

PANELBOARD SCHEDULE														
Branch Panel...	MDP		New/Exist:	NEW			Location:	STORAGE 401			Project Name:	CLEAR CREEK WELCOME CENTER		
SPD:	YES		Main:	800A MCB			Mounting:	Surface			Project No.:	0350006		
Voltage	480/277 Wye		Amp:	800 A			Kaic Rating:	35			Date	02.22.2023		
Feed From:	TRANS SBL1		Enclosure:	Type 3R			Feeder:	SEE ONE LINE DIAGRAM			Applied Engineering Services (317) 810-4141			
Ckt	Load Name	Pole	Rating	Type	Load...	A (KVA)	B (KVA)	C (KVA)	Load...	Type	Rating	Pole	Load Name	Ckt
1	Lighting - Exterior	1	20 A	Lighting	0.17 135...					LSI	800 A	3		
3	Lighting - Storage 101	1	20 A	Lighting		0.19	138...						PANEL HD1	2,4,6
5	Spare	1	20 A					0.00	114...					
7,9	TRANS SBL1	3	45 A	Receptacle	1.08 23.93			3.00	25.20		LSI	200 A	3	PANEL TRH1
13...	EUH-S101	3	20 A	Other	3.33				0.72 24.90					
13	Space												Space	14
16	Space												Space	16
18	Space												Space	18
19	Space												Space	20
21	Space												Space	22
23	Space												Space	24
						163.71 kVA	169.7 kVA	143.0 kVA						
Lighting Load (KVA)			0.36	1.00	Demand KVA			0.36	Molded Case with Fixed Trip Unit					
Receptacle Load (KVA)			4.80	NEC	Demand KVA			4.80	Molded Case with Electronic Trip Unit (LI)					
Heating Load (KVA)									Molded Case with Electronic Trip Unit (LSI)					
Motor Load (KVA)									SERVICE ENTRANCE RATED					
Other Load (KVA)			10.00	0.80	Demand KVA			8.00	SQUARE D LINE TCP OR APPROVED EQUAL					
Total Load (KVA)			476.39							SPD TO BE INSTALLED IN PANEL PROVIDE				
									CIRCUIT BREAKER FOR SPD AS REQUIRED.					
									PROVIDE METER FOR PANEL.					

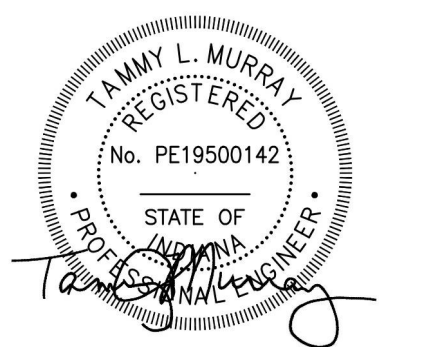
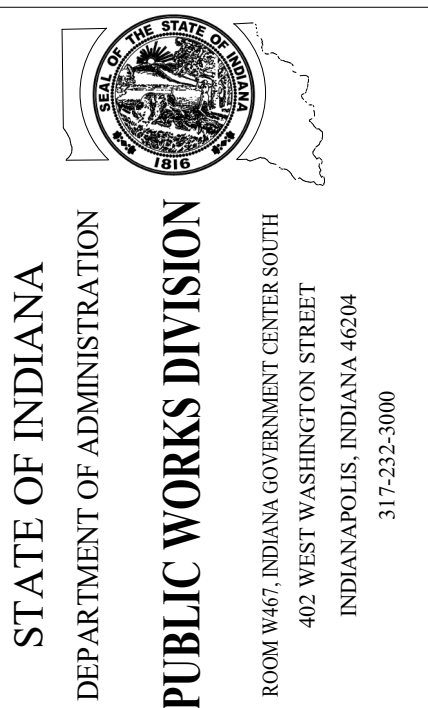
PANELBOARD SCHEDULE														
Branch Panel...	SBL1		New/Exist:	NEW			Location:	STORAGE 401			Project Name:	CLEAR CREEK WELCOME CENTER		
SPD:	YES		Main:	100A MCB			Mounting:	Surface			Project No.:	0350006		
Voltage	120/208 Wye		Amp:	100 A			Kaic Rating:	22			Date	02.22.2023		
Feed From:	TRANS SBL1		Enclosure:	Type 3R			Feeder:	SEE ONE LINE DIAGRAM			Applied Engineering Services (317) 810-4141			
Ckt	Load Name	Pole	Rating	Type	Load...	A (KVA)	B (KVA)	C (KVA)	Load...	Type	Rating	Pole	Load Name	Ckt
1	Receptacle - STORAGE 101	1	20 A	Receptacle	0.36 0.36					Receptacle	20 A	1	Receptacle - Exterior	2
3	EF-SB1	1	20 A	Receptacle		1.50	1.50			Receptacle	20 A	1	Overhead door - STORAGE 101	4
5	Receptacle - STORAGE 101	1	20 A	Receptacle				0.36	0.36	Receptacle	20 A	1	Receptacle - STORAGE 101	6
7	Receptacle - STORAGE 101	1	20 A	Receptacle	0.36 0.00						20 A	1	Spare	8
9	Spare	1	20 A					0.00	0.00		20 A	1	Spare	10
11	Spare	1	20 A					0.00	0.00		20 A	1	Spare	12
13	Spare	1	20 A		0.00 0.00						20 A	1	Spare	14
15	Spare	1	20 A					0.00	0.00		20 A	1	Spare	16
17	Spare	1	20 A					0.00	0.00		20 A	1	Spare	18
19	Spare	1	20 A		0.00 0.00						20 A	1	Spare	20
21	Spare	1	20 A					0.00	0.00		20 A	1	Spare	22
23	Spare	1	20 A					0.00	0.00		20 A	1	Spare	24
25	Spare	1	20 A		0.00 0.00						20 A	1	Spare	26
27	Spare	1	20 A					0.00	0.00		20 A	1	Spare	28
29	Spare	1	20 A						0.00 0.00		20 A	1	Spare	30
						1.08 kVA	3.0 kVA	0.7 kVA						
Lighting Load (KVA)						Demand KVA			Molded Case with Fixed Trip Unit					
Receptacle Load (KVA)			4.80	NEC	Demand KVA			4.80	Molded Case with Electronic Trip Unit (LI)					
Heating Load (KVA)									Molded Case with Electronic Trip Unit (LSI)					
Motor Load (KVA)									SPD TO BE INSTALLED IN PANEL PROVIDE					
Other Load (KVA)									CIRCUIT BREAKER FOR SPD AS REQUIRED.					
Total Load (KVA)			4.80											

LIGHTING FIXTURE SCHEDULE									
NOTES: 1. SCHEDULE NOTES 2. SCHEDULE NOTES									
TYPE TAG	DESCRIPTION	MOUNTING	TYPE	LUMENS	TEMPERATURE	WATTS	VOLTS	MANUFACTURERS	NOTES
F1C	4' INDUSTRIAL TYPE STRIP LIGHT FIXTURE WITH WITH FLAT FROSTED ACRYLIC LENS AND WIDE DISTRIBUTION.	CHAIN	LED	4500 lm	3500 K	32 W	277 V	COLUMBIA MPS4-35-LW-F-W-CSHC SERIES LITHONIA BLWP SERIES METALLIX 4SNX SERIES MODERN 10T50 SERIES	
F1CE	4' INDUSTRIAL TYPE STRIP LIGHT FIXTURE WITH WITH FLAT FROSTED ACRYLIC LENS, WIDE DISTRIBUTION, AND 1400 LUMEN	CHAIN	LED	4500 lm	3500 K	32 W	277 V	COLUMBIA MPS4-35-MW-F-W-ELL14 SERIES LITHONIA BLWP SERIES METALLIX 4SNX SERIES MODERN 10T50 SERIES	
F17C	2"W X 1/8" D X APPROXIMATELY 27"-4" LONG LINEAR DAMP LABELED RECESSED EXTRUSION WITH TAPE LIGHT AND LENS. FIELD CUTTABLE TO LENGTH OF SOFFIT, REMOTE DRIVER, AND REMOTE EMERGENCY DRIVER.	RECESSED IN SOFFIT	LED	5400 lm	4000 K	85 W	277 V	KELVIX 217 SERIES WITH EXTRUSION AND LENS CONTECH TLT24V-1/TLP24VHXMY-ENC/TLACR6-X/TLALF6	APPROXIMATELY 27"-4" IN LENGTH, FIELD CUT TO LENGTH OF SOFFIT.

TRANSFORMER SCHEDULE										
NOTES: 1. PROVIDE WALL MOUNTING BRACKET AND ACCESSORIES. 2. TRANSFORMER TO BE NEMA 3R RATED.										
UNIT TAG	LOCATION	KVA	PHASES	PRIMARY VOLTAGE	SECONDARY VOLTAGE	PRIMARY CONNECTION	SECONDARY CONNECTION	UNIT MOUNTING	UNIT TYPE	NOTES
TRANS SBL1	STORAGE 401	30 KVA	3	480 V	208 V	DELTA	WYE	WALL	DRY	1,2

DAPW PROJECT NUMBER: 84003001-22-058-C1

CLEAR CREEK WELCOME CENTER
 5494 W 21 ROAD WEST TERRE HAUTE, IN
 47885
 Issued For CONSTRUCTION DOCUMENTS
 02.22.2023



2/22/23

Revision:	1	Addendum #1	03.15.23
Project Number:	37005000-21-019-C1		
Revision Number:			
Account Number:			
Designer:	TLM	Drawing Date:	02.22.2023
Checker:	TLM	Drawing Scale:	
DAPW Approval:			
Client Approval:			
Reference Number:	1362S		
Building Reference:			
Drawing Number:			

ELECTRICAL SCHEDULES

SB-E601

PANELBOARD SCHEDULE table with columns: Branch Panel, SPD, Voltage, Feed From, Ckt, Load Name, Pole, Rating, Type, Load, A (KVA), B (KVA), C (KVA), Load, Type, Rating, Pole, Load Name, Ckt. Includes summary rows for Lighting, Receptacle, Heating, Motor, and Total Load (KVA).

PANELBOARD SCHEDULE table with columns: Branch Panel, SPD, Voltage, Feed From, Ckt, Load Name, Pole, Rating, Type, Load, A (KVA), B (KVA), C (KVA), Load, Type, Rating, Pole, Load Name, Ckt. Includes summary rows for Lighting, Receptacle, Heating, Motor, and Total Load (KVA).

LIGHTING FIXTURE SCHEDULE table with columns: TYPE TAG, DESCRIPTION, MOUNTING, TYPE, LUMENS, TEMPERATURE, WATTS, VOLTS, MANUFACTURERS, NOTES. Includes entries for F1C, F1CE, F16AE, F16BE, and F17E.

LIGHTING CONTROLLER SCHEDULE table with columns: TYPE TAG, DESCRIPTION, MOUNTING, SENSOR, VOLTS, TIME/OUT PERIOD, MANUFACTURERS, NOTES. Includes entry for S7.

PANELBOARD SCHEDULE table with columns: Branch Panel, SPD, Voltage, Feed From, Ckt, Load Name, Pole, Rating, Type, Load, A (KVA), B (KVA), C (KVA), Load, Type, Rating, Pole, Load Name, Ckt. Includes summary rows for Lighting, Receptacle, Heating, Motor, and Total Load (KVA).

PANELBOARD SCHEDULE table with columns: Branch Panel, SPD, Voltage, Feed From, Ckt, Load Name, Pole, Rating, Type, Load, A (KVA), B (KVA), C (KVA), Load, Type, Rating, Pole, Load Name, Ckt. Includes summary rows for Lighting, Receptacle, Heating, Motor, and Total Load (KVA).

TRANSFORMER SCHEDULE table with columns: UNIT TAG, LOCATION, KVA, PHASES, PRIMARY VOLTAGE, SECONDARY VOLTAGE, PRIMARY CONNECTION, SECONDARY CONNECTION, UNIT MOUNTING, UNIT TYPE, NOTES. Includes entries for TRANS TRL1 and TRANS TRL2.



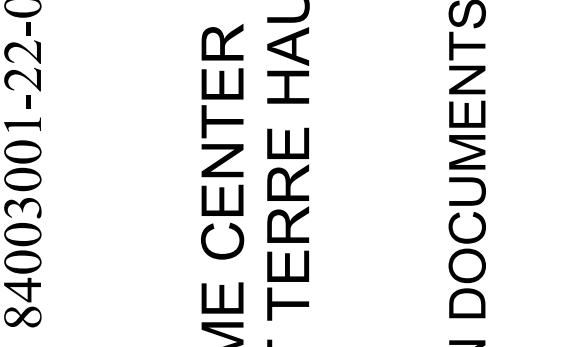
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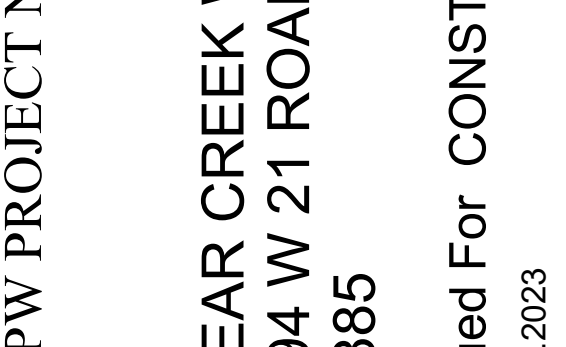
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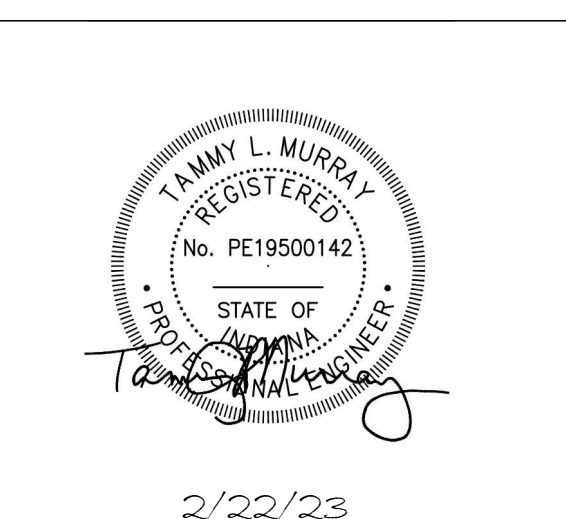
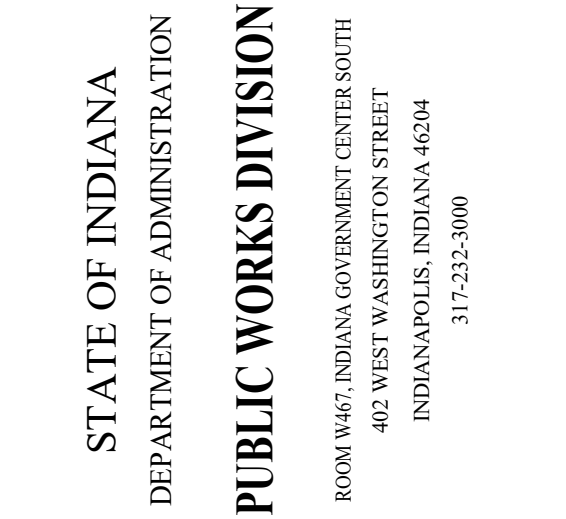
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Revision table with columns: Revision, Addendum #, Date. Includes entries for 1, 2, and 3.

Project Number: 37005000-21-019-C1
Drawing Date: 02/22/2023
Drawing Scale:
Reference Number: 13625
Building Reference:
Drawing Number:
ELECTRICAL SCHEDULES
TR-E601

PACKAGED MAKE-UP AIR HANDLER

- NOTES:
 1. DOWNFLOW ARRANGEMENT WITH 24" TALL FULL PERIMETER INSULATE CURB. UNIT TO BE MOUNTED ON GRADE IN PUBLIC AREA - PROVIDE SCREENS OR GUARDS ON ALL OPEN OPERABLE SECTIONS WITH TAMPER PROOF HARDWARE.
 2. PROVIDE WITH HOT GAS REHEAT 14MBH.
 3. PROVIDE UNIT WITH STAINLESS STEEL HEAT EXCHANGER. PROVIDE GAS FLUE KIT WITH AIR HANDLER - EXTEND FLUE HIGHER THAN ROOF OF BUILDING.
 4. DISCONNECT SWITCH / CONTINUOUS POWER CONVENIENCE OUTLET. PROVIDE INTAKE HOOD WITH BIRDSCREEN.
 5. FULLY PROGRAMMABLE ELECTRONIC CONTROLLER FOR CONSTANT VOLUME SINGLE ZONE OPERATION.

