

**TOWN OF EAST HARTFORD
PLANNING & ZONING COMMISSION
APPLICATION FORM**

DATE: 7/20/2017

Official Receipt Date:

7/20/17

1. APPLICATION TYPE: (CHECK ALL THAT APPLY)

***COMPLETE SECTION ON PAGE 2 OR 3**

- | | |
|--|--|
| <input type="checkbox"/> SITE PLAN APPLICATION | <input type="checkbox"/> NATURAL RESOURCES REMOVAL AND FILLING |
| <input checked="" type="checkbox"/> SITE PLAN MODIFICATION | <input type="checkbox"/> SPECIAL USE PERMIT* |
| <input type="checkbox"/> FLOOD HAZARD – MAJOR* | <input type="checkbox"/> ZONING MAP CHANGE* |
| <input type="checkbox"/> FLOOD HAZARD – MINOR* | <input type="checkbox"/> TEXT AMENDMENT* |
| <input type="checkbox"/> SOIL EROSION AND SEDIMENTATION - Cumulative disturbed area (sq. ft.): _____ | |

2. SITE AND PROJECT INFORMATION

PROPERTY ADDRESS: 400 Main St. Design Development ZONE: District 1.

ASSESSORS MAP AND LOT: 20-45 PARCEL SIZE (ACRES OR SQ. FT.): 855 s.f.

PROJECT NAME: Gas Compressor Enclosure

PROJECT DESCRIPTION (ATTACH ADDITIONAL SHEETS IF NEEDED):

Pratt & Whitney intends to construct a new building around the existing Gas Compressor installed in 2015 at the east side of the existing Power House. The south, west and part of the north walls are the existing exterior walls of the Power House. The east side and part of the north wall will be new. The new room formed by the construction will be a High Hazard H-2 location. The room will have an Electrical Classification of Class 1 Division 2 Group D. Room to be 855 square feet.

3. PROPERTY OWNER INFORMATION

☐ CHECK IF PRIMARY CONTACT

OWNER OF RECORD: United Technologies Pratt & Whitney

OWNER ADDRESS: 400 Main St.

OWNER PHONE: (860) 565-9224 OWNER EMAIL: zoraida.ferguson@pw.utc.com

OWNER SIGNATURE: Zoraida Ferguson PRINT NAME: Zoraida Ferguson

The undersigned owner hereby authorizes: (1) this application, and (2) the Planning and Zoning Commission and Town of East Hartford staff the right to enter upon the property for the purposes of inspection associated with this application.

4. APPLICANT INFORMATION

☒ CHECK IF PRIMARY CONTACT

☐ CHECK IF APPLICANT IS SAME AS PROPERTY OWNER

APPLICANT: James Wilkinson

APPLICANT ADDRESS: 400 Main St.

