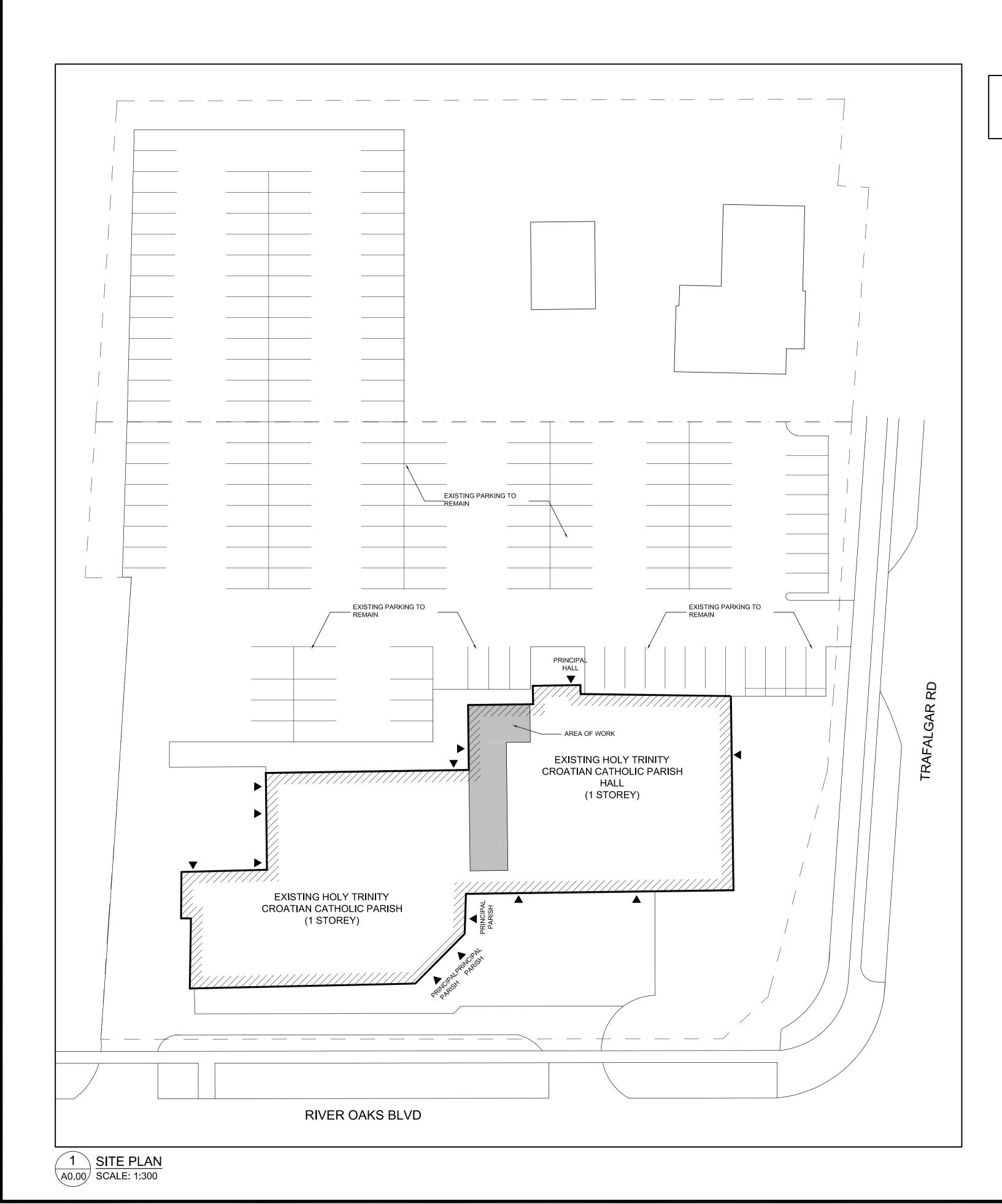
HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION

2110 TRAFALGAR RD, OAKVILLE, ON.





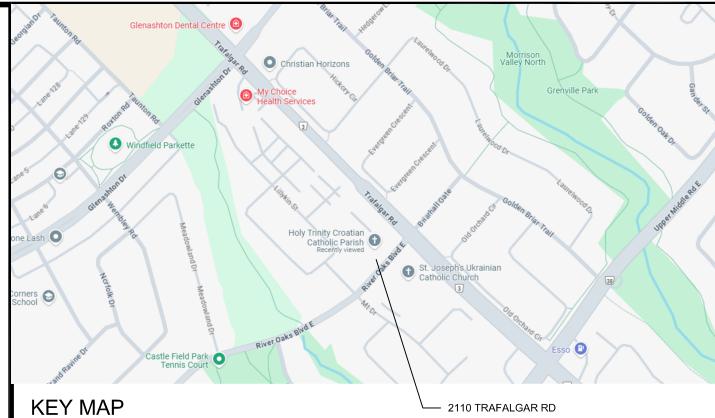




ENGINEERING 499 BROOKSIDE DRIVE, OAKVILLE, ONTARIO, L6K 1R4

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

MECHANICAL / ELECTRICAL ENGINEER



DRAWING LIST:

ARCHITECTURAL

SCALE: NTS

OBC DATA MATRIX AND EXITING PLAN DEMOLITION FLOOR PLANS FLOOR PLANS **ROOF PLAN** REFLECTED CEILING PLAN WALL SECTIONS AND DETAILS INTERIOR ELEVATIONS

INTERIOR ELEVATIONS AND SCHEDULES MILLWORK DETAILS

GENERAL NOTES AND SCHEDULES GENERAL NOTES AND SCHEDULES GROUND FLOOR PLANS, SECTION AND DETAILS ROOF FRAMING PLAN, SECTION AND DETAILS

MECHANICAL DEMOLITION PLAN MECHANICAL HVAC PLAN MECHANICAL PLUMBING PLAN MECHANICAL SCHEDULES MECHANICAL SPECIFICATIONS

ELECTRICAL DEMOLITION PLAN ELECTRICAL LIGHTING, LIFE SAFETY AND POWER PLANS ELECTRICAL DETAILS ELECTRICAL SPECIFICATIONS

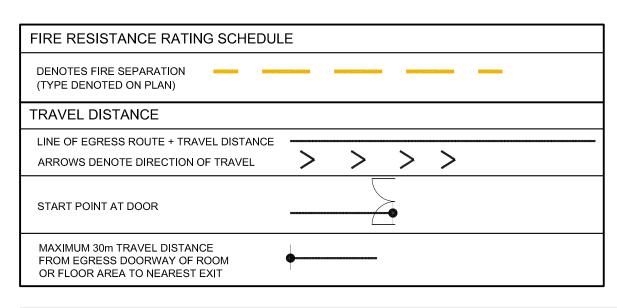
ELECTRICAL SPECIFICATIONS, LEGENDS AND SCHEDULES

ISSUED FOR TENDER

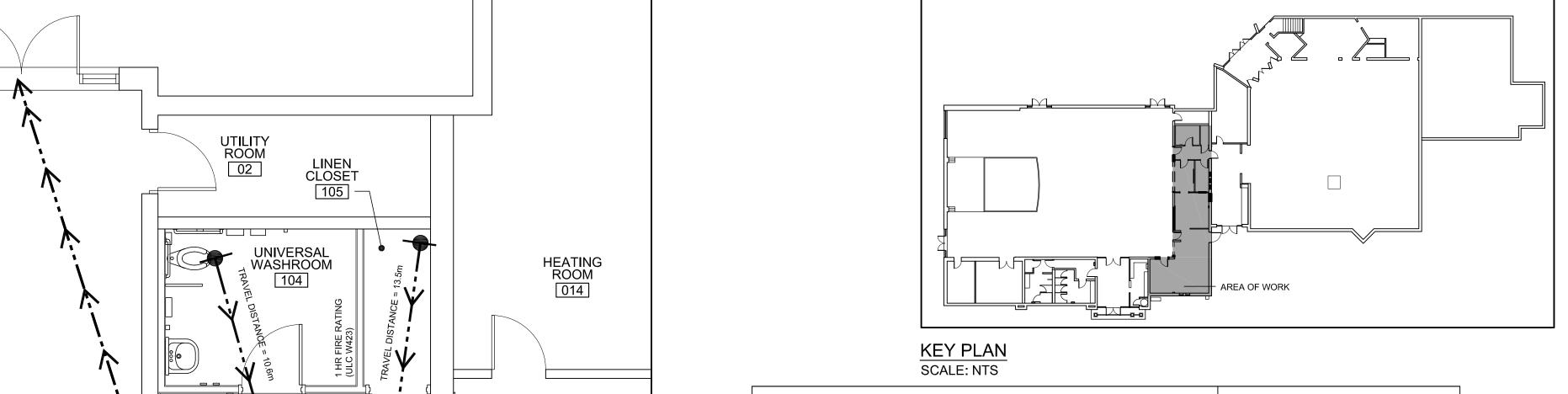
2025-05-28

PROJECT NUMBER

SHEET NUMBER



	Ontario Building Code Data Matrix Part 11 Renovation of Existing Building							
11.1	Existing Building classification:	Describe Existing Use: Construction Index:	11.2.1 T 11.2.1.1A					
		Hazard Index:			T 11.2.1.1B to N			
		Not Applicable (no major	change of occupancy)					
11.2	Alteration to Existing	Basic Renovation			11.3.3.1			
	Building is:	Extensive Renovation	11.3.3.2					
11.3	Reduction in				11.4.2			
	Performance Level:	Structural:	No No	☐ Yes	11.4.2.1			
		By Increase in occupant load:	■ No	☐ Yes	11.4.2.2			
		By change of major occupance Plumbing:	■ No	☐ Yes ☐ Yes	11.4.2.3 11.4.2.4			
		Sewage System:	■ No	☐ Yes	11.4.2.5			
11.4	Compensating Construction:				11.4.3			
	Construction.	Structural:	N o	☐ Yes (explain	11.4.3.2			
		Increase in occupant load:	■ No	Yes (explain)	11.4.3.3			
		Change of major occupancy:	■ No	☐ Yes (explain)	11.4.3.4			
		Plumbing:	No No	☐ Yes (explain)	11.4.3.5			
		Sewage system:	No No	☐ Yes (explain)	11.4.3.6			
11.5	Compliance	No No			11.4.2			
	Alternatives Proposed:	Yes (give number [s]):						

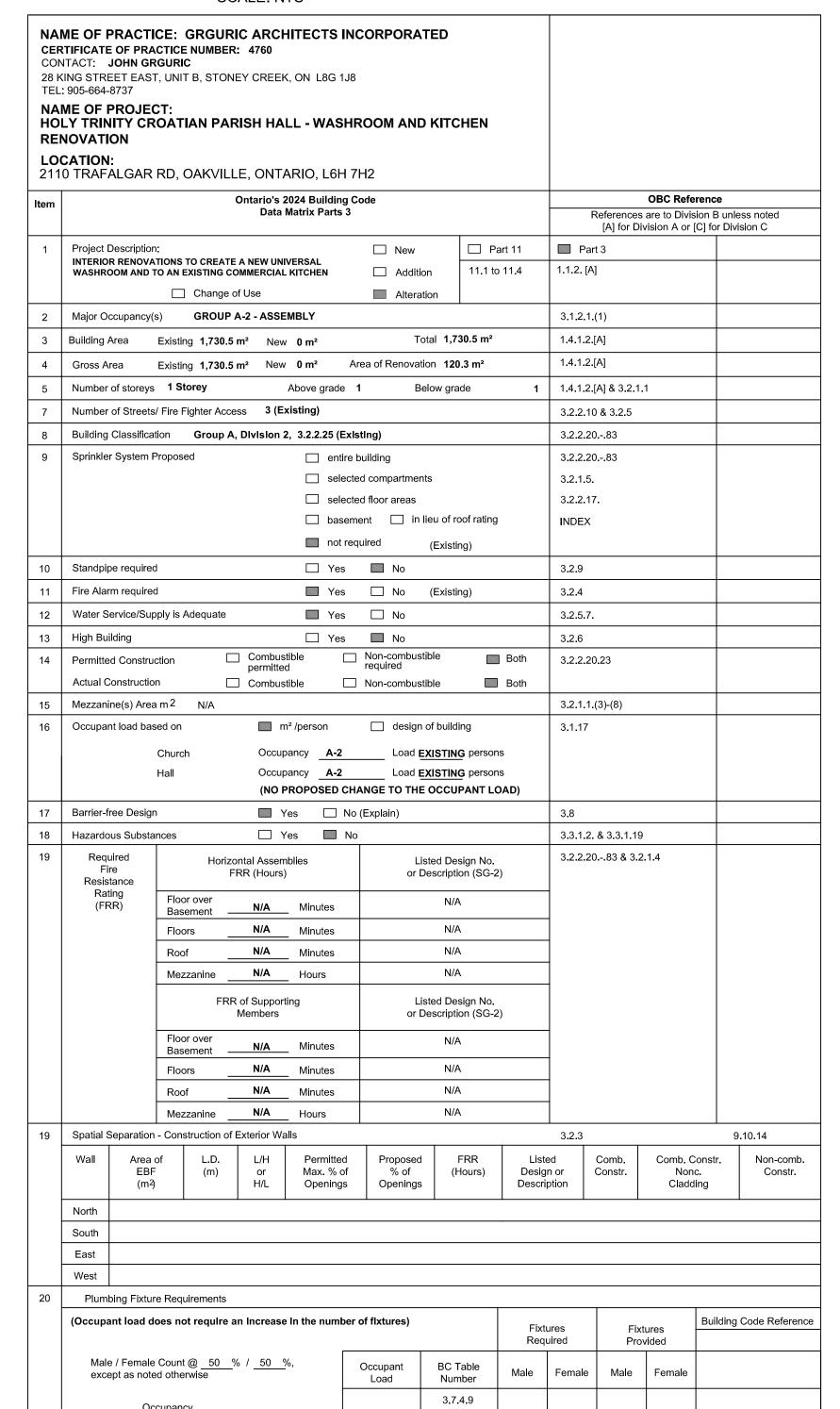


SUPPLY ROOM

103

CHURCH FOYER

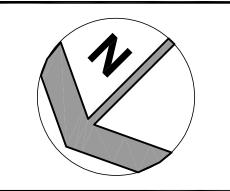
011



3.7.4.7

plus 1 UNIVERSAL WASHROOM (NEW)

Travel Distance to Exits (Refer to Drawings)



2	ISSUED FOR TENDER	2025-05-28
1	ISSUED FOR PERMIT	2025-05-22
Ю	REVISIONS	DATE

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HOLY TRINITY CROATIAN
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WASHROOM AND KITCHEN
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ON L6H 7H2

OBC DATA MATRIX AND EXITING PLAN

GRGURIC ARCHITECTS INCORPORATED



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

scale:
AS NOTED

START DATE:
MAR 2025

PROJECT:

2025-0

DRAWN DRAWING:

CHECKED
J.G

DRAWING:

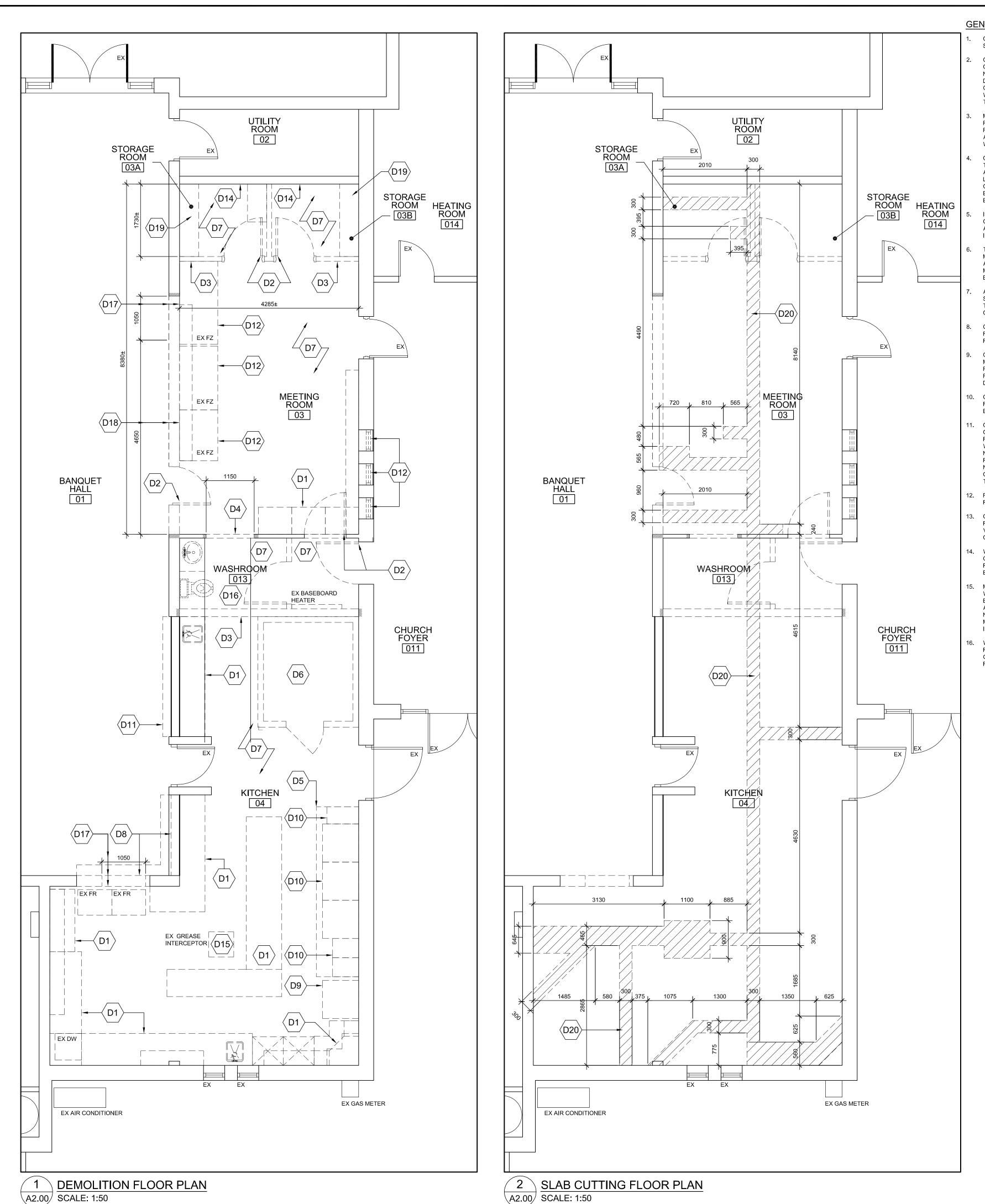
A0.0

1 A0.05 TRAVEL DISTANCE PLAN SCALE: 1:50

WOMEN'S

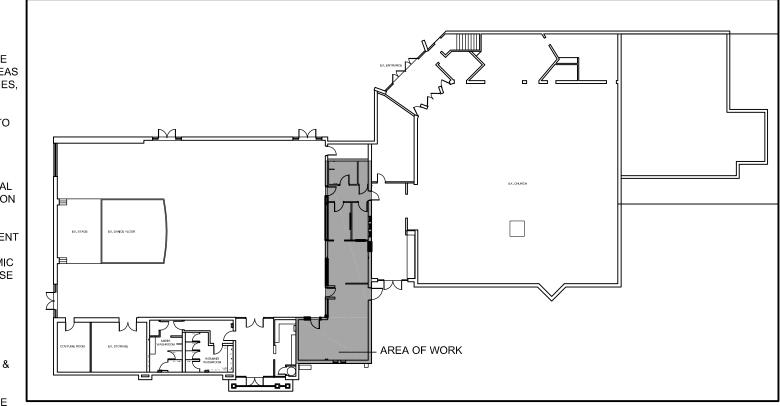
WASHROOM

EX RAD HD SD HD TABLE



GENERAL NOTES

- 1. COORDINATE AND VERIFY WITH THE OWNER ALL ITEMS TO BE SALVAGED, MOVED & STORED PRIOR TO DEMOLITION.
- 2. CAUSE NO DAMAGE TO EXISTING CONSTRUCTION TO REMAIN. TAKE CARE NOT TO ENCROACH ON ADJACENT OCCUPIED AREAS OR AREAS NOT WITHIN THE SCOPE OF WORK. PROTECT ALL EXISTING FINISHES, DOORS, FRAMES. ETC. WHICH ARE TO REMAIN. PATCH AND MAKE GOOD ALL EXISTING ADJACENT SURFACES FINISHES & MATERIALS WHERE DISTURBED BY NEW CONSTRUCTION AT NO EXTRA COST TO THE PROJECT.
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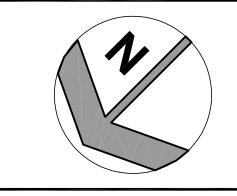
KEY PLAN SCALE: NTS

DEMOLITION NOTES

- REMOVE AND DISCARD EXISTING MILLWORK AND STAINLESS STEEL COUNTER TOPS (LOWER, UPPER CABINET AND SINKS). REFER TO MECHANICAL FOR DISCONNECTION AND CAPPING OF SERVICES (WATER AND SANITARY) TO SINK.
- REMOVE AND DISCARD EXISTING HOLLOW METAL DOOR AND FRAME IN ITS ENTIRETY
- REMOVE EXISTING PARTITION IN ITS ENTIRETY IN THE NOTED AREAS PATCH & MAKE GOOD ALL ADJACENT SURFACES, FINISHES, MATERIALS WHERE DISTURBED
- CUT NEW 2200mm HIGH OPENING IN EXISTING CONCRETE
 BLOCK WALL. OPENING TO EXTEND 50mm BELOW ADJACENT
 FLOOR LEVEL. INSTALL NEW STEEL LINTEL ABOVE TO SUPPORT
 EXISTING BLOCK. REFER TO STRUCTURAL DRAWINGS. PATCH &
 MAKE GOOD ALL EX GYP AROUND OPENING TO MATCH AND TIE
 IN WITH EX
- D5 REMOVE AND DISCARD EX HOOD IN ITS ENTIRETY. REFER TO MECHANICAL
- $\langle \, {\sf D6} \,
 angle$ remove and discard EX walk-in cooler in its entirety
- PREMOVE AND DISCARD EXISTING VCT FLOORING. GRIND EXISTING CONCRETE FLOORS TO REMOVE ADHESIVE. PATCH AND REPAIR EXISTING CONCRETE SLAB TO REMAIN AS REQUIRED AND MAKE READY TO RECEIVE NEW FINISH
- D8 REMOVE AND DISCARD EXISTING OVERHEAD ROLLING SHUTTER DOOR IN ITS ENTIRETY
- \langle D9 \rangle REMOVE AND DISCARD EXISTING OVENS
- (D10) REMOVE AND DISCARD EXISTING BURNER RANGES AND FRYER
- D11 REMOVE AND DISCARD EXISTING COUNTERTOP.
- D12 REMOVE AND DISCARD EXISTING WINDOWS
- D13 REMOVE EXISTING FREEZERS AND TURN OVER TO
- REMOVE AND DISPOSE OF EXISTING WOOD SLAT WALL CLADDING. PATCH AND REPAIR EXISTING WALL TO REMAIN AS REQUIRED AND MAKE READY TO RECEIVE NEW WALL FINISH
- D15 REMOVE AND DISCARD EXISTING GREASE INTERCEPTOR

READY TO RECEIVE NEW FINISHES

- REMOVE EXISTING WASHROOM FIXTURES & ACCESSORIES INCLUDING: PAPER TOWEL DISPENSERS, TOILET PAPER, DISPENSERS, SOAP DISPENSERS, GRAB BARS, MIRROR, BABY CHANGE STATION, AND BASEBOARD HEATER. PATCH AND REPAIR EXISTING WALLS TO REMAIN AND MAKE
- CUT NEW 2200mm HIGH OPENING IN EXISTING
 CONCRETE BLOCK WITH METAL STUD AND GYPSUM
 BOARD WALL. OPENING TO EXTEND 50mm PAST
 ADJACENT FLOOR LEVEL. INSTALL NEW STEEL
 LINTEL ABOVE TO SUPPORT EXISTING BLOCK.
 REFER TO STRUCTURAL DRAWINGS. PATCH &
 MAKE GOOD ALL EX GYP BD AROUND OPENING TO
 MATCH AND TIE IN WITH EX
- CUT NEW 2400mm HIGH OPENING IN EXISTING CONCRETE BLOCK WITH METAL STUD AND GYPSUM BOARD WALL. INSTALL NEW STEEL LINTEL ABOVE TO SUPPORT EXISTING BLOCK. REFER TO STRUCTURAL DRAWINGS. PATCH & MAKE GOOD ALL EX GYP BD AROUND OPENING TO MATCH AND TIE IN WITH EX
- D19 EXISTING WOOD SHELVES AND METAL PILASTERS TO BE REMOVED AND DISPOSED OF. PATCH AND REPAIR EXISTING WALLS TO REMAIN AND MAKE READY TO RECEIVE NEW FINISHES.
- HATCHED AREA DENOTES EXTENT OF EXISTING
 FLOOR SLAB TO BE REMOVE AND DISPOSE OF FOR
 UNDER SLAB PLUMBING INSTALLATION (ALLOW
 125mm SLAB THICKNESS). REMOVE AND DISPOSE
 OF EXISTING GRANULAR FILL BELOW THE SLAB AS
 REQUIRED. COORDINATE WITH MECHANICAL
 DRAWINGS.



LEGENE

- BD BOARD EX EXISTING ITEM FR FREEZER
- FR FREEZER
 MIN MINIMUM
 NIC NOT IN CO
- NIC NOT IN CONTRACT
 O/C ON CENTER
 U/S UNDERSIDE

2	ISSUED FOR TENDER	2025-05-28
1	ISSUED FOR PERMIT	2025-05-22
NO	REVISIONS	DATE
DRA	WINGS ARE NOT TO BE SCALED. CONTRACT	OR MUST

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PARISH HALL
WASHROOM AND KITCHEN
RENOVATION
2110 TRAFALGAR RD, OAKVILLE
ON L6H 7H2

DEMOLITION FLOOR PLANS

GRGURIC ARCHITECTS INCORPORATED



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

SCALE:
AS NOTED

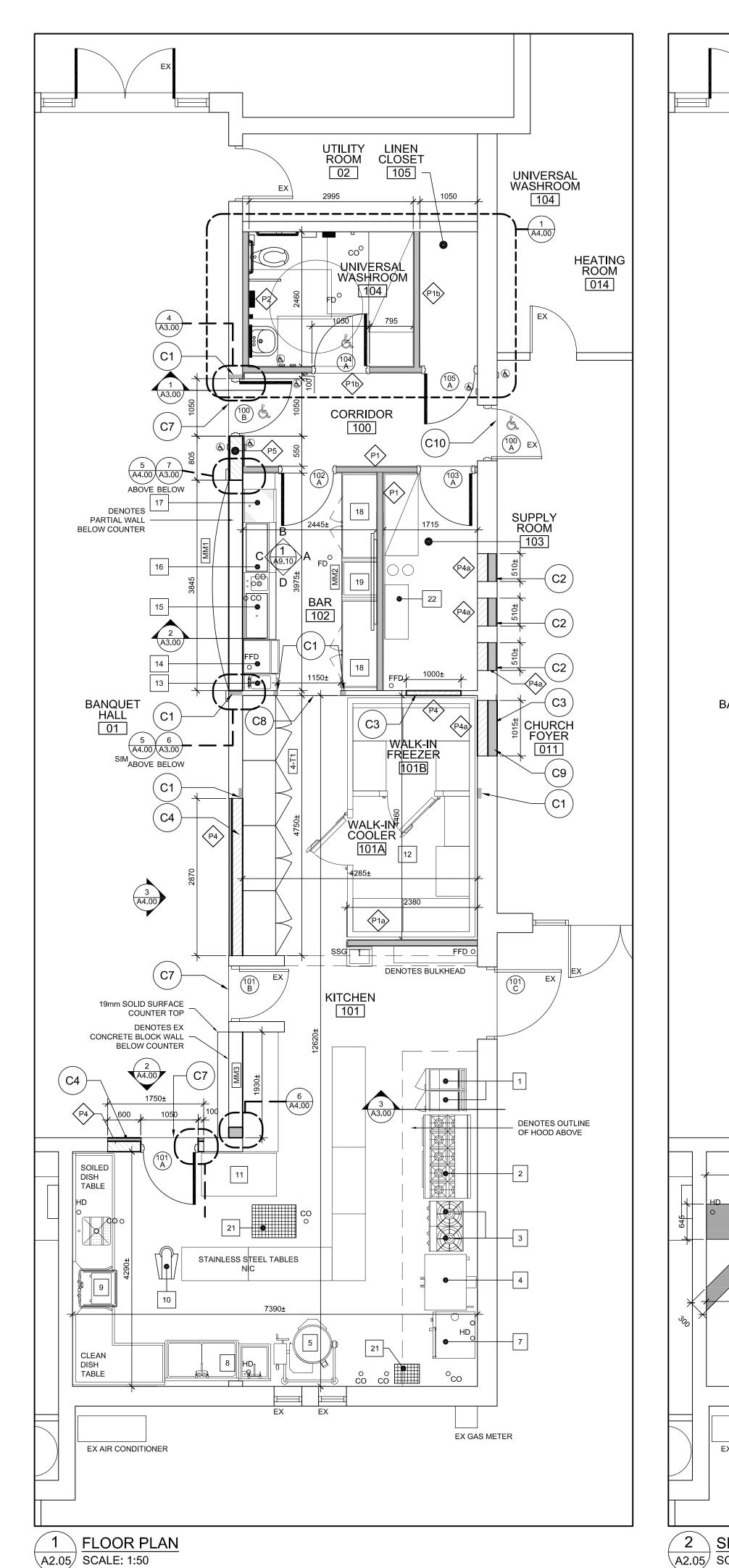
START DATE:
MAR 2025

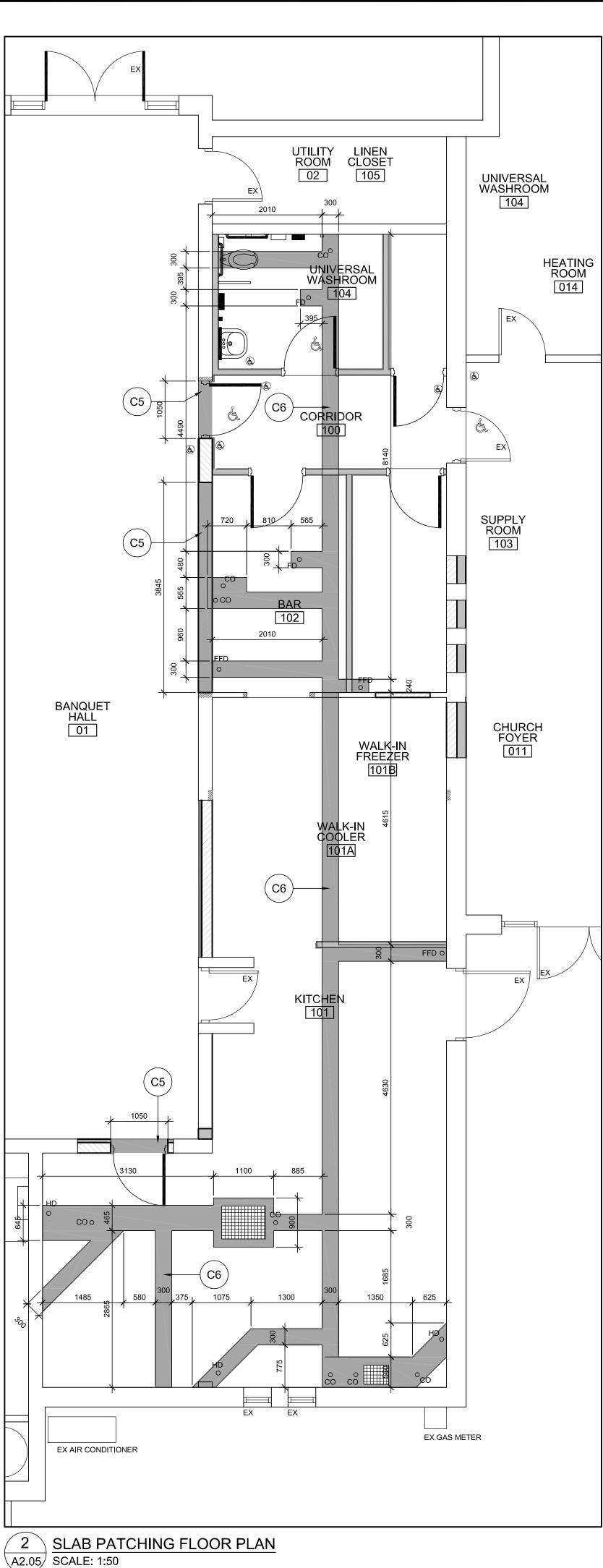
DRAWN

DRAWING:

CHECKED A2.0

PRINT DATE 05/28/25
S:\Data\2025\2025-04-Oakville_Croatian_Parish_Hall_Renovatio





GENERAL NOTES

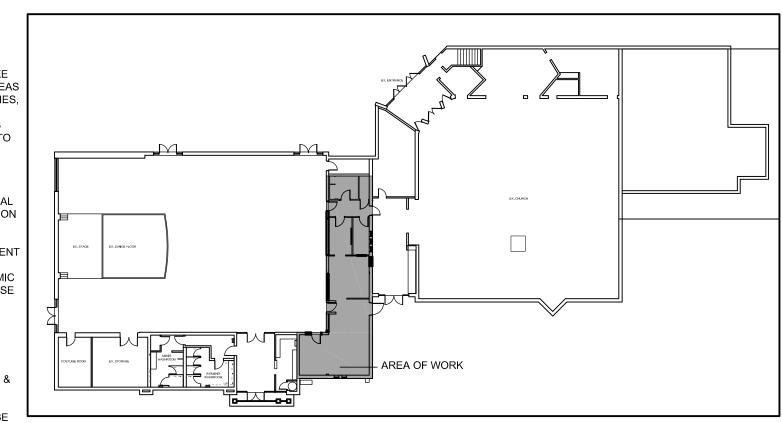
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EQL	JIPMENT LIST
1	GAS FLOOR FRYER
2	10 BURNER RANGE
3	STOCK POT RANGE - SINGLE
4	CONVECTION OVEN
5	TILTING KETTLE (ELECTRIC)
6	DOUBLE WARMER (TBC)
7	COMBI OVEN (GAS)
8	PREP SINK
9	DOOR TYPE DISHWASHER
10	EXISTING MIXER
11	SLIDING DOOR REFRIGERATOR
12	WALKIN FRIDGE / FREEZER COMBO UNIT
13	UNDERBAR HAND SINK UNIT
14	UNDERBAR ICE MAKER
15	COCKTAIL UNIT W/ DUMP SINK
16	COCKTAIL UNIT
17	UNDERBAR GLASS RACK UNIT
18	BACK BAR REFRIGERATOR
19	WINE FRIDGE
20	NOT USED
21	GREASE INTERCEPTOR
22	BEVERAGE RACK (BAG IN BOX)

NOTE: THE NUMBERS DO NOT CORRELATE TO ACE DESIGN DRAWING



KEY PLAN SCALE: NTS

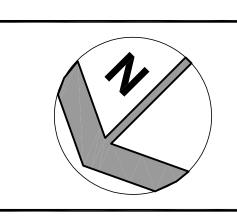
NO.	DESCRI	PTION	REMARKS							
P1		- 92mm METAL STUD AT 400mm O/C -16mm GYPSUM BOARD (BOTH		/ERSAL WASHROOM (104) USE TILE R BOARD IN LIEU OF GYPSUM)						
(P1a)		SIDES)	P1	EXTEND PARTITION TO U/S OF STRUCTURE ABOVE						
(P1b)			P1a	EXTEND PARTITION TO 150mm ABOVE ADJACENT CEILING						
			(P1b)	SAME AS P1 WITH WALL CAVITY FILLED WITH SOUND BATT INSULATION						
P2		- 92mm METAL STUD AT 400mm O/C -16mm GYPSUM BOARD BOTH SIDES	l .	END PARTITION TO DERSIDE OF CEILING						
P3		- 190mm CONC, BLOCK								
P4		- - 190mm CONC. BLOCK - METAL STUDS AT 400mm O/C	P4	41mm METAL STUDS						
P4a		-16mm GYPSUM BOARD	P4a	150mm METAL STUDS						
P5		13mm GYPSUM BOARD - 240mm CONC. BLOCK -22mm METAL FURRING CHANNELS (HORIZONTAL) AT 400mm O/C	- PROV SIDE TO	ND TO 2400mm AFF IDE FURRING CHANNELS ON HALL O MAKE GYPSUM BOARD FLUSH WITH ENT WALL						

CONSTRUCTION NOTES

- PATCH AND REPAIR EXISTING WALLS AS REQUIRED. MAKE SURFACE READY TO RECEIVE NEW WALL FINISH
- INFILL EX WINDOW OPENINGS WITH WALL TYPE INDICATED. APPROXIMATE OPENING HEIGHT IS
- 1800mm
 INFILL EX DOOR OPENING WITH INDICATED WALL
- C3 TYPE. APPROXIMATE HEIGHT OF OPENING IS 2200mm
- TYPE. APPROXIMATE HEIGHT OF OPENING IS 1200mm
- PROVIDE NEW 50mm CONCRETE FLOOR PATCH AT NEW OPENINGS IN THE WALL

INFILL EX WALL OPENING WITH INDICATED WALL

- PROVIDE NEW 25 MPA POURED CONCRETE
 FLOOR W/ 6x6 6x6 WWF. THICKNESS OF NEW
 FLOOR TO MATCH EXISTING FLOOR SLAB
 (APPROX. 125mm). MESH TO HAVE MINIMUM
 25mm COVER. PROVIDE 200mm LG 10M DOWELS
 AT 400mm O/C ON ALTERNATING SIDES. EPOXY
 EMBED DOWELS 100mm INTO EX FLOOR SLAB
- C7 PROVIDE METAL TRANSITION STRIP BETWEEN EDGE OF NEW FLOOR FINISH AND EXISTING VINYL TILE FINISH
- FEATHER EXISTING CONCRETE FLOOR AS REQUIRED TO PROVIDE A SMOOTH TRANSITION BETWEEN LVT FLOOR FINISH AND QT FINISH. PROVIDE METAL TRANSITION STRIP BETWEEN
- NEW INFILL WALL TO BE PAINTED TO MATCH ADJACENT WALL COLOUR. PROVIDE NEW 19mm THE WOOD BASE (APPROX 150mm TALL) AT INFILL
- PROVIDE METAL TRANSITION BETWEEN NEW LVT FLOOR AND EX CARPET FLOOR



L	EGEND)

APPROX APPROXIMATE BOARD CO CLEAN OUT EXISTING ITEM FLOOR DRAIN FFD FUNNEL FLOOR DRAIN HD LVT HUB DRAIN LUXUARY VINYL TIL MIN MINIMUM NIC NOT IN CONTRACT O/C ON CENTER

QUARRY TILE

UNDERSIDE

STAINLESS STEEL GUARD

2 ISSUED FOR TENDER 2025-05-28
1 ISSUED FOR PERMIT 2025-05-22

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FLOOR PLANS

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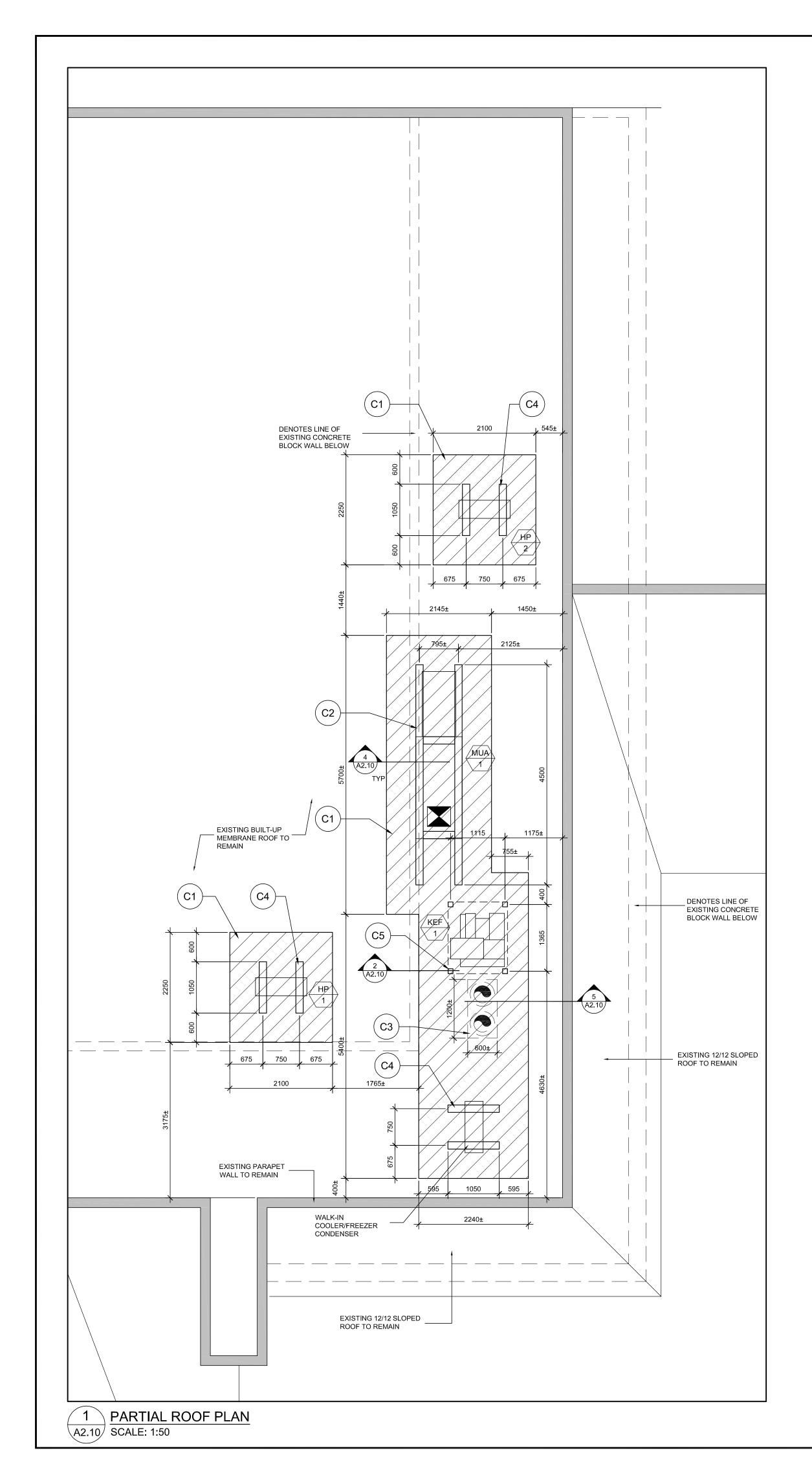
START DATE:
MAR 2025

DRAWN

PROJECT:
2025-C

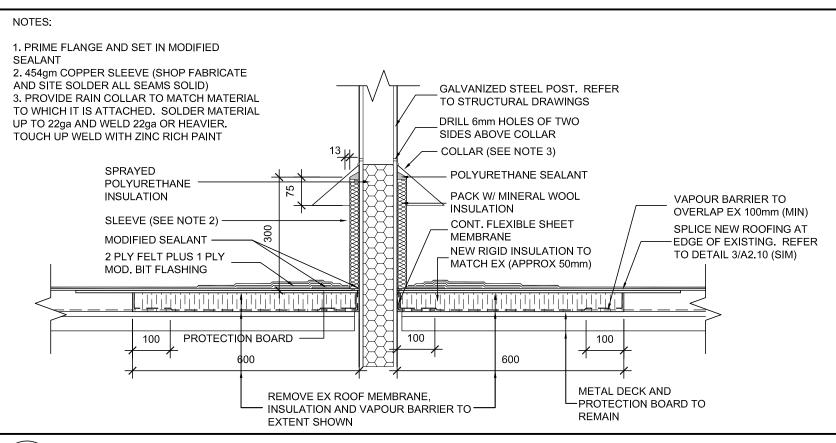
CHECKED A2.0

PRINT DATE 05/28/25
S:\Data\2025\2025-04-Oakville_Croatian_Parish_Hall_Renovations\65Drawin A2.00-Floor-plan-[2025-04].dwg



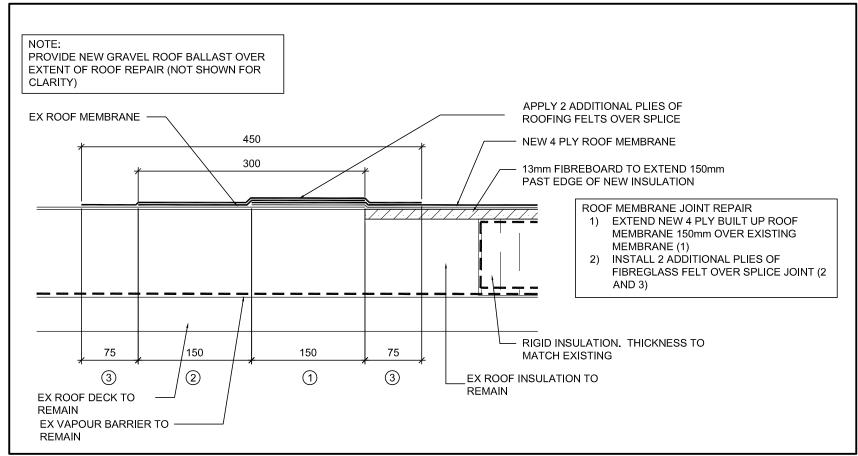
CONSTRUCTION NOTES

- HATCHED AREA DENOTES EXTENT OF REMOVAL OF EXISTING GRAVEL BALLAST, BUR ROOF MEMBRANE, PROTECTION BOARD, INSULATION AND VAPOUR BARRIER. REMOVAL OF BALLAST TO EXTEND PAST EXTENT SHOWN BY 150mm ON ALL SIDES. REMOVE VAPOUR BARRIER TO LEAVE 100mm OVERLAP ON ALL SIDES. PROVIDE NEW VAPOUR BARRIER, INSULATION, PROTECTION BOARD, ROOF MEMBRANE AND BALLAST AS PER DETAILS ON THIS PAGE. FIELD VERIFY FINAL PLACEMENT OF NEW MECHANICAL UNITS PRIOR TO ROOF REMOVAL
- PROVIDE NEW 150mm WIDE PRESSURE TREATED WOOD SLEEPERS BELOW NEW MAKE UP AIR UNIT. REFER TO DETAIL 4/A2.10. COORDINATE W/ UNIT SHOP DRAWINGS FOR PLACEMENT OF SLEEPERS
- REMOVE AND DISPOSE OF EX ROOF CURB AROUND EX EXHAUST DUCT OPENING. PROVIDE NEW PRESSURE TREATED WOOD CURB AS PER
- PROVIDE NEW 150mm WIDE PRESSURE TREATED WOOD SLEEPERS BELOW CONDENSING UNITS. REFER TO DETAIL 4/A2.10 (SIM).
 COORDINATE W/ UNIT SHOP DRAWINGS FOR PLACEMENT OF SLEEPERS
- PROVIDE 4 GALVANIZED STEEL POSTS THROUGH ROOF FOR THE SUPPORT OF THE NEW EXHAUST FAN. COORDINATE W/ STRUCTURAL DRAWINGS FOR SUPPORT FRAME AND POST SIZES. COORDINATE W/ FAN SHOP DRAWINGS FOR SUPPORT FRAME SPACING.



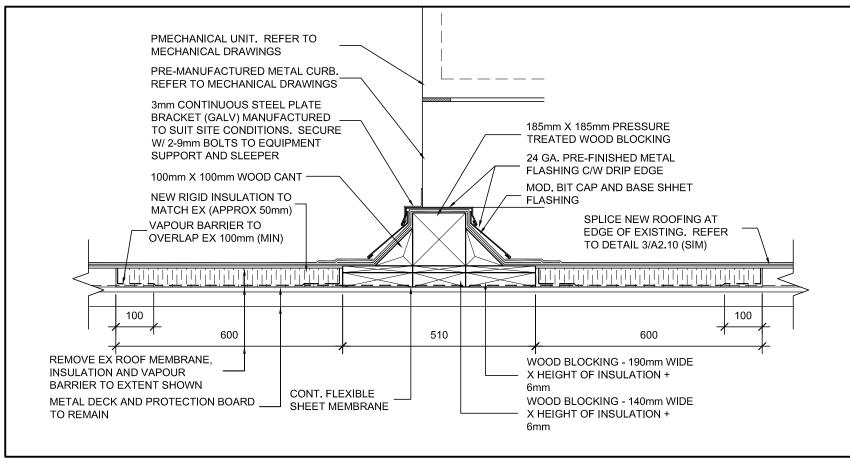
2 DETAIL - ROOF PENTRATION AT EXHAUST FAN

A2.10 SCALE: 1:10



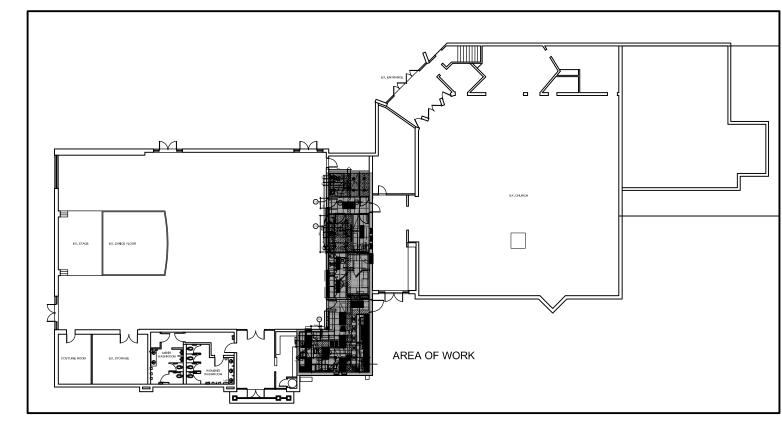
3 DETAIL - TYPICAL ROOF MEMBRANE SPLICE

A2.10 SCALE: 1:5

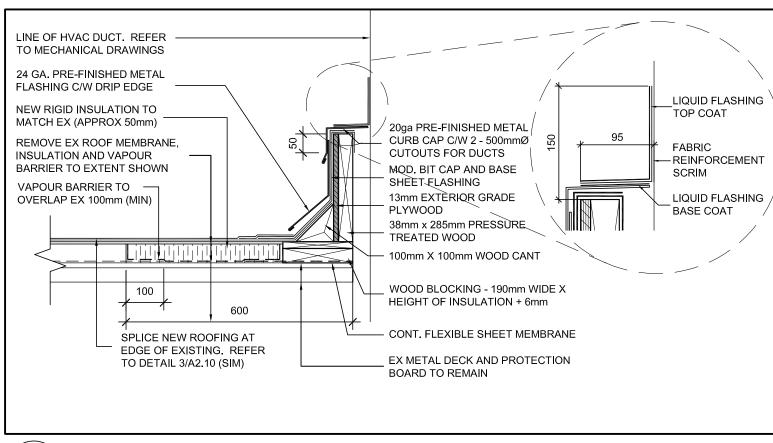


DETAIL - EQUIPMENT SLEEPER

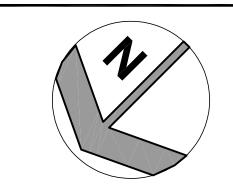
A2.10 SCALE: 1:10



KEY PLAN SCALE: NTS



5 DETAIL - ROOF CURB AT EXHAUST DUCTS A2.10 SCALE: 1:10



GALV

APPROX APPROXIMATELY **EXISTING ITEM** GALVANIZED MIN MINIMUM SIM SIMILAR TYP TYPICAL

	ISSUED FOR TENDER	2025-05-28
	ISSUED FOR PERMIT	2025-05-22
0	REVISIONS	DATE

DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT: AND MUST REPORT ANY DISCREPANCIES TO THE ARCHITECTS BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBID WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECTS.

HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION 2110 TRAFALGAR RD, OAKVILLE ON L6H 7H2

ROOF PLAN

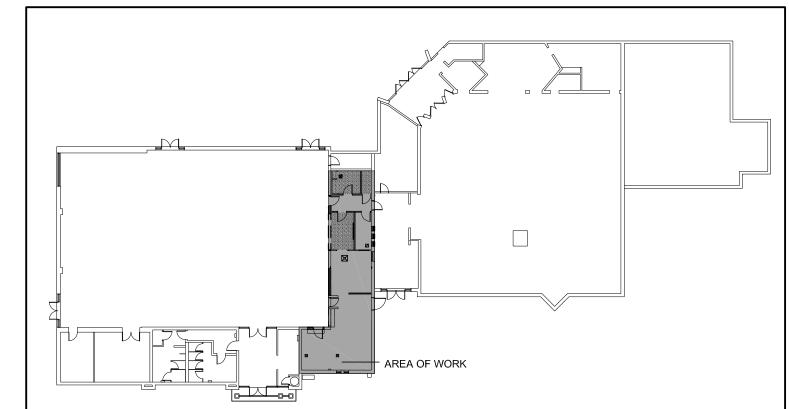
GRGURIC ARCHITECTS **INCORPORATED**



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

PROJECT: SCALE: AS NOTED START DATE: MAR 2025 DRAWN





GRAPHIC RCP LEGEND

NOTE: REFER TO ELECTRICAL DRAWINGS FOR FIXTURE TYPES
- MECHANICAL AND ELECTRICAL ITEMS SHOWN, I.E. DUCTWORK,
PIPING, LIGHT FIXTURES, ETC. ARE FOR REFERENCE ONLY
AND ARE NOT INCLUSIVE. REFER TO MECHANICAL AND
ELECTRICAL DRAWINGS FOR ALL RELATED FIXTURES.

600×1200 LIGHT FIXTURE

RETURN AIR GRILLE TO BE REMOVED

RETURN AIR GRILLE

DIFFUSER

NEW LINTEL - REFER TO

POT LIGHT

EXHAUST GRILLE

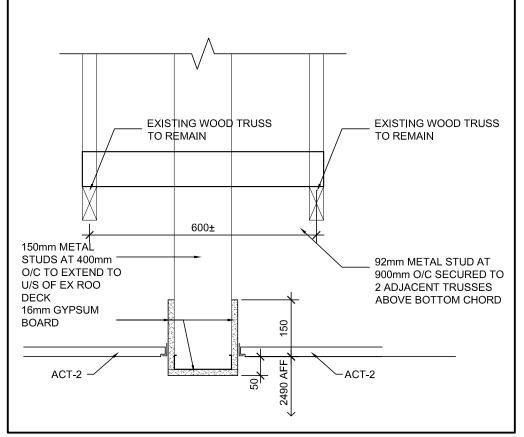
STRUCTURAL DRAWINGS

600×1200 LIGHT FIXTURE (REFER TO ELECTRICAL)

TO BE REMOVED (REFER TO ELECTRICAL)

KEY PLAN

SCALE: NTS



3 DETAIL - BULKHEAD BH-1 A2.20 SCALE: 1:10

GENERAL NOTES

- FIELD VERIFY ALL DIMENSIONS.
- 2. CAUSE NO DAMAGE TO EXISTING CONSTRUCTION TO REMAIN. TAKE CARE NOT TO ENCROACH ON ADJACENT OCCUPIED AREAS OR AREAS NOT WITHIN THE SCOPE OF WORK, PROTECT ALL EXISTING FINISHES, DOORS, FRAMES. ETC. WHICH ARE TO REMAIN. PATCH AND MAKE GOOD ALL EXISTING ADJACENT SURFACES FINISHES & MATERIALS WHERE DISTURBED BY NEW CONSTRUCTION.
- 3. TRANSITIONS BETWEEN NEW AND EXISTING FINISHES TO BE MADE SMOOTH AND CONTINUOUS.
- 4. REFER TO ELECTRICAL DRAWINGS FOR ACTUAL FIXTURE TYPES.
- 5. MECHANICAL AND ELECTRICAL ITEMS SHOWN, I.E. LIGHT FIXTURES, DUCTWORK, ETC. ARE FOR REFERENCE ONLY AND ARE NOT INCLUSIVE. REFER TO MECHANICAL AND ELECTRICAL FOR ALL RELATED WORK REQUIRED.

DEMOLITION NOTES

- REMOVE AND DISCARD EX ACOUSTIC CEILING TILES, T-BAR GRID & PERIMETER TRACK D1 REMOVE AND DISCARD EXTREME IN THE NOTED AREA OF WORK
- D2 REMOVE AND DISCARD EX WOOD SLAT CEIL REFER TO MECHANICAL AND ELECTRICAL REMOVE AND DISCARD EX WOOD SLAT CEILING IN THE NOTED AREA OF WORK
- PREMOVE AND DISCARD EX LIGHT FIXTURES IN THE NOTED AREA OF WORK REFER TO ELECTRICAL
- D4 REMOVE AND TURN TV AND BRACKET REMOVE AND TURN OVER TO THE OWNER THE EXISTING WALL MOUNTED
- REMOVE AND DISPOSE OF EXISTING WALL MOUNTED AC UNIT. REFER TO AND COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR

CONSTRUCTION NOTES

- PROVIDE CLOSURE PANELS FROM THE TOP OF THE COOLER/FREEZER TO U/S OF FINISHED CEILING PROVIDE CLOSURE PANELS FROM THE TOP OF THE WALK-IN
- PROVIDE 450mm x 600mm 16 ga STAINLESS STEEL CEILING PANELS PANELS



EILING MOUNTED 1200 LONG LIGHT FIXTURE O BE REMOVED (REFER TO ELECTRICAL)			
IEW GYPSUM BOARD CEILING			
DENOTES 610 x 1220 SUSPENDED ACOUSTIC CEILING TILE			
DENOTES 610 x 1220 SUSPENDED ACOUSTIC CEILING TILE TO BE REMOVED	2 1 NO	ISSUED FOR TENDER ISSUED FOR PERMIT REVISIONS	2025-05-28 2025-05-22 DATE
RETURN AIR GRILLE	DRA CHE THE THE	WINGS ARE NOT TO BE SCALED. CONTRACK AND VERIFY ALL DIMENSIONS AND COPROJECT; AND MUST REPORT ANY DISC ARCHITECTS BEFORE PROCEEDING WIT USE OF THIS DRAWING OR PART THERE	ACTOR MUST DNDITIONS ON REPANCIES TO H THE WORK.

HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION 2110 TRAFALGAR RD, OAKVILLE ON L6H 7H2

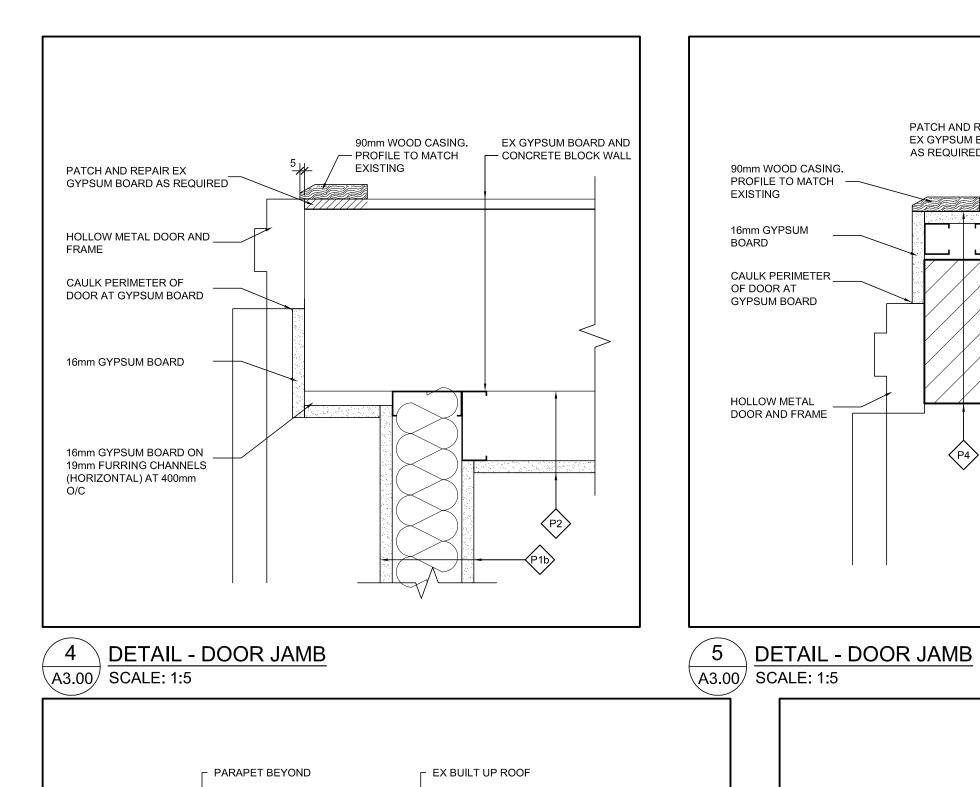
THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDI WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECTS.

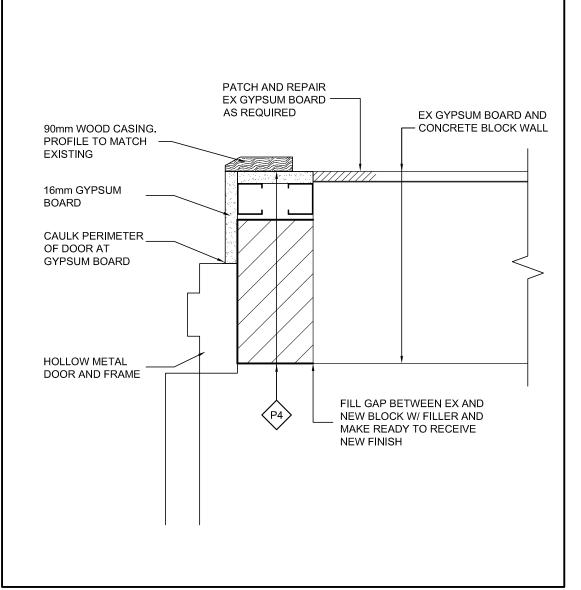
REFLECTED CEILING PLAN

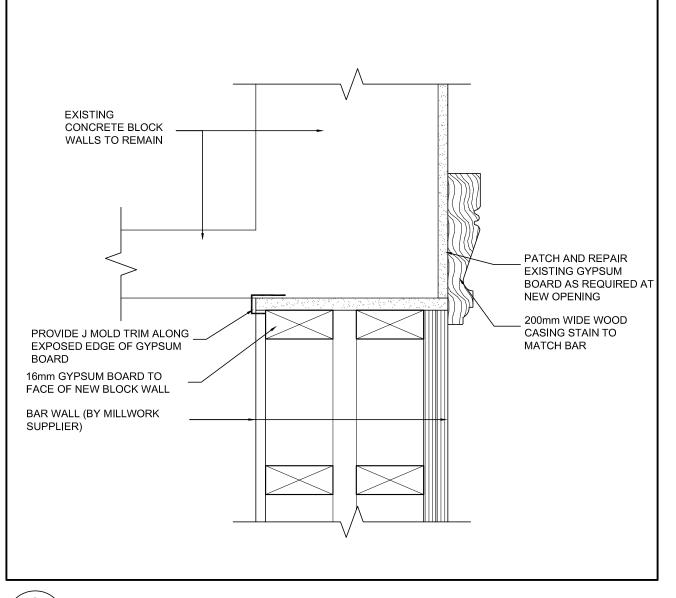
GRGURIC ARCHITECTS **INCORPORATED**

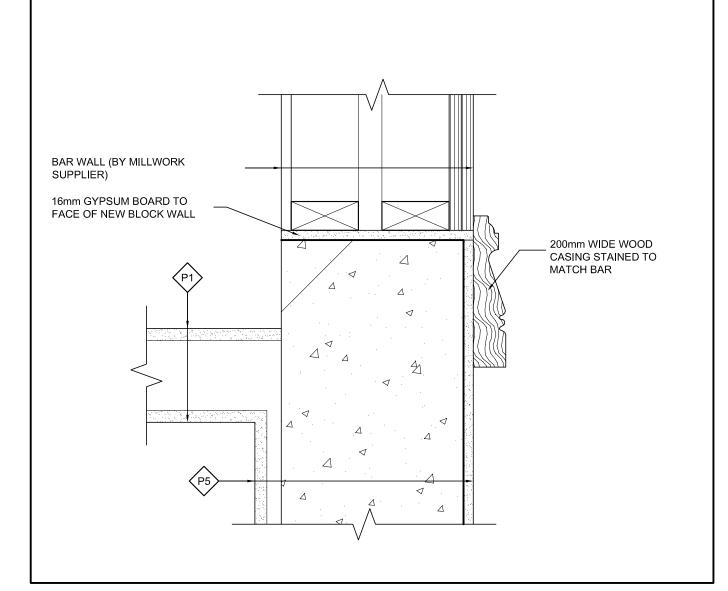
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SCALE:	PROJECT:
AS NOTED	0005
START DATE:	2025-0
MAR 2025	
DRAWN	DRAWING:



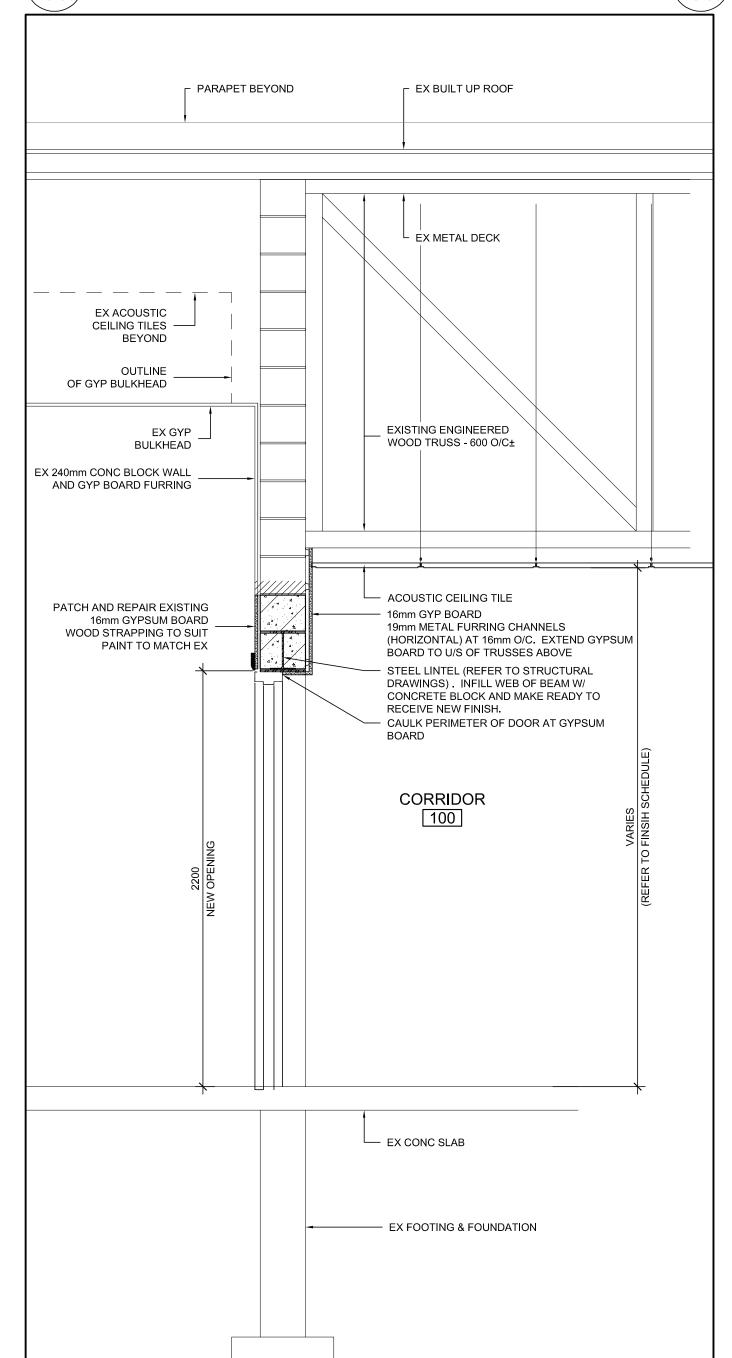


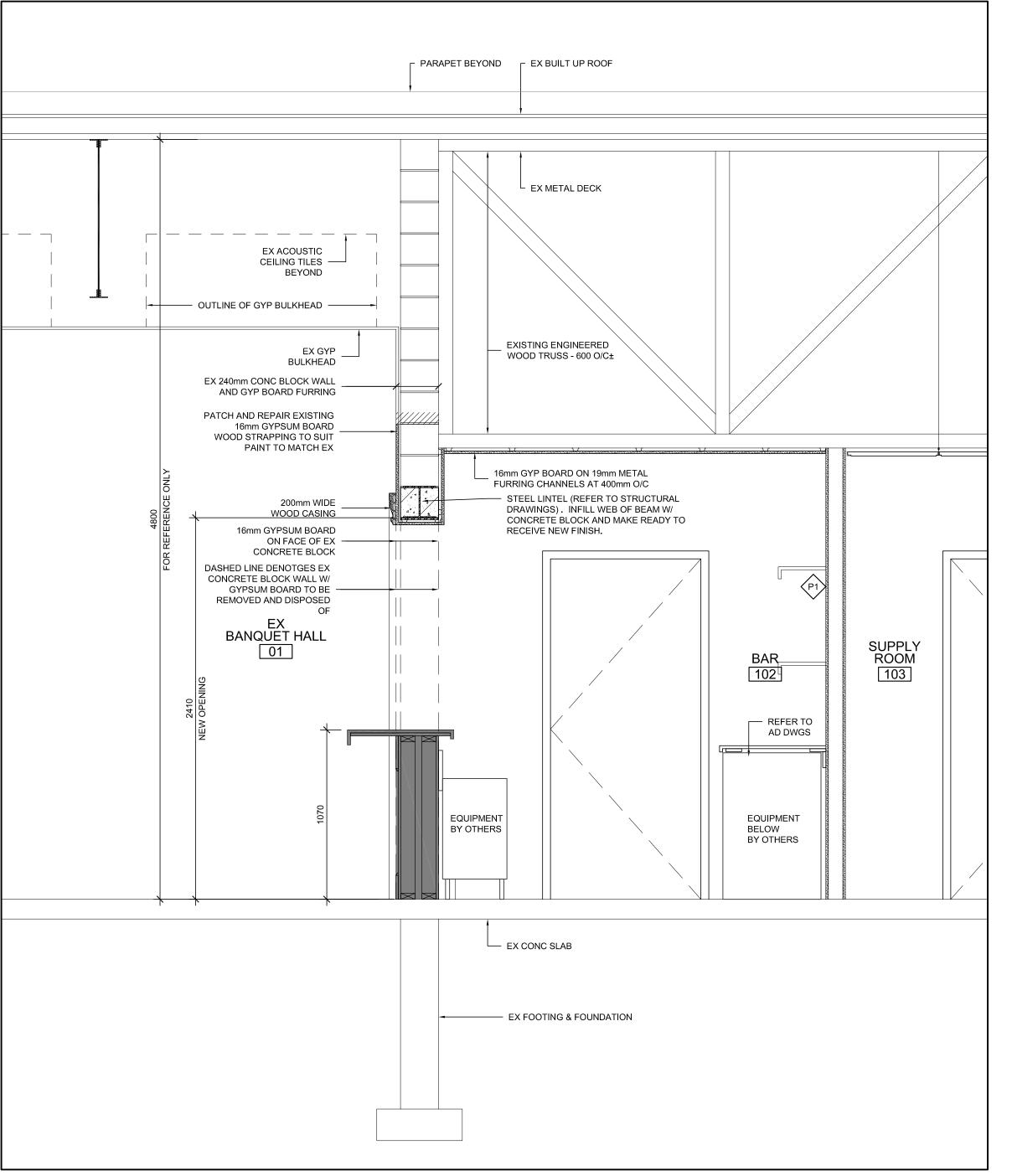


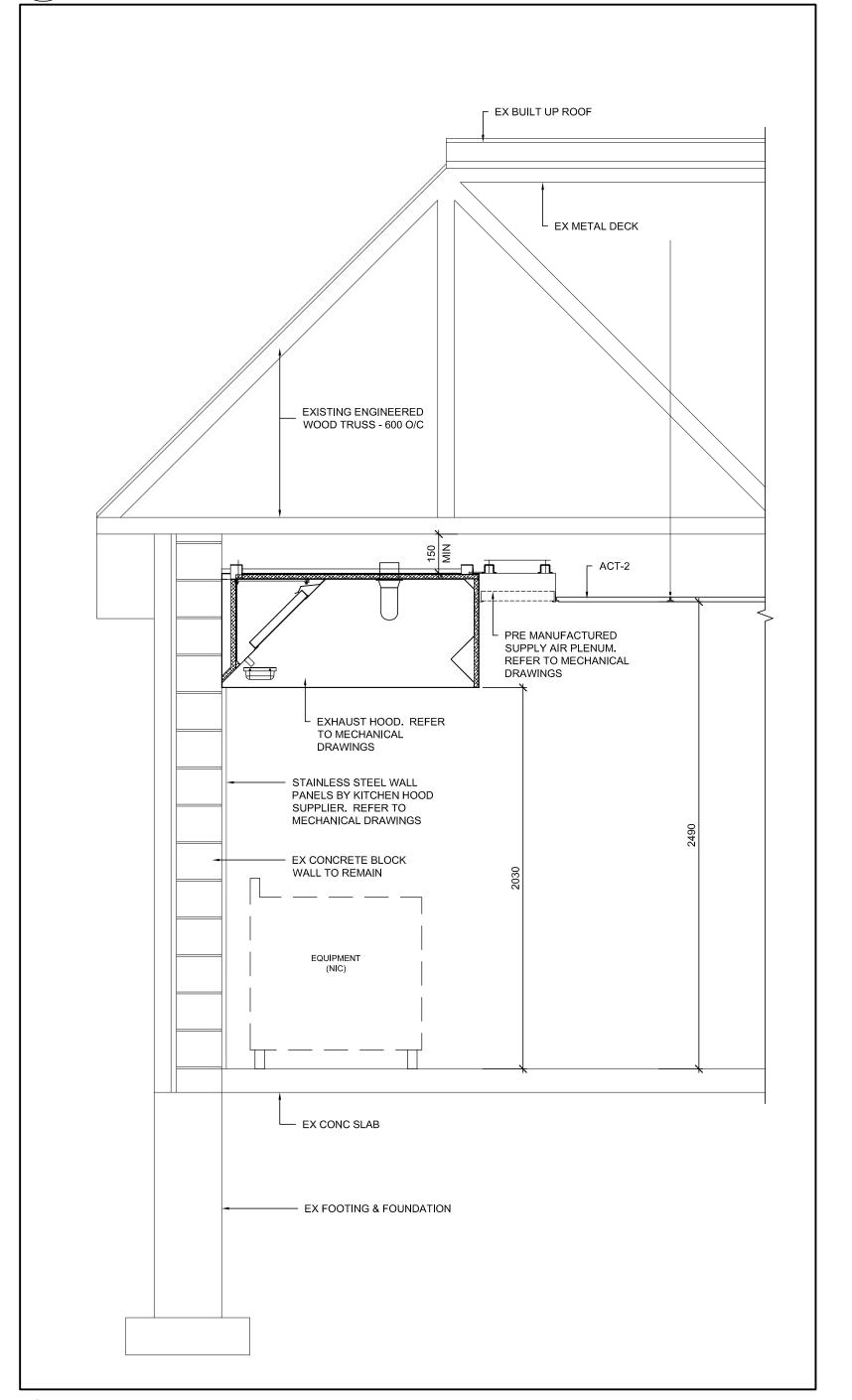


7 <u>DETAIL - WALL AT BAR OPENING</u> A3.00 SCALE: 1:5

6
A3.00 DETAIL - WALL AT BAR OPENING
SCALE: 1:5







NIC NOT IN CONTRACT O/C ON CENTER SIM SIMILAR T/R TO REMAIN VCT VINYL COMPOSITE TILE

DW DISH WASHER EX EXISTING ITEM FR FRIDGE FZ FREEZER GYP GYPSUM MIN MINIMUM

2	ISSUED FOR TENDER	2025-05-28					
1	ISSUED FOR PERMIT	2025-05-22					
NO	REVISIONS	DATE					
DRA	DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST						

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HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION 2110 TRAFALGAR RD, OAKVILLE ON L6H 7H2

WALL SECTIONS AND **DETAILS**

GRGURIC ARCHITECTS **INCORPORATED**



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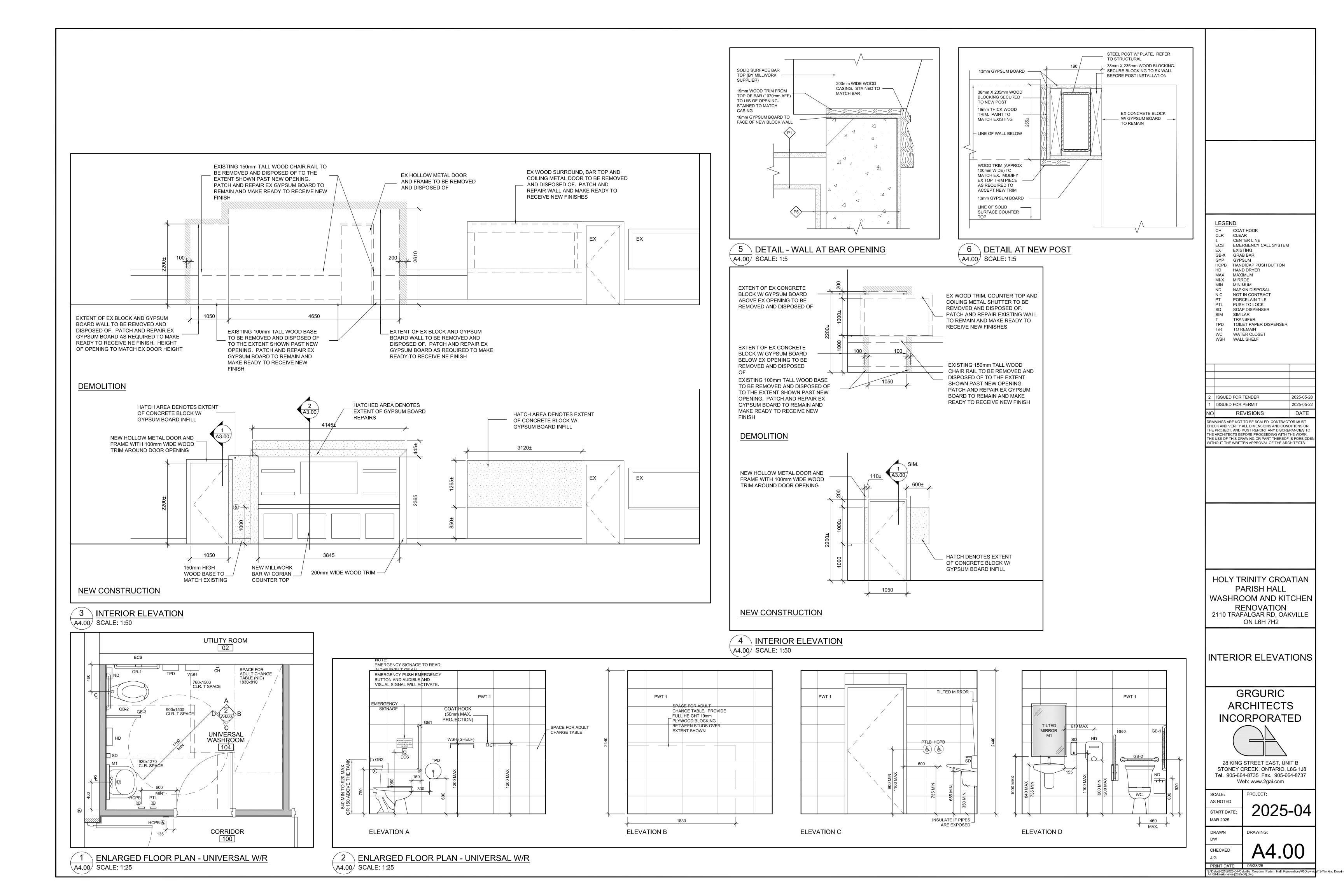
PROJECT: SCALE: AS NOTED START DATE: MAR 2025

DRAWN CHECKED

3 WALL SECTION- EXHAUST HOOD A3.00 SCALE: 1:20

1 WALL SECTION - DOOR OPENINGS \A3.00\ SCALE: 1:20

2 WALL SECTION - BAR OPENING A3.00 SCALE: 1:20



DOOR SCHEDULE																
		DOOR	S							FRAM	ES			PANIC	DOOR	
ROOM NAME	DOOR NO.		HEIGHT	THK.	FIRE	TYPE	MAT'L	FINISH	GLASS	TYPE	MAT'L	FINISH	GLASS		CLOSER	REMARKS
CORRIDOR	100 A	900± (EX)	2150± (EX)	44	-	EX	HM (EX)	PAINT	-	EX	HM (EX)	PAINT	-		•	CL,PDO,HCPB; EXISTING DOOR TO REMAIN - REPAINT
CORRIDOR	100 B	950	2150	44	-	A	НМ	PAINT	-	1	НМ	PAINT	-		•	CL, PDO,HCPB
KITCHEN	101 A	950	2150± (EX)	44	-	А	НМ	PAINT	-	1	НМ	PAINT	-		•	CL; HEIGHT OF FRAME TO FIT IN EXISTING OPENING (FIELD VERIFY)
KITCHEN	101 B	900± (EX)	2150± (EX)	44 (EX)	-	EX	HM (EX)	PAINT	-	EX	HM (EX)	PAINT	-			EXISTING DOOR TO REMAIN - REPAINT
KITCHEN	101 C	1220± (EX)	2150± (EX)	44 (EX)	-	EX	HM (EX)	PAINT	-	EX	HM (EX)	PAINT	-			EXISTING DOOR TO REMAIN - REPAINT
BAR	102 A	950	2150	44	-	А	НМ	PAINT	-	1	НМ	PAINT	-		•	CL; HEIGHT OF FRAME TO FIT IN EXISTING OPENING (FIELD VERIFY)
SUPPLY ROOM	103 A	950	2150	44	-	А	НМ	PAINT	-	1	НМ	PAINT	-		•	
UNIVERSAL WASHROOM	104 A	950	2150	44	-	А	НМ	PAINT	-	1	НМ	PAINT	-		•	CL, PDO, HCPB
LINEN CLOSET	105 A	950	2150	44	-	А	НМ	PAINT	-	1	НМ	PAINT			•	

DOOR SCHEDULE LEGEND

1. GENERAL CONTRACTOR TO FIELD VERIFY ALL DOOR & FRAME / SCREEN QUANTITIES & DIMENSIONS PRIOR TO FABRICATION 2. GENERAL CONTRACTOR TO CO-ORDINATE LOCATION & INSTALLATION OF PUSH

BUTTON / AUTOMATIC DOOR OPERATIONS AND ALL OTHER RELATED TRADES. TO BE SUPPLIED BY GENERAL CONTRACTOR & INSTALLED BY ELECTRICAL 3. REFER TO DOOR SCHEDULE FOR FIRE RESISTANCE RATINGS FOR DOOR, FRAMES & GLAZED FRAMES / SCREENS.

4. ALL HM. DOORS & FRAMES TO BE PAINTED.

GENERAL NOTES

5. REFER TO PLANS / DETAILS & WALL SECTIONS FOR LOCATIONS OF REQUIRED STEEL LINTELS / ANGLES (BY GENERAL CONTRACTOR) AND ANY FORMED ALUMINUM CLOSURE ANGLES OR SUPPORTS FOR DOOR / FRAMES (BY DOOR / FRAME INSTALLER)

6. AT ALL EXTERIOR DOORS PROVIDE CONTINUOUS SEALANT & BACKER ROD AROUND PERIMETER EDGES OF FRAME (TYP. FOR BOTH EXTERIOR & INTERIOR SIDES)

7. REFER TO DOOR HARDWARE SCHEDULE FOR ALL HOLD OPEN DEVICES, STRIKES, SECURITY, DOOR OPENERS, CLOSERS, PANIC HARDWARE, OVERHEAD STOPS, PUSH & KICK PLATES, ETC. & ANY OTHER DOOR HARDWARE REQUIREMENTS.



ANODIZED CLEAR ANODIZED COLOURED ANOD (CO) CONTINUOUS HINGE CLOSER DOOR CONTACT DOUBLE GLAZED

DOUBLE GLAZED SEALED INSULATING UNITS EXISTING FIRE GLASS HANDICAPPED PUSH BUTTON HOLLOW METAL THERMALLY INSULATED DOOR / FRAME

LAMINATED SAFETY GLASS

PDO POWER DOOR OPERATOR RELOCATED ITEM TEMPERED GLASS THICKNESS THRESHOLD SOLID CORE WOOD DOOR SCWD SEALED UNIT (GLAZING) WOOD WEATHER STRIPPING

MINERAL CORE

OVER HEAD STOP

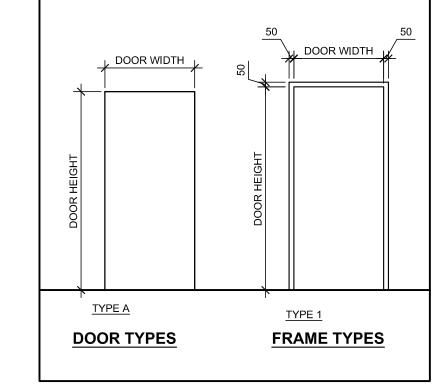
PANIC HARDWARE

PLASTIC LAMINATE

PARTICLE CORE WOOD DOOR

MINUTE

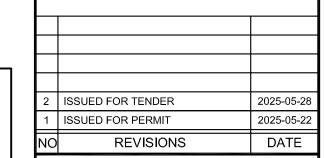
PLAM



ROOM ROOM NAME		FLOOR	BASE	WALL		CEILING			DEMARKS
NO.		FINISH		MAT'L	FINISH	MAT'L.	FINISH	HEIGHT	REMARKS
GRO	UND FLOOR								
100	CORRIDOR	LVT	RB	EX CONC. BLK GYP. BD	PAINT PAINT	ACT-1	-	2745mm	
101	KITCHEN	QT	QT	EX CONC. BLK GYP. BD	PAINT PAINT	ACT-2	-	2490mm	
101A	WALK-IN COOLER	QT	-						
101B	WALK-IN FREEZER			BY EQUI	PMENT MANU	FACTURER			
102	BAR	LVT	RB	GYP. BD	PAINT PWT-2	GYP BD	PAINT	2745mm	
103	SUPPLY ROOM	LVT	RB	EX CONC. BLK GYP. BD.	PAINT PAINT	ACT-1	-	2745mm	
104	UNIVERSAL WASHROOM	LVT	-	CONC. BLK BACKER BD	PWT-1 PWT-1	GYP. BD	PAINT	2440mm	
105	LINEN CLOSET	LVT	RB	EX CONC. BLK GYP. BD.	PAINT PAINT	GYP. BD.	PAINT	2440mm	

ROOM FINISH SCHEDULE LEGEND

ACT BLK CAR CAR. T ACOUSTIC CEILING TILE BLOCK CARPET CARPET TILES CB CONC CONCRETE BLOCK CONCRETE CT CWT EXP CERAMIC TILE CERAMIC WALL TILES EXPOSED GYPSUM BOARD LUXURY VINYL TILE PORCELAIN TILE QT RB RST SC QUARRY TILE RUBBER BASE RUBBER STAIR TREAD SEALED CONCRETE SHEET FLOORING SPORT FLR SPORTS FLOOR STRUCT STRUCTURE TO BE DECIDED VINYL COMPOSITE TILE WD WRGB WATER RESISTANT GYPSUM BOARD



CH COAT HOOK CLR CLEAR

EX EXISTING

GB-X GRAB BAR GYP GYPSUM

MI-X MIRROE

SIM SIMILAR T TRANSFEI

T/R TO REMAIN

WSH WALL SHELF

WC WATER CLOSET

MIN MINIMUM ND NAPKIN DISPOSAL

NIC NOT IN CONTRACT
PT PORCELAIN TILE
PTL PUSH TO LOCK
SD SOAP DISPENSER

TRANSFER

TPD TOILET PAPER DISPENSER

© CENTER LINE
ECS EMERGENCY CALL SYSTEM

HCPB HANDICAP PUSH BUTTON
HD HAND DRYER
MAX MAXIMUM

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HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION 2110 TRAFALGAR RD, OAKVILLE ON L6H 7H2

INTERIOR ELEVATIONS AND SCHEDULES

GRGURIC ARCHITECTS INCORPORATED

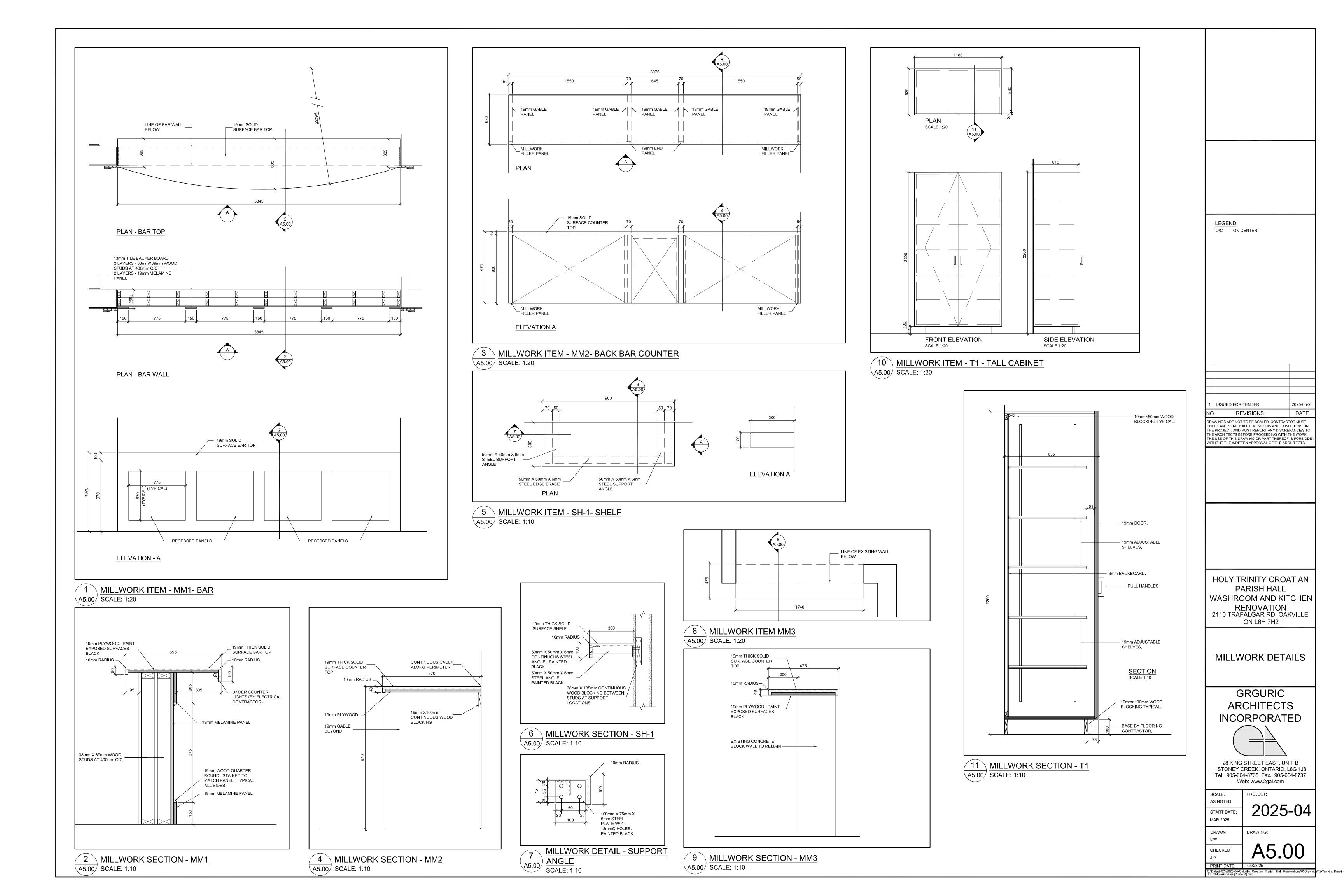


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SCALE:	PROJECT:
AS NOTED	
START DATE:	20
MAR 2025	

1985	EQ 605				
SH-1 TV PWT-2 PWT-	SH-1 CORIAN SHELVES CORIAN COUNTER TOP	PWT-2 PWT-2 MM3 GOLIPMENT (NIC) BAR EQUIPMENT (NIC) COLIPMENT (NIC) PWT-2 MM3 COLIPMENT (NIC)	CORIAN COUN MM1 PWT-2	CORIA SHELVE COUNTER TO	90 PWT-2
ELEVATION A	DASHED LINE DENOTES UNDER COUNTER BAR EQUIPMENT (NIC)	DASHED LINE DENOTES UNDER COUNTER BAR EQUIPMENT (NIC) ELEVATION B	ELEVATION C	DASHED LINE DENOTES UNDER COUNTER BAR EQUIPMENT (NIC)	DASHED LINE DENOTES UNDER COUNTER BAR EQUIPMENT (NIC) ELEVATION D

1 ENLARGED FLOOR PLAN - UNIVERSAL W/R A4.00 SCALE: 1:25



GENERAL NOTES

- 1. THESE DOCUMENTS ARE TO BE USED ONLY BY THE PARTY WITH WHOM DFE HAS ENTERED INTO A
- 2. THE USE OF THESE DRAWINGS IS LIMITED TO THAT IDENTIFIED IN THE REVISION COLUMN.
- 3. THE STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2024 ONTARIO BUILDING CODE (OBC) LATEST EDITION INCLUDING ALL THE LATEST STANDARDS REFERENCED THEREIN, AND ANY APPLICABLE ACTS OF AUTHORITY. CONSTRUCTION PRACTICES SHALL BE ACCORDING TO THE SAME. USE THE LATEST VERSIONS OF STANDARDS AND CODES LISTED BELOW. ELEMENTS OF STRUCTURES AND NON-STRUCTURAL COMPONENTS AND EQUIPMENT AND THEIR CONNECTIONS TO BE DESIGNED PER OBC LATEST EDITION.
- DO NOT SCALE THESE DRAWINGS. ERRORS MADE BECAUSE OF SCALING THESE DRAWINGS ARE RESPONSIBILITY OF THE PARTY WHO USED THE DRAWINGS.
- 5. WHERE DISCREPANCIES EXIST, THE MOST STRINGENT SHALL PREVAIL. NOTIFY THE ENGINEER BEFORE
- 6. STRUCTURAL DRAWINGS TO BE USED TOGETHER WITH ALL OTHER SPECIFICATIONS AND CONTRACT
- 7. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF

HOLES, SUMP PITS, TRENCHES, CURBS, BOLTS, SLEEVES, OPENINGS, ETC

- 8. THE CONTRACTOR SHALL BECOME FAMILIARIZED WITH THE PROJECT ON SITE, INCLUDING EXISTING
- CONSTRUCTION. ANY ALTERATIONS FROM ASSUMED IN THE DRAWINGS MUST BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- 9. THE ENGINEER MUST APPROVE SUBSTITUTIONS FOR SPECIFIED PRODUCTS AND MATERIALS. 10. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT
- AND REGULATIONS FOR CONSTRUCTION PROJECTS O.REG. 213/91. 11. THE CONTRACTOR SHALL PROVIDE DESIGN AND CONSTRUCTION OF HORIZONTAL AND VERTICAL
- SHORING AND TEMPORARY BRACING AS PER O.REG 213/91. THE CONTRACTOR SHALL PROVIDE BRACING, SHORING, SHEET PILING ETC. TO PROTECT EXISTING OR ADJACENT STRUCTURES AFFECTED
- 12. AN INDEPENDENT INSPECTION AND TESTING COMPANY SHALL PROVIDE TESTS TO PROVE THAT CONSTRUCTION IS IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. REQUIRED TESTING SHALL BE AS PER THE TESTING AND INSPECTION TABLE BELOW.
- 13. DOYTCH & FILO ENGINEERING WILL PROVIDE GENERAL REVIEW OF CONSTRUCTION. DOYTCH & FILO ENGINEERING WILL REVIEW SHOP DRAWINGS FOR GENERAL CONFORMITY WITH THE CONTRACT DOCLIMENTS PREPARED BY "DOYTCH & FILO". THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "DOYTCH & FILO" IS NOT RESPONSIBLE FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. REVIEWED SHOP DRAWINGS DO NOT RELIEVE CONTRACTORS FROM RESPONSIBILITY FOR THEIR MISTAKES.
- 14. SHOP DRAWINGS MUST BE SEALED BY PROFESSIONAL ENGINEER BEFORE BEING SUBMITTED TO DFE FOR REVIEW, U.N.O.
- 15. THE OWNER AND THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF CONSTRUCTION PROGRESS. AND THEY SHALL INVITE THE ENGINEER TO COMPLETE GENERAL REVIEWS.

REQUIRED SUBMITTALS

- 1. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION WHERE APPLICABLE.
- 2. REVIEW OF THE SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND IS NOT AN APPROVAL OF THE DETAIL DESIGN INHERENT IN THE SHOP DRAWINGS. RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT REL'IEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INFORMATION PERTAINING TO THE FABRICATION PROCESS TECHNIQUES OF CONSTRUCTION AND INSTALLATION AND FOR COORDINATION OF THE WORK OF ALL SUB-TRADES.
- THE APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF THE FITTING OF BUILDING COMPONENTS. ANY DISCREPANCIES IN THE SHOP DRAWINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

ITEM	REEQ'D SUBMITTAL?	ENGINEER'S STAMP REQ'D?	NOTES
REBAR SHOP DRAWINGS	YES	NO	INCL CONC BLOCK REINF
CONCRETE MIX DESIGNS	YES	NO	INGE GONG BEGONNEIN
MASONRY GROUT MIX DESIGN	YES	1.2	
MA CONTROL STOCK MAN DECICIO	YES	NO	
BLOCK MILL REPORT	YES	NO	
STRUCTURAL STEEL SHOP DRAWINGS	YES	YES	FOR CONNECTIONS ONLY
MISCELLANEOUS STEEL SHOP DRAWINGS	YES	YES	STAMP FOR STAIRS, LADDERS AND GUARDS
STEEL DECK SHOP DRAWINGS	YES	YES	
COLD FORMED STEEL FRAMING SHOP DWGS.	YES	YES	
FALL ARREST ANCHORS	YES	YES	
PRECAST SHOP DRAWINGS	YES	YES	

MASONRY

- 1. CONCRETE MASONRY UNITS SHALL CONFORM TO THE LATEST CSA CAN/CSA-A165 AND SHALL HAVE A MINIMUM COMPRESIVE STRENGTH OF 15MPa BASED ON NET CROSS-SECTIONAL AREA.
- 2. REINFORCING BARS SHALL CONFORM TO CAN/CSA G30.18 GRADE 400W FOR REINFORCING STEEL WITH MINIMUM YIELD STRENGTH OF FY = 400 MPa.
- 3. TYPE S MORTAR SHALL BE USED THROUGHOUT FOR LOAD BEARING BLOCK. TYPE N MORTAR SHALL BE USED FOR BRICK VENEER OR DECORATIVE NON-LOAD BEARING BLOCK MORTAR TYPE S: MIN_COMPRESSIVE STRENGTH - 12.0 MPa MORTAR TYPE N: MIN. COMPRESSIVE STRENGTH - 7.5 MPa GROUT SHALL CONFORM TO CAN/CSA A179
- GROUT MIN. COMPRESSIVE STRENGTH 20 MPa
- 4. ALL MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF LATEST CSA STANDARDS CAN/CSA-A370, CAN/CSA-A371 AND CSA S304
- ALL MASONRY WALLS SHALL BE HORIZONTALLY REINFORCED. MINIMUM REQUIREMENTS WITH (4.76 mm Ø) HEAVY DUTY "LADDER" TYPE JOINT REINFORCEMENT (OR APPROVED EQUAL) AND CONTINUOÚS REINFORCEMENT AT EVERY SECOND COURSE (400 mm/16"). a. ALL JOINT REINFORCEMENT SHALL BE HOT-DIPPED GALVANIZED.
- REINFORCEMENT SHALL BE LAPPED A MINIMUM OF 300mm (12":) AT ALL JOINTS. PREFABRICATED CORNER AND TEE REINFORCEMENT SHALL BE USED AT ALL WALL INTERSECTIONS.
- REINFORCEMENT SHALL BE PLACED AS TO PROVIDE 16 mm (5/8") MORTAR COVER ON THE EXTERIOR FACE OF WALL AND 12 mm (1/2") COVER ON THE INTERIOR FACE OF WALL.
- UNLESS NOTED OTHERWISE. PROVIDE CONTINUOUS BOND BEAMS (REINFORCED WITH 1-15M) AT UNDERSIDE OF EACH FLOOR. ROOF AND AT TOP OF PARAPETS. ALSO PROVIDE BOND BEAMS AT TOP AND BOTTOM OF OPENINGS AND EXTEND 600mm PAST CORNERS. REINFORCE BOTTOM BOND BEAM WITH 1-15M. REINFORCE TOP BOND BEAM AS FOLLOWS: - SPANS LESS THAN 1500 mm 200 mm DEEP BOND BEAM c/w 1-15M FULL LENGTH - SPANS 1500 mm TO 3000 mm
- 400 mm DEEP BOND BEAM c/w 2-15M FULL LENGTH 7. IN SEISMIC ZONES, IN ADDITION TO NOTE # 6 PROVIDE CONTINUOUS BOND BEAMS (REINFORCED
- 8. ALL TIES FOR MASONRY VENEER SHALL BE DESIGNED AND SUPPLIED BY THE MASONRY CONTRACTOR IN ACCORDANCE WITH LATEST CSA STANDARDS \$304 AND CAN/CSA-A370.
- 9 ALL BLOCK MASONRY UNITS SHALL BE CONSTRUCTED WITH FULL HEAD JOINTS, AND FULL BED.
- JOINTS UNDER THE FULL BEARING AREAS OF THE FACE SHELLS, AND UNDER WEBS SURROUNDING THOSE CELLS TO BE FILLED WITH GROUT.
- 10. WHERE MASONRY THICKNESS CHANGES, GROUT 100% SOLID MIN. 200mm (8") THE LOWER/THICKER PORTION OF THE WALL

WITH 1-15M) AT MAXIMUM VERTICAL INTERVALS OF 2400 mm O/C.

