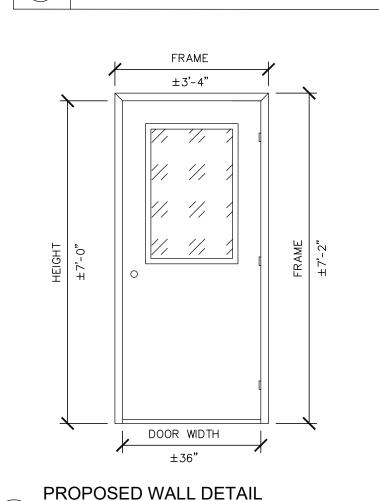


LEGEND: ITEM DESCRIPTION D# DOOR NUMBER SYMBOL W# WINDOW NUMBER SYMBOL



AND SCHEDULE PLAN

SCALE: 1:25

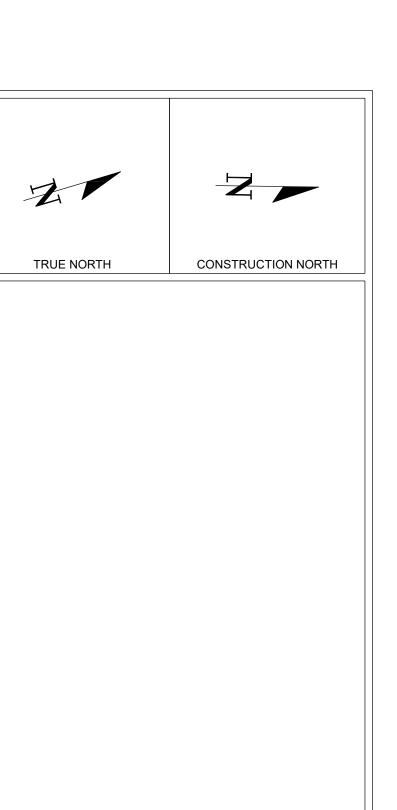
						DOOR	R & WINI	DOW SCHEDU	JLE					
DOOR/WINDOW				DOOR	/ WINDOW				FRAME			HARDWARE		
NÚMBER	QTY	SWING	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	GLAZING	MATERIAL	FINISH	DOORSTOP	DOOR HANG	DOOR HANDLE	
D1	5	LH	±36"	±7'-0"	±1' ³ / ₄ "	HOLLOW	PAINT	HALF	METAL	PAINT	YES	(3x) 4 ½" SS BALL BEARING HINGES	LEVER HANDLE c/w KEYED LOCK	
D2	2	RH	±30	<u> </u>	± 1 4	METAL		GLASS				BEARING HINGES		
D3 (VAULT 1 & 2)	2	RH	±36"	±7'-0"	±1 ³ ,"	HOLLOW METAL	PAINT	N/A	METAL	PAINT	YES	(3x) 4 ½" SS BALL BEARING HINGES	LEVER HANDLE c/w KEYED LOCK	
W1	4	N/A	±4'-0"	±3'-4 ½"	±1 ³ / ₄ "	FROST	TEMPERE	ED GLASS	METAL	PAINT	N/A	N/A	N/A	

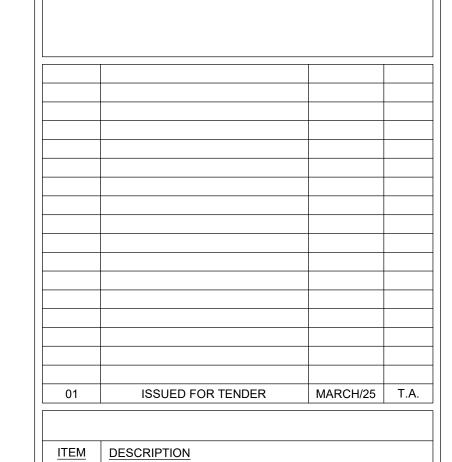
NOTES:

- SUBMIT SHOP DRAWINGS FOR DOORS
 AND HARDWARE SCHEDULES FOR

 BEVIEW
- ALL MAN DOORS TO BE HOLLOW METAL, 16 GA. STEEL, OF SIZES SHOWN, AS MANUFACTURED BY STEELCRAFT, OR ALTERNATIVE APPROVED BY OWNER.
- 3. DOOR FRAMES TO BE 16 GA. STEEL,
 COMPLETE WITH ANCHORS, AND
 REINFORCED FOR HARDWARE, AS
 MANUFACTURED BY STEELCRAFT, OR
 ALTERNATIVE APPROVED BY OWNER
- ALTERNATIVE APPROVED BY OWNER.

 4. DOORS TO HAVE COMPLETE HARDWARE.
 HARDWARE TO BE COMMERCIAL GRADE
 STAINLESS STEEL, TO MEET HOPA
 STANDARDS.
- 5. PROVIDE 3 HEAVY DUTY STAINLESS STEEL HINGES PER DOOR
- 6. INSTALL DOORS AND FRAMES IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
- 7. ALL MAN DOORS AND FRAMES TO BE PAINTED WITH 1 COAT ALKYD PRIMER AND 2 COATS ALKYD ENAMEL, SEMI-GLOSS PAINT. REFER TO PAINT SPEC. SCHEDULE ON DWG.A201.





0	3 6 Feet



605 JAMES STREET NORTH, HAMILTON, ON, L8L 1K1 PH:(905)525-4330 F:(905)525-7258

PROJECT: 605 JAMES STREET NORTH
FOURTH FLOOR RENOVATIONS

DWG. TITLE:
WALL DETAIL AND SCHEDULE PLAN

SCALE:
N.T.S.

DATE:
MARCH 2025

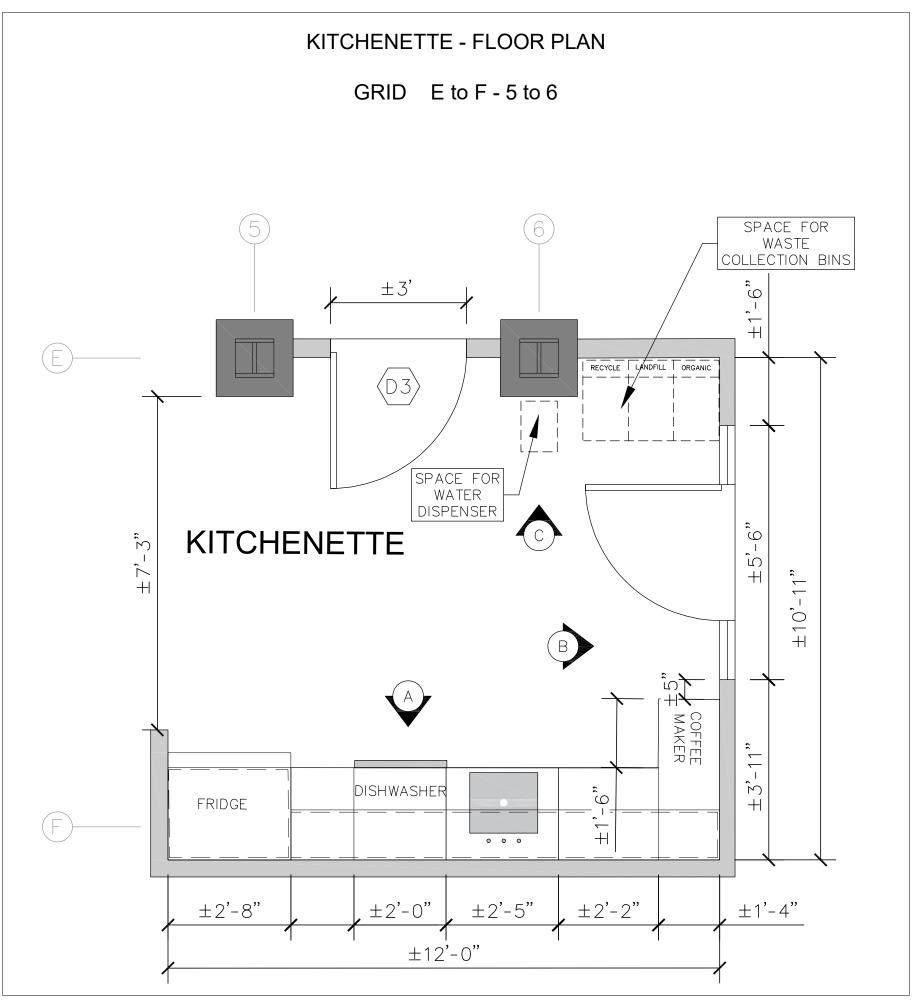
DRAWN BY:
T.A.

CHECKED BY:
J.L./L.F.

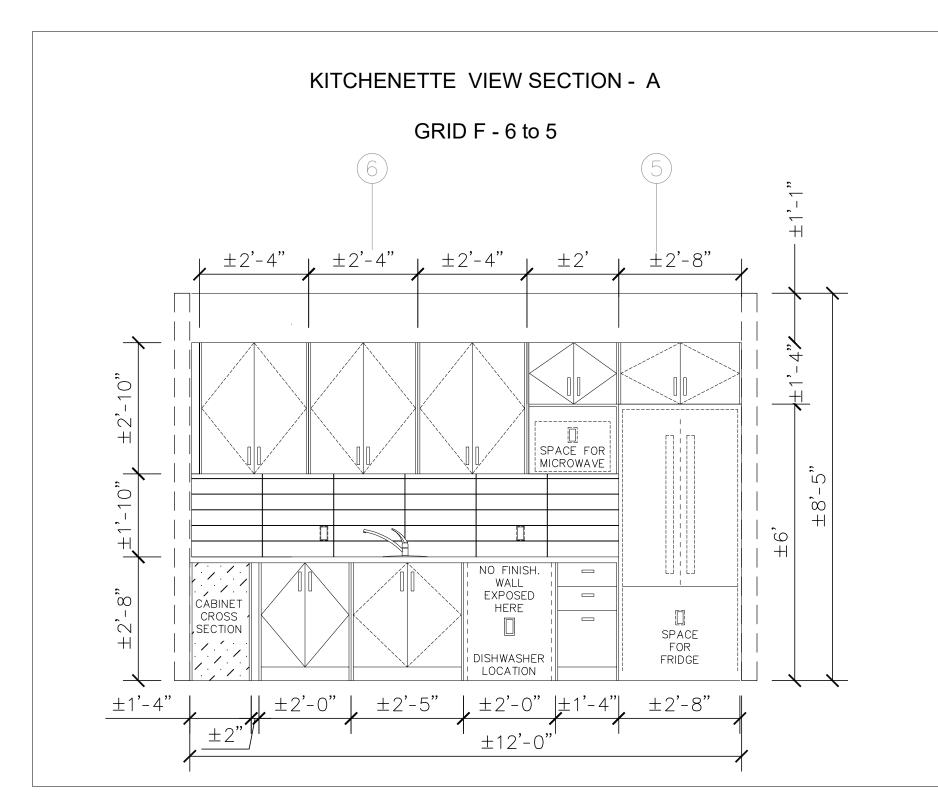
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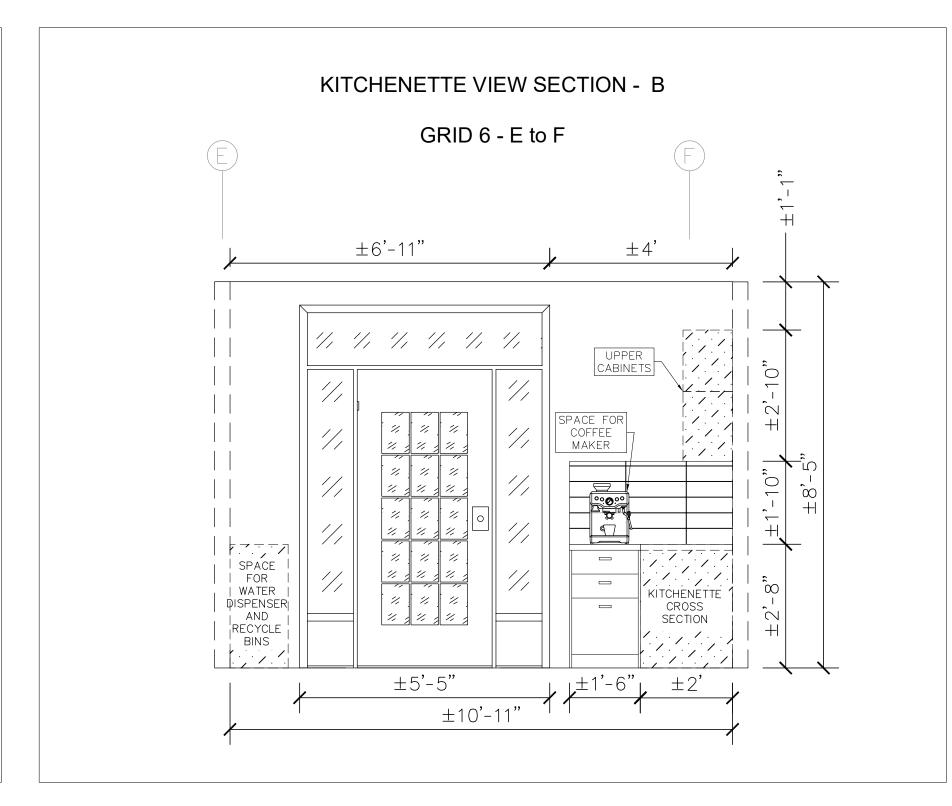
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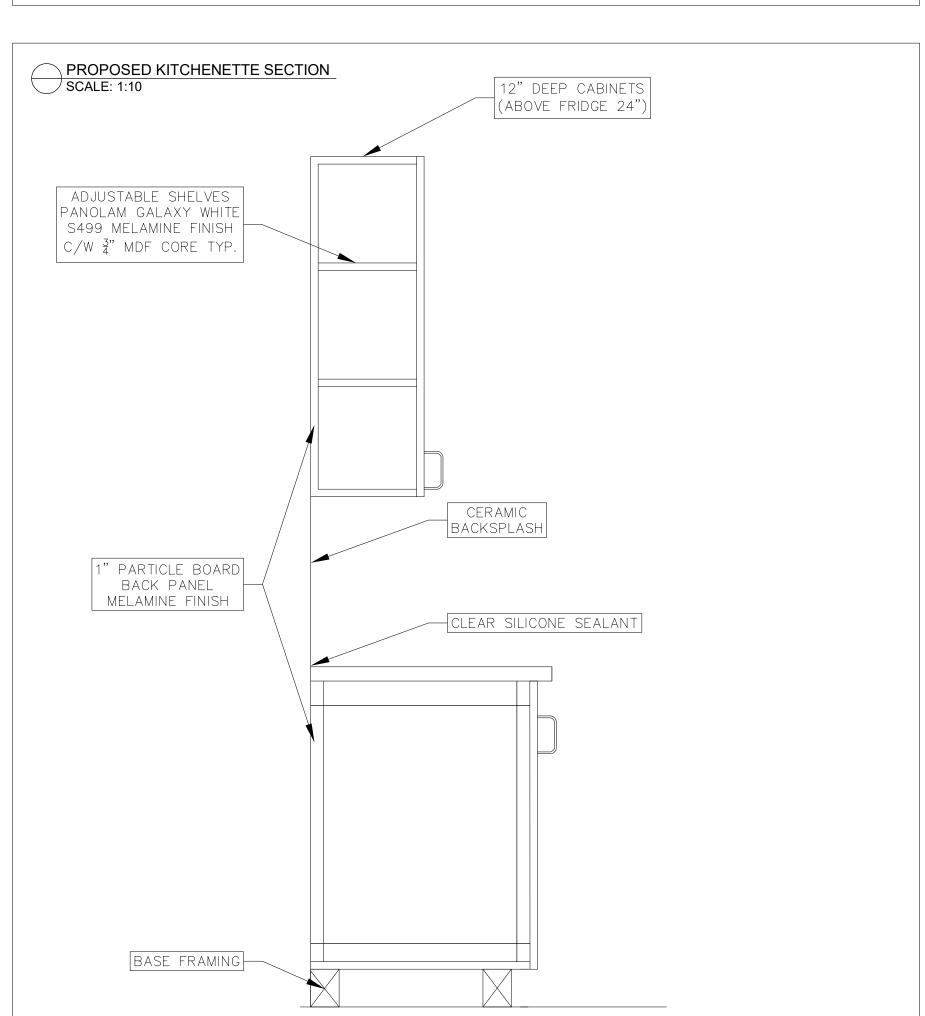
SCANT PONCISCA 2025 (605 James - 4th Floor Renos FA01604\1 PROCUREMENT DOCUMENTS\3 TENDER DOCUMENTS\1 DRAWINGS & SPECS\Architectural\Architectural\Plans 4th Floor Renovations New Design

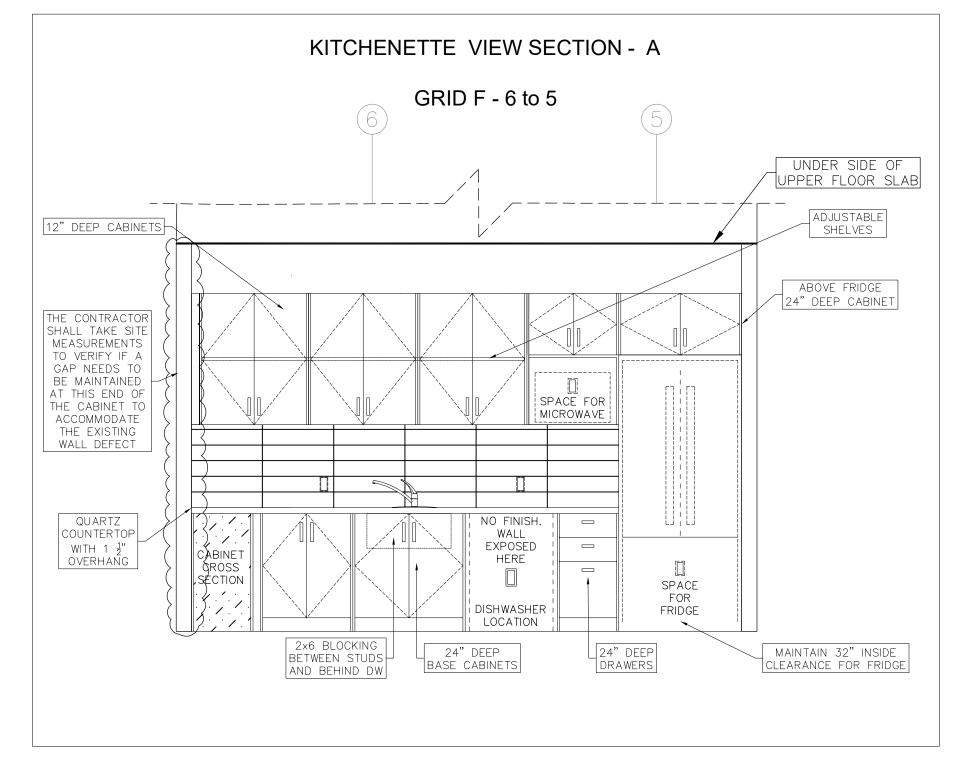


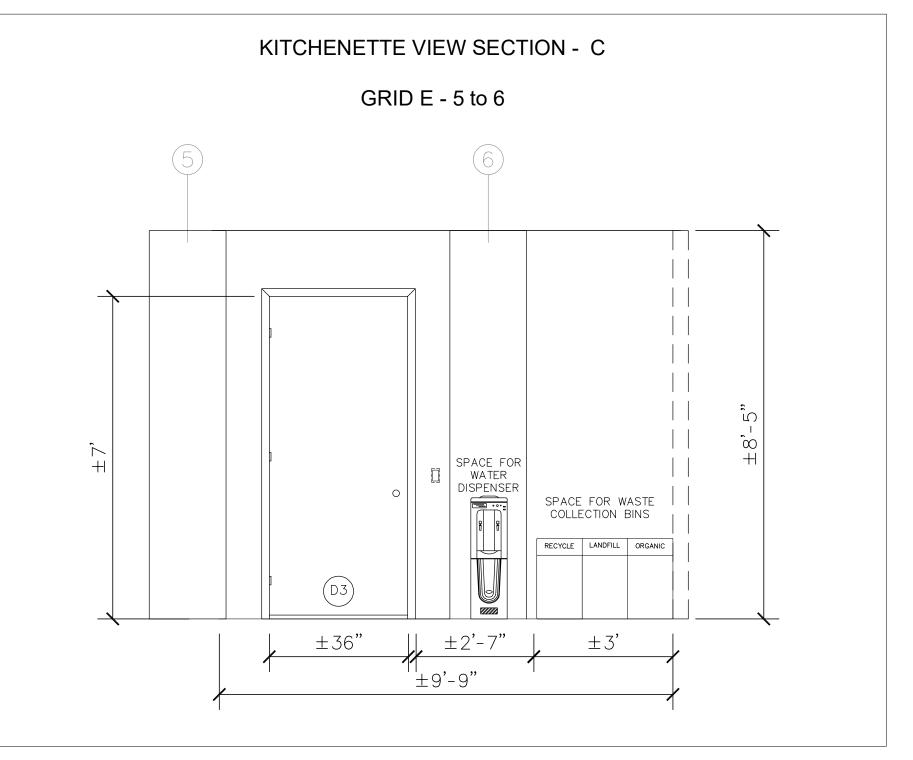






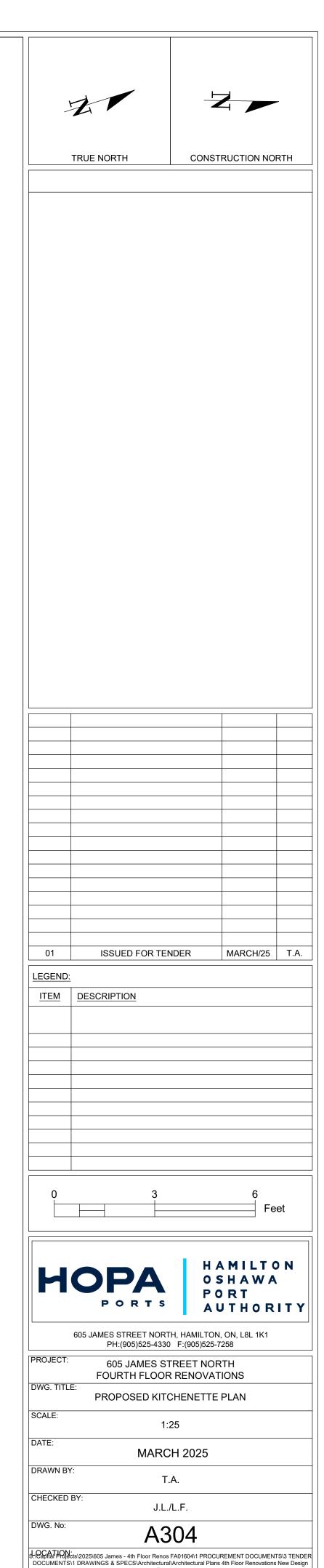


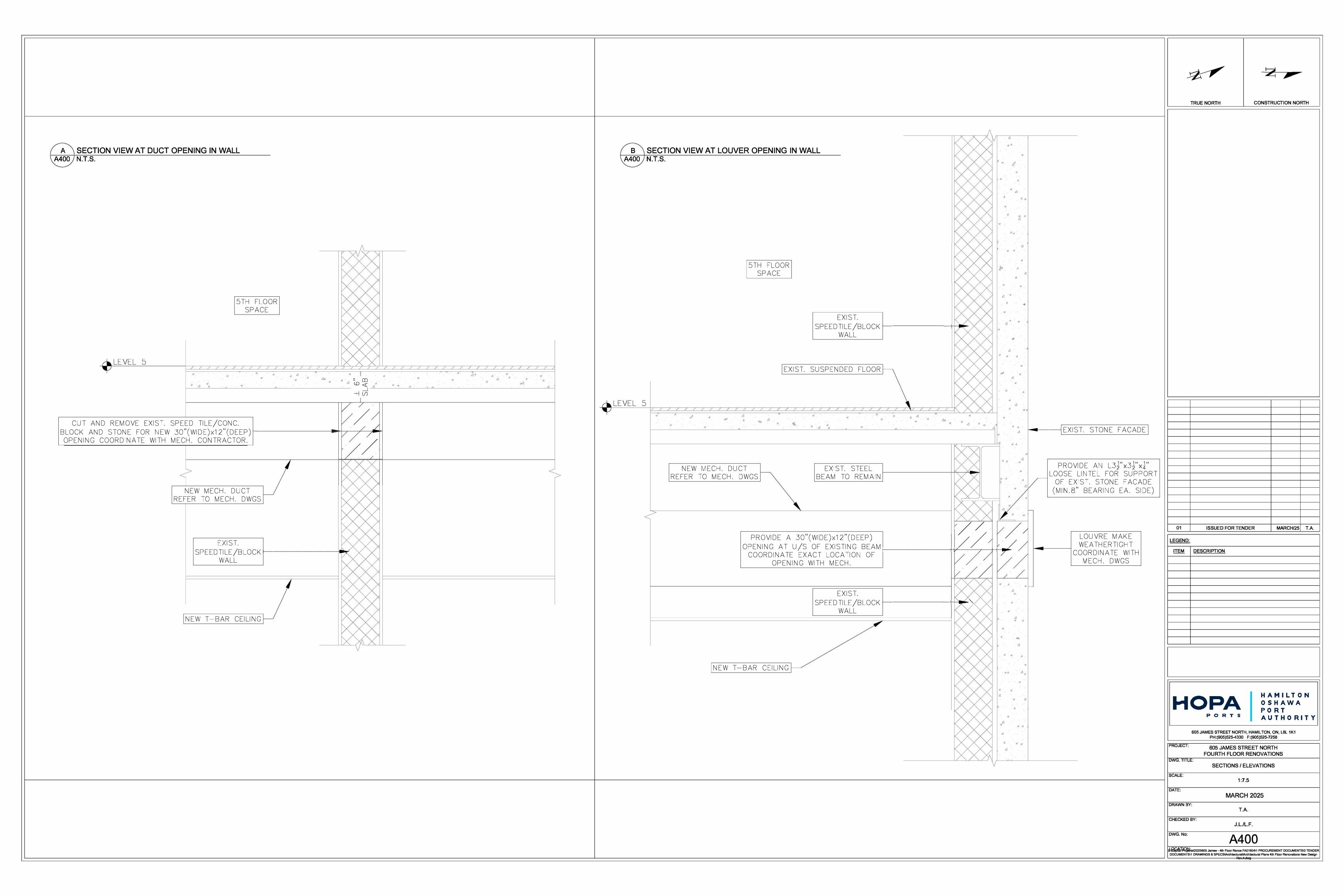


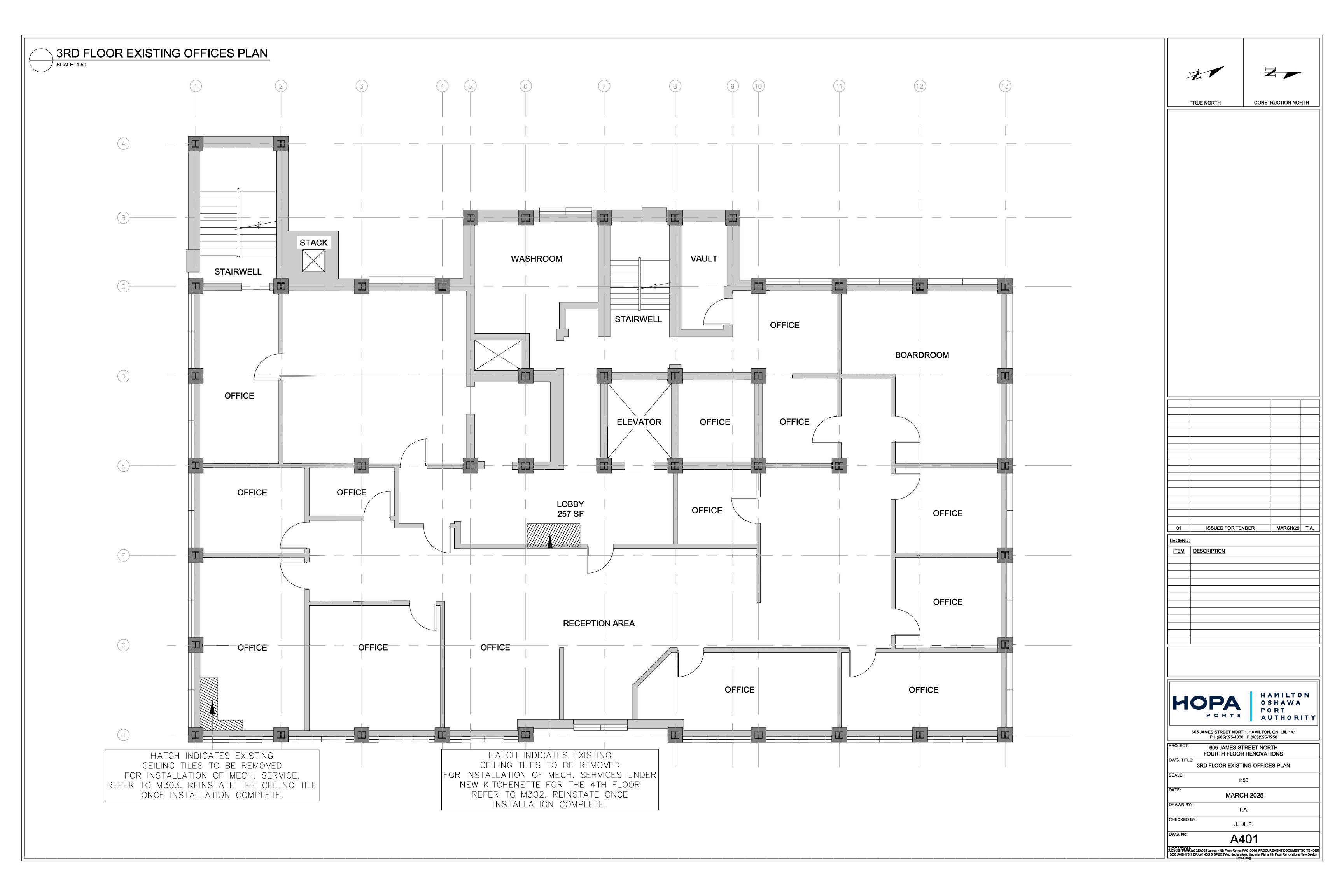


PROPOSED KITCHENETTE NOTES:

- 1. CONTRACTOR IS TO NOTIFY PROJECT MANAGER OF ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND MEASUREMENTS SHOWN ON THESE PLANS.
- 2. DO NOT SCALE DRAWINGS.
 3. CONTRACTOR TO SUPPLY ALL MATERIALS, LABOUR AND EQUIPMENT NECESSARY TO COMPLETE THE WORK INDICATED ON THE DRAWINGS.
- 4. CONTRACTOR IS TO COORDINATE ALL WORK.
- 5. WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL MINISTRY OF LABOUR REGULATIONS AND GUIDELINES.
 6. CONTRACTOR IS TO COOPERATE IN COORDINATING THE WORK OF OTHER CONTRACTORS, AND HOPA STAFF PRESENT IN THE WORK AREA.
- 7. ALL WORK REQUIRED, INCLUDING DEMOLITION, SHALL BE CARRIED OUT IN A MANNER THAT WILL NOT DAMAGE THE EXISTING SITE OR STRUCTURE. ANY DAMAGES SHALL BE REPAIR AT THE CONTRACTOR EXPENSE.
- 8. ALL KITCHEN APPLIANCES, SUCH AS FRIDGE, DISHWASHER, COFFEE MAKER, WATER DISPENSER AND WASTE COLLECTION BINS WILL BE SUPPLY AND INSTALLED BY HOPA.







