



1 SITE PLAN
M1-0
Scale: 1:300

MECHANICAL PIPING	
SYMBOL	DESCRIPTION
	PIPE DOWN
	PIPE UP
	PIPE UP & DOWN
	VALVE
	BALANCING VALVE
	CHECK VALVE
	STRAINER
	LOCK-SHIELD VALVE
	PRESSURE REDUCING VALVE
	ELECTRONIC CONTROL VALVE (2-WAY & 3-WAY)
	PNEUMATIC CONTROL VALVE (2-WAY & 3-WAY)
	3-WAY VALVE (MANUAL)
	PIPE CONTINUATION
	CONDENSATE DRAINAGE PIPING
	NATURAL GAS PIPING
	FLOW DIRECTION
	REFRIGERANT LIQUID AND GAS PIPING
	PUMP
	CAPPED PIPE
	PRESSURE GAUGE
	THERMOMETER
	PRESSURE RELIEF VALVE

DUCTWORK	
SYMBOL	DESCRIPTION
	SUPPLY AIR DUCT UP & DOWN
	RETURN / EXHAUST AIR DUCT UP & DOWN
	ROUND DUCT UP & DOWN
	SQUARE ELBOW WITH TURNING VANES
	DUCTWORK FLEXIBLE CONNECTION
	1" THICK ACOUSTICALLY LINED DUCTWORK
	EXTERNALLY INSULATED DUCTWORK (REFER TO SPECIFICATIONS FOR THICKNESS)
	DUCT CONTINUATION (ROUND & RECTANGULAR)
	SUPPLY AIR DIFFUSER C/W FLEX DUCT & SPIN ON CONNECTION WITH BALANCING DAMPER
	SUPPLY / RETURN GRILLE
	RETURN / EXHAUST GRILLE
	THERMOSTAT
	SWITCH
	CONTROL WIRING

MECHANICAL DRAWING LIST	
DRAWING NO.	DRAWING NAME
M1.0	DRAWING LIST, SYMBOL LIST & NOTES
M2.0	GROUND FLOOR & ROOF PLANS - HVAC
M2.1	GROUND FLOOR PLAN - PIPING
M3.0	BELOW GRADE & GROUND FLOOR PLANS - PLUMBING
M4.0	GROUND FLOOR PLAN - FIRE PROTECTION
M5.0	CONTROLS DIAGRAMS & FLOW DIAGRAM
M6.0	SCHEDULES 1
M6.1	SCHEDULES 2
M6.2	SCHEDULES 3
M7.0	DETAILS 1
M7.1	DETAILS 2

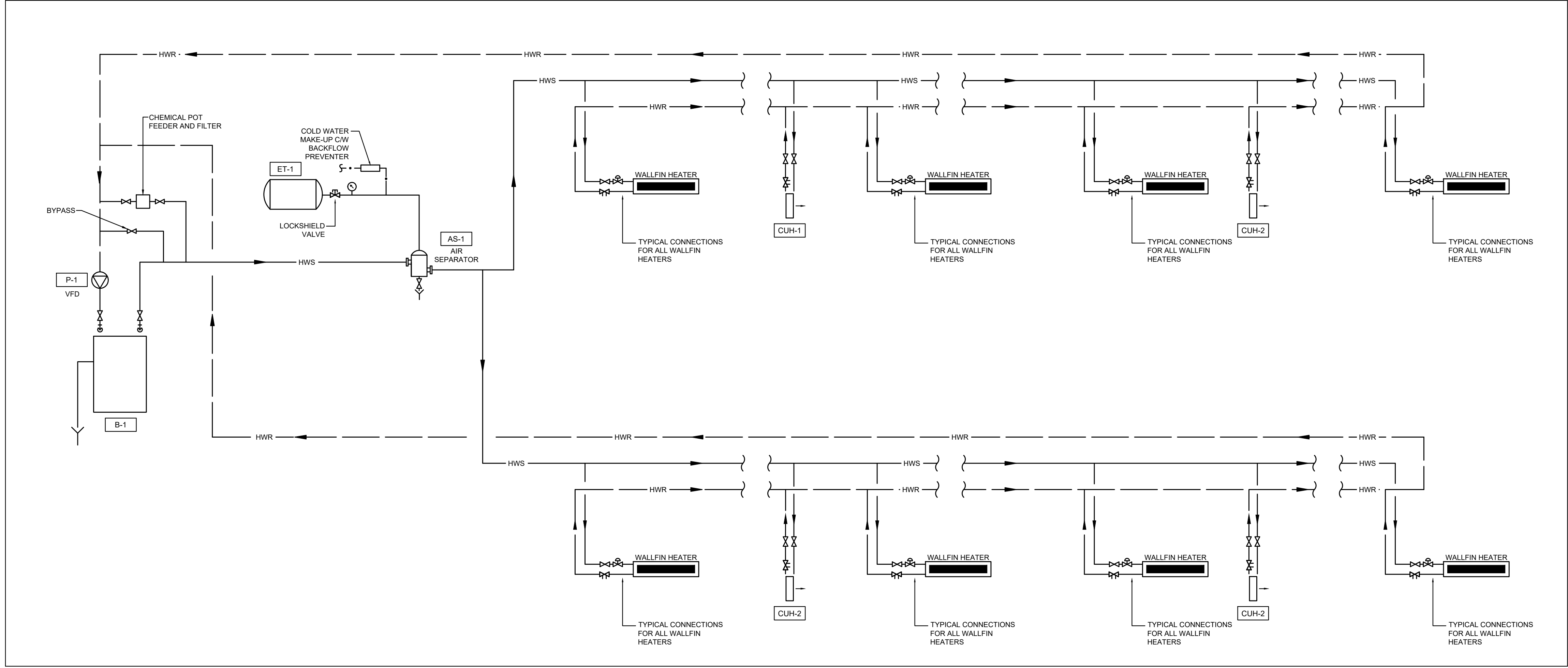
FIRE PROTECTION	
SYMBOL	DESCRIPTION
	CONCEALED SPRINKLER HEAD
	FIRE EXTINGUISHER C/W WALL BRACKET
	FIRE DEPARTMENT CONNECTION
	SUPERVISED VALVE

PLUMBING AND DRAINAGE	
SYMBOL	DESCRIPTION
	WATER CLOSET - TANK TYPE
	P-TRAP
	CLEAN OUT (FLOOR & CEILING)
	ROUND FLOOR DRAIN
	HUB DRAIN
	PIPE WYE CONNECTION
	PIPE TEE
	DOMESTIC COLD WATER (DCW) PIPING
	DOMESTIC HOT WATER (DHW) PIPING
	SANITARY DRAINAGE (SAN) PIPING
	VENT PIPING
	DOMESTIC HOT WATER RECIRC. (DHWR) PIPING

TAGS	
SYMBOL	DESCRIPTION
	EQUIPMENT TAG
	AIRFLOW DIRECTION
	CONNECT TO EXISTING
	FLOW IN CFM

DIFFUSER TAG
QUANTITY: 2
NECK / FACE SIZE: 8"Ø [200]
DIFFUSER TYPE: [Symbol]
AIRFLOW: [Symbol]

VAV BOX TAG
TYPE: (S) SUPPLY, (R) RETURN, (E) EXHAUST
S - 14"x14" [1000]
HEIGHT: [Symbol]
WIDTH: [Symbol]
AIRFLOW: [Symbol]
*IF APPLICABLE



2 HEATING WATER FLOW DIAGRAM
M1-0
Scale: N.T.S.

APPLICATION NUMBER:

APPLICATION NUMBER:

REVISIONS	DATE	BY

SUBMITTALS	DATE	BY
10		
9		
8		
7		
6		
5		
4		
3	ISSUED FOR PERMIT REVISIONS	2020.11.04 MD
2	ISSUED FOR PERMIT	2020.06.26 MD
1	ISSUED FOR COORDINATION	2020.04.03 VK
10	Description	YYYY.MM.DD By

NORTH: TRUE NORTH, PROJECT NORTH

STAMP: 1956 NOV 4, 2020 M. DI ZIO 100850658 RDZ ENGINEERS LTD

RDZ ENG RDZ ENGINEERS LTD 17A - 30 Pennsylvania Avenue Vaughan, Ontario L4K 4A5 email: info@rdzeng.ca

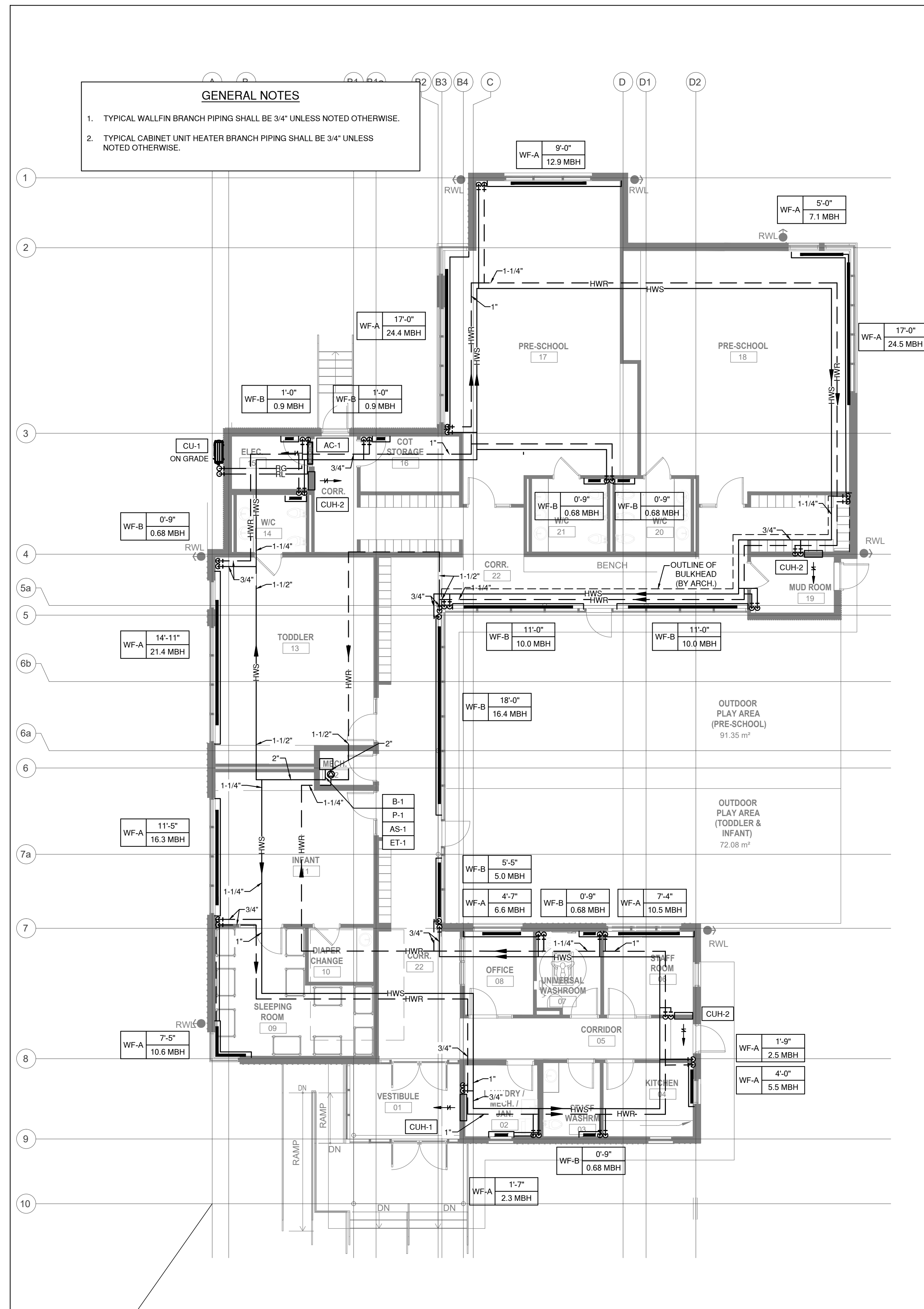
219031 - DENISON DAYCARE CENTRE

DRAWING LIST, SYMBOL LIST & NOTES
2020.03.19
Scale: N.T.S. Drawn By: SLKL MD 19146

M1.0

APPLICATION NUMBER:

APPLICATION NUMBER:



GENERAL NOTES

1. TYPICAL WALLFIN BRANCH PIPING SHALL BE 3/4" UNLESS NOTED OTHERWISE.
2. TYPICAL CABINET UNIT HEATER BRANCH PIPING SHALL BE 3/4" UNLESS NOTED OTHERWISE.

1
M2.0 GROUND FLOOR PLAN - HVAC
Scale: 1:100

REVISIONS

SUBMITTALS

10			
9			
8			
7			
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4			
3	ISSUED FOR PERMIT REVISIONS	2020.11.04	MD
2	ISSUED FOR PERMIT	2020.06.26	MD
1	ISSUED FOR COORDINATION	2020.04.03	VK
No.	Description	YYYY.MM.DD	By

