

- (ADD ALTERNATE H-3) UP TO GROUND FLOOR. 4" HWS/HWR PIPING (BASE BID) AND 2" CHWS/CHWR
- INCREASED SYSTEM STATIC PRESSURE (BASE BID). REPLACE EXISTING FAN MOTOR TO ACCOMMODATE CONTROLS IN EXISTING VENTILATION FAN DUCT. INSTALL COOLING COIL, CHWS/CHWR PIPING, AND
- 1) INSTALL OUTSIDE AIR VENTILATION SYSTEMS AND DUCTWORK FOR GROUND, 1ST AND 2ND FLOORS. INSTALL SUPPLY AND EXHAUST AIR REGISTERS AS PART OF COMPLETE DUCTED VENTILATION SYSTEM.
- **EXISTING STEAM RADIATION TO REMAIN, REPLACE** THERMOSTATIC CONTROL VALVES WITH NEW.
- REMOVE EXISTING COAL FIRED BOILER IN SUB-BASEMENT EXCHANGER, PUMPS, CONTROLS AND PIPING TO OUTSIDE AIR VENTILATION UNITS IN ATTIC. BOILER ROOM. INSTALL NEW STEAM TO HOT WATER HEAT

IN ADDITION TO BASE BID:

SERVE SIMILAR ROOMS. WITH COMMON EXTERIOR EXPOSURE. INSTALL SUPPLY AND RETURN DUCTWORK, SUPPLY AND RETURN REGISTERS AND TEMPERATURE INSTALL ABOVE CEILING, COOLING ONLY FAN COIL UNIT TO

- ELIMINATE ITEM 2) AND MODIFY ITEM 3) OF BASE BID.
- IN ADDITION TO ITEM 1) OF BASE BID
- REMOVE EXISTING STEAM RADIATORS AND ASSOCIATED WITH COOLING/HEATING CHANGE-OVER AND ASSOCIATED PIPING. INSTALL (2) PIPE CONSOLE STYLE FAN COIL UNITS TEMPERATURE CONTROLS TO REPLACE STEAM RADIATION
- 4) REMOVE EXISTING COAL FIRED BOILER AND INSTALL NEW HEATING LOAD AND THE SPACE HEATING LOAD BASE BID. HEAT EXCHANGER AND PUMPING CAPACITIES SHALL INCREASE TO INCLUDE BOTH THE VENTILATION STEAM TO HOT WATER HEAT EXCHANGER AS DESCRIBED IN

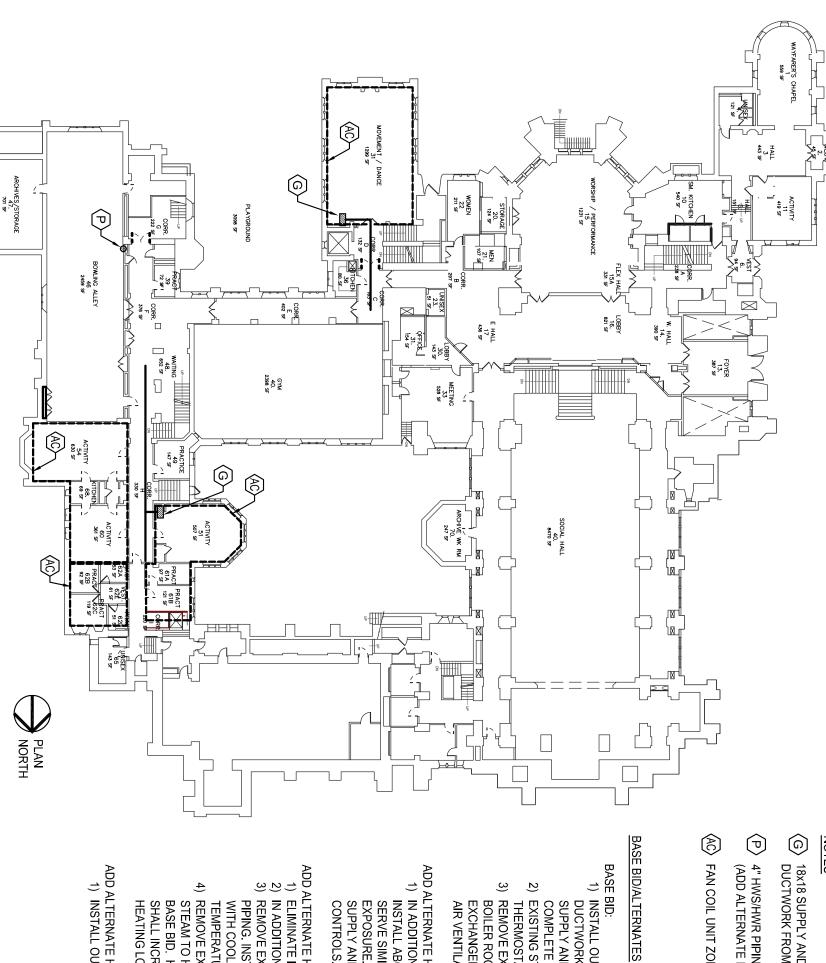
1) INSTALL OUTSIDE AIR VENTILATION SYSTEM FOR 3RD FLOOR

#### MZGIZ 1555 Coraopolis H Ш П RING

Moon Township, I ph: (412)

		EASTIBERTY		PROPOSED  HV/AC ALTERATIONS
Drawn By	Date:	Scale:	Project No.	BAS
JL	10-14-14		Project No. 14-0570 Drawing No.	BASEMENT FLOOR
		-	Drawing No.	FLOOR

