNAGE, TACK BOARDS, FURNITURE AND EQUIPMENT TO BE REMOVED BY OWNER PRIOR TO CONSTRUCTION. ANY REMAINING ITEMS TO BE REMOVED AND DISPOSED OF BY OC.
   - B. DEMOLISH ALL CURTAINS, BASKETS, CAGES, SWITCHES, DEVICES, FIXTURES, ACCESS PANELS, ETC.

MECHANICAL: (REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS)

1. EXG. SERVICES:
   - A. EXG. FIRE SYSTEM EQUIPMENT, INCLUDING AND NOT LIMITED TO, FIRE HOSE CABINETS, PULL STATIONS, FIRE ALARMS, ARE TO REMAIN. REMOVE AND RE-INSTATE AS REQUIRED. TESTING AND VERIFICATION OF ALL EXISTING DEVICES TO MEET INTENT OF NEW WORK.
   - B. MAINTAIN FIRE-RATING INTEGRITY, REFER TO LIFE SAFETY PLAN.



2 A200 BASEMENT DEMOLITION PLAN
1 : 100

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HATCH LEGEND

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK
- EXG WALLS / FIXTURES TO BE DEMOLISHED

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2	2026.11.06	ISSUED FOR TENDER
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LICENCE 6729

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LOWER LEVEL DEMOLITION PLAN

Scale:	As indicated
Drawn by:	CL
Reviewed by:	CL/OB
Job number:	25168
Plot date:	2026.11.06

Drawing number: A200

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HATCH LEGEND

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

1 A202 LOWER LEVEL FLOOR PLAN - ENLARGED
1 : 50

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2	2026.11.06	ISSUED FOR TENDER
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	DATE	REVISION

ONTARIO ASSOCIATION OF ARCHITECTS
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LICENCE 6729

PICKERING COLLEGE

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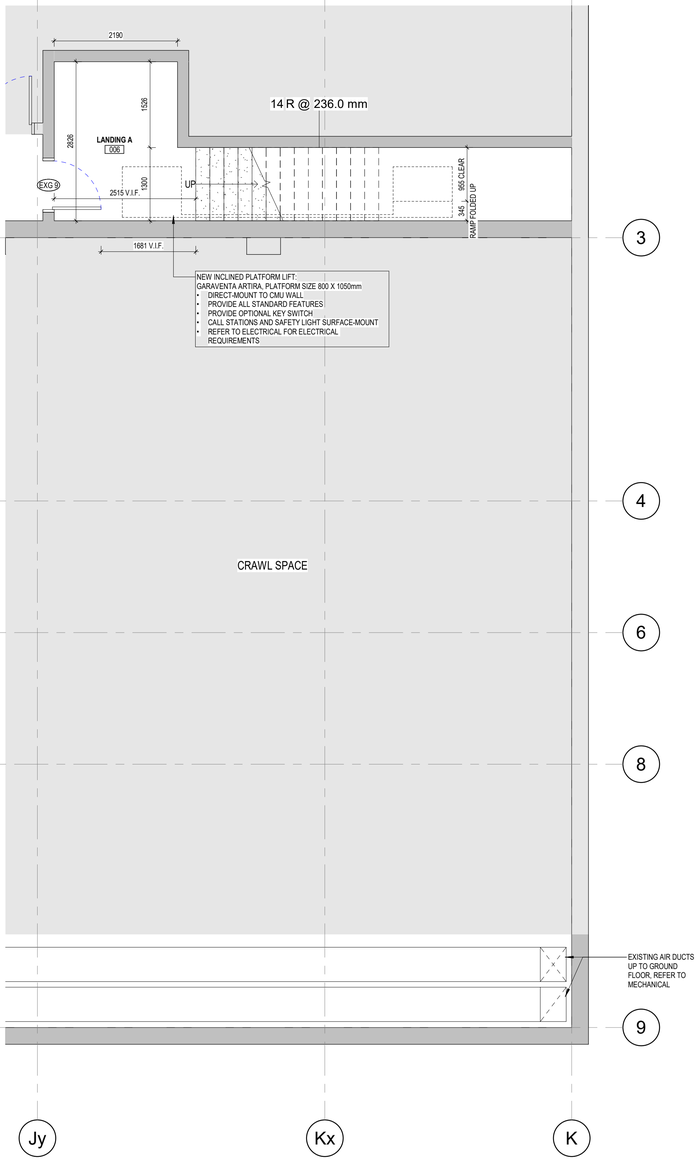
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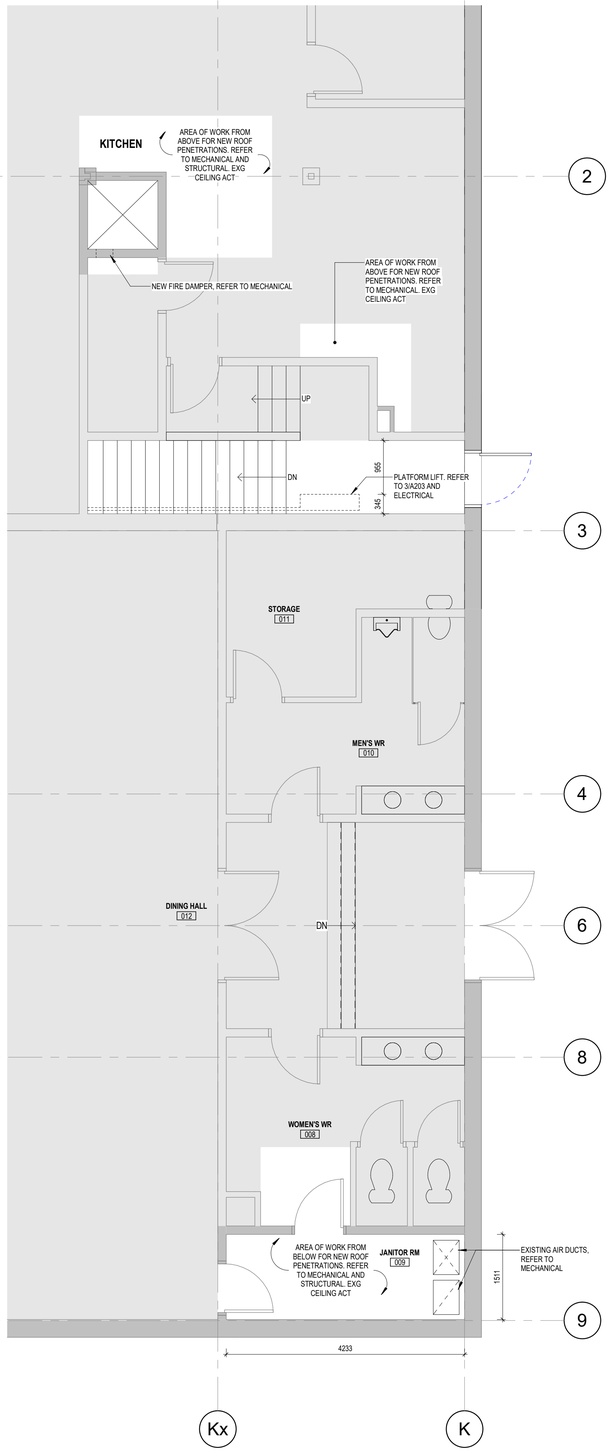
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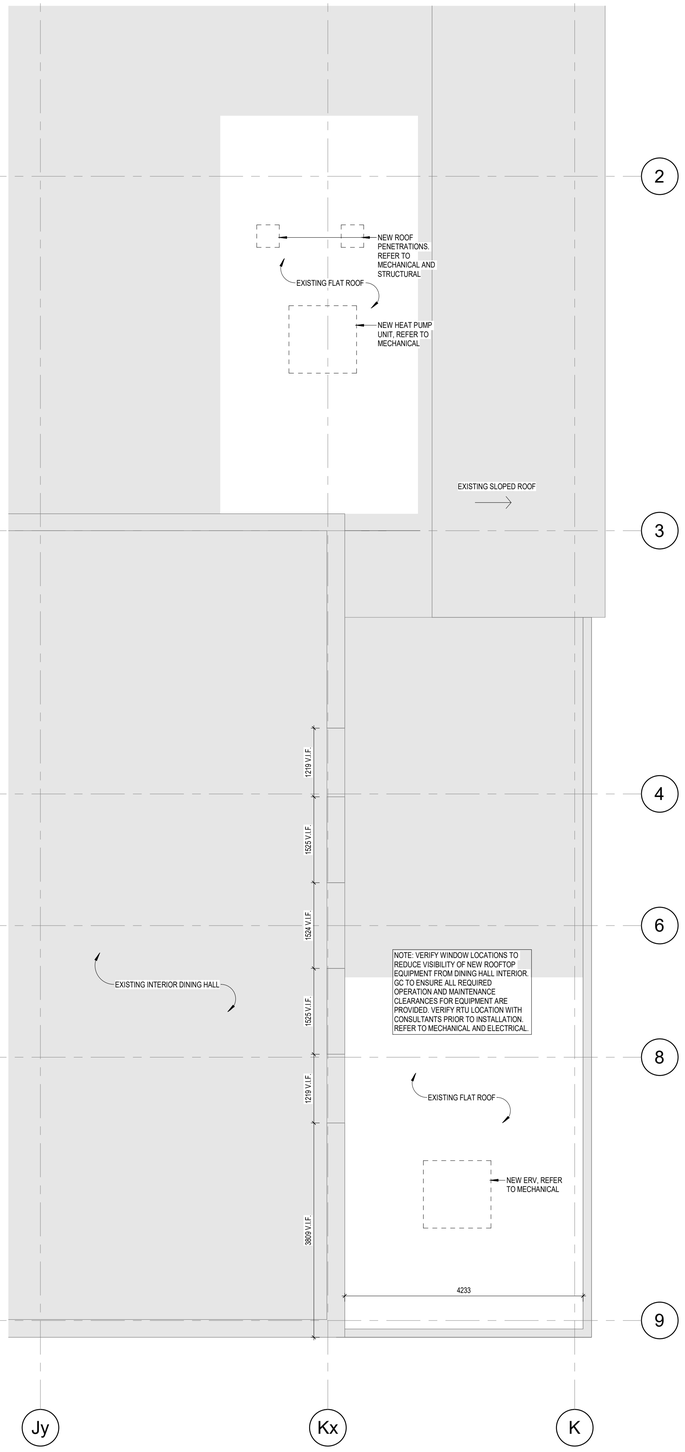
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3 A203 LOWER LEVEL PARTIAL (REAR STAIR)
1 : 50



1 A203 DINING HALL PARTIAL GROUND FLOOR PLAN
1 : 50



2 A203 DINING HALL PARTIAL ROOF PLAN
1 : 50

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HATCH LEGEND

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

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DINING HALL PARTIAL GROUND FLOOR & ROOF PLAN

Scale:	1 : 50
Drawn by:	CL
Reviewed by:	CL/OB
Job number:	25168
Plot date:	2026.11.06

Drawing number:

A203

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WALL FINISH LEGEND & GENERAL NOTES

GC SUPPLIED & INSTALLED ITEMS

- STORAGE MILLWORK
- PLUMBING FIXTURES

OWNER SUPPLIED & INSTALLED ITEMS

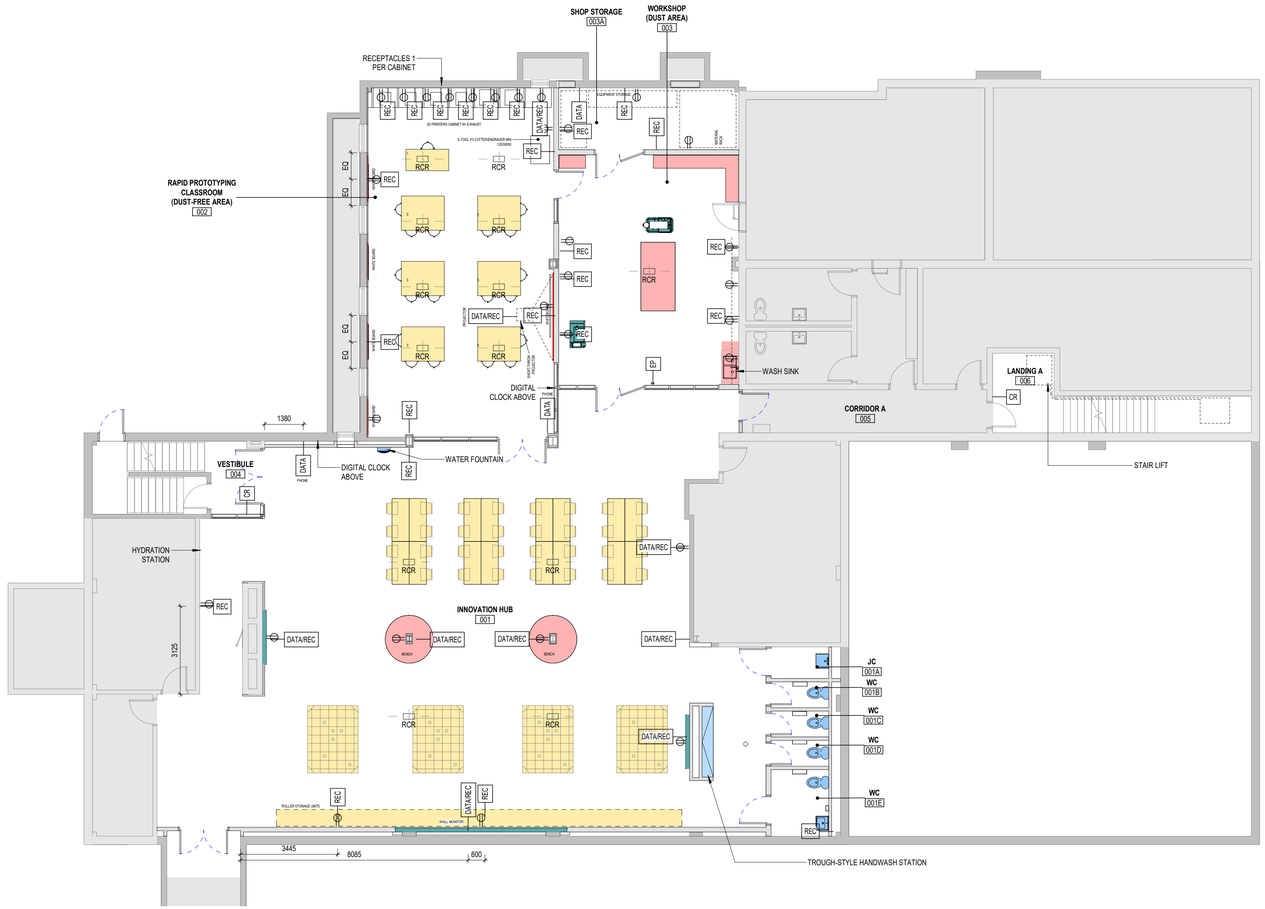
- NEW FURNITURE
- EQUIPMENT
- MACHINERY
- WHITEBOARD

ELECTRICAL LEGEND

- CR — CARD READER
- DATA — DATA OUTLET
- FP — FIRE PULL
- REC — POWER RECEPTACLE
- RCR — CEILING MOUNTED RETRACTABLE DATA & POWER CABLE REEL
- FLR — FLOOR MOUNTED RECEPTACLE
- EP — EMERGENCY PAGER

ROOM FINISHES SCHEDULE

ROOM NO.	ROOM NAME	FOOR FINISH	WALL BASE	WALL FINISH	CEILING FINISH	COMMENTS
001	INNOVATION HUB	CONC-1	B1	PT	PT	
001A	JC	CONC-1	B1	PCT-1	PT	
001B	WC	CONC-1	N/A	PCT-1	PT	
001C	WC	CONC-1	N/A	PCT-1	PT	
001D	WC	CONC-1	N/A	PCT-1	PT	
001E	WC	CONC-1	N/A	PCT-1	PT	
001F	ROBOT STORAGE CLOSET	CONC-1	B1	PT	PT	
002	RAPID PROTOTYPING CLASSROOM(DUST-FREE AREA)	CONC-1	B1	PT	PT	
003	WORKSHOP(DUST AREA)	CONC-1	B1	PT	PT	
003A	SHOP STORAGE	CONC-1	B1	PT	PT	
003B	ACCESS CLOSET	CONC-1	1B	PT	PT	
004	VESTIBULE	CONC-1	B1	PT	PT	
005	CORRIDOR A	CONC-1	EXG	PT	PT	
006	LANDING A	CONC-1	EXG	N/A	N/A	
008	WOMEN'S WR					
009	JANITOR RM					
010	MEN'S WR					
011	STORAGE					
012	DINING HALL					



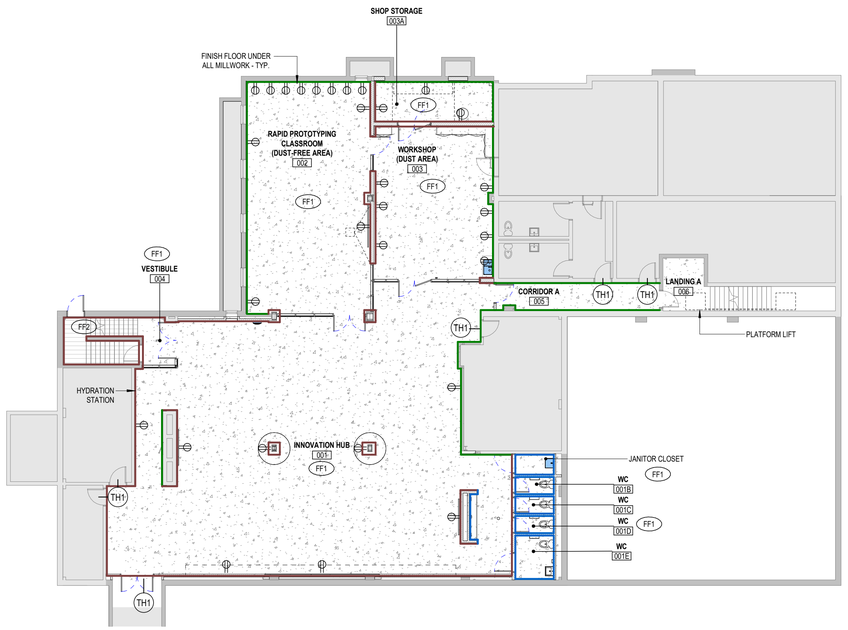
1 A205 LOWER LEVEL FF&E
1 : 100

FLOORING TYPE

TYPE	DESCRIPTION	
FF1	CONC-1	
FF2	RFL-1	

WALL FINISH LEGEND & GENERAL NOTES

- SEALED BIRCH PLY (OPTION)
- PAINTED MASONRY
- PAINTED GWB
- TILE



2 A205 LOWER LEVEL FINISHES
1 : 150

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HATCH LEGEND

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

	DATE	REVISION
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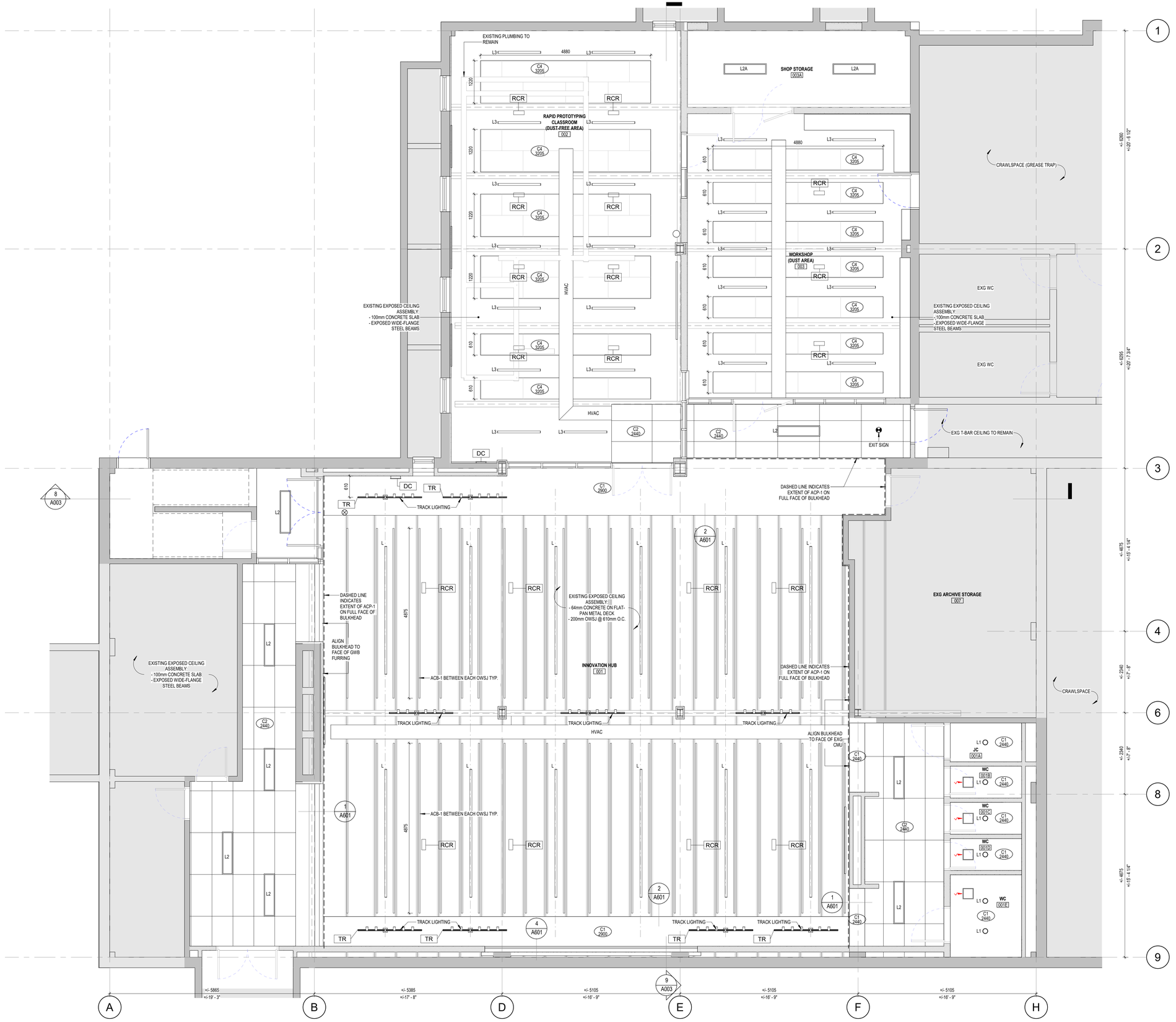
LOWER LEVEL FLOOR PLAN FINISHES

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Drawn by:	CL / TB
Reviewed by:	Checker
Job number:	25168
Plot date:	2026.11.06

Drawing number:

A205

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HATCH LEGEND

- EXG WALL TO REMAIN
- OUT OF SCOPE
- NEW SCOPE OF WORK

2	2026.11.06	ISSUED FOR TENDER
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LOWER LEVEL REFLECTED CEILING PLAN

Scale:	1 : 50
Drawn by:	CL
Reviewed by:	CL/OB
Job number:	25168
Plot date:	2026.11.06

Drawing number:

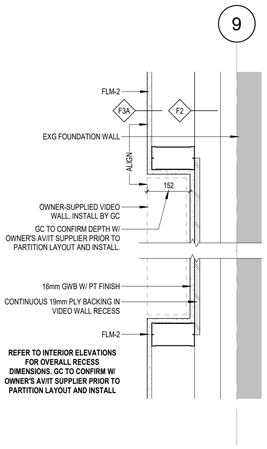
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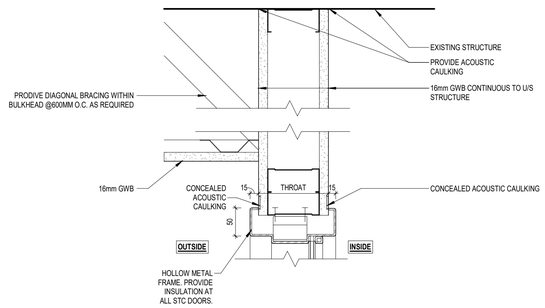
Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

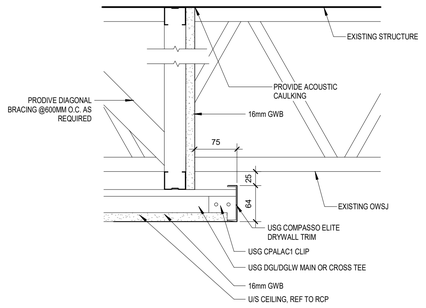
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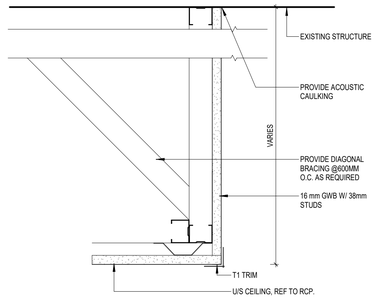
4 A601 SECTION - VIDEO WALL
1 : 10



3 A601 SECTION - CEILING DETAIL @ GWB BULKHEAD ABOVE SCREENS
1 : 5



2 A601 SECTION - CEILING DETAIL @ GWB BULKHEAD 2
1 : 5



1 A601 SECTION - CEILING DETAIL @ GWB BULKHEAD 1
1 : 5

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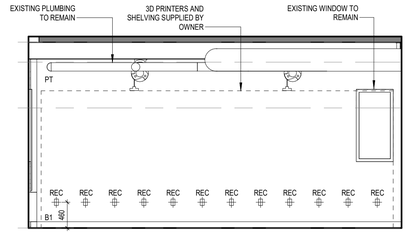
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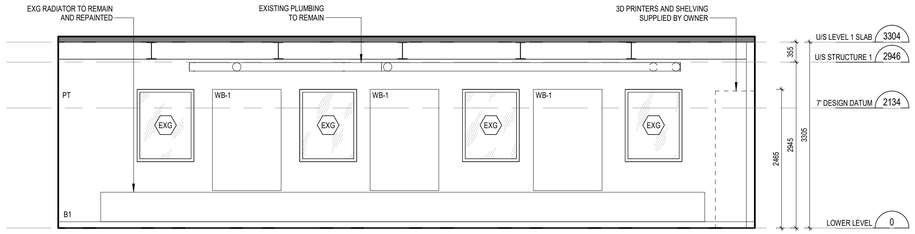
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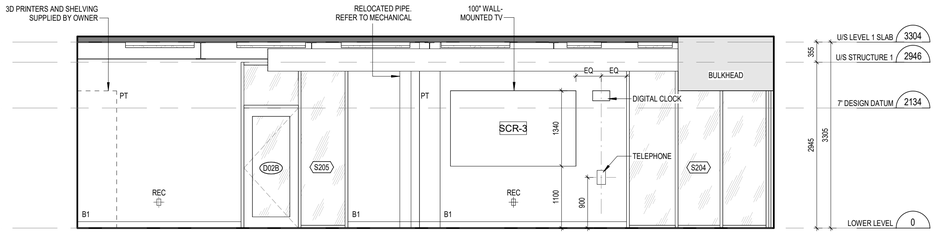
8 A801 CLASSROOM - N
1 : 50



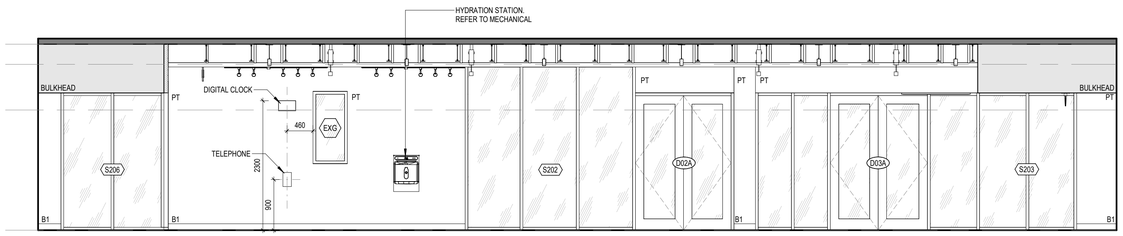
7 A801 CLASSROOM - W
1 : 50



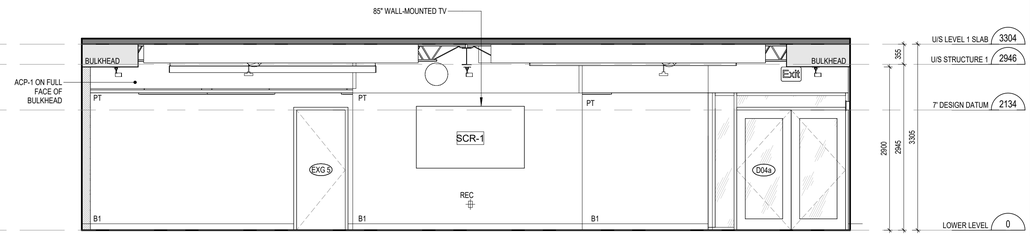
5 A801 CLASSROOM - S
1 : 50



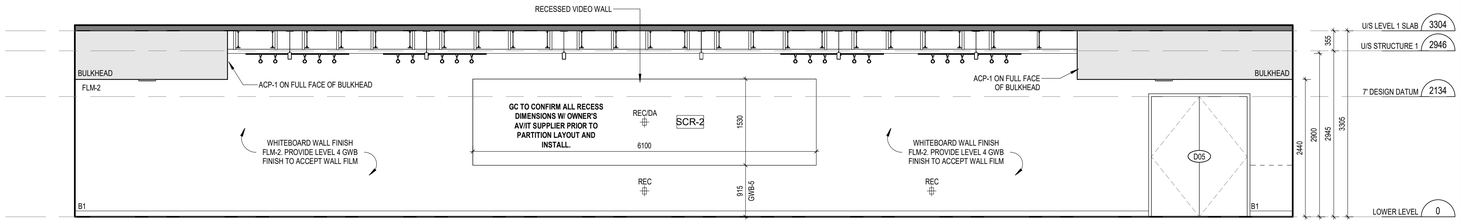
6 A801 CLASSROOM - E
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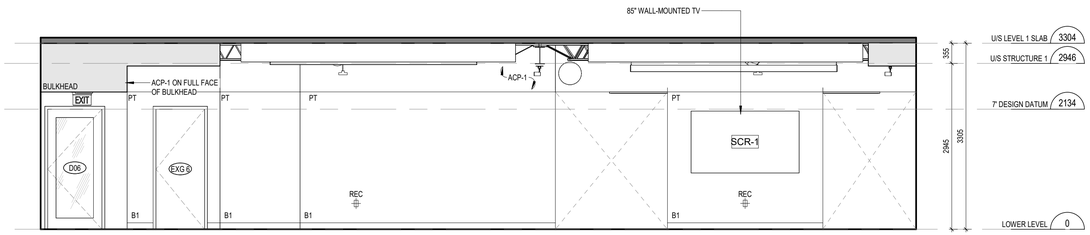
4 A801 INNOVATION HUB - N
1 : 50



3 A801 INNOVATION HUB - W
1 : 50



2 A801 INNOVATION HUB - S
1 : 50



1 A801 INNOVATION HUB - E
1 : 50

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INTERIOR ELEVATIONS

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Job number:	25168
Plot date:	2026.11.06

Drawing number:

A801

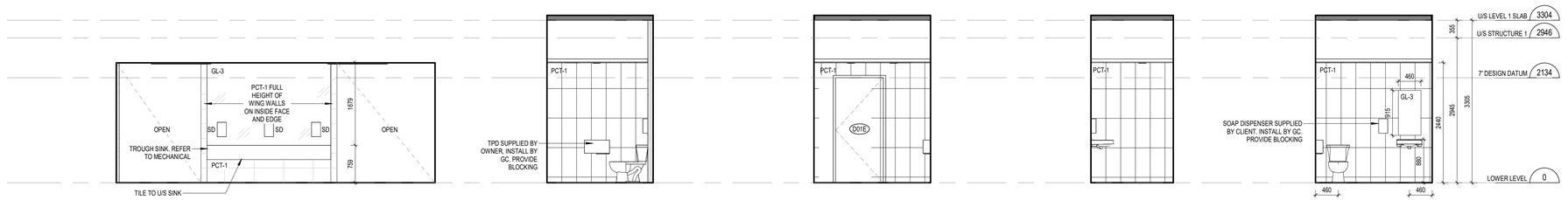
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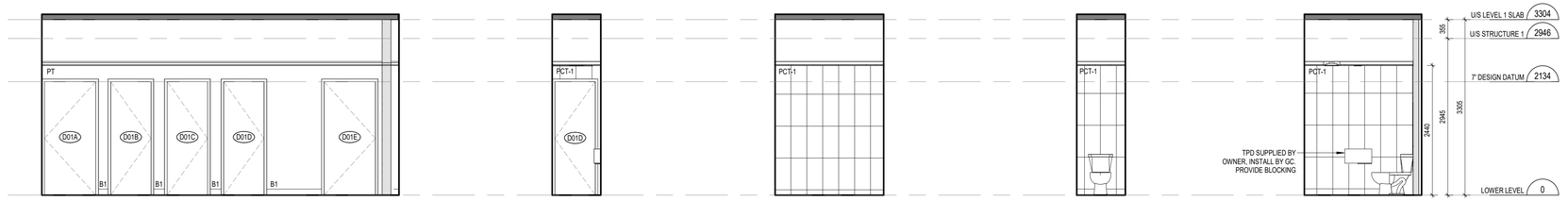
14 A802 WASHROOM ENTRANCES - WEST 1 : 50

13 A802 BF WASHROOM - NORTH 1 : 50

12 A802 BF WASHROOM - WEST 1 : 50

11 A802 BF WASHROOM - SOUTH 1 : 50

10 A802 BARRIER FREE WASHROOM - EAST 1 : 50



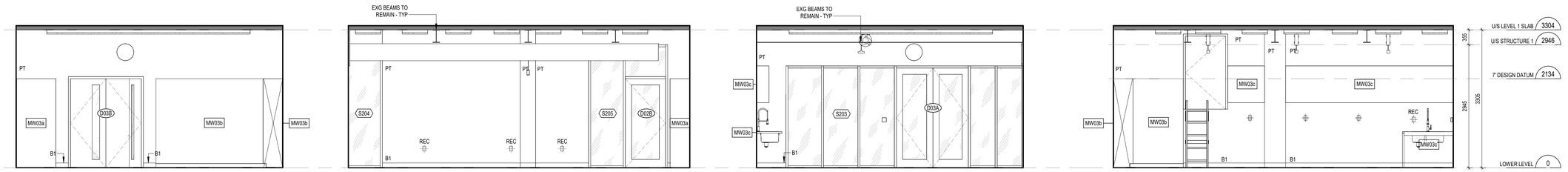
9 A802 WASHROOM ENTRANCES - EAST 1 : 50

8 A802 TYP. WASHROOM - WEST 1 : 50

7 A802 TYP. WASHROOM - SOUTH 1 : 50

6 A802 TYP. WASHROOM - EAST 1 : 50

5 A802 TYPICAL WASHROOM - SOUTH 1 : 50



4 A802 WOODSHOP - N 1 : 50

3 A802 WOODSHOP - W 1 : 50

2 A802 WOODSHOP - S 1 : 50

1 A802 WOODSHOP - E 1 : 50

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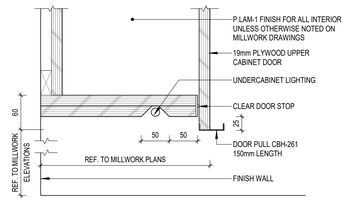
INTERIOR ELEVATIONS

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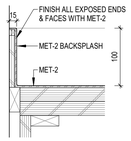
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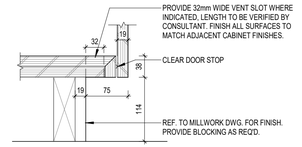
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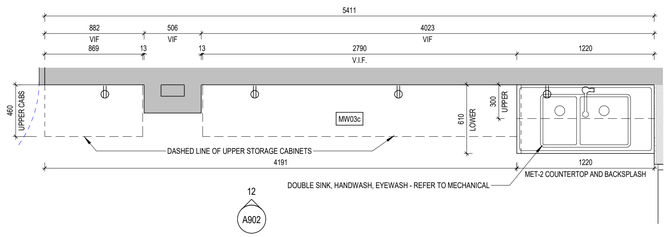
14 A902 U2_UNDERSIDE OF CABINET DETAIL
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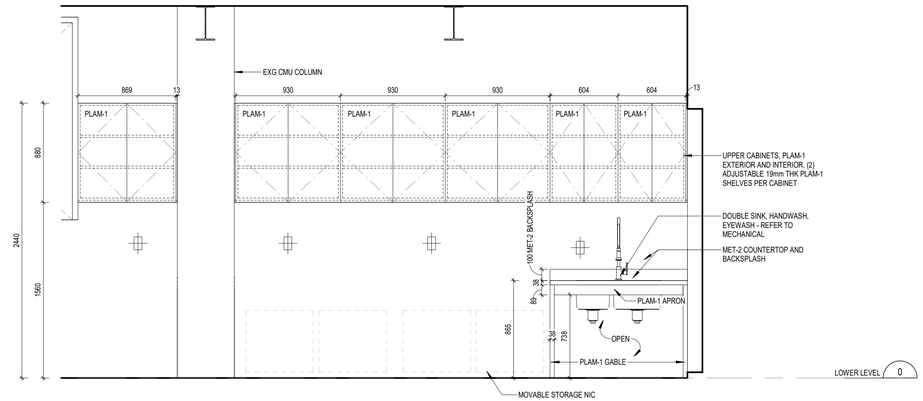
11 A902 BS2_SST COUNTERTOP BACKSPLASH
1 : 5