- GROUT 100% SOLID BLOCKS AT PARAPETS.
- 12. THE INTERSECTION OF ALL MASONRY WALLS SHALL BE TOOTHED OR CONTINUOUSLY REINFORCED WITH JOINT REINFORCEMENT.
- 13. ALL MASONRY BENEATH CONCENTRATED LOADS (SUCH AS BEAMS, LINTELS, AND JOISTS) SHALL BE SOLID BLOCKS OR 100% GROUTED BLOCKS FOR A MINIMUM DEPTH OF 400 mm (16") OR 3 TIMES THE LENGTH OF BEARING AND PROJECTING A MINIMUM OF 200 mm (8") OR THE LENGTH OF BEARING BEYOND EACH EDGE OF BEARING, UNLESS OTHERWISE NOTED OR SHOWN.
- 14. MAINTAIN SUPPORT OF MASONRY LINTELS FOR A MINIMUM OF SEVEN DAYS OR UNTIL SUFFICIENT STRENGTH IS GAINED TO SAFELY SUPPORT LOADS IMPOSED.
- 15. WHERE STEEL BEARING PLATES ARE SHOWN ON THE DRAWINGS, THEY SHALL BE ANCHORED WITH A MINIMUM OF TWO 15M X 300mm LONG + 75mm HOOKED ANCHOR RODS WELDED TO THE PLATES AND EMBEDDED INTO GROUT FILL AS NOTED ABOVE
- 16. SEE PLANS AND SCHEDULES REGARDING LINTEL SIZES FOR MASONRY WALLS AND VENEER. FOR ALL OPENINGS OR RECESSES IN MASONRY NOT SHOWN ON DRAWINGS GREATER THAN 300mm (12") AND UP TO 1200mm (4 FT.). INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES OR EQUIPMENT, PROVIDE ONE L89X89X6.4 (L3 1/2 X 3 1/2 X 1/4") ANGLE FOR EACH 100 mm (4") THICKNESS OF WALL.
- 17. ALL MASONRY WALLS SHALL BE ADEQUATELY BRACED DURING CONSTRUCTION UNTIL ADEQUATE DIAPHRAGM ACTION CAN BE DEVELOPED BY INSTALLED FLOOR AND ROOF STRUCTURAL
- 18. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY CONTROL JOINTS. SPACING OF CONTROL JOINTS IN ALL WALLS SHALL BE CONSTRUCTED AS PER PLAN, BUT SHALL NOT EXCEED 6000 mm (20'-0") O.C. ALL REINFORCING TO BE DISCONTINUOUS AT CONTROL JOINTS. CONTROL JOINTS SHALL BE CAULKED WITH FOAM BACKER ROD AND SHALL NOT BE FILLED WITH
- 19 REINFORCED MASONRY CELLS TO BE REINFORCED SHALL BE KEPT CLEAN OF MORTAR. GROUT FOR REINFORCED CELLS, BOND BEAMS, LINTELS AND CELLS CONTAINING DOWELS, ANCHOR BOLTS AND INSERTS PER NOTE #3. PROVIDE MINIMUM 2-15M VERTICALS FULL HEIGHT AT ALL WALL ENDS, CORNERS,
- INTERSECTIONS AND OPENINGS UNLESS OTHERWISE NOTED ON DRAWINGS. d. PROVIDE 1-15M VERTICAL FULL HEIGHT EACH SIDE OF MOVEMENT JOINTS. DOWELS FROM FOUNDATIONS TO MATCH VERTICAL REINFORCEMENT IN WALL. PROVIDE THE FOLLOWING LAPS FOR THE REINFORCEMENT INDICATED: 10M BARS = 450 mm (18")
- 20M BARS = 900 mm (36" EMBEDDED ITEMS ARE NOT TÓ INTERFERE WITH THE INTEGRITY OF THE MASONRY WALL OR LOCATION OF REINFORCEMENT. PROVIDE FULLY GROUTED LINTEL BEAM FOR CONDUITS AND PIPES RUNNING HORIZONTALLY WITHIN WALL.
- 20. PROVIDE COLD WEATHER PROTECTION AS REQUIRED BY CAN/CSA-A371.

15M BARS = 600 mm (24"

21. PROVIDE MOVEMENT JOINTS PER ARCHITECTURAL DRAWINGS. MAXIMUM DISTANCE BETWEEN MOVEMENT JOINTS TO BE 6000mm (20'-0"). COORDINATE LOCATION WITH ENGINEER.

STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL AND JOIST DESIGN CONNECTIONS AND DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST CSA STANDARD S16. a. REFER ALSO TO NOTES UNDER PLANS.
- 2. STRUCTURAL STEEL SHALL CONFORM TO LATEST CAN/CSA-G40.20, AND CAN/CSA-G40.21 a GRADE 350W CLASSIC FOR HISIS
- GRADE 350W FOR W SHAPES, S SHAPES, AND TEES. c. GRADE 300W FOR CHANNELS, ANGLES, PLATES, RODS
- 3. BOLTED CONNECTIONS SHALL USE ASTM A325 BOLTS. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325. ANCHOR RODS SHALL BE FABRICATED FROM STEEL ROD CONFORMING TO CSA STANDARD G40.21 GRADE 300W.
- 4. SHEAR STUDS TO CONFORM LATEST ASTM A108.
- 5. WELDING MATERIALS TO CONFORM TO LATEST CSA W48.
- 6. WELDING OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF LATEST CSA STANDARD W59.
- 7. FILLET WELDS SHALL BE 6mm (1/4") MIN. U.N.O. BOLTS SHALL BE A325 19mm (3/4") MIN. U.N.O. BOLTED CONNECTIONS SHALL HAVE MIN. OF TWO BOLTS IN EACH CONNECTED PIECE. BOLTED CONNECTIONS SHALL BE DESIGNED AS BEARING CONNECTIONS U.N.O.
- 8. STEEL COATINGS STRUCTURAL STEEL SHALL BE CLEANED AND PREPARED TO CONFORM TO CSA LATEST STANDARD S16. a. INTERIOR STRUCTURAL STEEL SHALL BE PRIMED AND PAINTED AS PER LATEST CSA/CAN-S16.
- EXPOSED STEEL TO BE HOT DIP GALVANIZED IN ACCORDANCE TO LATEST CAN/CSA-G164. TOUCH UP OF WELDS AND CUTS OF GALVANIZED MEMBERS TO BE DONE WITH A MINIMUM OF 3 COATS OF ZINC RICH PAINT. INTERIOR STEEL MREMBERS THAT ARE TO BE PROTECTED BY A CEMENTIOUS FIRE PROOFING SHALL BE CLEANED AND REMAIN UNCOATED.
- 9. FABRICATOR SHALL DESIGN CONNECTIONS IN ACCORDANCE WITH THE 2024 OBC FOR THE FORCES SHOWN ON THE DRAWINGS. BEAM CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM OF 50% OF THE BEAM SHEAR CAPACITY IF FACTORED DESIGN FORCES ARE NOT SHOWN ON THE DRAWINGS.
- 10. MOMENT FRAMES CONNECTIONS TO BE CONTINUOUS COLUMN / INTERRUPTED BEAM TYPE U.N.O.
- 11. WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT VALUES ARE NOT INDICATED, DESIGN CONNECTIONS FOR 100% SECTION CAPACITY OF THE SMALLER MEMBER JOINED.
- 12. COLUMN CAP PLATES TO BE MIN. 16mm (5/8") THICK U.N.O. COLUMN BASE PLATES TO BE MIN. 20mm (3/4") THICK U.N.O. HSS COLUMNS TO HAVE MIN. 10mm (3/8") THICK CAP PLATE WELDED ALL-AROUND U.N.O.
- 13. ALL BEAMS CANTILEVERED OR CONTINUOUS OR SUPPORTED OVER A COLUMN OR OTHER SUPPORT. AND BEAMS SUPPORTING POINTS OF CONCENTRATED LOAD, SHALL HAVE A MIN. OF 2-10 mm (3/8") STIFFENERS EACH SIDE OF
- 14. TOP OF COLUMNS WHICH ARE NOT BRACED BY JOISTS OR BEAMS SHALL BE BRACED DIAGONALLY TO THE ROOF OR FLOOR BY A MINIMUM OF 4-L76 x 76 x 6.4 mm (L3 x 3 x 1/4") ANGLES FOR INTERIOR COLUMNS: A MINIMUM 2-L76 x 76 x 6.4mm (L3 x 3 x 1/4") ANGLES FOR EXTERIOR COLUMNS. BRACING SHALL BE BETWEEN TOP OF COLUMN AND TOP CHORD OF JOISTS.
- 15. COLUMNS BUILT INTO MASONRY, ABUTTED BY, OR FACED WITH MASONRY WALLS SHALL HAVE ADJUSTABLE ANCHORS AT 400 mm (16") O.C. SPACED VERTICALLY. WHERE STEEL PROVIDES LATERAL BRACING ONLY TO MASONRY, ANCHORS SHALL ALLOW VERTICAL MOVEMENT BETWEEN STEEL MEMBERS AND MASONRY.
- 16. BEARING PLATES ARE TO BE CENTRED BELOW ALL BEAMS OR LINTELS U.N.O ON THE DRAWINGS. WELD TO BEARING PLATE WITH A MINIMUM 50 mm x 5 mm (2" x 3/16") FILLET ON BOTH SIDES OF BEAM.
- 17. STEEL BEAMS AND LINTELS SHALL HAVE 200 mm (8") MINIMUM END BEARING ON MASONRY AND 65 mm (2 1/2") MINIMUM BEARING ON STEEL UNLESS INDICATED OTHERWISE.
- 18. WHERE BACK-TO-BACK ANGLES ARE USED AS LINTELS OR SUPPORTS. STITCH WELD TOGETHER AT A MAXIMUM SPACING OF 300mm (12") O.C
- 19. ALL ROOF OPENINGS TO BE REINFORCED BY FRAMES PER TYP, DETAIL UNLESS NOTED OTHERWISE. MAXIMUM SPAN 2000 mm (6'-8"). FOR LARGER OPENING CONSULT STRUCTURAL ENGINEER. COORDINATE WITH MECHANICAL,
- ELECTRICVAL AND SUB-TRADES TO AVOID INTERFERENCE WITH STRUCTURAL MEMBERS. 20. PROVIDE TEMPORARY BRACING TO KEEP STRUCTURE SAFE AND PLUMB UNTIL PERMANENT BRACING SHOWN ON
- DRAWINGS INCLUDING FLOORS AND ROOFS IS CONSTRUCTED.

METAL DECK

- 1. DESIGN METAL DECK IN CONFORMANCE WITH THE REQUIREMENTS OF LATEST CSA S136 FOR THE LOADS INDICATED ON THE DRAWINGS
- 2. UNLESS NOTED OTHERWISE, ROOF DECK SHALL BE 38 mm x 0.91 mm (1.5" x .036") VIC WEST STEEL INC. RD 938 (OR APPROVED EQUAL), MINIMUM 3 SPANS CONTINUOUS. 3. UNLESS NOTED OTHERWISE, FLOOR DECK SHALL BE 38 mm x 0.76 mm (1.5"x .030") VIC WEST STEEL INC. HB938
- (OR APPROVED EQUAL), MINIMUM 3 SPANS CONTINUOUS. 4. METAL DECK SHALL BE LIGHT ZINC COATED STRUCTURAL STEEL SHEET FABRICATED AND ERECTED IN ACCORDANCE WITH LATEST CSSBI 10M, CAN/CSA-S136. THE MINIMUM ZINC COATING DESIGNATION SHALL BE
- 5. DECK SHALL OVERLAP A MINIMUM OF 50 mm (2") AT ALL END JOINTS AND HAVE A MINIMUM BEARING LENGTH OF
- 50 mm (2") ON ALL STRUCTURAL STEEL. 6. DECK HAS BEEN DESIGNED FOR DIAPHRAGM ACTION AND SHALL BE FASTENED AS FOLLOWS U.N.O.: WELD DECK TO SUPPORTING STEEL WITH 20 mm (3/4") DIAMETER PLUG WELD AT
- PERIMETER WELD SPACING =300 mm (12") Ó.C SIDE LAP BUTTON PUNCHING =300 mm (12") O. LONGITUDINAL WELD SPACING =300 mm (12") O.C
- 7. DECK WELDS SHALL BE TOUCHED UP WITH APPROVED PAINT BY THE DECK ERECTOR.
- 8. STEEL DECK WORK SHALL INCLUDE THE SUPPLY AND INSTALLATION OF ALL SHEET STEEL ANGLES, COVER PLATES CLOSURES STIFFENERS AND ANY OTHER ACCESSORIES REQUIRED
- CUT OPENINGS AND REINFORCE EDGES AS REQUIRED FOR PIPES, DUCTS, ETC.
- THE MAXIMUM SIZE OF AN UNREINFORCED OPENING IS 150 mm (6"). REINFORCE ALL OPENINGS LARGER THAN 150mm (6"), BUT NOT EXCEEDING 450 mm (18"), AS INDICATED BY THE METAL DECK SUPPLIER C. FOR OPENINGS GREATER THAN 450mm (18") NOT SHOWN ON THE DRAWINGS, CONTACT ENGINEER FOR

ALL STRUCTURAL STEEL MEMBERS TO BE HOT DIPPED GALVANIZED.

SEE ARCHITECTURAL DRAWINGS FOR SPANS

10. HANGER WIRE FOR SUSPENDED CEILINGS SHOULD PIERCE BOTH SIDES OF THE FLUTE AND BE LOOPED

4" BRICK VENEER LOOSE LINTEL SCHED.					
MAX. CLEAR SPAN	IZE	REMARKS			
UP TO 1200 (4'-0)	L89x89x7.9	(L3 1/2" x 3 1/2" x 5/16")			
1201 TO 1800 (4'-0 TO 6'-0)	L127x89x8 (LLV)	(L5" x 3 1/2" x 5/16" (LLV))			
1801 TO 2400 (6'-0 TO 8'-0)	L152x89x8 (LLV)	(L6" x 3 1/2" x 5/16" (LLV))			
24001 TO 3000 (8'-0 TO 10'-0)	L152x89x9.5 (LLV)	(L6" x 3 1/2" x 3/8" (LLV))			
NOTES:					

8.NAILING REQUIREMENTS

1.ALL WOOD SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH CSA STANDARD CAN/CSA 086-09 ENGINEERING DESIGN IN WOOD.

2.ALL PRE-ENGINEERED TRUSSES TO BE IN ACCORDANCE WITH CAN/CSA 086-09 ENGINEERING DESIGN IN WOOD, DESIGN SHALL CONSIDER DEAD LOADS AND LIVE LOADS INCLUDING WIND-UP LIFT, SNOW PILE-UP AND EQUIPMENT LOADS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL SUBMIT FOR REVIEW FABRICATION DRAWINGS AND CALCULATIONS SHOWING DESIGN LOADS. MEMBER SIZES AND CONNECTION DETAILS STAMPED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF ONTARIO.

3.PREFABRICATED WOOD I-JOISTS SHALL BE TRUSS JOISTS - TJI SERIES AS MANUFACTURED BY WEYERHAEUSER, OR APPROVE EQUVALENT. 3.1.ALL CUTTING OF FLANGES OR HOLES IN WEBS ARE TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMENDATIONS U.N.O.

4.JOISTS HANGERS SHALL BE MINIMUM 20 GAUGE GALVANIZED STEEL AND SHALL CONFORM TO THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS "ACCEPTANCE CRITERIA FOR JOIST HANGERS AND SIMILAR DEVICES".

5.SAWN LUMBER PRODUCTS SHALL CONFORM TO THE REQUIREMENTS OF CSA 0141. ALL SAWN LUMBER IS TO BE SPF GRADE No.1/No.2 OR BETTER, UNLESS NOTED OTHERWISE.

6.STRUCTURAL COMPOSITE LUMBER SHALL BE THE FOLLOWING (OR APPROVED EQUIVALENT) UNLESS NOTED OTHERWISE. 6.1.PARALLEĹ STRAND LUMBER (PSL): PARALAM GRADE 2.0E AS MANUFACTURED BY 6.2.LAMINATED VENEER LUMBER (LVL): SHALL BE 2900Fb - 2.0E

7.NAILS AND SPIKES SHALL CONFORM TO THE CSA STANDARD B111 "WIRE NAILS, SPIKES AND STAPLES".

BUILT-UP HEADERS - MIN. LENGTH OF NAILS - 76MM, AT 300MM, SPACING OF ROWS - 64MM FLOOR/ CEILING JOIST TO PLATE - MIN. LENGTH OF NAILS - 82MM, MIN. 2 NAILS. FOLLOW NAILING REQUREMENTS TABLE.

9.ALL BOLTS AND THREADED RODS CONNECTING WOOD MEMBERS SHALL CONFORM TO 10. FOR ALL WOOD CONSTRUCTION NOT DETAILED, FOLLOW SECTION 9.23 "WOOD - FRAME

CONSTRUCTION" OF THE 2012 OBC. 11. ROWS OF BRIDGING OR BLOCKING MUST NOT BE MORE THAN 6'-10" FROM EACH SUPPORT AND INTERMEDIATE LOCATIONS SO THAT THE DISTANCE BETWEEN ROWS DOES NOT EXCEED

12. PROVIDE DOUBLE FLOOR JOIST UNDER PARALLEL PARTITION WALLS.

13. ALL STUD WALLS SHALL BE ANCHORED TO THE FOUNDATION OR FLOOR SLAB WITH 16 mm (5/8") DIAMETER ANCHOR BOLTS AT 1200 mm (4 FT.) O.C. MAXIMUM U.N.O. 14. DESIGN OF WOOD TRUSS SYSTEM: A. PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE

DETAILS AND DESIGN LOADS SHOWN ON THE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS, AND SHALL CONFORM TO THE REQUIREMENTS OF CSA 086.1 AND THE WOOD DESIGN MANUAL PUBLISHED BY THE CANADIAN WOOD COUNCIL. B. TRUSS PLATES SHALL CONFORM TO THE CSA STANDARD S347 "METHOD OF TEST FOR EVALUATION OF TRUSS PLATES USED IN LUMBER JOINTS". C. DETAIL TRUSSES TO BEAR FLAT ON THE BOTTOM CHORD AT ALL BEARING WALLS. . DEFLECTION CRITERIA: VARIABLE LOADS = L/360, TOTAL LOAD = L/180 . DESIGN OF PERMANENT LATERAL BRACING OF WEB MEMBERS

F.TRUSSES SHALL BE DESIGNED TO SUPPORT THEIR SELF WEIGHT PLUS THE SUPERIMPOSED TOP AND BOTTOM CHORD LOADS AS SHOWN ON THE DRAWINGS OR AS REQUIRED BY TPIC (WHICHEVER IS GREATER) G. TRUSS CONNECTIONS TO SUPPORTING STRUCTURE SHALL BE DESIGNED BY THE RUSS DESIGN ENGINEER.

14.1. SHOP DRAWINGS OF THE ROOF TRUSSES INCLUDING LAYOUT OF THE TRUSSES, BRIDGING, BRACING, AND BEARING DETAILS (INCLUDING HOLD-DOWN CLIPS) SHALL BEAR THE STAMP OF A LICENSED PROFESSIONAL ENGINEER OF THE PROVINCE OF ONTARIO AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE FABRICATION. TRUSS SHOP DRAWINGS ARE TO INDICATE THE LOCATION OF ALL GIRDER TRUSSES AND GIRDER TRUSS SUPPORT LOCATIONS AND REACTIONS. ADDITIONAL COLUMNS TO SUPPORT GIRDER TRUSSES MAY BE REQUIRED.

14.2. WOOD TRUSSES SHALL BE TEMPORARILY BRACED DURING ERECTION TO KEEP THEM

PLUMB, IN ALIGNMENT AND SECURE UNTIL PERMANENT BRACING, DECKING AND/OR SHEATHING CAN BE INSTALLED. TEMPORARY BRACING SHALL BE MINIMUM 38X89 mm (2"x4") 14.3. PERMANENT DIAGONAL BRACING SHALL BE PROVIDED ON ALL WEB MEMBERS THAT

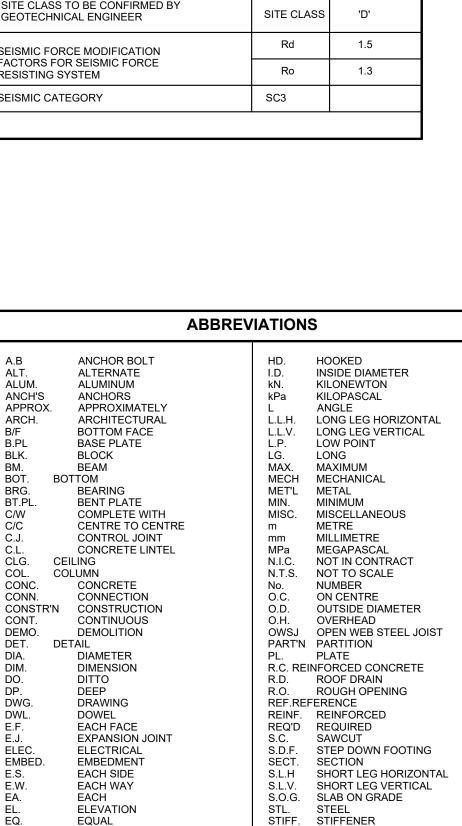
DIAGONAL BRACING TO BE SPECIFIED BY THE BUILDING ENGINEER, AND INSTALLED AS PER THE STRUCTURAL DRAWINGS. SPACING OF DIAGONAL BRACING SHALL NOT EXCEED 6 M (20') AS RECOMMENDED BY TPIC. 14.4. SITE REVIEW OF ROOF TRUSS SYSTEM: THE TRUSS SYSTEM SHALL BE INSPECTED BY THE TRUSS DESIGN ENGINEER RETAINED BY THE TRUSS SUPPLIER. SUBMIT INSPECTION

REPORTS TO THE ARCHITECT AND THE ENGINEER AS REQUIRED FOR RECORD PURPOSES.

REQUIRE LATERAL BRACING AS INDICATED ON THE TRUSS SHOP DRAWINGS. PERMANENT

CONSTRUCTION DETAIL	MIN. LENGTH OF NAILS mm (")	MIN. NUMBER OR SPACING OF NAILS
FLOOR / CEILING JOIST TO PLATE	82 (3 1/4)	2
BUILT-UP HEADERS / LINTELS - ALONG LENGTH - SPACING OF ROWS	76 (3)	300mm (12") O.C. 64mm (2 1/2") O.C.
STUD TO WALL PLATE - END NAIL - TOE NAIL	82 (3 1/4") 64 (2 1/2")	2 4
DOUBLE STUDS AT OPENINGS, OR STUD WALLS	76 (3)	750mm (30" O.C.)
BOTTOM WALL PLATE TO JOISTS OR BLOCKING	82 (3 1/4)	400mm (16") O.C.
LINTELS TO STUDS - EA. END	82 (3 1/4)	50mm (2") O.C. VERT. EACH PLY
ROOF RAFTER / TRUSS TO PLATE	82 (3 1/4)	3
ROOF RAFTER TO RIDGE BOARD - TOE OR END NAIL	82 (3 1/4)	3
COLLAR TIE TO RAFTER (U.N.O.)	76 (3)	3
WALL SHEATHING TO STUDS - ALONG EDGES - INTERMEDIATE SUPPORTS	51 (2) 51 (2)	150mm (6") O.C. 300mm (12") O.C.

BUILDING IMPORTANCE	NC	DRMAL
-		
SPECIFIED SNOW LOA	ADS	
RAIN LOADING DESIGN DATA (1/50)	24h RAIN	97mm
SNOW LOADING DESIGN DATA (1/50)	Ss	1.1 kPa
(1.2)	Sr	0.4 kPa
BASIC ROOF SNOW LOAD	S	1.28 kP
ADDITIONAL SNOW ACCUMULATION IS SHOWN ON	THE DRAWING	S.
SPECIFIED WIND LOA	ADS	
HOURLY WIND PRESSURE DESIGN DATA (1/50)	().47 kPa
WIND DESIGN CATEGORY	CA	TEGORY 2
TERRAIN TYPE	'(OPEN'
SPECIFIED EARTHQUAK	E LOADS	
	Sa (0.2, X _D)	0.385
SEISMIC LOADING DESIGN DATA	Sa (0.5, X _D)	0.319
CEIGINIO EGADINO DEGIGNI DATA	Sa (1.0, X _D)	0.18
	Sa (2.0, X _D)	0.0833
	Sa (5.0, X _D)	0.0215
	Sa (10.0, X _D)	0.00664
	PGV (X _D)	0.207
	PGA (X _D)	0.242
SITE CLASS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER	SITE CLASS	'D'
SEISMIC FORCE MODIFICATION	Rd	1.5
FACTORS FOR SEISMIC FORCE RESISTING SYSTEM	Ro	1.3
SEISMIC CATEGORY	SC3	



STRUCT. STRUCTURAL

TOP OF T.L.LTOP LOWER LAYER

T.U.L. TOP UPPER LAYER

UNDERSIDE

U.N.O. UNLESS NOTED OTHERWISE

VERTICAL EACH FACE

VERTICAL INSIDE FACE

VERTICAL OUTSIDE FACE

TYPICAL

VERTICAL

W.P. WORKING POINT

@ SPACED AT

W.W.M. WELEDED WIRE MESH

V.O.F.

EQUAL

EXISTING FACE TO FACE

FINISHED

FOUNDATION

GALVANIZED

HORIZONTAL

HIGH POINT

HEAVY DUTY

HOT DIPPED GALVANIZED

HORIZONTAL EACH FACE

HORIZONTAL OUTSIDE FACE

HOLLOW STRUCTURAL STEEL

FOOTING

FLOOR

FNDN.

H.O.F.

HORIZ.

DO NOT SCALE DRAWINGS. CONTRACTORS MUST CHECK AND

NOTE TO CONTRACTOR:

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

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



GENERAL NOTES

AND SCHEDULES

PARISH HALL RENOVATION

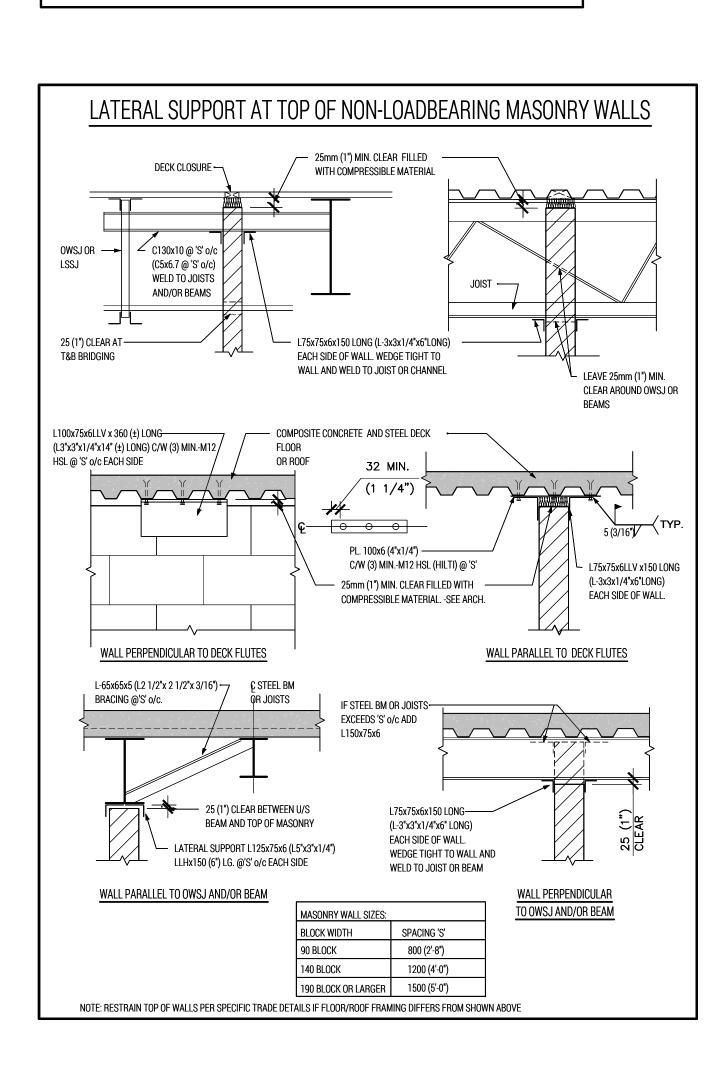
2110 TRAFALGAR RD., OAKVILLE, ON, L6H 7H2

DRAWING

2025-05-13 TD/AF Project No 25042501 Drawn By:

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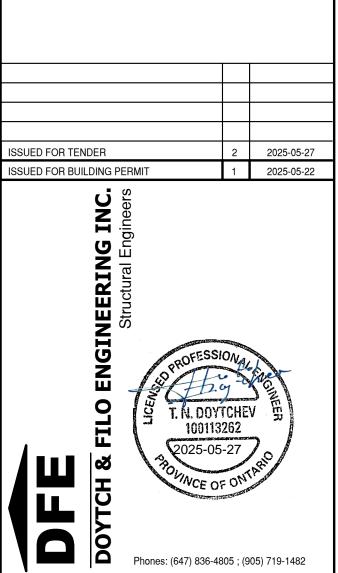
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	(<4'-(VER 1	VER 2	(<6'-0 VER 1	VER 2	(<8	3'-0")	(<10	1-0)	(<12	-0)	\ \
100 (4")	(1) L89x89x6 (1) L3 1/2x3 1/2x1/4	(2) Ls 45x45x5 (2) Ls 1 3/4x1 3/4x3/16	(1) L 125x89x8 (L.L.V.) (1) L 5x3 1/2x5/16 (L.L.V.)	(2) Ls 55x35x6 (2) Ls 2 1/2x1 1/2x1/4	(1) L 125x89x8 (L.L.V.)	(1) L 5x3 1/2x5/16 (L.L.V.)					
	VER 1	VER 2	VER 1	VER 2	VER 1	VER 2	.V.)	(.)			
150 (6")	(1) L 125x89x8 (L.L.V.) (1) L 5x3 1/2x5/16 (L.L.V.)	(2) Ls 65x65x6 (2) Ls 2 1/2x2 1/2x1/4	(1) L 125x125x8 (L.L.V.) (1) L 5x5x5/16 (L.L.V.)	(2) Ls 89x65x6 (2) Ls 3 1/2x2 1/2x1/4	(1) L 125x125x8 (L.L.V.) (1) L 5x5x5/16 (L.L.V.)	(2) Ls 89x65x6 (2) Ls 3 1/2x2 1/2x1/4	(1) L 125x125x8 (L.L.V.)	(1) L 5x5x5/16 (L.L.V.)			
200 (8")	(2) Ls 89x89x6	(2) Ls 3 1/2x3 1/2x1/4	(2) Ls 125x89x8 (L.L.V.)	(2) Ls 5x3 1/2x5/16 (L.L.V.)	(2) Ls 125x89x8 (L.L.V.)	(2) Ls 5x3 1/2x5/16 (L.L.V.)	W200x21 + PL 175x6 BOT.	W8x14 + PL 7x1/4 BOT.	W200x21 + PL 175x6 BOT.	W8x14 + PL 7x1/4 BOT.	
250 (10")	(2) Ls 102x89x6 (L. L.H.)	(2) Ls 4x3 1/2x1/4 (L.L.H.)	(2) Ls 102×102×8	(2) Ls 4x4x5/16	(2) Ls 152x102x8 (L.L.V.)	(2) Ls 6x4x5/16 (L.L.V.)	W200x21 + PL 225x6 BOT.	W8x14 + PL 9x1/4 B0T.	W200x21 + PL 225x6 BOT.	W8x14 + PL 9x1/4 B0T.	
300 (12")	(3) Ls 89/89x6	(3) Ls 3 1/2x3 1/2x1/4	(3) Ls 125/89x8 (L.L.V.)	(3) Ls 5x3 1/2x5/16 (1 L V)							



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



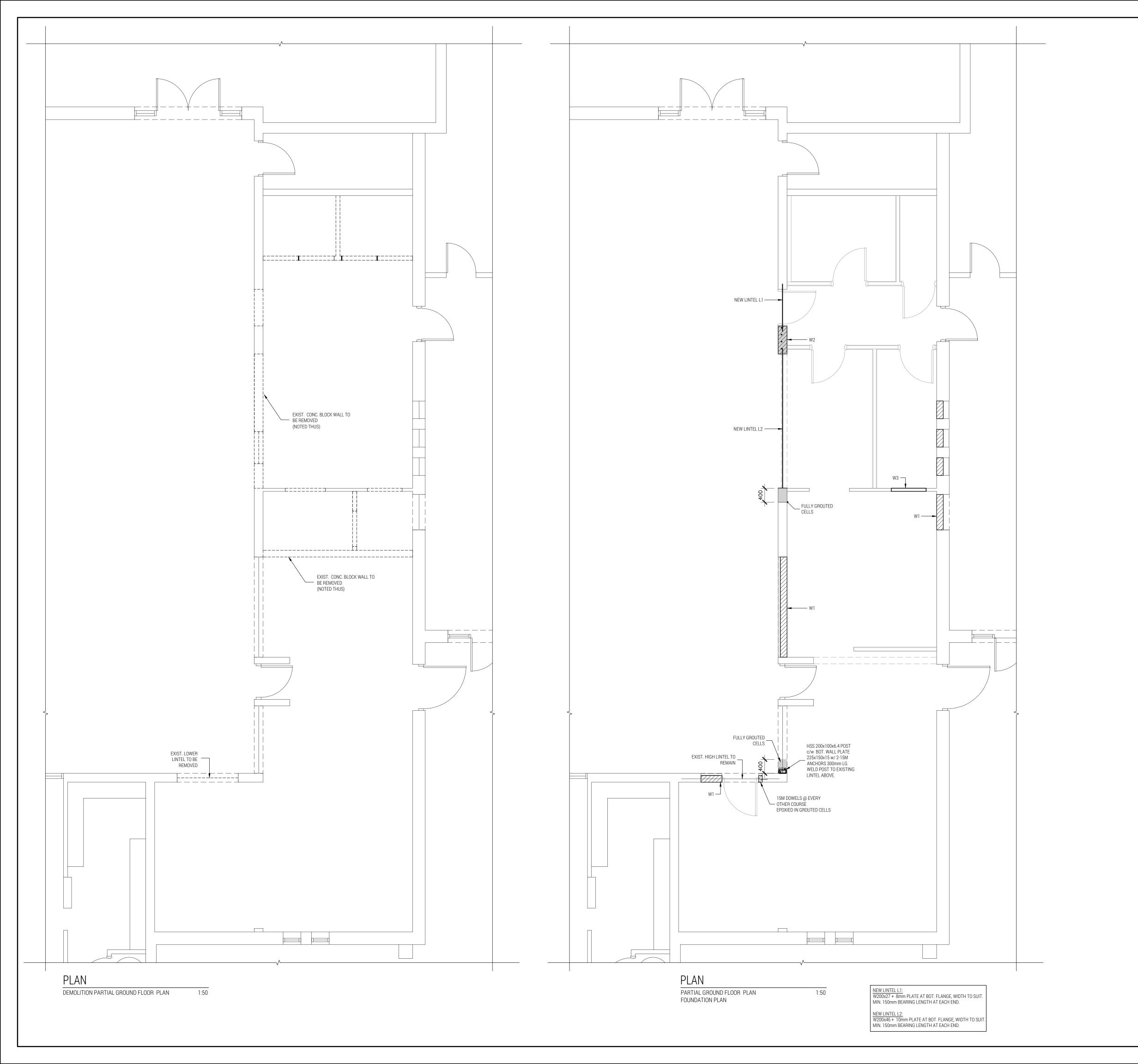
GENERAL NOTES AND SCHEDULES

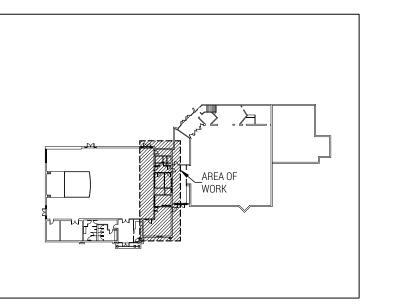
2110 TRAFALGAR RD., OAKVILLE, ON, L6H 7H2

HOLY TRINITY CROATIAN
PARISH HALL
RENOVATION

Design By: TD/AF Date: 2025-05-13
Project No.: 25042501

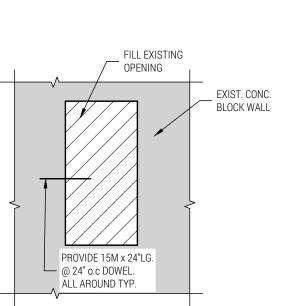
Drawn By: AF Drawing No.:





GROUND FLOOR KEY PLAN

CONCRETE BLOCK WALL SCHEDULE MARK DESCRIPTION - 190 CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa 15M @ 400 VERT. - HEAVY DUTY BLOCK-LOK TRUSS / LADDER AT EVERY SECOND COURSE - 240 CONC. BLOCK FULLY GROUTED - BLOCK COMP. STRENGTH = 15 MPa - 15M @ 200 VERT. - HEAVY DUTY BLOCK-LOK TRUSS / LADDER AT EVERY SECOND COURSE - 190 AND 90 CONC. BLOCK - BLOCK COMP. STRENGTH = 15 MPa (NON-LOAD - 10M @ 1000 VERT. BEARING) - HEAVY DUTY BLOCK-LOK TRUSS / LADDER AT EVERY SECOND COURSE NOTES: 1. FULLY GROUT ALL REINFORCED CORES. 2. ALL WALLS NOTED FULLY GROUTED ARE TO BE 100% FILLED WITH GROUT. 3. CO-ORDINATE ALL WALL OPENINGS WITH ARCH. DWGS. AND MECHANICAL CONTRACTOR. PROVIDE ADDITIONAL BAR/ MATCHING WALL REINF. SIZE. FULL HEIGHT @ ALL WALL ENDS. INTERSECTIONS AND OPENINGS UNLESS OTHERWISE NOTED ON DRAWINGS. PROVIDE STANDARD TENSION SPLICES FOR ALL HORIZONTAL AND VERTICAL WALL REINFORCEMENT. ALL BARS CONNECTING BETWEEN FLOORS TO BE TIED TOGETHER (REFER TO SECTION DETAILS). SOLID FILLED VOIDS TO BE MADE WITH 20MPa FLOWABLE GROUT (MORTAR FILL NOT PERMITTED). PROVIDE DOWELS FROM THE FOOTING TO WALLS ABOVE TO MATCH VERTICAL WALL THE INTERSECTION (CORNER JOINTS) OF ALL MASONRY WALLS SHALL BE TOOTHED. THE INTERSECTION ("T" JOINTS) OF ALL MASONRY WALLS SHALL BE TOOTHED OR CONTINUOUSLY REINFORCED WITH JOINT REINFORCEMENT. METAL OR PLASTIC LATH UNDER COURSES TO BE FILLED WITH GROUT OR MORTAR @ EMBEDMENT ENDS OF ANCHOR STRAP GALVANIZED ANCHOR STRAP @ 600 (24") C.C. OR 4t MIN.



TYPICAL DETAIL

ELEVATION VIEW

INFILL CONCRETE BLOCK

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2 2025-05-27

1 2025-05-22

HOLY TRINITY CROATIAN
PARISH HALL
RENOVATION

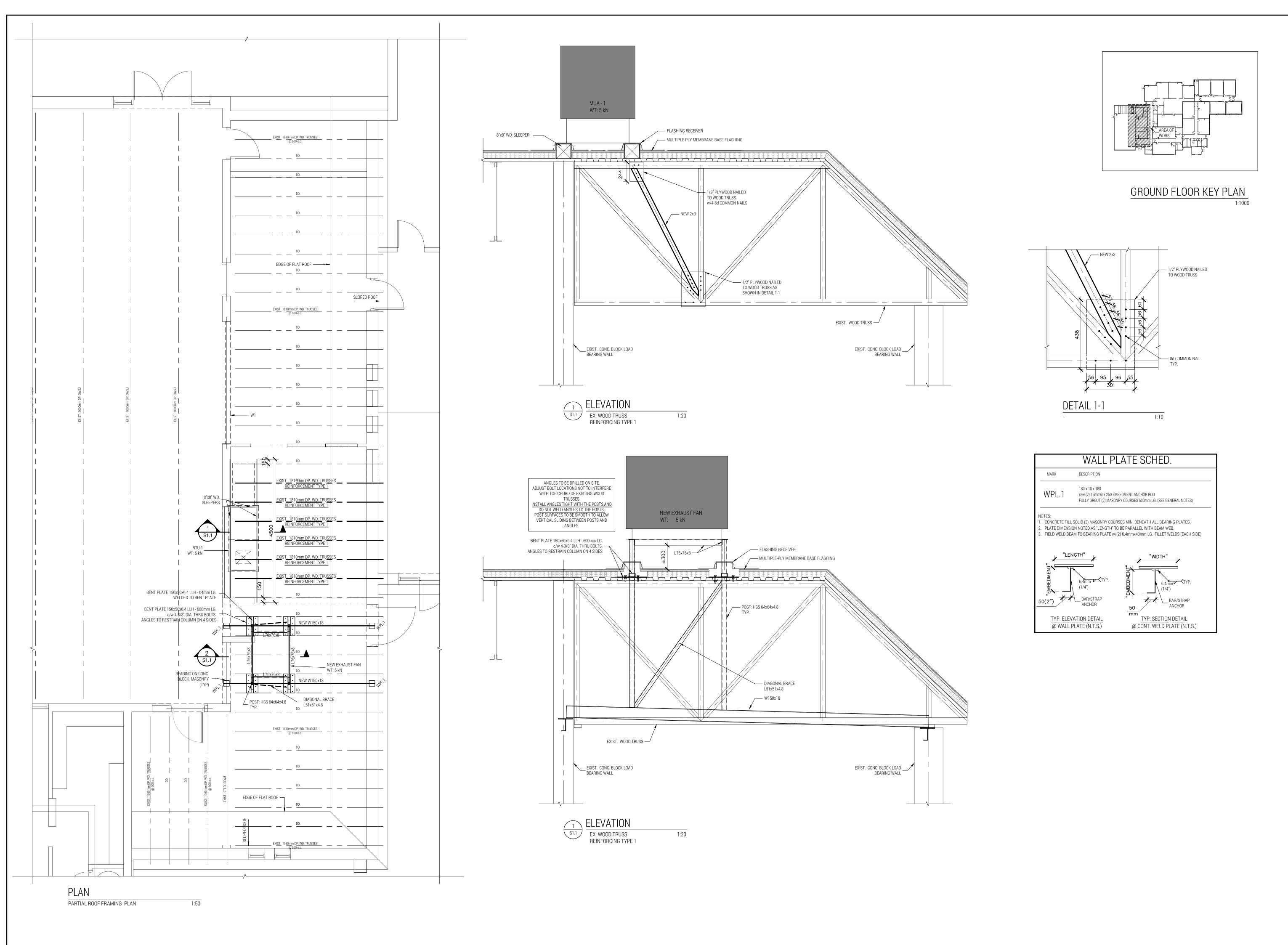
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ISSUED FOR TENDER

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GROUND FLOOR
PLANS, SECTION AND
DETAILS

Design By:	TD/AF	Date:	2025-05-1
		Project No.:	2504250
Drawn By:	AF	Drawing No.:	01.
Scale:	AS NOTED		S1.0



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ISSUED FOR TENDER

2 2025-05-27
ISSUED FOR BUILDING PERMIT

1 2025-05-22

Phones: (647) 836-4805; (905) 719-1482

DJECT HOLY TRINITY CROATIAN

PARISH HALL RENOVATION

2110 TRAFALGAR RD., OAKVILLE, ON, L6H 7H2
DRAWING

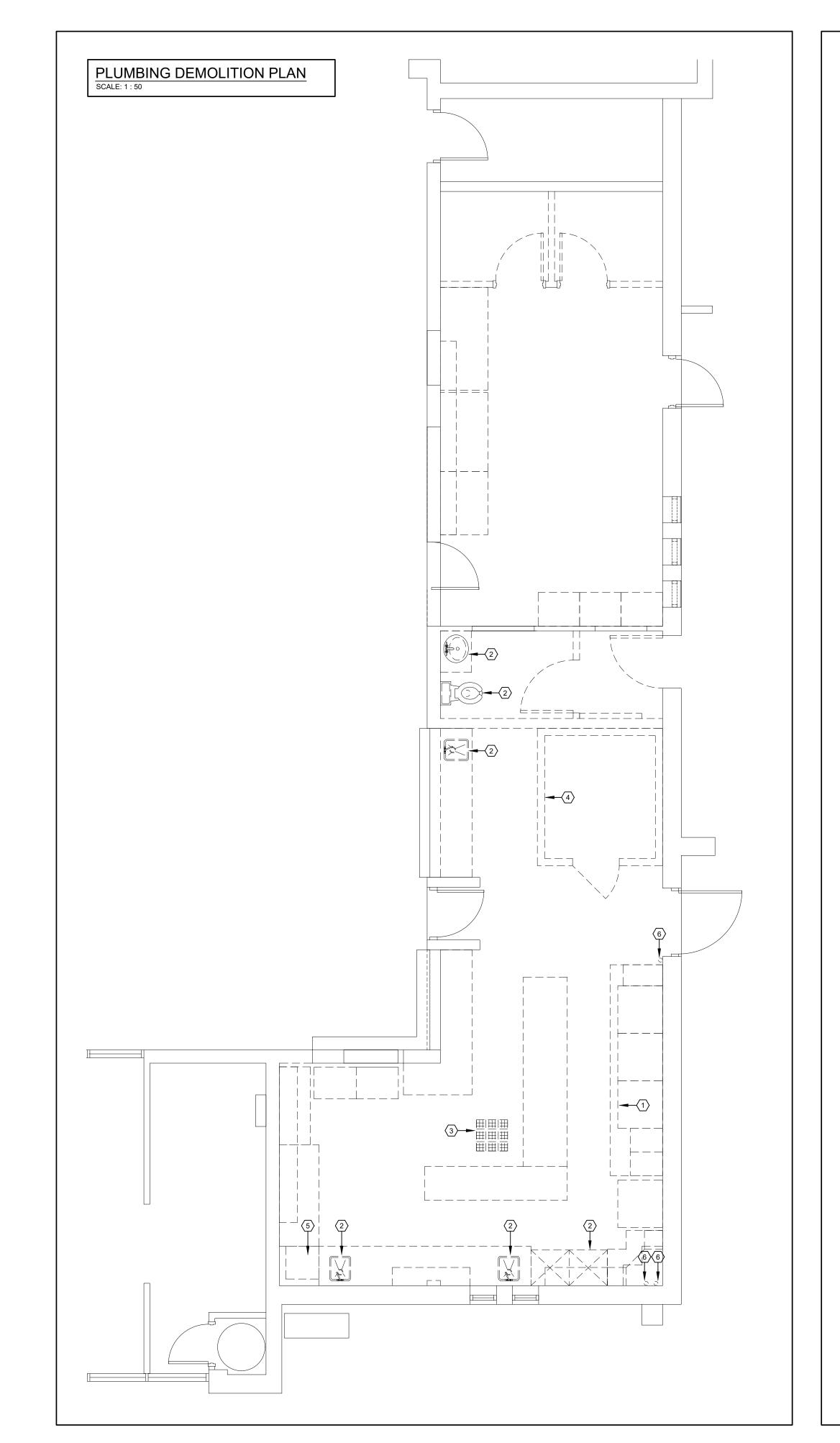
ROOF FRAMING
PLAN, SECTION AND
DETAILS

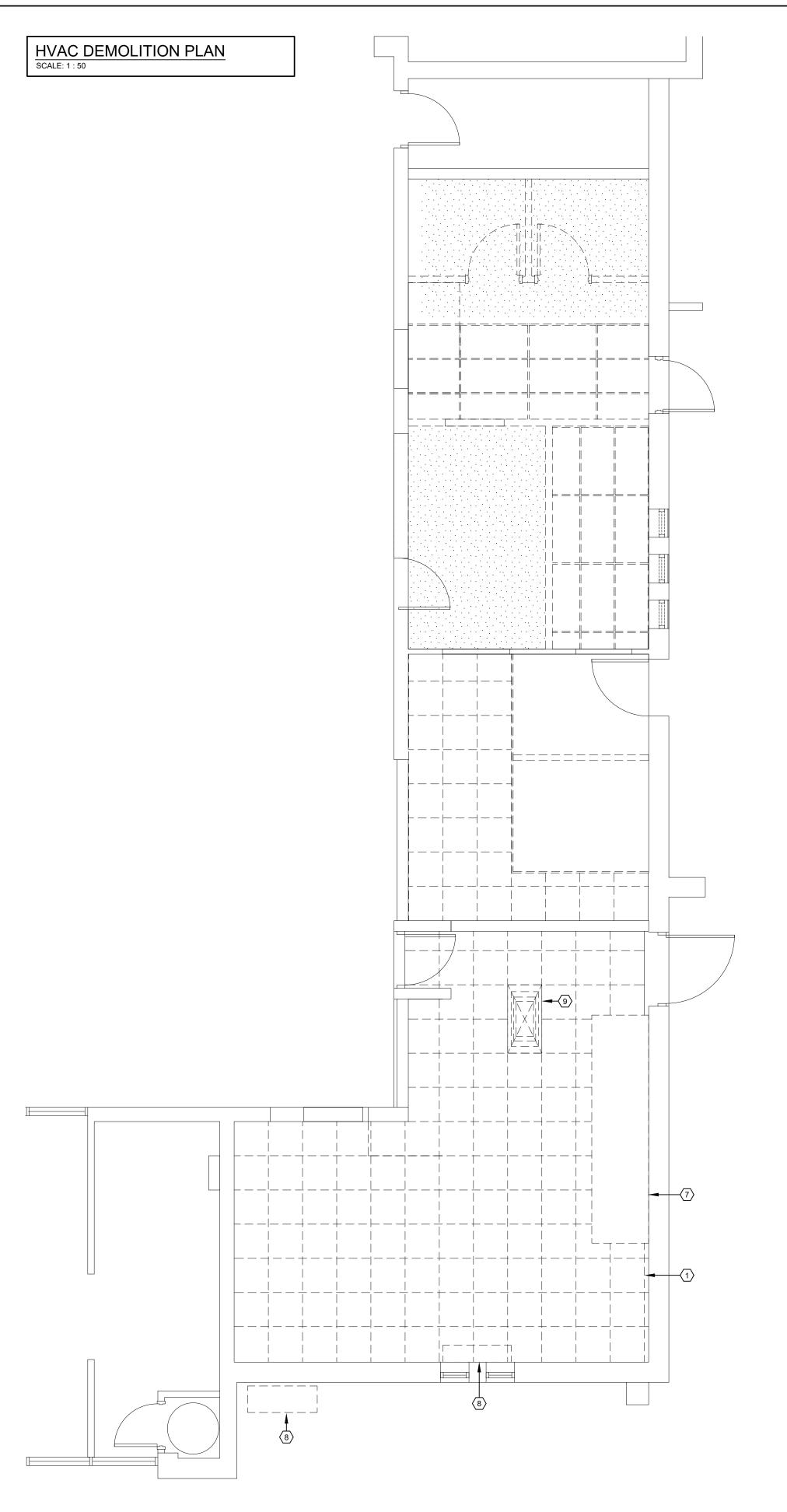
 Design By:
 Date:
 2025-05-13

 Project No.:
 25042501

 Drawn By:
 AF
 Drawing No.:

 Scale:
 AS NOTED
 S1.1





KEY NOTES:

- 1 LINE TYPE NOTES EXISTING TO BE DEMOLISHED, TYPICAL.
- EXISTING PLUMBING FIXTURE IS TO BE DISCONNECTED, REMOVED AND DISPOSED OF. CUT BACK ALL EXISTING PLUMBING SERVICES FROM FIXTURE AND CAP OFF AT MAIN SOURCE. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION.
- EXISTING RECESSED IN FLOOR GREASE INTERCEPTOR IS TO BE DISCONNECTED,
 REMOVED AND DISPOSED OF. CUT BACK ALL EXISTING PLUMBING SERVICES FROM
 FIXTURE AND CAP OFF AT MAIN SOURCE. MAKE GOOD / SAFE ALL AREAS AFFECTED
 BY THIS CONSTRUCTION.
- EXISTING WALK IN COOLER C/W COMPRESSOR, REFRIGERANT PIPING, ETC. IS TO BE DISCONNECTED, REMOVED AND DISPOSED OF. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION.
- EXISTING COMMERCIAL CHEMICAL RINSE HIGH TEMP DISHWASHER C/W BOOSTER HEATER AND ALL ASSOCIATED COMPONENTS IS TO BE REUSED / REINSTALLED INTO NEW KITCHEN LAYOUT. DISCONNECT AND REMOVE EXISTING PLUMBING SERVICES FROM FIXTURE AND CAP OFF AT MAIN SOURCE. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION. REFER TO NEW PLUMBING PLAN FOR MORE INFO.
- EXISTING GAS SERVICE LINES TO BE REMOVED AND REWORKED TO SUIT NEW KITCHEN LAYOUT. REFER TO NEW KITCHEN PLANS FOR MORE INFORMATION.
- EXISTING KITCHEN EXHAUST HOOD, C/W ALL ASSOCIATED DUCTWORK, CONTROLS, ROOF TOP MOUNTED EXHAUST FAN, MAKE UP AIR INTAKE AIR DUCT, FIRE SUPPRESSION SYSTEM, ETC. IS TO BE DISCONNECTED, REMOVED AND DISPOSED
- SUPPRESSION SYSTEM, ETC. IS TO BE DISCONNECTED, REMOVED AND DISPOSED OF. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION.
- EXISTING DUCTLESS AIR CONDITIONING UNIT / SYSTEM C/W ALL ASSOCIATED CONTROLS, REFRIGERANT PIPING, ETC. IS TO BE DISCONNECTED, REMOVED AND DISPOSED OF. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION.
- EXISTING DUCTLESS AIR CLEANING UNIT SYSTEM C/W ALL ASSOCIATED CONTROLS, ETC. IS TO BE DISCONNECTED, REMOVED AND DISPOSED OF. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION.