Drawing Title



- **DUCTWORK FROM 1ST FLOOR** 18x18 SUPPLY AND RETURN VENTILATION AIR
- (ADD ALTERNATE H-3) RISERS 4" HWS/HWR PIPING (BASE BID) AND 2" CHWS/CHWR
- FAN COIL UNIT ZONE UNDER ADD ALTERNATE H-1

- 1) INSTALL OUTSIDE AIR VENTILATION SYSTEMS AND COMPLETE DUCTED VENTILATION SYSTEM. DUCTWORK FOR GROUND, 1ST AND 2ND FLOORS. INSTALL SUPPLY AND EXHAUST AIR REGISTERS AS PART OF
- EXISTING STEAM RADIATION TO REMAIN, REPLACE THERMOSTATIC CONTROL VALVES WITH NEW.
- BOILER ROOM. INSTALL NEW STEAM TO HOT WATER HEAT EXCHANGER, PUMPS, CONTROLS AND PIPING TO OUTSIDE AIR VENTILATION UNITS IN ATTIC. REMOVE EXISTING COAL FIRED BOILER IN SUB-BASEMENT

### ADD ALTERNATE H-1:

IN ADDITION TO BASE BID:

INSTALL ABOVE CEILING, COOLING ONLY FAN COIL UNIT TO SERVE SIMILAR ROOMS. WITH COMMON EXTERIOR EXPOSURE. INSTALL SUPPLY AND RETURN DUCTWORK, SUPPLY AND RETURN REGISTERS AND TEMPERATURE

#### ADD ALTERNATE H-2:

- 1) ELIMINATE ITEM 2) AND MODIFY ITEM 3) OF BASE BID.
- IN ADDITION TO ITEM 1) OF BASE BID
- REMOVE EXISTING STEAM RADIATORS AND ASSOCIATED WITH COOLING/HEATING CHANGE-OVER AND ASSOCIATED PIPING. INSTALL (2) PIPE CONSOLE STYLE FAN COIL UNITS TEMPERATURE CONTROLS TO REPLACE STEAM RADIATION
- STEAM TO HOT WATER HEAT EXCHANGER AS DESCRIBED IN BASE BID. HEAT EXCHANGER AND PUMPING CAPACITIES SHALL INCREASE TO INCLUDE BOTH THE VENTILATION REMOVE EXISTING COAL FIRED BOILER AND INSTALL NEW HEATING LOAD AND THE SPACE HEATING LOAD

### ADD ALTERNATE H-3:

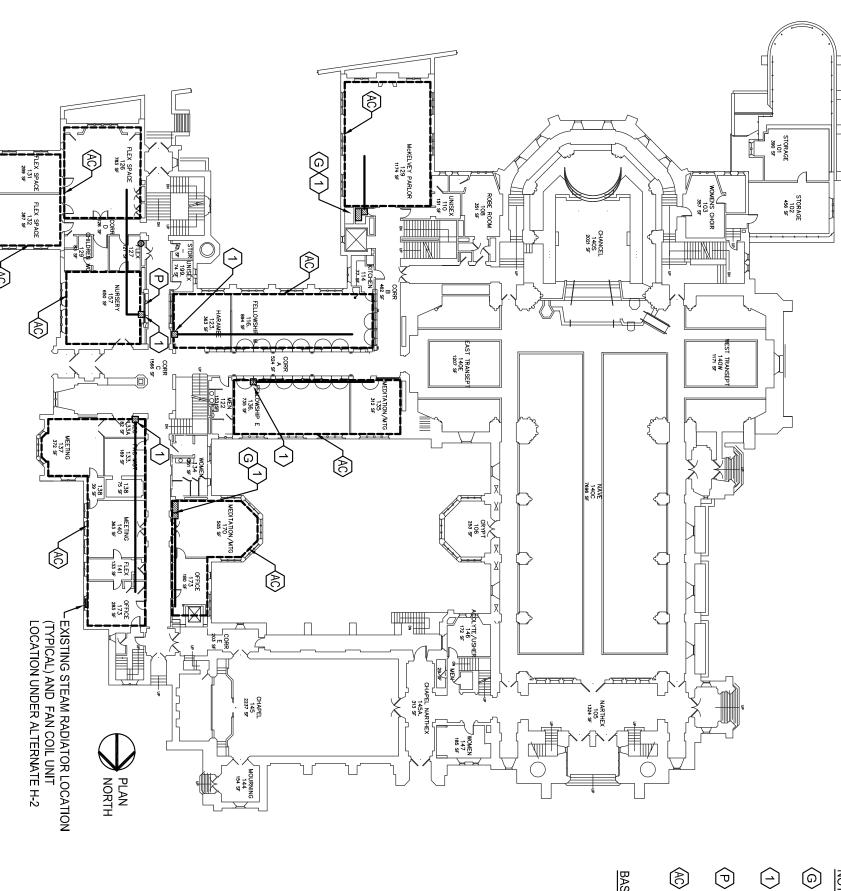
1) INSTALL OUTSIDE AIR VENTILATION SYSTEM FOR 3RD FLOOR

### **EZGIZEEZIZG** 1555 Coraopolis Heights Road, Suite 4200 Moon Township, PA 15108

ph: (412) 262-1220 fax: (412) 262-2972

PRESBY LEKIAN CHURCH		EAST HRERTY		TXCTCUTT	
Drawn By:	Date:	Scale:	Project No.	GR	Drawing Title
JL	10-14-14	3/32"=1'-0"	Project No. 14-0570 Drawing N	<b>GROUND FLOOR</b>	æ
			Drawing N	OOR	

H-2



- 3) 18x18 SUPPLY AND RETURN VENTILATION AIR DUCTWORK FROM 2ND TO GROUND FLOOR
- 1) 12x12 SUPPLY AND RETURN VENTILATION AIR DUCTWORK FROM 2ND FLOOR
- HWS/HWR PIPING (BASE BID) AND CHWS/CHWR PIPING (ADD ALTERNATE H-1) RISERS
- FAN COIL UNIT ZONE UNDER ADD ALTERNATE H-1

