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E

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F

Project Title	Project Number	
	589A6-18-903	
Renovate Infrastructure of Laundry Building 153	Building Number	
	153	
Location	Drawing Number	
	G0	
Issue Date	1 of 93	
	July 16, 2018	
Checked	Drawn	
	GLD TDW	

2

1

A



B



ELEC. SEWER

BOLLARD (TYP.)

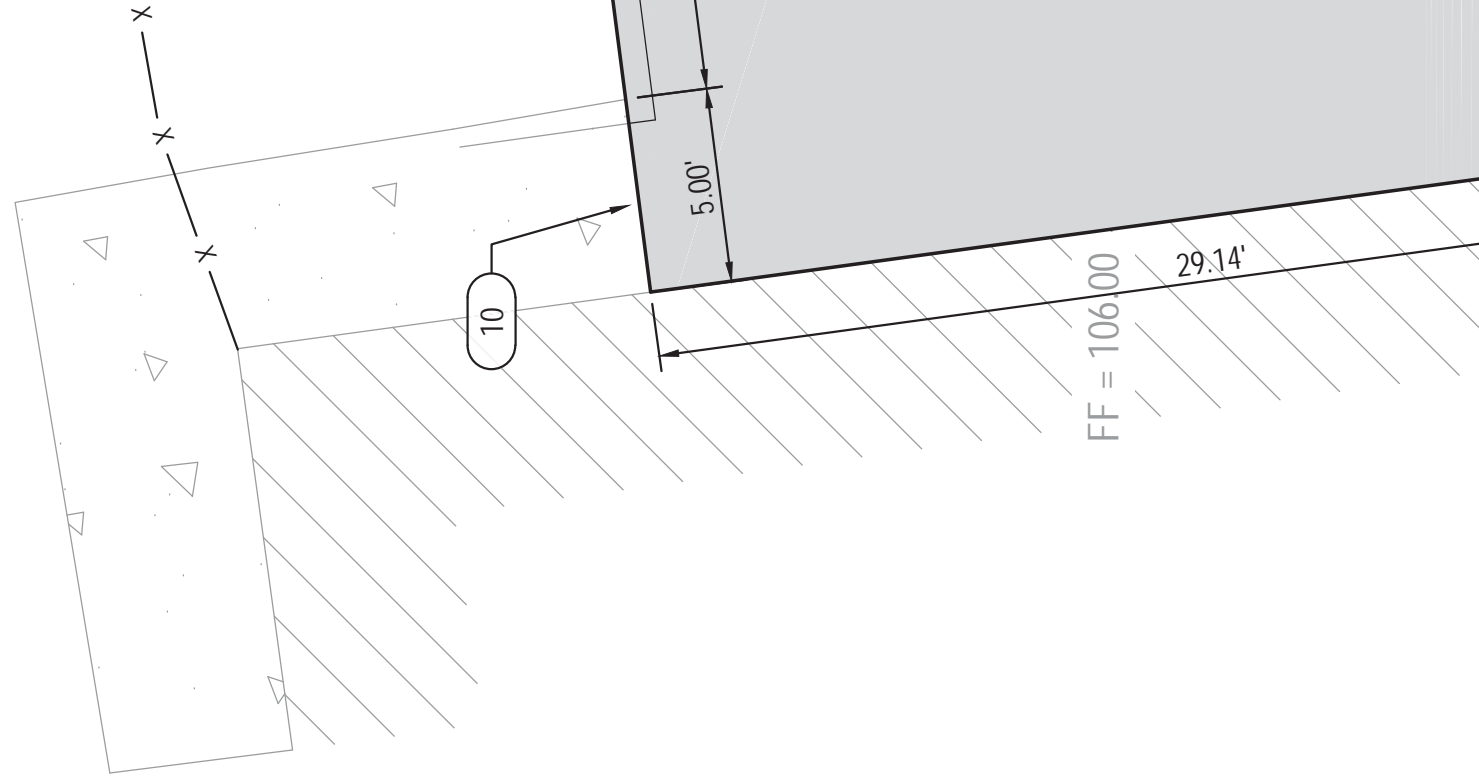
TRANSFORMER  
ON CONC. PAD

2

1

A

B



2

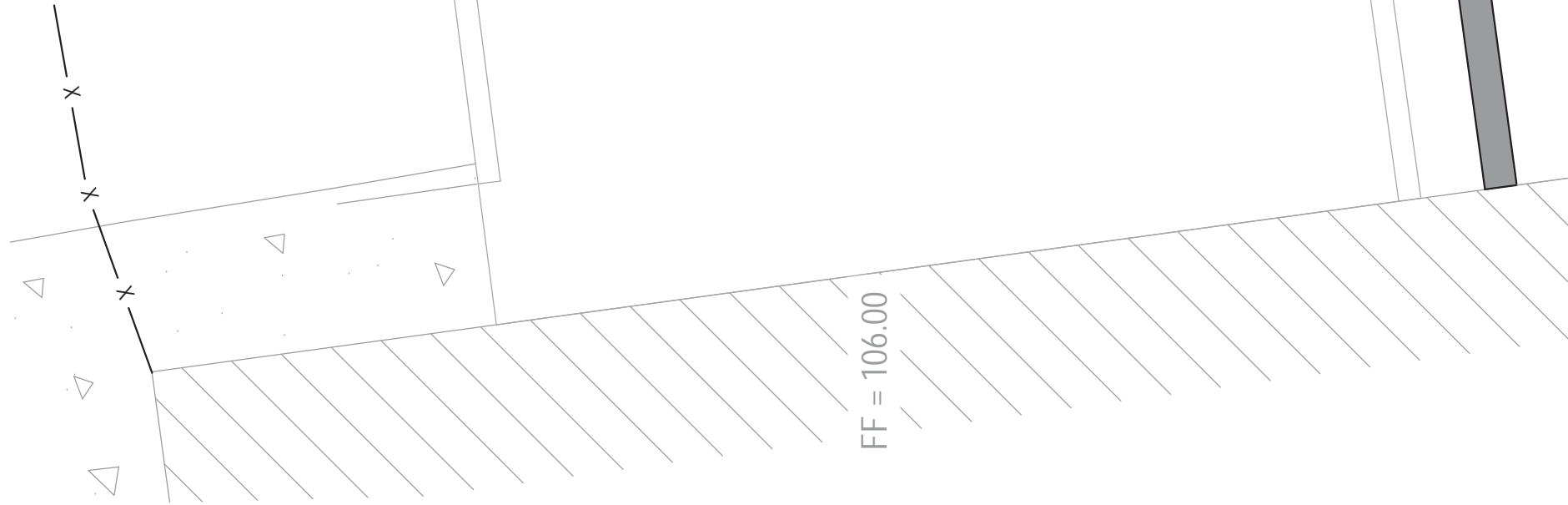
1

A

B



FF = 106.00



□	<b>CONSTRUCT STORM SEWER</b>	
NO.	DESCRIPTION	
1	15" Nyloplast Drain Basin with Standard Cover Rim = 102.26 FL (8" Out) = 97.20	
2	15" Nyloplast Drain Basin with 2x3 Grate Rim = 101.03 FL (8" In) = 95.56 FL (10" Out) = 95.40 FL (6" In) = 98.94	
3	Existing Area Inlet to Remain Rim = 89.12 FL (10" In) = 85.54 FL (10" Out) = 85.54	
4	Existing Area Inlet to Remain - Remove a Existing Grate with new Grate with one car semi-truck traffic at the dock drive. Rim = 83.92 FL (10" In) = 81.92	
5	ACO Drain, Klassik Drain K200 or approved 3 sections, (39.37 inches each section) With longitudinal cast iron removable grate grate pattern. Contractor shall submit shop drawings for approval. Rim = 101.59 FL (6" Out) = 100.25	

A

B

5

BASE PL. 1/2X4X6 W/ 1 1/2 MAX. GROU

E

- P 10: REMOVE THE CHANNEL / ANGLE MEMBERS FROM SIDE OF THE WALL. FILL IN THE CUTS/HOLES WITH GROUT.
- P 11: REPLACE ANY DISPLACED BRICK DURING REMOVAL.
- P 12: INSERT LOUVERS.

F

<p>ttal - n</p>	<p>Project Title <b>Renovate Infrastructure of Laundry Building 153</b></p>	<p>Project Number <b>589A6-18-903</b></p>
<p>ED</p>	<p>Location <b>VAMC LEAVENWORTH, KS</b></p> <p>Issue Date <b>July 16, 2018</b></p> <p>Checked <input type="checkbox"/></p> <p>Drawn <input type="checkbox"/></p>	<p>Building Number <b>153</b></p>
		<p>Drawing Number <b>S-101</b> <b>6 of 93</b></p>



ttal - n	Project Title	Renovate Infrastructure of Laundry Building 153		Project Number	589A6-18-903
	Location	VAMC LEAVENWORTH, KS		Building Number	153
ED	Issue Date	July 16, 2018		Drawing Number	S-102
	Checked	Drawn			7 of 93



Initial -  
n

Project Title  
**Renovate Infrastructure of  
Laundry Building 153**

Project Number  
**589A6-18-903**

Building Number  
**153**

ED

Location  
**VAMC LEAVENWORTH, KS**

Drawing Number  
**AD101**

Issue Date  
**July 16, 2018**

Checked  
**CLH**

Drawn  
**RJR**

**8 of 93**





<p>Project Title</p> <p><b>Renovate Infrastructure of Laundry Building 153</b></p>	<p>Project Number</p> <p><b>589A6-18-903</b></p>
<p>Location</p> <p><b>VAMC LEAVENWORTH, KS</b></p>	<p>Building Number</p> <p><b>153</b></p>
<p>Issue Date</p> <p><b>July 16, 2018</b></p>	<p>Checked</p>
<p>Drawn</p>	<p>Drawing Number</p> <p><b>AD102</b></p> <p><b>9 of 93</b></p>