14	Туре	Conr	nection Sizes		Fixture		Trim	Accessories		
tem	Туре	HW CW	TW Drain Vent	Acceptable Manufacturer	Fixture Description	Acceptable Manufacturer	Trim Description	Acceptable Manufacturer	Accessory Description	
S-1	STAINLESS STEEL SINGLE SINK	1/2 1/2	1 1/2 1 1/-	4 KINDRED LBS6808-1/3 NOVANNI 1017	SINK: SINGLE COMPARTMENT, LEDGE-BACK. FROM 1.0 mm (20 GAUGE) THICK TYPE 302 POLISHED STAINLESS STEEL, SELF-RIMMING, UNDERCOATED, CLAMPS. OVERALL SIZES: 520 mm X 510 mm X 200 mm (20½" X 20" X 8").	ZURN Z82300-CP8 MOEN COMMERCIAL 8701	FAUCET: CHROME PLATED BRASS, WITH SWING SPOUT, AERATOR, SINGLE LEVER HANDLE, WASHERLESS CONTROLS, ACCESSORIES TO LIMIT MAXIMUM FLOW RATE TO 8.35 I/min (2.2 gpm) AT 413 kPa (60 psi).		WASTE FITTING: INTEGRAL STAINLESS STEEL BASKET STRAINER/STOPPER, TAILPIECE, CAST BRASS P-TRAP WITH CLEANOUT.	
MS-1	JANITOR SINK	1/2 1/2	1 1/2 1 1/-	4 NOVANNI 7500-28 KINDRED SL2424-1	SINK: SINGLE COMPARTMENT 16 GAUGE, TYPE 304, STAINLESS STEEL, EXPOSED SURFACED FINISHED TO A SATIN FINISH. RADIUS COVED CORNERS FRONT AND BACK ONLY. ROLLED EDGE AT FRONT & SIDES. OVERALL SIZES: 540 mm X 550 mm X 360 mm (21 1/2"" X 21 5/8"" X 14").	CHICAGO FAUCETS 540-LDABCP	FAUCET: WALL MOUNTED 8" BODY, ADJUSTABLE ARMS 7-1/4"-8-3/4". CHROME PLATED BRASS WITH 6"S TYPE SWING SPOUT. 2-3/8" VANDAL PROOF LEVER HANDLE. QUATURN COMPRESSION OPERATING CARTRIDGE. ACCESSORIES TO LIMIT MAXIMUM FLOW RATE TO 8.35 I/min (2.2 gpm) AT 413 kPa (60 psi).	McGUIRE 8912	WASTE FITTING: INTEGRAL STAINLESS STEEL BASKET STRAINER/STOPPER, TAILPIECE, CAST BRASS P-TRAP WITH CLEANOUT.	

FAN	FAN COIL SCHEDULE capacity indicated on schedule refer to specification for construction standards, accessories and additional information.																							
			COIL I	NFORM	NOITAN				Со	oling (Capac	ity	Не	eating	Capaci	ty			Elect	rical				
Item	Туре	Air Flow	COII		DTS	DTR	COND	Total	Sens	Flow	FWT	Iwт	Total	Flow	FWT	ıwт	Fluid Type	Fan Motor		licui		Manufacturer	Remarks	
10111	.,,,,,	cfm (High Speed)	COIL TYPE	ROW	DTS PIPE	PIPE	PIPE	Gross	MBH	gpm	'F	*F	MBH	gpm	'F	'F	Туре	Wiotor	Voltage	MCA Fuse & Model		& Model	Nemura	
FC-1	VERTICAL	0.45	COOLING/		4 /0"	4 /0"	4 /0"			4 70				4 00	400			501	445 /4 /00		1.5	DAIKIN	SOFT GREY COLOUR. FACTORY SUPPLIED T—STAT. UNIT	
	CABINET FAN	245	HEATING	4	1/2	1/2	1/2	5.51	4.19	1.30	45	53.5	22.9	1.20	180	143.3	WATER	ECM	115/1/60	4.4	15	FCVC103	MOUNTED NON-FUSE DISCONNECT SWITCH. PROVIDE BACNET CARD FOR FUTURE INTEGRATION. PROVIDE NEW	
	COIL																						TOE SPACED GRILLE, 3.5" SUBBASE.	
FC-2	VERTICAL		COOLING/		T																	DAIKIN	SOFT GREY COLOUR. FACTORY SUPPLIED T-STAT. UNIT	
FC-2	CABINET FAN	490	HEATING '	4	3/4"	3/4"	1/2"	12.9	9.22	2.50	45	55.4	49.2	2.50	180	140.7	WATER	ECM	115/1/60	4.4	15	FCVC106	MOUNTED NON-FUSE DISCONNECT SWITCH. PROVIDE	
	COIL																						BACNET CARD FOR FUTURE INTEGRATION. PROVIDE NEW TOE SPACED GRILLE, 3.5" SUBBASE.	
	VERTICAL		COOLING /																			DAIKIN	SOFT GREY COLOUR. FACTORY SUPPLIED T-STAT. UNIT	
FC-3	CABINET FAN	552	COOLING/ HEATING	4	3/4"	3/4"	1/2"	16.2	11.1	3.2	45	55.0	60.3	3.20	180	142.9	WATER	ЕСМ	115/1/60	8.8	15	FCVC108	MOUNTED NON-FUSE DISCONNECT SWITCH. PROVIDE	
	COIL		I I D XI II YO		'	′	'												' '				BACNET CARD FOR FUTURE INTEGRATION. PROVIDE NEW	
																							TOE SPACED GRILLE, 3.5" SUBBASE.	
FC-4	VERTICAL	000	COOLING/		7 /4"	7 /4"	1 /0"	07.7	47.4	4.00		E C O	00.4	1.0	100	477.4	WATER	F014	115 /1 /60		1 -	DAIKIN	SOFT GREY COLOUR. FACTORY SUPPLIED T-STAT. UNIT	
	CABINET FAN COIL	996	HEATING '	4	3/4	3/4	'/2	23.3	17.4	4.20	45	56.0	99.1	4.2	180	133.4	WATER	ECM	115/1/60	0.0	15	FCVC110	MOUNTED NON-FUSE DISCONNECT SWITCH. PROVIDE BACNET CARD FOR FUTURE INTEGRATION. PROVIDE NEW	
	COIL																						TOE SPACED GRILLE, 3.5" SUBBASE.	
GENERAL	HEAT PUMP NOT	ES:		•							•	•	•	•	•		•		•	•	•	•	,	
	N COIL UNITS TO		OW LIMIT, C	CONDE	ENSATE	OVER	FLOW,	& PIP	ING P	ACKAG	ε.												!	

<u>GRIL</u>	LE SCHEDULE					CAPACITY INDICATED ON SCHEDULE REFER TO SPECIFICATION FOR CONSTRUCTION STANDARDS, ACCESSORIES AND ADDITIONAL INFORMATION.
Item	Туре	Equalizing Grid	Volume Damper		Acceptable Manufacturer	Description
D1	SQUARE CEILING DIFFUSER	YES	NONE	EH PRICE	SCDA	MULTICONE, FULLY ADJUSTABLE, 12x12, STEEL CEILING DIFFUSER W/ROUND NECK. SUITABLE FOR LAY-IN T-BAR CEILING, OR DRYWALL CEILING WHEN C/W FRAME.
R1	CEILING RETURN GRILLE (DUCTED)	NO	NONE	EH PRICE	80-FA	1/2x1/2x1/2 ALUMINUM EGGCRATE CORE, C/W 1 1/4" FLAT BORDER & SCREWED FASTENING FOR SURFACE MOUNTING.
E1	EXHAUST GRILLE (DUCTED)	NO	NONE	EH PRICE	80-FA	1/2x1/2x1/2 ALUMINUM EGGCRATE CORE, C/W 1 1/4" FLAT BORDER & SCREWED FASTENING FOR SURFACE MOUNTING.
GENERAL	DIFFUSER/GRILLE NOTES:					

1. ACCEPTABLE MANUFACTURERS: EH PRICE, NAILOR, TITUS
2. GRILLE COLOURS ARE SELECTED BY ARCHITECT FROM STANDARD COLOUR CHART, UNLESS OTHERWISE NOTED.
3. PAINT INTERIOR OF DUCTWORK BEHIND GRILLE MATT BLACK (WHERE VISIBLE THRU GRILLE).

WATER	HEATER	SCHEDULE

L								
			Inpu	ıt		Manufacturer		
	Item	Туре	Capacity	Medium	Storage Gal.	& Model	Remarks	
İ	HWT-1	HOT WATER TANK TYPE	4.5KW	ELEC.	27	A.O SMITH SPACE SAVER SS630LDE-45X	TWO (2) 4.5KW IMMERSED ELEMENTS, NON-SIMULTANEOUS OPERATION, 208V/3PH/60HZ, ADJUSTABLE THERMOSTAT, INSULATION, HI-LIMIT SAFTEY SHUT OFF SWITCH	

<u>ENEF</u>	RGY RECOV	/ERY U	NIT S	<u>SCHEI</u>	DULE			CAPACITY INDICATED ON SCHEDULE REFER TO SPECIFICATION FOR CONSTRUCTION STANDARDS, ACCESSORIES AND ADDITIONAL INFORMATION.
Item	Туре	Capacity Supply EXH cfm cfm	SP in wc	MCA MOF	lectrical Voltage	Manufacturer & Model	Remarks	
ERV-1	ENERGY RECOVERY VENTILATOR	600 750	1.0	28.9 40	208/1/60		C/W INDIVIDUAL INTAKE AND EXHAUST THERMAL INSULATION ON DUCT RUNS	IST LOUVERS, CONTROLLER, 7-DAY PROGRAMMABLE TIMER, CAV. PREHEAT 4.5KW ELEC. DUCT HEATER. PROVIDE NS

Item	Description	Item	Description
	ITEM TO BE REMOVED	Φ	TEMPERATURE GAUGE
	CUT EXISTING & CONNECT NEW PIPING	Ф	THERMOMETER
-	FLOW DIRECTION	©	ERV CONTROLLER
	POTABLE COLD WATER	——IgI——	BALL VALVE
	POTABLE HOT WATER		ACOUSTIC DUCT LINING
	POTABLE HOT WATER RECIRC.		THERMAL INSULATION
SAN-EX	EXISTING SAN ABOVE FLOOR		BRANCH LINE SPIN-IN COLLAR C/W BALANCING DAMPER
— — SAN — —	SANITARY ABOVE FLOOR		TRUNK MAIN BRANCH COLLAR C/W BALANCING DAMPER
STM-EX	EXISTING STM ABOVE FLOOR	— BD	BALANCING DAMPER
—STM— — · —	STORM ABOVE FLOOR	~~~ M	MOTORIZED DAMPER
——CD——	CONDENSATE DRAIN	FD	FIRE DAMPER
v	VENT	FSD	FIRE/SMOKE DAMPER
——F——	STANDPIPE	SD	SMOKE DAMPER
——SP——	SPRINKLER		RECTANGULAR DUCTWORK
DTS	DUEL TEMP WATER SUPPLY		RIGID ROUND DUCT
— — DTR — —	DUEL TEMP WATER RETURN		FLEXIBLE ROUND DUCT
FD %	FLOOR DRAIN	A	ACOUSTICAL, FLEXIBLE ROUND DUCT
- 79-P-	TRAP PRIMER	Type Size Capacity	DIFFUSER/GRILLE SIZE (imp), TYPE & CAPACITY (cfm)
	TEE CONNECTION	Type Size Size / cfm Capacity	HYDRONIC HEATING SIZE, TYPE & CAPACITY
c —	PIPE DOWN	AD	ACCESS DOOR
o —	PIPE UP	EXP	EXPANSION JOINT
~	FLEXIBLE CONNECTION	RIC	RETURN IN CABINET
	REDUCER/INCREASER	AFF	ABOVE FINISHED FLOOR
N -	CHECK VALVE	— EX —	EXISTING DUCT (SIZE AS INDICATED)
	UNION		TRANSFER DUCT (SIZE AS INDICATED)
	STRAINER	>>>>	TURNING VANES
4 C	VALVE ON RISER		SUPPLY AIR DUCT
BV BV	BALANCING VALVE		RETURN/EXHAUST AIR DUCT
o	INLINE PUMP	——-Гі——	BUTTERFLY VALVE
TCV	2-WAY TEMPERATURE CONTROL VALVE	——>	GATE VALVE
TCV	3-WAY TEMPERATURE CONTROL VALVE		SCREWED OR WELDED PIPE CAP
	SEMI-RECESSED HEAD	oco	FLOOR CLEANOUT
•			
-	UPRIGHT PENDENT HEAD	——ICO	LINE CLEANOUT
-	UPRIGHT PENDENT HEAD CONCEALED PENDENT HEAD	—— I CO	TEMPERATURE & PRESSURE RELIEF VALVE
O			TEMPERATURE & PRESSURE

MECHANICAL LEGEND

GENERAL NOTES

- A. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PREPARED SPECIFICATION.
- B. CONTRACTOR TO INCLUDE COST FOR CONSULTANT TO COMPLETE ELECTRONIC CAD AS-BUILT DWGS (ALL PAGES).
- C. SANITARY VENT PIPING IS NOT SHOWN. PROVIDE ALL NECESSARY VENT PIPING FROM ALL FIXTURES FOR A COMPLETE SYSTEM TO ALL LOCAL PLUMBING CODE & LOCAL AUTHORITY REQUIREMENTS, CONNECTED TO EXISTING VENTS OR NEW VENTS AS REQUIRED. CO-ORDINATE VENT LOCATION(S) WITH GENERAL CONTRACTOR. MAINTAIN MIN 14'-0" FROM ANY AIR INLET. INSTALL VENT PIPING HIGH IN JOIST SPACE.
- D. WHERE DUCTWORK PENETRATES CORRIDOR WALL, CENTER DUCT(S) BETWEEN OWSJ.
- E. CO-ORDINATE WITH THE GENERAL CONTRACTOR ANY OWSJ BRIDGING/CROSS BRACING RELOCATION OR REMOVAL/REPLACEMENT REQUIRED FOR INSTALLATION OF DUCTWORK.
- F. CONTRACTOR TO LOCATE ISOLATION VALVES / FREEZE PIPING / OR OTHERWISE DRAIN SYSTEMS TO ALLOW PROPOSED WORK TO PROCEED. REFILL SYSTEMS AS INDICATED.
- G. UPON COMPLETION OF THE PROJECT OR UPON COMPLETION OF EACH INDIVIDUAL PHASE OF THE PROJECT THE CONTRACTORS SHALL PROVIDE THE FOLLOWING CERTIFICATES BEFORE CONFORMANCE LETTERS ARE ISSUED BY THE CONSULTANT:

 POTABLE WATER TEST
 NFPA-13 SPRINKLER CONTRACTOR'S MATERIAL & TEST CERTIFICATE
 BALANCING REPORT
- ALL CERTIFICATES ARE TO BE SUBMITTED TOGETHER IN A SINGLE PACKAGE.

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before commencement of the work.

The drawings show general arrangement of services.
Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same

to meet the required conditions.

Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project.

These documents are not to be duplicated or copied without the consent of the Consultant.

Do not scale this drawing.

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	5	RE-ISSUED FOR TENDER	MAR 26 2025	SV
l	4	ISSUED FOR REVIEW	MAR 14 2025	SV
l	3	ISSUED FOR TENDER	JAN 13 2025	SV
l	2	ISSUED FOR 100% REVIEW	DEC 13 2024	SV
	1	ISSUED FOR REVIEW	NOV 14 2024	SV
I	NO.	ISSUED	DATE	BY



55 Northland Road, Waterloo, ON N2V 1Y8 Phone: 519-725-3555 Fax: 519-725-2515 Website: deiassociates.ca DEI PROJECT #24254



HAMILTON OSHAWA PORT AUTHORITY

605 JAMES STREET NORTH, HAMILTON, ON, L8L 1K1 PH:(905)525-4330 F:(905)525-7258

PROJECT: 605 JAMES STREET NORTH
FOURTH FLOOR RENOVATIONS

DWG. TITLE:

LEGEND & SCHEDULES

SCALE:

AS NOTED

DATE:

MARCH 2025

DRAWN BY:

H.A.

CHECKED BY:

S.V./M.P.

LOCATION:
X:\2024 Projects\24254 HOPA James St N Office Renovation, Hamilton\02 Dwgs\02 Mech\24254 M100 Legend
& Schedules.dwg

MECHANICAL SPECIFICATION

PART A GENERAL NOTES

- PROVIDE LABOUR, MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION WITH QUALITY WORKMANSHIP ACCEPTABLE TO OWNER AND CONSULTANT.
- . OBTAIN ALL PERMITS AND PAY ALL TAXES, FEES, AND OTHER COSTS INCURRED WITH THIS WORK. FILE ALL PLANS. OBTAIN ALL NECESSARY APPROVALS, CERTIFICATES. SUBMIT ALL FINAL CERTIFICATES TO THE CONSULTANT. COMPLY WITH RULES AND RECOMMENDATIONS OF THE BOARD OF FIRE UNDERWRITERS, THE LOCAL BUILDING CODE, AND ALL REQUIREMENTS OF THE LOCAL UTILITY COMPANY AND BY-LAWS. POST BUILDING PERMIT AT SITE IN ACCORDANCE WITH O.B.C. REQUIREMENTS.
- . VISIT THE SITE BEFORE SUBMITTING TENDERS TO EVALUATE ANY SITE CONDITIONS THAT MIGHT ARISE. INCLUDE ALL SITE CONDITIONS IN TENDER, EXTRAS WILL NOT BE ACCEPTED UNLESS BELIEVED TO BE REASONABLE BY THE OWNER AND CONSULTANT.
- . COORDINATE WITH OTHER CONTRACTORS INSTALLING EQUIPMENT OR MATERIAL AND ARRANGE EQUIPMENT IN PROPER RELATION WITH ALL OTHER TRADES. ENSURE SYSTEMS ARE SERVICEABLE.
- CUTTING AND PATCHING SHALL BE BY THE CONTRACTOR REQUIRED TO INSTALL THE SERVICE.
- 6. THE DRAWINGS ARE DIAGRAMMATIC. THE SERVICES SHALL BE INSTALLED TO CONSERVE HEADROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH THE FREE USE OF THE SPACES THROUGH WHICH THEY PASS.
- . PROVIDE TWO MARKED COPIES OF "RECORD DRAWINGS" SHOWING THE SYSTEM AS INSTALLED. PROVIDE UPDATED DIGITAL CAD FILES IN ADDITION TO THE MARKED COPIES. THE DIGITAL AND HARD COPY RECORD DRAWINGS SHALL BE PROVIDED TO THE OWNER AS PART OF THE MAINTENANCE MANUALS.
- 8. THE MECHANICAL SYSTEMS OF THIS BUILDING MUST ACHIEVE THE ENERGY EFFICIENCY LEVELS BY CONFORMING TO ANSI/ASHRAE/IESNA 90.1 "ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS" AND CHAPTER 2 OF DIVISION 3 OF SB-10 PRESCRIPTIVE METHOD FROM THE
- 9. ALL EQUIPMENT AND MATERIAL SHALL BE NEW. REPLACE ALL DAMAGED EQUIPMENT.
- 10. MATERIAL AND EQUIPMENT ARE NAMED IN THE SPECIFICATION TO ESTABLISH AN ACCEPTABLE STANDARD OF MATERIALS AND THE QUALITY OF WORKMANSHIP BY WHICH TO ADHERE.
- 11. SUBMIT SHOP DRAWINGS ELECTRONICALLY FOR ALL EQUIPMENT. THESE WILL BE REVIEWED BY THE CONSULTANT. RESUBMIT AS OFTEN AS MAY BE FOUND NECESSARY. SUBMIT ONE COMPLETE SUBMISSION INDEXED AND LABELED FOR THIS PROJECT.
- 12. PROVIDE ALL NECESSARY PROTECTION FOR FINISHED OR UNFINISHED WORK. ALL OPENINGS IN PIPES, DUCTS AND EQUIPMENT SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE.
- 13. MAINTAIN INSURANCE TO FULLY PROTECT THE CONTRACTOR, OWNER AND CONSULTANT FROM ANY AND ALL CLAIMS SUCH AS UNDER THE WORKERS COMPENSATION ACT, ETC. POST PROJECT NOTIFICATION AT THE SITE IN ACCORDANCE WITH THE MINISTRY OF LABOUR REQUIREMENTS.
- 14. PROVIDE STRUCTURAL SUPPORTS, SUPPORTING RODS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.
- 15. INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.
- 16. SUBMIT THREE (3) COPIES OF OPERATING AND MAINTENANCE INSTRUCTIONS IN PDF FORMAT LABELED FOR THE PROJECT.
- 17. REMOVE ALL PROTECTIVE COVERINGS, CLEAN AND POLISH ALL EQUIPMENT, FREE ALL OBSTRUCTIONS, CLEAN AND REPLACE ALL FILTERS WITH NEW, AND LEAVE ALL KEYS AND WRENCHES WITH THE OWNER.
- 18. ALL SURPLUS AND WASTE MATERIALS SHALL BE PROMPTLY REMOVED FROM THE PREMISES.
- 19. ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS
- 20. THE OWNER WILL DECIDE WHICH ITEMS OR EQUIPMENT SLATED FOR REMOVAL THAT THEY WISH TO RETAIN AS THEIR PROPERTY AND THIS CONTRACTOR SHALL REMOVE ALL OTHER MATERIALS FROM THE PREMISES.
- 21. PROVIDE LAMICOID TAGS FOR IDENTIFICATION OF NEW EQUIPMENT ADDED.
- 22. ALL ELECTRICAL LINE AND LOW VOLTAGE WIRING WHICH IS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR AS SPECIFIED ELSEWHERE HEREIN SHALL BE RUN IN EMT CONDUIT TO STANDARDS OF THE ELECTRICAL DIVISION
- 23. WARRANTY ALL MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF
- PROVIDE SCHEDULE 40 STEEL PIPE SLEEVES AT POINTS WHERE PIPES PASS THROUGH MASONRY, CONCRETE OR FIRE RATED ASSEMBLIES AND AS INDICATED. GROUT SLEEVES IN PLACE. MINIMUM 6 MM (1/4") CLEARANCE ALL AROUND. BEIWEEN SLEEVE AND UNINSULATED PIPE OR BEIWEEN SLEEVE AND INSULATION. CAULK BETWEEN SLEEVE AND PIPE IN FOUNDATION WALLS AND BELOW GRADE FLOORS WITH WATERPROOF FIRE RETARDANT NON—HARDENING MASTIC. WHERE SLEEVES PASS THROUGH WALLS OR FLOORS. PROVIDE SPACE FOR FIRESTOPPING. WHERE PIPES PASS THROUGH FIRE RATED WALLS. FLOORS AND PARTITIONS. MAINTAIN FIRE RATING INTEGRITY. ENSURE NO CONTACT BETWEEN COPPER TUBE OR PIPE AND FERROUS SLEEVE. FILL FUTURE—USE SLEEVES WITH LIME PLASTER OR OTHER EASILY REMOVABLE FILLER. COAT EXPOSED EXTERIOR SURFACES OF FERROUS SLEEVES WITH HEAVY APPLICATION OF ZINC RICH PAINT TO CGSB 1-GP-181M+AMDT-MAR-78.
- PROVIDE MINIMUM 20 GAUGE DUCT SLEEVES WHERE DUCTS PASS THROUGH MASONRY, CONCRETE OR FIRE RATED ASSEMBLIES. MAINTAIN MINIMUM 25 MM CLEARANCE ALL AROUND OR TO THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. SEAL AT WALL AS INDICATED. WHERE DUCTS PASS THROUGH FIRE RATED WALLS, FLOORS AND PARTITIONS, MAINTAIN FIRE RATING INTEGRITY.

PART B DEMOLITION NOTES

- THIS PROJECT IS ONE OF A RETROFIT NATURE IN PART, AND WHICH WILL REQUIRE SOME DEMOLITION. ALLOW FOR ALL REMEDIAL WORK IN AREAS INDICATED ON THE DRAWINGS AND AS GENERALLY DEFINED IN THE RELEVANT SECTIONS OF THE SPECIFICATIONS.
- 2. THE SCOPE OF WORK IS ESSENTIALLY THE SELECTED DISCONNECTION AND/OR REMOVAL OF SERVICES AND/OR EQUIPMENT, PIPING, DUCTWORK ETC. AS INDICATED OR REQUIRED TO COMPLETE THE WORK.
- 3. THIS DIVISION IS TO LIAISE WITH THE OWNERS OR CONSULTANT FOR EQUIPMENT BEING REMOVED THAT MAY BE SUITABLE FOR REUSE TO THAT SPECIFIED OR HANDED OVER TO THE OWNER.
- 4. THIS DIVISION TO TAKE FULL RESPONSIBILITY FOR ANY SPECIAL TOOLS OR EQUIPMENT REQUIRED TO
- DISASSEMBLE OR REMOVE MATERIAL FROM BUILDING.
- 5. THE GENERAL EXECUTION OF THE DEMOLITION IS TO BE CARRIED OUT IN A CLEAN AND EFFICIENT MANNER.
- DEMOLITION OF EXISTING CEILING, WALLS ETC., TO FACILITATE REMOVAL OF EXISTING SERVICES OR
- EQUIPMENT OR INSTALLATION OF NEW TO BE KEPT TO A MINIMUM AND THEN RESTORED TO MATCH EXISTING. . ALL OPENINGS OR HOLES CREATED BY REMOVAL OF EXISTING MECHANICAL SYSTEMS WHICH ARE NOT BEING
- 3. PROTECT ALL EXISTING FURNISHINGS MATERIALS AND EQUIPMENT. ANY DAMAGE OCCURRING AS A RESULT OF
- THE WORK OF THIS DIVISION SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THIS DIVISION.
- DIRECTED BY THE OWNERS IN AN EXPEDIENT MANNER WITH MINIMUM DISRUPTION TO THE FACILITY AND SYSTEMS DOWNTIME.
- 10. WHERE UNKNOWN SERVICES ARE ENCOUNTERED, IMMEDIATELY ADVISE CONSULTANT AND CONFIRM FINDINGS IN

9. WHERE WORK INVOLVES BREAKING INTO OR CONNECTING TO EXISTING SERVICES, CARRY OUT WORK AT TIMES

- 1. WHERE THE LOCATION OF ANY SERVICES HAS BEEN SHOWN ON THE PLANS, SUCH INFORMATION IS NOT GUARANTEED. IT IS THIS DIVISION'S RESPONSIBILITY TO VERIFY LOCATIONS, INVERT ELEVATIONS, ETC., IMMEDIATELY AFTER MOVING ON SITE. SHOULD FOR ANY REASON THE INFORMATION OBTAINED NECESSITATES CHANGES IN PROCEDURE OR DESIGN, ADVISE THE CONSULTANT AT ONCE. IF VERIFICATION OF EXISTING CONDITIONS IS NOT DONE AT THE OUTSET AND ANY PROBLEMS ARISE, THE RESPONSIBILITY FOR SAME IS ENTIRELY THIS DIVISION'S.
- DISCONNECT AND/OR REMOVE EQUIPMENT PIPING, DUCTWORK, ETC. AS INDICATED.

