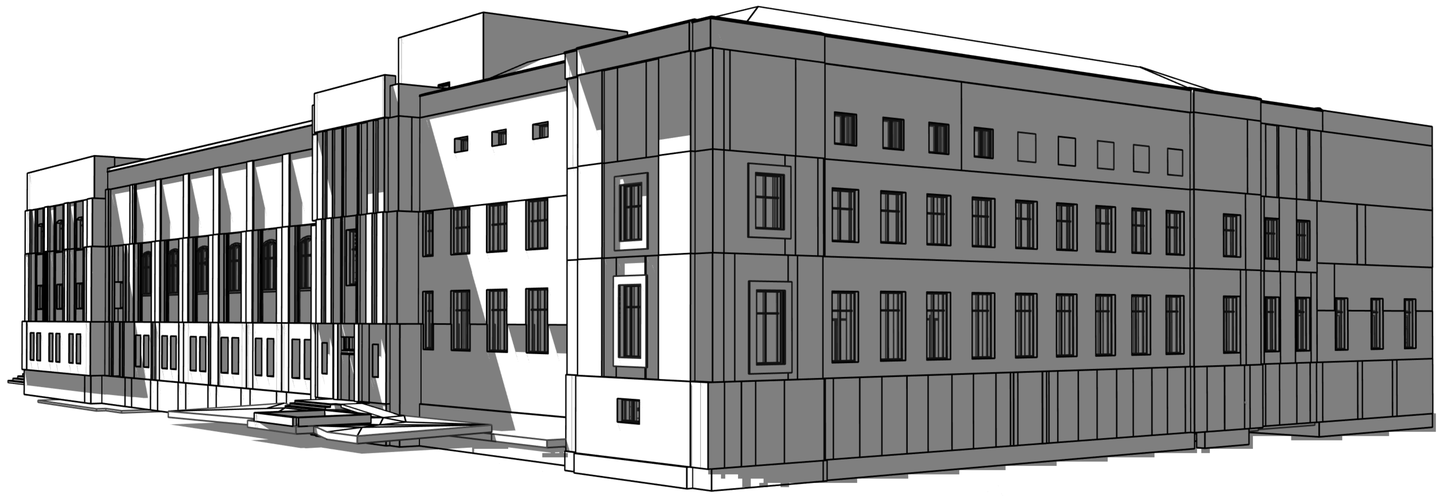
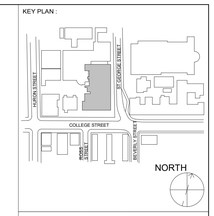
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST, TORONTO, ON M5T 3A1



SHEET No.	SHEET NAME	SCALE
TM-0.0	COVER & MECHANICAL DRAWING LIST	N.T.S.
TM-0.1	MECHANICAL LEGENDS	N.T.S.
TM-0.2	MECHANICAL STANDARD DETAILS	N.T.S.
TM-0.3	KITCHEN HOOD DETAILS	N.T.S.
TM-0.4	KITCHEN HOOD DETAILS	N.T.S.
TM-0.5	KITCHEN ECOLOGY UNIT DETAILS	N.T.S.
TM-0.6	KITCHEN ECOLOGY UNIT DETAILS	N.T.S.
TM-0.7	KITCHEN ECOLOGY UNIT DETAILS	N.T.S.
TM-0.8	CONTROLS DIAGRAM AND SEQUENCES	N.T.S.
TM-0.9	CONTROLS DIAGRAMS AND SEQUENCES	N.T.S.
TM-0.10	BAS ARCHITECTURE DIAGRAM	N.T.S.
TM-B.2	BASEMENT - PLUMBING AND PIPING LAYOUT	1:100
TM-1.2	GROUND FLOOR - PLUMBING AND PIPING LAYOUT	1:50
TM-2.2.1	SECOND FLOOR - PLUMBING AND PIPING DEMOLITION LAYOUT	1:100
TM-2.2	SECOND FLOOR - PLUMBING AND PIPING LAYOUT	1:100
TM-3.2.1	THIRD FLOOR - PLUMBING AND PIPING DEMOLITION LAYOUT	1:100
TM-3.2	THIRD FLOOR - PLUMBING AND PIPING LAYOUT	1:100
TM-1.1	GROUND FLOOR - H.V.A.C. DEMOLITION LAYOUT	1:100
TM-1.3	GROUND FLOOR - H.V.A.C. LAYOUT	1:100
TM-2.1	SECOND FLOOR - H.V.A.C. DEMOLITION LAYOUT	1:100
TM-2.3	SECOND FLOOR - H.V.A.C. LAYOUT	1:100
TM-3.1	THIRD FLOOR - H.V.A.C. DEMOLITION LAYOUT	1:100
TM-3.3	THIRD FLOOR - H.V.A.C. LAYOUT	1:100
TM-R.3	ROOF - MECHANICAL LAYOUT	1:100
TM-1.4.1	GROUND FLOOR - FIRE PROTECTION DEMOLITION LAYOUT	1:100
TM-1.4	GROUND FLOOR - FIRE PROTECTION LAYOUT	1:100
TM-2.4.1	SECOND FLOOR - FIRE PROTECTION DEMOLITION LAYOUT	1:100
TM-2.4	SECOND FLOOR - FIRE PROTECTION LAYOUT	1:100
TM-3.4.1	THIRD FLOOR - FIRE PROTECTION DEMOLITION LAYOUT	1:100
TM-3.4	THIRD FLOOR - FIRE PROTECTION LAYOUT	1:100

KEY PLAN :



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REVISION

NO.	DATE	DESCRIPTION
1	2024-10-04	ISSUED FOR 50% REVIEW
2	2024-11-14	ISSUED FOR PERMIT
3	2024-12-04	ISSUED FOR F&S REVIEW
4	2025-01-24	ISSUED FOR PEER REVIEW
5	2025-01-31	ISSUED FOR BID
6	2025-04-30	ISSUED FOR CONSTRUCTION

THIS DRAWING IS "ISSUED FOR CONSTRUCTION" AND IS CONSIDERED COMPLEMENTARY TO THE CONTRACT DOCUMENTS. TO THE BEST OF OUR KNOWLEDGE IT IS AN ACCURATE REPRESENTATION OF DOCUMENTED REVISIONS. IN THE CASE OF ANY DISCREPANCY, OMISSION OR CONFLICT BETWEEN THIS "ISSUED FOR CONSTRUCTION" DOCUMENT AND THE CONTRACT DOCUMENTS, THE CONTRACTOR IS TO PROMPTLY BRING IT TO THE ATTENTION OF THE CONSULTANT.

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SEAL :

OWNER:

UNIVERSITY OF TORONTO

PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

COVER & MECHANICAL DRAWING LIST

PROJECT NUMBER :
21590.003

DRAWING SCALE :
N.T.S.

DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO :
TM-0.0

REV :
6

POINT LEGEND

XX
YY — POINT TYPE

POINT TYPE	DESCRIPTION
AI	ANALOG INPUT
AO	ANALOG OUTPUT
BI	BINARY INPUT
BO	BINARY OUTPUT
PI	PULSE INPUT

XX — POINT ABBREVIATION
YY

POINT ABBREVIATION	DESCRIPTION
AF	AIR FLOW
AFS	AIR FLOW STATION
BYPD	BYPASS DAMPER
CCV	COOLING COIL VALVE
CDAF	COLD DECK AIR FLOW
CDASP	COLD DECK AIR STATIC PRESSURE
CDAT	COLD DECK AIR TEMPERATURE
CDD	COLD DECK DAMPER
CHWDP	CHILLED WATER DIFFERENTIAL PRESSURE
CHXXAMP	CHILLER XX AMPS
CHXXCHWET	CHILLER XX CHILLED WATER ENTERING TEMPERATURE
CHXXCHWF	CHILLER XX CHILLED WATER FLOW
CHXXCHWLT	CHILLER XX WATER LEAVING TEMPERATURE
CHXXCHWSTSP	CHILLER XX CHILLED WATER SUPPLY TEMPERATURE SET POINT
CHXXCHWV	CHILLER XX CHILLED WATER VALVE
CHXXCMW	CHILLER XX CONDENSER WATER VALVE
CHXXCWCV	CHILLER XX CONDENSER WATER CONTROL VALVE
CHXXCWET	CHILLER XX CONDENSER WATER ENTERING TEMPERATURE
CHXXCWLT	CHILLER XX CONDENSER WATER LEAVING TEMPERATURE
CHXXCWV	CHILLER XX CONDENSER WATER VALVE
CHXXEN	CHILLER XX ENABLE
CHXXLHWISOV	CHILLER XX HEATING WATER ISOLATION VALVE
CHXXLHWRT	CHILLER XX LOW HEATING WATER RETURN TEMPERATURE
CHXXLHWST	CHILLER XX LOW HEATING WATER SUPPLY TEMPERATURE
COMP	COMPRESSOR
DCHWT	DECOUPLER CHILLED WATER TEMPERATURE
EAD	EXHAUST AIR DAMPER
EADES	EXHAUST AIR DAMPER END SWITCH
EAT	ENTERING AIR TEMPERATURE
EFSS	EXHAUST FAN START/STOP
EFST	EXHAUST FAN STATUS
F	FIRESTAT
FFPD	FINAL FILTER PRESSURE DIFFERENTIAL
FZ	FREEZESTAT
GAL	GENERAL ALARM
GLR	GLYCOL RETURN
GLS	GLYCOL SUPPLY
GLYPX	GLYCOL PUMP
HCV	HEATING COIL VALVE
HDAF	HOT DECK AIR FLOW
HDD	HOT DECK DAMPER
HDSAH	HOT DECK SUPPLY AIR HUMIDIFIER
HP	HIGH PRESSURE SWITCH

XX — POINT ABBREVIATION
YY

POINT ABBREVIATION	DESCRIPTION
HTWE	HEAT WHEEL ENABLE
HTWLAT	HEAT WHEEL LEAVING AIR TEMPERATURE
HTWVSD	HEAT WHEEL VARIABLE SPEED DRIVE
HUME	HUMIDIFIER ENABLE
HUMV	HUMIDIFIER VALVE
HWP	HOT WATER PUMP
HWR	HOT WATER RETURN
HWRT	HOT WATER RETURN TEMPERATURE
HWRV	HOT WATER RETURN VALVE
HWS	HOT WATER SUPPLY
HWST	HOT WATER SUPPLY TEMPERATURE
HWSTSP	HOT WATER SUPPLY TEMPERATURE SET-POINT
LAT	LEAVING AIR TEMPERATURE
LTHWDP	LOW TEMPERATURE HEATING WATER DIFFERENTIAL PRESSURE
LTHWPXXEN	LOW TEMPERATURE HEATING PUMP XX
LTHWPXXFB	LOW TEMPERATURE HEATING PUMP XX FEED BACK
LTHWPXXVFD	LOW TEMPERATURE HEATING PUMP XX VARIABLE FREQUENCY DRIVE
OAD	OUTSIDE AIR DAMPER
OADES	OUTSIDE AIR DAMPER END SWITCH
PCHWST	PRIMARY CHILLED WATER SUPPLY TEMPERATURE
PFPD	PRE-FILTER PRESSURE DIFFERENTIAL
PHCV	PRE-HEAT COIL VALVE
PP	PRIMARY PUMP
PPXXEN	PRIMARY PUMP XX ENABLE
PPXXFB	PRIMARY PUMP XX FEED BACK
PPXXVFD	PRIMARY PUMP XX VARIABLE FREQUENCY DRIVE
RADV	RADIANT VALVE
RAF	RETURN AIR FLOW
RAH	RETURN AIR HUMIDITY
RAT	RETURN AIR TEMPERATURE
RHV	REHEAT VALVE
RVLV	REVERSING VALVE
SAT	SUPPLY AIR TEMPERATURE
SAH	SUPPLY AIR HUMIDITY
SCHWF	SECONDARY CHILLED WATER FLOW
SCHWRT	SECONDARY CHILLED WATER RETURN TEMPERATURE
SCHWST	SECONDARY CHILLED WATER SUPPLY TEMPERATURE
SF	SERIES FAN
SFSS	SUPPLY FAN START/STOP
SFST	SUPPLY FAN STATUS
SP	SECONDARY PUMP
SPCT	SPACE TEMPERATURE
SPXXEN	SECONDARY PUMP XX ENABLE
SPXXFB	SECONDARY PUMP XX FEED BACK
SPXXVFD	SECONDARY PUMP XX VARIABLE FREQUENCY DRIVE
VAVD	VAV DAMPER
ZD	ZONE DAMPER

10 TM-0.1 POINT LEGEND

12 TM-0.1 NOT USED

11 TM-0.1 NOT USED

7 TM-0.1 AIR HANDLING SYMBOLS AND ABBREVIATIONS (012.10)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY DUCT UP OR FROM ABOVE		ACOUSTICALLY LINED TRANSFER AIR DUCT
	SUPPLY DUCT DOWN OR FROM BELOW		SILENCER
	RETURN OR EXHAUST DUCT UP OR FROM ABOVE	CTS	CROSSTALK SILENCER
	RETURN OR EXHAUST DUCT DOWN OR FROM BELOW		DUCT WITH MINIMUM CLEARANCE FIRE RATED ENCLOSURE
	ROUND DUCT UP OR FROM ABOVE	F/D	DUCT WITH SLEEVE, INSULATION, AND DAMPER
	ROUND DUCT DOWN OR FROM BELOW	CAP	CAPPED CONNECTION
	ACOUSTIC LINED DUCT		
	FLEXIBLE CONNECTION	RISE UP	RISE IN DUCT
	SQUARE ELBOW DUCT WITH TURNING VANES	SLOPE DN	DROP IN DUCT
	RADIUS ELBOW WITH TURNING VANES	SB	SOUND BAFFLE
	AXIAL FAN / INLINE FAN MIXED FLOW OR CENTRIFUGAL		PROPELLER FAN WITH PROTECTIVE SCREEN

DIFFUSER, GRILLE, OR REGISTER TYPE — P4 | 150ø / 300 — NECK OR FACE SIZE (mm); AIR FLOW (L/s)
IMPERIAL: CFM, [INS.]
METRIC: L/s, [mm]

LINEAR SLOT DIFFUSER — S4 | 150øX1200mm / 300 — NECK SIZE AND LINEAR DIFFUSER LENGTH (mm); AIR FLOW (L/s)
IMPERIAL: CFM, [INS.]
METRIC: L/s, [mm]

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ROUND SUPPLY DIFFUSER		SUPPLY AIR DIFFUSER C/W FLEXIBLE DUCT
	DUCTED RETURN OR EXHAUST REGISTER OR GRILLE		LIGHT TROFFER DIFFUSER TOP INLET C/W FLEXIBLE DUCT
	SQUARE OR RECTANGULAR DIFFUSER		LIGHT TROFFER DIFFUSER SIDE INLET C/W FLEXIBLE DUCT
	RETURN OR EXHAUST GRILLE		DUCT MOUNTED SUPPLY OR RETURN GRILLE
	ROUND RETURN OR EXHAUST GRILLE		LINEAR SUPPLY OR RETURN GRILLE
	SQUARE DIFFUSER		
	DIFFUSER WITH BLANK-OFF PORTION (QTY SHOWN)		

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

8 TM-0.1 ELECTRICAL AND CONTROLS SYMBOLS AND ABBREVIATIONS (012.11)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
W	POWER REQUIREMENT FOR ELECTRIC TRACING	PE	PNEUMATIC-ELECTRIC
	ELECTRIC PIPE TRACING FOR SINGLE LINE PIPES	C	CONTROLLER
	ELECTRIC PIPE TRACING FOR DOUBLE LINE PIPES	TS	TEMPERATURE SENSOR
MCC	MOTOR CONTROL CENTRE	HS	HUMIDITY SENSOR
DS	DISCONNECT SWITCH		AIR FLOW MONITORING STATION
	SWITCH (MANUAL STARTER)	SP	STATIC
HOA	HAND-OFF AUTO	VFD	VARIABLE FREQUENCY DRIVE
FZ	LOW TEMPERATURE THERMOSTAT	CO	CARBON MONOXIDE SENSOR
FS	HIGH TEMPERATURE THERMOSTAT	RS	REFRIGERANT SENSOR
T	ELECTRIC/LOW VOLTAGE THERMOSTAT/SENSOR	CO2	CARBON DIOXIDE SENSOR
Ⓣ	PNEUMATIC THERMOSTAT	NO2	NITROGEN DIOXIDE SENSOR
Fs	FLOW SWITCH	AFS	AIR FLOW STATION
Ⓢ	SPEED SWITCH	PS	PRESSURE SENSOR
T	THERMOSTAT WITH LOCKABLE TAMPER GUARD	BTU	BTU METER

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

9 TM-0.1 NOT USED

4 TM-0.1 VALVE AND COMPONENT SYMBOLS AND ABBREVIATIONS (012.06)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ISOLATION VALVE (REFER TO SPECIFICATION FOR SPEIFIC TYPE AS REQUIRED)		PIPE GUIDE (REFER TO SPECIFICATIONS)
	GLOBE VALVE		PIPE SLEEVE
	BALL VALVE		ANCHOR
	LOCKSHIELD VALVE		STRAINER
FBV	FLOW BALANCING VALVE		UNION
PIFBV	PRESSURE INDEPENDENT FLOW BALANCING VALVE		FLANGE FITTING
	PLUG VALVE		ECCENTRIC FITTING
PRV	NATURAL PRESSURE REDUCING VALVE ASSEMBLY		CONCENTRIC FITTING
	CHECK VALVE		PRESSURE GAUGE
S	SOLENOID VALVE	T	THERMOMETER
SRV	SAFETY RELIEF VALVE		PRESSURE GAUGE COCK ASSEMBLY
FMS	FLOW METERING STATION	TW	THERMOMETER WELL
BP	BACKFLOW PREVENTOR	EJ	EXPANSION JOINT
	ANGLE VALVE	MV	MANUAL AIR VENT
	BUTTERFLY VALVE	AV	AUTOMATIC AIR VENT
	2-WAY BUTTERFLY VALVE	AS	AIR SEPARATOR
T	TEMPERED MIXING VALVE	SG	SIGHT GLASS
			PUMP
	FLEXIBLE JOINT		DOMESTIC WATER PRV STATION
VB	VACUUM BREAKER		
	BACK WATER VALVE	WHA	WATER HAMMER ARRESTOR

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

5 TM-0.1 MECHANICAL PIPING SYMBOLS AND ABBREVIATIONS (012.08)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
HWS	HEATING WATER SUPPLY	FOS	FUEL OIL SUPPLY
HWR	HEATING WATER RETURN	FOR	FUEL OIL RETURN
CHS	CHILLED WATER SUPPLY	EFOV	EMERGENCY FUEL OIL VENT
CHR	CHILLED WATER RETURN	FOV	FUEL OIL VENT
GLS	GLYCOL SUPPLY	FOF	FUEL OIL FILL
GLR	GLYCOL RETURN	PC	PUMPED STEAM CONDESATE
GLHS	GLYCOL HEATING SUPPLY	RS	REFRIGERATION SUCTION
GLHR	GLYCOL HEATING RETURN	RL	REFRIGERATION LIQUID
GLCS	GLYCOL COOLING SUPPLY	RHG	REFRIGERATION HOT GAS
GLCR	GLYCOL COOLING RETURN	DTS	DUAL TEMPERATURE SUPPLY
CDS	CONDENSER WATER SUPPLY	DTR	DUAL TEMPERATURE RETURN
CDR	CONDENSER WATER RETURN		BUCKET TYPE STEAM TRAP
LPS	LOW PRESSURE STEAM		FLOAT AND THERMOSTAT TYPE STEAM TRAP
MPS	MEDIUM PRESSURE STEAM	SVB	STEAM VACUUM BREAKER
HPS	HIGH PRESSURE STEAM	TEV	REFRIGERATION THERMAL EXPANSION VALVE
LPC	LOW PRESSURE CONDENSATE	SLV	REFRIGERATION SOLENOID LIQUID VALVE
MPC	MEDIUM PRESSURE CONDENSATE	RFD	REFRIGERATION FILTER DRYER
HPC	HIGH PRESSURE CONDENSATE		6 WAY CONTROL VALVE ELECTRIC
PICV	PRESSURE INDEPENDENT CONTROL VALVE		6 WAY CONTROL VALVE
CV	2 WAY CONTROL VALVE		
CV	3 WAY CONTROL VALVE	CV	CONTROL VALVE (WHERE SYMBOL NOT SHOWN)

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

6 TM-0.1 AIR HANDLING SYMBOLS AND ABBREVIATIONS (012.09)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
F/D	FIRE DAMPER	SMD	SMOKE DAMPER
MOD	MOTOR OPERATED DAMPER	PSD	POSITIVE SEAL DAMPER
MD	MANUAL DAMPER	BDD	GRAVITY OR BACKDRAFT DAMPER
BD	BALANCING DAMPER		VOLUME EXTRACTOR
CSF/D	COMBINATION SMOKE AND FIRE DAMPER	RBD	REMOTE OPERATED BALANCING DAMPER

VAV, FPVAV AND AFS TAG

VAV BOX TYPE — A | 0 / 1200 — MIN. FLOW (L/s); MAX. FLOW (L/s)

VAV BOX TYPE — A | 0/0 / 1200/600 — MIN. FLOW (L/s) COOLING/HEATING; MAX. FLOW (L/s) COOLING/HEATING
RHC- — REHEAT COIL CAPACITY (KW)

MIN. PRIMARY FLOW
FAN POWERED VAV BOX TYPE — FE | 120/1000 / 1100 — MAX. PRIMARY FLOW (L/s); SECONDARY FLOW (L/s)
RHC- — REHEAT COIL CAPACITY (KW)

IMPERIAL: CFM, [INS.]
METRIC: L/s, [mm]

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	VAV BOX (VARIABLE AIR VOLUME)		FAN POWERED BOX C/W RETURN AIR SILENCER OR ACOUSTICALLY LINED RETURN AIR
	VAV BOX WITH ATTENUATOR		FAN POWERED BOX C/W RETURN AIR SILENCER OR ACOUSTICALLY LINED RETURN AIR WITH REHEAT COIL
	VAV BOX WITH REHEAT COIL		INDUCTION VAV BOX
	VAV BOX WITH REHEAT COIL AND ATTENUATOR		PRESSURE INDEPENDENT AIR VALVE (LAB)
			TERMINAL UNIT (SEE NOTE 2)

HEATING ELEMENT TAG

ENCLOSURE TYPE — A | 1200W / 1944 — HEATING CAPACITY; ACTIVE ELEMENT LENGTH

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
UH-x	HORIZONTAL UNIT HEATER		DUCT COIL
UH-x	DOWN BLAST UNIT HEATER	R-X	RADIATION HEATING RISER NUMBERS (S=SUPPLY AND R=RETURN)
	RADIANT HEATING PANEL		WALL FIN ELEMENT IN CONTINUOUS ENCLOSURE

NOTE: 1 - NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS
NOTE: 2 - SYMBOLS ARE DIAGRAMMATIC IN NATURE. REFER TO SPECIFICATION/SCHEDULES FOR EXACT DIMENSIONS/CLEARANCES

1 TM-0.1 GENERAL SYMBOLS AND ABBREVIATIONS (012.13)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
6 M-01	DETAIL NUMBER DRAWING NUMBER	12 M-01	SECTION NUMBER DRAWING NUMBER
4	REVISION NUMBER		REVISION BUBBLE
OR	ELBOWS		PIPING SERVICE CONTINUES
	TEE		REFER TO STANDARD DETAIL DRAWINGS FOR ADDITIONAL REQUIREMENTS OF EQUIPMENT NOTED
	BRANCH OFF BOTTOM OF MAIN		VENT PIPE REDUCER
	BRANCH OFF TOP OF MAIN	CFM	AIR QUANTITY CFM (L/s)
	DIRECTION OF FLOW		

NOTE: EXISTING EQUIPMENT, PIPING, VALVES, DUCTWORK SHOWN LIGHT TO REMAIN.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXISTING DUCT, FLEX DUCT, AND AIR SUPPLY TO REMAIN	EX	EXISTING CONCEALED SPRINKLER HEAD & PIPING TO REMAIN
		EX	EXISTING PENDANT SPRINKLER HEAD & PIPING TO REMAIN
Ⓣ T Ⓢ	EXISTING ELECTRIC/PHEUMATIC THERMOSTAT/TEMPERATURE SENSOR AND SPEED CONTROL SWITCH TO REMAIN	EX	EXISTING SIDEWALL OR WINDOW SPRINKLER HEAD & PIPING TO REMAIN
EX	EXISTING UPRIGHT SPRINKLER HEAD & PIPING TO REMAIN		

NOTE: EXISTING EQUIPMENT, PIPING, VALVES, DUCTWORK SHOWN HATCHED TO BE REMOVED AND/OR RELOCATED.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXISTING DUCT, FLEX DUCT, AND AIR SUPPLY TO BE REMOVED	EX	EXISTING CONCEALED SPRINKLER HEAD & PIPING TO BE REMOVED/RELOCATED
		EX	EXISTING PENDANT SPRINKLER HEAD & PIPING TO BE REMOVED/RELOCATED
Ⓣ T Ⓢ	EXISTING ELECTRIC/PHEUMATIC THERMOSTAT / TEMPERATURE SENSOR AND SPEED CONTROL SWITCH TO BE REMOVED/RELOCATED	EX	EXISTING SIDEWALL OR WINDOW SPRINKLER HEAD & PIPING TO BE REMOVED/RELOCATED
EX	EXISTING UPRIGHT SPRINKLER HEAD & PIPING TO BE REMOVED/RELOCATED		

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

2 TM-0.1 GENERAL SYMBOLS AND ABBREVIATIONS (012.14)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
FD	FLOOR DRAIN, SIZE AS NOTED. REFER TO SPECIFICATION FOR TYPES		DOMESTIC COLD WATER (DOM. COLD WATER) (DCW)
FFD	FUNNEL FLOOR DRAIN, SIZE AS NOTED. REFER TO SPECIFICATION FOR TYPES		DOMESTIC HOT WATER (DOM. HOT WATER) (DHW)
CO	UPTURNED CLEANOUT		DOMESTIC HOT WATER RECIRCULATION (DOM. HOT WATER RECIRC.) (DHWR)
CO	HORIZONTAL CLEANOUT	T	TEMPERED WATER
FD	FLOOR DRAIN FROM ABOVE WITH TRAP	G	NATURAL GAS
FFD	FUNNEL FLOOR DRAIN FROM ABOVE WITH TRAP	GV	NATURAL GAS VENT
W- W-	WATER CLOSET AS NOTED, REFER TO SPECIFICATION FOR TYPES	V	VENT
U- U-	URINAL	SAN	SANITARY ABOVE GRADE OR FLOOR
CS- CS-	SINGLE COMPARTMENT KITCHEN SINK	SAN(B)	SANITARY BELOW GRADE OR FLOOR
CS- CS-	DOUBLE COMPARTMENT SINK		GATE OR ISOLATION VALVE (REFER TO SPECIFICATION)
L- L-	WALL HUNG LAVATORY		GLOBE VALVE
MS- MS-	MOP SINK		BALL VALVE
DF- DF-	DRINKING FOUNTAIN	●	PENDANT SPRINKLER HEAD
SP	WET SPRINKLER LINE	● DP	DRY PENDANT SPRINKLER HEAD
DSP	DRY SPRINKLER LINE	○	UPRIGHT SPRINKLER HEAD
FHC-x	FIRE HOSE CABINET AND TYPE	◉	CONCEALED SPRINKLER HEAD
SVC-x	SPRINKLER SHUT-OFF VALVE CABINET AND TYPE	○ NF	NON-FREEZE SPRINKLER HEAD
FE-x	FIRE EXTINGUISHER AND TYPE	○ HT	HIGH TEMPERATURE SPRINKLER HEAD
FEC-x	FIRE EXTINGUISHER CABINER AND TYPE	○*	CHEMICAL SPRINKLER HEAD
FR	FIRE REEL AND TYPE	◀	SIDEWALL SPRINKLER HEAD
WM	WATER METER	◀ W	WINDOW SPRINKLER HEAD
BFP	BACK FLOW PREVENTOR	NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS	

3 TM-0.1 PLUMBING SYMBOLS AND ABBREVIATIONS (012.04)

FIXTURES: REFER TO SPECIFICATION FOR DETAILS AND ADDITIONAL TYPE NOT LISTED BELOW. SYMBOLS ON THIS LEGEND ARE DIAGRAMMATIC IN NATURE, REFER TO SPECIFICATIONS AND OUTLINES OF SPECIFIC FIXTURES BOLDED ON FLOOR PLANS.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
WC-	WATER CLOSET	BT	BATHTUB
U-	URINAL	SH-	SHOWER
L-	COUNTERTOP LAVATORY	BF- DF-	BOTTLE FILLER DRINKING FOUNTAIN
L-	WALL HUNG LAVATORY	EW	EMERGENCY EYEWASH
S-	SINGLE COMPARTMENT SINK	EW/SH	EMERGENCY EYEWASH / SHOWER
JS-	JANITOR SINK	ESH	EMERGENCY SHOWER
S-	DOUBLE COMPARTMENT SINK	FT	FLUSH TANK
NP	NON-POTABLE (IF SUFFIX IS APPENDED TO A DOMESTIC WATER SYSTEM, I.E. DCW-NP)	H	HIGH TEMPERATURE (IF PREFIX IS APPENDED TO A DOMESTIC HOT WATERSYSTEM, I.E. HDHW)
	DOMESTIC COLD WATER (DOM. COLD WATER) (DCW)	RRW	RECLAIM RAINWATER
(B)	BURIED DOMESTIC COLD WATER (DOM. COLD WATER) (DCW)	G	NATURAL GAS
	DOMESTIC HOT WATER (DOM. HOT WATER) (DHW)	GV	NATURAL GAS VENT
	DOMESTIC HOT WATER RECIRCULATION (DOM. HOT WATER RECIRC.) (DHWR)	HB	HOSE BIBB
T	TEMPERED WATER	WH (NFWH)	WALL HYDRANT (OR NON FREEZE WALL HYDRANT)
WM	WATER METER	GH (NFGH)	GROUND HYDRANT (OR NON FREEZE GROUND HYDRANT)
	TEMPERED MIXING VALVE ASSEMBLY	NFPH	NON FREEZE POST HYDRANT
	TEMPERED MIXING VALVE CABINET	H/C HB	HOT AND COLD HOSE BIBB

NOTE: NOT ALL SYMBOLS APPLY, REFER TO FLOOR PLANS AND DRAWINGS

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2	2024-11-14	ISSUED FOR PERMIT
3	2024-12-04	ISSUED FOR F&S REVIEW
4	2025-01-24	ISSUED FOR PEER REVIEW
5	2025-01-31	ISSUED FOR BID
6	2025-03-24	Bid Addendum #04
7	2025-04-30	ISSUED FOR CONSTRUCTION

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Smith + Andersen
1100 - 100 Sheppard Ave East, Toronto ON, M2N 6N5
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ENFORM architects
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Toronto, Ontario, Canada M6R 2B7
t: 647-948-7523
www.enformarchitects.com

SEAL :

OWNER:
UNIVERSITY OF TORONTO

PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

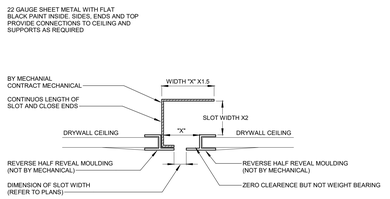
214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
MECHANICAL LEGENDS

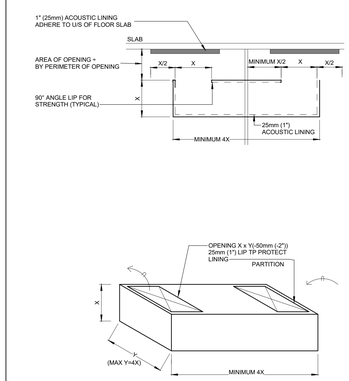
PROJECT NUMBER :
21590.003
DRAWING SCALE :
N.T.S.