APPLICANT PHONE: (860) 557-3311 APPLICANT EMAIL: james.wilkinson@pw.utc.com

APPLICANT SIGNATURE: James Wilkinson PRINT NAME: James Wilkinson

5. DESIGN PROFESSIONAL INFORMATION

☐ CHECK IF PRIMARY CONTACT

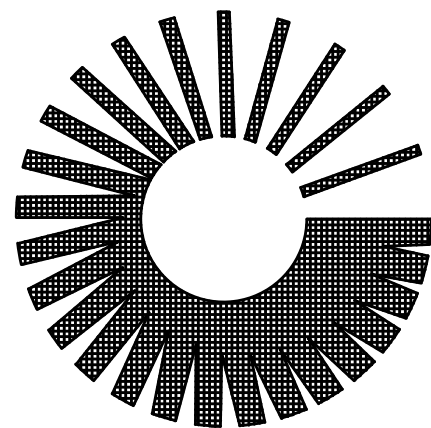
FIRM: Bonney Engineering

PHONE: (860) 771-1240

CONTACT PERSON: William Bonney

EMAIL: wbonney@gmail.com

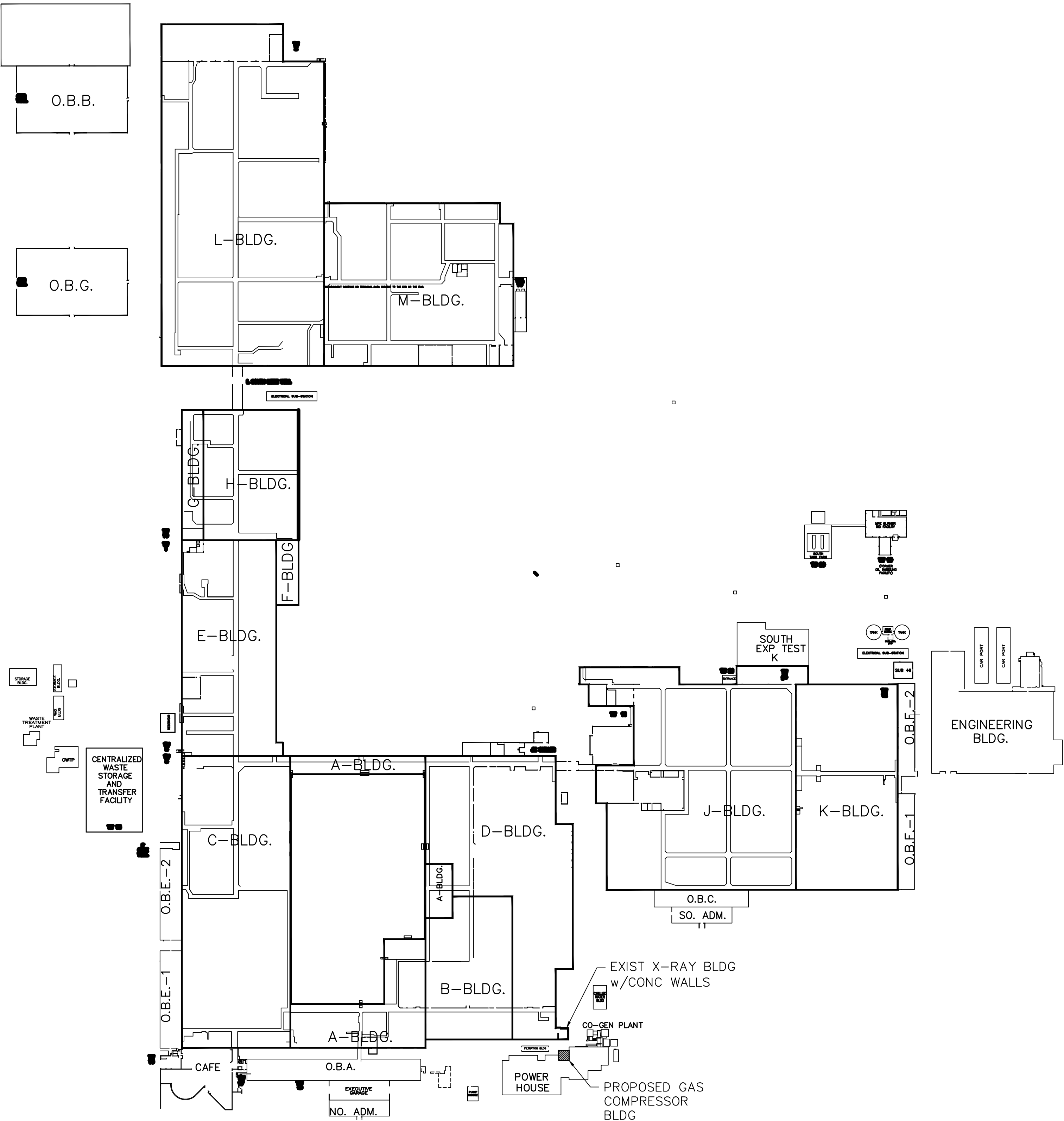
NEW GAS COMPRESSOR ROOM
EAST SIDE POWER HOUSE



Pratt & Whitney

A United Technologies Company

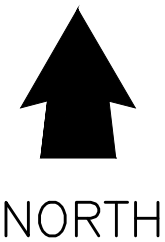
FACILITIES & SERVICES
EAST HARTFORD, CT 06118, U.S.A.



1 PROJECT LOCATION PLAN
Scale: 1" = 200'

DRAWING NO	DRAWING TITLE	ISSUE DATE	REVISION NO.	REVISION DATE
000XXX0000				
T001	TITLE SHEET AND LOCATION PLAN	07/00/2017	0	0
SI01	SITE PLAN		0	0
B001	FLOOR PLAN	07/XX/2017	0	0
B002	ROOF PLAN	07/XX/2017	0	0
B003	EAST & NORTH ELEVATIONS	07/XX/2017	0	0
B004	INTERIOR ELEVATIONS	07/XX/2017	0	0
S001	ROOF FRAMING & LOWER LEVEL PLAN	07/XX/2017	0	0

PRELIMINARY JULY 7, 2017



NORTH

ISSUED		DATE	DRAWN BY	APPR. BY
REV.	DESCRIPTION OF REVISION			
NEW GAS COMPRESSOR ROOM EAST SIDE OF POWER HOUSE TITLE SHEET AND LOCATION PLAN		PLANT NO. EHF1	BUILDING / SITE POWER HOUSE	
		SAP FUNCTIONAL LOCATION EHF1-XXXXX-XXXX		
		PLANT LAYOUT ENG. NO. / ALT. FUNCTIONAL LOCATION PLXXXXRXX		
DRAWN BY: WRB		DATE	07/XX/17	
CHECKED BY:		DATE	01/XX/17	
APPROVED BY: BLDG		DATE		
SAP ORDER NO.		1000XXXXX		
DRAWING NO.		1000XXXXX-D-T001		
SHEET NO.	001	DISCIPLINE	BLDG	NO. OF SHEETS 002

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P.O. BOX 265 - COVENTRY, CT 06238
Phone 860-771-1240
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Pratt & Whitney
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FACILITIES & SERVICES
EAST HARTFORD, CT 06118, U.S.A.