Initial -  
n

Project Title  
**Renovate Infrastructure of  
Laundry Building 153**

Project Number  
**589A6-18-903**

Building Number  
**153**

ED

Location  
**VAMC LEAVENWORTH, KS**

Drawing Number  
**AD103**

Issue Date  
**July 16, 2018**

Checked

Drawn

**10 of 93**

Initial -  
n

Project Title  
**Renovate Infrastructure of  
Laundry Building 153**

Project Number  
**589A6-18-903**

Building Number  
**153**

ED

Location  
**VAMC LEAVENWORTH, KS**

Drawing Number  
**A-100**  
11 of 93

Issue Date  
**July 16, 2018**

Checked  
**GLD**

Drawn  
**TDW**

Initial -  
n

Project Title  
**Renovate Infrastructure of  
Laundry Building 153**

Project Number  
**589A6-18-903**

Building Number  
**153**

ED

Location  
**VAMC LEAVENWORTH, KS**

Drawing Number  
**A-101**  
12 of 93

Issue Date  
**July 16, 2018**

Checked  
**GLD**

Drawn  
**TDW**

<p>Project Title</p> <p><b>Renovate Infrastructure of Laundry Building 153</b></p>	<p>Project Number</p> <p><b>589A6-18-903</b></p>
<p>Location</p> <p><b>VAMC LEAVENWORTH, KS</b></p>	<p>Building Number</p> <p><b>153</b></p>
<p>Issue Date</p> <p><b>July 16, 2018</b></p>	<p>Drawing Number</p> <p><b>A-102</b></p>
<p>Checked</p>	<p>13 of 93</p>
<p>Drawn</p>	

<p>ED</p>	<p>Project Title  <b>Renovate Infrastructure of          Laundry Building 153</b></p>	<p>Project Number  <b>589A6-18-903</b></p>
	<p>Location  <b>VAMC LEAVENWORTH, KS</b></p>	<p>Building Number  <b>153</b></p>
	<p>Issue Date  <b>July 16, 2018</b></p>	<p>Drawing Number  <b>A-103</b>  <b>14 of 93</b></p>
	<p>Checked  <b>GLD</b></p>	
		<p>Drawn  <b>TDW</b></p>

Initial -  
n

Project Title  
**Renovate Infrastructure of  
Laundry Building 153**

Project Number  
**589A6-18-903**

Building Number  
**153**

ED

Location  
**VAMC LEAVENWORTH, KS**

Drawing Number  
**AC101**  
15 of 93

Issue Date  
**July 16, 2018**

Checked  
**GLD**

Drawn  
**TDW**

Initial -  
n

Project Title  
**Renovate Infrastructure of  
Laundry Building 153**

Project Number  
**589A6-18-903**

Building Number  
**153**

ED

Location  
**VAMC LEAVENWORTH, KS**

Drawing Number  
**AC102**  
**16 of 93**

Issue Date  
**July 16, 2018**

Checked  
**GLD**

Drawn  
**TDW**





ED	Project Title <b>Renovate Infrastructure of          Laundry Building 153</b>	Project Number <b>589A6-18-903</b>
	Location <b>VAMC LEAVENWORTH, KS</b>	Building Number <b>153</b>
	Issue Date <b>July 16, 2018</b>	Drawing Number <b>A-201</b>
	Checked <b>GLD</b>	<b>17 of 93</b>
	Drawn <b>TDW</b>	



SECOND FLOOR  
887' - 9 219/256"

MECHANICAL MEZZANINE  
882' - 0"

FIRST FLOOR  
870' - 0"

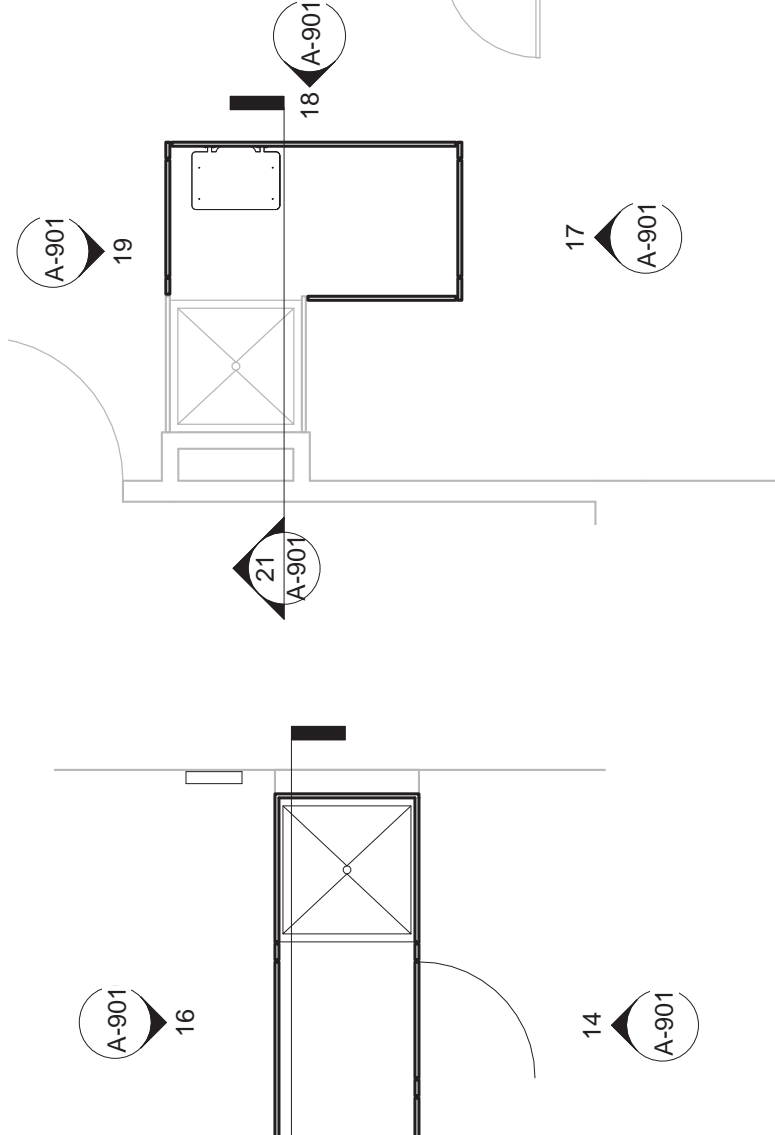
BASEMENT  
858' - 0"

REPAINT EXISTING  
COILING DOORS &  
FRAMES (SEE  
SPECS)

E

F

Project Title	Renovate Infrastructure of Laundry Building 153		Project Number	589A6-18-903
	Location		Building Number	153
Issue Date	VAMC LEAVENWORTH, KS		Drawing Number	
	Checked	Drawn	A-202	
July 16, 2018	GLD	TDW	18 of 93	

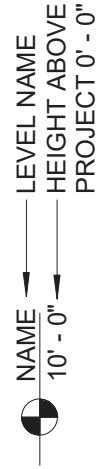


WOMEN'S SHOWER

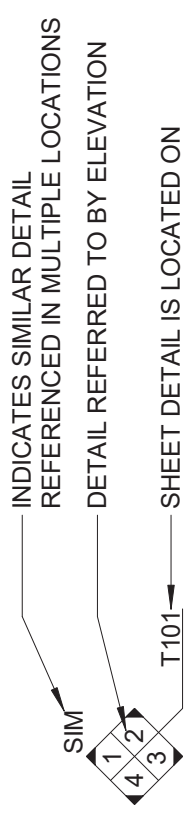
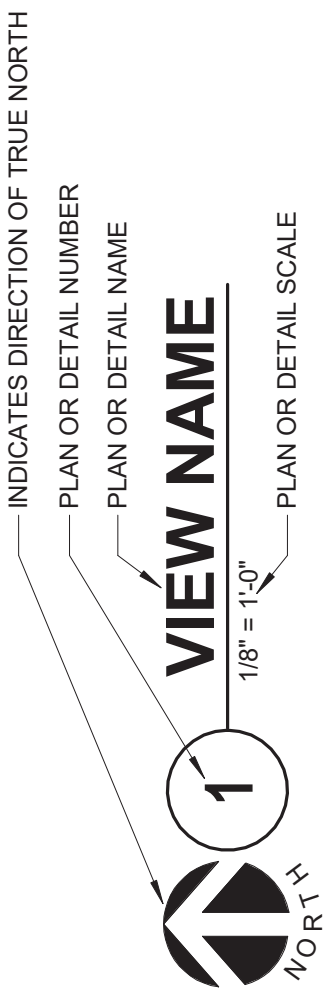
12 FIRST FLOOR - WOMEN'S SHOWER  
 1/4" = 1'-0"

Project Title	Renovate Infrastructure of Laundry Building 153		Project Number	589A6-18-903
	Location		Building Number	153
Issue Date	VAMC LEAVENWORTH, KS		Drawing Number	A-901
	Checked	Drawn	19 of 93	
July 16, 2018	GLD	TDW		

# VIEW KEY



INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL



### LINE TYPE KEY:

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- NEW WORK UNDERFLOOR OR UNDERGROUND BY THIS CONTRACTOR (DARK LONG DASHED LINE)
- NEW WORK BY OTHERS AND/OR EXISTING TO REMAIN (LIGHT SOLID LINE)
- EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK SHORT DASHED LINE)

## FIRE / SMOKE BARRIER DESIGNATIONS

THE LINE TYPES SHOWN ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY RATINGS WITH THE LATEST SET OF ARCHITECTURAL PLANS AND FURNISH ALL MATERIALS REQUIRED TO COMPLY WITH THOSE RATINGS WHETHER SHOWN OR NOT.

ALL FLOOR AND ROOF CEILING ASSEMBLIES SHALL BE DESIGNATED AS 1 HOUR FIRE BARRIER(S), UNLESS NOTED OTHERWISE ON THE PLANS.

1 HOUR FIRE BARRIER

2

1

A

B

4

2

1

A

B

4



2

1

A

B

4

2

1

A

B

4



2

1

A

B

4

2

1

A

B

4

2

1

A

B

4



1

2

A

2

34x24 SA THROUGH -  
EXISTING OPENING. R  
TO MH-101 FOR  
CONTINUATION.

B

38x24 RA THROUGH -  
EXISTING OPENING. R  
TO MH-101 FOR  
CONTINUATION.