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO :
TM-0.1
REV :
7



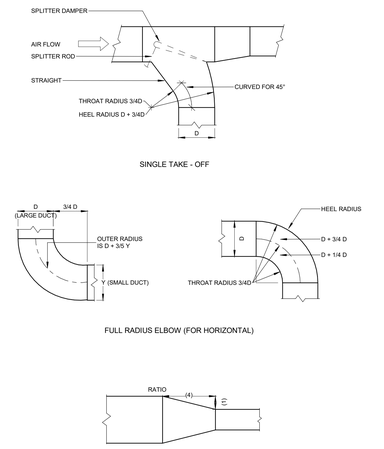
13 TM-0.2 RETURN AIR TRANSFER SLOT IN DRYWALL CEILING WITH SIGHT BAFFLE (870.03)



NOTE:

TOTAL FREE AREA NOTED ON DRAWINGS. CONTRACTO TO PROVIDE MULTIPLE TRANSFER AIR DUCTS OF SMALLER DIMENSIONS TO SUIT SITE CONDITIONS AS REQUIRED.

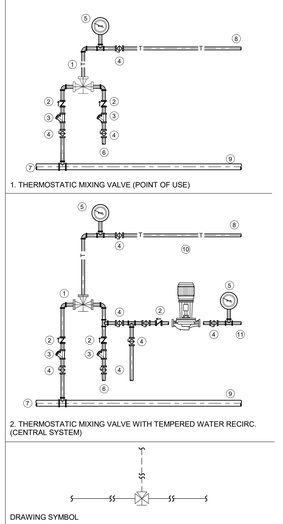
10 TM-0.2 ACOUSTICALLY LINED TRANSFER DUCT (840.12)



7 TM-0.2 DUCT DETAILS (840.05)

NOTES:

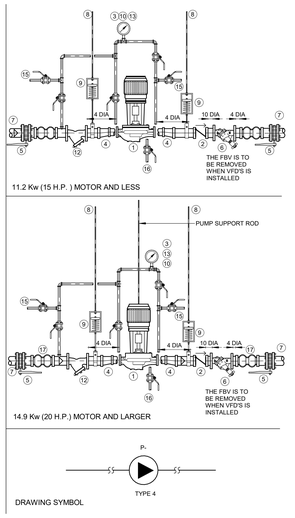
1. THERMOSTATIC MIXING VALVE. REFER TO SPECIFICATION FOR DETAILS.
2. CHECK VALVE.
3. STRAINER.
4. SHUT-OFF VALVE.
5. THERMOMETER.
6. DOMESTIC COLD WATER BRANCH LINE TO VALVE. PIPE SIZE AS SHOWN ON DRAWINGS.
7. DOMESTIC HOT WATER MAIN AND BRANCH LINE TO VALVE. PIPE SIZE AS SHOWN ON DRAWINGS.
8. TEMPERED WATER TO FIXTURES. PIPE SIZE AS SHOWN ON DRAWINGS.
9. HIGH TEMPERATURE HOT WATER TO LAUNDRY, DISHWASHER, ETC. PIPE SIZE AS SHOWN ON DRAWINGS.
10. TEMPERED WATER RECIR. PUMP. REFER TO PUMP SCHEDULE FOR DETAILS.
11. TEMPERED WATER RECIR. REFER TO PUMP SCHEDULE FOR DETAILS.
12. TEMPERED WATER RECIR. BACK TO COLD INLET OF DOMESTIC HOT WATER HEATER(S). PIPE SIZE AS SHOWN ON DRAWINGS.



4 TM-0.2 THERMOSTATIC MIXING VALVES (450.40)

NOTES:

1. PUMP.
2. CHECK VALVE.
3. PRESSURE GAUGE WITH ANTI-PULSATION SNUBBER.
4. ECCENTRIC FITTINGS.
5. SHUT-OFF VALVE.
6. FLOW BALANCING VALUE.
7. PIPE SIZES AS SHOWN ON DRAWINGS
8. HANGER RODS.
9. VIBRATION ISOLATION REFER TO SPECIFICATION AND SCHEDULES.
10. FOR OPEN SYSTEMS USE INDIVIDUAL PRESSURE GAUGES ON PUMP SUCTION, AND PUMP DISCHARGE.
11. CHECK VALVE IS NOT REQUIRED ON SINGLE PUMPS IN A CLOSED SYSTEMS
12. STRAINERS ARE NOT REQUIRED ON DOMESTIC WATER SYSTEMS.
13. PRESSURE GAUGES ARE NOT REQUIRED ON DOMESTIC HOT WATER RECIRC. PUMPS.
14. TAPPINGS ON PUMP CASING (WHERE PROVIDED) TO BE USED FOR PRESSURE GAUGE CONNECTIONS.
15. CONNECTION TO DIFFERENTIAL PRESSURE SWITCH AS REQUIRED BY CONTROL SECTION.
16. DRAIN LINE TO NEAREST FLOOR DRAIN [CHILLED WATER PUMPS]
17. SPHERICAL RUBBER FLEXIBLE CONNECTION.
18. ARRANGE PRESSURE GAUGE PIPING ASSEMBLY TO PERMIT MOTOR REMOVAL.



1 TM-0.2 CEILING HUNG IN-LINE PUMPS TYPE 4 (141.04)

14 TM-0.2 REFRIGERANT PIPING DETAILS

NOTES:

TOTAL FREE AREA NOTED ON DRAWINGS. CONTRACTOR TO PROVIDE MULTIPLE TRANSFER AIR DUCTS OF SMALLER DIMENSIONS TO SUIT SITE CONDITIONS AS REQUIRED.

11 TM-0.2 ACOUSTICALLY LINED TRANSFER DUCT WITH SIDEWALL GRILLE

8 TM-0.2 FLEXIBLE DUCT CONNECTIONS (840.06)

5 TM-0.2 BALANCING DAMPERS (840.03)

2 TM-0.2 SUBMERSIBLE SUMP PUMPS (146.01)

15 TM-0.2 ROOF MOUNTED EXHAUST FAN (824.01)

* - GLUED MOLDINGS FOR DRYWALL.
- T-BARS FOR LAY-IN CEILING.

12 TM-0.2 AIR BOOT IN LAY-IN CEILING OR DRYWALL CEILING (870.01)

NOTE:

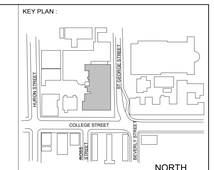
PROVIDE ADEQUATE SPACE FOR COIL REMOVAL. INSTALL COIL WITH SLOPE AS RECOMMENDED BY MANUFACTURER.

9 TM-0.2 WIP DUCT COIL INSTALLATION (840.09)

6 TM-0.2 TYPICAL VAV BOX INSTALLATION (840.04)

3 TM-0.2 SINK DETAIL NO DHWT - CS-2 (450.31)

KEY PLAN :



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REVISION

NO.	DATE	DESCRIPTION
1	2024-10-04	ISSUED FOR 50% REVIEW
2	2024-11-14	ISSUED FOR PERMIT
3	2024-12-04	ISSUED FOR F&S REVIEW
4	2025-01-24	ISSUED FOR PEER REVIEW
5	2025-01-31	ISSUED FOR BID
6	2025-04-30	ISSUED FOR CONSTRUCTION

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SEAL :

OWNER:

UNIVERSITY OF TORONTO

PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

MECHANICAL STANDARD DETAILS

PROJECT NUMBER : **21590.003**
DRAWING SCALE : **N.T.S.**

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO : **TM-0.2** REV : **6**

HOOD INFORMATION TABLE

DIM. UNITS	HOOD NUMBER	HOOD MODEL	EXHAUST AIR FLOW REQUIREMENTS						GREASE EXTRACTOR				HOOD CONSTRUCTION	HOOD WEIGHT
			EXHAUST AIR	T.A.B. PORT STATIC PRESSURE	TOTAL HOOD STATIC PRESSURE	EXHAUST COLLAR QTY	EXHAUST COLLAR LENGTH	EXHAUST COLLAR WIDTH	QTY	SIZE L	SIZE H	TYPE		
IMPERIAL UNITS	H-1	KVE	960 CFM	0.40" W.G.	0.51" W.G.	1	10"	8"	2	20"	13"	KSA	ALL 18GA. 304 S.S.	400 lb
									1	11"	13"			
METRIC UNITS	H-1	KVE	453 l/s	0.100 kPa	0.127 kPa	1	254 mm	203 mm	2	508	330	KSA	ALL 18GA. 304 S.S.	181 kg
									1	279	330			

ELECTRICAL CONNECTION SCHEDULE

CONNECTION #	CONNECTION DESCRIPTION	FROM	TO
E2-H	FIELD CONNECTION FOR TEMP SENSORS	HOOD H-1	PCB TIMER PANEL
E3-H	120,15AMP-TIMER PANEL POWER - 3WIRES	BUILDING SOURCE	PCB TIMER PANEL
EC-02	2 WIRES TO COOKLINE AIR PROVING SWITCH	CONTROL PANEL	HOOD H-1
EC-03	TO TIMER PANEL - 2 WIRES @ 120V	CONTROL PANEL	HOOD H-1

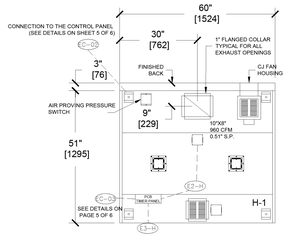
SHOP NOTE:

C/W SECONDARY FILTERS

NOTE
T-STAT IS FACTORY PRE-SET FOR 95 DEGREES, IF SPACE CONDITIONS EXCEED 95 DEGREES WITHOUT COOKING TAKING PLACE, THEN A FIELD ADJUSTMENT OF THE T-STAT WILL BE REQUIRED BY PERSONNEL OTHER THAN HALTON. T-STAT IS A SAFETY INTERLOCK ONLY . IT IS NOT INTENDED AS A PRIMARY MEANS OF ENGAGING THE EXHAUST FAN.

NOTE:
EXHAUST HOOD MUST BE INSTALLED SO THAT THE COOKING EQUIPMENT IS CENTERED UNDER THE EXHAUST HOOD ABOVE.

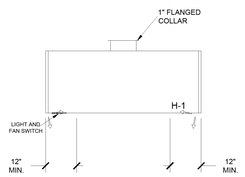
NOTE
HALTON "CAPTURE JET" HOODS ARE LISTED FOR 0" CLEARANCE TO COMBUSTIBLE CONSTRUCTION ON SIDE WALLS AS DEFINED BY NFPA96.

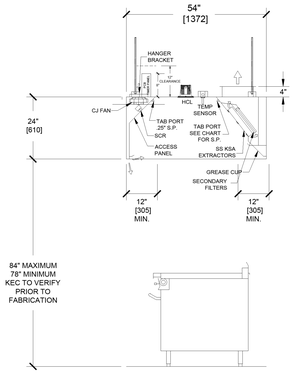


1 ITEM # H-1
PLAN VIEW

3

2





2 ITEM # H-1
ELEVATION VIEW

GENERAL SPECIFICATIONS

1 - HOOD CONSTRUCTION AND DESIGN MEETS NFPA 96 AND UL 710 STANDARD.

2 - HOOD IS NSF AND ETL LISTED UNDER THE FOLLOWING FILE NUMBER: ETL #1031432024PRT-001

3 - ALL INSTALLATION WORK IS TO BE PERFORMED BY QUALIFIED PERSONS AND IN ACCORDANCE WITH STATE AND LOCAL BUILDING CODE REQUIREMENTS.

4 - THE INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 96, REMOVAL OF SMOKE AND GREASE LADEN VAPORS FROM COMMERCIAL COOKING EQUIPMENT.

5 - ALL EXHAUST DUCTWORK AND TRANSITIONS ARE TO BE PROVIDED BY THE HVAC CONTRACTOR.

6 - CLEARANCE FROM HOOD AND DUCTS TO COMBUSTIBLE MATERIAL SHALL BE PER APPLICABLE BUILDING CODES.

7 - FOR PROPER OPERATION OF THE HOOD SYSTEM, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO HAVE THE HOOD BALANCED AND TESTED TO ENSURE THAT THE EXHAUST AND SUPPLY REQUIREMENTS OF THE HOOD ARE MET.

INSTALLATION REQUIREMENTS

KITCHEN EQUIPMENT CONTRACTOR'S REQUIREMENTS

1- PROVIDE DRAWINGS TO APPROPRIATE TRADES REFERENCING UTILITY SERVICE AND COORDINATE FINAL CONNECTION.

2 - DELIVER, ASSEMBLE AND INSTALL HALTON SYSTEM PER DRAWING.

3 - FURNISH WIRING AND PLUMBING DIAGRAMS TO END USER.

4 - THE K.E.C MUST INFORM HALTON OF ANY CHANGES IN EQUIPMENT OR BUILDING STRUCTURE. FIELD MODIFICATIONS ARE THE RESPONSIBILITY OF THE K.E.C.

5 - IF HALTON MANUAL EXHAUST VOLUME DAMPERS ARE PROVIDED, THE K.E.C. IS RESPONSIBLE FOR THEIR INSTALLATION OR TO MAKE ARRANGEMENTS WITH OTHER TRADES FOR THEIR INSTALLATION.

6 - IF HALTON MODEL KVL BACKSHELF STYLE HOODS ARE PROVIDED, THE K.E.C. IS RESPONSIBLE FOR THE INSTALLATION OF THE CAPTURE-JET FAN.

ELECTRICAL CONTRACTOR'S REQUIREMENTS

1- PROVIDE AND CONNECT ALL REQUIRED VOLTAGES, CONNECTORS, WIRING, CONDUIT, ETC., PER NEC AND ALL APPLICABLE LOCAL CODES.

ELECTRICAL EQUIPMENT REQUIREMENTS

FLUORESCENT LIGHT FIXTURE
40 WATT MAX BULB = 0.67 AMP EACH

RECESSED INCANDESCENT LIGHT FIXTURE
150 WATT MAX BULB = 1.25 AMP EACH

GLOBE INCANDESCENT LIGHT FIXTURE
100 WATT MAX BULB = 0.83 AMP EACH

HCL LIGHT FIXTURES = 0.12 AMP EACH

CAPTURE JET FAN = 0.72 AMP EACH

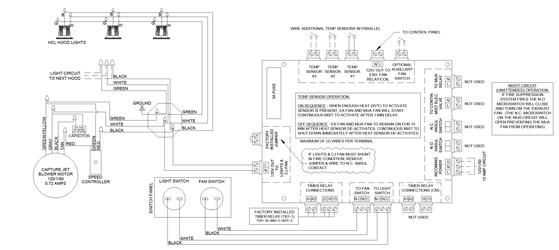
ALL HOOD CIRCUITS ARE NOT TO EXCEED 15 AMP
NOTE: LIGHT BULBS/LAMPS, IF REQUIRED, ARE NOT PROVIDED BY HALTON

CEILING HEIGHT NOTE

IF HALTON COMPANY IS TO PROVIDE CEILING CLOSURE PANELS, THE EXACT DIMENSION OF THE FINISHED CEILING HEIGHT MUST BE PROVIDED PRIOR TO RELEASE.

FINISHED CEILING HEIGHT A.F.F.: _____

Typical Wiring of Capture-Jet Fan W/HALTON SUPPLIED SWITCH PANEL



HANGER BRACKET LAYOUT

HOODS 96"L - 168"L WITH ONE EXHAUST COLLAR

KVE/EO

A = TOTAL LENGTH OF HOOD
B = (A - 7) / 3
C = TOTAL WIDTH OF HOOD
D = C - 8.9(KVE/EO) OR 15.9(KVC/EOP)

KVC/EOP

HOODS 95"L & LESS WILL NOT HAVE THE FOUR BRACKETS IN THE CENTER OF HOOD

NOTE:
STRUCTURAL ENGINEER TO VERIFY LOCAL REQUIREMENTS. HANGING REQUIREMENTS ARE THE RESPONSIBILITY OF INSTALLING CONTRACTOR. LOCAL CODES MUST BE FOLLOWED.

(1) 1/2" ALL THREAD "BY OTHERS"
(2) 1/2" NUT "BY OTHERS"
(3) HANGER BRACKET

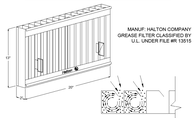
HOODS 96"L - 168"L WITH TWO EXHAUST COLLARS

KVE/EO

A = TOTAL LENGTH OF HOOD
B = TOTAL WIDTH OF HOOD
C = B - 8.9(KVE/EO) OR 15.9(KVC/EOP)

KVC/EOP

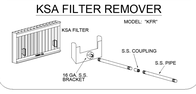
KSA GREASE EXTRACTOR



EFFECTIVE AREA = 1.25 SQUARE FEET PER FILTER
EFFECTIVE AREA = 0.75 SQUARE FEET PER HALF EXTRACTOR
SEE HOOD SUBMITTAL DRAWINGS FOR FILTER QUANTITY

EXTRACTION OF CONTAMINANTS FROM THE EXHAUST AIR IS PROVIDED BY THE KSA MULTI-CYCLONE GREASE EXTRACTORS. EFFICIENT GREASE EXTRACTION IS ACHIEVED BY FORCING THE EXHAUST AIR TO SPIRAL CONTINUOUSLY IN THE SAME DIRECTION THROUGH THE EXTRACTOR. CENTRIFUGAL FORCE IS USED TO SEPARATE THE GREASE PARTICLES FROM THE AIR FLOW CENTRIFUGALLY. HIGH EXTRACTION EFFICIENCY AND LOW PRESSURE LOSS OVER THE KSA REMAIN PRACTICALLY CONSTANT.

KSA FILTER REMOVER



PERFORMANCE CRITERIA

OTHER MANUFACTURERS WISHING TO OFFER AN ALTERNATE TO THE SPECIFIED MANUFACTURER MUST APPLY FOR PERMISSION TO DO SO IN WRITING FROM THE OFFICE OF THE SPECIFYING CONSULTANT. APPLICATION MUST BE RECEIVED BY THE CONSULTANT AT LEAST TEN WORKING DAYS PRIOR TO THE BID DATE. ANY ALTERNATE SYSTEM MUST MEET CONSTRUCTION AND PERFORMANCE REQUIREMENTS AND EFFICIENCIES AS OUTLINED IN THIS SPECIFICATION.

REQUESTS FOR APPROVAL MUST INCLUDE GREASE FILTRATION PERFORMANCE DATA (MICRON SIZE VS. EXTRACTION EFFICIENCY) AND MANUFACTURERS OWN EXHAUST AIR FLOW CALCULATIONS BASED ON THE CONVECTIVE HEAT LOAD OF COOKING EQUIPMENT BENEATH THE HOOD.

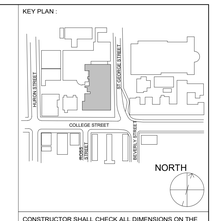
EFFICIENCY COMPARISON DATA TO BE PERFORMED IN ACCORDANCE WITH THE "TEST METHOD TO DETERMINE THE THRESHOLD OF CAPTURE AND CONTAINMENT." DATA MUST INCLUDE THERMAL IMAGING RESULTS VALIDATING CONFORMANCE TO ASTM F1704 AND SUPPLY AIR TEMPERATURE REQUIREMENT OF 74°F.

MAKE UP AIR WILL BE CALCULATED SO THAT THE SAME AMOUNT OF AIR WILL BE TAKEN FROM THE ZONE AS IS REQUIRED BY THE SPECIFIED SYSTEM . AN ADDITIONAL LOAD CANNOT BE PLACED ON THE KITCHEN HVAC SYSTEM.

MANUFACTURER MUST PROVIDE A WRITTEN GUARANTEE OF PERFORMANCE, ENSURING THE SPECIFYING ENGINEER THAT THE SYSTEM WILL PERFORM TO THE ENGINEER'S SATISFACTION WHEN INSTALLED AND BALANCED ACCORDING TO DESIGN AIR FLOWS AND RESULTS OF ASTM STANDARD F1704 TEST. (AS DETERMINED BY TAB PORTS AND PRESSURE VS. AIR FLOW CURVES.) CONSULTANT RESERVES THE RIGHT TO REJECT ANY SYSTEM WHICH, WHEN INSTALLED, DOES NOT PROVIDE CAPTURE AND CONTAINMENT AT THE THRESHOLD FLOW RATE DETERMINED IN ASTM F1704. REJECTED SYSTEM MUST BE REPLACED WITH SPECIFIED SYSTEM, WITH ALL REPLACEMENT COSTS PAID BY MANUFACTURER OF REJECTED SYSTEM.

ANY CHANGES IN THE SPECIFIED SIZING OF POWER WIRING, FAN SIZE, HOODSPOWER REQUIREMENTS, OR GAS LINES DUE TO THE USE OF ANY SYSTEM OTHER THAN THAT WHICH IS SPECIFIED IS THE RESPONSIBILITY OF THE ALTERNATE HOOD MANUFACTURER, AND MUST BE COORDINATED BY THE HOOD MANUFACTURER AND CONTRACTORS INVOLVED.

KEY PLAN :



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REVISION

NO.	DATE	DESCRIPTION
1	2024-11-14	ISSUED FOR PERMIT
2	2024-12-04	ISSUED FOR F&S REVIEW
3	2025-01-24	ISSUED FOR PEER REVIEW
4	2025-01-31	ISSUED FOR BID
5	2025-04-30	ISSUED FOR CONSTRUCTION

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFY THE FOLLOWING:
1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES
2. ELECTRICAL SUPPLY TYPE OF COOKING EQUIPMENT

NOTE TO APPROVER
ANY CHANGES IN COOKING EQUIPMENT SUCH AS INCREASED ENERGY INPUTS OR EQUIPMENT POSITION MAY AFFECT EXHAUST AIR FLOW. HALTON MUST BE NOTIFIED IF ANY OF THESE PARAMETERS ARE TO BE CHANGED. INSULATION EXHAUST AIRFLOW MAY BE REQUIRED.

APPROVED FOR FABRICATION ☐ WITH CHANGES AS NOTED
☐ WITH NO CHANGES ☐ REVISE AND RESUBMIT
APPROVED BY DATE

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301

HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSVILLE, KY 42164
1-270-237-5600

WEBSITE: WWW.HALTON.COM

REV.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			
7			

PROJECT: KOFFLER HEALTH &WELLNESS RENO
LOCATION: TORONTO,ON
DRAWN BY: OL
SCALE: NTS
CONSULTANT:
DATE: 1/27/25

Halton

DRAWING TITLE: HOOD DETAILS
DRAWING No.: C25-016
REV. NO.: 0
SHEET NO.: 1 of 5

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www.enformarchitects.com

SEAL :

OWNER:
UNIVERSITY OF TORONTO

PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER
214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
KITCHEN HOOD DETAILS

PROJECT NUMBER : **21590.003**
DRAWING SCALE : **N.T.S.**
DRAWN BY : AS
CHECKED BY : RC/DC
DATE: 2024-02-08
SHEET NO : **TM-0.3**
REV : **5**

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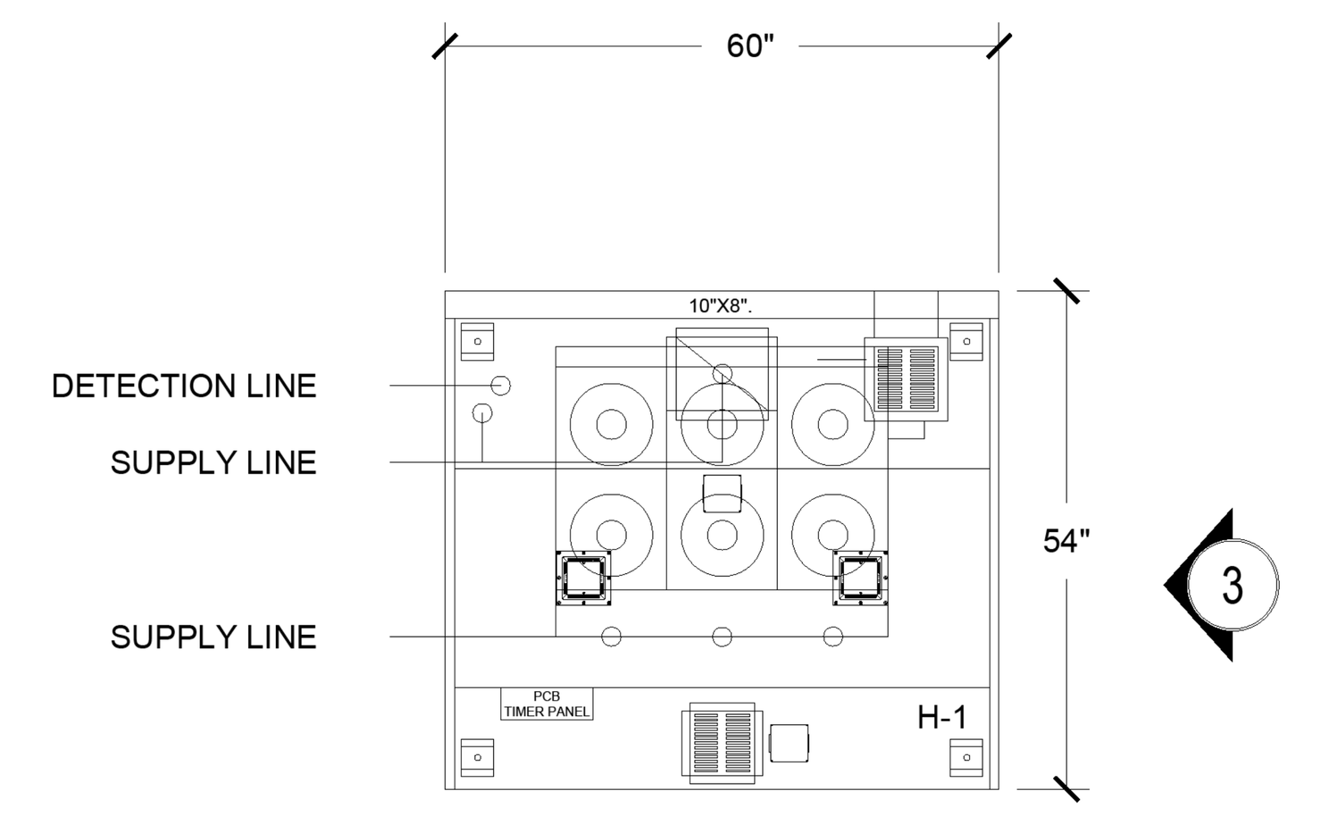
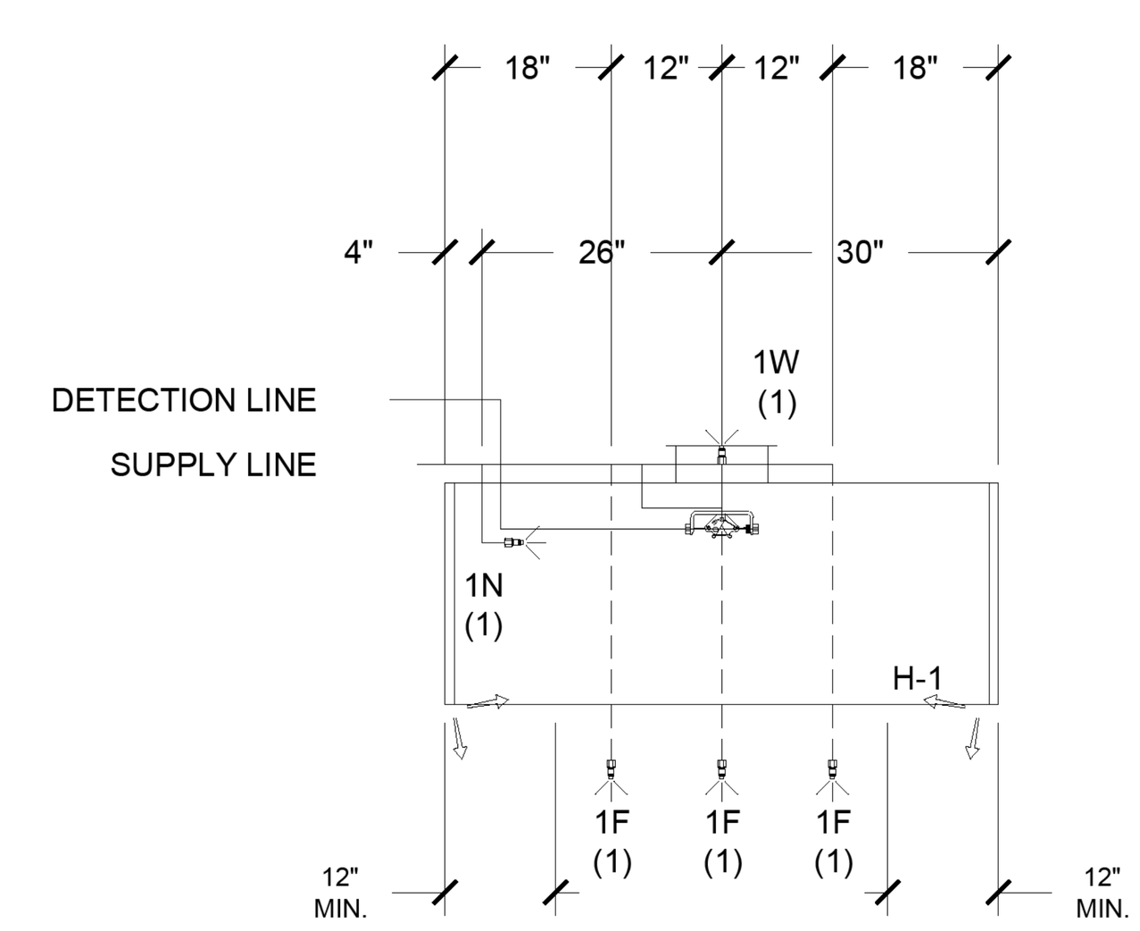
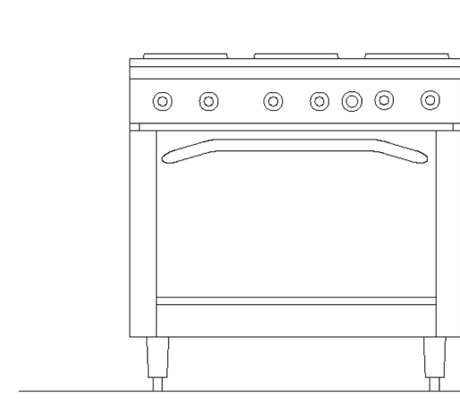
ANSUL R-102 FIRE SUPPRESSION SYSTEM
FIRE SYSTEM IS INTEGRAL WITH FACTORY DESIGN/PIPING/FIELD CERTIFICATION