TAG NO.	AREA SERVED	TYPE	CFM	OA CFM	TOTAL MBH	SEN MBH	EADB	EAWB	LADB	LAWB	REFRIG. TYPE	MAX. FACE VEL.	MIN. FACE AREA	GAS TYPE	GAS HEAT SECTION				COMPRESSOR/CONDENSER				FILTERS				ELECTRICAL DATA				REMARKS													
															INPUT MBH	OUTPUT MBH	MIN. TURN DOWN	TEMP. RISE	FAN TYPE	DRIVE	NO. OF FANS	TOTAL SP	EXTERNAL SP	FAN RPM	MOTOR HP	MOTOR RPM	VOLT/PH	MIN. NO. OF COMP	COMPRESSOR TYPE	NO. OF CONDENSER FANS		FAN TYPE	FAN HP EACH	FAN RPM	DESIGN AMBIENT TEMP.	NO.	TYPE	SIZE	MCA	MOP	EM POWER	CONTROL TYPE	MFG.	MODEL #
MAU-TRW	TRUCKER TOILET NW	PACKAGED RTU	700	700	62	32	95.0	78.0	52.0	51.0	R-410A	500	5.3	NAT	81.0	65	8.3:1	80	FC	DIRECT	1	1.8	1.25	1760	1.0	1760	460/3	1	SCROLL	1	PROPELLER	0.3	1110.0	95	2	DISPOSABLE 20x20x2	14	20	NO	DDC	AAON	RO-005	1000	SEE NOTES
MAU-TRE	TRUCKER TOILET SE	PACKAGED RTU	700	700	62	32	95.0	78.0	56.0	56.0	R-410A	500	5.3	NAT	81.0	65	8.3:1	80	FC	DIRECT	1	1.8	1.25	1760	1.0	1760	460/3	1	SCROLL	1	PROPELLER	0.3	1110.0	95	2	DISPOSABLE 20x20x2	14	20	NO	DDC	AAON	RQ-005	1000	SEE NOTES

UNIT HEATER SCHEDULE

DAFDSF
 1. PROVIDE WITH ALL MOUNTING HARDWARE.
 2. PROVIDE WITH INTEGRAL THERMOSTAT

UNIT TAG	LOCATION	TYPE	MBH	HEATING ELEMENT			MOTOR DATA				ELECTRICAL DATA				BASIS OF DESIGN		WEIGHT	NOTES
				KW	STEPS	HP	FLA	MCA	MOCF	VOLTS	PHASES	DISC. SW. BY	EM. POWER	CONTROL TYPE	MANUFACTURER	MODEL NO.		
EUH-TRE01	MECHANICAL 301	HORIZONTAL PROPELLER	10.2	3 kW	2	1/6	0 A	0 A	0 A	208 V	2	EC	NO	INTEGRAL	QMARK	MUH-0381	40 lb	1.2
EUH-TRW01	MECHANICAL 201	HORIZONTAL PROPELLER	10.2	3 kW	2	1/6	0 A	0 A	0 A	208 V	2	EC	NO	INTEGRAL	QMARK	MUH-0381	40 lb	1.2

EXHAUST FAN SCHEDULE

NOTES:
 1. SUSPEND UNIT FROM STRUCTURE WITH VIBRATION ISOLATORS PER MANUFACTURER'S RECOMMENDATIONS
 2.

UNIT TAG	AREA SERVED	FAN TYPE	CFM	TOTAL S.P.	RPM	DRIVE	NC LEVEL AT INLET S.P.	MOTOR DATA			DISCONNECT	CONTROL TYPE	WEIGHT	BASIS OF DESIGN		NOTES			
								HP	VOLTS	PH				FLA	EM POWER		PROVIDED BY	LOCATION	
EF-TRE	CHASE	INLINE	750 CFM	0.500 in-wg	1170	DIRECT	35	0.25	120 V	1	5 A	NO	EC	WALL	C	75 lb	GREENHECK	CSP-A1050VG	1
EF-TRW	CHASE	INLINE	750 CFM	0.500 in-wg	1170	DIRECT	35	0.25	120 V	1	5 A	NO	EC	WALL	C	75 lb	GREENHECK	CSP-A1050VG	1

SUPPLY GRILLE SCHEDULE

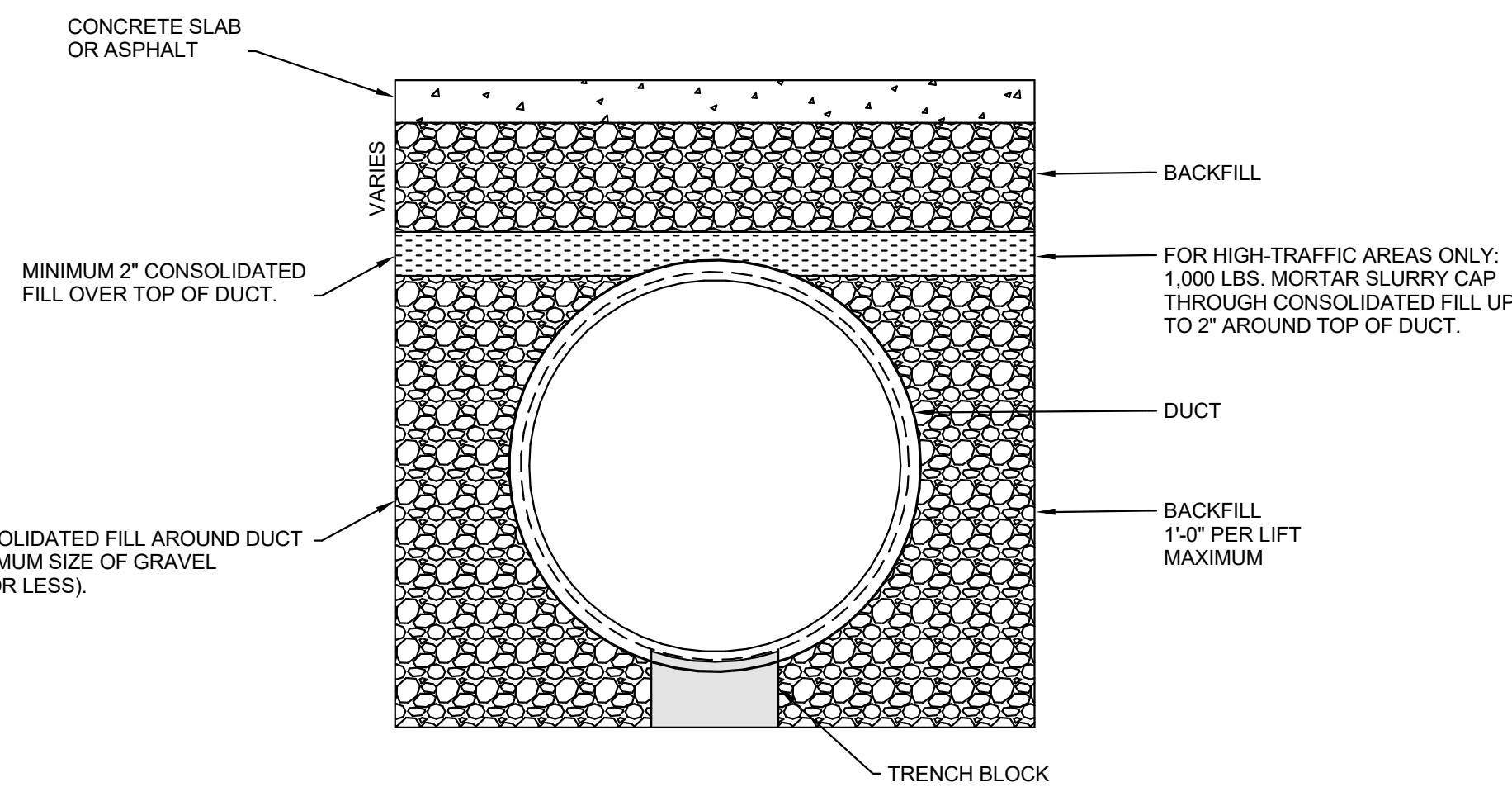
NOTES:
 1. ALUMINUM CONSTRUCTION
 2. SCHEDULE NOTES

TYPE TAG	NOMINAL FACE SIZE	MIN. CORE AREA	BRANCH DUCT SIZE	MAX. NC LEVEL	MAX. CORE VELOCITY	MAX. VELOCITY PRESSURE	MAX. TOTAL PRESSURE	MANUFACTURER	MODEL NO.	NOTES
SG	SEE PLANS	SEE PLANS	SEE PLANS	25	650 FPM	0.026 in-wg	0.060 in-wg	PRICE	620	1

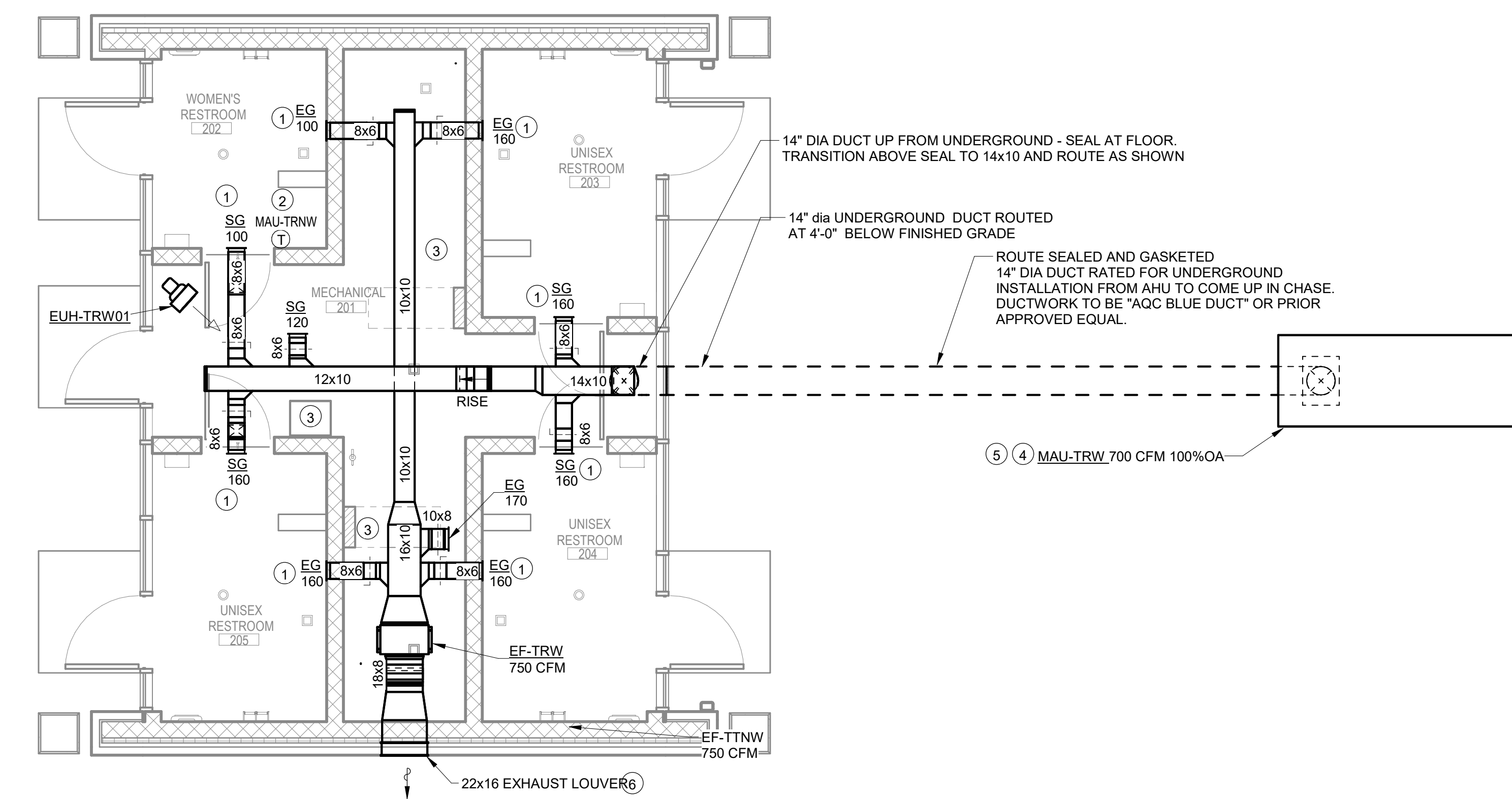
RETURN AND EXHAUST GRILLE SCHEDULE

NOTES:
 1. ALUMINUM CONSTRUCTION
 2. SCHEDULE NOTES

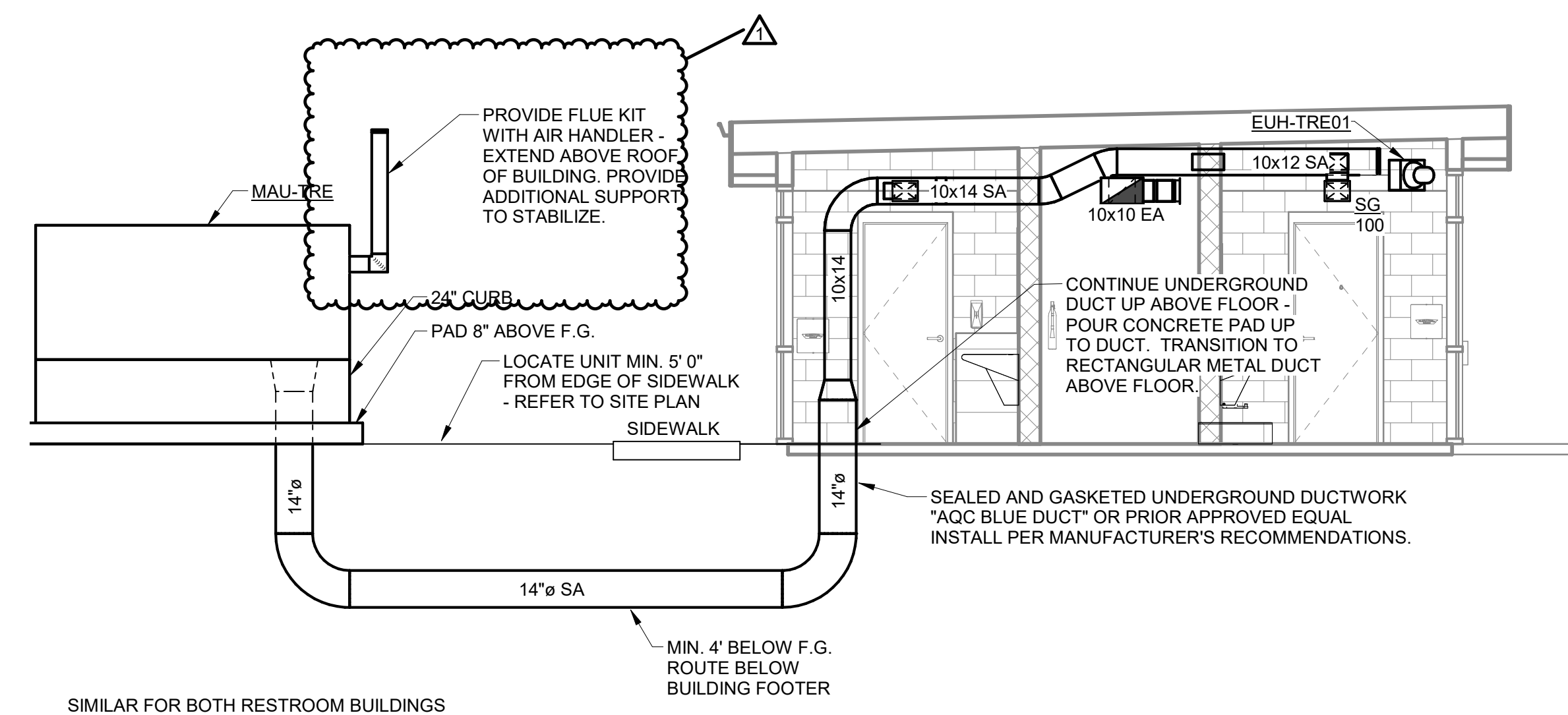
TYPE TAG	NOMINAL FACE SIZE	MIN. CORE AREA	BRANCH DUCT SIZE	MAX. NC LEVEL	MAX. CORE VELOCITY	MAX. VELOCITY PRESSURE	MAX. TOTAL PRESSURE	MANUFACTURER	MODEL NO.	NOTES
EG	SEE PLANS	SEE PLANS	SEE PLANS	25	700 FPM	0.031 in-wg	0.170 in-wg	PRICE	60	1