REUSED ARE TO BE PATCHED WITH THE SAME MATERIAL SURROUNDING SURFACES.

- 13. CAP AND CONCEAL ALL REDUNDANT AND OBSOLETE CONNECTIONS.
- 14. PROVIDE A LIST OF EQUIPMENT TO BE REMOVED TO THE OWNER, FOR HIS ACCEPTANCE OF SAME. REMOVE ALL EQUIPMENT FROM SITE WHICH THE OWNER DOES NOT RETAIN.
- 15. MAINTAIN EQUIPMENT TO BE RETAINED BY OWNER ON SITE WHERE DIRECTED BY CONSULTANT.
- 16. DEMOLITION OF ALL PARTS OF THE WORK MUST BE COMPLETED WITHIN THE CONFINES OF THE WORK AREA AND IN SUCH A WAY AS THE DUST PRODUCED AND RISK TO INJURY OF WILL NOT ADVERSELY AFFECT THE
- 17. DEMOLISHED AREAS OF THE EXISTING BUILDING WILL REMAIN IN THEIR CURRENT USE IN SOME CASES. DEMOLITION IN THESE AREAS MUST BE KEPT TO THE MINIMUM REQUIRED TO COMPLETE THE WORK.
- 18. DEMOLITION SHALL TAKE PLACE WITHIN AREAS ISOLATED FROM ALL OTHER AREAS WITH APPROPRIATE HOARDING, SCAFFOLDING, NETTING, FENCING OR OTHER MEANS OF SECURITY BETWEEN BUILDING USERS AND
- 19. CO-ORDINATE MAKING SAFE ELECTRICAL DEVICES, CAPPING PLUMBING AND REMOVAL OF FIXTURES PRIOR TO

COMMENCEMENT OF DEMOLITION.

- 20. ALL PIPING AND EQUIPMENT TO BE REMOVED AND/OR ABANDONED SHALL BE DRAINED PRIOR TO CAPPING AND/OR ABANDONING. DISPOSAL OF ALL LIQUIDS SHALL BE TO THE APPROVAL OF AUTHORITY OF HAVING JURISDICTION AND/OR PROVINCIAL REGULATIONS.
- 21. DRAIN ALL EXISTING PIPING AND DRAINAGE SYSTEMS INCLUDING ALL RELATED EQUIPMENT AS REQUIRED TO FACILITATE SYSTEM RENOVATIONS.
- 22. DISPOSAL OF EXISTING SYSTEM SHALL BE TO THE REQUIREMENTS OF THE LOCAL AND/OR PROVINCIAL

- 1. CONTRACTOR TO PROVIDE POTABLE WATER CERTIFICATE FOR E. COLI AND COLIFORM FROM A RECOGNIZED TESTING LABORATORY UPON COMPLETION OF THE PROJECT. WATER IS TO BE TAKEN FROM A NEW FIXTURE TO TEST THE NEW PIPING INSTALLED.
- CONNECT TO EXISTING SERVICES WHERE SHOWN ON DRAWINGS.
- SANITARY, SOIL WASTE, VENT, AND ALL WATER PIPING SHALL CONFORM AND BE INSTALLED TO THE ONTARIO PLUMBING CODE AND THE CANADIAN PLUMBING CODE, LATEST EDITION.
- SANITARY PIPING: ALL SANITARY PIPING SHALL BE TESTED WITH WATER UNDER THE GUIDANCE OF THE LOCAL PLUMBING INSPECTOR. SMOKE TESTS OR ANY OTHER TEST REQUIRED BY THE PLUMBING INSPECTOR SHALL ALSO BE MADE. WATER PIPING: ALL WATER PIPING SHALL BE TESTED TO 150 PSI. PRESSURE FOR NOT LESS THAN FOUR HOURS WITHOUT A LOSS IN PRESSURE.
- FLUSHING AND DISINFECTING ENSURE A MINIMUM OF 90% OF PLUMBING FIXTURES ARE INSTALLED. FLUSH WATER MAINS THROUGH AVAILABLE OUTLETS WITH A SUFFICIENT FLOW OF POTABLE WATER TO PRODUCE A VELOCITY OF 1.5 M/S, WITHIN PIPE FOR 10 MIN, OR UNTIL FOREIGN MATERIALS HAVE BEEN REMOVED AND FLUSHED WATER IS CLEAR WITH BACKFLOW PROTECTION. PROVIDE CONNECTIONS AND PUMPS FOR FLUSHING AS REQUIRED. OPEN AND CLOSE VALVES, AND OPERATE FIXTURES TO ENSURE THOROUGH FLUSHING. TAKE WATER SAMPLES AT REMOTE FIXTURES AND SERVICE CONNECTIONS.
- SANITARY AND VENT DRAINS: (ABOVE GRADE), MEDIUM WEIGHT CAST IRON WITH MECHANICAL RUBBER JOINTS OR TYPE DWV COPPER PIPE. WATER PIPING: TYPE L COPPER WITH LEAD FREE SOLDER JOINTS.
- ISOLATION VALVES: HOT AND COLD WATER BRONZE BODY, CLASS 150, STAINLESS STEEL BALL, FULL PORT, PTFE SEAT AND PACKING, STEEL LEVER HANDLE. MILWAUKEE BA-455, CRANE, TOYO CHECK VALVES: HOT AND COLD WATER SIZES 1/2" DIAMETER TO 2" DIAMETER CRANE FIG. 1342, OR EQUAL JENKINS, BRONZE SWING CHECK, SOLDER ENDS. CRANE FIG. 29 OR EQUAL JENKINS VERTICAL LIFT CHECK VALVE, SCREWED
- 7. CLEAN OUTS CLEAN OUTS: PROVIDE AND SET CLEAN OUT PLUGS IN ALL DRAINS AND SOIL PIPE LINES WHERE OBSTRUCTIONS MAY BE FOUND, AT CHANGES OF DIRECTION, AT THE BASE OF ALL SANITARY STACKS AND AT INTERVALS. LENGTHS TO THE ONTARIO PLUMBING CODE. CLEAN OUTS SHALL BE FULL SIZES OF PIPES UP TO 4" DIAMETER AND NOT LESS THAN 4" DIAMETER FOR LARGER PIPES. ANCON CO-100-R OR EQUAL.
- TRAP PRIMERS: ALL TRAPS WHERE REQUIRED BY THE CODE TO BE PRIMED OR WHERE SHOWN ON THE DRAWINGS SHALL HAVE MIFAB-MR-ENC-AG OR EQUAL PRESSURE DROP ACTIVATED TRAP SEAL PRIMER INSTALLED IN THE NEAREST COLD WATER LINE TO THE TRAP. TRAP PRIMER SHALL BE CONCEALED, PROVIDED WITH ENCLOSURE FOR INSTALLTION IN WALL AND HAVE INTEGRAL AIR GAP FOR BACKFLOW PREVENTION, PROVIDE ACCESS DOOR.
- DRIP COCKS: SUPPLY AND INSTALL 1/2" DIAMETER MUELLER OR EQUAL DRAIN VALVES AT ALL LOW POINTS IN THE WATER SYSTEMS TO COMPLETELY DRAIN THE SYSTEMS, ALL DRIP COCKS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
- 10. THERMOMETER & PRESSURE GAUGES DIRECT READING THERMOMETERS AND PRESSURE GAUGES ON ALL HOT AND COLD WATER LINES. PRESSURE GAUGES SHALL BE TRERICE OR APPROVED EQUAL. GAUGES SHALL BE INSTALLED IN SUCH A MANNER TO BE ACCESSIBLE, AND EASILY READ. ALL GAUGES SHALL BE 5" DIAMETER, UNLESS NOTED OTHERWISE. THE SCALE RANGE ON EACH PRESSURE GAUGE SHALL BE SUCH THAT THE OPERATING PRESSURE GAUGE SHALL PLACE THE INDICATOR AT ABOUT THE CENTER OF THE DIAL.
- 11. DOMESTIC WATER HEATER SUPPLY AND INSTALL IN CEILING, BRADFORD WHITE OR EQUAL (A.O SMITH, RHEEM) GLASS LINED ELECTRIC WATER HEATER WHERE SHOWN ON THE DRAWINGS. THE WATER HEATER SHALL BE PROVIDED WITH 2 - 3KW ELEMENTS WIRED FOR FLIP-FLOP OPERATION OR NON-SIMULTANEOUS OPERATION, SUITABLE FOR 208/3/60. THE HOT WATER HEATER SHALL BE COMPLETE WITH T&P RELIEF VALVES, LIMIT CONTROLS, DRAIN VALVE, 2IN INSULATION, STEEL JACKET.
- 12. PLUMBING FIXTURES FIXTURES AS LISTED ON THE DRAWINGS. ALL FIXTURES MUST BE NEW AND CLEAN WHEN THE WORK IS TAKEN OVER BY THE OWNER. ALL PLUMBING FIXTURES SHALL BE EQUIPPED WITH SUPPLY VALVES, FAUCETS, TRAPS, SUPPORTS, WATER CONNECTIONS, ESCUTCHEONS, HANGERS, BOLTS. ETC. FIXTURES SHALL BE AS PER SCHEDULE. TRAPS: 2" DIAMETER AND SMALLER, SHALL BE CAST BRASS AND CHROME PLATED IN EXPOSED AREAS. ALL SINK TRAPS SHALL BE TWO PIECE CONSTRUCTION. ALL TRIM MUST BE CAMBRIDGE BRASS OR EQUAL. ON COMPLETION ALL FIXTURES, ACCESSORIES AND EXPOSED PIPING SHALL BE THOROUGHLY CLEANED AND LEFT READY FOR USE. AFTER FINAL INSPECTION BY THE PLUMBING INSPECTOR CAULK AROUND BASE OF ALL FIXTURES TO THE WALL OR FLOOR WITH SILICONE CAULKING.
- 13. PIPE INSULATION INSULATE ALL DOMESTIC HOT AND COLD WATER PIPING AND STORM PIPING ABOVE GRADE WITH 1" (FOR PIPING UNDER 1 1/2" DIAMETER) OR 1 1/2" (FOR PIPING 1 1/2" DIAMETER AND HIGHER) FIBERGLASS INSULATION WITH VAPOUR BARRIER. INSTALL AS PER MANUFACTURERS RECOMMENDATIONS. RECOVER EXPOSED PIPING WITH 6 OZ. CANVAS JACKET AND TWO COATS LAGGING ADHESIVE.
- 14. FIRE EXTINGUISHERS SUPPLY AND INSTALL WHERE SHOWN ON DRAWINGS NATIONAL OR EQUAL UL LABELED 5 LB. MULTIPURPOSE DRY CHEMICAL FIRE EXTINGUISHERS WITH HOSE SHUTOFF NOZZLE AND WALL MOUNTING BRACKETS, PROVIDE RECESSED WALL CABINET WHERE NOTED.

PART E SPRINKLER NOTES

- CONNECT TO EXISTING SERVICES WHERE SHOWN ON DRAWINGS.
- 2. CODES AND REGULATIONS ALL SPRINKLER PIPING, SPACING AND EQUIPMENT SHALL CONFORM TO THE ONTARIO BUILDING CODE, NFPA-13 AND THE AUTHORITIES HAVING JURISDICTION.
- PIPING SHALL BE TESTED TO NFPA-13 REQUIREMENTS.
- 4. PRODUCTS PIPE AND FITTINGS
- 50 MM (2") AND SMALLER: SCHEDULE 40 STEEL PIPE WITH SCREWED FITTINGS. 65 MM (2 1/2") AND LARGER: SCHEDULE 10 STEEL PIPE WITH VICTAULIC FITTINGS.
- ULC LISTED FOR FIRE PROTECTION SERVICES. SPRINKLER HEADS:
- GENERAL: TO NFPA-13 AND ULC LISTED FOR FIRE SERVICES. SPRINKLER HEADS SHALL BE SEMI-RECESSED. COORDINATE LOCATION WITH REFLECTED CEILING PLANS. INSTALL NEW HEADS IN NEW CEILING.
- ENGINEERING DESIGN CRITERIA DESIGN SYSTEM IN ACCORDANCE WITH ONTARIO FIRE MARSHALL, LOCAL AUTHORITY HAVING JURISDICTION,

SYSTEM ZONING AS INDICATED IN ACCORDANCE WITH NFPA 13.

- OWNERS, UNDERWRITERS AS REQUIRED, AND NFPA 13, USING FOLLOWING PARAMETERS: HAZARD TO SUIT OCCUPANCY. PIPE SIZE AND LAYOUT: HYDRAULIC DESIGN OR PIPE SCHEDULE SIZING DESIGN.
- INDICATED. CONDUCT FLOW AND PRESSURE TEST OF WATER SUPPLY IN VICINITY OF PROJECT TO OBTAIN CRITERIA FOR

SPRINKLER HEAD LAYOUT: TO NFPA 13 OR AS DIRECTED BY AUTHORITIES HAVING JURISDICTION, AND/OR AS

- BASES OF DESIGN IN ACCORDANCE WITH NFPA 13. INDICATE LOCATION AND FLOW ON SHOP DRAWINGS.
- 9. PROVIDE COMPLETE DRAWINGS AND CALCULATIONS STAMPED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO.
- 10. PROFESSIONAL ENGINEER SHALL PROVIDE ON SITE REVIEW AND CERTIFICATION FOR LOCAL BUILDING CODE
- 11. INSTALLATION: INSTALL, INSPECT AND TEST TO ACCEPTANCE IN ACCORDANCE WITH ANSI/NFPA-13. TESTING

TO BE WITNESSED BY AUTHORITY HAVING JURISDICTION. SPACE HANGERS AND SUPPORT OF SPRINKLER PIPING IN ACCORDANCE WITH NFPA REGULATIONS. PROTECT EXPOSED WORK. DO NOT COVER OR CONCEAL PIPING ACCESSORIES OR WORK PRIOR TO INSPECTION AND APPROVAL BY AUTHORITIES HAVING JURISDICTION. ADJUST EQUIPMENT TO SATISFACTION OF AUTHORITY HAVING JURISDICTION AND CONSULTANT. PROTECT EQUIPMENT DURING PAINTING. REPLACE DAMAGED AND PAINTED COMPONENTS. COORDINATE THE SPRINKLER PIPING AND EQUIPMENT WITH THAT OF OTHER TRADES ON THE JOB. MAINS AND BRANCHES SHALL BE RUN SO AS NOT TO INTERFERE WITH BUILDING'S STRUCTURE, MECHANICAL OR ELECTRICAL INSTALLATIONS. GUARANTEE THAT THE SYSTEMS AND EQUIPMENT BE INSTALLED IN ACCORDANCE WITH ALL LOCAL AND PROVINCIAL BY-LAWS AND THE RULES AND REGULATIONS OF THE INSURANCE UNDERWRITERS AND THE BUILDING CODE OF ONTARIO.

PROVIDE A FLOW TEST TO APPROVAL OF LOCAL FIRE DEPARTMENT AND LOCAL WATER COMMISSION AT NEAREST FIRE HYDRANT ADJACENT TO BUILDING TO DETERMINE WATER FLOW RATE AND PRESSURE. PROVIDE WRITTEN TEST RESULTS WITH SHOP DRAWING SUBMISSION. PROVIDE A FORWARD FLOW TEST THRU THE BYPASS TO PROVE SYSTEM DEMAND CAN BE PROVIDED THRU THE BACKFLOW PREVENTOR.

PART F HYDRONIC DUAL TEMP

- 1. DUAL TEMP WATER PIPING: SCHEDULE 40 STEEL PIPE TO ASTM 53, GRADE B
- PIPING NPS 2 AND UNDER SHALL BE MALLEABLE IRON 150 LB SCREWED FITTINGS WITH PULVERIZED LEAD PIPING NPS 21/2 AND OVER SHALL BE WELDED FITTINGS AND STEEL FLANGES TO ANSI/ASME B16.5.
- BALL VALVES: CLASS 125 SCREWED ENDS, STAINLESS STEEL BALL AND TEFLON SEATS. CHECK VALVES: CLASS 125 WITH COMPOSITION DISC TO MSS SP-80. BALANCING VALVES: BELL AND GOSSETT MODEL CB. STRAINER: Y STRAINER, BRONZE BODY TO ASTM B62, SCREWED CONNECTIONS.
- PIPE INSULATION: INSULATE ALL HYDRONIC WATER PIPING WITH 11/2" FIBERGLASS INSULATION WITH VAPOUR BARRIER. INSTALL AS PER MANUFACTURERS RECOMMENDATIONS. RECOVER EXPOSED PIPING WITH PVC JACKET.
- REFILL SYSTEM WITH CLEAN WATER ADDING WATER TREATMENT AS SPECIFIED. THIS CONTRACTOR SHALL CONTACT OWNER'S WATER TREATMENT SUPPLIER AND CO-ORDINATE WATER TREATMENT OF NEW SYSTEM.
- PROCEDURE: FLUSHING AND CLEANING SHOULD ONLY TAKE PLACE AFTER SUCCESSFUL PIPING PRESSURE TESTING, TERMINAL DEVICES AND THEIR ASSOCIATED CONTROL AND BALANCING VALVES SHOULD BE BYPASSED DURING THE PRELIMINARY FLUSHING AND CLEANING PROCESS THE OVERALL CONSTRUCTION SCHEDULE IDENTIFIES PIPING FLUSHING AND CLEANING WITH REALISTIC TIME ALLOTMENTS. AS A MINIMUM, AT LEAST ONE PIPING FLUSHING AND CLEANING PROCEDURE SHALL BE WITNESSED, BY THE CONSULTANT AND/OR COMMISSIONING AGENT. THE MECHANICAL CONTRACTOR SHALL UTILIZE THE EXISTING WATER TREATMENT SPECIALIST TO SUPERVISE THE FLUSHING AND CLEANING PROCESS AND PROVIDE THE CERTIFIED WATER ANALYSIS REPORT CERTIFYING
- THAT THE PIPING SYSTEMS ARE CLEAN. FLUSH AND CLEAN NEW PIPING SYSTEM IN PRESENCE OF CONSULTANT. FLUSH AFTER PRESSURE TEST FOR A MINIMUM OF 4 HRS. FILL SYSTEM WITH SOLUTION OF WATER AND NON-FOAMING, PHOSPHATE-FREE DETERGENT 3% SOLUTION BY WEIGHT. CIRCULATE FOR MINIMUM OF 8 HRS. THOROUGHLY FLUSH ALL NEW MECHANICAL SYSTEMS AND EQUIPMENT WITH APPROVED CLEANING CHEMICALS DESIGNED TO REMOVE DEPOSITION FROM CONSTRUCTION SUCH AS PIPE DOPE, OILS, LOOSE MILL SCALE AND OTHER EXTRANEOUS MATERIALS. CHEMICALS TO INHIBIT CORROSION OF VARIOUS SYSTEM MATERIALS AND BE SAFE TO HANDLE AND USE.
- DURING CIRCULATION OF CLEANING SOLUTION, PERIODICALLY EXAMINE AND CLEAN FILTERS AND SCREENS AND MONITOR CHANGES IN PRESSURE DROP ACROSS EQUIPMENT. REFILL SYSTEM WITH CLEAN WATER. CIRCULATE FOR AT LEAST 2 HOURS. CLEAN OUT STRAINER SCREENS/BASKETS REGULARLY. THEN DRAIN. DRAINAGE TO INCLUDE DRAIN VALVES, DIRT POCKETS, STRAINERS, EVERY LOW POINT IN SYSTEM. DRAIN AND FLUSH SYSTEMS UNTIL ALKALINITY OF RINSE WATER IS EQUAL TO MAKE—UP WATER. REFILL WITH CLEAN WATER TREATED TO PREVENT SCALE AND CORROSION DURING SYSTEM OPERATION. REPEAT SYSTEM DRAIN AND FLUSH AS OFTEN AS NECESSARY TO HAVE A CLEAN SYSTEM. DISPOSAL OF CLEANING SOLUTIONS TO BE APPROVED BY AUTHORITY HAVING JURISDICTION. ISOLATE NEW PIPING SYSTEM FROM EXISTING SYSTEM AS REQUIRED FOR SYSTEM CLEANING.
- DRAIN EXISTING DUAL TEMP HYDRONIC SYSTEM AS REQUIRED TO FACILITATE SYSTEM RENOVATIONS. DISPOSAL OF EXISTING SYSTEM SHALL BE TO THE REQUIREMENTS OF THE LOCAL AND/OR PROVINCIAL REGULATIONS.

PART G HEATING, AIR CONDITIONING, AND VENTILATION NOTES

- 1. DUCTWORK TO BE CONSTRUCTED TO SMACNA STANDARDS, MEDIUM STATIC PRESSURE WITH LEAKAGE RATE OF 5% MAXIMUM. FABRICATED IN ACCORDANCE WITH RECOMMENDATIONS OF SMACNA AND ASHRAE. SEAL ALL TRANSVERSE AND LONGITUDINAL JOINTS WITH DUCT SEALER
- 2. ROUND AND OVAL DUCTS: FACTORY FABRICATED, SPIRAL WOUND, WITH MATCHING FITTINGS AND SPECIALS TO SMACNA. TRANSVERSE JOINTS UP TO 900 MM (36"): SLIP TYPE WITH TAPE AND SEALANTS.
- 3. SQUARE AND RECTANGULAR DUCTS:TO SMACNA. TRANSVERSE JOINTS, LONGEST SIDE UP TO AND INCLUDING 750 MM (30"): SMACNA PROPRIETARY DUCT JOINTS.
- ALL DAMPERS TO TO SMACNA RECOMMENDATIONS AS MINIMUM ACCEPTABLE STANDARD. SPLITTER DAMPERS OF SAME MATERIAL AS DUCT BUT ONE SHEET METAL THICKNESS HEAVIER WITH APPROPRIATE STIFFENING, CUT AIRFOIL SHAPE, PIANO HINGE PIVOT, WITH CONTROL ROD WITH LOCKING DEVICE AND POSITION INDICATOR ON EXTERIOR OF DUCT. SINGLE BLADE BALANCING ROUND AND RECTANGULAR. MAXIMUM 100MM (4") HIGH, OR SAME MATERIAL AS DUCT BUT ONE SHEET METAL THICKNESS HEAVIER (MINIMUM 16 GAUGE), V-GROOVÉ STIFFENED WITH LOCKING QUADRANT. MULTI-LEAF OPPOSED BLADE DAMPERS DESIGNED TO SMACNA DETAILS. SELF—LUBRICATING NYLON BEARINGS. SHAFT EXTENSION TO ACCOMMODATE INSULATION THICKNESS, WITH LOCKING QUADRANT. MANUFACTURED ADJUSTABLE EXTRACTORS TO BE WITH ADJUSTMENT ROD. ACCEPTABLE PRODUCTS: TITUS, NAILOR OR EQUAL.
- 5. FIRE DAMPERS UL OR ULC AND SHALL MEET REQUIREMENTS OF NFPA 90A-1978. FACTORY FABRICATED FOR FIRE RATING REQUIREMENTS TO MAINTAIN INTEGRITY OF MEMBRANE BEING
- MILD STEEL, FIRE LINK ACTUATED TOP. ROUND OR SQUARE GUILLOTINE TYPE, WEIGHTED TO CLOSE AND LOCK IN CLOSED POSITION WHEN RELEASED. ROLL DOOR TYPE IN HORIZONTAL POSITION WITH VERTICAL AIRFLOW. SIZED TO MAINTAIN FULL FLOW CROSS SECTION OF DUCT (TYPE B).
- 6. COMBINED FIRE/SMOKE CONTROL DAMPERS
- UL OR ULC LISTED AND SHALL MEET REQUIREMENTS OF NFPA 90A PROVIDE A COMPLETE SYSTEM CONSISTING OF THE DAMPER, DAMPER ACTUATOR, SMOKE DETECTOR, SLEEVE AND ALL OTHER COMPONENTS NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM. THE ASSEMBLY SHALL BE FACTORY ASSEMBLED AS A SINGLE UNIT. CONTRACTOR MAY SUPPLY FIELD ASSEMBLED UNITS PROVIDED ALL COMPONENTS ARE PROVIDED BY SINGLE SUPPLIER AND THE SITE ASSEMBLY DOES NOT AFFECT UL OR ULC LISTING OF THE ASSEMBLY.
- DAMPER SHALL BE NORMALLY CLOSED STYLE WITH CLASS I LEAKAGE RATING. ACTUATOR SHALL BE TWO POSITION WITH EXTERIOR INDICATION OF POSITION. UNIT SHALL BE CAPABLE OF OPERATING WITH AIR VELOCITIES OF 300 FPM TO 4000 FPM. PROVIDE ONE DETECTOR FOR EVERY 1.5 SQUARE METERS OF DUCT CROSS SECTIONAL AREA FOR VELOCITIES OVER 300
- ASSEMBLY SHALL REQUIRE 120 VOLT POWER. MECHANICAL CONTRACTOR IS RESPONSIBLE TO CO-ORDINATE POWER SOURCE WITH ELECTRICAL TRADE, OR PROVIDE POWER IF NOT WITHIN ELECTRICAL CONTRACT/JOB IS MECHANICAL ONLY.

FPM, AND ONE SENSOR FOR EACH 0.5 SQUARE METERS OF CROSS SECTIONAL AREA FOR VELOCITIES UNDER

- SENSOR SHALL BE UL APPROVED PHOTOELECTRIC STYLE DETECTOR, WITH TEST/RESET BUTTON AND LOCAL TESTING CAPABILITY. CONTRACTOR SHALL WORK WITH THE INTEGRATED LIFE SAFETY TESTING AGENCY TO VERIFY OPERATION OF ALL DAMPERS.
- 7. FLEXIBLE CONNECTIONS AT ALL DUCT CONNECTIONS TO FANS AND AIR HANDLING UNITS. NEOPRENE COATED GLASS FABRIC, NOT MORE THAN 6" LONG BETWEEN METAL PARTS INSTALLED SUFFICIENT SLACK TO PREVENT VIBRATION TRANSMISSION. ALLOW MOVEMENT (2") TO LOW PRESSURE FANS.
- SMALL ARC AIRFOIL HOLLOW VANES IN SUPPLY DUCT ELBOW WHERE CENTERLINE RADIUS IS LESS THAN 1 1/4 TIMES TURNING DIMENSION OF DUCT.
- 9. GRILLES, REGISTERS AND DIFFUSERS GRILLES, REGISTERS AND DIFFUSERS SHALL BE THE SAME MANUFACTURER. TYPE AS SHOWN ON THE ACCEPTABLE MATERIALS: E.H. PRICE, TITUS, NAILOR, KRUEGER.
- 10. FLEXIBLE DUCTWORK
- METALLIC ALUMINUM FLEXIBLE DUCTWORK MANUFACTURED BY FLEXMASTER LTD., OR EQUAL BETWEEN BRANCH DUCTS AND GRILLES, REGISTERS AND DIFFUSERS. MAXIMUM LENGTH SHALL BE 6'-0".

SUPPLY AND INSTALL FILTERS FOR NEW EQUIPMENT AND EXISTING EQUIPMENT SERVING RENOVATED AREAS.

1" DISPOSABLE FILTER MEDIA SHALL BE SUPPLIED FOR USE DURING THE CONSTRUCTION. A COMPLETE SET OF NEW FILTER MEDIA SHALL BE INSTALLED BEFORE TESTING AND BALANCING.

CONSTRUCTION SPECIALTIES INC., OR APPROVED EQUAL, WITH 4" BLADE AT 45 DEG. FABRICATED FROM EXTRUDED ALUMINUM WITH REINFORCING BARS. BLADES SHALL BE SUPPORTED BY CONCEALED INTERLOCKING BRACES AT 4'-0" CENTERS BIRD SCREEN. SILL SHALL BE PROJECTED TYPE WITH CONTINUOUS DRIP EDGE. INTAKE LOUVERS MODEL 4110. EXHAUST LOUVERS MODEL 4100.

FASTENINGS SHALL BE STAINLESS STEEL OR ALUMINUM. COLOUR AND FINISH AS SELECTED BY ARCHITECT.

RIGID DUCT LINER 1" THICK 36 KG/M WITH NEOPRENE LINER GLUED AND PINNED TO INSIDE SURFACE OF DUCTWORK. MINIMUM 3.0M (10') FROM ALL AIR HANDLERS AND WHERE SHOWN ON DRAWINGS. SEAL ALL EXPOSED EDGES. DUCT SIZING REPRESENTS CLEAR INSIDE DIMENSIONS.