2

1

A

B

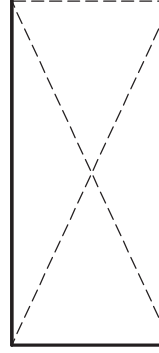


24x38 RA  
CONNECTION  
TO UNIT

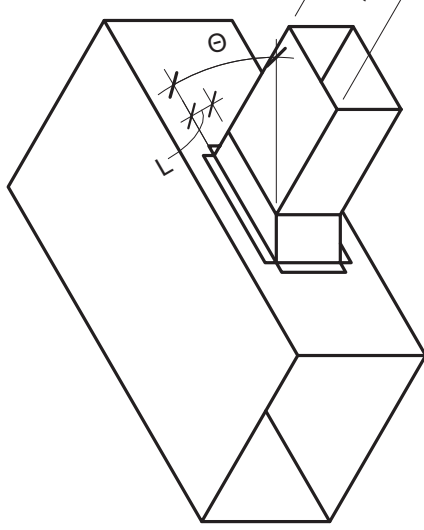
24x38 RA

24x38 RA

40x8



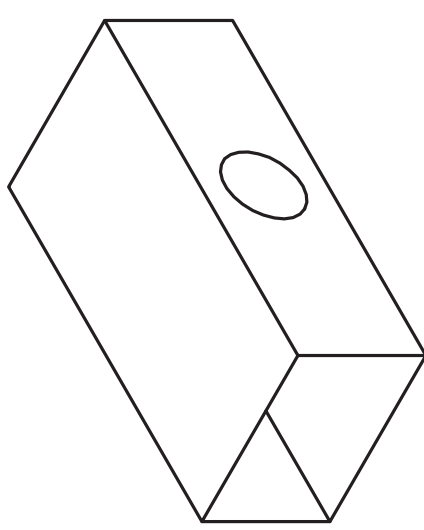
A



45 DEGREE  
ENTRY  $\theta$  45°  
(L = 4" OR W/4; WHICHEVER IS LAR

—

B



45 DEGREE  
ENTRY  $\theta$  45°

NOTES:

1. DO NOT USE CONNECTIONS
2. FIT ALL CONNECTIONS TO AV
3. SECURE THEM SUITABLY FOR
- SEE SPECIFICATIONS FOR AD

—

1

2

A

B

COVER HANDLE

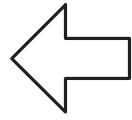
PRESSURE  
SENSITIVE  
RELEASE FOR  
MANUAL OR  
VACUUM  
RELEASE.

NOTES:

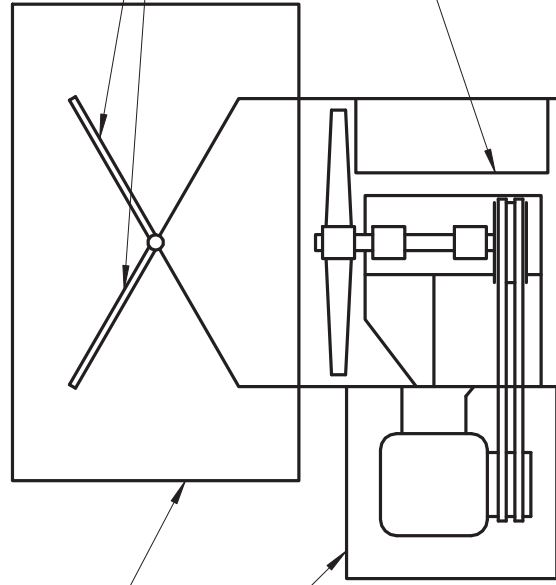
1. ACCESS SE  
FUSIBLE LIN  
OR FLAT OY
2. RELIEF SHL  
WATER COI
3. INSTALLAC
4. USE MAXIM  
THAN 11x11

1

2



A

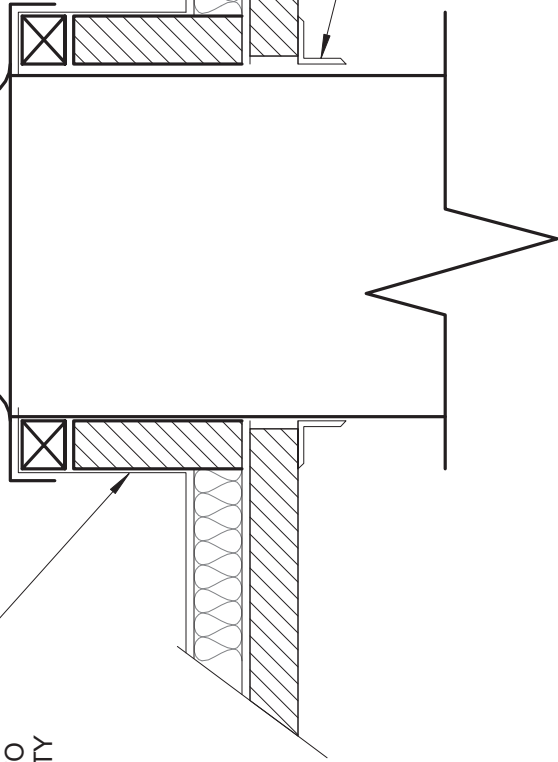


WINDBAND

WEATHERPROOF  
MOTOR COVER

—

PREFABRICATED CURB BY  
MC. COORDINATE W/  
ROOFING CONTRACTOR TO  
MAINTAIN ROOF WARRANTY



B

1

# ROOF MOUNTED FAN

NO SCALE





## AIR HANDLING SCHEDULE

### NOTES:

- 1.PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 12.
- 2.REFER TO 23 73 00 FOR ADDITIONAL INFORMATION.
- 3.SCHEDULED VALUES ARE FOR EACH FAN. THERE ARE THREE SUPPLY FANS TOTAL F
- 4.SCHEDULED VALUES ARE FOR EACH FAN. THERE ARE THREE EXHAUST FANS TOTAL
- 5.VALUES EQUALING ZERO INDICATE NO REHEAT COIL IN UNIT.
- 6.REFER TO 23 72 00 FOR ADDITIONAL INFORMATION.
- 7.COOLING COIL SELECTED WITH 35% PROPYLENE GLYCOL.

A

TAG NAME	AREA SERVED	TOTAL MAX CFM	TOTAL MIN CFM	TOTAL OA CFM
AHU-1	113 LAUNDRY, 114 LAUNDRY	39650	21650	14,500
AHU-2	203 RECEIVING AND SORTING	13080	13080	4,500

## AIR HANDLING SCHEDULE (CONT.)

### NOTES:

- 1.PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 12.
- 2.REFER TO 23 73 00 FOR ADDITIONAL INFORMATION.
- 3.SCHEDULED VALUES ARE FOR EACH FAN. THERE ARE THREE SUPPLY FANS TOTAL F
- 4.SCHEDULED VALUES ARE FOR EACH FAN. THERE ARE THREE EXHAUST FANS TOTAL
- 5.REFER TO 23 72 00 FOR ADDITIONAL INFORMATION.
- 6.COOLING COIL SELECTED WITH 35% PROPYLENE GLYCOL.
- 7.FOR AHU-1 - VALUE LISTED IS CFM DOWNSTREAM OF WHEEL. SA INCOMING TO WHEEL
- 8.FOR AHU-1 - VALUE LISTED IS CFM UPSTREAM OF WHEEL. EA LEAVING WHEEL SHALL

B

TAG NAME	OA CFM (NOTE 7)	OA APD	EXHAUST CFM (NOTE 8)	EXHAUST APD	WHEEL DIAMETER	EA
AHU-1	14,500 CFM	0.87 in-wg	3,005 CFM	0.18 in-wg	7'-5"	95
AHU-2	4,500 CFM	0.81 in-wg	3,200 CFM	0.56 in-wg	4'-0"	95

## AIR HANDLING SCHEDULE (CONT.)

### NOTES:

- 1.PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 12.
- 2.REFER TO 23 73 00 FOR ADDITIONAL INFORMATION.
- 3.SCHEDULED VALUES ARE FOR EACH FAN. THERE ARE THREE SUPPLY FANS TOTAL F
- 4.SCHEDULED VALUES ARE FOR EACH FAN. THERE ARE THREE EXHAUST FANS TOTAL
- 5.REFER TO 23 72 00 FOR ADDITIONAL INFORMATION.
- 6.COOLING COIL SELECTED WITH 35% PROPYLENE GLYCOL.

COOLING COIL (NOTE 6)

## MOTOR OPERATED DAMPER SCHEDULE

### NOTES:

- 1.COORDINATE DAMPER ACTUATOR LOCATION AND MOUNTING REQUIREMENTS WITH TEM
- 2.CONTRACTOR SHALL CONFIRM ALL QUANTITIES, SIZES, SLEEVES, AND MODEL NUMBERS
- 3.DUCT SIZE INDICATED IS NET INSIDE DIMENSIONS. THE DAMPER SIZE SHALL BE INCREASED AS NEEDED TO ACCOMMODATE THE ACTUATOR.
- 4.UNIT MOUNTED DAMPERS PROVIDED BY MFR, ACTUATOR BY TCC.
- 5.REFER TO 23 09 23 FOR ADDITIONAL INFORMATION.
- 6.PROVIDE STAINLESS STEEL DAMPER.

A

TAG NAME	AREA SERVED	SIZE		PROVIDED BY	INSTALLED BY
		WIDTH	HEIGHT		
MOD-1	SORTING AND RECEIVING 203	36	26	TCC	MC
MOD-2	SORTING AND RECEIVING 203	36	24	TCC	MC
MOD-3	RESTROOM LEVEL 1 EA	18	16	TCC	MC
MOD-4	AHU-1 OA	60	60	MFR	MFR
MOD-5	AHU-1 EA	108	48	MFR	MFR
MOD-6	AHU-2 OA	34	34	MFR	MFR
MOD-7	AHU-2 EA	30	32	MFR	MFR
MOD-8	AHU-1 ERW BYPASS 1	162	24	MFR	MFR
MOD-9	AHU-1 ERW BYPASS 2	174	18	MFR	MFR
MOD-10	AHU-2 ERW BYPASS 1	88	15	MFR	MFR
MOD-11	AHU-2 ERW BYPASS 2	88	15	MFR	MFR
MOD-12	AHU-2 MA	88	15	MFR	MFR
MOD-13	AHU-1 MA	162	18	MFR	MFR
MOD-14	TOILET 204, 205 EA	14	14	TCC	MC
MOD-15	STEAM CAPTURE EA	32	32	TCC	MC
MOD-16	BCU-1 OA	40	40	TCC	MC
MOD-17	BCU-1 RA	45	12	TCC	MC
MOD-18	LAUNDRY 113	86	40	TCC	MC

B

## BLOWER COIL UNIT SCHEDULE

### NOTES:

- 1.COOLING COIL SELECTED WITH 35% PROPYLENE GLYCOL.
- 2.PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 12
- 3.PROVIDE 2" PLEATED MERV 8 FILTERS.
- 4.PROVIDE RA/OA MIXING BOX SECTION.
- 5.PROVIDE STAINLESS STEEL DRAIN PAN WITH 1" GALVANIZED PIPE OUTLET.
- 6.PROVIDE HINGED ACCESS PANELS.
- 7.PROVIDE BASE RAILS FOR UNIT.