CATEGORY
SUB-CATEGORY
SCALE
NOTED

GAS COMPRESSOR BUILDING ADDITION at the POWER HOUSE.

Codes:

- 2016 Connecticut State Building Code consisting of the 2012 IBC, 2012 IFC, & 2012 IMC.
- NFPA 69 Standard on Explosion Prevention.
- FM 1-44 Damage Limiting Construction

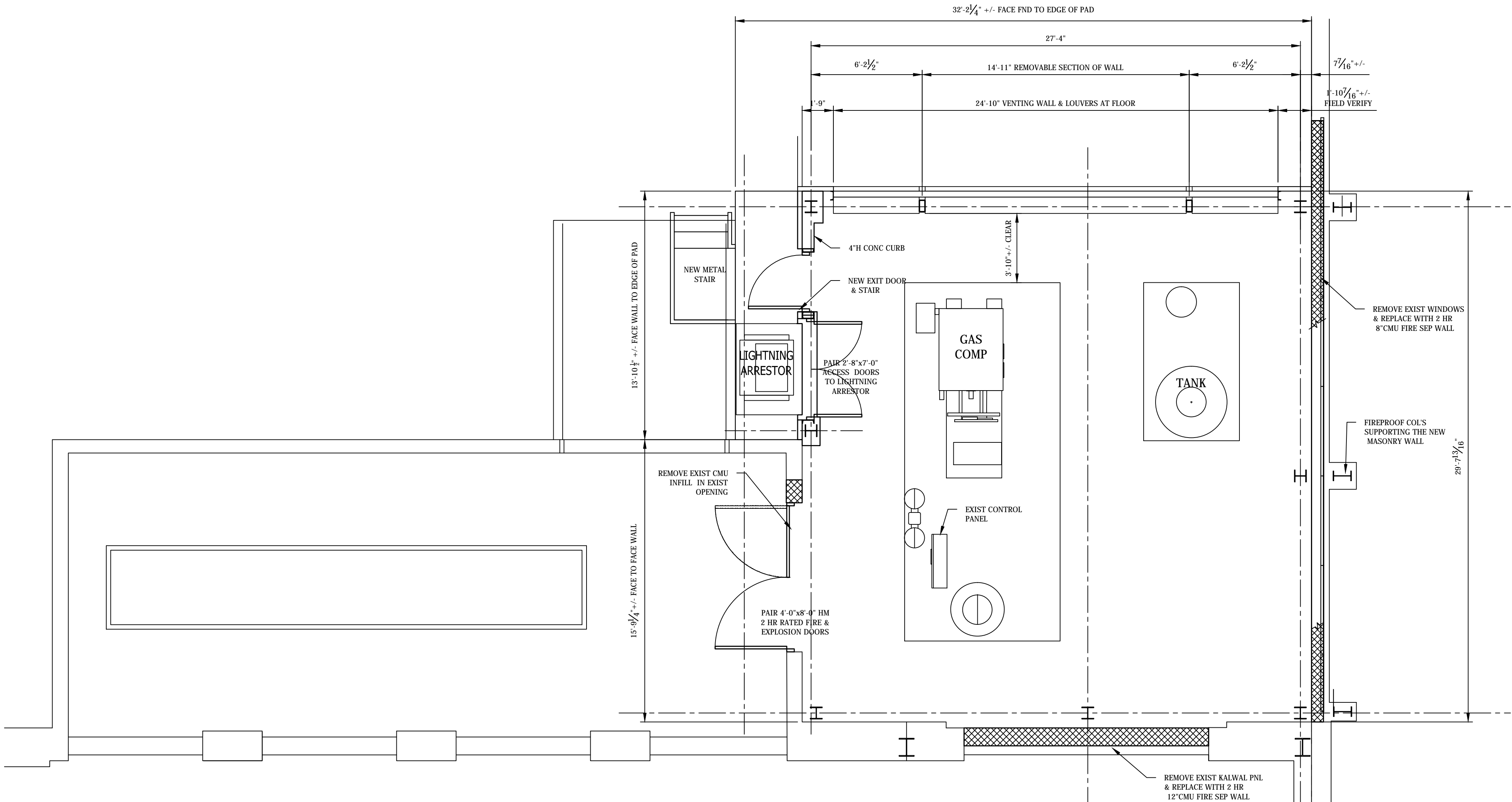
Power House:

- Use Group F-1, Fully Sprinklered, One Story building with Mezzanines and partial basement that is fully sprinklered.
- Type II B Construction
- Build between 1929 and 1965?
- Gas Compressor and storage tank were installed in 2015.