ITEM #



1 ITEM # H-1
PLAN VIEW



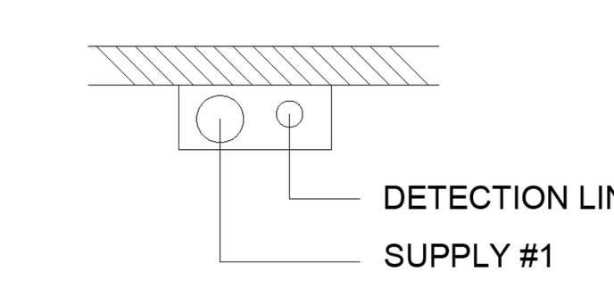


RANGE

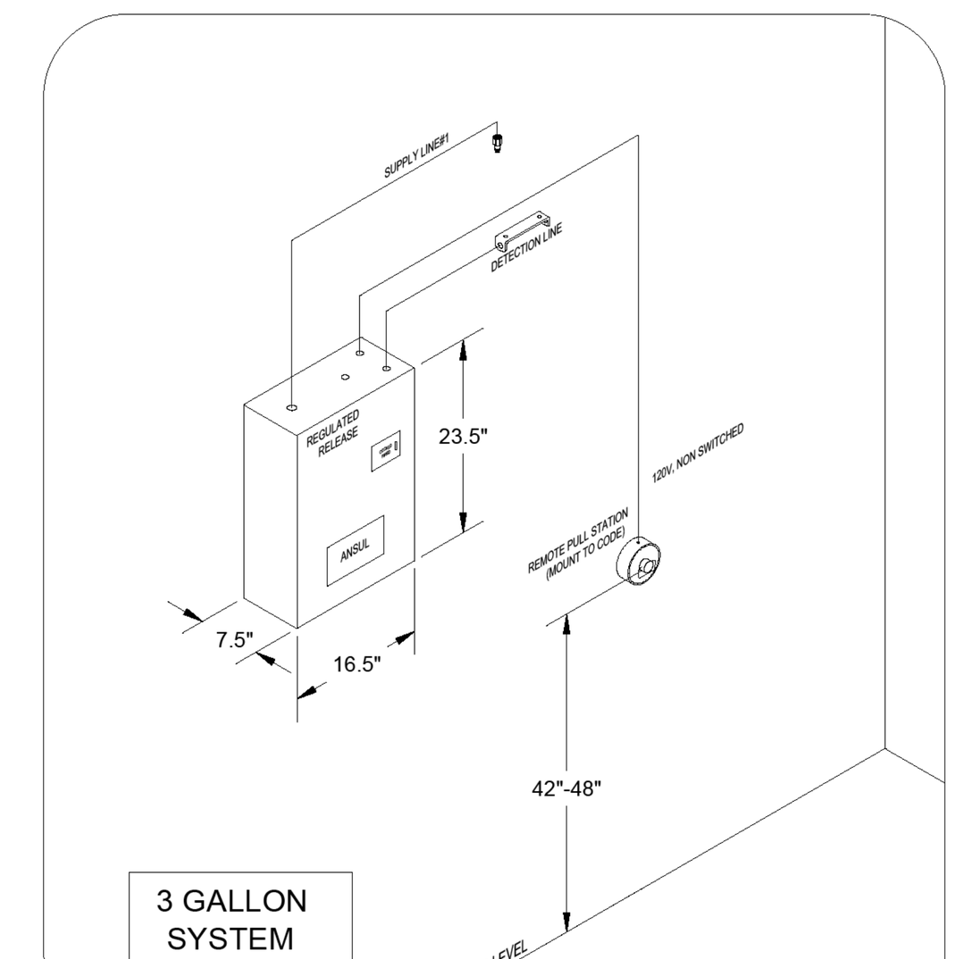
2 ITEM # H-1
ELEVATION VIEW

REMOTE MOUNTED:

(1) 120V ELECTRIC REGULATED RELEASE (WITH ONE TANK)



1) ANSUL R-102 FIRE SYSTEM
2) ONE TANK SYSTEM (3 GALLON)
3) 3/8" BLACK IRON PIPING (CONCEALED)
3/8" S.S. APPLIANCE DROPS (EXPOSED)



3 GALLON SYSTEM

FLOW POINT CHART

ANSUL R-102 FLOW POINT CALCULATION			
NOZZLE TYPE	NOZZLE FLOW PT.	NOZZLE QUANTITY	TOTAL FLOW PT.
3N	3	0	0
290	2	0	0
260	2	0	0
245	2	0	0
230	2	0	0
2W	2	0	0
2120	2	0	0
1W	1	0	0
1N	1	0	0
1F	1	0	0
1/2N	1/2	0	0
TOTAL FLOW POINTS USED			0
MAX. SYSTEM FLOW POINTS:			22 (6 GAL)

ANSUL NOTES

GENERAL NOTES:

1. THIS INSTALLATION IS TO BE MADE IN ACCORDANCE WITH THE R-102 INSTALLATION MANUAL AND IN ACCORDANCE WITH ALL STATE AND LOCAL CODES.
2. THE WIRE ROPE FOR THE DETECTOR AND REMOTE PULL STATION IS TO BE INSTALLED BY AN AUTHORIZED AND FACTORY TRAINED DISTRIBUTOR OR SERVICE REPRESENTATIVE.
3. THIS INSTALLATION IS TO BE INSPECTED, PUT INTO OPERATION AND CERTIFIED BY AN AUTHORIZED AND FACTORY TRAINED DISTRIBUTOR OR SERVICE REPRESENTATIVE.
4. ELECTRICAL CONTACTS AND WIRING FOR APPLIANCE SHUT OFF TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
5. ANSUL R-102 RESTAURANT FIRE SUPPRESSION SYSTEMS HAVE BEEN TESTED AND ARE LISTED BY UNDERWRITERS' LABORATORIES INC. AS PRE-ENGINEERED SYSTEMS, AND WHEN INSTALLED AS SHOWN ON THIS DRAWING SHALL COMPLY WITH ALL RELEVANT ANSUL INSTALLATION RECHARGE INSPECTION AND MAINTENANCE MANUALS AND SHALL COMPLY WITH NFPA 96 WHEN INSTALLED AND CERTIFIED BY AUTHORIZED TRAINED ANSUL DISTRIBUTORS IN ACCORDANCE WITH THE MANUAL.
6. ALL AGENT DISTIBUTION PIPING AND DETECTION CONDUIT HOOD PENETRATIONS MUST BE PROPERLY SEALED IN ACCORDANCE WITH NFPA 96.

DISTRIBUTION PIPING REQUIREMENT NOTES:

1. PIPE SHALL BE 3/8" SCHEDULE 40 BLACK IRON, CHROME PLATED OR STAINLESS STEEL UNLESS OTHERWISE NOTED.
2. FINAL NOZZLE LOCATION MAY NOT VARY FROM LOCATION SHOWN.

NOTE:

HALTON COMPANY WILL SUPPLY ANSUL COMPONENTS AND PRE-PIPED HOODS PER PUBLISHED ANSUL GUIDELINES AND RECOMMENDATIONS. IT IS THE RESPONSIBILITY OF THE F.S.E.C. TO INFORM HALTON OF ANY SPECIAL REQUIREMENTS OF THE LOCAL JURISDICTION PRIOR TO RELEASE OF EQUIPMENT.

NOTE:

ALL PIPING FOR LOW PROXIMITY APPLIANCE PROTECTION SHALL BE PROVIDED & INSTALLED BY THE INSTALLING ANSUL DISTRIBUTOR & NOT BY HALTON.

NOTE:

HAND HELD EXTINGUISHERS, IF REQUIRED, ARE TO BE PROVIDED BY OTHERS.

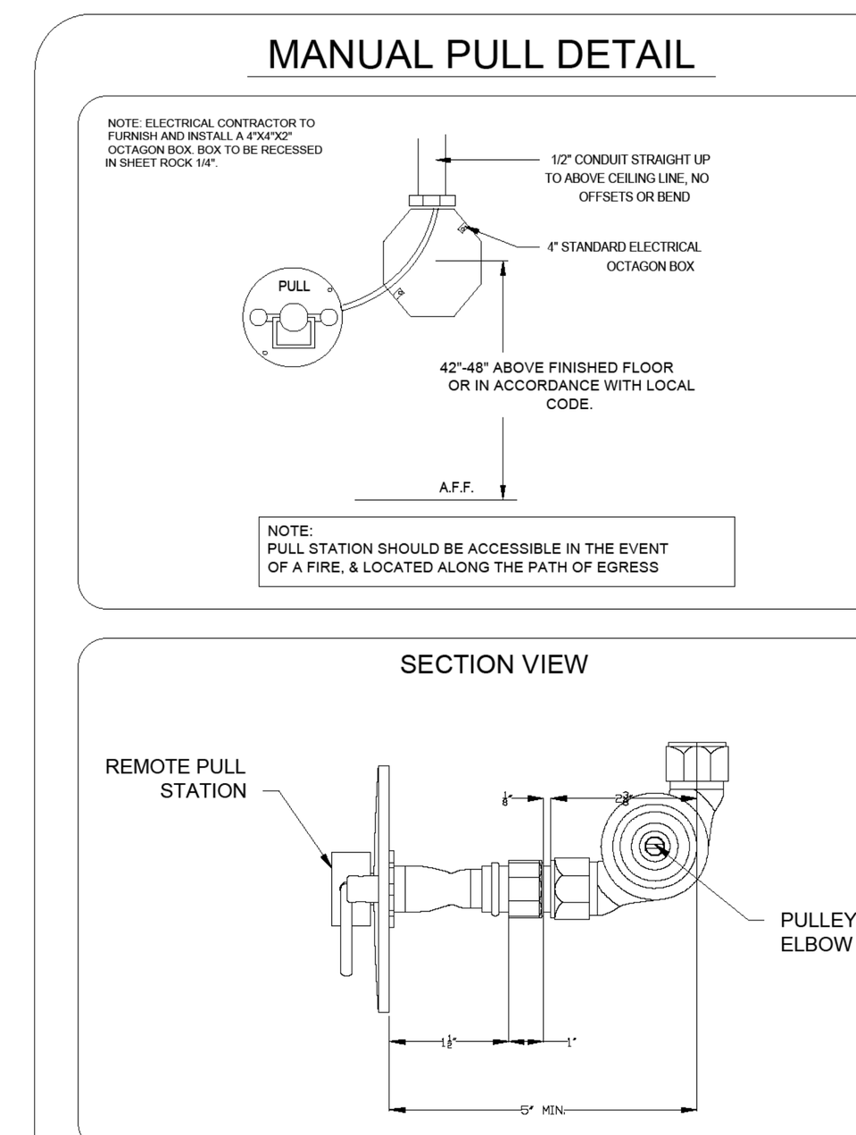
LEGEND

SUPPLY LINE

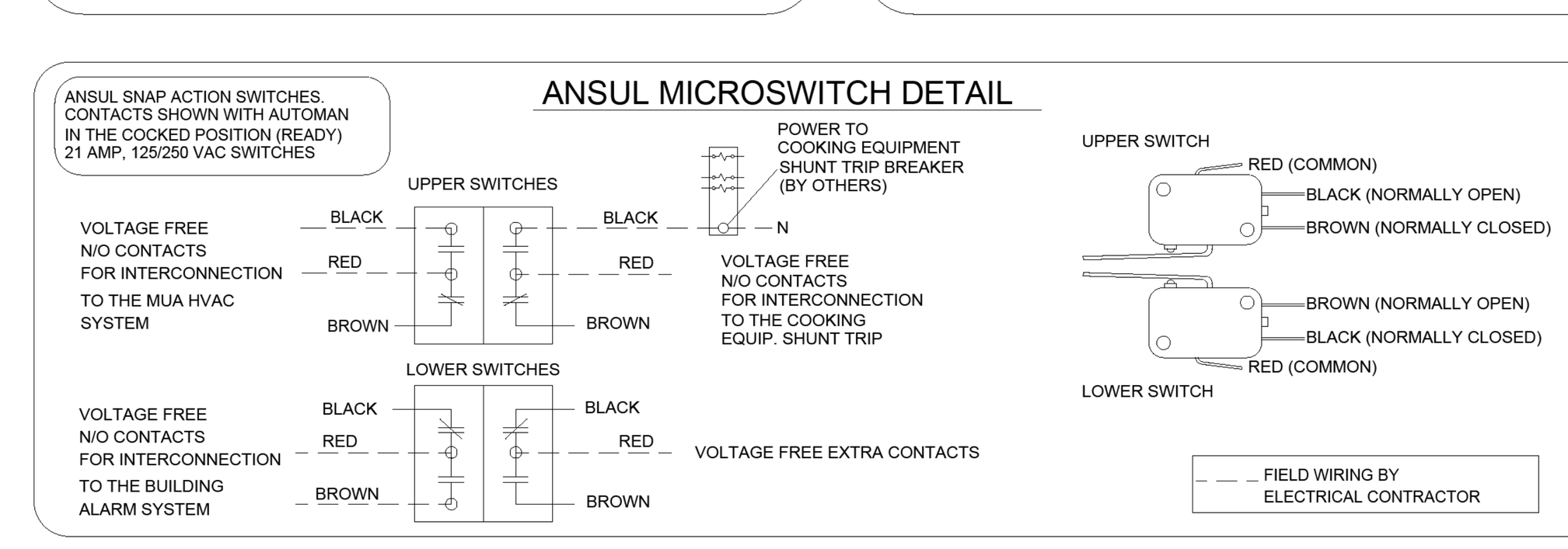
DETECTION LINE

PIPE SUPPLIED BY ANSUL CONTRACTOR TO SUIT SITE CONDITIONS. (NOZZLES SUPPLIED LOOSE)

MANUAL PULL DETAIL



ANSUL MICROSWITCH DETAIL



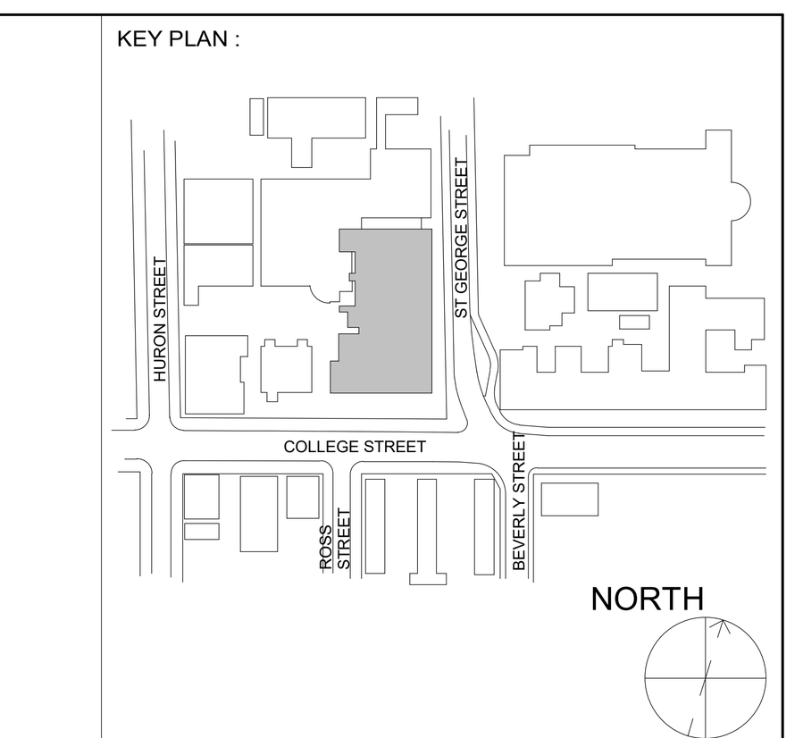
PROJECT: KOFFLER HEALTH & WELLNESS RENO
LOCATION: TORONTO,ON
DRAWN BY: OL DATE: 1/27/25
SCALE: NTS
CONSULTANT:

DRAWING TITLE: FIRE SYSTEM DETAILS

DRAWING No.: C25-016

REV. NO.: 0 SHEET NO.: 2 of 5

KEY PLAN :



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REVISION

NO.	DATE	DESCRIPTION
1	2024-11-14	ISSUED FOR PERMIT
2	2024-12-04	ISSUED FOR F&S REVIEW
3	2025-01-24	ISSUED FOR PEER REVIEW
4	2025-01-31	ISSUED FOR BID
5	2025-04-30	ISSUED FOR CONSTRUCTION

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Smith + Andersen

ENFORM architects

SEAL :

OWNER:

UNIVERSITY OF TORONTO

PROJECT : HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS : **KITCHEN HOOD DETAILS**

PROJECT NUMBER : **21590.003**

DRAWING SCALE : **N.T.S.**

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO : **TM-0.4** REV : **5**

UNIT DATA

DATA	IMPERIAL		METRIC	
Max. Exhaust Air	1907	CFM	958	l/s
Max. External S.P.	1.0"	W.G.	0.25	kpa
Design Exhaust Air	960	CFM	453	l/s
Total Internal S.P.	1.0"	W.G.	0.25	kpa
Motor	10	hp		
Power	6.3	bhp		
Full Load AMPS	5.2			
Voltage	208/3/60			
Weight (lbs)	1194			
Blower Model	EBM 355 (PN 12859)			
Mounting	INTERIOR/FLOOR			

HEAT LOAD DATA

Heat Gain to Space	NEGLIGIBLE
Required Additional Cooling (Tons)	NEGLIGIBLE
Minimum Outdoor Air (CFM)	190

FILTERS

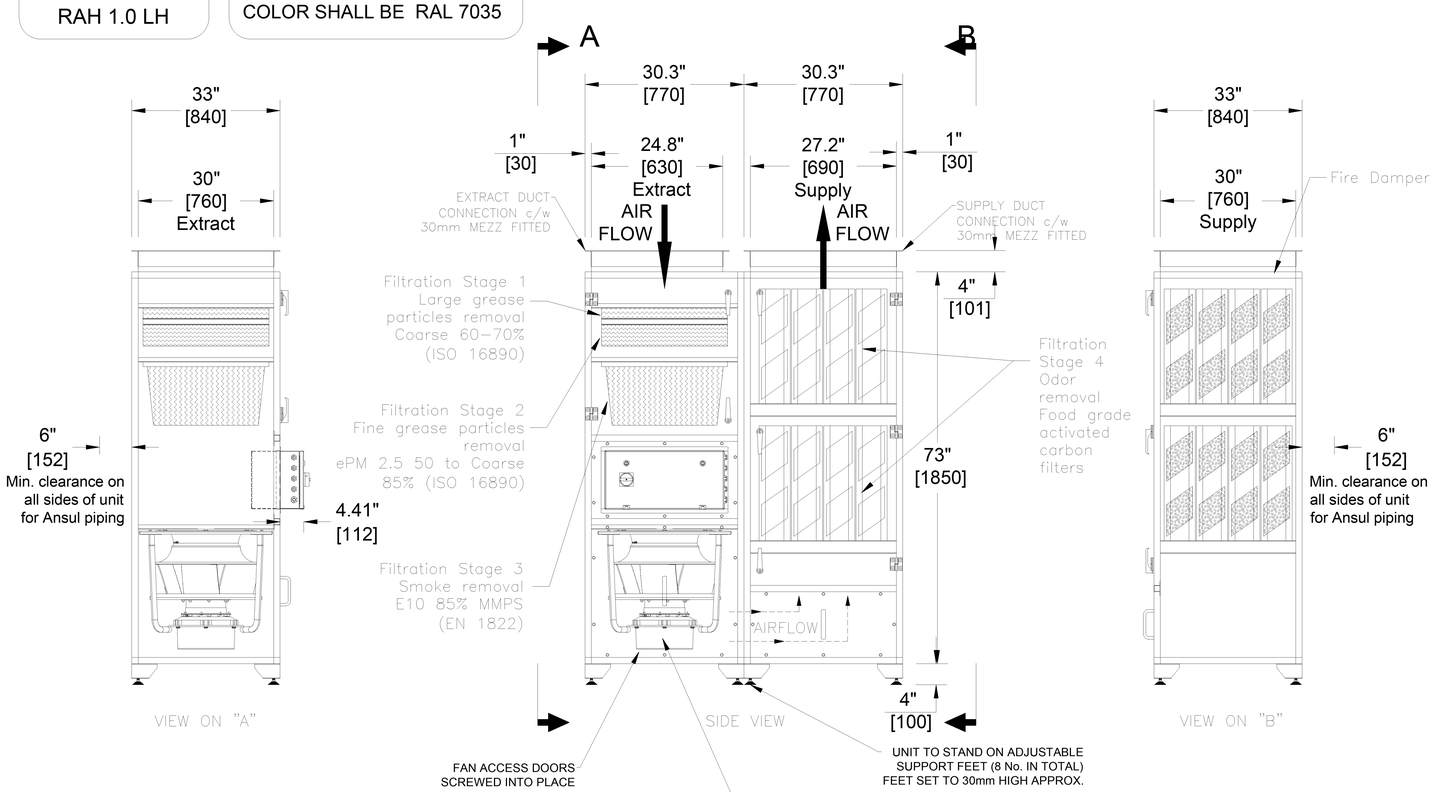
STAGE 1	QTY: 4	24" X 24" X 2"
STAGE 2	QTY: 4	24" X 24" X 4"
STAGE 3	QTY: 4	24" X 24" X 12"
STAGE 4	QTY: 32	CARBON CYLINDERS

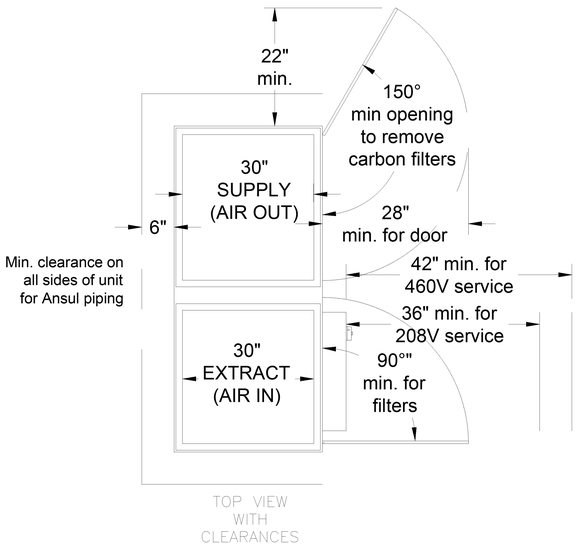
SHOP NOTE:

C/W EXTRA SET OF FILTERS IN STAGE 1,2,3

MODEL #
RAH 1.0 LH

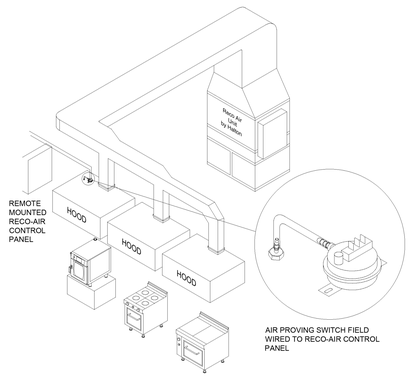
NOTE:
COLOR SHALL BE RAL 7035





AIR PROVING SWITCH LOCATION CONSIDERATIONS:

- SENSOR MUST BE INSTALLED IN LOCATION THAT WILL BE ACCESSIBLE FOR FUTURE MAINTENANCE.
- SENSOR MUST BE INSTALLED IN ONE HOOD OF A HOOD GROUP SERVED BY RECO-AIR UNIT
- SENSOR IS FIELD WIRED



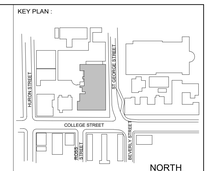
-RECO AIR UNITS ARE VENTLESS/RECIRCULATING SYSTEMS. ALL APPLICABLE LOCAL BUILDING AND FIRE CODES MUST BE CONSIDERED FOR INSTALLATION

-RECO AIR UNITS ARE APPROVED CITY WIDE BY THE FIRE DEPARTMENT OF NEW YORK CITY CERTIFICATE OF APPROVAL #5905

A. VENTLESS HOODS SHALL NOT BE INSTALLED IN THE BASEMENT OR CELLAR OF ANY BUILDING.
B. VENTLESS HOODS SHALL NOT BE INSTALLED IN ANY NON-FIREPROOF BUILDINGS.
C. VENTLESS HOODS SHALL NOT BE INSTALLED IN ANY UNSPRINKLERED BUILDINGS.
D. VENTLESS HOODS SHALL NOT BE INSTALLED IN ANY OPEN SPACES SUCH AS SHOPPING MALLS.

NOTE: For locations that do not meet of the above criteria, a request for special consideration may be submitted for a site specific approval of the use of light duty cooking /food warming operation within the City of New York.

KEY PLAN :



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REVISION

NO.	DATE	DESCRIPTION
1	2025-01-31	ISSUED FOR BID
2	2025-03-24	Bid Addendum #04
3	2025-04-30	ISSUED FOR CONSTRUCTION

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFY THE FOLLOWING:

1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES
2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.

NOTE TO APPROVER:
ANY CHANGES TO COOKING EQUIPMENT SUCH AS INCREASED ENERGY INPUTS OR EQUIPMENT POSITION MAY AFFECT EXHAUST AIRFLOW. HALTON MUST BE NOTIFIED IF ANY OF THESE CHANGES OCCUR, A RECALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.

APPROVED FOR FABRICATION
- ☐ REVISE AND RESUBMIT
- ☐ WITH NO CHANGES
- ☐ WITH CHANGES AS NOTED

APPROVED BY: DATE

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301

HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSVILLE, KY 42164
1-270-237-9600
WEBSITE : www.halton.com

REV.	DATE	BY	REVISION DESCRIPTION
1			
2			
3			
4			
5			
6			
7			

PROJECT: KOFFLER HEALTH & WELLNESS RENO
LOCATION: TORONTO,ON
DRAWN BY: OL
DATE: 1/27/25
SCALE: N.T.S.
CONSULTANT:

Halton

DRAWING TITLE: Reco-Air RAH 1.0
DRAWING No.: C25-016
REV. NO.: 0
SHEET NO.: 3 of 5

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Smith + Andersen
1100 - 100 Sheppard Ave East, Toronto ON, M2N 6N5
t 416 487 8151 smithandandersen.com

ENFORM architects
ENFORM Architects Inc.
126A Sterling Road, Suite 302B
Toronto, Ontario, Canada M6R 2B7
t. 647-848-7523
www.enformarchitects.com

SEAL :

OWNER: UNIVERSITY OF TORONTO

PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
KITCHEN ECOLOGY UNIT DETAILS

PROJECT NUMBER : **21590.003**
DRAWING SCALE : **N.T.S.**

DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO : **TM-0.5** REV : **3**

MODEL #

RAH 1.0 LH

FLOW POINT CHART

ANSUL R-102 FLOW POINT CALCULATION			
NOZZLE TYPE	NOZZLE FLOW PT.	NOZZLE QUANTITY	TOTAL FLOW PT.
2W	2	4	8
1W	1	1	1
1N	1	18	18
TOTAL FLOW POINTS USED			27
MAX. SYSTEM FLOW POINTS:			33 (9 GALLON)

ANSUL NOTES

GENERAL NOTES:

1. THIS INSTALLATION IS TO BE MADE IN ACCORDANCE WITH THE R-102 INSTALLATION MANUAL AND IN ACCORDANCE WITH ALL STATE AND LOCAL CODES.

2. THE WIRE ROPE FOR THE DETECTOR IS TO BE INSTALLED BY AN AUTHORIZED AND FACTORY TRAINED DISTRIBUTOR OR SERVICE REPRESENTATIVE.

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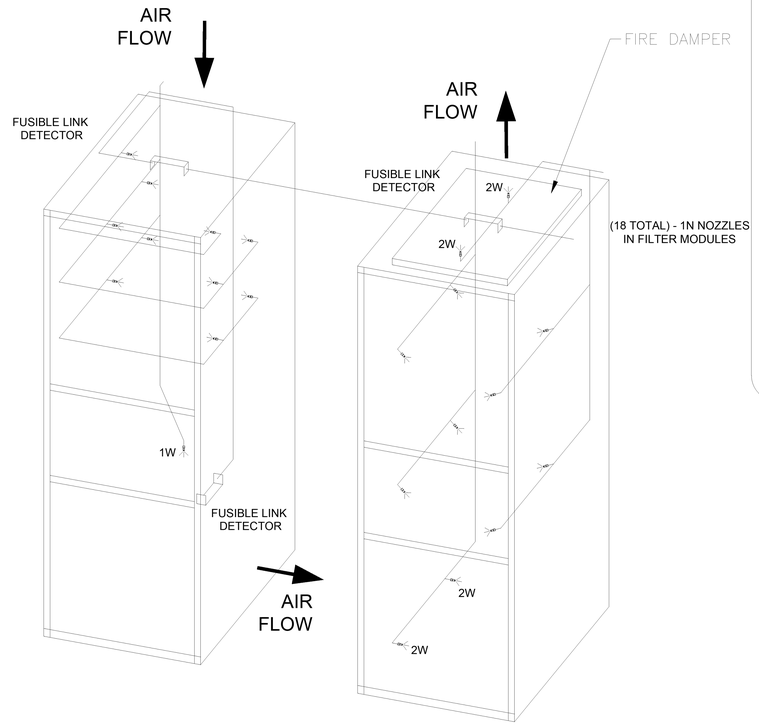
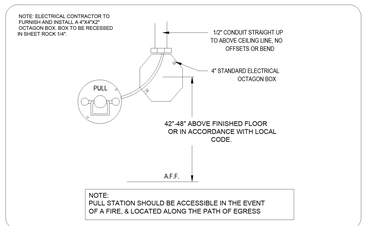
DISTRIBUTION PIPING REQUIREMENT NOTES:

1. PIPE SHALL BE 3/8" SCHEDULE 40 BLACK IRON FOR INDOOR APPLICATIONS, AND WILL BE PAINTED FOR OUTDOOR APPLICATIONS UNLESS OTHERWISE NOTED.

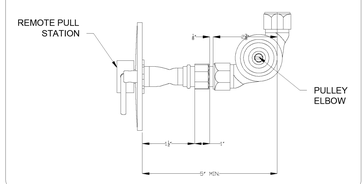
2. FINAL NOZZLE LOCATION MAY NOT VARY FROM LOCATION SHOWN.



MANUAL PULL DETAIL



SECTION VIEW



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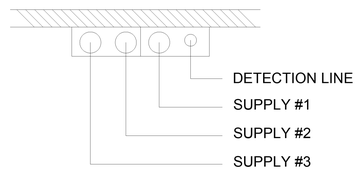
NOTE:

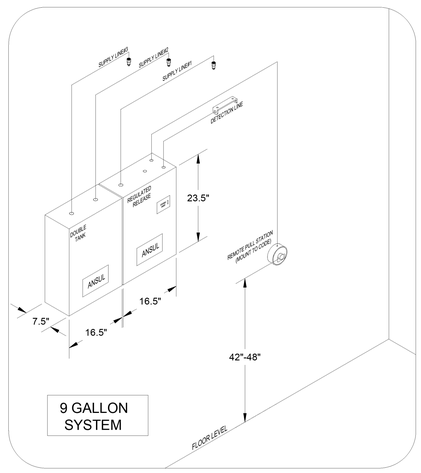
ALL PIPING FOR LOW PROXIMITY APPLIANCE PROTECTION SHALL BE PROVIDED & INSTALLED BY THE INSTALLING ANSUL DISTRIBUTOR & NOT BY HALTON.

REMOTE MOUNTED:

(1) 120V ELECTRIC REGULATED RELEASE (WITH ONE TANK)
(1) DOUBLE TANK ENCLOSURE (WITH TWO TANKS)



1) ANSUL R-102 FIRE SYSTEM
2) THREE TANK SYSTEM (9 GALLON)
3) 3/8" BLACK IRON PIPING (CONCEALED)
3/8" S.S. APPLIANCE DROPS (EXPOSED)



9 GALLON SYSTEM

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PLEASE VERIFY THE FOLLOWING:
1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS
2. ALL ELECTRICAL SERVICES
3. THE LOCATION AND TYPE OF COOKING EQUIPMENT.
NOTE TO APPROVER
ANY CHANGES IN COOKING EQUIPMENT SUCH AS INCREASED ENERGY INPUTS OR EQUIPMENT ADDITIONS MAY AFFECT THE SIZE OF THE EXHAUST SYSTEM. IT IS THE RESPONSIBILITY OF THESE CHANGES OCCUR, A RECALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.