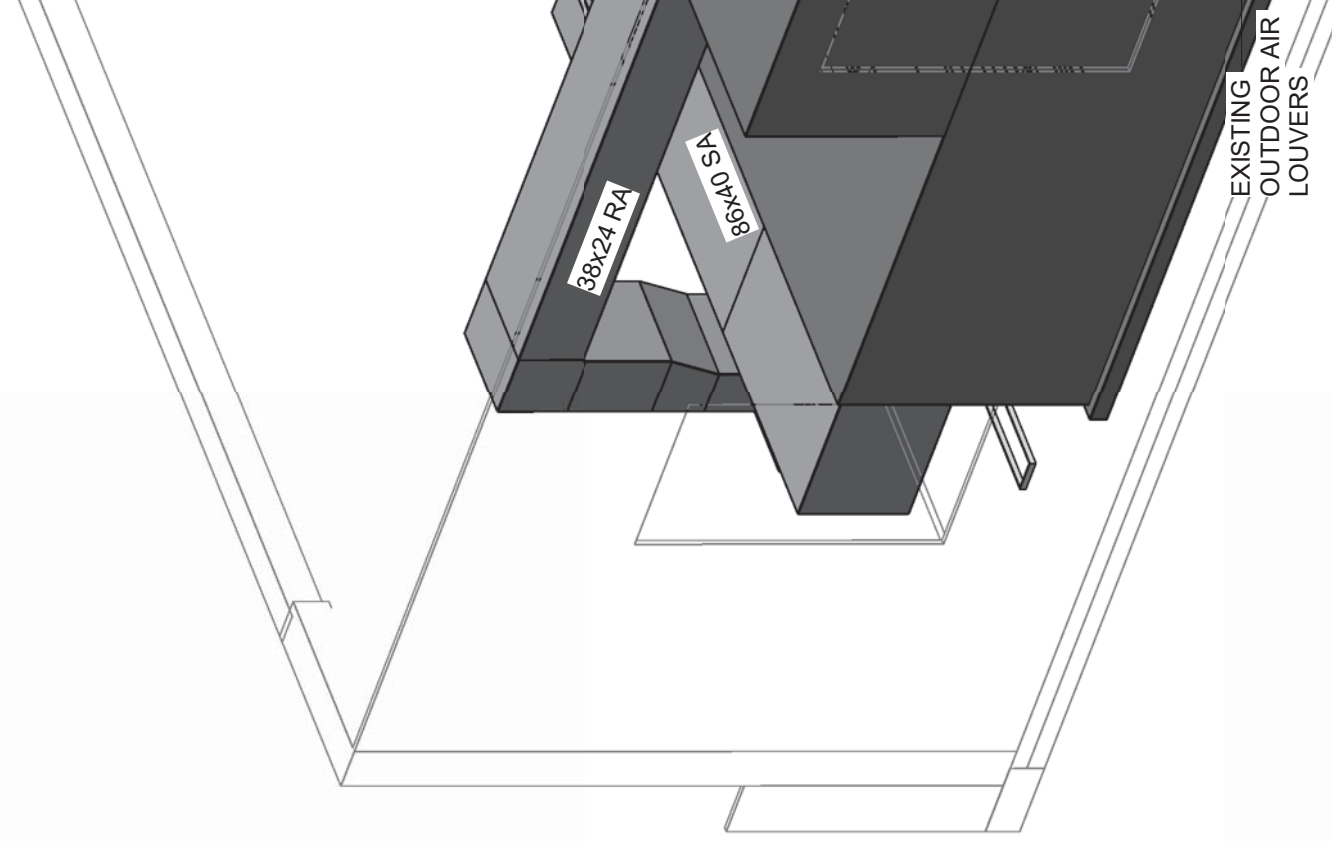
TAG NAME	AREA SERVED	CONFIGURATION	CFM	EXT. S.P. IN W.C.	EAT		TOTAL MBH
					DB °F	WB °F	
BCU-1	TRANSFORMER	VERTICAL	3000	0.5	80.0	67.0	56

2

1

A

B



2

1

A

B

4

2

1

A

B

4

2

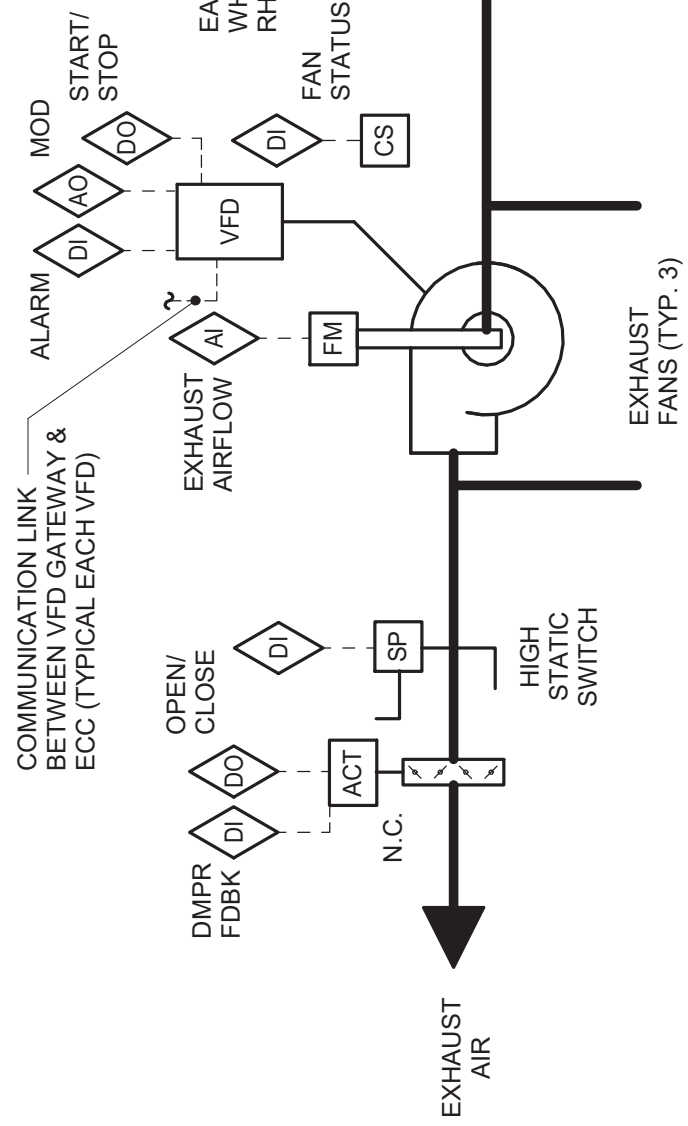
1

A

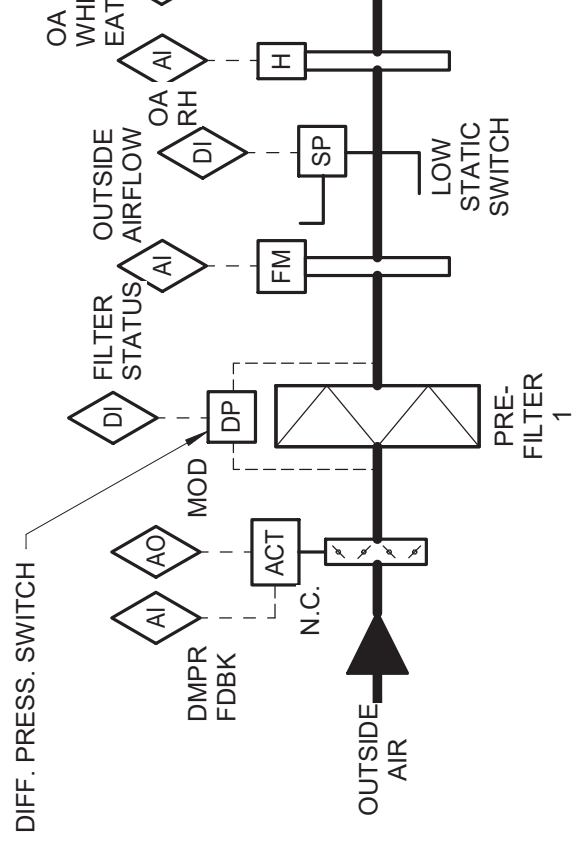
B

4

INSTALL TEMPERATURE SENSOR  
 SYMMETRICAL AROUND CENTERLINE  
 OF WHEEL. ALL PORTIONS OF SENSOR  
 TO BE IN THE AIRSTREAM. (TYP.)



A

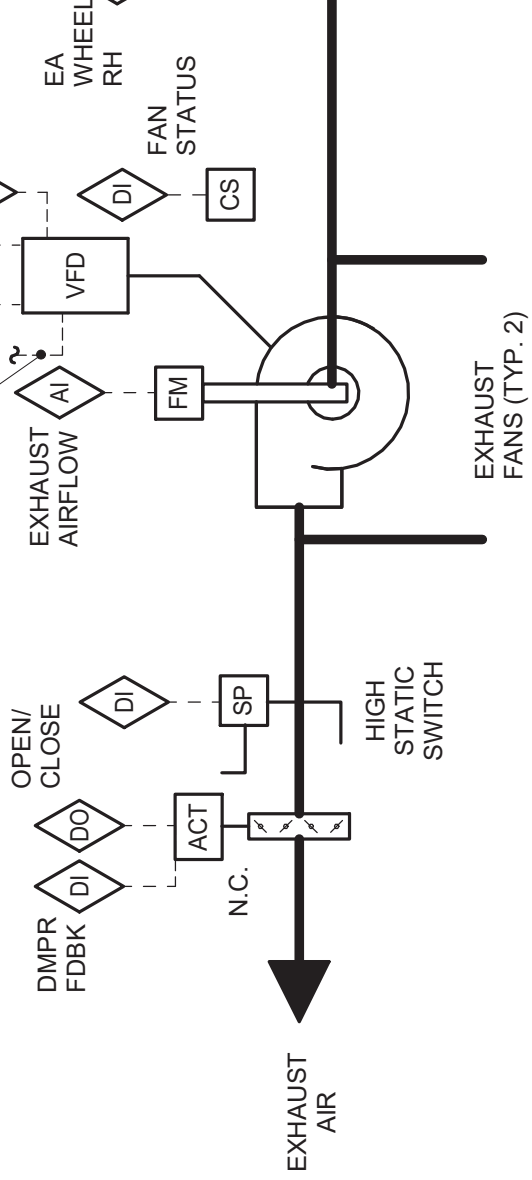


B



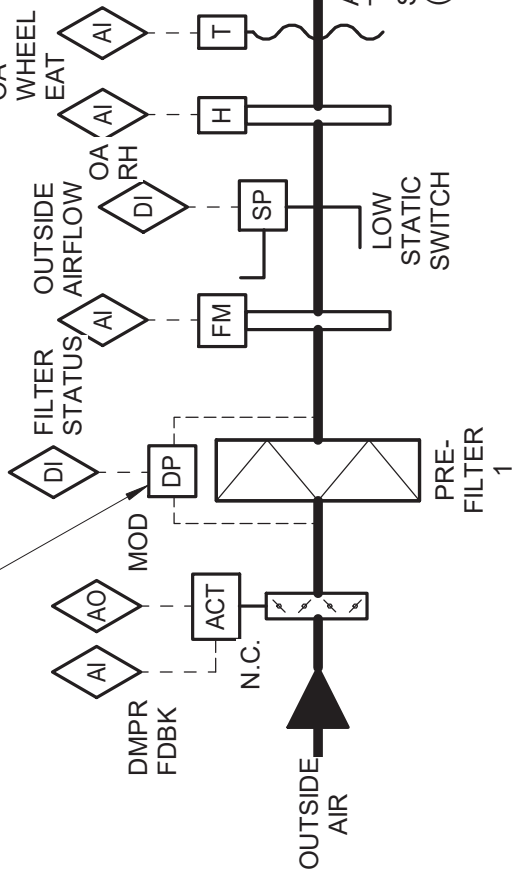
INSTALL TEMPERATURE SENSOR SYMMETRICAL AROUND CENTERLINE OF WHEEL. ALL PORTIONS OF SENSOR TO BE IN THE AIRSTREAM. (TYP.)