Gas Compressor Building Addition:

- Approximately 855 sq feet (28.5' x 30') by 20'-6" high
- Proposed Addition is Incidental Use with Less than 10% of the Power House Area and less than 25% of the perimeter.
- Type II B unprotected construction.
- Use Group is F-1 Factory and classified as High Hazard H-2 (Incidental Use) do to the 3,550 Cubic Feet of Natural Gas in the closed system consisting of pipes, storage tank and compressor.
 - Table 307.1 (1) Flammable Gas 1,000 Cubic Feet with 100% increase for sprinklers. Maximum quantity allowed in non-hazardous areas.
- Maximum Gas Pressure 480 PSIG.
- The Main Control Panel for the compressor is located in the on the compressor..
- Space adjacent to compressor and storage tank, electrically is listed as Class 1 Division 2 Group D. H-2 Hazardous space will be listed as Class 1 Division 2 Group D.
 - Control panel located on the compressor meets the area classification by the use of compressed air to purge the panel.
- Two exits with panic hardware are required.
- Fire Separation 1 Hr per Sect 509.4.4 Use 2 Hr per table 508.4.
- Roof deck is constructed of 1 hour rated concrete slab composite with metal deck.
- The Fire rating of the existing brick wall is over 3 hours. Thickness varies 8 to 18" thick.
- Explosion Control Sect 414.5: Use Explosion Prevention Space Ventilation meeting IFC and IMC. In addition to the explosion prevention space ventilation, an Explosion Deflagration Venting System will be included as requested by the owner. Explosion Deflagration Venting System will be designed per FM Data Sheet '1-44 Damage Limiting Construction'.
- Fire Protection Systems will include:
 - New Fire Alarm Panel (FAP) connected to the existing panel in the Power House.
 - UV Sensors (flame) tied into the Fire Alarm Panel.
- Manual Fire Alarm pull boxes at the two exits tied into the Fire Alarm Panel.
- Gas Detector Sensors tied into the Fire Alarm Panel. If gas is detected, FAP will send a signal to the compressor control to shut down the compressor, Shut the main gas supply valve and increase the emergency ventilation.
- LEL Sensors set at 25% tied into the Fire Alarm Panel. At 25% an alarm will be sounded. Will not shut down the compressor.
- LEL Sensors set at 40% tied into the Fire Alarm Panel. When 40% LEL is reached the emergency ventilation system will be activated.
 - Activation of any of the above detectors (UV Sensor, Gas Detector, 40% LVL), Manual Pull Stations or Emergency Stops will send a signal to the Compressor Main Control Panel and will shut down the compressors, shut the main gas supply valve and increase the emergency ventilation.
- Activation of any sensor, emergency stop, and manual pull stations a signal will be sent to P&W Fire Department.
- Emergency Stop Buttons will be provided at each exit.
- Automatic Sprinkler System: Dry Pipe System Ordinary Hazard Group 2 with an Area pf 3,000 square feet.
- Ventilation Systems. The ventilation System will consist of three fans. Two fans will be used for continuous explosion prevention space ventilation and emergency ventilation and the third will be for space cooling.
 - Each explosion prevention ventilating fan will be sized for either 1CFM or 6 air changes per hour (1580 CFM).
- For emergency operation the ventilating rate will be doubled to 12 air changes per hour (3,160 CFM).
- The cooling fan will be used to remove the heat generated from the 1,750 HP motor. The compressor is water cooled to a temperature of 103 deg.
- The compressor and motor can operate at a temperature of 18 deg higher than outside ambient temperature. The maximum temperature for Hartford is 93 deg in July.
- The Maximum temperature should not exceed 106 deg.
- Heating: (Optional)The room be heated to maintain a minimum temperature of 50 deg.
- Electrical and Lighting:
 - The electrical equipment and wiring within the space shall be Class 1 Division 2 Group D.
 - The lighting fixture shall be rated for Class 1 Div 2 and are to be LED.
 - The Lighting level for the space around the equipment average of 30 foot candles at 36" above the floor.

- Structural Design Loads:
 - Ground Snow Load: 30 PSF plus 3.4 ft high snow drift do to the height of the Power House.
- Wind Load: 95 miles per hour wind.
 - MCE Spectral Accelerations: Ss = 0.238S1 = 0.064



1 PROPOSED FLOOR PLAN GAS COMPRESSOR ROOM

Scale: 1/4" = 1'-0"

- NOTES:
1. PROPOSED GAS COMPRESSOR ROOM IS CLASSIFIED AS HIGH HAZARD GROUP H-2 FOR FLAMMABLE GAS.
 2. THE SPACE AT THE GAS COMPRESSOR IS ELECTRICALLY CLASSIFIED AS CLASS 1 DIV 2 GROUP D.
 3. REQ'D FIRE SEPARATION WALLS 1 HOUR.

