

WATER COIL CONNECTION (MSD-765.02)

MINIMUM

TYPE "K" GRILLE TO MATCH TRANSFER DUCT SIZE

TOTAL FREE AREA NOTED ON DRAWINGS. CONTRACTOR TO PROVIDE MULTIPLE

TRANSFER AIR DUCTS OF SMALLER DIMENSIONS TO SUIT SITE CONDITIONS

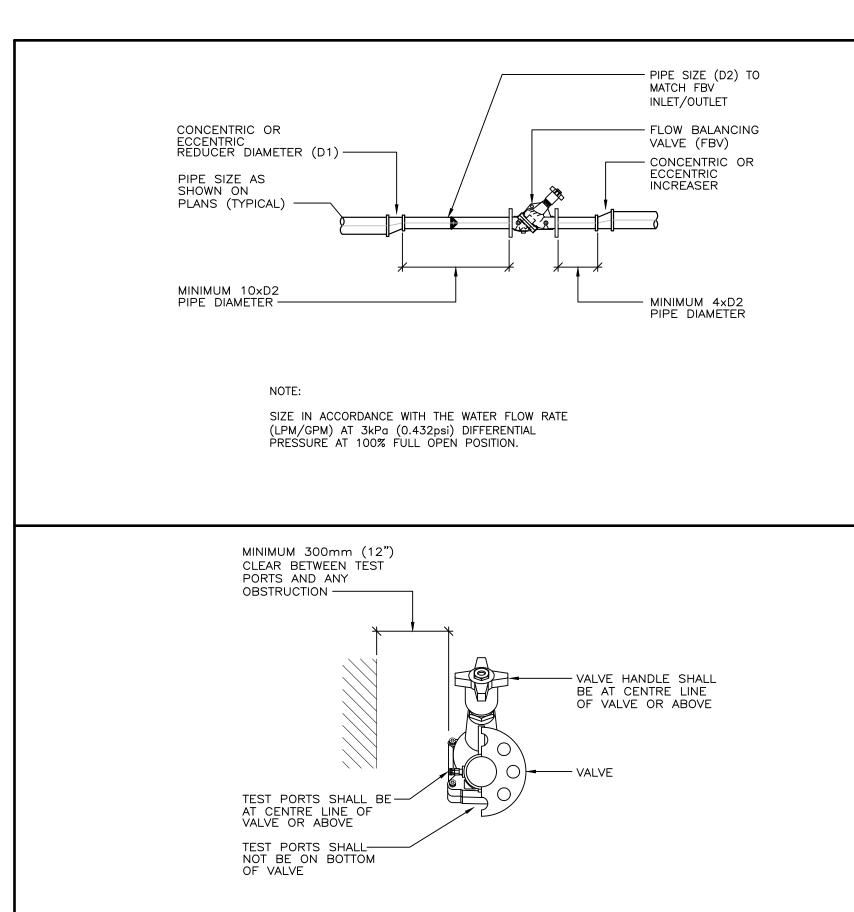
AS REQUIRED

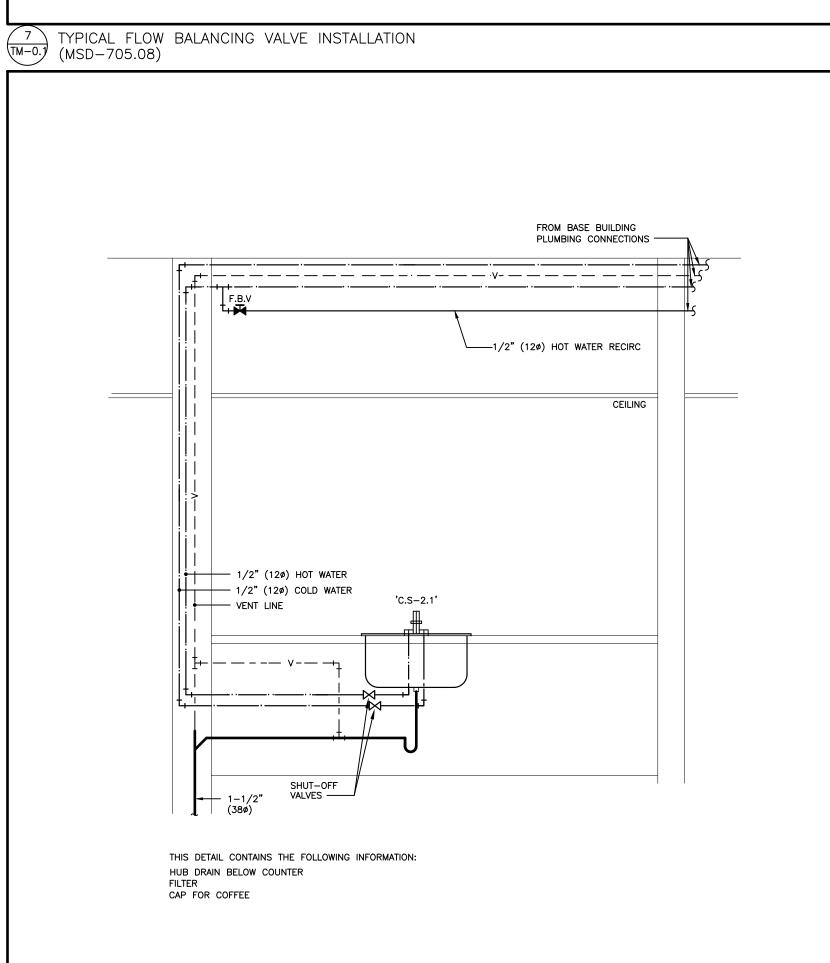
1" (25mm) ACOUSTIC LINING

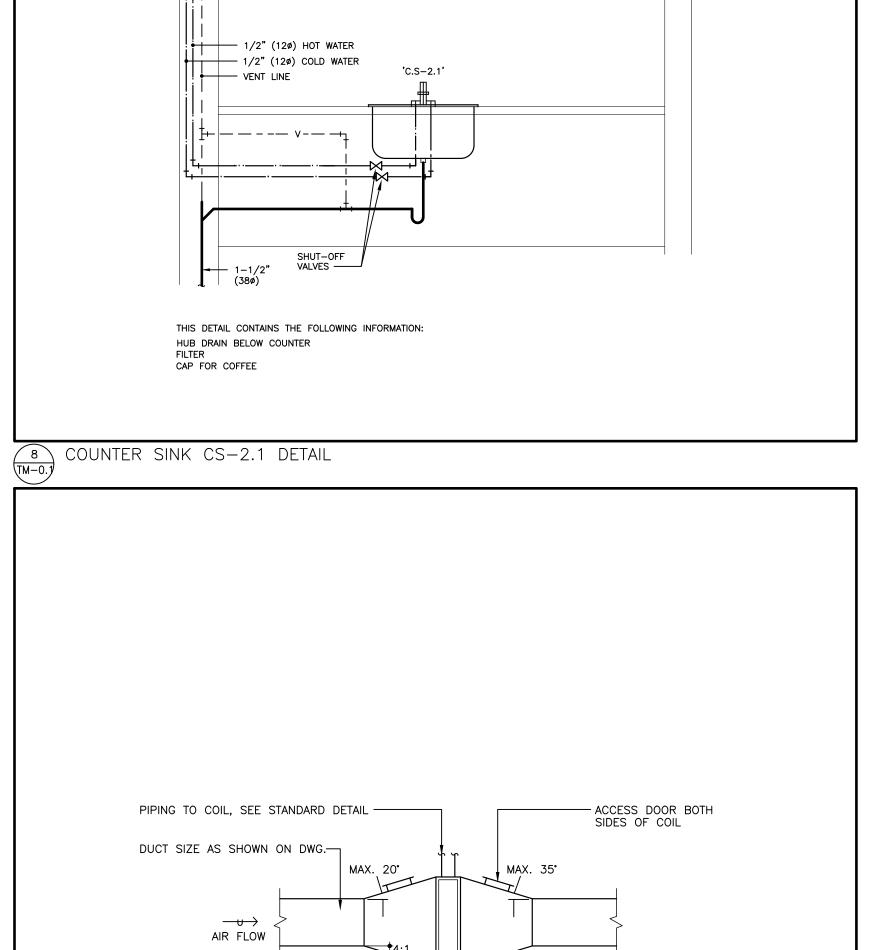
OPENING X x Y(-2" (50mm))

1" (25mm) LIP TO PROTECT

NEW TYPE 'K' GRILLE REFER TO DRAWING FOR SIZE







AREA OF OPENING + BY PERIMETER OF OPENING AND HERE TO U/S OF FLOOR SLAB MINIMUM X/2 X X/2 X X/2 X X/2 MINIMUM X/2 X X/2 ACOUSTIC LINING ACOUSTIC LINING ACOUSTIC LINING PARTITION OPENING X X Y(-2" (50mm)) 1" (25mm) LIP TO PROTECT LINING MINIMUM 4X MINIMUM 4X	PIPING TO COIL, SEE STANDARD DETAIL DUCT SIZE AS SHOWN ON DWG. MAX. 20 MAX. 35 TRANSITION SECTION AS REQUIRED COIL INSTALLATION
NOTES: TOTAL FREE AREA NOTED ON DRAWINGS. CONTRACTOR TO PROVIDE MULTIPLE TRANSFER AIR DUCTS OF SMALLER DIMENSIONS TO SUIT SITE CONDITIONS AS REQUIRED	<u>NOTE:</u> PROVIDE ADEQUATE SPACE FOR COIL REMOVAL. INSTALL COIL WITH SLOPE AS RECOMMENDED BY MANUFACTURER.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY DUCT UP OR FROM ABOVE		ACOUSTICALLY LINED TRANSFER AIR DUC
	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	I F/D	DUCT WITH SLEEVE, INSULATION AND DAMPER