COMMUNICATION LINK BETWEEN VFD GATEWAY & ECC (TYPICAL EACH VFD)

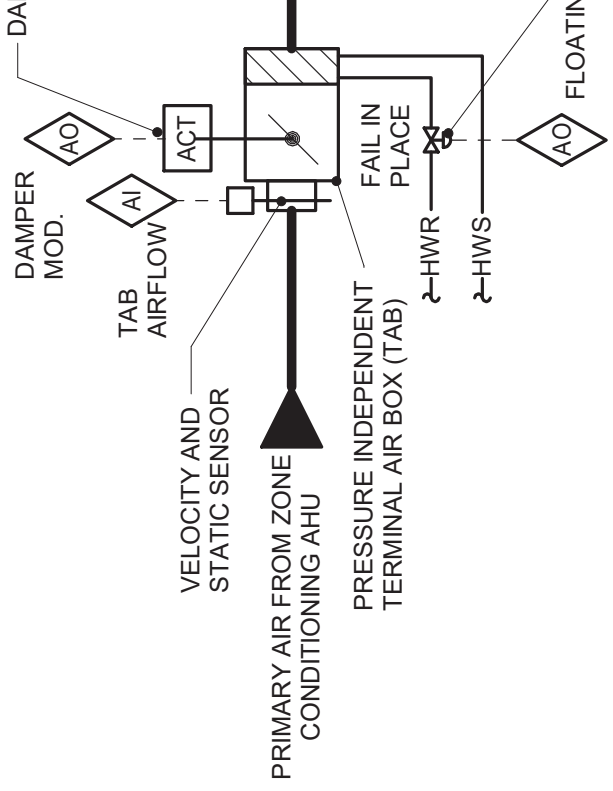


A

DIFF. PRESS. SWITCH



B



SEQUENCE OF OPERATION:

- ECC TAB CONTROLLER SHALL MODULATE THE TAB AIRFLOW TO THE ROOM.
- ECC TAB CONTROLLER SHALL MODULATE TAB HW FLOW SPACE TEMPERATURE OF 72°F (ADJ.) WITH 2°F (ADJ.) WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWING REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS SHALL UTILIZE OUTPUT FROM ALL TERMINATING THERMOSTATS.
- THE ECC SHALL UTILIZE OUTPUT FROM ALL TERMINATING THERMOSTATS TO DUCT DIFFERENTIAL STATIC PRESSURE.

ALARMS, INTERLOCKS & SAFETIES:

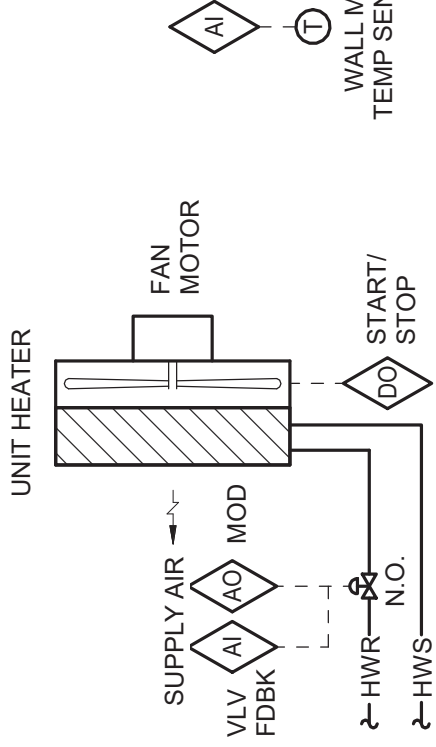
- SEND AN ALARM TO THE ECC OPERATOR INTERFACE WHEN TAB AIRFLOW IS ABOVE OR BELOW SETPOINT.

1

**CONSTANT VOLUME TAB**

NO SCALE

A



SEQUENCE OF OPERATION:

WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE 40°F (ADJ.) TEMPERATURE SENSOR SHALL MODULATE THE CONTROL VALVE TO CYCLE THE UNIT FAN TOGETHER TO MAINTAIN A SPACE TEMPERATURE OF 70°F (ADJ.).

WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 40°F (ADJ.) TEMPERATURE SENSOR SHALL MODULATE THE CONTROL VALVE TO MAINTAIN A SPACE TEMPERATURE OF 70°F (ADJ.) AND THE UNIT SHALL RUN CONTINUOUSLY.

IN LOCATIONS WITH MULTIPLE UNIT HEATERS, STAGE THE UNIT HEATERS ON/OFF BY SETTING INDIVIDUAL TEMPERATURE SENSORS 2°F APART.

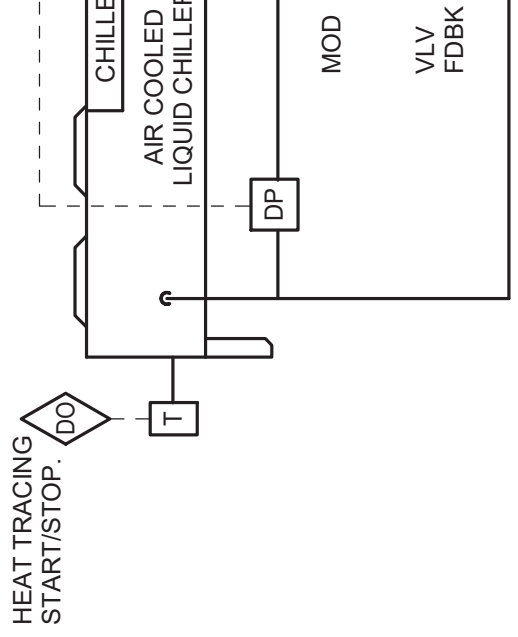
ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE ECC OPERATOR INTERFACE IF SPACE TEMPERATURE FALLS 10°F (ADJ.) BELOW SETPOINT.

B

A

- POINTS PROVIDED WITH CHILLER PLANT REPORT GENERATION:**  
**POINTS WILL BE MADE AVAILABLE TO THE CLIENT:**
- DI CHILLED WATER FLOW RATE
  - DI STATUS
  - DI GENERAL ALARM
  - DO START/STOP
  - AO CHILLED WATER SUPPLY TEMPERATURE
  - AI CURRENT DRAW
  - AO KW LOAD LIMIT
  - AI CHILLED WATER RETURN TEMPERATURE
  - AI CHILLED WATER RETURN FLOW RATE

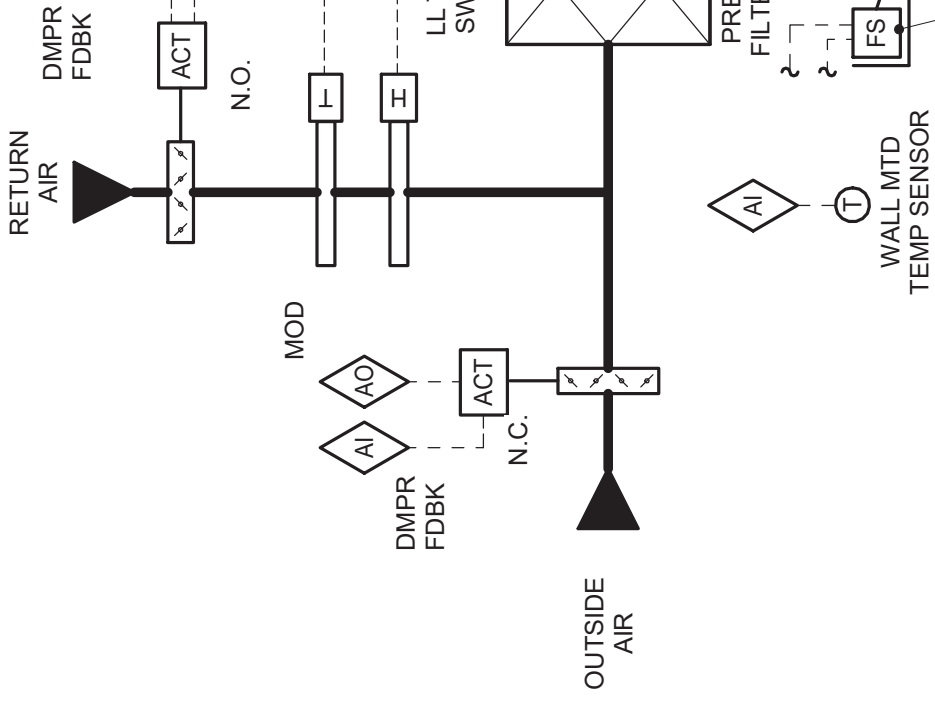


B

**CHILLER PLANT REPORT GENERATION:**

ECC SHALL MONITOR THE FOLLOWING POINTS ON 10 MINUTE (ADJ.) INTERVALS WITHIN A SINGLE TEND. THE TREND SHALL RUN FOR A 100-DAY (ADJ.) DURATION AT WHICH POINT NEWEST VALUES SHALL OVERWRITE THE OLDEST VALUES:

- DATE
- TIME
- GLOBAL OUTSIDE AIR TEMPERATURE [°F]
- GLOBAL OUTSIDE AIR DEWPOINT [°F]
- AVERAGE CHILLED WATER SUPPLY TEMPERATURE [°F]
- AVERAGE CHILLED WATER RETURN TEMPERATURE [°F]
- TOTAL CHILLED WATER FLOWRATE [GPM]



SEQUENCE OF OPERATION:

SUPPLY FAN OPERATION SHALL BE CONTROLLED BY ROOM AIR TEMPERATURE. SETPOINT SHALL BE 80°F.