PRELIMINARY JULY 7, 2017

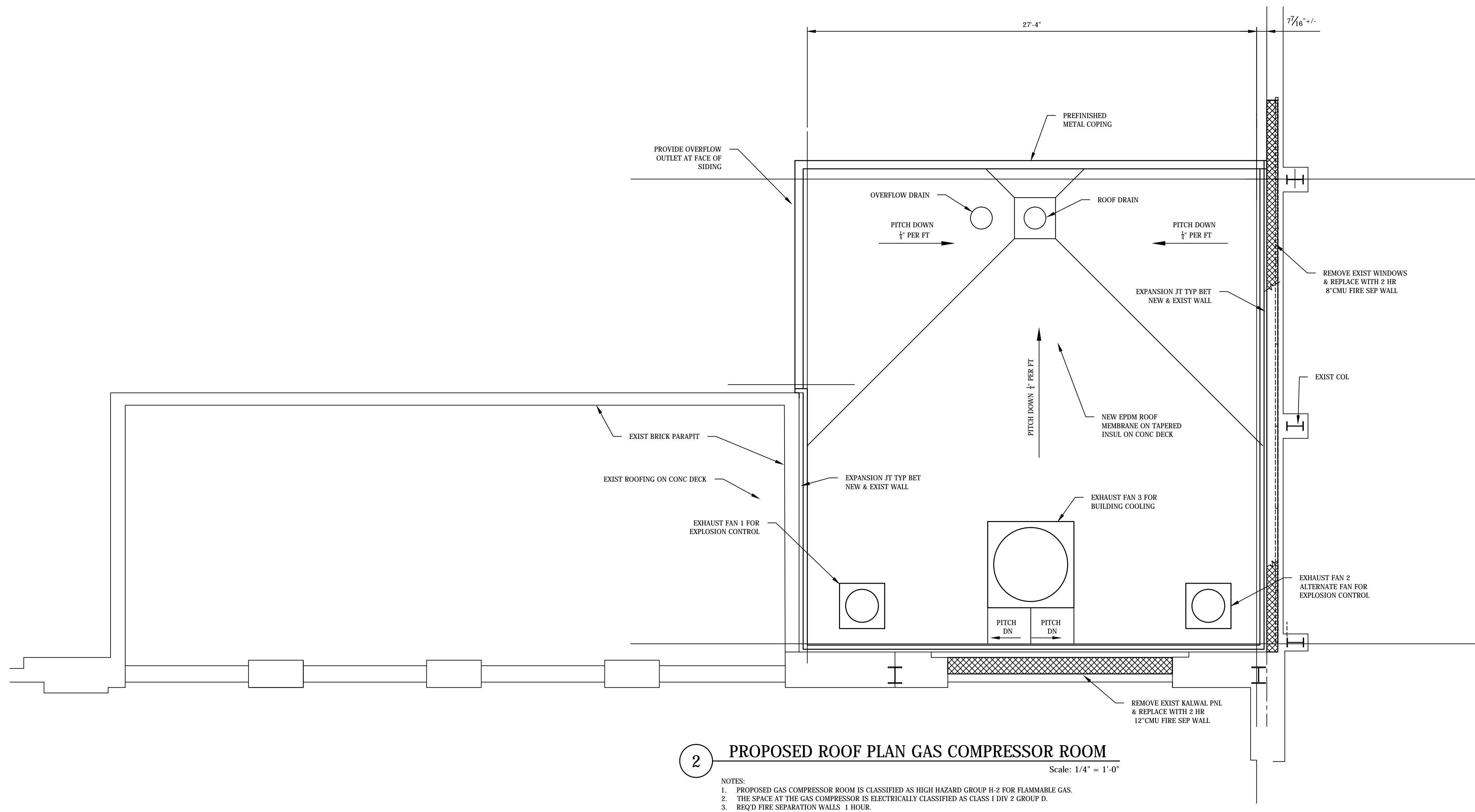
REV.	DESCRIPTION OF REVISION	DATE	DRAWN BY	APPR. BY
NEW GAS COMPRESSOR ROOM EAST SIDE OF POWER HOUSE FLOOR PLAN GAS COMPRESSOR RM		PLANT NO. EHP1	BUILDING / SITE POWER HOUSE	
		SAP FUNCTIONAL LOCATION EHP1-XXXX-XXXX		
		PLANT LAYOUT DWG NO. / ALT. FUNCTIONAL LOCATION PLXXXXRXX		
DRAWN BY:	WRB	DATE	01/XX/17	
CHECKED BY:		DATE	01/XX/17	
APPROVED BY:	BLDG	DATE		
CATEGORY	BRASS TAG NO.	SAP ORDER NO.	1000XXXXX	
SUB-CATEGORY		DRAWING NO.	1000XXXXX-D-B001	
SCALE	AS NOTED	SHEET NO.	001	DISCIPLINE NO. OF SHEETS BLDG 2

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FACILITIES & SERVICES
EAST HARTFORD, CT 06118, U.S.A.