	ROUND DUCT DOWN OR FROM BELOW	CAP	CAPPED CONNECTION
	ACOUSTIC LINED DUCT	=======	INSULATION DUCT
#	FLEXIBLE CONNECTION	RISE UP──	RISE IN DUCT
(CC	SQUARE ELBOW DUCT WITH TURNING VANE	SLOPE DN	DROP IN DUCT
	RADIUS ELBOW WITH TURNING VANES	■ S.B.	SOUND BAFFLE
—	AXIAL FAN/INLINE FAN	MOD MOD	PROPELLER FAN WITH PROTECTIVE SCREEN
	MIXED FLOW OR CENTRIFUG		CENTRIFUGAL FAN (ONLY IN SCHEMATIC)
FUSER GRILLE REGISTER TYI ERIAL: CFM,[IN TRIC: L/s,[mm	PE 150¢ SIZE (MM) NS.] P4 300 AIR FLOW (L/S)	LINEAR SLOT DIFFUSER — AIR FLOW (L/S) —	IMPERIAL: CFM,[INS.] 150øX1200mm METRIC: L/s,[mm] NECK SIZE AND LINEAR DIFFUSER LENGTH (MM)
<u>(()</u> →	ROUND SUPPLY DIFFUSER		LINEAR SUPPLY AIR DIFFUSER C/W FLEXIBLE DUCT
IØi←⊷	DUCTED RETURN OR EXHAUST REGISTER OR GRILLE		LIGHT TROFFER DIFFUSER TOP INLET C/W FLEXIBLE DUCT
<u>i⊗i</u> →	SQUARE OR RECTANGULAR DIFFUSER		LIGHT TROFFER DIFFUSER SIDE INLET C/W FLEXIBLE DUCT
₩→ [NON DUCTED RETURN OR EXHAUST GRILLE		DUCT MOUNTED SUPPLY OR RETURN GRILLE
₩)	NON DUCTED ROUND RETURN OR EXHAUST GRILLE		LINEAR SUPPLY OR RETURN GRILLE
· • • • • • • • • • • • • • • • • • • •	SQUARE PLAQUE DIFFUSER	~	SPIN-IN CONNECTION C/W BALANCING DAMPER AND FLEX DUCT
	DIFFUSERS WITH BLANK-OFF PORTION		SPIN-IN CONNECTION C/W BALANCING DAMPER AND RIGID DUCT

YMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	
6		12	SECTION NUMBER	
-01	DRAWING NUMBER	M-01	DRAWING NUMBER	
4	REVISION NUMBER		REVISION BUBBLE	
	ELBOWS	 \$	PIPING SERVICE CONTINUES	
<u>,†,</u>	· TEE	 \$\$	REFER TO STANDARD DETAIL DRAWINGS FOR ADDITIONAL REQUIREMENTS OF EQUIPMENT NOTED	
 	BRANCH OFF BOTTOM OF MAIN	-	VENT PIPE REDUCER	
i q	. BRANCH OFF TOP OF MAIN	(CFM)	AIR QUANTITY C.F.M. (L/s)	
	DIRECTION OF FLOW	NAMING OF EXISTING EQUIPMENT DENOTES EXISTING EQUIPMENT DESIGNATION FLOOR NUMBER		
		EX-FC-12-01-	SEQUENTIAL NUMBER	
TE: EX	KISTING EQUIPMENT, PIPING, VALVES, DUCTWO	RK SHOWN LIGHT	TO REMAIN	
TE: E>	KISTING EQUIPMENT, PIPING, VALVES, DUCTWO	RK SHOWN LIGHT	TO REMAIN	
TE: EX	EXISTING DUCT, FLEX. DUCT AND AIR SUPPLY TO REMAIN	RK SHOWN LIGHT	TO REMAIN EXISTING CONCEALED SPRINKLER HEAD & PIPING TO REMAIN	
	EXISTING DUCT, FLEX. DUCT AND AIR SUPPLY TO REMAIN EXISTING ELECTRIC/PNEUMATIC	EX 🎯	EXISTING CONCEALED SPRINKLER	
	EXISTING DUCT, FLEX. DUCT AND AIR SUPPLY TO REMAIN	EX (©)	EXISTING CONCEALED SPRINKLER HEAD & PIPING TO REMAIN EXISTING PENDANT SPRINKLER HEAD	
TE: EX	EXISTING DUCT, FLEX. DUCT AND AIR SUPPLY TO REMAIN EXISTING ELECTRIC/PNEUMATIC THERMOSTAT/TEMPERATURE SENSOR AND SPEED CONTROL SWITCH TO REMAIN EXISTING UPRIGHT SPRINKLER HEAD	EX ⊚ EX ⊕ EX ▽	EXISTING CONCEALED SPRINKLER HEAD & PIPING TO REMAIN EXISTING PENDANT SPRINKLER HEAD & PIPING TO REMAIN EXISTING SIDEWALL OR WINDOW SPRINKLER HEAD & PIPING TO REMAIN	
TE: EX	EXISTING DUCT, FLEX. DUCT AND AIR SUPPLY TO REMAIN EXISTING ELECTRIC/PNEUMATIC THERMOSTAT/TEMPERATURE SENSOR AND SPEED CONTROL SWITCH TO REMAIN EXISTING UPRIGHT SPRINKLER HEAD & PIPING TO REMAIN	EX EX EX EX EX EX REMOVED AND/O	EXISTING CONCEALED SPRINKLER HEAD & PIPING TO REMAIN EXISTING PENDANT SPRINKLER HEAD & PIPING TO REMAIN EXISTING SIDEWALL OR WINDOW SPRINKLER HEAD & PIPING TO REMAIN	
T T S	EXISTING DUCT, FLEX. DUCT AND AIR SUPPLY TO REMAIN EXISTING ELECTRIC/PNEUMATIC THERMOSTAT/TEMPERATURE SENSOR AND SPEED CONTROL SWITCH TO REMAIN EXISTING UPRIGHT SPRINKLER HEAD & PIPING TO REMAIN KISTING EQUIPMENT SHOWN HATCHED TO BE ELOCATED.	EX © EX EX EX REMOVED AND/O	EXISTING CONCEALED SPRINKLER HEAD & PIPING TO REMAIN EXISTING PENDANT SPRINKLER HEAD & PIPING TO REMAIN EXISTING SIDEWALL OR WINDOW SPRINKLER HEAD & PIPING TO REMAIN R EXISTING CONCEALED SPRINKLER	

<u> </u>	−012.13) I	1		
YMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	
⊕ F.D.	FLOOR DRAIN SIZE AS NOTED REFER TO SPECIFICATION FOR TYPES		DOMESTIC COLD WATER (DOM. COLD WATER)	
⊕ F.F.D.	FUNNEL FLOOR DRAIN SIZE AS NOTED REFER TO SPECIFICATION FOR TYPES		DOMESTIC HOT WATER (DOM. HOT WATER)	
C.O.	UPTURNED CLEANOUT		DOMESTIC HOT WATER RECIRCULATION (DOM. HOT WATER RECIRC.)	
I ^{C.O.}	HORIZONTAL CLEANOUT	— т —	TEMPERED DOMESTIC HOT WATER	
_ \$ [¢] ∂.	FLOOR DRAIN FROM ABOVE WITH TRAP	—— G ——	NATURAL GAS	
- \$ [€] € _Ø .	FUNNEL FLOOR DRAIN FROM ABOVE WITH TRAP	— — GV — —	NATURAL GAS VENT	
() ≪ () /- W-	WATER CLOSET AS NOTED REFER TO SPECIFICATION FOR TYPES		VENT	
- CS-	SINGLE COMPARTMENT KITCHEN SINK		SANITARY ABOVE GRADE OR FLOOR	
9 WS-	MOP SINK	— —SAN(B)— —	SANITARY BELOW GRADE OR FLOOR	
- CS− CS−	DOUBLE COMPARTMENT SINK	——⋈——	GATE OR ISOLATION VALVE (REFER TO SPECIFICATION)	
P G	DRINKING FOUNTAIN		GLOBE VALVE	
}	URINAL	——ф——	BALL VALVE	
- L-	WALL HUNG LAVATORY	•	PENDANT SPRINKLER HEAD	
— SP ——	WET SPRINKLER	● ^{DP}	DRY PENDANT SPRINKLER HEAD	
— DSP——	DRY SPRINKLER	0	UPRIGHT SPRINKLER HEAD	
Cx	FIRE HOSE CABINET AND TYPE	•	CONCEALED SPRINKLER HEAD	
Cx	SPRINKLER SHUT-OFF VALVE CABINET AND TYPE	O ^{NF}	NON-FREEZE SPRINKLER HEAD	
	FIRE EXTINGUISHER AND TYPE	O ^{HT}	HIGH TEMPERATURE SPRINKLER HEAD	
Cx^	FIRE EXTINGUISHER CABINET AND TYPE	0*	CHEMICAL SPRINKLER HEAD	
F.R.	FIRE REEL	4	SIDEWALL SPRINKLER HEAD	
	WATER METER	√w	WINDOW SPRINKLER HEAD	

	GENERAL (MSD-01	AND	ABBREVIATIONS	

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

SHEET NUMBER	SHEET TITLE	SCALE
TM-0.1	MECHANICAL DRAWING LIST, LEGENDS, AND DETAILS	N.T.S.
TM-0.2	MECHANICAL DETAILS	1:100
TM-2.1.1	2ND LEVEL - PHASE 1 MECHANICAL DEMOLITION LAYOUT	1:100
TM-2.2.1	2ND LEVEL - PHASE 1 PLUMBING AND PIPING LAYOUT	1:100
TM-2.3.1	2ND LEVEL - PHASE 1 H.V.A.C. LAYOUT	1:100
TM-2.4.1	2ND LEVEL - PHASE 1 FIRE PROTECTION LAYOUT	1:100
TM-3.1	3RD LEVEL - PHASE 1 MECHANICAL DEMOLITION LAYOUT	1:100
TM-3.2	3RD LEVEL - PHASE 1 PLUMBING AND PIPING LAYOUT	1:100
TM-3.2	3RD LEVEL - PHASE 1 H.V.A.C. LAYOUT	1:100
TM-3.4	3RD LEVEL - PHASE 1 FIRE PROTECTION LAYOUT	1:100