4 UNDERGROUND DUCT TRENCH AND BEDDING DETAIL
 SCALE: 12" = 1'-0"

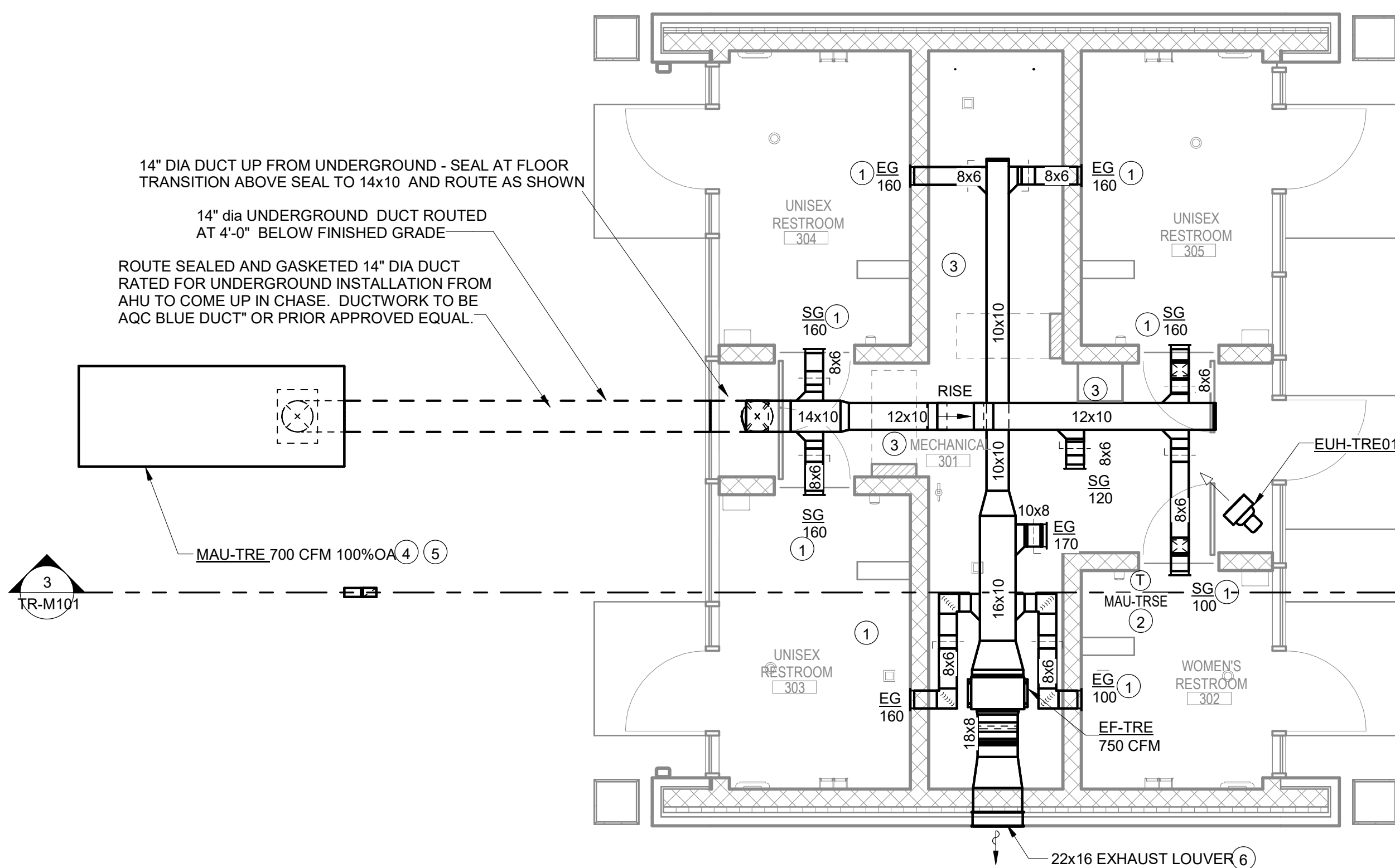


WEST BUILDING - HVAC PLAN - LEVEL 1
 SCALE: 1/4" = 1'-0"



SIMILAR FOR BOTH RESTROOM BUILDINGS

3 TRUCKER RESTROOM MAU ELEVATION
 SCALE: 1/4" = 1'-0"



EAST BUILDING - HVAC PLAN - LEVEL 1
 SCALE: 1/4" = 1'-0"

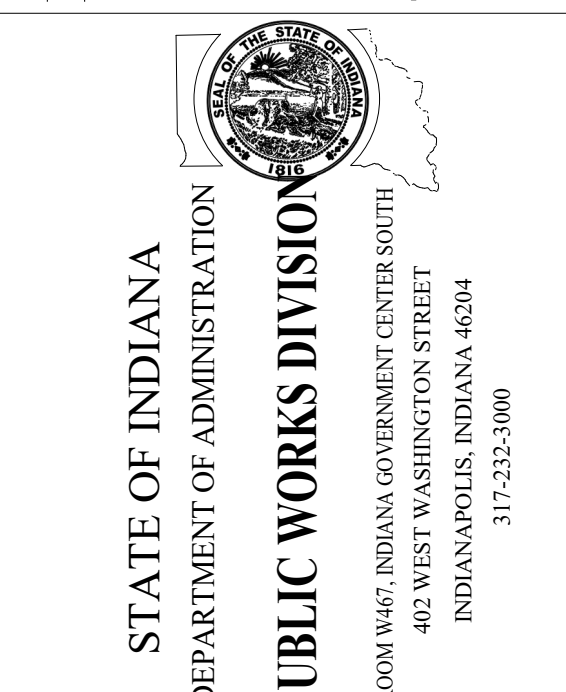
GENERAL NOTES:

1. REFER TO DRAWING TR-M001 FOR ADDITIONAL GENERAL NOTES.

PLAN NOTES:

1. WALL GRILLES CENTERED AT APPROX 8" 0" COORDINATE WITH TILE PATTERN.
 2. PROVIDE TAMPERPROOF GUARD FOR THERMOSTAT.
 3. DO NOT ROUTE DUCTWORK DIRECTLY OVER ELECTRICAL PANELS OR GEAR.
 4. UNIT MOUNTED ON 24" TALL INSULATED CURB AND CONCRETE PAD MIN 8" ABOVE FINISHED GRADE. LOCATE UNIT MIN. 5' 0" AWAY FROM SIDEWALK - REFER TO SITE PLANS FOR EXACT LOCATION.
 5. 2" G Routed to UNIT UNDERSLAB FROM WELCOME CENTER. SEE SITE UTILITY PLANS FOR INCOMING GAS SERVICE. PROVIDE DRIP LEG, SHUT-OFF, AND UNION AT CONNECTION.
 6. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION.

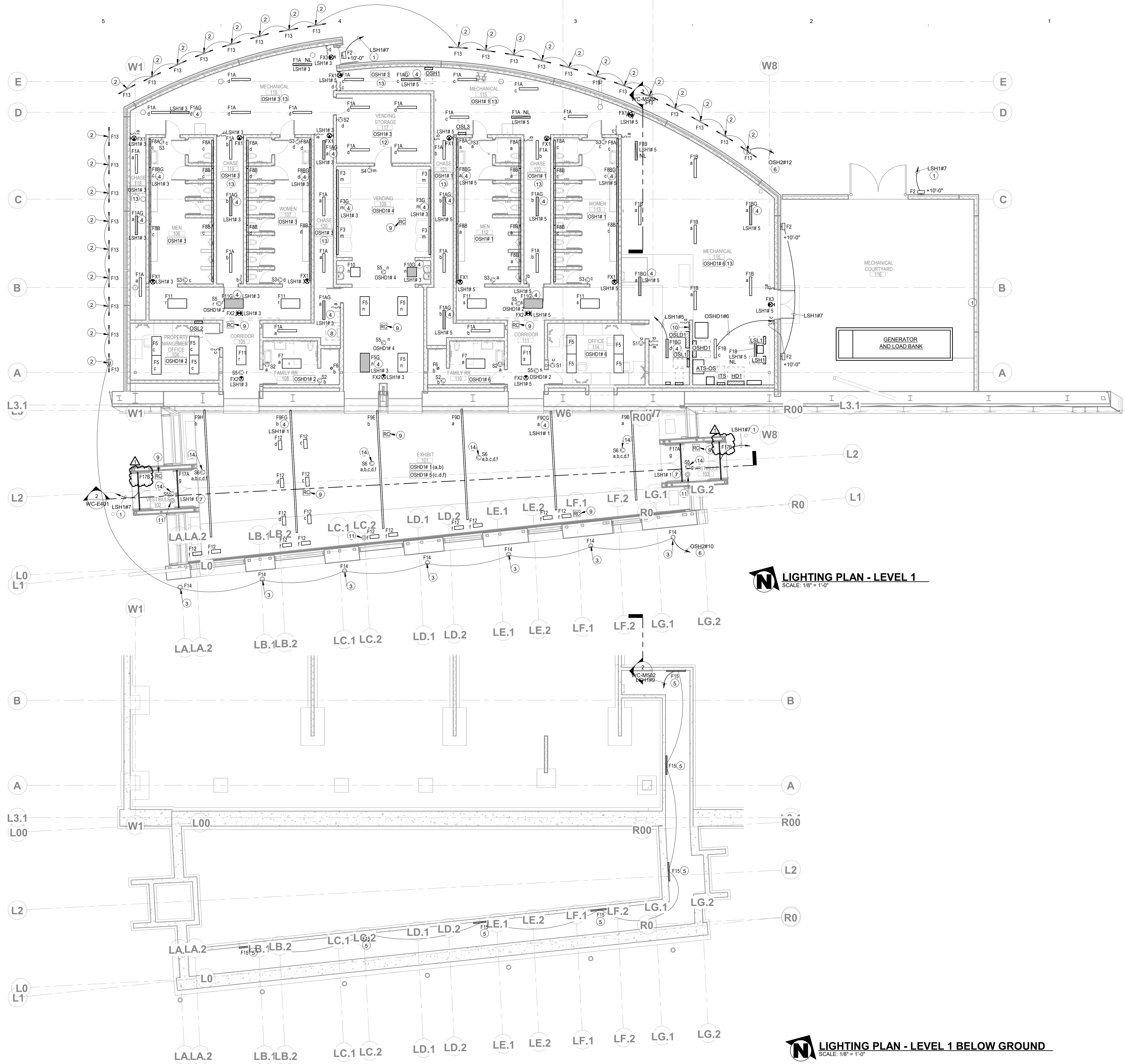
DAPW PROJECT NUMBER: 84003001-22-058-C1
 CLEAR CREEK WELCOME CENTER
 5494 W 21 ROAD WEST TERRE HAUTE, IN
 47885
 Issued For CONSTRUCTION DOCUMENTS
 02.22.2023



2/22/23

Revision:	Abdullah #1	03.15.23
Project Number:	37005000-21-019-C1	
Requisition Number:		
Account Number:		
Designer:	DaM 02.22.2023	
Checker:	DaM As indicated	
DAPW Approval:		
Client Approval:		
Reference Number:	1362S	
Building Reference:		
Drawing Number:		

HVAC PLANS -
 LEVEL 1
TR-M101



LIGHTING PLAN - LEVEL 1
SCALE: 1/8" = 1'-0"

LIGHTING PLAN - LEVEL 1 BELOW GROUND
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70) AS ADOPTED BY STATE INCLUDING ALL AMENDMENTS.
- SEE SHEET WC-E01 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND ADDITIONAL GENERAL NOTES.
- SEE WC-E500 SERIES SHEETS FOR ELECTRICAL DETAILS.
- SEE WC-E600 SERIES SHEETS FOR ELECTRICAL SCHEDULES.
- PROVIDE LIGHT FIXTURE AS SPECIFIED ON LIGHT FIXTURE SCHEDULE.
- SEE WC-E010 AND WC-E701 FOR SITE CONDUITS AND ONE LINE DIAGRAM.
- COORDINATE ALL DEVICE ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
- PROVIDE OCCUPANCY SENSOR AND/OR SWITCH AS SPECIFIED ON LIGHTING CONTROLLER SCHEDULES AND/OR DETAILS.
- OCCUPANCY SENSORS IN ROOMS WITH OPEN CEILING SHALL BE PENDANT MOUNTED TO MATCH ELEVATION OF LIGHT FIXTURES.
- ALL LIGHTING CIRCUITS EXCEEDING 100 FEET IN LENGTH SHALL CONSIST OF 3/4" (2) #12 AWG, #12 GND UNLESS OTHERWISE NOTED.
- ALL LIGHTING CIRCUITS EXCEEDING 100 FEET IN LENGTH SHALL CONSIST OF 3/4" (2) #10 AWG, #10 GND UNLESS OTHERWISE NOTED.
- ALL LIGHTING FIXTURES INSTALLED WITHIN HARD CEILING SHALL BE PROVIDED WITH MUD-IN TRIM.
- PROVIDE ALL POWER PACKS AS REQUIRED LIGHTING CONTROL DEVICES AND POWER SUPPLIES FOR LOW VOLTAGE LIGHTING FIXTURES AS REQUIRED.
- CEILING MOUNTED EXIT SIGN IN ROOMS WITH OPEN CEILINGS SHALL BE PENDANT MOUNTED, TOP OF FIXTURE SHALL ALIGN WITH BOTTOM OF PENDANT LIGHT FIXTURE.
- SEAL ALL PENETRATIONS IN FULL HEIGHT WALLS.
- LINEAR LIGHT FIXTURE RUNS SHALL BE WIRED TO SAME SWITCH LEG INDICATED ON DRAWINGS UNLESS OTHERWISE NOTED.
- LINEAR LIGHT FIXTURE RUNS (END TO END) SHALL BE PROVIDED IN LONGEST STANDARD LENGTHS WHENEVER POSSIBLE.
- PROVIDE ADDITIONAL TRAPEZE SUPPORTS FOR LIGHT FIXTURES AS REQUIRED UNDER DUCTWORK AND OTHER UTILITIES.
- ALL EXTERIOR EXPOSED CONDUITS TO BE RIGID GALVANIZED STEEL (RGS).
- NO EXPOSED CONDUITS IN FINISHED AREAS ARE ALLOWED ON THIS PROJECT.