2 PROPOSED ROOF PLAN GAS COMPRESSOR ROOM
Scale: 1/4" = 1'-0"

- NOTES:
1. PROPOSED GAS COMPRESSOR ROOM IS CLASSIFIED AS HIGH HAZARD GROUP H-2 FOR FLAMMABLE GAS.
 2. THE SPACE AT THE GAS COMPRESSOR IS ELECTRICALLY CLASSIFIED AS CLASS 1 DIV 2 GROUP D.
 3. REQ'D FIRE SEPARATION WALLS 1 HOUR.

PRELIMINARY JULY 7, 2017

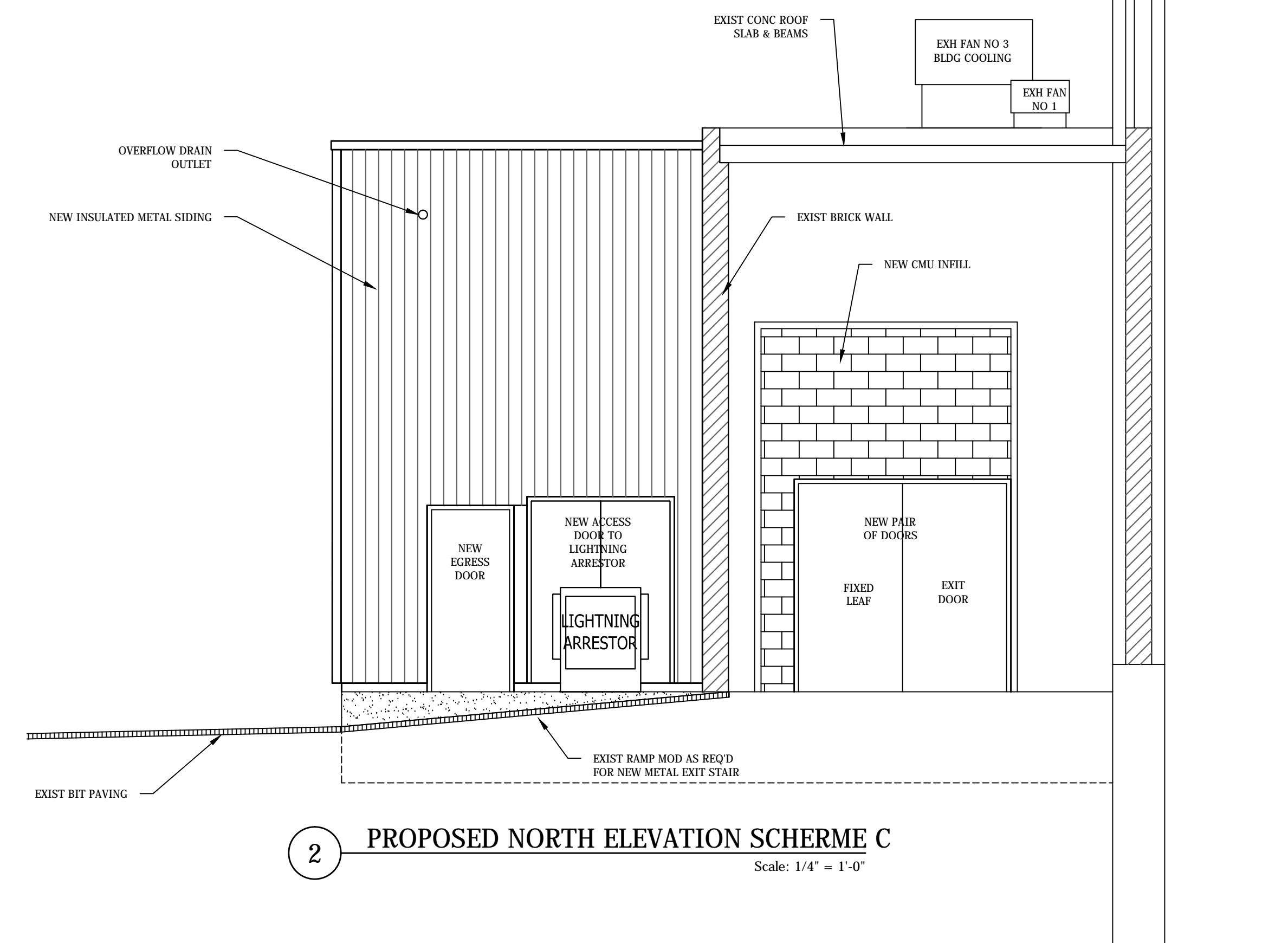


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CATEGORY	BRASS TAG NO.	APPROVED BY:	DATE
SUB-CATEGORY		BLDG	
SCALE	AS NOTED	SAP ORDER NO.	10000XXXXX
		DRAWING NO.	10000XXXXX-D-B00X
SHEET NO.	002	DISCIPLINE NO. OF BLDG	4