☐ REVISE AND RESUBMIT
APPROVED FOR FABRICATION ☐ WITH CHANGES AS NOTED
☐ WITH NO CHANGES
APPROVED BY DATE

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

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MISSISSAUGA, ON L4W 3R7
1-905-624-0301

HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSVILLE, KY 42164
1-270-237-5600

WEBSITE: www.halton.com

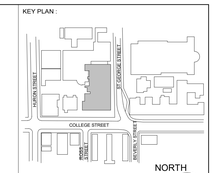
REV.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			
7			

PROJECT: KOFFLER HEALTH & WELLNESS RENO
LOCATION: TORONTO,ON
DRAWN BY: OL
DATE: 1/27/25
SCALE: N.T.S.
CONSULTANT:

Halton

DRAWING TITLE: Reco-Air RAH 1.0
DRAWING No.: C25-016
REV. NO.: 0
SHEET NO.: 4 of 5

KEY PLAN :



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REVISION

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2	2025-04-30	ISSUED FOR CONSTRUCTION

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Smith + Andersen
1100 - 100 Sheppard Ave East, Toronto ON, M2N 6N5
t 416 487 8151 smithandandersen.com

ENFORM architects
ENFORM Architects Inc.
128A Sterling Road, Suite 302B
Toronto, Ontario, Canada M6R 2B7
t: 647-848-7523
www.enformarchitects.com

SEAL :

OWNER:
UNIVERSITY OF TORONTO

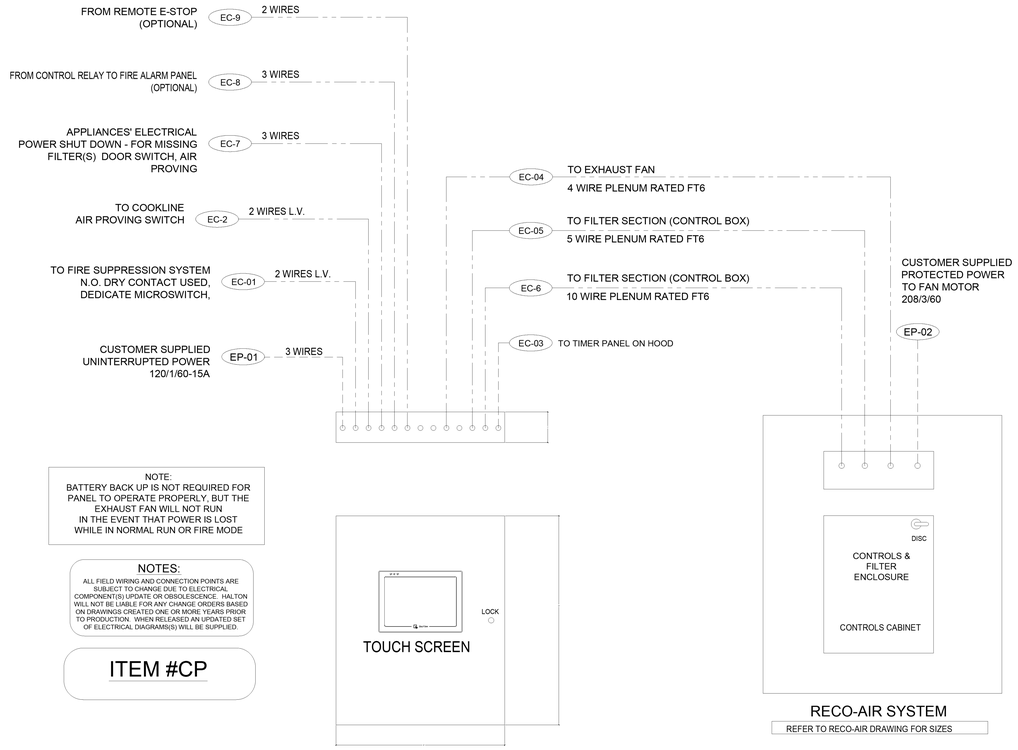
PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
KITCHEN ECOLOGY UNIT DETAILS

PROJECT NUMBER : **21590.003**
DRAWING SCALE : **N.T.S.**
DRAWN BY : AS | CHECKED BY : RC/DC | DATE: 2024-02-08
SHEET NO : **TM-0.6** | REV : **2**

RECO-AIR UNIT IS TO SHUT DOWN IN FIRE MODE



NOTE:
BATTERY BACK UP IS NOT REQUIRED FOR PANEL TO OPERATE PROPERLY, BUT THE EXHAUST FAN WILL NOT RUN
IN THE EVENT THAT POWER IS LOST WHILE IN NORMAL RUN OR FIRE MODE

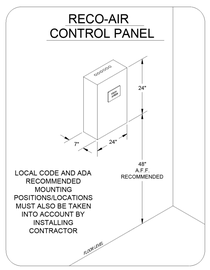
NOTES:
ALL FIELD WIRING AND CONNECTION POINTS ARE SUBJECT TO CHANGE DUE TO ELECTRICAL COMPONENT(S) UPDATE OR OBSOLESCENCE. HALTON WILL NOT BE LIABLE FOR ANY CHANGE ORDERS BASED ON DRAWINGS CREATED ONE OR MORE YEARS PRIOR TO PRODUCTION. WHEN RELEASED AN UPDATED SET OF ELECTRICAL DIAGRAMS(S) WILL BE SUPPLIED.

ITEM #CP

RECO-AIR CONTROL PANEL

RECO-AIR SYSTEM
REFER TO RECO-AIR DRAWING FOR SIZES

RECO-AIR CONTROL PANEL



ELECTRICAL CONNECTION SCHEDULE

	POWER CONNECTIONS :
EP-01	120 V, 15 AMP - RECO-AIR CONTROL PANEL POWER - 3 WIRES
EP-02	HIGH VOLTAGE POWER FROM BUILDING SOURCE TO VFD

	CONTROLS CONNECTIONS :
EC-01	2 WIRES - TO N.O. CONTACT OF FIRE SYSTEM MICROSWITCH
EC-02	2 WIRES TO COOKLINE AIR PROVING SWITCH
EC-03	2 WIRES - FROM TIMER PANEL - 120 VAC
EC-04	4 WIRES TO EXHAUST FAN - PLENUM RATED FT6
EC-05	5 WIRES TO FILTER SECTION - STP CABLE - FT6 RATED
EC-06	10 WIRES TO DOOR MICROSWITCHES, CANOPY FILTER SWITCH
EC-07	3 WIRES (N.O., COMMON, N.C.) FROM CONTROL RELAY TO SHUNT TRIP
EC-08	3 WIRES (N.O., COMMON, N.C.) FROM CONTROL RELAY TO FIRE ALARM PANEL (OPTIONAL)
EC-09	2 WIRES (OPTIONAL) FROM REMOTE E-STOP

NOTES:

ALL WIRING AND CABLING TO BE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS STATED OTHERWISE

NOTES:

FIELD WIRING (BY E.C.) - 120V - 12AWG MIN.-10AWG MAX.

FIELD WIRING (BY E.C.) - 24V - 22AWG MIN.-16AWG MAX.

RECO-AIR - SYSTEM SCOPE OF WORK

RESPONSIBILITY TO BE SELECTED BY GENERAL CONTRACTOR

DEFINITIONS FOR REFERENCE:

RECO-AIR SYSTEMS = 1 EXHAUST FAN SERVING MULTIPLE KITCHEN HOODS OR ONE HOOD ONLY
VFD = VARIABLE FREQUENCY DRIVES

CONNECTION LOCATIONS WILL VARY PER SYSTEM, REFER TO HALTON MARVEL DIAGRAMS FOR SPECIFICS

1. APPLICABLE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE RECO-AIR CONTROL PANEL. LOCATION TO BE DETERMINED BY GC AND SHAL BE WITHIN SAME SPACE AS THE KITCHEN HOODS BEING SERVED BY PANEL.

2. APPLICABLE CONTRACTOR TO SUPPLY AND INSTALL 120V (15A) DEDICATED CIRCUIT AT RECO-AIR CONTROL PANEL

3. APPLICABLE CONTRACTOR TO SUPPLY AND INSTALL THREE PHASE OR SINGLE PHASE POWER FEED FROM CIRCUIT BREAKER(S) TO VFD(S). APPLICABLE CONTRACTOR TO SUPPLY AND INSTALL THREE PHASE OR SINGLE PHASE POWER FROM VFD(S) TO EXHAUST / MUA (IF APPLICABLE) MOTORS, IF RECO-AIR IS EXTERIOR TYPE. ALL TO BE RAN IN SEPARATE CONDUIT.

4. APPLICABLE CONTRACTOR TO SUPPLY AND RUN 2 WIRE 5 V DC WIRING FROM FIRE SYSTEM TO RECO-AIR CONTROL PANEL.

5. APPLICABLE CONTRACTOR TO SUPPLY AND RUN 4 WIRE STP PLENUM RATED CABLE FOR MUA. SIGNAL START/STOP FROM CONTROL PANEL TO BMS OR DDC PANEL.

6. APPLICABLE CONTRACTOR TO SUPPLY AND RUN 7 WIRE STP PLENUM RATED CABLE 7 FROM RECO-AIR CONTROL PANEL TO VFD UNIT.

7. APPLICABLE CONTRACTOR TO SUPPLY AND RUN 2 WIRE 24V AC WIRING FROM RECO-AIR CONTROL PANEL TO VFD CABINET. FOR FIRESTAT CONNECTION.

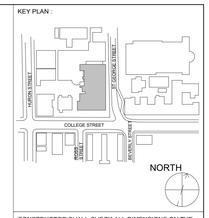
8. APPLICABLE CONTRACTOR TO SUPPLY AND RUN 10 WIRE STP PLENUM RATED CABLE FROM RECO-AIR CONTROL PANEL TO ELECTRICAL ENCLOSURE OF THE FILTER SECTION MOUNTED AT RECO-AIR UNIT.

9. APPLICABLE CONTRACTOR TO SUPPLY AND RUN 3 WIRE 24V AC WIRING FROM RECO-AIR CONTROL PANEL TO THIRD PARTY PANEL IN ORDER TO SHUT OFF POWER SUPPLY AND GAS.

10. APPLICABLE CONTRACTOR TO SUPPLY AND RUN 3 WIRE 24V WIRING FROM RECO-AIR CONTROL PANEL TO RECO-AIR CARBON SECTION. THREE WIRES ARE FOR VOC DETECTOR BEFORE CARBON FILTERS AND THREE WIRES ARE FOR VOC DETECTOR AFTER CARBON FILTERS.

11. HALTON REPRESENTATIVE TO PERFORM FINAL FIELD COMMISSIONING ONCE ALL RESPONSIBILITIES ARE COMPLETED ABOVE.

KEY PLAN :



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REVISION

NO.	DATE	DESCRIPTION
1	2025-01-31	ISSUED FOR BID
2	2025-04-30	ISSUED FOR CONSTRUCTION

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE NOTE THE FOLLOWING:
1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES
2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.
NOTE TO APPROVER
ANY CHANGES TO HOOD OR HOOD EQUIPMENT SUCH AS INCREASED ENERGY INPUTS OR EQUIPMENT POSITION MAY AFFECT EXHAUST AIRFLOW. HALTON MUST BE NOTIFIED IF ANY OF THESE CHANGES OCCUR. A RECALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.
APPROVED FOR FABRICATION
☐ REVISE AND RESUBMIT
☐ WITH NO CHANGES ☐ WITH CHANGES AS NOTED
APPROVED BY DATE

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:
HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301

HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSVILLE, KY 42164
1-270-237-5600
WEBSITE : www.halton.com

REV.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			
7			

PROJECT: KOFFLER HEALTH & WELLNESS RENO
LOCATION: TORONTO,ON
DRAWN BY: OL
DATE: 1/27/25
SCALE: N.T.S.
CONSULTANT:

Halton

DRAWING TITLE: Reco-Air RAH 1.0
DRAWING No.: C25-016
REV. NO.: 0
SHEET NO.: 5 of 5

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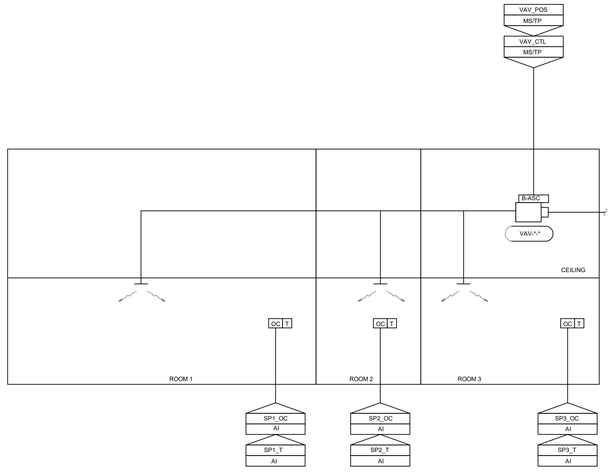
SEAL :

OWNER:
UNIVERSITY OF TORONTO

PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER
214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
KITCHEN ECOLOGY UNIT DETAILS

PROJECT NUMBER : **21590.003**
DRAWING SCALE : **N.T.S.**
DRAWN BY : AS | CHECKED BY : RC/DC | DATE : 2024-02-08
SHEET NO : **TM-0.7** | REV : **2**



VAV BOX (MULTIPLE ZONES) SYSTEM - SEQUENCE OF OPERATIONS

GENERAL
LOCATION: KOFFLER (143),
SYSTEM SERVING:
AHS-3
AHU-7

DESCRIPTION:
1. SYSTEM SHALL CONTROL AND MONITOR THE VAV BOX AND ASSOCIATED TEMPERATURE SENSORS TO MAINTAIN SPACE TEMPERATURE.

SENSOR FUNCTION
SPACE TEMPERATURE SENSOR (BY CONTROLS CONTRACTOR)
THIS INPUT SHALL BE USED TO MODULATE THE ASSOCIATED VAV BOX TO CONTROL THE SPACE TEMPERATURE.

OCCUPANCY SENSOR (BY CONTROL CONTRACTOR)
THIS INPUT SHALL BE USED TO ADD OR REMOVE TEMPERATURE SENSORS FROM THE SPACE TEMPERATURE AVERAGING FUNCTION.

SCHEDULE
OCCUPIED SCHEDULE:
SAME SCHEDULE AS ASSOCIATED AIR HANDLING UNIT.

SYSTEM START/STOP
SYSTEM ENABLED (INITIAL START- UP):
SYSTEM IS ENABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. VAV BOXES SHALL MODULATE TO THEIR PRESET POSITION.

SYSTEM DISABLED:
SYSTEM IS DISABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. VAV BOXES SHALL MODULATE CLOSED.

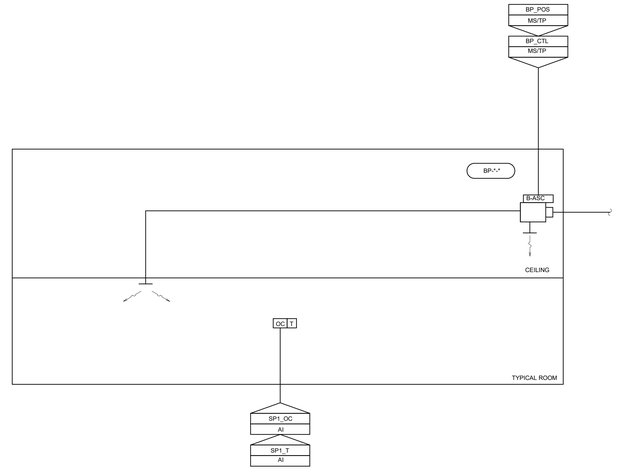
MODE OF OPERATION
SPACE TEMPERATURE SHALL BE AVERAGED FROM ALL CONNECTED SPACE TEMPERATURE SENSORS OF OCCUPIED ROOMS ONLY. VAV BOX SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT OF 23°C (OPERATOR ADJUSTABLE) BASED ON OCCUPIED AVERAGE SPACE TEMPERATURE.
INTEGRATION WITH OTHER SYSTEMS:
1. CONNECT TO EMRS.
2. CONNECT TO B-BC OF ASSOCIATED AIR HANDLING UNIT

TRENDING:
1. SPACE TEMPERATURE FOR EACH SENSOR.

GRAPHICS TO DISPLAY THE MINIMUM AND MAXIMUM SETPOINTS FOR EACH VAV BOX.

ALARM DESCRIPTION	ACTION	ALARM
SPACE TEMPERATURE OUT OF RANGE +/- 2C DURING OCCUPIED MODE	CONTINUE TO RUN	LOW
BAS TO ALARM IN UNOCCUPIED MODE IF SPACE TEMPERATURE DROPS BELOW 18 DEG (ADJUSTABLE)	CONTINUE TO RUN	LOW
NOTES: DO NOT ALARM WHEN OPERATOR OVERRIDES SYSTEM OR ITS COMPONENTS TO BE DISABLED.		

3 TM-0.8 MULTI-ZONE BOXES CONTROL DIAGRAM AND SEQUENCE



BYPASS BOX (MULTIPLE ZONES) SYSTEM - SEQUENCE OF OPERATIONS

GENERAL
LOCATION: KOFFLER (143),
SYSTEM SERVING:
AHS-4

DESCRIPTION:
1. SYSTEM SHALL CONTROL AND MONITOR THE BYPASS BOX AND ASSOCIATED TEMPERATURE SENSORS TO MAINTAIN SPACE TEMPERATURE.

SENSOR FUNCTION
SPACE TEMPERATURE SENSOR (BY CONTROLS CONTRACTOR)
THIS INPUT SHALL BE USED TO MODULATE THE ASSOCIATED BYPASS BOX TO CONTROL THE SPACE TEMPERATURE.

OCCUPANCY SENSOR (BY CONTROL CONTRACTOR)
THIS INPUT SHALL BE USED TO ADD OR REMOVE TEMPERATURE SENSORS FROM THE SPACE TEMPERATURE AVERAGING FUNCTION.

SCHEDULE
OCCUPIED/UNOCCUPIED:
THE OCCUPIED AND UNOCCUPIED MODES ARE DETERMINED BY A TIME OF DAY SCHEDULE. THE UNIT OPERATES UNDER NORMAL CONDITIONS DURING OCCUPIED SCHEDULE.
THE SYSTEM SHUTS DOWN DURING UNOCCUPIED SCHEDULE.
OCCUPIED SCHEDULE:
SAME SCHEDULE AS ASSOCIATED AIR HANDLING UNIT.

SYSTEM START/STOP
SYSTEM ENABLED (INITIAL START- UP):
SYSTEM IS ENABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. BYPASS BOXES SHALL MODULATE TO THEIR PRESET POSITION.

SYSTEM DISABLED:
SYSTEM IS DISABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. BYPASS BOXES SHALL MODULATE CLOSED.

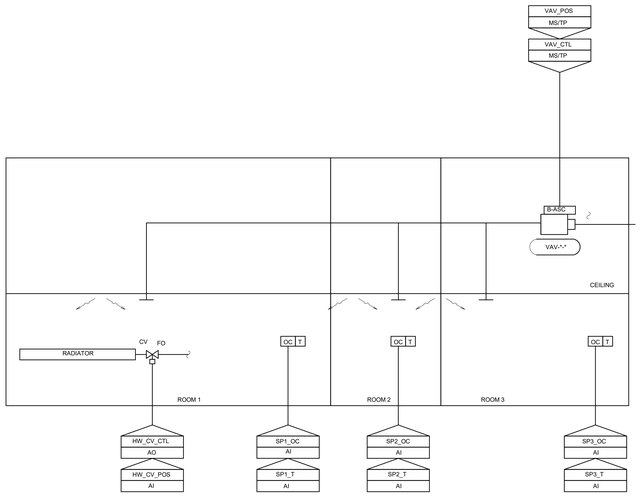
MODE OF OPERATION
SPACE TEMPERATURE SHALL BE AVERAGED FROM ALL CONNECTED SPACE TEMPERATURE SENSORS OF OCCUPIED ROOMS ONLY. BYPASS BOX SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT OF 23°C (OPERATOR ADJUSTABLE) BASED ON OCCUPIED AVERAGE SPACE TEMPERATURE.

INTEGRATION WITH OTHER SYSTEMS:
1. CONNECT TO EMRS.
2. CONNECT TO B-BC OF ASSOCIATED AIR HANDLING UNIT

TRENDING:
1. SPACE TEMPERATURE FOR EACH SENSOR.

ALARM DESCRIPTION	ACTION	ALARM
SPACE TEMPERATURE OUT OF RANGE +/- 2C DURING OCCUPIED MODE	CONTINUE TO RUN	LOW
NOTES: DO NOT ALARM WHEN OPERATOR OVERRIDES SYSTEM OR ITS COMPONENTS TO BE DISABLED.		

1 TM-0.8 BY PASS BOX CONTROL DIAGRAM AND SEQUENCE



VAV BOX (MULTIPLE ZONES) SYSTEM - SEQUENCE OF OPERATIONS

GENERAL
LOCATION: KOFFLER (143),
SYSTEM SERVING:
AHS-3
AHU-7

DESCRIPTION:
1. SYSTEM SHALL CONTROL AND MONITOR THE VAV BOX AND ASSOCIATED TEMPERATURE SENSORS TO MAINTAIN SPACE TEMPERATURE.

SENSOR FUNCTION
SPACE TEMPERATURE SENSOR (BY CONTROLS CONTRACTOR)
THIS INPUT SHALL BE USED TO MODULATE THE ASSOCIATED VAV BOX TO CONTROL THE SPACE TEMPERATURE.

OCCUPANCY SENSOR (BY CONTROL CONTRACTOR)
THIS INPUT SHALL BE USED TO ADD OR REMOVE TEMPERATURE SENSORS FROM THE SPACE TEMPERATURE AVERAGING FUNCTION.

SCHEDULE
OCCUPIED SCHEDULE:
SAME SCHEDULE AS ASSOCIATED AIR HANDLING UNIT.

SYSTEM START/STOP
SYSTEM ENABLED (INITIAL START- UP):
SYSTEM IS ENABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. VAV BOXES SHALL MODULATE TO THEIR PRESET POSITION.

SYSTEM DISABLED:
SYSTEM IS DISABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. VAV BOXES SHALL MODULATE CLOSED.

MODE OF OPERATION
SPACE TEMPERATURE SHALL BE AVERAGED FROM ALL CONNECTED SPACE TEMPERATURE SENSORS OF OCCUPIED ROOMS ONLY. VAV BOX SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT OF 23°C (OPERATOR ADJUSTABLE) BASED ON OCCUPIED AVERAGE SPACE TEMPERATURE.
IF HEATING REQUIRED, VAV BOX SHALL MODULATE TO MINIMUM POSITION AND HEATING WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT OF 23°C (OPERATOR ADJUSTABLE).

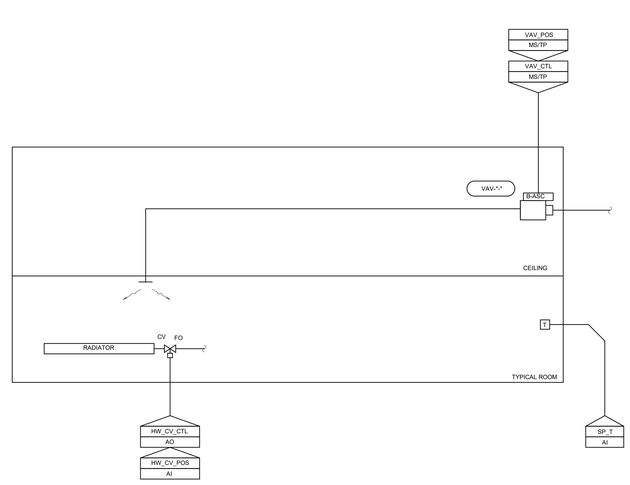
INTEGRATION WITH OTHER SYSTEMS:
1. CONNECT TO EMRS.
2. CONNECT TO B-BC OF ASSOCIATED AIR HANDLING UNIT

TRENDING:
1. SPACE TEMPERATURE FOR EACH SENSOR.

GRAPHICS TO DISPLAY THE MINIMUM AND MAXIMUM SETPOINTS FOR EACH VAV BOX.

ALARM DESCRIPTION	ACTION	ALARM
SPACE TEMPERATURE OUT OF RANGE +/- 2C DURING OCCUPIED MODE	CONTINUE TO RUN	LOW
BAS TO ALARM IN UNOCCUPIED MODE IF SPACE TEMPERATYRE DROPS BELOW 18 DEG (ADJUSTABLE)	CONTINUE TO RUN	LOW
NOTES: DO NOT ALARM WHEN OPERATOR OVERRIDES SYSTEM OR ITS COMPONENTS TO BE DISABLED.		

4 TM-0.8 MULTI-ZONE BOXES WITH RADIATORS CONTROL DIAGRAM AND SEQUENCE



VAV BOX WITH PERIMETER HEATING SYSTEM - SEQUENCE OF OPERATIONS

GENERAL
LOCATION: KOFFLER (143),
SYSTEM SERVING:
TYPICAL VAV BOX WITH RADIATORS

DESCRIPTION:
1. SYSTEM SHALL CONTROL AND MONITOR THE VAV BOX AND RADIATOR CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE.

SENSOR FUNCTION
SPACE TEMPERATURE SENSOR (BY CONTROLS CONTRACTOR)
THIS INPUT SHALL BE USED TO MODULATE THE ASSOCIATED VAV BOX TO CONTROL THE SPACE TEMPERATURE.

SCHEDULE
OCCUPIED SCHEDULE:
SAME SCHEDULE AS ASSOCIATED AIR HANDLING UNIT.

SYSTEM START/STOP
SYSTEM ENABLED (INITIAL START- UP):
SYSTEM IS ENABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. NONE.

SYSTEM DISABLED:
SYSTEM IS DISABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. NONE.

MODE OF OPERATION
IF COOLING REQUIRED, VAV BOX SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT.

IF HEATING REQUIRED, VAV BOX SHALL MODULATE TO MINIMUM POSITION AND HEATING WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT OF 23°C (OPERATOR ADJUSTABLE).

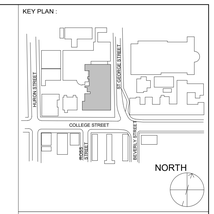
INTEGRATION WITH OTHER SYSTEMS:
1. CONNECT TO EMRS.
2. CONNECT TO B-BC OF ASSOCIATED AIR HANDLING UNIT

TRENDING:
1. SPACE TEMPERATURE

ALARM DESCRIPTION	ACTION	ALARM
SPACE TEMPERATURE OUT OF RANGE +/- 2C DURING OCCUPIED MODE	CONTINUE TO RUN	LOW
NOTES: DO NOT ALARM WHEN OPERATOR OVERRIDES SYSTEM OR ITS COMPONENTS TO BE DISABLED.		

2 TM-0.8 VAV BOXES WITH RADIATORS CONTROL DIAGRAM AND SEQUENCE

KEY PLAN :



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3	2025-03-24	Bid Addendum #04
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ENFORM architects
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Toronto, Ontario, Canada M6R 2B7
t: 647-948-7523
www.enformarchitects.com

SEAL :

OWNER:
UNIVERSITY OF TORONTO

PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
CONTROLS DIAGRAM AND SEQUENCES

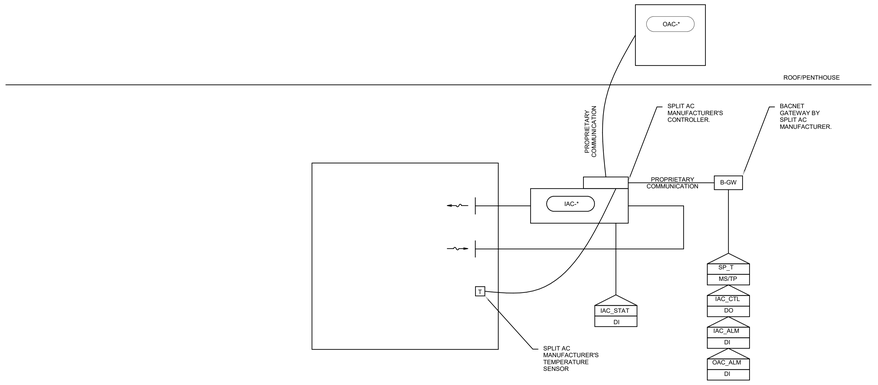
PROJECT NUMBER :
21590.003

DRAWING SCALE :
N.T.S.

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO :
TM-0.8

REV :
4



SPLIT AC SYSTEMS (TYPICAL) - SEQUENCE OF OPERATIONS

GENERAL:
LOCATION: KOFFLER (143), STORAGE ROOM 205A, ELECTRICAL ROOM 380A, ELECTRICAL ROOM 343

DESCRIPTION:
SYSTEM SHALL PROVIDE COOLING AND MONITORING OF SPACE TEMPERATURE FOR ASSOCIATED ROOMS.

SENSOR FUNCTION
CURRENT SENSOR (BY CONTROLS CONTRACTOR):
THIS INPUT SHALL BE USED TO SENSE STATUS OF INDOOR AC UNIT.

SCHEDULE
ALWAYS ON.

SYSTEM START/STOP
SYSTEM ENABLED (INITIAL START- UP):
SYSTEM IS ENABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. SPLIT AC UNIT SHALL BE ENABLED.
2. INDOOR UNIT SHALL HAVE FAN RUN CONTINUOUSLY.

SYSTEM DISABLED:
SYSTEM IS DISABLED THROUGH THE BAS BASED ON OPERATOR DEFINED SCHEDULE OR BY OPERATOR COMMAND.
1. SPLIT AC UNIT SHALL BE DISABLED.

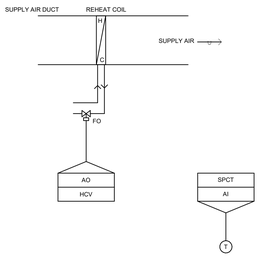
MODE OF OPERATION
SPLIT AC UNIT SHALL MODULATE COMPRESSORS TO MAINTAIN LOCAL SPACE TEMPERATURE SETPOINT.

INTEGRATION WITH OTHER SYSTEMS:
1. CONNECT TO EMRS.

TRENDING:
1. SPACE TEMPERATURE

ALARM DESCRIPTION	ACTION	ALARM
SPACE TEMPERATURE OUT OF RANGE ±2°C	CONTINUE TO RUN	LOW
NOTES: DO NOT ALARM WHEN OPERATOR OVERRIDES SYSTEM OR ITS COMPONENTS TO BE DISABLED.		

2 TM-0.9 SPLIT AC CONTROLS DIAGRAM



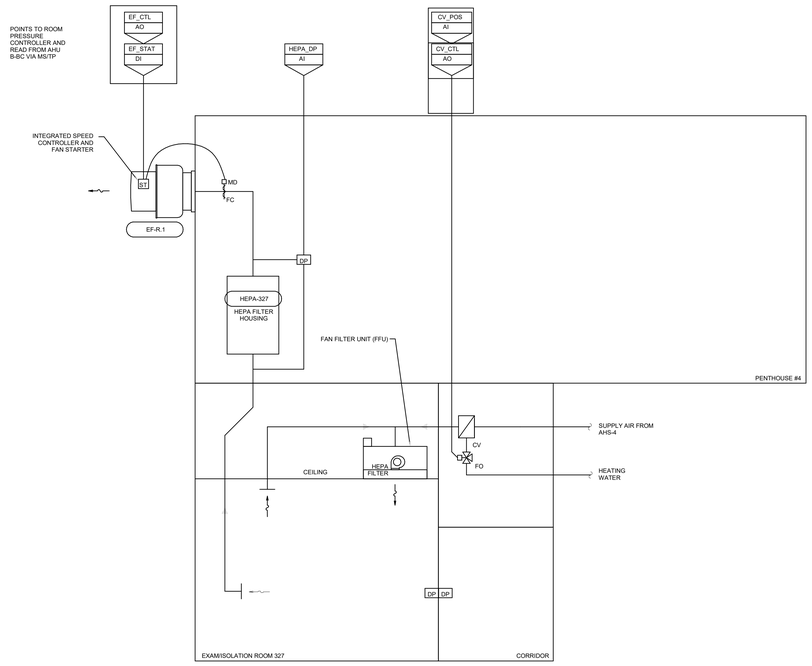
SYSTEM START/STOP
SYSTEM SHALL BE ENABLED ONLY IN WINTER MODE.
1. SYSTEM START SHALL BE INITIATED BY SPACE TEMPERATURE DEMAND. UPON SIGNAL TO START THE SYSTEM, SUPPLY FAN SHALL START. HEATING COIL VALVE SHALL BE ENABLED.

NORMAL OPERATION WINTER MODE:
1. HEATING COIL VALVE (HCV) SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE (SPCT) AT SET-POINT.

SYSTEM STOP:
1. SYSTEM STOP IS INITIATED WHEN SPACE TEMPERATURE IS SATISFIED. UPON SIGNAL TO STOP THE SYSTEM THE SUPPLY FAN SHALL STOP. HEATING COIL VALVE SHALL BE CLOSED.
2. SYSTEM SHALL BE DISABLED IN SUMMER MODE.

ALARMS:
1. SPACE TEMPERATURE (SPCT) OUT OF RANGE.