-0.1	HANICAL DRAWING LIST		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	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 <i>—</i> –	- GLYCOL RETURN	——PC——	PUMPED STEAM CONDENSATE
—GLHS—	GLYCOL HEATING SUPPLY	RS	REFRIGERATION SUCTION
– —GLHR— –	- GLYCOL HEATING RETURN	—— RL——-	REFRIGERATION LIQUID
—GLCS	GLYCOL COOLING SUPPLY		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
/ /	LOW PRESSURE STEAM	─ ─⊠	FLOAT AND THERMOSTAT TYPE STEAM TRAP
// //	MEDIUM PRESSURE STEAM		STEAM VACUUM BREAKER
/// ///	HIGH PRESSURE STEAM	——⊗ ^{TEV}	REFRIGERATION THERMAL EXPANSION VALVE
	LOW PRESSURE CONDENSATE	——⊗ ^{SLV}	REFRIGERATION SOLENOID LIQUID VALVE
-#-#-	MEDIUM PRESSURE CONDENSATE	RFD	REFRIGERATION FILTER DRYER
- 	HIGH PRESSURE CONDENSATE	-	6 WAY CONTROL VALVE ELECTRIC
-ss-⊠ cv	2 WAY CONTROL VALVE		6 WAY CONTROL VALVE TYPE 1
—≀r-Ā	3 WAY CONTROL VALVE		

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
F/D	FIRE DAMPER	SM/D	SMOKE DAMPER
M.O.D.	MOTOR OPERATED DAMPER	P.S.D.	POSITIVE SEAL DAMPER
M.D.	MANUAL DAMPER	B.D.D.	GRAVITY OR BACKDRAFT DAMPER
B.D.	BALANCING DAMPER	SP/D	SPLITTER DAMPER
C.S.F/[COMBINATION SMOKE AND FIRE DAMPER	R.B.D.	REMOTE OPERATED BALANCING DAMPER
	VOLUME EXTRACTOR		
<u>V.A.V. A</u>	ND F.P.V.A.V. TAG		

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

MIN. PRIMARY FLOW FAN POWERED V.A.V. BOX TYPE TIOO RHC- REHEAT COIL CAPACITY (KW) MAX. PRIMARY FLOW (L/s) IMPERIAL: CFM,[INS.] METRIC: L/s,[mm]			TECH	INOLOGY SERVINGENION SCAF	
	V.A.V. BOX (VARIABLE AIR VOLUME)		FAN POWERED BOX C/W RETURN AIR SILENCER OR ACOUSTICALLY LINED RETURN AIR		O ONTARIO, M1C1A4
	V.A.V. BOX WITH ATTENTUATOR		INDUCTION V.A.V. BOX	PROJECT #:	
	V.A.V. BOX WITH REHEAT COIL		PRESSURE INDEPENDENT AIR VALVE	0311	8.008.M.001
	V.A.V. BOX WITH REHEAT COIL AND ATTENTUATOR			PROJECT TIT	LE: ARY / IITS INT
<u>HEATING</u>	ELEMENT TAG				

			DUCT COIL
[HORIZONTAL UNIT HEATER	R-X	RADIATION HEATING RISER NUMBERS (S=SUPPLY AND R=RETURN)
③ → U.H2	DOWN BLAST UNIT HEATER		WALL FIN ELEMENT IN CONTINUOUS ENCLOSURE
	RADIANT HEATING PANEL		
	U.H.−1	ACTIVE ELEMENT LENGTH ENCLOSURE TYPE HORIZONTAL UNIT HEATER OU.H1 DOWN BLAST UNIT HEATER	ACTIVE ELEMENT LENGTH ENCLOSURE TYPE HORIZONTAL UNIT HEATER OU.H1 DOWN BLAST UNIT HEATER

AIR HANDLING SYMBOLS (MSD-012.09)

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

ARBOR ARBOR	UNIVERSITY OF TORONTO SCARBOROUGH
_	

Design & Construction Management 1265 Military Trail Toronto Ontario

		MIC IA4
NO.	DATE	REVISION NO
1	2021-06-25	ISSUED FOR PERMIT
2	2021-07-21	ISSUED FOR 100% TENDER CHECK SET
3	2021-08-05	ISSUED FOR TENDER
4	2021-10-20	ISSUED FOR CONSTRUCTION

NAME: ALI SAFI TEL: 416 487 8151 (ext 1354) EMAIL: Ali.Safi@smithandandersen.com

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH MECHANICAL SPECIFICATION SUBMITTED FOR THIS PROJECT.

Smith + Andersen

1100 - 100 Sheppard Ave. East, Toronto On, M2N 6N5 416 487 8151 f 416 487 9104 smithandandersen.com