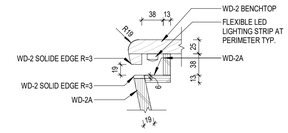
10 A902 B1_BASE DETAIL
1 : 5



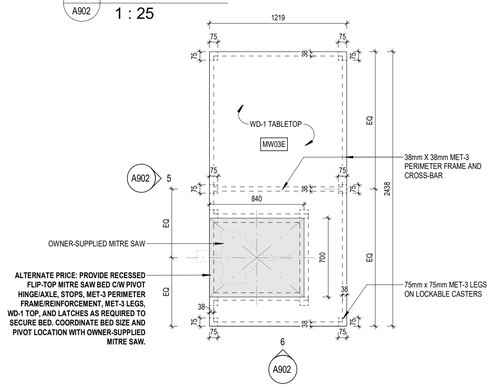
13 A902 PLAN - MW03c
1 : 25



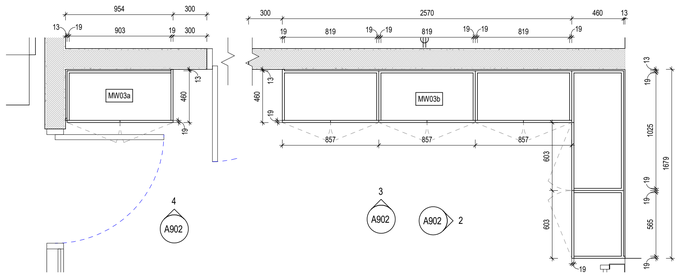
12 A902 ELEVATION - MW03c
1 : 25



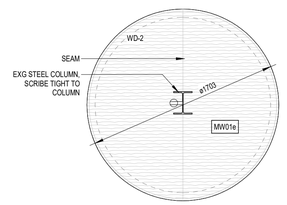
15 A902 BENCH LIGHTING
1 : 5



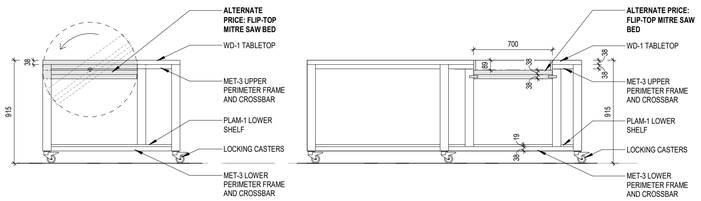
9 A902 PLAN - MW03e
1 : 25



8 A902 PLAN - MW03b
1 : 25

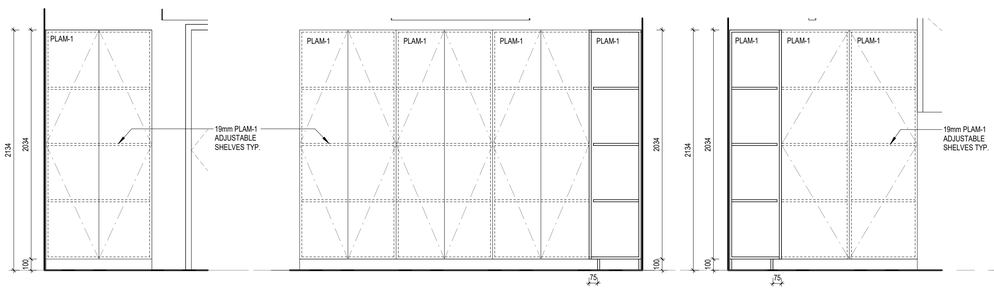


7 A902 PLAN - MW01e
1 : 25



6 A902 FRONT ELEVATION - MW03e
1 : 25

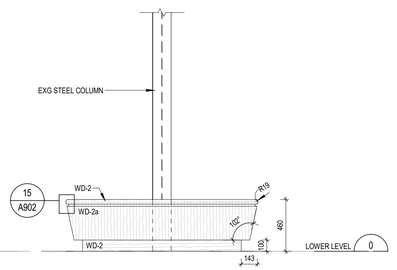
5 A902 SIDE ELEVATION - MW03e
1 : 25



4 A902 ELEVATION - MW03a - N
1 : 25

3 A902 ELEVATION - MW03b - N
1 : 25

2 A902 ELEVATION - MW03b - E
1 : 25



1 A902 ELEVATION - MW01e
1 : 25

Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

Project North / True North

1 2026.11.06 ISSUED FOR TENDER
DATE REVISION

ONTARIO ASSOCIATION OF ARCHITECTS
OLIVER ANTHONY BECK
LICENCE 6729

PICKERING COLLEGE

16945 Bayview Ave, Newmarket, ON L3Y 3W7

MILLWORK PLANS & ELEVATIONS

Scale:	As indicated
Drawn by:	CL / TB
Reviewed by:	Checker
Job number:	25168
Plot date:	2026.11.06

Drawing number:

A902

Autodesk Docs://Pickering College Innovation Hub and Wellness Space/Pickering College Innovation Hub V03 - Proposed Tender.rvt
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GENERAL

1. CONFORM TO THE REQUIREMENTS OF THE CURRENT ONTARIO BUILDING CODE AND ANY OTHER ACTS OF AUTHORITY HAVING JURISDICTION.
2. STRUCTURAL DRAWINGS ARE TO BE USED CONCURRENTLY WITH ALL OTHER PROJECT CONTRACT DOCUMENTS.
3. BEFORE PROCEEDING WITH WORK, COMPARE ALL DIMENSIONS AND INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL AND REPORT DISCREPANCIES TO THE ENGINEER.
4. DO NOT SCALE THE DRAWINGS.
5. REFER TO THE ARCHITECTURAL AND OTHER DRAWINGS FOR DIMENSIONING, ELEVATIONS, PITS, DEPRESSIONS, TRENCHES AND THE LIKE.
6. DESIGN LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
7. THE CONTRACTOR IS TO DETERMINE THE NEED FOR AND PROVIDE TEMPORARY WORKS.
8. IT IS A CONDITION OF THE STRUCTURAL DESIGN THAT 'KIEFFER STRUCTURAL ENGINEERING' SHALL BE RETAINED TO INSPECT THE INSTALLATION OF STRUCTURAL COMPONENTS, UNLESS OTHERWISE APPROVED.
9. STRUCTURAL DRAWINGS DO NOT INCLUDE THE DESIGN OF GUARDS, STAIRS AND OTHER ARCHITECTURAL ELEMENTS.

DESIGN NOTES

1. THE BUILDING IS DESIGNATED TO THE NORMAL IMPORTANCE CATEGORY AND PART 9, AS DEFINED IN THE OBC 2024.
2. STRUCTURAL ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT:
   - i) CSA A23.3 - REINFORCED CONCRETE ELEMENTS
   - ii) CAN/CSA S16 - STEEL ELEMENTS
   - iii) CSA O86 - TIMBER ELEMENTS
   - iv) CSA S304.1 - MASONRY ELEMENTS
3. LATERAL FORCES ON STRUCTURAL FRAME
   1. THE LATERAL FORCES ARE RESISTED BY SHEAR WALLS.
   2. WIND:
      - i) THE DESIGN OF THE STRUCTURE FOR WIND IS BASED ON AN HOURLY WIND PRESSURE OF 0.44 kPa (BASED ON 1/50 YEAR RETURN).
      - ii) EXPOSURE CONDITION: ROUGH TERRAIN
      - iii) THE IMPORTANCE FACTOR, Iw, FOR WIND DESIGN IS 1.0 ULS AND 0.75 SLS.
      - iv) THE DESIGN WIND FORCES HAVE BEEN CALCULATED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2024 AND WITH THE SIMPLE PROCEDURE DESCRIBED IN THE USER'S GUIDE - NBC - STRUCTURAL COMMENTARIES (PART 4).
5. LATERAL FORCES ON FOUNDATION WALLS
   - i) WALLS RETAINING EARTH ARE DESIGNED TO SAFELY WITHSTAND A HORIZONTAL PRESSURE AT ANY DEPTH (h) GIVEN BY THE EXPRESSION:
   - ii) P = K ((GAMMA)*h + q) , WHERE
     - K IS THE LATERAL EARTH PRESSURE COEFFICIENT
     - P IS THE PRESSURE EXERTED HORIZONTALLY
     - h IS THE DEPTH BELOW GRADE
     - (GAMMA) IS THE UNIT WEIGHT OF SOIL
     - q IS THE SURCHARGE ON THE GROUND SURFACE
   - iii) FOUNDATION AND OTHER WALLS RETAINING EARTH HAVE BEEN DESIGNED FOR SURCHARGE OF 4.8 kPa.
   - iv) THE WALLS HAVE BEEN DESIGNED ASSUMING THAT THERE IS FREE-DRAINING BACKFILL, OR THAT OTHER PROVISIONS HAVE BEEN MADE, SUCH THAT THE WALLS ARE NOT SUBJECT TO HYDROSTATIC PRESSURE.
   - v) IN ACCORDANCE WITH OBC Cl.9.4.4.6, THE WALLS HAVE BEEN DESIGNED USING K=1.0, AND □=4,7 kN/m3.
6. SNOW LOADS ON ROOFS
   - i) THE ROOFS HAVE BEEN DESIGNED WITH Ss = 2.0 kPa AND Sr = 0.4 kPa.
   - ii) THE IMPORTANCE FACTOR, IS, IS 1.0 FOR ULS AND 0.9 FOR SLS.
   - iii) ADDITIONAL SNOW ACCUMULATIONS ADJACENT TO HIGHER WALLS, ROOFS AND MECHANICAL UNITS ARE INDICATED ON THE DRAWINGS.
8. WIND UPLIFT OF ROOFS
   - i) ALL ROOF ELEMENTS INCLUDING JOISTS, METAL DECK, AND THEIR CONNECTIONS TO THE STRUCTURE ARE TO BE DESIGNED FOR UPWARD SUCTION DUE TO WIND.
9. LIVE AND OTHER LOADS
   - i) L/360 LIVE
   - ii) L/360 DEAD
   - iii) L/240 TOTAL

EXISTING CONDITIONS

1. THE DRAWINGS ASSUME THAT THE EXISTING STRUCTURE IS OF GOOD QUALITY AND HAS NOT DETERIORATED SIGNIFICANTLY. EXISTING STRUCTURAL MEMBERS ARE REASONABLY PLUMB, FREE OF HOLES AND NOTCHES, HAVE ADEQUATE BEARING AND IN GOOD CONDITION OTHERWISE.
2. ASSUMED LOCATION AND DIRECTION OF STRUCTURAL MEMBERS ARE SHOWN ON THE DRAWINGS. MINIMUM EXISTING STRUCTURAL MEMBERS ARE NOTED WHERE LOADS ARE BEING REVISED. THE CONTRACTOR IS TO VERIFY THE ASSUMPTIONS ON THE DRAWINGS ARE CORRECT AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. THE ENGINEER WILL REVIEW AND REVISE THE DRAWINGS AS REQUIRED.
3. EXISTING FOUNDATIONS ARE ASSUMED TO BE ADEQUATE, NOTIFY THE ENGINEER IF ANY SIGNS OF SETTLEMENT ARE APPARENT. WHERE FOUNDATION LOADS ARE BEING MODIFIED, MINIMUM FOOTING SIZES AND SOIL BEARING VALUES ARE NOTED. THE CONTRACTOR IS TO VERIFY THE MINIMUMS THROUGH GEOTECHNICAL SOILS INVESTIGATION.
4. DETERMINE THE NEED FOR AND DESIGN SHORING, BRACING, NEEDLING, SCAFFOLDING, AND THE LIKE, IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE. SUPERIMPOSED LIVE LOADS, CONSTRUCTION LOADS, WIND LOADS AND LATERAL STABILITY SHALL BE CONSIDERED.

MASONRY

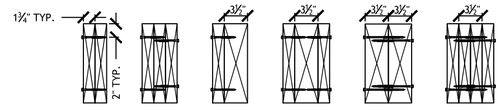
1. ALL MASONRY UNITS SHALL COMPLY WITH THE REQUIREMENTS OF CSA STANDARD A371-04, MINIMUM NET AREA COMPRESSIVE STRENGTH, 15 MPa.
2. GROUT FILL - MINIMUM 28-DAY COMPRESSIVE STRENGTH, 10 MPA AND A 200-250 MM SLUMP.
3. MORTAR - CONFORM TO THE REQUIREMENTS OF CSA STANDARD A179-04, TYPE S.
4. WHERE REINFORCING BARS, DOWELS, ANCHOR BOLTS, ETC. ARE SHOWN EMBEDDED IN MASONRY, BUILD THESE TIGHT INTO MASONRY VOIDS WITH GROUT FILL.

WOOD

1. SAWN LUMBER
   - i) CONFORM TO THE REQUIREMENTS OF CSA-O141
   - ii) SPECIES - SPRUCE-PIN-FIR
   - iii) GRADE - No1/No2
   - iv) ALL WOOD EXPOSED TO WEATHER AND EARTH TO BE PRESSURE TREATED IN ACCORDANCE WITH CSA O80.
2. PLYWOOD SHEATHING
   - i) CONFORM TO THE REQUIREMENTS OF CSA O121 AND CSA O151
7. LAMINATED VENEER LUMBER (LVL)
   - i) BENDING MEMBERS PROPERTIES - E = 2.0x10^6 psi, Fb = 4,805 psi
9. CONNECTIONS
   - i) WOOD CONNECTIONS ARE IN THE SCOPE OF THE CONTRACTOR, UNLESS NOTED. USE APPROPRIATE 'SIMPSON STRONG-TIE' (OR APPROVED EQUIVALENT) HANGERS, COLUMN CAPS/BASES, ANGLES, STRAPS AND THE LIKE. WHERE STANDARD WOOD CONNECTORS ARE NOT APPROPRIATE, HAVE CUSTOM CONNECTION DESIGNED AND FABRICATED.
   - ii) NAILS ARE TO BE COMMON STEEL WIRE NAILS CONFORMING TO THE REQUIREMENTS OF ASTM F1667 OR CSA B111. NAILS SHALL HAVE A MINIMUM DIAMETER (CORRESPONDING TO NAIL LENGTH) AS FOLLOWS: 2.87mm (FOR 57mm LONG NAILS); 3.25mm (62mm LONG); 3.66mm (76mm AND 82mm LONG); 4.88mm (102mm LONG).
   - iii) WOOD SCREWS ARE TO CONFORM TO THE REQUIREMENTS OF ASTM B18.6.1. REFER TO CSA O86 FOR DIAMETER AND MINIMUM YIELD STRENGTH INFORMATION.
   - iv) BOLTS, NUTS AND WASHERS: ASTM A307 OR SAE J429 GRADE 2.
   - v) LAG SCREWS ARE TO CONFORM TO THE REQUIREMENTS OF ASTM B18.2.1

BUILT-UP LSL AND LVL BEAMS

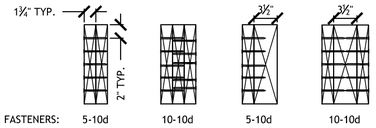
TYPICAL BEAM FASTENING: SCREWING



FASTENERS:	2-3½" SDS @1'-4"c/c	4-3½" SDS @1'-4"c/c	2-3½" SDS @1'-4"c/c	4-3½" SDS @1'-4"c/c	4-6" SDS @1'-4"c/c	4-6" SDS @1'-4"c/c
CAPACITY:	1300 PLF	980 PLF	980 PLF	870 PLF	3060 PLF	1020 PLF

NOTES:
1. ALL SCREWS TO BE 'SIMPSON' 'SDS' SCREWS OR AS APPROVED.
2. CAPACITY IS NOTED FOR SIDE-LOADED BEAMS. WHERE CAPACITIES ARE EXCEEDED TOP LOAD BEAMS
3. DETAILS FOR MAXIMUM 14" DEEP BEAMS.
4. 7" WIDE BEAMS TO BE SIDE LOADED FROM BOTH SIDES.
5. WHEN FASTENERS ARE ON BOTH SIDES, STAGGER FASTENERS ON THE FAR SIDE SO THEY FALL HALF WAY BETWEEN NEAR SIDE FASTENERS.

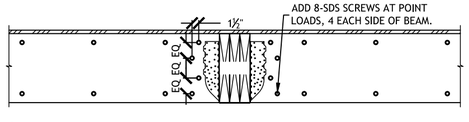
TYPICAL BEAM FASTENING: NAILING



FASTENERS:	5-10d @1'-0"c/c	10-10d @1'-0"c/c	5-10d @1'-0"c/c	10-10d @1'-0"c/c
CAPACITY:	865 PLF	650 PLF	650 PLF	575 PLF

NOTES:
1. ALL NAILS TO BE 10d(0.128"Ø) 3" LONG.
2. CAPACITY IS NOTED FOR SIDE-LOADED BEAMS. WHERE CAPACITIES ARE EXCEEDED USE SCREWED FASTENING OR TOP LOAD BEAMS.
3. DETAILS FOR MAXIMUM 14" DEEP BEAMS.
4. 7" WIDE BEAMS TO BE SIDE LOADED FROM BOTH SIDES.
5. WHEN FASTENERS ARE ON BOTH SIDES, STAGGER FASTENERS ON THE FAR SIDE SO THEY FALL HALF WAY BETWEEN NEAR SIDE FASTENERS.

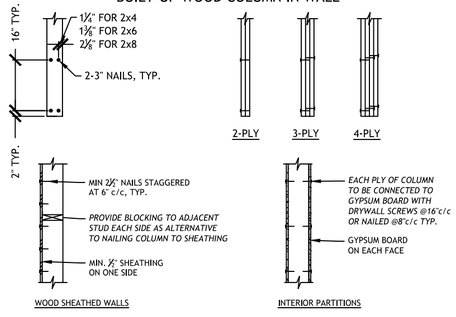
TYPICAL FASTENING AT POINT LOAD



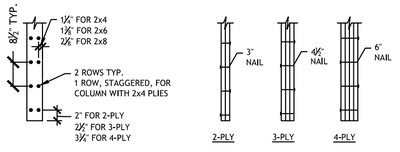
NOTES:
1. ALL SCREWS TO BE 'SIMPSON' 'SDS' SCREWS OR AS APPROVED.
2. MAXIMUM POINT LOAD CAPACITY IS 23 kN. WHERE LOAD IS EXCEEDED PROVIDE TOP MOUNT HANGER.
3. PROVIDE TOP MOUNT HANGERS WHEN BEARING ON 7" WIDE BEAMS.

BUILT UP WOOD POSTS

BUILT-UP WOOD COLUMN IN WALL



FREE STANDING BUILT-UP WOOD COLUMN



NOTES:
1. NO SPLICES SHALL BE MADE IN ANY BUILT-UP WOOD COLUMNS.
2. DETAILS ABOVE ONLY APPLY TO SPF COLUMNS.
3. ALL NAILS TO BE COMMON WIRE NAILS.

KIEFFER STRUCTURAL ENGINEERING

CONTACT INFORMATION

ADDRESS: 259 GERRARD STREET EAST, TORONTO, ON M5A 2G1

PHONE: (416) 924-7890
EMAIL: matthew@kieffer.ca

SEAL

LICENSED PROFESSIONAL ENGINEER
2026.10.30
M. T. KIEFFER
100230705
PROVINCE OF ONTARIO

DATE	ISSUED FOR
2026.10.30	PERMIT

DRAWING LIST

S001	GENERAL NOTES & TYPICAL DETAILS
S101-S102	PLANS

PROJECT NAME / ADDRESS

PICKERING COLLEGE, NEWMARKET, ON, L3Y 3W7

SHEET TITLE

GENERAL NOTES AND TYPICAL DETAILS

SCALE

NTS

DRAWN BY

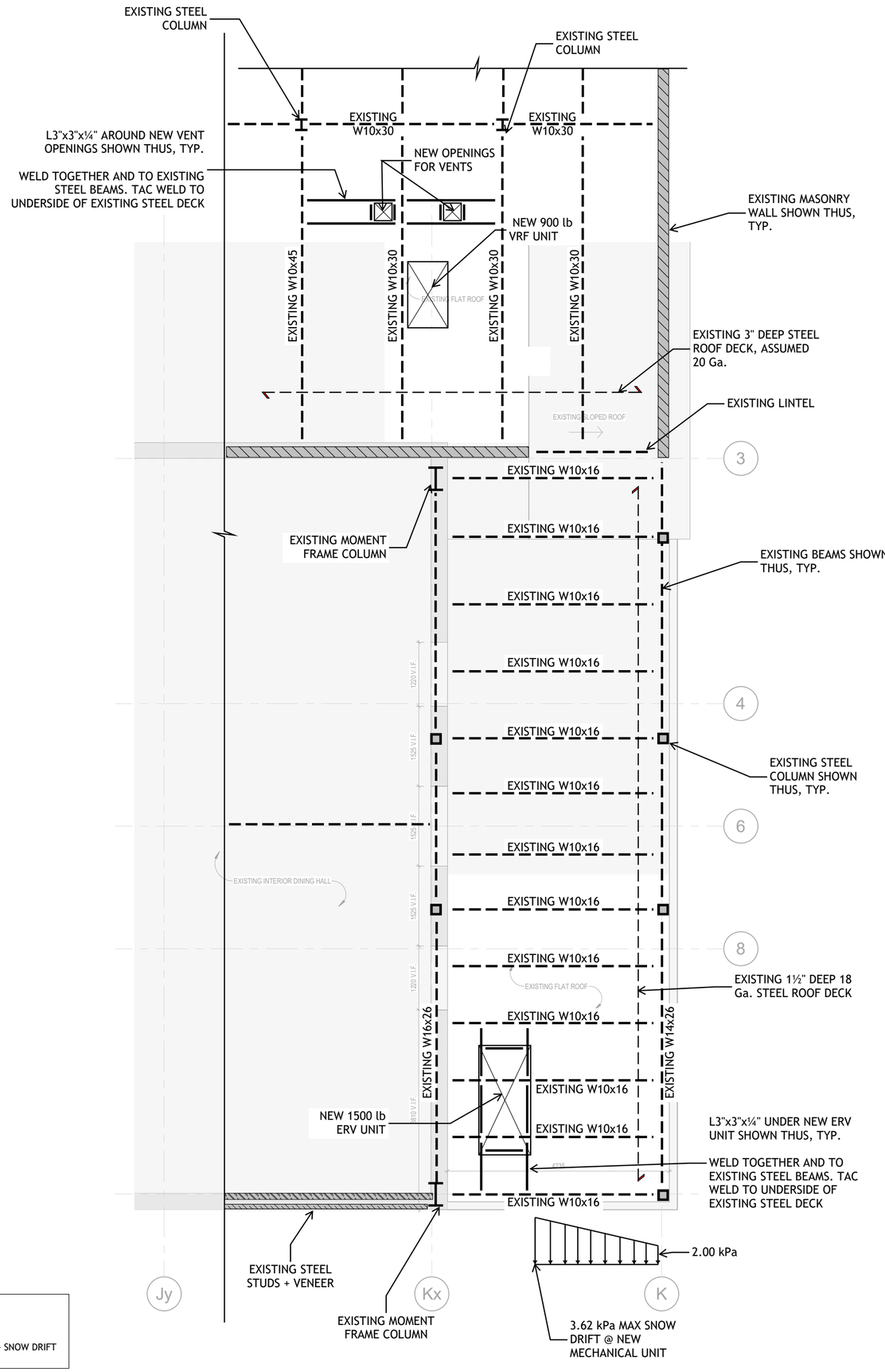
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PROJECT NUMBER

25385

PAGE

S001



PLAN NOTES

1. SUPERIMPOSED LOADS USED IN THE DESIGN:
   - ROOF DEAD: 1.18 kPa
   - ROOF SNOW: 2.24 kPa (Ss = 2.0 kPa) + SNOW DRIFT
   - MECHANICAL LIVE: 3.60 kPa

KIEFFER STRUCTURAL ENGINEERING

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S001	GENERAL NOTES & TYPICAL DETAILS
S101-S102	PLANS

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PICKERING COLLEGE, NEWMARKET, ON, L3Y 3W7

SHEET TITLE

NEW ROOFTOP MECHANICAL UNITS

SCALE

3/16"=12"

DRAWN BY

OA

PROJECT NUMBER

25385

PAGE

S101

ELECTRICAL LEGEND

POWER

SYMBOL	DESCRIPTION
	120V, 15A DUPLEX U-GROUND RECEPTACLE UNLESS OTHERWISE NOTED.
20A	DUPLEX RECEPTACLE AS ABOVE, CSA 5-20A TYPE.
	SAME AS ABOVE EXCEPT CONNECT TO CONTROLLED CIRCUIT. RECEPTACLE SHALL BE GREY COLOUR.
	DOUBLE DUPLEX RECEPTACLE IN A COMMON COVER PLATE.
	120V, 15A SINGLE RECEPTACLE. VOLTAGE/AMPERAGE AND TYPE AS INDICATED.
	SPECIAL RECEPTACLE. VOLTAGE/AMPERAGE AND TYPE AS INDICATED.
	RECEPTACLES AS ABOVE BUT MOUNTED ABOVE COUNTER OR 42"AFF.
GFI WP TL	RECEPTACLE AS ABOVE SUBSCRIPTS DENOTE SPECIAL TYPE AS PER ABBREVIATION LIST.
	120V, 15A CEILING MOUNTED DUPLEX RECEPTACLE AS SPECIFIED.
	BREAKER. SIZE AS NOTED.
	UNFUSED DISCONNECT SWITCH. SIZE TO SUIT OR AS NOTED. SEE ABBREVIATION FOR OTHER SUBCRIPTS.
	MOTOR AS INDICATED. INCLUDE FINAL CONNECTION.
	COMBINATION LINE VOLTAGE MOTOR STARTER AND SWITCH.
	LINE VOLTAGE MOTOR STARTER. SEE SPECIFICATION FOR SCOPE OF WORK.
	JUNCTION BOX AS INDICATED.
PL	120V DIRECT CONNECTION FOR USE AS NOTED. INCLUDE FINAL CONNECTION. 'PL' DENOTES FOR ELECTRONIC PLUMBING FIXTURES.
	SPECIAL DIRECT CONNECTION FOR USE AS NOTE. INCLUDE FINAL CONNECTION.
LP"A" LP"B"	FLUSH OR SURFACE MOUNTED ELECTRICAL PANEL RESPECTIVELY.
	ELECTRIC HEATER. BASEBOARD/FORCED-AIR RESPECTIVELY. TYPE AS INDICATED.
A 2KW	ELECTRIC HEATER DESCRIPTION. LETTER DENOTES TYPE. NUMBER DENOTES WATTAGE.
	PUSHBUTTON FOR USE AS NOTED.
SD	SELF CONTAINED SMOKE DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM)
TS	TIMESWITCH
EPO	EMERGENCY POWER-OFF PUSHBUTTON TO BE INTERLOCKED WITH ALL PANELBOARDS / EQUIPMENT WITH THE SAME ROOM.

LIGHTING

SYMBOL	DESCRIPTION
F1	STRIP LIGHT IN COVE OR VALENCE. LENGTH SHOWN TO SCALE ON THE DRAWINGS. LETTER DENOTES TYPE.
F2 F3	LUMINAIRE, CEILING OR WALL MOUNTED RESPECTIVELY. LETTER DENOTES TYPE.
F2 NL	LUMINAIRE AS ABOVE BUT CONNECTED TO NIGHT LIGHT CIRCUIT.
F2 EM	LUMINAIRE AS ABOVE BUT CONNECTED TO EMERGENCY OR NORMAL & EMERGENCY LIGHT CIRCUITS WITH BY-PASS UNIT - SEE SPEC FOR MORE DETAILS
A1 A2	CEILING OR WALL MOUNTED LUMINAIRE RESPECTIVELY. LETTER DENOTES TYPE.
A1 NL A2 NL	LUMINAIRE AS ABOVE BUT CONNECTED TO NIGHT LIGHT CIRCUIT.
A1 EM A2 EM	LUMINAIRE AS ABOVE BUT CONNECTED TO EMERGENCY OR NORMAL & EMERGENCY LIGHT CIRCUITS WITH BY-PASS UNIT - SEE SPEC FOR MORE DETAILS
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN RESPECTIVELY. SINGLE OR DOUBLE FACED AS INDICATED BY FILLED IN PORTION(S) WITH ARROW(S) AS INDICATED.
	SURFACE MOUNTED SINGLE OF DOUBLE EMERGENCY LIGHTING REMOTE HEAD. CEILING OR WALL MOUNTED AS SHOWN.
BU1	EMERGENCY BATTERY NIT "BU1" C/W LIGHTING HEAD(S) AS SHOWN ON PLAN.
$ $ $	15A/20A 120V SINGLE POLE TOGGLE SWITCH(ES) WITH ONE, TWO OR THREE-GANG COVERPLATE RESPECTIVELY. SWITCHES RATING TO SUIT LIGHTING LOADS & BREAKER SIZE.

FIRE ALARM

SYMBOL	DESCRIPTION
	FIRE ALARM HORN/STROBE COMBINATION. NUMBER DENOTES TYPE
	FIRE ALARM HORN
	FIRE ALARM MANUAL PULL STATION (WITH AND WITHOUT COVER).
SD	FIRE ALARM SMOKE DETECTOR
SA	SELF CONTAINED SMOKE ALARM (COMBINATION SMOKE DETECTOR AND AUDIBLE ALARM, NOT CONNECTED TO FIRE ALARM SYSTEM)
SD	SELF CONTAINED SMOKE DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM)
HD	FIRE ALARM HEAT DETECTOR, COMBINATION FIXED TEMPERATURE AND RATE-OF-RISE.
190	FIRE ALARM HEAT DETECTOR, FIXED TEMPERATURE (EG. 190'F)
FACP FACP	RECESSED OR SURFACE MOUNTED FIRE ALARM CONTROL PANEL/OR ANNUNCIATOR AS NOTED. FACP: FIRE ALARM CONTROL PANEL FAAP: FIRE ALARM ANNUNCIATOR PANEL

ABBREVIATIONS

SYMBOL	DESCRIPTION
WP	WEATHERPROOF
GFI	GROUND FAULT INTERRUPTER
MD	MOTORIZED DAMPER
A-1	PANEL "A", CIRCUIT #1.
AUX.	AUXILIARY CONTACT
RTU	ROOF TOP UNIT
AFF	ABOVE FINISHED FLOOR
TL	TWIST-LOCK
N	NEW
ER	DENOTES EXISTING TO BE RELOCATED
EX	EXISTING TO REMAIN
R	EXISTING TO BE REMOVED
RP	RELOCATED POSITION
CL	CEILING MOUNTED
D DWG	DETAIL # DRAWING WHERE DETAIL IS SHOWN.

SECURITY

SYMBOL	DESCRIPTION
DC	SECURITY SYSTEM, DOOR CONTACT.
CR	SECURITY SYSTEM, CARD READER
ES	SECURITY SYSTEM, ELECTRIC STRIKE
KP	SECURITY SYSTEM, KEY PAD
PB	SECURITY SYSTEM, PANIC BUTTON
REX	SECURITY SYSTEM, REQUEST TO EXIT MOTION SENSOR
SS	SECURITY SYSTEM, MOTION SENSOR
	CCTV SYSTEM CAMERA
EM	EMERGENCY PAGER (REQUIRES DATA DROP)

COMMUNICATION / AV SYSTEM

SYMBOL	DESCRIPTION
	TELEPHONE OUTLET (VOIP, PROVIDE DATA)
	DATA OUTLET
	COMBINATION TELEPHONE/DATA OUTLET.SEE
	OUTLET AS ABOVE BUT MOUNTED ABOVE COUNTER OR 42"AFF.
	FLOOR MOUNTED TELEPHONE, DATA OR COMBINATION AS SPECIFIED.
S	SPEAKER (OTHER THAN FIRE ALARM) WITH OUTLET FOR WALL OR CEILING MOUNTED.
PA	PUBLIC ANNOUNCEMENT SPEAKER (OTHER THAN FIRE ALARM) WITH OUTLET FOR WALL OR CEILING MOUNTED.
AV	AV SPEAKER WITH OUTLET FOR WALL OR CEILING MOUNTED.
	DIGITAL CLOCK OUTLET TO BE C/W SINGLE GANG BOX AND CONDUIT BACK TO MASTER CLOCK CONTROLLER. REQUIRES DATA DROP
TV	CATV OUTLET. REFER TO SCOPE OF WORK.
	CEILING OR WALL MOUNTED WIRELESS ACCESS POINT
	INTERCOM STATION
	SCHOOL BELL

ELECTRICAL DRAWING LIST

NUMBER	DESCRIPTION
E0.1	ELECTRICAL LEGEND, DRAWING LIST AND NOTES
E0.2	PANEL SCHEDULES
E0.3	SINGLE LINE DIAGRAM AND DETAILS
E0.4	GROUND FLOOR KEY PLAN
E1.1	BASEMENT POWER - DEMOLITION
E1.2	BASEMENT LIGHTING - DEMOLITION
E2.1	BASEMENT POWER - NEW LAYOUT
E2.2	BASEMENT LIGHTING - NEW LAYOUT
E2.3	RROF PART PLAN - DEMO & NEW LAYOUT
E3.1	ELECTRICAL SPECIFICATION

NOTES RE. VOICE/DATA SYSTEM

VOICE AND DATA SYSTEM SHALL BE PROVIDED BY COLLEGE VENDOR.

THIS ELECTRICAL CONTRACTOR SHALL PROVIDE THE FOLLOWING:

1. TELEPHONE OUTLET SHALL BE SINGLE GANG BOX C/W 3/4"C TO ZONE CONDUIT.
2. DATA OUTLET SHALL BE SINGLE BOX C/W 3/4"C TO ZONE CONDUIT.
3. COMBINATION TELEPHONE/DATA OUTLET SHALL BE SINGLE GANG C/W 3/4"C TO ZONE CONDUIT.
4. PROVIDE EMPTY CONDUITS. ALL CONDUITS SHALL BE C/W PULL STRING. PROVIDE 2" CONDUIT (OR AS PER SYSTEM PROVIDER) FROM RENOVATED AREA TO IT ROOM.
5. PROVIDE ZONE CONDUIT/BOXES FOR VOICE AND DATA CABLING.
6. CEILING PLENUM IS RETURN AIR PLENUM AND ALLOWED FOR FT6 RATING CABLES ONLY.
7. LOCATION AND QUANTITY OF OUTLETS ARE SHOWN ON FLOOR PLAN.
8. REFER TO FLOOR PLAN FOR LOCATION AND NUMBER OUT OUTLETS.
9. THIS CONTRACTOR TO PROVIDE TELECOMMUNICATIONS GROUNDING BUSBARS (TGB). BARS TO MEET REQUIREMENTS OF TIA/EIA 607 AND CONFORM TO BICSI RECOMMENDATIONS. PROVIDE GROUNDING AND BONDING AS REQUIRED.

MASTER CLOCK SYSTEM

THE COLLAGE IS EQUIPPED WITH MASTER CLOCK SYSTEM.

THIS CONTRACTOR TO PROVIDE BACK BOXES AND CONDUITS WITH PULL STRINGS.
CABLING WILL BE DONE BY COLLEGE VENDER. COORDINATE WITH COLLEAGUE VENDER AS REQUIRED.

WIRELESS ACCESS POINTS INSTALLATION

PROVIDE EMPTY CONDUITS FROM EACH AP (ACCESS POINT) POSITION TO EXISITNG IT ROOM, ENSURING THAT THE TOTAL PERMISSIBLE WIRE LENGTH OF 55 M IS NOT EXCEEDED.

THE APs SHALL USE CEILING OR WALL MOUNT STYLE AND BE POSITIONED BELOW THE CEILING (WHERE APPLICABLE). PROVIDE BACK BOXES.

CABLING, FINAL CONNECTIONS AND COMMISSIONING WILL BE DONE BY COLLEGE VENDER. COORDINATE WITH VENDER AS REQUIRED.

LUMINAIRE SCHEDULE

TYPE 'L'

SUSPENDED LINEAR, UP AND DOWN LED, 4FT LONG, 4.5" HIGH

LAMP: LED, 3500K, 90 CRI,
DIRECT 1000LM/FT; INDIRECT 500LM/FT
VOLTAGE: 120V, 51.6W, DIMMING 0-10V
FINISH: BLACK
PROVIDE BLACK STEM SUPPORTS. STEM LENGTH TO SUIT LIGHT ELEVATION. ELEVATION TO BE AS PER ARCHITECT.