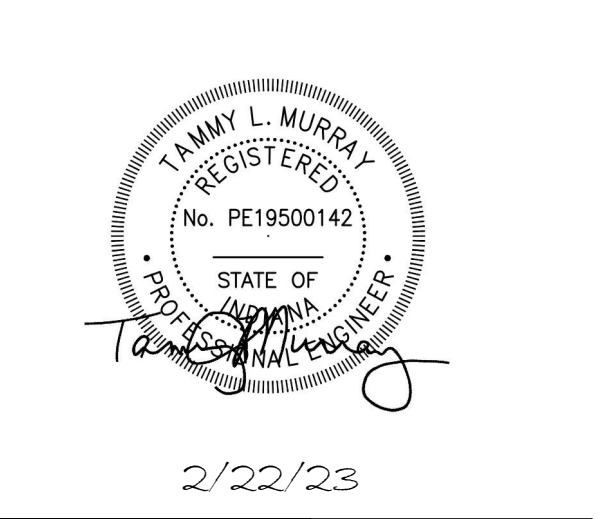
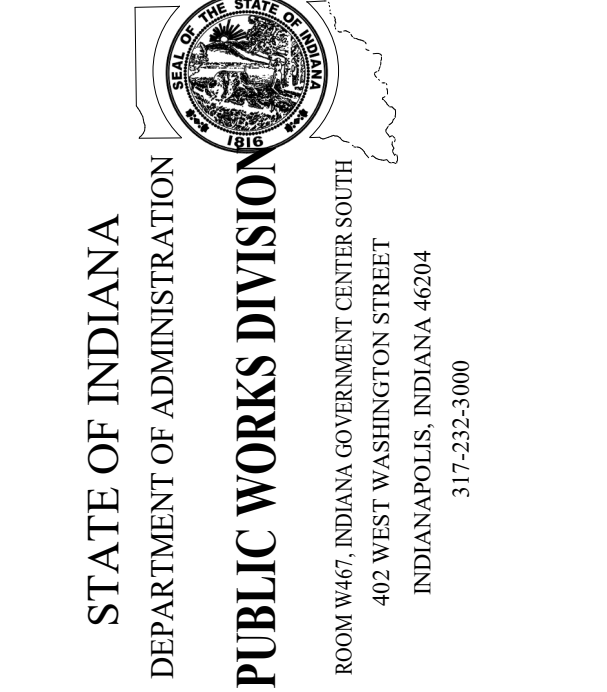
PLAN NOTES:

- CONTROLLED BY PHOTOCELL. PHOTOCELL TO BE TORK MODEL 2002 OR APPROVED EQUAL. COORDINATE LOCATION OF PHOTOCELL IN THE FIELD.
- TYPE F13 LIGHT FIXTURES TO BE SPACED APPROXIMATELY 6' APART AND LOCATED 3' FROM THE BUILDING.
- TYPE F14 LIGHT FIXTURES TO BE LOCATED 3' FROM THE BUILDING.
- LIGHT FIXTURE TO BE CONTROLLED NORMALLY BY LIGHT SWITCH/OCCUPANCY SENSOR IN THIS AREA. LIGHT FIXTURE TO BE CONNECTED TO GENERATOR THRU GENERATOR TRANSFER DEVICE AND CIRCUIT SHOWN WHEN GENERATOR IS RUNNING.
- LIGHT FIXTURE TO BE CONTROLLED BY INTEGRAL OCCUPANCY SENSOR IN LIGHT FIXTURE AND MOUNTED UP TIGHT IN CORNER BETWEEN THE WALL AND THE CEILING OF THE TUNNEL. CONTROLLED WITH SITE LIGHTING FIXTURES. SEE C600 SERIES SHEETS.
- ALL ITEMS IN THIS VESTIBULE ARE TO BE FED FROM BELOW GROUND AND NO CONDUIT CAN BE RUN HORIZONTALLY IN THE WALLS. ALL OUTLET BOXES FOR ITEMS IN THIS VESTIBULE ARE TO SIT FLUSH WITH THE FRONT OF THE FACE OF THE METAL PANELS.
- OUTLINE OF ROOF HATCH, NO CONDUITS OR CABLING TO BE ROUTED THROUGH THIS AREA.
- ROOM CONTROLLER. SEE EXHIBIT, VESTIBULE, CORRIDORS, AND VENDING AREA LIGHTING CONTROL RISER DIAGRAM ON E500 SERIES SHEETS.
- LIGHTING CONTROLS. SEE EXHIBIT, VESTIBULE, CORRIDORS, AND VENDING AREA LIGHTING CONTROL RISER DIAGRAM ON E500 SERIES SHEETS.
- DAYLIGHT SENSOR. SEE EXHIBIT, VESTIBULE, CORRIDORS, AND VENDING AREA LIGHTING CONTROL RISER DIAGRAM ON E500 SERIES SHEETS.
- LIGHT FIXTURES IN THIS AREA TO BE MOUNTED +9'-0" TO THE BOTTOM OF THE LIGHT FIXTURES. COORDINATE LOCATION OF LIGHT FIXTURES WITH MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING. RELOCATE LIGHT FIXTURES AS REQUIRED.
- LIGHT FIXTURES IN THIS ROOM TO BE MOUNTED +9'-6" TO THE BOTTOM OF THE LIGHT FIXTURES.
- OCCUPANCY SENSOR. SEE EXHIBIT, VESTIBULE, CORRIDORS, AND VENDING AREA LIGHTING CONTROL RISER DIAGRAM ON E500 SERIES SHEETS.



DAPW PROJECT NUMBER: 84003001-22-058-C1

CLEAR CREEK WELCOME CENTER
5494 W 21 ROAD WEST TERRE HAUTE, IN
47885
Issued For CONSTRUCTION DOCUMENTS
02.22.2023



Revision:	Amendment #1	03.15.23
Project Number:	37005000-21-019-C1	
Requestion Number:		
Account Number:		
Designer:	TLM	02.22.2023
Checker:	TLM	1/8" = 1'-0"
DAPW Approval:		
Client Approval:		
Reference Number:	1362S	
Building Reference:		
Drawing Number:		

LIGHTING PLANS - LEVEL 1 AND BELOW GROUND WC-E101

DAPW PROJECT NUMBER: 84003001-22-058-C1

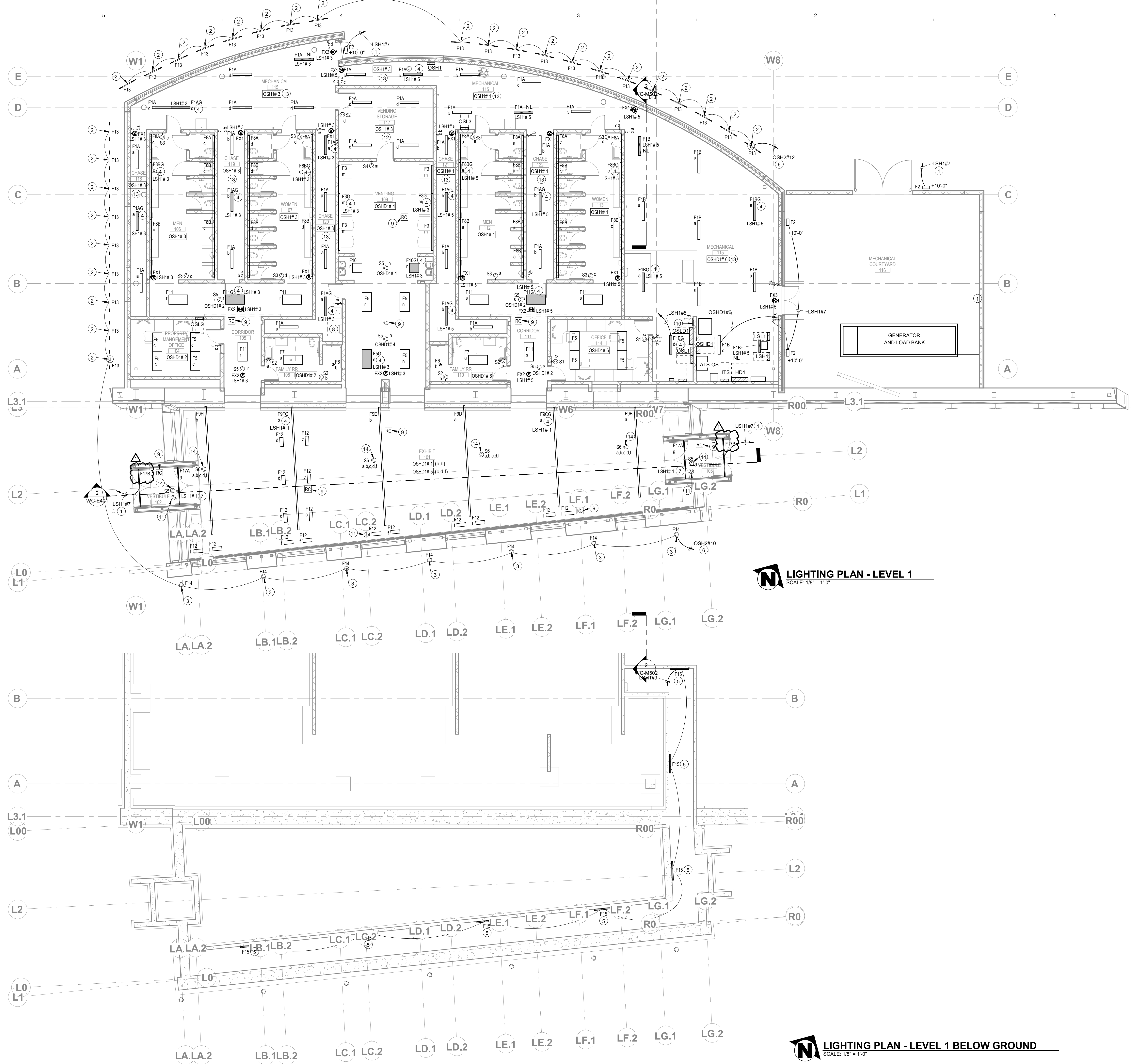
CLEAR CREEK WELCOME CENTER
5494 W 21 ROAD WEST TERRE HAUTE, IN
47885
Issued For CONSTRUCTION DOCUMENTS
02.22.2023

STATE OF INDIANA
DEPARTMENT OF ADMINISTRATION
PUBLIC WORKS DIVISION
ROOM 1045 INDIAN GOVERNMENT CENTER NORTH
402 WEST WASHINGTON STREET
INDIANAPOLIS, INDIANA 46204
317.232.3000

TAMMY L. MURRAY
REGISTERED
No. PE19500142
STATE OF INDIANA
Professional Seal
2/22/23

Revision:	1	Addendum #1	03.15.23
Project Number:	37005000-21-019-C1		
Requisition Number:			
Account Number:			
Designer:	TLM	Drawing Date:	02.22.2023
Checker:	TLM	Drawing Scale:	1/8" = 1'-0"
DAPW Approval:			
Client Approval:			
Reference Number:	1362S		
Building Reference:			
Drawing Number:			

LIGHTING PLANS -
LEVEL 1 AND
BELOW GROUND
WC-E101



LIGHTING PLAN - LEVEL 1
SCALE: 1/8" = 1'-0"

LIGHTING PLAN - LEVEL 1 BELOW GROUND
SCALE: 1/8" = 1'-0"

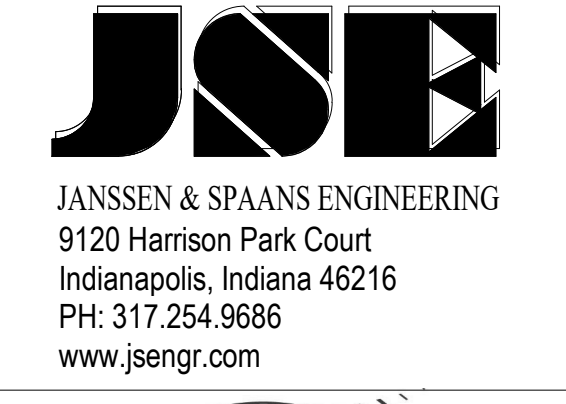
LIGHTING CONTROLLER SCHEDULE

Table with columns: TYPE TAG, DESCRIPTION, MOUNTING, TYPE, SENSORS, TIMEOUT PERIOD, MANUFACTURERS. Rows include occupancy sensors, daylight sensors, and room controllers.

LIGHTING FIXTURE SCHEDULE

NOTES: 1. THE CONTRACTOR CAN CHOOSE TO EITHER PROVIDE A GENERATOR TRANSFER DEVICE PER LIGHT FIXTURE OR PER CIRCUIT... 2. PROVIDE MOUNTING ACCESSORIES AS REQUIRED... 3. REMOTE DRIVER TO BE LOCATED ON TOP OF VESTIBULE... 4. PROVIDE MOUNTING ACCESSORIES AS REQUIRED.

Main table for lighting fixtures with columns: TYPE TAG, DESCRIPTION, MOUNTING, TYPE, LUMENS, TEMPERATURE, WATTS, VOLTS, MANUFACTURERS, NOTES. Includes a large hand-drawn area around fixtures F9B through F12.



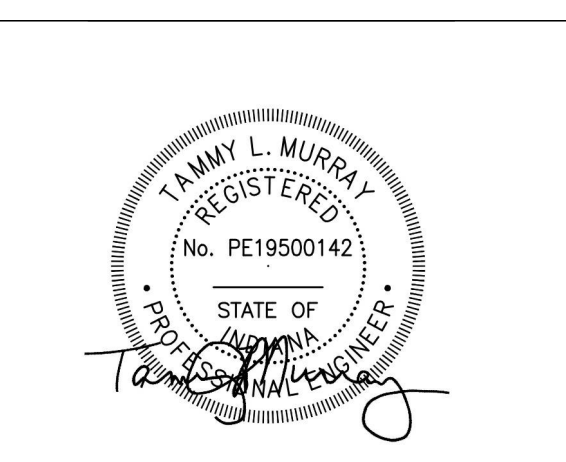
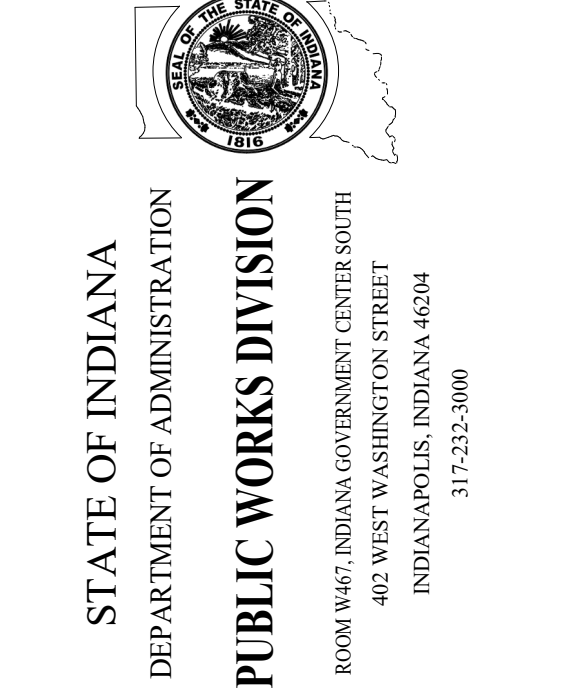
synthesis 251 N Illinois Street, Suite 200 Indianapolis, IN 46204

RATIO Landscape Architecture 30 W Monroe Street, Suite 500 Chicago, IL 60603

Applied Engineering Services 5975 Castle Creek Parkway N Drive, Suite 300 • Indianapolis, IN 46250

Fink Roberts & Patrie, Inc. Structural Engineers 3535 East 96th Street, Suite 126 Indianapolis, IN 46240

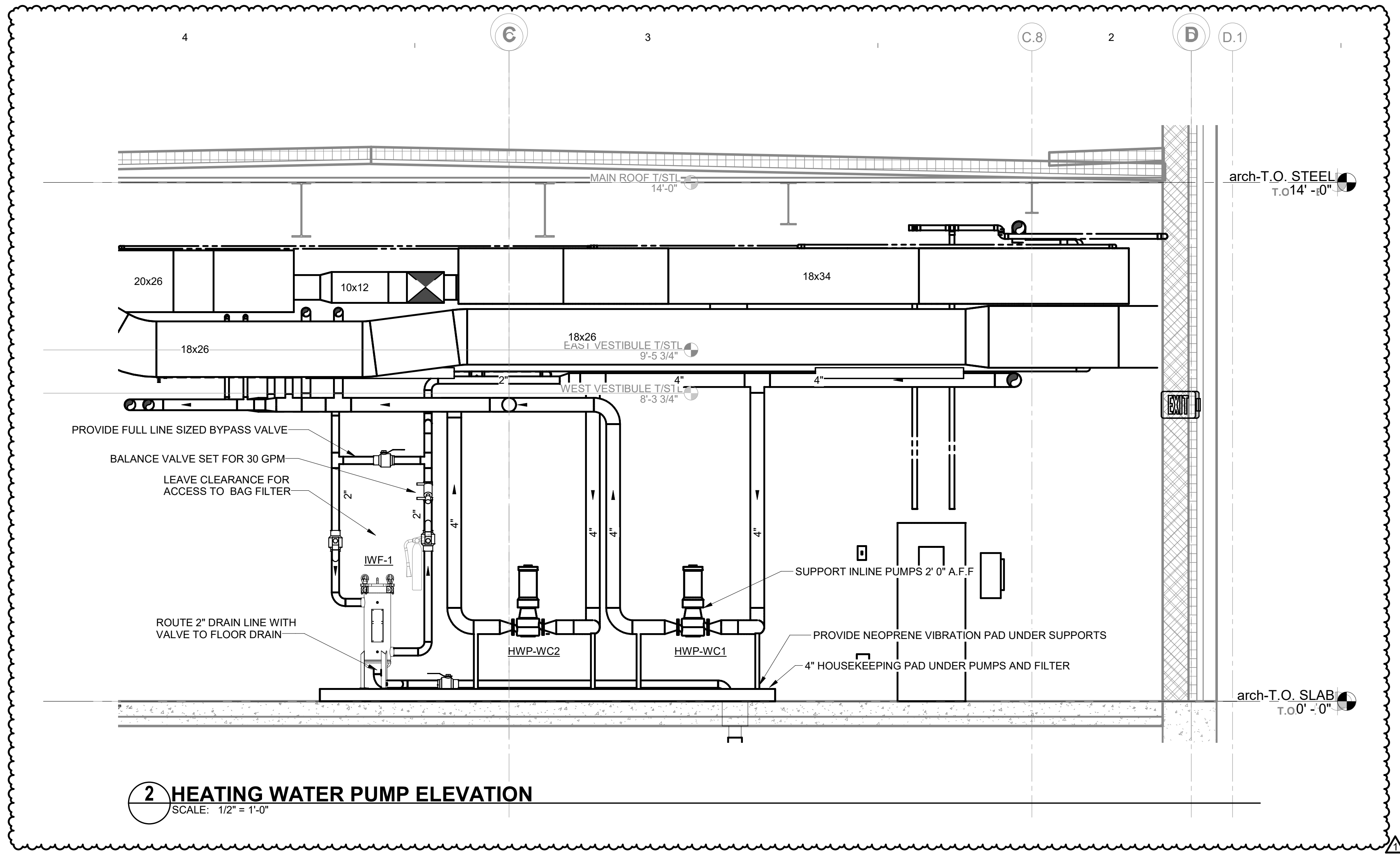
DAPW PROJECT NUMBER: 84003001-22-058-C1 CLEAR CREEK WELCOME CENTER 5494 W 21 ROAD WEST TERRE HAUTE, IN 47885 Issued For CONSTRUCTION DOCUMENTS 02.22.2023