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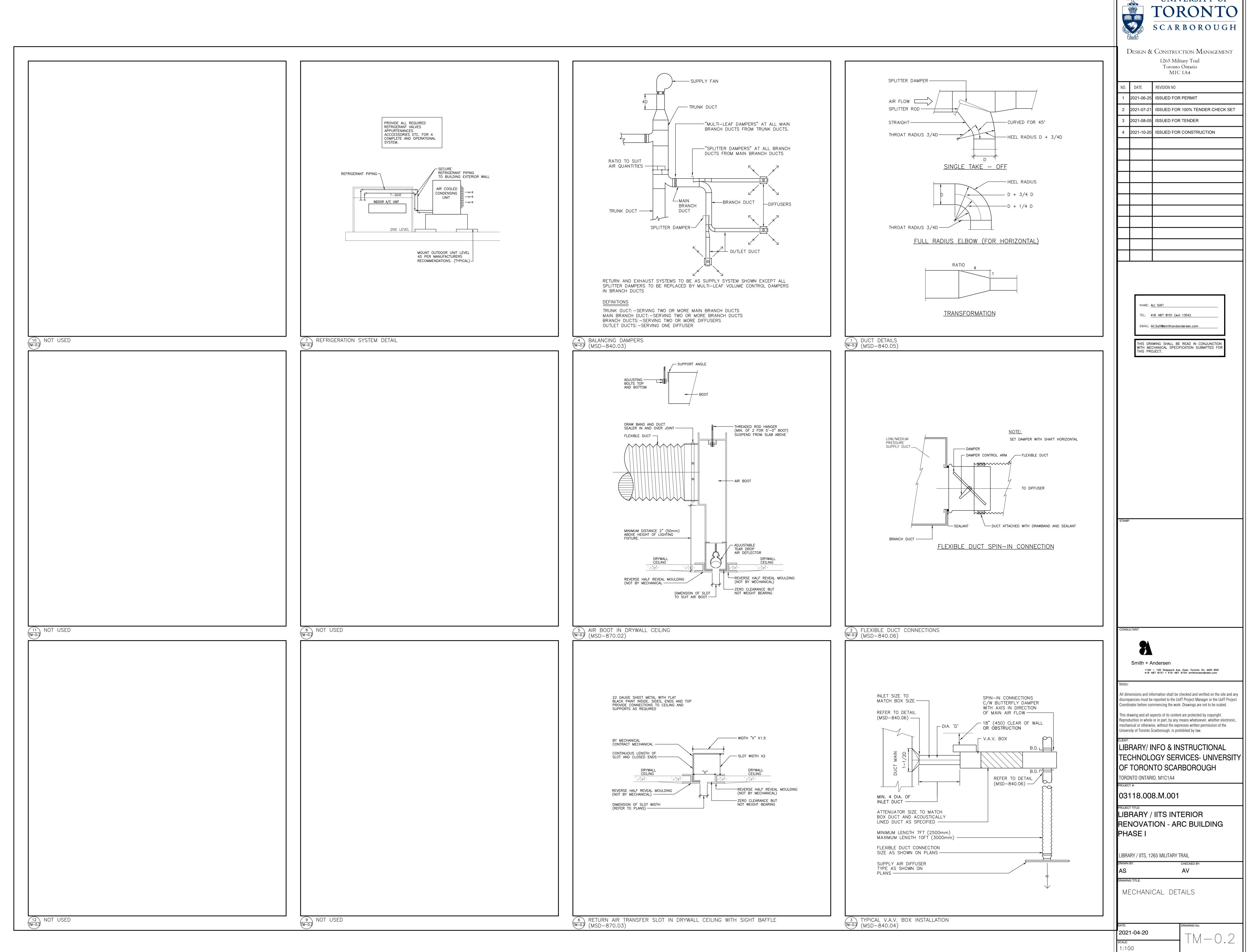
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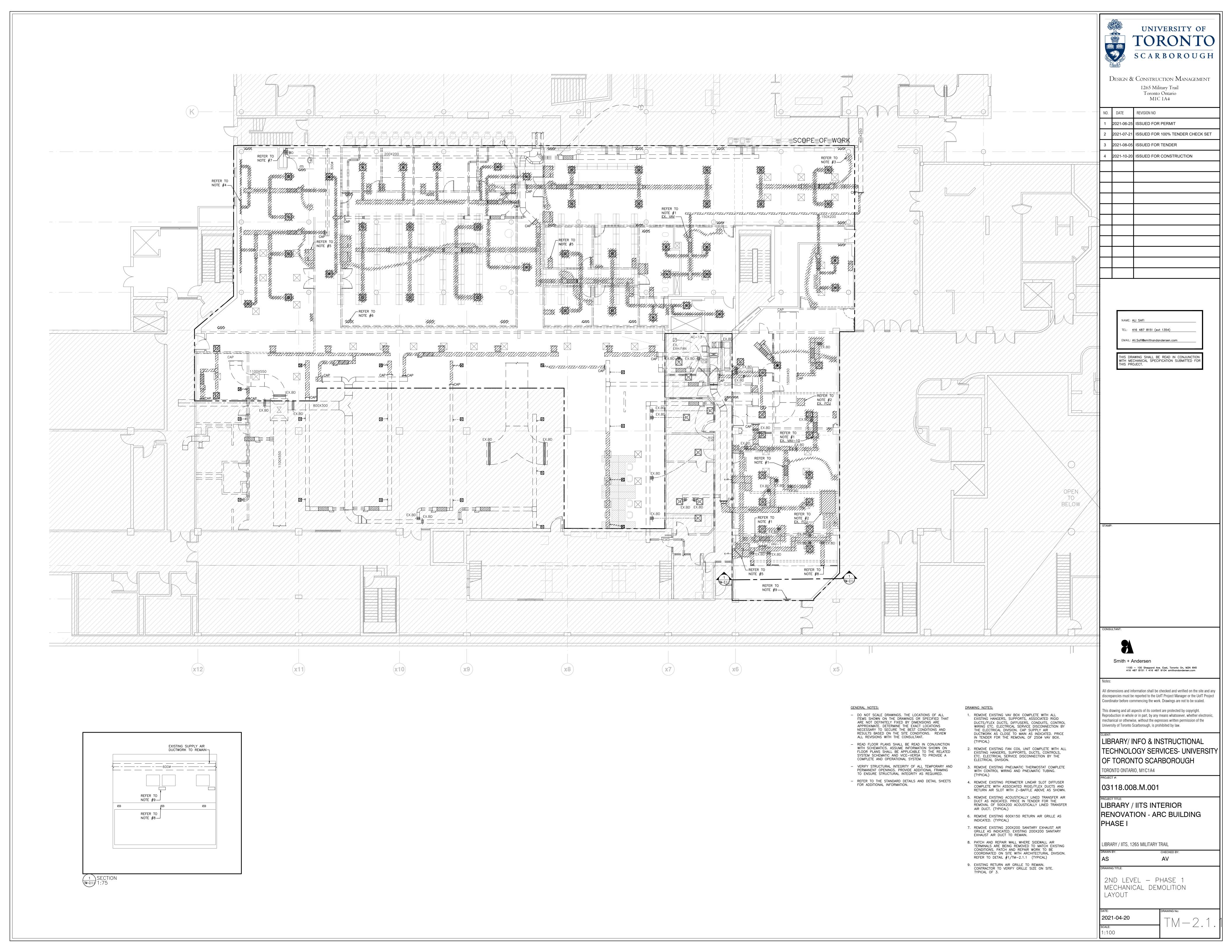
LEGENDS, AND DETAILS