MANUFACTURER: LUMENWERX,
VIA2PDI-HLO-FH-W102-SW-90-1000-500-35-4FT OR APPROVED EQUAL

TYPE 'L1'

RECESSED ROUND POT LIGHT FIXTURES, 4" DIAM.,
LAMP: LED, 3500K, 80+ CRI, 1500LM, SPECULAR CLEAR REFLECTOR
VOLTAGE: 120V, 15W, DIMMING 0-10V, 1%
FINISH: WHITE COLOUR

MANUFACTURER: LIGHTOLIER, SIGNIFY
CAT.#P4R DL 15 835 CL Z10 U
OR APPROVED EQUAL

TYPE 'L2'

RECESSED MOUNTED 1X4 SELECTABLE BACKLIT FLAT PANEL,

LAMP: LED, 3500K, 90 CRI, 4293LM
VOLTAGE: 120V, 37W, DIMMING 0-10V
FINISH: WHITE

MANUFACTURER: DAY-BRITE BY SIGNIFY, 1SBP3040L8CS-4-UN3-DIM OR APPROVED EQUAL

TYPE 'L2a'

SAME AS TYPE 'L2' BUT SURFACE MOUNTED
PROVIDE SURFACE MOUNT FIELD ASSEMBLY KIT FSF14

TYPE 'L3'

SUSPENDED LINEAR, UP AND DOWN LED, 4FT LONG, 4.5" HIGH

IP65 RATED, DUST TIGHT, WIPE DOWN APPLICATION
LAMP: LED, 3500K, 90 CRI,
DIRECT 750LM/FT; INDIRECT 750LM/FT
VOLTAGE: 120V, 60W, DIMMING 0-10V
FINISH: BLACK
PROVIDE BLACK STEM SUPPORTS. STEM LENGTH TO SUIT LIGHT ELEVATION. ELEVATION TO BE AS PER ARCHITECT.

MANUFACTURER: LUMENWERX,
VIA2SEALPDI-IP65EC-IP65-EPDO-W102-90-750-750-35-4FT OR APPROVED EQUAL

TYPE 'TR'

TRACK WITH LED TRACK LIGHTS.
TRACK LENGTH TO BE CUSTOM AS PER DRAWINGS. PROVIDE CONNECTORS AND ALL REQUIRED ACCESSORIES TO CREATE CONTINUOUS TRACK
REFER TO FLOOR PLANS FOR NUMBER OF TRACK LIGHTS
LIGHTS ELEVATION ABOVE FLOOR TO BE AS PER ARCHITECT.

TRACK:
BASIC TRACK SYSTEM, SERIES 60 LIGHTOLIER BY SIGNIFY,
FINISH: MATTE BLACK

TRACK LIGHTS:
MOUNTING: TRACK, PROVIDE LIGHTOLIER ADAPTER, 350° ROTATION, 89° TILT
VOLTAGE: 120V, 17W, (0-10V) 1% DIMMING DRIVER
FINISH: HOUSING SATIN BLACK, LAYERED FINE
LAMP: LED, 3500K, 90+CRI, 1500LM
BEAM: WIDE BEAM 34°

MANUFACTURER: LIGHTOLIER BY SIGNIFY, MS-SERIES TRACK LIGHTS
CAT.# 3DTH-L-BKST-LF-15L-WB-35K-2

CONTRACTOR TO INCLUDE FOR FINAL LOCATION OF TRACK LIGHT ADJUSTMENT ON SITE BASED ON BEST LIGHTING COVERAGE OF WALL. FINAL LOCATION TO BE COORDINATED WITH ARCHITECT

SECURITY SYSTEMS NOTES

RESPONSIBILITIES:

1. BY THIS ELECTRICAL CONTRACTOR:
   - PROVIDE ALL WIRING (INCLUDING LOW VOLTAGE WIRING, WIRING FOR SECURITY ETC.), CONDUITS & JUNCTION BOXES.
   - EXPOSED CONDUITS IN PUBLIC AREAS MUST BE SOLID RIGID CONDUITS WITH THREADED FITTINGS.
   - METAL FLEX CONDUITS ALLOWED TO BE INSTALLED ABOVE DROP CEILING OR WITHIN PLENUM SPACE ONLY WHEN INSTALLATION OF GRC/EMT IS NOT PRACTICAL DUE TO CONGESTION. METAL FLEX CONDUIT TO BE FULLY SECURED USING TWO SCREW CLIPS
   - WIRING SHALL BE SOLID COPPER CONDUCTORS, RISER RATED AND INSTALLED IN CONDUITS.
   - INSTALL FIRE RATED ELECTRIC STRIKE ON FIRE RATED DOORS
   - ALL LOW VOLTAGE WIRING HALL BE #22AWG, STRANDED AND S SHIELDED AND INSTALLED IN CONDUIT OR PLENUM RATED IN HOLLOW METAL DOOR FRAME WHERE ACCESSIBLE.
   - MINIMUM CONDUIT SIZE TO BE 3/4".
   - REFER TO COLLEGE SECURITY SYSTEM PROVIDER FOR WIRING REQUIREMENTS AND COORDINATE WITH DOOR HARDWARE SUPPLIER REQUIREMENTS
   - NEW CAMERAS ARE POE (POWER OVER ETHERNET). COLLEGE SECURITY SYSTEM PROVIDER WILL PROVIDE CAMERAS.
2. BY SECURITY SYSTEM PROVIDER:
   - FINAL CONNECTIONS, FRONT END DEVICES, PROGRAMMING AND COMMISSIONING OF DOOR CONTROL SYSTEM AND SECURITY CAMERAS. THIS ELECTRICAL CONTRACTOR TO COORDINATE AS REQUIRED.
3. BY GENERAL CONTRACTOR:
   - PROVIDE DOOR CONTROL DEVICES SUCH AS TRANSFER HINGE, CARD READER, DOOR CONTROLLER, DOOR CONTACTS ETC. THIS ELECTRICAL CONTRACTOR TO COORDINATE AS REQUIRED.
   - GENERAL CONTRACTOR WILL HIRE COLLEGE APPROVED BASE BUILDING CONTRACTOR TO INSTALL ACCESS CONTROL AND CCTV SYSTEM
4. THIS CONSTRICTOR TO COORDINATE WITH SECURITY SYSTEM PROVIDER AS REQUIRED.

OCCUPANCY SENSOR SCHEDULE

OC — FLUSH WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH:
- AUTO-ON WITH MANUAL OFF SWITCH.
- FITS A STANDARD SWITCH BOX WITH DECORA COVER PLATE.
- ADJUSTABLE TIME DELAY BETWEEN 30 SECONDS AND 30 MINUTES.
- ADJUSTABLE INTEGRATED NATURAL LIGHT LEVEL SENSOR BETWEEN 2 AND 1000 FOOT CANDLES.
- 5 YEAR WARRANTY.

WATT-STOPPER CAT.# DW-100-120-1.

OC — SURFACE CEILING/WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, ROOM SENSORS.
- UP TO 2000 SQ.FT. OR WALKING COVERAGE.
- SENSITIVITY ADJUSTMENT.
- ADJUSTABLE TIME DELAY BETWEEN 1 SECONDS TO 30 MINUTES.
- 5 YEAR WARRANTY.

WATT-STOPPER CAT.# DT-200 SERIES.

NOTES:

1. ADJUST SENSITIVITY OF SENSORS TO SUIT ROOM/AREA SIZE AND CONFIGURATION TO PREVENT SENSORS FROM "SEEING" OUTSIDE THE ROOM.
2. ADJUST LIGHT LEVEL SENSORS TO 65 FOOT CANDLES.
3. ADJUST TIME DELAY TO 30 MINUTES.
4. FINAL LOCATIONS OF SENSORS SHALL BE AS RECOMMENDED BY MANUFACTURERS. AVOID CLOSE PROXIMITY TO DIFFUSERS.
5. ALLOW IN CONTRACT LABOUR TO ADJUST SENSORS A SECOND TIME TO OWNER'S DIRECTIVES.
6. PROVIDE MINIMUM TWO TIMES SETTING BY WATTS-STOPPER REPRESENTATIVE.
7. COORDINATE WITH WATTS-STOPPER AND ALLOW IN CONTRACTOR TO HIRE WATTS-STOPPER REPRESENTATIVE FOR SETTING, PROGRAM, TRAINING OWNER STAFF, ETC.. TO INSURE WATTS-STOPPER CONTROL SYSTEM IN GOOD OPERATIONAL CONDITION.
8. ROOM CONTROLLERS ARE NOT SHOWN ON DRAWINGS. PROVIDE ROOM CONTROLLERS WHERE REQUIRED. COORDINATE WITH WATTS-STOPPER FOR EXACT REQUIRED QUANTITY.
   STORAGE AREA LIGHTS ARE 347V, RETAIL AREA LIGHTS ARE 120V.
9. THIS CONTRACTOR SHALL PROVIDE REQUIRED QUANTITY OF CAT.5E OR CAT6 CABLES TO SUIT.
10. FINAL LOCATION OF NEW SENSORS IN STORAGE AREA TO BE COORDINATED WITH WATT-STOPPER REPRESENTATIVE

EMERGENCY BATTERY UNIT SPECIFICATIONS

BATTERY UNITS

BATTERY UNIT SHALL BE LUMACELL CAT. #BG24S SERIES WITH CAPACITY 720W AND EQUAL BY EMERGILITE, DUALITE OR BEGHELLI. UNITS SHALL BE FOR OPERATION ON 120 VOLT - 10 YEARS LIFE BATTERY - WITH NUMBER OF HEADS INDICATED ON THE DRAWINGS. UNITS SHALL BE PLUG-IN TYPE WITH SEALED PURE LEAD BATTERIES. THE CHARGER SHALL BE COMPLETELY AUTOMATIC, SOLID STATE TYPE BROWN OUT FEATURE, CAPABLE OF FULLY RECHARGING DISCHARGED BATTERY IN 24 HOURS. TRANSFER DEVICE SHALL AUTOMATICALLY SWITCH LOAD ON AT POWER FAILURE AND OFF ON RETURN OF NORMAL POWER. UNITS SHALL HAVE LOW VOLTAGE DISCONNECT FEATURE. PROVIDE DUPLEX POWER OUTLET FOR EACH BATTERY UNIT.

REMOTE HEADS 'DC'

SINGLE AND DOUBLE REMOTE HEADS SHALL BE MR16, 24V, 6W, LED LAMPS
EMERGENCY LIGHTING REMOTE HEADS SHALL BE WHITE.
LUMACELL CAT. #MQM SERIES OR APPROVED EQUAL.

EXIT SIGN 'X'

SINGLE FACE OR DOUBLE FACE AS PER DRAWING, UNIVERSAL MOUNTED LED SIGN, GREEN RUNNING MAN PICTOGRAM, ALUMINUM HOUSING, LESS THAN 3W LED, 120VAC & 24VDC INPUT. GREEN MAN ON WHITE FACE, SELF-POWERED.

LUMACELL CAT.# LA SERIES OR APPROVED EQUAL

POWER REELS

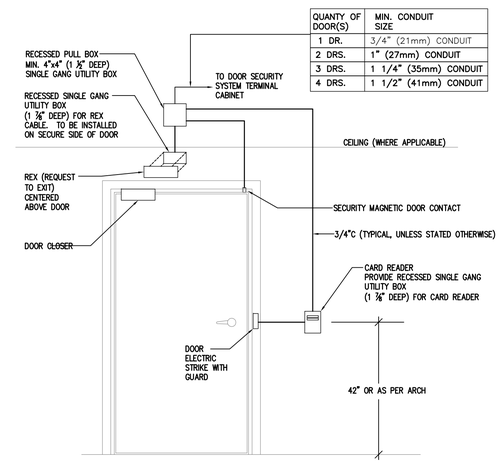
POWER REELS TO BE SUPPLIED AND INSTALLED BY THIS ELECTRICAL CONTRACTOR. REFER TO FLOOR PLANS FOR REELS LOCATIONS.

POWER REEL TO BE ULC LISTED, COMPLETED WITH RETRACTABLE 25FT LONG CORD WITH QUAD FEMALE RECEPTACLES (QUAD RB MOBILE END), 20A, 120V, IN-LINE GFCI, METAL CASE, ADJUSTABLE CORD STOPPER. PROVIDE SUPPORT BRACKETS AND ATTACHED TO CONCRETE SLAB ABOVE. SUPPORTS TO BE CUSTOM LENGTH SO THAT REEL IS IMMEDIATELY BELOW CEILING TILES. FOR CEILING TYPE REFER TO ARCH. DRAWINGS.

POWER REELS TO BE PLUG-IN TYPE ON FIXED END OF CORD.

PROVIDE GFI POWER OUTLETS NEXT TO REEL.

MANUFACTURE:
LEGRAND, PASS & SEYMOUR, 1000 SERIES, PART NO. PSCRCD123G25R20



NOTES:

1. ALL CONDUITS TO BE ROUTED BEHIND FINISHED SURFACES / WITHIN WALLS UNLESS SPECIFICALLY STATED OTHERWISE. ANY EXPOSED DEVICES OR WIRES TO BE MOUNTED ON INSIDE OF SECURE SIDE.
2. ALL WIRING TO BE BROUGHT TO DEVICE(S) USING FLEX OR CONDUIT. FLEX CONDUIT TO BE UTILIZED ONLY WHERE INSTALLATION OF GRC IS NOT PRACTICAL
3. UNLESS OTHERWISE NOTED, MINIMUM CONDUIT IS 21mmC.
4. ALL CONDUITS SHALL BE COMPLETE WITH PULL STRING.
5. ALL WIRING WILL BE PROVIDED BY CLIENT'S SYSTEM PROVIDER. THIS CONTRACTOR TO COORDINATE AS REQUIRED. CONFIRM BACK BOXES, JUNCTION BOXES AND CONDUIT SIZES WITH SYSTEM PROVIDER.
6. ALL CONDUITS AND JUNCTION BOXES MUST BE INSTALLED ON SECURED SIDE OF DOOR
7. DIAGRAM IS PROVIDED FOR REFERENCE ONLY. FOR TYPE AND NUMBER OF DEVICES REFER TO FLOOR PLANS

1 / E0.1 SECURITY DOOR WITH CARD READER
SCALE: N.T.S.

Architecture Counsel
4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

Project North / True North

SHARMA & PARTNERS INC.
Mechanical and Electrical Engineers
85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8
Tel.: (416)291-8822

LICENCE PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

SPI PROJECT#: 2026-1010

	DATE	REVISION
2.	2026.11.06	ISSUED FOR TENDER
1.	2026.10.05	ISSUED FOR PERMIT

PICKERING COLLEGE INNOVATION HUB
16945 Bayview Ave, Newmarket, ON L3Y 3W7

ELECTRICAL LEGEND, DRAWING LIST AND NOTES

Scale: N.T.S.
Drawn by: CAD
Reviewed by: AP
Job number: 25168
Plot date: 2026.11.06

Drawing number:
E0.1

PANEL A (EXISTING)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: 225 AMPS
MOUNTING: SURFACE

LOCATION: ELECTRICAL & SERVER ROOM

	LOAD	DESCRIPTION	BREAKER	CIRCUITS	BREAKER	DESCRIPTION	LOAD	
		BOILER PUMP	15A	1 2	70A	SERVERY PANEL G		
		BOILER PUMP	15A	3 4				
		BOILER PUMP	15A	5 6	3P			
		BOILER PUMP	15A	7 8	70A	BASEMENT PANEL B		(1)
		SPARE	15A	9 10				
		HALL LIGHTS	15A	11 12	3P			
		EXITS & EMERGENCY LIGHTS	15A	13 14	15A	EXITS & EMERG. LIGHTS (BASEMENT)		
		EXISTING LOAD	15A	15 16	15A	HEAT MAIN ROOM		
(1)		SPARE	15A	17 18	15A	SPARE		
(1)		SPARE	15A	19 20	15A	1ST FL SOUTH HALL RECEPT.		
		RECEP. WEST WALL PANEL	15A	21 22	15A	EMERG. LIGHTS (DINING RM, LOBBY, WEST DINING RM)		
		SPARE	20A	23 24	15A	1ST FL SOUTH RECEPT.		
		EXISTING LOAD	15A	25 26	15A	EMERG. LIGHTS, HALL RECEPT.		
		KEY RM HALLWAY LIGHTS	15A	27 28	15A	EXISTING LOAD		
		SPARE	20A	29 30	15A	DINING HALL ENTRY POTS		
		BATTERY UNIT 3 EXITS 1ST FLOOR	15A	31 32	15A	EXISTING LOAD		
		A/C LOUNGE (NORTH)	30A	33 34	15A	SPARE		
			2P	35 36	15A	EXISTING LOAD		
		A/C LOUNGE (SOUTH)	30A	37 38	15A	EXISTING LOAD		
			2P	39 40	2P			
		HEAT EXCHANGER	15A	41 42	15A	SPARE		
		RECEPT. LARGE COUNTER	15A	43 44	2P	SPARE		
		RECEPT. LARGE COUNTER	15A	45 46	15A	SECURITY PANEL		
		AUTO DOOR	20A	47 48	15A	SPARE		(1)
		LIGHTS LOUNGE	15A	49 50	2P	SPARE		
		RECEPT. LOUNGE	15A	51 52	15A	SPARE		(1)
		RECEPT. LARGE COUNTER	15A	53A 54	2P	SPARE		
		RECEPT. LOUNGE / ELEVATOR	15A	53B				
		RECEPT. LOUNGE	15A	55 56	15A	EXISTING LOAD		
		RECEPT. LOUNGE HALLWAY	15A	57A 58	15A	EXISTING LOAD		
		RECEPT. LOUNGE HALLWAY	15A	57B				
		LOUNGE WASHROOM HEATER	15A	59 60	15A	SUMP PUMP		
			2P	61 62	50A	HVAC MEZZANINE		
		LOUNGE WASHROOM HEATER	15A	63 64				
			2P	65 66	3P			
		FLOOR & WALL RECEPT. LOUNGE	15A	67A 68	40A	ART ROOM A/C		(1)
		FLOOR & WALL RECEPT. LOUNGE	15A	67B				
		FRONT LIGHT LOUNGE	15A	69 70				
		LOUNGE FLOOR + HALL RECEPT.	15A	71A 72	3P			
		FIRE DOOR NOT ENTER SIGN	15A	71B				
		OUTSIDE LIGHTS	15A	73 74	15A	EXISTING LOAD		
		OUTSIDE RECEPT.	15A	75 76	15A	SPARE		
		REAR POST LIGHTS	20A	77 78	20A	ART ROOM VENT TABLE		
		HEAT PUMP UNDER FLOOR	15A	79A 80	15A	PHONE RECPET.		
		SPARE	15A	79B				
		SPRINKLER PUMP	15A	81 82	20A	HEAD MASTER COURTYARD RECEPT.		
		COURTYARD TIMER	15A	83 84	20A	HEAD MASTER COURTYARD RECEPT.		

NOTES:
EXISITNG PANEL CAT.#NQOD484L225 BY SQUARE D, 225A, 208/120V, 3PH, 4W
PANEL IS FED FROM MAIN ELECTRICAL ROOM
EXISTING PANEL DIRECTOR IS PROVIDED FOR REFERENCE ONLY. THIS CONTRACTOR TO INCLUDE FOR SITE INVESTIGATION TO CONFIRM ALL CIRCUITS.
IDENTIFY ALL CIRCUITS FEEDING LOADS OUTSIDE OF RENOVATED AREA.
UPDATE DIRECTORY AFTER DEMOLITION IS COMPLETED
MARK BREAKERS AS "SPARE" AFTER ALL LOADS ON THE CIRCUIT AND REMOVED.
(1) REPLACE EXISITNG BREAKER AND WIRE NEW LOAD

PANEL A (EXIS. REVISED)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: 225 AMPS
MOUNTING: SURFACE

LOCATION: ELECTRICAL & SERVER ROOM

	LOAD	DESCRIPTION	BREAKER	CIRCUITS	BREAKER	DESCRIPTION	LOAD	
		BOILER PUMP	15A	1 2	70A	SERVERY PANEL G		
		BOILER PUMP	15A	3 4				
		BOILER PUMP	15A	5 6	3P			
		BOILER PUMP	15A	7 8	60A	ERV-1		(1)
		SPARE	15A	9 10				
		HALL LIGHTS	15A	11 12	3P			
		EXITS & EMERGENCY LIGHTS	15A	13 14	15A	EXITS & EMERG. LIGHTS (BASEMENT)		
		EXISTING LOAD	15A	15 16	15A	HEAT MAIN ROOM		
(1)		HP-1.3	15A	17 18	15A	SPARE		
			2P	19 20	15A	1ST FL SOUTH HALL RECEPT.		
		RECEP. WEST WALL PANEL	15A	21 22	15A	EMERG. LIGHTS (DINING RM, LOBBY, WEST DINING RM)		
		SPARE	20A	23 24	15A	1ST FL SOUTH RECEPT.		
		EXISTING LOAD	15A	25 26	15A	EMERG. LIGHTS, HALL RECEPT.		
		KEY RM HALLWAY LIGHTS	15A	27 28	15A	EXISTING LOAD		
		SPARE	20A	29 30	15A	DINING HALL ENTRY POTS		
		BATTERY UNIT 3 EXITS 1ST FLOOR	15A	31 32	15A	EXISTING LOAD		
		A/C LOUNGE (NORTH)	30A	33 34	15A	SPARE		
			2P	35 36	15A	EXISTING LOAD		
		A/C LOUNGE (SOUTH)	30A	37 38	15A	EXISTING LOAD		
			2P	39 40	2P			
		HEAT EXCHANGER	15A	41 42	15A	SPARE		
		RECEPT. LARGE COUNTER	15A	43 44	2P	SPARE		
		RECEPT. LARGE COUNTER	15A	45 46	15A	SECURITY PANEL		
		AUTO DOOR	20A	47 48	15A	HP-1.1		(1)
		LIGHTS LOUNGE	15A	49 50	2P			
		RECEPT. LOUNGE	15A	51 52	15A	HP-1.2		(1)
		RECEPT. LARGE COUNTER	15A	53A 54	2P			
		RECEPT. LOUNGE / ELEVATOR	15A	53B				
		RECEPT. LOUNGE	15A	55 56	15A	EXISTING LOAD		
		RECEPT. LOUNGE HALLWAY	15A	57A 58	15A	EXISTING LOAD		
		RECEPT. LOUNGE HALLWAY	15A	57B				
		LOUNGE WASHROOM HEATER	15A	59 60	15A	SUMP PUMP		
			2P	61 62	50A	HVAC MEZZANINE		
		LOUNGE WASHROOM HEATER	15A	63 64				
			2P	65 66	3P			
		FLOOR & WALL RECEPT. LOUNGE	15A	67A 68	45A	VRF-1		
		FLOOR & WALL RECEPT. LOUNGE	15A	67B				
		FRONT LIGHT LOUNGE	15A	69 70				(1)
		LOUNGE FLOOR + HALL RECEPT.	15A	71A 72	3P			
		FIRE DOOR NOT ENTER SIGN	15A	71B				
		OUTSIDE LIGHTS	15A	73 74	15A	EXISTING LOAD		
		OUTSIDE RECEPT.	15A	75 76	15A	SPARE		
		REAR POST LIGHTS	20A	77 78	20A	ART ROOM VENT TABLE		
		HEAT PUMP UNDER FLOOR	15A	79A 80	15A	PHONE RECPET.		
		SPARE	15A	79B				
		SPRINKLER PUMP	15A	81 82	20A	HEAD MASTER COURTYARD RECEPT.		
		COURTYARD TIMER	15A	83 84	20A	HEAD MASTER COURTYARD RECEPT.		

PANEL B (NEW)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: 225 AMPS
MOUNTING: SURFACE MOUNTED

LOCATION: ELECTRICAL & SERVER ROOM

	LOAD	DESCRIPTION	BREAKER	CIRCUITS	BREAKER	DESCRIPTION	LOAD	
		3D PRINTER – PROTOTYPING RM	20A	1 2	20A	3D PRINTER – PROTOTYPING RM		
		3D PRINTER – PROTOTYPING RM	20A	3 4	20A	3D PRINTER – PROTOTYPING RM		
		3D PRINTER – PROTOTYPING RM	20A	5 6	20A	3D PRINTER – PROTOTYPING RM		
		3D PRINTER – PROTOTYPING RM	20A	7 8	20A	3D PRINTER – PROTOTYPING RM		
		3D PRINTER – PROTOTYPING RM	20A	9 10	20A	3D PRINTER – PROTOTYPING RM		
		3D PRINTER – PROTOTYPING RM	20A	11 12	20A	3D PRINTER – PROTOTYPING RM		
		GFI, LASER CUTTER – PROTOTYPING RM	15A	13 14	20A	3D PRINTER – PROTOTYPING RM		
		POWER REEL – PROTOTYPING RM	20A	15 16	20A	POWER REEL – PROTOTYPING RM		
		POWER REEL – PROTOTYPING RM	20A	17 18	20A	POWER REEL – PROTOTYPING RM		
		POWER REEL – PROTOTYPING RM	20A	19 20	20A	POWER REEL – PROTOTYPING RM		
		POWER REEL – PROTOTYPING RM	20A	21 22	20A	POWER REEL – PROTOTYPING RM		
		TV – PROTOTYPING RM	15A	23 24	20A	RECEPTS – PROTOTYPING RM		
		WATER STATION, GFI	15A	25 26	15A	WATER STATION, GFI		
		POWER REEL – INNOVATION HUB	20A	27 28	20A	POWER REEL – INNOVATION HUB		
		POWER REEL – INNOVATION HUB	20A	29 30	20A	POWER REEL – INNOVATION HUB		
		SECURITY	15A	31 32	15A	PLUMBING FIXTURES, GFI		
		MECHANICAL CONTROLS	15A	33 34	15A	SPARE		
		TV – INNOVATION HUB	15A	35 36	15A	TV – INNOVATION HUB		
		TV – INNOVATION HUB	15A	37 38	20A	RECEPT. JANITOR'S ROOM		
		BATTERY UNIT BU	15A	39 40	20A	RECEPT. WC 001E		
		STAIR LIFT ACCESSORIES	15A	41 42	20A	STAIR PLATFORM LIFT		
		RECEPTS, INNOVATION HUB	15A	43 44	2P			
		RECEPTS, INNOVATION HUB	15A	45 46	15A	HALL LIGHTS + SUMP PUMP		(1)
		EXTERIOR RECEPTACLE (BY KITCHEN)	15A	47 48	15A	LIGHTS + EXTERIOR OUTLET		(1)
			2P	49 50	15A	ARCHIVE DUCT HEATER		(1)
(1)		EXISTING LOAD	20A	51 52	2P			
(1)		LIGHTS	15A	53 54	20A	ARCHIVE HEAT PUMP		(1)
(1)		EXISTING LOAD	15A	55 56	2P			
(1)		MAINTENANCE SHOP LIGHTS	15A	57 58	15A	PAY BOY LIGHTS		(1)
(1)		SHOP & WASHROOM LIGHTS	15A	59 60	15A	LIGHTS		(1)
(1)		STAIRWELL & CORRIDOR LIGHTS	15A	61 62		SPACE		
(1)		HALLWAY RECEPTACLE	15A	63 64		SPACE		
		PANEL 'C'	80A	65 66		SPACE		
			3P	67 68	20A	OUTDOOR RECEPTIVE		
		LIGHTS – PROTOTYPING	20A	69 70	20A	LIGHTS – INNOVATION HUB		
		LIGHTS – WORKSHOP	20A	71 72	20A	LIGHTS – INNOVATION HUB		
		SPARE	20A	73 74	20A	LIGHTS – INNOVATION HUB		
		SPACE		75 76	20A	RECEPTS. INNOVATION HUB		
		SPACE		77 78		SPACE		
		SPACE		79 80		SPACE		

PANEL TO BE PROVIDED WITH MAIN SWITCH
PANEL FINISH TO BE CUSTOM AS PER ARCHITECT
(1) CIRCUIT TO REMAIN FULLY FUNCTIONAL. RE-WIRE FROM OLD REMOVED PANEL TO NEW PANEL IN NEW LOCATION

PANEL B (EXISTING)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: XXX AMPS
MOUNTING: SURFACE

LOCATION: LOCKER ROOM

	LOAD	DESCRIPTION	BREAKER	CIRCUITS	BREAKER	DESCRIPTION	LOAD	
		SPARE (FORMER MAKER ROOM SUB-PANEL)	60A	1 2	15A	HALL LIGHTS + SUMP PUMP		(1)
			2P	3 4	15A	LIGHTS + EXTERIOR OUTLET		(1)
(1)		EXTERIOR RECEPTACLE (BY KITCHEN)	15A	5 6	15A	SPARE		
			2P	7 8	2P			
		WASHROOM / SHOWER	15A	9 10	20A	SPARE		
		WATER COOLER	15A	11 12	2P			
(1)		EXISTING LOAD	20A	13 14	20A	SPARE		
(1)		PAY BOY LIGHTS	15A	15 16	2P			
(1)		LIGHTS	15A	17 18	20A	SPARE		
(1)		EXISTING LOAD	15A	19 20	15A	ARCHIVE DUCT HEATER		(1)
(1)		MAINTENANCE SHOP LIGHTS	15A	21 22	2P			
(1)		SHOP & WASHROOM LIGHTS	15A	23 24	20A	ARCHIVE HEAT PUMP		(1)
(1)		STAIRWELL & CORRIDOR LIGHTS	15A	25 26	2P			
(1)		HALLWAY RECEPTACLE	15A	27 28	35A	DUCT HEATER		
		SPACE		29 30				
(1)		LIGHTS	15A	31 32	3P			
		SPACE		33 34		SPACE		
		SPACE		35 36		SPACE		
		SPACE		37 38		SPACE		
		SPACE		39 40		SPACE		
		SPACE		41 42		SPACE		

NOTES:
EXISTING PANEL DIRECTOR IS PROVIDED FOR REFERENCE ONLY. THIS CONTRACTOR TO INCLUDE FOR SITE INVESTIGATION TO CONFIRM ALL CIRCUITS. REPORT ANY DISCREPANCIES.
IDENTIFY ALL CIRCUITS FEEDING LOADS OUTSIDE OF RENOVATED AREA.
PANEL TO BE REMOVED. ENSURE ALL LOADS OUTSIDE OF RENOVATION AREAS ARE RE-WIRED TO NEW PANEL.
(1) CIRCUIT FOR LOADS OUTSIDE OF RENOVATED AREA. CIRCUIT TO REMAIN FULLY FUNCTIONAL. RE-WIRE TO NEW PANEL IN NEW LOCATION

PANEL C (NEW)

120/208V,3PH,4W

TYPE: BOLT-ON
MAINS: 225 AMPS
MOUNTING: RECESSED

LOCATION: SHOP STORAGE 003A

	LOAD	DESCRIPTION	BREAKER	CIRCUITS	BREAKER	DESCRIPTION	LOAD	
	1HP	FAN EF-1	15A	1 2	15A	FAN EF-3	1HP	
			3P	3 4				
				5 6	3P			
	075HP	FAN EF-2	20A	7 8	25A	SUMP PUMPS SP-1A & SP-1B	2x2HP	
(1)		POWER REEL – WORKSHOP	20A	9 10				
(1)		POWER REEL – WORKSHOP	20A	11 12	3P			
(1)		RECEPTACLE – WORKSHOP	20A	13 14	20A	POWER REEL – WORKSHOP		(1)
(1)		RECEPTACLE – WORKSHOP	20A	15 16	20A	RECEPTACLES – WORKSHOP		(1)
(1)		RECEPTACLE – WORKSHOP	15A	17 18	20A	RECEPTACLES – WORKSHOP		(1)
(1)		RECEPTACLE – WORKSHOP	15A	19 20	20A	RECEPTACLES – WORKSHOP		(1)
		RECEPTACLE – WORKSHOP	15A	21 22	15A	MECHANICAL; CONTROLS		
		SPACE		23 24	20A	RECEPTACLES – SHOP STORAGE		
		SPACE		25 26	20A	RECEPTACLES – SHOP STORAGE		
		SPACE		27 28		SPACE		
		SPACE		29 30		SPACE		
		SPACE		31 32		SPACE		
		SPACE		33 34		SPACE		
		SPACE		35 36		SPACE		
		SPACE		37 38		SPACE		
		SPACE		39 40		SPACE		
		SPACE		41 42		SPACE		
		SPACE		43 44		SPACE		

PANEL TO BE PROVIDED WITH MAIN SWITCH
AND VANDAL PROOF LOCKABLE DOOR
(1) CIRCUIT TO BE CONNECTED TO "EPO" (EMERGENCY POWER OFF) PUSHBUTTON TO CUT POWER TO CIRCUIT WHEN "EPO" IS PUSHED

Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

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Project North / True North

SHARMA & PARTNERS INC.
Mechanical and Electrical Engineers
85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8
Tel.: (416)291-8822

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

SPI PROJECT#: 2026-1010

	DATE	REVISION
2.	2026.11.06	ISSUED FOR TENDER
1.	2026.10.05	ISSUED FOR PERMIT

PICKERING COLLEGE INNOVATION HUB

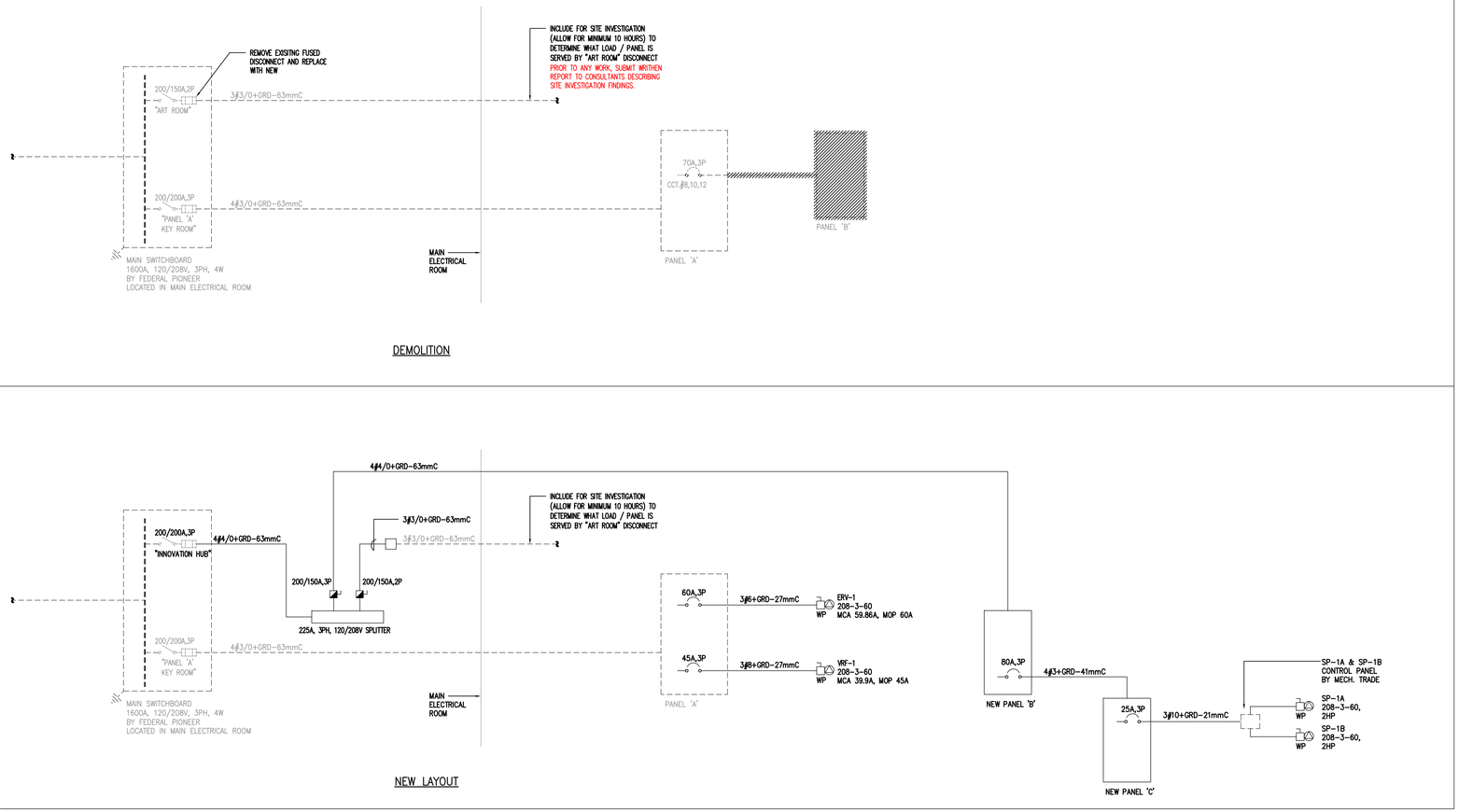
16945 Bayview Ave, Newmarket, ON L3Y 3W7

PANEL SCHEDULES

Scale:	N.T.S.
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

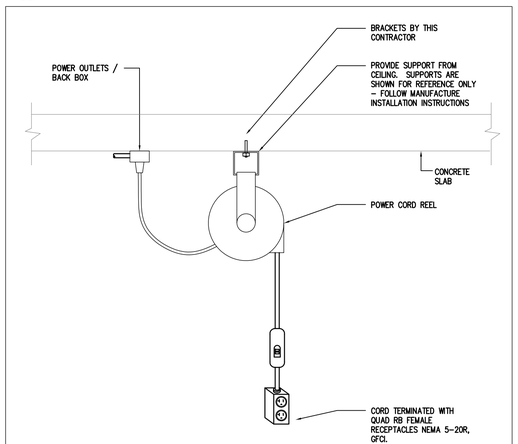
Drawing number:

E0.2



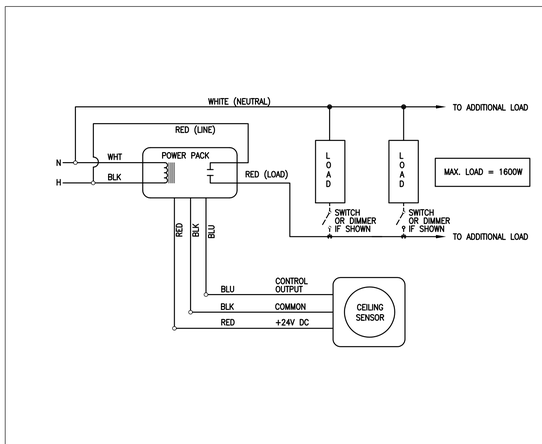
1 E0.3 SINGLE LINE DIAGRAM – DEMO & NEW LAYOUT

SCALE: N.T.S.