- WHENEVER THE ROOM AIR TEMPERATURE IS 2°F ABOVE THE SETPOINT, THE CHILLED WATER CONTROL VALVE SHALL OPEN.
- WHEN IN ECONOMIZER MODE, ECC SHALL NOT OPEN IF THE DAMPER IS MORE THAN 95% OPEN (ADJ.)

- WHENEVER THE ROOM AIR TEMPERATURE IS 2°F BELOW THE SETPOINT, THE CHILLED COIL CONTROL VALVE SHALL BE CLOSED.

IF ROOM AIR TEMPERATURE IS MAINTAINED AND THE ROOM AIR TEMPERATURE CONTROLS ARE MAINTAINED, THE CONTROL VALVE OPENS, THEN THE SUPPLY FAN SHALL START.

ECONOMIZER SEQUENCE

WHENEVER THE O.A. TEMP DROPS BELOW 70°F (ADJ.) FOR 10 MINUTES (ADJ.), THE ECONOMIZER MODE SHALL BE ENABLED. IF THE O.A. TEMP RISES ABOVE 70°F (ADJ.) FOR 10 MINUTES (ADJ.), THE ECONOMIZER MODE SHALL BE DISABLED.

ONCE ECONOMIZER CONTROLS HAVE BEEN ENABLED, THE ECONOMIZER MODE SHALL BE MAINTAINED FOR A MINIMUM OF 10 MINUTES (ADJ.) BEFORE BEING ALLOWED TO RETURN TO NORMAL OPERATION.

IN ECONOMIZER MODE THE ECC SHALL MODULATE THE CHILLED WATER CONTROL VALVE TO MAINTAIN THE ROOM AIR TEMPERATURE SETPOINT.

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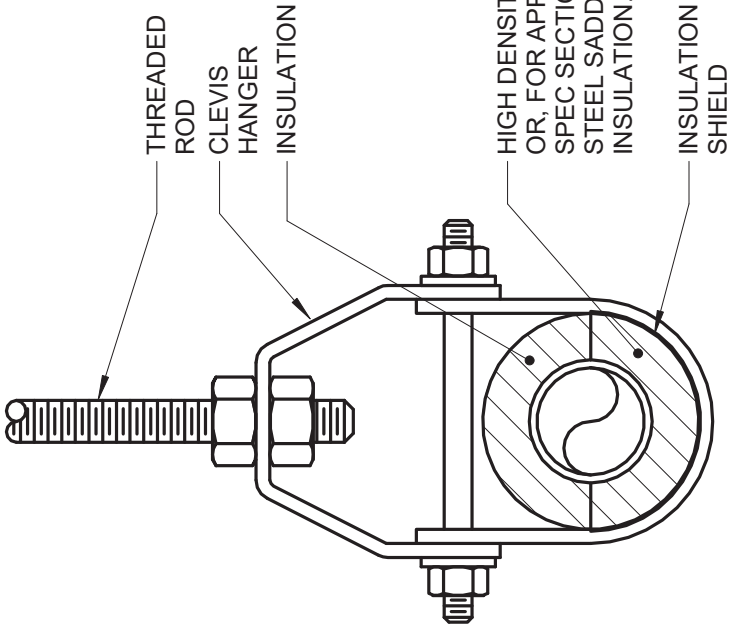
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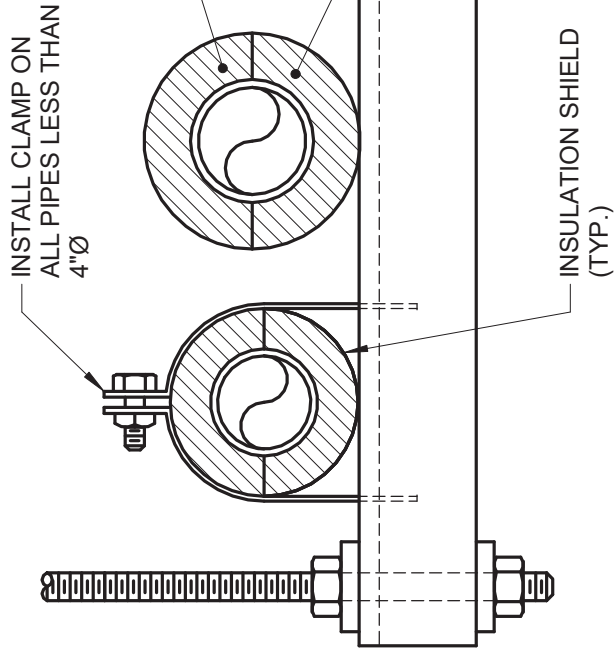
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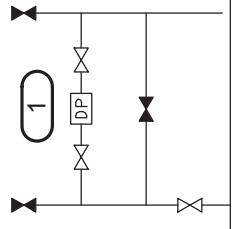
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CH-2  
EXISTING YORK AIR COOLED CHILLER  
YVAA

2

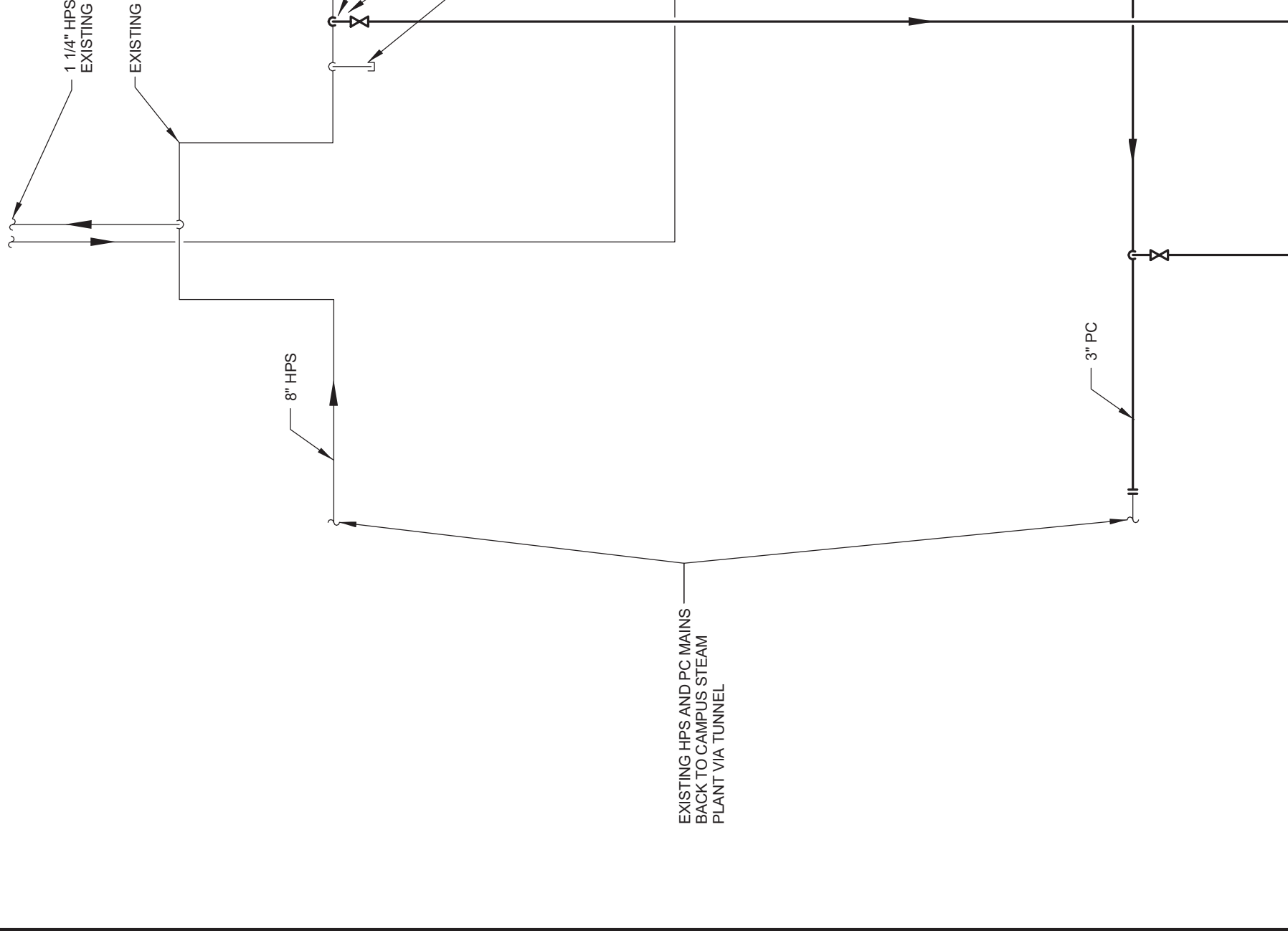
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1 1/4" HPS  
EXISTING

EXISTING

8" HPS

3" PC

EXISTING HPS AND PC MAINS  
BACK TO CAMPUS STEAM  
PLANT VIA TUNNEL

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## CONDENSATE RETURN STATION SCHEDULE

SYMBOL	SERVICE	TYPE	LB/HR	CONDENSATE TEMPERATURE °F	GPM	RECEIVE CAPACITY GALL
CRS-1	MECH. ROOM EQUIPMENT	DUPLEX	5,500	210	22.0	23

A

### NOTES:

1. LB/HR IS ACTUAL MAXIMUM LOAD OF SYSTEM.
2. PROVIDE WITH GAUGE GLASS, DIAL THERMOMETER, INLET BASKET STRAINER, DISCHARGE VALVE AND THERMIST.
3. PROVIDE HARD WIRED CONNECTION TO BAS FOR PUMP FAILURE ALARM.

## UNIT HEATER SCHEDULE - HOT WATER

SYMBOL	SERVICE	TYPE	CFM	MBH	GPM	EW °F
UH-001	BASEMENT MECH ROOM	VERTICAL	1,800	60.4	4.7	180
UH-002	MAINTENANCE SHOP	VERTICAL	1,800	60.4	4.7	180
UH-003	BASEMENT MECH ROOM	VERTICAL	1,800	60.4	4.7	180
UH-004	BASEMENT MECH ROOM	VERTICAL	1,800	60.4	4.7	180
UH-005	BASEMENT MECH ROOM	VERTICAL	1,800	60.4	4.7	180
UH-201	SECOND FLOOR MECH ROOM	VERTICAL	1,800	60.4	4.7	180
UH-202	SECOND FLOOR MECH ROOM	VERTICAL	1,800	60.4	4.7	180
UH-203	SECOND FLOOR MECH ROOM	VERTICAL	1,800	60.4	4.7	180
UH-204	SECOND FLOOR CORRIDOR	VERTICAL	1,800	60.4	4.7	180
UH-205	SECOND FLOOR CORRIDOR	VERTICAL	1,800	60.4	4.7	180

B

### NOTES:

1. REFER TO SPECIFICATION SECTION 23 82 00 FOR FURTHER REQUIREMENTS.
2. SCHEDULED PERFORMANCE IS BASED ON A 60° F ENTERING AIR TEMPERATURE.
3. PROVIDE UNIT HEATER WITH UNIT MOUNTED THERMOSTAT AND PACKAGED CONTROL VALVE.