NORTH: TRUE NORTH, PROJECT NORTH

STAMP: LICENSED PROFESSIONAL ENGINEER, NOV 4, 2020, M. DI ZIO, 100850658, PROVINCE OF ONTARIO

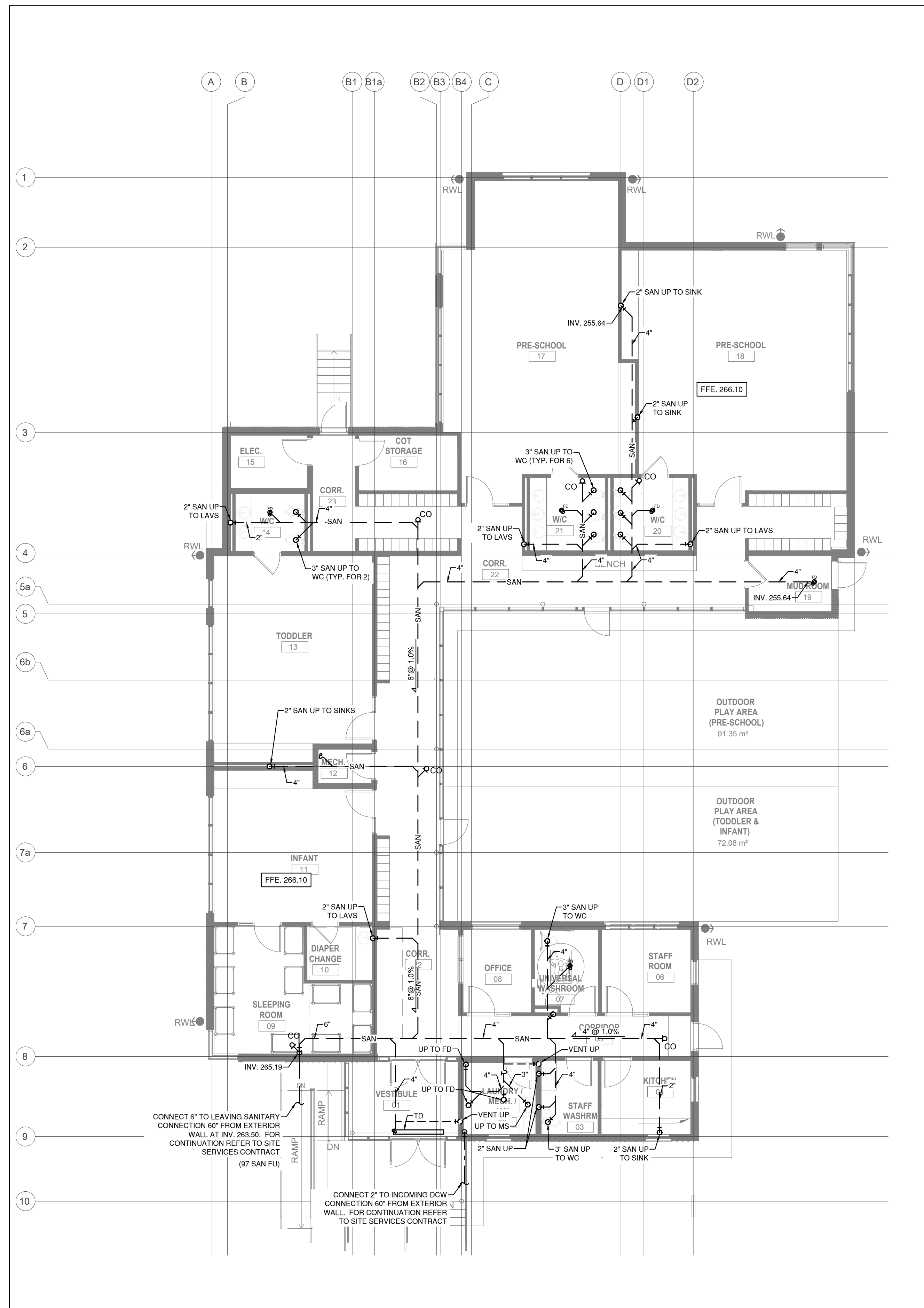
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Vaughan, Ontario L4K 4A5
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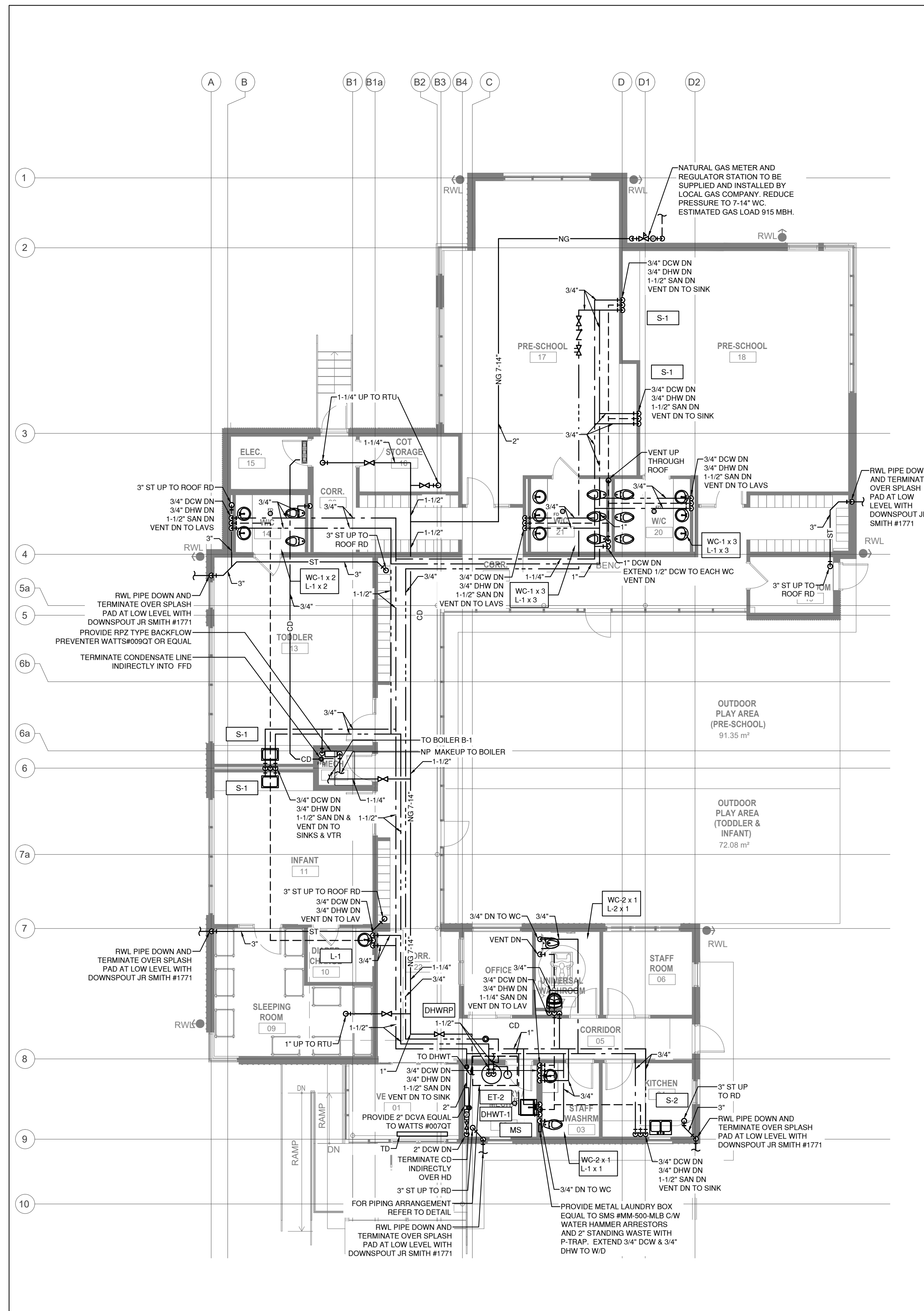
GROUND FLOOR PLAN - PIPING

2020.03.19
Scale: 1:100
Drawn By: SL
Checked By: MD
19146

M2.1



1 BELOW GRADE PLAN - PLUMBING
Scale: 1:100
M3.0



2 GROUND FLOOR PLAN - PLUMBING
Scale: 1:100
M3.0

APPLICATION NUMBER:

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No.	Description	YYYY.MM.DD By

NORTH

TRUE NORTH PROJECT NORTH

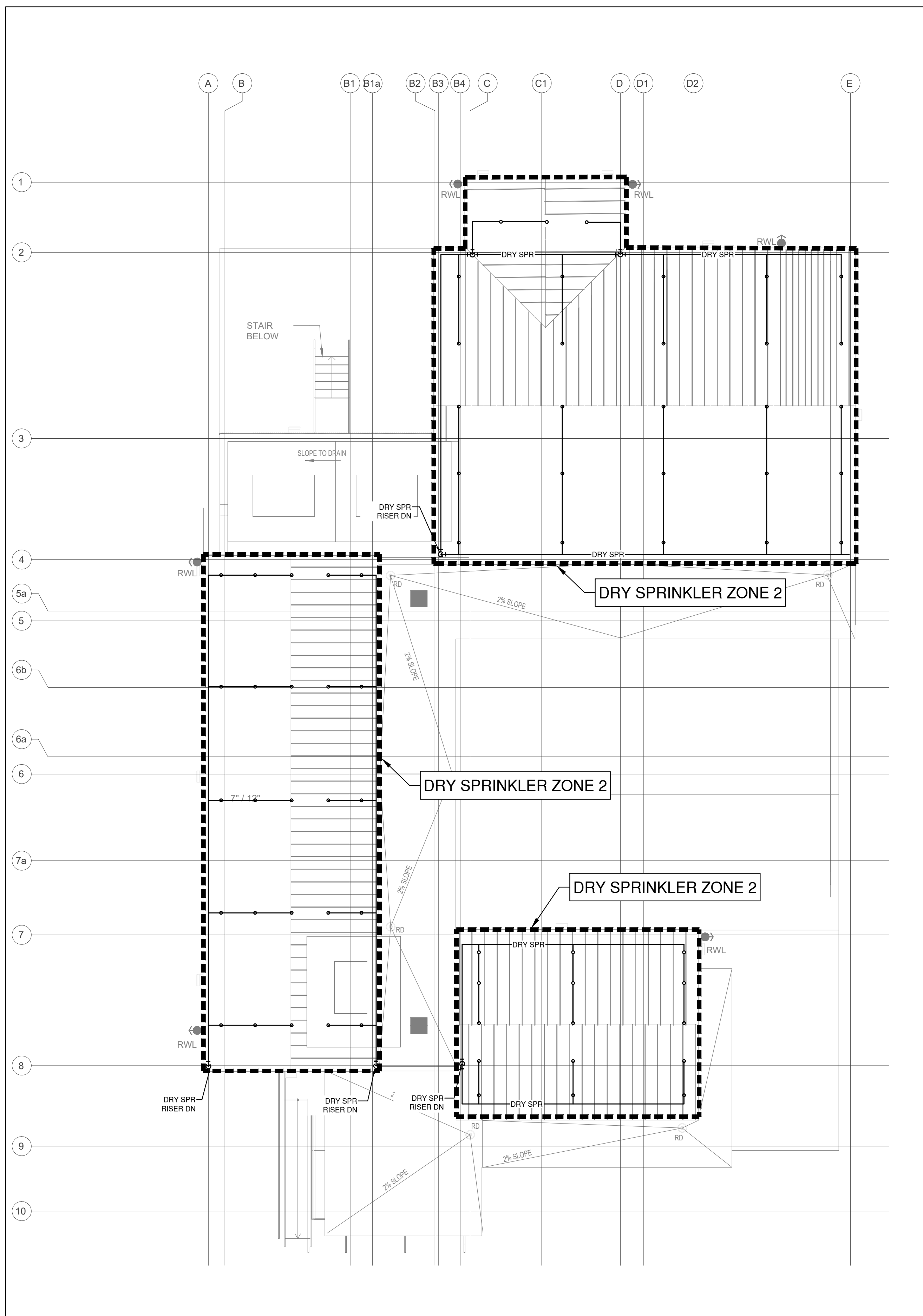
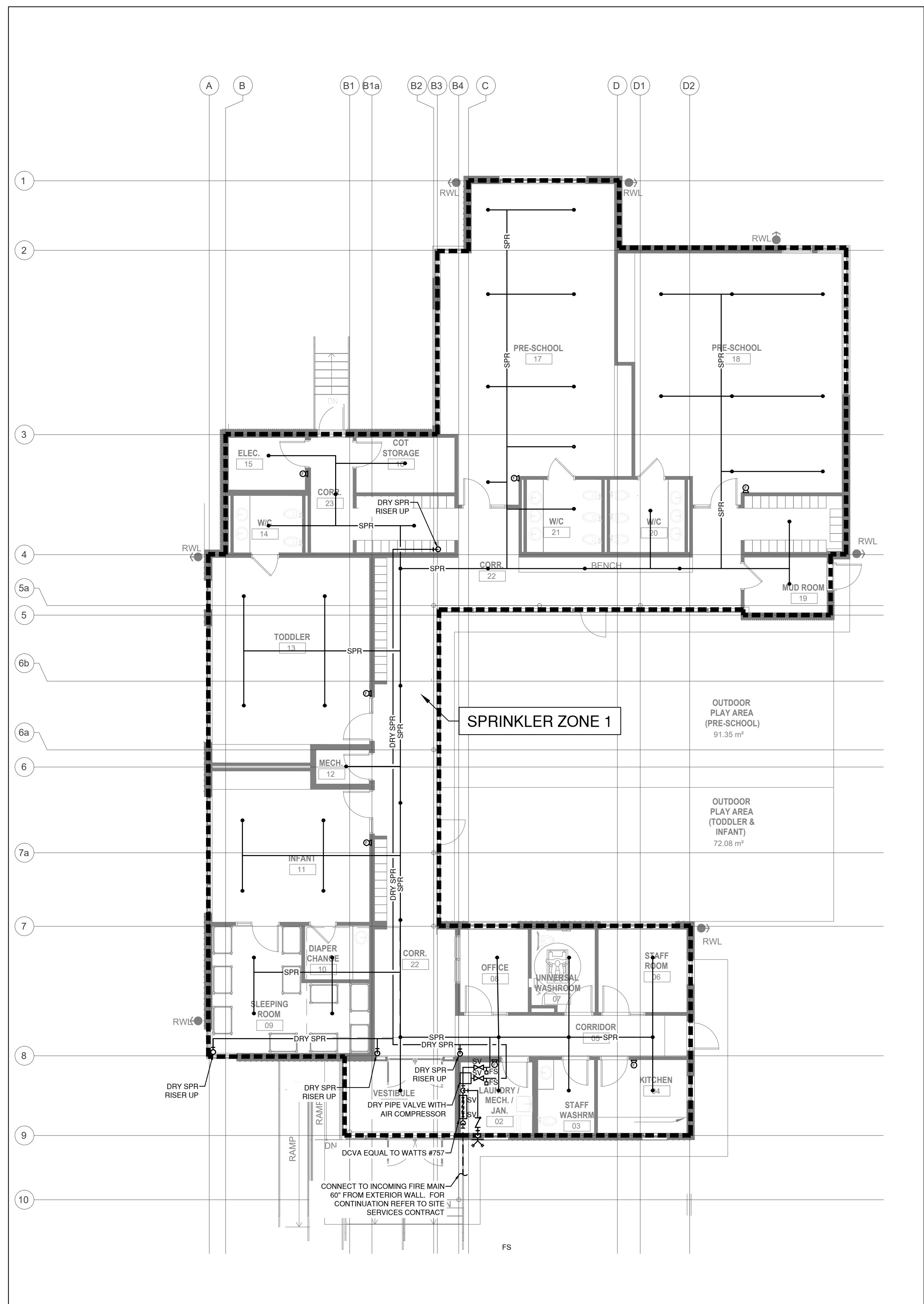
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BELOW GR. & GROUND FLOOR - PLUMBING
2020.03.19
Scale: 1:100 Drawn By: KL MD
19146

M3.0



REVISIONS

SUBMITTALS

3 ISSUED FOR PERMIT REVISIONS 2020.11.04 MD

2 ISSUED FOR PERMIT 2020.06.26 MD

1 ISSUED FOR COORDINATION 2020.04.03 VK

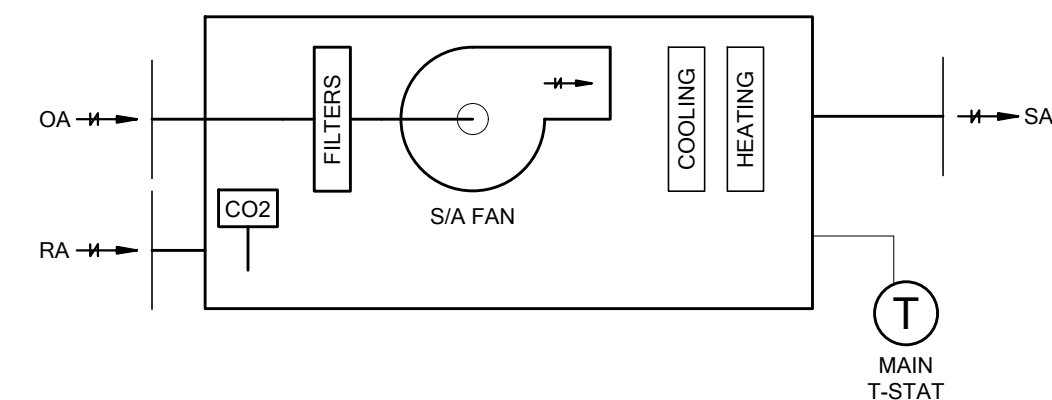
No. Description YYYYMMDD By

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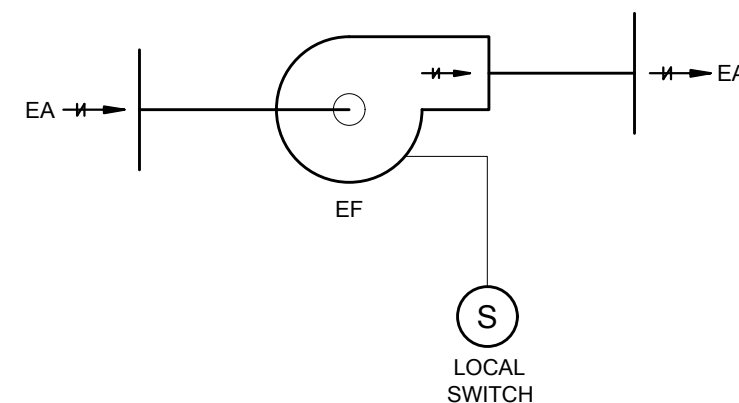
SEQUENCE OF OPERATION