#### E BID/ALTERNATES

#### BASE BID:

- 1) INSTALL OUTSIDE AIR VENTILATION SYSTEMS AND DUCTWORK FOR GROUND, 1ST AND 2ND FLOORS. INSTALL SUPPLY AND EXHAUST AIR REGISTERS AS PART OF COMPLETE DUCTED VENTILATION SYSTEM.
- EXISTING STEAM RADIATION TO REMAIN, REPLACE THERMOSTATIC CONTROL VALVES WITH NEW.
  REMOVE EXISTING COAL FIRED BOILER IN SUB-BASE BOILER ROOM. INSTALL NEW STEAM TO HOT WATER

2)

3) REMOVE EXISTING COAL FIRED BOILER IN SUB-BASEMENT BOILER ROOM. INSTALL NEW STEAM TO HOT WATER HEAT EXCHANGER, PUMPS, CONTROLS AND PIPING TO OUTSIDE AIR VENTILATION UNITS IN ATTIC.

### ADD ALTERNATE H-1:

IN ADDITION TO BASE BID:

INSTALL ABOVE CEILING, COOLING ONLY FAN COIL UNIT TO SERVE SIMILAR ROOMS. WITH COMMON EXTERIOR EXPOSURE. INSTALL SUPPLY AND RETURN DUCTWORK, SUPPLY AND RETURN REGISTERS AND TEMPERATURE CONTROLS.

#### ADD ALTERNATE H-2:

- 1) ELIMINATE ITEM 2) AND MODIFY ITEM 3) OF BASE BID.
- IN ADDITION TO ITEM 1) OF BASE BID
- REMOVE EXISTING STEAM RADIATORS AND ASSOCIATED PIPING. INSTALL (2) PIPE CONSOLE STYLE FAN COIL UNITS WITH COOLING/HEATING CHANGE-OVER AND ASSOCIATED TEMPERATURE CONTROLS TO REPLACE STEAM RADIATION
- 4) REMOVE EXISTING COAL FIRED BOILER AND INSTALL NEW STEAM TO HOT WATER HEAT EXCHANGER AS DESCRIBED IN BASE BID. HEAT EXCHANGER AND PUMPING CAPACITIES SHALL INCREASE TO INCLUDE BOTH THE VENTILATION HEATING LOAD AND THE SPACE HEATING LOAD

### ADD ALTERNATE H-3:

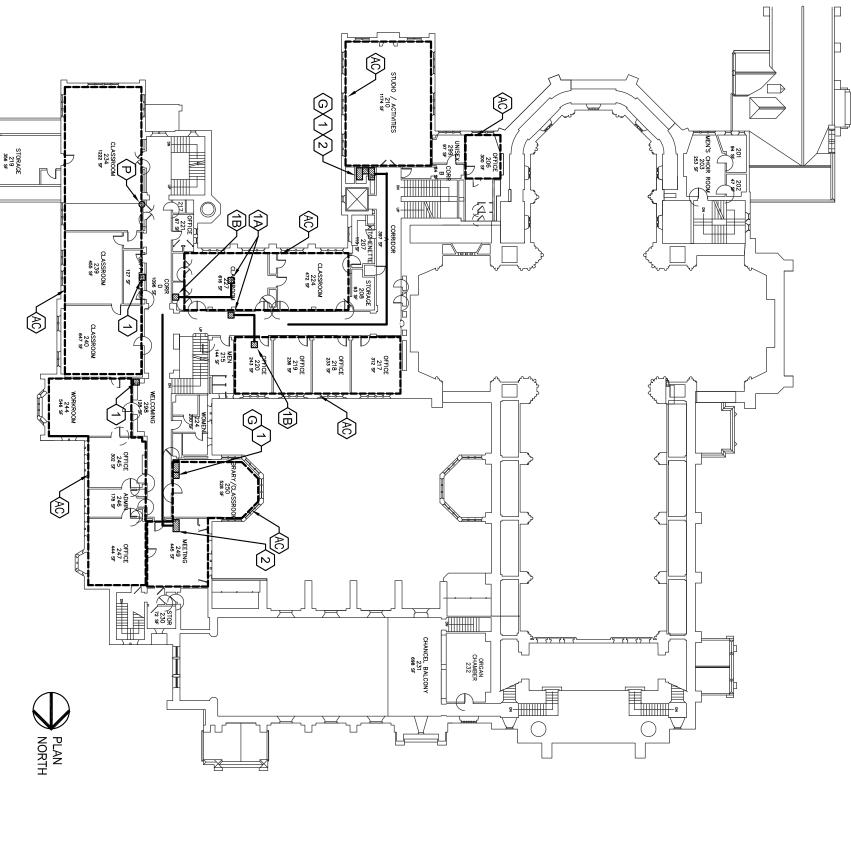
1) INSTALL OUTSIDE AIR VENTILATION SYSTEM FOR 3RD FLOOR

# EZGIZEERIZG 1555 Coraopolis Heights Road, Suite 4200

Moon Township, PA 15108

ph: (412) 262-1220 fax: (412) 262-2972

		I	
	JL	Drawn By:	CATORY ITRIAN CHORCE
エ	10-14-14	Date:	
- - )	3/32"=1'-0"	Scale:	=AST   IBERTY
Drawing No.	Project No.: 14-0570 Drawing No.	Project No	
R	FIRST FLOOR	FIF	TVAC ALTERATIONS
	itle	Drawing Title	שטחטפרה



- (G) 18x18 SUPPLY AND RETURN VENTILATION AIR **DUCTWORK FROM ATTIC TO GROUND FLOOR**
- 12x12 SUPPLY AND RETURN VENTILATION AIR **DUCTWORK FROM 2ND FLOOR TO 1ST FLOOR**
- (1A) 12x12 SUPPLY AND RETURN VENTILATION AIR **DUCTWORK FROM 2ND FLOOR**
- 18x18 SUPPLY AND RETURN VENTILATION AIR DUCTWORK FROM 3RD FLOOR. 12x12 SUPPLY AND RETURN VENTILATION AIR DUCTWORK DOWN TO 1ST FLOOR.