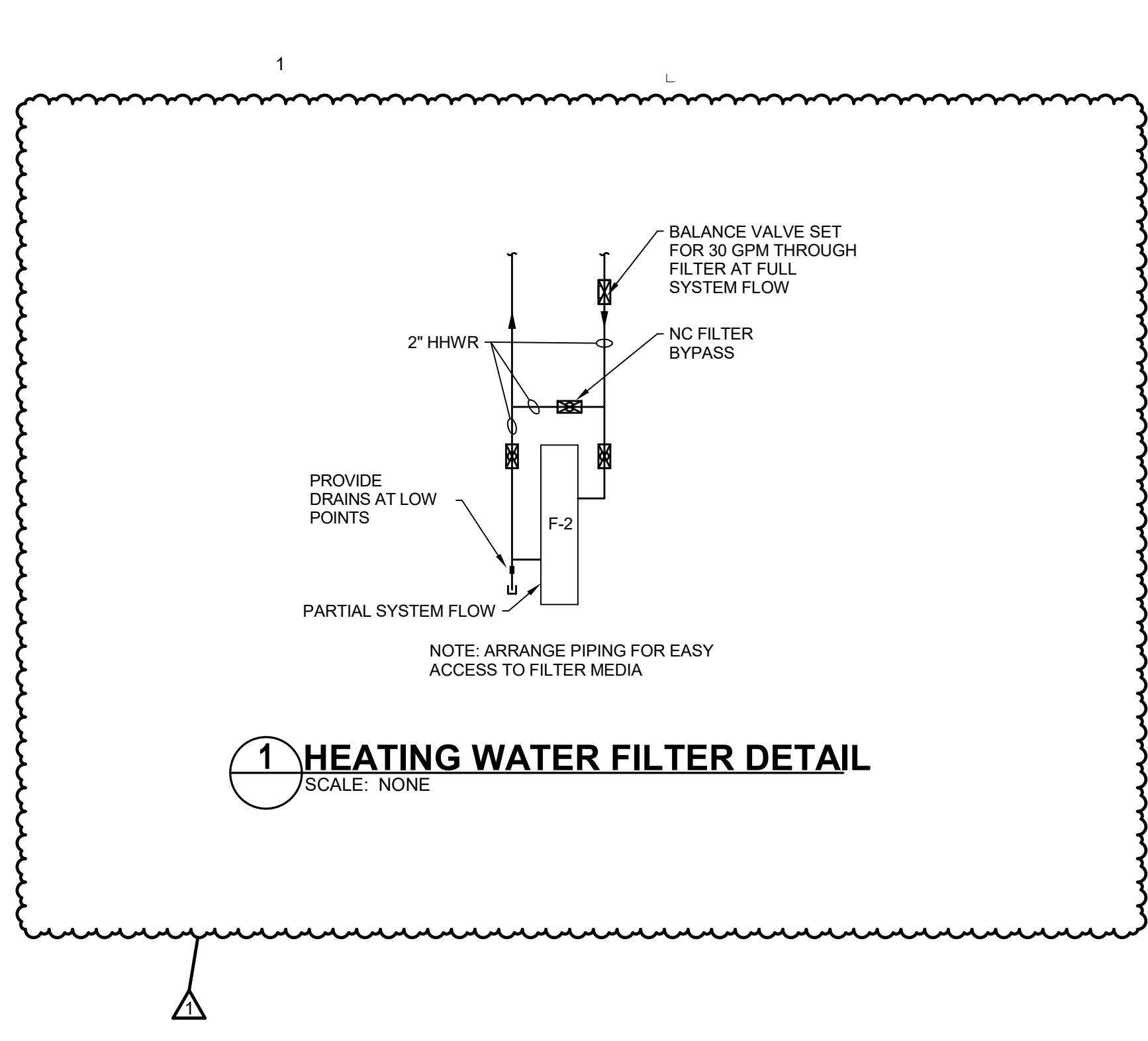
Revision table with columns: Revision, Description, Date. Includes revision 1: Addendum #1 dated 03.15.23.

ELECTRICAL SCHEDULES

WC-E603



2 HEATING WATER PUMP ELEVATION
SCALE: 1/2" = 1'-0"



1 HEATING WATER FILTER DETAIL
SCALE: NONE

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DAPW PROJECT NUMBER: 8-4003001-22-058-C1

CLEAR CREEK WELCOME CENTER
5494 W 21 ROAD WEST TERRE HAUTE, IN
47885

Issued For CONSTRUCTION DOCUMENTS
02.22.2023

STATE OF INDIANA
 DEPARTMENT OF ADMINISTRATION
PUBLIC WORKS DIVISION
 ROOM 400 INDIANA GOVERNMENT CENTER SOUTH
 400 WEST WASHINGTON STREET
 INDIANAPOLIS, INDIANA 46204
 317-232-3000

DANIEL THOMAS HILL
 REGISTERED PROFESSIONAL ENGINEER
 No. PE10302029
 STATE OF INDIANA
 2/22/23

Revision:	Added Item #1	03.15.23
Project Number:	37005000-21-019-C1	
Requestion Number:		
Account Number:		
Designer:	DaM	Drawing Date: 02.22.2023
Drafter:	DaM	Drawing Scale: As indicated
DAPW Approval:		
Client Approval:		
Reference Number:	1362S	
Building Reference:		
Drawing Number:		

MECHANICAL
DETAILS

WC-M502

SPLIT SYSTEM AHU

Table with columns for TAG NO., AREA SERVED, TYPE, CFM, OA CFM, TOTAL MBH, SEN MBH, EADB/EAWB, LADB/LAWB, REFRIG TYPE, MAX FACE VEL, MIN FACE AREA, MBH, EAT/LAT, EWT/LWT, GPM, MAX PD, FAN TYPE, DRIVE, NO OF FANS, TOTAL SP, EXT SP, FAN RPM, MOTOR HP, VOLTS/PH, FLA, MCA, MOCOP, STARTER, EM POWER, CONTROL TYPE, MIN. NO OF COMP, COMPRESSOR TYPE, NO OF CONDENSER FANS, FAN HP EACH, FAN RPM, DESIGN AMBIENT TEMP, TYPE, FLA, MCA, MOP, EM POWER, CONTROL TYPE, MFG, INDOOR/OUTDOOR MODEL, INDOOR/OUTDOOR WEIGHT, REMARKS.

ENERGY RECOVERY VENTILATOR SCHEDULE

Table with columns for AHU TAG NO., ENTERING (OA), LEAVING (FA), ENTERING (RA), LEAVING (EXH), RECOVERED, FAN DATA, ELECTRICAL DATA, BASIS OF DESIGN.

SUPPLY NOZZLE SCHEDULE

Table with columns for TYPE TAG, NOMINAL SIZE, NOMINAL ROUND NECK SIZE, BRANCH DUCT SIZE TO DIFFUSER, MINIMUM CFM, MAXIMUM CFM, MAX. NC LEVEL, THROW (FT), MAX. NECK VELOCITY, MAX. VELOCITY PRESSURE, MAX. TOTAL PRESSURE, MANUFACTURER, MODEL NO., TYPE, DESCRIPTION, NOTES.

ROOF HOOD SCHEDULE

Table with columns for TAG NO., EQUIPMENT SERVED, TYPE, SERVICE, CFM, THROAT AREA SQ FT, AIR VELOCITY FPM, STATIC PRESSURE W.C., HOOD SIZE LxWxH OR DIA x H, ROOF OPENING, FINISH, MANUFACTURER & MODEL, NOTES.

HOT WATER BOILER SCHEDULE

Table with columns for TAG NO., LOCATION, FUEL, GAS PRESSURE, INPUT MBH, OUTPUT MBH, MIN. TURN DOWN, MIN. SURFACE AREA, GPM MAX/MIN, EWT, LWT, PRESSURE DROP, RELIEF VALVE SETTING, DISC BY, STARTER BY, EM POWER, FLA, VOLT & PHASE, MFG, MODEL NO, WGT., NOTES.

PUMP SCHEDULE

Table with columns for UNIT TAG, LOCATION, TYPE, FLOW, TDH, FLUID, MIN. FLUID TEMP., MAX. FLUID TEMP., IMPELLER DIA, MIN. EFFICIENCY, BHP, HP, RPM, VOLTS, PH, STARTER BY, STARTER TYPE, EM POWER, CONTROL TYPE, MANUFACTURER, MODEL NO., WEIGHT, NOTES.

RETURN AND EXHAUST GRILLE SCHEDULE

Table with columns for TYPE TAG, NOMINAL FACE SIZE, MIN. CORE AREA, BRANCH DUCT SIZE, MIN. CFM, MAX. CFM, MAX. NC LEVEL, MAX. CORE VELOCITY, MAX. VELOCITY PRESSURE, MAX. TOTAL PRESSURE, MANUFACTURER, MODEL NO., NOTES.

ELECTRIC HEATER SCHEDULE

Table with columns for UNIT TAG, LOCATION, TYPE, MBH, EAT, KW, STEPS, NO OF SPEEDS, HP, FLA, MCA, MOCOP, VOLTS, PHASES, DISC. SW. BY, EM. POWER, CONTROL TYPE, MANUFACTURER, MODEL NO., WEIGHT, NOTES.

SUPPLY GRILLE SCHEDULE

Table with columns for TYPE TAG, NOMINAL FACE SIZE, MIN. CORE AREA, BRANCH DUCT SIZE, MIN. CFM, MAX. CFM, MAX. NC LEVEL, MAX. CORE VELOCITY, MAX. VELOCITY PRESSURE, MAX. TOTAL PRESSURE, MANUFACTURER, MODEL NO., NOTES.

HYDRONIC HEATER SCHEDULE

Table with columns for UNIT TAG, LOCATION, TYPE, MBH, EWT, LWT, GPM, MAX WATER P.D., HP, NO OF SPEEDS, VOLTS, PHASES, DISC. SW. BY, EM. POWER, CONTROL TYPE, MANUFACTURER, MODEL NO., WEIGHT, NOTES.

LINEAR SLOT DIFFUSER SCHEDULE

Table with columns for UNIT TAG, NOMINAL LENGTH, NUMBER OF SLOTS, SLOT WIDTH, INLET DUCT SIZE, MIN. CFM, MAX. CFM, MAX. NC LEVEL, MAX. THROW, MAX. TOTAL PRESSURE, MANUFACTURER, MODEL NO., NOTES.

SUPPLY DIFFUSER SCHEDULE

Table with columns for TYPE TAG, NOMINAL SIZE, NOMINAL ROUND NECK SIZE, BRANCH DUCT SIZE TO DIFFUSER, MINIMUM CFM, MAXIMUM CFM, MAX. NC LEVEL, THROW (FT), MAX. NECK VELOCITY, MAX. VELOCITY PRESSURE, MAX. TOTAL PRESSURE, MANUFACTURER, MODEL NO., TYPE, DESCRIPTION, NOTES.

MISCELLANEOUS EQUIPMENT SCHEDULE

Table with columns for UNIT TAG, LOCATION, DESCRIPTION, CAPACITY, MOTOR, ELECTRICAL DATA, MFG, MODEL #, WGT (LBS), NOTES.

EXPANSION TANK AND AIR CONTROL SYSTEM SCHEDULE

Table with columns for TAG NO., LOCATION, SYSTEM SERVED, APPROX SYSTEM VOLUME, WATER TEMP RANGE MIN/MAX, PRV FILL PRESSURE AT TANK PSIG, RELIEF VALVE PSIG, AT TANK PSIG, MIN. VOLUME GAL., MIN. VOLUME GAL., AIR SEPARATOR, BASIS OF DESIGN, WEIGHT, NOTES.

HVAC DESIGN CONDITIONS

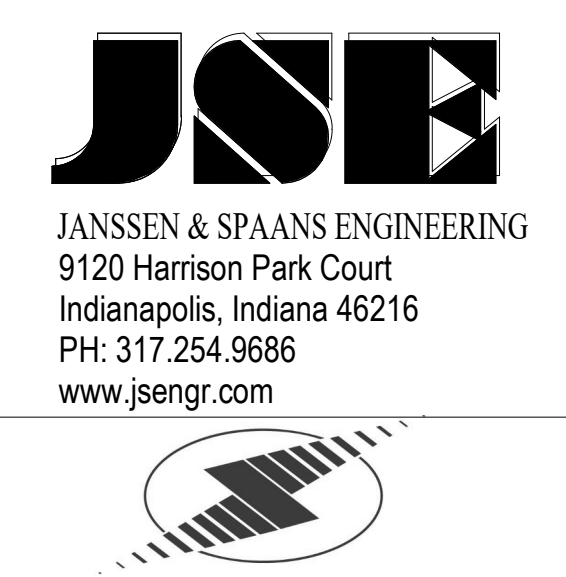
Table with columns for OUTDOOR DESIGN CONDITIONS (SUMMER, WINTER), SPACE TEMP - OCCUPIED SPACES, SPACE TEMP - UTILITY SPACES, DRY BULB, WET BULB, DRY BULB, RELATIVE HUMIDITY, COOLING, HEATING, MIN, MAX, COOLING, HEATING, COOLING, HEATING.

INLINE WATER FILTER SCHEDULE

Table with columns for UNIT TAG, LOCATION, TYPE, CIRCUITS, MAX FLOW, INLET INLET, FILTER MEDIA, DP, CONSTRUCTION, ASME RATING, COVER LIFT, MANUFACTURER, BASIS OF DESIGN, OPERATING WEIGHT, NOTES.

VAV BOX SCHEDULE

Table with columns for UNIT TAG, SYSTEM SERVED, AREA SERVED, UNIT TYPE, UNIT INLET SIZE, INLET DUCT DIA, MAXIMUM CFM, MINIMUM CFM, MAXIMUM S.P. AT MAXIMUM CFM, INLET S.P., EAT, LAT, EWT, LWT, GPM, MAXIMUM WATER P.D., NOMINAL PIPE SIZE, HEATING CFM MAX, HEATING CFM MIN, MBH AT HEATING, NC LEVEL AT INLET S.P., MAXIMUM ROOM NC, CONTROL TYPE, POWER 120V OR 24V W/ REMOTE, WEIGHT, MANUFACTURER, MODEL NO., NOTES.