1. DURING OCCUPIED MODE, PACKAGED UNIT TO RUN CONTINUOUSLY TO MAINTAIN ROOM TEMPERATURE SENSOR SETPOINT OF 22.2°C (ADJUSTABLE) IN HEATING AND 23.3°C (ADJUSTABLE) IN COOLING. DURING UNOCCUPIED MODE, UNIT TO OPERATE TO MAINTAIN ROOM TEMPERATURE SENSOR SETPOINT OF 18°C (ADJUSTABLE) IN HEATING AND 26°C (ADJUSTABLE) IN COOLING. UNIT TO MODULATE FAN SPEED, DX COOLING AND GAS HEATING AS REQUIRED.
2. THROUGH INTEGRATED ENTHALPHY CONTROL, PACKAGED ROOFTOP UNIT SHALL PROVIDE FOR FREE COOLING WHEN THE RETURN AIR ENTHALPHY IS GREATER THAN THE OUTDOOR AIR ENTHALPHY (ECONOMIZER CONTROL).
3. UNIT TO MODULATE OUTDOOR AIR DAMPER POSITION TO MAINTAIN RETURN AIR CO2 CONCENTRATION BELOW 800 PPM (ADJUSTABLE)

NOTES

1. UNIT TO OPERATE CONTINUOUSLY BASED ON A TIME OF DAY SCHEDULE PROGRAMMED THROUGH PROGRAMMABLE THERMOSTAT.
2. UNIT COMPLETE WITH 7-DAY PROGRAMMABLE THERMOSTAT C/W TEMPERATURE SENSOR TO GOVERN UNIT OPERATION.

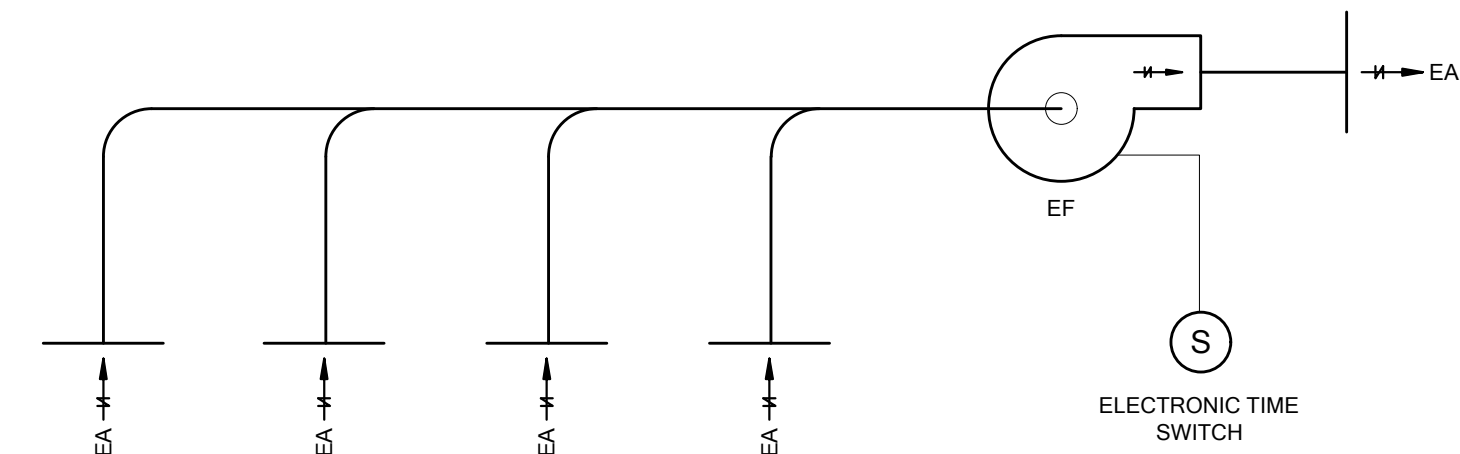
**PACKAGED ROOFTOP UNITS
CONTROL DIAGRAM**



SEQUENCE OF OPERATION

1. LOCAL FAN SWITCH SHALL ENABLE/DISABLE EXHAUST FAN.
2. FAN TEF-2 SERVING JAN. CLOSET SHALL OPERATE CONTINUOUSLY AT ALL TIMES.

**EXHAUST FAN "TEF-2"
CONTROL DIAGRAM**



SEQUENCE OF OPERATION

1. ELECTRONIC TIME SWITCH TO ENABLE/DISABLE TOILET EXHAUST FAN BASE ON TIME OF DAY SCHEDULE.
2. ONCE ENABLED, FAN TO OPERATE CONTINUOUSLY AT FULL CAPACITY.

NOTES

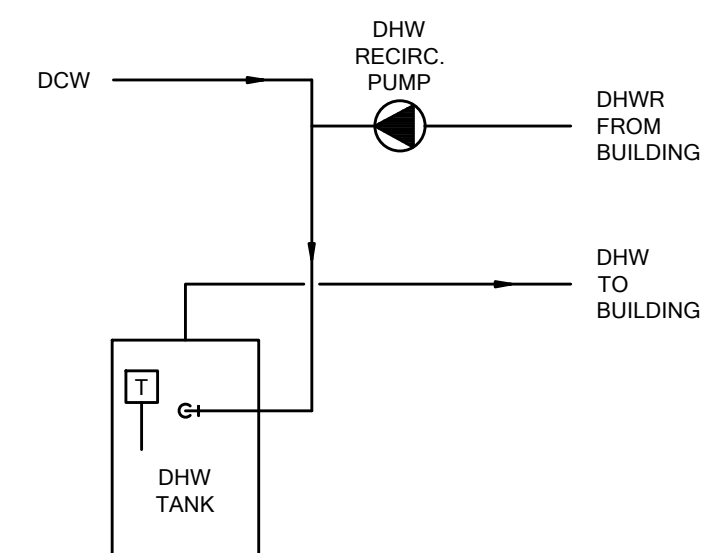
1. ELECTRONIC TIME SWITCH EQUAL TO INTERMATIC MODEL# FM1D20A-120. SWITCH TO BE WALL MOUNTED IN COT STORAGE ROOM 16.

**TOILET EXHAUST FAN "TEF-1"
CONTROL DIAGRAM**

NOTES

1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL RELAYS, DRY CONTACTS, CONTACTORS, TRANSDUCERS, ETC. AS REQUIRED TO OPERATE THE SYSTEMS AS INTENDED.
2. COORDINATE FINAL INSTALLATION POSITION OF EACH THERMOSTAT AND ALL OTHER CONTROLS RELATED DEVICES THAT ARE LOCATED ON WALLS, CEILINGS, FLOORS, ETC. IN ALL AREAS ON SITE WITH THE ARCHITECT AND/OR INTERIOR DESIGNER PRIOR TO ROUGH IN. WALL MOUNTED THERMOSTATS ARE TO BE MOUNTED AS PER LOCAL GOVERNING AUTHORITY AND BARRIER FREE REQUIREMENTS.
3. ALL CONTROL WIRING IN AREAS WITH EXPOSED CEILINGS SHALL BE PROVIDED IN CONDUIT.

GENERAL CONTROL NOTES



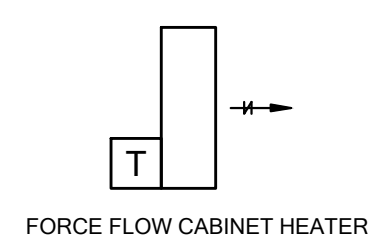
SEQUENCE OF OPERATION

1. INTEGRAL WATER TEMPERATURE SENSOR TO MONITOR STORAGE WATER TEMPERATURE.
2. LOCAL CONTROLLER TO ENABLE AND DISABLE DOMESTIC HOT WATER TANK HEATER TO MAINTAIN WATER STORAGE TEMPERATURE SETPOINT OF 60°C(140°F).

NOTES

1. RECIRCULATION PUMP RUN FOR 15 MIN OF EVERY HOUR.

**DOMESTIC HOT WATER HEATER
CONTROL DIAGRAM**

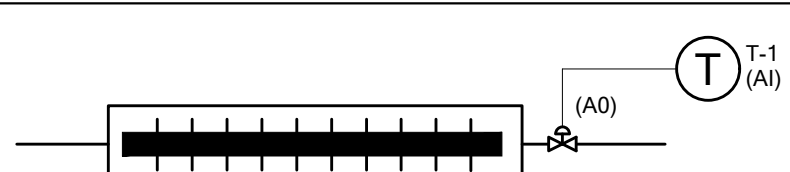


FORCE FLOW CABINET HEATER

SEQUENCE OF OPERATION

1. INTEGRAL THERMOSTAT TO MAINTAIN A SETPOINT OF 70°F

**TYPICAL CABINET UNIT HEATER
CONTROL DIAGRAM**



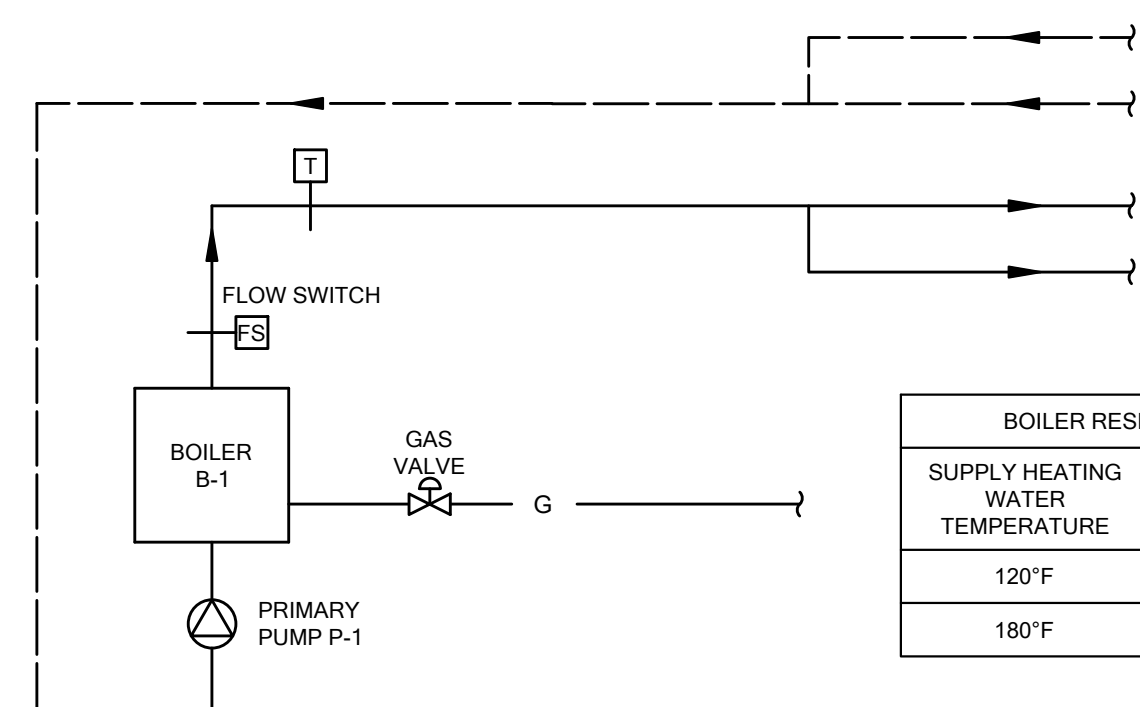
SEQUENCE OF OPERATION

1. IN HEATING MODE, LOCAL TEMPERATURE SENSOR SHALL MODULATE HEATING COIL CONTROL VALVE OF WALLFIN HEATER TO MAINTAIN THE FOLLOWING ROOM TEMPERATURE SETPOINTS (ADJUSTABLE):
22.2°C (72°F) IN FRONT OF HOUSE SPACES
15.6°C (60°F) FOR STORAGE AND SERVICE SPACES.

NOTES

1. REFER TO FLOOR PLAN FOR LOCATIONS OF WALLFIN HEATERS.

**WALLFIN HEATER
CONTROL DIAGRAM**



BOILER RESET SCHEDULE	
SUPPLY HEATING WATER TEMPERATURE	OUTDOOR AIR TEMPERATURE
120°F	60°F
180°F	-4°F

SEQUENCE OF OPERATION

1. THE SYSTEM IS ENERGIZED THROUGH LOCAL BOILER CONTROLLER. HEATING WATER IS AVAILABLE CONTINUOUSLY THROUGHOUT THE HEATING SEASON.
2. ONCE ENABLED, BOILER SHALL OPERATES ON ITS OWN SYSTEMS OF CONTROL AND SAFETIES. THE BOILER CONTROLLER SHALL MODULATE THE BOILER BY SEQUENCING THE BOILER AND ASSOCIATED PUMP TO OPTIMIZE ENERGY USE AND MAINTAIN HOT WATER TEMPERATURE SETPOINT AT THE WATER SUPPLY TEMPERATURE SENSOR BASED ON OUTDOOR AIR TEMPERATURE RESET SCHEDULE.
4. ANYTIME THE BOILER IS ENABLED, PUMP P-1 SHALL START AND AS FLOW IS PROVEN, THE BOILER SHALL FIRE UNDER ITS OWN CONTROLS AS NOTED ABOVE.

NOTES

1. OUTDOOR AIR TEMPERATURE SENSOR PROVIDED BY BUILDING OUTDOOR AIR TEMPERATURE AND ENTHALPHY STATION.
2. WHEN BOILER IS TURNED ON, MONITOR THE HEATING WATER SUPPLY TEMPERATURE THROUGH THE BOILER FLOW SWITCH AND ENSURE THAT THE BOILER IS NOT ENABLED UNTIL FLOW IS PROVEN THROUGH THE BOILER.