SEAL

1 ISSUED FOR TENDER 05.28.2025
0 ISSUED FOR PERMITS 05.21.2025
-- ISSUED FOR REVIEW 05.21.2025

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TEL: (416) 726-1648 | (905) 617-4804
E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca

PROJECT:

HOLY TRINITY CROATIAN
PARISH HALL
WASHROOM AND KITCHEN
RENOVATION
2110 TRAFALGAR RD, OAKVILLE

ON L6H 752

DRAWING TITLE:

MECHANICAL DEMOLITION PLANS

GRGURIC ARCHITECTS INCORPORATED



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

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DATE:	

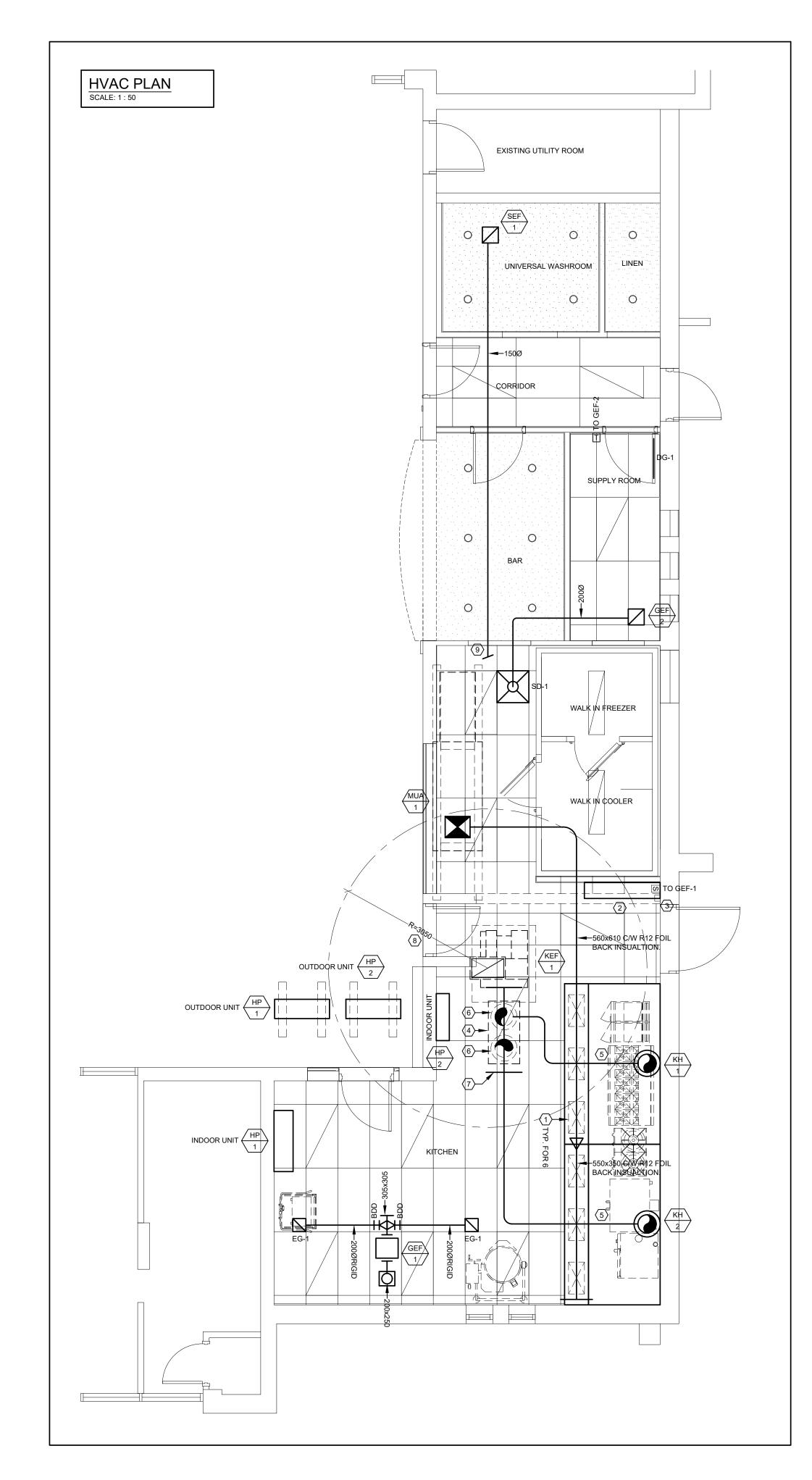
MAY.2025

CHECKED

25011

DRAWN DRAWING MR

M1/5



KEY NOTES:

- DUCT RISER FROM MAKE UP AIR SUPPLY COLLARS TO BE DUCTED TO MAIN MAKE UP AIR DUCTWORK, TYPICAL FOR 6.
- (2) HOOD UTILITY SYSTEM BOX C/W FIRE SUPPRESSION, CONTROLS

- 1950 CFM @ 1825 FPM.

- 3900 CFM @ 1788 FPM.

- PROPOSED LOCATION OF HOOD START / STOP CONTROL AND EMERGENCY FIRE SUPPRESSION SYSTEM PULL STATION.
- REUSE / REWORK EXISTING ROOF OPENING TO SUIT 2 NEW KITCHEN HOOD EXHAUST DUCTS RISERS FROM HOODS THROUGH THE ROOF. REFER TO ARCHITECTURAL DETAILS FOR NEW ROOF CURB DETAILS, FLASHING, ETC. BY THE ROOFING CONTRACTOR.
- CAPTIVE AIRE MODEL: DW-3Z RATED DOUBLE WALL GREASE EXHAUST DUCTWORK C/W ALL ELBOWS, TURNS, CLEAN OUTS, CONNECTORS, JOISTS, SEALANT, ETC. CONNECTED TO HOOD
- COLLAR. PERFORM ALL INSTALLATIONS IN ACCORDANCE WITH THE MANUFACTURES SHOP DRAWINGS. ONCE DEMOLITION HAS BEEN COMPLETED PERFORM SITE MEASURE TO DETERMINE EXACT DUCT LENGTHS, ELBOWS, ETC. REQUIRED. PROVIDE SHOP DRAWINGS FOR APPROVAL.

 355Ø INNER DUCT DIAMETER / 510Ø OUTER DUCT DIAMETER
- GREASE EXHAUST DUCT UP THOUGH ROOF / ROOF CURB CONNECTED TO MAIN HORIZONTAL DUCT ON ROOF, (SEE NOTE 7).
- CAPTIVE AIRE MODEL: DW-3Z RATED DOUBLE WALL GREASE EXHAUST DUCTWORK.
 HORIZONTAL MOUNTED ON ROOF C/W CLEAN OUT & CONNECTED TO SIDE INLET OF ROOF
- TOP MOUNTED GREASE EXHAUST FAN. PROVIDE PAVERS AND GALVANIZED STEEL SUPPORT STANDS TO SUPPORT DUCT. PERFORM ALL INSTALLATIONS IN ACCORDANCE WITH THE MANUFACTURES SHOP DRAWINGS.

 510Ø INNER DUCT DIAMETER / 660Ø OUTER DUCT DIAMETER
- MINIMUM 3050mm, (10'-0") CLEARANCE FROM EXHAUST FAN DISCHARGE TO MAKE UP AIR UNIT OUTSIDE AIR INTAKE HOOD.
- DISCHARGE NEW SANITARY EXHAUST FAN DUCT TO EXISTING EXTERIOR TERMINATION POINT SERVING PREVIOUS WASHROOM BEING DEMOLISHED. REFER TO DEMOLITION PLAN FOR MORE INFORMATION.

HVAC LEGE	END
DESCRIPTION	SYMBOL
RECT. / ROUND SUPPLY AIR DUCT UP / DOWN	
RECT. & ROUND RETURN OR EXHAUST AIR DUCT UP / DOWN	
THERMOSTAT C/W GUARD	Ξ _G
DUCT TRANSITION	Δ
FIRE DAMPER	FD
FLEXIBLE DUCT CONNECTION	FC
AIR BALANCING DAMPER	Ŋ
BACK DRAFT DAMPER	BDD
OPPOSED BLADE DAMPER	OPD
FIRE DAMPER	FD
DUCTED AIR TRASNFER	A/T
UNDER CUT	U/C
SPLITTER DAMPER	SD

NOTE:
A OWNER CERTIFIED & APPROVED ROOFING CONTRACTOR SHALL SUPPLY & INSTALL AC LINE SHACK SYSTEMS FOR ALL MECHANICAL EQUIPMENT REFRIGERANT TUBING, ELECTRICAL / CONNECTIONS, CONTROL WIRING SYSTEMS, ETC.
MECHANICAL CONTRACTOR IS TO COORDINATE ALL LOCATIONS ON SITE WITH THE ROOFING CONTRACTOR. REFER TO ARCHITECTURAL DETAILS & SPECIFICATIONS FOR MORE INFORMATION.

SEAL

1	ISSUED FOR TENDER	05.28.202
0	ISSUED FOR PERMITS	05.21.202
	ISSUED FOR REVIEW	05.21.202

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REVISIONS

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PROJECT:

HOLY TRINITY CROATIAN
PARISH HALL
WASHROOM AND KITCHEN
RENOVATION
2110 TRAFALGAR RD, OAKVILLE
ON L6H 752

DRAWING TITLE:

MECHANICAL HVAC PLAN

GRGURIC ARCHITECTS INCORPORATED



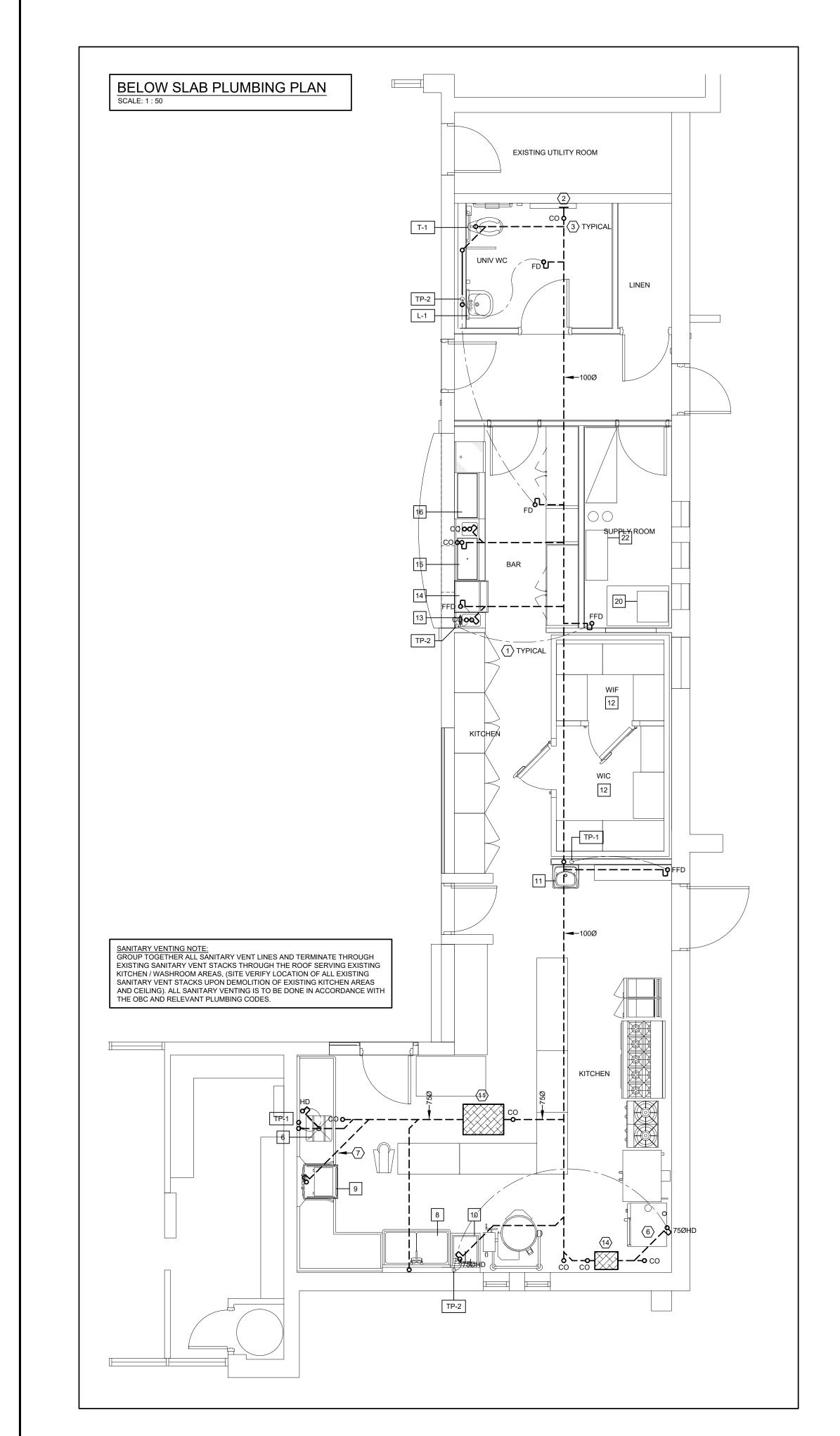
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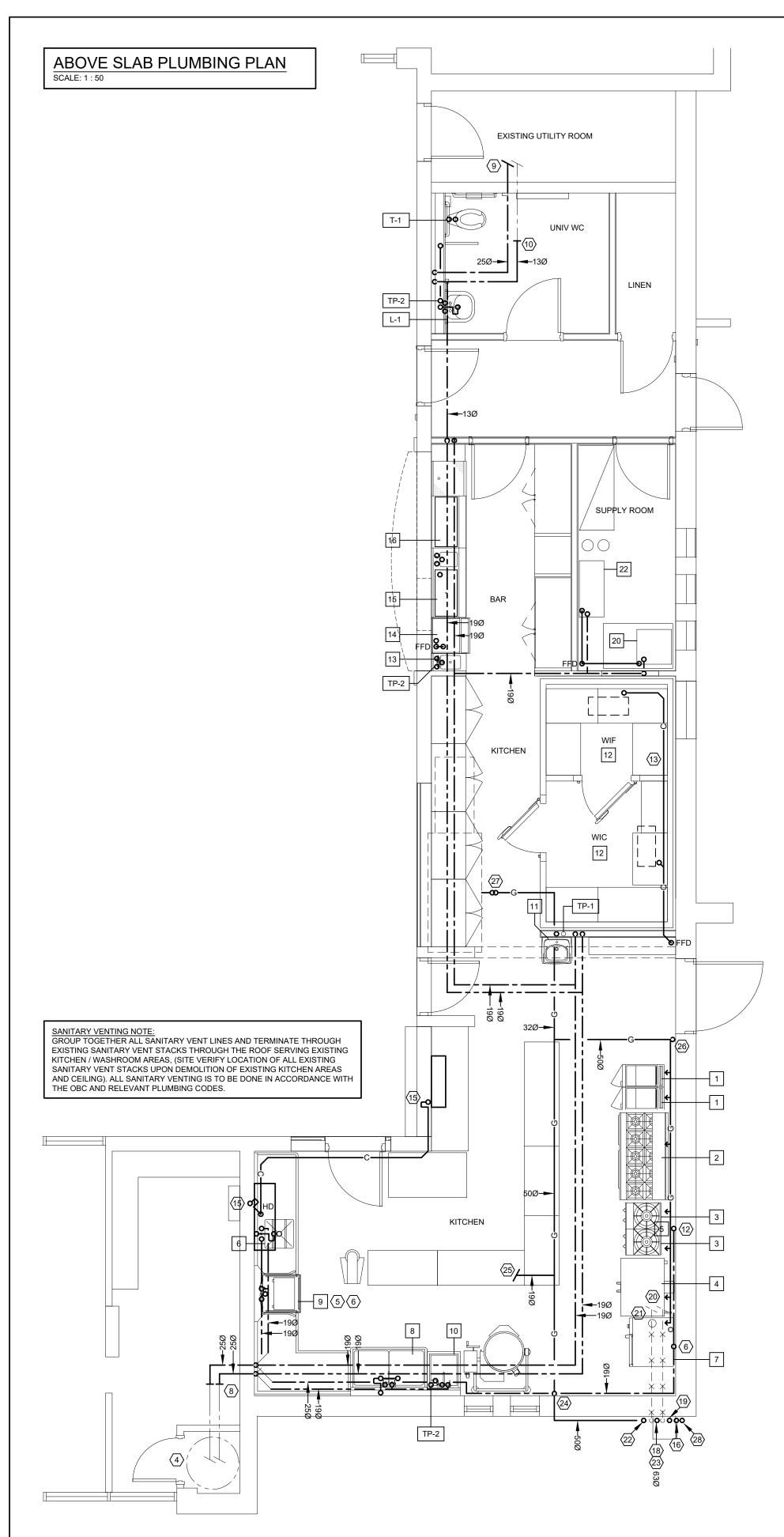
Web: www.2gai.com

SCALE: AS NOTED	PROJECT:
DATE: MAY.2025	2501

MR CHECKED

M2 / 5





KEY NOTES

- 1 TRAP SEAL PRIMER LINE BELOW SLAB, TYPICAL.
- X-RAY / SCAN FLOOR SLAB TO LOCATE EXISTING BASE BUILDING MAIN SANITARY
 SERVICE LINE LOCATION, SIZE, INVERT & FLOW DIRECTION. GROUP ALL NEW SANITARY
 LINES TOGETHER AND CONNECT TO EXISTING MAIN BASE BUILDING SANITARY LINE.
- ONCE LOCATION, INVERT, CONNECTION POINT AND FLOW DIRECTION OF EXISTING SANITARY LINE HAS BEEN DETERMINED ON SITE PROVIDE 45' TURNS ON ALL SANITARY SERVICE BRANCH LINES IN FLOW DIRECTION OF NEW MAIN LINE.
- EXISTING HOT WATER TANK IS TO REMAIN AS IS. INSPECT AND REPORT ANY DISCREPANCIES. RHEEM RUUD MODEL PV75CE-1.
- RELOCATED POSITION OF EXISTING DISHWASHER, DISHWASHER BOOSTER HEATER, SANITATION CONTROL, THERMAL EXPANSION TANK, DETERGENT LINES AND ALL OTHER ASSOCIATED COMPONENTS. REFER TO DEMOLITION PLAN FOR MORE INFO.
- SUPPLY AND INSTALL A COLD WATER DRAIN TEMPERING VALVE ON DRAIN LINE SERVING DISHWASHER. EQUAL TO THERMO OMEGA TECH.
 #9-DISHWASHER 3/4" DRAIN TEMPERING VALVE.
- #9-DISHWASHER & #7-COMBI OVEN DRAIN LINE PIPING TO BE CAST IRON OR COPPER DRAIN PIPE MATERIAL.
- CONNECT TO EXISTING HOT AND COLD WATER LINES IN CEILING SPACE AND DISTRIBUTE NEW PIPING AS SHOWN.
- CONNECT TO MAIN DOMESTIC WATER SERVICE PIPE IN EXISTING UTILITY ROOM AND DISTRIBUTE NEW LINE TO SERVE UNIVERSAL WASHROOM. SITE VERIFY BEST
- CONNECT NEW HOT WATER LINE TO EXISTING LINE SERVING MOP SINK IN EXISTING UTILITY ROOM. SITE VERIFY BEST CONNECTION POINT.
- UTILITY ROOM. SITE VERIFY BEST CONNECTION POINT.

 GREASE INTERCEPTOR CALCULATION:
- 2 COMPARTMENT SINK: (24" x 24" x 14") x (2) = 16128 cu" ((20928 / 231) x (0.75)) / 2 MIN DRAIN DOWNTIME = 33.97 GPM (11) DISHWASHER: 15 GPM PEAK RATE DRAIN FLOW

#7-COMBI OVEN 1/2" DRAIN TEMPERING VALVE.

- TOTAL = 48.97 GPM
 SUPPLY & INSTALL RECESSED FLUSH IN FLOOR GREASE INTERCEPTOR EQUAL TO.
 MIFAB MI-G-7. 50.0 GPM FLOW RATE UNIT. 100 LB GREASE CAPACITY.
- (12) COLD WATER LINE TO SERVE POT FILLER.
- COPPER CONDENSATE DRAIN LINES FROM WALK IN COOLER / FREEZER EVAPORATORS TO BE HEAT TRACED AND INSULATED. TERMINATE INDIRECT ABOVE FFD.
- COMBI OVEN DISCHARGE PEAK RATE DRAIN FLOW = 3.0 GPM

 SUPPLY & INSTALL RECESSED FLUSH IN FLOOR GREASE INTERCEPTOR EQUAL TO. MIFAB MI-G-1. 7.0 GPM FLOW RATE UNIT. 14 LB GREASE CAPACITY.
- CONDENSATE DRAIN LINE FROM DUCTLESS HEAT PUMP UNIT TERMINATED INDIRECT ABOVE DRAIN.
- $\langle 16 \rangle$ EXISTING RECTORY GAS METER # 2 IS TO REMAIN AS IS.
- EXISTING RECTORY GAS LINE DOWN & BURIED BELOW GRADE TO RECTORY IS TO REMAIN AS IS.
- EXISTING RECTORY GAS METER # 1 PRIOR TO ANY BID OR WORK GAS FITTER SHALL CONTACT THE LOCAL NATURAL GAS COMPANY / PROVIDER AND VERIFY EXISTING GAS
- SERVICE & METER SIZE / CAPACITY. IF REQUIRED UPGRADE GAS SERVICE & METER TO SUIT NEW GAS LOAD, (2570.1 MBH SEE CODED NOTES 19 28 FOR MORE INFO.).
- EXISTING GAS LINE FED FROM METER # 1 DOWN & BURIED BELOW GRADE TO CHURCH REMOTE MOUNTED HVAC UNIT IS TO REMAIN AS IS, (APPROX. 210.0 MBH GAS LOAD).
- EXISTING GAS LINE FED FORM METER # 1 THROUGH BLOCK WALL IS TO BE DISCONNECTED AND REMOVED DUE TO NEW HOOD INSTALLATION, (38Ø SERVING EXISTING KITCHEN APPLIANCES).
- EXISTING GAS LINE FED FORM METER # 1 THROUGH BLOCK WALL IS TO BE DISCONNECTED AND REMOVED DUE TO NEW HOOD INSTALLATION, (25Ø SERVING EXISTING HOT WATER TANK).
- EXISTING GAS LINE FED FROM METER # 1 UP INTO ATTIC SPACE IS TO REMAIN AS IS AND RE-CONNECTED TO NEW METER # 1 SERVICE LINE, (SERVING CHURCH REMOTE MOUNTED HVAC UNIT, APPROX. 400.0 MBH GAS LOAD).
- (23) NEW GAS LINE / HEADER FROM GAS METER # 1.
- NEW GAS LINE THROUGH WALL AND UP INTO INTO KITCHEN ATTIC SPACE. DISTRIBUTE NEW PIPING AS SHOWN.
- RECONNECT EXISTING GAS LINE SERVING HOT WATER TANK IN ATTIC SPACE TO NEW GAS SERVICE LINE, (SITE VERIFY EXACT LOCATION AFTER DEMOLITION).
- GAS LINE DOWN TO EMERGENCY GAS SHUT-OFF VALVE AND GAS SOLENOID VALVE CONNECTED TO CAPTIVE AIRE UTILITY CABINET TO SHUT DOWN VALVE UPON EMERGENCY ACTIVATION. CONTINUE PIPING / MANIFOLD TO SERVE COOKING EQUIPMENT.
- GAS LINE UP THROUGH ROOF TO SERVE NEW MAKE UP AIR UNIT.
- EXISTING GAS LINE FED FROM METER # 1 UP INTO ATTIC SPACE IS TO REMAIN AS IS AND RE-CONNECTED TO NEW METER # 1 SERVICE LINE, (SERVING CHURCH REMOTE MOUNTED HVAC UNITS, APPROX. 630.0 MBH GAS LOAD).

PLUMBING LEGEND					
SYMBOL	DESCRIPTION				
	SAN. LINE ABOVE SLAB/GRADE				
	SAN. LINE BELOW SLAB/GRADE				
= 0 co	CLEAN OUT				
c FD	FLOOR DRAIN				
C FFD	COMBINATION FLOOR FUNNEL DRAIN				
C HD	HUB DRAIN				
	COLD WATER LINE				
	HOT WATER LINE				
G	GAS LINE				
- HB	NON FREEZE HOSE BIBB C/W SHUT OFF VALVE & LOCK BOX				

NOTE:
A OWNER CERTIFIED & APPROVED ROOFING
CONTRACTOR SHALL SUPPLY & INSTALL ANY PITCH
POCKETS FOR MECHANICAL EQUIPMENT GAS PIPING,

| ISSUED FOR TENDER | 05.28.2025 | 1SSUED FOR PERMITS | 05.21.2025 | 1SSUED FOR REVIEW | 05.21.2025 | 0 REVISIONS | DATE

SEAL

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PROJECT:

DRAWING TITLE:

HOLY TRINITY CROATIAN
PARISH HALL
WASHROOM AND KITCHEN
RENOVATION
2110 TRAFALGAR RD, OAKVILLE

ON L6H 752

MECHANICAL PLUMBING PLAN

GRGURIC ARCHITECTS



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SCALE:
AS NOTED

DATE:
MAY.2025

DRAWN
MR

CHECKED

PROJECT:
25011

DRAWING

MR

MR

MAY MR



1. PERFORM ALL INSTALLATIONS IN ACCORDANCE WITH ALL RELEVANT CODES AND STANDARDS.

2. ALL PENETRATIONS TO BASE BUILDING STRUCTURE INCLUDING FLOOR WORK, EXTERIOR WALL WORK, ROOF WORK, FLASHING, ETC. IS TO BE PERFORMED BY A CERTIFIED, INSURED OWNER APPROVED CONTRACTOR.

3. PROVIDE SUPPORT FOR ALL NEW EQUIPMENT IN ACCORDANCE WITH STRUCTURAL ENGINEER / ENGINEERING DETAILS.

4. UPON ACTIVATION OF FIRE SUPPRESSION SYSTEM ALL COOKING EQUIPMENT UNDER EXHAUST HOOD IS TO SHUT DOWN. PROVIDE AUTOMATIC SHUT OF SOLENOID VALVE FOR GAS EQUIPMENT. REFER TO AND COORDINATE ALL THESE ITEMS WITH THE ELECTRICAL CONTRACTOR AND CAPTIVE AIRE SHOP DRAWINGS.

5. FIRE ALARM CONTRACTOR TO CONNECT THE TENANTS MAIN KITCHEN HOOD CONTROL PANEL TO MAIN BUILDING FIRE ALARM PANEL.

6. SITE VERIFY BEST INSTALLATION, ELEVATION / ARRANGEMENT OF ALL DUCTWORK

TO BEST SUIT SITE CONDITIONS. PROVIDE AS-BUILT MARK UP.

7. WHERE CLEARANCES TO ANY COMBUSTIBLES CANNOT BE MAINTAINED, ALL WELDED DUCT IS TO BE WRAPPED IN 2 LAYERS OF EQUAL TO 3M TYPE FIRE BLANKET FOR GREASE EXHAUST DUCT FIRE PROTECTION SYSTEM. PERFORM ALL INSTALLATIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

8. PROVIDE ACCESSIBLE GREASE CLEAN OUTS ON ALL WELDED DUCTWORK AT ALL ELBOWS AND RISERS IN ACCORDANCE WITH NFPA REQUIREMENTS.

9. ADDITIONAL DUCT TRANSITIONS, ELBOWS, ETC. MAY BE REQUIRED ONCE A SITE MEASURE HAS BEEN PERFORMED AND A B.O.M. HAS BEEN OBTAINED.

10. CARRY COST IN BID TO HIRE A FIRE SUPPRESSION SYSTEM INSTALLER TO ARRANGE FOR ENGINEERED FIRE SUPPRESSION SYSTEM SHOP DRAWINGS, (SEALED BY AN ENGINEER QUALIFIED TO PRACTICE IN THE PROVINCE OF ONTARIO). APPLY FOR AND PAY FEES FOR THE SUPPRESSION SYSTEM PERMIT APPLICATIONS &

11. PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO ORDERING OR INSTALLING ANY NEW EQUIPMENT.

12. ALL EQUIPMENT MUST BE LISTED AND APPROVED FOR USE IN CANADA.

13. ALL EXISTING BASE BUILDING DUCTS, EQUIPMENT, PIPES, ETC. NOT SHOWN ON PLAN, BUT PASSING THROUGH CEILING SPACE IS TO REMAIN AS IS.

CENEE	AL REQUIREMENTS FOR COMMERCIAL COOKING EQUIPMENT
GENER	AL REQUIREMENTS FOR COMMERCIAL COOKING EQUIPMENT
SECTIO	ON REF. ITEM REQUIREMENTS
2	- EXHAUST SYSTEM REQUIRED
311	- HOOD 20 GAUGE STAINLESS STEEL
	- HOOD 18 GAUGE STEEL
321	- ALL JOINTS HAVE LIQUID TIGHT CONTINUOUS EXTERNAL WELDS
322	- GUTTER PROVIDED UNDER FILTER
33	- HOODS OR ENCLOSURES ARE "ULC" LISTED
412	- DUCT 18 GAUGE STAINLESS STEEL
	- DUCT 16 GAUGE STEEL
4122 (a	- DUCT HAVE LIQUID TIGHT CONTINUOUS EXTERNAL WELD
(b)	- DUCT LEADS DIRECTLY TO OUTSIDE WITHOUT TRAPS
(c)	- DUCT SUPPORT - INSIDE BUILDING
(c)(1) - VERTICAL DUCT INSIDE HAVE 2 HR. SHAFT < 4 STOREYS
(2)	VEDTICAL DUCT INSIDE HAVE 2 HP SHAET > OP = 4 STOPEY

- VERTICAL DUCT INSIDE HAVE 2 HR. SHAFT > OR = 4 STOREYS - VERTICAL SHAFT ACCESS DOOR MEET N.F.P.A. #80 (1978) - EXHAUST SYSTEM SERVICES ONLY ONE FLOOR - EXHAUST SYSTEM SERVES COMMERCIAL COOKING ONLY - CLEANOUT AND ACCESS DOORS FOR EACH CHANGE OF DIRECTION - DUCT DO NOT PASS THROUGH FIRE SEPARATIONS - DUCT SUPPORT - OUTSIDE BUILDING 4123 (a) - RESIDUE TRAP AT BASE OF RISER-EXTERIOR ONLY - DUCT TERMINATES 40" ABOVE FINISHED ROOF DUCT TERMINATES 10 FT. FROM PROPERTY LINES - AIR INTAKES, ADJACENT BUILDINGS AND ADJOINING GRADE LEVELS - RESIDUE TRAP UNDER HORIZONTAL DISCHARGE - PILOT RUNNING LIGHT IS PROVIDED - AIR VELOCITY IS 500 (MIN.) - AN ADEQUATE SUPPLY OF MAKE-UP AIR SHALL BE PROVIDED. - WHEN MAKE-UP AIR IS INTRODUCED INTO THE HOOD THE MAKE-UP AIR DUCT SHALL BE EITHER 1) SAME GUAGE AS HOOD WITH ALL JOINTS CONTINUOUSLY WELDED OR 2) AN APPROVED TYPE FIRE DAMPER IS INSTALLED AT THE INLET, THE MAKE-UP AIR DUCT

CONNECTION NEED NOT TO BE WELDED AND CAN BE CONSTRUCTED

OF NORMAL GAUGE. - FILTERS ARE "ULC" LABELLED FOR USE
- DAMPERS SHALL NOT BE INSTALLED IN DUCTS ON EXHAUST DUCTS SYSTEMS UNLESS SPECIFICALLY LISTED FOR SUCH USE OR REQUIRED AS PART OF A LISTED OR APPROVED DEVICE OR SYSTEM. 1033 - AUTOMATIC SHUT-OFF OF FUEL SOURCES

APPENDIX "B"

4131

PROTECTION AND CLEARANCE FROM COMBUSTIBLE MATERIALS **CLEARANCE** 3 28 GAUGE SHEET METAL SPACED OUT

22 GAUGE SHEET ON 1" MINERAL WOOL BATS REINFORCED WITH WIRE MESH OR EQUIVALENT

1" ON NON-COMBUSTIBLE SPACERS

APPENDIX "C"

18" CLEARENCE CAN BE REDUCED TO 0" IF THE COMBUSTIBLE MATERIAL IS PROTECTED BY THE FOLLOWING: 1. STAINLESS STEEL OR ANY EQUIVALENT MATERIAL.

KITCHEN EXHAUST HOOD

- THE KITCHEN EXHAUST HOOD SHALL BE STAINLESS STEEL, FABRICATED AND INSTALLED TO MEET ALL ULC, NFPA AND LOCAL CODE REQUIREMENTS. - THE KITCHEN EXHAUST HOOD SHALL BE COORDINATED WITH THE FINAL EQUIPMENT AND SPACE LAYOUT. - THE KITCHEN EXHAUST HOOD SHALL BE FURNISHED WITH CUT-OUTS AND FLANGES FOR THE CONNECTION OF THE EXHAUST AND SUPPLY DUCTS AS REQUIRED BY CODE.

- THE KITCHEN EXHAUST HOOD SHALL BE FURNISHED WITH ALL BALLANCING DAMPERS AND FIRE DAMPERS REQUIRED BY CODE. - THE KITCHEN EXHAUST HOOD SHALL BE FURNISHED WITH HANGING FLANGES

HANGERS - KITCHEN HOOD TO BE INSTALLED BY G.C. CONSTRUCTION AND INSTALLATION TO MEET ALL LOCAL CODE REQUIREMENTS. CONTRACTOR TO INCLUDE SHOP DRAWINGS, CUT SHEETS & SPECIFICATIONS FOR HOOD INCLUDING FIRE PROTECTION SYSTEM FIRE PROTECTION SYSTEM TO BE PROVIDED BY HOOD MANUFACTURER.

- 40" DIMENSION IS TO THE SUCTION SIDE OF THE EXHAUST FAN - 40" CLEARANCE TO FAN OUTLET IF FAN IS THE SAME GUAGE AS THE DUCT - FAN BEARINGS AND MOTOR SHALL NOT BE LOCATED IN THE AIR STREAM *CLEARANCE CAN BE REDUCED AS PER APPENDIX "B" *18" CLEARANCE FROM THE DRYWALL OR ANY OTHER COMBUSTIBLE MATERIAL PROVIDE EXTINGUISHER SYSTEM FOR PROTECTION OF DUCT, GREASE - REMOVAL DEVICES, HOOD & COOKING EQUIPMENT IN ACCORDANCE WITH N.F.P.A.96

UNIT REF MANUFAC	HEATING SUPPLY FAN		VOLTAGE	WEIGHT	DESCRIPTION					
UNIT REF IMANUFAC	FAC. MODE	l l	IN (BTUH)	OUT (BTUH)	L.S / CFM	EXT SP	HP	VOLTAGE	WEIGHT	ROOF TOP MOUNTED GAS MAKE UP AIR UNIT C/W W.P. DISC., SWITCH, ROOF CURB, CONVENIENCE OUTLET, FILTER SECTION, INTAKE DAMPER, CONTROLS,
MUA-1 CAPTIVE	VE AIRE A2-D.5	0.500-20D	367095	337727	1748 / 3704	0.5"	3.0	208V/3PH	315 KG 695 LBS	MODULATING GAS VALVE. MAKE UP AIR UNIT TO BE INTERLOCKED OPERATE WITH HOOD FAN THROUGH CAPTIVE AIRE CONTROL PANEL. ALL INSTALLATIONS ARE TO BE PERFORMED AS PER MANUFACTURERS SHOP DRAWINGS. MAKE UP AIR UNIT TO BE MOUNTED ON ROOF CURBS / SLEEPERS, REFER TO STRUCTURAL DETAILS FOR MORE INFORMATION.

HOOD EX	HAUST FAN SCHEDU	JLE						
UNIT	MANUFACTURER	MODEL	L.S / CFM	S.P.	VOLTAGE	H.P.	WEIGHT	NOTES:
KEF-1	CAPTIVE AIRE	USBI24DD-RM	3900	2.0"	208/3PH	3.0	418 KG 921 LBS	TO BE C/W WP DISC. SWITCH & OPERATED THROUGH CAPTIVE AIRE UTILITY CABINET / CONTROL PANEL AND INTERLOCKED WITH MAKE UP AIR UNIT. ALL INSTALLATIONS ARE TO BE PERFORMED AS PER MANUFACTURERS SHOP DRAWINGS. EXHAUST FAN IS TO BE MOUNTED ON ROOF CURBS / SLEEPERS, REFER TO STRUCTURAL DETAILS FOR MORE INFORMATION.

HOOD SCH	EDULE				
UNIT REF	MAKE / MODEL	LENGTH	EXHAUST	VOLTAGE	NOTES
KH-1	CAPTIVE AIRE - 5424 ND-2-PSP-F	10'-0"	1950 CFM	120/1PH	COMMERCIAL KITCHEN GREASE EXHAUST HOOD 1" LAYER OF INSULATION FACTORY INSTALLED IN INTERNAL TOP, SIDES, FRONT AND BACK STANDOFFS. ULC LISTED FILTER, CANOPY LIGHTS, ETC. REMOTE WALL MOUNTED UTILITY BOX C/W CONTROLS, SUPPRESSION SYSTEM CYLINDERS. ETC.
KH-2	CAPTIVE AIRE - 5424 ND-2-PSP-F	10'-0"	1950 CFM	120/1PH	PERFORM INSTALLATION AS PER MANUFACTURER SHOP DRAWINGS AND NFPA96 CODES AND REGULATIONS. WALL BACKING PANELS BEHIND BOTH HOODS AND ALL COOKING EQUIPMENT IS TO BE IS TO BE SUPPLIED BY CAPTIVE AIRE AND INSTALL BY MECHANICAL CONTRACTOR.

	IERAL EXHAUST FAN SCHEDULE IVIDE A SEPARATE PRICE IN TENDER FOR THIS SCOPE OF WORK, (SUPPLY & INSTALL)										
UNIT	MAKE	MODEL	L.S / CFM	S.P.	VOLTAGE	NOTES					
GEF-1	GREENHECK	CSP-A710	264 / 560	0.375"	115V/1PH, 4.4 AMPS	1,2,3,4,5,6					
GEF-2	GREENHECK	FV1115VK2	71 / 150	0.125"	115V/1PH	7,8					
NOTES:	,	,									

MOUNT FAN IN PLENUM SPACE SPACE SUPPORTED FROM STRUCTURE ABOVE C/W FLEXIBLE CONNECTIONS, HANGING RODS, UNI-STRUT AND VIBRATION ISOLATORS. INTERNAL MOUNTED ADJUSTABLE SPEED CONTROL DIAL.

TO BE OPERATED BY ON/OFF SWITCH BY THE ELECTRICAL CONTRACTOR, (LABEL SWITCH DISHWASHER AND STEAM KETTLE GENERAL EXHAUST FAN). FILTER SECTION / FILTER AT FAN INLET, (LEAVE 10 SPARES WITH OWNER).

RJ-10x10 ROOF CAP FOR MODEL CSP-A710 FAN MOUNT FAN IN T-BAR CEILING FROM STRUCTURE ABOVE C/W FLEXIBLE.

TO BE OPERATED BY REVERSE ACTING THERMOSTAT BY THE MECHANICAL CONTRACTOR.

WASHROOM SANITARY EXHAUST FAN SCHEDULE									
UNIT	MAKE	MODEL	L.S / CFM	VOLTAGE					
SEF-1	PANASONIC FV-1115VK2 52 / 110 120V/1PH								

2. TO BE OPERATED BY OCCUPANCY SENSOR SWITCH BY THE ELECTRICAL CONTRACTOR.

3. EXHAUST DUCT TO BE INSULATED MIN. 15' AWAY FROM EXHAUST ROOF PENETRATION.

EXISTING METER 1 CHURCH / HALL ESTIMATED TOTAL GAS LOAD					
TEM NAME	GAS LOAD (MBH)				
EXISTING MECHANICAL HVAC UNIT(S)	1250.0				
EXISTING DOMESTIC HOT WATER TANK	75.0				
NEW MAKE UP AIR UNIT	367.1				
NEW KITCHEN EQUIPMENT	878.0				
TOTAL GAS LOAD	2570.1				

EXISTING RECTORY METER 2 ESTIMATED TOTAL GAS LOAD					
TEM NAME	GAS LOAD (MBH)				
EXISTING RECTORY HVAC UNIT	100.0				
EXISTING DOMESTIC HOT WATER TANK	75.0				
TOTAL GAS LOAD	175.0				

AIR DEVI	CE SCHEDULE										
SYMBOL	MANUFACTURER/ CATALOG	NOM. S	SIZE	MOUI	NTING	MATI	ERIAL	FINISH	DPR	BORDER	COMMENTS
(1) (2)	NUMBER	SIZE	NECK	CLG.	OTHR.	STL.	ALUM.	(3)	(4)	(5)	
EG-1	E.H. PRICE - 81	305x305		•		•		A		С	EGGCRATE EXHAUST GRILLE C/W DUCTED SHEET METAL PLENUM INLET BOX ON TOP OF GRILLE IN PLENUM SPACE SUITABLE FOR SIDE INLET ROUND DUCT CONNECTION.
DG-1	E.H. PRICE - STG	610x200			•	•		В		В	AIR TRANSFER GRILLE MOUNTED IN DOOR AT LOW LEVEL
SD-1	E.H. PRICE - SPD	610x610		•		•		Α		С	FLAT PANEL LAY-IN CEILING DIFFUSER
FIR	MBOL KEY - ST LETTER: S-SUPPLY COND LETTER: D-DIFFL					•	F		URNIS	HED OPPOS	SED BLADE OR BUTTERFLY TYPE D FROM FACE OF DIFFUSER / GRILLE.

SECOND LETTER: D-DIFFUSER R-REGISTER G-GRILLE PROVIDE OPTIONAL DIRECTIONAL BLOW FEATURE FOR OTHER THAN 4-WAY. FINISH-

5. BORDER STYLE-"A" SURFACE MOUNTED "B" PROVIDE WITH FRAME FOR DOOR / DRYWALL MOUNTING PURPOSES.

A - WHITE BAKEN ON ENAMEL FINISH B - TO MATCH DOOR COLOR "C" LAY-IN FRAME FOR T-BAR CEILING.

HEAT PUMF	UNIT SCHEDULE				
UNIT REF.	MANUFACTURER MODEL NO.	HEATING CAPACITY	COOLING CAPACITY	VOLTAGE MCA	NOT
HP-1	MITSUBISHI INDOOR UNIT: PKA-A36KA8-TH OUTDOOR UNIT: PUZ-HA36NKA	@ 47°F - 38,000 BTUH @ 17°F - 38,000 BTUH @ 5°F - 38,000 BTUH @ -13°F - 30,400 BTUH	33,600 BTUH	208V/1PH 26.0	DUC - - - - -
HP-2	MITSUBISHI INDOOR UNIT: MSZ-FS15NA-U1 OUTDOOR UNIT: MUZ-FS15NAH-U1	@ 47°F - 16,000 BTUH @ 17°F - 16,000 BTUH @ 5°F - 19,360 BTUH @ -13°F - 14,400 BTUH	14,000 BTUH	208V/1PH 18.0	- - -

UCTLESS HEAT PUMP SYSTEM TO BE: COLD CLIMATE HYPER HEAT H2I INVERTER TECHNOLOGY MITSUBISHI THERMOSTATIC CONTROLLER SERVICE DISCONNECT SWITCH'S FULLY INSULATED REFRIGERANT LINE SETS FILTERS FOR INDOOR UNITS PERFORM ALL INSTALLATIONS IN ACCORDANCE WITH THE MANUFACTURERS SHOP DRAWINGS. OUTDOOR UNITS TO BE MOUNTED ON 460mm HIGH STRUCTURAL SLEEPERS, REFER TO STRUCTURAL ENGINEERING DETAILS FOR MORE INFORMATION. ALL CONTROL & LOW VOLTAGE WIRING FOR SYSTEM IS TO BE BY MECHANICAL CONTRACTOR START UP AND COMMISSIONING IS TO BE DONE BY MITSUBISHI ELECTRIC CERTIFIED TECHNICIAN. THIS CONTRACTOR SHALL CARRY COST AND CONTACT MITSUBISHI TEM TO COORDINATE THIS WORK).