3 TM-0.9 REHEAT COIL CONTROLS DIAGRAM



ISOLATION ROOM - SEQUENCE OF OPERATIONS

GENERAL
LOCATION: KOFFLER STUDENT CENTER (143), PENTHOUSE #4
SYSTEM SERVING:
ISOLATION ROOM 370

DESCRIPTION:
1. CONSTANT VOLUME SUPPLY AND EXHAUST FANS SHALL CONTINUE TO MAINTAIN A NEGATIVE PRESSURE DIFFERENTIAL AS SET BY AIR BALANCERS.
2. THE BAS SHALL MONITOR AND DISPLAY THE DIFFERENTIAL PRESSURE IN THE SPACE AND SHALL ALARM IN ANY CASE WHERE PRESSURE IN SPACE BECOMES POSITIVE IN RELATION TO ADJACENT CORRIDOR.

MODE OF OPERATION
IF ROOM PRESSURE DIFFERENTIAL CONTROLLER IS OPERATING IN "SETBACK" MODE:

FAN FILTER UNIT SHALL BE DISABLED.
ROOM DIFFERENTIAL PRESSURE CONTROLLER SHALL MODULATE EXHAUST FAN EF-R.1 SPEED TO MAINTAIN 0 INWC ROOM DIFFERENTIAL PRESSURE.

MODULATE REHEAT COIL CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE.

IF ROOM PRESSURE DIFFERENTIAL CONTROLLER IS OPERATING IN "ISOLATION" MODE:

FAN FILTER UNIT SHALL BE ENABLED AT PREBALANCED AIRFLOW OF 250 CFM.

ROOM DIFFERENTIAL PRESSURE CONTROLLER SHALL ENABLE EXHAUST FAN EF-R.1.

LOCAL EF-R.1 ECM CONTROLLER SHALL OPEN MOTORIZED DAMPER MD-2. MODULATE EXHAUST FAN EF-R.1 SPEED TO MAINTAIN 0.03 INWC ROOM DIFFERENTIAL PRESSURE.

MODULATE REHEAT COIL CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE.

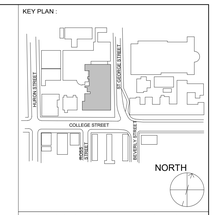
INTEGRATION WITH OTHER SYSTEMS:
1. CONNECT TO EMRS.

TRENDING:
1. ROOM PRESSURE
2. ROOM TEMPERATURE

ALARM DESCRIPTION	ACTION	ALARM
ROOM PRESSURE BELOW 0.01 INWC.	ACTIVATE LOCAL AUDIBLE AND VISUAL ALARM	CRITICAL
FAN FILTER UNIT FILTER DIRTY	CONTINUE TO RUN	HIGH
HEPA FILTER HOUSING FILTER DIRTY	CONTINUE TO RUN	HIGH
EXHAUST FAN NOT WORKING	ACTIVATE LOCAL AUDIBLE AND VISUAL ALARM	CRITICAL
NOTES: DO NOT ALARM WHEN OPERATOR OVERRIDES SYSTEM OR ITS COMPONENTS TO BE DISABLED.		

1 TM-0.9 ISOLATION ROOM CONTROLS DIAGRAM AND SEQUENCE

KEY PLAN :



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SEAL :

OWNER:
UNIVERSITY OF TORONTO

PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
CONTROLS DIAGRAMS AND SEQUENCES

PROJECT NUMBER :
21590.003

DRAWING SCALE :
N.T.S.

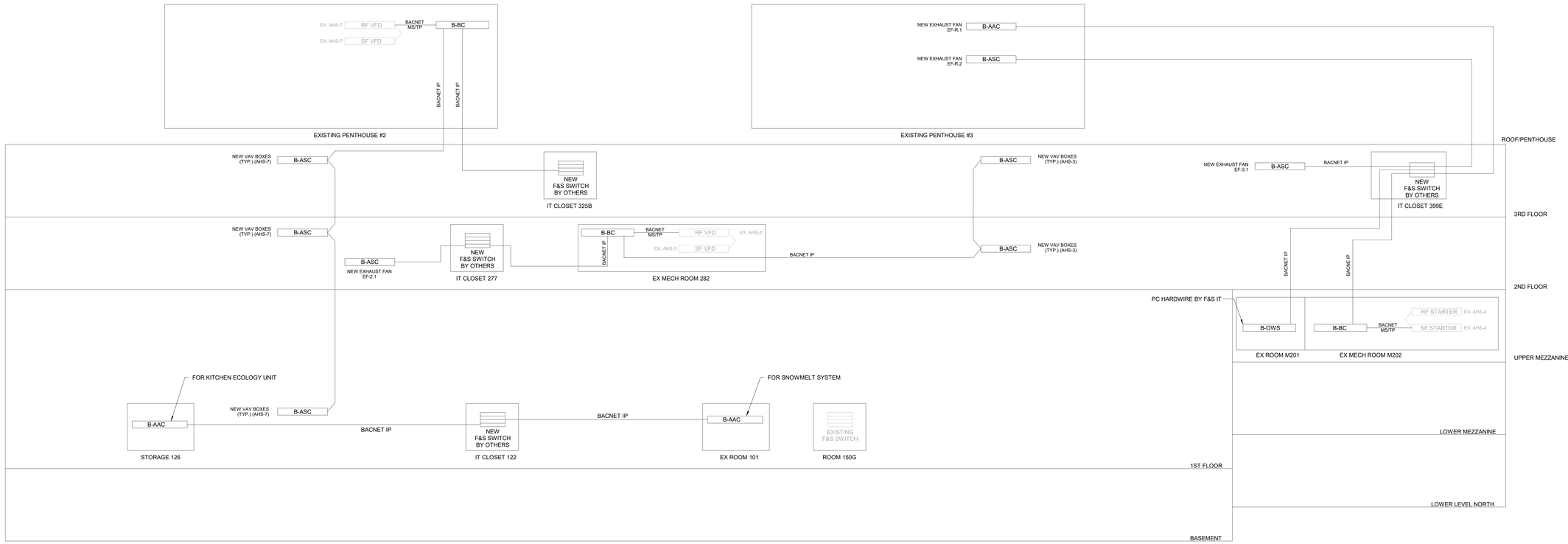
DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO : **TM-0.9**
REV : **4**

GENERAL NOTES:
PROVIDE ALL NEW DATA AND COMMUNICATION CABLING AS SHOWN BELOW AND AS SPECIFIED. COORDINATE WITH ALL TRADES

LEGEND:

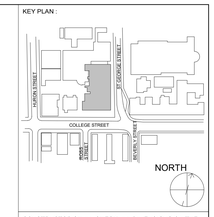
- B-BC – BUILDING CONTROLLER C/W UPS
- B-AAC – ADVANCED APPLICATION CONTROLLER
- B-ASC – APPLICATION SPECIFIC CONTROLLER
- B-GW – GATEWAY
- B-OWS – OPERATOR WORKSTATION



KOFFLER STUDENT CENTER

BAHEN (BCIT)

KEY PLAN :



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REVISION

NO.	DATE	DESCRIPTION
1	2025-01-31	ISSUED FOR BID
2	2025-03-14	Bid Addendum #02
3	2025-03-24	Bid Addendum #04
4	2025-04-30	ISSUED FOR CONSTRUCTION

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SEAL :

OWNER:
UNIVERSITY OF TORONTO

PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
BAS ARCHITECTURE DIAGRAM

PROJECT NUMBER :
21590.003

DRAWING SCALE :
N.T.S.

DRAWN BY :	CHECKED BY :	DATE :
AS	Checker	2024-02-08

SHEET NO : **TM-0.10**

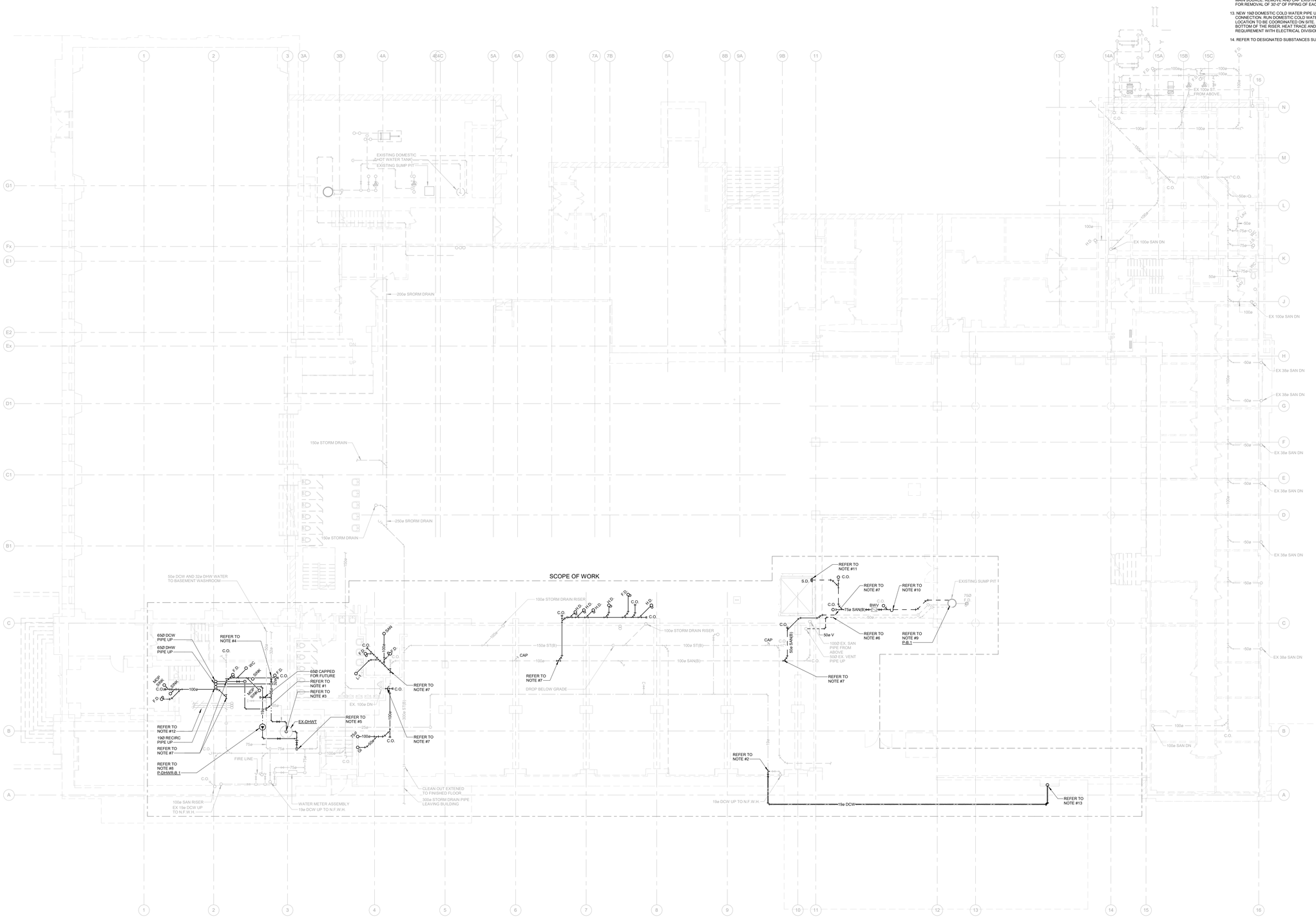
REV : **4**

GENERAL NOTES:

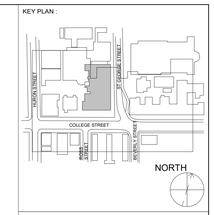
1. DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
2. READ FLOOR PLANS IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. CONNECT NEW 65Ø DOMESTIC COLD WATER PIPE TO EXISTING 75Ø DOMESTIC COLD WATER PIPE COMPLETE WITH ISOLATION VALVE AND EXTEND AS INDICATED. ALLOW FOR PIPE FREEZING TO COMPLETE CONNECTION.
2. CONNECT NEW 19Ø DOMESTIC COLD WATER PIPE TO EXISTING 19Ø DOMESTIC COLD WATER PIPE COMPLETE WITH ISOLATION VALVE AND EXTEND AS INDICATED. ALLOW FOR PIPE FREEZING TO COMPLETE CONNECTION.
3. CONNECT NEW 65Ø DOMESTIC HOT WATER PIPE TO EXISTING DOMESTIC HOT WATER TANK AND EXTEND AS INDICATED.
4. CONNECT NEW 32Ø DOMESTIC HOT WATER PIPE TO EXISTING 32Ø DOMESTIC HOT WATER CAPPED CONNECTION COMPLETE WITH ISOLATION VALVE AND EXTEND AS INDICATED.
5. CONNECT NEW 65Ø DOMESTIC HOT WATER RICIRCULATION PIPE TO EXISTING 75Ø DOMESTIC COLD WATER PIPE COMPLETE WITH ISOLATION VALVE AND CHECK VALVES AND EXTEND AS INDICATED. ALLOW FOR PIPE FREEZING TO COMPLETE CONNECTION.
6. CONNECT NEW 50Ø VENT PIPE TO EXISTING 50Ø VENT PIPE AND EXTEND AS INDICATED.
7. CONNECT NEW 100Ø SANITARY DRAINAGE PIPE TO EXISTING 100Ø SANITARY DRAINAGE PIPE BELOW SLAB ON GRADE AND EXTEND AS INDICATED. INCLUDE IN TENDER PRICE FOR SCANNING/XRAY, TRENCHING AND BACKFILL.
8. PROVIDE AND INSTALL NEW DOMESTIC HOT WATER RECIRCULATION PUMP COMPLETE WITH VIBRATION ISOLATION, PRESSURE GAUGES, STRAINER, CHECK VALVE, SHUT-OFF VALVES AND FLOW BALANCING VALVE. CONNECT NEW 65Ø RECIRCULATION LINE TO 75Ø DOMESTIC COLD WATER LINE FEEDING HOT WATER TANKS AND EXTEND AS INDICATED.
9. REMOVE EXISTING SUMP PUMP FROM EXISTING SUMP PIT. DISCONNECT POWER FROM EXISTING RECEPTACLE. EXISTING SUMP PIT TO REMAIN. PROVIDE AND INSTALL NEW SUMP PUMP IN EXISTING SUMP PIT. SUMP PUMP SHALL BE ZOELLER M58. 120V/1/60. 50 USGPM @ 13 FTWC DYNAMIC COMPLETE WITH INTEGRAL FLOAT SWITCH. PLUG NEW SUMP PUMP IN SAME EXISTING RECEPTACLE AS DEMOLISHED PUMP. INCLUDE FOR ALL DISCHARGE PIPING MODIFICATIONS TO SUIT THE NEW PUMP. RE-USE EXISTING LIFTING CHAIN AND SECURE TO NEW SUMP PUMP. SUPPLY AND INSTALL NEW CHAINS IF EXISTING IS MISSING OR CORRODED. INTERFACE SUMP PUMP CONTROLLER WITH BAS FOR MONITORING.
10. PROVIDE NEW RUNNING TRAP COMPLETE TRAP SEAL PRIMER FROM NEW WATER CLOSET FLUSH VALVES FROM 2ND FLOOR ADJACENT TO SERVE ELEVATOR PIT DRAIN.
11. PROVIDE NEW SCUPPER DRAIN AND BACKWATER VALVE COMBINATION SIMILAR TO WATTS #BV-600.
12. ALLOW FOR 3 HOURS OF INVESTIGATION OF EXISTING PLUMBING STUB-OUTS TO TRACE PIPING BACK TO MAIN SOURCE. REMOVE AND CAP EXISTING PLUMBING PIPING AS CLOSE TO SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF 30'-0" OF PIPING OF EACH PLUMBING SERVICE.
13. NEW 19Ø DOMESTIC COLD WATER PIPE UP TO NON FREEZE HOSE BIBB FOR FUTURE IRRIGATION CONNECTION. RUN DOMESTIC COLD WATER PIPE BELOW GRADE EXTERIOR TO THE BUILDING. EXACT LOCATION TO BE COORDINATED ON SITE. PROVIDE AND INSTALL A DRAIN VALVE WITH HOSE END AT THE BOTTOM OF THE RISER. HEAT TRACE AND INSULATE ENTIRE RUN OF PIPE. COORDINATE POWER REQUIREMENT WITH ELECTRICAL DIVISION.
14. REFER TO DESIGNATED SUBSTANCES SURVEY REPORT FOR ABATEMENT SCOPE.



KEY PLAN :



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SEAL :

OWNER:

UNIVERSITY OF TORONTO

PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

BASEMENT - PLUMBING AND PIPING LAYOUT

PROJECT NUMBER : **21590.003**

DRAWING SCALE : **1:100**

DRAWN BY :	CHECKED BY :	DATE :
AS	TS/DC	2024-02-08

SHEET NO : **TM-B.2**

REV : **7**

Grease Interceptor Calculation

Floor	Item Description	length (inches)	width (inches)	depth (inches)	volume (cu in)	Factor to convert volume to gallons	Item Gallons - Item Fixture Units or Calculated Gallons	120*4 and *3
1	Sink Compartment 1	14	13	8	1456	231	**23**	0.5
1	Sink Compartment 2	14	13	8	1456	231	**23**	0.5
								1.1
						Conversion	1 L/s - 0.063 GPM	0.1
								16.9

Notes:

*1 : Total floor drains (i.e., 3 floor drain * 2.31 to convert to gallons)

*2 : Enter unit gallon in column H if/when volumes do not apply

*3 : Drainage Load - 75% of Maximum Discharge (Dishes Displace 25% of the water in sink)

4 : Drain Down Time 120 (seconds) = (0.75(I2*3.785)/120) where 3.785 convert gallons to litres and 120 is the drain down time

5 : Drain Down Time 60 (seconds) = (0.75(I2*3.785)/60) where 3.785 convert gallons to litres and 60 is the drain down time

Code Reference: OBC 7.4.4.3 Interceptors

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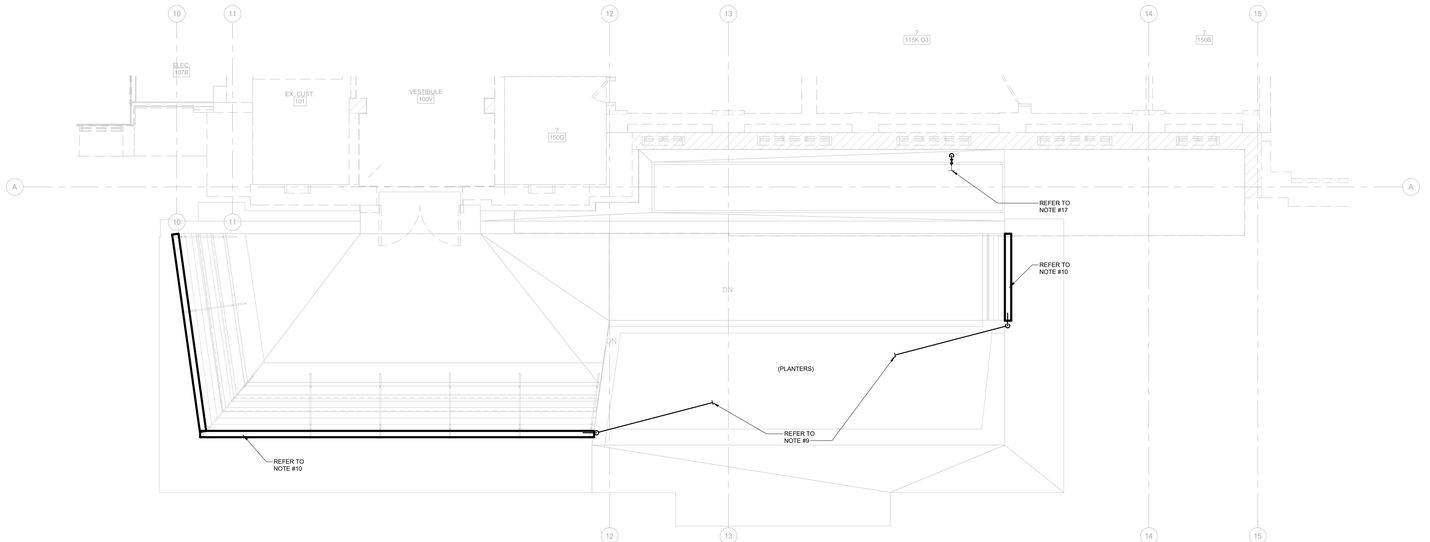
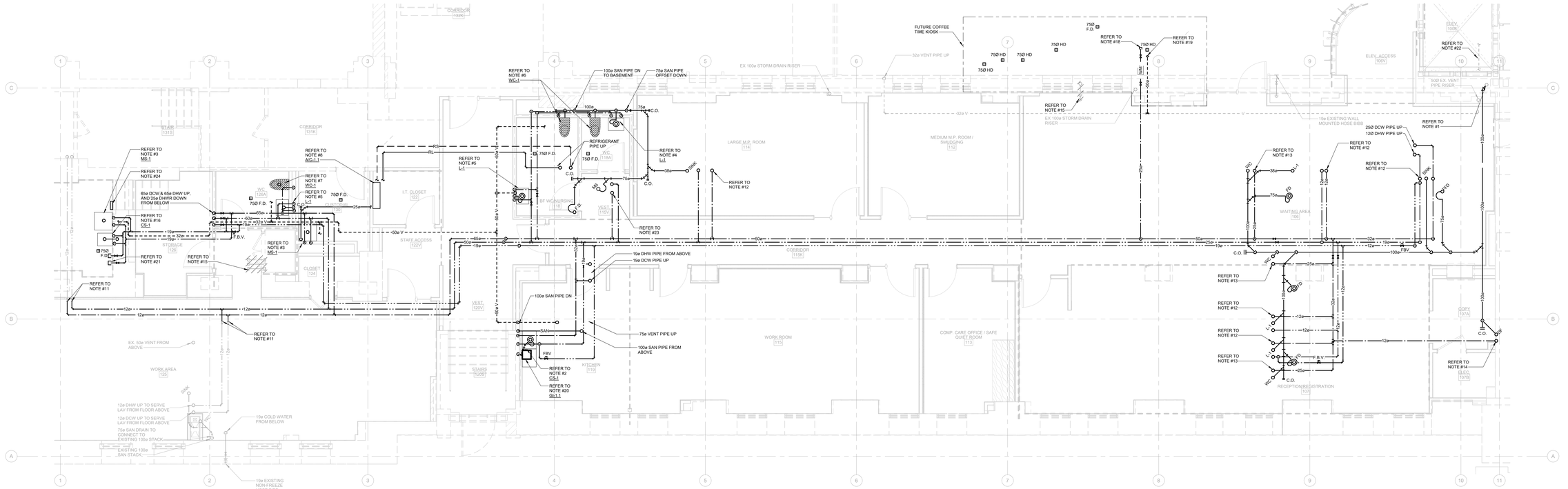
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. CONNECT NEW 100Ø SANITARY DRAINAGE PIPE TO EXISTING 100Ø SANITARY PIPE RISER AND EXTEND AS INDICATED.
2. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO SINK, 32Ø VENT LINE UP FROM SINK, AND 38Ø SANITARY DRAIN DOWN TO BELOW COUNTER GREASE INTERCEPTOR AND DOWN TO CEILING SPACE OF (BASEMENT) FLOOR BELOW. ROUGH-IN AND FINAL CONNECTION FOR TWO AT 12Ø (1/2"Ø) ONE VALVED AND CAPPED DOMESTIC HOT WATER CONNECTION FOR DISHWASHER AND ONE VALVED AND CAPPED DOMESTIC COLD WATER CONNECTION FOR FUTURE CLIENT SUPPLIED APPLIANCE. PROVIDE NEW GREASE INTERCEPTER UNDER SINK.
3. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO MOP SINK, 32Ø VENT LINE UP FROM MOP SINK, AND 38Ø SANITARY DRAIN DOWN FROM MOP SINK TO CEILING SPACE OF (BASEMENT) FLOOR BELOW.
4. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO LAVATORY, 32Ø VENT LINE UP FROM LAVATORY, AND 32Ø SANITARY DRAIN DOWN FROM LAVATORY TO NEW 75Ø SANITARY PIPING AS INDICATED.
5. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO LAVATORY, 32Ø VENT LINE UP FROM LAVATORY, AND 32Ø SANITARY DRAIN DOWN FROM LAVATORY TO CEILING SPACE OF (BASEMENT) FLOOR BELOW.
6. 25Ø DOMESTIC COLD WATER PIPE DOWN TO WATERCLOSET, 50Ø VENT LINE UP FROM WATERCLOSET, AND 75Ø SANITARY DRAIN DOWN FROM WATERCLOSET TO NEW 75Ø SANITARY PIPING AS INDICATED.
7. 25Ø DOMESTIC COLD WATER PIPE DOWN TO WATERCLOSET, 50Ø VENT LINE UP FROM WATERCLOSET, AND 75Ø SANITARY DRAIN DOWN FROM WATERCLOSET TO CEILING SPACE OF (BASEMENT) FLOOR BELOW.
8. PROVIDE AND INSTALL NEW WALL MOUNTED DUCTLESS SPLIT A/C COMPLETE WITH REFRIGERANT LINES AND CONDENSATE PUMP. NEW 25Ø CONDENSATE DRAIN FROM SPLIT A/C TO TERMINATE INDIRECTLY OVER MOP SINK AS INDICATED.
9. PROVIDE NEW 100Ø STORM DRAIN FROM NEW TRENCH DRAIN AND DISCHARGE OPEN ENDED TO DRY BASIN BELOW PLANTER FOR IRRIGATION. REFER TO ARCHITECTURAL DRAWING FOR ELEVATION.
10. PROVIDE NEW TRENCH DRAIN. TRENCH DRAIN SHALL BE J.R. SMITH #9660, 150MM WIDE STAINLESS STEEL CONTINUOUS TRENCH DRAIN SYSTEM. SNOWMELT SYSTEM FOR TRENCH DRAIN BY ELECTRICAL CONTRACTOR.
11. CONNECT NEW 12Ø DOMESTIC HOT AND COLD WATER PIPES TO EXISTING 12Ø DOMESTIC HOT AND COLD WATER PIPES IN THE CEILING SPACE OF THIS FLOOR AND EXTEND AS INDICATED.
12. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP TO SINK ON FLOOR ABOVE AND 38Ø SANITARY DRAIN DOWN FROM SINK ON FLOOR ABOVE DOWN TO CEILING OF THIS FLOOR.
13. 25Ø DOMESTIC COLD WATER PIPE UP TO WATER CLOSET ON FLOOR ABOVE AND 75Ø SANITARY DRAIN DOWN FROM WATER CLOSET ON FLOOR ABOVE DOWN TO CEILING OF THIS FLOOR.
14. 12Ø DOMESTIC COLD WATER PIPE UP TO DRINKING FOUNTAIN ON FLOOR ABOVE AND 38Ø SANITARY DRAIN DOWN FROM DRINKING FOUNTAIN ON FLOOR ABOVE DOWN TO CEILING OF THIS FLOOR.
15. ALLOW FOR 3 HOURS OF INVESTIGATION OF EXISTING PLUMBING STUB-OUTS TO TRACE PIPING BACK TO MAIN SOURCE. REMOVE AND CAP EXISTING PLUMBING PIPING AS CLOSE TO SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF 30'-0" OF PIPING OF EACH PLUMBING SERVICE.
16. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO SINK, 38Ø VENT LINE UP FROM SINK, AND 38Ø SANITARY DRAIN DOWN FROM SINK TO CEILING SPACE OF (BASEMENT) FLOOR BELOW.
17. PROVIDE NEW 19Ø WALL MOUNTED HOSE BIB FOR FUTURE IRRIGATION CONNECTION. HOSE BIB SHALL BE IN A LOCKABLE BOX AND RECESSED INTO THE NEW PLANTER. EXACT LOCATION TO BE COORDINATED ON SITE.
18. 25Ø DOMESTIC COLD WATER PIPE CAPPED CONNECTION COMPLETE WITH SHUT-OFF VALVE AND WATER CHECK METER FOR FUTURE TENANT.
19. 50Ø VENT PIPE CAPPED CONNECTION FOR FUTURE TENANT.
20. PROVIDE AND INSTALL NEW UNDER COUNTER GREASE INTERCEPTOR COMPLETE WITH COUPLING ON SIDE AND THREADED CONNECTION FOR GREASE PUMP CONNECTION. GREASE INTERCEPTOR SHALL BE RATED FOR 34 GPM AND 70 LB GREASE HOLDING CAPACITY.
21. PROVIDE 19Ø CAPPED DOMESTIC HOT AND COLD WATER LINES FOR FUTURE CLIENT SUPPLIED WASHER.
22. ALLOW FOR 3 HOURS OF INVIESTIGATION AND TO REMOVE AND RE-ROUTE EXISTING PIPE.
23. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP TO MOP SINK ON FLOOR ABOVE AND 75Ø SANITARY DRAIN DOWN FROM MOP SINK ON FLOOR ABOVE DOWN TO CEILING OF THIS FLOOR.
24. PROVIDE NEW ELECTRONIC TRAP SEAL PRIMER. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL DIVISION.

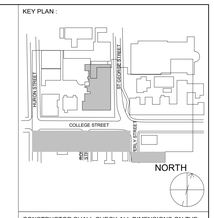


2 / TM-1.2 ENLARGED BUILDING EXTERIOR PLUMBING PLAN
1 : 50



1 / TM-1.2 GROUND FLOOR PLAN
1 : 50

KEY PLAN :



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5	2025-01-24	ISSUED FOR PEER REVIEW
6	2025-01-31	ISSUED FOR BID
7	2025-03-24	Bid Addendum #04
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HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

GROUND FLOOR - PLUMBING AND PIPING LAYOUT

PROJECT NUMBER : **21590.003**

DRAWING SCALE : **1:50**

DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO : **TM-1.2**

REV : **8**

GENERAL NOTES:

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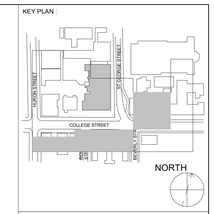
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. CAP AND REMOVE EXISTING 50∅ VENT LINE AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF AN ADDITIONAL 5.0 METERS OF PIPING THAN SHOWN ON DRAWING.
2. CAP AND REMOVE EXISTING 38∅ SANITARY DRAIN AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF AN ADDITIONAL 5.0 METERS OF PIPING THAN SHOWN ON DRAWING.
3. CAP AND REMOVE EXISTING 75∅ SANITARY DRAIN AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF AN ADDITIONAL 5.0 METERS PIPING NOT SHOWN ON THE DRAWING.
4. CAP AND REMOVE EXISTING FLOOR DRAIN COMPLETE WITH ASSOCIATED P-TRAP AND SANITARY DRAINAGE IN THE CEILING PLENUM OF 2ND FLOOR BELOW. PIPING TO BE TERMINATED AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF AN ADDITIONAL 5.0 METERS OF PIPING NOT SHOWN ON THE DRAWING.
5. REMOVE EXISTING SINK AND FIXTURES. CAP AND REMOVE ALL ASSOCIATED SERVICES, HANGERS AND PIPING AS INDICATED OR AS CLOSE TO SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF 5.0 METERS OF PIPING OF EACH SERVICE.
6. REMOVE EXISTING CEILING MOUNTED WATER CHILLER AND ASSSOCIATED APPURTENANCES (DRIP PAN, ETC.). REMOVE AND CAP EXISTING SERVICES AS CLOSE TO SOURCE AS POSSIBLE. ELECTRICAL DISCONNECTION BY ELECTRICAL DIVISION.