**HOT WATER BOILER
CONTROL DIAGRAM**

APPLICATION NUMBER:

APPLICATION NUMBER:

REVISIONS		

SUBMITTALS		
10		
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3	ISSUED FOR PERMIT REVISIONS	2020.11.04 MD
2	ISSUED FOR PERMIT	2020.06.26 MD
1	ISSUED FOR COORDINATION	2020.04.03 VK
No	Description	YYYY.MM.DD By

NORTH: TRUE NORTH, PROJECT NORTH

STAMP:

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CONTROLS DIAGRAMS & FLOW DIAGRAMS

2020.03.19	Scale	Drawn By	Checked By	M5.0
N.T.S.	SL/KL	MD	MD	
19146	19146	19146	19146	

SCHEDULE OF ROOFTOP UNITS																												
TAG	MANUFACTURER	MODEL	LOCATION	AREA SERVED	WEIGHT (LBS)	DIMENSIONS			CURB HEIGHT (IN.)	DESIGN AIRFLOW (CFM)	OUTDOOR AIR			DX COOLING								HEATING						
						WIDTH (IN.)	LENGTH (IN.)	HEIGHT (IN.)			CAPACITY (MBH)		EAT (F)		LAT (F)		OAT (F) DB	CONDENSATE DRAIN SIZE (IN)	NO. COOLING STAGES	FUEL		HEATING STAGES	INPUT (MBH)	OUTPUT (MBH)	OAT (F) DB	HEAT RISE (F)		
											SENSIBLE	TOTAL	DB	WB	DB	WB				DB	TYPE						PRESSURE (IN. WC)	
						(CFM)	(CFM)	%			DB	WB	DB	WB	DB	(IN)												
RTU-1	CARRIER	48GCEM05E2A1-6W0C0	ROOF	OFFICES	555	44 1/8	74 3/8	33 3/8	14	1550	110	7	35.76	49.85	76.8	64.5	55.0	53.7	87.0	3/4	2	NAT. GAS	7"-14"	1	110	88	-4.0	53.7
RTU-2	CARRIER	48TRD12E2A1-6W0M0	ROOF	INFANT, TODDLER, SLEEPING	940	59-1/2	88-1/8	49-3/8	14	3850	980	25	93.6	125.58	78.8	65.9	55.8	55.2	87.0	3/4	2	NAT. GAS	7"-14"	1	180	148	-4.0	36.3
RTU-3	CARRIER	48TRD12E2A1-6W0M0	ROOF	PRE-SCHOOL	940	59-1/2	88-1/8	49-3/8	14	4250	1105	26	98.14	127.62	78.9	65.9	57.0	56.2	87.0	3/4	2	NAT. GAS	7"-14"	1	220	184	-4.0	40.9

NOTES

- REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.
- TEFC TYPE MOTOR
- UNIT SHALL BE COMPLETE WITH 7-DAY PROGRAMMABLE THERMOSTAT, DEMAND CONTROL VENTILATION, CO2 SENSOR, MULTISPEED FAN AND DUAL ENTHALPY ECONOMIZER.
- PROVIDE UNIT MOUNTED WEATHERPROOF DISCONNECT.
- PROVIDE 2 INCH MERV 8 FILTER COMPLETE WITH ONE SPARE SET.

SCHEDULE OF ROOFTOP UNITS CONTINUED									
SUPPLY FAN					ELECTRICAL			EMERGENCY POWER	REMARKS
ESP	TSP	BHP	MOTOR HP	VFD	MCA	MOCF	POWER (V/PH/Hz)		
(IN. WC)	(IN. WC)								
0.65	0.72	0.75		YES	10	15	575/3/60	NO	
0.7	0.88	2.30		YES	23	25	575/3/60	NO	
0.7	0.93	2.89		YES	23	25	575/3/60	NO	

LOOSE MOTOR STARTER SCHEDULE																					
ITEM NO.	DESCRIPTION	MOTOR HP	FULL LOAD (AMPS)	COMBINATION STARTER & DISCONNECT				MODIFICATIONS							BRANCH FEEDERS		WP DISCONNECT AT MOTOR	DISCONNECT AT MOTOR	DISCONNECT ONLY	F.A. SHUT DOWN	REMARKS
				FUUSED DISC.		STARTER		CONTROL TRANSFORMER (24V)	START/STOP PUSH BUTTON	H.O.A. SELECTOR SWITCH	PILOT LIGHT	AUX. CONT.		CABLE OR BUS	CONDUIT SIZE						
				REQUIRED	FUSE	SIZE	TYPE					NORMALLY OPEN	NORMALLY CLOSED								
TEF-1	PRE-SCHOOL AND TODDLER ROOM WASHROOMS, MECH CLOSET			NOTE 2	NOTE 2	1	FVNR	YES	-	YES	YES	2	2	NOTE 2	NOTE 2	-	YES	-	-	120 - 1Ø RATED, QUANTITY = 1	
TEF-2	UNIVERSAL AND STAFF WASHROOMS, LAUNDRY ROOM, AND DIAPER CHANGE ROOM			NOTE 2	NOTE 2	1	FVNR	YES	-	YES	YES	2	2	NOTE 2	NOTE 2	-	YES	-	-	120 - 1Ø RATED, QUANTITY = 4; FAN CONTROL BY LIGHT SWITCH	
CUH-1	VESTIBULE	1/20	NOTE 2	NOTE 2	NOTE 2	1	FVNR	YES	-	YES	YES	2	2	NOTE 2	NOTE 2	-	YES	-	-	120 - 1Ø RATED, QUANTITY = 1	
CUH-2	CORRIDORS, MUD ROOM	1/25	NOTE 2	NOTE 2	NOTE 2	1	FVNR	YES	-	YES	YES	2	2	NOTE 2	NOTE 2	-	YES	-	-	120 - 1Ø RATED, QUANTITY = 3	
P-1	HEATING WATER PUMP	1.0	NOTE 2	NOTE 2	NOTE 2	1	FVNR	YES	-	YES	YES	2	2	NOTE 2	NOTE 2	-	YES	-	-	208 - 1Ø RATED, QUANTITY = 1	

NOTES

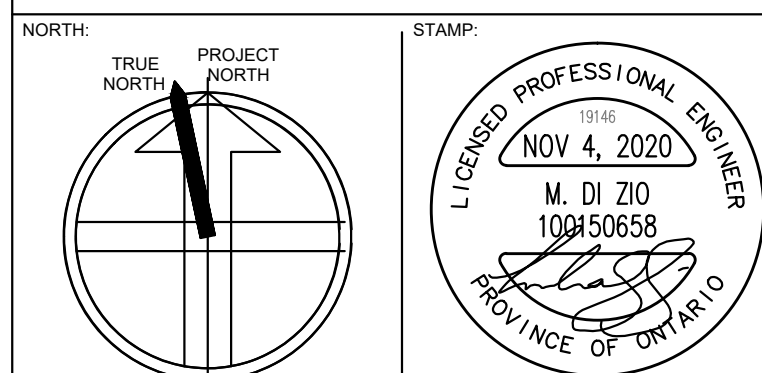
- ALL STARTERS TO BE COMPLETE WITH EXTERNAL OVERLOAD RESET PUSH BUTTONS.
- REFER TO ELECTRICAL FLOOR PLANS, PANEL SCHEDULES, AND SINGLE LINE DIAGRAM FOR ELECTRICAL REQUIREMENT SUCH AS FUSE SIZE, CIRCUIT, BRANCH FEEDER, BREAKER REQUIREMENT.

APPLICATION NUMBER:

APPLICATION NUMBER:

NO.	REVISIONS	DATE	BY

NO.	DESCRIPTION	DATE	BY
3	ISSUED FOR PERMIT REVISIONS	2020.11.04	MD
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EQUIPMENT SCHEDULES 1

2020.03.19
 Scale: N.T.S.
 Drawn By: SL/KL MD
 Checked By: MD
 19146

M6.0

SCHEDULE OF VIBRATION ISOLATION					
EQUIPMENT	MANUFACTURER	TYPE OF BASE & THICKNESS (IN)	TYPE OF ISOLATION	STATIC DEFLECTION (IN)	REMARKS
IN-LINE FANS	VIBRO ACOUSTICS	-	SHR	1	1/2" THICK RUBBER (NEOPRENE) GROMMET AT HANGAR ROD CONNECTION
CONDENSING UNIT	VIBRO ACOUSTICS	-	NSN	1.5	UNIT MOUNTED ON NEOPRENE PAD ON CONCRETE PAVERS

NOTES:
1. SHR - SPRING HANGERS

SCHEDULE OF GRILLES AND DIFFUSERS							
TYPE	MANUFACTURER	MODEL	DESCRIPTION	VOLUME CONTROL	FINISH	OPTIONS	REMARKS
A	E.H. PRICE	SCD	SQUARE CONE DIFFUSER	YES	TO ARCH. DIRECTION	SIZE: 24"x24" (600mm x 600mm) FRAME: 31 SURFACE MOUNT	REFER TO FLOOR PLANS FOR NECK SIZE AND AIRFLOWS.
B	E.H. PRICE	SCD	SQUARE CONE DIFFUSER	YES	TO ARCH. DIRECTION	SIZE: 12"x12" (300mm x 300mm) FRAME: 31 SURFACE MOUNT	REFER TO FLOOR PLANS FOR NECK SIZE AND AIRFLOWS.
C	E.H. PRICE	80	EGG CRATE	YES	TO ARCH. DIRECTION	DUCTED: F BORDER	REFER TO FLOOR PLANS FOR SIZE OF GRILLES.
D	E.H. PRICE	520FF	LOUVERED SUPPLY GRILLE	YES	TO ARCH. DIRECTION	DOUBLE DEFLECTION STEEL CONSTRUCTION SURFACE MOUNT: F BORDER SPIRAL DUCT: SDF FRAME L BLADE ORIENTATION FIRE RATED	REFER TO FLOOR PLANS FOR SIZE OF GRILLES.
E	E.H. PRICE	530FF	LOUVERED SUPPLY GRILLE 45° DEFLECTION	YES	TO ARCH. DIRECTION	STEEL CONSTRUCTION SURFACE MOUNT: F BORDER L BLADE ORIENTATION FIRE RATED	REFER TO FLOOR PLANS FOR SIZE OF GRILLES.
F	E.H. PRICE	SCD	SQUARE CONE DIFFUSER	YES	TO ARCH. DIRECTION	SIZE: 12"x12" (300mm x 300mm) FRAME: 31 SURFACE MOUNT	REFER TO FLOOR PLANS FOR NECK SIZE AND AIRFLOWS.

NOTES:
1. CONFIRM FINISH WITH ARCHITECT PRIOR TO ORDER
2. REFER TO DRAWINGS FOR QUANTITIES.

SCHEDULE OF BOILERS																			
TAG	SYSTEM	NO. REQ'D	LOCATION	MANUFACTURER	MODEL	SIZE (H x W x D)	WEIGHT (LBS)	INPUT MIN/MAX (MBH)	HEATING CAPACITY (MBH)	NET AHRI RATING (MBH)	FLOW RATE (GPM)	ΔT (°F)	HEAD LOSS (FT)	VENT (IN)	RELIEF VALVE (PSI)	ELECTRICAL			REMARKS
																POWER (V/Ø/Hz)	MCA	FLA	
B-1	HEATING WATER	1	MECH 12	LOCHINVAR	WHB285N	43-3/8" X 16" X 19"	205	28.5/285	264	229	27	20	2.42	3	30	120/1/60	4.5	3.6	

NOTES:
1. COMPLETE WITH CONCENTRIC VENT KIT.
2. COMPLETE WITH CONDENSATE NEUTRALIZATION KIT.
3. MODULATING BURNER WITH 10:1 TURNDOWN.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SCHEDULE OF PUMPS																		
TAG	SYSTEM	NO. REQ'D	LOCATION	MANUFACTURER	MODEL	SIZE (IN) INLET X OUTLET	WEIGHT (LB)	FLOW (GPM)	HEAD (FT)	RPM	MOTOR BHP	MOTOR HP	VFD	POWER (V/Ø/Hz)	EMERGENCY POWER	REMARKS		
P-1	HEATING WATER	1	MECH 12	GRUNDFOS	MAGNA3 65-150	2.5 X 2.5	53	26.4	40	1301	0.46	1.0	NO	208/1/60	NO			

NOTES:
1.
2.

SCHEDULE OF MOTORIZED UNIT HEATERS													
TAG	MANUFACTURER	MODEL	LOCATION	CAPACITY (MBH)	AIRFLOW (CFM)	WATER (GPM)	EWT (°F)	ΔT (°F)	MOTOR			REMARKS	
									HP	RPM	VOLTAGE		
CUH-1	ENGINEERED AIR	CUH-4	VESTIBULE	31.8	370	3.07	180	20	1/20	1050	120/1/60	FULLY RECESSED ARRANGEMENT 16	
CUH-2	ENGINEERED AIR	CUH-1	CORRIDOR, MUD ROOM	16.2	185	1.62	180	20	1/25	1075	120/1/60	FULLY RECESSED ARRANGEMENT 16	

NOTES:
1. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.

SCHEDULE OF WALLFINS								
TAG	MANUFACTURER	MODEL	ELEMENT	ENCLOSURE HEIGHT (IN)	CAPACITY (BTU/HR/FT)	AVERAGE WATER TEMPERATURE (°F)	NUMBER OF ROWS	REMARKS
WF-A	ENGINEERED AIR	WF-4C	1-1/4" COPPER TUBE W/ 4"x4" ALUMINUM FINNS 50 FINS/FT	305	1,433	170	2	
WF-B	ENGINEERED AIR	WF-4C	1-1/4" COPPER TUBE W/ 4"x4" ALUMINUM FINNS 50 FINS/FT	152	913	170	1	

NOTES:
1. CAPACITIES BASED ON WATER TEMPERATURE DROP OF 20°F AND ENTERING AIR TEMPERATURE OF 70°F.

SCHEDULE OF FANS																
TAG	MANUFACTURER	MODEL	LOCATION	AREA SERVED	WEIGHT (LBS)	DESIGN AIRFLOW (CFM)	ESP (IN. WC)	RPM	BHP	MOTOR HP	SPEED CONTROLLER	SOUND (SONES)	ELECTRICAL		EMERGENCY POWER	REMARKS
													FLA (A)	POWER (V/Ø/Hz)		
TEF-1	GREENHECK	BSQ-90	W/C 14	W/C 14, 20, 21, MECH 12	83	650	0.6	1589	0.25	1/3	YES	12.3	7.2	115/60/1	NO	INTERMATIC FM1D20A-120 ELECTRONIC TIMER SWITCH FOR TEF-1
TEF-2	ZONEX	GM-3	VARIOUS	DIAPER CHANGE 10, LAUNDRY/MECH/JAN. 02, STAFF WASHROOM 03, UNIVERSAL WASHROOM 07	11	100	0.3	771	-	29W	NO	-	0.24	115/60/1	NO	

NOTES:
1. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
2. PROVIDE SPRING HANGER (EQUAL TO VIBRO-ACOUSTIC 'SHR') FOR IN-LINE FANS FOR VIBRATION ISOLATION.
3. BELT DRIVE FAN C/W SPEED CONTROLLER.