ГЕМ#	ITEM NAME	COLD WATER	HOT WATER	INDIRECT WASTE	DIRECT WASTE	VENT SIZE	GAS MBH	NOTES
1	FRYER						120.0	C/W ISOLATION VALVE AT APPLIANCE
2	10 BURNER RANGE						396.0	C/W ISOLATION VALVE AT APPLIANCE
3	STOCK POT						110.0	C/W ISOLATION VALVE AT APPLIANCE
4	CONVECTION OVEN						100.0	C/W ISOLATION VALVE AT APPLIANCE
5	POT FILLER	13Ø						
6	PRE RINSE SINK	13Ø	13Ø		38Ø	38Ø		
7	COMBI OVEN	19Ø			50Ø	50Ø	152.0	C/W BACK FLOW PREVENTER C/W ISOLATION VALVE AT APPLIANCE
8	2 COMP. POT SINK	13Ø	13Ø		38Ø	38Ø		
9	EXISTING RELOCATED DISHWASHER	19Ø	19Ø		38Ø	38Ø		SEE PLAN NOTES
10	VEGETABLE PREP. SINK	13Ø	13Ø	•				
11	WALL MOUTNED S.S. HAND SINK & FAUCET	13Ø	13Ø		38Ø	38Ø		
12	WALK IN COOLER / FREEZER			•				SEE PLAN NOTES
13	HAND SINK	13Ø	13Ø		38Ø	38Ø		
14	ICE MAKER	13Ø		•				C/W BACK FLOW PREVENTER
15	COCKTAIL UNIT WITH DUMP SINK	13Ø	13Ø		2 x 38Ø	2 x 38Ø		
16	COCKTAIL UNIT				38Ø	38Ø		
20	ICE MAKER	13Ø		•				C/W BACK FLOW PREVENTER
22	BAG IN BOX POP FILL STATION	13Ø		•				C/W BACK FLOW PREVENTER INSTALL CONDUIT FOR POP UNIT LINES TO BAR. CONFIRM TYPE, SIZE AND ROUTING WITH EQUIPMENT VENDOR SHOP DRAWINGS PRIOR TO SUPPLY & INSTALLATION.

REF	SPECIFICATION	CW	HW	SAN	VENT
T-1	- AMERICAN STANDARD MADERA 3461.001 BARRIER FREE ELONGATED BOWL FLUSHOMETER TOILET - FLOOR MOUNTED VITREOUS CHINA BOTTOM OUTLET TOP SPUD CONFIGURATION - TOP SPUD SELECTRONIC 606B.161 / PK00.HAC SENSOR OPERATED FLUSH VALVE TOP SPUD RISER IS TO BE EXTENDED RISER SUCH THAT SENSOR ASSEMBLY AND SENSOR EYE CLEAR THE REAR GRAB BAR MOUNTING HEIGHT @ 36" AFF HARD WIRED AC POWERED - CENTOCO 820STSSFE-001 ELONGATED OPEN FRONT SEAT RIM AND SEAT COVER	25Ø		100Ø	50Ø
L-1	- AMERICAN STANDARD 0954004EC MURRO BARRIER FREE UNIVERSAL WALL HUNG LAVATORY - WALL HUNG WHITE VITREOUS CHINA SINK WITH 4" OC FAUCET HOLES - WALL CARRIER HANGER SUPPORT KIT - 0059020EC SHROUD KNEE CONTACT GUARD KIT - CHROME OPEN GRID DRAIN - AMERICAN STANDARD INNSBROOK SELECTRONIC ELECTRONIC PROXIMITY LAVATORY FAUCET - 6059.202 HARD WIRED AC POWERED - 605XTMV1070 THERMOSTATIC MIXING VALVE	13Ø	13Ø	38Ø	38Ø
TP-1	- PRESSURE DROP ACTIVATED TRAP SEAL PRIMER DEVICE				
TP-2	- PRESSURE DROP ACTIVATED TRAP SEAL PRIMER DEVICE C/W 2 WAY DISTRIBUTION OUTLET				

. PERFORM ALL FIXTURE INSTALLATIONS IN ACCORDANCE WITH THE MANUFACTURERS SHOP DRAWINGS

2. REFER TO ARCH. & MANUFACTURER SHOP DRAWINGS FOR A BARRIER FREE MOUNTING INSTALLATION DETAILS. 3. ALL FIXTURES ARE TO BE C/W SHUT OFF VALVES, BOLTS / BOLT CAPS, FLEXIBLE BRAIDED RISER, GASKETS, P-TRAPS,

ESCUTCHEONS, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION.

SEAL

1	ISSUED FOR TENDER	05.28.20
0	ISSUED FOR PERMITS	05.21.20
	ISSUED FOR REVIEW	05.21.20
NO	REVISIONS	DATE

RAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST ROJECT: AND MUST REPORT ANY DISCREPANCIES TO THE ARCHITECT & ENGINEER BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE

THE CONTRACTOR AND SUB-TRADES ARE RESPONSIBLE TO CONTACT THE ENGINEER IN ADVANCE IN ORDER TO SCHEDULE REQUIRED SITE VISITS AND PROVIDE INSPECTION REPORTS AS REQUIRED IN ACCORDANCE WITH THE GENERAL COMMITMENT & REVIEW PROCESS BY ARCHITECTS AND ENGINEERS.

ENGINEERING CONSULTANTS:



ENGINEERING 162 Guelph St., Unit 216, Georgetown, On., L7G 4A6 TEL: (416) 726-1648 | (905) 617-4804 E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca

PROJECT:

HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION 2110 TRAFALGAR RD, OAKVILLE

DRAWING TITLE:

MECHANICAL SCHEDULES

ON L6H 752

GRGURIC **ARCHITECTS INCORPORATED**



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

SCALE:	PROJECT:	
AS NOTED		
DATE:	25011	
MAY.2025		
DRAWN	DRAWING	
MR	,	

M4 / 5 CHECKED

MECHANICAL GENERAL PROVISIONS

A. GENERAL CONDITIONS

1. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS ARE A PART OF THIS CONTRACT AND APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 15.

2. THE CONTRACTOR FOR THIS WORK IS REQUIRED TO READ THE ENTIRE SPECIFICATIONS AND REVIEW DRAWINGS FOR ALL OTHER TRADES.

3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS SUBCONTRACTORS WITH FULL SET OF BID DOCUMENTS (INCLUDING SPECIFICATIONS) AND THE COORDINATION OF HIS WORK AND INSPECTIONS AND THE WORK AND INSPECTIONS OF HIS SUBCONTRACTORS WITH ALL OTHER TRADES ON SITE CONFORMING TO THE GENERAL CONTRACTOR'S TIME

4. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID TO DETERMINE CONDITIONS AFFECTING THE WORK. BIDS SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY IN PERFORMANCE OF WORK

5. WHEN USED, THE TERM "PROVIDED BY CONTRACTOR" SHALL BE INTERPRETED AS MEANING "FURNISHED AND INSTALLED" WITH THE EXCEPTION WHERE ITEMS ARE "PROVIDED BY TENANT" WHICH MEANS "FURNISHED ONLY" (INSTALLED BY CONTRACTOR), EXCEPT AS SPECIFICALLY NOTED OTHERWISE.

6. THE CONTRACTOR SHALL PROVIDE A SAFETY RAILING SYSTEM ALONG ROOF EDGE WHERE SERVING OF MECHANICAL EQUIPMENT IS REQUIRED AND NOT WITHIN STANDARD GUIDELINES FOR CLEARANCES TO THE ROOF EDGE

B. GENERAL REQUIREMENTS

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL MECHANICAL SYSTEM AS SHOWN ON THE DRAWINGS. CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE LANDLORD SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR CLOSELY COORDINATE THE ENTIRE INSTALLATION WITH THE LANDLORD. AS REQUIRED. FIELD VERIFY THE EXACT TYPE, SIZE AND LOCATION, ETC. OF EXISTING PIPE AND DUCTS IN THE TENANT SPACE PRIOR TO BID.

2. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIAL OR LABOR CALLED FOR IN ONE SHALL BE PROVIDED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK, AND WHICH IS USUALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE PROVIDED AS PART OF CONTRACT.

3. ALL MECHANICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT ACCESS TO ALL EQUIPMENT FOR SERVICE.

4. THE CONTRACTOR SHALL DO ALL CUTTING, CORE DRILLING, CHASING OR CHANNELING AND PATCHING REQUIRED FOR ANY WORK UNDER THIS DIVISION. CUTTING SHALL HAVE PRIOR APPROVAL BY THE TENANT'S CONSTRUCTION MANAGER AND THE LANDLORD. PATCHING SHALL MATCH, FINISH OF SURROUNDING AREA.

1 ALL WORK SHALL BE PERFORMED IN A NEAT PROFESSIONAL MANNER USING GOOD ENGINEERING PRACTICES. ALL WORK SHALL CONFORM TO THE LANDLORD'S CRITERIA. THE PROVINCE, JURISDICTION'S, CITY'S AND LOCAL CODES AND ORDINANCES, SAFETY AND HEALTH CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS THE CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES. ORDINANCES, AND REGULATIONS. AFTER CONTRACT IS ISSUED, NO ADDITIONAL COST DUE TO CODE ISSUES SHALL BE REIMBURSED BY THE TENANT TO THE CONTRACTOR.

D. LICENSES, PERMITS, INSPECTIONS & FEES

1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, INSPECTIONS, AND FEES REQUIRED OR RELATED TO HIS WORK.

2. FURNISH TO THE TENANT'S CONSTRUCTION MANAGER ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT SUBSTANTIAL COMPLETION DATE OF PROJECT.

1. DRAWINGS (PLANS, SPECIFICATIONS, AND DETAILS) ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION AND INTENT OF THE MECHANICAL SYSTEMS, BECAUSE OF THE SMALL SCALE OF THE DRAWINGS. IT IS NOT POSSIBLE TO INDICATE ALL DUCT AND PIPING OFFSETS, FITTINGS AND ACCESSORIES THAT MAY BE REQUIRED.

2 THE LAYOUT SHOWN ON THE DRAWINGS IS BASED ON A PARTICULAR MAKE OF CHANGE OF ANY DESCRIPTION FROM THE DRAWINGS OR SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE AS PART OF THIS WORK, FOR MAKING ALL SLICH MODIFICATIONS AND CHANGES, INCLUDING THOSE INVOLVING OTHER TRADES WITH THE COST THEREOF INCLUDED IN HIS BID. IN SUCH CASE, CONTRACTOR SHALL SUBMIT DRAWINGS AND SPECIFICATIONS PRIOR TO STARTING WORK SHOWING ALL SUCH MODIFICATIONS AND CHANGES. HIS PROPOSAL SHALL BE SUBJECT TO THE APPROVAL OF THE TENANT'S CONSTRUCTION

MANAGER. F. DISCREPANCIES IN DOCUMENTS

1. DRAWINGS (PLANS, SPECIFICATIONS, AND DETAILS) ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION AND INTENT OF THE MECHANICAL SYSTEMS. WHERE DRAWINGS EXISTING SITE CONDITIONS, SPECIFICATIONS OR OTHER TRADES CONFLICT OR ARE UNCLEAR, ADVISE THE GENERAL CONTRACTOR IN WRITING, PRIOR TO SUBMITTAL OF BID. THE GENERAL CONTRACTOR IS RESPONSIBLE TO ADVISE THE TENANT'S CONSTRUCTION MANAGER, IN WRITING, OF VARIATIONS TO CONTRACT DOCUMENTS PRIOR TO SUBMISSION OF BID. OTHERWISE, TENANT'S CONSTRUCTION MANAGER'S INTERPRETATION OF CONTRACT DOCUMENTS OR CONDITIONS SHALL BE FINAL WITH NO ADDITIONAL COMPENSATION

G. TRADE NAMES AND MANUFACTURERS

1 WHERE TRADE NAMES AND MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS. THE EXACT EQUIPMENT SHALL BE USED AS A MINIMUM STANDARD FOR THE BASE BID MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED WILL BE SUBJECT TO APPROVAL IN WRITING BY THE TENANT'S CONSTRUCTION MANAGER PRIOR TO ACCEPTANCE. THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S

SHOP DRAWINGS

1. SUBMIT SIX COPIES OF MATERIAL LISTS AND SHOP DRAWINGS FOR ALL EQUIPMENT AND DUCT FABRICATION DRAWINGS TO THE TENANT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO ORDERING EQUIPMENT. SUBMISSIONS MUST BE EARLY ENOUGH TO ALLOW THE TENANT'S CONSTRUCTION MANAGER EIGHT WORKING DAYS FOR REVIEW WITHOUT CAUSING DELAYS OR CONFLICTS TO THE JOB'S PROGRESS. SUBMITTALS SHALL BE IN ACCORDANCE WITH THE GENERAL CONDITIONS USING THE MANUFACTURER'S LISTED ON THE DRAWINGS. SHOP DRAWINGS SHALL INCLUDE ALL DATA THAT PERTAINS TO THE REQUIREMENTS SET FORTH ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SUBMITTAL SHALL INCLUDE BUT NOT LIMITED TO CUTS OR CATALOGS INCLUDING DESCRIPTIVE LITERATURE AND CHARACTERISTICS OF EQUIPMENT SHALL SHOW MAJOR DIMENSIONS, ROUGHING-IN DATA, CAPACITY, CURVES, PRESSURE DROP, CODE COMPLIANCE, MOTOR AND DRIVE DATA AND ELECTRICAL DATA. OBSERVE SPECIAL INSTRUCTIONS WHEN REQUIRED. SUBMITTALS SHALI BEAR THE STAMP OF THE GENERAL AND SUBCONTRACTOR SHOWING THAT HE HAS REVIEWED AND CONFIRMED THAT THEY ARE IN CONFORMANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS OR INDICATE WHERE EXCEPTIONS TAKE PLACE. LACK OF SUCH CONTRACTOR'S REVIEW AND APPROVAL WILL BE CAUSE FOR REJECTION WITHOUT REVIEW BY TENANT'S CONSTRUCTION MANAGER ALL SHOP DRAWINGS MUST APPEAR IN THE OPERATION AND MAINTENANCE MANUALS LEFT ON SITE AT JOB COMPLETION.

2. TENANT'S CONSTRUCTION MANAGER'S REVIEW OF SHOP DRAWINGS OR SCHEDULES SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS, OMISSIONS OR OTHER DEFICIENCIES OR DEVIATIONS IN THE SHOP DRAWING FROM THE CONTRACT DRAWINGS AND SPECIFICATIONS.

RECORD DRAWINGS

1. THE CONTRACTOR SHALL MAINTAIN ONE COPY OF DRAWINGS AND SPECIFICATIONS ON THE JOB SITE TO RECORD DEVIATIONS FROM CONTRACT DRAWINGS, SUCH AS:

LOCATION OF CONCEALED PIPING VALVES AND DUCTS. REVISIONS, ADDENDUMS, AND CHANGE ORDERS.

SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS, APPROVED

EQUIPMENT SUBSTITUTIONS, AND CONTRACTOR'S COORDINATION WITH OTHER TRADES. D. EXACT ROUTING OF ALL SANITARY AND DOMESTIC WATER PIPING UNDER FLOOR.

2. AT COMPLETION OF THE PROJECT AND BEFORE FINAL APPROVAL, THE CONTRACTOR SHALL MAKE ANY FINAL CORRECTIONS TO DRAWINGS AND CERTIFY THE ACCURACY OF EACH PRINT BY SIGNATURE THEREON. THE DRAWINGS ARE TO BE TURNED OVER TO THE TENANT.

K. GUARANTEE

1. THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORK UNDER HIS CONTRACT AND SHALL MAKE GOOD, REPAIR OR REPLACE AT HIS OWN EXPENSE, ANY DEFECTIVE WORK, MATERIAL, OR EQUIPMENT WHICH MAY BE DISCOVERED WITHIN A PERIOD OF 12 MONTHS FROM THE DATE OF ACCEPTANCE (IN WRITING) OF THE INSTALLATION BY THE TENANT'S CONSTRUCTION MANAGER. PROVIDE EXTENDED WARRANTIES AS SPECIFIED WITH INDIVIDUAL EQUIPMENT. IN CASE OF REPLACEMENT OR REPAIR OR EQUIPMENT DUE TO FAILURE WITHIN GUARANTEE PERIOD, GUARANTEE ON THAT PORTION OF WORK SHALL BE EXTENDED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUCH REPLACEMENT OR REPAIR.

L. OPERATIONS MANUALS

1. ONE COPY OF EACH OPERATION AND MAINTENANCE MANUAL FOR ALL EQUIPMENT FURNISHED ON JOB SHALL BE COLLECTED AND INSERTED IN A 3" THREE RING BINDER AND TURNED OVER TO THE OWNER. EACH NOTEBOOK SHALL INCLUDE BUT NOT BE LIMITED TO INSTALLATION, MAINTENANCE AND OPERATING INSTRUCTIONS, PAMPHLETS OR BROCHURES APPROVED SHOP DRAWINGS AND WARRANTIES OBTAINED FROM EACH MANUFACTURER OF PRINCIPAL ITEMS OF EQUIPMENT, AS-BUILT DRAWINGS, TESTING REPORTS AND CERTIFICATES.

M. SLEEVES

1. THE CONTRACTOR SHALL PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH IT'S RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR.

2 ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND/OR FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THE FIRE RATING OF THE FLOOR OR WALL. CONFORM TO U.L. ASSEMBLY RATING OF FLOOR OR WALL.

3. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS, AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE NO. 22 U.S.GAUGE GALVANIZED STEEL MINIMUM.

4. DUCT SLEEVES TO BE MINIMUM 14 GAUGE STEEL.

N. HANGERS & SUPPORT

 HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE IRON. BANDS. C-CLAMPS WITH RETAINING CLIPS, CHANNELS, DUCT STANDS, HANGER RODS, SEISMIC SUPPORT, ETC., NECESSARY FOR THE INSTALLATION OF WORK AS REQUIRED IN ACCORDANCE WITH STRUCTURAL ENGINEERING DRAWINGS, DETAILS AND SPECIFICATIONS TYPICAL FOR ALL EQUIPMENT, DUCTWORK, ETC. (BUILDING INTERIOR AND EXTERIOR AREAS).

2. HANGERS SHALL BE FASTENED TO BUILDING STEEL, CONCRETE, OR MASONRY, BUT NOT TO PIPING OR DUCTWORK. HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS MUST BE ATTACHED TO UPPER CHORD OF BAR JOIST. WHERE INTERFERENCES OCCUR, IN ORDER TO SUPPORT DUCTWORK OR PIPING, THE CONTRACTOR MUST INSTALL TRAPEZE TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO FIRE DAMPERS, VALVES, ACCESS DOORS AND OTHER EQUIPMENT SERVICE REQUIREMENTS AND/OR OTHER TRADES. HANGER TYPES AND INSTALLATION METHODS ARE SUBJECT TO LANDLORD CRITERIA

3. HANGERS FOR ALL INSULATED PIPING SHALL BE SIZED AND INSTALLED FOR THE OUTER DIAMETER OF INSULATION. INSTALL 6" LONG SPLIT CIRCLE GALVANIZED SADDLE BETWEEN THE HANGER AND THE PIPE INSULATION.

4. HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED FROM ONE ANOTHER.

O. ACCESS DOORS

1 FURNISH STEEL ACCESS DOORS AND FRAMES MIN 16" X 20" OR AS SHOWN ON DRAWINGS TO GENERAL CONTRACTOR FOR ALL LOCATIONS WHERE NECESSARY TO PROVIDE ACCESS TO CONCEALED VALVES. AND OTHER EQUIPMENT REQUIRING SERVICE OR INSPECTION. LOCATION, TYPE, SIZE AND NUMBER AS DETERMINED BY CONTRACTOR AND APPROVED BY TENANT CONSTRUCTION MANAGER TO SUIT EQUIPMENT REQUIREMENTS. GENERAL CONTRACTOR WILL INSTALL ACCESS DOORS AND FRAMES

2. ACCESS DOORS LOCATED IN FIRE-RATED WALLS, FLOORS, CEILING-FLOOR OR CEILING-ROOF ASSEMBLIES SHALL BE FIRE RATED, UNDERWRITER'S LABORATORIES, (C) INC., LISTED AND LABELED.

3. ACCESS DOORS SHALL BE FLUSH TYPE, MANUFACTURED FROM NO. 14 GAUGE STEEL, COMPLETE WITH FLUSH FLANGE TYPE FRAMES MANUFACTURED FROM NO. 16 GAUGE STEEL PROVIDED WITH ANCHORS. ACCESS DOORS SHALL BE SUITABLE FOR INSTALLATION IN WALL OR CEILING MATERIALS SHOWN IN ROOM FINISH SCHEDULES

P FLECTRICAL MOTORS

1 FURNISH INSTALL AND ALIGN ALL MOTORS REQUIRED FOR THIS FOUIPMENT, UNLESS THEY ARE FACTORY INSTALLED ON THE UNIT, ALL STARTERS AND ASSOCIATED WIRING AND SAFETY SWITCHES FOR SUCH MOTORS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. STARTERS SHALL MEET ALL REQUIREMENTS AS DEFINED IN THE ELECTRICAL DIVISION OF THE SPECIFICATIONS.

2 DESIGN CONSTRUCTION AND PERFORMANCE CHARACTERISTICS OF MOTORS SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF LATEST NEMA, ANSI, ISEE STANDARDS FOR ELECTRICAL EQUIPMENT. ALL MOTORS SHALL BE SUITABLE FOR OPERATION ON VOLTAGE VARIATION OF PLUS OR MINUS 10%%, 40 DEGREES C AMBIENT TEMPERATURE; HAVE A SERVICE FACTOR OF NOT LESS THAN 1.15.

Q. LOW VOLTAGE (24 VOLT) WIRING

1. THE CONTRACTOR IS TO INSTALL ALL LOW VOLTAGE WIRING REQUIRED FOR HIS EQUIPMENT. THIS WORK INCLUDES ALL TRANSFORMERS AND DEVICES TO MAKE THIS A COMPLETE FUNCTIONAL SYSTEM.

2. ALL WORK IS TO CONFORM TO THE LATEST ADDITION N.E.C AND TO DIVISION 16 ELECTRICAL SPECIFICATIONS.

3. ANY CONDUIT REQUIRED BY CODE OR THE LANDLORD WILL BE INSTALLED BY THE ELECTRICAL SUBCONTRACTOR.

R. COMMISSIONING AND DEMONSTRATION

1. THE COMMISSIONING PROCESS REQUIRES THE COMPLETE PROCESS TO TEST, ADJUST AND BALANCE THE ENTIRE SYSTEM.

S. FIRE STOPPING

1. PROVIDE LISTED & APPROVED FIRE STOPPING, FIRE STOPPING DEVICES AND SEALANT AS REQUIRED TO MAINTAIN FIRE SEPARATIONS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS AND TYPES OF SEPARATIONS.

T. SEISMIC SUPPORT

1. THE CONTRACTOR SHALL ENGAGE A SEISMIC RESTRAINT SYSTEM ENGINEER TO PROVIDE ENGINEERED SHOP DRAWINGS FOR SEISMIC RESTRAINT SUPPORT SYSTEMS ON ALL MECHANICAL EQUIPMENT, PIPES, DUCTWORK, ETC, WHERE REQUIRED BY CODE. DESIGN AND ALL SPECIFICATIONS MUST BE PERFORMED BY A PROFESSIONAL ENGINEER REGISTERED AND INSURED IN THE PROVINCE OF ONTARIO SPECIALIZING IN THE DESIGN OF SEISMIC RESTRAINT SYSTEMS

DIVISION 15 MECHANICAL HEATING, VENTILATION, AND AIR CONDITIONING

A. SCOPE OF WORK

1. THE HVAC CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION AND FACILITIES NECESSARY FOR, REASONABLY IMPLIED AND INCIDENTAL TO, THE FURNISHING, INSTALLATION, COMPLETION AND TESTING OF ALL THE WORK FOR THE MECHANICAL SYSTEMS AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS, TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: (REFER TO RESPONSIBILITY SCHEDULE FOR EXACT RESPONSIBILITIES) A. ROOF MOUNTED PACKAGED MECHANICAL EQUIPMENT, AND APPURTENANCES. B. DUCTWORK, FITTINGS, DAMPERS, AND INSULATION. C. DIFFUSERS, GRILLES, AND REGISTERS

D. TESTING, ADJUSTING, AND BALANCING.

2. BEFORE STARTING WORK, THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL STRUCTURAL, MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS TO SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE HVAC SYSTEM, MATERIALS AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID INTERFERENCES AND CONFRONTATIONS

A. HVAC EQUIPMENT . PRIMARY PACKAGED EQUIPMENT.

A. PROVIDE MECHANICAL EQUIPMENT AS INDICATED IN SCHEDULE ON DRAWINGS. B. ALL EQUIPMENT SHALL BE COMPLETE IN EVERY RESPECT WITH ALL DEVICES, APPURTENANCES, AND ACCESSORIES PROVIDED TO MEET THE DESIGN INTENT AND OPERATION OF THE SYSTEMS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL AIR CONDITIONING EQUIPMENT MUST HAVE A CONDENSATE DRAIN AND BE TRAPPED IN ACCORDANCE WITH MANUFACTURERS DATA. SEE DRAWINGS FOR

. WHERE SHOWN ON DRAWINGS, PROVIDE A TOILET EXHAUST FAN UNIT COMPLETE WITH GRAVITY BACK DRAFT DAMPERS. ALL DUCTWORK, ROOF OPENINGS AND CAPS NECESSARY TO PROVIDE A COMPLETE EXHAUST SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. REFER TO PLANS FOR APPLICABILITY.

3. BASEBOARD, CABINET, AND UNIT HEATERS A. ELECTRIC HEATING DEVICES WILL BE SUPPLIED AND INSTALLED BY ELECTRICAL TRADE DIVISION 16

4. VIBRATION ISOLATION DEVICES A. VIBRATION ISOLATION DEVICES SHALL BE PROVIDED IN ALL SUPPORTS BETWEEN VIBRATING EQUIPMENT (FANS. ROOFTOP UNITS, ETC.) AND STRUCTURE. B. VIBRATING EQUIPMENT HUNG FROM STRUCTURE SHALL BE ISOLATED WITH RUBBER AND SPRING DEVICES. VIBRATING EQUIPMENT SUPPORTED FROM FLOOR OR DECK SHALL BE ISOLATED WITH HOUSED SPRING MOUNT DEVICES. C. EXAMINE DEAD LOAD AND OPERATING LOAD CONDITIONS WHEN SELECTING DEVICES. ADJUST FOR PROPER ALIGNMENT AND LOADING. AVOID "GROUNDING" THE ISOLATOR. D. CHECK HANGER ROD SIZE FOR ALLOWABLE LOADS AT THE ISOLATING DEVICE AND AT THE UPPER AND LOWER ATTACHMENTS TO STRUCTURES, DUCTS, EQUIPMENT, ETC. E. CONSULT MANUFACTURER FOR APPLICATION DATA.

5. CURBS AND STEEL FRAMING FOR SUPPORT A. THIS CONTRACTOR WILL PROVIDE ALL NECESSARY CURBS AND STEEL FRAMING REQUIRED TO INSTALL ALL HVAC EQUIPMENT AS DESCRIBED OR IMPLIED ON THE DRAWINGS. CURBS SHALL BE A MINIMUM OF 14" HIGH, OF THE SAME MANUFACTURER OF THE EQUIPMENT SUPPORTED. INSULATE UNDER THE COMPRESSOR SECTION TO PREVENT CONDENSATION. ALL CURBS MUST BE INSTALLED SO THAT TOP OF CURBS ARE "DEAD" LEVEL. ALL PENETRATIONS OF EXISTING STRUCTURE SHALL BE DONE IN ACCORDANCE TO THE LANDLORD'S GUIDELINES AT THIS CONTRACTOR'S EXPENSE.

B. NEW METAL DUCTWORK - NO FIBERGLASS DUCT PERMITTED

1 NO DUCTWORK SHALL BE FABRICATED PRIOR TO APPROVAL BY THE TENANT'S CONSTRUCTION MANAGER. SIGNIFICANT DEVIATIONS FROM DESIGN MUST BE APPROVED BY TENANT'S CONSTRUCTION MANAGER PRIOR TO FABRICATION OR INSTALLATION. ALL DUCT MAINS ARE TO BE RECTANGULAR UNLESS NOTED OTHERWISE. ALL DUCT BRANCHES TO DIFFUSERS ARE TO BE ROUND RIGID DUCT. (FLEXIBLE DUCT CONNECTIONS TO THE DIFFUSER ARE NOT TO EXCEED 5'-0").

2. EXCEPT AS OTHERWISE INDICATED, FABRICATE AND INSTALL SPIRAL & RECTANGULAR DUCTS WITH GALVANIZED SHEET STEEL, IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" OF THE LATEST EDITION. CONFORM TO THE REQUIREMENTS IN THE REFERENCED STANDARD FOR METAL THICKNESS, ZINC COATED Z90 GALVANIZED STEEL, REINFORCING TYPES AND INTERVALS, TIE ROD APPLICATIONS, AND JOINT TYPES AND

A. ALL EXPOSED ROUND SPIRAL DUCTWORK IS TO BE ROUND SPIRAL TYPE DUCTWORK, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLAN NOTES; 8"Ø OR LESS = 26GA

B. RECTANGULAR DUCTWORK SHALL BE GALVANIZED STEEL METAL; DUCTS UP TO 12" ON THE LONGEST DIMENSION: 26 GA. DUCTS 13" - 28" ON THE LONGEST DIMENSION: 24 GA. DUCTS 29" - 48" ON THE LONGEST DIMENSION: 22 GA.

BY PRESSURE CLASS RATINGS IN SMACNA STANDARDS

3. EXCEPT WHERE OTHERWISE INDICATED, CONSTRUCT DUCT SYSTEMS TO THE FOLLOWING PRESSURE CLASSIFICATIONS: (VERIFY WHETHER RETURN OR EXHAUST DUCT IS POSITIVE OR NEGATIVE PRESSURE) A. SUPPLY DUCTS: 2 INCHES WATER GAUGE, POSITIVE PRESSURE B. RETURN AND EXHAUST DUCTS: 2 INCHES WATER GAUGE, NEGATIVE PRESSURE. PRESSURE TEST DUCTS FOR LEAKAGE. REMAKE LEAKING JOINTS AND APPLY SEALANTS AS REQUIRED TO FABRICATE A SYSTEM THAT DOES NOT EXCEED LEAKAGE OR LESS AS STATED

4. AS A MINIMUM, CROSS BREAK ALL FLAT SURFACES OR REINFORCE WITH A BEAD APPROXIMATELY 3/8" WIDE X 3/16" DEEP ON 12" CENTERS TO PREVENT VIBRATIONS.

5. INSTALL DOUBLE THICKNESS TURNING VANES IN ALL RIGHT ANGLE ELBOWS. 6. INSTALL RIGID ROUND AND RECTANGULAR METAL DUCT WITH SUPPORT SYSTEMS INDICATED IN SMACNA STANDARDS AND STRUCTURAL DETAILS

7. WHERE DUCTS PASS THROUGH ROOFS AND FLOORS, PROVIDE AS MINIMUM 1- 1/2"X1-1/2" X1/8" STEEL ANGLE FRAMES AT EACH SIDE OF OPENING. THE ANNULAR SPACE BETWEEN DUCT AND ANGLE FRAMES SHALL BE CAULKED WITH SILICONE SEALANT OR FIREPROOFED AS REQUIRED BY ASSEMBLY FIRE RATING.

DAP CMC DUCT SEALER. JOINTS ALSO SHALL BE RIVETED OR CONNECTED WITH SHEET

8. ALL TRAVERSE JOINTS AND SEAMS IN SUPPLY AIR DUCT SHALL BE SEALED AIR TIGHT WITH

9. SOFT ELASTOMER BUTYL GASKET WITH ADHESIVE BACKING SHALL BE USED TO SEAL

10. DUCT TRANSITIONS SHALL NOT EXCEED 30 DEGREES SLOPE EXCEPT AS SPECIFICALLY NOTED OTHERWISE.

11. PROVIDE ACCESS TO ALL MOTORIZED DAMPERS, FIRE DAMPERS, CONTROLS, AND OTHER ITEMS IN DUCTWORK THAT REQUIRE SERVICE OR INSPECTION. IF THE ACCESS PANEL LOCATION IS EXPOSED TO THE SALES AREA, IT MUST BE APPROVED BY THE TENANT'S CONSTRUCTION MANAGER PRIOR TO INSTALLATION. LAY-IN SUPPLY AND RETURN AIR DIFFUSERS, GRILLES AND REGISTERS WITH PLASTER FRAMES MAY BE USED AS ACCESS

12. FLEXIBLE CONNECTIONS

A. FLEXIBLE COLLARS SHALL BE PROVIDED IN ALL CONNECTIONS BETWEEN VIBRATING EQUIPMENT (FANS, ROOFTOP UNITS, ETC.) AND DUCTS OR CASINGS. ALSO, PROVIDE FLEXIBLE CONNECTIONS WHERE DUCTS CROSS BUILDING EXPANSION JOINTS. B. FLEXIBLE CONNECTIONS SHALL CONSTRUCTED OF NEOPRENE-COATED FLAMEPROOF FABRIC. PROVIDE ADEQUATE JOINT FLEXIBILITY TO ALLOW FOR MOVEMENT AND PREVENT THE TRANSMISSION OF VIBRATION C. FLEXIBLE CONNECTION IS TO BE RATED FOR THE OPERATING PRESSURE OF THE SYSTEM.

13 FIRE DAMPERS

A. PROVIDE PRIMARY FIRE DAMPERS WHERE INDICATED OR REQUIRED BY CODES. DAMPERS SHALL BE DESIGNED FOR HORIZONTAL OR VERTICAL FLOW OF AIR AS REQUIRED. FIRE DAMPERS SHALL BE ULC LABELED. B. FIRE DAMPERS SHALL HAVE THE BLADES OUT OF THE AIRSTREAM AND A 165°F FUSIBLE LINK, TYPE A. AS MINIMUM. PROVIDE ALL NECESSARY FRAMING AND SLEEVES FOR DAMPER MOUNTING PER UL AND CODE REQUIREMENTS. D. PROVIDE DUCT ACCESS DOORS IN AN ACCESSIBLE LOCATION FOR ALL FIRE DAMPERS.

DOOR IS TO BE 20 GA GALVANIZED DOOR WITH QUICK-OPENING LATCH AND PIANO HINGE. A. FLEXIBLE AIR DUCT SHALL BE 1" INSULATED CLASS 1 AND RATED FOR THE OPERATING PRESSURE OF THE SYSTEM. DUCT CONSTRUCTION MATERIAL (PLASTIC, CLOTH, ALUMINUM) MUST ADHERE TO LOCAL CODES AND LANDLORD'S REQUIREMENTS AND BE INCLUDED AS

B. FLEXIBLE AIR DUCT MAY ONLY BE USED IN VERTICAL APPLICATIONS WITH PRIOR APPROVAL FROM TENANT'S CONSTRUCTION MANAGER. C. FLEXIBLE DUCT SHALL NOT EXTEND OVER 5'-0" IN LENGTH AT ANY ONE LOCATION.

15. SUPPLY AIR TAKE-OFF FITTINGS A. PROVIDE CONICAL OR "BELL-MOUTH" TAKE-OFFS FROM MAIN DUCTWORK TO ROUND

BRANCHES. INSTALL PER MANUFACTURER'S INSTRUCTIONS. B. PROVIDE 45° RECTANGULAR TAKE-OFFS FROM MAIN DUCTWORK TO RECTANGULAR BRANCHES.

A PROVIDE MANUAL LOCKING QUADRANT VOLUME CONTROL DAMPERS WITH HANDLE OPERATORS IN EACH BRANCH DUCT AND AS SHOWN ON PLANS TO FACILITATE AIR BALANCING. B. WHERE ACCESS TO BALANCING DAMPER IS RESTRICTED, YOUNG'S REGULATORS SHALL C. ALL RECTANGULAR DAMPERS IN OUTSIDE AIR, RELIEF AIR, OR RETURN AIR DUCTS ARE TO BE OF OPPOSED BLADE TYPE. ALL OUTSIDE AIR DUCT DAMPERS MUST ALSO BE OF THE LOW LEAKAGE TYPF D. ALL MOTORIZED DAMPERS NOT FURNISHED WITH EQUIPMENT ARE TO BE HONEYWELL

17 DIFFUSERS GRILLES AND REGISTERS

A. PROVIDE DIFFUSERS GRILLES AND REGISTERS AS SCHEDULED. DEVICES, TO BE COMPLETE WITH DAMPERS FRAMES AND ALL ACCESSORIES. FINISH AS INDICATED. B. INSTALL ALL AIR DEVICES AS LOCATED ON THE ARCHITECTURAL REFLECTED CEILING C. APPROVED MANUFACTURERS: E.H.PRICE, EQUALS BY METALAIRE, NAILOR, TITUS OR KRUEGER IS ACCEPTABLE.

18. DUCTWORK INSULATION A. INSTALL INSULATION PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES. INSULATION B. ALL DUCTWORK IN THE PLENUM SPACE ABOVE THE CEILING SHALL BE EXTERNALLY INSULATED WITH A MINIMUM OF 1"THICK, 1-1/2 LB. DENSITY (R=5.6) DUCT WRAP WITH VAPOR

BARRIER. VAPOR BARRIER IS TO BE MAINTAINED THROUGHOUT DUCT SYSTEM. ALL JOINTS MUST BE TAPED SO THAT NO INSULATION FIBER IS VISIBLE. EXTEND DUCTWORK INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS, AND SIMILAR PENETRATIONS. C. ALL INSULATION SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NO HIGHER THAT 50 WHEN TESTED IN ACCORDANCE WITH ASTM C 411, OR AS REQUIRED BY LOCAL CODES.

19. SYSTEM CLEANOUT A. DUCTWORK AND AIR HANDLING EQUIPMENT IS TO BE CLEANED OUT AND BLOWN OUT BEFORE PAINTING IS STARTED BY THE GENERAL CONTRACTOR. B. FILTERS MUST BE IN UNITS AT ANY TIME FANS ARE OPERATED. A CLEAN FILTER MUST BE IN UNIT WHEN THE SPACE IS COMPLETED FOR TURNOVER TO THE TENANT

D. SYSTEM TESTING, ADJUSTING, AND BALANCING

1. TESTING, ADJUSTING AND BALANCING OF ALL WORK SHALL BE MADE BY AN INDEPENDENT CONTRACTOR WHO IS CURRENTLY LICENSED ASSOCIATED AIR BALANCING COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) BALANCING CONTRACTOR. NO OTHER BALANCE REPORTS WILL BE REVIEWED OR ACCEPTED. ALL BALANCING WORK MUST BE COMPLETE AND DONE IN ACCORDANCE WITH THE MOST RECENT STANDARDS OF THEIR SOCIETY. PAYMENT OF ALL COSTS FOR TESTING SHALL BE MADE BY THE HVAC

2. THE HVAC CONTRACTOR SHALL INSTALL NEW FILTERS IN ALL UNITS PRIOR TO THE AIR BALANCE. THE COMPLETE AIR BALANCE SHALL TAKE PLACE WITH OUTSIDE AIR DAMPERS IN

3. BALANCE AIR QUANTITIES TO WITHIN 5%%% OF THAT INDICATED ON THE DRAWINGS. ANY REQUIRED CHANGES IN SHEAVES, BELTS, PULLEYS, OR THE ADDITION OF DAMPERS REQUIRED TO ACHIEVE SPECIFIED FLOW RATES SHALL BE PERFORMED BY THE HVAC CONTRACTOR WITH NO ADDITIONAL COST TO THE TENANT.

4. THE BALANCE REPORT SHALL INCLUDE AS A MINIMUM THE FOLLOWING INFORMATION: A. AABC OR NEBB CERTIFICATION NUMBER AND SIGNATURE OF BALANCING CONTRACTOR. B INSTRUMENTATION LIST WITH LAST CALIBRATION DATES

C. MAKE AND MODEL NUMBERS OF ALL HVAC EQUIPMENT TESTED D. AIR CFM AND STATIC PRESSURE READINGS (DISCHARGE AND SUCTION) AS MEASURED BY PITOT TUBE DUCT TRAVERSE AT THE UNIT. E. MOTOR NAMEPLATE DATA WITH ACTUAL FIELD VOLTAGE AND AMPERAGE READINGS FOR

F. MOTOR AND FAN RPMS, SHEAVE SIZES AND BELT SIZES. G. OUTSIDE, RETURN, MIXED AND SUPPLY AIR TEMPERATURES AT FULL COOLING. H. MAKE AND MODEL NUMBERS OF ALL AIR DISTRIBUTION EQUIPMENT. I. FINAL BALANCED AIR VOLUMES AT ALL OUTLETS (INCLUDING RETURNS WHERE DUCTED).

J. INDEXED PLAN WITH DIFFUSER AND RETURN LOCATIONS 5. ALL CONTROL SEQUENCES SHALL BE TESTED (INTERLOCKED EQUIPMENT, SMOKE DETECTORS, SMOKE EVACUATION, ECONOMIZER, ETC.) AND OPERATING STATUS RECORDED

6. THREE COPIES OF THE BALANCE REPORT SHALL BE SUBMITTED THROUGH THE GENERAL CONTRACTOR TO THE TENANT'S CONSTRUCTION MANAGER FOR APPROVAL

7. THE BALANCING CONTRACTOR SHALL PERFORM ALL APPLICABLE TESTING AND BALANCING FUNCTIONS REQUIRED FOR THE SYSTEM DESIGNED IN THESE DRAWINGS. THE BALANCING CONTRACTOR SHALL RECHECK ANY ITEMS THAT THE TENANT DEEMS NECESSARY AT NO ADDITIONAL COST TO THE TENANT.

8. FINAL BALANCE REPORT SHALL BE INCLUDED IN THE OPERATION & MAINTENANCE

E. DEMOLITION SPECIFICATION

1. EQUIPMENT INDICATED TO BE REMOVED SHALL BE TAKEN FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS. LANDLORD SHALL HAVE THE OPTION TO RECEIVE ANY ITEMS CALLED TO BE REMOVED PRIOR TO REMOVAL FROM SITE. EQUIPMENT REQUIRED TO BE TURNED OVER TO THE OWNER SHALL BE PLACED IN A MUTUALLY ACCEPTABLE LOCATION.

2. THE WORK SHALL INCLUDE THE REMOVAL OF MATERIALS AS DIRECTED. PRIOR TO REMOVING EQUIPMENT AND MATERIALS FROM THE PROJECT SITE, THE BUILDING MANAGER SHALL INSPECT AND ADVISE WHICH ITEMS WILL BE RESTORED.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL FROM THE PREMISES ALL DEBRIS RESULTING FROM REMOVAL OF MECHANICAL WORK.

4. CONTRACTOR SHALL CAP AIRTIGHT ALL REMAINING DUCTS, AT ALL POINTS OF

DISCONNECTION. 5. DEMOLITION AND OTHER WORK WHICH CREATES DISTURBING NOISE. MUST BE PERFORMED AFTER NORMAL WORKING HOURS OR ON WEEKENDS. THE DELIVERY HANDLING AND INSTALLING OF MATERIALS FOUIPMENT AND DEBRIS MUST BE ARRANGED TO AVOID ANY INCONVENIENCE AND ANNOYANCE TO OTHER TENANTS, CLEANING MUST BE CONTROLLED TO PREVENT DIRT AND DUST FROM INFILTRATING INTO ADJACENT TENANT OR MECHANICAL

AREAS. WELDING OR BURNING MUST BE PERFORMED ONLY DURING TIMES SPECIFICALLY

6. IN CASES WHERE EXISTING PIPE IS REMOVED AND CUT BACK TO EXISTING RISERS. CONTRACTOR SHALL PROVIDE NEW OUTLETS FOR FUTURE USE AS TIGHT AS POSSIBLE TO EXISTING RISERS: 4"CAPPED SANITARY OUTLET IN CEILING OF FLOOR BELOW, 2"CAPPED VENT OUTLET, AND NEW VALVED AND CAPPED CW AND HW OUTLETS ABOVE NEW CEILING ELEVATION. SIZE OF NEW VALVED CW & HW OUTLETS SHALL MATCH EXISTING RISER TAPS.

APPROVED BY THE BUILDING MANAGER.

7. PATCH SLAB TO MATCH EXISTING THROUGHOUT.

MECHANICAL PLUMBING

 A. SCOPE OF WORK 1 THIS CONTRACTOR SHALL FURNISH ALL LABOR MATERIALS FOUIPMENT SERVICES TOOLS TRANSPORTATION AND FACILITIES NECESSARY FOR REASONABLY IMPLIED AND INCIDENTAL TO. THE FURNISHING, INSTALLATION, COMPLETION AND TESTING OF ALL THE WORK FOR THE PLUMBING SYSTEMS AS SHOWN ON THE DRAWINGS. CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS, TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: (REFER TO RESPONSIBILITY SCHEDULE FOR EXACT RESPONSIBILITIES) A. COMPLETE SANITARY PIPING SYSTEMS OF WASTE, DRAINS, AND VENTS. B. COMPLETE COLD AND HOT WATER PIPING SYSTEMS, APPURTENANCES AND INSULATION. C. PLUMBING FIXTURES AND EQUIPMENT AS SCHEDULED.

D. NATURAL GAS PIPING AND FITTINGS. E. TESTS AND ADJUSTMENTS.

2. BEFORE STARTING WORK, THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS TO SEQUENCE. COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE PLUMBING SYSTEM. MATERIALS, AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID INTERFERENCES AND

3. RELOCATION OF EXISTING WATER, WASTE, VENT, OR DRAINAGE LINES TO FACILITATE STORE DESIGN CRITERIA MUST BE INCLUDED IN BID PROPOSAL

A. PLUMBING EQUIPMENT

1. PROVIDE NEW PLUMBING EQUIPMENT AS SHOWN ON THE DRAWING AND SPECIFIED IN THE PLUMBING FIXTURE SCHEDULE

2. WHERE EXISTING PLUMBING FIXTURES ARE TO BE REUSED, REPLACE BALL COCK VALVE SEALS, LEAVE IN PROPER WORKING ORDER.

B. GENERAL PIPING REQUIREMENTS

1. GENERALLY, SANITARY AND POTABLE WATER CONNECTIONS WILL BE MADE AT SERVICE LOCATIONS. FIELD VERIFY EXACT CONNECTION POINTS PRIOR TO SUBMITTING BID AND NOTIFY THE TENANT'S CONSTRUCTION MANAGER IF CONDITIONS ARE NOT AS SHOWN ON THE PLANS OR AS STATED IN THE SPECIFICATIONS. CONTRACTOR MUST VERIFY THE OPERABILITY OF ENTIRE SYSTEM PRIOR TO TIE IN AS FOLLOWS: A. SNAKE SANITARY FOR A DISTANCE OF 100 FEET AND REPORT ANY BLOCKAGE. B. TEST WATER PRESSURE TO INSURE MINIMUM OF 50 PSI.

2. INSTALL ALL NECESSARY PIPE HANGERS, SADDLES, AND CARRIERS TO PROPERLY SUPPORT ALL PIPING AND FIXTURES. HANGERS SHALL SUIT TYPE OF PIPING PROVIDED AND BE SPACED AT A MAXIMUM SPAN OF 5 FEET.

3. ESCUTCHEONS SHALL BE CHROME PLATED, SIZE AS REQUIRED AND PLACED AT ALL PIPE PENETRATIONS AT WALLS, FLOORS, AND CEILINGS IN FINISHED AREAS.

4. FLASHING SHALL BE SEALED WATERTIGHT AND PERFORMED IN ACCORDANCE TO THE LANDLORD'S CRITERIA

A. PIPING - ALL MATERIALS MUST BE CSA LISTED / APPROVED FOR USE IN CANADA

 SANITARY & STORM PIPING MATERIALS MUST BE CSA LISTED.

BURIED - PVC SDR 35 WITH SOLVENT JOINTS ABOVE GROUND / EXPOSED - IPEX XFR-15-50 WITH SOLVENT JOINTS, (SANITARY, STORM AND VENT PIPING), IN RETURN AIR PLENUM SPACES IPEX SYSTEM 15 PERMITTED IN NON-RETURN AIR PLENUM APPLICATIONS

WASTE, DRAIN AND VENT PIPING SHALL BE SERVICE WEIGHT, CAST IRON SOIL PIPE. VENT PIPING ABOVE FLOOR TO BE COPPER. B. JOINTS: BELOW FLOOR SLAB - COMPRESSION TYPE PLASTIC SEAL (HUB AND SPIGOT). ABOVE FLOOR SLAB - NEOPRENE SEALING SLEEVE WITH STAINLESS STEEL SHIELD AND CLAMP WITH APPROVED NEOPRENE - BASED LUBRICANT, (HUBLESS). GALVANIZED VENT -SCREWED JOINTS WITH TEFLON TAPE ON MALE THREADS. PITCH WASTE LINES 3" AND SMALLER NOT LESS THAN 1/4" PER FOOT. PITCH LARGER MAINS NOT LESS THAN 1/8" PER FOOT. INSTALL A CLEANOUT AT BASE OF EACH SOIL STACK, AT EACH CHANGE D IN DIRECTION AT INTERVALS NOT OVER 50 FEET, AND ELSEWHERE AS SHOWN ON

DRAWINGS OR REQUIRED BY LOCAL CODE. CLEAN OUTS SHALL ONLY BE INSTALLED IN NON-PUBLIC AREAS UNLESS GIVEN EXPRESSED WRITTEN PERMISSION BY TENANT'S CONSTRUCTION MANAGER, WHEN GIVEN PERMISSION TO INSTALL IN PUBLIC AREAS. THE CLEANOUTS SHALL HAVE STAINLESS STEEL WALL COVERS AND BRASS FLOOR COVERS (FILISH WITH FINISHED FLOOR) PROVIDED BY THE CONTRACTOR PROVIDE COVERS WITH INSET AREA FOR CARPETED FLOOR LOCATIONS. ALL CLEAN-OUT LOCATIONS SHALL BE APPROVED BY THE TENANT'S CONSTRUCTION MANAGER. E. INSULATE ALL HORIZONTAL RUNS OF PIPING LOCATED IN CEILING SPACES WHEN APPLICABLE. INSULATION TO BE AS SPECIFIED FOR WATER PIPING

CONDENSATE PIPING SHALL BE TYPE "L" DRAWN COPPER TUBE WITH LEAD FREE SOLDERED JOINTS AND WROUGHT COPPER FITTINGS WITH DIELECTRIC SEPARATION

ARMSTRONG "ARMAFLEX" PIPING INSULATION OR TRUEBRO MODEL 102W "HANDI LAV GUARD"

F. INSULATE THE TRAP, SANITARY AND SUPPLY PIPES UNDER LAVATORY WITH 1/2"

BETWEEN DISSIMILAR METALS.