2

- (P) HWS/HWR (BASE BID) AND CHWS/CHWR (ADD ALTERNATE H-1) PIPE RISERS
- BASE BID/ALTERNATES (FC) FAN COIL UNIT ZONE UNDER ADD ALTERNATE H-1

#### BASE BID:

- 1) INSTALL OUTSIDE AIR VENTILATION SYSTEMS AND DUCTWORK FOR GROUND, 1ST AND 2ND FLOORS. INSTALL SUPPLY AND EXHAUST AIR REGISTERS AS PART OF COMPLETE DUCTED VENTILATION SYSTEM.
- EXISTING STEAM RADIATION TO REMAIN, REPLACE THERMOSTATIC CONTROL VALVES WITH NEW.

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REMOVE EXISTING COAL FIRED BOILER IN SUB-BASEMENT EXCHANGER, PUMPS, CONTROLS AND PIPING TO OUTSIDE BOILER ROOM. INSTALL NEW STEAM TO HOT WATER HEAT AIR VENTILATION UNITS IN ATTIC.

### ADD ALTERNATE H-1:

 IN ADDITION TO BASE BID: INSTALL ABOVE CEILING, COOLING ONLY FAN COIL UNIT TO SERVE SIMILAR ROOMS. WITH COMMON EXTERIOR EXPOSURE. INSTALL SUPPLY AND RETURN DUCTWORK, SUPPLY AND RETURN REGISTERS AND TEMPERATURE

#### ADD ALTERNATE H-2:

- 1) ELIMINATE ITEM 2) AND MODIFY ITEM 3) OF BASE BID.
- IN ADDITION TO ITEM 1) OF BASE BID
- REMOVE EXISTING STEAM RADIATORS AND ASSOCIATED WITH COOLING/HEATING CHANGE-OVER AND ASSOCIATED PIPING. INSTALL (2) PIPE CONSOLE STYLE FAN COIL UNITS TEMPERATURE CONTROLS TO REPLACE STEAM RADIATION
- 4 REMOVE EXISTING COAL FIRED BOILER AND INSTALL NEW HEATING LOAD AND THE SPACE HEATING LOAD SHALL INCREASE TO INCLUDE BOTH THE VENTILATION BASE BID. HEAT EXCHANGER AND PUMPING CAPACITIES STEAM TO HOT WATER HEAT EXCHANGER AS DESCRIBED IN

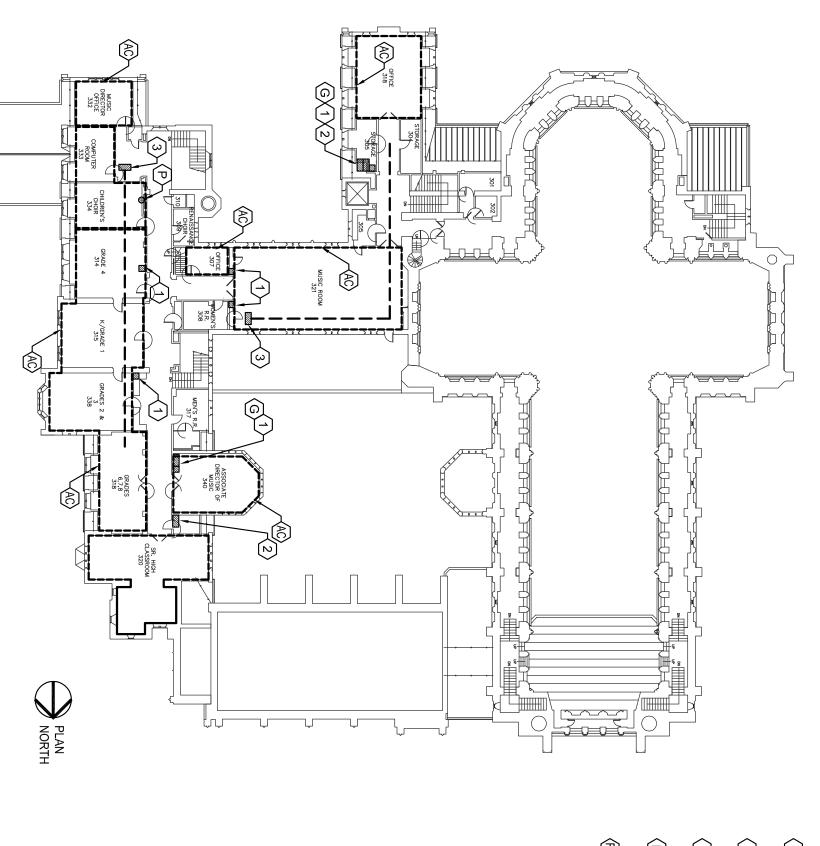
### ADD ALTERNATE H-3:

1) INSTALL OUTSIDE AIR VENTILATION SYSTEM FOR 3RD FLOOR

TAEUDY EXIAN CHURCH		EASTIBERTY		TVAC AI TERATIONA	
Drawn By: JL	Date: 10-14-14	Scale: 3/32"=1'-0"	Project No. 14-0570	SECOND FLOOR	Drawing Title
	] H-4	•	Drawing No.	OOR	