SCHEDULE OF DX SPLIT SYSTEMS																	
SYSTEM	MANUFACTURER	OUTDOOR UNIT			INDOOR UNIT					REFRIGERANT	ELECTRICAL				EMERGENCY POWER	REMARKS	
		MODEL	WEIGHT (LBS)	SOUND PRESSURE LEVEL (dBA)	MODEL	WEIGHT (LBS)	AIRFLOW (CFM)	RATED COOLING CAPACITY (MBH)	RATED HEATING CAPACITY (17°F) (MBH)		SOUND PRESSURE LEVEL (dB)	TYPE	MCA				POWER (V/Ø/Hz)
													INDOOR	OUTDOOR			
AC-1 & CU-1	MITSUBISHI	PU-A12NKA7	92	46	PKA-A12HA7	29	320-370-425	5.8 - 12.0	5.5 - 18.0	36-40-43	R410-A	1	11	28	208/1/60	NO	HEAT PUMP OPERATION

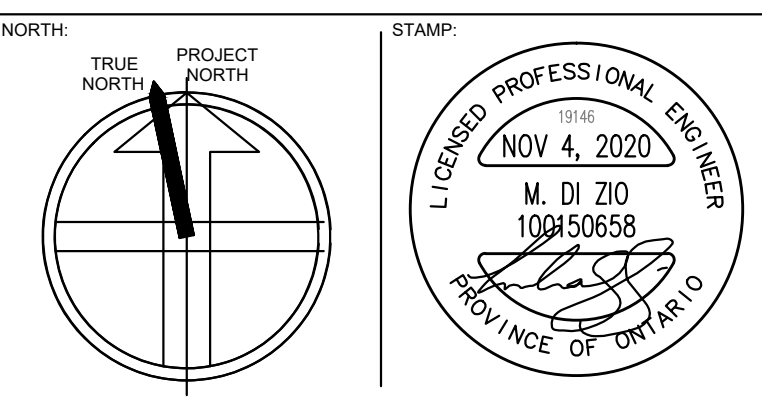
NOTES:
1. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.
2. PROVIDE WIRED ZONE CONTROLLER MOUNTED ON WALL.
3. PROVIDE CONDENSATE PUMP KIT C/W INTERLOCK TO EVAPORATOR UNIT.
4. UNIT TO HAVE MULTIPLE FAN SPEED SETTINGS. AIRFLOW AND SOUND PRESSURE DATA NOTED ABOVE IS FOR HIGH SPEED.
5. LOW AMBIENT COOLING KIT C/W WIND GUARD

APPLICATION NUMBER:

APPLICATION NUMBER:

REVISIONS		

SUBMITTALS		
10		
9		
8		
7		
6		
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4		
3	ISSUED FOR PERMIT REVISIONS	2020.11.04 MD
2	ISSUED FOR PERMIT	2020.06.26 MD
1	ISSUED FOR COORDINATION	2020.04.03 VK
No	Description	YYYY.MM.DD By



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219031 - DENISON DAYCARE CENTRE

EQUIPMENT SCHEDULES 2
2020.03.19
Scale: N.T.S. Drawn By: SLKL MD
Project No: 19146

M6.1

APPLICATION NUMBER:

APPLICATION NUMBER:

PLUMBING FIXTURE SCHEDULE

Table with columns: LOCATION, PRODUCTS, DESCRIPTION, ACCESSORIES, SAN, HW, CW, VEN T, NOTES/COMMENTS. Contains 10 rows of plumbing fixture details.

SCHEDULE OF EXPANSION TANKS

Table with columns: TAG, SYSTEM, LOCATION, MANUFACTURER, MODEL, TYPE, SIZE (DIA. x LENGTH), VOLUME (USGAL), ACCEPTANCE VOLUME (USGAL), REMARKS. Contains 2 rows of expansion tank details.

SCHEDULE OF AIR SEPARATORS

Table with columns: TAG, SYSTEM, LOCATION, MANUFACTURER, MODEL, FLOW RATE (GPM), OUTLET SIZE (IN), WEIGHT (KG), REMARKS. Contains 1 row of air separator details.

SCHEDULE OF DRAINS

Table with columns: TAG, MANUFACTURER & MODEL, REMARKS. Contains 5 rows of drain details.

SCHEDULE OF GAS-FIRED DOMESTIC HOT WATER STORAGE HEATERS

Table with columns: TAG, MANUFACTURER, MODEL, LOCATION, SIZE DIA. x HEIGHT, STORAGE CAPACITY, GAS INPUT, GAS PRESSURE, RECOVERY, VENTS, POWER, REMARKS. Contains 1 row of heater details.

SCHEDULE OF PLUMBING PUMPS

Table with columns: TAG, SYSTEM, NO. REQD, OPERATION, LOCATION, MANUFACTURER, MODEL, FLOW (GPM), HEAD (FT), RPM, MOTOR HP, POWER (V/Ø/Hz), EMERGENCY POWER, REMARKS. Contains 1 row of pump details.

Table for REVISIONS with columns for revision number, description, and date.

Table for SUBMITTALS with columns for submittal number, description, and date.

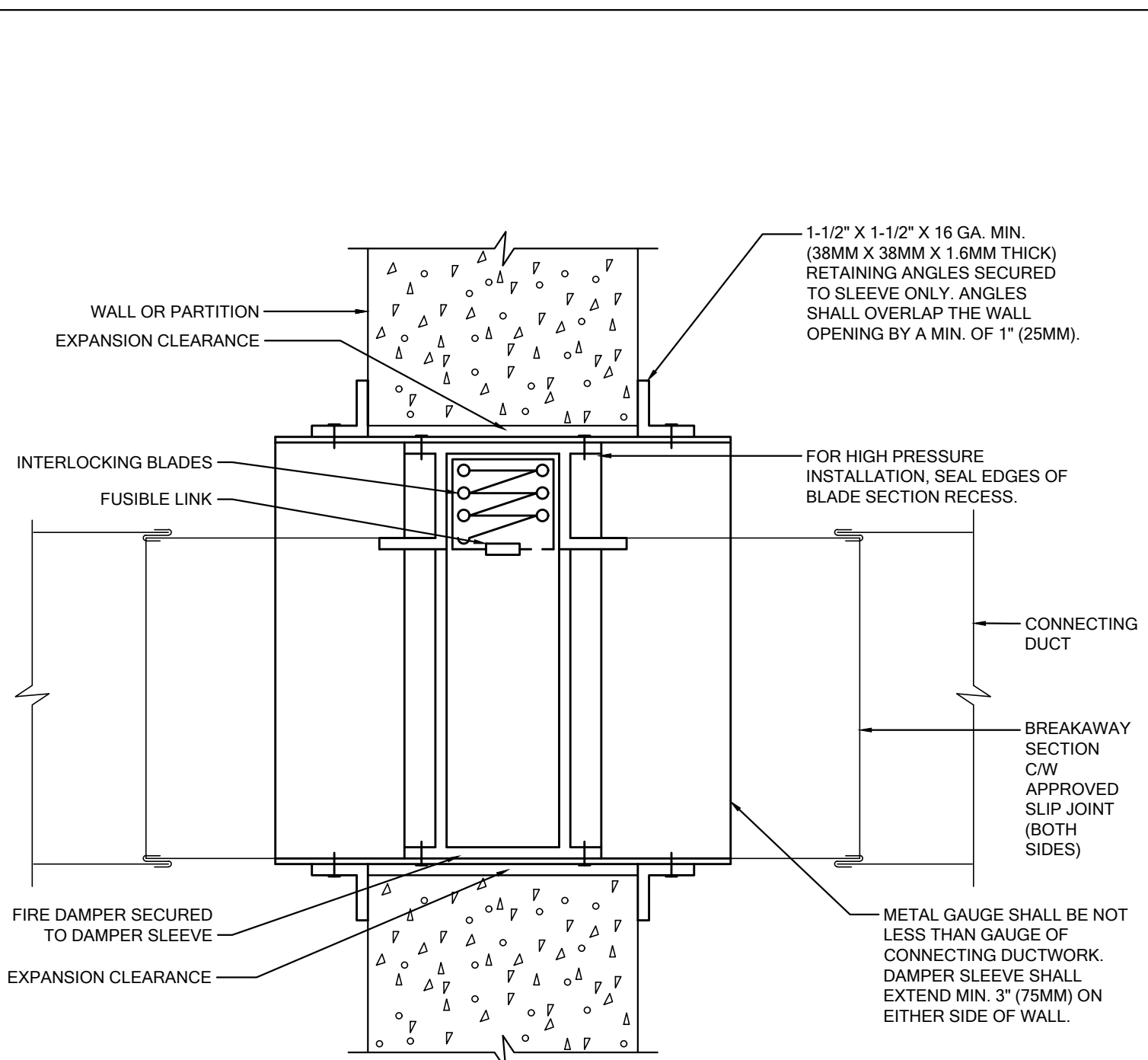
Professional Engineer Stamp for M. Di Zio, dated NOV 4, 2020, Province of Ontario.

RDZ ENG RDZ ENGINEERS LTD 17A - 30 Pennsylvania Avenue Vaughan, Ontario L4K 4A5 email: info@rdzeng.ca

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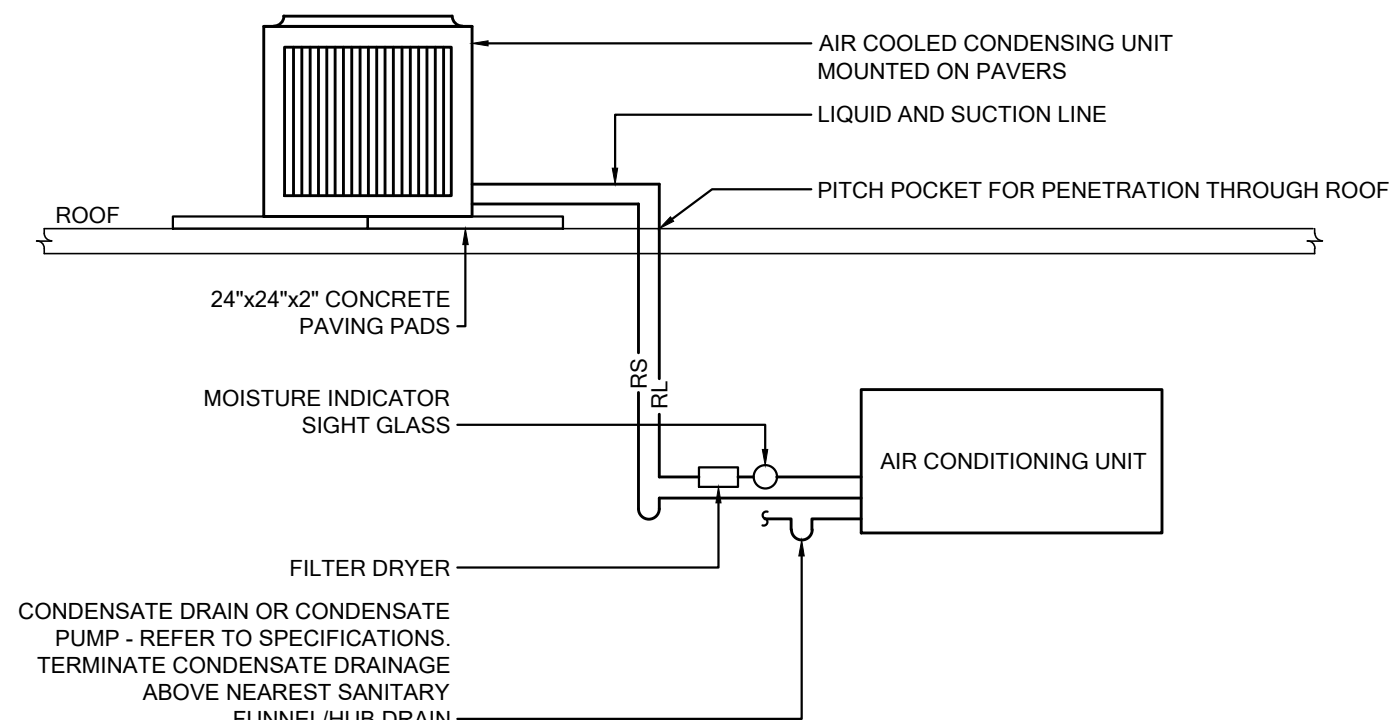
EQUIPMENT SCHEDULES 3

Table with columns: Scale, Drawn By, Checked By, Equipment Number. Includes 'M6.2' and '19146'.

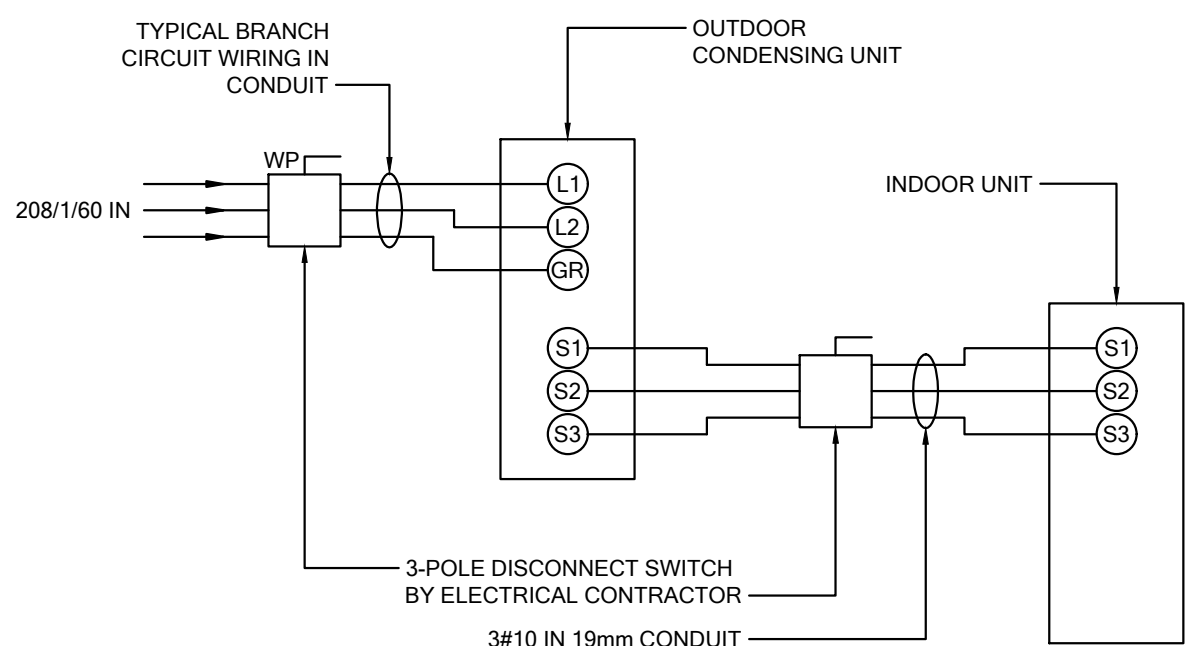


- NOTES:
1. HORIZONTAL INSTALLATION SHALL BE SIMILAR, BUT DAMPER SHALL BE C/W S.S. CLOSURE SPRING.
 2. SEAL BREAKAWAY SECTIONS AFTER INSTALLATION. FOR HIGH PRESSURE INSTALLATIONS, PROVIDE DUCT TAPE ON JOINTS AFTER SEALING.