- ON ALL EXHAUST DUCTS, INCLUDING PLENUM AND ALL AIR INTAKE DUCTWORK. FIBERGLASS FOIL FACED RIGID DUCT INSULATION 1" THICK TYPE PF-335-3/4 LB. DENSITY WITH RFFRK FACING. GLUE AND PIN AS PER MANUFACTURERS RECOMMENDATIONS. ON ALL RECTANGULAR SUPPLY AND RETURN DUCTS, PROVIDE 1IN THICK RIGID MINERAL FIBRE BOARD T ASTM C612 WITH FACTORY APPLIED VAPOUR RETARDER JACKET METETING THE REQUIREMENT OF ASTM C1136 ON ALL ROUND SUPPLY AND RETURN DUCTS, PROVIDE MINERAL FIBRE BLANKET TO ASTM C553 TYPE I, II, AND III, ASTM C1136 TYPE II AND IV, AND ASTM C1290 TYPE III
- 15. SYSTEM BALANCING BALANCING WILL BE FROM CASH ALLOWANCE IN TENDER FORM

ALL DUCTWORK ASSOCIATED WITH ERV TO HAVE INSULATION.

- 16. CONTROL NOTES START/STOP E.R.V. ON A TIME OF DAY SCHEDULE. CONFIRM OPERATION AND ALARM ON FAILURE.
- BALANCE AIR AND WATER SYSTEMS USING NEBB CERTIFIED FIRM AND AS PER NEBB REQUIREMENTS TO WITHIN 5% OF TOTAL SYSTEM CAPACITY. PROVIDE 3 COPIES OF BALANCING REPORTS C/W SYSTEM
- 18. ENERGY RECOVERY VENTILATOR SYSTEMAIR TOPVEX OR EQUAL ALDES OR VENMAR. UNIT SHALL BE SIZED TO FIT WITHIN AVAILABLE CEILING PACKAGED, ERV, INDOOR, WITH ENTHALPY WHEEL, WHEEL DRIVE SYSTEM, VENTILATION AIR FAN, EXHAUST AIR FAN, NECESSARY DAMPERS, TEMPERATURE SNESORS AND MICROPRESSOR CONTROLS. UNIT CONSTRUCTION SHALL MEET CSA AND ULC STANDARDS WITH 2 YEAR WARRANTY ON ALL PARTS (HEAT EXCHANGER SHALL
- HAVE 15 YEAR WARRANTY). UNIT SHALL BE COMPLETE WITH: -30% WASHABLE FILTERS -EXHAUST ONLY DEFROST CYCLE
- -UNIT ACCESS PANELS -FACTORY PAINTED -INTAKE DAMPER -EXHAUST DAMPER

-ELEC PREHEAT COIL

UNIT TO BE AHRI CERTIFIED. UNIT TO COME WITH CHASSIS, COIL(S), FAN WHEEL(S), FAN CASING, FAN BOARD, MOTOR, NON-CORROSIVE DRAIN PAN C/W INSULATION, AUX DRAIN PAN. UNIT TO HAVE QUAD GRILLE OUTLET. FANS TO BE ECM. DELUXE PIPING PACKAGE WITH MANUAL CIRCUIT SETTER INCLUDES UNION, P/T PORT, SHUT OFF BALL VALVES, 3-WAY CONTROL VALVE, BALANCING VALVE. UNIT TO COME WITH DISCONNECT SWITCH, EXTENDED END POCKET FOR PIPING, SUB BASE. LOW LIMIT SENSOR, CONDENSATE OVERFLOW SENSOR, THERMOSTAT. ARCHITECT TO CONFIRM COLOUR OF UNIT. REFER TO DRAWING SCHEDULES FOR PERFORMANCE AND

MAKE/MODEL

20. ALTERNATES AND SUBSTITUTES SHOULD ELECTRICAL CHARACTERISTICS FOR "ALTERNATE" OR "EQUAL" EQUIPMENT DIFFER FROM EQUIPMENT SPECIFIED IT SHALL BE THE RESPONSIBILITY OF THE EQUIPMENT MANUFACTURER TO PAY ALL COSTS ASSOCIATED WITH THE REVISIONS TO THE ELECTRICAL CONTRACT.

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MECHANICAL | ELECTRICAL | AQUATIC

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DEI PROJECT #24254

HAMILTON

605 JAMES STREET NORTH, HAMILTON, ON, L8L 1K1 PH:(905)525-4330 F:(905)525-7258

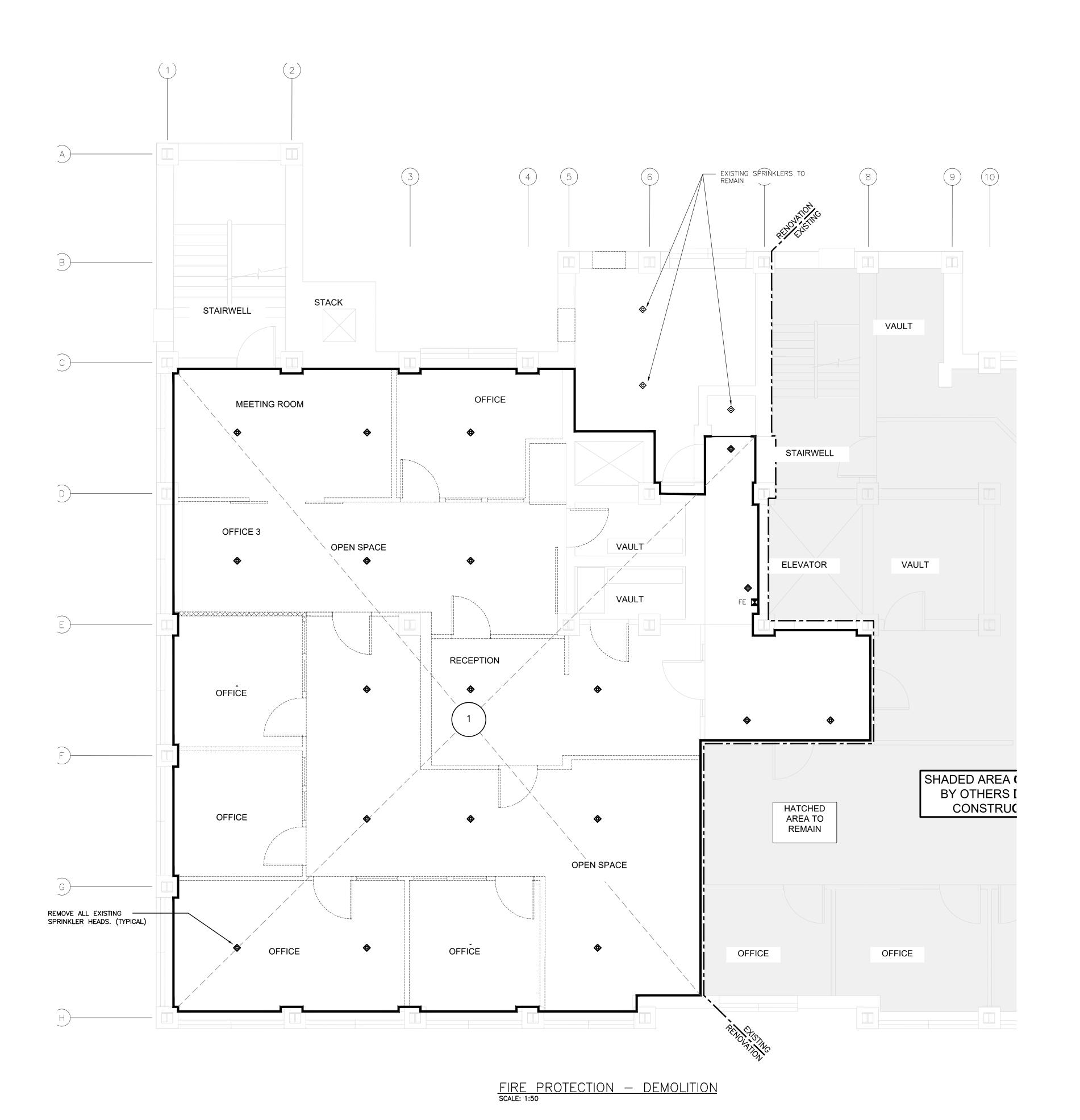
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AUTHORITY

PORT

605 JAMES STREET NORTH FOURTH FLOOR RENOVATIONS SPECIFICATIONS AS NOTED MARCH 2025 DRAWN BY H.A. CHECKED BY S.V./M.P.

& Schedules.dwg



GENERAL DEMOLITION NOTES

- A. EXISTING MECHANICAL ITEMS NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- B. EXISTING MECHANICAL ITEMS SHOWN BUT NOT NOTED AS BEING REMOVED OR RENOVATED SHALL REMAIN AS PRESENTLY INSTALLED AND OPERATING.
- C. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ON SITE ALL LOCATIONS AND SIZES OF ALL SERVICES & EQUIPMENT PRIOR TO THE COMMENCEMENT OF WORK
- D. ALL OPENINGS THAT RESULT FROM THE REMOVAL OF EQUIPMENT OR SERVICES SHALL BE NEATLY PATCHED WITH SUITABLE NEW MATERIALS TO SUIT EXISTING CONSTRUCTION.
- E. PLUMBING VENTS ARE NOT INDICATED OR IDENTIFIED. REMOVE ALL REDUNDANT VENTS WHILE MAINTAINING INTEGRITY OF EXISTING SYSTEMS TO REMAIN.
- F. REMOVAL OF EXISTING PIPING, OR DUCT SYSTEMS INCLUDES REMOVAL OF ALL HANGERS, INSULATION, FITTINGS, ETC.
- G. MAINTAIN INTEGRITY OF EXISTING SYSTEMS THAT ARE TO REMAIN OR BE MODIFIED.
- H. INSTALL NEW SYSTEM OR SERVICES WHERE REQUIRED TO MAINTAIN SYSTEM OPERATION PRIOR TO DEMOLITION OF EXISTING SERVICES.
- I. THIS CONTRACTOR IS TO REMOVE & REPLACE CEILINGS AS REQUIRED FOR REMOVAL/REPLACEMENT OF SERVICES.

SPECIFIC DEMOLITION NOTES

REMOVE ALL EXISTING SPRINKLER HEADS AS INDICATED.
 CAP PIPE AND PREPARE FOR NEW LAYOUT





TRUE NORTH

CONSTRUCTION NORTH

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1	ISSUED FOR REVIEW	NOV 14 2024	SV
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Consulting Engineers

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HAMILTON OSHAWA PORT AUTHORITY

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PROJECT: 605 JAMES STREET NORTH
FOURTH FLOOR RENOVATIONS

DWG. TITLE:
FIRE PROTECTION - DEMOLITION

SCALE:
AS NOTED

DATE:
MARCH 2025

DRAWN BY:

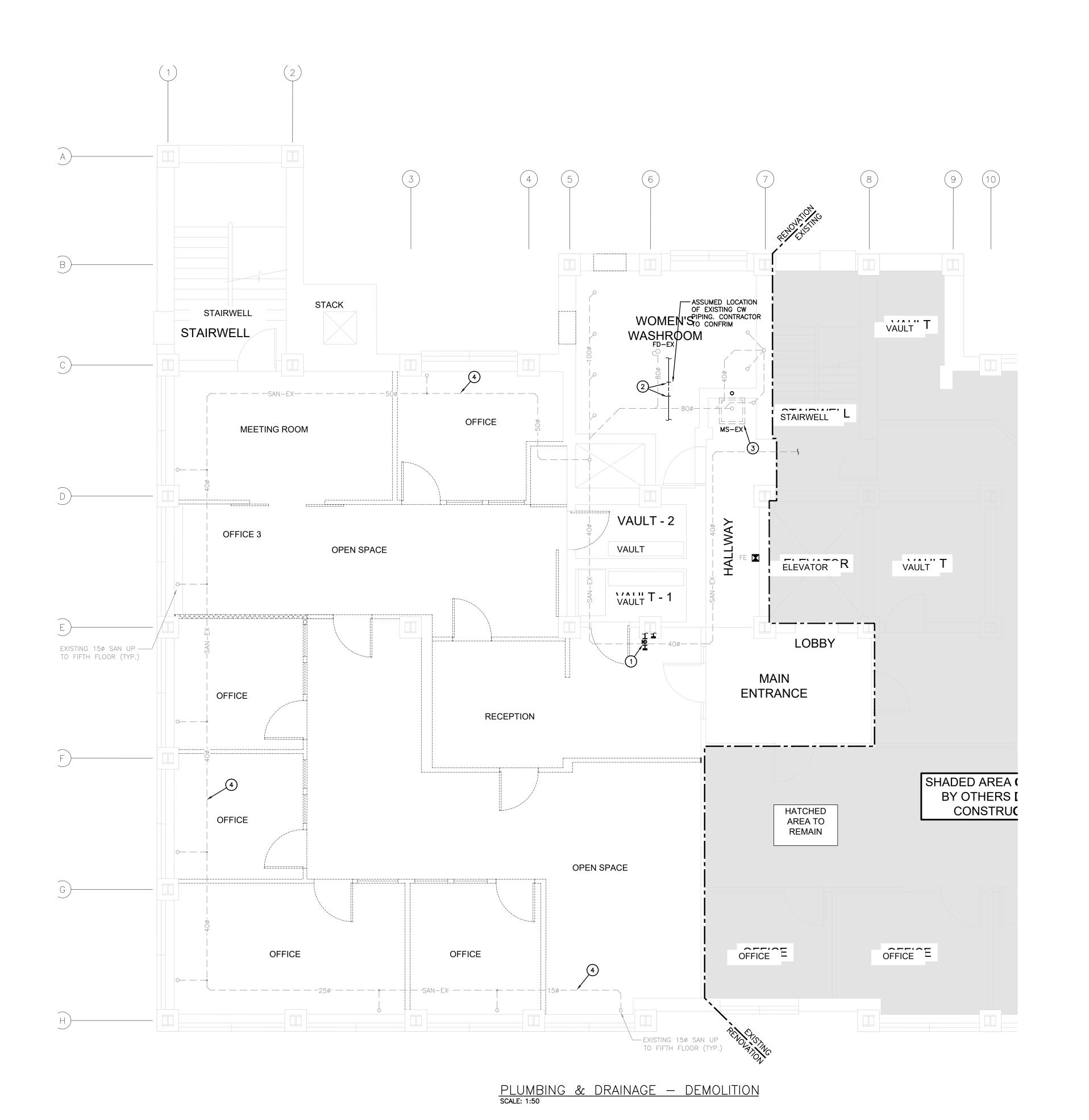
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H.A.

CHECKED BY:

S.V./M.P.

LOCATION:
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- E. PLUMBING VENTS ARE NOT INDICATED OR IDENTIFIED. REMOVE ALL REDUNDANT VENTS WHILE MAINTAINING INTEGRITY OF EXISTING SYSTEMS TO REMAIN.
- REMOVAL OF EXISTING PIPING, OR DUCT SYSTEMS INCLUDES REMOVAL OF ALL HANGERS, INSULATION, FITTINGS, ETC.
- G. MAINTAIN INTEGRITY OF EXISTING SYSTEMS THAT ARE TO REMAIN OR BE MODIFIED.
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- I. THIS CONTRACTOR IS TO REMOVE & REPLACE CEILINGS AS REQUIRED FOR REMOVAL/REPLACEMENT OF SERVICES.

SPECIFIC DEMOLITION NOTES

- 1. REMOVE EXISTING 150 CW PIPE AND 320 SAN PIPE BACK WITHIN WALL AND CAP, PREPARE 150 CW PIPE FOR CONNECTION IN NEW LAYOUT
- 2. EXISTING DOMESTIC COLD WATER TO BE CUT, PREPARE FOR NEW CONNECTION
- 3. REMOVE EXISTING JANITOR MOP SINK, CAP SAN AND H&CW PIPE AND PREPARE FOR NEW CONNECTIONS
- 4. REMOVE EXISTING INSULATION ON DRAIN PIPE. TYPICAL ALL DRAIN PIPES WITHIN 4TH FLOOR CEILING SPACE.





TRUE NORTH

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FOURTH FLOOR RENOVATIONS

OWG. TITLE:

PLUMBING & DRAINAGE - DEMOLITION

SCALE:

AS NOTED

DATE:

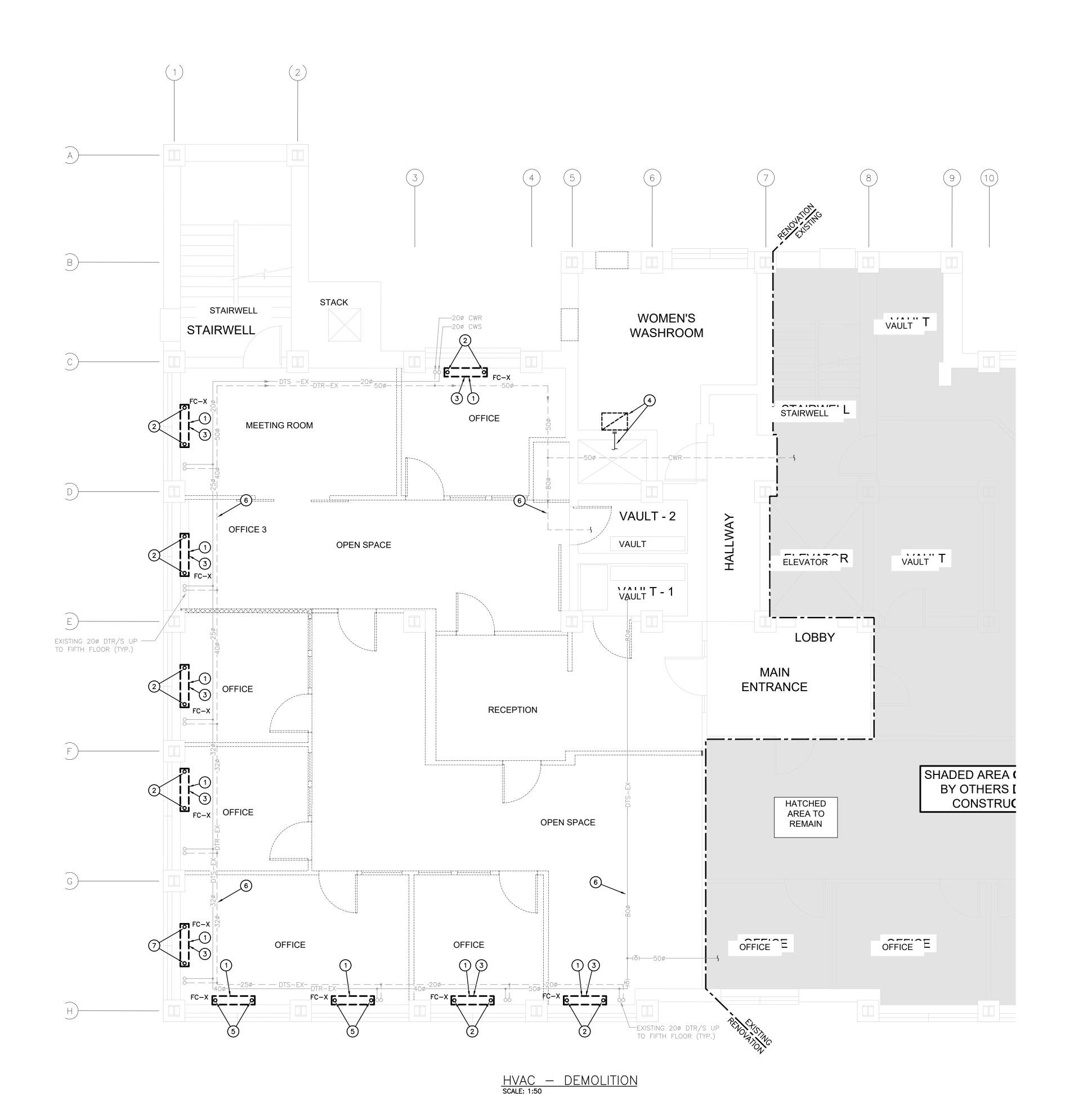
MARCH 2025

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H.A.

CHECKED BY:
S.V./M.P.

M202

LOCATION:
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Demo & Reno Overalls.dwg



GENERAL DEMOLITION NOTES

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- I. THIS CONTRACTOR IS TO REMOVE & REPLACE CEILINGS AS REQUIRED FOR REMOVAL/REPLACEMENT OF SERVICES.

SPECIFIC DEMOLITION NOTES

- 1. REMOVE EXISTING FAN COIL UNIT AS INDICATED C/W THERMOSTAT, PIPING, VALVES AND ALL ASSOCIATED ACCESSORIES.
- 2. DISCONNECT EXISTING DUAL TEMP SUPPLY/RETURN PIPING AND PREPARE FOR NEW CONNECTION
- 3. DISCONNECT EXISTING CONDENSATE PIPING AND PREPARE PIPING FOR NEW CONNECTION
- 4. EXISTING EXHAUST GRILLE TO BE REMOVED COMPLETE. CAP EXISTING DUCT CONNECTION WITHIN WALL AND ABANDON IN PLACE
- DISCONNECT EXISTING DUAL TEMP SUPPLY/RETURN AND CONDENSATE PIPING AND CAP BELOW FLOOR, MAKE GOOD.
- 6. REMOVE EXISTING INSULATION ON ALL DUAL TEMP SUPPLY/RETURN PIPING WITHIN 4TH FLOOR CEILING
- 7. DISCONNECT EXISTING DUAL TEMP SUPPLY/RETURN PIPING AND CAP AT MAIN WITHIN 3RD FLOOR CEILING SPACE





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HAMILTON OSHAWA PORT AUTHORITY

605 JAMES STREET NORTH, HAMILTON, ON, L8L 1K1 PH:(905)525-4330 F:(905)525-7258

PROJECT: 605 JAMES STREET NORTH
FOURTH FLOOR RENOVATIONS

DWG. TITLE:
HVAC - DEMOLITION

SCALE:
AS NOTED

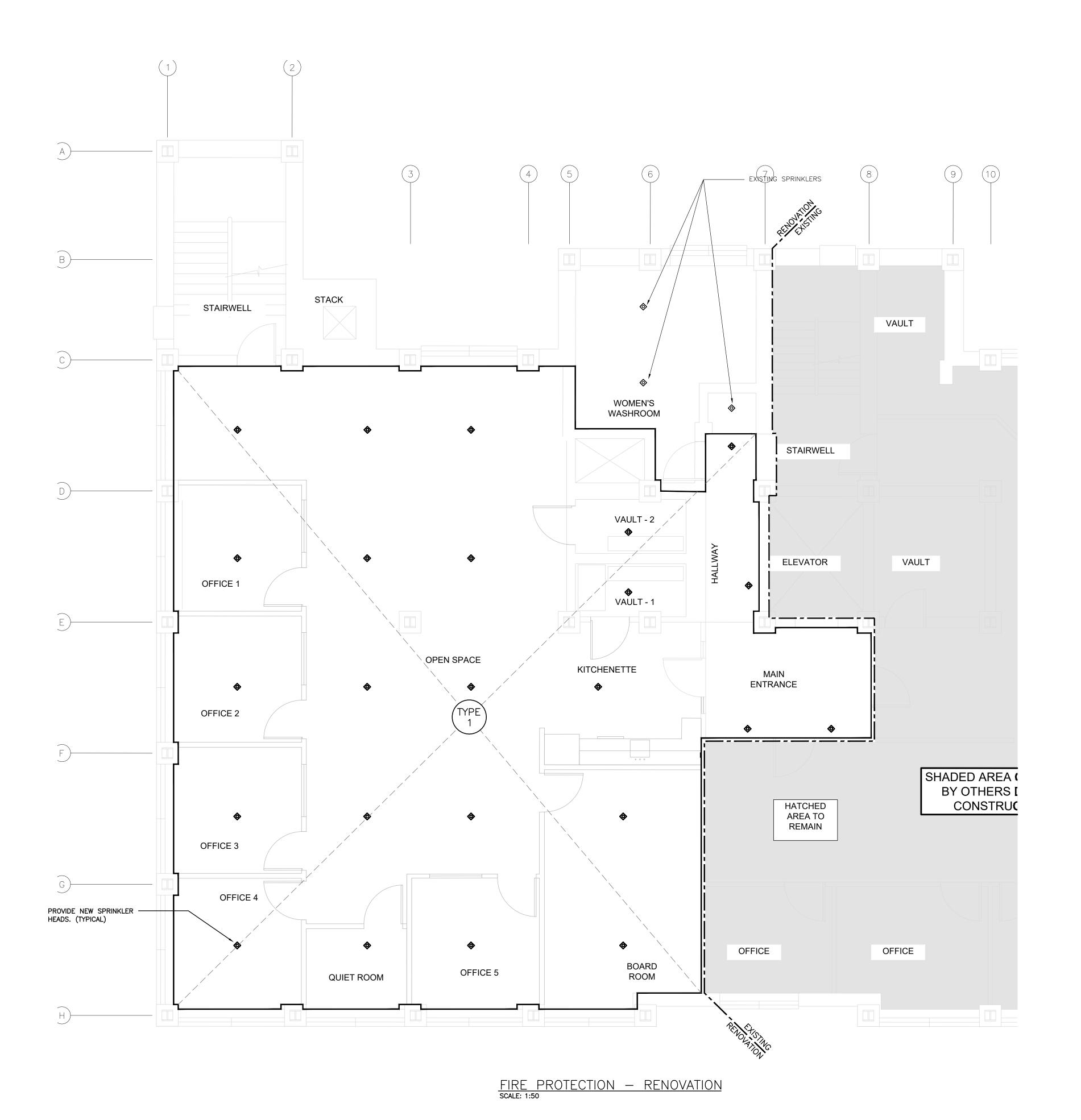
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MARCH 2025

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H.A.

CKED BY: S.V./M.P.

o: M203

LOCATION:
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Demo & Reno Overalls.dwg



GENERAL SPRINKLER NOTES

- 1. SUBMIT PRELIMINARY DESIGN & HYDRAULIC CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER, AND MANUFACTURERS' PRODUCT SHEETS FOR SHOP DRAWING SUBMISSION AS SPECIFIED PRIOR TO COMMENCING WORK.
- 2. ENSURE DESIGN MEETS OR EXCEEDS PRESENT NFPA 13 STANDARDS. ENSURE SPRINKLER SYSTEMS ARE INSTALLED TO NFPA 13 STANDARDS. UPON COMPLETION, SPRINKLER CONTRACTOR TO PROVIDE REPRODUCIBLE DRAWING (AT 1/8"=1'-0" SCALE) AND HYDRAULIC CALCULATIONS OF AS-BUILT CONDITION.
- 3. SPRINKLER CONTRACTOR'S 'PROFESSIONAL ENGINEER' TO PROVIDE O.B.C. AND NFPA REQUIRED INSPECTION AND CERTIFICATION.
- 4. REFER TO ARCHITECTURAL DRAWINGS FOR REFLECTED CEILING PLAN.
- 5. PROVIDE SPRINKLER HEAD TYPES AS FOLLOWS:
- 5.1. PROVIDE SEMI—RECESSED HEADS IN ALL AREAS . HEAD & ESCUTCHEON FINISH SELECTED BY CONSULTANT.
- SPRINKLER HEADS TO BE IN CENTRELINE OF CEILING TILE. MINIMUM 150mm (6") FROM EDGE.
- FINAL NUMBER AND LOCATION OF SPRINKLER HEADS TO BE DETERMINED BY CONTRACTOR'S HYDRAULIC CALCULATIONS AND APPROVED DRAWINGS.
- 8. SPRINKLER PIPING TO BE COORDINATED WITH OTHER SERVICES PRIOR TO INSTALLATION
- 9. COORDINATE LOCATION OF INSPECTOR'S TEST CONNECTION WITH CONSULTANT PRIOR TO INSTALLATION. INCLUDING BUT NOT LIMITED TO GRILLES, DIFFUSERS, LIGHTS, SENSORS, CEILING FANS AND ANY CEILING MOUNTED DEVICES.
- 10. SPRINKLER CONTRACTOR TO VISIT SITE AND EVALUATE EXISTING CONDITIONS PRIOR TO TENDER CLOSING. INCLUDE ALL MODIFICATIONS IN TENDER PRICE.
- 11. EXISTING SPRINKLER SYSTEM TO BE RENOVATED/MODIFIED TO SUIT NEW LAYOUT. CONTRACTOR IS RESPONSIBLE TO SURVEY EXISTING SYSTEMS FOR CREATION OF SHOP DWGS.
- 12. PROVIDE SPRINKLER HEADS UNDER ALL DUCTWORK AND EQUIPMENT OVER 1200mm WIDE.
- 13. COMMISSIONING OF INTEGRATED TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEM.

 13.1. SPRINKLER CONTRACTOR TO PROVIDE SERVICES WITH THE FIRE COMMISSIONING AGENT (FCA) TO MEET THEIR REQUIREMENTS OF ADMINISTRATION, VERIFICATION, AND FINAL SIGNOFF TO THE LOCAL AUTHORITIES AND CONSULTANT. THE FCA IS BEING RETAINED BY THE ELECTRICAL CONTRACTOR, HOWEVER, THIS CONTRACTOR'S
- WORK TO SATISFY THE FCA REQUIREMENTS SHALL BE INCLUDED IN THE TENDER PRICE.