**EZGIZEEZIZG** 

1555 Coraopolis Heights Road, Suite 4200 Moon Township, PA 15108 ph: (412) 262-1220 fax: (412) 262-2972



- 18x18 SUPPLY AND RETURN VENTILATION AIR
   DUCTWORK FROM ATTIC TO GROUND FLOOR
- 1) 12x12 SUPPLY AND RETURN VENTILATION AIR DUCTWORK FROM ATTIC TO 1ST FLOOR
- 2) 18x18 SUPPLY AND RETURN VENTILATION AIR **DUCTWORK FROM ATTIC TO 2ND FLOOR**
- 3) 18Xx18 SUPPLY AND RETURN VENTILATION AIR DUCTWORK FROM ATTIC (ADD ALTERNATE H-3)
- P HWS/HWR (BASE BID) AND CHWS/CHWR (ADD ALTERNATE H-1) PIPE RISERS
- $\ket{\mathsf{FC}}$  FAN COIL UNIT ZONE UNDER ADD ALTERNATE H-3

# BASE BID/ALTERNATES

#### BASE BID:

- 1) INSTALL OUTSIDE AIR VENTILATION SYSTEMS AND SUPPLY AND EXHAUST AIR REGISTERS AS PART OF COMPLETE DUCTED VENTILATION SYSTEM. DUCTWORK FOR GROUND, 1ST AND 2ND FLOORS. INSTALL
- THERMOSTATIC CONTROL VALVES WITH NEW.
  REMOVE EXISTING COAL FIRED BOILER IN SUB-BASEMENT **EXISTING STEAM RADIATION TO REMAIN, REPLACE**

7)

ယ EXCHANGER, PUMPS, CONTROLS AND PIPING TO OUTSIDE AIR VENTILATION UNITS IN ATTIC. BOILER ROOM. INSTALL NEW STEAM TO HOT WATER HEAT

### ADD ALTERNATE H-1

1) IN ADDITION TO BASE BID:

EXPOSURE. INSTALL SUPPLY AND RETURN DUCTWORK, SUPPLY AND RETURN REGISTERS AND TEMPERATURE INSTALL ABOVE CEILING, COOLING ONLY FAN COIL UNIT TO SERVE SIMILAR ROOMS. WITH COMMON EXTERIOR

- ADD ALTERNATE ITEM 2) AND MODIFY ITEM 3) OF BASE BID.
- IN ADDITION TO ITEM 1) OF BASE BID
- WITH COOLING/HEATING CHANGE-OVER AND ASSOCIATED REMOVE EXISTING STEAM RADIATORS AND ASSOCIATED TEMPERATURE CONTROLS TO REPLACE STEAM RADIATION PIPING. INSTALL (2) PIPE CONSOLE STYLE FAN COIL UNITS
- 4) REMOVE EXISTING COAL FIRED BOILER AND INSTALL NEW BASE BID. HEAT EXCHANGER AND PUMPING CAPACITIES SHALL INCREASE TO INCLUDE BOTH THE VENTILATION HEATING LOAD AND THE SPACE HEATING LOAD STEAM TO HOT WATER HEAT EXCHANGER AS DESCRIBED IN

### ADD ALTERNATE H-3:

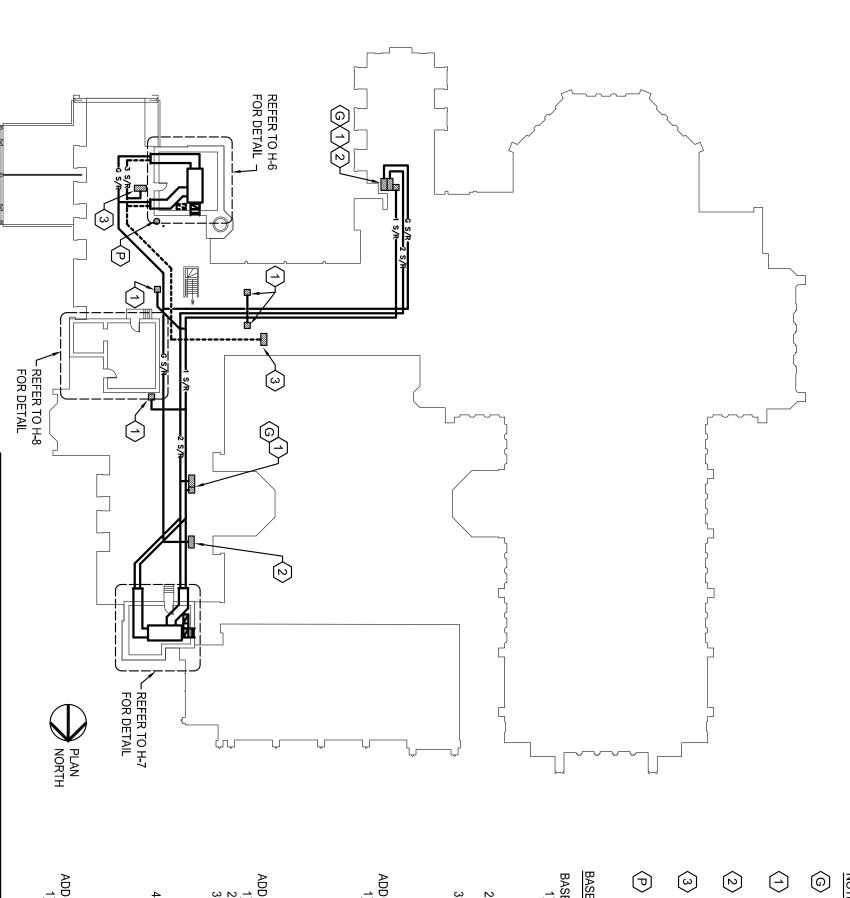
1) INSTALL OUTSIDE AIR VENTILATION SYSTEM FOR 3RD FLOOR

# **EZGIZEEZIZG** 1555 Coraopolis Heights Road, Suite 4200

ph: (412) 262-1220 fax: (412) 262-2972

Moon Township, PA 15108

PRESBY LERIAN CHURCH		EASTLIBERTY		TXOTOUTU	
Drawn By: JL	Date: 10-14-14	Scale: 3/32"=1'-0"	Project No.: 14-0570 Drawing No	THIRD FLOOR	Drawing Title
		- -	Drawing No.	)R	