DETAIL OF VERTICAL MOUNTED FIRE DAMPER INSTALLATION
SCALE: NTS

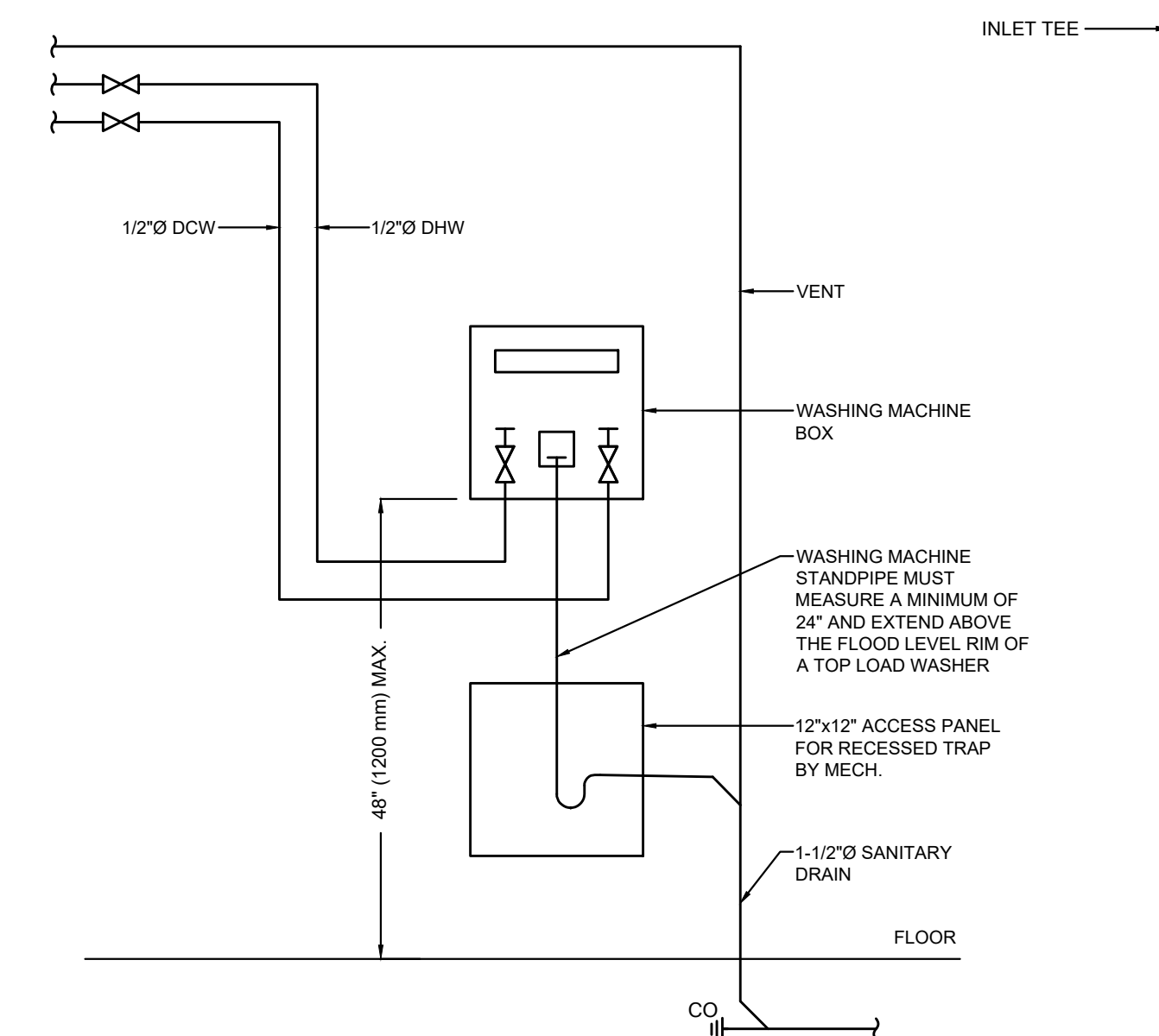


PIPING ARRANGEMENT

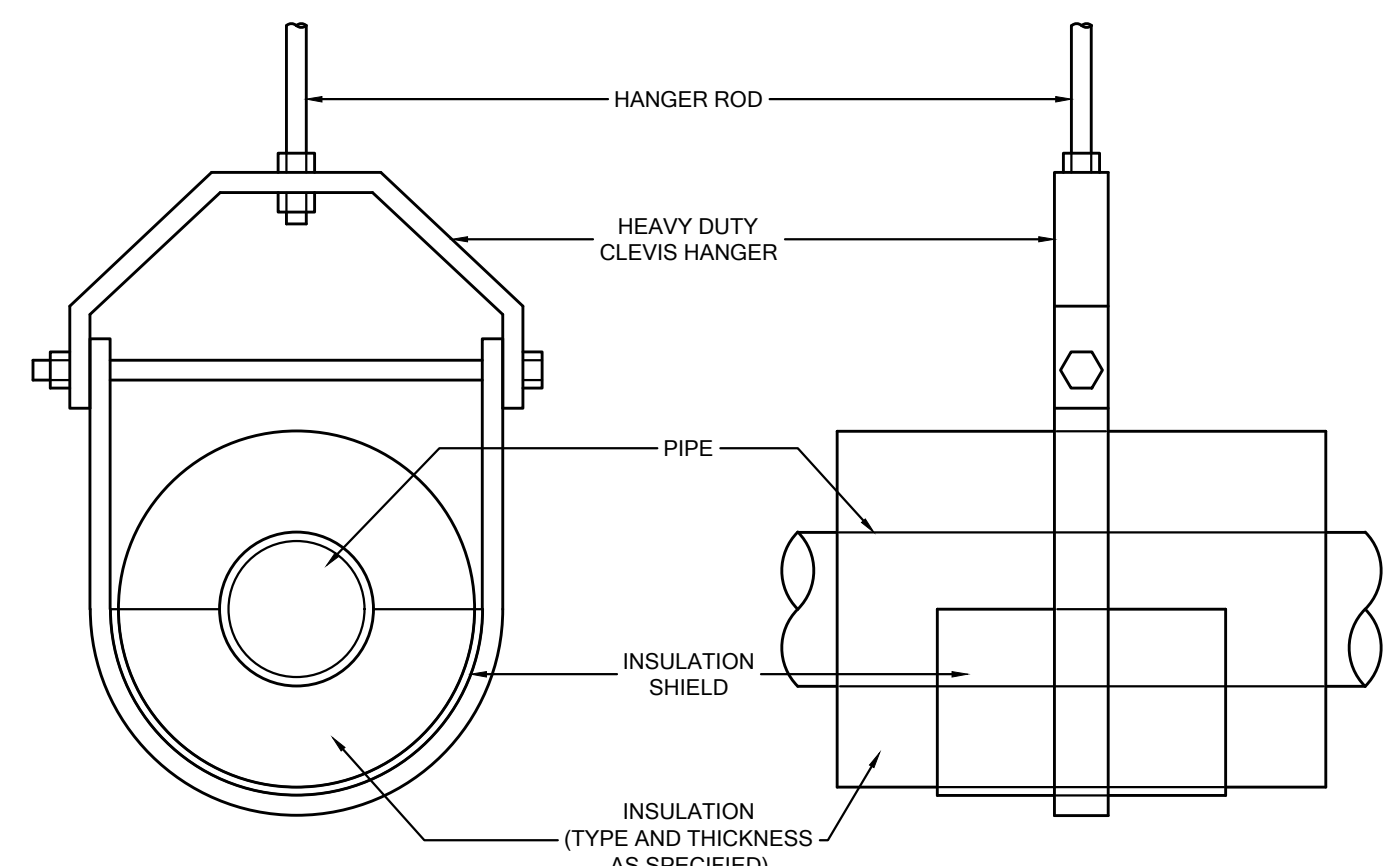


WIRING ARRANGEMENT

DETAIL OF SPLIT AC UNIT
SCALE: NTS



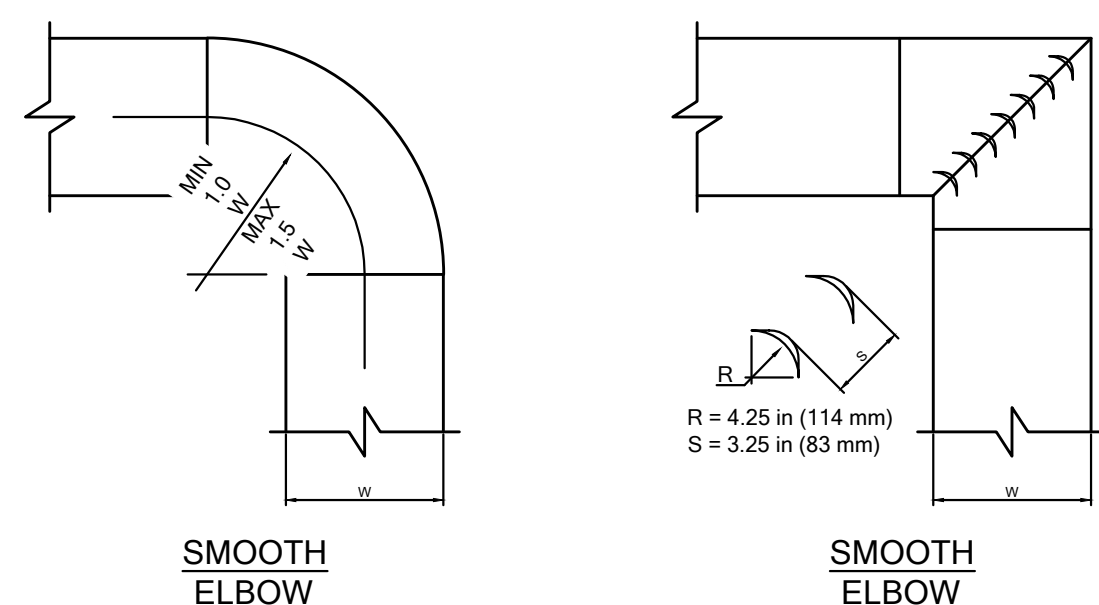
DETAIL OF WASHING MACHINE WALL BOX
SCALE: NTS



HANGER SPACING (FT)	PIPE SIZE	PIPE SIZE												
		(mm)	25	30	40	50	65	75	100	125	150	200	250	300
STD. STEEL	WATER	7	7	9	10	11	12	14	14	17	19	20	23	
	STEAM	9	9	12	13	14	15	17	17	21	24	26	30	
	COPPER	WATER	6	6	8	8	9	10	12	12	14	16	18	19
		STEAM	9	9	12	13	14	15	17	17	21	24	26	30
HANGER ROD DIAMETER (INCH)		1/4	3/8	3/8	3/8	3/8	3/8	1/2	1/2	1/2	5/8	3/4	7/8	

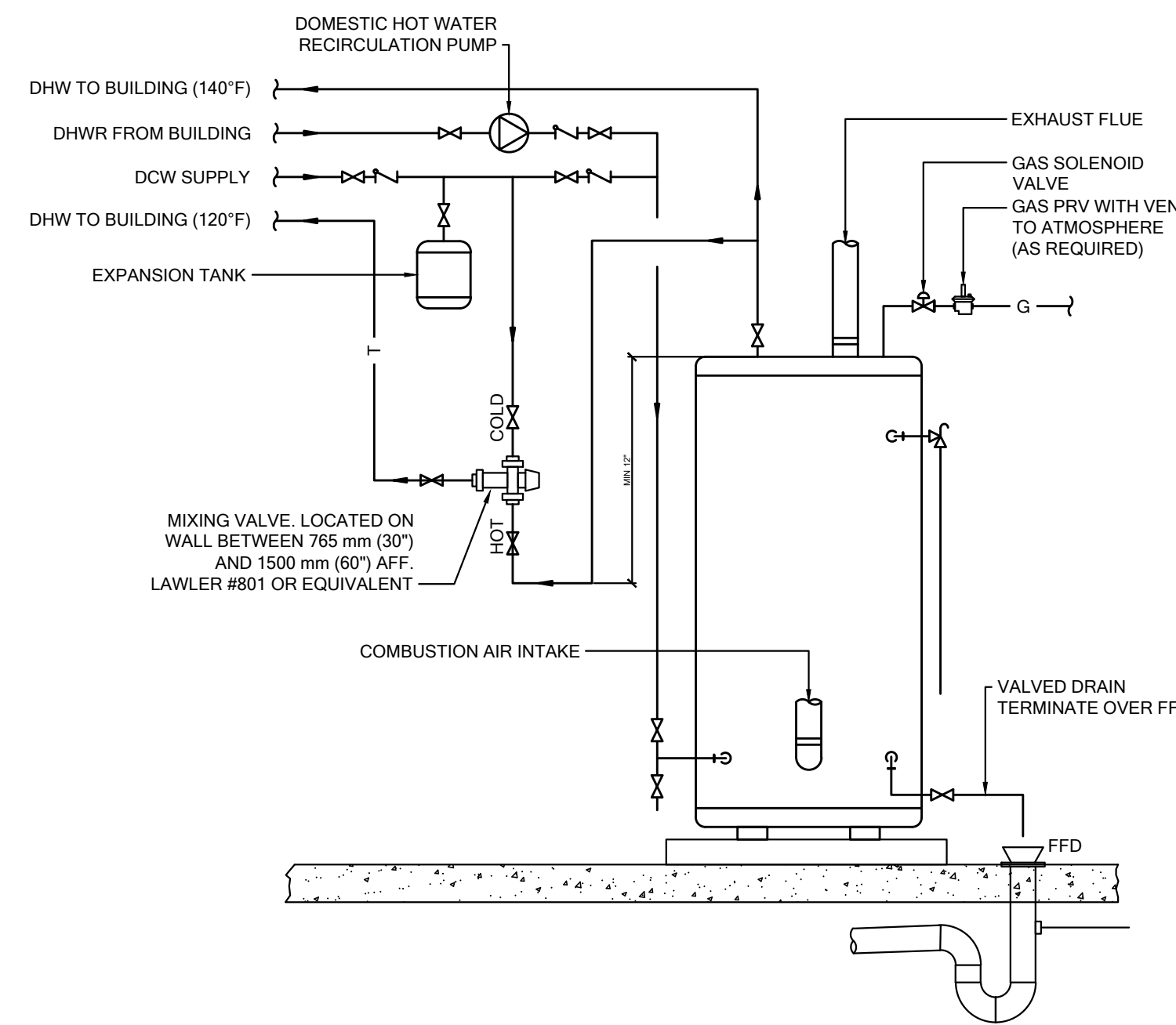
- NOTES:
1. PROVIDE A SECTION OF HIGH COMPRESSION STRENGTH INSULATION AT EACH HANGER. INSULATION MAY BE TO HALF ROUND OR FULL ROUND AND EXTEND A MINIMUM OF 50 mm (2") BEYOND INSULATION SHIELD IN EACH DIRECTION. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.
 2. INSULATION SHIELD TO BE MINIMUM 16 GA.
 3. CONTRACTOR IS RESPONSIBLE TO PROVIDE AN ENGINEERED SYSTEM FOR PIPE HANGERS SUITABLE TO SUPPORT THE SIZE AND WEIGHT OF THE PIPE BEING SUPPORTED.