## RADIATION SCHEDULE



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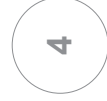
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FULL SIZE CONDENSATE  
DRAIN, CONNECT TO DRAIN  
PAN AS RECOMMENDED BY  
MANUFACTURER.

1

**CONDENSATE**

NO SCALE

NOTES:

1. H = 8" AND X = 4" FC
2. H = 7.5" AND X = 3.75"

## PLUMBING FIXTURE SCHEDULE

TAG NAME	DESC
BFP-1	<p>BACK FLOW PREVENTER - REDUCED PRESSURE ZONE CONSTRUCTION, SIZE SAME AS PIPE, NON-CORROSIVE DIFFERENTIAL PRESSURE RELIEF VALVE BETWEEN SUPPLY INLET AND OUTLET OF UNIT. BALL STYLE SHUTOFF VALVE AIR GAP DRAIN FITTING, TEST PORTS WITH SHUT-OFF (MAXIMUM) PRESSURE DROP AT 10 FPS, FACTORY TEST REMOVING UNIT FROM LINE, APPROVED BY USC FCCO LISTED.</p> <p>MOUNT WITHIN 60" OF FINISHED FLOOR. PROVIDE ANNI UPSTREAM OF EACH UNIT AND ADDITIONAL VALVE UP CURVES SHALL BE SUBMITTED.</p>
EWC-1	<p>ELECTRIC WATER COOLER - FLOOR MOUNTED, 18 GALS WITH STAINLESS STEEL FINISH, STREAM PROJECTOR CONTROLS, BUILT-IN FLOW REGULATOR, PLASTIC P-T ACCESSORIES, TANK DRAIN AND ANGLE STOPS, HERM REFRIGERANT. COMPLIANT TO LATEST ANSI A117.1 AND ACT S.3874.</p> <p>GLASS FILLER - STAINLESS STEEL SINGLE WATER GO LEVER CONTROL</p> <p>UNIT SHALL PROVIDE 8.0 GPH OF WATER FROM 80°F TO LEAD FREE CONSTRUCTION. TANK SHALL BE TESTED ORIFICE SHALL BE AT 42" (MAXIMUM) ABOVE FINISHED ELECTRICAL REQUIREMENTS - 115V-1 PHASE, CORD A</p>
EWC-2	<p>ELECTRIC WATER COOLER - FLOOR MOUNTED, 18 GALS WITH STAINLESS STEEL FINISH, STREAM PROJECTOR CONTROLS, BUILT-IN FLOW REGULATOR, PLASTIC P-T ACCESSORIES, TANK DRAIN AND ANGLE STOPS, HERM REFRIGERANT. COMPLIANT TO LATEST ANSI A117.1 AND ACT S.3874.</p> <p>UNIT SHALL PROVIDE 8.0 GPH OF WATER FROM 80°F TO LEAD FREE CONSTRUCTION. TANK SHALL BE TESTED ORIFICE SHALL BE AT 42" (MAXIMUM) ABOVE FINISHED ELECTRICAL REQUIREMENTS - 115V-1 PHASE, CORD A</p>
F-1	<p>WATER FILTER - CAST BRASS OR STAINLESS STEEL HI CARTRIDGE, FDA APPROVED MATERIALS.</p> <p>6 GPM FLOW AT 3 PSIG PRESSURE DROP</p>
FD-1	<p>FLOOR DRAIN - CAST IRON BODY, NICKEL BRONZE AD COLLAR, DEEP SEAL TRAP.</p> <p>TRAP SEAL - 4", PLASTIC HOUSING WITH FLEXIBLE DIA WHEN DISCHARGE IS COMPLETED, ASSE 1072.</p>
GD-1	<p>GARBAGE DISPOSER - CONTINUOUS FEED, SINGLE DIPH</p>

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## FIRE SPRINKLER USAGE SCHEDULE

### NOTES:

- SEE FLOOR PLANS FOR ZONING REQUIREMENTS.
- SPRINKLER SHALL HAVE COLOR CODED BULB THERMAL ELEMENT.
- ALL SPRINKLERS SHALL BE UL AND FM LISTED.
- CONTRACTOR TO VERIFY SPRINKLER REQUIREMENTS BASED ON ACTUAL INSTALLATION, U REQUIREMENTS.
- TAG NAME IS PRIMARILY FOR IDENTIFYING SPRINKLERS IN SUBMITTALS. IT MAY OR MAY NOT BE USED.
- CONTRACTOR TO SUBMIT ALL SPRINKLER TYPES TO BE USED.
- AREAS ARE GENERAL IN NATURE. CONTRACTOR TO MATCH UNSCHEDULED AREAS TO SIMILAR AREAS.
- SPRINKLERS SHALL HAVE A 3mm QUICK RESPONSE BULB.
- SPRINKLERS SPECIFIED WITHIN FIRE SPRINKLER USAGE SCHEDULE ARE STANDARD COVERED AREAS. CONTRACTOR TO VERIFY ALL REQUIREMENTS OF UL ANNUAL LISTINGS. ALL SPRINKLERS ARE PERMITTED PROVIDED SPRINKLERS MEET THE REQUIREMENTS OF UL ANNUAL LISTINGS.

A

AREA TYPE (NOTE 1 & 6)	AREA HAZARD	SPRINKLER			
		TAG NAME (NOTE 4 & 5)	SPRINKLER TYPE	RESPONSE CATEGORY	FINISH
AREAS WITH EXPOSED CONSTRUCTION	SEE PLANS	SPR-1	UPRIGHT	QUICK	ROUGH BRASS
AREAS WITH DROP CEILINGS	SEE PLANS	SPR-2	CONCEALED	QUICK	WHITE
ELEVATOR PIT	SEE PLANS	SPR-3	SIDEWALL	QUICK	ROUGH BRASS

B

### VIEW KEY

 NAME  
 LEVEL NAME  
 10' - 0" HEIGHT ABOVE PROJECT 0' - 0"

 INDICATES NOTE USED  
 ADDITIONAL INFORMATION  
 WORK REQUIRED, SPECIFICATIONS  
 SHEET AND/OR DETAIL

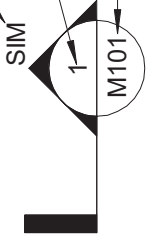
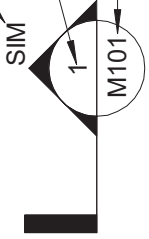
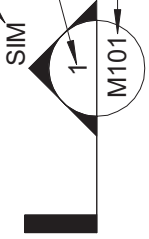
 INDICATES DIRECTION OF TRUE NORTH  
 PLAN OR DETAIL NUMBER  
 PLAN OR DETAIL NAME




## VIEW NAME

1/8" = 1'-0"

PLAN OR DETAIL SCALE



 INDICATES SIMILAR DETAIL  
 REFERENCED IN MULTIPLE LOCATIONS  
 DETAIL REFERRED TO BY SECTION  
 SHEET DETAIL IS LOCATED ON

 INDICATES SIMILAR DETAIL  
 REFERENCED IN MULTIPLE LOCATIONS  
 DETAIL REFERRED TO BY ELEVATION  
 SHEET DETAIL IS LOCATED ON

### LINE TYPE KEY:

 NEW WORK BY THIS CONTRACTOR  
 (DARK SOLID LINE)

 NEW WORK UNDERFLOOR OR UNDERGROUND BY THIS CONTRACTOR  
 (DARK LONG DASHED LINE)

 NEW WORK BY OTHERS AND/OR EXISTING TO REMAIN  
 (LIGHT SOLID LINE)

 EXISTING TO BE REMOVED BY THIS CONTRACTOR  
 (DARK SHORT DASHED LINE)

### FIRE / SMOKE BARRIER DESIGNATION

THE LINE TYPES SHOWN ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY RATINGS WITH THE LATEST SET OF ARCHITECTURAL PLANS AND FULLY UNDERSTAND THE REQUIREMENTS FOR THE MATERIALS REQUIRED TO COMPLY WITH THOSE RATINGS WHETHER SHOWN OR NOT.

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SEQUENCE OF OPERATION

SYSTEM INPUTS

FIRE ALARM PANEL, TRANSPONDER, NAC PANEL  
LOW BATTERY

FIRE ALARM PANEL, TRANSPONDER, NAC PANEL  
BATTERY OR CHARGER FAILURE

FIRE ALARM PANEL, TRANSPONDER, NAC PANEL  
ABNORMAL SWITCH OR CONTROL POSITION.

FIRE ALARM PANEL, TRANSPONDER, NAC PANEL  
GROUND FAULT, OPEN CIRCUIT, SHORT CIRCUIT

FIRE ALARM PANEL, TRANSPONDER, NAC PANEL  
AC POWER LOSS OR IRREGULARITY

NOTIFICATION APPLIANCE CIRCUIT OR SLC LOOP  
GROUND FAULT, OPEN CIRCUIT, SHORT CIRCUIT

INITIATING DEVICE  
FAILURE OR COMMUNICATION ERROR

FIRE ALARM PANEL  
MANUAL FIRE DRILL

MANUAL PULL STATION

SMOKE DETECTOR

HEAT DETECTOR

SPRINKLER SYSTEM  
FLOW SWITCH

SPRINKLER SYSTEM  
MONITOR SWITCH

SPRINKLER SYSTEM  
CABINET MONITOR

SMOKE DETECTOR  
FOR HVAC CONTROL

SMOKE DETECTOR FOR  
SMOKE DAMPER CONTROL

FT F

SD

H HF H

MM

MM

MM

SD

SD

FS

MS

MS

PIV

SPRINKLER SYSTEM  
FLOW SWITCH

SPRINKLER SYSTEM  
MONITOR SWITCH

SPRINKLER SYSTEM  
CABINET MONITOR

SMOKE DETECTOR  
FOR HVAC CONTROL

SMOKE DETECTOR FOR  
SMOKE DAMPER CONTROL

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**(MTG) MOUNTING:**  
 RE - RECESSED  
 SP - SUSPENDED  
 CL - CEILING SURFACE  
 WL - WALL  
 UC - UNDER CABINET  
 CV - COVE  
 PL - POLE  
 FR- FLANGED RECESSED  
 O - OTHER ( SEE DESCRIPTION)