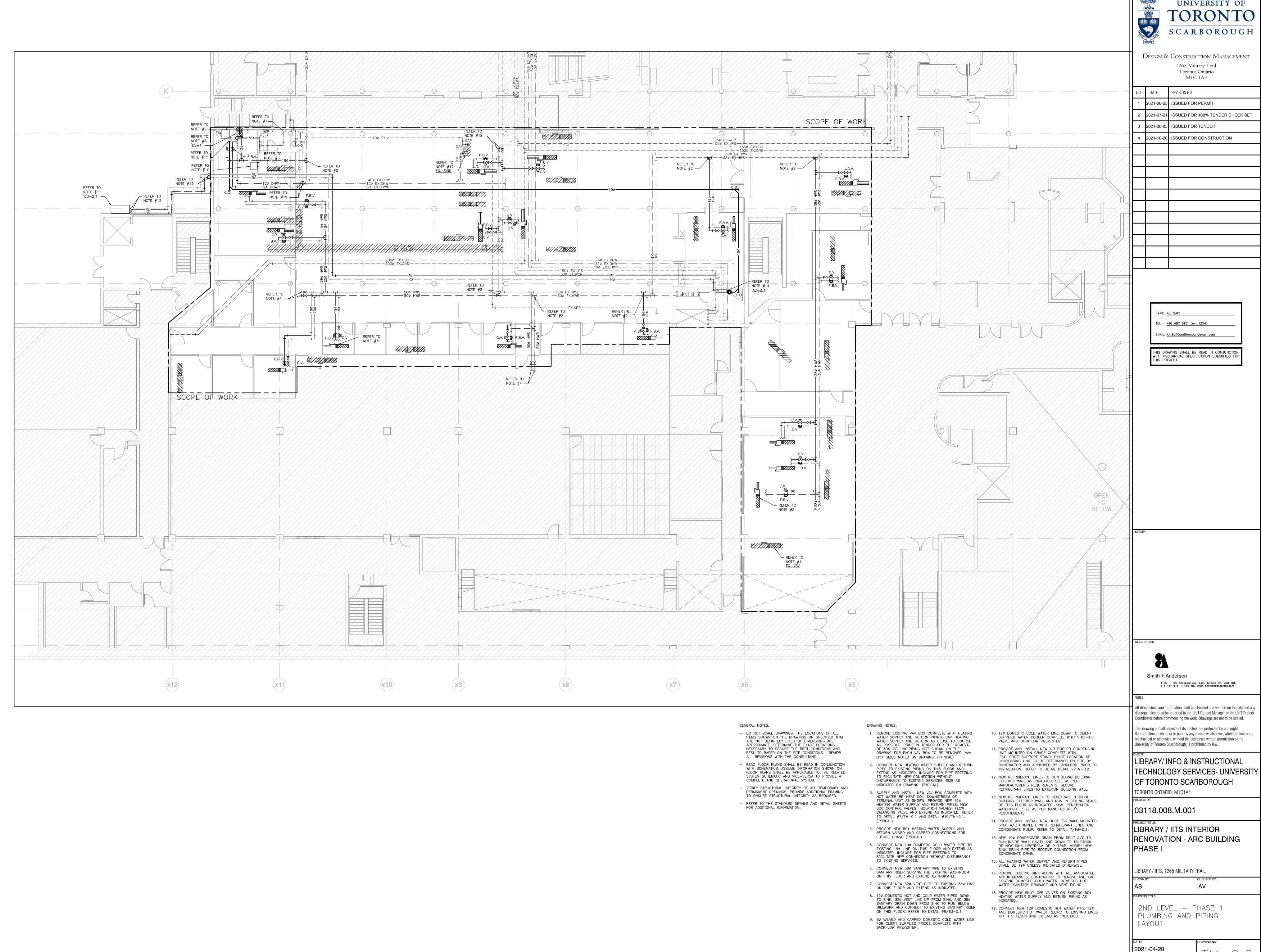
MECHANICAL DRAWING LIST,

2021-04-20 TM-0.1

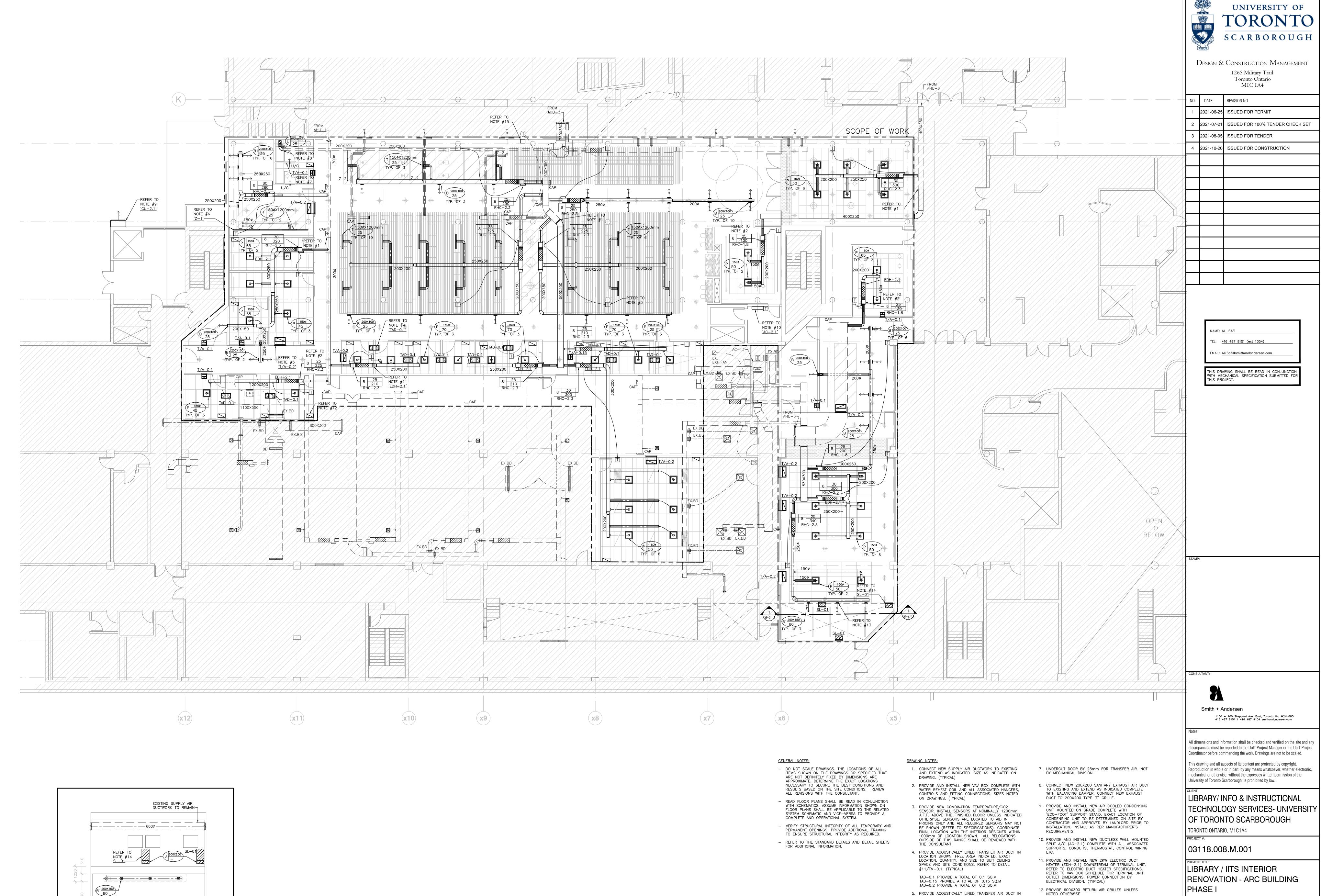


UNIVERSITY OF









LOCATION SHOWN. FREE AREA INDICATED. PROVIDE 'J'

13. ALL DUCTWORK GRILLES WITHIN OPEN CEILING AREAS

14. PROVIDE AND INSTALL NEW CROSS—TALK SILENCER IN LIEU OF EXISTING RETURN AIR GRILLE. REMOVE

EXISTING RETURN AIR GRILLE TO FACILITATE THE

WORK REQUIRED. PROVIDE ACOUSTICALLY LINED

SPECIFICATIONS FOR SILENCER SCHEDULE. CONTRACTOR TO VERIFY EXISTING GRILLE SIZE ON

ARCHITECTURAL DIVISION ON SITE FOR

TRANSITION AS REQUIRED. REFER TO MECHANICAL

SITE AND PROVIDE NEW CROSS-TALK SILENCER TO MATCH EXISTING OPENING DIMENSIONS. TERMINATE

INTERFERENCES. REFER TO DETAIL #1/TM-2.1.1

15. PROVIDE AND INSTALL NEW SIEMENS CONTROL PANEL

FOR NEW VAV CONTROLS. FINAL LOCATION TO BE COORDINATED ON SITE.