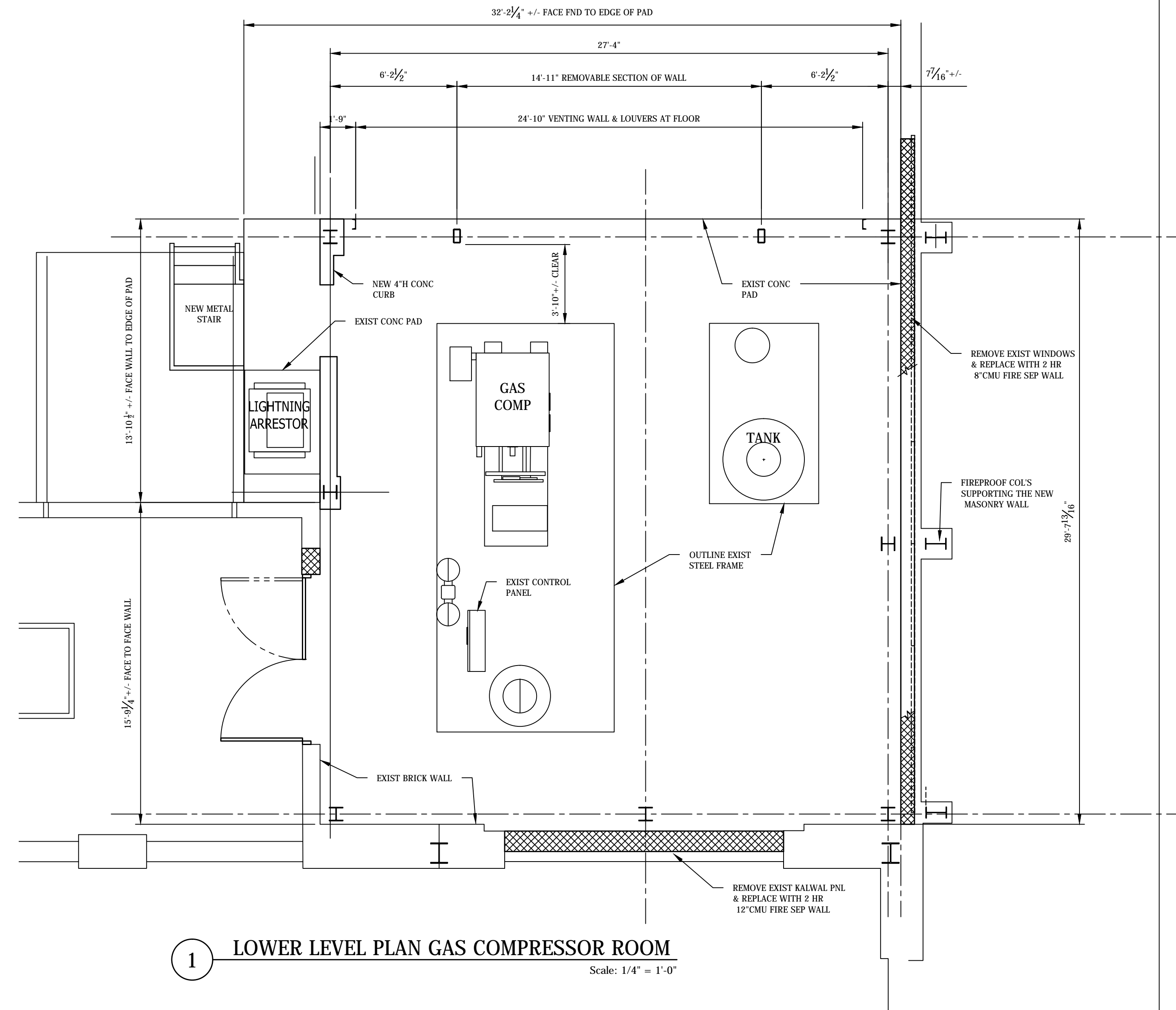
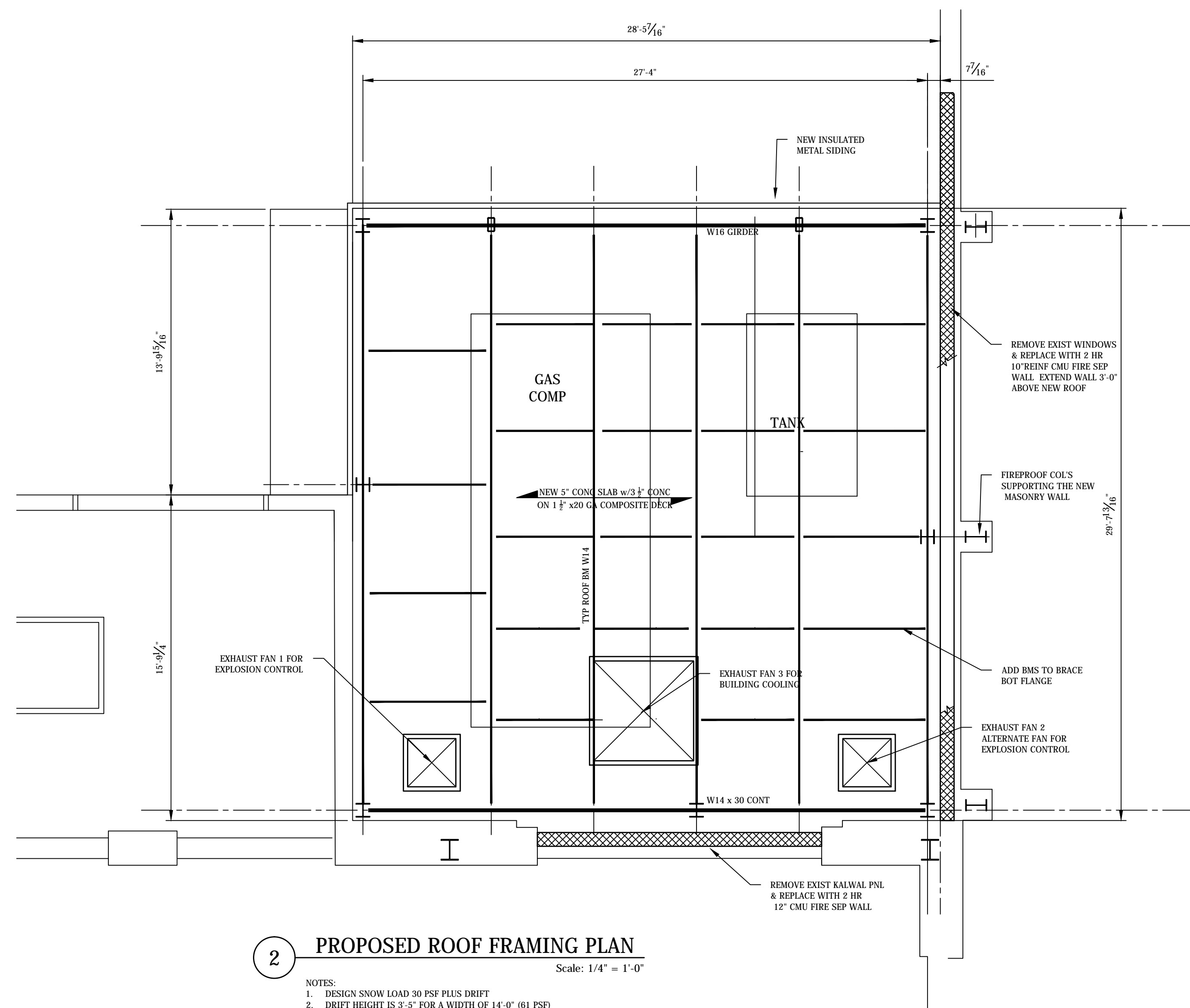