- (G) 18x18 SUPPLY AND RETURN VENTILATION AIR DUCTWORK DOWN TO GROUND FLOOR
- (1) 12x12 SUPPLY AND RETURN VENTILATION AIR DUCTWORK DOWN TO 1ST FLOOR
- 18x18 SUPPLY AND RETURN VENTILATION AIR **DUCTWORK DOWN TO 2ND FLOOR**
- 18Xx18 SUPPLY AND RETURN VENTILATION AIR DUCTWORK DOWN TO 3RD FLOOR (ADD ALTERNATE H-3)
- P 4" HWS/HWR (BASE BID) AND 4" CHWS/CHWR (ADD ALTERNATE H-1) DOWN TO THIRD FLOOR

# BASE BID/ALTERNATES

#### BASE BID:

- 1) INSTALL OUTSIDE AIR VENTILATION SYSTEMS AND SUPPLY AND EXHAUST AIR REGISTERS AS PART OF COMPLETE DUCTED VENTILATION SYSTEM. DUCTWORK FOR GROUND, 1ST AND 2ND FLOORS. INSTALL
- **EXISTING STEAM RADIATION TO REMAIN, REPLACE** THERMOSTATIC CONTROL VALVES WITH NEW.

2)

3) REMOVE EXISTING COAL FIRED BOILER IN SUB-BASEMENT EXCHANGER, PUMPS, CONTROLS AND PIPING TO OUTSIDE AIR VENTILATION UNITS IN ATTIC. BOILER ROOM. INSTALL NEW STEAM TO HOT WATER HEAT

### ADD ALTERNATE H-1:

1) IN ADDITION TO BASE BID:

EXPOSURE. INSTALL SUPPLY AND RETURN DUCTWORK, SUPPLY AND RETURN REGISTERS AND TEMPERATURE INSTALL ABOVE CEILING, COOLING ONLY FAN COIL UNIT TO SERVE SIMILAR ROOMS. WITH COMMON EXTERIOR

#### ADD ALTERNATE H-2:

- ELIMINATE ITEM 2) AND MODIFY ITEM 3) OF BASE BID.
- IN ADDITION TO ITEM 1) OF BASE BID
- WITH COOLING/HEATING CHANGE-OVER AND ASSOCIATED REMOVE EXISTING STEAM RADIATORS AND ASSOCIATED TEMPERATURE CONTROLS TO REPLACE STEAM RADIATION PIPING. INSTALL (2) PIPE CONSOLE STYLE FAN COIL UNITS
- 4) REMOVE EXISTING COAL FIRED BOILER AND INSTALL NEW BASE BID. HEAT EXCHANGER AND PUMPING CAPACITIES SHALL INCREASE TO INCLUDE BOTH THE VENTILATION HEATING LOAD AND THE SPACE HEATING LOAD STEAM TO HOT WATER HEAT EXCHANGER AS DESCRIBED IN

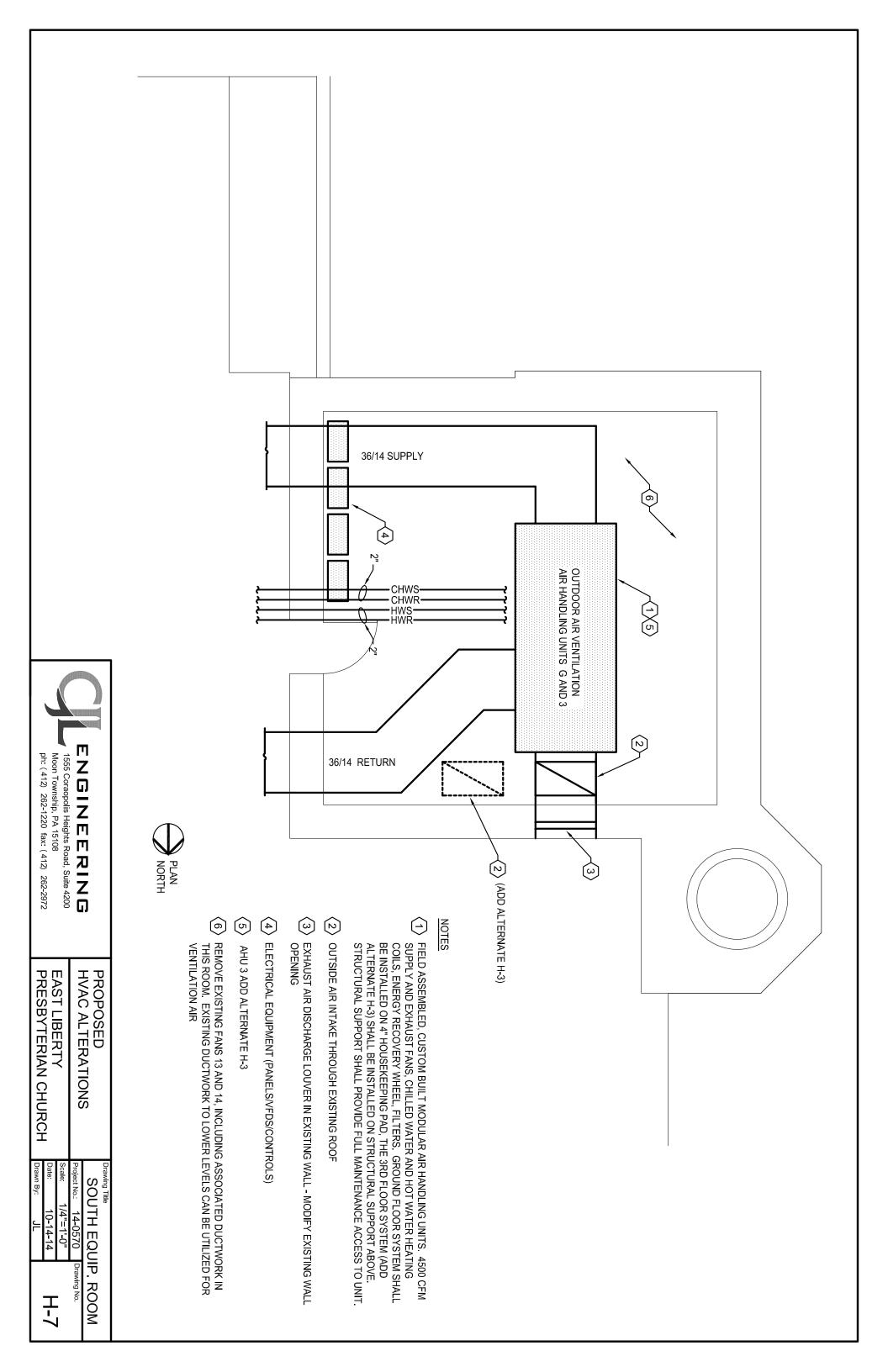
### ADD ALTERNATE H-3:

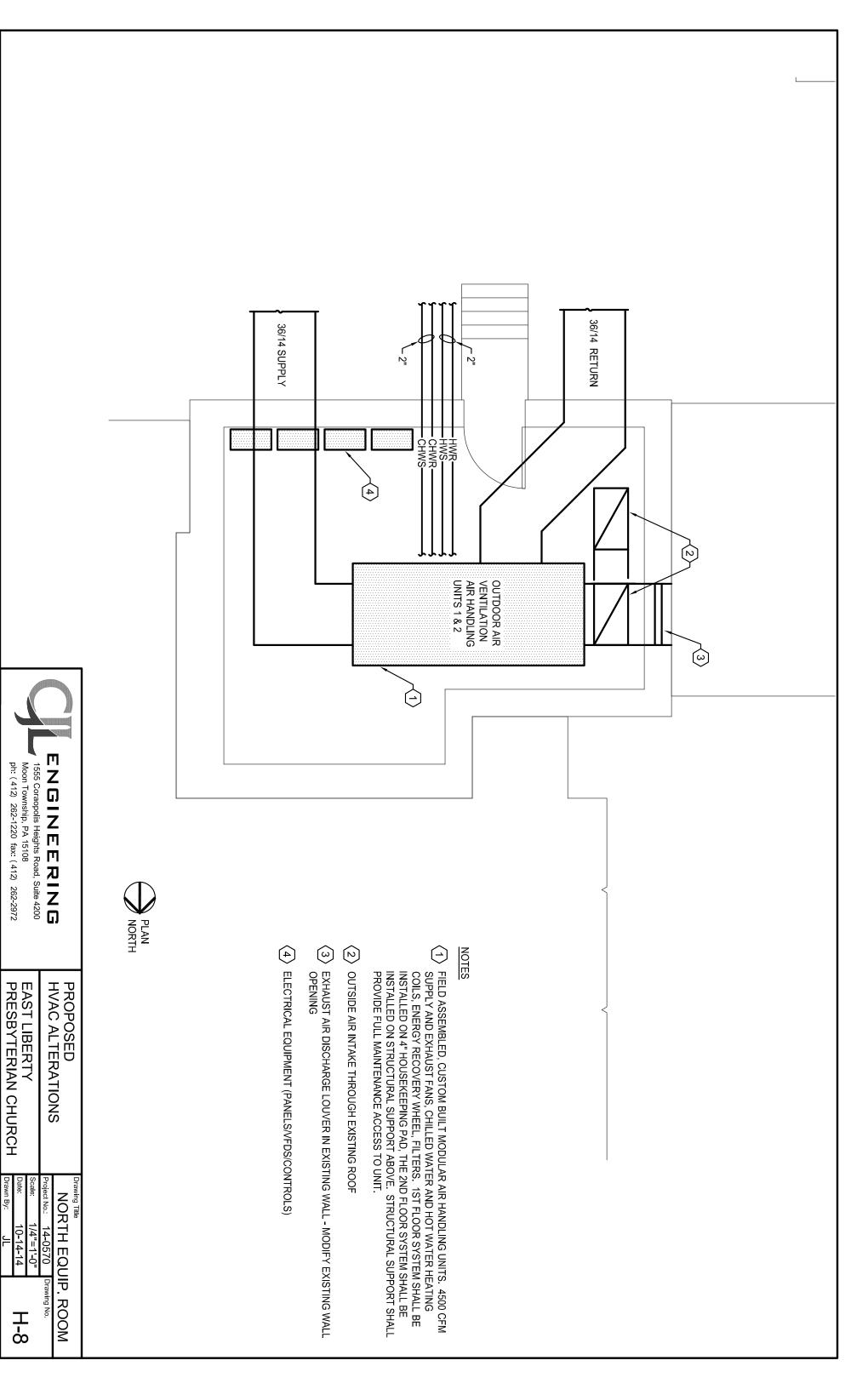
1) INSTALL OUTSIDE AIR VENTILATION SYSTEM FOR 3RD FLOOR

**EZGIZEEZIZG** Moon Township, PA 15108 1555 Coraopolis Heights Road, Suite 4200

ph: (412) 262-1220 fax: (412) 262-2972

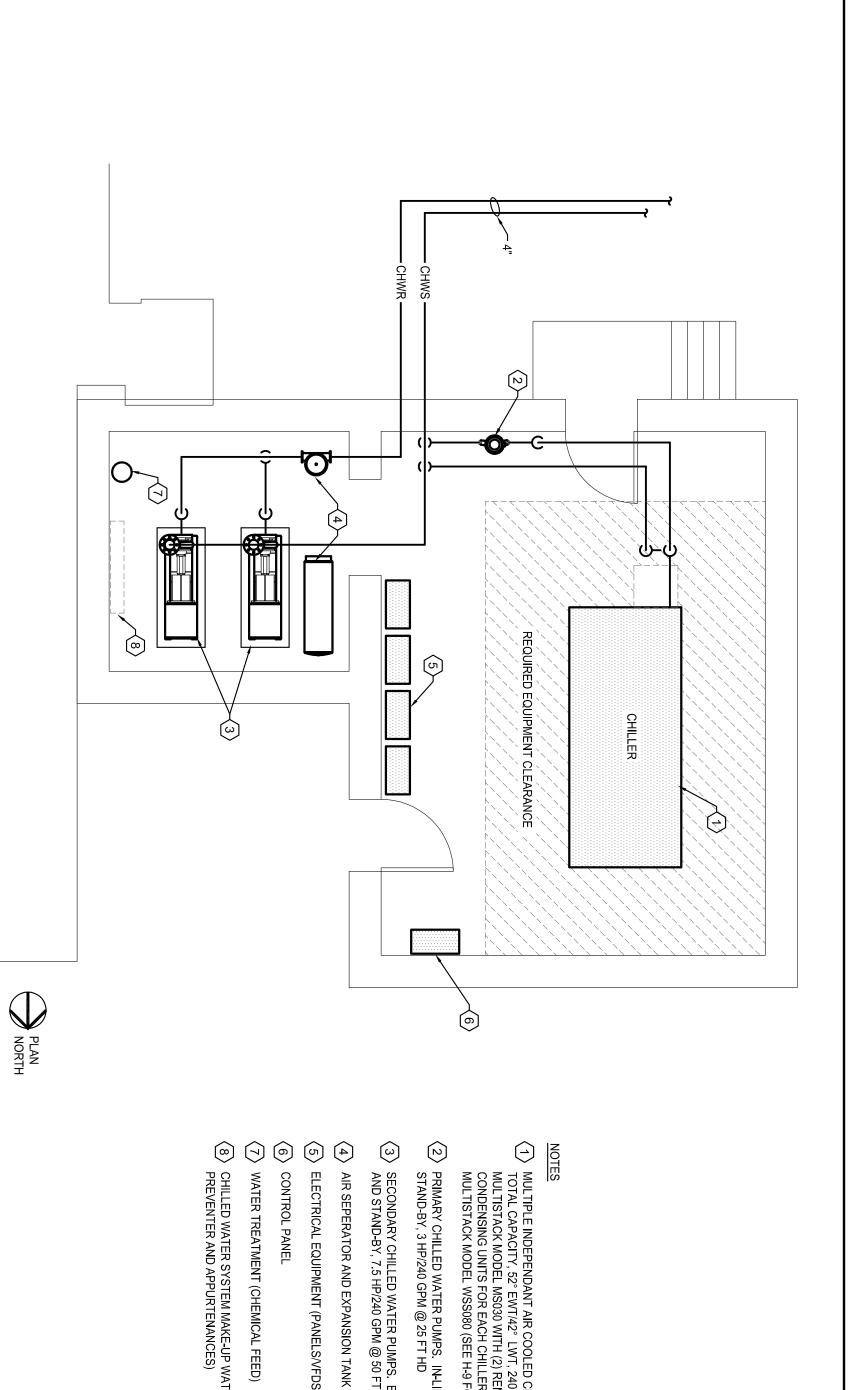
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Drawn By: JL	Date: 10-14-14	Scale: 3/32"=1'-0"	Project No. 14-0570 Drawing No.	ATTIC FLOOR	0.000
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H-8



- MULTIPLE INDEPENDANT AIR COOLED CHILLERS. 120 TONS TOTAL CAPACITY, 52° EWT/42° LWT, 240 GPM. (4)
  MULTISTACK MODEL MS030 WITH (2) REMOTE AIR COOLED CONDENSING UNITS FOR EACH CHILLER MODULE,
  MULTISTACK MODEL WSS080 (SEE H-9 FOR LOCATIONS)
- (2) PRIMARY CHILLED WATER PUMPS. IN-LINE DUTY AND STAND-BY, 3 HP/240 GPM @ 25 FT HD
- SECONDARY CHILLED WATER PUMPS. BASE MOUNTED DUTY AND STAND-BY, 7.5 HP/240 GPM @ 50 FT HD, WITH VFD'S
- (5) ELECTRICAL EQUIPMENT (PANELS/VFDS/ETC)
- (7) WATER TREATMENT (CHEMICAL FEED)
- (8) CHILLED WATER SYSTEM MAKE-UP WATER (BACKFLOW PREVENTER AND APPURTENANCES)

# **ENGINEERING** 1555 Coraopolis Heights Road, Suite 4200 Moon Township, PA 15108 ph: (412) 262-1220 fax: (412) 262-2972

TRESOT ERIAN COURCD Drawn By:	DDT DDT DT Date:	EACT   IRERTY Scale:		TVAC ALTERATIONS ( )	
By: JL	10-14-14	1/4"=1'-0"	Project No. 14-0570 Drawing No.	CHILLER EQUIP. ROOM	Cidwing
	T-9	-	Orawing No.	JIP. RO	