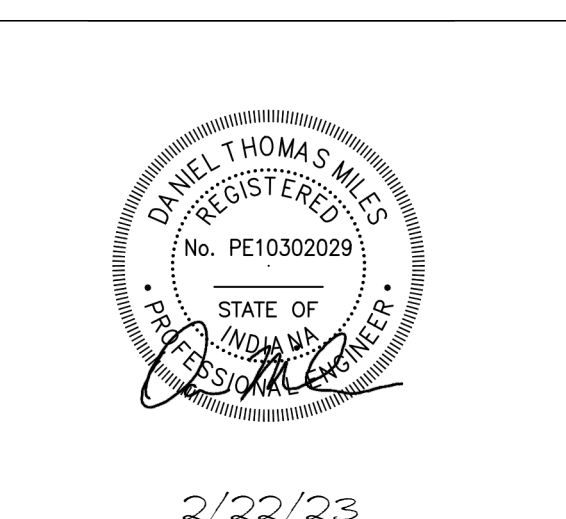
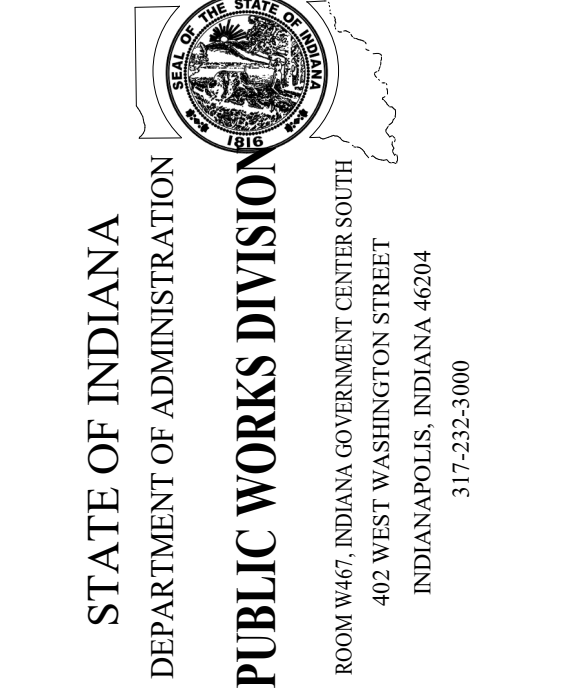


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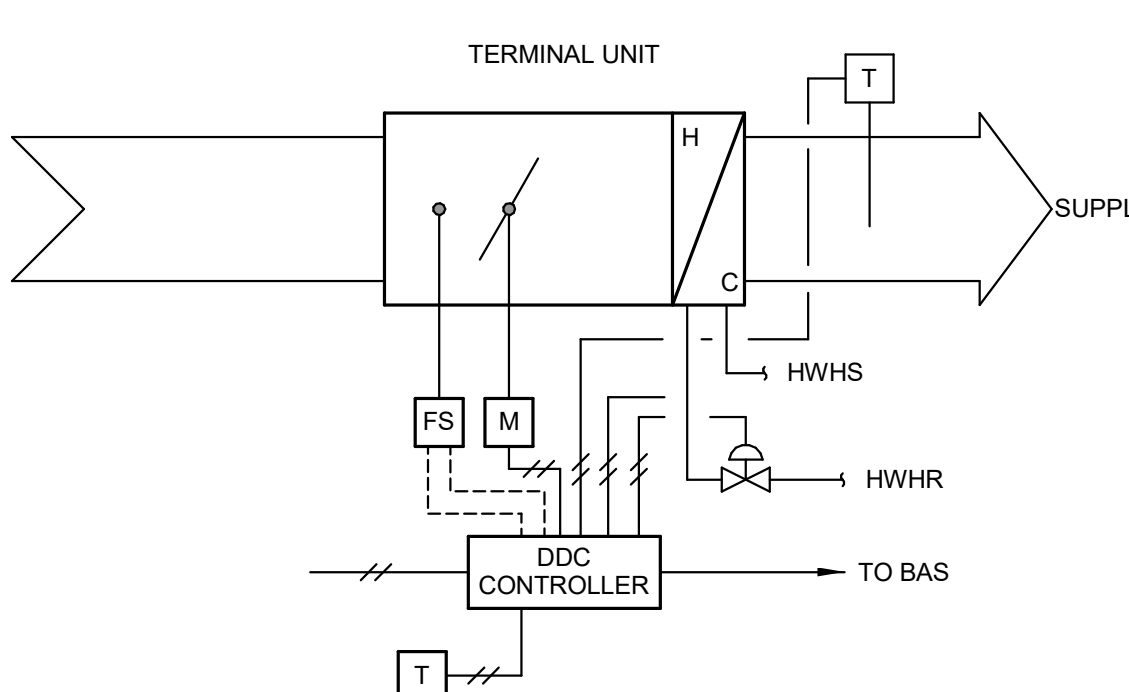
Applied Engineering Services 5975 Castle Creek Parkway N Drive, Suite 300 • Indianapolis, IN 46250 PH:317.810.4141 www.applied-e-s.com Fink Roberts & Petrie, Inc. Structural Engineers 3535 East 96th Street, Suite 126 Indianapolis, IN 46240 PH: 317.872.8400 www.frpic.com

DAPW PROJECT NUMBER: 84003001-22-058-C1 CLEAR CREEK WELCOME CENTER 5494 W 21 ROAD WEST TERRE HAUTE, IN 47885 Issued For CONSTRUCTION DOCUMENTS 02.22.2023



2/22/23 03.15.23 Project Number: 37005000-21-019-C1 Requestion Number: Account Number: Designer: DaM 02/22/2023 Drafter: DaM 12" = 1'-0" DAPW Approval: Client Approval: Reference Number: 1362S Building Reference: Drawing Number:

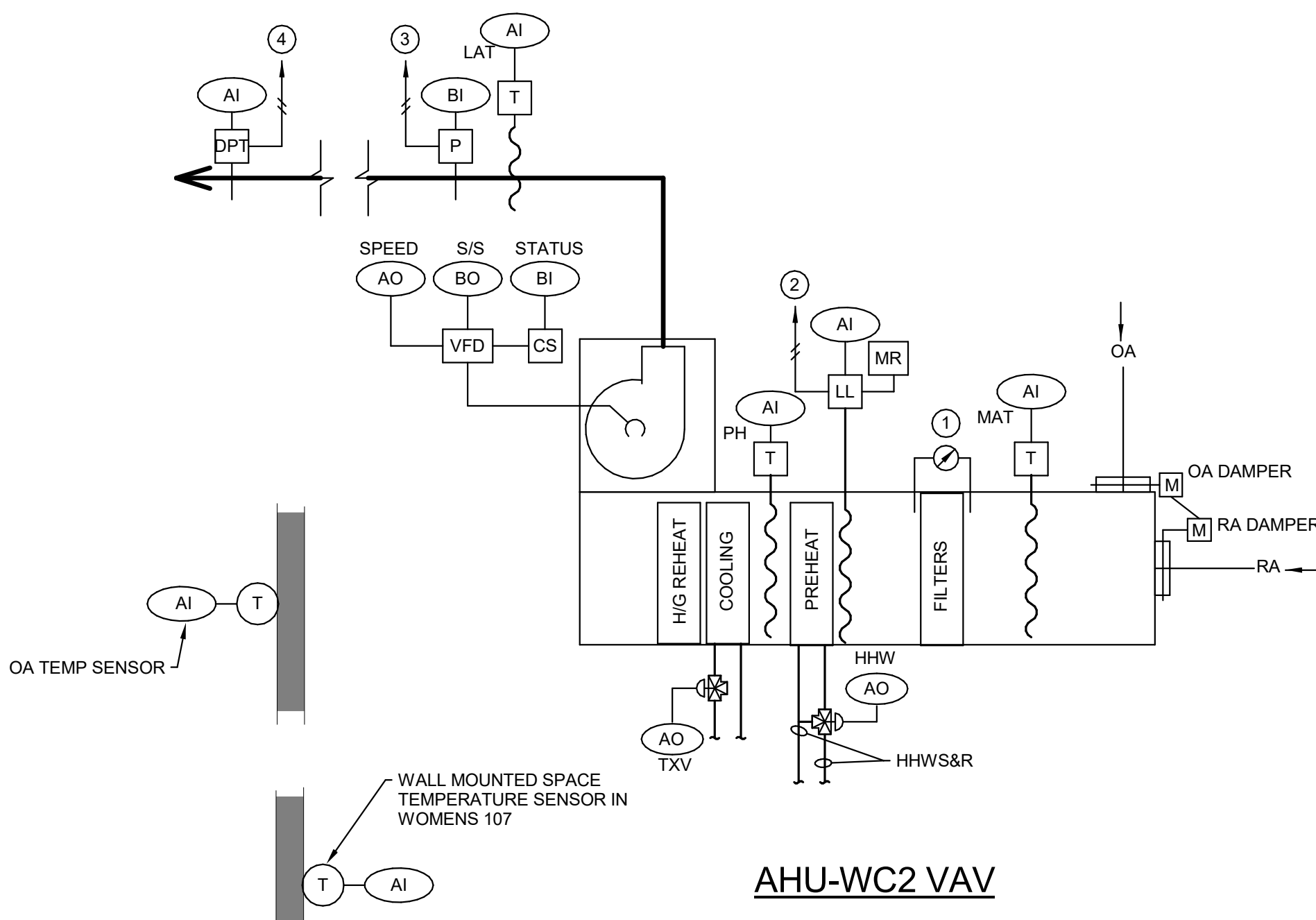
MECHANICAL SCHEDULES IWC-M601



VAV TERMINAL UNIT CONTROL DIAGRAM
SCALE: NONE

SEQUENCE OF OPERATIONS:

- 1. GENERAL:
1.1. THE ROOM HEATING AND COOLING SET POINTS SHALL BE SET BY THE BAS.
1.2. OCCUPIED ZONE TEMPERATURE COOLING SETPOINT = 75 DEG F.
1.3. OCCUPIED ZONE TEMPERATURE HEATING SETPOINT = 70 DEG F.
1.4. UNOCCUPIED ZONE TEMPERATURE COOLING SETPOINT = 80 DEG F.
1.5. UNOCCUPIED ZONE TEMPERATURE HEATING SETPOINT = 60 DEG F.
1.6. CONNECT TO AUXILIARY CONTACT ON LIGHTING OCCUPANCY SENSOR...
2. OCCUPIED MODE:
2.1. ON A CALL FOR COOLING, THE DAMPER SHALL MODULATE BETWEEN MAXIMUM AND MINIMUM AIR FLOW POSITION...
2.2. WHEN THE ROOM TEMPERATURE IS BETWEEN THE ROOM OCCUPIED COOLING AND THE ROOM OCCUPIED HEATING SET POINTS, THE DAMPER SHALL REMAIN IN THE MINIMUM AIR FLOW POSITION.
2.3. ON A CALL FOR HEATING, THE HEATING WATER CONTROL VALVE SHALL MODULATE OPEN TO MEET THE ROOM HEATING SET POINT...
2.3.1. WHEN MAXIMUM DISCHARGE TEMPERATURE IS REACHED AND SPACE TEMPERATURE IS BELOW SETPOINT - INCREMENTALLY INCREASE AIRFLOW WHILE MODULATING THE HEATING WATER CONTROL VALVE TO MAINTAIN MAXIMUM DISCHARGE AIR TEMPERATURE...
3. UNOCCUPIED MODE:
3.1. ON A CALL FOR COOLING, THE DAMPER SHALL MODULATE BETWEEN MAXIMUM AND MINIMUM AIR FLOW POSITION TO MEET THE ROOM UNOCCUPIED COOLING SET POINT.
3.2. WHEN THE ROOM TEMPERATURE IS BETWEEN THE ROOM UNOCCUPIED COOLING AND THE ROOM UNOCCUPIED HEATING SET POINTS, THE DAMPER SHALL CLOSE.
3.3. ON A CALL FOR HEATING, THE DAMPER SHALL OPEN TO MINIMUM POSITION. THE HEATING WATER CONTROL VALVE V-H1 SHALL MODULATE OPEN TO MEET THE ROOM HEATING SET POINT...
3.1.1. WHEN MAXIMUM DISCHARGE TEMPERATURE IS REACHED AND SPACE TEMPERATURE IS BELOW SETPOINT THAN INCREMENTALLY INCREASE AIRFLOW WHILE MODULATING THE HEATING WATER CONTROL VALVE TO MAINTAIN MAXIMUM DISCHARGE AIR TEMPERATURE...



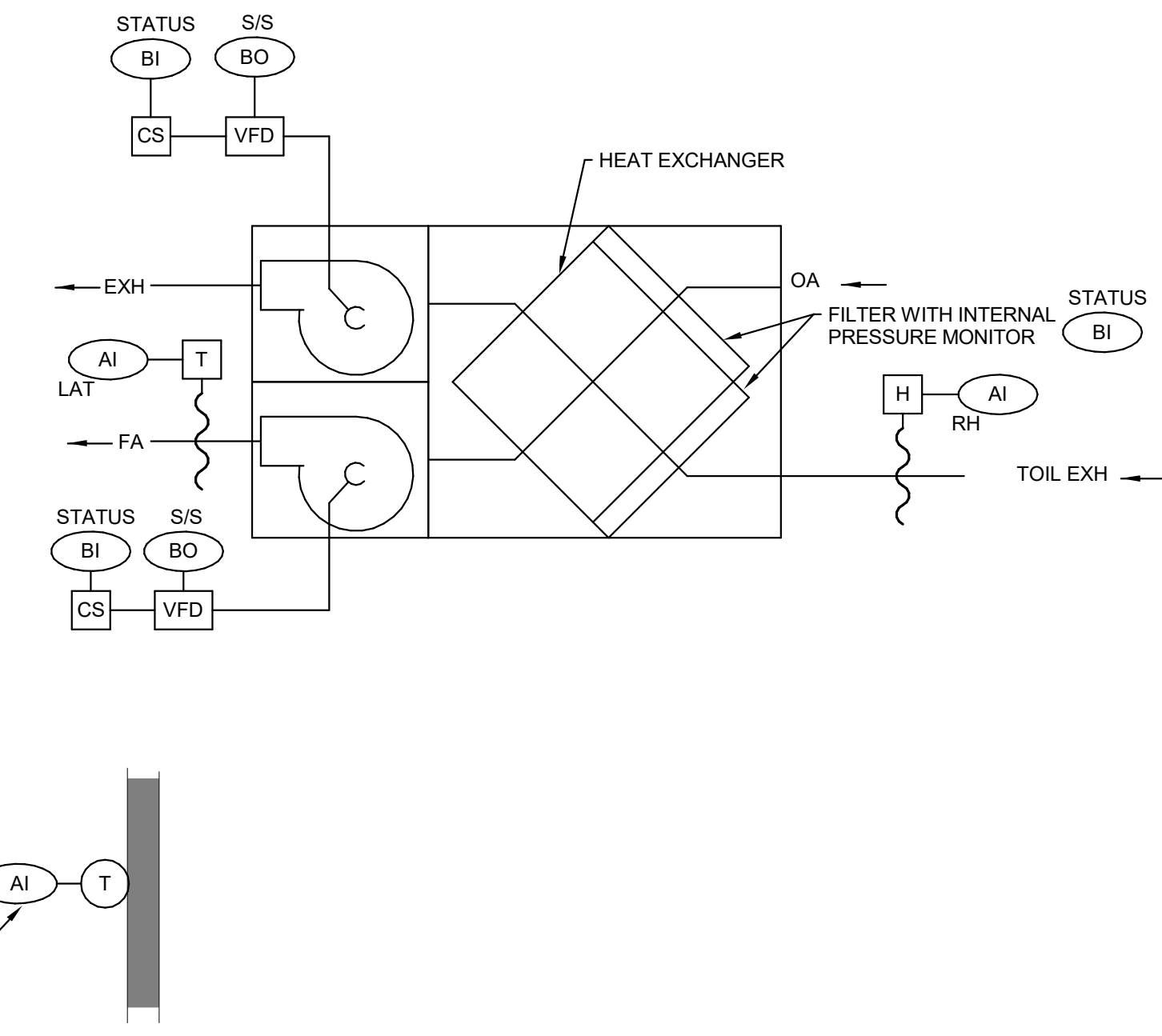
- NOTES:
1. DIFFERENTIAL PRESSURE GAUGE BY UNIT MFRG.
2. TEMPERATURE LOW LIMIT SENSOR HARDWIRED TO VFD'S. PROVIDE MANUAL RESET BUTTON.
3. PRESSURE HIGH LIMIT SENSOR HARDWIRED TO VFD'S. PROVIDE MANUAL RESET BUTTON.
4. DIFFERENTIAL PRESSURE SENSOR LOCATED 2/3 THROUGH DUCTWORK IN CHASE 120.