POTABLE WATER PIPING: UPONOR AQUAPEX OR WIRSBO hePEX PERMITTED, OTHERWISE; BELOW GRADE: TYPE 'K', ANNEALED TEMPERED COPPER TUBE FOR PIPE SIZES 2 INCHES AND SMALLER. BRAZE ALL JOINTS. ABOVE GRADE: TYPE 'L' DRAWN COPPER TUBE WITH WROUGHT COPPER FITTINGS AND LEAD FREE SOLDER. INSTALL AIR CHAMBER SHOCK ABSORBERS IN PIPING SYSTEM TO PREVENT NOISE AND DAMAGE DUE TO WATER HAMMER.

SHUT OFF VALVES IN THE SUPPLY PIPING TO EVERY FIXTURE. PROVIDE ACCESS DOORS WHERE NECESSARY E. PROVIDE WATER METER AND REMOTE READER PER LANDLORD'S CRITERIA OR LOCAL UTILITIES REQUIREMENTS IF APPLICABLE. REFER TO PLANS FOR FOR ADDITIONAL INFORMATION. F. SECURE PIPE AT ANGLE STOPS.

D. ALL BRANCH PIPING SYSTEM SHALL HAVE ACCESSIBLE SERVICE VALVE. PROVIDE

G. PROVIDE FLEXIBLE INSERTS AT ALL PIPE PENETRATIONS THROUGH FRAMING TO KEEP PIPES FROM HITTING FRAME WHEN IN OPERATION. A. PROVIDE A COMPLETE GAS PIPING SYSTEM IF APPLICABLE. REFER TO PLANS TO

DETERMINE IF A GAS SYSTEM IS REQUIRED. B. LOW PRESSURE (14" W.C. AND BELOW) GAS LINES SHALL BE BLACK STEEL, SCHEDULE 40. ASTM A-120, WITH MALLEABLE THREADED FITTINGS FOR 2" AND SMALLER, AND WITH WELDED JOINTS FOR 2-1/2" AND LARGER. MEDIUM PRESSURE (ABOVE 14" W.C.) SHALL HAVE WELDED PROVIDE A GAS COCK, DIRT LEG, AND UNION CONNECTION TO EACH PIECE OF

EQUIPMENT. PROVIDE GAS METER AND/OR REGULATOR AS REQUIRED. REGULATOR TO BE D. PITCH PIPING AT A UNIFORM GRADE OF 1/4" IN 15 FEET UPWARD IN DIRECTION OF FLOW. SUPPORT PIPING EVERY 5 FEET. SUPPORT AS REQUIRED BY LANDLORD CRITERIA, AS DETAILED ON DRAWINGS, OR BY STANDARD INDUSTRY PRACTICE, WHICHEVER IS MORE GAS PIPING EXPOSED ON ROOF MUST BE PAINTED WITH RUST-INHIBITING PAINT.

F. INSTALLATION, TESTING AND PURGING OF GAS PIPING SHALL BE DONE PER THE REQUIREMENTS OF THE LOCAL GAS COMPANY, LOCAL CODES, AND APPLICABLE NFPA 54 G. CONTACT AND COORDINATE GAS SERVICE AND METER REQUIREMENTS WITH THE LOCAL GAS COMPANY AND THE LANDLORD PRIOR TO RID H. PROVIDE SUPPORTS, BLOCKS, ETC. FOR NEW GAS LINES IN ACCORDANCE WITH IRASE THE

INSULATION A. INSULATE ALL WATER AND INTERIOR CONDENSATE PIPING WITH 1" THICK (K=0.23 @ 75 F) SNAP-ON FIBERGLASS PIPE INSULATION WITH AN ALL SERVICE JACKET TO MEET LOCAL CODES AND ULC FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATINGS OF 50.

6. TEST & STERILIZATION A. LEAKAGE TESTS SHALL BE PER LOCAL CODES, MINIMUM AS FOLLOWS: TEST POTABLE WATER PIPING AND CONDENSATE PIPING AT 125 PSIG FOR SIX HOURS. TEST DRAIN, WASTE, VENT PIPING BY A 10' WATER COLUMN FOR TWO HOURS. ALL JOINTS SHALL BE GAS AND WATER TIGHT. 3. TEST GAS PIPING WITH PER NFPA 54 CODES.

4. STERILIZE POTABLE HOT & COLD WATER LINES UPON COMPLETION OF SYSTEM. STERILIZE

WATER SYSTEM IN ACCORDANCE WITH LOCAL CODES. FIRE STOPPING PROVIDE ULC / CSA APPROVED FIRE STOPPING SEALANTS AND FIRE STOPPING DEVICES

15MM OPENINGS.

DIV. B. 7.3.4.5

AND SPECIFICATIONS.

APPROVED MANUFACTURER: MANVILLE MICRO-LOK.

RELEVANT CODES & STANDARDS

GENERAL NOTES, (MECHANICAL HVAC & PLUMBING); 1. FIRE DAMPERS SHALL BE INSTALLED IN CONFORMANCE WITH DIV. B, 3.1.8.9

MOVEMENT PROVIDED FOR IN THE CONSTRUCTION FOR THE THE BUILDING.

6. CONDENSATE DRAINS FROM HVAC EQUIPMENT SHALL BE INDIRECTLY DRAINED &

FOR APPROVAL. INSTALLATION SHALL BE COORDINATED ON SITE AND SUBJECT TO THE

AS REQUIRED WHERE PIPING PENETRATES ALL FIRE RATED SEPARATIONS.

AND NFPA 80-20913 2. INSULATION AND COVERINGS ON HEATING AND AIR CONDITIONING PIPING WHERE THE FLUID TEMP. EXCEEDS 120°C SHALL BE NON-COMBUSTIBLE MATERIALS OR SHALL NOT FLAME.

MATERIALS ARE PERMITTED PROVIDED THEY COMPLY WITH DIV. B. 6.2.9.2 3. AIR INTAKES AND EXHAUST OUTLETS SHALL BE SHIELDED FROM THE ENTRY OF SNOW & RAIN AND SHALL BE FITTED WITH CORROSION RESISTANT SCREENS OF MESH HAVING MAX.

GLOW, SMOKE OR SMOLDER WHEN TESTED IN ACCORDANCE WITH ASTM C411, COMBUSTIBLE

4. EXHAUST DUCTS AND OUTLETS SHALL CONFORM TO DIV. B. 6.2.3.8 OF THE OBC. 5. DIV. B. 6.2.1.3 - STRUCTURAL MOVEMENT - MECHANICAL SYSTEMS AND EQUIPMENT SHALL BE DESIGNED AND INSTALLED TO ACCOMMODATE THE MAXIMUM RELATIVE STRUCTURAL

CONNECTED TO THE DRAINAGE SYSTEM FORMING MIN. 25MM AIR BREAK AS PER DIV. B. 7.3.3.11 & 7.4.2.1.(1). 7. PIPING PENETRATING FIRE SEPARATIONS ARE REQUIRED TO BE SEALED AT THE PENETRATION BY FIRE STOPS AND IN COMPLIANCE WITH DIV. B. 3.1.9. THE APPROVED FIRE STOP SYSTEM AND INSTALLATION DETAILS MUST BE SUBMITTED TO THE FILED INSPECTOR

APPROVAL OF THE FIELD INSPECTOR. 8. CAST IRON DRAINAGE, VENT PIPING AND FITTINGS SHALL BE CERTIFIED TO CAN/BSA-B70 9. COPPER PIPING OR TUBING USED SHALL BE CERTIFIED TO ASTM B88 OR COMPLY WITH

10. BACK WATER VALVES AND INSTALLATIONS SHALL CONFORM TO DIV. B. 7.4.6.4 OF THE OBC. 11. NOMINALLY HORIZONTAL PIPING SHALL BE SUPPORTED AT MAX. INTERVALS SPECIFIED IN

12. BACKFLOW PREVENTION DEVICES SHALL BE SELECTED INSTALLED AND TESTED IN CONFORMANCE WITH CAN/CSA-B64-2017 & REGION STANDARDS. 13. ALL WORK, PROCEDURES, PRACTICES & MATERIALS MUST BE IN STRICT CONFORMANCE WITH THE LATEST EDITION OF ALL THE RELEVANT CODES, RULES, STANDARDS, REGULATIONS SEAL

ISSUED FOR TENDER 05.28.202 ISSUED FOR PERMITS 05.21.2025 05.21.2025 ISSUED FOR REVIEW

REVISIONS

ARCHITECT & ENGINEER BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS ORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE THE CONTRACTOR AND SUB-TRADES ARE RESPONSIBLE TO ONTACT THE ENGINEER IN ADVANCE IN ORDER TO SCHEDULE

EQUIRED SITE VISITS AND PROVIDE INSPECTION REPORTS AS

EQUIRED IN ACCORDANCE WITH THE GENERAL COMMITMENT 8

AWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST

OJECT; AND MUST REPORT ANY DISCREPANCIES TO TH

DATE

ENGINEERING CONSULTANTS:



EVIEW PROCESS BY ARCHITECTS AND ENGINEERS.

TEL: (416) 726-1648 | (905) 617-4804 E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca

PROJECT: HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION

162 Guelph St., Unit 216, Georgetown, On., L7G 4A6

DRAWING TITLE: MECHANICAL

2110 TRAFALGAR RD, OAKVILLE

ON L6H 752

SPECIFICATIONS

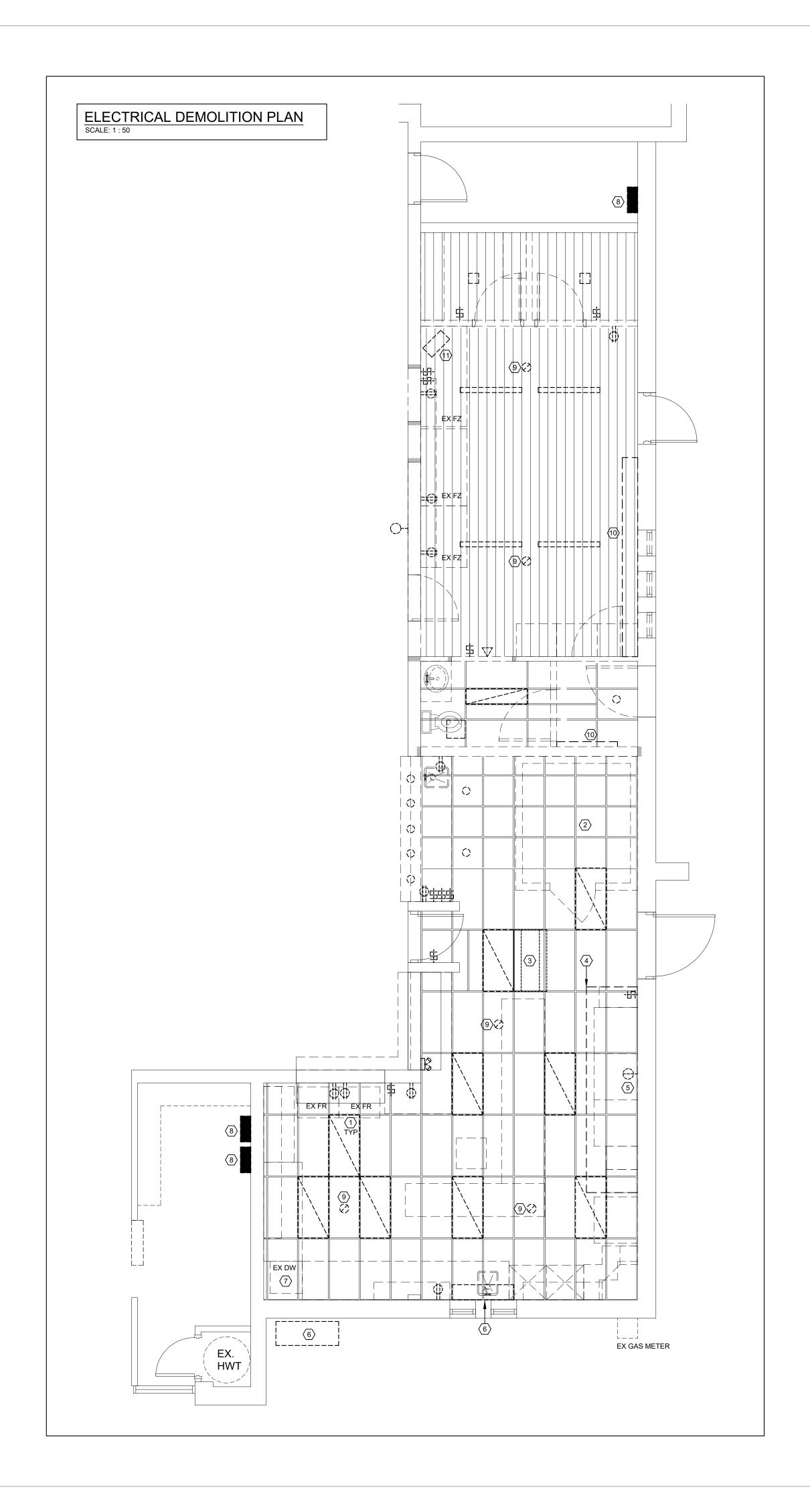


28 KING STREET EAST, UNIT B STONEY CREEK, ONTARIO, L8G 1J8 Tel. 905-664-8735 Fax. 905-664-8737 Web: www.2gai.com

PROJECT: SCALE: AS NOTED 25011 DATE: MAY.2025 DRAWN DRAWING

CHECKED

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DEMOLITION GENERAL NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING AND REMOVING ALL ELECTRICAL EQUIPMENT FROM AREAS BEING ALTERED OR DEMOLISHED. WIRING, CONDUIT AND EQUIPMENT REQUIRED TO MAINTAIN SERVICE IN OTHER PARTS OF THE BUILDING SHALL BE TEMPORARILY SUPPORTED, REROUTED, SERVICED OR RELOCATED AS REQUIRED. OBSOLETE CONDUITS AND CABLES SHALL BE DISCONNECTED FROM THEIR SOURCE OF SUPPLY, CUT BACK AS FAR AS POSSIBLE, AND SHALL BE REMOVED. ALL EXISTING WIRING NOT REMOVED SHALL BE DISCONNECTED, BLANKED-OFF AND MADE SAFE.
- CONTRACTOR SHALL ENSURE THAT AREAS NOT INCLUDED IN THIS CONTRACT ARE ADEQUATELY PROTECTED FROM DUST, DEBRIS, OR ANY OTHER DAMAGE RESULTING FROM WORK PERFORMED, AND THAT ANY CLEANING OR REPAIR REQUIRED IS PERFORMED WITHOUT COST TO OWNER.

 CONTRACTOR SHALL ENSURE THAT ALL REFUSE IS REMOVED ON A DAILY BASIS AND THAT JOB.
- 3. CONTRACTOR SHALL ENSURE THAT ALL REFUSE IS REMOVED ON A DAILY BASIS AND THAT JOB SITE IS MAINTAINED IN AN ORDERLY AND SAFE CONDITION.

 4. THE CONTRACTOR SHALL REPLACE OR REPAIR ANY ITEMS WHICH ARE DAMAGED DUE TO THIS
- WORK AT NO EXTRA COST TO THE BUILDING OWNER.

 5. REMAINING REMOVED EQUIPMENT AND MATERIALS, UNLESS OTHERWISE NOTED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE UPON COMPLETION OF THE WORK.
- GENERAL CONTRACTOR SHALL REMOVE ALL NECESSARY CEILING TILES TO ALLOW DEMOLITION
 OF MECHANICAL AND ELECTRICAL SERVICES.
 MECHANICAL & ELECTRICAL CONTRACTORS SHALL ASSIST THE GENERAL CONTRACTOR IN THE
- DEMOLITION WORK, BY CUTTING BACK MECHANICAL & ELECTRICAL SERVICES AS NEEDED FOR DEMOLITION WORK.

 8. REMOVE EXISTING OUTLETS NOT TO BE REUSED, PULL WIRES BACK TO RESPECTIVE PANEL AND
- 9. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR MAKING GOOD ANY SURFACES OR FINISHES DAMAGED AS A RESULT OF DEMOLITION.

ELECTRIC	ELECTRICAL DEMOLITION LEGEND							
-	TOGGLE SWITCH TO BE DISCONNECTED AND REMOVED BACK TO SOURCE							
() =	DUPLEX RECEPTACLE TO BE DISCONNECTED AND REMOVED BACK TO SOURCE							
<1	COMMUNICATION OUTLET TO BE DISCONNECTED AND REMOVED BACK TO SOURCE							
	LIGHTING FIXTURES TO BE DISCONNECTED AND REMOVED							
D\$	EMERGENCY REMOTE HEADS TO BE DISCONNECTED AND REMOVED							
⟨⟩	FIRE ALARM DEVICE TO BE DISCONNECTED AND REMOVED							

DRAWING CODED NOTES:

- EXISTING LIGHT FIXTURES TO BE DISCONNECTED AND REMOVED. EXISTING CIRCUITRY TO REMAIN AND BE COILED UP IN THE CEILING SPACE AND LEFT FOR FUTURE CONNECTION TO NEW LIGHT FIXTURES. REFER TO DRAWING E2 FOR MORE INFORMATION.
- EXISTING WALK IN COOLER TO BE REMOVE. EXISTING POWER FEEDERS, TRANSFORMERS, CONTROLS ETC. TO BE DISCONNECTED AND REMOVED. EXISTING POWER FEEDERS SERVING WALK IN COOLERS TO BE CUT BACK TO THE BREAKER SOURCE.
- EXISTING POWER TO DUCTLESS AIR CLEANING UNIT SYSTEM TO BE DISCONNECTED AND REMOVED BACK TO SOURCE. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION
- EXISTING KITCHEN EXHAUST HOOD, C/W ROOF TOP MOUNTED EXHAUST FAN, MAKE UP AIR INTAKE AIR DUCT, FIRE SUPPRESSION SYSTEM, ETC. IS TO BE DISCONNECTED, REMOVED AND DISPOSED OF. EXISTING POWER FEEDERS SERVING EACH EQUIPMENT TO BE CUT BACK TO THE SOURCE. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION.
- ALL EXISTING POWER RECEPTACLES AND CONNECTIONS SERVING EXISTING KITCHEN APPLIANCES TO BE DISCONNECTED AND CUT BACK TO SOURCE. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION.
- EXISTING POWER TO DUCTLESS AIR CONDITIONING UNIT / SYSTEM IS TO BE DISCONNECTED, REMOVED AND CUT BACK TO SOURCE. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS
- CONSTRUCTION.

 EXISTING COMMERCIAL CHEMICAL RINSE HIGH TEMP DISHWASHER C/W BOOSTER HEATER AND ALL ASSOCIATED COMPONENTS IS TO BE REUSED / REINSTALLED INTO NEW KITCHEN LAYOUT. DISCONNECT AND REMOVE EXISTING POWER FEEDERS AND LEAVE FOR FUTURE

CONNECTION TO DISHWASHER. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS

- 8 EXISTING ELECTRICAL PANELS TO REMAIN AS IS. CONTRACTOR TO PROVIDE UPDATED TYPEWRITTEN PANEL SCHEDULES FOR EACH PANEL AFTER DEMOLITION WORK.
- EXISTING FIRE ALARM DEVICES TO BE DISCONNECTED AND REMOVED. EXISTING CIRCUITRY TO REMAIN AND BE COILED UP IN THE CEILING SPACE AND LEFT FOR FUTURE CONNECTION
- TO NEW FIRE ALARM DEVICES. REFER TO DRAWING E2 FOR MORE INFORMATION.

 EXISTING BASEBOARD HEATER TO BE DISCONNECTED AND REMOVED. CUT BACK POWER
- FEEDER TO SOURCE. MAKE GOOD / SAFE ALL AREAS AFFECTED BY THIS CONSTRUCTION.

 (11) EXISTING TELEVISION TO BE DISCONNECTED AND REMOVED.

CONSTRUCTION. REFER TO NEW POWER PLAN FOR MORE INFO.

SEAL

1	ISSUED FOR TENDER	05.28.2025
0	ISSUED FOR PERMITS	05.21.2025
	ISSUED FOR REVIEW	05.21.2025
NO	REVISIONS	DATE

DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT; AND MUST REPORT ANY DISCREPANCIES TO THE ARCHITECT & ENGINEER BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

THE CONTRACTOR AND SUB-TRADES ARE RESPONSIBLE TO CONTACT THE ENGINEER IN ADVANCE IN ORDER TO SCHEDULE REQUIRED SITE VISITS AND PROVIDE INSPECTION REPORTS AS REQUIRED IN ACCORDANCE WITH THE GENERAL COMMITMENT & REVIEW PROCESS BY ARCHITECTS AND ENGINEERS.

ENGINEERING CONSULTANTS:



162 Guelph St., Unit 216, Georgetown, On., L7G 4A6 TEL: (416) 726-1648 | (905) 617-4804 E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca

PROJECT:

HOLY TRINITY CROATIAN
PARISH HALL
WASHROOM AND KITCHEN
RENOVATION
2110 TRAFALGAR RD, OAKVILLE

DRAWING TITLE:

ELECTRICAL DEMOLITION PLANS

ON L6H 752

GRGURIC ARCHITECTS INCORPORATED



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

Web: www.2gai.com

PROJECT:

SCALE:
AS NOTED
DATE:

MAY.2025

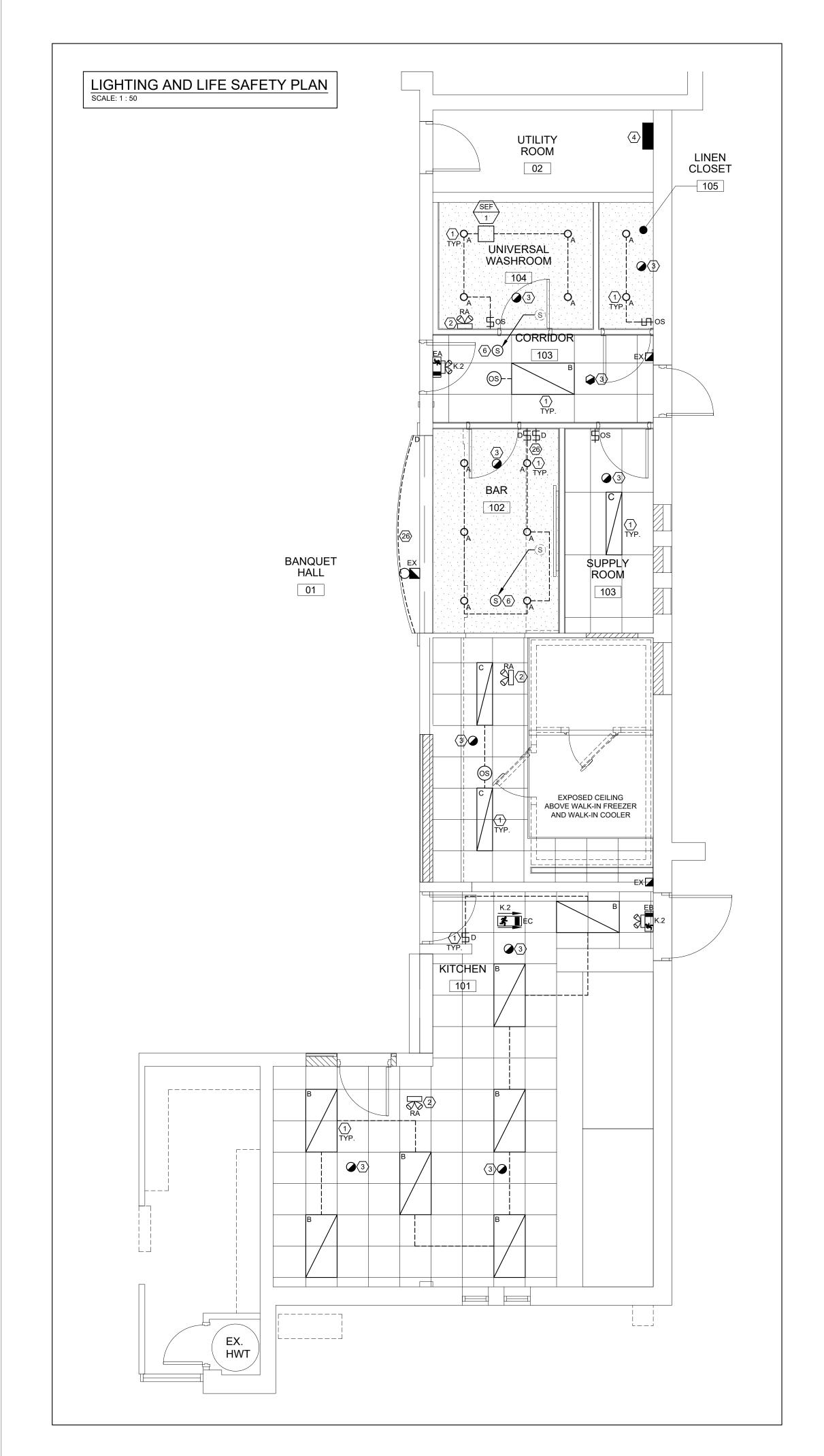
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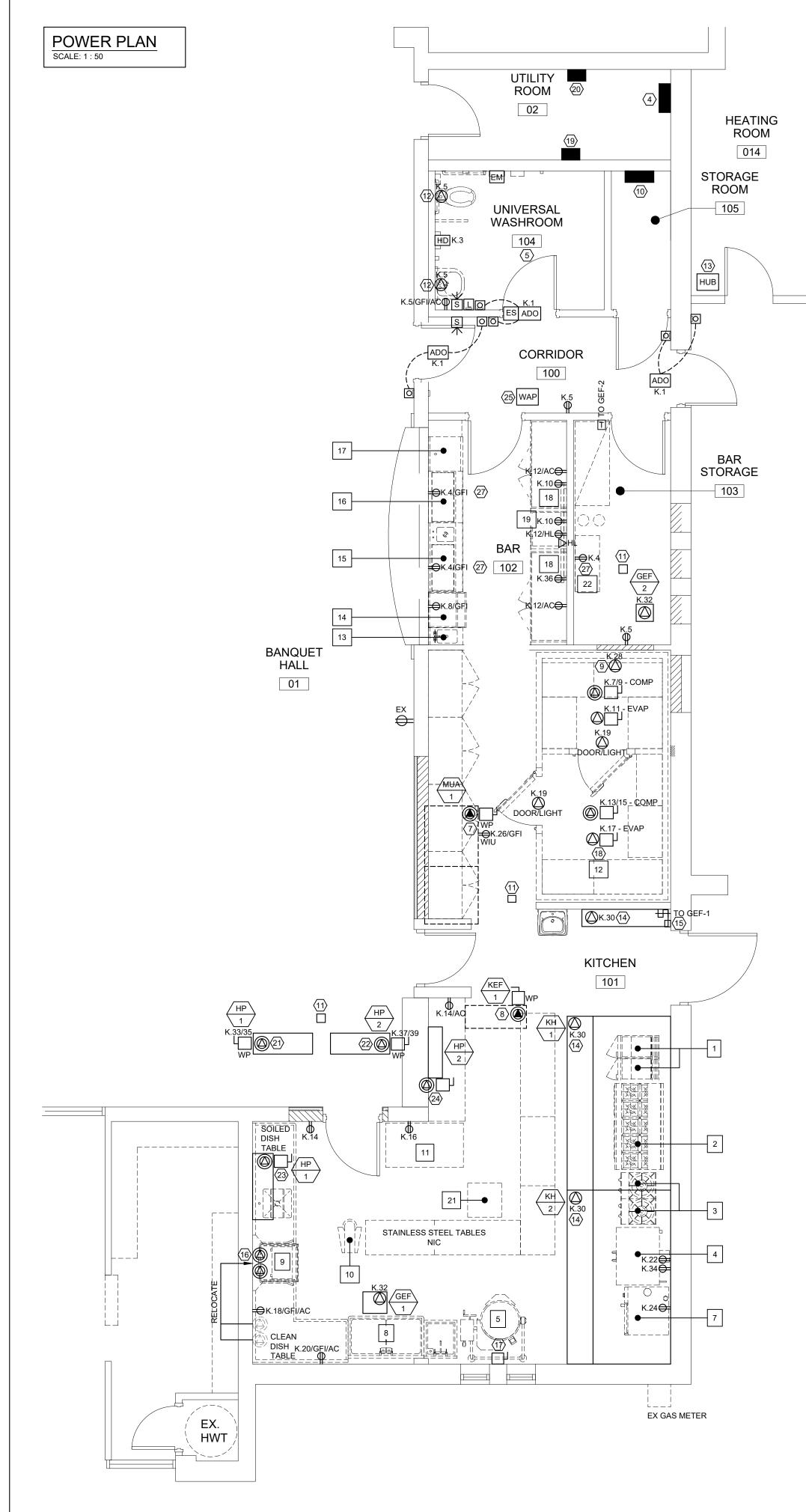
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ELECTRICAL GENERAL NOTES

- 1. CONTRACTOR TO EXAMINE SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
- COORDINATE ALL EQUIPMENT/SERVICE SHUT DOWN WITH OWNER. PROVIDE NEW EQUIPMENT AND ALL ASSOCIATED ACCESSORIES AS REQUIRED TO COMPLETE A FULLY
- FUNCTIONING SYSTEM. COMPLETELY REMOVE ALL DEBRIS AND RUBBISH FROM SPACE DAILY.

. ALL BRANCH WIRING SHALL BE CONCEALED IN WALLS AND ABOVE HUNG CEILING.

INTERLOCKED WITH SUPPRESSION SYSTEM BY THE ELECTRICAL CONTRACTOR.

- ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE ANY WORK IS BEGUN. CONTRACTOR TO MAINTAIN FIRE SEPARATION.
- ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS AND/OR EXISTING CONDITIONS ARE TO BE REFERRED TO CONSULTANT FOR INSTRUCTIONS BEFORE ANY WORK IS BEGUN.
- 8. PROVIDE CAULKING AND FIRESTOPPING FOR ALL ELECTRICAL SERVICES PASSING THROUGH FIRE
- PROVIDE SEPARATE NEUTRAL WIRE FOR EACH DEDICATED CIRCUIT. 10. TO PREVENT SOUND TRANSFER, STAGGER OUTLETS AN EITHER SIDE OF A PARTITION, DO NOT LOCATE
- BACK TO BACK. . ALL NEW EQUIPMENT TO BE LABELED. PROVIDE PANEL DIRECTORIES FOR NEW PANELS. UPDATE PANEL DIRECTORIES FOR EXISTING PANELS.
- 13. CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK. CONTRACTOR TO FURNISH AND INSTALL ALL NECESSARY WIRES, CONDUIT AND JUNCTION BOXES REQUIRED TO KEEP CONTINUITY
- 14. VERIFY EXACT POWER REQUIREMENTS OF MECHANICAL EQUIPMENT BEFORE ROUGHING. REFER TO MECHANICAL SHOP DRAWINGS FOR MANUFACTURERS ELECTRICAL DATA AND INSTALLATION REQUIREMENTS. ADVISE CONSULTANT OF ANY DISCREPANCIES.
- 15. IDENTIFY AND LABEL ALL NEW POWER RECEPTACLES. 16. CONTRACTOR MUST PRACTICE PROPER LOCK AND TAG PROCEDURES
- 17. BEAM CLAMPS ARE NOT PERMITTED TO HANG OR SUPPORT ELECTRICAL SERVICES. 18. ALL POWER REQUIREMENTS FOR KITCHEN EQUIPMENT TO BE VERIFIED AND CONFIRMED WITH OWNER. 19. AUTOMATIC SHUT-OFF IS REQUIRED FOR ALL ELECTRICAL EQUIPMENT UNDER THE HOOD. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH KITCHEN SUPPLIER AND MECHANICAL CONTRACTOR TO ENSURE ALL REQUIREMENT ARE MET. ALL INTERLOCKING OF ELECTRIC EQUIPMENT UNDER HOOD TO BE
- 20. FIRE SUPPRESSION SYSTEM IS TO BE INTERLOCKED WITH BASE BUILDING FIRE ALARM SYSTEM. COORDINATE WITH SYSTEM SUPPLIER.
- 21. BEFORE INSTALLING ANY RECEPTACLES OR OUTLET BOXES FOR KITCHEN EQUIPMENT THIS ELECTRICAL CONTRACTOR IS TO VERIFY TYPE OF CONNECTIONS AND EXACT LOCATIONS OF OUTLETS WITH OWNER.

DRAWING CODED NOTES:

- CONNECT NEW LIGHT FIXTURES AND LIGHTING CONTROL IN LOCATIONS AS INDICATED ON LAYOUT. CONNECT NEW LIGHTS TO EXISTING LIGHTING CIRCUITS PREVIOUSLY USED FOR LIGHTING IN THIS AREA. EXTEND FEEDERS TO NEW LOCATIONS AS REQUIRED. TYPICAL FOR ALL LIGHT FIXTURES IN THE AREA.
- NEW EMERGENCY REMOTE HEADS C/W INTEGRATED BATTERY UNIT TO BE FED FROM UNSWITCHED PORTION OF THE NEAREST LIGHTING CIRCUIT AS INDICATED ON LAYOUT.
- PROVIDE NEW HEAT DETECTORS AND SMOKE DETECTORS AS INDICATED ON LAYOUT. EXTEND (3) EXISTING CIRCUITRY PREVIOUSLY USED FOR FIRE ALARM DEVICES IN THIS AREA TO NEW DEVICE LOCATIONS. COORDINATE ALL WORK WITH G.C.
- EXISTING GE FIRESHEILD PLUS MAIN FIRE ALARM CONTROL PANEL. PROVIDE NEW CIRCUITRY FOR ALL NEW DEVICES AS INDICATED ON LAYOUT. PROVIDE NEW DEDICATED ZONE FOR HOOD CONTROL PANEL/FIRE SUPPRESSION SYSTEM. PROVIDE ALL NECESSARY RELAYS AND EQUIPMENT FOR A COMPLETE INSTALLATION. COORDINATE ALL REQUIREMENTS WITH GE
- (5) REFER TO UNIVERSAL WASHROOM DETAIL ON DRAWING E0.3 FOR MORE INFORMATION.
- EXISTING AUDIO SPEAKERS TO BE RELOCATED AS INDICATED ON LAYOUT. EXTEND EXISTING FEEDERS TO NEW LOCATIONS AS REQUIRED. VERIFY REQUIREMENTS ON SITE.
- PROVIDE POWER FOR NEW MAKE UP AIR UNIT MUA-1 (20A 208V/3PH) TO BE FED FROM NEW PANEL K (CCTS. K-27/29/31). REFER TO PANEL SCHEDULE ON DRAWING E3 FOR MORE INFORMATION. PROVIDE 3#12 +GND IN 3/4" CONDUIT FROM PANEL K TO HOOD CONTROL PANEL, THEN TO EQUIPMENT LOCATION ON ROOF RESPECTIVELY. COORDINATE ALL REQUIREMENTS
- WITH MECHANICAL CONTRACTOR. CONFIRM ROUTING OF FEEDERS ON SITE PRIOR TO TENDERING. NEW NEMA 5-20R GFI RECEPTACLE IN 'WIU' COVER IN MUA TO BE PROVIDED BY MUA MANUFACTURER AND FIELD WIRED BY THE ELECTRICAL CONTRACTOR. CONFIRM WITH UNIT SHOP DRAWINGS ON THE EXACT LOCATION OF CONVENIENCE RECEPTACLE. COORDINATE UNIT LOCATION AND ROTATION WITH MECHANICAL CONTRACTOR ON SITE
- PROVIDE DEDICATED POWER FOR NEW EXHAUST FAN KEF-1 (30A 208V/3PH) TO BE FED FROM NEW PANEL K (CCTS. K-21/23/25). REFER TO PANEL SCHEDULE ON DRAWING E1.04 FOR MORE INFORMATION PROVIDE 3#10 +GND IN 3/4" CONDUIT FROM PANEL K TO HOOD CONTROL PANEL THEN TO EQUIPMENT LOCATION ON ROOF RESPECTIVELY. COORDINATE ALL REQUIREMENTS WITH MECHANICAL CONTRACTOR. CONFIRM ROUTING OF FEEDERS ON SITE PRIOR TO TENDERING. COORDINATE UNIT LOCATION WITH MECHANICAL CONTRACTOR ON SITE.
- PROVIDE POWER TO HEAT TRACING CABLE SUPPLIED AND INSTALLED BY THE MECHANICAL CONTRACTOR. COORDINATE REQUIREMENTS AND LOCATIONS WITH MECHANICAL

CONTRACTOR PRIOR TO ANY ROUGH-IN.

- LOCATION OF NEW 200A 120/208V/3PH/4W PANELBOARD 'K'. REFER TO SINGLE LINE DIAGRAM ON DRAWING E3 FOR MORE INFORMATION.
- A/C LINE SHACK ON ROOF FOR FLEXIBLE POWER CONDUIT RUNS. COORDINATE LOCATIONS WITH MECHANICAL CONTRACTOR.
- PROVIDE POWER TO TOILET AND FAUCETAS INDICATED ON LAYOUT. CONTRACTOR TO PROVIDE POWER FROM PANEL K (CCT. K.5). VERIFY ON SITE EXACT REQUIREMENTS ON SITE. COORDINATE ALL WORK WITH PLUMBING CONTRACTOR. PROVIDE ALL REQUIRED EQUIPMENT FOR A COMPLETE INSTALLATION. PROVIDE NEW GFI BREAKER.
- EXISTING IT RACK HUB TO REMAIN AS IS. ALL NEW DATA LINES TO BE TERMINATED IN EXISTING PATCH PANELS. PROVIDE POWER TO KITCHEN HOODS KH-1 & KH-2 AND REMOTE MOUNTED HOOD UTILITY
- SYSTEM BOX C/W FIRE SUPPRESSION & CONTROLS, ALL INTERLOCKING OF EXHAUST FAN AND MAKE UP AIR UNIT TO BE PERFORMED BY MECHANICAL CONTRACTOR. PROVIDE DRY CONTACT FROM FIRE ALARM PANEL TO SHUT DOWN HOOD EXHAUST FAN (KEF-1), MAKE-UP AIR UNIT (MUA-1) AND CCT'S#K-22, 24 & 34 UPON FIRE ALARM ACTIVATION. CONNECT TO DEDICATED FIRE ALARM ZONE IN FIRE ALARM PANEL TO MONITOR SUPPRESSION SYSTEM. REFER TO CAPTIVE AIR SHOP DRAWINGS FOR ELECTRICAL AND FIRE ALARM REQUIREMENTS AND RESPONSIBILITIES. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.
- PROPOSED LOCATION OF HOOD START / STOP CONTROL AND EMERGENCY FIRE SUPPRESSION SYSTEM PULL STATION. PROVIDE NECESSARY CONDUITS FROM CEILING SPACE TO CONTROL AND PULL STATION LOCATIONS FOR LOW VOLTAGE WIRING BY OTHERS. REFER TO CAPTIVE AIR SHOP DRAWINGS FOR EXACT REQUIREMENTS AND RESPONSIBILITIES. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.
- EXISTING 2 x POWER FEEDERS SERVING DISHWASHER TO BE DISCONNECTED, RELOCATED AND REWORKED TO NEW LOCATIONS AS INDICATED ON LAYOUT. VERIFY ON SITE EXACT
- PROVIDE NEW POWER TO STEAM KETTLE (9.8KW 208V/3PH) FED FROM EXISTING DISCONNECT SWITCH IN THE UTILITY ROOM C/W NEW 40A FUSES. REFER TO NOTE #20 BELOW. CONFIRM ALL POWER REQUIREMENTS WITH KITCHEN SUPPLIER PRIOR TO ANY WORK. REFER TO SINGLE LINE DIAGRAM FOR MORE INFORMATION.
- PROVIDE ALL NECESSARY POWER CONNECTIONS FOR WALK IN COOLER AND WALK IN FREEZER AS REQUIRED BY THE MANUFACTURER. CONFIRM ALL POWER REQUIREMENTS WITH EQUIPMENT SHOP DRAWINGS.
- EXISTING 200A/3P DISCONNECT PREVIOUSLY USED FOR "ELECTRIC DUCT HEATER" TO BE REPLACED WITH NEW 200A/3P DISCONNECT SWITCH TO SERVE NEW PANEL K. REFER TO SINGLE LINE DIAGRAM FOR MORE INFORMATION.
- EXISTING 60A/3P DISCONNECT PREVIOUSLY USED FOR "STOVE" TO BE REUSED FOR NEW STEAM KETTLE. EXISTING POWER FEEDER FROM DISCONNECT SWITCH TO BE DISCONNECTED AND REMOVED. PROVIDE NEW 40A FUSES FOR STEAM KETTLE.
- PROVIDE POWER TO NEW ROOF TOP MOUNTED HEAT PUMP OUTDOOR UNIT HP-1 (50A -208V/1PH). COORDINATE LOCATIONS AND POWER REQUIREMENTS WITH MECHANICAL
- PROVIDE POWER TO NEW ROOF TOP MOUNTED HEAT PUMP OUTDOOR UNIT HP-2 (20A -208V/1PH). COORDINATE LOCATIONS AND POWER REQUIREMENTS WITH MECHANICAL
- PROVIDE POWER TO NEW HEAT PUMP INDOOR UNIT HP-1 FED FROM RESPECTIVE OUTDOOR UNIT. COORDINATE LOCATIONS AND POWER REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- PROVIDE POWER TO NEW HEAT PUMP INDOOR UNITS HP-2 FED FROM RESPECTIVE OUTDOOR
- PROVIDE ONE DATA CABLE FOR EACH WIRELESS ACCESS POINT. (WAP PROVIDED BY OWNER). PROVIDE 3M SLACK COILED UP IN CEILING SPACE. COORDINATE EXACT LOCATION WITH

UNIT. COORDINATE LOCATIONS AND POWER REQUIREMENTS WITH MECHANICAL CONTRACTOR.

- PROVIDE NEW UNDERCOUNTER LIGHTING UNDER BAR TOP TO BE OPERATED VIA NEW DIMMER SWITCH. PROVIDE REMOTE DRIVER ABOVE NEW CEILING IN BAR 102. PROVIDE LOW VOLTAGE WIRING FROM THE DRIVER TO THE ROPE LIGHTING LOCATION. ALL EXPOSED WIRING TO BE IN WIREMOLD. COORDINATE ALL REQUIREMENTS WITH GC PRIOR TO ANY WORK.
- PROVIDE POWER TO NEW SODA POP DISPENSER. CONFIRM EXACT POWER REQUIREMENTS WITH KITCHEN APPLIANCE SUPPLIER PRIOR TO ANY WORK.

0 ISSUED FOR PERMITS 05.21.2025 ISSUED FOR REVIEW 05.21.2025

> DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT: AND MUST REPORT ANY DISCREPANCIES TO THE ARCHITECT & ENGINEER BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE

DATE

REVISIONS

THE CONTRACTOR AND SUB-TRADES ARE RESPONSIBLE TO CONTACT THE ENGINEER IN ADVANCE IN ORDER TO SCHEDULE REQUIRED SITE VISITS AND PROVIDE INSPECTION REPORTS AS REQUIRED IN ACCORDANCE WITH THE GENERAL COMMITMENT & REVIEW PROCESS BY ARCHITECTS AND ENGINEERS.

ENGINEERING CONSULTANTS:



162 Guelph St., Unit 216, Georgetown, On., L7G 4A6 TEL: (416) 726-1648 | (905) 617-4804 E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca

PROJECT:

HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION

2110 TRAFALGAR RD, OAKVILLE

ON L6H 752

DRAWING TITLE:

ELECTRICAL LIGHTING, LIFE SAFETY AND POWER PLANS

GRGURIC ARCHITECTS **INCORPORATED**



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

Web: www.2gai.com AS NOTED DATE:

MAY.2025

DRAWN

NEW PANEL K RATING: 200A-120V/208V/3PH/4W													
BKR		LOAD		NO			NO	LOAD			BKR	CIRCUIT	
DIXIX	Α	В	С	110.			110.	Α	В	С	Bitit	DESIGNATION	
1/15	600			1	┢		2	100			1/15	EXIT SIGNS	
1/15		1000		3	Н	•	4		500		1/20	SODA POP DISPENSER	
1/15			300	5	H	+	- 6			500	1/15	#18 FRIDGES / #19 WINE	
2/15				7	┢	+	- 8	1350			1/15	#14 U/C ICE MAKER	
2/13				9	\mathbb{H}	\dagger	10		900		1/15	#18 FRIDGES / #19 WINE	
1/15				11	\mathbb{H}	╁	12			300	1/15	BAR REC.	
2/15				13	┢	+	14	500			1/20	KITCHEN REC.	
2/15				15	H	+	16		500		1/15	#11 SLIDING DOOR FRIDGE	
1/15				17	H	╫	18			500	1/20	KITCHEN REC.	
1/15				19	⊣	+	20	500			1/20	KITCHEN REC.	
		1896		21	Н	+	22		900		1/15	#4 CONVECTION OVEN *	
3/30			1896	23	Н	╫	24			800	1/15	#7 COMBI OVEN *	
	1896			25	\vdash	+	26	100			1/20	ROOFTOP CONV. REC.	
		1140		27	Н	+	28		150		1/15	HEAT TRACING	
3/20			1140	29	Н	╅	30			500	1/15	KH-1 & KH-2	
	1140			31	⊣	+	32	500			1/15	GEF-1 & GEF-2	
0/50		2700		33	Н	+	34		900		1/15	#4 CONVECTION OVEN *	
2/50			2700	35	Н	╁	36						
0/00	1900			37	⊣	+	38				1/15	SPARE	
2/20		1900		39	Н	+	40				1/15	SPARE	
1/15				41	Н	╁	42				1/15	SPARE	
1/15				43	⊣	+	44					SPACE	
				45	Н	+	46					SPACE	
				47	Н	╁	48					SPACE	
				49	\vdash	+	50					SPACE	
				51	Н	+	- 52					SPACE	
				53	H	+	54					SPACE	
				55	⊣	$\dashv \downarrow$	56					SPACE	
				57	\vdash	$\downarrow \downarrow$	- 58					SPACE	
				59	\vdash	_	- 60					SPACE	
	### BKR 1/15 1/15 1/15 1/15 2/15 1/15 1/15 3/30 3/20 2/50 2/20 1/15 1/15	//3PH/4W BKR A 1/15 600 1/15 1/15 2/15 1/15 3/30 1896 3/20 1140 2/50 1900 2/20 1/15 1/15	//3PH/4W BKR	//3PH/4W BKR	### BKR A B C NO. 1/15 600		BKR		NO. NO.	BKR	BKR	BKR	

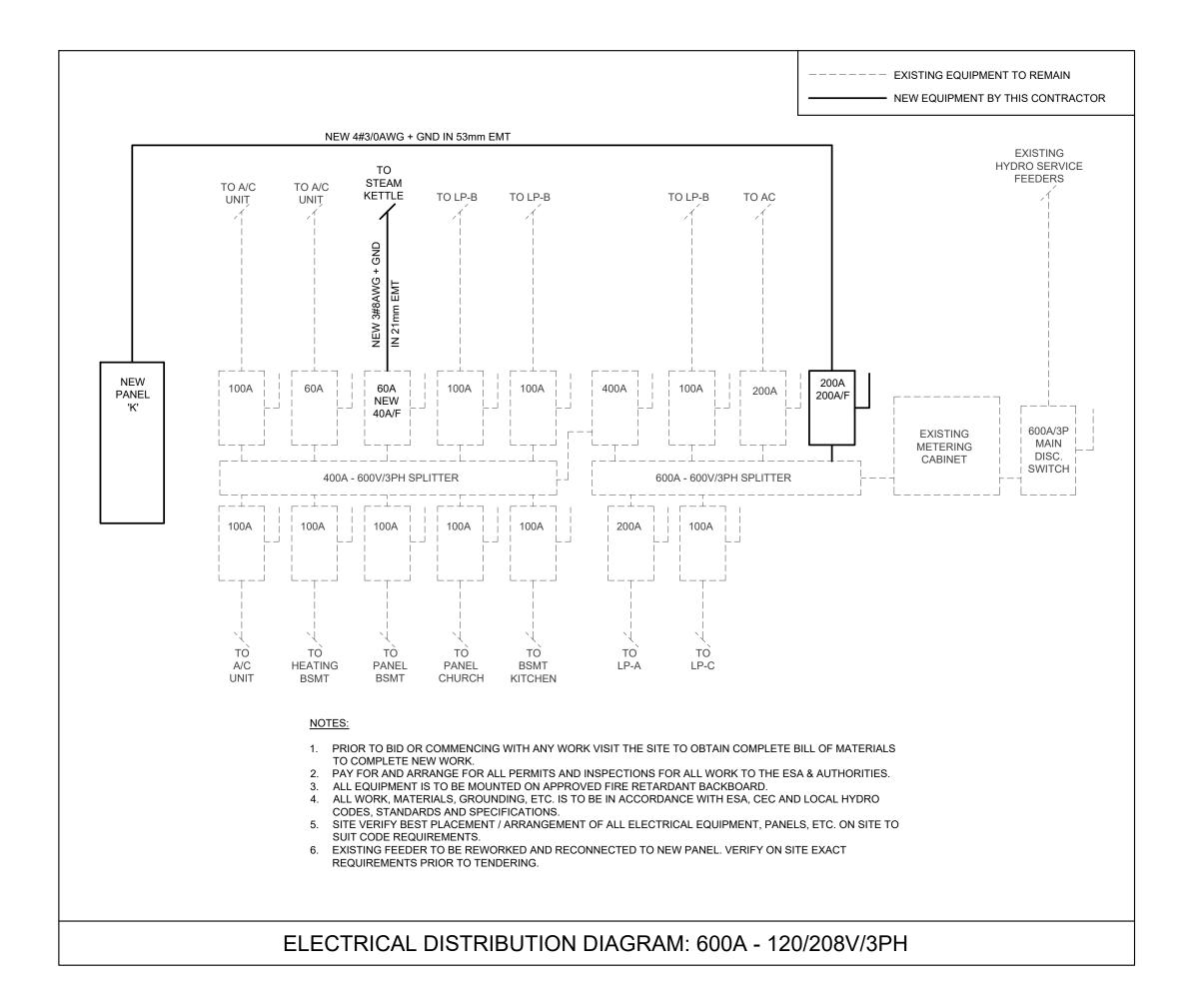
CONTRACTOR TO PERFORM LOAD TEST AND ENSURE PANEL'S ARE PROPERLY BALANCED. ELECTRICAL CONTRACTOR SHALL BALANCE PANEL

SCHEDULE'S AND ELECTRICAL EQUIPMENT TO 10% (+) BETWEEN PHASES: A/B, B/C, A/C REGARDLESS OF CIRCUITING INDICATED.