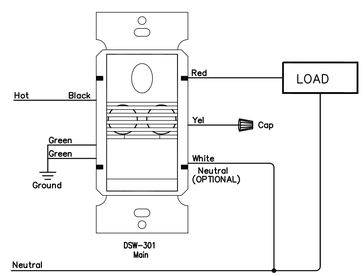
2 E0.3 POWER CORD REEL INSTALALTION DETAIL

SCALE: N.T.S.



2 E0.3 SINGLE SENSOR & SINGLE CIRCUIT OCCUPANCY SENSOR CONTROL WIRING DIAGRAM

SCALE: N.T.S.



3 E0.3 TYPICAL STANDALONE WALLBOX DUAL TECH OCCUPANCY SENSOR SWITCHES (ON/OFF)

SCALE: N.T.S.

Architecture Counsel

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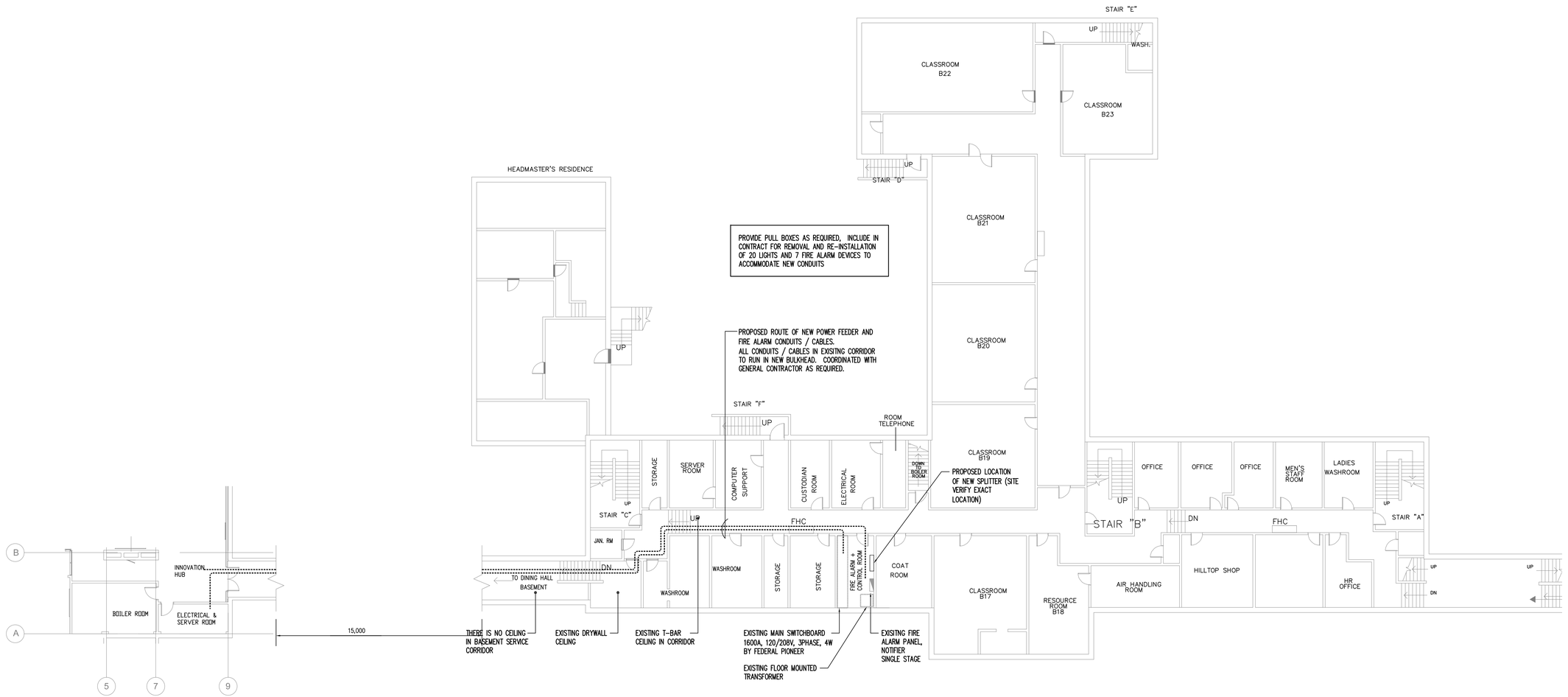
16945 Bayview Ave, Newmarket, ON L3Y 3W7

SINGLE LINE DIAGRAM AND DETAILS

Scale:	N.T.S.
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

E0.3



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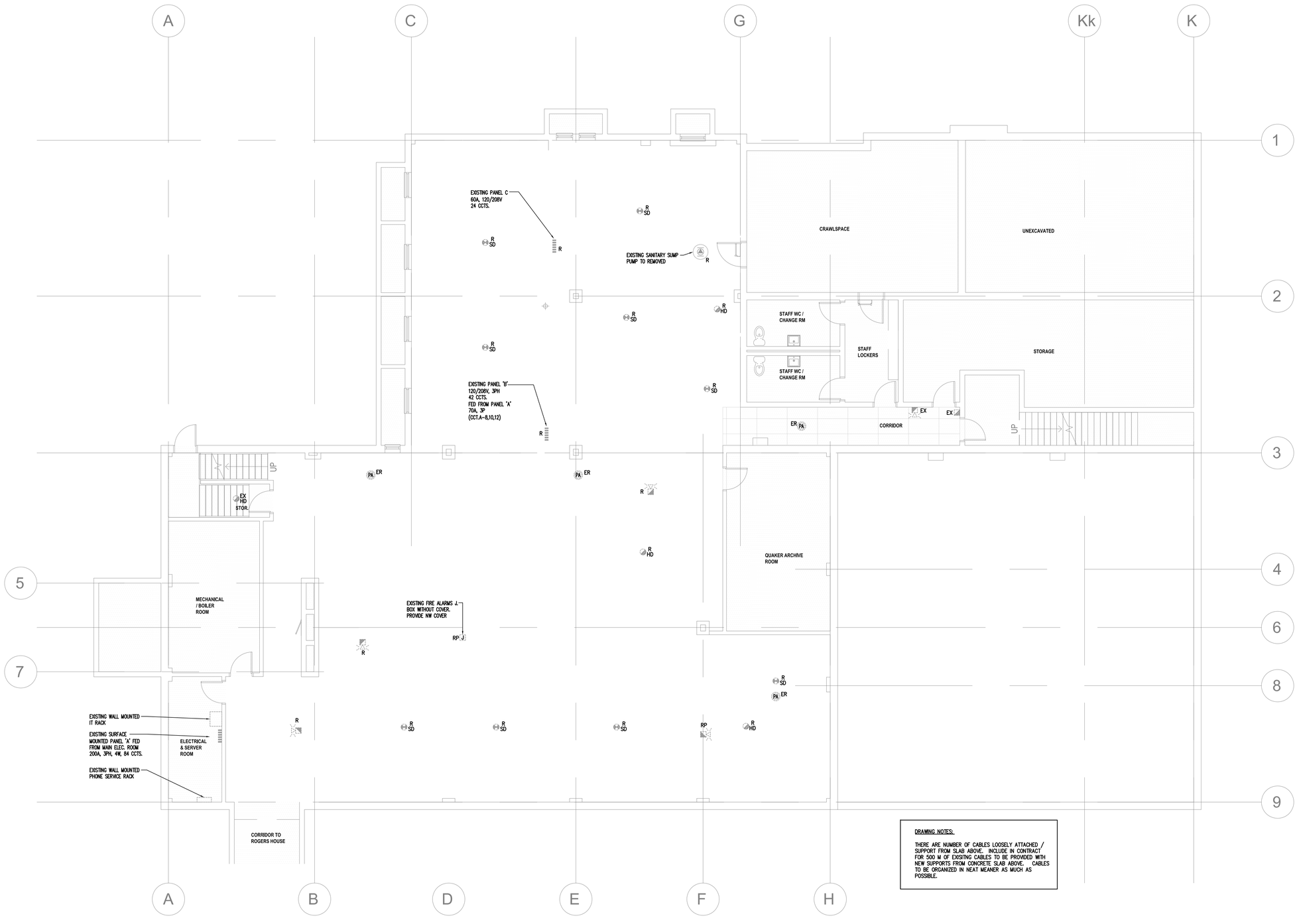
16945 Bayview Ave, Newmarket, ON L3Y 3W7

GROUND FLOOR KEY PLAN

Scale:	1:150
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

E0.4



DRAWING NOTES:

THERE ARE NUMBER OF CABLES LOOSELY ATTACHED / SUPPORT FROM SLAB ABOVE. INCLUDE IN CONTRACT FOR 500 M OF EXISTING CABLES TO BE PROVIDED WITH NEW SUPPORTS FROM CONCRETE SLAB ABOVE. CABLES TO BE ORGANIZED IN NEAT MEANER AS MUCH AS POSSIBLE.

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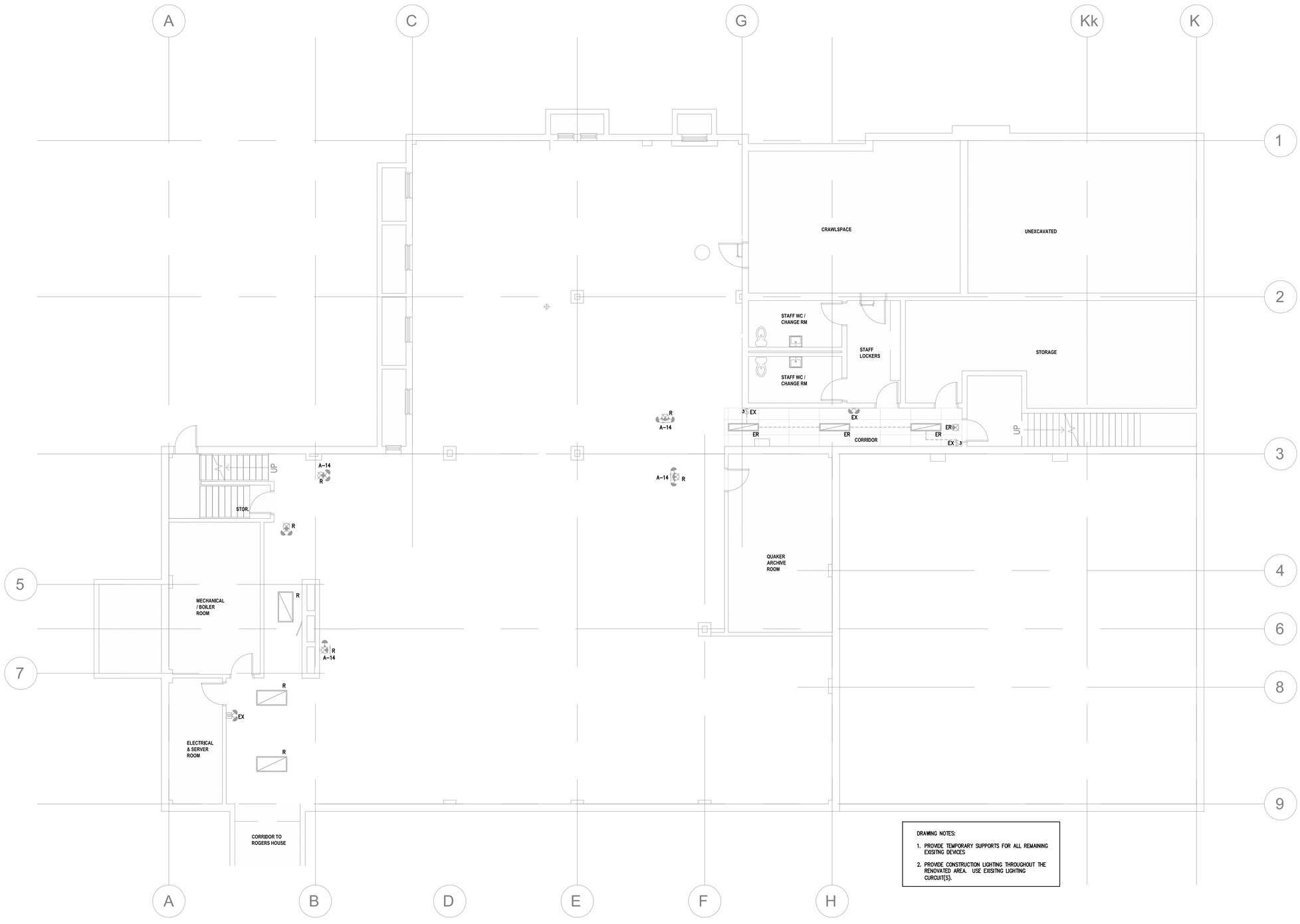
16945 Bayview Ave, Newmarket, ON L3Y 3W7

BASEMENT POWER DEMOLITION

Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

E1.1



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PICKERING COLLEGE INNOVATION HUB

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BASEMENT LIGHTING DEMOLITION

Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

E1.2

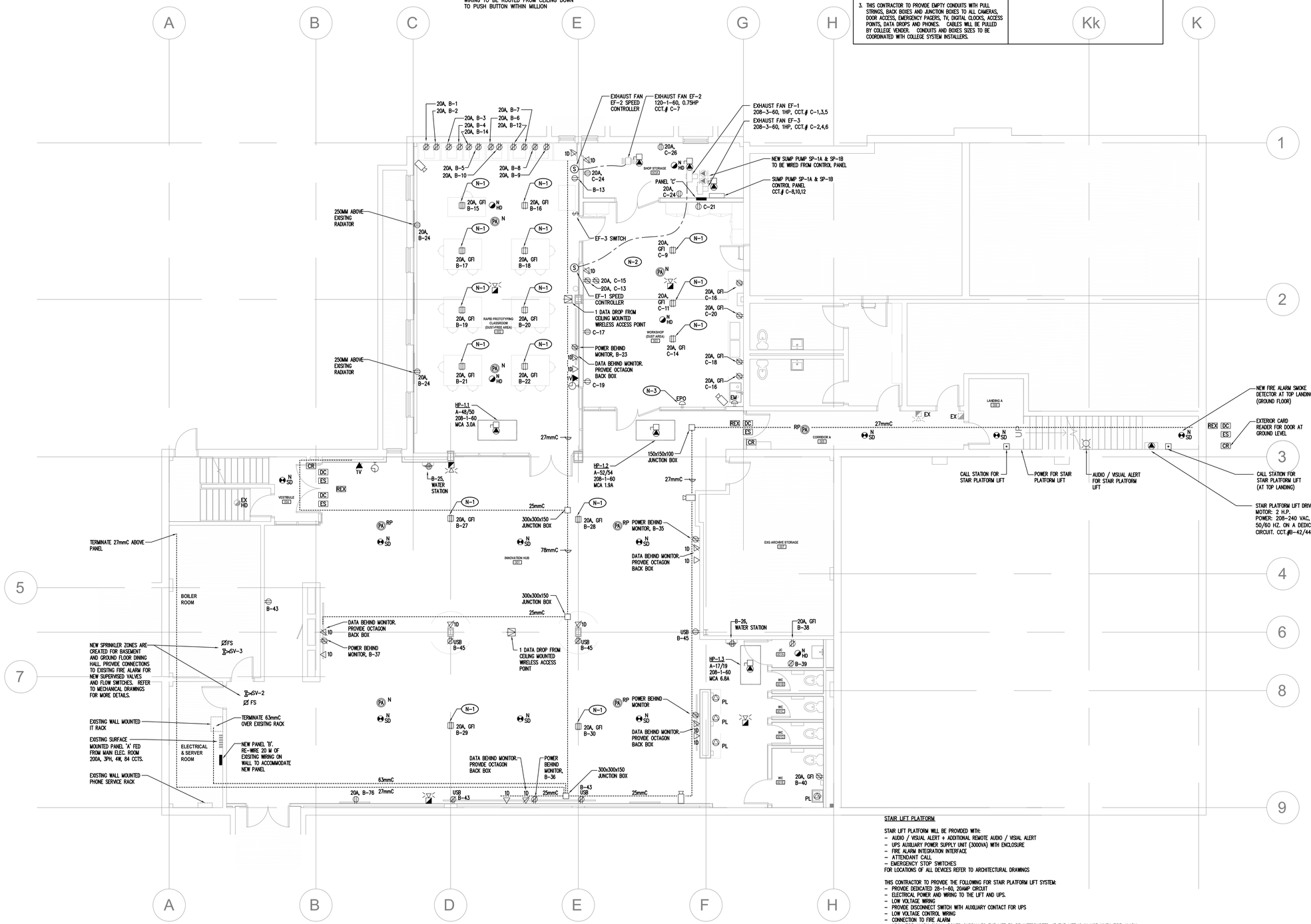
DRAWING NOTES

1. IN ADDITION TO DATA DROPS SHOWN ON DRAWING PROVIDE DATA DROP TO EACH:
   SECURITY CAMERA
   MASTER CLOCK
   WIRELESS ACCESS POINT
   PHONE OUTLET
   EMERGENCY PAGER
2. THE DRAWING INCLUDES PROPOSED CONDUIT ROUTES FOR SOME DEVICES (PARTIAL ROUTING IS SHOWN TO INDICATE INTENT ONLY). NOT ALL CONDUITS ARE SHOWN. PROVIDE CONDUITS TO ALL DEVICES AS REQUIRED.
3. THIS CONTRACTOR TO PROVIDE EMPTY CONDUITS WITH PULL STRINGS, BACK BOXES AND JUNCTION BOXES TO ALL CAMERAS, DOOR ACCESS, EMERGENCY PAGERS, TV, DIGITAL CLOCKS, ACCESS POINTS, DATA DROPS AND PHONES. CABLES WILL BE PULLED BY COLLEGE VENDER. CONDUITS AND BOXES SIZES TO BE COORDINATED WITH COLLEGE SYSTEM INSTALLERS.
4. UNLESS STATED OTHERWISE PROVIDE
   SINGLE GANG BACK BOX FOR SECURITY CAMERAS
   SINGLE GANG BACK BOX FOR DATA DROP AND PHONE OUTLET
5. ALL WIRING IN EXPOSED AREAS TO BE IN CONDUITS. ENSURE CONDUITS RUN PARALLEL TO WALLS IN NEAT AND ORGANIZED MANNER. CONDUITS WILL BE PAINTED BY GENERAL CONTRACTOR
6. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND ELEVATIONS OF RECEPTACLE AND OTHER DEVICES

N-1 POWER REEL WITH CEILING MOUNTED POWER OUTLET (TYPICAL)

N-2 ALL EQUIPMENT AND DEVICES WITHIN WORKSHOP 003 AREA TO BE DUST PROOF AND TO BE PROVIDED IN ACCORDANCE WITH SECTION 18 OF OESC

N-3 EMERGENCY POWER OFF PUSHBUTTON TO BE LOCATED ON GLASS WALL MILLION. WIRING TO BE ROUTED FROM CEILING DOWN TO PUSH BUTTON WITHIN MILLION



STAIR LIFT PLATFORM

STAIR LIFT PLATFORM WILL BE PROVIDED WITH:
- AUDIO / VISUAL ALERT + ADDITIONAL REMOTE AUDIO / VISIAL ALERT
- UPS AUXILIARY POWER SUPPLY UNIT (3000VA) WITH ENCLOSURE
- FIRE ALARM INTEGRATION INTERFACE
- ATTENDANT CALL
- EMERGENCY STOP SWITCHES

FOR LOCATIONS OF ALL DEVICES REFER TO ARCHITECTURAL DRAWINGS

THIS CONTRACTOR TO PROVIDE THE FOLLOWING FOR STAIR PLATFORM LIFT SYSTEM:
- PROVIDE DEDICATED 28-1-60, 20AMP CIRCUIT
- ELECTRICAL POWER AND WIRING TO THE LIFT AND UPS.
- LOW VOLTAGE WIRING
- PROVIDE DISCONNECT SWITCH WITH AUXILIARY CONTACT FOR UPS
- LOW VOLTAGE CONTROL WIRING
- CONNECTION TO FIRE ALARM
  UPON FIRE ALARM SIGNAL POWER SUPPLY TO THE LIFT TO BE INTERRUPTED. IF THE LIFT IS IN USE WHEN FIRE ALARM SOUNDS, THE LIFT TO ONLY ALLOW PLATFORM TO TRAVEL TO DESIGNATED LANDING (GROUND FLOOR).

FOLLOW MANUFACTURE INSTALLATION AND WIRING INSTRUCTIONS

Architecture Counsel

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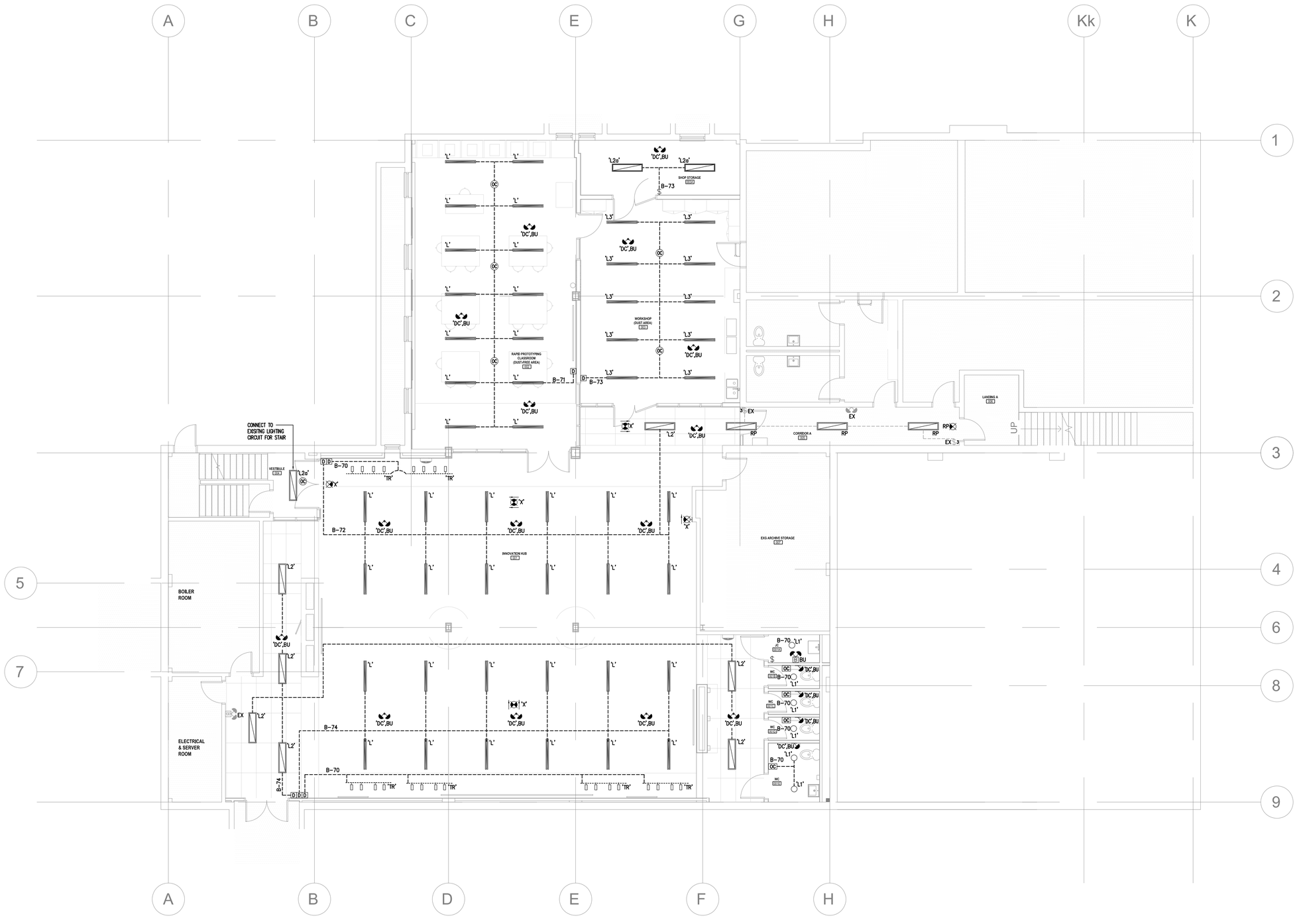
16945 Bayview Ave, Newmarket, ON L3Y 3W7

BASEMENT POWER NEW LAYOUT

Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

E2.1



Architecture Counsel

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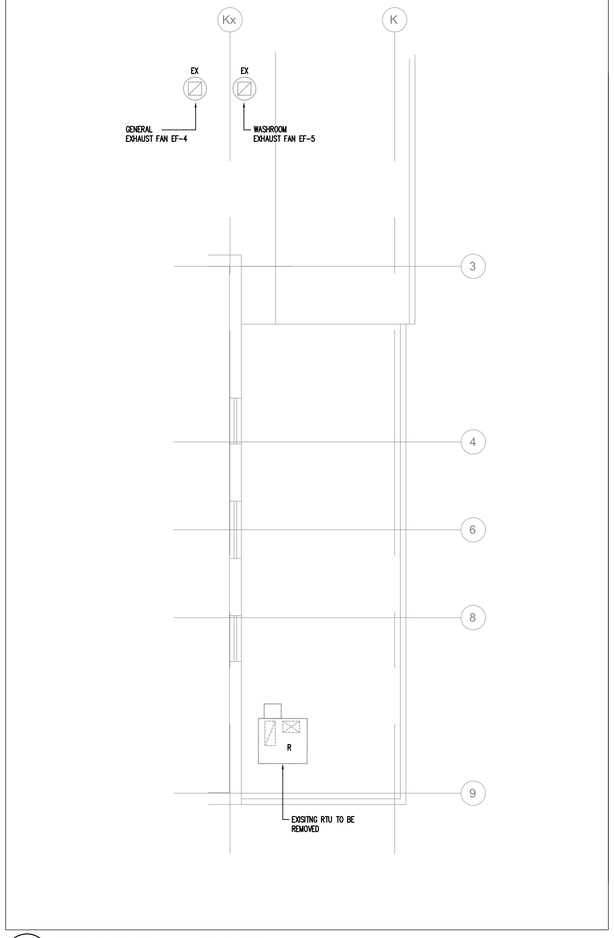
16945 Bayview Ave, Newmarket, ON L3Y 3W7

BASEMENT LIGHTING NEW LAYOUT

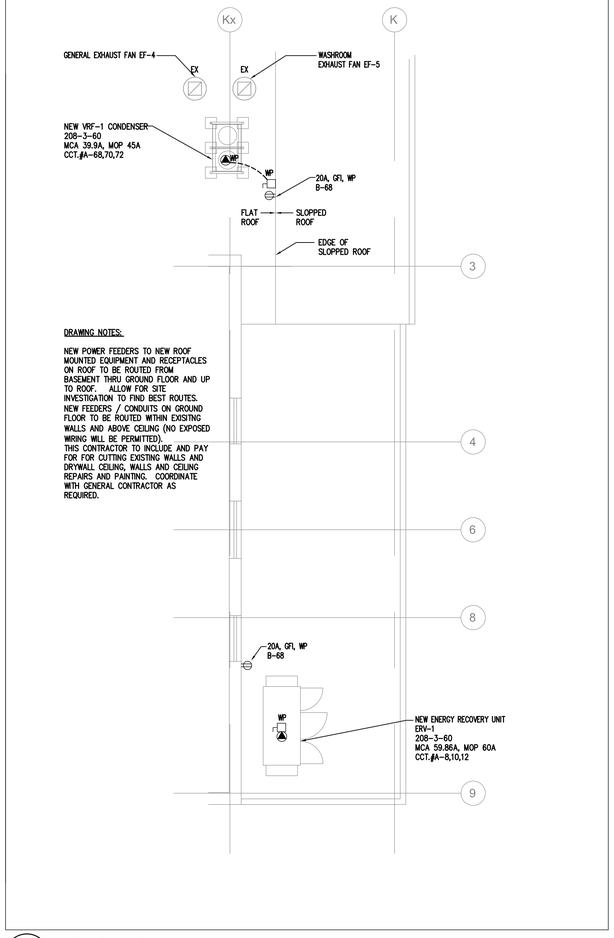
Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

E2.2



1 / E2.3 ROOF PART PLAN – DEMOLITION
SCALE: 1:75



2 / E2.3 ROOF PART PLAN – NEW LAYOUT
SCALE: 1:75

Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

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ROOF PART PLAN DEMO & NEW LAYOUT

Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

E2.3

ELECTRICAL SPECIFICATION

GENERAL ELECTRICAL CONDITIONS – SECTION 16050

1. COMPLY WITH GENERAL CONDITIONS OF THE CONTRACT AND DIVISION 15, MECHANICAL SPECIFICATIONS. DIVISION 15 SHALL BE THE PRIME CONTRACTOR.

2. THIS SECTION APPLIES TO ALL SECTIONS OF DIVISION 16.

3. PROVIDE EACH ITEM MENTIONED OR INDICATED OF QUALITY AND SUBJECT TO QUALIFICATIONS NOTED; PERFORM ACCORDING TO CONDITIONS STATED EACH OPERATION PRESCRIBED; AND PROVIDE THEREFORE ALL LABOUR, MATERIAL, EQUIPMENT, INCIDENTALS AND SERVICES REQUIRED TO COMPLETE THE INSTALLATION.

4. OTHER WORK BY THIS DIVISION

   1. PAINTING OF EXPOSED CONDUITS, UNFINISHED ELECTRICAL EQUIPMENT: UNDER DIVISION 16.
   2. CONCRETE WORK – UNDER DIVISION 16.
   3. CUTTING AND PATCHING WILL BE BY DIVISION 16. PATCHING SHALL BE OF SAME MATERIAL AS SURROUNDING AREA AND SHALL BE PAINTED OR FINISHED TO MATCH EXISTING.

5. MAKE A SET OF WHITE PRINTS AND AS THE JOB PROGRESSES, MARK ON CHANGES MADE THROUGH ANY APPROVED CHANGE ORDER AS WELL AS THE LOCATION OF FEEDERS, CONDUIT RUNS, JUNCTION BOXES, AND ALL CHANGES IN CIRCUITING, LOCATION OF EQUIPMENT, RUNS OF CONDUITS, WIRING, ETC. FROM THAT ORIGINALLY SHOWN, SO THAT ON THE COMPLETION OF THE JOB THE RECORD DRAWINGS WILL SHOW THE EXACT LOCATION AS ACTUALLY INSTALLED. RECORD DRAWINGS SHALL BE KEPT AT THE SITE AND SHALL BE BROUGHT UP TO DATE AS THE WORK PROGRESSES. SUBMIT COMPLETED RECORD DRAWINGS BEFORE FINAL CERTIFICATE OF JOB ACCEPTANCE IS ISSUED.

6. THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED TO THE CONSULTANT ON THE COMPLETION OF THE PROJECT AS DESCRIBED ABOVE:

   – ESA ELECTRICAL INSPECTION CERTIFICATE
   – FIRE ALARM VERIFICATION REPORT
   – EMERGENCY LIGHTS TEST REPORT
   – AS_BUILT DRAWINGS (AUTOCAD, PDF AND HARD COPY). AS–BUILT DRAWINGS SHALL RECORD ALL CHANGES TO DESIGN.
   – OPERATION AND MAINTENANCE MANUALS.
   – GUARANTEE
   – OTHER CERTIFICATES SPECIFIED.

7. ALL MATERIAL SHALL BE STORED NEATLY AND OUT OF THE WAY. CLEAN UP DAILY ALL REFUSE CAUSED BY WORK.

8. BIND WITHIN A HARD_COVERED, LOOSE_LEAF BINDER, A COMPLETE SET OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS SHOWING ALL MAJOR ELECTRICAL EQUIPMENT AND SYSTEMS. INCLUDE SHOP DRAWINGS AND DETAIL DRAWINGS. INSTRUCTIONS SHALL BE COMPLETE FOR INSTALLATION, OPERATION AND MAINTENANCE. SPARE PART SUPPLIERS, LISTS AND ADDRESSES SHALL BE INCLUDED. MAKE ANY ADDITIONS AND/OR CORRECTIONS REQUIRED BY THE CONSULTANT AND SUBMIT TWO CORRECT COPIES TO THE CONSULTANT. INSTRUCTIONS SHALL BE REVIEWED WITH THE OPERATING PERSONNEL TO ENSURE A THOROUGH UNDERSTANDING OF THE EQUIPMENT AND ITS OPERATION.

9. EXAMINE THE SITE, EXISTING EQUIPMENT AND THE LOCAL CONDITIONS AFFECTING THE WORK UNDER THIS CONTRACT. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY FOR ANY OBVIOUS CONSIDERATIONS OVERLOOKED.

10. AFTER THE WORK IS COMPLETE BUT BEFORE FINAL PAYMENT, GIVE THE OWNER A WRITTEN GUARANTEE THAT YOU WILL, AT NO CHARGE TO THE OWNER, REPLACE OR REPAIR ANY DEFECTS IN WORKMANSHIP AND MATERIALS NOT DUE, IN THE OPINION OF THE ARCHITECT TO MISUSE OR NEGLECT. GUARANTEE SHALL COVER A PERIOD OF 12 MONTHS FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE ARCHITECT. THIS GUARANTEE SHALL IN NO WAY SUPPLANT ANY OTHER GUARANTEE OR GUARANTEES OF LONGER PERIOD, BUT SHALL BE BINDING ON ALL OTHER WORK NOT OTHERWISE COVERED.

11. ALL WORK SHALL COMPLY STRICTLY TO THE REQUIREMENTS OF THE LATEST EDITIONS OF THE CANADIAN ELECTRICAL CSA CODE AS ADOPTED AND AMENDED BY PROVINCIAL REGULATIONS AND THE BUILDING CODE. THESE CODES AND ANY ADDITIONAL REQUIREMENTS OF THE POWER UTILITY SHALL FORM AN INTEGRAL PART OF THIS SPECIFICATION. WHERE DRAWINGS CALL FOR EQUIPMENT, WIRING OR OTHER REQUIREMENTS EXCEEDING THE MINIMUM REQUIREMENTS OF THE CODE, THE DRAWINGS SHALL BE FOLLOWED.

12. BEFORE STARTING ANY WORK, SUBMIT THE REQUIRED NUMBER OF COPIES OF THE ELECTRICAL DRAWINGS TO THE POWER AUTHORITY AND ELECTRICAL INSPECTION DEPARTMENT REGIONAL OFFICE, FOR THEIR APPROVAL AND COMMENTS.

13. PAY ALL FEES FOR EXAMINATION OF DRAWINGS AND OBTAIN ALL PERMITS REQUIRED AND PAY ALL PERMIT AND INSPECTION FEES.

14. ARRANGE FOR INSPECTION OF ALL WORK BY THE POWER AUTHORITY AND INSPECTION DEPARTMENT. ON COMPLETION OF THE WORK, PRESENT TO THE OWNER THE FINAL UNCONDITIONAL CERTIFICATE OF APPROVAL.

15. ON AWARD OF CONTRACT, SUBMIT FOR REVIEW LIST OF DELIVERY DATES AND ELECTRONIC COPY OF SHOP DRAWINGS FOR ALL EQUIPMENT.

16. ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS, NOISE AND VIBRATION. ALL EQUIPMENT SHALL BE CSA APPROVED.