AIR HANDLER AHU-WC2 VAV
SEQUENCE OF OPERATIONS:

- MODE OF OPERATION: GENERAL
1. UNIT SHALL COMMUNICATE WITH BAS SYSTEM. COORDINATE COMMUNICATION PROTOCOL BETWEEN EQUIPMENT AND TCC PRIOR TO ORDERING.
2. UNIT IS INTENDED FOR CONTINUOUS DAY AND NIGHT OPERATION. UNOCCUPIED MODE TO BE AVAILABLE FOR MANUAL SELECTION AT BAS.
3. UNIT SHALL RUN CONTINUOUSLY IN OCCUPIED MODE AND INTERMITTENTLY IN UNOCCUPIED MODE.
4. UNOCCUPIED MODE
4.1. IF SPACE TEMPERATURE AT SENSOR IN WOMENS 107 FALLS BELOW UNOCCUPIED SPACE TEMPERATURE SETPOINT (80°F ADJ.) UNIT TO START AND RUN WITH OA DAMPER CLOSED AND RA DAMPER FULLY OPEN. WHEN SPACE TEMPERATURE IS 3°F ABOVE UNOCCUPIED SETPOINT TEMPERATURE, UNIT TO SHUTDOWN PER SEQUENCE BELOW.
4.2. IF SPACE TEMPERATURE AT SENSOR IN WOMENS 107 IS ABOVE UNOCCUPIED SPACE COOLING SETPOINT (80°F ADJ.) UNIT TO START AND RUN NORMALLY FOR 30 MINUTES. IF SPACE TEMPERATURE IS STILL ABOVE SETPOINT, RESET TIMER AND CONTINUE OPERATING.
5. OCCUPIED MODE
5.1. SUPPLY FAN
5.1.1. SUPPLY FAN SHALL OPERATE TO MAINTAIN SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE OF 1.25" (ADJ.). TAB CONTRACTOR SHALL DETERMINE FINAL SETPOINT AND PROVIDE FAN SPEED TO TCC.
5.2. DAMPERS
5.2.1. OA AND RA DAMPERS SHALL OPERATE TOGETHER TO MAINTAIN SCHEDULED OA FLOW AS DETERMINED BY TAB CONTRACTOR.
5.2.2. WHEN OA DAMPER IS CLOSED, RA DAMPER TO BE FULLY OPEN.
5.3. COILS
5.3.1. UNIT SHALL OPERATE TO MAINTAIN DISCHARGE TEMPERATURE OF 55°F (ADJ.).
5.3.2. PREHEAT COIL 3-WAY VALVE SHALL MODULATE TO MAINTAIN COIL DISCHARGE TEMP OF 55°F(ADJ.).
5.3.3. ON A CALL FOR COOLING CONDENSING UNIT AND ASSOCIATED TXV SHALL OPERATE AND MODULATE TO MAINTAIN 52°F(ADJ.) DISCHARGE TEMPERATURE.
5.3.4. ON A CALL FOR HEATING CONDENSING UNIT AND ASSOCIATED TXV SHALL OPERATE AND MODULATE TO MAINTAIN 52°F(ADJ.) DISCHARGE TEMPERATURE.
5.3.5. MODULATING HOT GAS REHEAT SHALL MODULATE TO MAINTAIN A SPACE TEMPERATURE SETPOINT OF 55°F.
6. SHUTDOWN
6.2. ON UNIT SHUTDOWN, FAN SHALL BE OFF. OA DAMPERS SHALL BE CLOSED RA DAMPERS SHALL BE OPEN. COOLING VALVE SHALL OFF. PREHEAT VALVE SHALL MODULATE TO MAINTAIN 50°F CABINET TEMPERATURE. STATUS SHALL BE SENT TO BAS FRONT END.
7. STARTUP
7.1. MORNING WARMUP: ON UNIT STARTUP BELOW 40°F OAT, UNIT SHALL START WITH OA DAMPERS CLOSED AND RETURN AIR DAMPERS OPEN. AFTER 10 MINUTES, OA AND RETURN AIR DAMPERS SHALL SLOWLY MODULATE TO NORMAL POSITIONS.
8. SAFETIES
8.1. AT A 40°F MIXED AIR TEMPERATURE, A VIRTUAL LOW LIMIT SHALL BE ACTIVATED MODULATING THE OUTSIDE AIR DAMPER AND THE RETURN AIR DAMPER AS REQUIRED TO MAINTAIN MINIMUM 44" MIXED AIR TEMPERATURE.
8.2. WHEN THE PHYSICAL LOW LIMIT SENSOR (SET FOR 34°F) TRIPS, HARD WIRING THROUGH THE LOW LIMIT SENSOR SHALL STOP THE SUPPLY FAN AND INITIATE SHUTDOWN PROCEDURES. AN ALARM SHALL BE SENT TO THE BAS FRONT END. AFTER 3 AUTOMATIC RESETS, A MANUAL RESET SHALL BE REQUIRED TO RESTART UNIT. CLEARLY MARK RESET BUTTON AND LOCATE FOR BEST ACCESS NEAR AIR HANDLER.

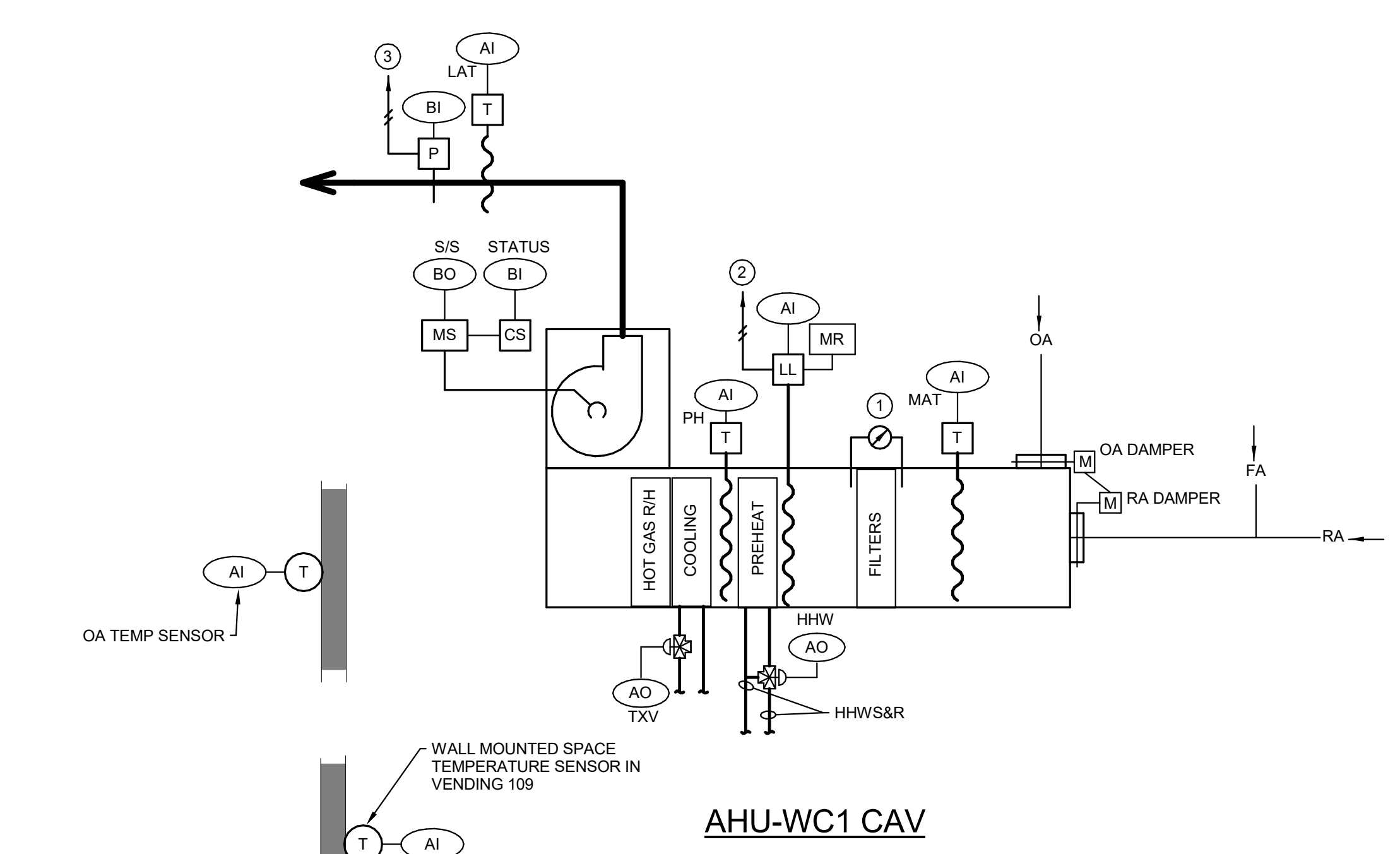
ENERGY RECOVERY VENTILATOR (ERV)
SEQUENCE OF OPERATIONS:

- MODE OF OPERATION: GENERAL
1. UNIT SHALL COMMUNICATE WITH BAS SYSTEM. COORDINATE COMMUNICATION PROTOCOL BETWEEN EQUIPMENT AND TCC PRIOR TO ORDERING.
FANS
1. UNIT IS INTENDED FOR CONTINUOUS DAY AND NIGHT OPERATION. UNOCCUPIED MODE TO BE AVAILABLE FOR MANUAL SELECTION AT BAS.
2. UNIT SHALL RUN CONTINUOUSLY IN OCCUPIED MODE AND OFF IN UNOCCUPIED MODE.
3. OCCUPIED MODE
3.1. SUPPLY FAN
3.1.1. SUPPLY FAN SHALL OPERATE AT VARIABLE SPEED AS DETERMINED BY INTERNAL CONTROLLER.
3.2. EXHAUST FAN
3.2.1. EXHAUST FAN SHALL OPERATE AT VARIABLE SPEED AS DETERMINED BY INTERNAL CONTROLLER.
FROST PROTECTION
1. MONITOR TOILET EXHAUST (RA) HUMIDITY AND OUTDOOR AIR TEMPERATURE. BELOW 10°F(ADJ.) OAT AND ABOVE 30% RH, OUTDOOR AIR FAN SHALL SHUT DOWN. EXHAUST FAN SHALL CONTINUE TO RUN. SEND ALARM TO BAS. AFTER 20 MINUTES, IF CONDITIONS PERMIT, OUTDOOR AIR FAN SHALL START.
COOL STARTUP
1. IF UNIT IS STARTING BELOW 30°F OAT, START EXHAUST FAN AND RUN FOR 10 MINUTES BEFORE STARTING OUTDOOR AIR FAN.



ERV CONTROL DIAGRAM
SCALE: NONE

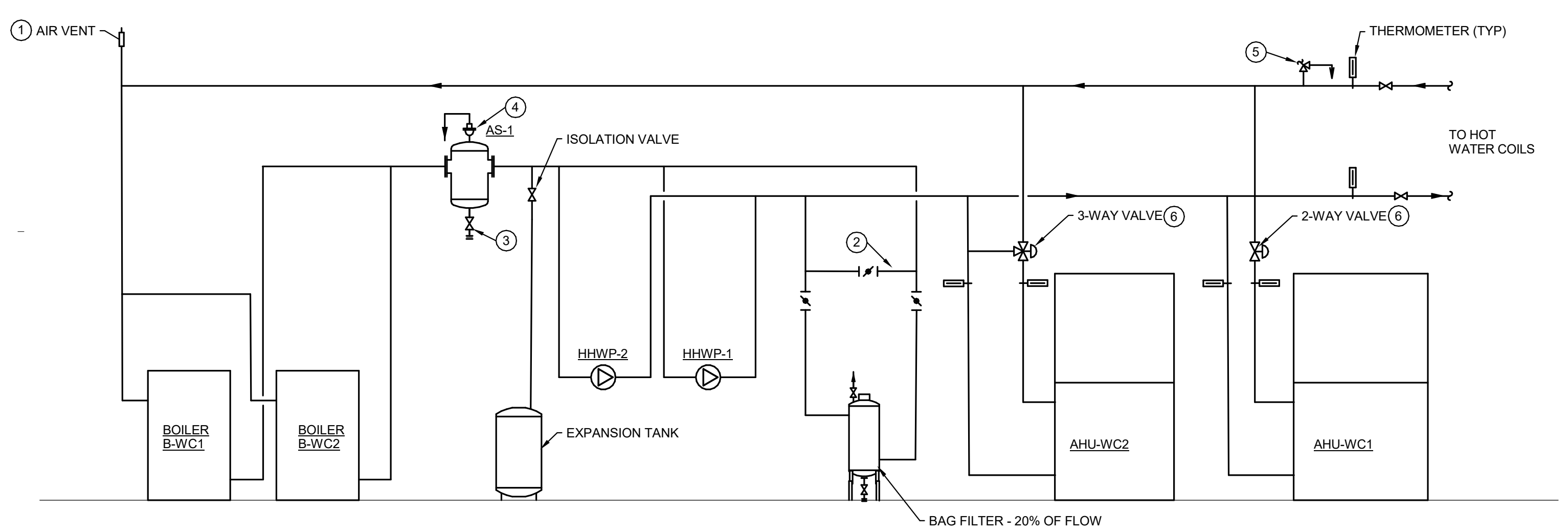
AHU-WC1 CONTROLS DIAGRAM
SCALE: NONE



- NOTES:
1. DIFFERENTIAL PRESSURE GAUGE BY UNIT MFRG.
2. TEMPERATURE LOW LIMIT SENSOR HARDWIRED TO VFD'S. PROVIDE MANUAL RESET BUTTON.
3. PRESSURE HIGH LIMIT SENSOR HARDWIRED TO VFD'S. PROVIDE MANUAL RESET BUTTON.
4. DIFFERENTIAL PRESSURE SENSOR LOCATED 2/3 THROUGH DUCTWORK IN CHASE 120.