 13.2. CHECK/TEST: MOVEMENT OF ALL VALVES, CREATE WATER FLOW AT ALL DEVICES TO VERIFY DETECTION AT FIRE ALARM PANEL, OPERATION OF ALL PUMPS &/OR COMPRESSORS.
- 13.3. PERFORM ALL WORK IN ACCORDANCE WITH NFPA 3.
 13.4. RETURN SPRINKLER/STANDPIPE SYSTEM TO NORMAL OPERATION ON COMPLETION OF TESTING

GENERAL RENOVATION NOTES

 PROVIDE NEW SPRINKLER HEADS C/W BRANCH PIPING. EXTEND PIPING AS REQURIED

SPRINKLER SCHEDULE

Туре	Sprinkler Head	Colour	Remarks
1	SEMI RECESSED	BRASS	





TRUE NORTH

CONSTRUCTION NORTH

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)	ISSUED	DATE	BY



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Phone: 519-725-3555 Fax: 519-725-2515
Website: deiassociates.ca
DEI PROJECT #24254



HAMILTON OSHAWA PORT AUTHORITY

605 JAMES STREET NORTH, HAMILTON, ON, L8L 1K1 PH:(905)525-4330 F:(905)525-7258

PROJECT: 605 JAMES STREET NORTH
FOURTH FLOOR RENOVATIONS
DWG. TITLE:
FIRE PROTECTION - RENOVATION
SCALE:
AS NOTED

DATE: MARCH 2025

H.A.

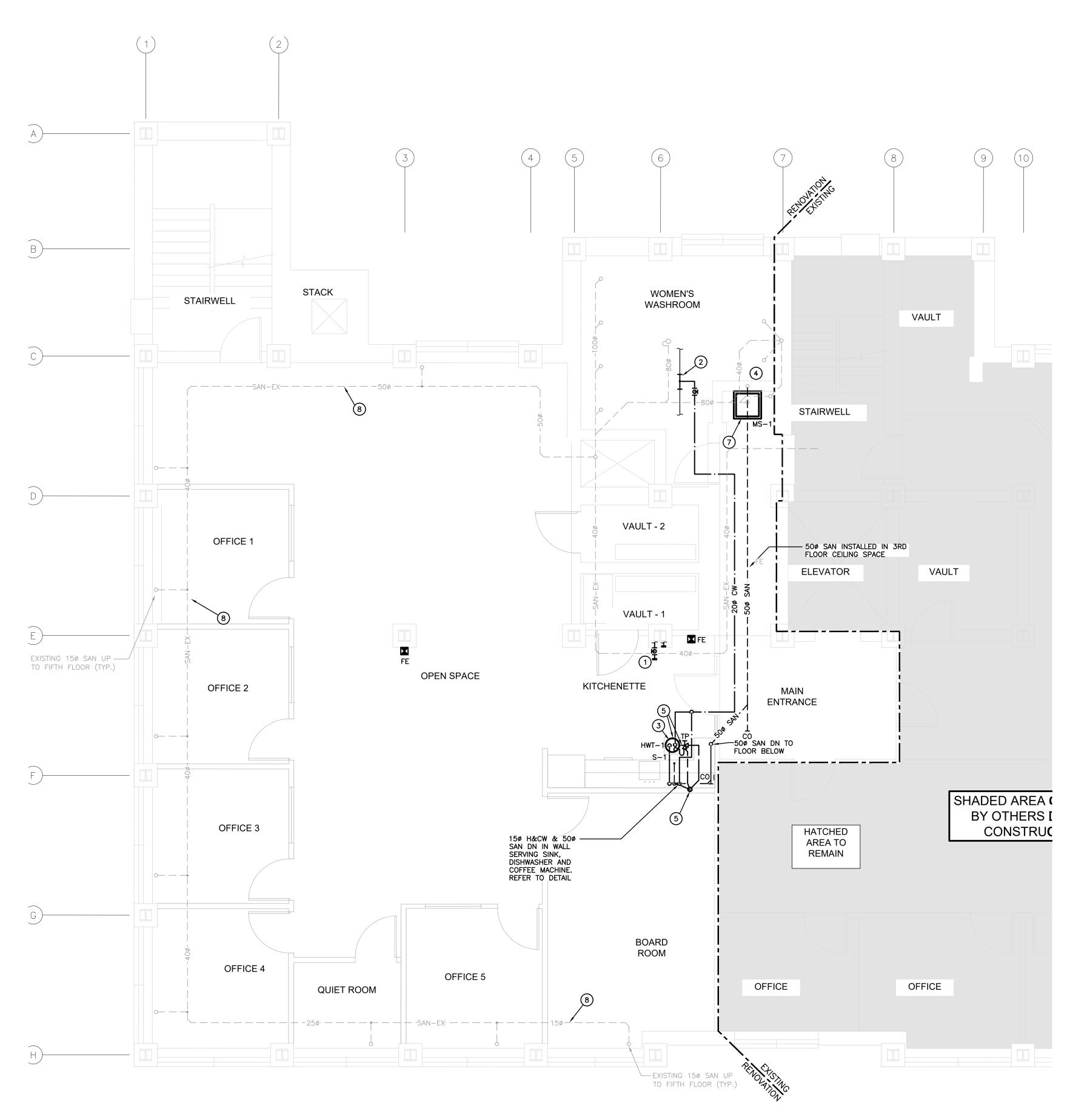
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S.V./M.P.

DRAWN BY:

M301

LOCATION:
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PLUMBING & DRAINAGE — RENOVATION SCALE: 1:50

GENERAL RENOVATION NOTES

- 1. PROVIDE NEW 150 CAPPED CONNECTION C/W BALL VALVE & 400 SAN CAPPED CONNECTION FOR FUTURE WATER DISPENSER.
- 2. CONNECT NEW 150 CW PIPE TO EXISTING
- 3. PROVIDE NEW ELECTRIC HWT-1 (HOT WATER TANK) AS INDICATED. HWT-1 TO BE WITHIN CEILING SUSPENDED. REFER TO DETAIL
- 4. CONNECT NEW 1000 SAN PIPE TO EXISTING SAN WITHIN JANITOR CLOSET ON 3rd FLOOR. COORDINATE WITH GENERAL CONTRACTOR REQUIRED ACCESS WITHIN THIRD FLOOR CEILING SPACE FOR INSTALLATION OF NEW PLUMBING. EXISTING THIRD FLOOR CEILING TO BE REMOVED AND REINSTATED AS REQUIRED TO ACCOMMODATE WORK.
- 5. WATER HEATER DRAIN PAN DRAIN AN T&P DRAIN TO BE INDIRECTLY DRAIN IN WALL, REFER TO DETAIL.
- PROVIDE NEW INSULATION ON ANY PIPING THAT HAD ITS INSULATION REMOVED DUE TO ASBESTOS ABATEMENT.
- CONNECT NEW JANITOR SINK TO EXISTING SAN & H&CW PIPING.
- 8. PROVIDE NEW INSULATION ON ALL EXISTING DRAIN PIPING WITHIN 4TH FLOOR CEILING SPACE.





TRUE NORTH

CONSTRUCTION NORTH

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HAMILTON OSHAWA PORT AUTHORITY

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PROJECT: 605 JAMES STREET NORTH
FOURTH FLOOR RENOVATIONS
DWG. TITLE:
PLUMBING & DRAINAGE - RENOVATION

AS NOTED

DATE: MARCH 2025

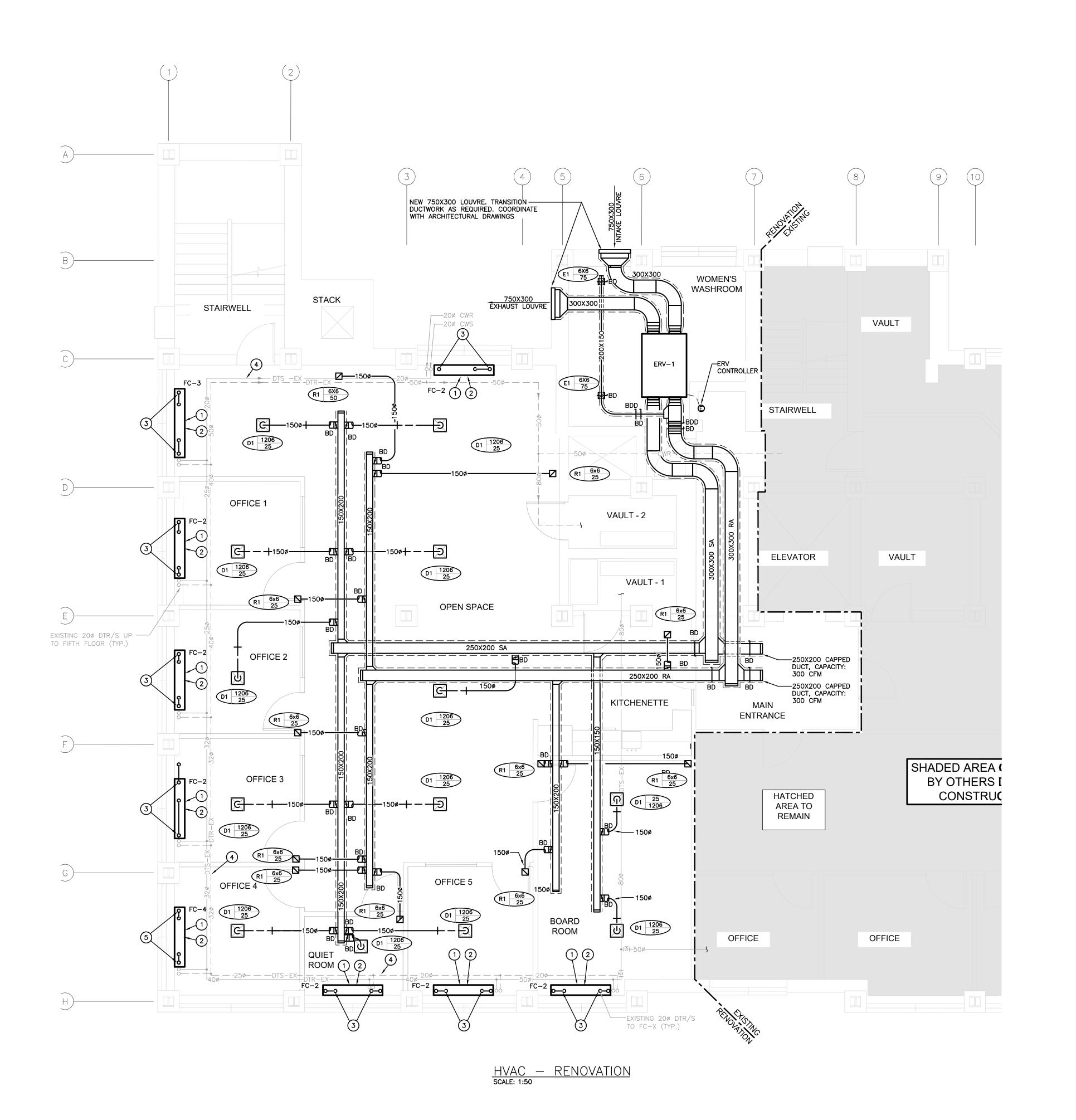
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S.V./M.P. M302

H.A.

LOCATION:
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Demo & Reno Overalls.dwg



- PROVIDE NEW FAN COIL UNIT AS INDICATED C/W
 THERMOSTAT, PIPING, BALANCE VALVE, TCV, ISOLATION
 VALVES AND ALL OTHER ASSOCIATED ACCESSORIES.
 REFER TO DETAIL. COORDINATE WITH GENERAL
 CONTRACTOR REQUIRED ACCESS WITHIN THIRD FLOOR CEILING SPACE FOR INSTALLATION OF NEW FAN COILS. EXISTING THIRD FLOOR CEILING TO BE REMOVED AND REINSTATED AS REQUIRED TO ACCOMMODATE WORK
- 2. CONNECT NEW CONDENSATE PIPING TO EXISTING CUT CONNECTIONS
- CONNECT NEW DTS/DTR AND CONDENSATE PIPING TO EXISTING CUT CONNECTIONS
- 4. PROVIDE NEW INSULATION ON ALL EXISTING DUEL TEMP SUPPLY & RETURN PIPING WITHIN 4TH FLOOR CEILING SPACE
- PROVIDE NEW 20Ø DUEL TEMP SUPPLY & RETURN PIPING FROM MAIN ON THIRD TO NEW UNIT.





TRUE NORTH



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commencement of the work. The drawings show general arrangement of services.

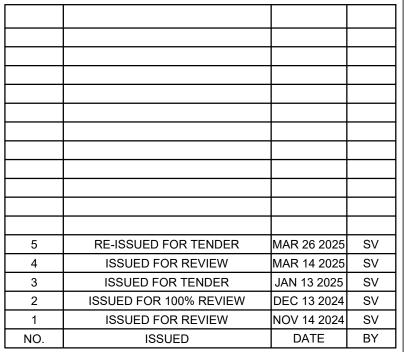
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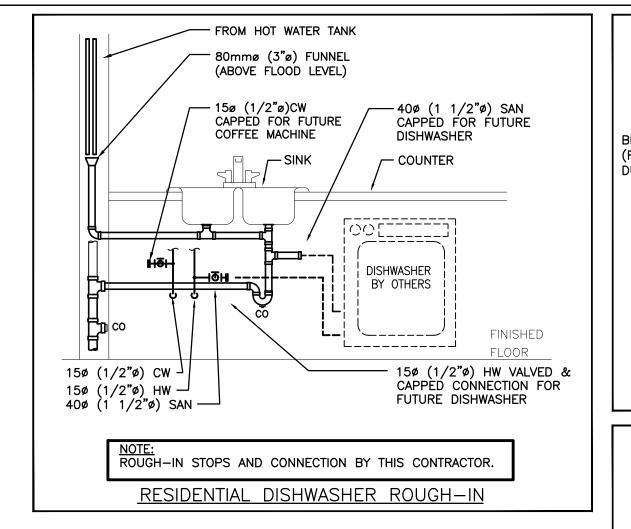
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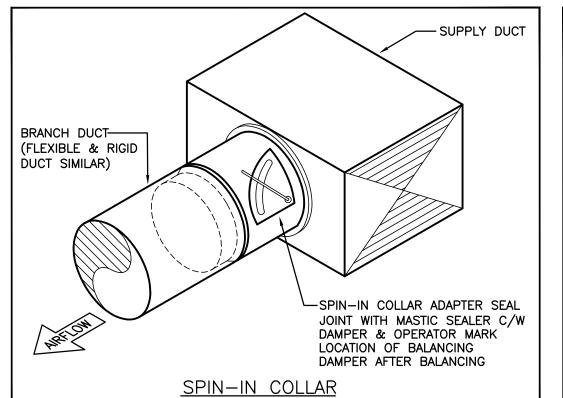
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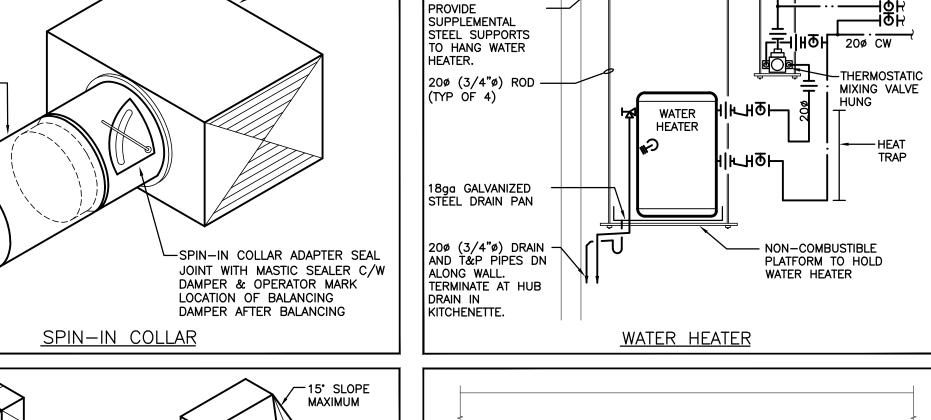
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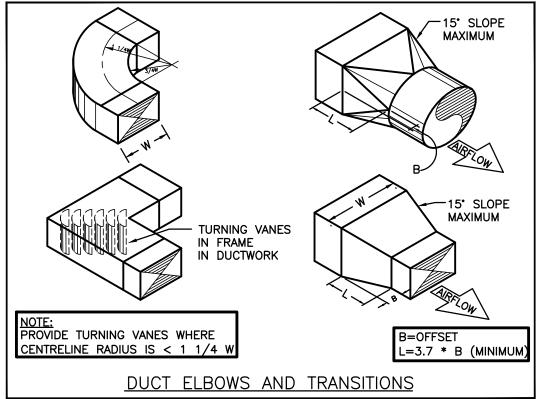
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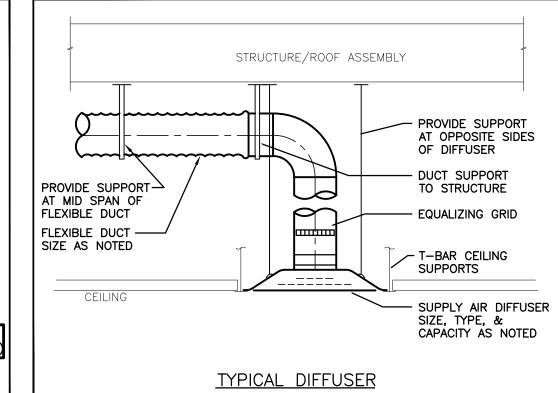
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Demo & Reno Overalls.dwg













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Consultant before commencement of the work.

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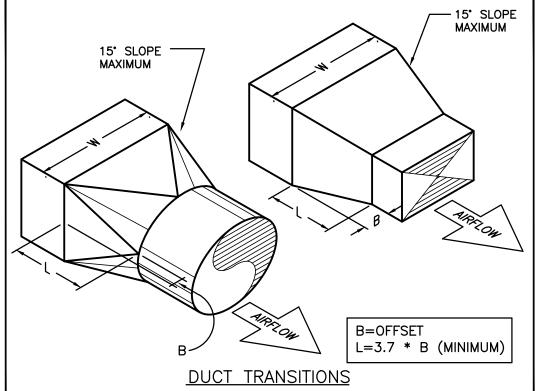
commencement of the work.

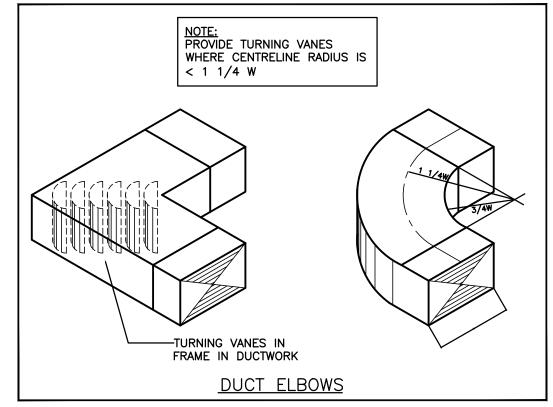
to meet the required conditions.

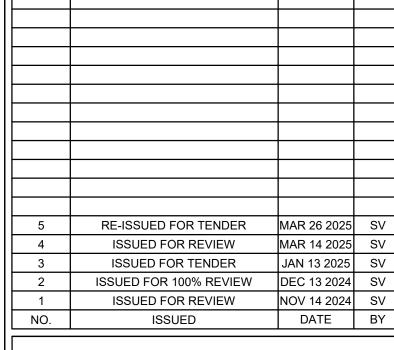
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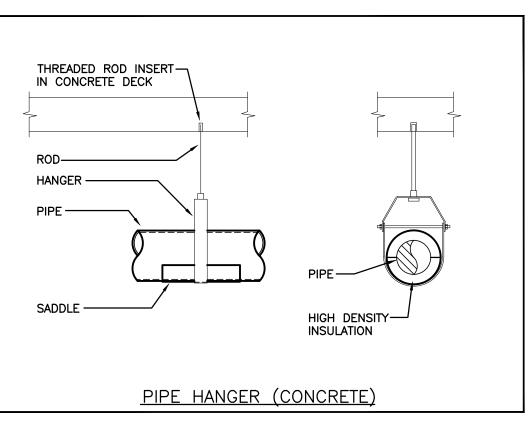
without the consent of the Consultant.

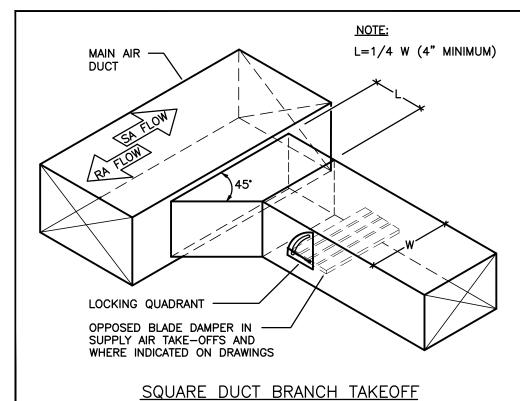
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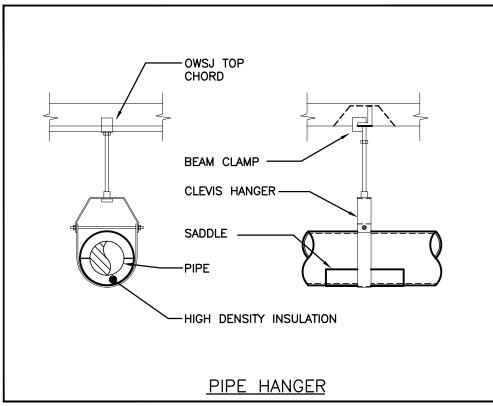


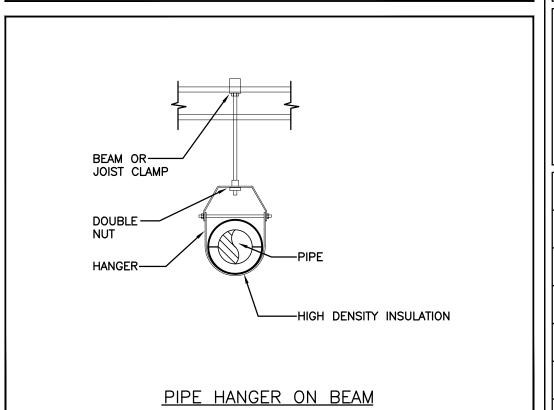








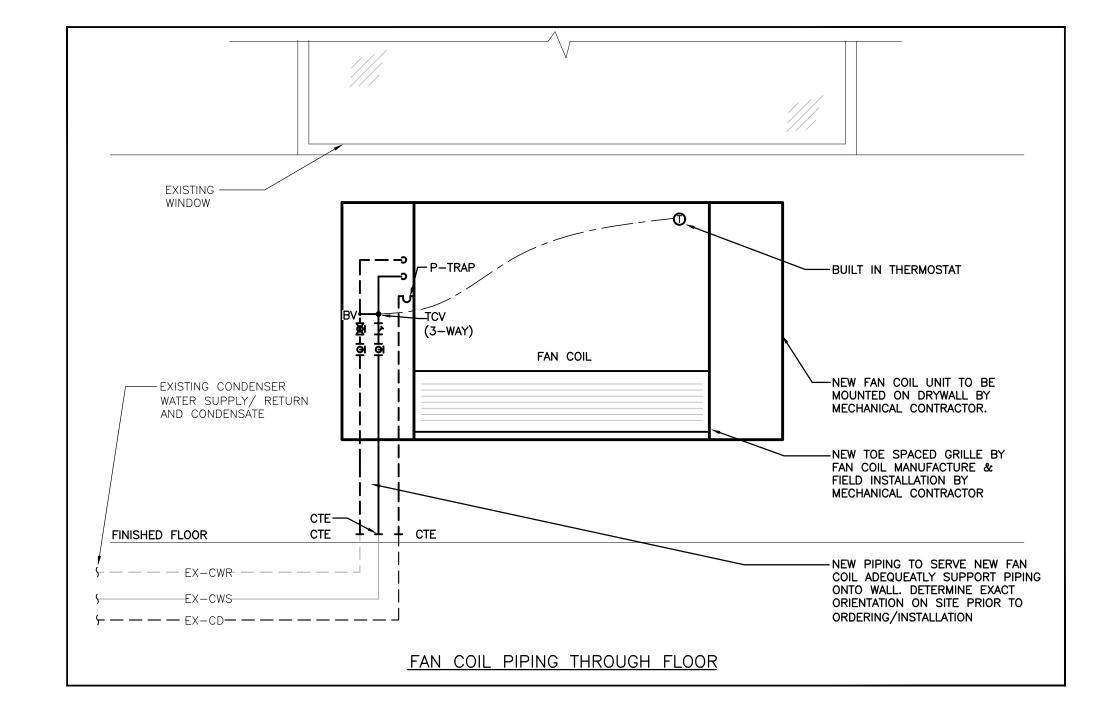




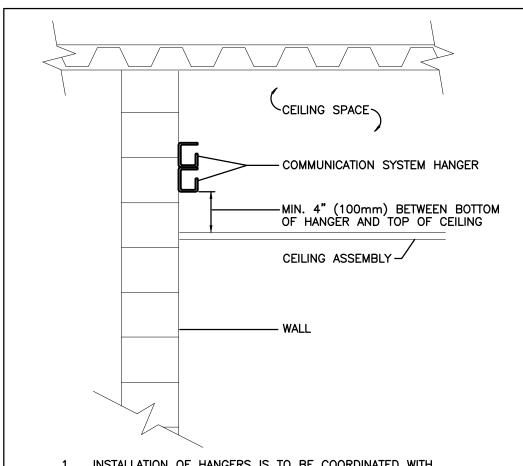


605 JAMES STREET NORTH, HAMILTON, ON, L8L 1K1 PH:(905)525-4330 F:(905)525-7258

	(/
PROJECT:	605 JAMES STREET NORTH FOURTH FLOOR RENOVATIONS
DWG. TITLE:	DETAILS
SCALE:	AS NOTED
DATE:	MARCH 2025
DRAWN BY:	H.A.
CHECKED BY	S.V./M.P.
DWG. No:	M401
LOCATION: X:\2024 Projects	s\24254 HOPA James St N Office Renovation, Hamilton\02 Dwgs\02 Mech\24254 M901 Details.dwg



<u>EQUII</u>	PMENT WIRING SCHE	<u>)UL</u>	<u>E</u>																																		M = MECHANICAL O = OTHERS
	Description			Electrical	Data			Starter				Ctrl Device			ls	Isolating Device			Remote Items						Other Interlock			Interio	ock								
Mechanical Item	Description	Provided By	Voltage	Size hp/kW/Amps	Phase	MOCP	Magnetic	Manual	Combination	VFD	ECM (No Separate Starter Device)		Un/Uff Selector	Pilot Light	Disconnect	WP Disconnect	Breaker/Fuse	Starter/Device Wired by	Thermostat	Thermostat		ariable	Current Sensor	Voltage	2 6	VRF System Controll Panel	ke Control Syster	Control Panel	Wired by		ed By	cellaneous	Miscellaneous 2	Interlock to	Interlock by	Remarks	
FC-1	FAN COIL	М	115	2.75MCA	1	15									Е		Е	E	М										М								
FC-2	FAN COIL	М	115	3.88MCA	1	15									Е		Е	E	М										М								
FC-3	FAN COIL	М	115	3.88MCA	1	15									E		Е	E	М										М								
FC-4	FAN COIL	М	115	6.07MCA	1	15									E		E	E	М										М								
ERV-1	ENERGY RECOVERY VENTILATOR	М	208	28.9MCA	3	40									Е		Е	E										М	М							ELEC CAPACITY INCLUDES FOR 4.5KW PRE-HEATER	
HWT-1	HOT WATER HEATER	М	208	4.5KW	3										Ε		Е	E																		TWO 4.5KW HEATERS, NON SIMALTANOUS OPERATION	(FLIP FLOP OPERATION)



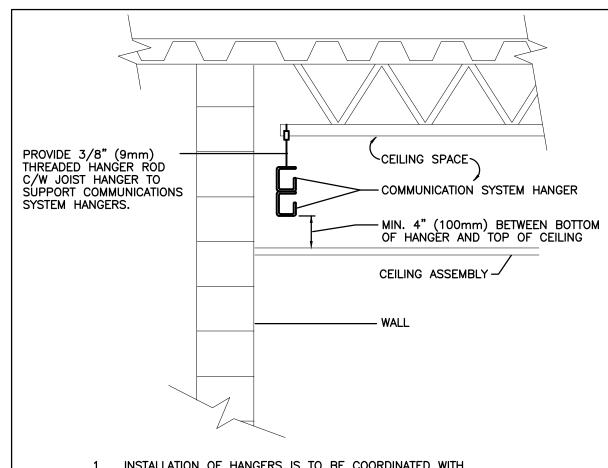
- INSTALLATION OF HANGERS IS TO BE COORDINATED WITH MECHANICAL AND ALL OTHER ASSOCIATED TRADES.
- HANGERS ARE TO BE INSTALLED IN LINE ALONG LENGTH OF CORRIDOR AT MAXIMUM 4'-0" (1200mm) INTERVALS.

A-WALL MOUNTED CABLE HANGER DETAIL SCALE: NTS

NOTES: 1 LED LUMEN VALUES QUOTED FOR FIXTURES ARE TO BE

CONSIDERED MINIMUM, AND AS ABSOLUTE OR DELIVERED

LUMENS. LUMEN VALUES SHOULD NOT EXCEED MORE THAN 10% OF SPECIFIED OUTPUT.



INSTALLATION OF HANGERS IS TO BE COORDINATED WITH MECHANICAL AND ALL OTHER ASSOCIATED TRADES.