17. SCHEDULE AND COORDINATE ALL WORK WITH OTHER TRADES. RELOCATE OR REPLACE CONDUIT OR EQUIPMENT WHICH INTERFERES WITH OTHER TRADES DUE TO LACK OF COORDINATION WITH OTHER TRADES.

18. THE OWNER SHALL HAVE TEMPORARY USE OF INSTALLATION PRIOR TO FINAL ACCEPTANCE.

19. ALL CLAIMS FOR EXTRAS SHALL BE SUPPORTED BY WRITTEN AUTHORIZATION AND SHALL BE SUBMITTED WITH ITEMIZED MATERIAL AND LABOUR COSTS BREAKDOWNS. THE FORMAT OF THE BREAKDOWN SHALL FOLLOW THAT OF THE CHANGE DOCUMENT (I.E. THAT OF THE NOTICE OF CHANGE, SITE INSTRUCTION, CHANGE DIRECTIVE, ETC.). MATERIALS SHALL BE PRICED AT COST INCLUDING ANY DISCOUNT. LABOUR UNITS SHALL BE BASED ON CECA AND NECA LABOUR UNIT TABLES SUITABLE FOR THE TYPE OF WORK INVOLVED. THERE SHALL BE NO EXTRA CLAIM FOR RELOCATION OF ANY EQUIPMENT WITHIN 10 FEET (3M) FROM THE ORIGINAL LOCATION, PROVIDED THAT THE CHANGE IS MADE BEFORE INSTALLATION.

20. ALL ELECTRICAL EQUIPMENT MOUNTED AND CONNECTED BY THIS CONTRACTOR, WHETHER SUPPLIED BY HIM OR NOT, SHALL BE IDENTIFIED BY MEANS OF PLASTIC NAMEPLATES.

21. WIRING

   1. ALL WIRING SHALL BE CONCEALED EXCEPT IN UNFINISHED AREAS AND IN AREAS NOTED WHERE WIRING MAY BE INSTALLED IN SURFACE CONDUITS.
   2. RIGID STEEL CONDUITS SHALL BE USED IN:
      - ALL EXPOSED WIRING SUBJECT TO MECHANICAL DAMAGE,
      - ALL AREAS REQUIRED BY CODE.
   3. EMT CONDUITS MAY BE USED WHERE PERMITTED BY CODE:
      - EXPOSED WIRING,
      - IN FURRED WALLS.
   4. ARMOURED FLEXIBLE CABLE TYPE AC90 (BX CABLE) MAY BE USED AS DROP CABLE FROM JUNCTION BOX TO LIGHT FIXTURES, RECEPTACLES AND MOTORS IF RUN IN HOLLOW PARTITIONS OR IN DRY ACCESSIBLE CEILING SPACES. MAXIMUM LENGTH 20FT.
   5. FLEXIBLE CONDUIT SHALL BE USED FOR FINAL SHORT CONNECTIONS BETWEEN OUTLET AND ELECTRICAL EQUIPMENT SUCH AS RECESSED FIXTURES, MOTORS, TRANSFORMERS, MOTORIZED EQUIPMENT AND FIXED APPLIANCES. FLEXIBLE CONDUIT IN MECHANICAL ROOMS AND ON THE EXTERIOR WALL SHALL BE PVC JACKETED, LIQUID TIGHT.
   6. HOME RUNS OF WIRING TO PANELS SHALL BE IN CONDUITS.

22. ALL LOW VOLTAGE AND MULTI CONDUCTOR CABLES SHALL BE INSTALLED IN CONDUIT.

23. ALL CONDUCTORS SHALL BE COPPER 600 VOLT GRADE WITH INSULATION TYPE RW90. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG AND COLOUR CODED. WIRE CONNECTIONS SHALL BE MADE WITH PRESSURE TYPE SOLDERLESS CONNECTORS WITH VINYL INSULATING CAPS AND LOCKING RINGS.

   1. MAXIMUM LENGTH FOR 15 AMP, 120/208 VOLT BRANCH CIRCUIT HOME RUNS SHALL BE AS FOLLOWS:

LOAD	#12 AWG	#10 AWG
RECEPTACLE	65 FT (20M)	OVER 65 FT (20M)
LIGHTING	90 FT (27M)	OVER 90 FT (27M)

24. UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL AND ELECTRICAL DRAWINGS, MOUNTING HEIGHTS OF EQUIPMENT ABOVE FINISHED FLOOR FROM CENTRE LINE OF THE MOUNTING BOX SHALL BE AS FOLLOWS:

   1. TOP OF PANEL BOARD – 78" (1980MM)
   2. LIGHT SWITCH – 43" (1100MM)
   3. MOTOR STARTER/THERMOSTAT – SAME AS LIGHT SWITCH
   4. RECEPTACLE, TELEPHONE, DATA, ETC. – 18" (460MM)
   5. RECEPTACLES IN MECHANICAL ROOMS AND OTHER UNFINISHED AREAS – 47" (1200MM)

25. SUPPLY AND INSTALL ALL NECESSARY ACCESS DOORS IN WALLS AND CEILINGS FOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING BUT NOT LIMITED TO DISCONNECTS, JUNCTION BOXES ETC . WHERE NECESSARY, DOORS SHALL BE RATED TO SUIT FIRE ASSEMBLY RATING.

26. IF NUMBER OF CONDUCTORS IN ANY ONE CONDUIT EXCEEDS 6 LINE CONDUCTORS, CONDUCTOR SIZE SHALL BE INCREASED TO ALLOW FOR DERATING AS REQUIRED BY CODE.

27. MECHANICAL TRADE WILL SUPPLY ALL STARTERS, CONTROL TRANSFORMERS AND CONTROLS FOR EQUIPMENT SUPPLIED BY THEM AND WILL MOUNT ALL THESE EXCEPT FOR WALL MOUNTED STARTERS AND WALL MOUNTED LINE VOLTAGE CONTROLS, WHICH SHALL BE MOUNTED BY ELECTRICAL TRADE. ELECTRICAL TRADE SHALL DO ALL POWER WIRING, WHICH IS WIRING THAT CARRIES THE LOAD CURRENT OF THE MOTOR, HEATER, HOT WATER TANK OR OTHER EQUIPMENT SUPPLIED BY MECHANICAL TRADE. MECHANICAL TRADE WILL DO ALL OTHER RELATED WIRING. REFER TO MECHANICAL DRAWINGS AND COORDINATE WITH MECHANICAL TRADE FOR POWER REQUIREMENTS AND LOCATIONS OF DEVICES AND CONTROL EQUIPMENT.

28. PROVIDE ELECTRICAL SERVICE 'GOOSENECK' TYPE FLASHING FOR ANY SERVICES PENETRATING ROOF FOR WATERTIGHT INSTALLATION.

29. ALL CONDUITS AND OUTLET BOXES SHALL BE SUPPORTED FROM THE BUILDING SURFACES AND SHALL NOT BE SUPPORTED FROM OTHER CONDUITS, DUCTS OR PIPES.

30. PROVIDE FIRE STOPS. FIRE STOPS SHALL SEAL OFF ALL FIRE RATED WALLS AND CEILINGS. FIRE STOPS SHALL BE CSA AND UL LISTED AND SHALL BE DESIGNED FOR APPLICATION REQUIRED TO MEET THE VARIOUS FIRE RATED SEPARATIONS. FIRE STOP SHALL BE HILTI, TREMSTOP MANUFACTURED BY TREMCO, 3M OR EQUAL.

RACEWAY, ELECTRICAL DEVICES AND CONTROLS – SECTION 16100

1. PROVIDE ALL MATERIAL, EQUIPMENT AND LABOUR REQUIRED FOR A COMPLETE AND ADEQUATE INSTALLATION OF ELECTRICAL MATERIALS AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.

2. SWITCHES SHALL BE UNLESS OTHERWISE INDICATED, PASS & SEYMOUR, WHITE, DECORA TYPE AS FOLLOWS:

   .1 SPECIFICATION GRADE 15A 20A
   SINGLE POLE 120V 2601–W 2621–W
   3_WAY 120V 2603–W 2623–W
   4_WAY 120V 2604–W 2624–W

   .2 SWITCHES OF EQUAL QUALITY AS MANUFACTURED BY BRYANT, ARROW HART, LEVITON,HUBBLE.

3. COVERPLATES FOR RECEPTACLES, LIGHT SWITCHES, TELEPHONE, DATA AND TV OUTLETS SHALL BE STAINLESS STEEL.

OUTLET BOXES SHALL BE ELECTRO GALVANIZED AND MADE OF CODE GAUGE STEEL. WHERE MORE THAN ONE DEVICE IS SHOWN ON PLAN, A MULTI–GANG BOX SHALL BE USED. OFFSET OUTLET BOXES, SHOWN BACK TO BACK IN PARTITIONS, HORIZONTALLY TO MINIMIZE NOISE TRANSMISSION BETWEEN ADJACENT AREAS. OUTLET BOX FOR DEVICES MOUNTED SIDE BY SIDE OR ONE ABOVE THE OTHER SHALL BE SEPARATED BY A MINIMUM OF ONE INCH (25MM).

SERVICES AND DISTRIBUTION – SECTION 16400

1. PROVIDE ALL MATERIAL, EQUIPMENT AND LABOUR REQUIRED FOR A COMPLETE AND ADEQUATE DISTRIBUTION SYSTEM AS DESCRIBED HEREIN.

2. POWER PANELS

   .1 PROVIDE PANELBOARDS AS CALLED FOR ON THE DRAWINGS.

   .2 POWER PANELS SHALL CONTAIN CIRCUIT BREAKERS. FUSIBLE UNITS WILL NOT BE ACCEPTED IN LIEU OF BREAKERS.

   .3 PANELBOARDS AND DISTRIBUTION PANELS
   .1 PANELBOARDS SHALL BE INDUSTRIAL QUALITY, COMPLETE WITH COPPER BUS, COPPER GROUND BUS, MAIN BREAKER, DESIGNED FOR USE WITH BOLT–ON, THERMALLY COMPENSATED, TRIP–FREE CIRCUIT BREAKERS; 2 POLE AND 3 POLE CIRCUIT BREAKERS SHALL HAVE COMMON TRIP HANDLES. TIE HANDLES ARE NOT ACCEPTABLE.
   .2 CIRCUIT BREAKERS SHALL BE AMBIENT COMPENSATED TYPE, CALIBRATED AT 40°C AND BE OF THE BOLT–ON TYPE, WITHOUT ANY PLUG–IN CONNECTIONS. MULTI–POLE BREAKERS SHALL HAVE COMMON TRIP. CIRCUIT BREAKERS FOR 120/208 VOLT APPLICATION SHALL HAVE A MINIMUM SYMMETRICAL INTERRUPTING RATING OF 10,000 AMPS; FOR 600 VOLT APPLICATIONS, THE RATING SHALL BE MINIMUM 35,000 AMPS. ALL INTERRUPTING RATINGS SHALL MATCH EXISTING.
   .3 PANELBOARDS ENCLOSURE SHALL BE DEAD FRONT CONSTRUCTION WITH HINGED DOOR HAVING LATCH AND KEY.
   .4 PANELS TO BE FACTORY–FINISHED GREY ASA NO. 61 (OR GREEN PANTONE 335C FOR EMERGENCY POWER).
   .5 PROVIDE TYPEWRITTEN DIRECTORY INFORMATION, PROTECTED WITH PLASTIC COVER.

   .4 PANELBOARDS SHALL BE COMPLETED WITH 200% RATED NEUTRAL.

   .5 SURFACE–MOUNTED PANELBOARDS SHALL BE COMPLETE WITH DRIP SHIELD AND WEATHER PROOF CONNECTORS.

   .6 MOUNTING HEIGHT OF THE PANELBOARDS SHALL BE 4'–6" FROM FINISHED FLOOR TO CENTRE OF THE PANELBOARDS. THE TOP BREAKER OF THE PANELBOARDS SHALL BE NOT MORE THAN 6'–0" FROM FINISHED FLOOR.

   .7 BALANCE THE CONNECTED LOADS ACROSS THE PHASES ON THE PANEL, WITHIN 5%.

   .8 PANELBOARDS SHALL CONFORM TO CSA REQUIREMENTS.

   .9 PANELBOARDS SHALL BE MANUFACTURED BY SCHNEIDER, SIEMENS OR EATON.

3. PROVIDE FEEDER CIRCUIT BREAKERS AS CALLED FOR ON THE DRAWINGS. FEEDER CIRCUIT BREAKERS SHALL HAVE A SHORT CIRCUIT INTERRUPTING CAPACITY TO MATCH EXISTING POWER DISTRIBUTION BOARD. WHERE INTERRUPTING CAPACITY IS NOT EVIDENT, CONSULT WITH U. OF T. REPRESENTATIVE.

4. PROVIDE CIRCUIT BREAKERS OFF THE SPLITTER AS CALLED FOR ON THE DRAWINGS. CIRCUIT BREAKERS OFF THE SPLITTER SHALL BE MOLDED CASE TYPE IN EEMAC–1 ENCLOSURE. CIRCUIT BREAKERS SHALL BE SCHNEIDER, EATON OR SIEMENS.

5. TANDEM DOUBLE DENSITY CIRCUIT BREAKERS ARE NOT ACCEPTABLE.

6. ALL MATERIALS AND EQUIPMENT SHALL BE CSA OR ONTARIO ELECTRICAL SAFETY SPECIAL INSPECTION APPROVED AND BEAR EVIDENCE OF SAME.

7. ALL CURRENT CARRYING MATERIAL SHALL BE COPPER, INCLUDING BUT NOT LIMITED TO PANELBOARD BUS, SPLITTER BUS, TRANSFORMER WINDINGS, AND WIRING.

8. CIRCUIT BREAKERS SHALL HAVE AMPACITY AND FRAME SIZE SHOWN ON THE DRAWINGS. BREAKERS SHALL HAVE DEFINITE OFF AND TRIP POSITIONS WITH PROVISIONS FOR PADLOCKING. BREAKERS SHALL BE BOLTED TO THE BUS. TWO AND THREE POLE BREAKERS SHALL HAVE COMMON TRIPS.

9. UNLESS OTHERWISE NOTED, TWO AND THREE POLE MOULDED CASE CIRCUIT BREAKERS SHALL HAVE A MINIMUM INTERRUPTING CAPACITY OF 22KA RMS SYMMETRICAL, AND 10KA RMS SYMMETRICAL FOR SINGLE POLE.

10. EACH BREAKER SHALL HAVE A LAMACOID NAMEPLATE ATTACHED WITH CONTACT CEMENT OR SCREWS. NAMEPLATE SHALL CARRY NAME OF EQUIPMENT OR PANEL SERVED BY THE UNIT OR BREAKER.

11. ALL THE POWER DISTRIBUTION EQUIPMENT SHALL HAVE PERMANENT IDENTIFICATION LAMICOID NAME PLATES IDENTIFYING SOURCE OF POWER SUPPLY AND CONNECTED LOAD.

12. DISCONNECT SWITCHES SHALL BE TYPE A, HORSEPOWER RATED, 'SWITCHMATIC' BY FEDERAL PIONEER OR EQUAL BY SQUARE D, CUTLER–HAMMER, SIEMENS. USE ENCLOSED BREAKERS (FUSIBLE DISCONNECTS ARE NOT ACCEPTABLE).

13. PANELBOARD TO BE CUSTOM FINISH AS PER ARCHITECT.

14. SUBMIT SHOP DRAWINGS FOR NEW PANEL.

LIGHTING – SECTION 16450

1. SUPPLY AND INSTALL ALL LIGHTING FIXTURES, LAMPS, AND ALL REQUIRED ACCESSORIES AS INDICATED ON THE DRAWINGS BY LETTER TYPE AND AS HEREINAFTER SPECIFIED.

2. SUBMIT SHOP DRAWINGS FOR EACH LIGHTING FIXTURE TYPE.

3. REPLACE AND INSTALL WITHOUT EXTRA COST TO THE OWNER:

   – LED LIGHTS WITHIN 90 DAYS

4. DRIVERS FOR LED LIGHTS TO BE DIMMABLE (0–10) WHERE DIMMING CONTROL IS SHOWN.

5. ALL LIGHTING FIXTURES, INCLUDING THOSE MOUNTED IN SUSPENDED CEILING, TO BE SUPPORTED FROM BUILDING STRUCTURE.

6. COORDINATE THE INSTALLATION OF LIGHTING FIXTURE WITH ALL TRADES TO PROVIDE SPACING INTENDED.

7. FIXTURES SHALL BE PROPERLY CLEANED AND LEFT CLEAN AND DUST_FREE. ANY FIXTURE SHOWING MARKS OR SCRATCHES DUE TO HANDLING OR TOOL MARKS SHALL BE REPLACED.

WORKING IN EXISTING BUILDING AND CONTINUITY OF SERVICES – SECTION 16500

1. MECHANICAL AND ELECTRICAL ALTERATIONS AND ADDITIONS ARE BEING MADE IN THE EXISTING AREAS AS NOTED ON MECHANICAL DRAWINGS AND SPECIFICATIONS.

2. VISIT THE SITE AND EXAMINE THE EXISTING CONDITIONS AND ALL TENDERING DOCUMENTS, DRAWINGS AND SPECIFICATIONS. MAKE ALL NECESSARY ALLOWANCES IN TENDER PRICE FOR REMOVAL, RELOCATION, REROUTING, RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND WIRING AS MAY BE NECESSARY FOR THE EXECUTION AND COMPLETION OF THIS PROJECT. NO ALLOWANCE WILL BE MADE LATER FOR ANY EXPENSE INCURRED BY THIS TRADE THROUGH FAILURE TO MAKE THIS EXAMINATION.

3. REMOVE AND/OR RELOCATE AND REINSTALL ALL WIRING AND EQUIPMENT AS NECESSARY TO ACCOMMODATE MECHANICAL ALTERATIONS AND ADDITIONS INDICATED ON THE DRAWINGS. WIRING LOCATED IN AREAS BEING ALTERED OR DEMOLISHED, BUT FEEDING OUTLETS OR EQUIPMENT REQUIRED TO REMAIN IN SERVICE SHALL BE REROUTED AS REQUIRED TO MAINTAIN THE CONTINUITY OF THESE SERVICES.

4. EXISTING ELECTRICAL EQUIPMENT REMOVED AND INDICATED FOR REUSE SHALL BE CLEANED BEFORE INSTALLATION. ALL UNUSED CONDUIT ENTRANCE OPENINGS SHALL BE SEALED, ALL DEFECTIVE COMPONENTS SHALL BE REPLACED BEFORE REINSTALLATION.

5. ALL WIRING SHALL BE RUN CONCEALED WHERE POSSIBLE EXCEPT THAT CONDUITS IN UNFINISHED AREAS AND ON EXISTING WALLS AND CEILING MAY BE INSTALLED ON SURFACE.

6. REWORK EXISTING POWER SERVICE AND DISTRIBUTION TO SUIT MECHANICAL EQUIPMENT REVISIONS. PROVIDE NEW POWER PANEL, SPLITTER AND FUSIBLE UNITS, ETC., AS REQUIRED.

7. SUPPLY, INSTALL AND MAINTAIN ALL REQUIRED TEMPORARY WIRING TO OCCUPIED AREAS AT ALL TIMES. PROVIDE ADEQUATE PROTECTION TO EXISTING WIRING AND EQUIPMENT SERVING THE EXISTING AND NEW WORK AND PARTICULARLY WHERE WIRING AND ELECTRICAL EQUIPMENT HAVE BECOME EXPOSED TO MECHANICAL INJURY OR MOISTURE IN THE COURSE OF ALTERATIONS OR NEW WORK.

8. POWER SHUTDOWN, IF REQUIRED, MUST BE COORDINATED WITH CLIENT'S REPRESENTATIVE.

9. FIRE ALARM SHUTDOWN, IF REQUIRED, MUST BE COORDINATED WITH THE CLIENT'S REPRESENTATIVE. AT THE END OF EACH WORKING DAY, ENSURE FIRE ALARM IS FULLY FUNCTIONAL AND THE BUILDING IS PROTECTED. OTHERWISE, PROVIDE FIRE WATCH DURING TIMES WHEN FIRE ALARM SYSTEM OR PART OF THE SYSTEMS OR ZONES ARE DISCONNECTED.

10. CERTAIN ITEMS ARE IDENTIFIED ON THE DRAWINGS AS EXISTING EQUIPMENT TO BE 'REMOVED': DISCONNECT SAID EQUIPMENT AND MAKE SAFE. OBSOLETE CONDUITS AND CABLES SHALL BE DISCONNECTED FROM THEIR SOURCE OF SUPPLY, CUT BACK TO A SUITABLE POINT.

11. ALL UNUSED FUSED SWITCHES AND CIRCUIT BREAKERS SHALL BECOME SPARE. PROVIDE NEW, UP–DATED DIRECTORIES FOR PANELS.

12. CERTAIN ITEMS ARE IDENTIFIED ON THE DRAWINGS AS EXISTING EQUIPMENT 'RELOCATED': DISCONNECT SAID EQUIPMENT FROM ITS PRESENT SOURCE AND AFTER RELOCATION, RECONNECT AND REINSTALL ALL ELECTRICAL COMPONENTS. PROVIDE NEW DISCONNECTS TO SUIT EQUIPMENT RATING.

13. ALL EXISTING EQUIPMENT AND MATERIAL NOT REQUIRED IN THE FINAL INSTALLATION SHALL BE CAREFULLY REMOVED AT THE APPROPRIATE TIME AND SHALL BE DISPOSED OF EXCEPT STARTERS FOR MECHANICAL EQUIPMENT BEING HANDED BACK TO THE CLIENT.

FIRE ALARM SYSTEM – SECTION 16720

1. THE FIRE ALARM SYSTEM IS EXISTING NOTIFIER, SINGLE STAGE PANEL.

2. THIS CONTRACTOR TO HIRE AND PAY FOR FIRE ALARM CONTRACTOR AS REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM.

3. NEW SMOKE DETECTOR, SPEAKERS, HORN/STROBE, PULL STATION AND ALL FIRE ALARM DEVICES AND ACCESSORIES SHALL BE COMPATIBLE WITH THE EXISTING SYSTEM.

4. PROVIDE NEW FIRE ALARM DEVICES AS SHOWN. REPLACE / REMOVE EXISTING DEVICES AS INDICATED ON THE DRAWINGS. ALL NEW DEVICES TO BE ADDRESSABLE TYPE (FOR HYBRID OR FULLY ADDRESSABLE SYSTEMS), OTHERWISE, CONVENTIONAL TO SUIT EXISTING SYSTEM. RE–WIRE AS REQUIRED. PROVIDE NEW LOOPS COMPLETED WITH LINE RESISTORS ETC. AS REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM. RECONNECT ALL EXISTING ZONES AND DEVICES AS REQUIRED.

5. PROVIDE ALL REQUIRED MODIFICATIONS TO THE EXISTING SYSTEM (ADDITIONAL RELAYS, MODULES ETC.) TO ACCOMMODATE NEW DEVICES AND ZONES.

6. COMPLETE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF CAN/ULC–S524 "STANDARD FOR THE INSTALLATION OF FIRE ALARM SYSTEMS" AND SHALL BE VERIFIED TO CAN/ULC–S537 "STANDARD FOR THE VERIFICATION OF FIRE ALARM SYSTEMS". WHERE THE REQUIREMENTS OF THIS SECTION EXCEED THE MINIMUM REQUIREMENTS OF THE ULC STANDARD, THESE SPECIFICATIONS SHALL GOVERN.

7. WIRING:

   .1 SEPARATION OF WIRING SHALL ADHERE TO SUGGESTED WIRING AND INSTALLATION GUIDE OF CAN/ULC–S524.

   .2 WIRING SHALL BE SIZED IN ACCORDANCE WITH CLASS 2 REQUIREMENTS, BUT SHALL BE PROTECTED FROM MECHANICAL INJURY OR OTHER INJURIOUS CONDITIONS SUCH AS MOISTURE. EXCESSIVE HEAT OR CORROSIVE ACTION IN ACCORDANCE WITH CLASS I REQUIREMENTS. CONDUCTORS SHALL BE SOLID COPPER. THE MINIMUM SIZE OF ANY CONDUCTOR SHALL BE:

   FOR ALARM RECEIVING CIRCUIT #18 AWG TWISTED SHIELDED PAIRS. IN NO CASE SHALL THE WIRE RESISTANCE IN THESE CIRCUITS EXCEED 50 OHMS.

   .3 FOR AUDIBLE SIGNAL CIRCUITS #14 AWG FOR 1 OR 2 CONDUCTORS IN A CABLE. #18 AWG FOR 3 OR 4 CONDUCTORS IN A CABLE. IN NO CASE SHALL THE VOLTAGE DROP TO ANY SIGNAL EXCEED 10%.

   .4 RATING OF CABLE SHALL BE 90 DEGREES C AND 300 VOLT MINIMUM.

   WIRING SHALL BE INSTALLED IN CONDUIT AND IN ANY CASE SHALL CONFORM TO THE SYSTEM MANUFACTURER'S RECOMMENDATIONS. ALL CONDUITS SHALL BE GROUNDED PER CLASS 1 WIRING.

8. VERIFICATION AND CERTIFICATION OF EQUIPMENT:

   .1 THAT THE TYPE OF EQUIPMENT INSTALLED IS THAT DESIGNATED IN THE SPECIFICATIONS.

   .2 THAT THE WIRING CONNECTIONS TO ALL EQUIPMENT COMPONENTS SHOW THAT THE INSTALLER UNDERTOOK TO HAVE OBSERVED ULC AND CSA REQUIREMENTS.

   .3 THAT EQUIPMENT OF THE MANUFACTURER'S MANUFACTURE HAS BEEN INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND THAT ALL SIGNALING DEVICES OF WHATEVER MANUFACTURE HAVE BEEN OPERATED OR TESTED TO VERIFY THEIR OPERATION.

   .4 THAT THE SUPERVISORY WIRING OF THOSE ITEMS OF EQUIPMENT CONNECTED TO A SUPERVISED CIRCUIT IS OPERATING AND THAT THE GOVERNMENTAL REGULATIONS, IF ANY, CONCERNING SUCH SUPERVISORY WIRING, HAVE BEEN MET TO THE SATISFACTION OF INSPECTING OFFICIALS.

   .5 THE MANUFACTURER SHALL SUPPLY REASONABLE AMOUNTS OF TECHNICAL ASSISTANCE WITH RESPECT TO ANY CHANGES NECESSARY TO CONFORM TO THE ABOVE. DURING THE PERIOD OF INSPECTION BY THE MANUFACTURER, MAKE AVAILABLE TO THE MANUFACTURER ELECTRICIANS AS DESIGNATED BY THE MANUFACTURER.

   .6 OPEN FLAME AND SMOKE ARE NOT TO BE USED FOR TESTING.

9. COMPLETION OF THE INSPECTION AND WHEN ALL OF THE ABOVE CONDITIONS HAVE BEEN COMPLIED WITH, THE MANUFACTURER SHALL ISSUE TO THE CONSULTANT:

   .1 A COPY OF THE INSPECTING TECHNICIAN'S REPORT SHOWING LOCATION OF EACH DEVICE AND CERTIFYING THE TEST RESULTS OF EACH DEVICE.

   .2 A CERTIFICATE OF VERIFICATION CONFIRMING THAT THE INSPECTION HAS BEEN COMPLETE AND SHOWING THE CONDITIONS UPON WHICH SUCH INSPECTION AND CERTIFICATION HAVE BEEN RENDERED.

   .3 PROOF OF LIABILITY INSURANCE FOR THE INSPECTION.

10. INTEGRATED SYSTEMS TESTING

   .1 PERFORM INTEGRATED SYSTEM TESTING IN ACCORDANCE WITH CAN/ULCS1001; 'INTEGRATED SYSTEMS TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEMS'.
   .2 THE ELECTRICAL CONTRACTOR SHALL CO–ORDINATE AND CO–OPERATE WITH THE INTEGRATED TESTING COORDINATOR.
   .3 PROVIDE ALL REQUIRED DOCUMENTATION, TEST REPORTS, CERTIFICATES AND VERIFICATION REPORTS TO THE INTEGRATED TESTING COORDINATOR.
   .4 ADVISE THE INTEGRATED TESTING COORDINATOR IN WRITING THAT THE SYSTEMS HAVE BEEN INSTALLED IN ACCORDANCE WITH THE DESIGN AND ARE READY FOR INTEGRATED TESTING.
   .5 SUPPLY LABOUR AND MATERIALS TO PROVIDE ASSISTANCE WITH THE DEMONSTRATION OF SYSTEM OPERATION TO THE INTEGRATED TESTING
   .6 COORDINATOR WITH THE INTEGRATED SYSTEM TESTING AS OUTLINED IN CAN/ ULCS1001. PROVIDE THESE SERVICES FOR SUCH PERIOD, AND FOR AS MANY VISITS AS NECESSARY TO SATISFACTORILY DEMONSTRATE PROPER SYSTEM OPERATION TO THE INTEGRATED TESTING COORDINATOR.
   .7 MAKE ADJUSTMENTS AND RECTIFICATIONS NECESSARY TO CORRECT DEFICIENCIES NOTED DURING INTEGRATED SYSTEM TESTING AND PROVIDE LABOUR AND MATERIALS AS NECESSARY FOR RE–TESTING OF SYSTEMS AFTER CORRECTION.

ALL COSTS INVOLVED IN THIS INSPECTION SHALL BE INCLUDED IN THE TENDER PRICE

Architecture Counsel

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All drawings and specifications are the property of the architect. The contractor shall verify all dimensions and information on site and report any discrepancy to architect before proceeding.

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LICENCE PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

SPI PROJECT#: 2026–1010

2.	2026.11.06	ISSUED FOR TENDER
1.	2026.10.05	ISSUED FOR PERMIT
	DATE	REVISION

PICKERING COLLEGE INNOVATION HUB

16945 Bayview Ave, Newmarket, ON L3Y 3W7

ELECTRICAL SPECIFICATION

Scale:	N.T.S.
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

E3.1

MECHANICAL LEGEND

PLUMBING

SYMBOL	DESCRIPTION
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
EDCW	EXISTING DOMESTIC COLD WATER
EDHW	EXISTING DOMESTIC HOT WATER
EDHWR	EXISTING DOMESTIC HOT WATER RECIRCULATION
V	SANITARY VENT LINE
EV	EXISTING SANITARY VENT LINE
SANB	BURIED SANITARY DRAIN
SAN	SUSPENDED SANITARY DRAIN
SAN	SANITARY DRAIN IN CEILING SPACE OF FLOOR BELOW
PSAN	SANITARY PUMPED DISCHARGE
ESANB	EXISTING BURIED SANITARY DRAIN
ESAN	EXISTING SUSPENDED SANITARY DRAIN
ESAN	EXISTING SANIT. DRAIN IN CEILING SPACE OF FLOOR BELOW
EPSAN	EXISTING SANITARY PUMPED DISCHARGE
STMB	BURIED STORM DRAIN
STM	SUSPENDED STORM DRAIN
STM	STORM DRAIN IN CEILING SPACE OF FLOOR BELOW
PSTM	STORM PUMPED DISCHARGE
ESTMB	EXISTING BURIED STORM DRAIN
ESTM	EXISTING SUSPENDED STORM DRAIN
ESTM	EXIS. STORM DRAIN IN CEILING SPACE OF FLOOR BELOW
EPSTM	EXISTING STORM PUMPED DISCHARGE
CO	CLEANOUT PLUG
CO	FLOOR CLEANOUT
C	CONDENSATE DRAIN (GRAVITY)
EC	EXISTING CONDENSATE DRAIN (GRAVITY)
PC	PUMPED CONDENSATE DRAIN
EPC	EXISTING PUMPED CONDENSATE DRAIN
	ELBOW, TURNED DOWN AND TURNED UP
	BRANCH – TOP CONNECTION
	BRANCH – BOTTOM CONNECTION
WH	INTERIOR WALL HYDRANT
NFWH	EXTERIOR NON FREEZE WALL HYDRANT
HB	INTERIOR HOSE BIB
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN

HVAC (PIPING)

SYMBOL	DESCRIPTION
HTS	HEATING WATER SUPPLY
HTR	HEATING WATER RETURN
EHTS	EXISTING HEATING WATER SUPPLY
EHTR	EXISTING HEATING WATER RETURN
RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID
ERS	EXISTING REFRIGERANT SUCTION
ERL	EXISTING REFRIGERANT LIQUID

VALVES & PIPING FITTINGS

SYMBOL	DESCRIPTION
	GATE VALVE
	CHECK VALVE
	RELIEF VALVE
	STRAINER
	BALL VALVE
	TWO–WAY AUTOMATIC CONTROL VALVE
	THREE–WAY AUTOMATIC CONTROL VALVE
	CIRCUIT BALANCING VALVE
CTE	CONNECT NEW SERVICES TO EXISTING

VENTILATION

	DUCTWORK (DOUBLE LINE)
	EXISTING DUCTWORK (DOUBLE LINE)
	DUCTWORK (SINGLE LINE)
	EXISTING DUCTWORK (SINGLE LINE)
	ACOUSTICALLY LINED DUCTWORK (DOUBLE LINE)
	ACOUSTICALLY LINED DUCTWORK (SINGLE LINE)
	THERMALLY INSULATED DUCTWORK (DOUBLE LINE)
	THERMALLY INSULATED DUCTWORK (SINGLE LINE)
	DUCTWORK (DOUBLE LINE) WITH FIRE RATED WRAP
	DUCTWORK (SINGLE LINE) WITH FIRE RATED WRAP
	FLEXIBLE DUCT
	EXISTING FLEXIBLE DUCT
	SUPPLY DUCT UP (RECTANGULAR)
	ROUND DUCT UP
	RETURN DUCT UP
	SUPPLY DUCT DOWN
	ROUND DUCT DOWN
	RETURN DUCT DOWN
	CHANGE IN DUCT ELEVATION
	DUCT MOUNTED EQUIPMENT WITH FLEXIBLE CONNECTORS
	DUCT SILENCER
	LINEAR OR SLOT DIFFUSER
	SPIN ON FITTING WITH FLEXIBLE DUCT
	EXISTING SPIN ON FITTING WITH FLEXIBLE DUCT
BD	MANUAL BALANCING DAMPER
FD	FIRE DAMPER
MD	AUTOMATIC (MOTORIZED) DAMPER
	RETURN OR EXHAUST AIR GRILLE
	EXISTING RETURN OR EXHAUST AIR GRILLE
	SQUARE SUPPLY AIR DIFFUSER
	EXISTING SQUARE SUPPLY AIR DIFFUSER
	SIDEWALL GRILLE
	EQUIPMENT
	EXISTING EQUIPMENT
T	THERMOSTAT
T	EXISTING THERMOSTAT
	EXISTING SERVICES OR EQUIPMENT TO BE REMOVED

ABBREVIATIONS

SYMBOL	DESCRIPTION
HP	HEAT PUMP UNIT
HWT	HOT WATER STORAGE TANK
AFF	ABOVE FINISHED FLOOR
EX	EXISTING TO REMAIN
ER	DENOTES EXISTING TO BE RELOCATED
N	NEW
R	DENOTES EXISTING TO BE REMOVED
N.I.C.	NOT IN CONTRACT
CTE	CONNECT TO EXISTING
	EXISTING SERVICES / EQUIPMENT TO BE REMOVED

FIRE PROTECTION

SYMBOL	DESCRIPTION
SP	SPRINKLER LINE
SPD	SPRINKLER DRAIN
F	FIRE LINE
ESP	EXISTING SPRINKLER LINE
ESPD	EXISTING SPRINKLER DRAIN
EF	EXISTING FIRE LINE
	PENDANT SPRINKLER HEAD
	UPRIGHT SPRINKLER HEAD
C	UPRIGHT SPRINKLER HEAD WITH PROTECTIVE CAGE
	SIDEWALL SPRINKLER HEAD
	CONCEALED TYPE SPRINKLER HEAD
	EXISTING SPRINKLER HEAD
	EXISTING SPRINKLER HEAD
	SPRINKLER ZONE BORDER LINE
FDC	FIRE DEPARTMENT CONNECTION
SVC	SPRINKLER ZONE VALVE CABINET (RECESSED TYPE)
FHC	FIRE HOSE CABINET (SURFACE MOUNTED)
FHC	FIRE HOSE CABINET (RECESSED)
F.E. F.E.	FIRE EXTINGUISHER (WITH AND WITHOUT ENCLOSURE)

GENERAL

SYMBOL	DESCRIPTION
X / M–XXX	SECTION No. DRAWING No.
X / M–XX	DETAIL No. DRAWING No. FOR CONTINUATION, SEE DETAIL No. /DRAWING No.
N–X	REFER TO NOTE "X" ON THIS DRAWING
X,XX / XXX	TYPE OF GRILLE OR DIFFUSER AIR QUANTITY (L/S) GRILLE / DIFFUSER FACE SIZE OR NECK SIZE

MECHANICAL DRAWING LIST

NUMBER	DESCRIPTION
M0.1	MECHANICAL LEGEND, DRAWING LIST
M0.2	MECHANICAL EQUIPMENT SCHEDULES
M0.3	MECHANICAL DIAGRAMS
M0.4	MECHANICAL DETAILS
M1.1	BASEMENT HVAC – DEMOLITION
M1.2	BASEMENT PLUMBING – DEMOLITION
M1.3	GROUND FLOOR AND ROOF PART PLAN MECHANICAL DEMOLITION
M2.1	BASEMENT HVAC – NEW LAYOUT
M2.2	BASEMENT PLUMBING – NEW LAYOUT
M2.3	GROUND FLOOR AND ROOF PART PLAN MECHANICAL NEW LAYOUT
M2.4	BASEMENT FIRE PROTECTION – NEW LAYOUT
M3.1	MECHANCIAL SPECIFICATION

Architecture Counsel

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Project North / True North

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Tel.: (416)291–8822

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

SPI PROJECT#: 2026–1010

2.	2026.11.06	ISSUED FOR TENDER
1.	2026.10.05	ISSUED FOR PERMIT
	DATE	REVISION

PICKERING COLLEGE INNOVATION HUB

16945 Bayview Ave, Newmarket, ON L3Y 3W7

MECHANICAL LEGEND, DRAWING LIST

Scale:	N.T.S.
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

M0.1

ENERGY RECOVERY VENTILATOR

REF. LETTER	AREA SERVED / DESIGNATION	UNIT MAKE	MODEL	FAN	CAPACITY L/S	E.S.P. PA	FILTERS		FAN					ELECTRIC PRE-HEAT					HEAT EXCHANGER								ELECTRIC DATA (UNIT ONLY)				ELECTRIC DATA (UNIT+PREHEAT ELEC. COIL)				REMARKS
							LOCATION	TYPE	V-PH-HZ	HP	DRIVE	FAN RPM	VFD	CAPACITY, KW	CONTROL	COILS	EAT(C)	EAT(C)	SEASON	OUTDOOR AIR		RETURN AIR		SUPPLY AIR		EXHAUST AIR		V-PH-HZ	FLA	MCA	MOP	V-PH-HZ	FLA	MCA	MOP	
																				DB(C)	WB(C)	DB(C)	WB(C)	DB(C)	WB(C)	DB(C)	WB(C)									
ERV-1	INNOVATION HUB	ALDES	PE20E	SUPPLY	760	310	SUPPLY	50mm 85% MERV 13	208-3-60	2.5	DIRECT	2583	ECM	13	SCR	1	-22	-10	SUMMER	30	23	23.9	17.2	26	20.5	28.3	20.5	208-3-60	17.8	19.3	-	208-3-60	47.89	59.86	60	OUTDOOR ERV, DOUBLE WALL CONTRACTION. PROVIDE ROOF SUPPORTS
				EXHAUST	672	310	RETURN	50mm 30% MERV 8	208-3-60	2.5	DIRECT	2410	ECM						WINTER	-10	-12.7	22.2	12.2	9.4	3.8	0.5	-2.7									

NOTES:
1. UNIT TO BE SUITABLE FOR OUTDOOR INSTALLATION, DOUBLE WALL CONSTRUCTION WITH MIN. 1 IN INSULATION, EXTERIOR 22 GA PRE-PAINTED STEEL, INTERIOR 22 GA GALVANIZED STEEL
2. UNIT TO BE MODULATING SUPPLY AND RETURN AIR FLOW BASED ON CO2 LEVEL IN RETURN AIR DUCT. PROVIDE DUCT MOUNTED CO2 SENSOR
3. UNIT TO HAVE ONE POWER CONNECTION.
4. BOTTOM SUPPLY AND RETURN DUCT CONNECTIONS
5. PROVIDE PROGRAMMABLE TIMER TO ENERGIZE AND DE-ENERGIZE UNIT
6. UNIT TO HAVE FEATURES FOR FUTURE CONNECTION TO BUILDING AUTOMATION SYSTEM.