AIR HANDLER AHU-WC1 CAV
SEQUENCE OF OPERATIONS:

- MODE OF OPERATION: GENERAL
1. UNIT SHALL COMMUNICATE WITH BAS SYSTEM. COORDINATE COMMUNICATION PROTOCOL BETWEEN EQUIPMENT AND TCC PRIOR TO ORDERING.
2. UNIT IS INTENDED FOR CONTINUOUS DAY AND NIGHT OPERATION. UNOCCUPIED MODE TO BE AVAILABLE FOR MANUAL SELECTION AT BAS.
3. UNIT SHALL RUN CONTINUOUSLY IN OCCUPIED MODE AND INTERMITTENTLY IN UNOCCUPIED MODE.
4. UNOCCUPIED MODE
4.1. IF SPACE TEMPERATURE AT SENSOR IN VENDING 109 FALLS BELOW UNOCCUPIED SPACE TEMPERATURE SETPOINT (60°F ADJ.) UNIT TO START AND RUN WITH OA DAMPER CLOSED AND RA DAMPER FULLY OPEN. WHEN SPACE TEMPERATURE IS 3°F ABOVE UNOCCUPIED SETPOINT TEMPERATURE, UNIT TO SHUTDOWN PER SEQUENCE BELOW.
4.2. IF SPACE TEMPERATURE AT SENSOR IN VENDING 109 IS ABOVE UNOCCUPIED SPACE COOLING SETPOINT (80°F ADJ.) UNIT TO START AND RUN NORMALLY FOR 30 MINUTES. IF SPACE TEMPERATURE IS STILL ABOVE SETPOINT, RESET TIMER AND CONTINUE OPERATING.
5. OCCUPIED MODE
5.1. SUPPLY FAN
5.1.1. SUPPLY FAN SHALL OPERATE AT CONSTANT SPEED AS DETERMINED BY TAB CONTRACTOR AND PROVIDED TO TCC CONTRACTOR.
5.2. DAMPERS
5.2.1. OA AND RA DAMPERS SHALL OPERATE TOGETHER TO MAINTAIN SCHEDULED OA FLOW AS DETERMINED BY TAB CONTRACTOR.
5.2.2. WHEN OA DAMPER IS CLOSED, RA DAMPER TO BE FULLY OPEN.
5.3. COILS
5.3.1. UNIT SHALL MODULATE DISCHARGE TEMPERATURE TO MAINTAIN SPACE TEMPERATURE SETPOINT AS DETERMINED BY TEMPERATURE SENSOR IN VENDING 109.
5.3.2. HEATING COIL 2-WAY VALVE SHALL MODULATE TO MAINTAIN MINIMUM COIL DISCHARGE TEMP OF 53°F(ADJ.).
5.3.3. HEATING COIL 2-WAY VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT AS DETERMINED BY TEMPERATURE SENSOR IN VENDING 109.
5.3.4. ON A CALL FOR COOLING CONDENSING UNIT AND ASSOCIATED TXV SHALL OPERATE AND MODULATE TO MAINTAIN 52°F(ADJ.) DISCHARGE TEMPERATURE.
5.3.5. MODULATING HOT GAS REHEAT SHALL MODULATE TO MAINTAIN A SPACE TEMPERATURE SETPOINT AS DETERMINED BY TEMPERATURE SENSOR IN VENDING 109.
6. SHUTDOWN
6.1. ON UNIT SHUTDOWN, FAN SHALL BE OFF. OA DAMPERS SHALL BE CLOSED RA DAMPERS SHALL BE OPEN. COOLING VALVE SHALL OFF. HEATING VALVE SHALL MODULATE TO MAINTAIN 50°F CABINET TEMPERATURE. STATUS SHALL BE SENT TO BAS FRONT END.
7. STARTUP
7.1. MORNING WARMUP: ON UNIT STARTUP BELOW 40°F OAT, UNIT SHALL START WITH OA DAMPERS CLOSED AND RETURN AIR DAMPERS OPEN. AFTER 20 MINUTES, OA AND RETURN AIR DAMPERS SHALL SLOWLY MODULATE TO NORMAL POSITIONS.
8. SAFETIES
8.1. AT A 40°F MIXED AIR TEMPERATURE, A VIRTUAL LOW LIMIT SHALL BE ACTIVATED MODULATING THE OUTSIDE AIR DAMPER AND THE RETURN AIR DAMPER AS REQUIRED TO MAINTAIN MINIMUM 44" MIXED AIR TEMPERATURE.
8.2. WHEN THE PHYSICAL LOW LIMIT SENSOR (SET FOR 34°F) TRIPS, HARD WIRING THROUGH THE LOW LIMIT SENSOR SHALL STOP THE SUPPLY FAN AND INITIATE SHUTDOWN PROCEDURES. AN ALARM SHALL BE SENT TO THE BAS FRONT END. AFTER 3 AUTOMATIC RESETS, A MANUAL RESET SHALL BE REQUIRED TO RESTART UNIT. CLEARLY MARK RESET BUTTON AND LOCATE FOR BEST ACCESS NEAR AIR HANDLER.



HEATING HOT WATER SYSTEM OPERATION

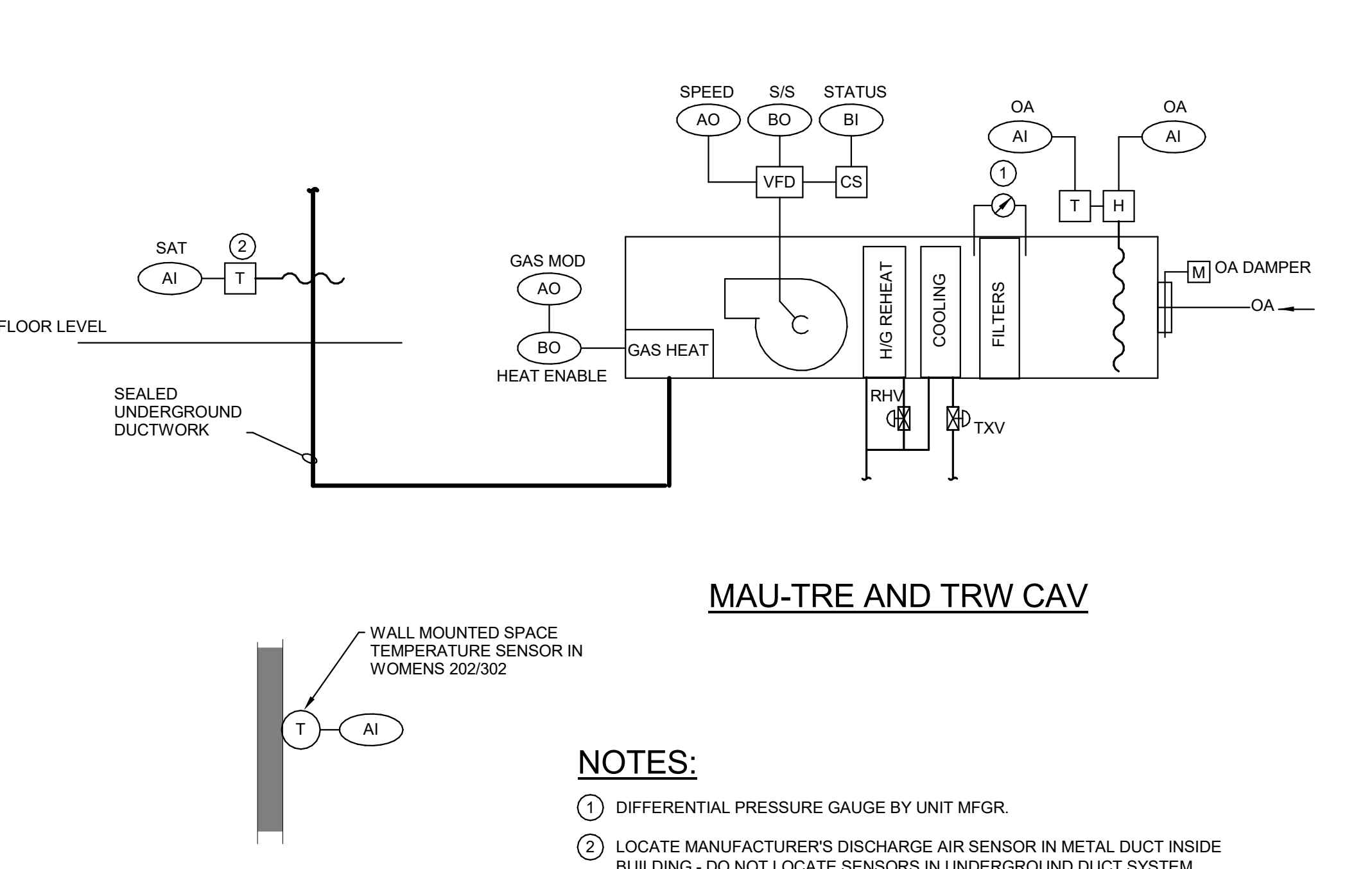
- 1. BOILERS TO HAVE INTEGRAL MODULATING CONTROLS TO MAINTAIN MOST EFFICIENT OPERATION. BOILERS TO CONTROL TO 130° LEAVING TEMPERATURE YEAR ROUND.
2. FULL LINE SIZE Bypass.
3. HEATING WATER SYSTEM TO COMMUNICATE WITH BAS FOR ENTERING AND LEAVING WATER TEMPERATURE AT BOILERS. BOILER STATUS AND ALARM. PUMP STATUS, SPEED, AND ALARM. PUMPS TO RUN IN PARALLEL AT VARIABLE SPEED TO MAINTAIN SYSTEM DIFFERENTIAL PRESSURE AS DETERMINED BY TAB CONTRACTOR.
4. AUTOMATIC AIR VENT WITH 1/2" DRAIN LINE. ROUTE TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM.
5. SYSTEM SAFETY RELIEF VALVE. PIPE TO NEAREST FLOOR DRAIN.
6. REFER TO 2-WAY AND 3-WAY COIL PIPING DETAILS ON VC-1504.
7. LOCATE DIFFERENTIAL PRESSURE SENSOR 2/3 DOWN HEATING WATER SYSTEM NEAR CHASE 120.

PLAN NOTES:

- 1. MANUAL HIGH POINT VENT AT ALL LOCATIONS IN THE PIPING SYSTEM WHERE AIR CAN BE TRAPPED.
2. FULL LINE SIZE Bypass.
3. 1" BLOWDOWN LINE. ROUTE TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM.
4. AUTOMATIC AIR VENT WITH 1/2" DRAIN LINE. ROUTE TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM.
5. SYSTEM SAFETY RELIEF VALVE. PIPE TO NEAREST FLOOR DRAIN.
6. REFER TO 2-WAY AND 3-WAY COIL PIPING DETAILS ON VC-1504.
7. LOCATE DIFFERENTIAL PRESSURE SENSOR 2/3 DOWN HEATING WATER SYSTEM NEAR CHASE 120.

HEATING WATER SCHEMATIC
SCALE: NONE

AHU-WC1 CONTROLS DIAGRAM
SCALE: NONE

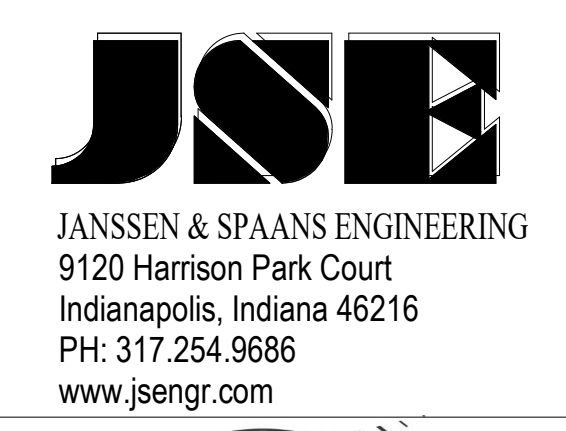


- NOTES:
1. DIFFERENTIAL PRESSURE GAUGE BY UNIT MFRG.
2. LOCATE MANUFACTURER'S DISCHARGE AIR SENSOR IN METAL DUCT INSIDE BUILDING - DO NOT LOCATE SENSORS IN UNDERGROUND DUCT SYSTEM.

MAKEUP AIR UNIT MAU-TRE AND MAU-TRW CAV
SEQUENCE OF OPERATIONS:

- MODE OF OPERATION: GENERAL
1. UNIT SHALL COMMUNICATE WITH BAS SYSTEM. COORDINATE COMMUNICATION PROTOCOL BETWEEN EQUIPMENT AND TCC PRIOR TO ORDERING.
2. UNIT IS INTENDED FOR CONTINUOUS DAY AND NIGHT OPERATION. UNOCCUPIED MODE TO BE AVAILABLE FOR MANUAL SELECTION AT BAS.
3. UNIT SHALL RUN CONTINUOUSLY IN OCCUPIED MODE AND INTERMITTENTLY IN UNOCCUPIED MODE.
4. UNOCCUPIED MODE
4.1. IF SPACE TEMPERATURE AT SENSOR IN WOMENS (202 OR 302) FALLS BELOW UNOCCUPIED SPACE TEMPERATURE SETPOINT (80°F ADJ.) UNIT TO START AND RUN WITH MANUFACTURER'S NORMAL STARTUP PROCEDURE. UNIT SPACE TEMPERATURE IS 3°F ABOVE UNOCCUPIED SETPOINT TEMPERATURE, UNIT TO SHUTDOWN PER SEQUENCE BELOW.
4.2. IF SPACE TEMPERATURE AT SENSOR IN WOMENS (202 OR 302) IS ABOVE UNOCCUPIED SPACE COOLING SETPOINT (80°F ADJ.) UNIT TO START AND RUN NORMALLY FOR 30 MINUTES. IF SPACE TEMPERATURE IS STILL ABOVE SETPOINT, RESET TIMER AND CONTINUE OPERATING.
5. OCCUPIED MODE
5.1. SUPPLY FAN
5.1.1. SUPPLY FAN SHALL OPERATE TO MAINTAIN CONSTANT AIR VOLUME SPEED AS DETERMINED BY TAB CONTRACTOR. TAB CONTRACTOR SHALL PROVIDE SPEED SETTING TO TCC.
5.2. DAMPERS
5.2.1. OA DAMPERS SHALL OPERATE WITH UNIT OPERATION PER MANUFACTURERS RECOMMENDED SEQUENCE.
5.2.2. WHEN UNIT IS OFF, OA DAMPER SHALL BE CLOSED.
5.3. COILS
5.3.1. UNIT SHALL OPERATE TO MAINTAIN A VARIABLE DISCHARGE TEMPERATURE TO SATISFY SPACE TEMPERATURE SETPOINT OF 75°F (ADJ.) SUMMER, 67°F (ADJ.) WINTER.
5.3.2. UNIT SHALL MODULATE DIRECT EXPANSION (DX) COOLING COIL, HOT GAS REHEAT (HGR) AND GAS FIRED HEATING COILS TO SATISFY SPACE TEMPERATURE SETPOINT.
5.3.3. ON A CALL FOR COOLING CONDENSING UNIT AND ASSOCIATED TXV SHALL OPERATE AND MODULATE TO MAINTAIN 52°F(ADJ.) DISCHARGE TEMPERATURE.
5.3.4. ON A CALL FOR HEATING CONDENSING UNIT AND ASSOCIATED TXV SHALL OPERATE AND MODULATE TO MAINTAIN 52°F(ADJ.) DISCHARGE TEMPERATURE.
5.3.5. MODULATING HOT GAS REHEAT SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT.
6. SHUTDOWN
6.1. ON UNIT SHUTDOWN, FAN SHALL BE OFF. OA DAMPERS SHALL BE CLOSED, COOLING SYSTEM SHALL OFF. GAS HEAT SHALL MODULATE TO MAINTAIN 50°F CABINET TEMPERATURE. STATUS SHALL BE SENT TO BAS FRONT END.
7. SAFETIES
7.1. BELOW 45°F OR ABOVE 105°F DISCHARGE AIR TEMPERATURE, AN ALARM SHALL BE SENT TO THE BAS SYSTEM.
7.2. BELOW 55°F(ADJ.) SPACE TEMPERATURE, AN ALARM SHALL BE SENT TO THE BAS SYSTEM.

MAU-TRE AND TRW CONTROLS DIAGRAM
SCALE: NONE



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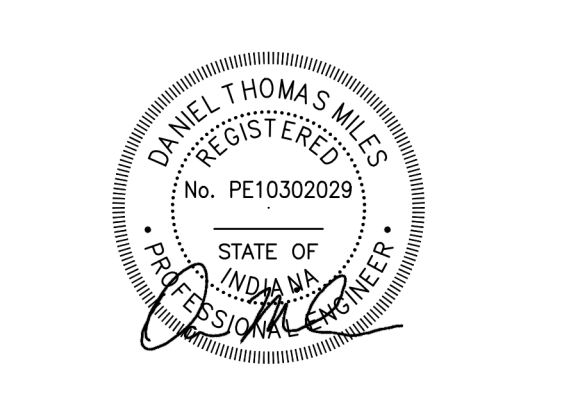
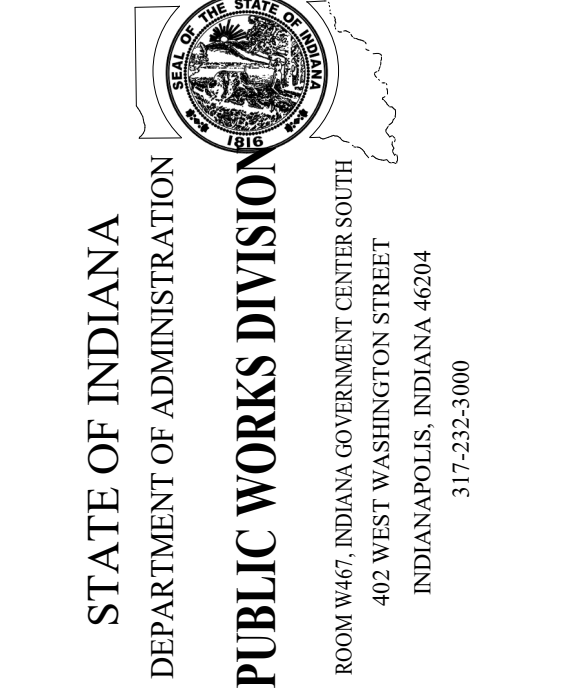


Table with project details including Project Number (27005000-21-019-C1), Account Number, Designer (DAM), Date (02/22/2023), and other metadata.

MECHANICAL DIAGRAMS

WC-M701