NORTH

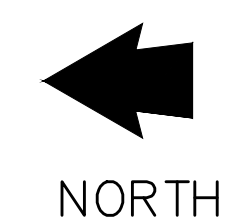
REV.	DESCRIPTION OF REVISION					DATE	DRAWN BY	APPR. BY					
NEW GAS COMPRESSOR ROOM EAST SIDE OF POWER HOUSE NORTH & EAST ELEVATIONS						PLANT NO. EHF1	BUILDING / SITE POWER HOUSE						
						SAP FUNCTIONAL LOCATION EHF1-XXXXX-XXXXX							
						PLANT LAYOUT DWG NO. / ALT. FUNCTIONAL LOCATION PLXXXXXXRX							
						DRAWN BY: WRB		DATE 01/XX/17					
						CHECKED BY:		DATE 01/XX/17					
 Pratt & Whitney A United Technologies Company						CATEGORY	BRASS TAC. NO.		APPROVED BY: BLDG		DATE		
						SUB-CATEGORY				SAP ORDER NO. 10000XXXX			
										DRAWING NO. 10000XXXX-D-B002			
								SCALE AS NOTED		SHEET NO. 002		DISCIPLINE ELDC	NO. OF SHEETS 2
FACILITIES & SERVICES EAST HARTFORD, CT 06118, U.S.A.													

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SUB-CATEGORY		BLDG	
SCALE	AS NOTED	SAP ORDER NO.	10000XXXXX
		DRAWING NO.	10000XXXXX-DS00X
SHEET NO.	002	DISCIPLINE NO. OF BLDG	SHEETS 4

NEW GAS COMPRESSOR ROOM
EAST SIDE OF POWER HOUSE
ROOF FRAMING PLAN

REV.	DESCRIPTION OF REVISION	DATE	DRAWN BY	APPR. BY

PLANT NO.	EHF1	BUILDING / SITE	POWER HOUSE
SAP FUNCTIONAL LOCATION	EHF1-XXXXX-XXXXX		
PLANT LAYOUT DWG NO.	PLXXXXXX		
DRAWN BY:	WRB	DATE	01/XX/17
CHECKED BY:		DATE	01/XX/17