KEY PLAN :



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SHEET CONTENTS :

SECOND FLOOR - PLUMBING AND PIPING DEMOLITION LAYOUT

PROJECT NUMBER : **21590.003**

DRAWING SCALE : **1:100**

DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO : **TM-2.2.1**

REV : **6**

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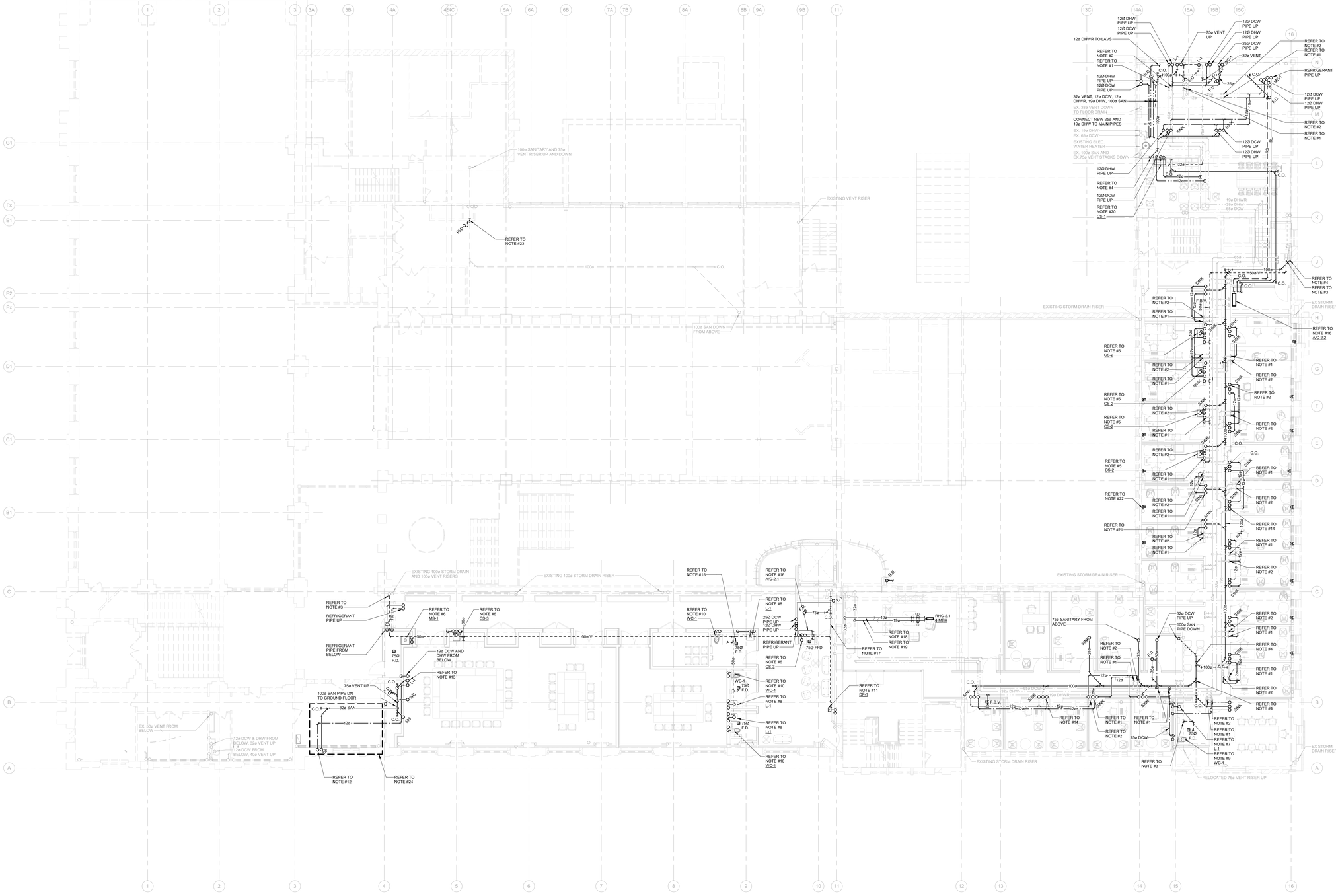
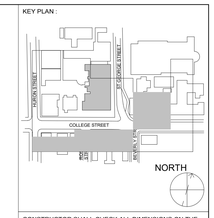
DRAWING NOTES:

1. CONNECT NEW DOMESTIC COLD WATER PIPING TO EXISTING DOMESTIC COLD WATER PIPING AND EXTEND AS INDICATED. REFER TO DRAWING FOR PIPE SIZES.
2. CONNECT NEW DOMESTIC HOT WATER PIPING TO EXISTING DOMESTIC HOT WATER PIPING AND EXTEND AS INDICATED. REFER TO DRAWING FOR PIPE SIZES.
3. CONNECT NEW 50Ø VENT PIPE TO EXISTING 75Ø VENT PIPE AND EXTEND AS INDICATED.
4. CONNECT NEW 100Ø SANITARY DRAINAGE PIPE TO EXISTING 100Ø SANITARY PIPE RISER AND EXTEND AS INDICATED.
5. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO SINK, 32Ø VENT LINE UP FROM SINK, AND 38Ø SANITARY DRAIN DOWN FROM SINK TO CEILING SPACE OF (GROUND) FLOOR BELOW.
6. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP FROM FLOOR BELOW TO SINK, 32Ø VENT LINE UP FROM SINK, AND 38Ø SANITARY DRAIN DOWN FROM SINK TO CEILING SPACE OF (GROUND) FLOOR BELOW.
7. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO LAVATORY, 32Ø VENT LINE UP FROM LAVATORY, AND 32Ø SANITARY DRAIN DOWN FROM LAVATORY TO CEILING SPACE OF (GROUND) FLOOR BELOW.
8. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP FROM FLOOR BELOW TO LAVATORY, 32Ø VENT LINE UP FROM LAVATORY, AND 32Ø SANITARY DRAIN DOWN FROM LAVATORY TO CEILING SPACE OF (GROUND) FLOOR BELOW.
9. 25Ø DOMESTIC COLD WATER PIPE DOWN TO WATERCLOSET, 50Ø VENT LINE UP FROM WATERCLOSET, AND 75Ø SANITARY DRAIN DOWN FROM WATERCLOSET TO CEILING SPACE OF (GROUND) FLOOR BELOW.
10. 25Ø DOMESTIC COLD WATER PIPE UP FROM FLOOR BELOW TO WATERCLOSET, 50Ø VENT LINE UP FROM WATERCLOSET, AND 75Ø SANITARY DRAIN DOWN FROM WATERCLOSET TO CEILING SPACE OF (GROUND) FLOOR BELOW.
11. 12Ø DOMESTIC COLD WATER PIPE UP FROM FLOOR BELOW TO DRINKING FOUNTAIN, 32Ø VENT AND 32Ø SANITARY DRAIN DOWN FROM DRINKING FOUNTAIN TO CEILING SPACE OF (GROUND) FLOOR BELOW.
12. 12Ø DOMESTIC COLD WATER PIPE UP TO DRINKING FOUNTAIN ON FLOOR ABOVE, 32Ø SANITARY DRAIN DOWN FROM DRINKING FOUNTAIN ON FLOOR ABOVE.
13. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP TO LAVATORY ON FLOOR ABOVE, 32Ø SANITARY DRAIN DOWN FROM LAVATORY ON FLOOR ABOVE.
14. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP TO SINK ON FLOOR ABOVE, 38Ø SANITARY DRAIN DOWN FROM SINK ON FLOOR ABOVE. (TYPICAL)
15. PROVIDE NEW FLOOR DRAINS COMPLETE WITH TRAPS AND TRAP PRIMERS. (TYPICAL)
16. PROVIDE AND INSTALL NEW WALL MOUNTED DUCTLESS SPLIT A/C COMPLETE WITH REFRIGERANT LINES AND CONDENSATE PUMP. NEW 25Ø CONDENSATE DRAIN FROM SPLIT A/C TO EXTEND AS INDICATED AND TERMINATE INDIRECTLY OVER FUNNEL FLOOR DRAIN BELOW COUNTER SINK.
17. PROVIDE NEW WATER TIGHT DRIP PAN UNDER NEW/EXISTING PLUMBING SERVICES COMPLETE WITH MOISTURE SENSOR TIED INTO AUDIBLE ALARM WITHIN CEILING SPACE FOR MONITORING. 25 DRIP PAN DRAIN TO TERMINATE INDIRECTLY OVER 75Ø FUNNEL FLOOR DRAIN AS INDICATED.
18. CONNECT NEW HEATING WATER SUPPLY PIPES TO EXISTING PIPING ON THIS FLOOR AND EXTEND AS INDICATED. INCLUDE FOR PIPE FREEZING TO FACILITATE NEW CONNECTION WITHOUT DISTURBANCE TO EXISTING SERVICES. SIZE AS INDICATED ON DRAWING.
19. CONNECT NEW HEATING WATER RETURN PIPES TO EXISTING PIPING ON THIS FLOOR AND EXTEND AS INDICATED. SYSMTEM SHALL FOLLOW A REVERSE RETURN PIPING CONFIGURATION. INCLUDE FOR PIPE FREEZING TO FACILITATE NEW CONNECTION WITHOUT DISTURBANCE TO EXISTING SERVICES. SIZE AS INDICATED ON DRAWING.
20. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO COUNTER SINK, 32Ø VENT LINE UP FROM SINK, AND 32Ø SANITARY DRAIN DOWN FROM SINK TO CEILING SPACE OF FLOOR BELOW AND TO CONNECT TO EXISTING PIPE OF EQUAL OR LARGER SIZE.
21. OFFSET NEW SANITARY, DOMESTIC COLD AND HOT WATER AS REQUIRED TO AVOID INTERFERENCE WITH EXISTING BEAM. (TYPICAL)
22. ALLOW FOR THE REWORK OF EXISTING HEATING WATER SUPPLY PIPING AND INSTALL NEW CONTROL VALVE WITHIN EXISTING PERIMETER RADIATION UNIT ENCLOSURE. INTERFACE WITH NEW DDC VAV BOX CONTROLS. COORDINATE WORK ON SITE. WORK SHALL BE PERFORMED BY XX. (TYPICAL)
23. CONNECT NEW 75Ø SANITARY DRAINAGE PIPE TO EXISTING 100Ø SANITARY PIPE RISER AND EXTEND AS INDICATED.
24. COORDINATE CEILING DEMOLITION AND REINSTALLATION WITH THE ARCHITECT.



KEY PLAN :



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REVISION

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4	2024-12-04	ISSUED FOR F&S REVIEW
5	2025-01-24	ISSUED FOR PEER REVIEW
6	2025-01-31	ISSUED FOR BID
7	2025-03-24	Bid Addendum #04
8	2025-04-30	ISSUED FOR CONSTRUCTION

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SEAL :

OWNER:

UNIVERSITY OF TORONTO

PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

SECOND FLOOR - PLUMBING AND PIPING LAYOUT

PROJECT NUMBER : **21590.003**

DRAWING SCALE : **1:100**

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO : **TM-2.2**

REV : **8**

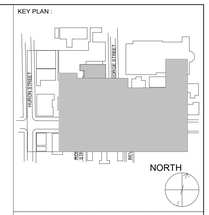
GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
2. READ FLOOR PLANS IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. CAP AND REMOVE EXISTING 50∅ VENT LINE AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF AN ADDITIONAL 5.0 METERS OF PIPING THAN SHOWN ON DRAWING.
2. CAP AND REMOVE EXISTING 100∅ VENT LINE AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF AN ADDITIONAL 5.0 METERS OF PIPING THAN SHOWN ON DRAWING.
3. CAP AND REMOVE EXISTING 75∅ VENT RISERS AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF 20.0 METERS OF PIPING FOR EACH RISER.
4. CAP AND REMOVE EXISTING 38∅ SANITARY DRAIN AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF AN ADDITIONAL 5.0 METERS OF PIPING NOT SHOWN ON THE DRAWING.
5. CAP AND REMOVE EXISTING 75∅ SANITARY DRAIN AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF AN ADDITIONAL 5.0 METERS PIPING NOT SHOWN ON THE DRAWING.
6. CAP AND REMOVE EXISTING FLOOR DRAIN COMPLETE WITH ASSOCIATED P-TRAP AND SANITARY DRAINAGE IN THE CEILING PLENUM OF 2ND FLOOR BELOW. PIPING TO BE TERMINATED AS CLOSE TO MAIN SOURCE AS POSSIBLE. ALLOW FOR REMOVAL OF AN ADDITIONAL 5.0 METERS OF PIPING NOT SHOWN ON THE DRAWING.
7.

KEY PLAN :



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4	2024-12-04	ISSUED FOR F&S REVIEW
5	2025-01-24	ISSUED FOR PEER REVIEW
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SEAL :

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UNIVERSITY OF TORONTO

PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

THIRD FLOOR - PLUMBING AND PIPING DEMOLITION LAYOUT

PROJECT NUMBER : **21590.003**

DRAWING SCALE : **1:100**

DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO : **TM-3.2.1**

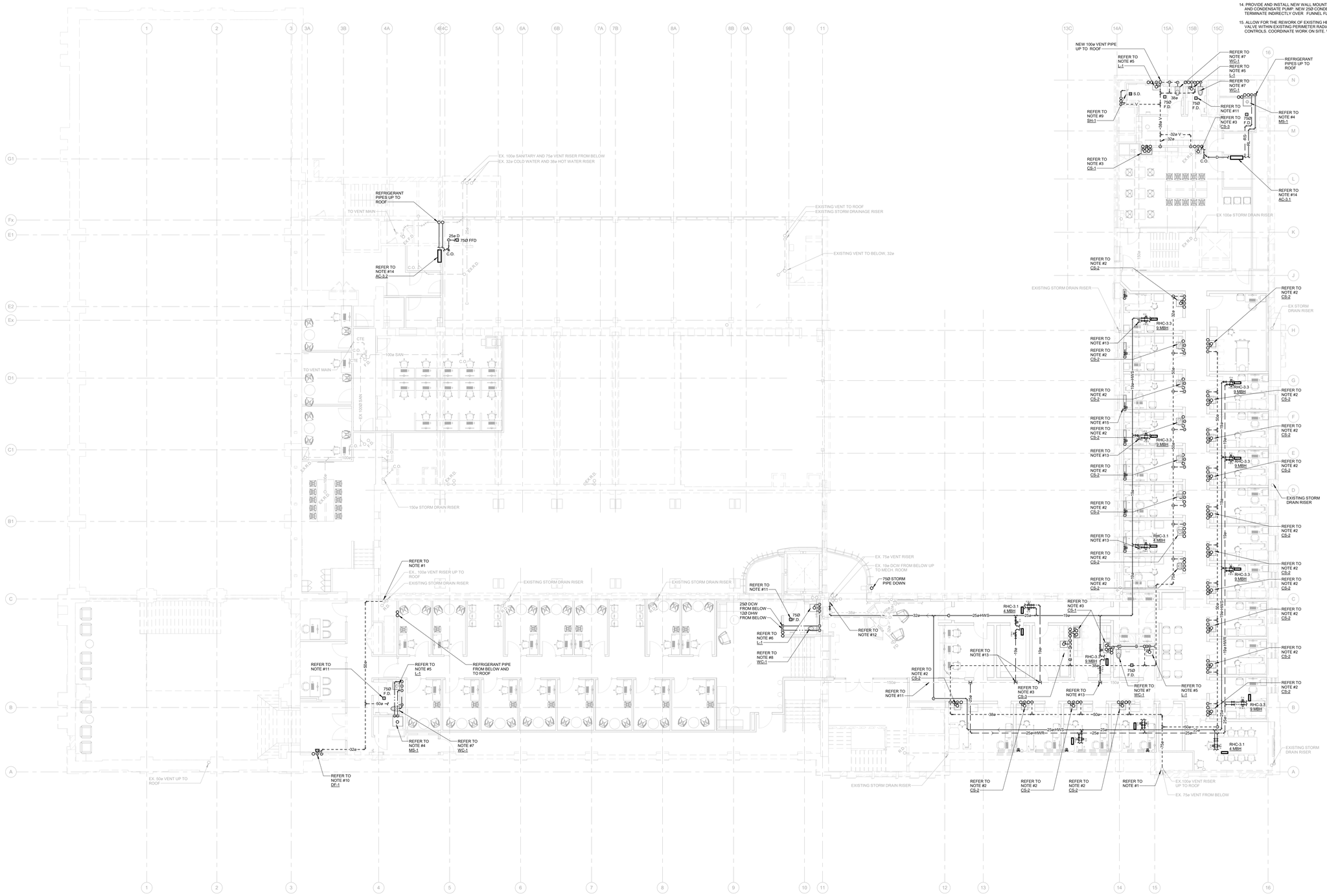
REV : **6**

GENERAL NOTES:

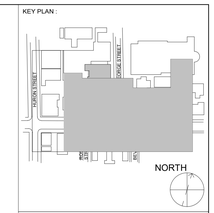
1. DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
2. READ FLOOR PLANS IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. CONNECT NEW 75Ø VENT PIPE TO EXISTING 100Ø VENT PIPE AND EXTEND AS INDICATED.
2. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP FROM FLOOR BELOW TO SINK, 32Ø VENT LINE UP FROM SINK, AND 38Ø SANITARY DRAIN DOWN FROM SINK TO CEILING SPACE OF (2ND) FLOOR BELOW. OFFSET NEW SANITARY DRAIN IN WALL TO AVOID INTERFERENCE WITH EXISTING BEAM BELOW. COORDINATE WITH STRUCTURAL.
3. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP FROM FLOOR BELOW TO SINK, 32Ø VENT LINE UP FROM SINK, AND 38Ø SANITARY DRAIN DOWN FROM SINK TO CEILING SPACE OF (2ND) FLOOR BELOW. ROUGH-IN AND FINAL CONNECTION FOR TWO AT 12Ø ONE VALVED AND CAPPED DOMESTIC HOT WATER CONNECTION FOR DISHWASHER AND ONE VALVED AND CAPPED DOMESTIC COLD WATER CONNECTION FOR FUTURE CLIENT SUPPLIED APPLIANCE. OFFSET NEW SANITARY DRAIN IN WALL TO AVOID INTERFERENCE WITH EXISTING BEAM BELOW. COORDINATE WITH STRUCTURAL.
4. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO MOP SINK, 32Ø VENT LINE UP FROM MOP SINK, AND 38Ø SANITARY DRAIN DOWN FROM MOP SINK TO CEILING SPACE OF (2ND) FLOOR BELOW.
5. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP FROM FLOOR BELOW TO LAVATORY, 32Ø VENT LINE UP FROM LAVATORY, AND 32Ø SANITARY DRAIN DOWN FROM LAVATORY TO CEILING SPACE OF (2ND) FLOOR BELOW.
6. 12Ø DOMESTIC HOT AND COLD WATER PIPES DOWN TO LAVATORY, 32Ø VENT LINE UP FROM LAVATORY, AND 32Ø SANITARY DRAIN DOWN FROM LAVATORY TO CEILING SPACE OF (2ND) FLOOR BELOW.
7. 25Ø DOMESTIC COLD WATER PIPE DOWN TO WATERCLOSET, 50Ø VENT LINE UP FROM WATERCLOSET, AND 75Ø SANITARY DRAIN DOWN FROM WATERCLOSET TO CEILING SPACE OF (2ND) FLOOR BELOW.
8. 25Ø DOMESTIC COLD WATER PIPE UP FROM FLOOR BELOW TO WATERCLOSET, 50Ø VENT LINE UP FROM WATERCLOSET, AND 75Ø SANITARY DRAIN DOWN FROM WATERCLOSET TO CEILING SPACE OF (2ND) FLOOR BELOW.
9. 12Ø DOMESTIC HOT AND COLD WATER PIPES UP FROM FLOOR BELOW TO SHOWER MIXING ASSEMBLY, 19Ø VENT LINE UP FROM SHOWER, AND 50Ø SANITARY DRAIN DOWN FROM SHOWER TO CEILING SPACE OF (2ND) FLOOR BELOW.
10. 12Ø DOMESTIC COLD WATER PIPE UP FROM FLOOR BELOW TO DRINKING FOUNTAIN AND 32Ø SANITARY DRAIN DOWN FROM DRINKING FOUNTAIN TO CEILING SPACE OF (GROUND) FLOOR BELOW.
11. PROVIDE NEW FLOOR DRAINS COMPLETE WITH TRAPS AND TRAP PRIMERS. (TYPICAL)
12. CONNECT NEW HEATING WATER SUPPLY PIPES TO EXISTING PIPING ON THIS FLOOR AND EXTEND AS INDICATED. INCLUDE FOR PIPE FREEZING TO FACILITATE NEW CONNECTION WITHOUT DISTURBANCE TO EXISTING SERVICES. SIZE AS INDICATED ON DRAWING.
13. CONNECT NEW HEATING WATER RETURN PIPES TO EXISTING PIPING ON THIS FLOOR AND EXTEND AS INDICATED. SYSMTEM SHALL FOLLOW A REVERSE RETURN PIPING CONFIGURATION. INCLUDE FOR PIPE FREEZING TO FACILITATE NEW CONNECTION WITHOUT DISTURBANCE TO EXISTING SERVICES. SIZE AS INDICATED ON DRAWING.
14. PROVIDE AND INSTALL NEW WALL MOUNTED DUCTLESS SPLIT A/C COMPLETE WITH REFRIGERANT LINES AND CONDENSATE PUMP. NEW 25Ø CONDENSATE DRAIN FROM SPLIT A/C TO EXTEND AS INDICATED AND TERMINATE INDIRECTLY OVER FUNNEL FLOOR DRAIN.
15. ALLOW FOR THE REWORK OF EXISTING HEATING WATER SUPPLY PIPING AND INSTALL NEW CONTROL VALVE WITHIN EXISTING PERIMETER RADIATION UNIT ENCLOSURE. INTERFACE WITH NEW DDC VAV BOX CONTROLS. COORDINATE WORK ON SITE. WORK SHALL BE PERFORMED BY XX. (TYPICAL)



KEY PLAN :



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SEAL :

OWNER:
UNIVERSITY OF TORONTO

PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
THIRD FLOOR - PLUMBING AND PIPING LAYOUT

PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO :
TM-3.2

REV :
7

GENERAL NOTES:

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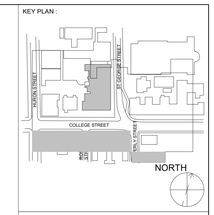
3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. REMOVE EXISTING PERIMETER RADIANTION UNIT COMPLETE WITH ASSOCIATED PNUEMATIC CONTROL VALVE AND PNUEMATIC TUBING. CAP HEATING WATER SUPPLY AND RETURN PIPING AT FLOOR LEVEL. (TYPICAL)
2. REMOVE EXISTING WALL MOUNTED HYDRONIC HEATING UNITS. CAP HYDRONIC SUPPLY AND RETURN PIPING WITHIN CEILING SPACE OF FLOOR BELOW. PATCH AND REPAIR WALL AND FLOOR PENETRATIONS AS REQUIRED TO MATCH EXISTING.
3. EXISTING PERIMETER RADIATION UNIT TO REMAIN. PREPARE (SAND AND PRIME) AND REPAINT EXISTING RADIATION UNIT COVER.
4. ALLOW FOR THE REMOVAL OF EXISTING ABANDONED PNUEMATIC LINES AS INDICATED AND CAP AS CLOSE TO SOURCE AS POSSIBLE. (TYPICAL)

KEY PLAN :



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UNIVERSITY OF TORONTO

PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

GROUND FLOOR - H.V.A.C. DEMOLITION LAYOUT

PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO :
TM-1.1

REV :
7

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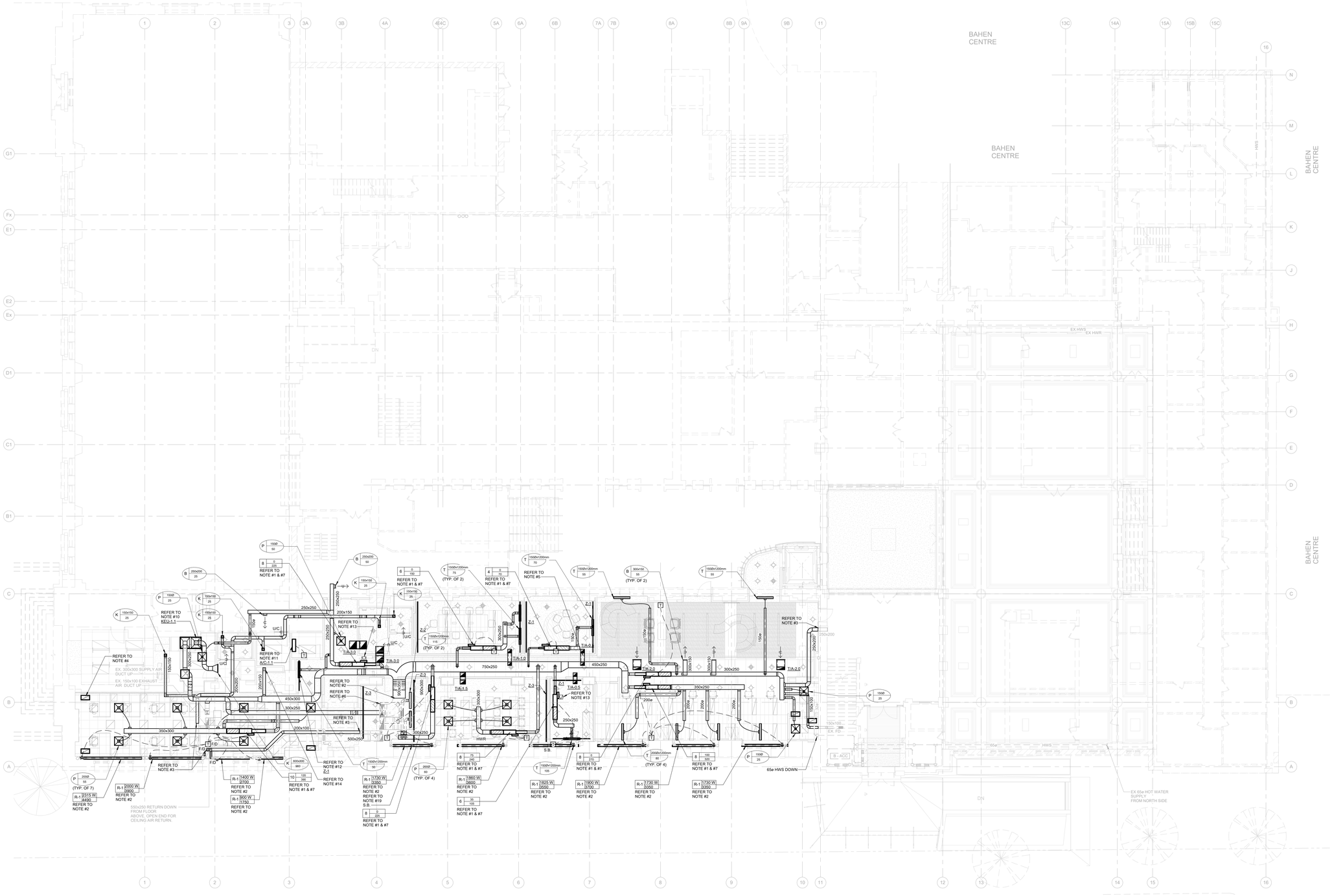
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

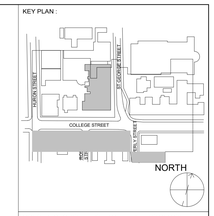
1. PROVIDE AND INSTALL NEW VAV BOX COMPLETE WITH ASSOCIATED HANGERS, SUPPORTS, DUCTWORK, CONTROLS, CONTROL WIRING, ETC.
2. PROVIDE AND INSTALL NEW RADIATOR COMPLETE WITH NEW RADIATOR AND TRIMS TO ENCLOSE HEATING WATER PIPING. EXTEND RADIATOR COVER WALL-TO-WALL. MODIFY EXISTING HEATING WATER SUPPLY AND RETURN PIPES TO SUIT NEW UNIT AS REQUIRED. REMOVE EXISTING PNUEMATIC CONTROL VALVE AND PROVIDE NEW NEW 2-WAY DDC CONTROL VALVE ON SUPPLY SIDE. REFER TO DRAWING FOR LENGTH. (TYPICAL)
3. CONNECT NEW DUCTWORK TO EXISTING DUCTWORK AND EXTEND AS INDICATED. REFER TO DRAWING FOR DUCT SIZING.
4. PROVIDE NEW TYPE 'E' 24"X12" OR 24"X24" RETURN AIR GRILLE AS INDICATED ON DRAWING.
5. PROVIDE ACOUSTICALLY LINED TRANSFER AIR DUCT IN LOCATION SHOWN. FREE AREA INDICATED. EXACT LOCATION, QUANTITY AND SIZE TO SUIT CEILING SPACE AND SITE CONDITIONS.