 HANGERS ARE TO BE INSTALLED IN LINE ALONG LENGTH OF CORRIDOR AT MAXIMUM 4'-0" (1200mm) INTERVALS. B-CEILING MOUNTED CABLE HANGER DETAIL SCALE: NTS

<u>LIGHT FIXTURE SCHEDULE</u>

Item	Manufacturer/Catalog Number	Voltage	Lamp	Mounting	CRI	Listings	Description
L	AIMLITE CAT. #C2AR-4LPS45P-32/3C STANPRO CAT. #L3CBA-4LPS45P-Q/3C VISCOR CAT. #LRTF2x4-LED840K040LUNV	120V	LED 4257 LUMENS 4000K 30.4W	RECESSED	80	DLC DAMP LOC.	2'X4' (610mmX1220mm) VOLUMETRIC LED TROFFER C/W SMOOTH FROSTED ACRYLIC CENTRE LENS, 1% 0-10V DIMMING DRIVER, AND WHITE FINISH.
L1	AIMLITE CAT. #S20RS-48LA1-32/3C STANPRO CAT. #L2STR-48LS1-Q/3C VISCOR CAT. #LCOMN48-LED83550KS026/037/046LSUN3	120V	LED 4620 LUMENS 4000K 35W	SURFACE	80	DLC DAMP LOC.	4' (1220mm) SURFACE LED STRIP LIGHT C/W WIDE LENSED OPTICAL DISTRIBUTION AND 10% 0-10V DIMMING DRIVER.
L2	AIMLITE CAT. #PBLV-4LPS50-32/SC STANPRO CAT. #L3PNV-4LPS50-Q/5C/CHOICE LITELINE CAT. #LEDB-24-WH	120V	LED 4494 LUMENS 4000K 40W	RECESSED	80	DLC IC DAMP LOC.	2'X4' (610mmX1220mm) LED BACKLIT FLAT PANEL FIXTURE C/W WHITE FROSTED LENS, 10% 0-10V DIMMING DRIVER, SELECTABLE COLOUR TEMP & LUMENS AND WHITE FINISH.
	AIMLITE CAT. #RPALWUMWHTUNVDC STANPRO CAT. #RMXLOWH—UDC LUMACELL CAT. #LA3WUX	12V/120V	LED 2.5 WATT (MAX.)AC 2 WATT (MAX.)DC	SURFACE	N/A	N/A	LED EXTRUDED ALUMINUM PICTOGRAM FIXTURE C/W GREEN FACE AND WHITE LEGEND, UNIVERSAL MOUNTING TO SUIT WALL, END OR CEILING, AND MAXIMUM 2.5" (63mm) THICKNESS. FACES AND CHEVRONS TO SUIT DRAWINGS.
	AIMLITE CAT. #RMSM212V4WLJWHT STANPRO CAT. #N2-06-12V4WLJWH LUMACELL CAT. #MQM2LD7	12V	LED 2-4W PAR18	SURFACE	N/A	N/A	TWIN HEAD LED REMOTE MR16 FIXTURE C/W COMPACT DESIGN, THERMOPLASTIC CONSTRUCTION, WHITE COLOUR, FULL AIMING ADJUSTMENT, AND 360° ROTATION.
	AIMLITE CAT. #CARPW SERIES EM-1 #CARPW12036X2SM4WLJATD STANPRO CAT. #PRMXL SERIES EM-1 #PRMXL10361-2N4LJ-AT LUMACELL CAT. #LAC SERIES EM-1 #LACXW12502LD7ATN	12V/120V	LED 2-4W PAR18	SURFACE	N/A	N/A	LED EXTRUDED ALUMINUM PICTOGRAM FIXTURE C/W GREEN FACE AND WHITE LEGEND, UNIVERSAL MOUNTING TO SUIT WALL, END OR CEILING, MAXIMUM 2.5" (63mm) THICKNESS, 12V INTERNAL SEALED RECHARGABLE BATTERY PROVIDING MINIMUM EMERGENCY WATTAGE AS NOTED BY THE CATALOGUE NUMBER AND AUTOTEST FEATURE. INTEGRAL 12V LED HEADS TO HAVE COMPACT DESIGN WITH WHITE COLOUR, FULL AIMING ADJUSTMENT, AND 360° ROTATION. WHERE NOTED UNIT SHALL BE C/W WIREGUARD. FACES AND CHEVRONS TO SUIT DRAWINGS.

2) IF THERE ARE ANY DISCREPANCIES BETWEEN THE FIXTURE PART NUMBER AND DESCRIPTION, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO BRING THESE TO THE ELECTRICAL CONSULTANT'S ATTENTION PRIOR TO TENDER CLOSE. NO EXTRAS WILL BE ENTERTAINED FOR FAILURE TO DO SO. FINAL FIXTURE CHARACTERISTICS AND DESCRIPTION WILL BE MARKED BY CONSULTANT AT TIME OF SHOP DRAWING REVIEW.

PANEL '4N'	* INDICATES 33mA GROUND FAULT STYLE BREAK
	THE CONTRACTOR IS TO COORDINATE ROOM NAME:
VOLTAGE: 120/208 VOLTS PHASE: 3P, 4W	AND NUMBERS NOTED WITH THE FINAL ROOM INFORMATION ISSUED DURING CONSTRUCTION AND
MAINS: 225A	ADJUST DIRECTORIES TO SUIT.
NEUTRAL BUS: FULL	
MOUNTING: SURFACE NOTES: C/W SPRINKLER HOOD	
1101231 3) II 31 IIII 1211 11335	
COFFEE MAKER REC. 20A 🦳 1	2 20A KITCHEN COUNTER REC.
MICROWAVE REC. 15A 3	4 15A DISHWASHER
FRIDGE REC. 15A 5	6 20A MISC. OPEN OFFICE REC.
BOARD RM. REC. 15A 7	8 15A OFFICE 5/QUIET RM. REC.
OPEN SPACE CEILING FAN 15A 9	10 15A OFFICE 3/4/QUIET RM. REC.
OFFICE 1/2/3 REC. 15A 11	12 15A OFFICE 1/OPEN SPACE REC.
COPIER REC. 15A 13	14 SHREDDER REC.
SERVER RACK REC. 15A 15	16 15A BOARD RM. FAN
BOARD RM. T.V. REC. 20A 17	18 20A BOARD RM. FLOOR BOX REC.
MAIL MACHINE 15A 19	20 15A OPEN SPACE SYS. FURN.
SPARE 20A 21	22 15A OPEN SPACE SYS. FURN.
SPARE 20A 23	24 0PEN SPACE SYS. FURN.
SPARE 15A 25	26 15A OPEN SPACE SYS. FURN.
SPARE <u>15A</u> 27	15A SPARE
SPARE 15A 29	30 15A SPARE
SPARE 15A 31	32 <u>15A</u> SPARE
EXISTING CIRCUIT 15A 33	34 15A EXISTING CIRCUIT
EXISTING CIRCUIT 15A 35	15A EXISTING CIRCUIT
EXISTING CIRCUIT 15A 37	15A EXISTING CIRCUIT
EXISTING CIRCUIT 15A 39	40 15A EXISTING CIRCUIT
EXISTING CIRCUIT 15A 41	42 15A EXISTING CIRCUIT
EXISTING CIRCUIT 15A 43	44 15A EXISTING CIRCUIT
EXISTING CIRCUIT 15A 45	46 15A EXISTING CIRCUIT
EXISTING CIRCUIT 20A 47	48 20A EXISTING CIRCUIT
EXISTING CIRCUIT 20A 49	50 20A EXISTING CIRCUIT
EXISTING CIRCUIT 15A 51	52 15A EXISTING CIRCUIT
2P 53	54 0 2P
SPARE 15A 55	56 15A EXISTING CIRCUIT
SPARE 15A 57	58 2P
SPACE 59	SPACE SPACE
SPACE 61	SPACE SPACE
SPACE 63	SPACE SPACE
SPACE 65	SPACE SPACE
KITCHENETTE WH IN CEILING 20A 67	68 40A ERV-1 ABOVE WOMENS WR
(HWT-1) 69	70 (ERV-1)

THE INDICATED PANEL ASSEMBLY MUST HAVE AN INTERRUPTING CAPACITY OF 10000A . PROVIDE BY EITHER FULLY RATED BREAKERS OR INTEGRATED EQUIPMENT RATING WITH

THE UPSTREAM BREAKER.

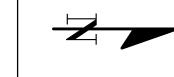
E = ELECTRICAL

ELECTRICAL SYMBOLS

					_		
	LIGHTING		POWER				
X	LIGHT FIXTURE TYPE AS INDICATED	Ф	WALL MOUNTED RECEPTACLE (15A-120V)				
EM-X DC-X X-X	COMBINATION EMERGENCY/EXIT TYPE AS INDICATED (EM-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT,	•	WALL MOUNTED T-SLOT RECEPTACLE (20A-120V)		TRUE NORTH	1	FRUCTION NOR
X-X	TYPE, DC-X INDICATES DC CIRCUIT, AND X-X INDICATES AC SOURCE CIRCUIT)	#	T-SLOT RECEPTACLE MTD. ABOVE COUNTER (20A-120V)	errors a	itractor shall verify and discrepancies to ncement of the work	the Cons	•
Ø Ø	CEILING OR WALL MOUNTED LIGHT FIXTURE TYPE AS INDICATED	₩ _s	RECEPTACLE MTD. ABOVE COUNTER S=SPLIT (15A-120V)	The dra	wings show general as closely as actual	l arranger	
凌	WALL MOUNTED EXIT LIGHT SHADING INDICATES FACE	<u>۾</u>	SPECIAL RECEPTACLE	permit. (Obtain approval for ant before commen	relocation	n of service fr
1)()()	CEILING MOUNTED EXIT LIGHT ARROWS DENOTE DIRECTION SHADING INDICATES FACE	#	QUAD RECEPTACLE	accesso	wings do not indicatories which may be i	required.	•
<u>F</u> EE	SINGLE OR TWIN EMERGENCY LIGHTING FIXTURE	©	DIRECT CONNECTION	Drawing	the required conditings and specifications onsultant are the pr	s, etc., pre	•
EM-X DC-X X-X	BATTERY UNIT WITH INTEGRAL EMERGENCY FIXTURE (EM-X INDICATES BATTERY UNIT TYPE, DC-X INDICATES DC CIRCUIT,	DEB <	FLOOR BOX C/W DEVICES AS NOTED (REFER TO SPECIFICATIONS)	and mus	st be returned at the locuments are not to	e completi o be dupli	ion of the pro cated or cop
1801-40 X-X^	TYPE, DC-X INDICATES DC CIRCUIT, AND X-X INDICATES AC SOURCE CIRCUIT)	JB	JUNCTION BOX	Do not s	the consent of the C scale this drawing. DEI Consulting Eng		
\$	SINGLE POLE SWITCH (3=3 WAY, 4=4 WAY, P=PILOT LIGHT, K=KEYED, DM=DIMMER, M=MOTOR RATED)	PB	PULLBOX		DET Consulting Eng		.
\$ ^{os}	OCCUPANCY SENSOR (PASSIVE)	-	PANEL AS INDICATED		PROFESS	SIONAL CO	
OSD/OSR \$	OCCUPANCY SENSOR: OSD=DUAL TECHNOLOGY OSR=DUAL CIRCUIT/DUAL TECHNOLOGY	짣	FUSED DISCONNECT		J.J. JA 10001	ACKSON F	ה ה
OS	CEILING MOUNTED MOTION SENSOR	라	UNFUSED DISCONNECT		7 /05	7/25 OF ONTARIO	
wos	WALL MOUNTED MOTION SENSOR	DVR	DUAL VOLTAGE RELAY		, NCE C	OF UN	
DR	DIGITAL ROOM CONTROLLER	I	TIME CLOCK				
DM	DIGITAL WALL DIMMER STATION	Ø	0-15 MINUTE INTERVAL TIMER				
EM	EMERGENCY LIGHTING RELAY	S	SPEED CONTROLLER				
PK	ANALOG POWER PACK	Ø	MANUAL STARTER				
		Ø	MAGNETIC STARTER				
	FIRE ALARM	M	COMBINATION MAGNETIC STARTER				
=	HEAT DETECTOR (135 DEGREE RATE OF RISE AND FIXED TEMPERATURE)	_6 ▽	SURFACE RACEWAY C/W DEVICES AS NOTED (REFER TO SPECIFICATIONS)				
•	HEAT DETECTOR (135 DEGREE FIXED TEMPERATURE)	HD	HAND DRYER				
	HEAT DETECTOR (194 DEGREE FIXED TEMPERATURE)	•	PUSH-BUTTON STATION (QUANTITY OF BUTTONS AS PER PLANS)				
	HEAT DETECTOR (195 DEGREE RATE OF RISE AND FIXED TEMPERATURE)			5	RE-ISSUED FOR TE	ENDER	MAR 26 2025
S	SMOKE DETECTOR (RL=RELAY BASE)			3 2	ISSUED FOR REVISSUED FOR TEN	IDER	MAR 14 2025 JAN 13 2025 DEC 13 2024
	PULLSTATION			1 NO.	ISSUED FOR 100% I		NOV 14 2024 DATE
\searrow	ALARM HORN		ACCESS CONTROL				
Y	ALARM STROBE	ML	MAG LOCK				F
Y	COMBINATION HORN/STROBE	ES	ELECTRIC STRIKE. CONFIRM ROUGHIN WITH DOOR HARDWARE.				
FSD	FIRE SMOKE DAMPER	CR	CARD/FOB READER				
					Onsulting E		
	COMMUNICATIONS		GENERAL		55 Northland Road, Water Phone: 519-725-3555 Fa	rloo, ON N2V	/ 1Y8
\triangle \(\frac{1}{4} \)	SINGLE COMPUTER OUTLET C/W ¾" (21mm) C TO CABLE MANAGEMENT	ER	INDICATED EXISTING ITEM TO REMAIN		Website: deiasso DEI PROJE	ciates.ca	
• "	SYSTEM. # INDICATES THE QUANTITY OF ACTIVE PORTS (IF MORE THAN 1)	D	INDICATES EXISTING ITEM TO BE DELETED				
♦	TELEVISION OUTLET C/W 1"C (27mm) TO CABLE MANAGEMENT SYSTEM.	R	INDICATES EXISTING ITEM TO BE RELOCATED/IN RELOCATED POSITION				
(A)	AUXILIARY (HDMI) OUTLET	WG	WIREGUARD		-	1 11 4	MILTON
©	HANGER SYSTEM (REFER TO DETAILS)	GF	GROUND FAULT		10PA	O S P O	MILTON HAWA RT
		CLG	CEILING MOUNTED		PORTS	AU	THORIT
		\otimes	NOTE INDICATOR		605 JAMES STREET NORT PH:(905)525-4330	F:(905)525-7	7258
		(X)	MECHANICAL ITEM NO.	DWG. TITLE		RENOV	ATIONS
				SCALE:	LEGEND & S	CHEDUL	_ES



NOTE: ALL SYMBOLS MAY NOT BE USED



CONSTRUCTION NORTH

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before

The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.

Drawings and specifications, etc., prepared and issued by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied



5	RE-ISSUED FOR TENDER	MAR 26 2025	JL
4	ISSUED FOR REVIEW	MAR 14 2025	JL
3	ISSUED FOR TENDER	JAN 13 2025	JL
2	ISSUED FOR 100% REVIEW	DEC 13 2024	JL
1	ISSUED FOR REVIEW	NOV 14 2024	JL
NO.	ISSUED	DATE	BY





HAMILTON OSHAWA PORT AUTHORITY

605 JAMES STREET NORTH FOURTH FLOOR RENOVATIONS LEGEND & SCHEDULES AS NOTED

MARCH 2025 DRAWN BY: K.F.

CHECKED BY: J.L.

LOCATION:
X:\2024 Projects\24254 HOPA James St N Office Renovation, Hamilton\02 Dwgs\03 Elec\24254 E101 Legend
& Schedules.dwg





- 'ER' DENOTES EXISTING ITEM TO REMAIN.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN SHALL REMAIN UNLESS NOTED OTHERWISE.
- 'R' INDICATES EXISTING ITEM TO BE RELOCATED. REFER TO RENOVATION DRAWINGS AND RELOCATE DEVICE AND WIRING TO SUIT. UNLESS OTHERWISE NOTED.



TRUE NORTH



The contractor shall verify all dimensions and report all

errors and discrepancies to the Consultant before commencement of the work.

The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

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2	ISSUED FOR 100% REVIEW	DEC 13 2024	JL
1	ISSUED FOR REVIEW	NOV 14 2024	JL
NO.	ISSUED	DATE	BY



55 Northland Road, Waterloo, ON N2V 1Y8
Phone: 519-725-3555 Fax: 519-725-2515
Website: deiassociates.ca
DEI PROJECT #24254



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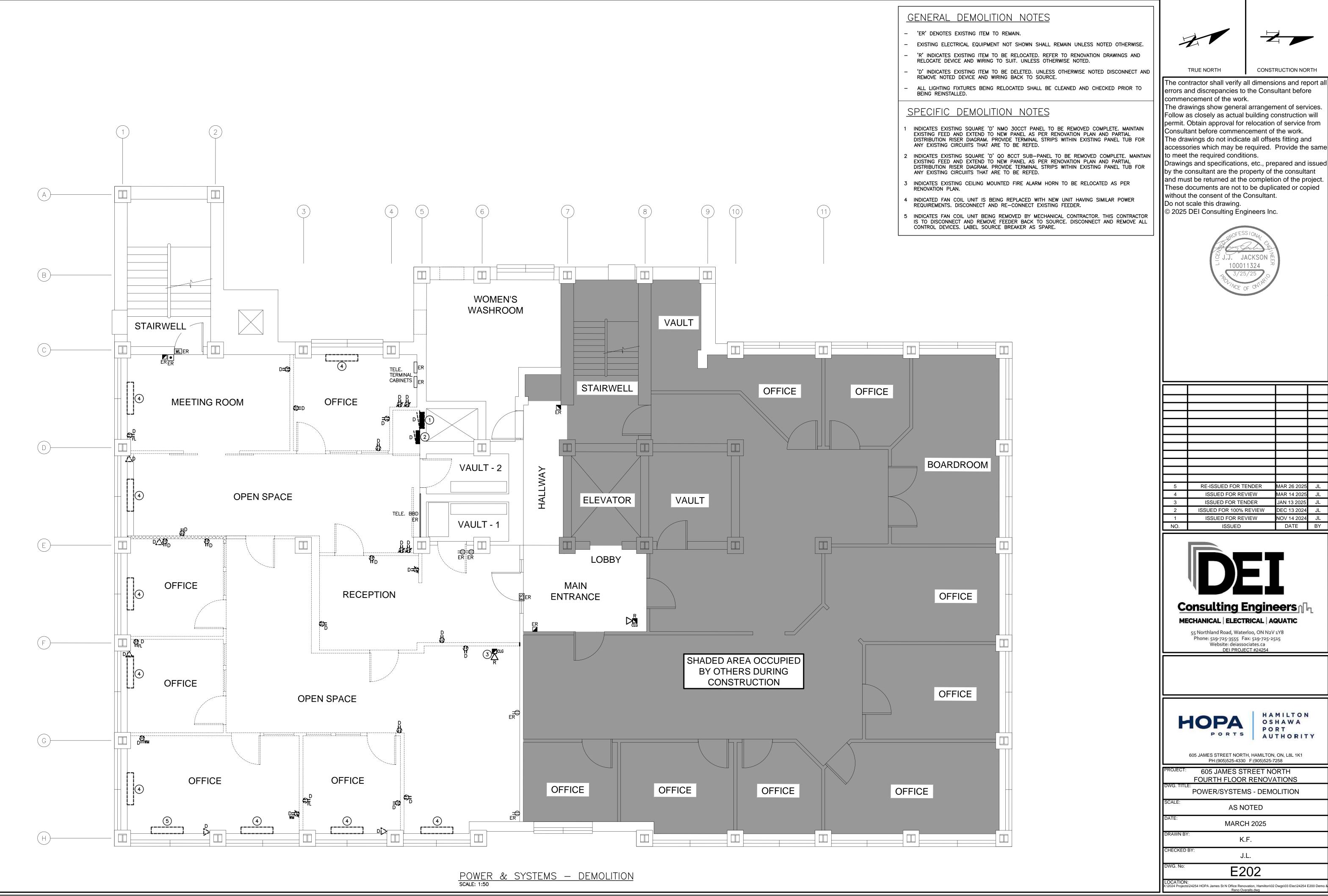
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605 JAMES STREET NORTH FOURTH FLOOR RENOVATIONS LIGHTING - DEMOLITION AS NOTED MARCH 2025 K.F. J.L.

E201

LOCATION:

X:\2024 Projects\24254 HOPA James St N Office Renovation, Hamilton\02 Dwgs\03 Elec\24254 E200 De Reno Overalls.dwg





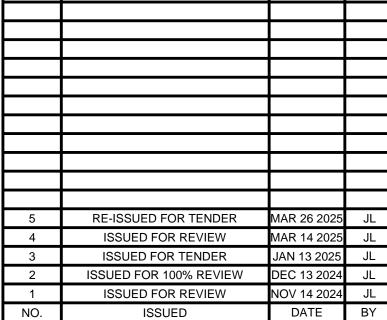
CONSTRUCTION NORTH

errors and discrepancies to the Consultant before

Follow as closely as actual building construction will permit. Obtain approval for relocation of service from

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same

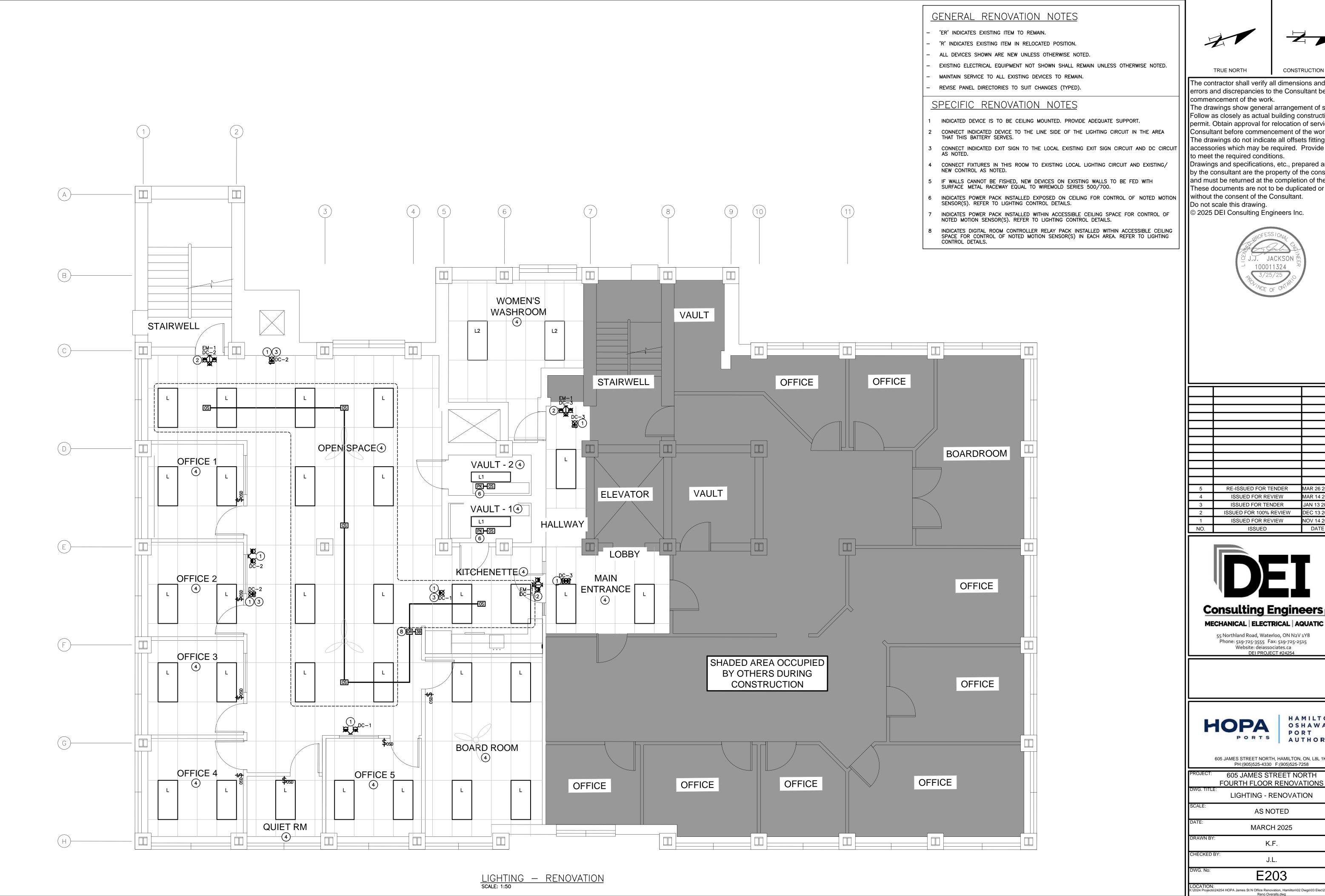
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605 JAMES STREET NORTH FOURTH FLOOR RENOVATIONS POWER/SYSTEMS - DEMOLITION







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The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same

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4	ISSUED FOR REVIEW	MAR 14 2025	J
3	ISSUED FOR TENDER	JAN 13 2025	J
2	ISSUED FOR 100% REVIEW	DEC 13 2024	JI
1	ISSUED FOR REVIEW	NOV 14 2024	J
NO.	ISSUED	DATE	B'



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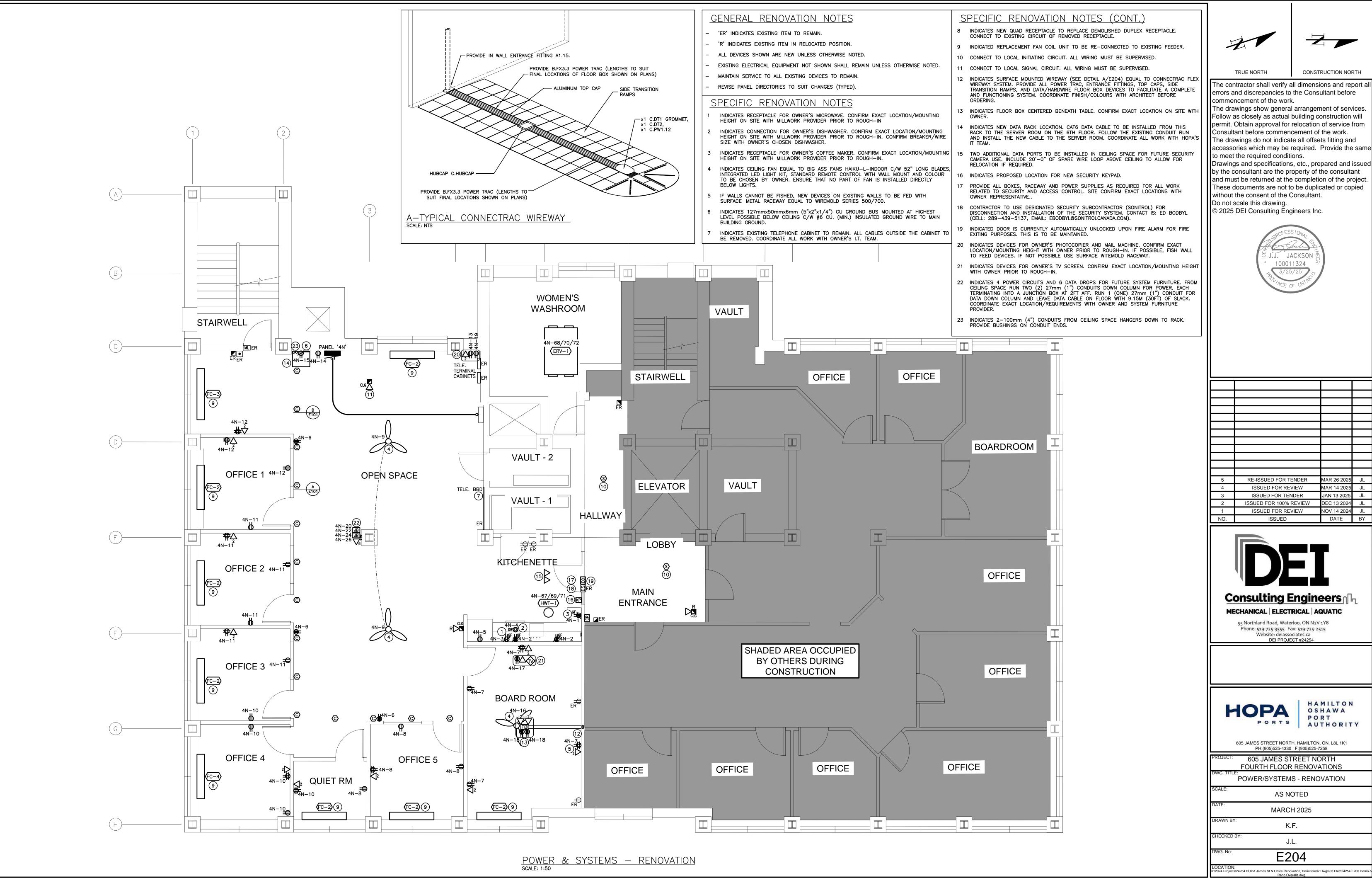
605 JAMES STREET NORTH, HAMILTON, ON, L8L 1K1 PH:(905)525-4330 F:(905)525-7258

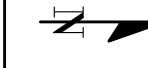
605 JAMES STREET NORTH FOURTH FLOOR RENOVATIONS LIGHTING - RENOVATION AS NOTED MARCH 2025 K.F.