FAN COIL UNITS SCHEDULE

TAG	VRF SYSTEM VRF-1	AREA SERVED		FAN COIL UNIT TYPE	MAKER	MODEL	AIR	CAPACITY				REFRIGERANT TYPE	COND. DRAIN, MM	ELECTRICAL DATA			REMARKS
		ROOMS SERVED	FLOOR				CAPACITY CFM HI-MID-LO	E.S.P. IN.W.G.	RATED COOLING BTU/H	TOTAL COOLING BTU/H	SENS. COOLING BTU/H	TOTAL HEATING BTU/H			V/PH/HZ	MCA AMP	FUSE AMP	
HP-1.1	VRF-1	RAPID PROTOTYPING CLASSROOM	BASEMENT	HORIZONTAL, DUCTED	DAIKIN	FXMA30AAVJU	1094/847/795	0.8	30,000	29,204	20,658	34,000	R-32	25	208-1-60	3.0	15	PROVIDE P-TRAP, CONDENSATE DRAIN TO BE ROUTED TO CLOSEST HUB DRAIN
HP-1.2	VRF-1	WORKSHOP	BASEMENT	HORIZONTAL, DUCTED	DAIKIN	FXMA18AAVJU	635/565/512	0.8	18,000	17,452	12,647	20,000	R-32	25	208-1-60	1.9	15	PROVIDE CONDENSATE PUMP, CONDENSATE DRAIN TO BE ROUTED TO CLOSEST HUB DRAIN
HP-1.3	VRF-1	INNOVATION HUB	BASEMENT	HORIZONTAL, DUCTED	DAIKIN	FXMA96AAVJU	2965/2506/1838	0.8	96,000	92,647	64,761	107,996	R-32	25	208-1-60	6.8	15	PROVIDE P-TRAP, CONDENSATE DRAIN TO BE ROUTED TO CLOSEST HUB DRAIN

NOTES:
VRF SYSTEM INCLUDING THERMOSTAT TO HAVE FEATURES FOR FUTURE CONNECTION TO BUILDING AUTOMATION SYSTEM.

AIR SOURCE HEAT PUMP CONDENSING UNIT (VRF SYSTEM)

NO.	AREA SERVED	MAKE	MODEL	COOLING, BTU/H	HEATING, BTU/H		REFRIG.	SAFETY CLASS	ELECTRICAL DATA			WEIGHT KG	COMMENTS
				NOMINAL AT 95°F OA	RATED	AT -4°F	AT -13°F			V-PH-HZ	MCA	MOCP	
VRF-1	INNOVATION HUB AREAS	DAIKIN	RXYA120AATJA	119,000	114,000	114,000	81,600	74,400	R-32	A2L	208-3-60	39.9	45	350	

NOTES:
VRF SYSTEM TO BE FOR ULTRA LOWER OUTSIDE TEMPERATURE FOR HEATING (NOT LESS THAN -13F)

REGISTERS, GRILLES & DIFFUSERS SCHEDULE

REF. LETTER	APPLICATION	MANUFACTURER DATA		OPPOSED BLADE DAMPER	FINISH	REMARKS
		SELECTION MFG.	MODEL DESCRIPTION AND SIZE (in x in)			
A	SUPPLY AIR GRILLE	EH PRICE	520 LOUVERED, STEEL SIZE AS SHOWN ON DWGS. 20MM SPACING DOUBLE DEFLECTION	YES	WHITE	FRAME & BORDER TO SUIT APPLICATION
B	EGGCRATE RETURN GRILLE	EH PRICE	50R 12x12x12 ALUMINUM CORE, SIZE AS SHOWN	NO	WHITE	FRAME & BORDER TO SUIT APPLICATION
C	RETURN / EXHAUST GRILLE	EH PRICE	535 STEEL SIZE AS SHOWN ON DWGS 20 MM SPACING, 35° DEFLECTION	NO	WHITE	FRAME & BORDER TO SUIT APPLICATION

NOTES:
DIFFUSERS AND GRILLES IN DRYWALL CEILING TO BE PROVIDED WITH BALANCING DAMPERS AT GRILLE / DIFFUSER
PROVIDE GRILLES WITH FILTERS WHERE INDICATED ON FLOOR PLANS

PLUMBING FIXTURE SCHEDULE

WATER CLOSET TYPE "WC" (WALL MOUNTED)

.1 AMERICAN STANDARD WATER CLOSET "GLENWALL VORMAX", ELONGATED, SIPHON ACTION, BACK OUTLET GRAVITY FLUSH, COMBINATION OF BOWL AND TANK, HIGH-EFFICIENCY TOILET, LOW CONSUMPTION 1.28 GPF (4.8 LPF), DUAL INJECTION FLUSH VALVES, TRIM LEVER SIDE (LEFT OR RIGHT) REFER TO ARCH. DRAWINGS.
MODEL #2882107 (LEFT SIDE TRIM) OR #2882108 (RIGHT SIDE TRIM)

.2 SEAT: AMERICAN STANDARD #5901.100 HEAVY DUTY OPEN FRONT, FOR ELONGATED BOWL, WITH SLOW CLOSE SNAP-OFF HINGE LESS COVER.

.3 CARRIER: ZURN Z1201-N_3, ADJUSTABLE HORIZONTAL SIPHON JET WATER CLOSET CARRIER SYSTEM, FLOOR MOUNTED PRE-FAB SLOTTED FOOT SUPPORTS

.4 SUPPLY WITH STOP

WALL HANG LAVATORY "LAV (BARRIER FREE)

.1 DURAVIT VITAL # 0309600000 WALL MOUNTED SINK, SQUARE, FAUCET DECK, SINGLE FAUCET HOLE, OVERFLOW
OVERALL DIMENSIONS: 23 ⅝" X 21 ½"" X 7" (600MM X 545MM X 180MM).

.2 PROVIDE MOUNTING KIT FOR WALL HANG INSTALLATION

.3 AMERICAN STANDARD #6056 105, AC POWERED, SINGLE INLET SELECTRONIC INNSBROOK ELECTRONIC PROXIMITY FAUCET, WITH CAST SPOUT, VANDAL RESISTANT SOLID CAST BRASS LEAD-FREE BODY, 1.9 LPM (0.5 GPM) VANDAL RESISTANT AERATOR. PROVIDE INTEGRAL LOW VOLTAGE TRANSFORMER (120V POWER SUPPLY).

.4 PROVIDE THERMOSTATIC MIXING VALVE. AMERICAN STANDARD MODEL 605XTWV. VALVE TO BE CONNECTED DIRECTLY TO SOLENOID INLET AND BE HOUSED IN MATCHING ENCLOSURE. PROVIDE RECESSED S.S. ENCLOSURE

.5 TRAP: 1 ¼"(32') CP CAST BRASS ADJUSTABLE P-TRAP - POLISHED CHROME "P" TRAP WITH CLEANOUT SLIP JOINT INLET AND FEMALE OUTLET. (PROVIDE NPS 1-1/4" M.I.P. ADAPTOR COMPLETE WITH CP DEEP ESCUTCHEON.) EXPOSED PIPING TO BE INSULATED AND PROVIDED WITH PVC JACKETING.

.5 CARRIER: CONCEALED ARMS SUPPORT CARRIER

.6 ALL DEVICES TO BE INSTALLED BELOW DECK RECESSED. PROVIDE BACK BOX TO HOUSE ALL DEVICES. BOX TO BE COMPLETE WITH STAINLESS STEEL ACCESS PANEL. NO EXPOSED DEVICES OR PIPING WILL BE PERMITTED.

LAVATORY "LAV-1" (TROUGH SINK)

SINK: MONOLITH BASIN 2,700MM X 600MM X 105MM - GLACIER WHITE BY ARDEC GROUP.

PIPE SKIRT: REMOVABLE, STAINLESS STEEL, CUSTOM MADE TO SUIT SINK, 2,700MM LONG. VIRONNE PIPESKIRT BY ARDEC GROUP.

SINK TO BE PROVIDED WITH 3 (THREE) FAUCETS TYPE 'F'. PROVIDE REQUIRED OPENINGS FOR FAUCET.

FOLLOW MANUFACTURE INSTALLATION INSTRUCTIONS AND COORDINATE WITH GENERAL CONTRACTOR AS REQUIRED.

"F" FAUCET FOR TROUGH SINK

FAUCET: "TOTO" #TEL101-D10E SELF-GENERATING HYDRO-POWERED ECO-POWER SYSTEM, FAUCET TO HAVE MAXIMUM OF 10 SECONDS ON-DEMAND FLOW (0.18GPC). SELF-ADJUSTING SENSOR, POLISHED CHROME FINISH.
1.0 GPM, 1/2" WATER SUPPLY MALE THREADED.
THERMOSTATIC MIXING VALVE: MODEL TLM10

ALL PIPING, VALVES AND ACCESSORIES TO BE INSTALLED BEHIND SINK SKIRT.

NO EXPOSED PIPING OR DEVICES WILL BE PERMITTED

EYE WASH STATION "EW"

YEYWASH DRENCH HOSE, DECK MOUNTED,
MODEL H-9459 BY ULINE
PROVIDE MIXING VALVE. VALVE TO BE LOCATED BELOW COUNTER IN LOWER CABINET

JANITOR SINK TYPE "JS"

.1 STERN WILLIAMS MOP SINK MODEL SB802: 24" X 24" X 12" (610MM X 610MM X 305MM DEEP) RECEPTOR COMPOSED OF PEARL GREY MARBLE CHIPS AND WHITE PORTLAND CEMENT, WITH NPS 3 DRAIN WITH S.S. STRAINER.

.2 FAUCET: T-10-VB MOP SERVICE SINK FAUCET WITH VACUUM BREAKER, ADJUSTABLE TOP BRACE, ¾" HOSE THREAD ON SPOUT WITH BRACKET HOOK INLET 8" ON CENTRE, CHROME FINISH

.3 HOSE AND WALL HOOK: T-35, 36" LONG HOSE, WITH ¾" CHROME COUPLING. S.S. WALL BRACKET

.4 MOP HANGER: T-40, S.S. MOP HANGER, 24" LONG WITH 3 RUBBER SPRING LOADED GRIPS.

.5 PROVIDE SPLASH CATCHER PANEL ON ONE SIDE (ON WALL BEHIND SINK). PANEL TO BE 20 GA, TYPE 304 STAINLESS STEEL. PANEL TO BE 5FT HIGH.

DRINKING WATER FOUNTAIN "WF"

.1 ELKAY BOTTLE FILLING STATION AND SWIRLFLO SINGLE FOUNTAIN, HIGH EFFICINCY, FILTERED, REFRIGERATED, STAINLESS STEEL, MODEL LZWS-SFGRN8K.

EZH2O BOTTLE FILLING STATION & SWIRLFLO®SINGLE FOUNTAIN HIGH EZH2O® BOTTLE FILLING STATION & SWIRLFLO®SINGLE FOUNTAIN HIGH (GALLONS PER HOUR) OF 50°F DRINKING WATER, BASED ON 80°F INLET WATER AND 90°F AMBIENT, PER ASHRAE 18 TESTING.
UNIT TO ANTIMICROBIAL*, FILTERED, GREEN TICKER™, HANDS FREE, HIGH EFFICIENCY, ANTIMICROBIAL*, FILTERED, GREEN TICKER™, HANDS FREE, HIGH EFFICIENCY, GUARD ® STREAMSAVER ™BUBBLER.
ELECTRONIC BOTTLE FILLER SENSOR WITH MECHANICAL FRONT BUBBLER BUTTON ACTIVATION.
PRODUCT SHALL BE WALL MOUNT (INWALL FRAME/PLATE), FOR INDOOR APPLICATIONS, SERVING 2 STATION(S).

CAPACITY: 8.0 GPH
POWER: 120-1-60, FLA 1A, RATED 260 W

FOLLOW MANUFACTURE INSTALLATION INSTRUCTIONS

FLOOR DRAIN "FD"

FLOOR DRAINS SHALL BE ZURN ZXN-415-A DURA COATED CAST IRON BODY WITH ANCHOR FLANGE, CAST IRON REVERSIBLE WATERPROOFING CLAMP WITH WEEPHOLES, SEEPAGE COLLECTION SUMP AND 5" (127MM) DIAMETER X " (12.7MM) THICK POLISHED NICKEL BRONZE STRAINER OR EQUAL IN WATTS, ANCON OR J.R. SMITH. FOR TILED AREAS, USE ZURN ZXN-415-H WITH 6" X 6" (152MM X 152MM) X " (12.7MM) THICK POLISHED NICKEL BRONZE STRAINER. DRAIN SIZE CONNECTION AS SHOWN ON DRAWINGS

DOUBLE COMPARTMENT S.S. SINK "S" (BARRIER FREE)

SINK:
DOUBLE BOWL TOP MOUNT SINK, MODEL ALBD4405P ADA BY FRANKE COMMERCIAL, WITH 3 FAUCET HOLES SPACED 8" CNETERS.
DOUBLE BOWL, 18 GAUGE, TYPE 304 STAINLESS STEEL,
OVERALL DIMENSIONS: LENGTH 31 ½"(794MM) X WIDTH 18 ⅞"(478MM) X DEPTH 5"(127MM)
MOUNTING KIT TO BE PROVIDED, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MM (3-1/2") CRUMB CUP WASTE ASSEMBLY WITH 38 MM (1-1/2") TAILPIECE.

FAUCET:
CHICAGO FAUCETS, MODEL 786-GN8AE35VPABCP, MANUAL FAUCET, 8" FIXED CENTERS, 8" SWING GOOSENECK SPOUT, PRESSURE COMPENSATING AERATOR 1.5 GPM,
VANDAL PROOF 4" WRISTBLADE HANDLES
FAUCET SUPPLIES, CHROME PLATED FINISH POLISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 MM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDLES, ESCUTCHEON AND FLEXIBLE COPPER RISERS.

PROVIDE MASON JAR TYPE SEDIMENT TRAP. SEDIMENT TRAP TO BE LOCATED INSIDE CABINET NEXT TO SINK.

ENSURE ALL PLUMBING CONNECTIONS ARE INSTALLED NEATLY AT BACK AS HIGH AS POSSIBLE TO ACCOMMODATED ACCESSIBLE COUNTER WITH SINK.
DRAIN TO BE INSULATED WITH PVC JACKETING

PLUMBING FIXTURE SERVICE REQUIREMENTS

No.	DESIGNATION	MINIMUM SERVICE CONNECTION SIZE			
		DRAIN	COLD WATER	HOT WATER	VENT
"WC"	WATER CLOSET	75	12	-	AS PER CODE
"LAV"	LAVATORY	32	12	12	AS PER CODE
"LAV-1"	LAVATORY	50	NOTE 1	NOTE 1	AS PER CODE
"JS"	JANITOR'S MOP RECEPTOR	50	12	12	AS PER CODE
"FD"	FLOOR DRAIN	75	-	-	VENT & PRIME AS PER CODE
"WF"	WATER COOLER	32	12	-	AS PER CODE
"EW"	EYE WASH	-	12	12	AS PER CODE

NOTE 1: 12ø DCW & DHW PER FAUCET

PUMP SCHEDULE

TAG	DESIGNATION	LOC'N	MAKE	MODEL	FLUID	PERFORMANCE DATA				CONSTRUCTION DATA	ELECTRIC DATA			REMARKS
						CAPACITY GPM	TOT. DYN. HEAD FT HEAD	R.P.M.	WORK TEMP. °F	TYPE	V-PH-HZ	MOTOR HP	VFD	
SP-1A	SANITARY SUMP PUMP	BASEMENT	PETAIR	WGL20	SEWER	35	30	3450	65	CAST IRON, GRINDER, SUBMERSIBLE	208-3-60	2	NO	MYERS/PENTAIR DUPLEX GRINDER PUMPS. ONE DUTY, ONE STAND-BY. PROVIDE DUPLEX PUMP CONTROL PANEL, HIGH / LOW FLOATS & ALARMS
SP-1B	SANITARY SUMP PUMP	BASEMENT	PETAIR	WGL20	SEWER	35	30	3450	65	CAST IRON, GRINDER, SUBMERSIBLE	208-3-60	2	NO	

NOTES:
PUMPS TO BE GRINDER.
ACCEPTABLE MANUFACTURES: MYERS / PENAIR, SCARBOROGH, LIBERTY

FAN SCHEDULE

REF. LETTER	AREA SERVED / DESIGNATION	MANUFACTURE	MODEL	CAPACITY L/S	E.S.P. PA	ECLECTIC		DRIVE	FAN RPM	REMARKS
						V-PH-HZ	HP			
EF-1	PROTOTYPING ROOM - FUMEARM EXHAUST	GREENHECK	FPB-90F-M10	165	1250	208-3-60	1.0	DIRECT	3500	SPARK A CONSTRUCTION
EF-2	PROTOTYPING ROOM - 3D PRINTERS EXHAUST	GREENHECK	SQ-98-VG	183	375	120-1-60	0.75	DIRECT	2138	WITH REMOTE SPEED CONTROLLER
EF-3	PROTOTYPING ROOM - LASER CUTTER	GREENHECK	FPB-90H-M10	188	750	208-3-60	1.0	DIRECT	3500	SPARK A CONSTRUCTION

NOTES:
PROVIDE SPEED CONTROLLER AT EF-3 FOR BALANCING. FAN TO BE CONTROLLED BY ON/OFF SWITCH AT LASER CUTTER
TYPICAL FOR ALL: PROVIDE SUPPORTS, VIBRATION ISOLATORS, FLEX. CONNECTIONS (FLEX. CONNECTION TO BE SUITABLE FOR SYSTEM PRESSURE) ON INLET AND OUTLET ETC.

Architecture Counsel
4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

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Project North / True North

SHARMA & PARTNERS INC.
Mechanical and Electrical Engineers
85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8
Tel.: (416)291-8822

SPI PROJECT#: 2026-1010

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

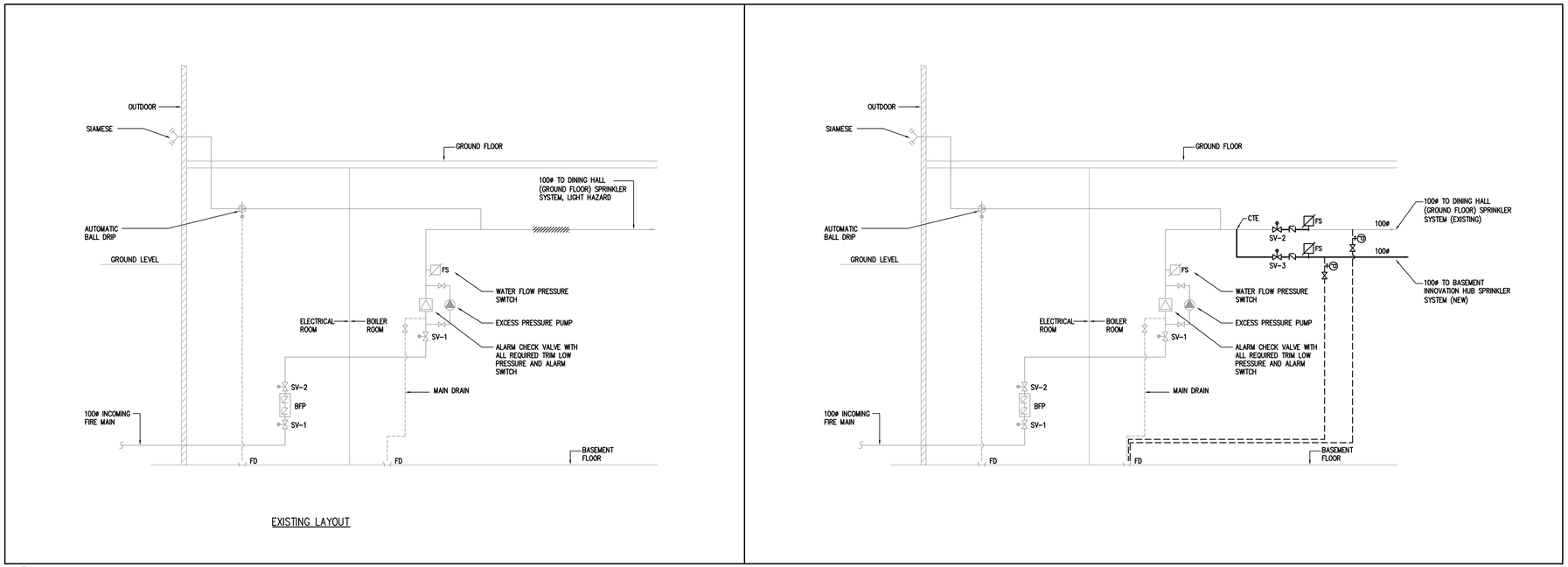
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PICKERING COLLEGE INNOVATION HUB
16945 Bayview Ave, Newmarket, ON L3Y 3W7

MECHANICAL EQUIPMENT SCHEDULES

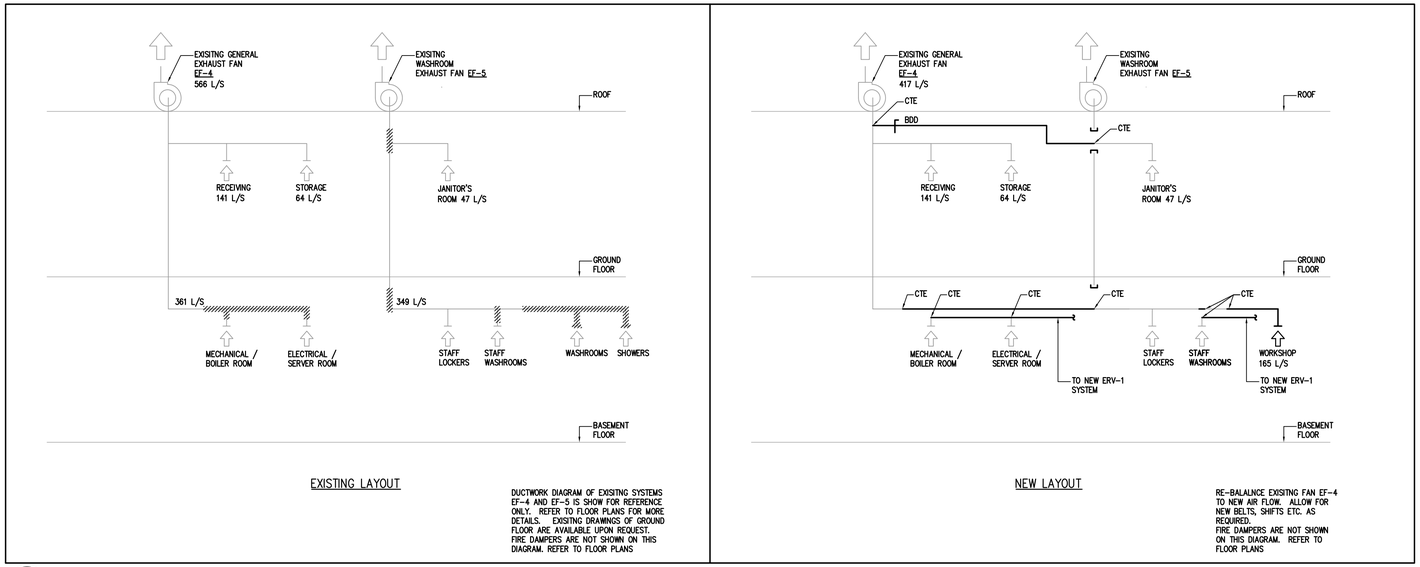
Scale:	N.T.S.
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:
M0.2



1 M0.3 SPRINKLER ASSEMBLY

SCALE: N.T.S.



2 M0.3 EXISTING DUCTWORK DIAGRAM (EF-4 AND EF-5)

SCALE: N.T.S.

Architecture Counsel

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PICKERING COLLEGE INNOVATION HUB

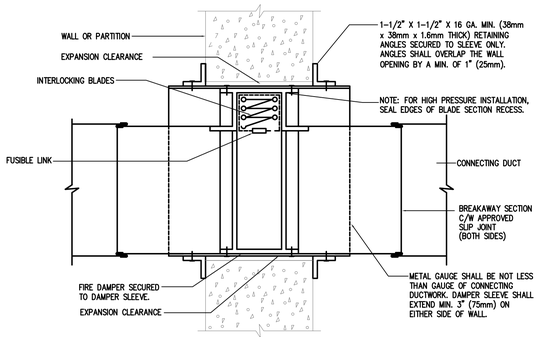
16945 Bayview Ave, Newmarket, ON L3Y 3W7

MECHANICAL DIAGRAMS

Scale:	N.T.S.
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

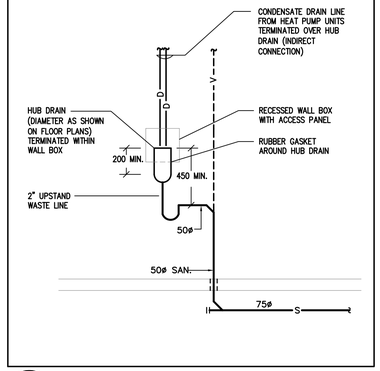
M0.3



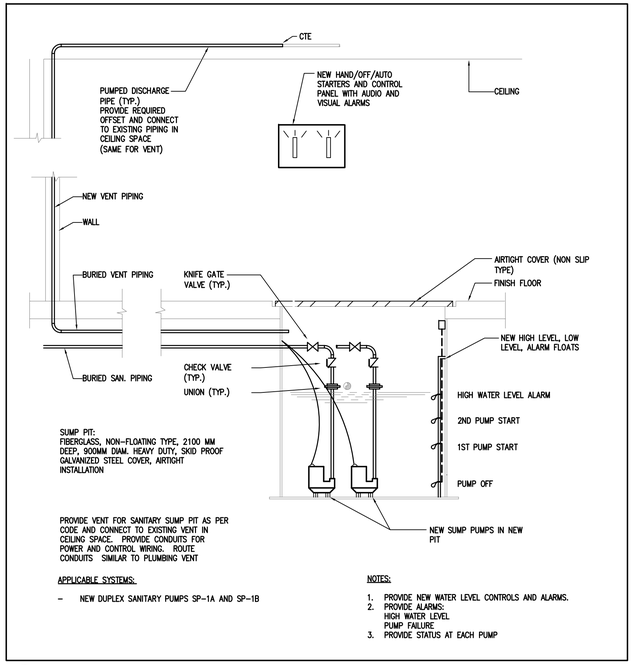
NOTES : ① HORIZONTAL INSTALLATION SHALL BE SIMILAR, BUT DAMPER SHALL BE C/W S.S. CLOSURE SPRING.
② SEAL BREAKAWAY SECTIONS AFTER INSTALLATION. FOR HIGH PRESSURE INSTALLATIONS, PROVIDE DUCT TAPE ON JOINTS AFTER SEALING.
③ PROVIDE ACCESS DOOR IN DUCT FOR FIRE DAMPER

THIS DETAIL ONLY APPLIES TO DUCT THRU WALL. FOR DUCT THRU FIRE RATED WALL WITH WALL MOUNTED GRILLE FOLLOW SPECIFIC MANUFACTURE INSTALLATION INSTRUCTIONS

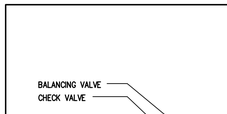
1 M0.4 TYPICAL DETAIL OF VERTICAL MOUNTED FIRE DAMPER INSTALLATION
SCALE: N.T.S.



2 M0.4 TYPICAL CONDANSATE DRAIN INSTALLATION
SCALE: N.T.S.

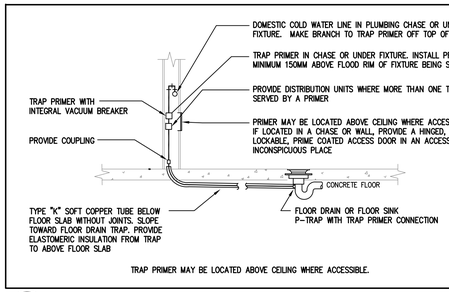


3 M0.4 TYPICAL SUMP PUMP SYSTEM CONTROL, MONITORING & ALARM
N.T.S.



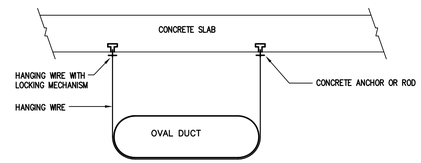
THIS DETAIL IS APPLICABLE TO ALL DHWR MAIN BRANCHES

4 M0.4 DHWR PIPE BRANCH VALVE ARRANGEMENT
SCALE: N.T.S.

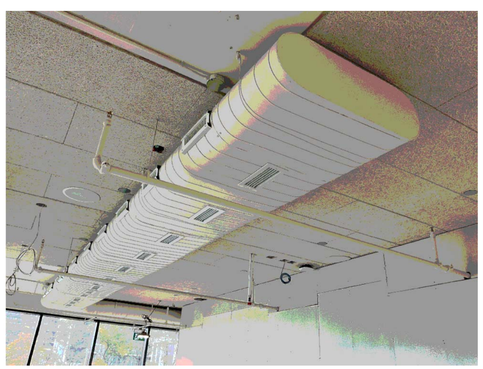


TRAP PRIMER MAY BE LOCATED ABOVE CEILING WHERE ACCESSIBLE.

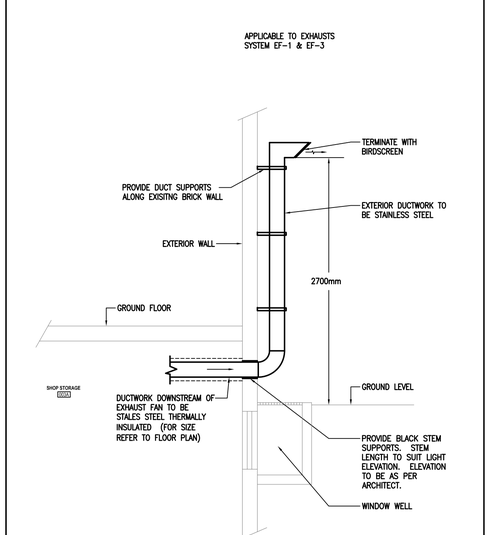
5 M0.4 FLOOR DRAIN WITH PRIMER
SCALE: N.T.S.