   T/A-0.5 PROVIDE A TOTAL FREE AREA OF 0.05 SQ.M.
   T/A-1.0 PROVIDE A TOTAL FREE AREA OF 0.10 SQ.M.
   T/A-1.5 PROVIDE A TOTAL FREE AREA OF 0.15 SQ.M.
   T/A-2.0 PROVIDE A TOTAL FREE AREA OF 0.20 SQ.M.
   T/A-3.0 PROVIDE A TOTAL FREE AREA OF 0.30 SQ.M.
6. PROVIDE AND INSTALL NEW NFPA96 COMPLIANT TYPE 1 RECIRCULATING HOOD COMPLETE WITH INTEGRAL FIRE SUPPRESSION SYSTEM. COORDINATE POWER REQUIREMENTS AND BASE BUILDING FIRE ALARM TIE IN WITH ELECTRICAL DIVISION. REFER TO TM-0.3 & TM-0.4 FOR KITCHEN HOOD DETAIL DRAWINGS.
7. PROVIDE ALL DUCTWORK DOWNSTREAM OF TERMINAL EQUIPMENT (I.E. VAV BOXES) EQUAL TO THE EQUIPMENT OUTLET SIZE (MINIMUM) OR LARGER AS INDICATED. WHERE OUTLETS SIZES ARE ODD SIZES, INCREASE THE DUCT SIZE UP TO NEAREST EVEN SIZE (I.E. PROVIDE (14") FOR (12.5") OR (13") OUTLET) PROVIDE TRANSITION DUCTS AS REQUIRED.
8. THERMOSTATS ARE LOCATED TO AID IN PRICING ONLY AND ALL REQUIRED THERMOSTATS MAY NOT BE SHOWN (REFER TO SPECIFICATIONS). COORDINATE FINAL LOCATION WITH THE INTERIOR DESIGNER WITHIN (40") OF LOCATION SHOWN. ALL RELOCATIONS OUTSIDE OF THIS RANGE SHALL BE REVIEWED WITH CONSULTANT.
9. INSTALL THERMOSTATS NOMINALLY AT (48") ABOVE THE FINISHED FLOOR UNLESS INDICATED OTHERWISE.
10. PROVIDE AND INSTALL NEW FLOOR MOUNTED RECIRCULATING SELF- CONTAINED KITCHEN ECOLOGY UNIT. COMPLETE WITH ZERO CLEARANCE PRE-FABRICATED NFPA96 COMPLIANT KITCHEN EXHAUST DUCTWORK AND EXTEND AS INDICATED COORDINATE POWER REQUIREMENTS WITH ELECTRICAL DIVISION. REFER TO TM-0.5, TM-0.6 & TM-0.7 FOR KITCHEN ECOLOGY DRAWINGS.
11. PROVIDE AND INSTALL NEW WALL MOUNTED SPLIT A/C UNIT COMPLETE WITH ASSOCIATED REFRIGERANT PIPING, CONTROLS, CONTROL WIRING, ETC.
12. SUPPLY AND INSTALL LINEAR SLOT DIFFUSERS WITHIN CONTINUOUS ARCHITECTURAL SLOT PROVIDE. REFER TO ARCHITECTURAL DRAWING FOR TOTAL SLOT LENGTH. NON-ACTIVE (RETURN) LENGTH TO BE COMPLETE WITH MATT BLACK 2" BAFFLE AND A MINIMUM NON-ACTIVE LENGTH TO BE:

    Z-1 MIN. OF 3'-0" RETURNNON-ACTIVE LENGTH
    Z-2 MIN. OF 8'-0" RETURNNON-ACTIVE LENGTH
    Z-3 MIN. OF 13'-0" RETURNNON-ACTIVE LENGTH
13. PROVIDE AND INSTALL NEW 300X300 ACCESS PANEL.
14. NEW 200X150 SUPPLY AIR DUCT DOWN TO CEILING SPACE OF BASEMENT LEVEL BELOW AND CONNECT TO EXISTING 200X150 DUCT.
15. ALL CONTROLS WORK TO BE COMPLETED BY BASE BUILDING CONTROLS CONTRACTOR.
16. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
17. INSPECT AND VERIFY THE OPERATION OF CONTROL VALVES AND THERMOSTAT FOR EXISTING PERIMETER RADIATION UNITS. PROVIDE A WRITTEN REPORT IDENTIFYING ALL INOPERATIONAL OR DAMAGED CONTROL DEVICES AND PROVIDE AN ITEMIZED COST ASSOCIATED WITH REPAIR OR REPLACEMENT AS REQUIRED.
18. NOT USED.
19. PROVIDE NEW SOUND BAFFLE (S.B.) WITHIN PERIMETER RADIATOR UNIT. (TYPICAL)



KEY PLAN :



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5	2025-01-24	ISSUED FOR PEER REVIEW
6	2025-01-31	ISSUED FOR BID
7	2025-03-24	Bid Addendum #04
8	2025-04-30	ISSUED FOR CONSTRUCTION

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SEAL :

OWNER:

UNIVERSITY OF TORONTO

PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

GROUND FLOOR - H.V.A.C. LAYOUT

PROJECT NUMBER : **21590.003**
DRAWING SCALE : **1:100**
DRAWN BY : AS | CHECKED BY : RC/DC | DATE : 2024-02-08
SHEET NO : **TM-1.3** | REV : **8**

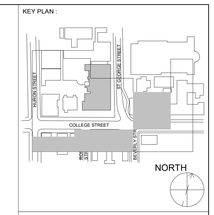
GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
2. READ FLOOR PLANS IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. REMOVE EXISTING SUPPLY AIR DUCT AS INDICATED. REFER TO DRAWING FOR DUCT SIZING.
2. REMOVE EXISTING RETURN AIR DUCT AS INDICATED. REFER TO DRAWING FOR DUCT SIZING.
3. REMOVE EXISTING PERIMETER RADIANTION UNIT COMPLETE WITH ASSOCIATED PNUEMATIC CONTROL VALVE AND PNUEMATIC TUBING. CAP HEATING WATER SUPPLY AND RETURN PIPING AT FLOOR LEVEL. (TYPICAL)
4. EXISTING PERIMETER RADIATION UNIT TO REMAIN. REMOVE EXISTING COVER AND PROVIDE NEW ENGINEERED AIR FLAT TOP WITH OPEN BOTTOM WF SERIES STEEL ENCLOSURE. FIELD VERIFY ENCLOSURE HEIGHT AND MEASURE EXACT LENGTHS OF THE ENCLOSURE TO SUIT SITE CONDITIONS PRIOR TO ORDERING.
5. EXISTING PERIMETER RADIATION UNIT TO REMAIN. PREPARE (SAND AND PRIME) AND REPAINT EXISTING RADIATION UNIT COVER.
6. ALLOW FOR THE REMOVAL OF EXISTING ABANDONED PNUEMATIC LINES AS INDICATED AND CAP AS CLOSE TO SOURCE AS POSSIBLE. (TYPICAL)

KEY PLAN :



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HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS

SECOND FLOOR - H.V.A.C. DEMOLITION LAYOUT

PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO :
TM-2.1

REV :
7

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
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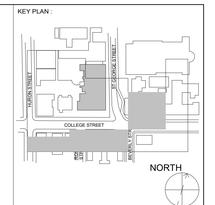
3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. PROVIDE AND INSTALL NEW VAV BOX COMPLETE WITH ASSOCIATED HANGERS, SUPPORTS, DUCTWORK, CONTROLS, CONTROL WIRING, ETC.
2. PROVIDE AND INSTALL NEW RADIATOR COMPLETE WITH NEW RADIATOR AND TRIMS TO ENCLOSE HEATING WATER PIPING. EXTEND RADIATOR COVER WALL-TO-WALL. MODIFY EXISTING HEATING WATER SUPPLY AND RETURN PIPES TO SUIT NEW UNIT AS REQUIRED. REMOVE EXISTING PNUEMATIC CONTROL VALVE AND PROVIDE NEW NEW 2-WAY DDC CONTROL VALVE ON SUPPLY SIDE. REFER TO DRAWING FOR LENGTH.
3. CONNECT NEW DUCTWORK TO EXISTING DUCTWORK AND EXTEND AS INDICATED. REFER TO DRAWING FOR DUCT SIZING.
4. PROVIDE NEW TYPE 'E' 24"X12" OR 24"X24" RETURN AIR GRILLE AS INDICATED ON DRAWING.
5. PROVIDE ACOUSTICALLY LINED TRANSFER AIR DUCT IN LOCATION SHOWN. FREE AREA INDICATED. EXACT LOCATION, QUANTITY AND SIZE TO SUIT CEILING SPACE AND SITE CONDITIONS.

   T/A-0.5 PROVIDE A TOTAL FREE AREA OF 0.05 SQ.M.
   T/A-1.5 PROVIDE A TOTAL FREE AREA OF 0.15 SQ.M.
   T/A-2.0 PROVIDE A TOTAL FREE AREA OF 0.20 SQ.M.
6. PROVIDE AND INSTALL NEW EXHAUST FAN COMPLETE WITH ASSOCIATED HANGERS, SUPPORTS, DUCTWORK, REVERSE ACTING THERMOSTAT CONNECTED TO A FACTORY MOUNTED SPEED CONTROLLER ON FAN, CONTROLS, CONTROL WIRING, ETC. DISCHARGE EXHAUST AIR OPEN ENDED INTO THE CEILING SPACE. ACOUSTICALLY LINED ENTIRE EXHAUST DUCT. POWER REQUIREMENT BY ELECTRICAL DIVISION.
7. PROVIDE ALL DUCTWORK DOWNSTREAM OF TERMINAL EQUIPMENT (I.E. VAV BOXES) EQUAL TO THE EQUIPMENT OUTLET SIZE (MINIMUM) OR LARGER AS INDICATED. WHERE OUTLETS SIZES ARE ODD SIZES, INCREASE THE DUCT SIZE UP TO NEAREST EVEN SIZE (I.E. PROVIDE (14") FOR (12.5") OR (13") OUTLET) PROVIDE TRANSITION DUCTS AS REQUIRED.
8. THERMOSTATS ARE LOCATED TO AID IN PRICING ONLY AND ALL REQUIRED THERMOSTATS MAY NOT BE SHOWN (REFER TO SPECIFICATIONS). COORDINATE FINAL LOCATION WITH THE INTERIOR DESIGNER WITHIN (40") OF LOCATION SHOWN. ALL RELOCATIONS OUTSIDE OF THIS RANGE SHALL BE REVIEWED WITH CONSULTANT.
9. INSTALL THERMOSTATS NOMINALLY AT (48") ABOVE THE FINISHED FLOOR UNLESS INDICATED OTHERWISE.
10. PROVIDE AND INSTALL NEW WALL MOUNTED DUCTLESS SPLIT A/C COMPLETE WITH REFRIGERANT LINES AND CONDENSATE PUMP. NEW 25Ø CONDENSATE DRAIN FROM SPLIT A/C TO TERMINATE INDIRECTLY OVER MOP SINK AS INDICATED.
11. PROVIDE AND INSTALL NEW HYDRONIC HEATING COIL COMPLETE WITH ASSOCIATED CONTROLS, CONTROL WIRING AND HYDRONIC PIPING. REFER TO TM-2.2 FOR HEATING COIL CAPACITY AND PIPING LAYOUT. (TYPICAL)
12. PROVIDE AND INSTALL NEW 300X300 ACCESS PANEL
13. ALL CONTROLS WORK TO BE COMPLETED BY BASE BUILDING CONTROLS CONTRACTOR.
14. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
15. INSPECT AND VERIFY THE OPERATION OF CONTROL VALVES AND THERMOSTAT FOR EXISTING PERIMETER RADIATION UNITS. PROVIDE A WRITTEN REPORT IDENTIFYING ALL INOPERATIONAL OR DAMAGED CONTROL DEVICES AND PROVIDE AN ITEMIZED COST ASSOCIATED WITH REPAIR OR REPLACEMENT AS REQUIRED.
16. NOT USED.
17. PROVIDE AND INSTALL NEW RADIATOR CONCEALED BEHIND FINISHES. COORDINATE WITH ARCHITECTURAL DIVISION. MODIFY EXISTING HEATING WATER SUPPLY AND RETURN SERVICES TO SUIT NEW UNIT AS REQUIRED COMPLETE WITH NEW 2-WAY CONTROL VALVE ON SUPPLY SIDE. NEW RADIATOR SHALL BE RUNTAL RZF-1, 263 BTU/HFT. REFER TO DRAWING FOR LENGTH.
18. EXISTING PERIMETER RADIATION UNIT TO REMAIN. PROVIDE NEW ENGINEERED AIR FLAT TOP WITH OPEN BOTTOM WF SERIES STEEL ENCLOSURE. FIELD VERIFY ENCLOSURE HEIGHT AND MEASURE EXACT LENGTHS OF THE ENCLOSURE TO SUIT SITE CONDITIONS PRIOR TO ORDERING. (TYPICAL)

KEY PLAN :



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PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

SECOND FLOOR - H.V.A.C. LAYOUT

PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO :
TM-2.3

REV :
8

GENERAL NOTES:

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3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
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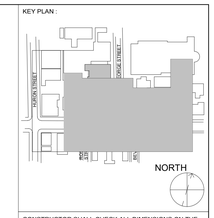
DRAWING NOTES:

1. REMOVE AND CAP EXISTING SUPPLY AIR DUCT COMPLETE WITH FIRE DAMPER AS INDICATED. REFER TO DRAWING FOR DUCT SIZING.
2. REMOVE AND CAP EXISTING RETURN AIR DUCT COMPLETE WITH FIRE DAMPER AS INDICATED. REFER TO DRAWING FOR DUCT SIZING.
3. REMOVE AND CAP EXISTING EXHAUST AIR DUCT DUCT UP TO MECHANICAL PENTHOUSE ABOVE. REFER TO DRAWING FOR DUCT SIZING. INCLUDE IN THE TENDER PRICE TO PATCH AND REPAIR AS REQUIRED WITHIN MECHANICAL PENTHOUSE ABOVE.
4. REMOVE EXISTING PERIMETER RADIANTION UNIT COMPLETE WITH ASSOCIATED PNUEMATIC CONTROL VALVE AND PNUEMATIC TUBING. CAP HEATING WATER SUPPLY AND RETURN PIPING AT FLOOR LEVEL. (TYPICAL)
5. REMOVE EXISTING VAV BOX COMPLETE WITH ALL EXISTING HANGERS, SUPPORTS, CONTROLS, ETC. REFER TO DRAWING FOR BOX SIZE.
6. REMOVE EXISTING DUCT MOUNTED SUPPLY AIR REGISTER AND CAP DUCTWORK AS INDICATED.
7. EXISTING PERIMETER RADIATION UNIT TO REMAIN. REMOVE EXISTING COVER AND PROVIDE NEW ENGINEERED AIR FLAT TOP WITH OPEN BOTTOM WF SERIES STEEL ENCLOSURE. FIELD VERIFY ENCLOSURE HEIGHT AND MEASURE EXACT LENGTHS OF THE ENCLOSURE TO SUIT SITE CONDITIONS PRIOR TO ORDERING.
8. REMOVE EXISTING VERTICAL FAN COIL UNIT. CAP HYDRONIC SUPPLY AND RETURN PIPING AS CLOSE TO SOURCE AS POSSIBLE.
9. ALLOW FOR THE REMOVAL OF EXISTING ABANDONED PNUEMATIC LINES AS INDICATED AND CAP AS CLOSE TO SOURCE AS POSSIBLE. (TYPICAL)

KEY PLAN :



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SHEET CONTENTS :

THIRD FLOOR - H.V.A.C. DEMOLITION LAYOUT

PROJECT NUMBER : **21590.003**

DRAWING SCALE : **1:100**

DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO : **TM-3.1**

REV : **7**

RADIATOR SCHEDULE

TAG	MAKE	MODEL No.	CAPACITY (BTUH/FT)	AVERAGE WATER TEMPERATURE AWT (F)	LENGTH (IN)
R-1	RUNTAL	R2F-1	537	160	REFER TO FLOOR PLANS

1. PROVIDE TRIM COVER TO COMPLETELY COVER ASSOCIATED EXPOSED PIPING.
2. COLOUR: WHITE
3. PROVIDE 75 MM CLEARANCE FROM BOTTOM OF RADIATOR.
4. RADIATOR PIPING CONFIGURATION SHALL MATCH ROUTING ON PLAN DRAWINGS.

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DRAWING NOTES:

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2. PROVIDE AND INSTALL NEW HYDRONIC HEATING COIL COMPLETE WITH ASSOCIATED CONTROLS, CONTROL WIRING AND HYDRONIC PIPING. REFER TO TM-3.2 FOR HEATING COIL CAPACITY AND PIPING LAYOUT. (TYPICAL)
3. CONNECT NEW DUCTWORK TO EXISTING DUCTWORK AND EXTEND AS INDICATED. REFER TO DRAWING FOR DUCT SIZING.
4. PROVIDE NEW TYPE 'E' 24"X12" OR 24"X24" RETURN AIR GRILLE AS INDICATED ON DRAWING.
5. PROVIDE ACOUSTICALLY LINED TRANSFER AIR DUCT IN LOCATION SHOWN. FREE AREA INDICATED. EXACT LOCATION, QUANTITY AND SIZE TO SUIT CEILING SPACE AND SITE CONDITIONS.

   T/A-0.5 PROVIDE A TOTAL FREE AREA OF 0.05 SQ.M.
6. PROVIDE ALL DUCTWORK DOWNSTREAM OF TERMINAL EQUIPMENT (I.E. VAV BOXES) EQUAL TO THE EQUIPMENT OUTLET SIZE (MINIMUM) OR LARGER AS INDICATED. WHERE OUTLETS SIZES ARE ODD SIZES, INCREASE THE DUCT SIZE UP TO NEAREST EVEN SIZE (I.E. PROVIDE (14") FOR (12.5") OR (13") OUTLET) PROVIDE TRANSITION DUCTS AS REQUIRED.
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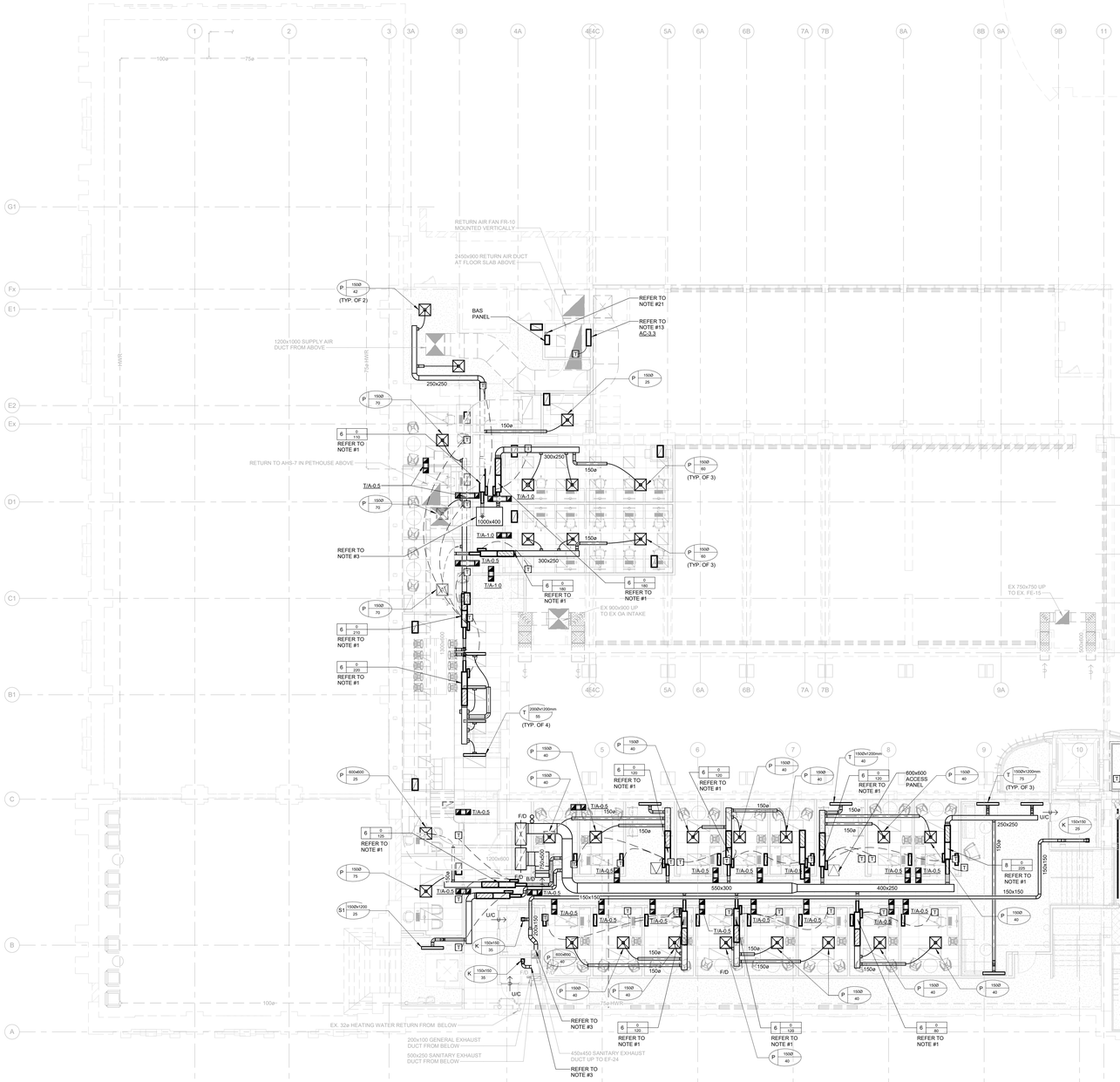
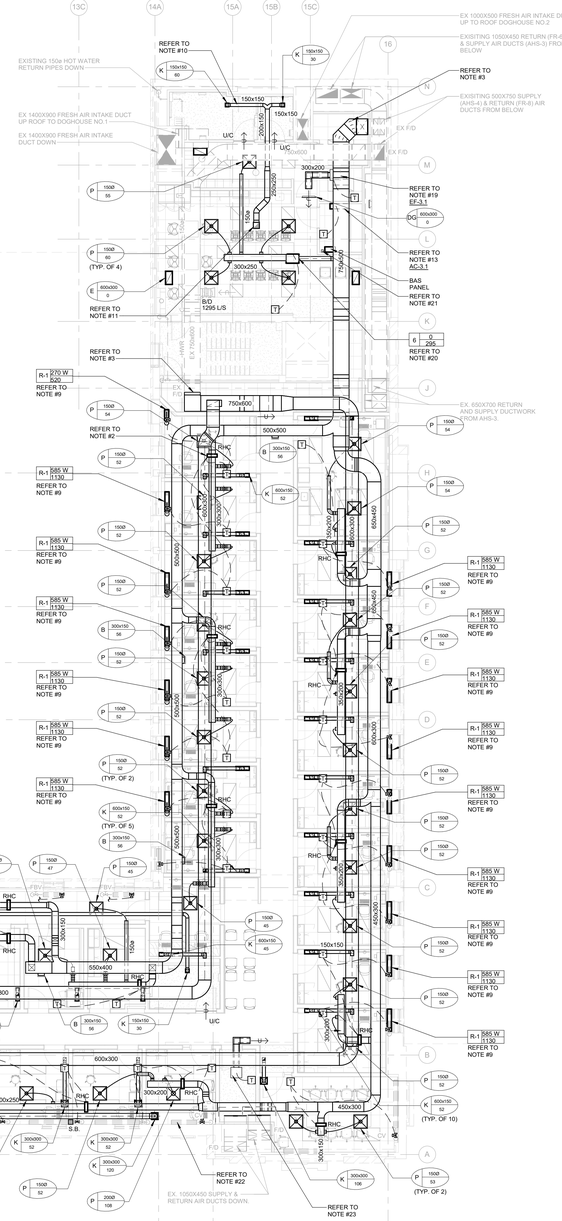
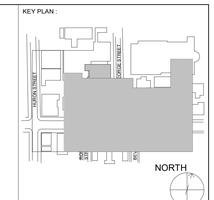
8. INSTALL THERMOSTATS NOMINALLY AT (1200MM) ABOVE THE FINISHED FLOOR UNLESS INDICATED OTHERWISE.
9. PROVIDE AND INSTALL NEW RADIATOR COMPLETE WITH RADIATOR COVERS, AND TRIMS TO ENCLOSE PIPING AND EXTEND RADIATOR WALL-TO-WALL. MODIFY EXISTING HEATING WATER SUPPLY AND RETURN SERVICES TO SUIT NEW UNIT AS REQUIRED COMPLETE WITH NEW 2-WAY CONTROL VALVE ON SUPPLY SIDE. REFER TO DRAWING FOR LENGTH.
10. NEW SANITARY EXHAUST DUCTWORK SERVING WASHROOM TO BE ALUMINUM. THERMALLY INSULATE THE ENTIRE EXHAUST DUCT.
11. CONNECT NEW 250X250 SANITARY EXHAUST DUCT TO EXISTING 300X300 DUCT BELOW ROOF DECK AND EXTEND AS INDICATED.
12. CONNECT NEW 150X150 SANITARY EXHAUST DUCT TO EXISTING 300X300 DUCT BELOW ROOF DECK AND EXTEND AS INDICATED.
13. PROVIDE AND INSTALL NEW WALL MOUNTED DUCTLESS SPLIT A/C COMPLETE WITH REFRIGERANT LINES AND CONDENSATE PUMP. NEW 25Ø CONDENSATE DRAIN FROM SPLIT A/C TO TERMINATE INDIRECTLY OVER NEW 75Ø WIDE HUB DAIN IN THE CEILING SPACE WHERE INDICATED ON DRAWING COMPLETE WITH AIR GAP. NEW 25Ø HUB DRAIN CONDENSATE LINE TO RUN INSIDE WALL CAVITY AND DOWN TO TAILSTOCK OF NEW SINK UPSTREAM OF P-TRAP.
14. COORDINATE WITH ARCHITECTURAL DIVISION TO HAVE GRILLE ABOVE PATIENT. EXTEND 250Ø DUCT UP TO PENTHOUSE ABOVE AS INDICATED. LABEL DUCTWORK WITH "CAUTION: AIRBORNE ISOLATION ROOM EXHAUST".
15. ALL CONTROLS WORK TO BE COMPLETED BY BASE BUILDING CONTROLS CONTRACTOR.
16. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
17. INSPECT AND VERIFY THE OPERATION OF CONTROL VALVES AND THERMOSTAT FOR EXISTING PERIMETER RADIATION UNITS. PROVIDE A WRITTEN REPORT IDENTIFYING ALL INOPERATIONAL OR DAMAGED CONTROL DEVICES AND PROVIDE AN ITEMIZED COST ASSOCIATED WITH REPAIR OR REPLACEMENT AS REQUIRED.
18. EXISTING AIR HANDLING UNITS TO REMAIN. INSPECT AND VERIFY THE OPERATION OF EXISTING AHS-3, AHS-4, AHS-7. PROVIDE A WRITTEN REPORT IDENTIFYING ALL IN OPERATIONAL OR DAMAGED CONTROL DEVICES AND PROVIDE AN ITEMIZED COST ASSOCIATED WITH REPAIR OR REPLACEMENT AS REQUIRED.
19. PROVIDE AND INSTALL NEW EXHAUST FAN COMPLETE WITH ASSOCIATED HANGERS, SUPPORTS, DUCTWORK, CONTROLS, CONTROL WIRING, ETC. POWER REQUIREMENT BY ELECTRICAL DIVISION.
20. PROVIDE AND INSTALL NEW BYPASS BOX COMPLETE WITH ASSOCIATED HANGERS, SUPPORTS, DUCTWORK, CONTROLS, CONTROL WIRING, ETC.
21. LOCATION OF 120/1/60 - 15 AMP POWER FOR CONTROLS.
22. EXISTING PERIMETER RADIATION UNIT TO REMAIN. PROVIDE NEW ENGINEERED AIR FLAT TOP WITH OPEN BOTTOM WF SERIES STEEL ENCLOSURE. FIELD VERIFY ENCLOSURE HEIGHT AND MEASURE EXACT LENGTHS OF THE ENCLOSURE TO SUIT SITE CONDITIONS PRIOR TO ORDERING.
23. PROVIDE AND INSTALL NEW EXHAUST FAN COMPLETE WITH ASSOCIATED HANGERS, SUPPORTS, DUCTWORK, REVERSE ACTING THERMOSTAT CONNECTED TO A FACTORY MOUNTED SPEED CONTROLLER ON FAN, CONTROLS, CONTROL WIRING, ETC. DISCHARGE EXHAUST AIR OPEN ENDED INTO THE CEILING SPACE. ACOUSTICALLY LINED ENTIRE EXHAUST DUCT. POWER REQUIREMENT BY ELECTRICAL DIVISION.
24. PROVIDE NEW SOUND BAFFLE (S.B.) WITHIN PERIMETER RADIATOR UNIT. (TYPICAL)





KEY PLAN :



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4	2024-12-04	ISSUED FOR F&S REVIEW
5	2025-01-24	ISSUED FOR PEER REVIEW
6	2025-01-31	ISSUED FOR BID
7	2025-03-24	Bid Addendum #04
8	2025-04-30	ISSUED FOR CONSTRUCTION

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OWNER:

UNIVERSITY OF TORONTO

PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

THIRD FLOOR - H.V.A.C. LAYOUT

PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO :
TM-3.3

REV :
8

GENERAL NOTES:

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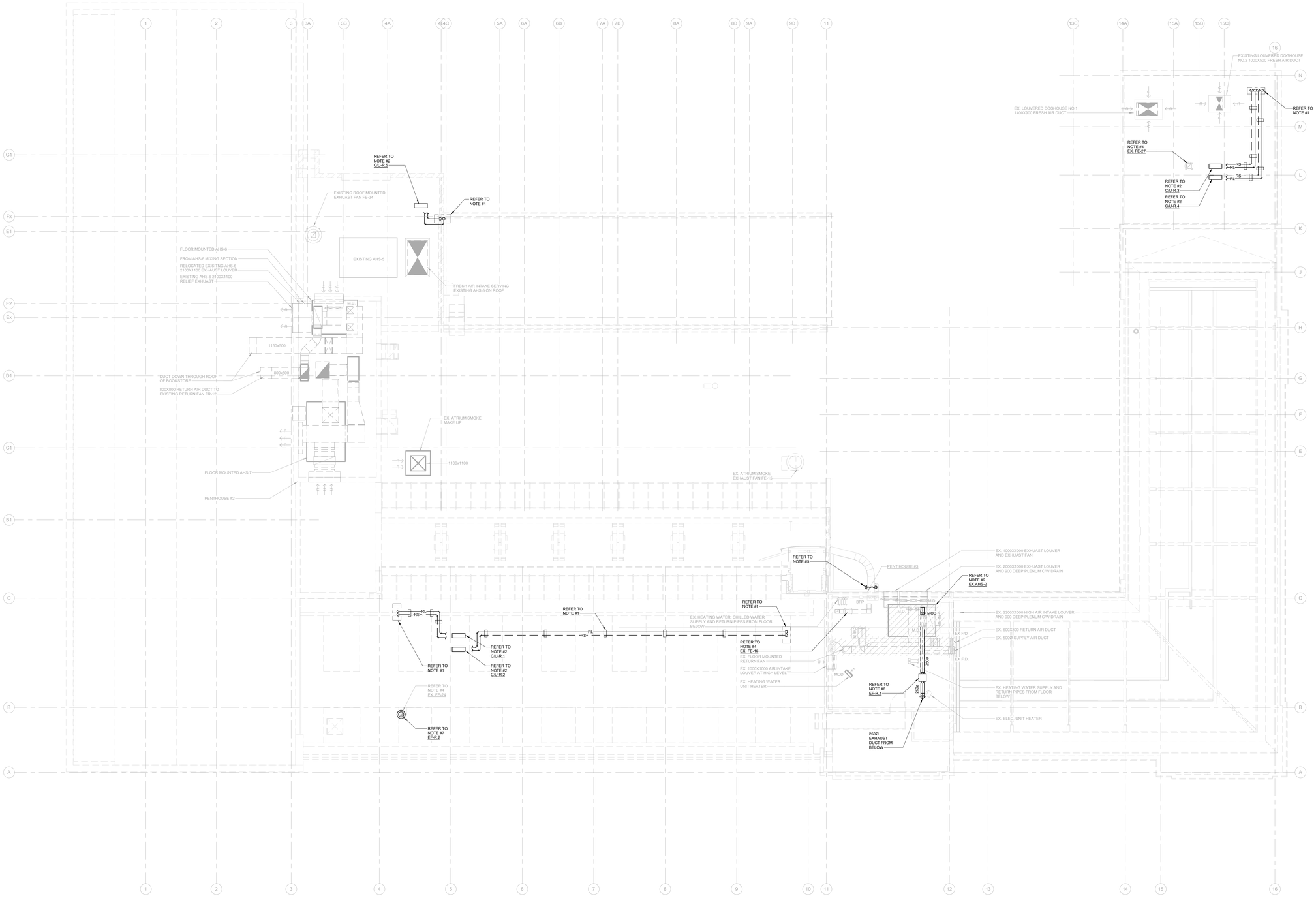
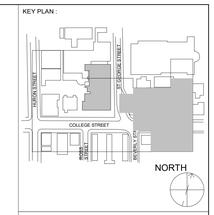
2. READ FLOOR PLANS IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. RUN NEW LIQUID AND SUCTION REFRIGERATION LINES FROM BELOW VIA DOGHOUSE ENCLOSURE. REFER TO DETAIL/TM-0.3.
2. INSTALL NEW CONDENSING UNIT COMPLETE WITH ECOFOOT STAND ON THE ROOF AT THIS APPROXIMATE LOCATION. INSTALL CONDENSING UNIT ABOVE SNOW LINE AS PER MANUFACTURER'S REQUIREMENT. REFER TO DETAIL/TM-0.3
3. EXISTING AIR HANDLING UNITS TO REMAIN. INSPECT AND VERIFY THE OPERATION OF EXISTING AHS-3, AHS-4, AHS-7. PROVIDE A WRITTEN REPORT IDENTIFYING ALL IN OPERATIONAL OR DAMAGED CONTROL DEVICES AND PROVIDE AN ITEMIZED COST ASSOCIATED WITH REPAIR OR REPLACEMENT AS REQUIRED.
4. REMOVE EXISTING ROOF MOUNTED SANITARY EXHAUST FAN "EX.FE-24" AND CAP DUCTWORK AT ROOF FOR FUTURE CONNECTION. POWER DISCONNECTION BY ELECTRICAL DIVISION.
5. NEW 75ø WALL SCUPPER DRAIN COMPLETE WITH 75ø STORM PIPE DOWN ALONG BUILDING EXTERIOR WALL AS INDICATED. SECURE STORM PIPE TO EXTERIOR BUILDING WALL. STORM PIPE TO TERMINATE WITH 45 DEGREE DOWNSPOUT AT LOWER ROOF. REFER TO TM-2.2 FOR CONTINUATION. SCUPPER DRAIN AND STORM PIPE SPECIFICATION BY ARCHITECTURAL DIVISION. PROVIDE ELECTRICAL HEAT TRACING INSIDE STORM PIPE NVENT RAYCHEM SELF REGULATING HEATING CABLES OR EQUIVALENT. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL DIVISION.
6. PROVIDE AND INSTALL NEW CEILING MOUNTED INLINE EXHAUST FAN COMPLETE WITH HEPA FILTRATION SECTION, ASSOCIATED HANGERS, SUPPORTS, CONTROLS, CONTROL WIRING, DUCTWORK, ETC. EXHAUST DUCTWORK TO BE THERMALLY INSULATED AND EXTEND TO EXISTING EXHAUST AIR PLENUM BOX AT EXTERIOR WALL AS INDICATED. INTERLOCK MOTORIZED DAMPER WITH EXHAUST FAN.
7. PROVIDE AND INSTALL NEW ROOF MOUNTED UP BLAST SANITARY EXHAUST FAN "EF-R.2". REMOVE CAP AND CONNECT NEW 450X450 SANITARY EXHAUST DUCT TO EXISTING 450X450 AND EXTEND AS INDICATED.
8. PROVIDE REFRIGERANT PIPING SUPPORT AS REQUIRED TO PROPERLY SUPPORT ENTIRE LENGTH OF REFRIGERANT PIPING. REFER TO DETAIL #/TM-0.4.
9. REMOVE EXISTING FLOOR MOUNTED AIR HANDLING UNIT COMPLETE WITH ASSOCIATED RIGID DUCTWORK, HEATING/CHILLED WATER PIPING, MOTORIZED DAMPERS, VFD, CONTROLS, CONTROL WIRING, ETC. CAP PIPING AS CLOSE TO SOURCE AS POSSIBLE. PATCH AND REPAIR FLOOR TO MATCH EXISTING.