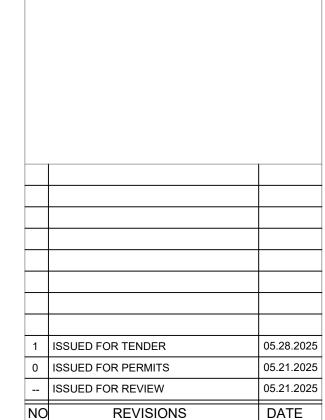
DENOTES SHUNT TRIPBREAKER

DENOTES GFCI BREAKER

1	GAS FLOOR FRYER
2	10 BURNER RANGE
3	STOCK POT RANGE - SINGLE
4	CONVECTION OVEN
5	TILTING KETTLE (ELECTRIC)
6	DOUBLE WARMER (TBC)
7	COMBI OVEN (GAS)
8	PREP SINK
9	DOOR TYPE DISHWASHER
10	EXISTING MIXER
11	SLIDING DOOR REFRIGERATOR
12	WALKIN FRIDGE / FREEZER COMBO UNIT
13	UNDERBAR HAND SINK UNIT
14	UNDERBAR ICE MAKER
15	COCKTAIL UNIT W/ DUMP SINK
16	COCKTAIL UNIT
17	UNDERBAR GLASS RACK UNIT
18	BACK BAR REFRIGERATOR
19	WINE FRIDGE
20	ICE MAKER
21	GREASE INTERCEPTOR
22	BEVERAGE RACK (BAG IN BOX)



UNIVERSAL WASHROOM DOOR OPERATOR / EMERGENCY CALL SYSTEM DETAIL (TO BE EQUAL TO:) 1. PRIOR TO ANY WORK, ROUGH IN OR ORDERING ANY MATERIALS COORDINATE ALL DOOR HARDWARE WITH THE G.C., ARCHITECT & OWNER. 2. OPERATION OF AUTOMATIC DOOR CONTROL SYSTEM: THE WASHROOM DOOR IS NORMALLY CLOSED AND UNLOCKED. THE EXTERIOR PUSH TO OPEN ILLUMINATED PUSH PLATE SWITCH OUTER RING IS GREEN INDICATING THE WASHROOM IS VACANT. PRESSING THE PUSH TO OPEN SWITCH WILL OPEN THE DOOR. ONCE THE DOOR IS CLOSED. PRESSING THE PUSH TO LOCK ILLUMINATED PLUS PLATE SWITCH WILL LOCK THE DOOR. THIS DISABLES THE EXTERIOR PLUSH BUTTON, OUTSIDE LEVER IS ALWAYS IN THE LOCKED POSITION. THE PUSH TO LOCK OUTER RING WILL GLOW RED INDICATING THE DOOR IS LOCKED, ALSO, THE EXTERIOR ILLUMINATED PUSH PLATE RING GLOW RED INDICATING THE DOOR IS OCCUPIED. TO EXIT PUSHING THE LEVER DOWN OR PRESSING INTERIOR PUSH PLATE SWITCH WILL OPEN THE DOOR AUTOMATICALLY AND RESET THE SYSTEM. THE ILLUMINATED PUSH PLATE SWITCHES WILL GLOW GREEN INDICATING THE WASHROOM IS VACANT. IF THE DOOR IS OPENED MANUALLY TO EXIT THE WASHROOM THE OVERHEAD MAGNETIC CONTACT SWITCH WILL RESET THE SYSTEM. 3. OPERATION OF EMERGENCY CALL SYSTEM; WHILE THE WASHROOM IS OCCUPIED. PRESSING THE PRESS FOR EMERGENCY ASSISTANCE WASHROOM PUSH BUTTON WILL DE-ENERGITE THE ELECTRICAL STRIKE AND UNLOCK THE DOOR. IN ADDITION, THIS ENERGIZES THE LED ANNUNCIATOR WITH ASSISTANCE REQUESTED MESSAGE TEXT AND SOUNDER WITH THE WASHROOM. AS WELL AS THE DOME LIGHT WITH 'ASSISTANCE REQUIRED MESSAGE TEXT AND PIEZO SOUNDER OUTSIDE THE WASHROOM. BOTH ANNUNCIATORS WILL BE ENERGIZED UNTIL THE LATCH OF PRESS FOR EMERGENCY ASSISTANCE WASHROOM PUSH BUTTON IS PULLED OUT. PROVIDE A SIGN INDICATING IN THE EVENT OF AN EMERGENCY, PUSH EMERGENCY BUTTON AND AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE ABOVE THE WASHROOM ACTIVATION SWITCH. WHEN THE EMERGENCY PUSH BUTTON IS ACTIVATED IT WILL ACTIVATE THE AUDIO VISUAL DEVICES AND CUT POWER TO THE ELECTRIC DOOR STRIKE SO THE DOOR IS UNLOCKED UPON ACTIVATION. OUTSIDE WASHROOM <→ INSIDE WASHROOM CAMDEN CM-AF140S0 DOME LIGHT / SOUND CAMDEN CX-EMF-2 SCHILAGE P2902 MULTI FUNCTION DEVICE POWER SUPPLY CM-AF501SO LED ANNUNCIATOR CAMDEN CX-MDC WITH SOUNDER DOOR CONTACT SWITCH. | | -----1 | -----QMEGA CAMDEN OAL-100 DOOR CM-SE21A OPERATOR OR EMERGENCY FAIL SAFE VON CAMDEN CM-45/4B CAMDEN CAMDEN CM-45/4B ☐ DUPRIN 6211-FS __ ILLUMINATED CM-450R/12 ☐ CM-45/8GRSEI ILLUMINATED ELECTRIC STRIKE CM-450rV 12
EMERGENCY CALL SQUARE PUSH TO SQUARE PUSH TO SQUARE MUSHROOM PUSH OPEN BUTTON IN OPEN BUTTON IN ILLUMINATED CM-54GR BUTTON PUSH TO LOCK CM-54GR ILLUMINATED PUSH/PLATE ILLUMINATED **ENCLOSURE C/W** SWITCH **ENCLOSURE C/W** CM-54SEI SIGN CM-54SEI SIGN ALL 120V AND LOW VOLTAGE WIRING SHALL BE IN 1/2"Ø EMT CONDUIT BY THIS CONTRACTOR.



PROJECT: AND MUST REPORT ANY DISCREPANCIES TO THE ARCHITECT & ENGINEER BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. THE CONTRACTOR AND SUB-TRADES ARE RESPONSIBLE TO

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DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST

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PROJECT:

HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION 2110 TRAFALGAR RD, OAKVILLE

DRAWING TITLE:

ELECTRICAL DETAILS

ON L6H 752

GRGURIC ARCHITECTS **INCORPORATED**



Web: www.2gai.com SCALE: PROJECT: AS NOTED DATE: MAY.2025

DRAWN

ELECTRICAL SPECIFICATIONS

1. CODES AND STANDARDS

1.1. DESIGN AND PERFORMANCE OF COMPONENTS AND METHODS SPECIFIED HEREIN SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF THE CODES, STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS OF THE ENTITIES LISTED BELOW:

1.1.1. OBC ONTARIO BUILDING CODE

1.1.2. OESC ONTARIO ELECTRICAL SAFETY CODE

1.1.3. CSA CANADIAN STANDARDS ASSOCIATION

1.1.4. ULC UNDERWRITER'S LABORATORIES OF CANADA

1.1.5. NFPA NATIONAL FIRE PROTECTION ASSOCIATION OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, 1.1.6. OSHA

AND ALL AGENCIES HAVING JURISDICTION

1.2. COMPLY WITH ELECTRICAL AND BUILDING CODE BULLETINS IN FORCE AT TIME OF BID SUBMISSION.

1.3. ALL ELECTRICAL WORK SHALL BE PERFORMED IN COMPLIANCE WITH BASE BUILDING STANDARDS AND OWNER REQUIREMENTS.

2. SCOPE OF WORK

2.1. THE SCOPE OF WORK SHALL CONSIST OF THE FOLLOWING:

2.1.1. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES REQUIRED FOR COMPLETE INSTALLATION OF ALL WORK INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN.

2.1.2. SUPPLYING, INSTALLING AND CONNECTING ALL PANELBOARDS, FEEDERS, POWER OUTLETS, LIGHT FIXTURES, SWITCHES, CONTROLS, CONDUITS, AND WIRING.

2.1.3. SUPPLYING AND INSTALLING NEW COMMUNICATION OUTLETS AND RACEWAY

2.1.4. SUPPLYING AND INSTALLING NEW CIRCUIT BREAKERS.

2.1.5. OTHER WORK SHOWN ON DRAWING AND INDICATED IN SPECIFICATIONS.

2.1.6. ELECTRICAL CONNECTIONS TO EQUIPMENT, MOTORS, ETC FURNISHED BY THE OWNER AND/OR OTHER TRADES.

2.1.7. CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK. CONTRACTOR TO FURNISH AND INSTALL ALL NECESSARY WIRES, CONDUIT AND JUNCTION BOXES REQUIRED TO

2.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND APPROVALS AND SHALL PAY ALL ASSOCIATED COSTS AND FEES. BUILDING PERMITS TO BE SUBMITTED AND PAID FOR BY OWNER

2.3. SUBMIT TO THE LOCAL ELECTRICAL INSPECTION DEPARTMENT, THE NECESSARY NUMBER OF DOCUMENTS FOR EXAMINATION, SPECIAL INSPECTION AND APPROVAL, PRIOR TO THE COMMENCEMENT OF THE WORK, AND PAY ALL COSTS AND ASSOCIATED

2.4. PROVIDE CERTIFICATE(s) OF ACCEPTANCE FOR THE AUTHORITIES INSPECTION DEPARTMENT, UPON COMPLETION OF WORK.

2.5. VERIFY EXISTING CONDITIONS IN FIELD AND INCLUDE IN THE BID PRICE ALL WORK REQUIRED TO ACCOMMODATE THE EXISTING

2.6. PROVIDE AND MAINTAIN INSURANCE TO PROTECT THE OWNERS AND TRADES FROM ALL POSSIBLE CLAIMS. SUBMIT WITH BID FOR AN AMOUNT ACCEPTABLE TO THE OWNER AND GENERAL CONTRACTOR.

2.7. PROVIDE TEMPORARY LIGHT AND POWER SYSTEM (AS PART OF THE CONTRACT) ADEQUATE FOR THE REQUIREMENTS OF ALL TRADES DURING CONSTRUCTION. THE TEMPORARY SYSTEM SHALL BE DISCONNECTED AND REMOVED WHEN PERMANENT SERVICE IS IN OPERATION.

3.1. THE SPECIFICATIONS AND DRAWINGS ARE INTENDED TO SERVE JOINTLY AS A BASIS UPON WHICH THE CONTRACTOR SUBMIT A CONTRACT PRICE FOR THE MATERIAL AND LABOUR PROVISIONS.

3.2. WHEN CONFLICTS OCCUR IN THE SPECIFICATIONS OR ON THE DRAWINGS, OR BETWEEN EITHER, THE ITEMS GREATER QUANTITY OR HIGHER COST SHALL BE PROVIDED.

3.3. THE CONTRACTOR SHALL PROVIDE ALL ITEMS OF LABOUR OR MATERIALS SPECIFICALLY INDICATED OR REQUIRED TO COMPLETE THE INTENDED INSTALLATIONS

3.4. THE CONTRACTOR SHALL COORDINATE THE WORK SUCH THAT CONFLICTS IN SPACE LOCATIONS DO NOT OCCUR.

3.5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK WITH ITS COMPLETION AND FINAL ACCEPTANCE AND SHALL REPLACE ANY OF THE SAME WHICH MAY BE DAMAGED, LOST OR STOLEN, WITHOUT ADDITIONAL COSTS TO THE OWNER.

3.6. ALL WORK IN OCCUPIED AREAS SHALL BE COORDINATED WITH THE OWNER.

3.7. THE CONTRACTOR SHALL PRICE THE WORK BASED ON ANY NECESSARY MODIFICATIONS OF THE EXISTING SYSTEMS. THE

CONTRACTOR SHALL INCLUDE ALL NECESSARY OVERTIME WORK. 3.8. THE CONTRACTOR WILL BE HELD TO HAVE VISITED THE SITE AND EXAMINED THE DRAWINGS AND SPECIFICATIONS OF OTHER TRADES AND OF GENERAL CONSTRUCTION TRADES TO SATISFY ALL THE CONDITIONS INVOLVED. THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS GIVEN ON THE DRAWINGS AND THOROUGHLY BE ACQUAINTED WITH ALL EXISTING CONDITIONS AFFECTING THE PROPER INSTALLATION OF THE WORK. A SCHEDULED SITE VISIT DATE SHALL BE SCHEDULED DURING THE TENDER PERIOD. REFER TO ARCHITECTURAL INSTRUCTIONS

4. SUBMITTALS AND COORDINATION

4.1. CONTRACTOR TO PROVIDE SHOP DRAWING SCHEDULE TO ARCHITECT AND ENGINEER AT AWARD OF CONTRACT.

4.2. SUBMIT THE FOLLOWING INFORMATION AS APPLICABLE AND AS REQUIRED FOR ALL WORK SPECIFIED UNDER THIS DIVISION: 4.2.1 MANUFACTURERS PRODUCT DATA SHEETS AND SAMPLES WHERE REQUIRED

4.2.2. SUBMIT PDF COPIES OF SHOP DRAWINGS OF ALL SPECIFIED EQUIPMENT INCLUDING DIMENSIONED EQUIPMENT LAYOUTS FOR REVIEW AND RECORDS PRIOR TO COMMENCEMENT OF WORK. EACH SHOP DRAWING SHALL BE CHECKED AND STAMPED BY THE ELECTRICAL AND GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER FOR REVIEW.

4.2.3. POINT-TO-POINT WIRING DIAGRAMS AND SEQUENCES OF OPERATION.

4.2.4. REPRODUCIBLE DRAWINGS, PDF, OR AUTOCAD FILES.

4.2.5. OPERATION AND MAINTENANCE MANUALS. 4.2.6. CERTIFIED FACTORY AND FIELD TEST REPORTS.

4.2.7. MANUFACTURERS' CERTIFICATIONS, WARRANTIES AND SPARE PARTS.

4.3. SUBSTITUTIONS TO SPECIFIED ITEMS MUST COMPLY WITH ALL SPECIFICATION REQUIREMENTS AND WILL ONLY BE PERMITTED WHERE SUBMITTED AND APPROVED IN WRITING.

4.4. PROJECT CLOSEOUT

4.4.1. AFTER COMPLETION OF PROJECT AND PRIOR TO REQUESTING FINAL PAYMENT, THE CONTRACTOR SHALL GIVEN WRITTEN NOTICE THAT THE FOLLOWING ITEMS HAVE BEEN COMPLETED:

4.4.1.1. REQUIRED AGENCY APPROVALS.

4.4.2. COPY OF FINAL HYDRO INSPECTION CERTIFICATE. FIRE ALARM VERIFICATION CERTIFICATE (AS PER STANDARD ULC 537) MUST

BE PROVIDED WHEN THE FIRE ALARM SYSTEM WAS MODIFIED UNDER THE CONTRACT. 4.4.3. FINAL CLEANING AND ADJUSTMENT OF LIGHTING FIXTURES AND EQUIPMENT

4.4.4. RESOLUTION OF OUTSTANDING SUBMITTALS AND PUNCH LIST ITEMS.

4.4.5. AS-BUILT DRAWINGS.

4.4.6. TURNOVER OF SPARE LAMPS, KEYS, AND ANY REQUIRED SPARE PARTS OR TOOLS.

4.4.7. SYSTEM STARTUP, TESTING AND ADJUSTMENT.

4.4.8. MANUFACTURER'S CERTIFICATIONS, WARRANTIES AND O&M MANUALS.

4.4.9. DEMONSTRATIONS AND OWNER INSTRUCTION. 5. AS-BUILT DRAWINGS AND MAINTENANCE MANUALS

5.1. THE CONTRACTOR SHALL KEEP RECORD OF ALL CHANGES, FIELD CONDITIONS, AND SHALL PREPARE AND PROVIDE AS-BUILT DRAWINGS INDICATING ANY DEVIATION FROM THE ORIGINAL ELECTRICAL DESIGN. THE REVISED DRAWING SHALL BE STAMPED "AS-BUILT" WITH THE DATE AND CONTRACTOR'S SIGNATURE. ONE (1) SET OF PDF PRINTS SHALL BE SENT TO THE ENGINEER BEFORE THE FINAL PAYMENT IS MADE. AFTER THE REVIEW AND APPROVAL OF AS-BUILT CONTRACTOR SHALL DELIVER A USB STICK DISK TO THE OWNER.

5.2. PROVIDE THE ARCHITECT THREE (3) BOUND AND INDEXED COPIES OF OPERATIONS AND MAINTENANCE DATA MANUALS FOR THE INSTALLATION. THE MANUAL SHALL PROVIDE COMPREHENSIVE DETAILED INFORMATION ON THE APPROVED INSTALLATION, OPERATION AND USE, MAINTENANCE AND PARTS LIST. INCLUDE THE FOLLOWING INFORMATION:

5.2.1. NAMES AND ADDRESS OF LOCAL SUPPLIERS FOR THE ITEMS INCLUDED. TECHNICAL DATA, PRODUCT DATA, SUPPLEMENTED BY BULLETINS, COMPONENT ILLUSTRATIONS, EXPLODED VIEW, TECHNICAL DESCRIPTIONS OF ITEMS AND PARTS LISTS. ADVERTISING OR SALES LITERATURE IS NOT ACCEPTABLE.

5.2.2. THE CONSULTANT REVIEWED SHOP DRAWINGS

5.2.3. CERTIFICATE(S) OF ACCEPTANCE FROM THE AUTHORITY'S INSPECTION DEPARTMENT

5.2.4. VERIFICATION REPORTS AND CERTIFICATE(S) FOR ANY NEW FIRE ALARM COMPONENTS OR TIE-INS AND ANY BASE BUILDING TIE-INS FOR MISCELLANEOUS SYSTEMS (I.E. SECURITY, LIGHTING, CONTROL, DIGITAL METERING).

5.2.5. LOAD BALANCE REPORT WRITTEN GUARANTEE

5.3. REVIEW INFORMATION PROVIDED IN THE MAINTENANCE INSTRUCTIONS AND MANUALS WITH THE OWNER'S OPERATING PERSONNEL AND LANDLORD'S OPERATING PERSONNEL WHERE BASE BUILDING SYSTEMS ARE REVISED TO ENSURE A COMPLETE UNDERSTANDING OF THE ELECTRICAL EQUIPMENT AND SYSTEMS AND THEIR OPERATION.

6. QUALITY ASSURANCE

6.1. MATERIALS, EQUIPMENT, AND INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF ALL APPLICABLE CODES AND THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE BUILDING STANDARDS AND THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY

6.2. MATERIALS, EQUIPMENT, AND INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE APPLICABLE REFERENCE STANDARDS AS PER SPECIFICATION SECTION 1.

6.3. THE CONTRACTOR SHALL HAVE COMPLETED AT LEAST TWO PROJECTS OF SIZE AND COMPLEXITY SIMILAR TO THOSE REQUIRED UNDER THIS CONTRACT. ALL WORKMEN SHALL BE SKILLED IN THEIR RESPECTIVE TRADE.

6.4. ALL WORK SHALL BE WARRANTED IN WRITING TO BE FREE FROM DEFECTS IN MATERIALS AND/OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION WARRANTY SHALL INCLUDE ALL COSTS OF PARTS, LABOR, TRAVEL AND LIVING EXPENSES REQUIRED TO REPAIR OR REPLACE DEFECTIVE ITEMS.

6.5. INSPECTION:

6.5.1. ALL STAGES OF THE INSTALLATION WILL BE INSPECTED BY THE OWNER AND/OR OWNERS REPRESENTATIVE FOR COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS. ANY PORTION OF THE CONSTRUCTION NOT MEETING THOSE REQUIREMENTS TO THE SATISFACTION OF THE ENGINEER SHALL BE REPLACED AT NO ADDITIONAL COST TO

6.5.2. PROVIDE PROPER EQUIPMENT AND REASONABLE ASSISTANCE AS THE OWNER AND/OR OWNERS REPRESENTATIVE MAY REQUIRE TO FACILITATE ACCESS AND INSPECTION AT THE CONSTRUCTION SITE.

7.1. NOTES AND GRAPHIC REPRESENTATIONS ON THE DRAWINGS SHALL NOT LIMIT THE EXTENT OF REMOVALS REQUIRED. THE CONTRACTOR SHALL VISIT THE SITE AND CAREFULLY EXAMINE THE EXISTING CONDITIONS AND SHALL PERFORM ALL WORK REQUIRED TO ACHIEVE THE FINAL DESIGN INTENT AS REQUIRED BY THE CONTRACT DOCUMENTS. THE EXTENT OF ALL REMOVAL WORK SHALL BE COORDINATED WITH THE ARCHITECT

7.2. WHERE PORTIONS OF AN EXISTING BRANCH CIRCUIT ARE REMOVED, WIRING TO REMAIN DEVICES ON THE CIRCUIT SHALL BE RECONNECTED OR MODIFIED IN AN APPROVED MANNER AS REQUIRED TO MAINTAIN CONTINUITY OF THE AFFECTED BRANCH CIRCUIT AND OPERATION OF THE REMAINING DEVICES.

7.3. ALL WORK REQUIRED TO REMAIN IN SERVICE BUT INTERFERING WITH THE ALTERATION SHALL BE RELOCATED AND RECONNECTED USING MATERIALS AND STANDARDS OF THIS CONTRACT.

7.4. THE REMOVAL OF ALL TELEPHONE AND DATA DEVICES AND ASSOCIATED CABLE SHALL BE COORDINATED WITH THE

7.5. IN THE PROCESS OF REMOVING WIRING DEVICES, LIGHTING FIXTURES AND OTHER ELECTRICAL EQUIPMENT AND MATERIALS, THIS CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO PREVENT DAMAGE TO ARCHITECTURAL SURFACES AND MATERIALS WHICH ARE TO REMAIN, INCLUDING WALLS, FLOORS, CEILINGS, WINDOWS, DOORS, MOLDINGS, STRUCTURAL MEMBERS, ETC. THE COST TO REPAIR OR REPLACE ANY MATERIAL DEEMED BY THE ARCHITECT TO HAVE BEEN UNDULY DAMAGED BY THIS CONTRACTOR DURING DEMOLITION OR CONSTRUCTION SHALL BE PAID BY THIS CONTRACTOR AT NO

8.1. PROVIDE A COMPLETE BREAKDOWN OF MATERIAL, LABOUR, OVERHEAD, PROFIT, ETC. WHEN SUBMITTING QUOTATIONS FOR CHANGE NOTICES ON THIS PROJECT.

THE HOURLY LABOUR RATE SHALL BE INCLUSIVE OF ALL CHARGES FOR SUPERVISION, VARIABLE LABOUR FACTORS, HAND TOOLS, PAYROLL BURDENS, HEIGHT FACTORS, WARRANTIES, STORAGE, RENTALS, ADDITIONAL BONDING, PARKING, CLEAN-UP, AS-BUILT DRAWINGS, HOISTING, FREIGHT AND DELIVERY, BUT EXCLUSIVE OF OVERHEAD AND PROFIT.

9. BASIC MATERIAL AND METHODS

ADDITIONAL COST TO THE OWNER.

9.1. COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES PRIOR TO INSTALLATION. ASSIST IN THE PREPARATION OF COORDINATION DRAWINGS AS REQUIRED BY THE GENERAL CONDITIONS

9.2. ALL SHUTDOWN OF BUILDING POWER, FIRE ALARM AND SIGNAL SYSTEMS SHALL BE COORDINATED WITH THE OWNER. WORK TO ACCOMMODATE OFF-HOUR SHUTDOWNS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.

9.3. CUT AND PATCH NON-STRUCTURAL SURFACES AS REQUIRED. REPAIRS SHALL MATCH ORIGINAL FINISH; PENETRATIONS OF FIRE RATED PARTITIONS SHALL BE SEALED WITH APPROVED MATERIAL TO PROVIDE THE SAME RATING AS THE PARTITION. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED PARTITIONS.

9.4. PROVIDE EXPANSION FITTINGS WHERE RACEWAYS CROSS BUILDING EXPANSION JOINTS.

AND NEMA 4 FOR WET LOCATIONS.

THE ORIGINAL FINISH

10. <u>DELIVERY, STORAGE AND HANDLING</u> 10.1. ALL EQUIPMENT SHALL BE DELIVERED IN MANUFACTURER'S ORIGINAL PROTECTIVE PACKAGING AND STORED IN A CLEAN, DRY PLACE PROTECTED FROM WEATHER, FUMES, WATER, DUST AND PHYSICAL DAMAGE. TOUCH UP DAMAGED FINISHES TO MATCH

9.5. EQUIPMENT, DEVICES AND ENCLOSURES SHALL BE RATED NEMA 1 FOR INTERIOR LOCATIONS, NEMA 3R FOR DAMP LOCATIONS

11.1. RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL CONFORM TO CSA C22.2 NO 45. FITTINGS SHALL BE THREADED.

11.2. ELECTRICAL METALLIC TUBING (EMT) SHALL CONFORM TO CSA C22.2 NO.83. FITTINGS SHALL BE STEEL GLAND AND RING

11.3. FLEXIBLE METALLIC CONDUIT SHALL CONFORM TO CSA C22.2 NO.56. LIQUID TIGHT FLEXIBLE METAL CONDUIT SHALL CONFORM

TO CSA C22.2 NO.56. FITTINGS SHALL BE STEEL. 11.4. PVC TELECOMMUNICATION AND TV CABLE DUCTS SHALL BE MANUFACTURED TO CSA B196.3.

11.5. ALL CONDUIT FITTINGS AND CONNECTORS SHALL BE STEEL WITH INSULATED THROATS TO CAN/CSA C22.2 NO.18. DIE-FORMED ZINC FITTINGS ARE NOT ACCEPTABLE. BUSHINGS SHALL BE PROVIDED AT ALL CONDUIT TERMINATIONS. BUSHINGS LARGER THAN 1" (27mm) SHALL BE GROUNDING TYPE. PVC BUSHINGS MAY BE UTILIZED ONLY FOR 3/4" (21mm) BRANCH CIRCUIT

11.6. MINIMUM RACEWAY SIZE SHALL BE 3/4" (21mm). RACEWAYS SHALL BE RUN PARALLEL TO BUILDING STRUCTURAL LINES. RACEWAYS SHALL NOT BE RUN HORIZONTALLY BELOW 8'-0" AFF IN PARTITIONS. ALL EMPTY RACEWAYS SHALL BE FURNISHED

11.7. ALL WIRING BETWEEN JUNCTION BOXES AND FOR CIRCUIT HOMERUNS BETWEEN FIRST OUTLET SERVED BY THE BRANCH CIRCUIT AND THE PANELBOARD SHALL BE RUN IN EMT OR RGS AS REQUIRED.

11.8. RACEWAY UTILIZATION SHALL BE AS FOLLOWS:

CONDUITS TERMINATING AT PANELBOARDS

11.8.1.RIGID GALVANIZED STEEL (RGS) - IN CONCRETE SLABS; EXPOSED IN ALL MECHANICAL EQUIPMENT ROOMS; FIRE ALARM

11.8.2.ELECTRICAL METALLIC TUBING (EMT) - INTERIOR CONCEALED AND EXPOSED LOCATIONS; EXPOSED IN MECHANICAL ROOMS ABOVE 8'-0" AFF: INTERIOR COMMUNICATIONS WIRING.

11.8.3.FLEXIBLE METALLIC CONDUIT - FINAL CONNECTIONS TO TRANSFORMERS (MAXIMUM LENGTH 3'-0") AND FINAL CONNECTIONS ONLY FROM JUNCTION BOXES ABOVE CEILINGS TO RECEPTACLES AND LIGHT FIXTURES (MAXIMUM LENGTH 10'-0" (3.048M). NOT TO BE USED FOR HOMERUNS OR FEEDERS TO MECHANICAL EQUIPMENT.INSTALL CONDUIT TO CSA C22.1.

11.8.4.LIQUID TIGHT FLEXIBLE CONDUIT - FINAL CONNECTIONS TO MOTORS AND MECHANICAL EQUIPMENT.

11.9. INSTALL CONDUIT TO CSA C22.1

11.10. ALL CONDUIT AND TUBING SHALL BE CUT SQUARE AND REAMED AT THE ENDS.

11.11. CONDUIT AND TUBING RUNS SHALL BE MECHANICALLY AND ELECTRICALLY CONTINUOUS FROM SERVICE STARTING TO ALL OUTLETS AND EQUIPMENT. CONDUIT SHALL ENTER AND BE SECURELY CONNECTED TO A CABINET, JUNCTION BOX, PULLBOX OR OUTLET BOX BY MEANS OF LOCKNUTS ON THE OUTSIDE AND INSIDE AND AN INSULATED BUSHING ON THE INSIDE. IN TUBING OR FLEXIBLE METAL CONDUIT THE ONE COMPRESSION LOCKNUT SHALL BE MADE WRENCH-TIGHT. ALL LOCKNUTS SHALL BE THE BONDING TYPE WITH SHARP EDGES FOR DIGGING INTO THE METAL WALL OF AN ENCLOSURE AND SHALL BE INSTALLED IN A MANNER THAT WILL ASSURE A LOCKING AND ELECTRICALLY CONTINUOUS INSTALLATION. LOCKNUTS AND BUSHINGS ARE NOT REQUIRED WHERE CONDUITS ARE SCREWED INTO TAPPED CONNECTIONS. FOR ECCENTRIC AND CONCENTRIC KNOCKOUTS PROVIDE GROUND RINGS

11.12. ALL VERTICAL RUNS OF CONDUIT OR TUBING TERMINATING IN THE BOTTOMS OF WALL BOXES OR CABINETS, OR SIMILAR LOCATIONS. SHALL BE PROTECTED FROM THE ENTRANCE OF FOREIGN MATERIAL PRIOR TO THE INSTALLATION OF

11.13. UNLESS OTHERWISE SPECIFIED, ALL CONDUIT AND TUBING SHALL BE INSTALLED CONCEALED. IN GENERAL, ALL CONDUIT AND TUBING SHALL BE RUN IN HUNG CEILINGS AND FURRED SPACES WHERE THEY EXIST. WHERE CONDUIT IS RUN EXPOSED IT SHALL BE SECURELY SUPPORTED WITH ZINC COATED MALLEABLE IRON PIPE STRAPS OR OTHER APPROVED MEANS. ALL CONDUITS SHALL BE SUPPORTED FROM STRUCTURAL MEMBERS.

11.14. EVERY CONDUIT SYSTEM SHALL BE INSTALLED COMPLETE BEFORE ANY CONDUCTORS ARE DRAWN IN. WIRE PULLING LUBRICANTS. WHEN UTILIZED, SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF UNDERWRITERS' LABORATORIES, INC., APPLICABLE TO THE SPECIFIC CONDUCTOR OR CABLE INSULATION AND RACEWAY MATERIAL.

11.15. SIZE ALL CONDUITS FOR A MAX. 40% FILL. TO INCLUDE DEDICATED INSULATED GROUND WIRE.

11.16. RUN CONDUITS IN WEBBED PORTION OF STRUCTURAL STEEL

11.17. WHERE REQUIRED BY THE ENGINEER, EXTRA DEEP OR EXTRA SHALLOW OUTLET BOXES SHALL BE USED TO FACILITATE THE INSTALLATION OF THE CONDUIT SYSTEM.

12.1. OUTLET, PULL AND JUNCTION BOXES SHALL BE FABRICATED FROM WELDED STEEL AND CONFORM TO CSA-C22.2 NO. 18 AND NEMA OS1. BOXES FOR INTERIOR LOCATIONS SHALL BE CODE GAUGE, GALVANIZED SHEET STEEL. BOXES FOR MECHANICAL ROOMS SHALL BE CAST STEEL WITH GASKETED COVERS.

12.2. BOXES SHALL CONTAIN SUITABLE KNOCKOUTS. BARRIERS SHALL BE FURNISHED AS REQUIRED BY CODE AND TO SEPARATE SWITCHES FOR 347 VOLT CIRCUITS ON DIFFERENT PHASES. 12.3. BOXES SHALL BE SIZED AS REQUIRED BY CODE FOR THE NUMBER AND GAUGE OF CONDUCTORS THEREIN, EXCEPT WHERE

NOTED TO BE LARGER, THE MINIMUM BOX SHALL BE 4" SQUARE BY 1-1/2" DEEP. COVERS GREATER THAN 50LB SHALL BE

12.4. ALL RECEPTACLES SWITCHES AND DEVICES IN FIRE RATED WALLS TO BE COMPLETE WITH FIRE RATED BOXES. COORDINATE LOCATIONS WITH ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED BOXES.

13.1. PROVIDE INSERTS, EXPANSION SHIELD LUGS, ANCHORS, BOLTS WITH NUTS AND WASHERS, SHIMS OR ANY OTHER TYPE OF FASTENING DEVICES REQUIRED TO FASTEN PANELS OR OTHER EQUIPMENT TO FLOORS, WALLS, OR CEILINGS. UNLESS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE CONTRACT DRAWINGS. ALL FASTENERS SHALL BE HOT-DIPPED GALVANIZED, OF SIZES AND TYPES RECOMMENDED BY THE EQUIPMENT MANUFACTURER AND AS APPROVED BY THE

14. WIRES, CABLES, SPLICES AND TERMINATIONS

14.1. POWER AND CONTROL WIRING SHALL BE COPPER, MINIMUM 98% CONDUCTIVITY, WITH TYPE RW90 INSULATION RATED 600 VOLTS. MINIMUM WIRE SIZE SHALL BE #12 AWG. CONDUCTORS SHALL BE SOLID FOR WIRE SIZED #10 AWG AND SMALLER AND STRANDED FOR WIRE SIZES #8 AWG AND LARGER.

14.2. ALL HOME RUNS TO BE IN EMT CONDUIT.

14.3. AC CABLE SHALL BE 90°C RATED CODE TYPE AC90. JACKET SHALL BE ALUMINUM INTERLOCKING ARMOUR. AC CABLE #12 MAY BE USED IN CEILING SPACE FROM CEILING DISTRIBUTION BOX DOWN TO RECEPTACLES IN PARTITIONS. AC RUNS IN CEILING SPACE NOT TO EXCEED 3048MM (10'-0") IN LENGTH.

14.4. CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS:

RED ORANGE BROWN BLACK BLUE YELLOW WHITE NEUTRAL GRAY OR WHITE WITH TRACER

GREEN GROUND GREEN WHITE WITH TRACER NEUTRAL FOR GFI CIRCUIT

14.5. CONDUCTORS #6AWG AND SMALLER SHALL HAVE COLOR CODED INSULATION. CONDUCTORS #4AWG AND LARGER SHALL BE IDENTIFIED WITH COLOR INSULATION OR PHASING TAPE.

14.6. CONDUCTOR SIZES SHALL BE INCREASED WHERE REQUIRED BY CODE AND/OR THE ENGINEER TO COMPENSATE FOR 2% VOLTAGE DROP AND HIGH AMBIENT TEMPERATURE.

14.7. COMMUNICATIONS CABLING RUN EXPOSED IN AIR HANDLING PLENUMS SHALL BE TYPE CMP PLENUM RATED.

14.8. SPLICES FOR WIRE SIZES #10 AWG AND SMALLER SHALL BE MADE WITH SPRING CONNECTORS AND TAPE. SPLICES FOR WIRE SIZES #8 AWG AND LARGER SHALL BE HYDRAULIC COMPRESSION TYPE WITH PRE-MOULDED COVER AND TAPE.

15.1. WIRING DEVICES SHALL BE SPECIFICATION-GRADE DECORA STYLE WITH NEMA CONFIGURATIONS AS INDICATED ON THE DRAWINGS. COLOR OF DEVICES SHALL BE WHITE. WIRING DEVICES SHALL BE MANUFACTURED BY EATON, HUBBELL, LEVITON,

15.2. FACEPLATES SHALL BE NON-MAGNETIC WHITE FACEPLATES UNLESS SPECIFIED BY THE ARCHITECT. FACEPLATES SHALL BE FURNISHED FOR ALL COMMUNICATIONS OUTLETS AND SHALL BE CONFIGURED TO SUIT THE SYSTEM SUPPLIERS' REQUIREMENTS

15.3. RECEPTACLES TO BE MOUNTED IN KITCHEN 101 SHALL BE WHITE WITH STAINLESS STEEL COVERPLATE 15.4. DEVICES MOUNTED ADJACENT TO EACH OTHER SHALL BE FURNISHED WITH A COMMON FACEPLATE AND BE GANGED IN ONE BOX. 15.5. ALL DEVICES SHALL BE MOUNTED AT LOCATIONS AND HEIGHTS AS INDICATED ON ARCHITECTURAL DRAWINGS.

15.6. ALTER LOCATION OF OUTLETS/SWITCHES AT NO COST OR CREDIT, PROVIDING DISTANCE DOES NOT EXCEED 3M (10'-0") AND INFORMATION IS GIVEN BEFORE ROUGH-IN. 15.7. WHERE NEW, EXISTING OR NEW AND EXISTING SWITCHES ARE MOUNTED AT SAME LOCATION, MOUNT SWITCHES BEHIND

15.8. WHILE-IN-USE COVER FOR EXTERIOR RECEPTACLES TO BE HUBBELL CAT# ML500G.

COMMON FACEPLATE.

16. BRANCH CIRCUIT PANELBOARDS 16.1. BRANCH CIRCUIT PANELBOARDS SHALL BE 600/347V AND/OR 208/120V, 3ø, 4-WIRE CONFIGURATION WITH COPPER BUS BARS, NEUTRAL BUS AND SEPARATE GROUND BUS BONDED TO PANEL ENCLOSURE. PROVIDE 200% NEUTRAL AND ISOLATED GROUND BUS WHERE INDICATED ON DRAWINGS. CABLE LUGS SHALL BE MECHANICAL TYPE. PANELBOARDS SHALL BE MANUFACTURED BY SCHNEIDER ELECTRIC/SQUARE D. GENERAL ELECTRIC. SIEMENS, OR EATON.

16.2. CIRCUIT BREAKERS SHALL BE MOULDED CASE, BOLT-IN-PLACE WITH THERMAL-MAGNETIC TRIP ELEMENT, MINIMUM INTERRUPTING RATINGS SHALL BE 22,000 AIC FOR 208/120V AND 65,000 AIC FOR 600/347V UNLESS NOTED OTHERWISE ON DRAWINGS. CIRCUIT BREAKERS FOR UNSWITCHED LIGHTING CIRCUITS SHALL BE RATED FOR SWITCHING DUTY. MAIN CIRCUIT BREAKERS SHALL BE MOUNTED SEPARATELY FROM BRANCH BREAKERS AT TOP OR BOTTOM. MOULDED CASE CIRCUIT BREAKERS TO BE AS PER CSA C22.2 NO.5.

16.3. PANELBOARD ENCLOSURES SHALL BE GALVANIZED CODE GAUGE STEEL WITHOUT PRE-PUNCHED KNOCKOUTS. TRIMS SHALL BE SURFACE TYPE IN UNFINISHED SPACES AND FLUSH TYPE IN FINISHED SPACES, WITH ANSI 61 GRAY ENAMEL FINISH. DOORS SHALL BE DOOR IN DOOR TYPE CONSTRUCTION AND SHALL BE LOCKABLE AND ALL LOCKS SHALL BE KEYED ALIKE. FURNISH TWO KEYS FOR EACH PANEL

16.4. PANELS SHALL HAVE A MINIMUM OF 4" GUTTER SPACE ON BOTH SIDES.

16.5. FURNISH AND INSTALL TYPEWRITTEN DIRECTORIES FOR EACH PANELBOARD, NEW AND EXISTING, INDICATING DEVICES SERVED.

16.6. PANELS NOT MOUNTED ON STRUCTURAL WALLS SHALL BE SUPPORTED FROM THE FLOOR INDEPENDENTLY OF WALL

CONSTRUCTION BUT LATERALLY SECURED TO WALL. FLUSH MOUNTED PANELBOARDS SHALL BE PROVIDED WITH (3) 1" EMPTY CONDUITS TERMINATED ABOVE THE FINISHED CEILING 16.7. PANELS MOUNTED ON MASONRY WALLS SHALL BE SHIMMED WITH WASHERS TO PROVIDE A 1/2" SPACE BETWEEN PANELBOARD

17.1. SAFETY DISCONNECT SWITCHES SHALL BE 250V OR 600V AS REQUIRED, HEAVY DUTY, HORSEPOWER RATED, QUICK-MAKE QUICK-BREAK DESIGN IN NEMA 1 ENCLOSURE. ENCLOSURES EXPOSED TO WET OR RAIN CONDITIONS SHALL BE IN NEMA 3R

17.2. PROVIDE INTERLOCKS TO PREVENT OPENING THE COVER WITH THE SWITCH IN THE "ON" POSITION OR CLOSING OF THE SWITCH WITH THE DOOR OPEN, EXCEPT THAT THE INTERLOCK SHALL BE TOOL RELEASABLE BY A QUALIFIED PERSON FOR INSPECTION OF THE CONTACTS OF MECHANISM

17.3. PROVIDE FOR PADLOCKING HANDLE IN THE OFF POSITION.

17.4. PROVIDE NEUTRAL ASSEMBLY WHERE SCHEDULED.

17.5. SWITCHES SHALL BE CAPABLE OF WITHSTANDING THE AVAILABLE FAULT OR LET THROUGH CURRENT BEFORE THE FUSE OPERATES WITHOUT DAMAGE OR CHANGE IN RATING. THE SHORT CIRCUIT INTERRUPTING RATING OF THE FUSE SWITCH COMBINATION SHALL BE 100,000 RMS SYMMETRICAL AMPERES AND 12 TIMES THE CONTINUOUS CURRENT RATING WHEN UNFUSED AT RATED VOLTAGE

17.6. FUSE CLIPS SHALL BE OF THE REJECTION TYPE, SHALL ACCOMMODATE DUAL ELEMENT, CURRENT LIMITING FUSES ONLY AND SHALL BE SIZED TO ACCEPT FUSES OF THE PROPER AMPERE RATING.

17.7. PROVIDE GROUND LUG IN EACH SWITCH.

18.1. FUSES SHALL BE CSA LISTED, TIME DELAY, CURRENT LIMITING AND HAVE AN INTERRUPTING CAPACITY OF AT LEAST 200,000

AMPERES RMS SYMMETRICAL 18.2. THE TIME-CURRENT CHARACTERISTICS AND RATINGS SHALL BE SUCH THAT POSITIVE SELECTIVE COORDINATION IS ASSURED.

18.3. FUSE VOLTAGE RATINGS SHALL BE 600V OR 250V AS REQUIRED.

18.4. CLASS RK1 (TIME DELAY) FUSES. REJECTION TYPE 18.4.1.BUSSMANN TYPE LPN-RK (250V) OR TYPE LPS-RK (600V)

18.4.2.MERSEN A2D (250V) OR A6D (600V) 18.4.3.LITTELFUSE TYPE LLN-RK (250V) OR LLS-RK (600V)

18.5. CLASS L (TIME DELAY)

18.5.1.BUSSMANN TYPE KRP-C

18.5.2.LITTELFUSE TYPE KLP-C 18.5.3.MERSEN A4BQ

18.6. CLASS CC (TIME DELAY) FUSES, REJECTION TYPE

18.6.1.BUSSMANN TYPE LP-CC 18.6.2.MERSEN ATDR

18.6.3.LITTELFUSE TYPE KLDR

19. <u>LIGHTING FIXTURES AND EQUIPMENT</u> 19.1. LIGHTING FIXTURES SHALL BE SPECIFICATION GRADE AND FURNISHED COMPLETE WITH ALL REQUIRED MOUNTING HARDWARE. FIXTURES SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE ESTABLISH THE PERFORMANCE REQUIREMENTS. SUBSTITUTIONS

19.2. SUBMIT SCALED LAYOUT DRAWINGS FOR CONTINUOUS FIXTURES. SUBMIT SAMPLES WHEN REQUIRED BY THE LIGHTING FIXTURE SCHEDULE OR WHEN REQUESTED FOR SUBSTITUTIONS. 19.3. CONTRACTOR SHALL ENSURE COMPATIBILITY BETWEEN FIXTURE TRIMS AND CEILING SYSTEMS. FIXTURES RECESSED IN

ACCESSIBLE CEILINGS SHALL BE FURNISHED WITH SEISMIC RESTRAINTS. FIXTURES RECESSED IN NON-ACCESSIBLE CEILINGS

SHALL BE DESIGNED FOR BALLAST OR TRANSFORMER ACCESS THROUGH THE FIXTURE OPENING.

MUST MEET OR EXCEED THE PERFORMANCE OF THE SPECIFIED FIXTURE AND TO BE CSA APPROVED

19.4. ALL EXIT SIGNS SHALL HAVE LED ILLUMINATION AND INTEGRAL BATTERY BACK-UP.

19.5. ALL NEW EXIT AND EMERGENCY LIGHTING TO MEET OR EXCEED CSA 22.2 No.141-15.

20.1. SENSORS AND SWITCH CONTROL SYSTEMS SHALL BE MANUFACTURED BY SENSORWORX, COOPER CONTROLS, SENSOR SWITCH OR APPROVED EQUAL. SYSTEM SHALL CONSIST OF THE FOLLOWING:

20.1.1.CEILING MOUNTED OCCUPANCY SENSOR - SENSORWORX MODEL #SWX-222-1. 20.1.2.24VDC UNIVERSAL VOLTAGE POWER PACK - SENSORWORX MODEL #SWX-900-AX. MAXIMUM FIVE (5) SENSORS PER POWER

20.1.3.DIMMER SWITCH SENSORWORX MODEL #SWX-803-WH. 20.1.4.WALL MOUNTED OCCUPANCY SENSOR SWITCH - SENSORWORX MODEL #SWX-121-WH.

20.1.5.WALL MOUNTED OCCUPANCY SENSOR DIMMER SWITCH - SENSORWORX MODEL #SWX-121-D-WH.

20.5. PROVIDE 10' OF LOW VOLTAGE CABLE SLACK BETWEEN SENSOR AND SWITCHPACK.

20.1.6.ALL ASSOCIATED WIRING AS PER MANUFACTURERS SPECIFICATIONS. 20.2. SENSORS SHALL UTILIZE A COMBINATION OF PASSIVE INFRARED AND ULTRASONIC TECHNOLOGY TO ACTIVATE AND/OR MAINTAIN LIGHTING. SENSORS SHALL INCLUDE ADJUSTMENTS FOR COVERAGE PATTERN AND SENSITIVITY, TIME DELAY TO OFF (30 MIN.)

20.3. BEFORE THE TURN OVER OF THE PROJECT, THE CONTRACTOR SHALL COORDINATE THE SENSITIVITY, CALIBRATION AND ADJUSTMENTS OF ALL SENSORS IN THE FIELD IN CORRELATION WITH LIGHTING REQUIREMENTS, USAGE, AND THE OWNER. 20.4. ALL REQUIRED POWER PACKS ARE TO BE PROVIDED WITH TRANSFORMERS AND RELAYS AS REQUIRED.

20.6. WHERE MULTIPLE ZONE EXIST IN A PARTICULAR ROOM, PROVIDE SEPARATE SWITCHPACK FOR EACH LIGHTING ZONE IN THAT

21.1. THE DISTRIBUTION SYSTEM SHALL BE COMPLETELY AND PROPERLY GROUNDED USING APPROVED FITTINGS IN ACCORDANCE WITH THE LATEST EDITION OF THE ELECTRICAL SAFETY CODE. SEPARATE INSULATED GROUND CONDUCTORS SHALL BE RUN WITH ALL THE FEEDERS WHERE INDICATED, RECEPTACLE BRANCH CIRCUITS AND FLEXIBLE CONNECTIONS TO LIGHTING FIXTURES AND EQUIPMENT.

21.2. METAL RACEWAYS, METAL ENCLOSURES OF ELECTRICAL DEVICES AND OTHER EQUIPMENT SHALL BE COMPLETELY GROUNDED IN AN APPROVED MANNER. PROPER HARDWARE REQUIRED FOR A COMPLETE GROUNDING SYSTEM SHALL BE INSTALLED BY THE

22. SPLICES AND TERMINATIONS

22.1. NO SPLICES OR JOINTS WILL BE PERMITTED IN EITHER FEEDER OR BRANCHES EXCEPT AT OUTLETS OR ACCESSIBLE TERMINAL. SPLICE OR JUNCTION BOXES

22.2 ALL MATERIALS REQUIRED FOR MAKING SPLICES AND/OR TERMINATIONS SHALL BE SUPPLIED IN COMPLETE KITS NOT OLDER THAN 6 MONTHS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ENSURING THAT ALL MATERIALS FURNISHED WILL NOT ADVERSELY AFFECT THE PHYSICAL OR ELECTRICAL PROPERTIES OF OTHER MATERIALS FURNISHED OR OF THE WIRE OR CABLE

22.3. WHERE THE CONTRACTOR MAKES CONNECTIONS TO EXISTING WIRES, THEY SHALL OPEN AND DISCONNECT THE EXISTING SPLICES FROM SUCH WIRES AND INSTALL NEW SPLICES TO INCLUDE THE EXISTING WIRES AS REQUIRED

22.4. ALL SPLICES FOR WIRE SIZES #10 AWG AND SMALLER SHALL BE MADE WITH INSULATED SPRING CONNECTOR APPLIED TO TWISTED CONDUCTORS. TWO HALF LAPPED LAYERS OF VINYL TAPE EXTENDING A DISTANCE OF NOT LESS THAN ONE INCH FROM THE CONNECTOR SHALL BE APPLIED. SPLICES OTHER THAN THE AFOREMENTIONED WILL BE PERMITTED AT THE DISCRETION OF

22.5. ALL SPLICES FOR WIRE SIZES #8 AWG AND LARGER SHALL BE MADE WITH HYDRAULIC COMPRESSION TYPE CONNECTORS WITH PRE-MOLDED COVER OVER WHICH TWO HALF LAPPED LAYERS OF VINYL TAPE EXTENDING A DISTANCE OF NOT LESS THAN ONE (1) INCH FROM THE CONNECTOR SHALL BE APPLIED.