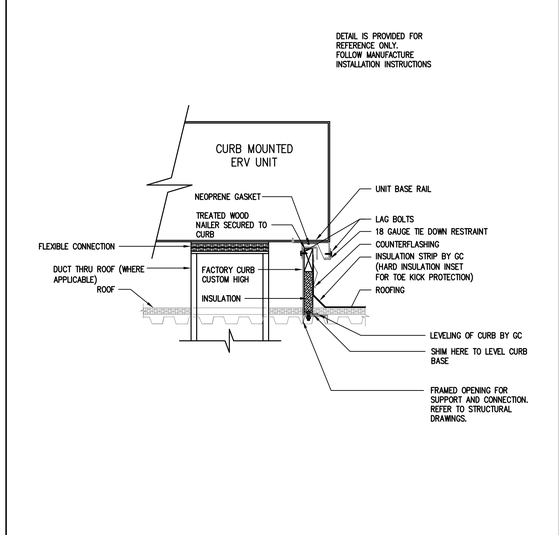
NOTES:
THIS DETAIL APPLIES TO ALL EXPOSED DUCTWORK
ALL DUCTWORK TO BE HUNG FROM BUILDING CONSTRUCTION NOT TO BE SUPPORTED FROM HUNG CEILING OR OTHER SERVICES.
HANGING SYSTEM TO BE AS ON PHOTO BELOW
DUCTWORK TO BE INSTALLED AS HIGH AS POSSIBLE



6 M0.4 DUCT SUPPORT INSTALLATION
SCALE: N.T.S.



7 M0.4 DUCT TERMINATION AT EXTERIOR WALL
SCALE: N.T.S.



8 M0.4 ROOF MOUNTED ERV UNIT CURB ASSEMBLY DETAIL
SCALE: N.T.S.

Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

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Project North True North

SHARMA & PARTNERS INC.
Mechanical and Electrical Engineers
85 Curlew Drive, Unit 108, Toronto, Ontario M3A 2P8
Tel.: (416)291-8822

SPI PROJECT#: 2026-1010

LICENCED PROFESSIONAL ENGINEER A. PROTKIN 06/11/26 PROVINCE OF ONTARIO

2.	2026.11.06	ISSUED FOR TENDER
1.	2026.10.05	ISSUED FOR PERMIT
	DATE	REVISION

PICKERING COLLEGE INNOVATION HUB

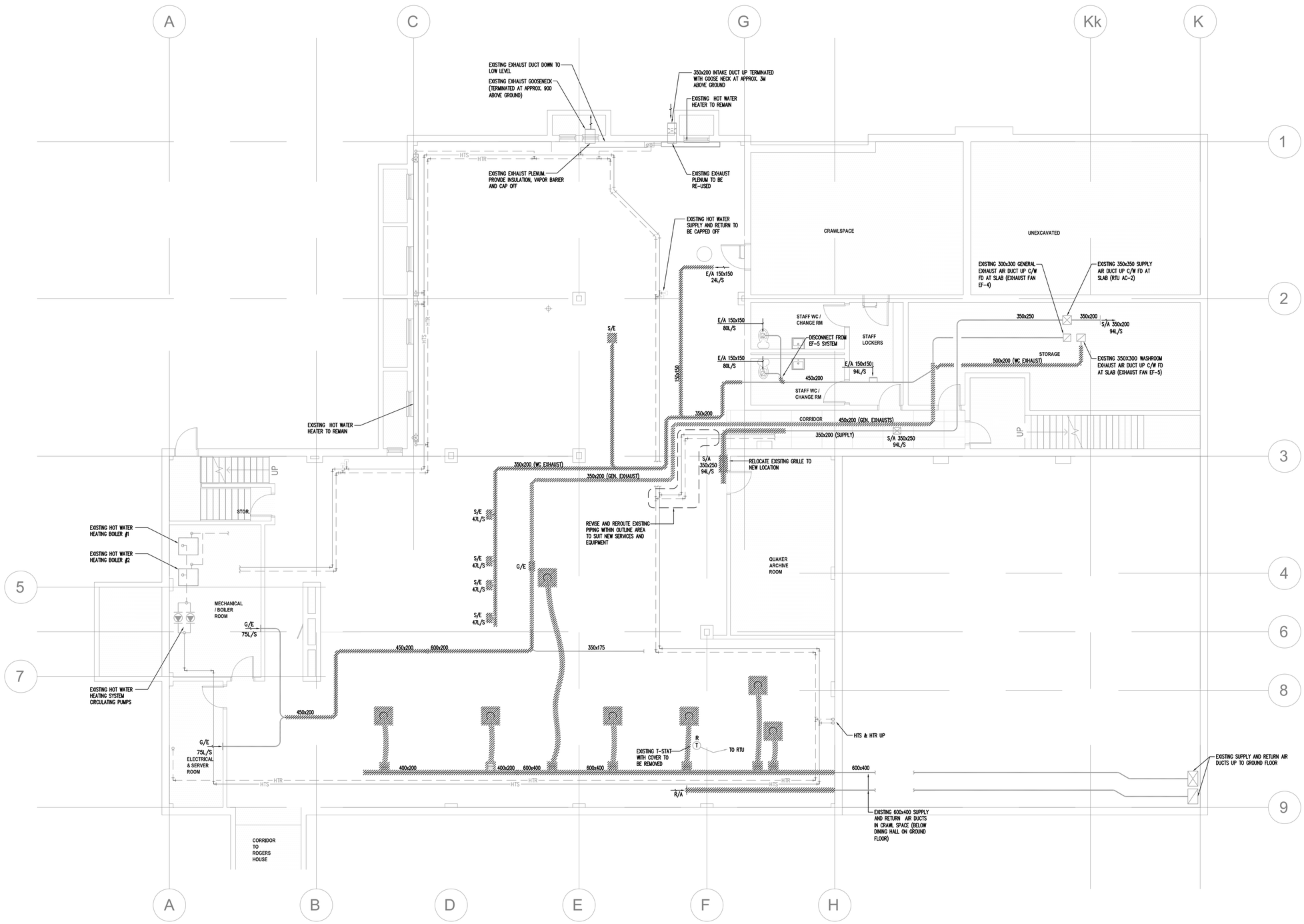
16945 Bayview Ave, Newmarket, ON L3Y 3W7

MECHANICAL DETAILS

Scale:	N.T.S.
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

M0.4



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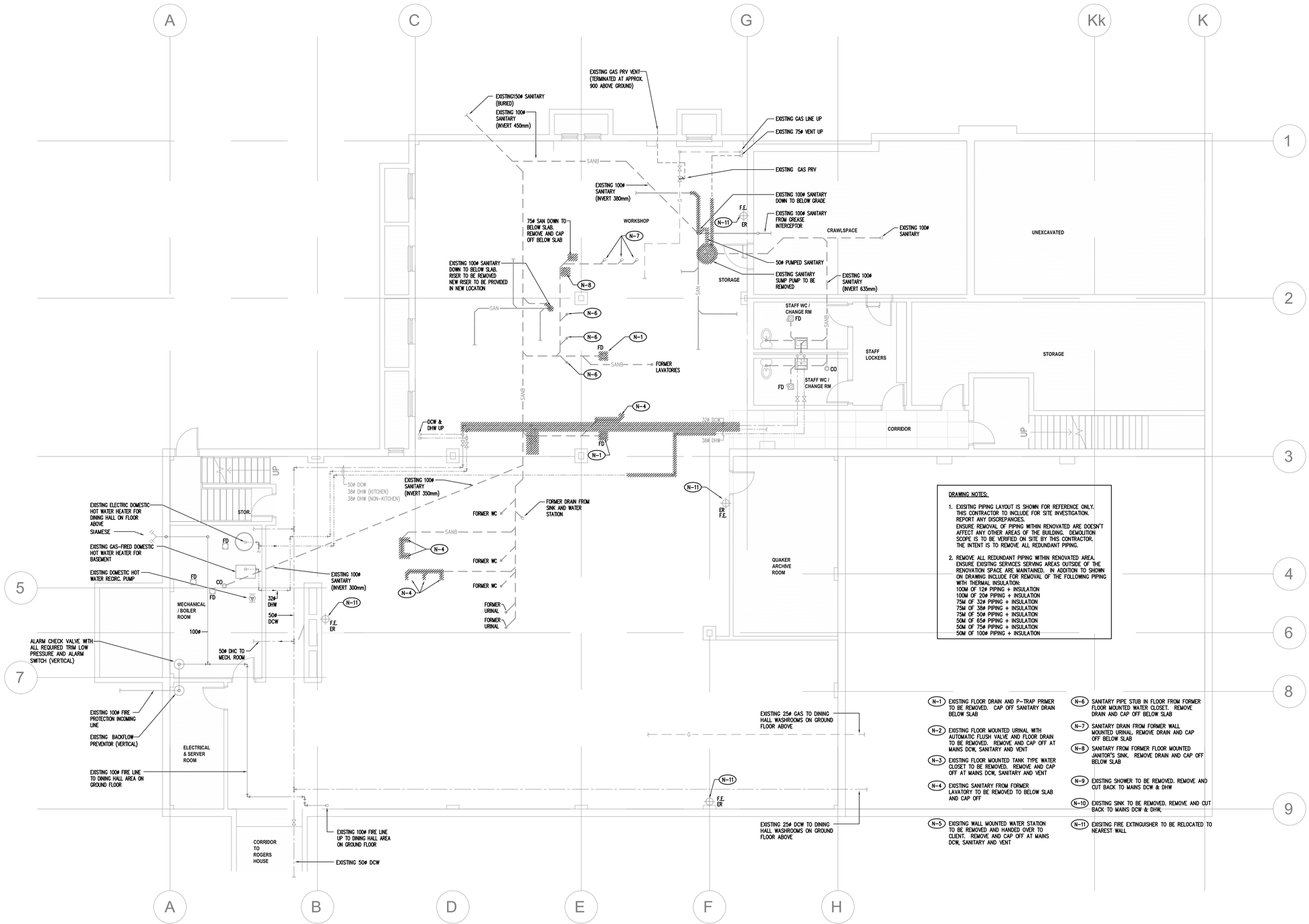
16945 Bayview Ave, Newmarket, ON L3Y 3W7

BASEMENT HVAC DEMOLITION

Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

M1.1



DRAWING NOTES:

1. EXISTING PIPING LAYOUT IS SHOWN FOR REFERENCE ONLY. THIS CONTRACTOR TO INCLUDE FOR SITE INVESTIGATION. REPORT ANY DISCREPANCIES. ENSURE REMOVAL OF PIPING WITHIN RENOVATED ARE DOESN'T AFFECT ANY OTHER AREAS OF THE BUILDING. DEMOLITION SCOPE IS TO BE VERIFIED ON SITE BY THIS CONTRACTOR. THE INTENT IS TO REMOVE ALL REDUNDANT PIPING.
2. REMOVE ALL REDUNDANT PIPING WITHIN RENOVATED AREA. ENSURE EXISTING SERVICES SERVING AREAS OUTSIDE OF THE RENOVATION SPACE ARE MAINTAINED. IN ADDITION TO SHOWN ON DRAWING INCLUDE FOR REMOVAL OF THE FOLLOWING PIPING WITH THERMAL INSULATION:
   100M OF 12ø PIPING + INSULATION
   100M OF 20ø PIPING + INSULATION
   75M OF 32ø PIPING + INSULATION
   75M OF 38ø PIPING + INSULATION
   75M OF 50ø PIPING + INSULATION
   50M OF 65ø PIPING + INSULATION
   50M OF 75ø PIPING + INSULATION
   50M OF 100ø PIPING + INSULATION

N-1 EXISTING FLOOR DRAIN AND P-TRAP PRIMER TO BE REMOVED. CAP OFF SANITARY DRAIN BELOW SLAB

N-2 EXISTING FLOOR MOUNTED URINAL WITH AUTOMATIC FLUSH VALVE AND FLOOR DRAIN TO BE REMOVED. REMOVE AND CAP OFF AT MAINS DCW, SANITARY AND VENT

N-3 EXISTING FLOOR MOUNTED TANK TYPE WATER CLOSET TO BE REMOVED. REMOVE AND CAP OFF AT MAINS DCW, SANITARY AND VENT

N-4 EXISTING SANITARY FROM FORMER LAVATORY TO BE REMOVED TO BELOW SLAB AND CAP OFF

N-5 EXISTING WALL MOUNTED WATER STATION TO BE REMOVED AND HANDED OVER TO CLIENT. REMOVE AND CAP OFF AT MAINS DCW, SANITARY AND VENT

N-6 SANITARY PIPE STUB IN FLOOR FROM FORMER FLOOR MOUNTED WATER CLOSET. REMOVE DRAIN AND CAP OFF BELOW SLAB

N-7 SANITARY DRAIN FROM FORMER WALL MOUNTED URINAL. REMOVE DRAIN AND CAP OFF BELOW SLAB

N-8 SANITARY FROM FORMER FLOOR MOUNTED JANITOR'S SINK. REMOVE DRAIN AND CAP OFF BELOW SLAB

N-9 EXISTING SHOWER TO BE REMOVED. REMOVE AND CUT BACK TO MAINS DCW & DHW

N-10 EXISTING SINK TO BE REMOVED. REMOVE AND CUT BACK TO MAINS DCW & DHW.

N-11 EXISTING FIRE EXTINGUISHER TO BE RELOCATED TO NEAREST WALL

Architecture Counsel

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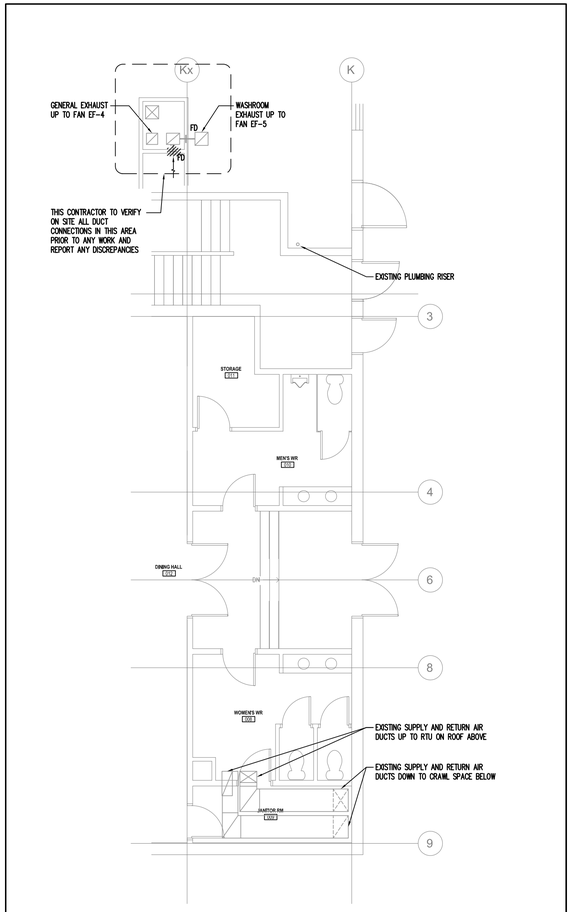
16945 Bayview Ave, Newmarket, ON L3Y 3W7

BASEMENT PLUMBING DEMOLITION

Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

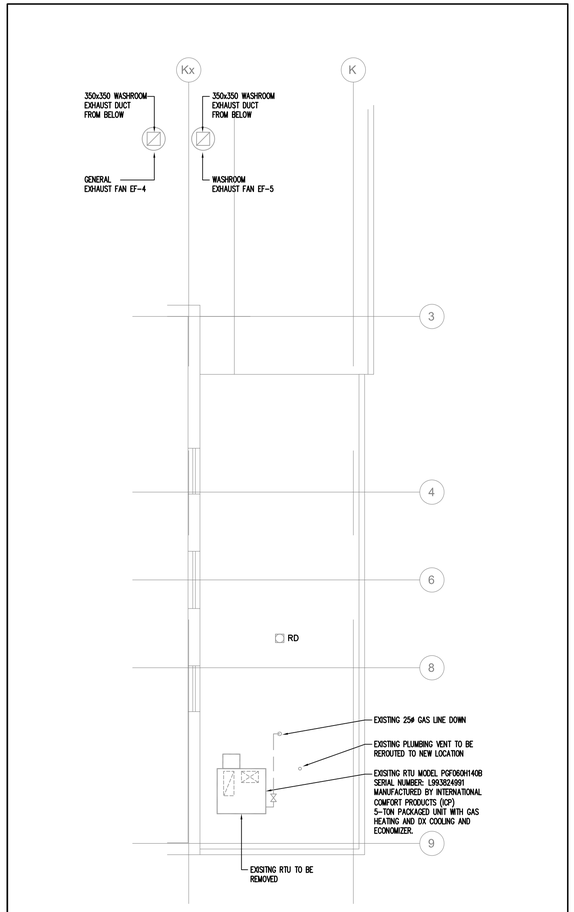
Drawing number:

M1.2



1 M1.3 GROUND FLOOR PART PLAN

SCALE: 1:75



2 M1.3 ROOF PART PLAN – DEMOLITION

SCALE: 1:75

Architecture Counsel

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16945 Bayview Ave, Newmarket, ON L3Y 3W7

GROUND FLOOR AND ROOF PART PLAN MECHANICAL DEMOLITION

Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

M1.3

DRAWING NOTES:

1. DUCTWORK IN EXPOSED (NO CEILING) AREAS TO BE OVAL.
2. SUPPLY DUCTWORK IN CEILING SPACE TO BE PROVIDED WITH EXTERNAL THERMAL INSULATION.
3. ALL FIRE DAMPERS TO BE TYPE 'B' (FUSE OUTSIDE OF AIR STREAM).
4. REPLACE THERMAL INSULATION ON ALL EXISTING PIPING. NEW INSULATION TO BE PROVIDED WITH PVC JACKETING
5. PROVIDE SUPPORTS FOR ALL HEAT PUMPS AND FANS FROM SLAB ABOVE. INCLUDE FOR VIBRATION ISOLATORS. SUPPORTS TO SUIT EQUIPMENT DIMENSIONS, WEIGHT ETC.
6. EXISTING PIPING IS NOT SHOWN ON THIS DRAWING. REFER TO DEMOLITION FLOOR PLAN FOR EXISTING SERVICES.
5. DUCTWORK AND PIPING ARE SHOWN DIAGRAMMATICALLY. THIS CONTRACTOR TO COORDINATE ON SITE AND PROVIDE OFFSETS ETC. TO SUIT SITE CONDITIONS.

EXHAUST FAN EF-1 (FUMEARM EXHAUST) SEQUENCE OF OPERATION:

- FAN TO BE TURNED ON / OFF FROM WALL MOUNTED SPEED CONTROLLER BY CLASSROOM INSTRUCTOR AS REQUIRED.
- SPEED CONTROLLER IS FOR BALANCING AND AIR FLOW ADJUSTMENT ONLY. SET UP SPEED TO PROVIDE 165L/S OF EXHAUST AIR FLOW. PROVIDE TAG NEXT TO SPEED CONTROLLER STATING FAN SPEED.

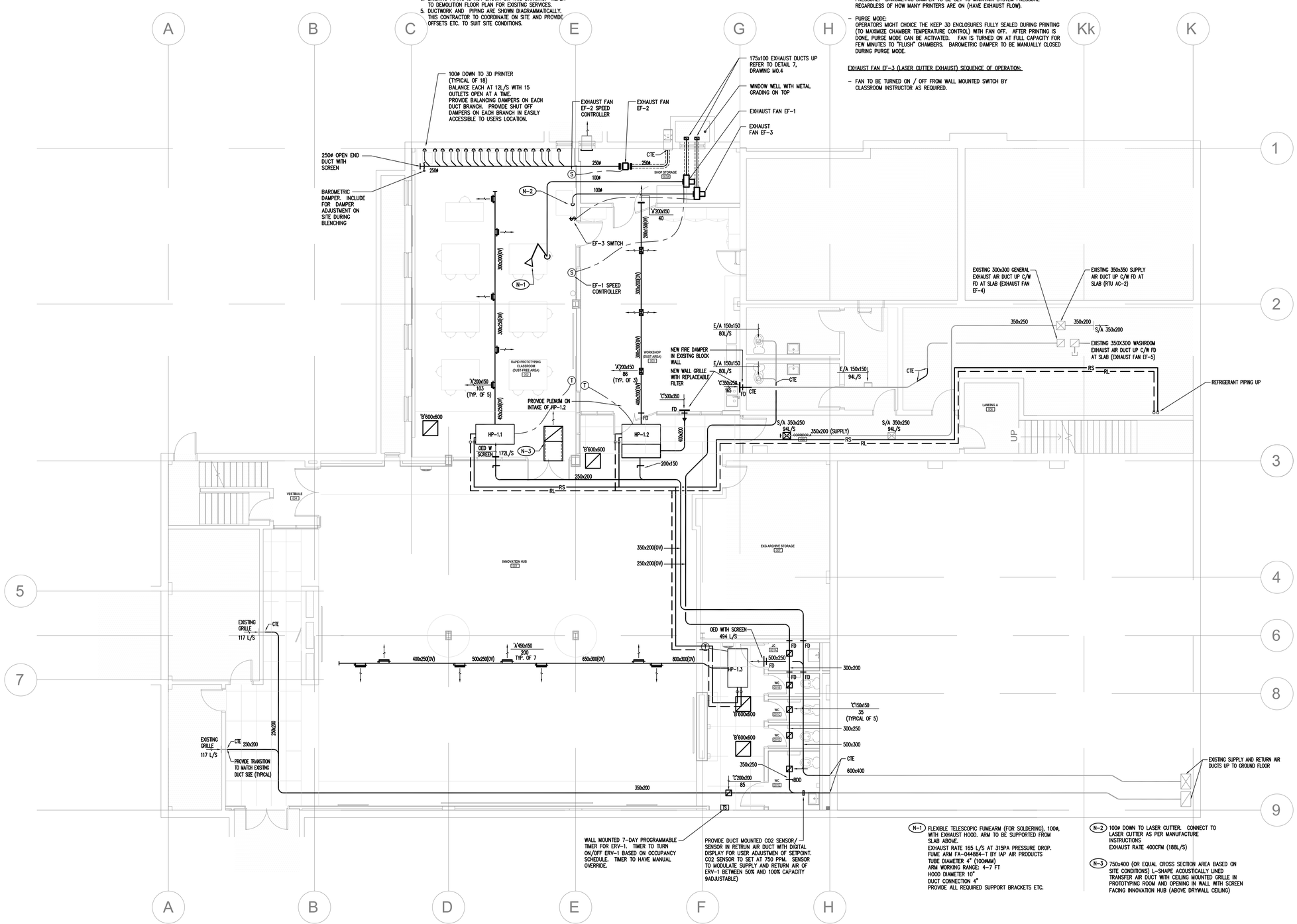
DUCTWORK TO BE HEAVY GAUGE SUITABLE FOR HIGH PRESSURE SYSTEMS

EXHAUST FAN EF-2 (3D PRINTERS) SEQUENCE OF OPERATION:

- FAN TO BE TURNED ON / OFF FROM WALL MOUNTED SPEED CONTROLLER BY CLASSROOM INSTRUCTOR AS REQUIRED.
- NORMAL OPERATION:
  BALANCE EACH DUCT BRANCH AT 252FM. TOTAL AIR FLOW OF EXHAUST SYSTEM IS BASED ON 15 OUT OF 18 DUCT BRANCHES OPEN AT A TIME (ALLOW FOR 2 ADDITIONAL FIELD ADJUSTMENTS BASED ON USERS REQUIREMENTS)
  SET FAN SPEED AND PROVIDE TAG NEXT TO WALL MOUNTED SPEED CONTROLLER IDENTIFYING SPEED SETTING FOR NORMAL OPERATION.
  ADJUST BAROMETRIC DAMPER AS REQUIRED TO MAINTAIN FIELD MEASURED SYSTEM PRESSURE. BAROMETRIC DAMPER TO BE SET TO MAINTAIN SYSTEM PRESSURE REGARDLESS OF HOW MANY PRINTERS ARE ON (HAVE EXHAUST FLOW).
- PURGE MODE:
  OPERATORS MIGHT CHOICE THE KEEP 3D ENCLOSURES FULLY SEALED DURING PRINTING (TO MAXIMIZE CHAMBER TEMPERATURE CONTROL) WITH FAN OFF. AFTER PRINTING IS DONE, PURGE MODE CAN BE ACTIVATED. FAN IS TURNED ON AT FULL CAPACITY FOR FEW MINUTES TO "FLUSH" CHAMBERS. BAROMETRIC DAMPER TO BE MANUALLY CLOSED DURING PURGE MODE.

EXHAUST FAN EF-3 (LASER CUTTER EXHAUST) SEQUENCE OF OPERATION:

- FAN TO BE TURNED ON / OFF FROM WALL MOUNTED SWITCH BY CLASSROOM INSTRUCTOR AS REQUIRED.



N-1 FLEXIBLE TELESCOPIC FUMEARM (FOR SOLDERING), 100ø, WITH EXHAUST HOOD. ARM TO BE SUPPORTED FROM SLAB ABOVE.
EXHAUST RATE 165 L/S AT 315PA PRESSURE DROP.
FUME ARM FA-044884-T BY IAP AIR PRODUCTS
TUBE DIAMETER 4" (100MMW)
ARM WORKING RANGE: 4-7 FT
HOOD DIAMETER 10"
DUCT CONNECTION 4"
PROVIDE ALL REQUIRED SUPPORT BRACKETS ETC.

N-2 100ø DOWN TO LASER CUTTER. CONNECT TO LASER CUTTER AS PER MANUFACTURE INSTRUCTIONS
EXHAUST RATE 400CFM (188L/S)

N-3 750x400 (OR EQUAL CROSS SECTION AREA BASED ON SITE CONDITIONS) L-SHAPE ACOUSTICALLY LINED TRANSFER AIR DUCT WITH CEILING MOUNTED GRILLE IN PROTOTYPING ROOM AND OPENING IN WALL WITH SCREEN FACING INNOVATION HUB (ABOVE DRYWALL CEILING)

Architecture Counsel

4 CLINTON PL, TORONTO, ON M6G 1J9 T 416-603-1515

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Project North / True North

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PICKERING COLLEGE INNOVATION HUB

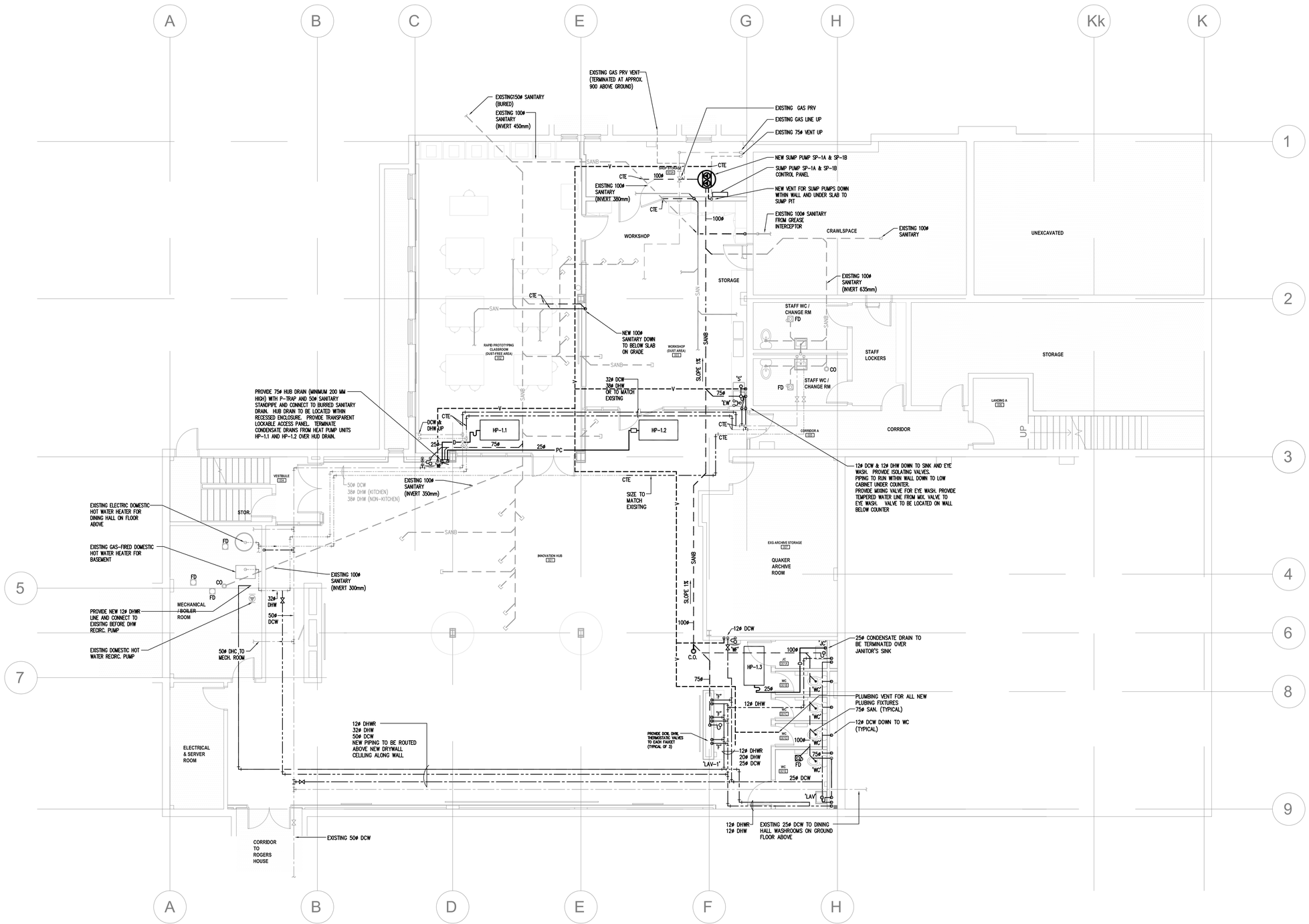
16945 Bayview Ave, Newmarket, ON L3Y 3W7

BASEMENT HVAC NEW LAYOUT

Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

M2.1



Architecture Counsel

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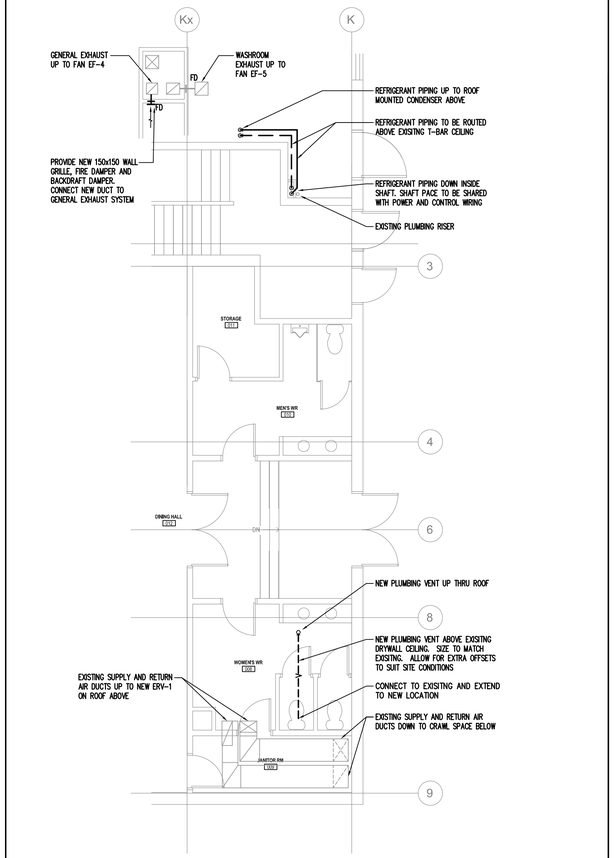
16945 Bayview Ave, Newmarket, ON L3Y 3W7

BASEMENT PLUMBING NEW LAYOUT

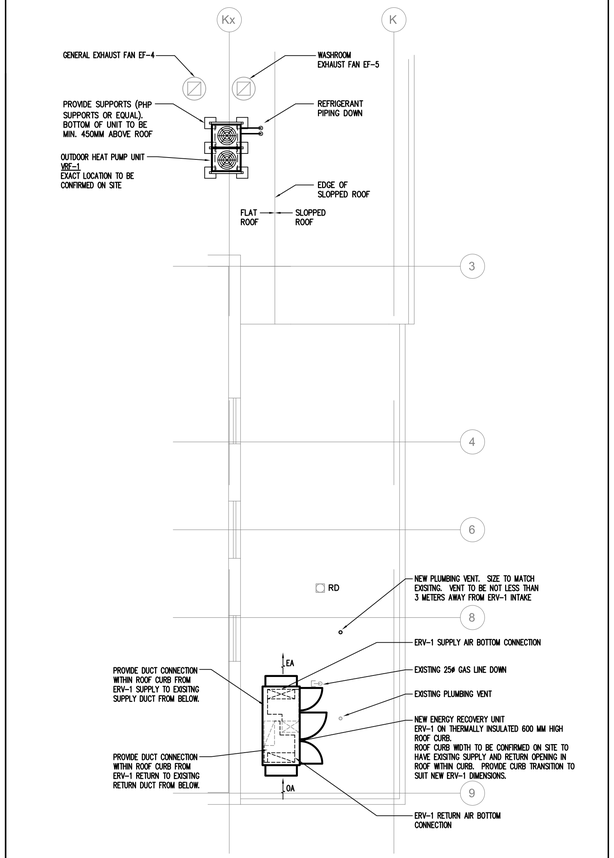
Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

M2.2



1 M2.3 GROUND FLOOR PART PLAN – NEW LAYOUT
SCALE: 1:75



2 M2.3 ROOF PART PLAN – NEW LAYOUT
SCALE: 1:75

Architecture Counsel

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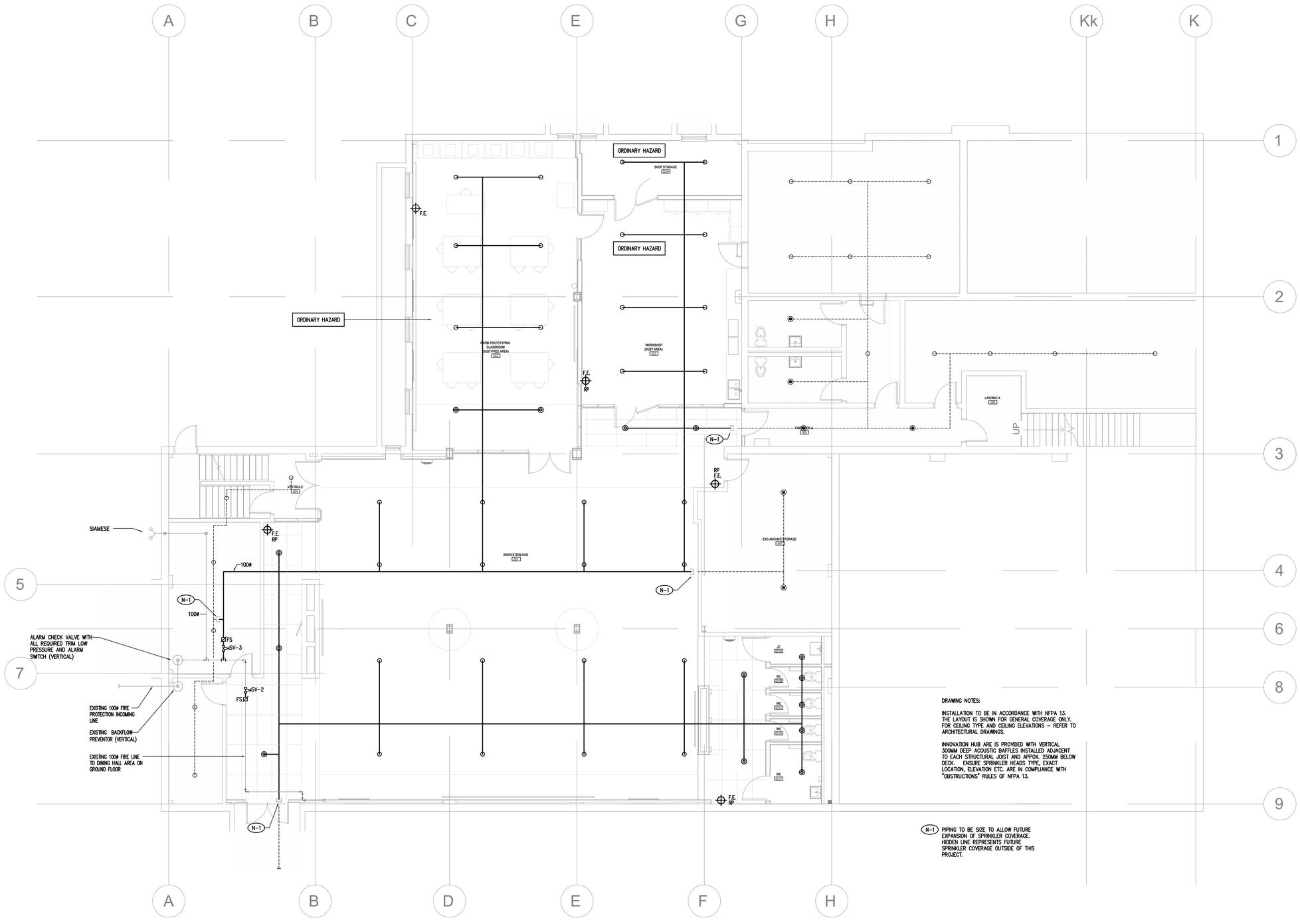
16945 Bayview Ave, Newmarket, ON L3Y 3W7

GROUND FLOOR AND ROOF PART PLAN MECHANICAL NEW LAYOUT

Scale:	1:75
Drawn by:	CAD
Reviewed by:	AP
Job number:	25168
Plot date:	2026.11.06

Drawing number:

M2.3



DRAWING NOTES:

INSTALLATION TO BE IN ACCORDANCE WITH NFPA 13. THE LAYOUT IS SHOWN FOR GENERAL COVERAGE ONLY. FOR CEILING TYPE AND CEILING ELEVATIONS – REFER TO ARCHITECTURAL DRAWINGS.

INNOVATION HUB ARE IS PROVIDED WITH VERTICAL 300MM DEEP ACOUSTIC BAFFLES INSTALLED ADJACENT TO EACH STRUCTURAL JOIST AND APPOX. 250MM BELOW DECK. ENSURE SPRINKLER HEADS TYPE, EXACT LOCATION, ELEVATION ETC. ARE IN COMPLIANCE WITH "OBSTRUCTIONS" RULES OF NFPA 13.

(N-1) PIPING TO BE SIZE TO ALLOW FUTURE EXPANSION OF SPRINKLER COVERAGE. HIDDEN LINE REPRESENTS FUTURE SPRINKLER COVERAGE OUTSIDE OF THIS PROJECT.