E203

COCATION:

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Reno Overalls.dwg





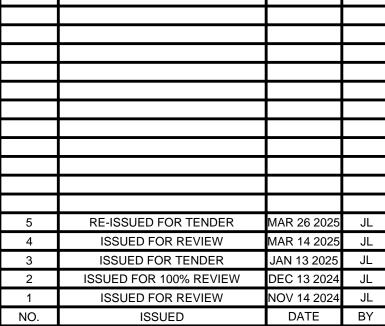
CONSTRUCTION NORTH

The contractor shall verify all dimensions and report all errors and discrepancies to the Consultant before

Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

accessories which may be required. Provide the same

by the consultant are the property of the consultant and must be returned at the completion of the project.





HAMILTON OSHAWA AUTHORITY

FOURTH FLOOR RENOVATIONS POWER/SYSTEMS - RENOVATION

ELECTRICAL SPECIFICATION

GENERAL NOTES

- .1 PROVIDE LABOUR, MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A COMPLETE INSTALLATION WITH QUALITY WORKMANSHIP ACCEPTABLE TO THE OWNER, ARCHITECT AND CONSULTANT.
- .2 OBTAIN ALL PERMITS AND PAY ALL TAXES, FEES AND OTHER COSTS INCURRED WITH THIS WORK. FILE ALL PLANS. OBTAIN NECESSARY APPROVALS, CERTIFICATES AND INSPECTIONS. SUBMIT ALL FINAL CERTIFICATES TO THE CONSULTANT.
- .3 COMPLY WITH RULES AND RECOMMENDATIONS OF THE BOARD OF UNDERWRITERS, ELECTRICAL SAFETY AUTHORITY, THE CANADIAN STANDARDS ASSOCIATION AND ALL REQUIREMENTS OF THE LOCAL UTILITY.
- VISIT THE SITE BEFORE SUBMITTING TENDERS TO EVALUATE ANY SITE CONDITIONS THAT MIGHT ARISE. INCLUDE ALL SITE CONDITIONS IN TENDER, EXTRAS WILL NOT BE ACCEPTED UNLESS BELIEVED TO BE REASONABLE BY THE OWNER AND
- .5 CUTTING AND PATCHING SHALL BE BY THE CONTRACTOR REQUIRING TO INSTALL THE SERVICE.
- .6 THE DRAWINGS ARE DIAGRAMMATIC, THE SERVICES SHALL BE INSTALLED TO CONSERVE HEADROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH THE FREE USE OF THE SPACES THROUGH WHICH THEY PASS.
- .7 SUBMIT COPIES OF SHOP DRAWINGS AS PDF FILES VIA EMAIL FOR ALL MAJOR EQUIPMENT. THESE WILL BE REVIEWED BY THE CONSULTANT. RESUBMIT AS OFTEN AS MAY BE FOUND NECESSARY.
- .8 PROVIDE ALL NECESSARY PROTECTION FOR FINISHED OR UNFINISHED WORK. ALL OPENINGS IN CONDUITS, DUCTS AND EQUIPMENT

UNDER THE WORKMEN'S COMPENSATION ACT, ETC. POST PROJECT NOTIFICATION AT THE SITE IN ACCORDANCE WITH THE MINISTRY

- SHALL BE CAPPED TO ENSURE SERVICES ARE KEPT CLEAN WHEN NOT IN USE. .9 MAINTAIN INSURANCE TO FULLY PROTECT THE CONTRACTOR, OWNER AND CONSULTANT FROM ANY AND ALL CLAIMS SUCH AS
- .10 PROVIDE STRUCTURAL SUPPORTS, PLATFORMS, SUPPORTING RODS, HANGERS, INSERTS AND BRACKETS FOR EQUIPMENT AND SERVICES. DO NOT SUPPORT SERVICES FROM STEEL DECK.
- .11 INSTRUCT THE OWNER'S STAFF IN THE CARE, MAINTENANCE AND OPERATION OF THE SYSTEMS.
- .12 WARRANTY ALL LABOUR, MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE (1) YEAR (UNLESS OTHERWISE NOTED) AFTER FINAL
- .13 COORDINATE WITH OTHER CONTRACTORS INSTALLING EQUIPMENT OR MATERIAL AND ARRANGE EQUIPMENT IN PROPER RELATION WITH APPARATUS OF ALL OTHER TRADES.
- .14 PROVIDE LAMICOID TAGS FOR IDENTIFICATION OF NEW EQUIPMENT ADDED.
- .15 MOUNTING HEIGHTS SHALL BE AS FOLLOWS FROM FINISHED FLOOR TO CENTERLINE OF DEVICE/EQUIPMENT (UNLESS OTHERWISE
- SWITCHES, DIMMERS AND SPEED CONTROLLERS: 1100mm (44")
- WALL RECEPTACLES: GENERAL: 400mm (16"
- ABOVE TOP OF COUNTERS: 100mm (4") - IN MECHANICAL/ELECTRICAL ROOMS: 1100mm (44") (GANG WITH SWITCH).
- PANEL BOARDS: 1400mm (4'-8") OR AS REQUIRED BY CODE. TELEPHONE OUTLETS: 400mm (16")
- VOICE/DATA OUTLETS: 400mm (16") FIRE ALARM SIGNAL DEVICES: 2250mm (7'-6")
- .16 ALL AREAS NOT AFFECTED BY RENOVATION OR DEMOLITION SHALL REMAIN AS PRESENTLY INSTALLED UNLESS OTHERWISE NOTED.
- .17 ALL EXISTING ELECTRICAL DEVICES, OUTLET BOXES, ETC., NOT SHOWN ON DRAWINGS OR MENTIONED IN THE FOLLOWING NOTES AND INSTALLED IN WALLS SLATED FOR DEMOLITION, SHALL BE DISCONNECTED AND REMOVED COMPLETELY IN ALL RESPECTS.
- .18 SUBMIT ONE COPY OF OPERATING AND MAINTENANCE INSTRUCTIONS IN A THREE RING BINDER LABELED FOR THE PROJECT COMPLETE WITH ITEMIZED SECTIONS CONTAINING PROJECT DATA, SHOP DRAWINGS, ETC. UPON ACCEPTANCE OF THE OPERATION AND MAINTENANCE MANUAL BY THE CONSULTANT PROVIDE TWO ADDITIONAL COPIES BOUND IN SEPARATE THREE RING BINDERS. A PDF FILE OF THE ENTIRE MANUAL IS TO BE PROVIDED ON A USB STICK. ONLY ONE USB STICK IS TO BE PROVIDED CONTAINING
- BOTH THE APPROVED MANUALS AND RECORD DRAWINGS. .19 CONTRACTOR SHALL PROVIDE 2 SETS OF REPRODUCIBLE ELECTRICAL DRAWINGS. MARK THEREON ALL CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR. THIS SHALL INCLUDE FIELD AND CONTRACT CHANGES TO ELECTRICAL SYSTEMS. IDENTIFY EACH DRAWING IN LOWER RIGHT HAND CORNER IN LETTERS AT LEAST 3mm (1/8") HIGH AS FOLLOWS: - "RECORD DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW ELECTRICAL SYSTEMS AS INSTALLED. (SIGNATURE OF CONTRACTOR)(DATE)". SUBMIT HARD COPY TO CONSULTANT FOR APPROVAL. WHEN RETURNED, MAKE CORRECTIONS (IF ANY) AS DIRECTED. ONCE APPROVED,

SUBMIT COMPLETED REPRODUCIBLE PAPER RECORD DRAWINGS AS WELL AS A SCANNED PDF COPY FILE ON USB STICK WITH

- .20 CONTRACTOR SHALL PROVIDE RED LINE RECORD DRAWINGS OF EACH AND EVERY ELECTRICAL DRAWING FOR DEI CONSULTING ENGINEERS TO CAD THE RECORD DRAWINGS. THE CAD DRAWING FILES WILL BE PROVIDED TO THE OWNER AS PART OF THE
- .21 THE CONTRACTOR IS TO DETERMINE GENERAL INSPECTION FEES WITH THE ELECTRICAL SAFETY AUTHORITY AND INCLUDE AS PART OF TENDER.

- .1 JUNCTION, OUTLET AND PULL BOXES MUST BE APPROVED TO SUIT INSTALLATION METHODS AND ENVIRONMENT.
- .2 CONDUIT MUST BE CONCEALED UNLESS INSTALLED IN SERVICE OR STORAGE ROOMS.
- .3 CONDUIT MUST BE INSTALLED PARALLEL AND PERPENDICULAR TO BUILDING LINES IN A NEAT AND WORKMANLIKE MANNER.
- .4 ALL FEEDER AND BRANCH CIRCUIT WIRING MUST BE COPPER, T90 RATING/STYLE RUN IN EMT CONDUIT WITH INTERNAL INSULATED GREEN GROUND WIRE UNLESS NOTED OTHERWISE. MINIMUM WIRE SIZE SHALL BE #12 AND MINIMUM CONDUIT SIZE SHALL BE
- .5 AC90 CABLE MAY BE USED FOR BRANCH CIRCUIT WIRING IN STEEL STUD WALLS AND "DROPS" IN T-BAR CEILING AREAS TO LIGHT FIXTURES AND FIRE ALARM DEVICES. LENGTH OF DROP MUST BE LIMITED TO 8'-0" (2400mm).
- .6 WHERE DEVICES ARE TO BE INSTALLED ON EXISTING WALLS IN FINISHED AREA, WHICH CANNOT BE FISHED, INSTALL FEEDS IN A SURFACE METAL RACEWAY EQUAL TO WIREMOLD V700 SERIES.
- .7 COLOUR CODE CONDUITS, BOXES AND METALLIC SHEATHED CABLES.

PINK

- .8 CODE WITH PLASTIC TAPE OR PAINT AT POINTS WHERE CONDUIT OR CABLE ENTERS WALL, CEILING, OR FLOOR, AND AT 15m(45') INTERVALS.
- .9 COLOUR BANDS MUST BE 25mm(1") WIDE AND CODED AS FOLLOWS FOR NOTED SYSTEMS.

SYSTEM UP TO 208V VOICE SYSTEM **GREEN** DATA SYSTEM ORANGE FIRE ALARM RED

.10 THIS CONTRACTOR MUST PAINT ALL SYSTEM JUNCTION BOXES AND COVERS IN CONFORMANCE WITH THE ABOVE SCHEDULE.

DRAW BREAKDOWN

EMERGENCY LIGHTING

.1 THIS CONTRACTOR MUST SUBMIT A BREAKDOWN OF THE TENDER PRICE INTO CLASSIFICATIONS TO THE SATISFACTION OF THE CONSULTANT, WITH THE AGGREGATE OF THE BREAKDOWN TOTALING THE TOTAL CONTRACT AMOUNT. EACH ITEM MUST BE BROKEN OUT INTO MATERIAL AND LABOUR COSTS. PROGRESS CLAIMS, WHEN SUBMITTED ARE TO BE ITEMIZED AGAINST EACH ITEM OF THE DRAW BREAKDOWN. THIS SHALL BE DONE IN TABLE FORM SHOWING CONTRACT AMOUNT, AMOUNT THIS DRAW, TOTAL TO DATE, % COMPLETE AND BALANCE.

- .2 BREAKDOWN SHALL BE AS FOLLOWS: PERMITS AND FEES
- MOBILIZATION (MAXIMUM 1%) DEMOLITION
- PANELBOARDS AND MISCELLANEOUS DISTRIBUTION EQUIPMENT
- BRANCH CONDUITS BRANCH WIRING
- LIGHTING FIXTURES FIRE ALARM SYSTEM
- .9 VOICE/DATA SYSTEM
- .10 WIRING FOR MECHANICAL EQUIPMENT .11 COMMISSIONING (MINIMUM 3%)
- .3 THE BREAKDOWN MUST BE APPROVED BY THE CONSULTANT PRIOR TO SUBMISSION OF THE FIRST DRAW.
- .4 BREAKDOWNS NOT COMPLYING TO THE ABOVE WILL NOT BE APPROVED.
- .5 BREAKDOWN MUST INDICATE TOTAL CONTRACT AMOUNT.
- .6 MOBILIZATION AMOUNT MAY ONLY BE DRAWN WHEN ALL REQUIRED SHOP DRAWINGS HAVE BEEN REVIEWED BY THE CONSULTANT.

SHOP DRAWINGS AND PRODUCT DATA

- .1 FURNISH COMPLETE CATALOG DATA FOR MANUFACTURED ITEMS OF EQUIPMENT TO BE USED IN THE WORK TO CONSULTANT FOR REVIEW WITHIN 30 DAYS AFTER AWARD OF CONTRACT.
- .2 IF MATERIAL OR EQUIPMENT IS NOT AS SPECIFIED OR SUBMITTAL IS NOT COMPLETE, IT WILL BE REJECTED BY CONSULTANT.
- ADDITIONAL SHOP DRAWINGS REQUIRED BY THE CONTRACTOR FOR MAINTENANCE MANUALS, SITE COPIES ETC., SHALL BE PHOTOCOPIES OF THE REVIEWED SHOP DRAWINGS. ALL COSTS TO PROVIDE ADDITIONAL COPIES OF SHOP DRAWINGS SHALL BE BORNE BY THE CONTRACTOR.
- .4 PARTIAL SUBMITTALS WILL NOT BE ACCEPTED.
- .5 CATALOG DATA OR SHOP DRAWINGS FOR EQUIPMENT, WHICH ARE NOTED AS BEING REVIEWED BY CONSULTANT OR HIS ENGINEER SHALL NOT SUPERSEDE CONTRACT DOCUMENTS.
- .6 REVIEW COMMENTS OF CONSULTANT SHALL NOT RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR DEVIATIONS FROM CONTRACT DOCUMENTS UNLESS CONSULTANT'S ATTENTION HAS BEEN CALLED TO SUCH DEVIATIONS IN WRITING AT TIME OF SUBMISSION, NOR SHALL THEY RELIEVE THIS DIVISION FROM RESPONSIBILITY FOR ERRORS IN ITEMS SUBMITTED.
- .7 CHECK WORK DESCRIBED BY CATALOG DATA WITH CONTRACT DOCUMENTS FOR DEVIATIONS AND ERRORS.
- .8 SHOP DRAWINGS AND PRODUCT DATA SHALL SHOW:
- MOUNTING ARRANGEMENTS OPERATING AND MAINTENANCE CLEARANCES. E.G. ACCESS DOOR SWING SPACES.
- .9 SHOP DRAWINGS AND PRODUCT DATA SHALL BE ACCOMPANIED BY
- DETAILED DRAWINGS OF BASES, SUPPORTS, AND ANCHOR BOLTS.

CERTIFICATION OF COMPLIANCE TO APPLICABLE CODES.

- MANUFACTURER TEST DATA WHERE REQUESTED. MANUFACTURER TO CERTIFY AS TO CURRENT MODEL PRODUCTION.
- .10 STATE SIZES, CAPACITIES, BRAND NAMES, MOTOR HP, ACCESSORIES, MATERIALS, GAUGES, DIMENSIONS, AND OTHER PERTINENT INFORMATION. LIST ON CATALOG COVERS PAGE NUMBERS OF SUBMITTED ITEMS. UNDERLINE APPLICABLE DATA.
- .11 ONCE THESE SHOP DRAWINGS ARE RETURNED REVIEWED OR REVIEWED AS NOTED FABRICATION, PRODUCTION, AND INSTALLATION MAY COMMENCE. NOTE: IF A SHOP DRAWING IS RETURNED REVIEWED AS NOTED THIS CONTRACTOR MUST PROVIDE WRITTEN INDICATION THAT THE COMMENTS HAVE BEEN COMPLIED WITH.
- .12 A PARTIAL LIST OF SHOP DRAWINGS INCLUDES:
- PANELBOARDS
- EMERGENCY BATTERY UNITS AND FIXTURES

3M FIREMASTER DUCTWRAP OR APPROVED EQUAL.

- STARTERS, CONTACTORS, AND CONTROL DEVICES FIRESTOPPING MATERIALS
- SURFACE RACEWAYS WIRING DEVICES
- OCCUPANCY SENSORS COMPUTER SYSTEM COMPONENTS

<u>FIRESTOPPING</u>

- .1 FIRESTOPPING MATERIAL AND INSTALLATION WITHIN ANNULAR SPACE BETWEEN CONDUITS, DUCTS, AND ADJACENT FIRE SEPARATION.
- .2 PROVIDE MATERIALS AND SYSTEMS CAPABLE OF MAINTAINING EFFECTIVE BARRIER AGAINST FLAME, SMOKE, AND GASES.

IN A FIRE SEPARATION. PROVIDE FIREWRAP BLANKET AROUND SERVICES PENETRATING FIREWALLS.

- .3 COMPLY WITH THE REQUIREMENTS OF CAN4-S115-M35, AND DO NOT EXCEED OPENING SIZED FOR WHICH THEY HAVE BEEN
- .4 SYSTEMS TO HAVE AN F OR FT RATING (AS APPLICABLE) NOT LESS THAN THE FIRE PROTECTION RATING REQUIRED FOR CLOSURES
- .5 EXTENT OF BLANKET MUST CORRESPOND TO ULC RECOMMENDATIONS. IN GENERAL WRAP INDIVIDUAL CONDUITS WITH APPROVED FIREWRAP MATERIALS ON EACH SIDE OF FIREWALL. REFER TO ARCHITECTURAL DRAWINGS FOR FT RATINGS. PROVIDE 1 AND/OR 2 LAYERS OF FIREWRAP WITH TRANSVERSE AND LONGITUDINAL SEAMS OVERLAPPED AND/OR BUTTED (SECOND LAYER OFFSET FROM FIRST LAYER). CUT EDGES ARE TO BE SEALED WITH ALUMINUM FOIL TAPE. PROVIDE 50 MM STAINLESS STEEL BANDING AT 200 MM INTERVALS. INSTALL FIREWRAP TO MANUFACTURERS' RECOMMENDATIONS FOR PROPER FT RATING. ACCEPTABLE MANUFACTURERS ARE
- .6 THE FIRESTOPPING MATERIALS ARE NOT TO SHRINK, SLUMP OR SAG AND BE FREE OF ASBESTOS, HALOGENS AND VOLATILE
- .7 FIRESTOPPING MATERIALS ARE TO CONSIST OF A COMPONENT SEALANT APPLIED WITH A CONVENTIONAL CAULKING GUN AND
- .8 FIRESTOP MATERIALS ARE TO BE CAPABLE OF RECEIVING FINISH MATERIALS IN THOSE AREAS, WHICH ARE EXPOSED AND SCHEDULED TO RECEIVE FINISHES.
- .9 FIRESTOPPING SHALL BE INSPECTED AND APPROVED BY LOCAL AUTHORITY PRIOR TO CONCEALMENT OR ENCLOSURE.
- .10 INSTALL MATERIAL AND COMPONENTS IN ACCORDANCE WITH ULC CERTIFICATION, MANUFACTURERS INSTRUCTIONS AND LOCAL
- .11 SUBMIT PRODUCT LITERATURE AND INSTALLATION MATERIAL ON FIRESTOPPING IN SHOP DRAWING AND PRODUCT DATA MANUAL.
- .12 ACCEPTABLE MANUFACTURERS: RECTORSEAL CORPORATION (METACAULK) PROSET SYSTEMS
- STI FIRESTOP

NOTE: FIRE STOP MATERIAL MUST CONFORM TO REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION. CONTRACTOR TO CONFIRM PRIOR TO APPLICATION AND ENSURE MATERIAL USED IS COMPATIBLE WITH THAT USED BY OTHER TRADES ON SITE.

.13 ENSURE FIRESTOP MANUFACTURER REPRESENTATIVE PERFORMS ON SITE INSPECTIONS AND CERTIFIES INSTALLATION, SUBMIT INSPECTION REPORTS/CERTIFICATION AT TIME OF SUBSTANTIAL COMPLETION.

READY FOR TAKEOVER

- .1 COMPLETE THE FOLLOWING TO THE SATISFACTION OF THE CONSULTANT PRIOR TO REQUEST FOR READY FOR
- .1 AS-BUILT DRAWINGS.
- .2 MAINTENANCE MANUALS.
- .3 SYSTEM START UP.
- .4 INSTRUCTIONS TO OWNERS. .5 FINAL CERTIFICATES
- ELECTRICAL SAFETY AUTHORITY EMERGENCY LIGHTING

FIRE ALARM VERIFICATION CERTIFICATE

WIRING DEVICES

- .1 GENERAL PURPOSE AC SWITCHES MUST CONFORM TO CSA C22.2 NO. 111 (LATEST EDITION).
- .2 15 OR 20 A, 120 V, SINGLE POLE, DOUBLE POLE, THREE-WAY, OR FOUR-WAY SWITCHES.
- .3 MANUALLY-OPERATED GENERAL PURPOSE AC SWITCHES WITH THE FOLLOWING FEATURES:
 - TERMINAL HOLES APPROVED FOR NO. 10 AWG WIRE. SILVER ALLOY CONTACTS.
- UREA OR MELAMINE MOLDING FOR PARTS SUBJECT TO CARBON TRACKING.
- SUITABLE FOR BACK AND SIDE WIRING. .5 TOGGLE COLOUR AS SELECTED BY ARCHITECT.
- .4 ACCEPTABLE MATERIALS: SINGLE POLE: HUBBELL CAT. #1201 OR EQUAL THREE-WAY: HUBBELL CAT. #1203 OR EQUAL
 - FOUR-WAY: HUBBELL CAT. #1204 OR EQUAL MOTOR RATED: HUBBELL CAT. #HBL1221PL OR EQUAL (HBL2121 DECORA OR EQUAL) C/W PILOT LIGHT.
- .5 INSTALL SINGLE THROW SWITCHES WITH HANDLE IN "UP" POSITION WHEN SWITCH IS CLOSED.
- .6 INSTALL SWITCHES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE SWITCH IS REQUIRED IN ONE LOCATION.
- .7 RECEPTACLES, PLUGS, AND OTHER SIMILAR WIRING DEVICES MUST CONFORM TO CSA C22.2 NO. 42 (LATEST EDITION).
- .8 DUPLEX RECEPTACLES, CSA TYPE 5-15 R, 125 V, 15 A, U GROUND, WITH THE FOLLOWING FEATURES: UREA MOLDED HOUSING WITH COLOUR AS SELECTED BY ARCHITECT.
 - SUITABLE FOR NO. 10 AWG FOR BACK AND SIDE WIRING. BREAK-OFF LINKS FOR USE AS SPLIT RECEPTACLES.
- EIGHT BACK WIRED ENTRANCES, FOUR SIDE WIRING SCREWS .5 TRIPLE WIRE CONTACTS AND RIVETED GROUNDING CONTACTS.
- .9 ACCEPTABLE MATERIALS:
- STANDARD DUPLEX RECEPTACLE: HUBBELL CAT. #HBL5252CN

.10 OTHER RECEPTACLES WITH AMPACITY AND VOLTAGE AS INDICATED. COLOUR BY ARCHITECT.

- GROUND FAULT PROTECTED T-SLOT RECEPTACLES: HUBBELL CAT. #GF20X COMPLETE WITH DECORA STYLE COVERPLATE TO SUIT SPECIFICATION BELOW.
- .3 T-SLOT RECEPTACLES: HUBBELL CAT. #HBL5352
- .11 ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE: PASS & SEYMOUR
- .12 WALL MOUNTED OCCUPANCY SENSORS (PASSIVE TECHNOLOGY), OCCUPANCY SENSORS USED IN STORAGE AND SERVICE ROOMS
- HUBBELL CAT. #AP1277XIN (COLOUR BY ARCHITECT)
- WATTSTOPPER CAT. #PW-100-VOLT-X (COLOUR BY ARCHITECT) LEVITON CAT. #ODS-15-ID-VOLT-X (COLOUR BY ARCHITECT)
- .4 SENSOR SWITCH CAT. #WSD-VOLT-X (COLOUR BY ARCHITECT) .13 WHERE NOTED ON THE DRAWINGS, THE WALL MOUNTED SWITCH STYLE OCCUPANCY SENSOR USED IN ADMINISTRATIVE OFFICES
- NOTED ON THE DRAWINGS. COLOUR TO SUIT ARCHITECT. SWITCHES SHALL BE EITHER: SINGLE RELAY (CIRCUIT): WATTSTOPPER CAT. #DW-100
- DUAL RELAY (CIRCUIT): WATTSTOPPER CAT. #DW-200 APPROVED EQUAL:
- HUBBELL LEVITON

SENSOR SWITCH NOTE: FOR DUAL RELAY SWITCHES, PROGRAM THE SENSORY FOR 15 MINUTE OFF DELAY, ENABLED WAL-THRU, AUDIBLE ALERT ENABLED, RELAY 1 ON MODE: AUTO ON, RELAY 2 ON MODE: MANUAL ON.

AND SEMINAR/MEETING ROOMS SHALL BE A DUAL TECHNOLOGY WITCH WITH EITHER SINGLE OR DOUBLE RELAY (CIRCUIT) AS

- .14 PROVIDE OTHER OCCUPANCY SENSORS TO SUIT THE DETAIL(S) ON THE DRAWINGS.
- .15 ALL SENSORS SHALL BE SET TO 5 MINUTES "DELAY TO OFF" UNLESS OTHERWISE DIRECTED.
- .16 OCCUPANCY SENSORS:
- .1 INSTALL POWER PACKS IN ACCESSIBLE MAINTENANCE AREAS. .2 PROVIDE ACCESS DOORS IF POWER PACKS ARE INSTALLED ABOVE DRYWALL CEILINGS.
- .3 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND AIM SENSORY IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER COVERAGE WITHIN THE RANGE OF COVERAGE AS PER THE MANUFACTURER'S RECOMMENDATIONS. THE LOCATIONS AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS WHICH ARE TO BE PROVIDED WITH SENSORS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY AND COMPLETELY COVER THE RESPECTIVE ROOMS.
- .4 IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A PRE-INSTALLATION MEETING WITH THE MANUFACTURER'S FACTORY AUTHORIZED REPRESENTATIVE, AT THE FACILITY, TO VERIFY PLACEMENT TO SENSORS AND INSTALLATION CRITERIA.
- .5 THE CONTRACTOR SHALL ALSO PROVIDE THE ON-SITE TRAINING NECESSARY TO FAMILIARIZE THE OWNER'S PERSONNEL WITH
- THE OPERATION. USE, ADJUSTMENT AND PROBLEM SOLVING DIAGNOSIS OF THE OCCUPANCY SENSING DEVICES SYSTEMS .6 UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A
- TROUBLE-FREE OCCUPANCY-BASED LIGHTING CONTROL. SUBMIT COMMISSIONING REPORT WITH CLOSE-OUT DOCUMENTS. .17 INSTALL DEVICES IN GANG TYPE OUTLET BOX WHEN MORE THAN ONE DEVICE IS REQUIRED IN ONE LOCATION.
- .18 SHEET STEEL UTILITY BOX COVER FOR WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES.
- .19 STAINLESS STEEL, VERTICALLY BRUSHED, 1mm THICK COVER PLATES FOR WIRING DEVICES MOUNTED IN FLUSH-MOUNTED OUTLET
- .20 SHEET METAL COVER PLATES FOR WIRING DEVICES MOUNTED IN SURFACE-MOUNTED FS OR FD TYPE CONDUIT BOXES. .21 PROTECT STAINLESS STEEL COVER PLATE FINISH WITH PAPER OR PLASTIC FILM UNTIL PAINTING AND OTHER WORK IS FINISHED.
- .22 INSTALL SUITABLE COMMON COVER PLATES WHERE WIRING DEVICES ARE GROUPED.