23. IDENTIFICATION OF WORK

OPPOSITE END

23.1. ALL PANELBOARDS, EQUIPMENT AND CABINETS SPECIFIED HEREIN SHALL BE CLEARLY IDENTIFIED WITH THE EQUIPMENT DESIGNATION, VOLTAGE AND AMPERE RATING, FUSE RATING, EQUIPMENT SERVED AND ORIGIN OF THE INCOMING FEED. IDENTIFICATION SHALL BE WHITE ON BLACK LAMACOID NAMEPLATE WITH 1/2" MINIMUM LETTERING MECHANICALLY ATTACHED TO

23.2. FACEPLATES OF SWITCHES FOR EQUIPMENT SUCH AS REMOTE FANS AND MOTORIZED SCREENS SHALL BE IDENTIFIED WITH THE NAME OF THE DEVICE CONTROLLED. IDENTIFICATION SHALL BE BY INDELIBLE MARKER IN CONCEALED LOCATIONS AND ADHESIVE LABELS IN EXPOSED LOCATIONS. EMERGENCY DEVICES SHALL BE IDENTIFIED IN RED.

23.4. BALLAST COMPARTMENTS FOR FIXTURES OPERATING AT GREATER THAN 120 VOLTS SHALL BE IDENTIFIED WITH A BRIGHT ORANGE ADHESIVE WARNING LABEL INDICATING VOLTAGE.

23.3. EMPTY CONDUITS SHALL BE IDENTIFIED WITH TAGS AT BOTH ENDS INDICATING THE LOCATION OF TERMINATION AT THE

23.5. ALL WIRES SHALL BE IDENTIFIED BY PANEL AND CIRCUIT NUMBER AT ALL TERMINATION AND SPLICE POINTS BY THE USE OF BRADY B-500 VINYL CLOTH TAPE OR EQUIVALENT METHOD. 23.6. ALL JUNCTION BOXES SHALL BE IDENTIFIED WITH PANEL AND CIRCUIT NUMBERS OF ALL CIRCUITS OR THE NAME OF COMMUNICATIONS SYSTEM CABLING CONTAINED WITHIN. JUNCTION BOXES IN EXPOSED LOCATIONS SHALL BE CLEARLY MARKED. WITH IDENTIFYING LABELS. JUNCTION BOXES IN CONCEALED LOCATIONS SHALL BE MARKED WITH A BOLD, INDELIBLE MARKING PEN. LETTERING SHALL BE NEATLY AND LEGIBLY PRINTED, JUNCTION BOXES ON EMERGENCY SERVICE SHALL BE PAINTED RED

23.7. CONDUIT RUNS FOR BRANCH CIRCUITING AND/OR COMMUNICATIONS CABLING SHALL BE IDENTIFIED AT EVERY 50 FEET OF

24.1. LOCATIONS OF LIGHTING FIXTURES INDICATED ON THE DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL REFER TO

LENGTH, AND AT EACH OUTLET AND PULL BOX WITH CIRCUIT NUMBER OR SYSTEM NAME

INSTALLATION OF LIGHTING FIXTURES

AND LABELED AS EMERGENCY

PRIOR TO INSTALLATION. 24.2. RECESSED FIXTURES SHALL BE FURNISHED COMPLETE WITH MOUNTING DEVICES AND ACCESSORIES. 24.3. FIXTURES SHALL BE ATTACHED TO CEILING SUPPORTING MEMBERS AND SHALL NOT DEPEND UPON LATHING OR PLASTER FOR ALIGNMENT OR SUPPORT. FIXTURES IN SUSPENDED CEILINGS SHALL BE SUPPORTED BY SADDLE HANGERS OR TIE-BARS

ATTACHED TO RUNNERS OR BETWEEN CROSSBARS OF CEILING SYSTEMS. MOUNTING SPLINES OR OTHER POSITIVE MEANS OF

SHALL BE PRIMED OR PAINT DIPPED TO RESIST CORROSION. FASTENING DEVICES SHALL BE OF A POSITIVE, LOCKING TYPE, AND

PROVIDED FOR LIGHTING FIXTURES RECESSED IN HUNG CEILINGS WITH ACCESSIBLE TILES. ONE (1) OUTLET BOX MAY SERVE UP

MAINTAINING ALIGNMENT AND RIGIDITY SHALL BE PROVIDED. SUPPORTING MEMBERS SHALL BE SURFACE PASSIVATED AND

ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS, MODELS, AND TRIM TYPES OF ALL LIGHTING FIXTURES

SHALL NOT REQUIRE THE USE OF SPECIAL TOOLS TO REMOVE. TIE WIRES SHALL NOT BE USED IN PLACE OF FASTENING DEVICES. 24.4. SPLICES SHALL NOT BE PERMITTED IN ANY RUN OF LIGHTING FIXTURE HOOKUP WIRE.

TO A MAXIMUM OF FOUR (4) RECESSED LIGHTING FIXTURES.

25.1. ALL CUTTING AND PATCHING REQUIRED FOR EQUIPMENT INCLUDED IN THESE SPECIFICATIONS SHALL BE DONE BY THIS

24.5. SEPARATELY MOUNTED OUTLET BOXES AND FLEXIBLE CONDUIT PIGTAIL CONNECTIONS (MAXIMUM LENGTH OF 6'-0") SHALL BE

CONTRACTOR. PATCHING TO BE PROVIDED BY A QUALIFIED TRADE AND COORDINATED WITH GENERAL CONTRACTOR. 25.2. THE CONTRACTOR SHALL NOT DO ANY CUTTING THAT MAY IMPAIR THE STRENGTH OF BUILDING CONSTRUCTION. NO HOLES ARE TO BE DRILLED INTO ANY STRUCTURAL MEMBERS. CLAMPS OR OTHER APPROVED HOLDING DEVICES ARE TO BE USED.

25.3. ALL THE CUTTING OF EXISTING FLOORS, CEILINGS AND WALLS SHALL BE PERFORMED IN A MANNER SO AS TO MINIMIZE DAMAGE

INSURE COMPLETE MATCHING WITH ADJACENT FINISHES AFTER FINAL TREATMENT OF SURFACES.

THE GENERAL CONTRACTOR IN WRITING

26.1. CORED HOLES SHALL BE REVIEWED BY A STRUCTURAL ENGINEER PRIOR TO STARTING.

26.2. CORE DRILLING TO BE COORDINATED WITH THE OWNERS AND THERE SCHEDULED USE OF BUILDING.

26.3. FOR REMOVED OR ABANDONED OUTLETS, THE EXISTING CORED HOLE IN THE CONCRETE SLAB SHALL BE FILLED WITH NON-SHRINK GROUT. THE FILLED HOLE SHALL BE ADJUSTED TO GRADE LEVEL.

26.4. BEFORE CORE DRILLING FLOOR SLAB OR STRUCTURAL WALLS, X-RAY SLAB OR WALLS AND HAVE THE LOCATIONS ACCEPTED BY

26.5. THE CONTRACTOR SHALL USE A BAR LOCATOR TO DETERMINE IF REBARS INTERFERE WITH PROPOSED HOLE. IF THERE IS AN INTERFERENCE, THE CORE HOLE SHALL BE SHIFTED TO A NEW LOCATION ACCEPTABLE TO THE TENANT, STRUCTURAL ENGINEER

27.1. ALL PENETRATIONS OF WALLS, FLOORS OR CEILINGS MUST BE SEALED IN AN APPROVED MANNER USING AN OUTER

26.6. WHEN AN EXISTING HOLE IS TO BE REACTIVATED, INSPECT TO SEE IF REBARS HAVE BEEN CUT. IF REBARS HAVE BEEN CUT,

INFORM THE GENERAL CONTRACTOR TO PROCEED TO REPAIR REBARS. PROCEED WITH A NEW CORE HOLE AS DESCRIBED

27. SEALING OF PENETRATIONS

BE MALLEABLE IRON.

STRUCTURAL MEMBERS

CIRCUMFERENTIAL SLEEVE FILLED INSIDE AND OUT. 27.2. ALL PENETRATIONS OF FIRE RATED WALLS, FLOORS OR CEILINGS SHALL BE SEALED WITH FIRESTOPPING MATERIAL LISTED WITH, AND BEAR LAREL OF CSA AND LLIC. AND MAINTAIN SAME FIRE RATING AS FLOOR, WALL, OR CEILING ASSEMBLY, REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED PARTITIONS AND FLOOR ASSEMBLIES.

STEEL. SUPPORT CLIPS AND FASTENERS SHALL BE LISTED AND APPROVED FOR THE APPLICATION. STRAPS AND CLAMPS SHALL

28.1. THREADED RODS SHALL BE FULLY GALVANIZED, MINIMUM 3/8" DIAMETER. MODULAR CHANNEL SUPPORTS SHALL BE GALVANIZED

28.2. HANGERS MUST NOT BE WELDED TO STRUCTURAL STEEL MEMBERS AND BURNING OF HOLES IN STRUCTURAL STEEL IS

28.3. DO NOT USE ANY BASE BUILDING SUPPORTS OR EQUIPMENT, INCLUDING CEILING SUPPORT SYSTEM. SUPPORT FROM

28.4. SUPPORTS SHALL BE SIZED TO ACCOMMODATE THE LOAD REQUIRED. ALL WORK SHALL BE SUPPORTED INDEPENDENTLY OF THE WORK OF OTHER TRADES, INCLUDING CEILING SYSTEM SUPPORTS. 28.5. PANELS AND EQUIPMENT LOCATED ON OTHER THAN MASONRY WALLS SHALL BE MOUNTED WITH MODULAR CHANNEL SUPPORTS

28.6. APPROVED SEISMIC RESTRAINTS RATED TO RESIST 1/2G OF FORCE SHALL BE FURNISHED FOR ALL ELECTRICAL WORK REQUIRED BY LOCAL BUILDING CODES AND THE AUTHORITIES HAVING JURISDICTION.

29. POWER INTERRUPTION NOTE 29.1. ELECTRICAL POWER MUST BE SHUT OFF PRIOR TO THE CONTRACTOR PERFORMING ANY WORK IN RACEWAYS WITH LIVE ELECTRICAL CIRCUITS OR ANY OTHER LIVE ELECTRICAL CIRCUITS OR EQUIPMENT. ANY POWER INTERRUPTION SHALL BE COORDINATED WITH THE OWNER AND BUILDING OPERATING PERSONNEL, PROVIDING A MINIMUM OF SEVEN (7) DAYS ADVANCE

29.2. TAPS INTO LIVE RISERS ARE NOT PERMITTED.

SECURED TO THE BUILDING STRUCTURE.

05.21.2025

05.21.2025

REVISIONS DATE DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST PROJECT: AND MUST REPORT, ANY DISCREPANCIES TO TH ARCHITECT & ENGINEER BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE

THE CONTRACTOR AND SUB-TRADES ARE RESPONSIBLE TO

CONTACT THE ENGINEER IN ADVANCE IN ORDER TO SCHEDULE

REQUIRED SITE VISITS AND PROVIDE INSPECTION REPORTS AS REQUIRED IN ACCORDANCE WITH THE GENERAL COMMITMENT & REVIEW PROCESS BY ARCHITECTS AND ENGINEERS.

ISSUED FOR PERMITS

I ISSUED FOR REVIEW

ENGINEERING CONSULTANTS: ENGINEERING

TEL: (416) 726-1648 | (905) 617-4804 E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca

PROJECT:

DRAWING TITLE

HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION

2110 TRAFALGAR RD, OAKVILLE

ELECTRICAL

ON L6H 752

162 Guelph St., Unit 216, Georgetown, On., L7G 4A6

28 KING STREET EAST, UNIT B

STONEY CREEK, ONTARIO, L8G 1J8

Tel. 905-664-8735 Fax. 905-664-8737

PROJECT:

Web: www.2gai.com SCALE: AS NOTED DATE:

MAY.2025 DRAWN

30. FINAL CLEANUP AND FIELD TESTS 30.1. AFTER COMPLETION OF THE ENTIRE ELECTRICAL INSTALLATION: 30.1.1. THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, SHALL CLEAN ALL PANELS, SWITCHES, CABINETS, DEVICES PLATES,

EQUIPMENT, CABLES, ALL JUNCTION BOXES AND OTHER ITEMS IS COMPLETED. 30.1.2. THE CONTRACTOR SHALL REPAIR OR REPLACE, AS DIRECTED BY THE ENGINEER, ANY ITEM DAMAGED DUE TO INSTALLATION OR RELOCATION OF EQUIPMENT OR DEVICES AT NOT ADDITIONAL COST TO THE OWNER.

FIXTURES AND OTHER ITEMS FURNISHED UNDER THIS CONTRACT AND SHALL ENSURE THAT ALL PANELBOARD DIRECTORIES

ARE IN PLACE AND COMPLETED OR REVISED AS REQUIRED BY THE WORK, AND THAT ALL IDENTIFICATION AND MARKING OF

30.2. IN ADDITION TO OTHER TESTS WHICH MAY BE REQUIRED BY OTHER DIVISIONS, PERFORM FIELD TESTS IN THE PRESENCE OF THE ENGINEER, TO DEMONSTRATE THE PROPER FUNCTIONING OF THE ELECTRICAL INSTALLATION. THE ENGINEER SHALL BE GIVEN A MINIMUM OF 48 HOURS ADVANCE NOTICE OF ALL TESTS. REQUIRED FIELD TESTS SHALL INCLUDE, BUT NOT BE LIMITED TO THE

30.2.1. OPERATION OF ALL ELECTRICAL EQUIPMENT FOR A PERIOD FOR A PERIOD OF 24 HOURS WITHOUT INTERRUPTION.

30.2.2. 1.000 VOLT MEGOHMMETER TEST FOR ALL WIRES AND CABLES FURNISHED. THE CONTRACTOR SHALL FURNISH A TEST REPORT TO THE ENGINEER INDICATING TEST METHOD USED AND RESULTS. IF GROUND RESISTANCE ON ANY CIRCUIT IS LESS THAN THAT REQUIRED BY CSA, SUCH CIRCUITS ARE TO BE CONSIDERED DEFECTIVE AND MUST BE REPLACED.

30.2.3. MEASURE PHASE CURRENT TO PANELBOARDS WITH NORMAL LOADS OPERATING AT TIME OF ACCEPTANCE. ADJUST BRANCH CIRCUIT CONNECTION AS REQUIRED TO OBTAIN THE BEST BALANCE OF CURRENT BETWEEN PHASES AND SUBMIT A REPORT

30.3. ALL DEFECTIVE FIXTURES CABLES OR OTHER EQUIPMENT ENCOUNTERED DURING THE COURSE OF TESTING SHALL BE PROMPTLY REPLACED AND RETESTED TO THE SATISFACTION OF THE ENGINEER.

31. PLYWOOD

31.1. PLYWOOD BACKBOARDS SHALL BE 19MM (3/4") THICK, ULC OR CSA FIRE RETARDANT FIR. REFER TO DRAWINGS FOR SIZE. PRIME AND PAINT BACKBOARDS WITH FIRE RETARDANT PAINT EQUAL TO CGSB SPEC. #1-GP-151M, OF A COLOUR AS SELECTED BY THE ARCHITECT OR CONSULTANT. FIRE RETARDANT LABELS SHALL NOT BE PAINTED OVER.

32. COORDINATION OF MECHANICAL DRAWINGS

32.1. UNLESS INDICATED OTHERWISE ON THE ELECTRICAL DRAWINGS, ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR THE

SUPPLY AND INSTALLATION OF THE FOLLOWING: 32.1.1. STARTERS AND DISCONNECT SWITCHES (INSTALLATION ONLY)

32.1.2. LINE AND LOAD SIDE WIRING FOR STARTERS.

32.1.3. LINE AND LOAD SIDE WIRING TO VARIABLE SPEED DRIVES.

32.1.4. ALL POWER WIRING (120V & ABOVE) TO ALL MECHANICAL EQUIPMENT.

32.1.5. ALL MOTORIZED DAMPER POWER CONNECTIONS (120V & ABOVE).

32.1.6. ADDITIONAL FIRE ALARM DEVICES.

32.1.7. WIRING TO ELECTRIC SPACE HEATERS.

32.2. MECHANICAL DIVISIONS WILL BE RESPONSIBLE FOR THE SUPPLY AND INSTALLATION OF THE FOLLOWING:

32.2.1. STARTERS AND DISCONNECT SWITCHES TO MECHANICAL UNITS.

32.2.2. ALL VARIABLE SPEED DRIVES AND CONTROL WIRING TO STARTERS.

32.2.3. PIPE TRACING AND RELATED CONTROLS.

32.2.4. ELECTRIC HOT WATER HEATERS.

32.2.5. ALL INTERPOSING RELAYS, RELAYS, CONTACTORS AND 120V CONTROL DEVICES.

32.2.6. ALL 120V AND LOW VOLTAGE CONTROL WIRING AND CONDUITS.

32.2.7. SHOULD THE MECHANICAL CONTRACTOR CHANGE ANY OF THE MOTOR OR EQUIPMENT SIZES FROM THOSE IDENTIFIED ON THE MECHANICAL SCHEDULES AND DRAWINGS AT ANY STAGE OF THE PROJECT TO AIDE THEIR INSTALLATION, THE MECHANICAL CONTRACTOR WILL INCUR ALL EXTRA ELECTRICAL COSTS TO REVISE THE ELECTRICAL FEEDERS, BREAKERS, STARTERS AND EQUIPMENT TO SUPPLY POWER TO THE REVISED PIECE OF EQUIPMENT.

32.3. DETERMINE EXACT LOCATION OF STARTERS, MOTORS AND LINE VOLTAGE CONTROLS BASED ON THE MECHANICAL DRAWINGS TO COORDINATE WITH THE LOCATIONS OF ALL EQUIPMENT TO ENSURE THE REQUIRED CLEARANCES ARE MAINTAINED. IF NO WALL LOCATION IS SUITABLE FOR THE MOTOR STARTERS, THEN MOUNT THE STARTERS ON A PLYWOOD BACKBOARD NEAR THE RESPECTIVE EQUIPMENT TO MEET THE APPLICABLE CODE REQUIREMENTS FOR MOTOR ISOLATION SWITCHES. IF A MOTOR OR PIECE OF EQUIPMENT IS LISTED ON ONE OF THE STARTER SCHEDULES BUT IS NOT SHOWN ON THE FLOOR PLANS, THE CONTRACTOR IS TO REFERENCE THE MECHANICAL DRAWINGS FOR THE LOCATION OF THE RESPECTIVE PIECE OF EQUIPMENT. NO ADDITIONAL COSTS WILL BE ENTERTAINED.

33. DATA/VOICE SPECIFICATION

33.1. HORIZONTAL CABLING

33.1.1. PROVIDE AND INSTALL ALL HORIZONTAL DATA CABLING AS INDICATED. HORIZONTAL DATA CABLES SHALL BE 4-PAIR 100 OHM UTP, 22 TO 24 AWG, CMR/CMP, FT6/FT4 FIRE RATED, CERTIFIED TO ANSI/TIA/EIA-568-B.2. CATEGORY 6 SPECIFICATIONS, AND BLUE IN COLOUR. THE FULL END TO END 100 METER CHANNEL THAT INCLUDES A WORST CASE OF FOUR TERMINATIONS (INCLUDING CONSOLIDATION POINT AND CROSS CONNECT) MUST MEET ALL OF THE CRITERIA (AS A MINIMUM) AS DEFINED IN SECTION 1.10. THE CHANNEL PERFORMANCE SPECIFICATIONS ALL OF THE PARAMETERS IN SECTION 1.10 MUST BE TESTED (AND PUBLISHED) UP TO AND INCLUDING 1 GHZ AND WARRANTABLE UP TO AND INCLUDING 1 GHZ FOR A MINIMUM PERIOD OF

33.1.2. PROVIDE AND INSTALL ALL HORIZONTAL VOICE CABLING AS INDICATED. HORIZONTAL VOICE CABLES SHALL BE 4-PAIR UNSHIELDED TWISTED PAIR. CSA FT6/CMP PLENUM FIRE RATED. CERTIFIED TO ANSI/TIA/EIA-568-B.2. CATEGORY 6 SPECIFICATIONS AND WHITE IN COLOUR ALL FUTURE REFERENCE TO 'VOICE CABLE' SHALL REFER TO THE REQUIREMENTS. AS STATED IN THIS SECTION. THE CABLE MUST BE CSA CERTIFIED AND STAMPED ACCORDINGLY. ALL CATEGORY 6 UTP VOICE CABLE SHALL HAVE A WHITE OUTER JACKET. OTHER COLORS MAY BE ACCEPTABLE IF APPROVED IN WRITING BY THE

33.1.3. WHEN INSTALLED IN CONDUIT, FT4 TYPE CABLES CAN BE USED.

33.1.4. ALL CABLES PULLED AND TERMINATED FOR SERVERS ARE TO BE TREATED EXACTLY THE SAME AS OTHER HORIZONTAL

33.1.5. THE INSTALLATION SHALL COMPLY WITH GOITS STANDARDS.

33.1.6. HORIZONTAL CABLING SHALL BE SUPPLIED AS END-TO-END SOLUTION BY BELDEN/NORDX OR HUBBELL.

33.2. MODULAR JACKS AND ADAPTORS

33.2.1. PROVIDE AND INSTALL ALL MODULAR JACKS AS INDICATED. 33.2.2. MODULAR JACK CURRENT RATING: 1.5 AMPERES MAXIMUM

MODULAR JACK DURABILITY: 750 MATING CYCLES

MODULAR JACK CONTACT PRESSURE: 100 GRAMS, MINIMUM PER CONTACT

DIELECTRIC VOLTAGE STRENGTH: 1000V RMS AT 60HZ.

33.2.3. THE UTP MODULES MUST BE MATCHED APPROPRIATELY WITH THE VOICE AND DATA CABLES TO ENSURE THAT END TO END VENDOR WARRANTIES WILL BE APPLICABLE. ALL UTP DATA AND VOICE CABLES SHALL BE TERMINATED WITH THE JACK COLORS AS DESCRIERED BELOW

DATA MODULE COLOR - BLUE

VOICE MODULE COLOR - WHITE THE COLOR OF THE UTP MODULES MAY BE CHANGED AT THE DISCRETION OF THE CONSULTANT.

33.3. TERMINATION VOICE MODULES, RACKS AND PATCH PANELS

33.3.1. PROVIDE VOICE TERMINATION BLOCKS WHERE SHOWN ON DRAWINGS. VOICE TERMINATION PANELS TO BE MOUNTED ON

33.3.2. ALL UTP VOICE AND DATA MODULES SHALL BE 8-PIN RJ45'S CONFORMING TO THE ENHANCED CATEGORY 6 STANDARD. THE JACKS MUST ACCEPT EITHER RJ 45 OR RJ11 MALE PLUGS WITHOUT CAUSING ANY DAMAGE OR DEGRADATION TO THE

33.4. RISER CABLING - VOICE

33.4.1. THE 100 PAIR COPPER RISER VOICE CABLE SHALL CONSIST OF 24 AWG THERMOPLASTIC INSULATED CONDUCTORS. THE BINDER GROUPS ARE TO BE IDENTIFIED BY DISTINCTLY COLOURED BINDERS AND ASSEMBLED TO FORM A SINGLE COMPACT CORE COVERED BY A DUAL POLYLEFIN/POLYVINYL CHLORIDE INSULATION AND AN ALPLAST SHEATH. THE CONDUCTORS

SHALL BE SOLID ANNEALED COPPER AND THE INSULATED CONDUCTORS SHALL BE TWISTED TO FORM PAIRS. THE CABLE SHALL BE CSA CERTIFIED CBC FT4 IN ACCORDANCE WITH CSA STANDARD C22.2 NO. 214M. THE CABLE SHALL MEET OR EXCEED MINIMUM CSA SPECIFICATIONS FOR 100 OHM UTP MULTIPAIR BACKBONE CABLES AS DEFINED IN CSA DOCUMENT CSA-T529M SECTION 10.3. 33.5. CROSS-CONNECTION CABLES AND WIRE

33.5.1. THE UTP DATA PATCH CORD FOR CONNECTING A DATA PATCH PANEL JACK TO ITS CORRESPONDING EQUIPMENT JACK SHALL BE OF UNSHIELDED TWISTED PAIR CORDAGE WITH EIGHT 24 AWG THERMOPLASTIC PLATED, STRANDED COPPER CONDUCTORS FORMED INTO FOUR INDIVIDUALLY TWISTED PAIRS WITH TIGHT TWISTING FOR HIGH SPEED OPERATIONS. THE UTP LINE CORD FOR CONNECTING THE STATION OUTLET JACK TO THE STATION EQUIPMENT (TYPICALLY A PERSONAL COMPUTER) IS TO BE OF EQUIVALENT CONSTRUCTION.

33.5.2. THE UTP PATCH/LINE CORD SHALL BE WIRED EIA-A TO EIA-A WITH A ONE-TO-ONE CORRESPONDENCE STRAIGHT-THROUGH AND TERMINATED ON BOTH ENDS ON 8-POSITION MODULAR LONG PLUGS WITH MINIMUM OF 50 MICRO-INCH GOLD PLATING. THE UTP PATCH CORDS SHALL BE C/W LABELS AT BOTH ENDS.

33.5.3. DATA PATCH CORDS AND DATA LINE CORDS SHALL BE SUPPLIED AND OF THE SAME MANUFACTURER AS THE HORIZONTAL CABLES AND SHALL MEET OR EXCEED THE PERFORMANCE CHARACTERISTICS OF THE HORIZONTAL DATA CABLE.

33.6. TESTING

33.6.1. PROVIDE TEST REPORTS FOR BOTH DATA AND VOICE CABLING. UTP CAT 6 TESTING SHALL INCLUDE:

33.6.2. -ATTENUATION 33.6.3. -NEAR END CROSSTALK (NEXT)

33.6.4. -INSERTION LOSS

33.6.5. -ATTENUATION TO CROSSTALK, TO PSNEXT

33.6.6. -POWER SUM (PS-NEXT)

33.6.7. -RETURN LOSS (RL)

33.6.8. -EQUAL LEVEL FAR END CROSSTALK (ELFEXT)

33.6.9. -POWER SUM ELFEXT (PS-ELFEXT)

33.6.10. -FAR END CROSSTALK (FEXT)

33.6.11. -ATTENUATION TO CROSSTALK RATIO (ACR) 33.6.12. -POWER SUM ATTENUATION TO CROSSTALK RATIO (PSACR).

33.7. IDENTIFICATION LABELS

33.7.1. EACH HORIZONTAL CABLE AND PATCH CORD SHALL BE AFFIXED WITH MECHANICALLY PRINTED LABELLING TABS OR TYPED LETTER SELF-ADHESIVE MYLAR AT BOTH ENDS. (THE LETTERING SHALL NOT BE EXPOSED.)

LABELING SCHEME: -DATA CABLES: D.X-1 TO 100 33.7.3.

33.7.6.

33.9.4.

33.7.4. -VOICE CABLES: V.X-1 TO 100 WHERE LETTERS AND NUMBERS DENOTE:

33.7.7. X - DENOTES FLOOR NUMBER 33.7.8. NEXT NUMBER DENOTES CABLE NUMBER

D- DATA CABLE, V-VOICE CABLE

33.8. GROUNDING 33.8.1. GROUND WIRE SHALL BE STRANDED #6AWG COPPER WIRE, GREEN INSULATED JACKET

33.8.2. ALL RACKS AND CABINETS MUST BE GROUNDED. PROVIDE AND INSTALL ONE GROUND WIRE FROM EACH RACK OR CABINET TO THE NEAREST APPROVED ELECTRICAL GROUND. 33.9. RISER CABLING - FIBRE OPTICS

33.9.1. MULTI-MODE FIBER OPTIC CABLE SHALL CONSIST OF 24 STRANDS MULTI-MODE FIBRE OPTIC BETWEEN MAIN BELL ROOM AND SECOND FLOOR LAN ROOM AND 6 STRANDS MULTI-MODE FIBRE OPTIC BETWEEN 2ND FLOOR AND 3RD, 4TH, 5TH AND 6TH FLOOR WHICH SHALL BE TIGHT-BUFFERED, DUAL-WINDOW, GRADED-INDEX OPTICAL FIBRE.

33.9.2. THE MULTI-MODE FIBRE CABLE SHALL MEET REQUIREMENTS FOR FDDI AND IBM CHANNEL EXTENDER WITH MINIMUM PERFORMANCE PARAMETERS AS DETAILED IN THE FOLLOWING TABLE:

33.9.3.

MAXIMUM INDIVIDUAL ATTENUATION (DB/KM) 850NM 1300NM

33.9.5. TYPICAL ATTENUATION (@23'C) 2.9 0.9 MINIMUM BANDWITH - 3db OPTICAL (mhz-KM) 200

33.9.7. ALL FIBRE CABLE SHALL BE ENCLOSED IN FIBRE DUCT OR CONDUIT TO THE POINT OF TERMINATION FOR MAXIMUM MECHANICAL AND ENVIRONMENTAL PROTECTION. ALL SUCH FIBRE PATHWAYS SHALL BE SIZED LARGE ENOUGH SO THAT ALL INTERNAL CABLING IS ROUTED FREELY INSIDE WITH NO CONTINUOUS CONTACT WITH THE ENVELOPING PATHWAY. (ALL FIBRE PATHWAYS SHALL MEET ALL RELEVANT BUILDING CODES.)

33.9.8. LEAVE A MINIMUM OF 7 FEET OF SLACK FIBRE CABLING AT THE TERMINATION CABINET ENDS.

33.9.9. MULTI-MODE FIBRE CABLE SHALL BE ORANGE IN COLOUR. FIBRE CABLES SHALL BE AS MANUFACTURED BY HUBBELL,

33.10. FIBRE OPTIC EQUIPMENT

33.10.1. FIBRE OPTIC RISER PANEL TO BE RACK MOUNTABLE FIBRE OPTIC DISTRIBUTION CENTRE/PANEL.

33.10.2. FIBRE CABINET TO ACCOMMODATE UP TO 24 CONNECTORS ON THE SECOND FLOOR AND MINIMUM OF FOUR SEPARATE TIGHT BUFFERED CABLES.

33.10.3. SPOOLS FOR STORING PATCH CORD SLACK AND MECHANISM TO CONTROL BEND RADII WITHIN CABINET, HINGED FRONT OR SHELF PROVIDING EASY ACCESSIBILITY TO CONNECTORS AND SPLICES.

33.10.4. FIBRE OPTIC PANEL WITH ST CONNECTOR PANEL MODULES FULLY LOADED WITH ST SIMPLEX FIBRE OPTIC ADAPTERS.

33.10.5. ALL CONNECTORS SHALL COMPLY TO ANSI. ALL ST CONNECTORS SHALL MEET THE FOLLOWING SPECIFICATIONS: -ATTENUATION: <= 0.75DB PER MATED ST OR SC CONNECTOR PAIR @23°C ± 5°C

33.10.7. -RETURN LOSS: <= 20DB @ 23°C ± 5°C

33.10.8. -TOTAL OPTICAL ATTENUATION: <= 1.5DB THROUGH THE CROSS-CONNECT FROM ANY TERMINATED OPTICAL FIBRE TO ANY OTHER TERMINATED OPTICAL FIBRE.

-DURABILITY: <= 500 MATING CYCLES PER ANSI/EIA/TIA-455-21 @23°C ± 5°C 33.10.10.-CONNECTOR OPTICAL AXIAL PULL STRENGTH: 2.2N @ 0°, 2.2N @ 90° WITH A MAXIMUM 0.5DB INCREASE IN ATTENUATION.

33.10.11. -MAXIMUM INSERTION LOSS: 0.6DB -FERRULE MATERIAL: CERAMIC

33.11. INSTALLATION NOTES:

33.11.1. ALL UTP CATEGORY CAT 6 CABLING MUST BE INSTALLED IN ACCORDANCE WITH ANSI/TIA/EIA-568-B.2. CATEGORY 6

INSTALLATION REQUIREMENTS. 33.11.2. ALL CABLES SHALL BE NEATLY BUNDLED AND TIE-WRAPPED. VOICE AND DATA CABLES SHALL BE SEPARATED INTO TWO (2) DISTINCT BUNDLES AND ROUTED THROUGH THE SAME CONDUIT. SECURE BUNDLES TO AVAILABLE VERTICAL AND HORIZONTAL SUPPORTS AND NEATLY FASTEN TO PATCH PANELS

33.11.3. ROUTE ALL CABLES TO MAINTAIN MINIMUM SEPARATIONS FROM SOURCES OF LIGHTING, POWER CABLES, HVAC AND OTHER ELECTRICAL EQUIPMENT. PROVIDE ADDITIONAL MATERIALS IN ORDER TO MEET THE MINIMUM SEPARATION REQUIREMENTS.

33.11.4. ALL DATA AND VOICE CABLES ARE TO BE PULLED IN CONTINUOUS RUNS. NO CABLE SPLICES ARE ALLOWED. 33.11.5. ALL CABLING MUST BE ROUTED TO MINIMIZE CROSS-OVERS AND CONGESTION.

33.11.6. EXERCISE CAUTION WHEN PULLING CABLES TO ENSURE THAT THE MANUFACTURER'S MAXIMUM PULL-FORCE AND MINIMUM BEND RADII SPECIFICATIONS ARE ADHERED TO.

33.11.7. ALL CABLING SHALL BE NEATLY DRESSED AND COMBED ALONG THE BACK OF BACKBOARD AND AT ALL TERMINATION 33.11.8. PROVIDE CABLE SUPPORTS, HARNESSES AND SLEEVES AS REQUIRED. ALL FREE RUNNING CABLES SHALL BE SECURELY FASTENED TO APPROPRIATE CARLE SUPPORTS AND HARNESSES WITH A MAXIMAL INTERSUPPORT CARLE SAG OF 150MM

OTHER EXISTING FIXTURE OR CEILING SPACE STRUCTURE. CABLE SUPPORTS SHALL BE CADDY CABLECAT OR EQUIVALENT. 33.11.9. WHEN TERMINATING THE CABLE AT MODULAR JACKS AND TERMINATION PANELS, THE LENGTH OF UNJACKETED CONDUCTORS SHALL NOT EXCEED 1"(25 MM). THE AMOUNT OF UNTWISTING OF CABLE CONDUCTORS MUST NOT BE

GREATER THAN 1/2" (13 MM) AFTER TERMINATION. 33.11.10. EACH CABLE AND TERMINATION JACK SHALL BE LABELLED WITH A MECHANICALLY PRINTED IDENTIFICATION LABEL. CABLE LABELS TO BE SELE-LAMINATING VINYL CONSTRUCTION WITH WHITE MARK-ON COLOUR AND CLEAR OVERLAPS. CABLE LABEL SHALL BE A MINIMUM OF 2"(50MM) WIDE AND OF SUFFICIENT LENGTH TO PERMIT CLEAR OVERLAP TO BE WRAPPED COMPLETELY AROUND THE CABLE AT LEAST ONE AND A HALF TIMES.

ALL CABLES SHALL BE COMPLETELY SUPPORTED BY THE HARNESSES SO THAT NO WEIGHT IS TRANSFERRED TO ANY

33.11.11.INSTALLERS SHALL BE CERTIFIED BY THE MANUFACTURER TO QUALIFY THE INSTALLATION FOR A 25-YEAR WARRANTY. INSTALLER SHALL PROVIDE CERTIFICATE WITHIN 14 DAYS OF THE CONTRACT AWARD AND SHALL INCLUDE END-TO-END CHANNEL TEST REPORTS WITH PROJECT COMMISSIONING DOCUMENTATION.

34. FIRE ALARM SYSTEM

34.1. ALL WORK, MATERIALS, INSTALLATION LOCATIONS, HEIGHTS, CLEARANCES, ETC. SHALL BE IN COMPLIANCE WITH THE APPLICABLE CODES, STANDARDS AND REGULATIONS.

34.2. ALL INSTALLATIONS AND EQUIPMENT SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE NATIONAL BUILDING CODE, ONTARIO BUILDING CODE, CAN/ULC S-524, CAN/ULC-S525, CAN/ULC-S526, CAN/ULC-S527, CAN/ULC-S528, CAN/ULC-S529, CAN/ULC-S530, AND SUBJECT TO THE LOCAL AUTHORITIES HAVING JURISDICTION.

34.3. ALL TESTING AND VERIFICATION SHALL BE IN CONFORMANCE WITH CAN/ULC S-537. PROVIDE FINAL ACCEPTANCE, VERIFICATION TEST / REPORTS & CERTIFICATION OF ENTIRE SYSTEM. 34.4. SUPPLY AND INSTALL ALL NECESSARY EQUIPMENT & MATERIALS TO ACCOMMODATE DEVICES WIRING, ETC. ALL EQUIPMENT MUST

BE OPERATIONAL, TESTED AND VERIFIED TO THE SATISFACTION OF THE LOCAL AUTHORITIES HAVING JURISDICTION. 34.5. PROVIDE ALL NECESSARY CONDUITS, WIRING, JUNCTION BOXES, ETC. REQUIRED FOR A COMPLETE SYSTEM INSTALLATION. COORDINATE CONDUIT ROUTING ON SITE WITH ALL TRADES.

34.6. MOUNT AND CALIBRATE ALL DEVICES IN ACCORDANCE THE WITH O.B.C., CAN/ULC STANDARDS AND LOCAL AUTHORITIES HAVING

34.7. COORDINATE ALL DEVICE FINAL LOCATIONS WITH ALL OTHER TRADES AND G.C. ON SITE PRIOR TO ROUGH-IN. ENSURE TO INSTALL DEVICES TO AVOID ANY BULKHEADS, PARTITIONS, ETC

34.8. ALL WORK SHALL BE PERFORMED BY A APPROVED CERTIFIED CONTRACTOR.

	ELECTRICAL		ABBREVIATIONS		
LIGHTING	CONTROL	POWER		AC	ABOVE COUNTER
\$	DECORA TYPE LIGHT SWITCH	ф	DECORA DUPLEX RECEPTACLE 5-15R (OR AS NOTED),	AFF	ABOVE FINISHED FLOOR
OS)	CEILING MOUNTED OCCUPANCY SENSOR	_	120VAC, 15A/1P. DECORA QUAD RECEPTACLE 5-15R (OR AS NOTED),	BAS	BUILDING AUTOMATION SYSTEM
		#	120VAC, 15A/1P	BFG	BELOW FINISHED GRADE
SWITCH SUBSCRIPTS: 3 - THREE WAY 4 - FOUR WAY D - DIMMER SWITCH OS - OCCUPANCY TYPE SENSOR SWITCH C/W MANUAL OVERRIDE		DECORA DUPLEX SPLIT RECEPTACLE 5-15R (OR AS NOTED), 120VAC, 15A/1P.		С	CEILING MOUNTED
			FLOOR MOUNTED COMPACT DUPLEX RECEPTACLE, 5-15R OR AS NOTED	C/B	CIRCUIT BREAKER
			SINGLE SPECIALTY RECEPTACLE AS NOTED ON DWG	<u>¢</u>	CENTERLINE
	/60 MIN. TIMER SWITCH			E/EX/EXIST	EXISTING EQUIPMENT TO REMAIN
KP - KEY P	-	\bigcirc	120 VOLT DIRECT CONNECTION , 1PH.	EC	EMPTY CONDUIT
EXIT AND EMERGENCY LIGHTING			208 VOLT DIRECT CONNECTION, 1 PH.	EM	EMERGENCY
#	SELF POWERED RUNNING MAN EXIT SIGN.		208 VOLT DIRECT CONNECTION , 3 PH.	EMT	ELECTRICAL METALLIC TUBING
\$	SELF POWERED COMBINATION RUNNING MAN EXIT		347/600 VOLT DIRECT CONNECTION 3 PH	FA	FIRE ALARM
	SIGN C/W REMOTE HEADS.	JB	JUNCTION BOX	G/GRD/GND	GROUND
DC1	EMERG. BATTERY PACK C/W REMOTE HEADS.		DISCONNECT SWITCH.	GFI	GROUND FAULT INTERRUPTER
	SINGLE OR DUAL REMOTE EMERGENCY HEADS.		FLUSH MOUNTED, SURFACE MOUNTED	HL	MOUNTED AT HIGH LEVEL
			PANELBOARDS	HP	HORSE POWER
•	EMERGENCY DOWNLIGHT	HD	DYSON AIRBLADE V 1000 WATTS, 120/1PH VOLT. CONFIRM SPEC/FINISH	LVR	LOW VOLTAGE RELAY
JNIVERSAL	WASHROOM EMERGENCY CALL SYSTEM		WITH ARCHITECT/OWNER PRIOR TO ORDERING.	MH	MOUNTING HEIGHT
EM	PUSH / PULL EMERGENCY BUTTON	HDMI	HDMI OUTLET.	MTD	MOUNTED
) s	AUDIBLE / VISUAL SIGNAL DEVICE FOR EM. CALL SYSTEM.	1A.8	TYPICAL CIRCUIT NUMBER INDICATE PANEL '1A' AND CIRCUIT NUMBER 8.	N/NEW	NEW EQUIPMENT BY THIS CONTRACTOR
ADO		COMMUNICATION		NIC	NOT IN CONTRACT
ES	AUTOMATIC DOOR OPENER & ELECTRIC STRIKE		COMPUTER NETWORK DATA LINE SINGLE JACK 12"	NTS	NOT TO SCALE
L	DOOR LOCK PUSH BUTTON		AFF OR AS NOTED. PROVIDE (1) RJ45 JACKS AND (1) CAT 6 UTP CABLE CABLE TO CENTRAL HUB	ОС	ON CENTER
0	BARRIER FREE DOOR OPENER PUSH BUTTON,		LOCATION.	Р	POLES
	TYP. FOR 2.		FLOOR MOUNTED DATA RECEPTACLE	PH	PHASE
1	RM SYSTEM	HUB	LOCATION. CONFIRM LOCATION WITH CLIENT PRIOR		STANDARD
	MANUAL PULL STATION				SINGLE POLE DOUBLE THROW
	HEAT DETECTOR		TO INSTALLATION.	SPST	SINGLE POLE SINGLE THROW
	SMOKE DETECTOR	WAP	WIRELESS ACCESS POINT	SWBD	SWITCHBOARD
	FIRE ALARM BELL	COMMUN 2D	ICATION TAG:	REL	EXISTING EQUIPMENT TO BE RELOCATED
	FIRE ALARM HORN/STROBE COMBO	↑ L DAT		REM	EXISTING EQUIPMENT TO BE REMOVED
D##	FIRE ALARM STROBE	# OF	DATA OUTLETS	REP	EXISTING EQUIPMENT TO BE REPLACED
ANN	FIRE ALARM ANNUNCIATOR			TYP	TYPICAL
				UC	UNDER COUNTER
				UNF	UNFUSED
				UON	UNLESS OTHERWISE NOTED
				W	WIRE
				WIU	WEATHERPROOF WHILE IN USE ENCLOSURE

ΓAG	MANUFACTURER	CATALOG #	LUMENS	WATTS	COMMENTS
Α	LIGHTOLIER	M4RDL109CSWCDZ10U-3500K	762	8.3	
В	DAY-BRITE CFI	2SBP3050L8DS-4-UNV-DIM	4549	40	NSF RATED FOR USE IN FOOD PREP AREAS.
С	DAY-BRITE CFI	14SBP2035L8DS-4-UNV-DIM	2282	18	
D	TBD	TBD			
EA	STANPRO	PRMER-1WWH			
EB	STANPRO	PRMS12-2L			
EC	STANPRO	RMSE-IB1 (SELF POWERED)			
RA	STANPRO	SLH-5L			

ALL LIGHT FIXTURES ARE MUST BE LED TYPE. ALL LIGHT FIXTURES MUST BE CSA / ETL(C) LISTED AND APPROVED FOR USE IN CANADA.

CONFIRM MOUNTING REQUIREMENTS WITH LIGHTING SUPPLIER ALL EXIT & EMERGENCY LIGHTING SHALL CONFORM TO 'CSA C22.2 No.141-02' SIZE ALL WIRES TO SUIT VOLTAGE DROP ACCORDINGLY TO WIRE LENGTH.

. PROVIDE DIRECTIONAL ARROW ON EXIT SIZES WHERE REQUIRED.

GENERAL EXHAUST FAN SCHEDULE PROVIDE A SEPARATE PRICE IN TENDER FOR THIS SCOPE OF WORK, (SUPPLY & INSTALL)								
UNIT MAKE MODEL VOLTAGE NOTES								
GEF-1	GREENHECK	CSP-A710	115V/1PH, 4.4 AMPS	1				
GEF-2 GREENHECK FV1115VK2 115V/1PH 2								
	-			-				

1. TO BE OPERATED BY ON/OFF SWITCH BY THE ELECTRICAL CONTRACTOR, (LABEL SWITCH DISHWASHER AND STEAM KETTLE GENERAL EXHAUST FAN 2. TO BE OPERATED BY REVERSE ACTING THERMOSTAT BY THE MECHANICAL CONTRACTOR.

WASHROOM SANITARY EXHAUST FAN SCHEDULE								
	UNIT	MAKE	MODEL	VOLTAGE				
	SEF-1	PANASONIC	FV-1115VK2	120V/1PH				
	NOTES: 1. TO BE OPERATED BY OCCUPANCY SENSOR SWITCH THE ELECTRICAL CONTRACTOR.							

MAKE UP AIR UNIT SCHEDULE								
UNIT REF	MANUFAC.	MODEL	SI	JPPLY FAN	DESCRIPTION			
ONIT IXEI	MANOI AC.	MODEL	HP	VOLTAGE	ROOF TOP MOUNTED GAS MAKE UP AIR UNIT			
MUA-1	CAPTIVE AIRE	A2-D.500-20D	3.0	208V/3PH	C/W W.P. DISC., SWITCH, CONVENIENCE OUTLET. MAKE UP AIR UNIT TO BE INTERLOCKED OPERATE WITH HOOD FAN THROUGH CAPTIVE AIRE CONTROL PANEL. ALL INSTALLATIONS ARE TO BE PERFORMED AS PER MANUFACTURERS SHOP DRAWINGS.			

UNIT REF.	MANUFACTURER MODEL NO.	VOLTAGE MCA	NOTES:
HP-1	MITSUBISHI INDOOR UNIT: PKA-A36KA8-TH OUTDOOR UNIT: PUZ-HA36NKA	208V/1PH 26.0	DUCTLESS HEAT PUMP SYSTEM TO BE: - COLD CLIMATE HYPER HEAT H2I INVERTER TECHNOLOGY - MITSUBISHI THERMOSTATIC CONTROLLER - SERVICE DISCONNECT SWITCH'S - PERFORM ALL INSTALLATIONS IN ACCORDANCE WITH THE MANUFACTURERS SHOP
HP-2	MITSUBISHI INDOOR UNIT: MSZ-FS15NA-U1 OUTDOOR UNIT: MUZ-FS15NAH-U1	208V/1PH 18.0	DRAWINGS. - ALL CONTROL & LOW VOLTAGE WIRING FOR SYSTEM IS TO BE BY MECHANICAL CONTRACTOR - START UP AND COMMISSIONING IS TO BE DONE BY MITSUBISHI ELECTRIC CERTIFIED TECHNICIAN. THIS CONTRACTOR SHALL CARRY COST AND CONTACT MITSUBISHI TEM TO COORDINATE THIS WORK).

HOOD EXHAUST FAN SCHEDULE							
UNIT	MANUFACTURER	MODEL	H.P.	VOLTAGE	NOTES:		
KEF-1	CAPTIVE AIRE	USBI24DD-RM	3.0	208/3PH	TO BE C/W WP DISC. SWITCH. OPERATED THROUGH CAPTIVE AIRE UTILITY CABINET / CONTROL PANEL AND INTERLOCKED WITH MAKE UP AIR UNIT. ALL INSTALLATIONS ARE TO BE PERFORMED AS PER MANUFACTURERS SHOP DRAWINGS.		

HOOD SCHEDULE								
UNIT REF	MAKE / MODEL	LENGTH	VOLTAGE	NOTES				
KH-1	CAPTIVE AIRE - 5424 ND-2-PSP-F	10'-0"	120/1PH	COMMERCIAL KITCHEN GREASE EXHAUST HOOD ULC LISTED CANOPY LIGHTS, ETC. REMOTE WALL MOUNTED UTILITY BOX C/W CONTROLS, SUPPRESSION SYSTEM CYLINDERS,				
KH-2	CAPTIVE AIRE - 5424 ND-2-PSP-F	10'-0"	120/1PH	ETC PERFORM INSTALLATION AS PER MANUFACTURER SHOP DRAWINGS AND NFPA96 CODES AND REGULATIONS.				

05.28.2025 0 ISSUED FOR PERMITS 05.21.2025 ISSUED FOR REVIEW 05.21.2025 REVISIONS DATE DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT: AND MUST REPORT. ANY DISCREPANCIES TO THE

SEAL

THE CONTRACTOR AND SUB-TRADES ARE RESPONSIBLE TO CONTACT THE ENGINEER IN ADVANCE IN ORDER TO SCHEDULE REQUIRED SITE VISITS AND PROVIDE INSPECTION REPORTS AS REQUIRED IN ACCORDANCE WITH THE GENERAL COMMITMENT & REVIEW PROCESS BY ARCHITECTS AND ENGINEERS.

ARCHITECT & ENGINEER BEFORE PROCEEDING WITH THE

FORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE

WORK. THE USE OF THIS DRAWING OR PART THEREOF IS

ENGINEERING CONSULTANTS:

ENGINEERING

E-MAIL: contact@rm-eng.ca | WEB: rm-eng.ca PROJECT:

> HOLY TRINITY CROATIAN PARISH HALL WASHROOM AND KITCHEN RENOVATION 2110 TRAFALGAR RD, OAKVILLE

> > ON L6H 752

162 Guelph St., Unit 216, Georgetown, On., L7G 4A6

TEL: (416) 726-1648 | (905) 617-4804

DRAWING TITLE:

ELECTRICAL SPECIFICATIONS. LEGENDS AND SCHEDULES



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

Web: www.2gai.com SCALE: PROJECT: AS NOTED DATE: MAY.2025

DRAWN

CHECKED

DRAWING