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BASEMENT FIRE PROTECTION NEW LAYOUT

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Drawn by:	CAD
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Drawing number:

M2.4

MECHANICAL SPECIFICATION

GENERAL MECHANICAL CONDITIONS – SECTION 15050

1. CONFORM TO INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS AND GENERAL REQUIREMENTS.
2. THIS SECTION 15050 SHALL APPLY TO ALL DIVISION 15 SECTIONS.
3. BEFORE SUBMITTING TENDERS, EXAMINE SITE, EXISTING SERVICES AND ALL DRAWINGS. EXTRAS WILL NOT BE ALLOWED FOR FAILURE TO DO SO.
4. PROVIDE ALL LABOUR, MATERIALS AND EQUIPMENT NECESSARY TO EXECUTE THE WORK SHOWN AND DESCRIBED. INSTALLATION OF MATERIALS SHALL MEET ALL APPLICABLE PROVINCIAL, FEDERAL AND MUNICIPAL REQUIREMENTS.
5. OBTAIN PERMITS AND PAY ALL FEES FOR WORK AND REQUIRED INSPECTIONS.
6. ANY REFRIGERATION SYSTEM EXCEEDING 5 TONS MUST BE TSSA REGISTERED AND FIELD APPROVED. ARRANGE AND PAY FOR REQUIRED INSPECTIONS.
7. MAINTAIN LIABILITY INSURANCE TO PROTECT OWNER AND THE CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKER'S COMPENSATION ACT.
8. THE DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC ONLY. ALL MEASUREMENTS SHALL BE TAKEN FROM BUILDING SITE AND ARCHITECT'S DRAWINGS.
9. ALL MATERIALS SHALL CONFORM TO CSA, HEPC AND CEC REQUIREMENTS AND SHALL BEAR CSA LABEL. GAS FIRED EQUIPMENT SHALL BEAR CGA LABEL.
10. ALL EXISTING SERVICES MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THIS CONTRACTOR TO PROVIDE ALL NECESSARY TEMPORARY LINES, ETC. SO AS TO CARRY OUT THE ABOVE.
11. TEMPORARY LIGHT, POWER AND WATER BY GENERAL CONTRACTOR.
12. ALL CUTTING AND PATCHING FOR MECHANICAL WORK WILL BE THE RESPONSIBILITY OF THIS SUB-CONTRACTOR. HIRE SPECIALIZED TRADES TO DO THIS WORK. X-RAY FLOORS PRIOR TO CUTTING AND COORDINATE FOR AFTER HOUR X -RAY OF THE FLOOR.
13. PROVIDE TEMPORARY BUILDINGS AND MATERIAL STORAGE AS REQUIRED AND BE RESPONSIBLE FOR ANY LOSS OR DAMAGE THERETO.
14. DUCTWORK AND PIPPING PENETRATION THRU WALL / CEILING
    WHERE EXPOSED DUCTWORK OR PIPING PENETRATES WALL OR CEILING PROVIDE FRAME OR TRIM AROUND PERIMETER OF THE DUCT OR PIPE FOR NEAT APPEARANCE. THIS IS IN ADDITION TO SMOKE SEAL REQUIREMENTS.
15. SUBMIT SAMPLES OF MATERIALS WHEN REQUIRED.
16. SUBMIT ELECTRONIC COPIES OF SHOP DRAWINGS FOR REVIEW COVERING MAJOR MANUFACTURED ITEMS, I.E. PLUMBING FIXTURES, VRF SYSTEM, ENERGY RECOVERY VENTILATOR , CONTROLS ETC.
17. WHERE SUBSTITUTIONS ARE MADE FOR EQUIPMENT SPECIFIED BY NAME OR MODEL NUMBER, BE FULLY RESPONSIBLE FOR CAPACITIES AS WELL AS PHYSICAL FIT OF SUBSTITUTED MATERIALS.
18. SUPPLY AND LOCATE ALL BASES, SUPPORTS, SLEEVES, CURBS, ETC. REQUIRED FOR THIS WORK. FLASHING BY ROOF TRADES. COUNTERFLASHING BY THIS CONTRACTOR.
19. UNLESS OTHERWISE NOTED, ALL MOTORS 1/2 HP AND UNDER SHALL BE 115/1/60, MOTORS OVER 1/2 HP SHALL BE OF 3 PHASE VOLTAGE AVAILABLE ON PROJECT.
20. SUPPLY PROPER STARTERS WITH OVERLOAD PROTECTION AND DISCONNECT SWITCHES FOR POWERED MECHANICAL EQUIPMENT AND HAND OVER TO ELECTRICAL CONTRACTOR FOR INSTALLATION. THIS DOES NOT INCLUDE ISOLATION SWITCHES, UNLESS STATED SPECIFICALLY.
21. ALL POWER WIRING BY ELECTRICAL CONTRACTOR, CONTROL AND INTERLOCK WIRING BY MECHANICAL CONTRACTOR. CONTROL WIRING IN RETURN AIR CEILING SPACES SHALL BE FT-6 OR INSTALLED IN CONDUIT.
    A. UNLESS SPECIFICALLY NOTED, OTHERWISE ALL WIRING BY THIS CONTRACTOR.
22. SUPPLY AND INSTALL ALL NECESSARY ACCESS DOORS FOR MECHANICAL EQUIPMENT INCLUDING ENTERING AND LEAVING SIDES OF ALL COILS, FIRE DAMPERS ETC. WHERE NECESSARY, DOORS SHALL BE RATED TO SUIT FIRE ASSEMBLY RATING.
23. DO ALL EXCAVATING AND BACKFILLING FOR MECHANICAL WORK.
    A. BACKFILL FROM BOTTOM OF TRENCH, AROUND PIPE AND TO 600MM (24") ABOVE PIPE SHALL BE CLEAN SAND, COMPACTED MECHANICALLY IN 150MM (6") LAYERS TO 95% MODIFIED PROCTOR DENSITY. REMAINDER OF TRENCH SHALL BE BACKFILLED UTILIZING NATIVE MATERIAL COMPACTED IN 6" LAYERS.
    B. EXTERIOR BACKFILL ABOVE 600MM (24") ABOVE PIPES IN AREAS TO HAVE CONCRETE WALKS OR ASPHALT PAVING SHALL BE O.H.O. GRANULAR CLASS B COMPACTED IN MAXIMUM 150MM (6"). REMAINDER OF TRENCH SHALL BE BACKFILLED UTILIZING NATIVE MATERIAL COMPACTED IN 6" LAYERS.
    C. EXTERIOR BACKFILL ABOVE 600MM (24") ABOVE PIPES IN AREAS TO RECEIVE SOD OR SEED SHALL BE CLEAN FILLED, FREE FROM ORGANIC MATERIAL AND DEBRIS, PLACED IN MAXIMUM 300MM (12") LAYERS.
    D. ALL UNUSED EXCAVATED MATERIAL SHALL BE REMOVED FROM SITE.
24. PIPE HANGERS SHALL BE CLEVIS SPLIT TYPE WITH MILD STEEL RODS. FOR COPPER PIPE USE PLASTIC INSERTS. USE OVERSIZED HANGERS AND SADDLES FOR C.W. PIPING. DO NOT SUPPORT EQUIPMENT, DUCTS OR PIPING FROM ROOF DECK WITHOUT PERMISSION FROM ARCHITECTS. SUPPLY AND INSTALL NECESSARY STEEL TO TRANSFER LOAD TO STRUCTURAL MEMBERS.
25. PROVIDE CONCRETE OR METAL CURBS OR SLEEVES AROUND ALL MECHANICAL ROOM FLOOR PENETRATIONS WHERE ROOM IS NOT LOCATED ON GRADE. SEAL ALL OPENINGS WATERTIGHT.
26. ALL DISSIMILAR METAL (STEEL-COPPER, ETC.) SHALL BE SEPARATED USING GASKETS AND INSULATING WASHERS OR WATTS "DI-ELECTRIC" FITTINGS.
27. INSTALL CHROME-PLATED ESCUTCHEONS WHERE BRANCH PIPES PASS THROUGH FINISHED SURFACE.
28. KEEP ACCURATE RECORD OF "AS-BUILT" DRAWINGS AND SUBMIT THESE BEFORE FINAL CERTIFICATE OF COMPLETION. BURIED SERVICES MUST BE DIMENSIONED. PROVIDE ELECTRONIC FILES IN AUTOCAD AND PDF FORMAT OF THE AS_BUILT DRAWINGS TO CONSULTANT FOR REVIEW AND VERIFICATION. AFTER VERIFIED, PROVIDE ALSO HARD COPY.
29. ALL SURFACES MUST BE LEFT CLEAN AND SMOOTH, READY FOR PAINTING BY GENERAL TRADES.
30. IDENTIFY ALL PIPING. USE STENCILS OR COLOUR CODES AND DIRECTIONAL ARROWS.
31. IDENTIFY ALL FANS, STARTERS, REMOTE CONTROL AND ALL OTHER EQUIPMENT AS TO SERVICE BY A BLACK LAMACOID ENGRAVED NAMEPLATE WITH WHITE CORE, FIRMLY AFFIXED WITH SCREWS TO EACH UNIT.
32. PROVIDE FIRE STOPPING AND SMOKE SEALS.
    A. PRIMERS TO MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC MATERIAL, SUBSTRATE, AND END USE.
    B. DAMMING AND BACKUP MATERIALS, SUPPORTS AND ANCHORING DEVICES TO BE TO MANUFACTURER'S RECOMMENDATIONS; AND IN ACCORDANCE WITH TESTED ASSEMBLY BEING INSTALLED AS ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.
    C. SEALANTS FOR VERTICAL JOINTS TO BE NON-SAGGING.
    D. FIRESTOP AND SMOKE SEAL AROUND MECHANICAL AND ELECTRICAL ASSEMBLIES PENETRATING NON-RATED FIRE SEPARATIONS.
    E. RIGID DUCTS WITH DIMENSIONS GREATER THAN 1300 MM TO BE FIRE STOPPED BY BEAD OF FIRE STOPPING MATERIAL BETWEEN RETAINING ANGLE AND FIRE SEPARATION, AND BETWEEN RETAINING ANGLE AND DUCT, ON EACH SIDE OF FIRE SEPARATION.
    F. REMOVE EXCESS MATERIALS AND DEBRIS AND CLEAN ADJACENT SURFACES IMMEDIATELY AFTER APPLICATION.
    G. REMOVE TEMPORARY DAMS AFTER INITIAL SET OF FIRE STOPPING AND SMOKE SEAL MATERIALS.
33. ON COMPLETION OF THE WORK, REMOVE FROM THE PREMISES ALL TOOLS, DEBRIS, SURPLUS AND WASTE MATERIALS RESULTING FROM OPERATIONS UNDER THIS SECTION. CLEAN ALL EQUIPMENT AND LEAVE ALL ITEMS IN PERFECT ORDER READY FOR OPERATION.
34. AFTER ACCEPTANCE, INSTRUCT OWNER IN EQUIPMENT OPERATION AND PROVIDE HIM WITH OPERATING AND MAINTENANCE MANUALS STANDARDS AND EXTENDED WARRANTY DOCUMENTS, INSPECTION CERTIFICATES AND COPIES OF SHOP DRAWINGS OF INSTALLED EQUIPMENT.
35. THE CONTRACTOR SHALL, BEFORE FINAL PAYMENT IS MADE, GUARANTEE ALL MATERIALS AND WORKMANSHIP SUPPLIED BY HIM IN THE PERFORMANCE OF THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND SHALL, WHEN CALLED UPON, MAKE GOOD WITHOUT FURTHER COST TO THE OWNER SUCH DEFECTS AS MAY APPEAR WITHIN THIS PERIOD.
36. SHOULD ANY DISCREPANCY APPEAR BETWEEN THESE SPECIFICATIONS AND THE DRAWINGS TO CAUSE DOUBT AS TO THE TRUE MEANING AND INTENT OF THE DRAWINGS AND SPECIFICATIONS, A RULING SHALL BE OBTAINED FROM THE ARCHITECT CONSULTANT BEFORE SUBMITTING THE TENDER. IF THIS IS NOT DONE IT WILL BE ASSUMED THAT THE MORE EXPENSIVE ALTERNATIVE HAS BEEN INCLUDED IN THE CONTRACT.
37. ANY ERROR OR INCONSISTENCY IN THE DRAWINGS OR SPECIFICATIONS NOTED AFTER AWARD OF CONTRACT MUST BE REPORTED TO THE ARCHITECT CONSULTANT BEFORE COMMENCING WORK.
38. THE OMISSION OR INCORRECT MENTION OF WORK, MATERIALS, ETC. THAT ARE INDISPENSABLE TO THE COMPLETED WORK, IS NOT TO BE INTERPRETED AS RELIEVING OF THE NECESSITY OF PROVIDING SUCH WORK, MATERIALS, ETC. AT NO EXPENSE TO THE OWNER.
39. ALLOW FOR CONNECTIONS TO EXISTING SYSTEMS DURING AFTER HOURS OR WEEKENDS, INCLUDING BUT NOT LIMITED TO PLUMBING AND DRAINAGE, WATER PIPING, HEATING SYSTEMS, ELECTRICAL AND CONTROL CONNECTIONS. COORDINATE WITH THE CLIENT FOR ANY SHUT DOWN IN ADVANCE IN WRITING. FOR CONNECTIONS TO HEATING / COOLING WATER PIPES ALLOW FOR FREEZING OF PIPES – DRAINAGE OF THE EXISTING SYSTEMS WILL NOT BE PERMITTED.
40. "RE-ROUTING" DENOTES REMOVAL OF EXISTING AND INSTALLATION OF NEW SERVICES INCLUDING NEW THERMAL INSULATION.
41. WHERE NEW CONNECTION IS MADE TO EXISTING PIPING OR DUCTWORK INCLUDE FOR NEW THERMAL INSULATION AND JACKETING ON THE EXISTING DUCT / PIPE.

SPRINKLERS – SECTION 15330

1. ALTER THE EXISTING SPRINKLER SYSTEM TO ADD NEW SPRINKLER ZONES FOR GROUND FLOOR AND BASEMENT. BASEMENT SPRINKLER SYSTEM IS NEW.
2. THIS IS PERFORMANCE SPECIFICATION ONLY. PREPARE SPRINKLER SHOP DRAWINGS FOR SUBMISSION TO ENGINEER, UNDERWRITERS AND BUILDING DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION. ENGINEERS DRAWINGS INDICATE GENERAL AREAS TO BE SPRINKLERED ONLY. THIS CONTRACTOR TO PROVIDE HYDRAULIC CALCULATIONS PREPARED AND STAMPED BY PROFESSIONAL ENGINEER ON ONTARIO. HYDRANT TEST IS AVAILABLE UPON REQUEST. THIS CONTRACTOR TO SUBMIT ALL REQUIRED DOCUMENT TO THE BUILDING DEPARTMENT (AND OTHER DEPARTMENTS AS APPLICABLE). OBTAIN PERMITS AND PAY ALL FEES FOR AND REQUIRED INSPECTIONS.
3. SPRINKLER WORK SHALL BEGIN INSIDE BUILDING AT MAIN COLD WATER HEADER WHERE INDICATED ON DRAWINGS.
4. PIPING MATERIALS
    A. BLACK STEEL SCHEDULE 40 CONFORMING TO ASTM A120 OR ASTM A53. SCHEDULE 30 PIPE MAY BE USED IN SIZES (200MM) 8" AND LARGER. LIGHT WALL PIPE WITH ROLL GROOVE FOR MECHANICAL COUPLINGS MAY BE USED FOR ALL PIPING WHERE PERMITTED BY CODES AND AUTHORITIES. THE "PRESSFIT" PIPING SYSTEM MAY BE USED IN SIZES UP TO AND INCLUDING (50MM) 2".
    B. FITTINGS SHALL BE CAST IRON, MALLEABLE IRON OR STEEL WELDING TYPE. SCREWED UNIONS AND COUPLINGS SHALL BE USED ON PIPING (50MM) 2" AND SMALLER. SCREWED COUPLINGS, FLANGES, OR WELDING SHALL BE USED TO JOINT PIPING (65MM) 2-1/2" AND LARGER, EXCEPT WHERE MECHANICAL COUPLINGS ARE ALLOWED AS SPECIFIED HEREIN.
    C. MECHANICAL COUPLINGS AND FITTINGS SUCH AS "FIRELOCK" AND "PRESSFIT" MANUFACTURED BY VICTAULIC WHICH ARE ULC LISTED FOR FIRE PROTECTION SERVICE AND MEETING WITH THE APPROVAL OF THE INSURANCE UNDERWRITING AGENCY AND GOVERNING CODES MAY BE USED TO JOIN ABOVE GROUND PIPING.
5. SYSTEM SHALL BE COMPLETE WITH ALL NECESSARY PIPING, HANGERS, HEADS, DRAINS, SUPERVISED VALVES, FLOW SWITCHES ETC., ALL IN STRICT ACCORDANCE WITH STANDARDS AS STIPULATED IN THE NATIONAL FIRE PREVENTION ASSOCIATION NFPA 13 AS REVISED TO DATE AND/OR AS APPROVED BY THE LOCAL FIRE DEPARTMENT AND BUILDING DEPARTMENT.
6. IN GENERAL, SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH "LIGHT HAZARD OCCUPANCY" AND ORDINARY HAZARD OCCUPANCY (WHERE INDICATED ON THE DRAWINGS) STANDARDS.
7. ALL HEADS UNLESS NOTED OTHERWISE SHALL BE EQUAL TO GRINNELL "DURO SPEED". LOW HEADS SHALL BE EQUIPPED WITH GUARDS.
8. WHERE SUSPENDED CEILINGS OCCUR, PIPING SHALL BE CONCEALED ABOVE CEILINGS, HEADS SHALL BE CHROME PLATED RECESSED PENDANT TYPE IN AREAS WHERE THERE ARE NO SUSPENDED CEILINGS, HEADS SHALL BE UPRIGHT TYPE WITH PLAIN BRONZE FINISH. SUBMIT SAMPLES TO ARCHITECT FOR APPROVAL BEFORE INSTALLATION.
9. CONTRACTOR SHALL PAY ALL NECESSARY CHARGES HE INCURS FROM UNDERWRITERS FOR THEIR REVIEW OF THESE DRAWINGS.
10. WHERE SPRINKLER HEAD IS SHOWN TO BE RELOCATED, EXTEND PIPING TO NEW LOCATION AND PROVIDE NEW SPRINKLER HEAD. ONLY NEW SPRINKLERS TO BE INSTALLED.
11. WHERE CEILINGS ARE RAISED OR LOWERED, ADJUST HEADS TO SUIT NEW CEILING HEIGHTS.
12. WHERE CEILINGS ARE REMOVED AND REPLACED, REMOVE AND REPLACE HEADS AS REQUIRED TO PERMIT EXECUTION OF NECESSARY WORK.

PLUMBING & DRAINAGE INSIDE THE BUILDING – SECTION 15400

1. ALL WORK SHALL BE EXECUTED BY LICENSED PLUMBERS.
2. FOR PVC PIPING: INSTALLER/PLUMBER TO CONTACT IPEX FOR ON-SITE TRAINING (AT NO CHARGE) PRIOR TO START OF INSTALLATION.
3. ALL PLUMBING AND DRAINAGE WORK SHALL BE INSTALLED AS REQUIRED BY ONTARIO BUILDING CODE, REVISED TO DATE, AND SHALL MEET THE REQUIREMENTS OF ALL PROVINCIAL AND MUNICIPAL AUTHORITIES HAVING JURISDICTION.
4. INCLUDE ALL PIPING, FITTINGS AND EQUIPMENT SHOWN ON DRAWINGS OR DESCRIBED IN SPECIFICATIONS. ALL ITEMS NOT MENTIONED BUT UNDERSTOOD TO BE NECESSARY TO COMPLETE THE PLUMBING SYSTEM SHALL BE INCLUDED. PIPING MATERIAL AND FITTING TO BE SUITABLE FOR SYSTEM PRESSURE AND REQUIRED SMOKE AND FIRE RATING. FOLLOW MANUFACTURE INSTALLATION AND APPLICATION INSTRUCTIONS.
5. MAKE ALL NECESSARY CONNECTIONS TO EXISTING SERVICES.
6. ALL BURIED SANITARY AND STORM DRAINAGE PIPING SHALL BE IPEX BDS PVC SDR 35 PIPE WITH SOLVENT JOINTS (CAST IRON MECHANICAL JOINTS). 8" (200MM) AND OVER USE IPEX RING-TITE PVC SDR 35 PIPE WITH GASKETED JOINTS.
7. ALL ABOVE GROUND SANITARY AND STORM DRAINAGE PIPING SHALL BE IPEX SYSTEM 15 PVC DWV WITH ONE-STEP CEMENT FOR SIZES UP TO 6'(150MM) AND TWO-STEP CEMENT WITH PRIMER FOR SIZES 8'(200MM) AND LARGER. (CAST IRON MECHANICAL JOINT OR DWV COPPER). USE IPEX SYSTEM XFR PVC DWV IN AIR PLENUMS OR BUILDINGS CLASSIFIED AS HIGH BUILDINGS. PVC PIPING IS NOT PERMITTED IN VERTICAL SERVICE SPACES.
8. ABOVE GROUND WATER PIPING SHALL BE TYPE 'L" COPPER C/W 95/5 SOLDER JOINTS. FOR 2" (50MM) AND OVER, VITAULIC ROLL-GROOVED JOINTING WILL BE ACCEPTED. AS AN ALTERNATE FOR DCW ONLY, USE IPEX AQUARISE CPVC PIPE, FITTINGS AND VALVES WITH ONE-STEP CEMENT FOR SIZES UP TO 2'(50MM) AND TWO-STEP CEMENT WITH PRIMER FOR SIZES 2-1/2'(65MM) AND LARGER.
9. BURIED DOMESTIC WATER PIPING SHALL BE COPPER TYPE "K" OR CEMENT LINED DUCTILE IRON. PVC APPROVED FOR MUNICIPAL POTABLE WATER. BURIED INCOMING FIRE LINE SHALL BE CEMENT LINED DUCTILE IRON.
10. ALL ABOVE GROUND VENT PIPING SHALL IPEX SYSTEM 15 PVC DWV WITH ONE-STEP CEMENT FOR SIZES UP TO 6'(150MM) AND TWO-STEP CEMENT WITH PRIMER FOR SIZES 8'(200MM) AND LARGER (CAST IRON WITH MECHANICAL JOINT OR DWV COPPER). USE IPEX SYSTEM XFR PVC DWV IN AIR PLENUMS OR BUILDINGS CLASSIFIED AS HIGH BUILDINGS.
11. BURIED VENT PIPING MAY BE ABS PLASTIC SOLVENT WELD.
12. WHERE PVC PIPING TO BE USED, THE PIPING PRESSURE, SMOKE AND FIRE RATING TO BE SUITABLE FOR APPLICATION.
13. ALL FIRE PROTECTION PIPING TO BE "THINWALL" PIPE WITH GROOVED FITTINGS.
14. VALVES UP TO 2" (50MM) SHALL BE FULL THROAT BRONZE BALL VALVES. 2 1/2" (65MM) AND OVER SHALL BE BUTTERFLY VALVES.
15. SUPPLY AND INSTALL ALL GREASE INTERCEPTORS, PLUMBING FIXTURES, CLEANOUTS, HOSE BIBBS, FLOOR DRAINS, COMBINATION DRAINS, ROOF DRAINS, HOT WATER TANKS, PUMPS, ETC. AS SHOWN ON DRAWINGS AND LISTED IN SCHEDULES.
16. VISIBLE SINK DRAINAGE TRAPS AND SUPPLY PIPING SHALL BE CHROME PLATED.
17. CLEANOUTS SHALL BE INSTALLED AS REQUIRED BY CODE AND WHERE SHOWN AND SHALL SUIT FLOORING MATERIAL.
18. PROVIDE PRESSURE ACTIVATED TRAP SEAL PRIMERS FOR ALL FLOOR DRAINS.
19. PROVIDE HAMMER ARRESTORS ON DCW AND DHW SUPPLIES TO FIXTURE (OR GROUP OF FIXTURES) AND WHERE REQUIRED.
20. FIRE HOSE CABINETS SHALL BE FULLY RECESSED AS SHOWN TO CONTAIN LISTED 1 1/2" (40MM) HOSE, RACK AND VALVE AND ANI 1/2" (40MM) LEXXAN FOG-SOLID STREAM NOZZLE CHROME PLATED, AND A FIRE EXTINGUISHER. HOSE LENGTH SHALL BE 75 FT. (22.5M). ALL EXPOSED PARTS INCLUDING RACK, VALVES, PIPE FITTINGS SHALL BE CHROME PLATED. WHERE REQUIRED, PROVIDE ULC LISTED PRESSURE RESTRICTING HOSE VALVES.
21. PROVIDE APPROVED BACKFLOW PREVENTORS ON ALL INSIDE AND OUTSIDE HOSE BIBBS. ON MECHANICAL EQUIPMENT CONNECTIONS, USE REDUCED PRESSURE TYPE BACKFLOW PREVENTORS.
22. ALL SPRINKLER INSTALLATIONS SHALL BE INSTALLED AS STIPULATED IN NFPA 13.
23. DOMESTIC COLD AND HOT WATER PIPING (INCLUDING PVC PIPING) SHALL BE INSULATED WITH 1" (25MM) THICK FIBREGLAS PIPE INSULATION WITH ASJ. USE 1 1/2" (40MM) MATERIAL FOR PIPING 2" AND OVER. HORIZONTAL RUNS OF SANITARY AND STORM DRAINS SHALL BE INSULATED IN A SIMILAR MANNER. IN EXPOSED AREAS FINISH WITH CANVAS OR P.V.C. JACKETTING. INSULATE ALSO COLD WATER METERS. PVC DRAINAGE PIPING NEED NOT BE INSULATED.
24. ROOF DRAIN BODIES TO BE INSULATED, AND AREAS EXPOSED TO BE FINISHED WITH CANVAS OR PVC JACKETTING.
25. SUPPLY AND INSTALL ALL FIRE EXTINGUISHERS AS REQUIRED BY CODE.
26. SEE FIXTURE SCHEDULE FOR PLUMBING FIXTURE TYPES.
27. SUPPLY AND INSTALL WHEEL HANDLE OR SCREW FIXTURES STOP VALVE ON THE HOT AND COLD WATER SUPPLY TO EVERY FIXTURE ON THE JOB, IN ADDITION TO THE VALVE OR FAUCET ON THE FIXTURE ITSELF.
28. PROTECT ALL FIXTURES UNTIL HANDED OVER TO THE OWNER. ALL FIXTURES SHALL BE C/W NECESSARY TRIM, TRAP SUPPLIES, STOPS, TAIL PIECES, TRAPS, GASKETS, ETC.
29. PROVIDE CONCRETE THRUST BLOCKS AT EVERY TURN OF DIRECTION AND WHERE SHOWN ON DRAWINGS FOR DOMESTIC BURIED WATER AND BURIED FIRE LINE.
30. AFTER COMPLETION OF PIPING INSTALLATION PROVIDE SYSTEM FLUSHING. SUBMIT REPORT UPON COMPLETION.
31. ALL EXISTING DRAIN LINES TO BE PRESSURE WASHED AND VIDEO INSPECTED BY PLUMBING CONTRACTOR, PRIOR TO COMMENCEMENT OF WORK.

WARM AIR HEATING, VENTILATING & AIR CONDITIONING – SECTION 15850

1. SUPPLY AND INSTALL ALL HEATING, VENTILATION AND AIR HANDLING EQUIPMENT AS SHOWN ON DRAWINGS.
2. SUPPLY AND INSTALL DUCTWORK AS INDICATED ON DRAWING. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH LATEST SMACNA STANDARDS AND SHALL BE MANUFACTURED OF GALVANIZED STEEL UNLESS SPECIFICALLY NOTED OTHERWISE.
3. INSTALL MANUAL BALANCING DAMPERS AT ALL BRANCH TAKEOFFS AND IN OTHER LOCATIONS WHERE NECESSARY FOR SYSTEM BALANCING.
4. FLEXIBLE DUCTS SHALL BE ALUMINUM HELICALLY WOUND SPIRAL DUCT, EQUAL TO FLEXMASTER T/L, MAXIMUM 10 FT. LENGTH. PROVIDE ACOUSTIC FLEX EQUAL TO FLEXMASTER MODEL T/L-A, WHERE DUCTS ARE TO BE INTERNALLY INSULATED. USE CLASS A FIRE-RATED FLEXIBLE DUCTS WITH A FLAME SPREAD RATING BETWEEN ZERO AND 25 IN CEILING RETURN AIR PLENUMS.
5. INSTALL 6" (150MM) APPROVED FLEXIBLE CONNECTOR ON DUCT CONNECTIONS TO RESILIENTLY MOUNTED HEAT PUMP UNITS, ERV UNIT.
6. WHERE SHOWN, DUCTWORK SHALL BE LINED INTERNALLY WITH (1/2") (1") (12MM) (25MM) FACED FLEXIBLE DUCT LINER. SHOWN SIZES ARE CLEAR INSIDE DIMENSIONS, INCREASE DUCT SIZE ACCORDINGLY.
    SIMILARLY LINE SUPPLY AND RETURN DUCTS 10 FT. (3M) FROM ALL ROOFTOP AC UNITS AND INDOOR AIR HANDLER/AND HEAT PUMPS.
7. SUPPLY ALL GRILLES AND DIFFUSERS WHERE SHOWN ON DRAWINGS. FINISH SHALL BE OFF-WHITE BAKED ENAMEL.
8. THE REFRIGERANT LINES SHALL BE SIZED FOR A PRESSURE DROP OF NOT MORE THAN 14 KPA (2 PSI). REFRIGERANT PIPE SHALL BE TYPE L NITROGEN CHARGED ACR GRADE COPPER WITH FORGED BRASS OR WROUGHT COPPER REFRIGERATION FITTINGS. ALL JOINTS SHALL BE BRAZED. SAE FLARED FITTINGS ARE NOT ACCEPTED.
9. PROVIDE SIGHT GLASSES FOR ALL LIQUID LINES AND SPORLAN LIQUID LINE DRIERS AHEAD OF EACH THERMO EXPANSION VALVE. PROVIDE SOLENOID VALVE AHEAD OF EACH EXPANSION VALVE. SUCTION LINES SHALL BE PROPERLY LOOPED IN ORDER TO ALLOW THE RETURN OF OIL TO RETURN TO THE COMPRESSOR. PROVIDE NECESSARY WIRING TO OPERATE CONDENSER AND DX SOLENOID.
10. REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 3/4" (19MM) THICK ARMAFLEX INSULATION, WITH CEMENTED JOINTS. LIQUID LINES OUTDOORS EXPOSED TO SUNLIGHT SHALL ALSO BE SIMILARLY INSULATED. COVER EXTERIOR INSULATION WITH ALUMINUM JACKETTING.
11. INCLUDE FOR STARTUP OF VRF SYSTEM AND ERV SYSTEM. SUBMIT REPORTS.
12. CENTRIFUGAL FANS SHALL BE COMPLETE WITH BELT GUARDS WITH TACHOMETER OPENINGS.
13. ALL BACKDRAFT AND ELECTRIC MOTORIZED DAMPERS SHALL BE LOW LEAKAGE TYPE.
14. ALL EXTERIOR DUCTWORK SHALL BE INTERNALLY INSULATED WITH 1/2" (12MM) OF COATED FIBREGLAS DUCT INSULATION. INSULATE THE EXTERIOR WITH 2" (50MM) OF RIGID INSULATION AND FINISH WITH ALUMINUM JACKETTING, BANDED ON AND SEALED WITH SILICONE OR SIMILAR SEALER. (TOTAL INSULATION VALUE R-12). DUCTWORK IN UNHEATED SPACES SHALL ALSO BE INSULATED TO R-12.
15. EXHAUST AIR DUCTWORK WITHIN 5 FT. (1500MM) OF A WALL OR ROOF, AND ALL OUTSIDE AIR INTAKE DUCTWORK, SHALL BE EXTERNALLY INSULATED WITH 2 1/2" (38MM) THICK FOIL FACED FLEXIBLE FIBREGLAS DUCT INSULATION (R-10). APPLY USING RECOMMENDED ADHESIVE AND TAPE ALL JOINTS USING VAPOUR BARRIER TAPE. ALL AIR CONDITIONED AIR SUPPLY DUCTWORK, UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE INSULATED IN A SIMILAR MANNER USING 1" MATERIAL. INSULATION INSTALLED IN CEILING RETURN AIR PLENUM TO BE FIRE-RATED OR PLENUM RATED.
16. SUPPLY AND INSTALL ELECTRIC DUCT HEATERS OF SIZE AND TYPE AS SHOWN ON DRAWINGS. INCLUDE AIR FLOW SWITCH, CONTACTORS, SAFETY CUTOUTS, CONTROL TRANSFORMER, SCR CONTROLLER ETC.
17. PROVIDE ALL MOTORIZED DAMPERS TO OPEN AND CLOSE AS RESPECTIVE FANS START AND STOP.
18. SUPPLY AND INSTALL ALUMINUM WEATHER LOUVRES WHERE SHOWN. 4" (100MM) [6" (150MM)] STORMPROOF BLADE C/W BIRDSCREEN, LOUVRE COLOUR TO ARCHITECT'S APPROVAL. BLANK OFF ALL UNUSED SECTIONS WITH INSULATED SHEETMETAL.
19. ADJUST ALL FAN SPEEDS TO DELIVER SHOWN AIR QUANTITIES. BALANCE ALL AIR SYSTEMS AND SUPPLY WRITTEN AIR BALANCING REPORTS IN ELECTRONIC FORMAT. INCLUDE NECESSARY SPARE BELTS PULLEYS FOR FIELD ADJUSTMENT AND REPLACEMENT OF FILTERS. SET AIR SYSTEMS CONTROLS AND DEMONSTRATE OPERATION TO OWNER'S REPRESENTATIVE.

VRF SYSTEM – SECTION 15960

PART – 1 GENERAL

1.1 SUMMARY

.1 SCOPE OF WORK:

.1 SUPPLY AND INSTALL SPLIT-SYSTEM AIR CONDITIONING SYSTEMS. PROVIDE ALL NECESSARY REFRIGERANT SYSTEM COMPONENTS, RELAYS, CONTACTORS, STARTERS, DISCONNECTS.

1.2 SUBMITTALS

.1 SHOP DRAWINGS

.1 SUBMIT PRODUCT DATA FOR SPLIT-SYSTEM AIR CONDITIONING SYSTEMS AND RELATED EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE, BUT NOT BE LIMITED TO:

.1 COMPLETE SPECIFICATIONS.

.2 PRODUCT DATA SHEETS INDICATING RATED CAPACITIES, WEIGHT, AND SOUND POWER LEVELS.

.3 REFRIGERANT PIPING DIAGRAM SHOWING ALL REQUIRED COMPONENTS (VALVING, FILTER-DRIER, SIGHT GLASS, TRAPS).

.4 POWER AND CONTROL WIRING DIAGRAMS.

.5 PHYSICAL OUTLINE DIMENSION DRAWING SHOWING REQUIRED CLEARANCES, WEIGHTS, AND LOCATION AND SIZE OF CONNECTION ENTRIES.

PART – 2 PRODUCTS

2.1 SPLIT-SYSTEM HEAT PUMP SYSTEM

.1 GENERAL

.1 THE NEW AIR COOLED HEAT PUMP SYSTEM SHALL CONSIST OF A WALL MOUNTED PACKAGED EVAPORATOR SECTIONS AND MATCHING OUTDOOR UNIT. REFER TO EQUIPMENT SCHEDULES ON DRAWINGS.

.2 THE UNITS SHALL BE MADE WITHIN NORTH AMERICA. THE UNITS SHALL BE LISTED BY INTERTEK TESTING SERVICE (ITS) AND BEAR THE ETL LABEL. ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.). THE UNITS SHALL BE RATED IN ACCORDANCE WITH ARI STANDARD 210/240 AND BEAR THE ARI LABEL. THE UNITS SHALL BE MANUFACTURED IN A FACILITY CERTIFIED TO ISO 9001.

.3 THE CONDENSING UNIT SHALL CONTAIN AN R-410 REFRIGERANT CHARGE FOR THE EVAPORATOR SECTION AND CONDENSER SECTION. SYSTEM SEER SHALL MEET OR EXCEED REQUIREMENTS OF THE ASHRAE 90.1 LATEST EDITION.

.2 WARRANTY

.1 THE UNITS SHALL HAVE A MANUFACTURER'S WARRANTY FOR A PERIOD OF ONE (1) YEAR FROM DATE OF INSTALLATION. THE COMPRESSOR SHALL HAVE A WARRANTY OF FIVE (5) YEARS FROM DATE OF INSTALLATION. IF, DURING THIS PERIOD, ANY PART SHOULD FAIL TO FUNCTION PROPERLY DUE TO DEFECTS IN WORKMANSHIP OR MATERIAL, IT SHALL BE REPLACED OR REPAIRED AT THE DISCRETION OF THE MANUFACTURER.

.2 THIS WARRANTY DOES NOT INCLUDE LABOR.

.3 INDOOR UNIT

.1 THE INDOOR UNIT SHALL BE FACTORY ASSEMBLED AND WIRED. THE CABINET SHALL BE FABRICATED OF GALVANNEALED STEEL, FINISHED IN OFFWHITE WITH CORROSION INHIBITING POLYESTER POWDER-COATED PAINT.

.2 THE EVAPORATOR FANS SHALL BE A FORWARD CURVE CENTRIFUGAL TYPE, DYNAMICALLY BALANCED AND DIRECTLY MOUNTED TO THE MOTOR SHAFTS. THE MOTORS SHALL BE PSC TYPE WITH INTERNAL THERMAL OVERLOAD PROTECTION. THE SUPPLY LOUVERS SHALL BE DUAL ADJUSTABLE F