OPEN END WITH TYPE 'J' GRILLE. COORDINATE WITH

TO BE FLUSH WITH DUCTWORK.

TYPE WALL GRILLE TO SUIT FREE AREA. EXACT LOCATION, QUANTITY AND SIZE TO SUIT CEILING

SPACE AND SITE CONDITIONS. REFER TO DETAIL

T/A-0.1 PROVIDE A TOTAL OF 0.1 SQ.M

T/A-0.2 PROVIDE A TOTAL OF 0.2 SQ.M

T/A-0.15 PROVIDE A TOTAL OF 0.15 SQ.M

6. SUPPLY AND INSTALL LINEAR SLOT DIFFUSERS WITHIN CONTINUOUS ARCHITECTURAL SLOT PROVIDED. REFER TO ARCHITECTURAL DRAWING FOR TOTAL SLOT

LENGTH. NON-ACTIVE (RETURN) LENGTH TO BE

COMPLETE WITH MATT BLACK 'Z' BAFFLE AND A MINIMUM NON-ACTIVE LENGTH TO BE:

Z-1 MIN. OF 4'-0" RETURN/NON-ACTIVE LENGTH

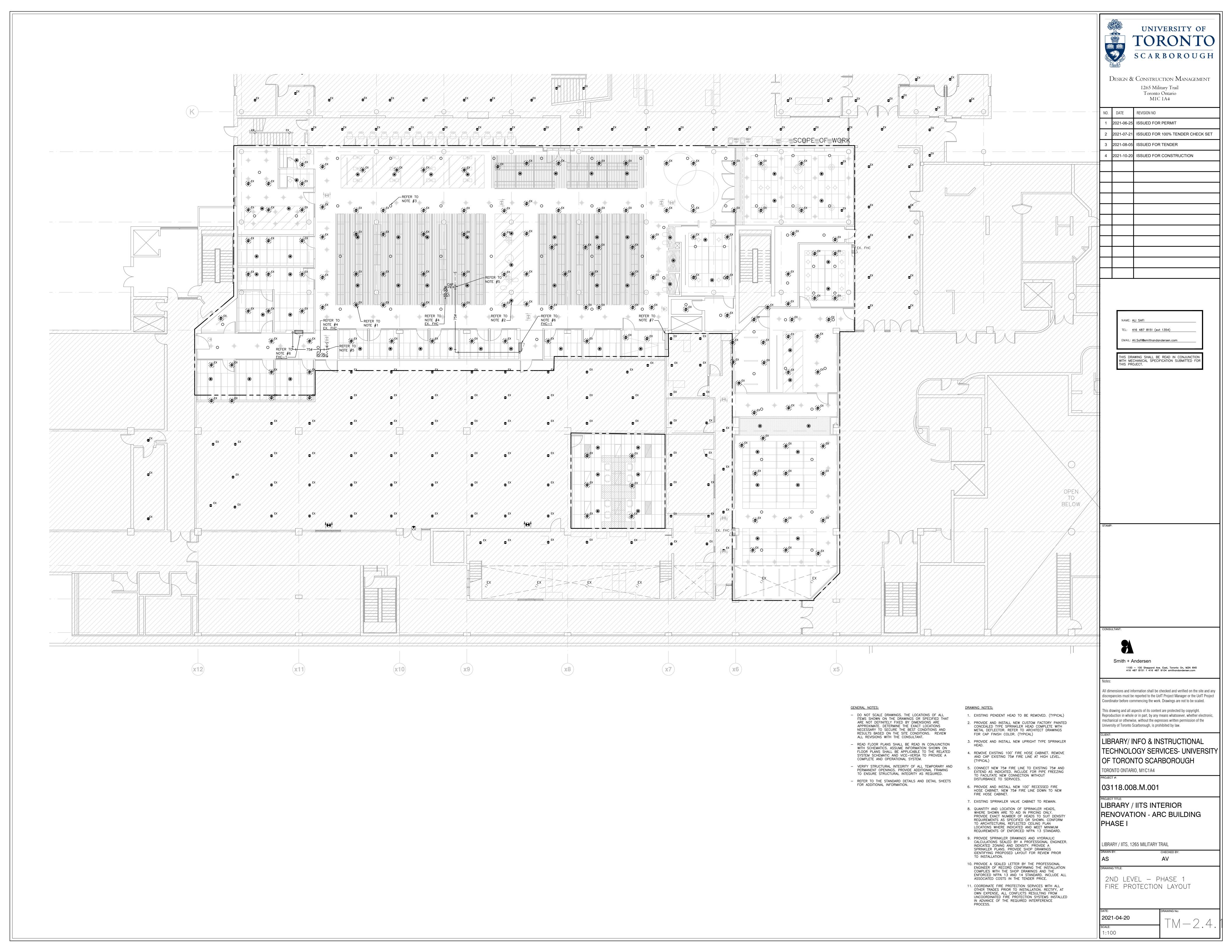
Z-1 MIN. OF 8'-0" RETURN/NON-ACTIVE LENGTH