**DOOR:**  
 FA - FLAT ALUMINUM  
 FS - FLAT STEEL  
 RA - REGRESSED ALUMINUM  
 RS - REGRESSED STEEL



**FINISH:**  
 PAF - PAINT AFTER FABRICATION  
 CSA - FINISH SELECTION BY ARCHITECT

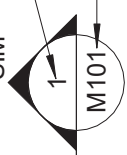
CATALOG NUMBER SHALL NOT BE CONSIDERED C  
 DESCRIPTION AND THE SPECIFICATION SHALL BE  
 ORDERED. THE FIRST MANUFACTURER LISTED IS  
 REFER TO SPECIFICATION SECTIONS LIGHTING 28

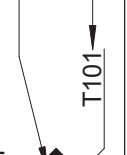
ITEM	DESCRIPTION
F1E	PROVIDE AND INSTALL EGRESS BATTERY BACKUP MICRO-INVERTER AT FIXTURE LOCATIONS INDICATED. INCLUDE TEST SWITCH AND CHARGING INDICATOR. UNIT SHALL PROVIDE 90-MINUTE CODE-COMPLIANT RUNTIME. LED LIGHT FIXTURES ARE PROVIDED UNDER A SEPARATE CONTRACT.
F2	RECESSED LED STATIC GRID FIXTURE, WITH ACRYLIC CENTER BASKET OPAL DIFFUSER.
F2E	PROVIDE AND INSTALL EGRESS BATTERY BACKUP MICRO-INVERTER AT FIXTURE LOCATIONS INDICATED. INCLUDE TEST SWITCH AND CHARGING INDICATOR. UNIT SHALL PROVIDE 90-MINUTE CODE-COMPLIANT RUNTIME. LED LIGHT FIXTURES ARE PROVIDED UNDER A SEPARATE CONTRACT.

**VIE**

NAME  LEVEL NAME  
 10' - 0"  HEIGHT ABOVE  
 PROJECT 0' - 0" 

 **VIEW**  
 1   
 1/8" = 1'-0"

 SIM  
 M101

 SIM  
 T101

**LINE TYPE KEY:**

\_\_\_\_\_ NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)

--- NEW WORK UNDERFLOOR (DARK LONG DASHED LINE)

\_\_\_\_\_ NEW WORK BY OTHERS (LIGHT SOLID LINE)

--- EXISTING TO BE REMOVED (DARK SHORT DASHED LINE)

A

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**FIRE / SMOKE BARRIER**

THE LINE TYPES SHOWN ARE FOR THE CONVENTIONAL. THE CONTRACTOR SHALL VERIFY RATINGS WITH THE LATEST SELECTION LIST AND MATERIALS REQUIRED TO COMPLY WITH THE LISTED RATING.

ALL FLOOR AND ROOF CEILING ASSEMBLIES SHALL BE RATED AS FIRE / SMOKE BARRIER(S), UNLESS NOTED OTHERWISE ON THE DRAWINGS.

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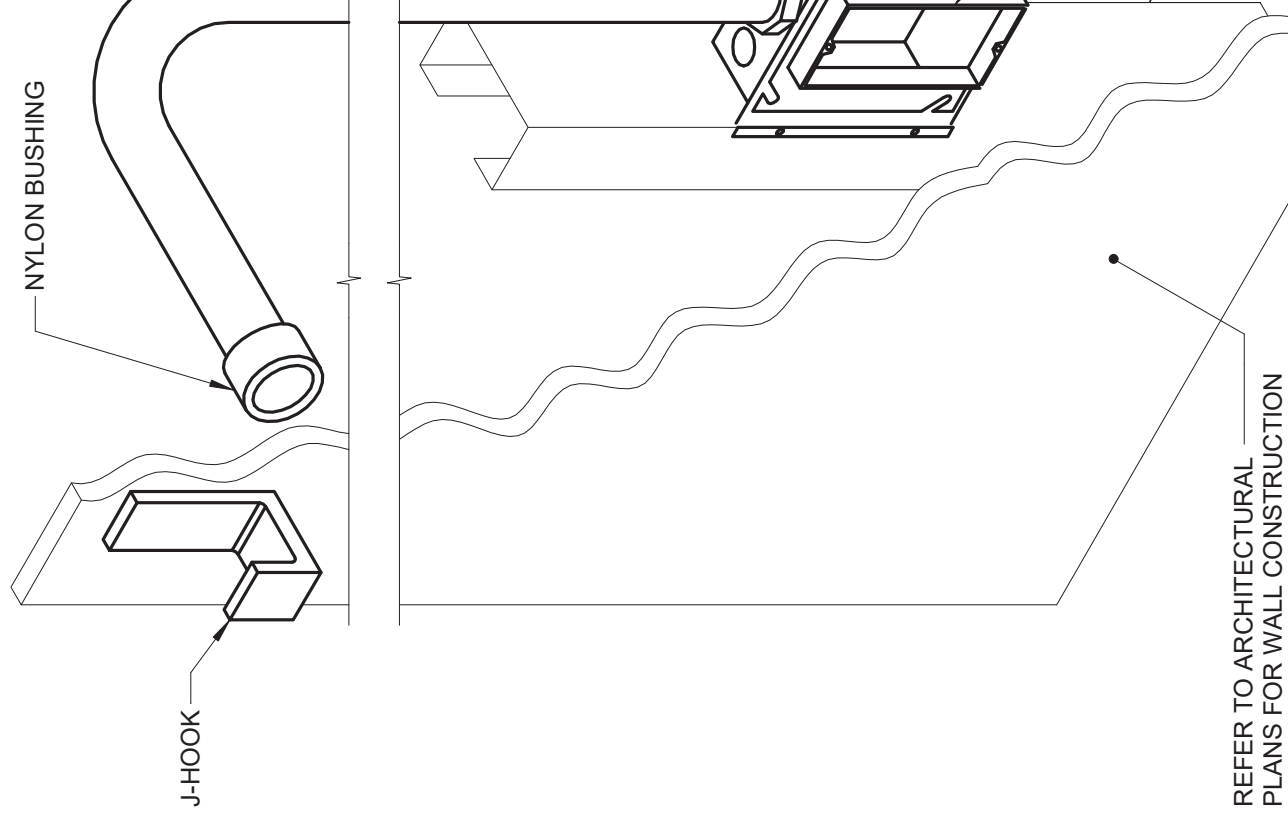
TEL  
1/2" = 1'-0"

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TECHNOLOGY ROUGH-IN

NO SCALE

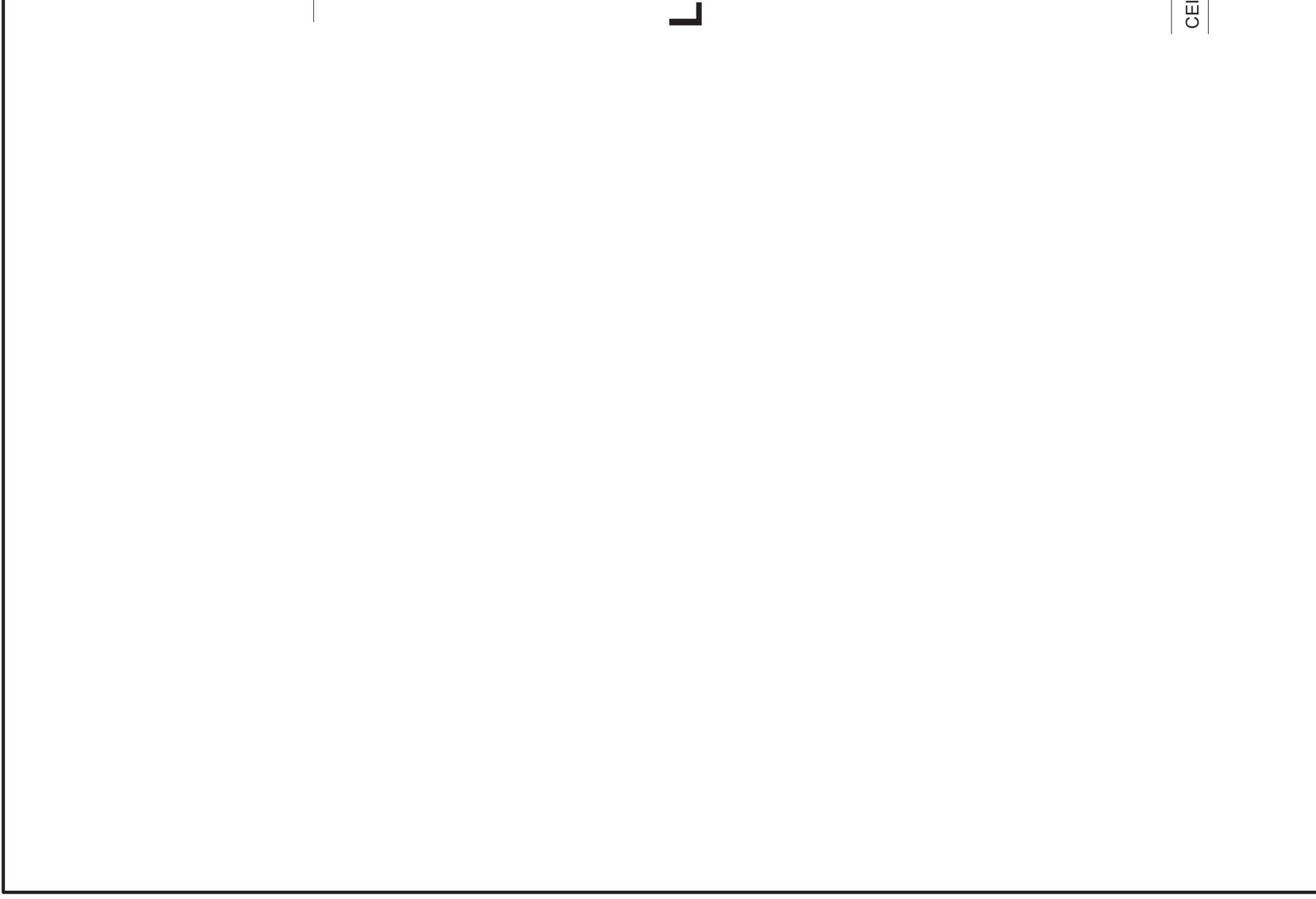
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THE EQUIPMENT LIST SHALL BE RESPONSIBLE FOR THE WORKING SYSTEM.

CATALOG NUMBERS AND MANUFACTURER'S PART NUMBERS ORDERED BY MANUFACTURER.

**EQUIPMENT LIST ABBREVIATION**

PA-AMP-1

PA-ANC-1

PA-NET-SW

PA-S1-C

PA-S2-C

PA-S-W