- PANEL BOARDS
- .1 PANEL BOARDS MUST CONFORM TO CSA C22.2 NO. 29 (LATEST EDITION)
- .2 IN ADDITION TO CSA REQUIREMENTS MANUFACTURER'S NAMEPLATE MUST SHOW FAULT CURRENT THAT PANEL INCLUDING BREAKERS HAS BEEN BUILT TO WITHSTAND. SERIES RATING IS ACCEPTABLE-SUBMIT INFORMATION WITH SHOP DRAWINGS.
- .3 BUS AND BREAKERS/SWITCHES MUST BE RATED FOR 10KA (SYMMETRICAL) INTERRUPTING CAPACITY OR AS INDICATED. .4 SEQUENCE PHASE BUSSING WITH ODD NUMBERED BREAKERS ON LEFT AND EVEN ON RIGHT, WITH EACH BREAKER IDENTIFIED BY
- PERMANENT NUMBER IDENTIFICATION AS TO CIRCUIT NUMBER AND PHASE. .5 PANEL BOARD MAINS, NUMBER OF CIRCUITS, AND NUMBER AND SIZE OF BRANCH CIRCUIT AS INDICATED.
- .6 TWO KEYS FOR EACH PANEL BOARD AND KEY PANEL BOARDS ALIKE.
- .7 ALUMINUM BUS WITH NEUTRAL OF SAME AMPERE RATING AS MAINS.
- .8 MAINS MUST BE SUITABLE FOR BOLT-ON BREAKERS. PROVIDE MAIN (IF APPLICABLE) AND BRANCH BREAKERS AS BOLT-ON
- .9 TRIM AND DOOR FINISH MUST BE BAKED GRAY ENAMEL.
- .10 BREAKERS WITH THERMAL AND MAGNETIC TRIPPING IN PANEL BOARD EXCEPT AS INDICATED OTHERWISE. .11 PROVIDE NAMEPLATE FOR EACH PANEL BOARD WITH ENGRAVED DESCRIPTION AS INDICATED.
- .12 FOR EACH NEW AND EXISTING PANEL PROVIDE COMPLETE CIRCUIT DIRECTORY WITH TYPEWRITTEN LEGEND SHOWING LOCATION OF EACH CIRCUIT.
- .13 LOCATE PANEL BOARDS AS INDICATED AND MOUNT SECURELY, PLUMB, TRUE AND SQUARE, TO ADJOINING SURFACES.
- .14 INSTALL SURFACE MOUNTED PANEL BOARDS ON PLYWOOD BACKBOARDS. WHERE PRACTICAL, GROUP PANEL BOARDS ON COMMON
- .15 CONNECT LOADS TO CIRCUITS.
- .16 CONNECT NEUTRAL CONDUCTORS TO COMMON NEUTRAL BUS.
- .17 BRANCH CIRCUIT PANEL BOARDS MUST BE ONE OF THE FOLLOWING: CUTLER HAMMER CAT. #POW-R-LINE-C PRL-1 OR PRL-2
 - SCHNEIDER ELECTRIC CAT. #NQOD SERIES SIEMENS CAT. #SENTRON PI SERIES
- .18 ALL REDUNDANT BREAKERS ARE TO REMAIN AND BE RE-LABELED AS "SPARE".
- .19 EXISTING PANELS MUST BE REVIEWED FOR LOOSE AND/OR FAULTY BREAKERS AND WIRING. ALL REQUIRED MODIFICATIONS MUST BE PERFORMED TO CORRECT ANY UNCOVERED PROBLEMS.





CONSTRUCTION NORTH

The contractor shall verify all dimensions and report al errors and discrepancies to the Consultant before commencement of the work.

The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from Consultant before commencement of the work.

The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.

by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.

Do not scale this drawing.



5	RE-ISSUED FOR TENDER	MAR 26 2025	JL
4	ISSUED FOR REVIEW	MAR 14 2025	JL
3	ISSUED FOR TENDER	JAN 13 2025	JL
2	ISSUED FOR 100% REVIEW	DEC 13 2024	JL
1	ISSUED FOR REVIEW	NOV 14 2024	JL
NO.	ISSUED	DATE	BY



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DEI PROJECT #24254

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PORT

AUTHORITY

SPECIFICATION (SHEET 1 OF 2) **AS NOTED**

MARCH 2025 K.F.

J.L.

4254 HOPA James St N Office Renovation, Hamilton\02 Dwgs\03 Elec\24254 E200 De

Drawings and specifications, etc., prepared and issued

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LIGHTING SYSTEMS

FIXTURES ARE TO BE PROVIDED AS NOTED IN THE LIGHT FIXTURE SCHEDULE C/W THE FOLLOWING FEATURES:

- FIXTURE LED'S MUST BE TESTED IN CONFORMANCE WITH IESNA LM80 STANDARD. LED'S MUST BE SELECTED USING A BINNING ALGORITHM TO ENSURE COLOUR AND LUMEN OUTPUT OF A GIVEN FIXTURE ARE CONSISTENT, AS WELL AS MEET OR SURPASS ANSI C78.377 SPECIFICATION FOR THE RATED LIFETIME OF THE
- FIXTURE. COLOUR ACCURACY BETWEEN PRODUCTS MUST BE WITHIN A 2-STEP MACADAM ELLIPSE. LUMINAIRES MUST BE TESTED TO IESNA LM79 BY AN INDEPENDENT APPROVED LABORATORY.
- LUMINAIRES MUST BE TESTED PRIOR TO SHIPPING.
- LUMINAIRES MUST BE ULC CERTIFIED AND APPROVED FOR USE IN CANADA. FIXTURES MUST MAINTAIN A MINIMUM OF 90% OF THEIR INITIAL LIGHT OUTPUT FOR 60,000 HOURS. SUBMIT TEST
- RESULTS UPON REQUEST.
- .7 LUMEN VALUES INDICATED FOR FIXTURES IN THE PROJECT DOCUMENTS ARE TO BE CONSIDERED AS 'ABSOLUTE' OR 'DELIVERED' VALUES. .8 OTHER THAN FOR SPECIALTY FIXTURES, AND UNLESS OTHERWISE INDICATED, THE MAXIMUM DRIVER CURRENT IS TO BE
- .2 STANDARD EXIT LIGHTING UNITS .1 EXIT LIGHTING UNITS MUST CONFORM TO CSA C22.2 NO. 141 (LATEST EDITION AND CSA C860).
- .2 LAMPS: LED 2W
- .3 OPERATION: 25 YEARS
- .4 UNITS ARE TO BE PROVIDED WITH THREE (3) PICTOGRAM LEGENDS INDICATING "LEFT FROM HERE", "STRAIGHT FROM HERE", AND "RIGHT FROM HERE".
- .4 EMERGENCY LIGHTING UNITS
- .1 MUST CONFORM TO CSA C22.2 NO. 141 (LATEST EDITION).
- .2 SUPPLY VOLTAGE: 120 VOLT, AC.
- .3 OUTPUT VOLTAGE: 12 VOLT, DC.
- .4 BATTERY: SEALED UNITS MUST BE CAPABLE OF SUPPLYING THE WATTAGE INDICATED FOR A MINIMUM OF 30 MINUTES.
- .5 SIGNAL LIGHTS: "AC POWER ON" CONDITION AND "CHARGING" CONDITION.
- .6 LAMP HEADS: INTEGRAL ON UNIT, 345° HORIZONTAL AND 180° VERTICAL ADJUSTMENT. LAMP TYPE: MINIMUM 4W LED.
- .7 AUXILIARY EQUIPMENT:
- TEST SWITCH AC INPUT AND DC OUTPUT TERMINAL BLOCKS INSIDE CABINET.
- .4 CORD AND PLUG CONNECTION FOR AC.
- .5 REMOTE EMERGENCY LIGHTING FIXTURES
- .1 REMOTE EMERGENCY LIGHTING FIXTURES MUST CONFORM TO CSA C22.2 NO. 141 (LATEST EDITION).
- .2 FIXTURES SHALL BE SMALL "MICRO" SIZE WITH WHITE FINISH.
- .3 FIXTURES MUST BE ADJUSTABLE TYPE HEADS WITH CANOPY.
- .4 UNLESS OTHERWISE INDICATED SURFACE MOUNTED FIXTURES IN WASHROOMS, LOCKER ROOMS, CHANGE ROOMS AND GYMNASIUMS MUST BE PROVIDED WITH WIRE GUARD.
- .6 FIXTURE INSTALLATION .1 LOCATE AND INSTALL LUMINAIRES AS INDICATED.
- .2 FIXTURE SURFACE MOUNTED TO SUSPENDED CEILINGS MUST BE SECURED THROUGH CEILING ASSEMBLY TO CROSS MEMBER SUPPORTS. THESE SUPPORTS ARE TO BE STEEL CHANNELS OR ANGLES INDEPENDENTLY SECURED TO STRUCTURE USING #12 "JACK" CHAIN. EACH CHAIN MUST BE SECURED SO NO FIXTURE WEIGHT IS ADDED TO THE CEILING ASSEMBLY.
- .3 PLASTER FRAMES/FLANGE KITS MUST BE PROVIDED BY THIS DIVISION FOR FIXTURES RECESSED IN PLASTER AND/OR
- .4 WHERE SPECIFIED, FIXTURES TO BE CHAIN HUNG SHALL BE HUNG USING "JACK" CHAIN WITH A CAPACITY TO SUIT THE FIXTURE WEIGHT. BRANCH CIRCUIT WIRING FEEDING THESE FIXTURES SHALL BE AC90 CABLE "TY-WRAPPED" AT 36" (900mm) INTERVALS ALONG LENGTH OF DROP. FINAL APPEARANCE MUST BE NEAT AND PROFESSIONAL.
- .5 INSTALL EXIT LIGHTING UNITS AS INDICATED WITH ILLUMINATED FACES AND CHEVRONS/ARROWS INDICATING PATH(S) OF EXIT.
- .6 INSTALL EMERGENCY LIGHTING UNITS AND ASSOCIATED REMOTE MOUNTED FIXTURES AS INDICATED.
- .7 DIRECT "HEADS" ON UNITS AND REMOTE MOUNTED FIXTURES TO ILLUMINATE PATH(S) OF EXIT.
- .8 INSTALL EMERGENCY LIGHTING UNITS AND REMOTE FIXTURES AT 8' (2400mm) ABOVE FINISHED FLOOR UNLESS INDICATED
- .9 PROVIDE A 15A 120V DUPLEX RECEPTACLE (CONNECT TO CIRCUIT INDICATED) ADJACENT TO UNIT
- .10 CONNECT LUMINAIRES TO LIGHTING CIRCUITS AS INDICATED.
- .11 CONNECT EXIT FIXTURES TO EXIT LIGHTING CIRCUITS AND UNIT EQUIPMENT (IF APPLICABLE).
- .12 CONNECT UNIT EQUIPMENT TO CIRCUITS AS INDICATED.
- .13 ALL WIRING OF REMOTE EMERGENCY FIXTURES SHALL BE MINIMUM #10 T90 FOR EACH CIRCUIT AND RUN IN CONDUIT. WIRING MUST BE SIZED IN CONFORMANCE WITH MANUFACTURERS' RECOMMENDATIONS FOR DISTANCE REQUIRED.
- .14 ALIGN LUMINAIRES MOUNTED IN CONTINUOUS ROWS TO FORM STRAIGHT UNINTERRUPTED LINES.
- .15 ALIGN LUMINAIRES MOUNTED INDIVIDUALLY PARALLEL OR PERPENDICULAR TO BUILDING GRID LINES.
- .16 ALL LIGHTING BRANCH CIRCUITS ARE TO BE PROVIDED WITH SEPARATE NEUTRALS.
- .7 GUARANTEE .1 ALL LED FIXTURES AND DRIVERS ARE TO BE COMPLETE WITH A 5 YEAR GUARANTEE.
- .2 THE LABOUR REQUIRED TO REPLACE THESE DRIVERS MUST BE INCLUDED IN THE ABOVE GUARANTEE
- .8 TESTING/CERTIFICATION
- .1 AT THE COMPLETION OF THE PROJECT AND IN THE PRESENCE OF THE CONSULTANT, TEST ALL EXIT AND EMERGENCY FIXTURES. ON COMPANY LETTERHEAD, THE CONTRACTOR IS TO PREPARE A CHART INDICATING:
- PROJECT DATE
- EQUIPMENT TYPE
- CERTIFICATION OF CORRECT CONNECTION CERTIFICATION OF CORRECT OPERATION
- DURATION OF TEST IN MINUTES (MINIMUM 30) ACTUAL PERIOD OF TESTING (TIME OF DAY)
- VOICE/DATA NETWORK INSTALLATIONS

THE SCOPE OF WORK FOR THIS SYSTEM SHALL BE AS FOLLOWS:

- THIS WORK INCLUDES CATEGORY 5E VOICE AND DATA CABLING, OUTLETS, PATCH PANELS AND TESTING.
 HORIZONTAL VOICE AND DATA CABLES SHALL BE TERMINATED IN IN CAT. 5E JACKS AT THE WORKSTATION END AND CATEGORY 5E PATCH PANELS MOUNTED IN EXISTING VOICE/DATA SOURCE RACK AS LOCATED ON PLANS. SUPPLY AND INSTALL ALL NECESSARY HARDWARE AND ACCESSORIES FOR A COMPLETE INSTALLATION.
- A CABLE HANGER SYSTEM SHALL BE PROVIDED IN THE CORRIDORS FOR ALL VOICE AND DATA CABLES. OUTLET BOXES AND CONDUITS ARE TO BE PROVIDED AT EACH OUTLET LOCATION. CONDUITS SHALL EXTEND FROM THE OUTLET BOX TO THE CORRIDOR AND TERMINATE ADJACENT TO THE
- .1 ALL WORK PERFORMED MUST CONFORM TO THE LATEST VERSION OF THE APPLICABLE CODES, STANDARDS AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION INCLUDING, BUT NOT LIMITED TO: ANSI/TIA/EIA 568-B, ANSI/TIA/EIA 569, ISO 11801, CSA T530, CSA T528, CSA T527,
- CSA C22.1, CSA C22.2 NO. 214, OBC. .2 THE OWNER'S IT DEPARTMENT HAS STANDARDIZED ON NORDX/CDT BASED PRODUCTS FOR THE STRUCTURED CABLING, NO ALTERNATES WILL BE
- .3 AT LEAST ONE MEMBER OF THE CONTRACTOR'S PROJECT TEAM MUST HOLD A CURRENT RCDD ACCREDITATION. THE RCDD WILL BE RESPONSIBLE FOR QUALITY CONTROL AND CERTIFICATION OF THE PROJECT.
- CABLE SHALL BE 4 PAIR, 24 AWG SOLID BARE ANNEALED COPPER CONDUCTORS.
- WHITE COLOUR FOR VOICE, BLUE COLOUR FOR DATA, SUITABLE FOR USE INDOOR, RISER OR PLENUM, AND HORIZONTAL APPLICATIONS. CABLE SHALL BE ANSI/TIA/EIA-568-B.2 AND ISO/IEC 11801 CATEGORY 5E COMPLIANT.
- APPROVED MAKE: IBDN GIĞAFLEX 1200 CAT. 5E SERIES
- CATEGORY 5E MODULAR JACKS JACKS SHALL BE 8 POSITION UN-KEYED.
- EACH JACK SHALL BE AN INDIVIDUALLY CONSTRUCTED UNIT AND SHALL SNAP MOUNT IN AN INDUSTRY STANDARD KEYSTONE OPENING (.760 X
- JACKS SHALL BE UL VERIFIED FOR TIA/EIA COMPONENT COMPLIANT CATEGORY 5E ELECTRICAL PERFORMANCE. .4 APPROVED MAKE: GIGAFLEX PS5E (BLUE FOR DATA)
- COPPER PATCH CORDS SHALL BE 100% TESTED TO CATEGORY 5E ANSI/TIA/EIA-568-A-4 SPECIFICATIONS. CORD WIRING SHALL BE COMPATIBLE WITH T568A AND T568B WIRING STANDARDS.
- PATCH CORDS SHALL HAVE GREY JACKET.
- .4 APPROVED MAKE: GIGAFLEX PS5E
- CATEGORY 5E PATCH PANELS .1 PANELS SHALL ACCOMMODATE 24 PORTS FOR EACH RACK MOUNT SPACE OR "U" AND SHALL BE MADE OF COMPATIBLE ADAPTER MODULES.
- PANELS SHALL BE AVAILABLE IN BOTH T568A AND T568B WIRING SCHEMES.
- PANELS SHALL BE UL VERIFIED FOR TIA/EIA CATEGORY 5E PERFORMANCE. PANELS SHALL HAVE PORT IDENTIFICATION NUMBERS ON BOTH THE FRONT AND REAR OF THE PANEL. APPROVED MAKE: FLEX 24/48 PORT PATCH PANEL, GIGAFLEX MODULES

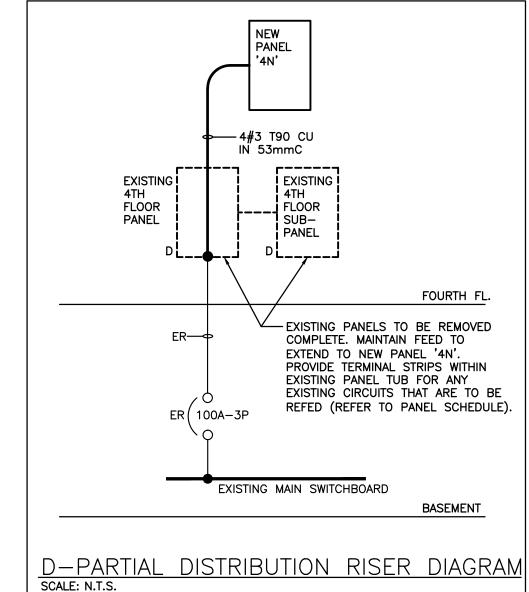
- WALL MOUNTED RACK PROVIDE A WALL MOUNTED SWING OUT RACK WITH HORIZONTAL CABLE MANAGEMENT CHANNELS APPROVED MAKE: R.F. MOTE CAT.# RFM-1920-RWS-20
- .1 THE COMMUNICATIONS CONTRACTOR SHALL PERFORM A FULL CAT. 5E TEST FOR EVERY DATA DROP INSTALLED. TESTERS TO BE USED SHALL BE
- MICROTEST OMNISCANNER OR FLUKE DSP 4000. COORDINATE TESTING REQUIREMENTS WITH OWNERS IT DEPARTMENT. .2 TEST RESULTS SHALL BE SUBMITTED IN ELECTRONIC FORMAT ON USB FORMAT IN A WINDOWS BASED DATABASE (MICROSOFT EXCEL IS
- ACCEPTABLE), ACCOMPANIED BY A CERTIFICATE SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE COMPANY.

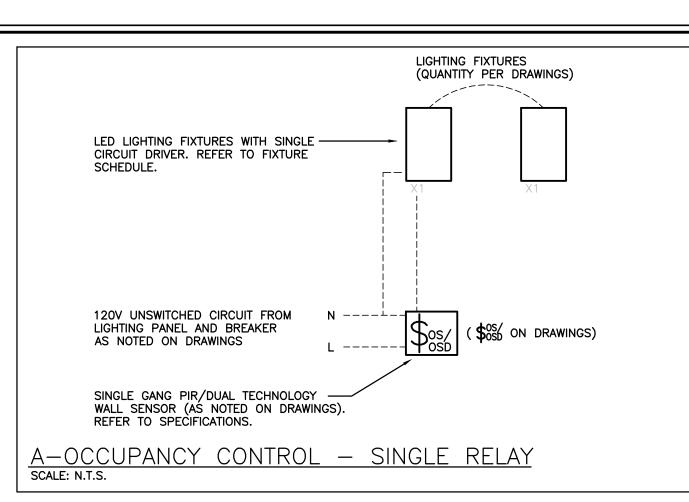
 .3 THE TEST RESULT DOCUMENTATION SHALL BE SUBMITTED TO THE CONSULTANT NO LATER THAN 10 WORKING DAYS FOLLOWING THE COMPLETION OF THE INSTALLATION.
- .1 AT THE END OF THE PROJECT, THIS CONTRACTOR SHALL OBTAIN AUTOCAD FILES FROM THE CONSULTANT AND UPDATE THEM WITH THE WORK PERFORMED BY THE CONTRACTOR. THIS CONTRACTOR SHALL PROVIDE ONE (1) SOFT COPY OF UPDATED AS-BUILT DRAWINGS AND 3 SETS OF PRINTS, SUBMITTED TO THE CONSULTANT NO LATER THAN 10 WORKING DAYS FOLLOWING THE COMPLETION OF THE INSTALLATION.
- .1 THE COMMUNICATIONS CABLING CONTRACTOR WILL BE REQUIRED TO PROVIDE A 25 YEAR MANUFACTURER'S EXTENDED COMPONENT WARRANTY AND AN APPLICATION ASSURANCE WARRANTY FOR THE ENTIRE COMMUNICATIONS CABLING SYSTEM.

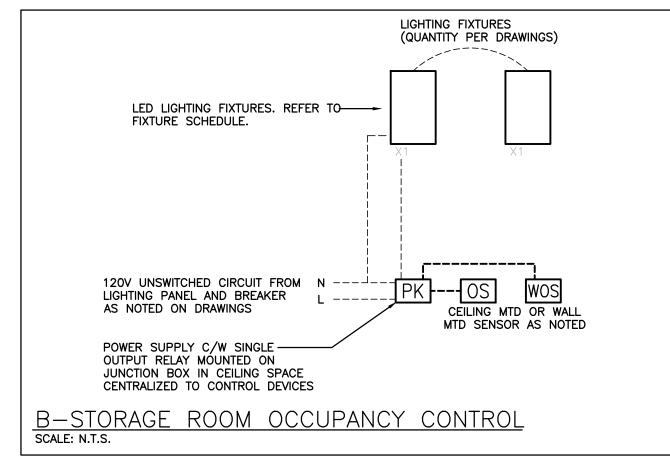
FIRE ALARM SYSTEMS

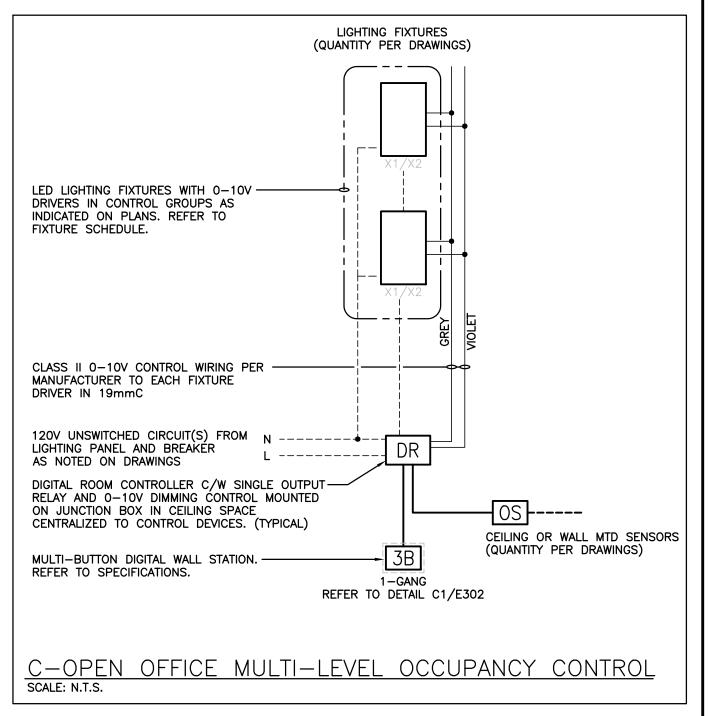
- .1 INSTALLATION OF FIRE ALARM DEVICES MUST CONFORM TO ULC-S524 (LATEST EDITION).
- .2 ALL WIRING MUST BE COLOUR CODED, SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND CONFORM TO THE LATEST EDITION OF THE ELECTRICAL SAFETY CODE.
- .3 ALL NEW FIRE ALARM DETECTION AND SIGNALING DEVICES ADDED DUE TO RENOVATIONS AND ADDITIONS SHALL BE CONNECTED TO EXISTING LOCAL ZONE OR NEW ZONE AS INDICATED.
- .4 EQUIPMENT SHALL BE SUPPLIED AND INSTALLED AS FOLLOWS;
- AUTOMATIC ALARM INITIATING DEVICES 1 SMOKE DETECTOR: CEILING MOUNTED, PHOTO ELECTRIC TYPE, VISUAL ALARM INDICATOR, COMPLETE WITH RELAY BASE
- .2 AUDIBLE/VISUAL SIGNAL DEVICES .1 HORN: FLUSH MOUNTED TEMPORAL HORN, 24VDC OPERATION, 94DBA RATING AT 3000mm (10'), RED FINISH, FM AND
- ANY SURFACE MOUNTED SIGNAL DEVICES MUST BE PROVIDED WITH SUITABLE BACKBOXES SUPPLIED BY THE MANUFACTURER.
- .3 END-OF-LINE DEVICES END-OF-LINE DEVICES TO CONTROL SUPERVISORY CURRENT IN ALARM CIRCUITS AND SIGNALING CIRCUITS, SIZED TO ENSURE CORRECT SUPERVISORY CURRENT FOR EACH CIRCUIT. OPEN, SHORT OR GROUND FAULT IN ANY CIRCUIT WILL ALTER SUPERVISORY CURRENT IN THAT CIRCUIT, PRODUCING AUDIBLE AND VISIBLE ALARM AT MAIN CONTROL PANEL AND REMOTELY AT ANNUNCIATORS.
- .5 ONCE INSTALLATION IS COMPLETE THE MANUFACTURER'S REPRESENTATIVE MUST MAKE AN INSPECTION OF THE DEVICES INSTALLED.
- .6 THIS TEST MUST CONFORM TO THE ONTARIO BUILDING CODE AND THE LATEST EDITION OF ULC CAN4-S537.
- .7 ALL COSTS ASSOCIATED WITH THIS INSPECTION BY THE CONTRACTOR AND MANUFACTURER MUST BE CARRIED IN THE TENDER
- .8 UPON SUCCESSFUL COMPLETION OF TESTING THE MANUFACTURER MUST SUBMIT TO THE CONTRACTOR AND CONSULTANT: A CERTIFICATE OF VERIFICATION
- FIELD TECHNICIAN VERIFICATION SHEETS FOR EACH DEVICE VERIFIED (INCLUDE COPIES OF SAME IN MAINTENANCE MANUALS) .9 THE MANUFACTURER AND ELECTRICAL CONTRACTOR ARE TO ALLOW IN THEIR TENDER THE COST TO ADD TWO (2) ADDITIONAL SIGNALING DEVICES TO BE INSTALLED AND VERIFIED IN LOCATIONS AS DIRECTED BY THE CONSULTANT. NOTE: THIS INSTALLATION
- AND VERIFICATION WILL BE OCCURRING AFTER THE AUDIBILITY TESTING IS COMPLETE. .10 AUDIBILITY TESTING: (WRITER TO SELECT)
 - THE CONTRACTOR IS TO COORDINATE AN AUDIBILITY TEST PRIOR TO OCCUPANCY OF THE FACILITY. THE TEST IS TO BE PERFORMED BY THE REPRESENTATIVES OF THE FIRE ALARM MANUFACTURER IN THE PRESENCE OF THE CONSULTANT. THE TEST REPORT IS TO BE IN CHART FORM INDICATING:
 - PROJECT DATE OF TEST
 - ROOM NAME AND NUMBER AMBIENT DB LEVEL
 - ALARM DB LEVEL NAME OF TESTING TECHNICIAN
- .11 THE TEST RESULTS ARE TO BE SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO ISSUING TO OWNER'S REPRESENTATIVES AND/OR AUTHORITIES HAVING JURISDICTION.
- .12 PROVIDE INTEGRATED TESTING OF THIS LIFE SAFETY SYSTEM IN CONFORMANCE WITH THE NOTED SPECIFICATION SECTION. INCLUDE ALL ASSOCIATED COSTS IN TENDER.
- .13 EQUIPMENT:

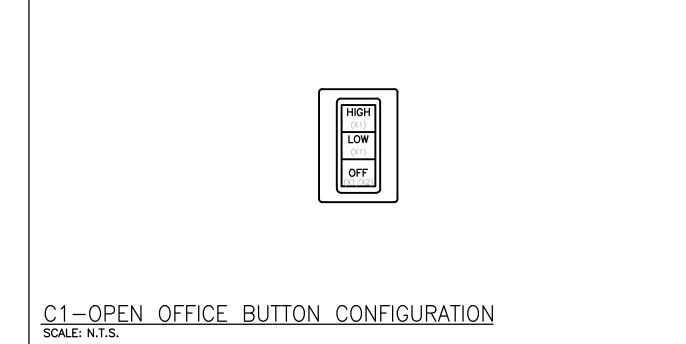
<u>DEVICE</u>	MIRCOM
CONTROL PANEL: (ADDRESSABLE)	•
	EXISTING MIRCOM
INTELLIGENT DEVICES:	
SMOKE DETECTORS	MIX-2251BA













commencement of the work.



CONSTRUCTION NORTH

The contractor shall verify all dimensions and report al errors and discrepancies to the Consultant before

The drawings show general arrangement of services. Follow as closely as actual building construction will permit. Obtain approval for relocation of service from

Consultant before commencement of the work. The drawings do not indicate all offsets fitting and accessories which may be required. Provide the same to meet the required conditions.

Drawings and specifications, etc., prepared and issued

by the consultant are the property of the consultant and must be returned at the completion of the project. These documents are not to be duplicated or copied without the consent of the Consultant.

Do not scale this drawing. © 2025 DEI Consulting Engineers Inc.



RE-ISSUED FOR TENDER MAR 26 2025 ISSUED FOR REVIEW MAR 14 202 ISSUED FOR TENDER JAN 13 2025 **ISSUED FOR 100% REVIEW** ISSUED FOR REVIEW NOV 14 2024 JL DATE BY ISSUED



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HAMILTON

AUTHORITY

OSHAWA

PORT

605 JAMES STREET NORTH FOURTH FLOOR RENOVATIONS SPECIFICATION (SHEET 2 OF 2) AND DETAILS **AS NOTED** MARCH 2025 K.F.

J.L.

24254 HOPA James St N Office Renovation, Hamilton\02 Dwgs\03 Elec\24254 E200 D