DETAIL OF PIPE HANGER
SCALE: NTS



BRANCH DUCT TAKEOFF FROM MAIN

DETAIL OF TYPICAL DUCTWORK FITTINGS
SCALE: NTS



DETAIL OF GAS FIRED DHW TANK
SCALE: NTS

APPLICATION NUMBER:

APPLICATION NUMBER:

REVISIONS		
SUBMITTALS		
10.		
9.		
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4.		
3. ISSUED FOR PERMIT REVISIONS	2020.11.04	MD
2. ISSUED FOR PERMIT	2020.06.26	MD
1. ISSUED FOR COORDINATION	2020.04.03	WK
No. Description	YYYY.MM.DD	By

NORTH: TRUE NORTH PROJECT NORTH

STAMP:

 LICENSED PROFESSIONAL ENGINEER
 NOV 4, 2020
 M. DI ZIO
 100150658
 PROVINCE OF ONTARIO

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 Vaughan, Ontario L4K 4A5
 email: info@rdzeng.ca

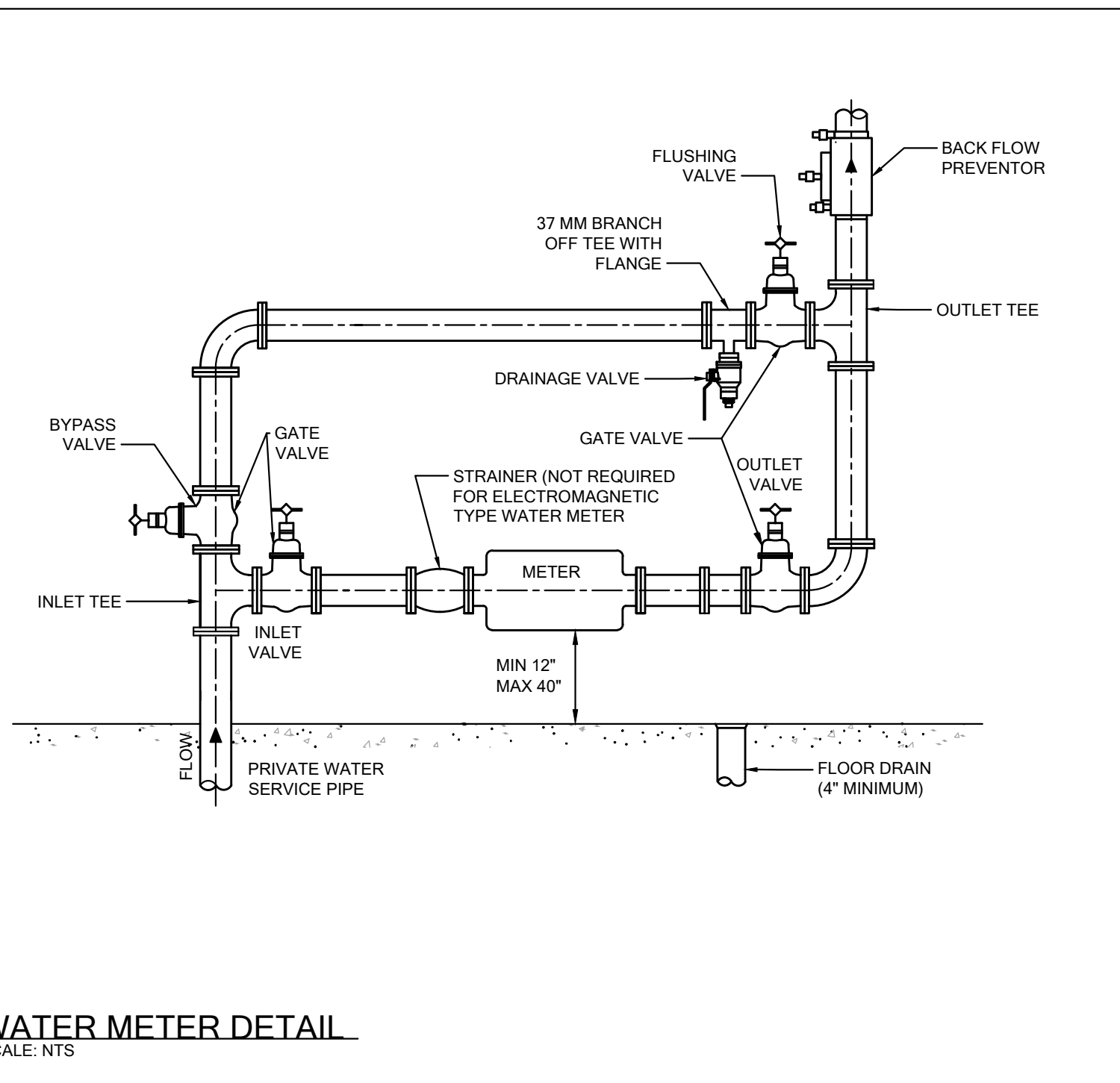
219031 - DENISON DAYCARE CENTRE

DETAILS 1

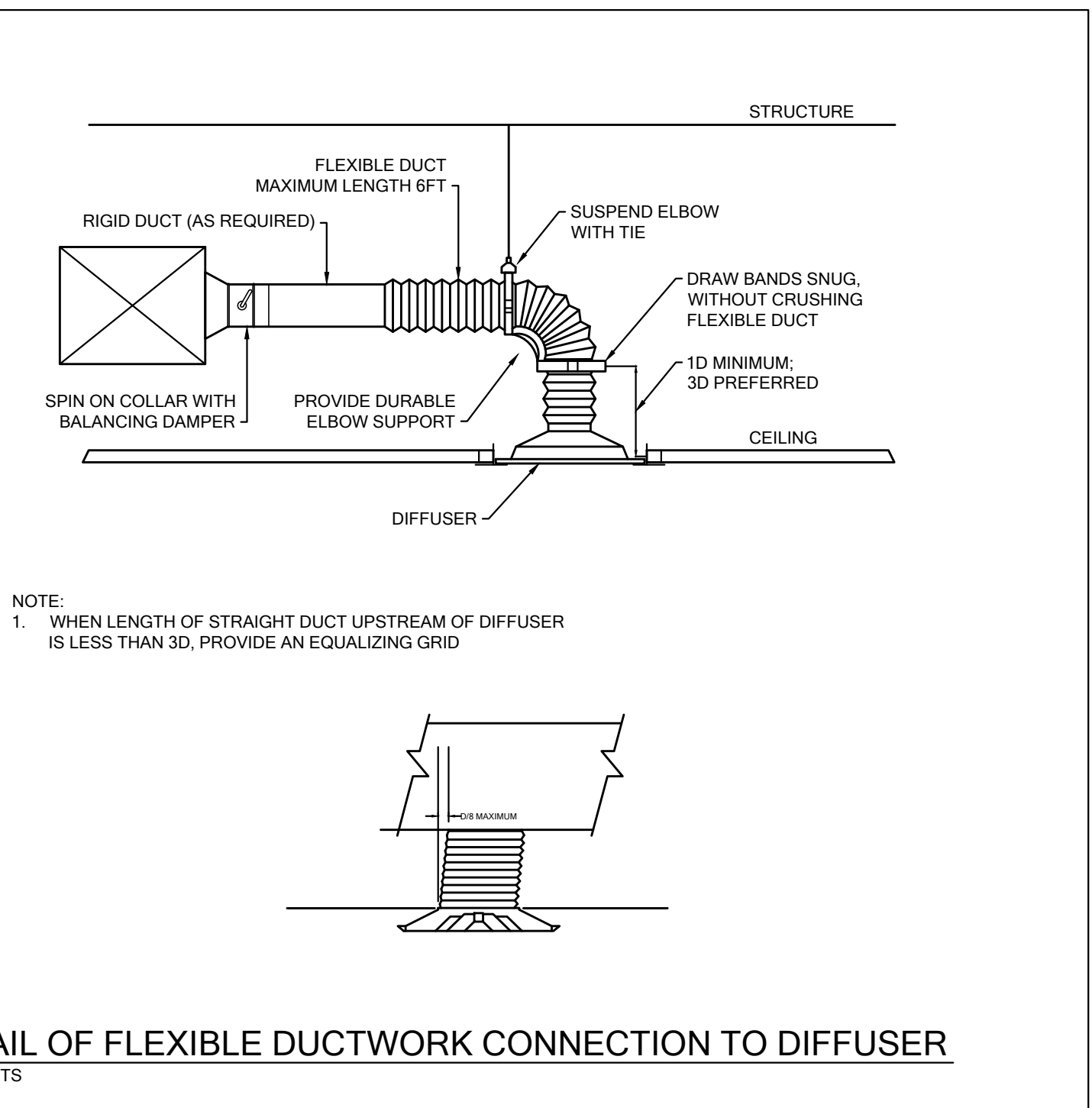
2020.03.19

Scale	Drawn By	Checked By
N.T.S.	SL/KL	MD
19146		

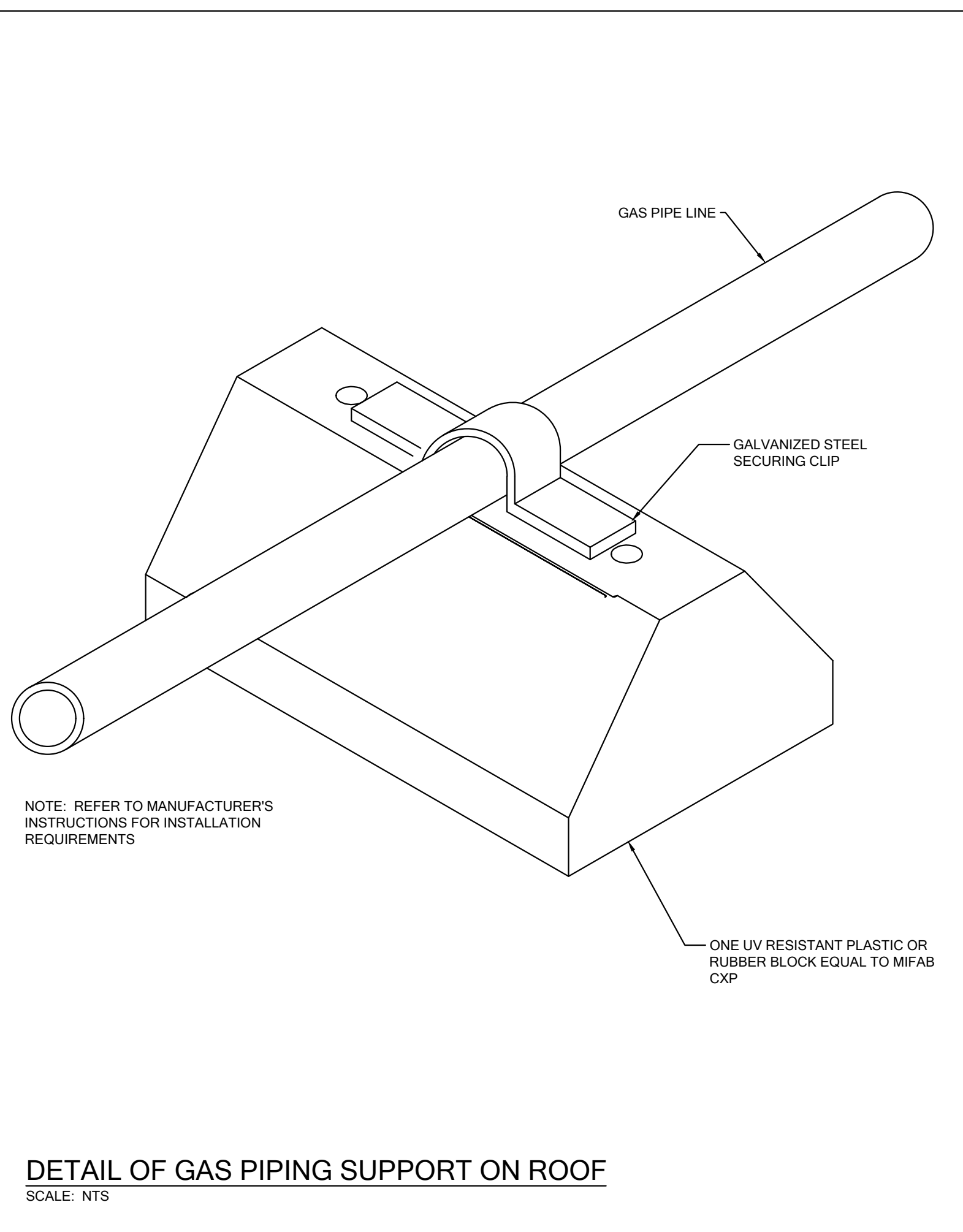