KEY PLAN :



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5	2025-01-31	ISSUED FOR BID
6	2025-03-07	Bid Addendum #01
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PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

ROOF - MECHANICAL LAYOUT

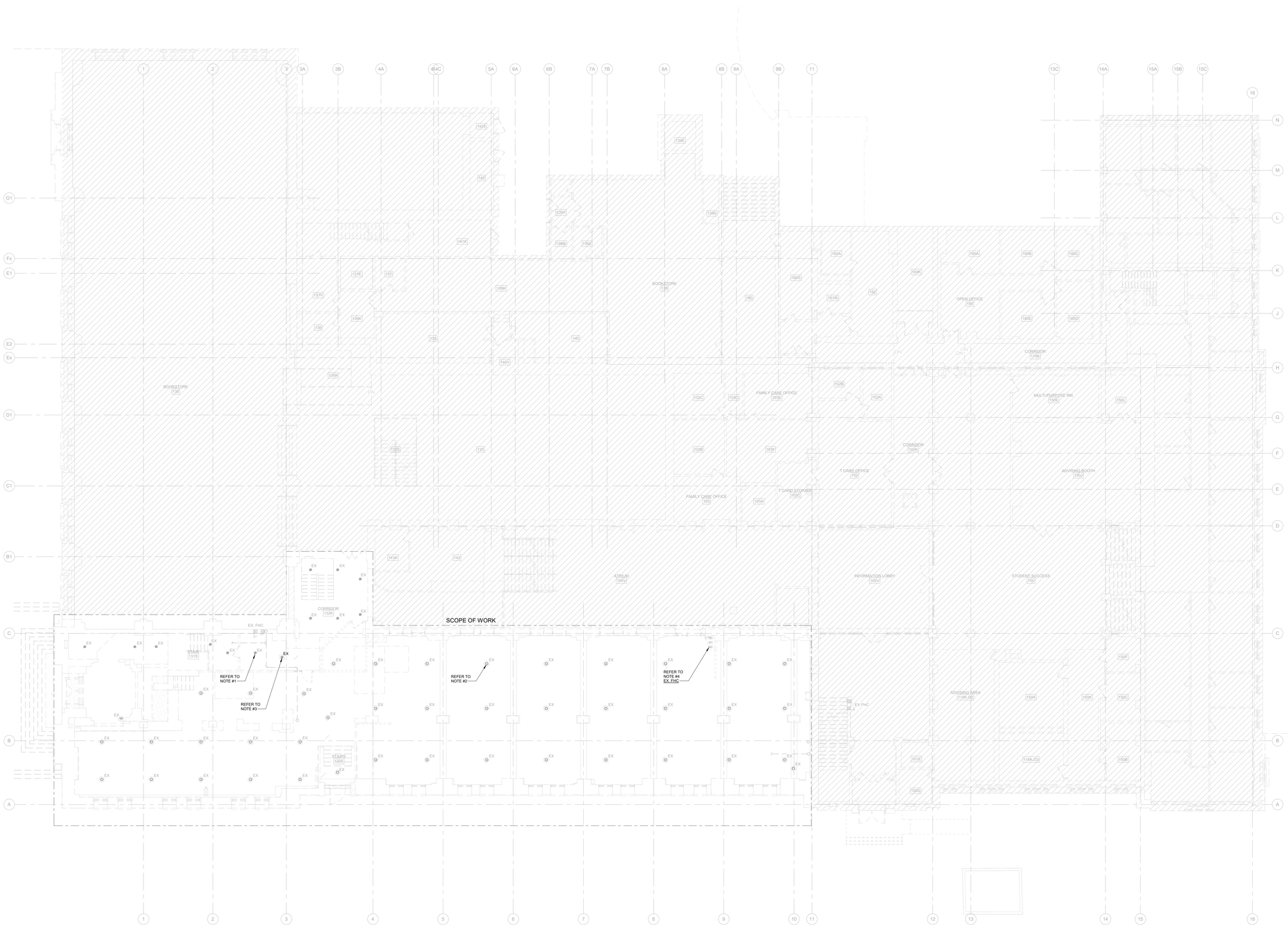
PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO :
TM-R.3

REV :
7



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4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. EXISTING PENDENT TYPE SPRINKLER HEADS TO REMAIN. (TYPICAL)
2. REMOVE EXISTING UPRIGHT TYPE SPRINKLER HEADS. (TYPICAL)
3. REMOVE EXISTING PENDENT TYPE SPRINKLER HEAD.
4. REMOVE EXISTING FIRE HOSE CABINET AND CAP EXISTING 75Ø FIRE LINE IN THE CEILING SPACE AS INDICATED. ALLOWS FOR DRAIN DOWN OF FIRE STANDPIPE RISER. REMOVE ALL UNUSED PIPING FROM SITE.
5. INCLUDE IN THE TENDER FOR THE REMOVAL OF AN ADDITIONAL FIVE (5) SPRINKLER HEADS COMPLETE WITH BRANCH PIPING NOT SHOWN IN THE DRAWINGS TO SUIT SITE CONDITIONS.

KEY PLAN :

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PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
GROUND FLOOR - FIRE PROTECTION DEMOLITION LAYOUT

PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO : **TM-1.4.1**
REV : **7**

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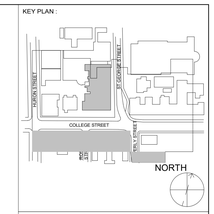
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. NEW SEMI-RECESSED TYPE SPRINKLER HEAD TO MATCH BASE BUILDING STANDARD COMPLETE WITH ALL ASSOCIATED BRANCH PIPING. NEW BRANCH PIPING TO CONNECT TO EXISTING SPRINKLER MAIN OR BRANCH MAIN WITH ADEQUATE SIZE. (TYPICAL)
2. NEW 23.0 METER FIRE HOSE CABINET.
3. NEW 75Ø FIRE LINE DOWN TO NEW FIRE HOSE CABINET.
4. SUPPLY AND INSTALL NEW FIRE EXTINGUISHER CABINET AS PER SPECIFICATIONS. FIRE EXTINGUISHER INSTALLATION TO COMPLETE WITH NFPA 10 STANDARDS. (TYPICAL)
5. PROVIDE AND INSTALL NEW NFPA96 COMPLIANT TYPE 1 RECIRCULATING HOOD COMPLETE WITH INTEGRAL FIRE SUPRESSION SYSTEM. COORDINATE POWER REQUIREMENTS AND BASE BUILDING FIRE ALARM TIE IN WITH ELECTRICAL DIVISION. REFER TO HOOD DETAIL DRAWINGS.
6. QUANTITY AND LOCATION OF SPRINKLER HEADS, WHERE SHOWN ARE TO AID IN PRICING ONLY. PROVIDE EXACT NUMBER OF HEADS TO SUIT DENSITY REQUIREMENTS AS SPECIFIED OR SHOWN. CONFORM TO ARCHITECTURAL REFLECTED CEILING PLAN LOCATIONS WHERE INDICATED AND MEET MINIMUM REQUIREMENTS OF ENFORCED NFPA 13 STANDARD.
7. PROVIDE SPRINKLER DRAWINGS AND HYDRAULIC CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER. INDICATED ZONING AND DENSITY. PROVIDE A SPRINKLER PLANS. PROVIDE SHOP DRAWINGS IDENTIFYING PROPOSED LAYOUT FOR REVIEW PRIOR TO INSTALLATION.
8. PROVIDE A SEALED LETTER BY THE PROFESSIONAL ENGINEER OF RECORD CONFIRMING THE INSTALLATION COMPLIES WITH THE SHOP DRAWINGS AND THE ENFORCED NFPA 13 & 14 STANDARD. INCLUDE ALL ASSOCIATED COSTS IN TENDER PRICE.
9. COORDINATE FIRE PROTECTION SERVICES WITH ALL OTHER TRADES PRIOR TO INSTALLATION. RECTIFY, AT OWN EXPENSE, ALL CONFLICTS RESULTING FROM UNCOORDINATED FIRE PROTECTION SYSTEMS INSTALLED IN ADVANCE OF THE REQUIRED INTERFERENCE PROCESS.
10. INCLUDE IN THE TENDER PRICE FOR THE SUPPLY AND INSTALLATION OF AN ADDITIONAL FIVE (5) SPRINKLER HEADS COMPLETE WITH BRANCH PIPING TO SUIT SITE CONDITIONS TO MEET REQUIREMENTS OF NFPA-13.

KEY PLAN :



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PROJECT :
HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :
GROUND FLOOR - FIRE PROTECTION LAYOUT

PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO :
TM-1.4

REV :
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DRAWING NOTES:

1. EXISTING UPRIGHT TYPE SPRINKLER HEADS TO REMAIN. (TYPICAL)
2. REMOVE EXISTING UPRIGHT TYPE SPRINKLER HEADS. (TYPICAL)
3. REMOVE EXISTING FIRE HOSE CABINET AND CAP EXISTING 75Ø FIRE LINE IN THE CEILING SPACE AS INDICATED. ALLOWS FOR DRAIN DOWN OF FIRE STANDPIPE RISER. REMOVE ALL UNUSED PIPING FROM SITE.
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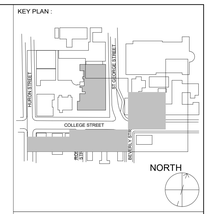

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TORONTO, ON M5T 3A1

SHEET CONTENTS :

SECOND FLOOR - FIRE PROTECTION DEMOLITION LAYOUT

PROJECT NUMBER : **21590.003**

DRAWING SCALE : **1:100**

DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO : **TM-2.4.1**

REV : **6**

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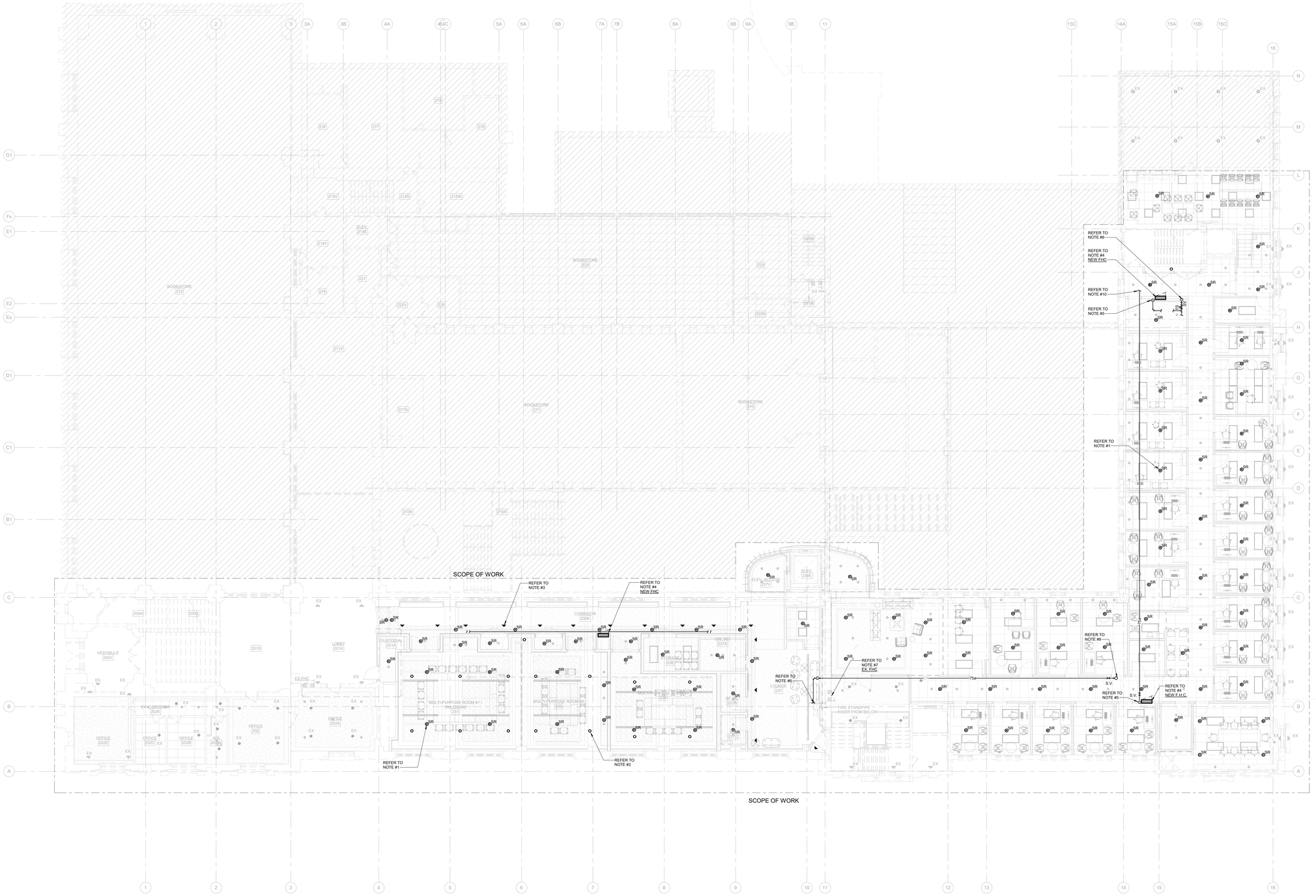
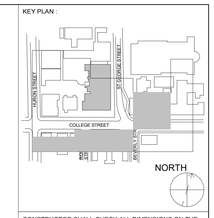
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. NEW SEMI-RECESSED TYPE SPRINKLER HEAD TO MATCH BASE BUILDING STANDARD COMPLETE WITH ALL ASSOCIATED BRANCH PIPING. NEW BRANCH PIPING TO CONNECT TO EXISTING SPRINKLER MAIN OR BRANCH MAIN WITH ADEQUATE SIZE. (TYPICAL)
2. NEW UPRIGHT TYPE SPRINKLER HEAD TO MATCH BASE BUILDING STANDARD COMPLETE WITH ALL ASSOCIATED BRANCH PIPING. NEW BRANCH PIPING TO CONNECT TO EXISTING SPRINKLER MAIN OR BRANCH MAIN WITH ADEQUATE SIZE. (TYPICAL)
3. NEW SIDEWALL TYPE SPRINKLER HEAD TO MATCH BASE BUILDING STANDARD COMPLETE WITH ALL ASSOCIATED BRANCH PIPING. NEW BRANCH PIPING TO CONNECT TO EXISTING SPRINKLER MAIN OR BRANCH MAIN WITH ADEQUATE SIZE. (TYPICAL)
4. NEW 23.0 METER FIRE HOSE CABINET.
5. NEW 75Ø FIRE LINE DOWN TO NEW FIRE HOSE CABINET.
6. RELOCATED SPRINKLER ZONE CONTROL CABINET COMPLETE WITH SUPERVISED VALVE AND FLOW SWITCH. CONNECT NEW SPRINKLER PIPE TO EXISTING AND EXTEND TO SPRINKLER ZONE CONTROL CABINET AS INDICATED. FIRE ALARM TIE IN AND CONNECTION TO ANNUCIATOR PANEL BY ELECTRICAL DIVISION.
7. EXISTING 23.0 METER FIRE HOSE CABINET TO REMAIN.
8. CONNECT NEW 75Ø FIRE STANDPIPE TO EXISTING 75Ø FIRE STANDPIPE AND EXTEND AS INDICATED. ALLOW FOR SYSTEM DRAIN DOWN.
9. 75Ø FIRE STANDPIPE UP TO SERVE NEW FIRE HOSE CABINET ON 3RD FLOOR ABOVE COMPLETE WITH NEW SUPERVISORY VALVE.
10. CONNECT NEW 75Ø FIRE STANDPIPE TO NEAREST SERVICE OF ADEQUATE SIZE. ALLOW FOR AN ADDITIONAL 5.0 METERS OF PIPING THAN THAT SHOWN ON DRAWING.
11. QUANTITY AND LOCATION OF SPRINKLER HEADS, WHERE SHOWN ARE TO AID IN PRICING ONLY. PROVIDE EXACT NUMBER OF HEADS TO SUIT DENSITY REQUIREMENTS AS SPECIFIED OR SHOWN. CONFORM TO ARCHITECTURAL REFLECTED CEILING PLAN LOCATIONS WHERE INDICATED AND MEET MINIMUM REQUIREMENTS OF ENFORCED NFPA 13 STANDARD.
12. PROVIDE SPRINKLER DRAWINGS AND HYDRAULIC CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER. INDICATED ZONING AND DENSITY. PROVIDE A SPRINKLER PLANS. PROVIDE SHOP DRAWINGS IDENTIFYING PROPOSED LAYOUT FOR REVIEW PRIOR TO INSTALLATION.
13. PROVIDE A SEALED LETTER BY THE PROFESSIONAL ENGINEER OF RECORD CONFIRMING THE INSTALLATION COMPLIES WITH THE SHOP DRAWINGS AND THE ENFORCED NFPA 13 & 14 STANDARD. INCLUDE ALL ASSOCIATED COSTS IN TENDER PRICE.
14. COORDINATE FIRE PROTECTION SERVICES WITH ALL OTHER TRADES PRIOR TO INSTALLATION. RECTIFY, AT OWN EXPENSE, ALL CONFLICTS RESULTING FROM UNCOORDINATED FIRE PROTECTION SYSTEMS INSTALLED IN ADVANCE OF THE REQUIRED INTERFERENCE PROCESS.
15. INCLUDE IN THE TENDER PRICE FOR THE SUPPLY AND INSTALLATION OF AN ADDITIONAL FIVE (5) SPRINKLER HEADS COMPLETE WITH BRANCH PIPING TO SUIT SITE CONDITIONS TO MEET REQUIREMENTS OF NFPA-13.



KEY PLAN :



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REVISION

NO.	DATE	DESCRIPTION
1	2024-10-04	ISSUED FOR 50% REVIEW
2	2024-11-01	PROGRESS ISSUANCE
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4	2024-12-04	ISSUED FOR F&S REVIEW
5	2025-01-24	ISSUED FOR PEER REVIEW
6	2025-01-31	ISSUED FOR BID
7	2025-03-24	Bid Addendum #04
8	2025-04-30	ISSUED FOR CONSTRUCTION

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SEAL :

OWNER:

UNIVERSITY OF TORONTO

PROJECT :

HEALTH AND WELLNESS CENTRE RENOVATION AT KOFFLER

214 COLLEGE ST,
TORONTO, ON M5T 3A1

SHEET CONTENTS :

SECOND FLOOR - FIRE PROTECTION LAYOUT

PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE :
AS	RC/DC	2024-02-08

SHEET NO :
TM-2.4

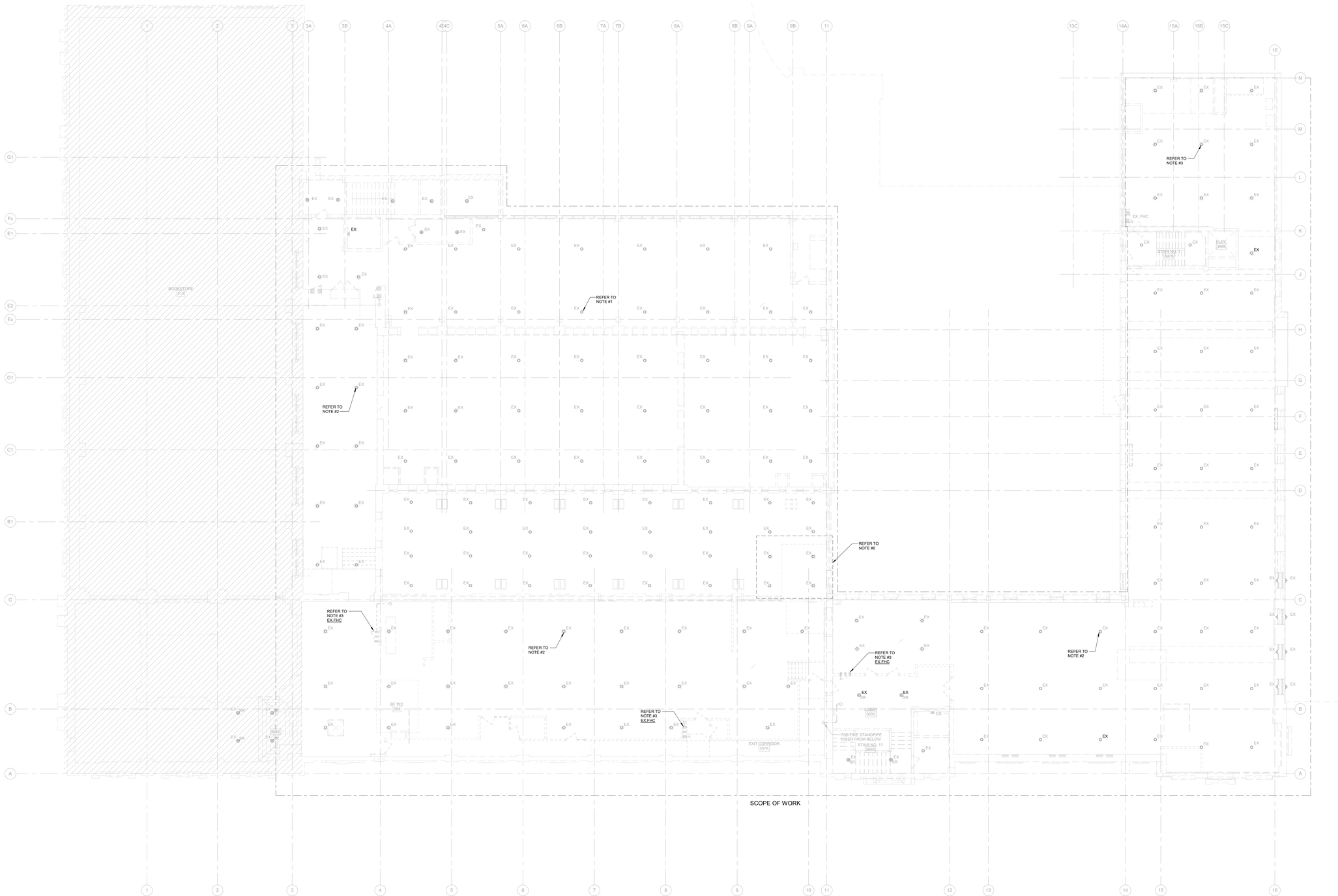
REV :
8

GENERAL NOTES:

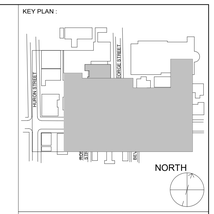
1. DO NOT SCALE DRAWINGS. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. DETERMINE THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS BASED ON SITE CONDITIONS. REVIEW ALL REVISIONS WITH THE CONSULTANT.
2. READ FLOOR PLANS IN CONJUNCTION WITH SCHEMATICS. ASSUME INFORMATION SHOWN ON FLOOR PLANS TO BE APPLICABLE TO THE RELATED SYSTEM SCHEMATIC AND VICE-VERSA TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
4. REFER TO THE STANDARD DETAILS AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. EXISTING UPRIGHT TYPE SPRINKLER HEADS TO REMAIN. (TYPICAL)
2. EXISTING UPRIGHT TYPE SPRINKLER HEAD AT TRUSS LEVEL TO REMAIN. (TYPICAL)
3. REMOVE EXISTING UPRIGHT TYPE SPRINKLER HEADS. (TYPICAL)
4. REMOVE EXISTING FIRE HOSE CABINET AND CAP EXISTING 75Ø FIRE LINE IN THE CEILING SPACE AS INDICATED. ALLOWS FOR DRAIN DOWN OF FIRE STANDPIPE RISER AND WELDING OF CAPS AT REMOVED CABINET. REMOVE ALL UNUSED PIPING FROM SITE.
5. INCLUDE IN THE TENDER FOR THE REMOVAL OF AN ADDITIONAL FIVE (5) SPRINKLER HEADS COMPLETE WITH BRANCH PIPING NOT SHOWN IN THE DRAWINGS TO SUIT SITE CONDITIONS.
6. ALLOW FOR SPRINKLER PIPING RE-WORK TO SUIT NEW ELEVATOR.



KEY PLAN :



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PROJECT :
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214 COLLEGE ST,
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SHEET CONTENTS :
THIRD FLOOR - FIRE PROTECTION DEMOLITION LAYOUT

PROJECT NUMBER :
21590.003

DRAWING SCALE :
1:100

DRAWN BY :	CHECKED BY :	DATE:
AS	RC/DC	2024-02-08

SHEET NO :
TM-3.4.1

REV :
7

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3. VERIFY STRUCTURAL INTEGRITY OF ALL TEMPORARY AND PERMANENT OPENINGS. PROVIDE ADDITIONAL FRAMING TO ENSURE STRUCTURAL INTEGRITY AS REQUIRED.
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DRAWING NOTES:

1. NEW SEMI-RECESSED TYPE SPRINKLER HEAD TO MATCH BASE BUILDING STANDARD COMPLETE WITH ALL ASSOCIATED BRANCH PIPING. NEW BRANCH PIPING TO CONNECT TO EXISTING SPRINKLER MAIN OR BRANCH MAIN WITH ADEQUATE SIZE. (TYPICAL)
2. NEW SIDEWALL TYPE SPRINKLER HEAD TO MATCH BASE BUILDING STANDARD COMPLETE WITH ALL ASSOCIATED BRANCH PIPING. NEW BRANCH PIPING TO CONNECT TO EXISTING SPRINKLER MAIN OR BRANCH MAIN WITH ADEQUATE SIZE. (TYPICAL)
3. NEW UPRIGHT TYPE SPRINKLER HEAD SERVING SKYLIGHT/ELEVATOR TO MATCH BASE BUILDING STANDARD COMPLETE WITH ALL ASSOCIATED BRANCH PIPING. NEW BRANCH PIPING TO CONNECT TO EXISTING SPRINKLER MAIN OR BRANCH MAIN WITH ADEQUATE SIZE.
4. NEW 23.0 METER FIRE HOSE CABINET.
5. NEW 75Ø FIRE LINE DOWN TO NEW FIRE HOSE CABINET.
6. EXISTING 23.0 METER FIRE HOSE CABINET TO REMAIN.
7. AREA PROTECTED BY EXISTING UPRIGHT HEADS AT TRUSS LEVEL. REFER TO TM-3.4.1 FOR EXISTING SPRINKLER HEAD LAYOUT.
8. ALLOW FOR STANDPIPE REWORK TO AVOID INTERFERENCE WITH NEW HANDRAIL AND STAIRS.
9. QUANTITY AND LOCATION OF SPRINKLER HEADS, WHERE SHOWN ARE TO AID IN PRICING ONLY. PROVIDE EXACT NUMBER OF HEADS TO SUIT DENSITY REQUIREMENTS AS SPECIFIED OR SHOWN. CONFORM TO ARCHITECTURAL REFLECTED CEILING PLAN LOCATIONS WHERE INDICATED AND MEET MINIMUM REQUIREMENTS OF ENFORCED NFPA 13 STANDARD.
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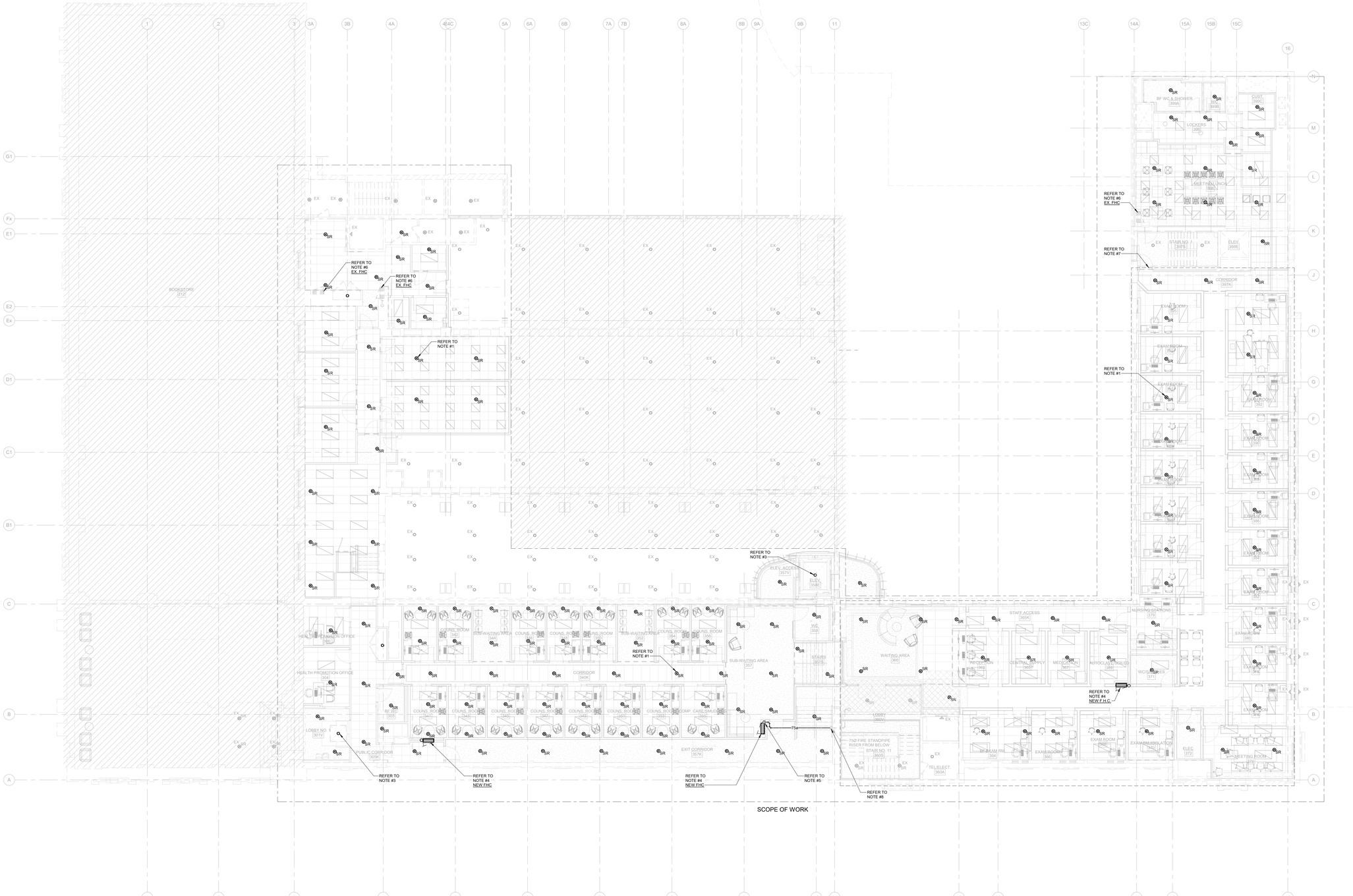
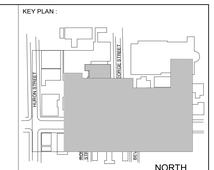


SCOPE OF WORK

KEY PLAN :



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SHEET CONTENTS :

THIRD FLOOR - FIRE PROTECTION LAYOUT

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8