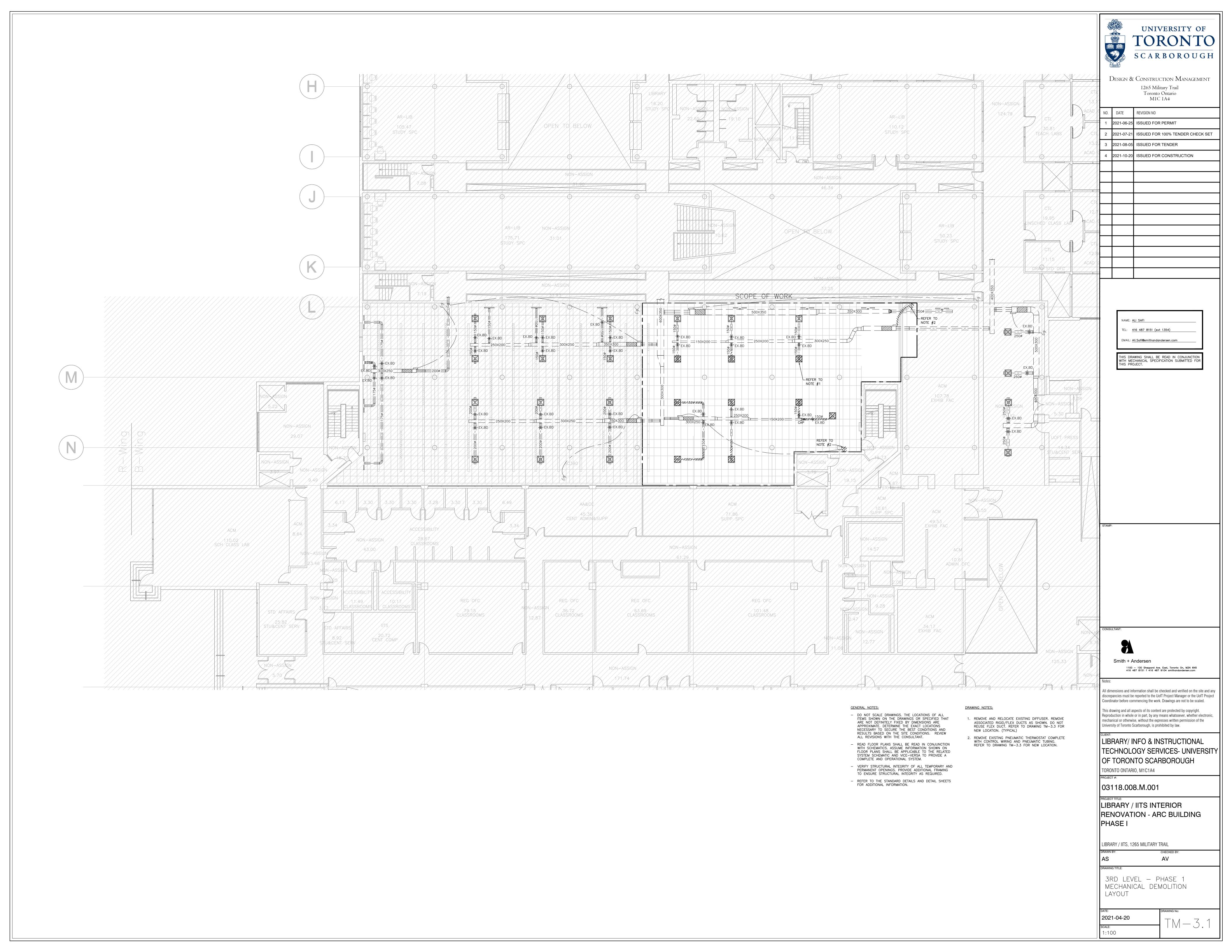
#12/TM-0.1. (TYPICAL)

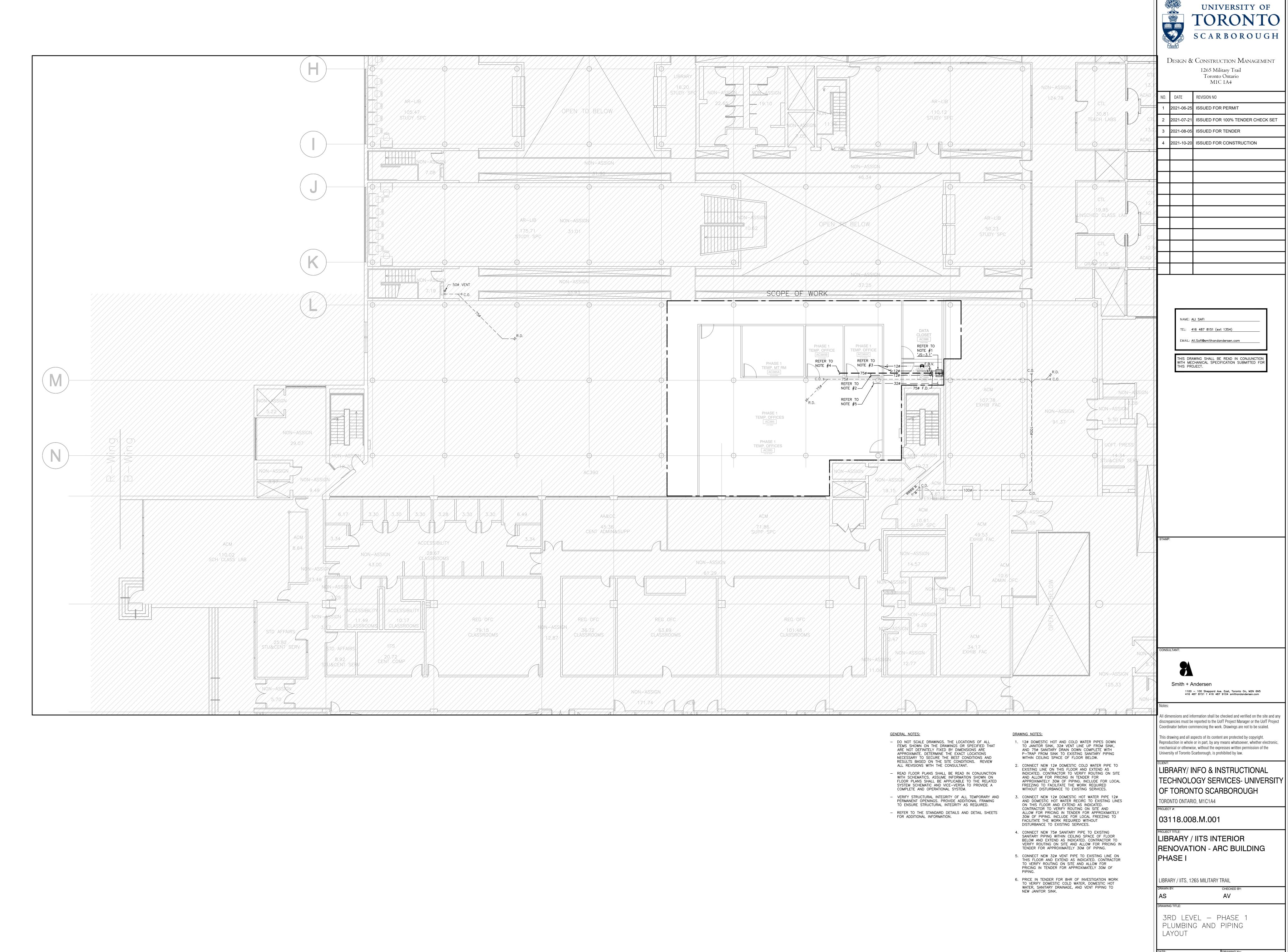
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2ND LEVEL - PHASE 1 H.V.A.C. LAYOUT

2021-04-20







2021-04-20

1:100

TM-3.2