M7.0



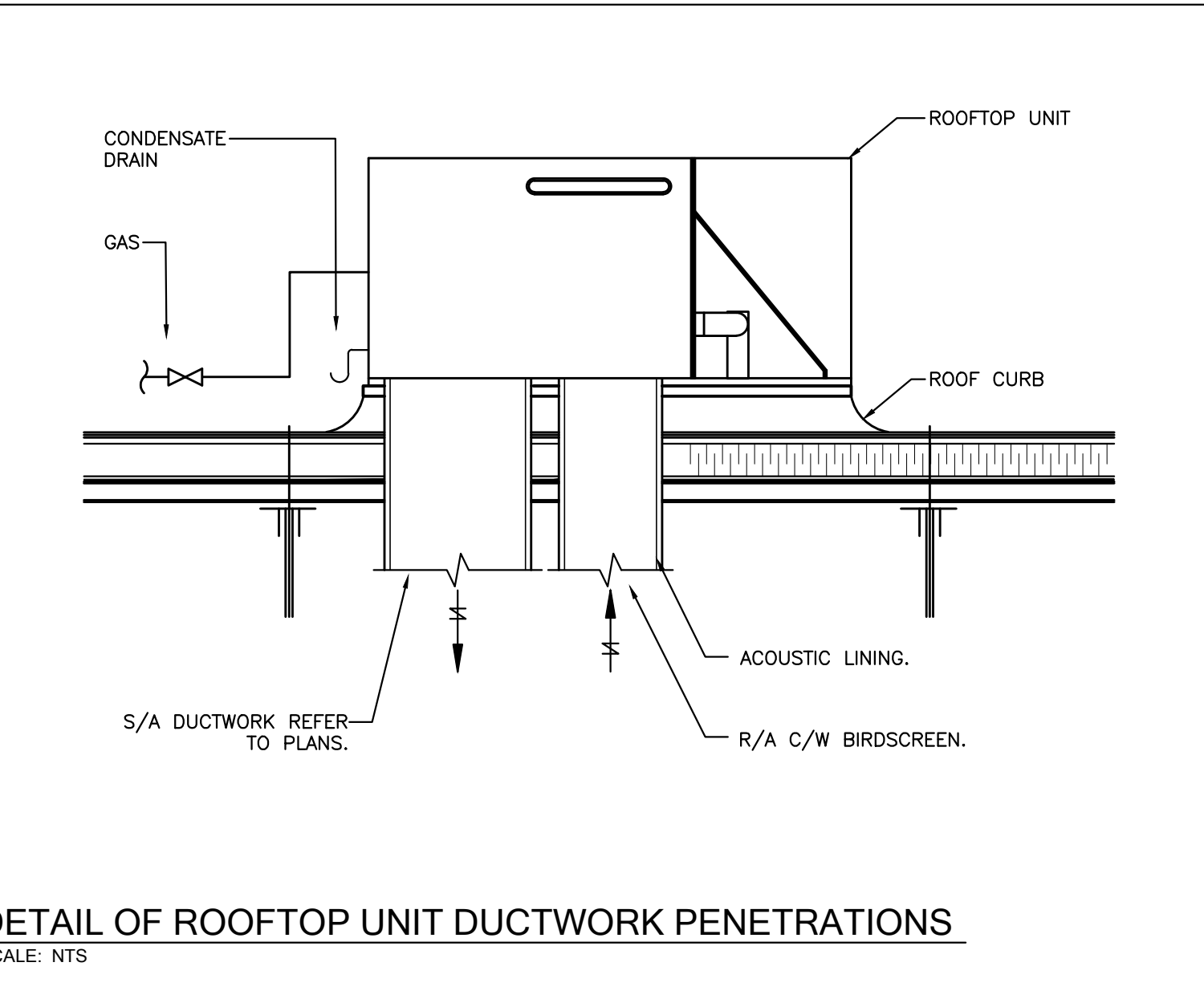
WATER METER DETAIL
SCALE: NTS



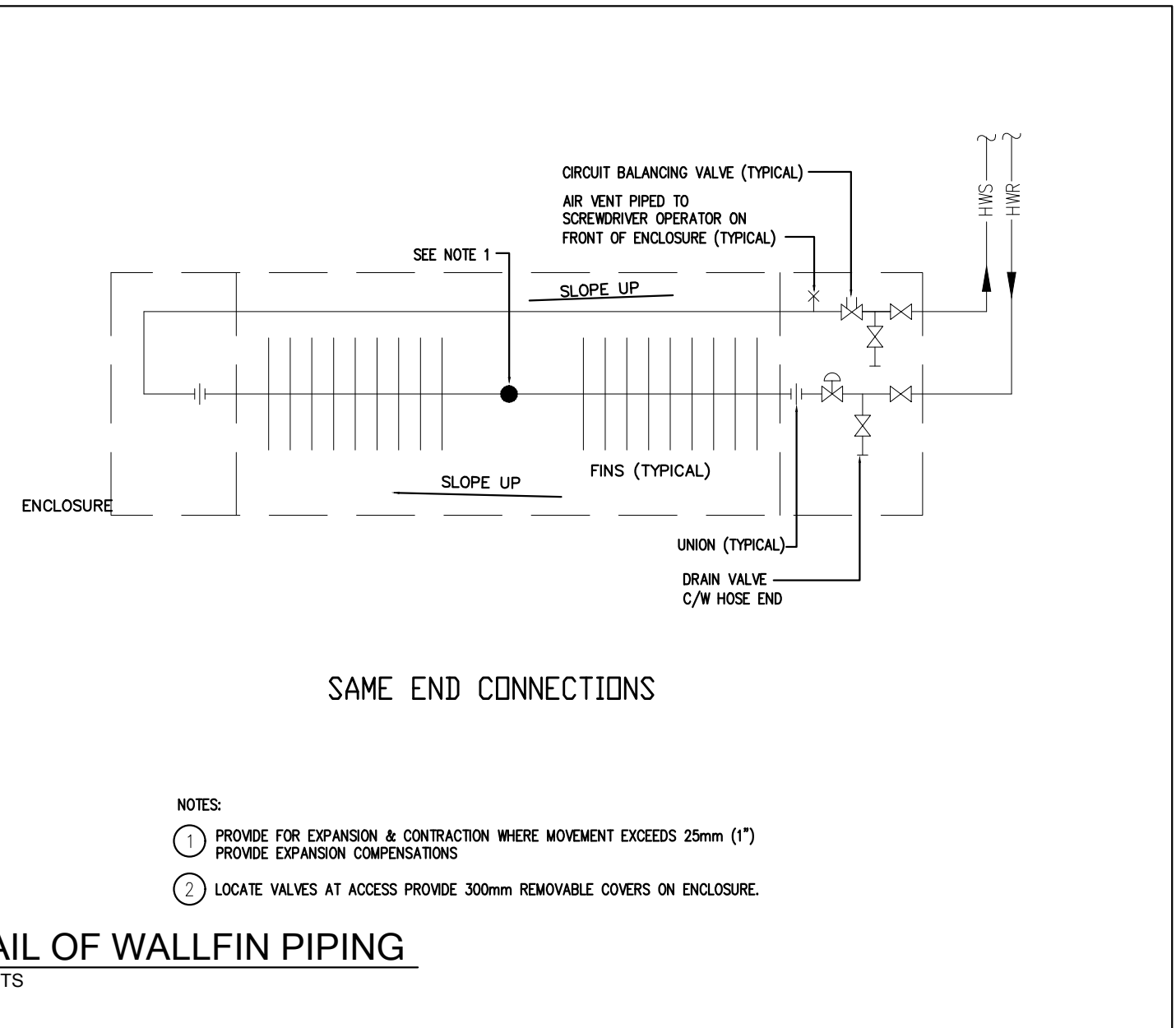
DETAIL OF FLEXIBLE DUCTWORK CONNECTION TO DIFFUSER
SCALE: NTS



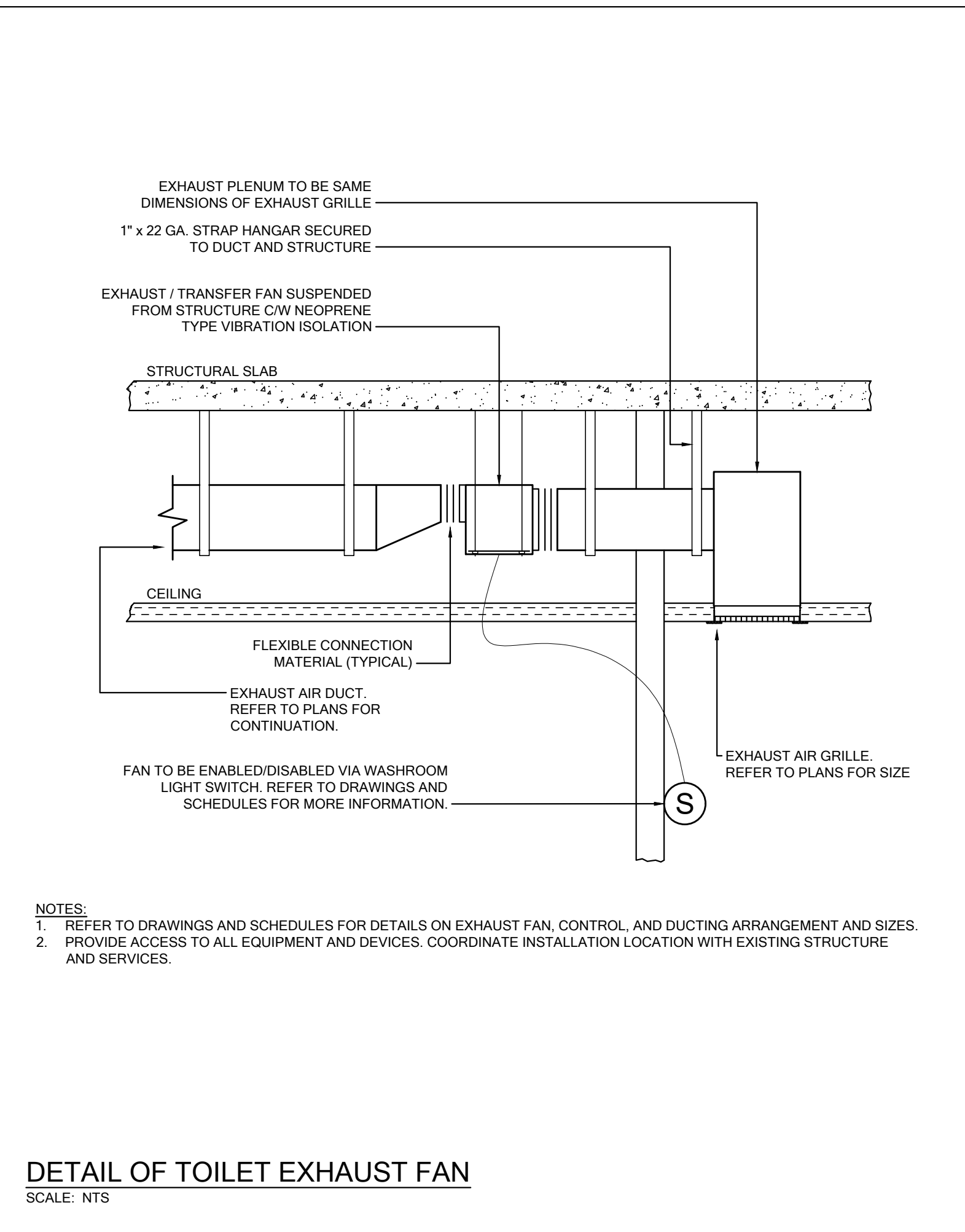
DETAIL OF GAS PIPING SUPPORT ON ROOF
SCALE: NTS



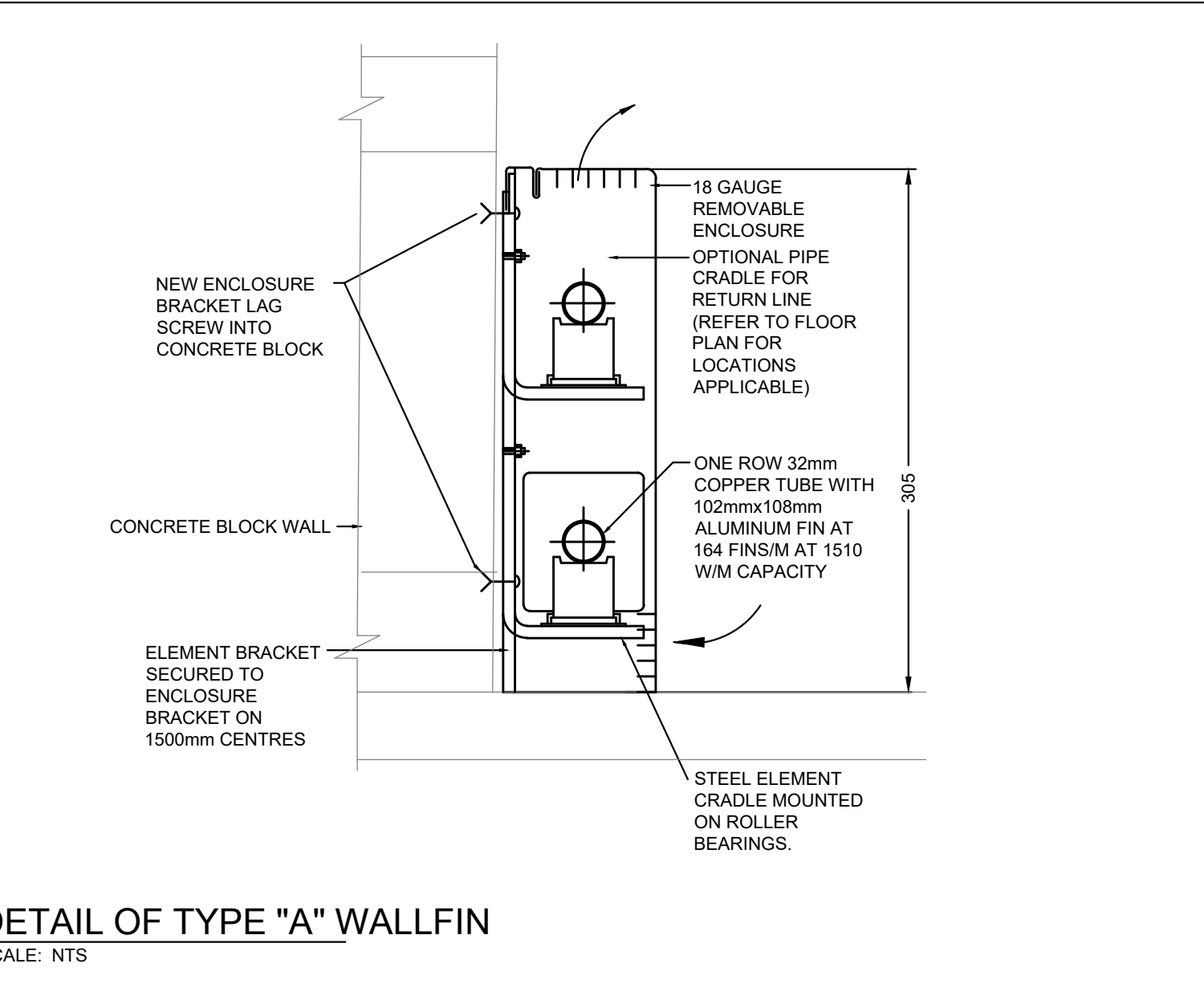
DETAIL OF ROOFTOP UNIT DUCTWORK PENETRATIONS
SCALE: NTS



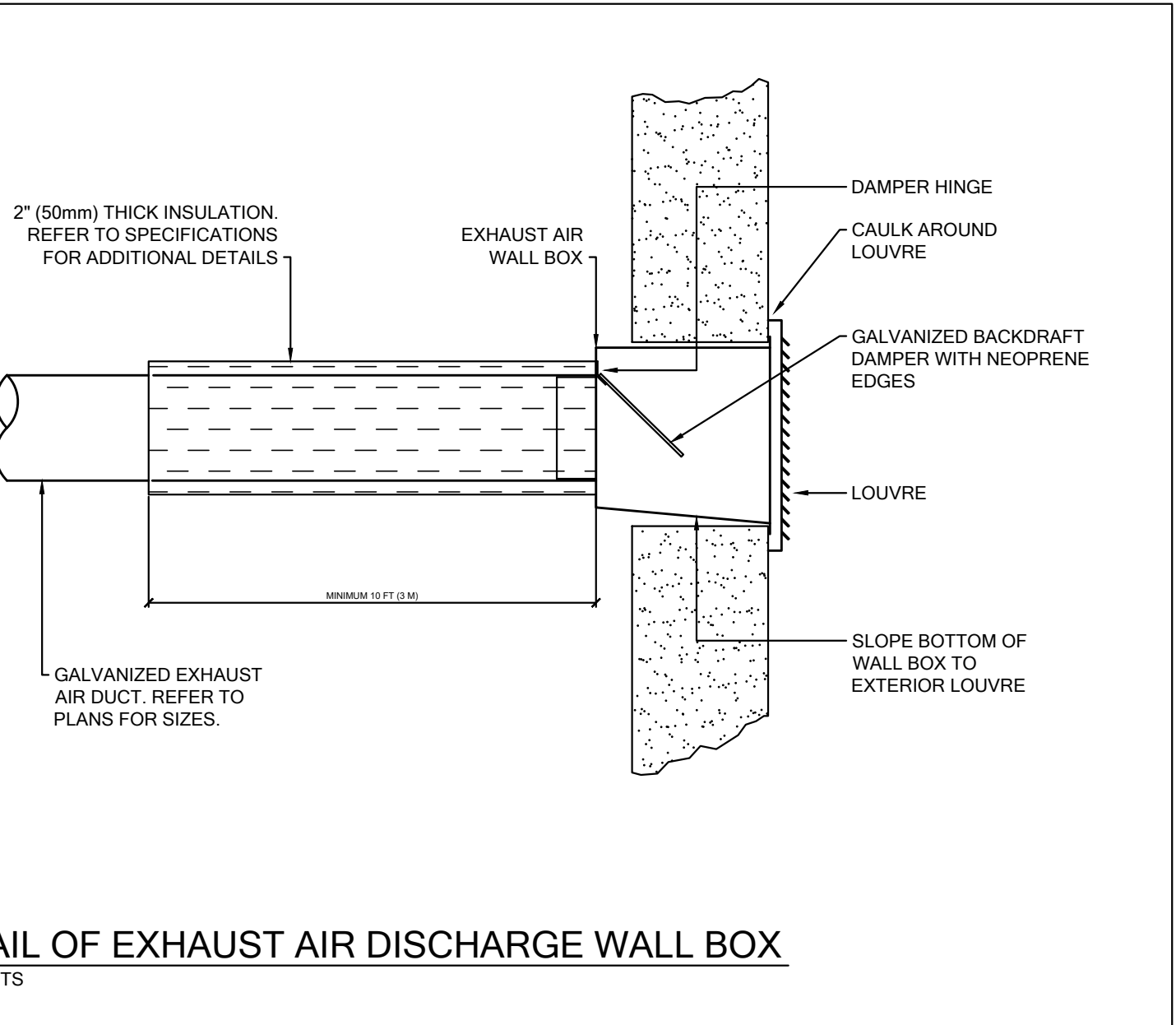
DETAIL OF WALLFIN PIPING
SCALE: NTS



DETAIL OF TOILET EXHAUST FAN
SCALE: NTS



DETAIL OF TYPE "A" WALLFIN
SCALE: NTS



DETAIL OF EXHAUST AIR DISCHARGE WALL BOX
SCALE: NTS

APPLICATION NUMBER:

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STAMP: PROFESSIONAL ENGINEER, NOV 4, 2020, M. DI ZIO, 100150658, PROVINCE OF ONTARIO

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219031 - DENISON DAYCARE CENTRE

DETAILS 2
2020.03.19
Scale: N.T.S. Drawn By: SL/KL MD
19146

M7.1