




























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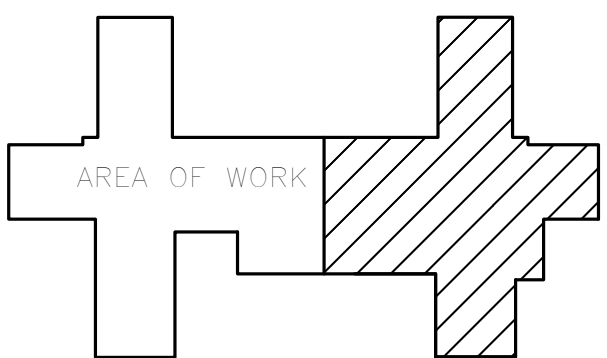
ELECTRICAL SYMBOLS LEGEND		
RECEPTACLES	POWER	
		PANEL BOARD
DUPLEX RECEPTACLE		DISTRIBUTION PANEL BOARD
		SEPARATE CIRCUIT BREAKER
QUADPLEX RECEPTACLE		DISCONNECT
		FUSED DISCONNECT SWITCH
RECEPTACLE MTD. 6" ABOVE COUNTER OR HGT SHOWN		EMERGENCY FUSED DISCONNECT SWITCH
		TRANSFORMER
TAMPER RESISTANT RECEPTACLE		MOTOR STARTER/CONTACTOR
		COMBINATION MOTOR STARTER
WEATHER-PROOF GFCI RECEPTACLE		J-BOX
LIGHTING		FLOOR BOX
		OVERHEAD BOX
STRIP LIGHT		PULL BOX, SIZE AS NOTED OR AS REQUIRED BY CODE
SECURITY		ELECTRICAL EQUIPMENT CONNECTION
		MOTOR CONNECTION
CARD READER		HOME RUN TO PANEL BOARD
		VARIABLE FREQUENCY DRIVE / DISCONNECT
REQUEST TO EXIT SENSOR		
		
ELECTRIC STRIKE		
		
DOOR CONTACT		

ELECTRICAL SHEET INDEX	
E001	ELECTRICAL NOTES, SYMBOLS, AND ABBREVIATIONS
EP140	FOURTH FLOOR EAST ELECTRICAL PLAN
EP160	SIXTH FLOOR EAST ELECTRICAL PLAN

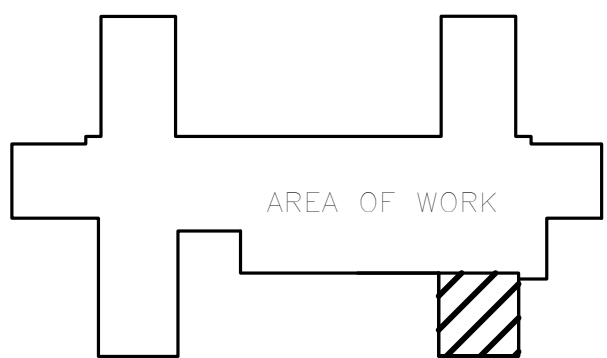
ELECTRICAL ABBREVIATIONS			
AC	ABOVE COUNTERTOP	MC	MECHANICAL CONTRACTOR
AFF FLOOR	ABOVE FINISH	MCA	MINIMUM CIRCUIT AMPS
AFG	ABOVE FINISH GRADE	MDP	MAIN DISTRIBUTION PANEL
ANNC	ANNUNCIATOR	MTD	MOUNTED
CC	CONTROLS CONTRACTOR	OCC	OCCUPANCY
EC	ELECTRICAL CONTRACTOR	PC	PLUMBING CONTRACTOR
EX	EXISTING	PNL	PANEL
EXR	EXISTING RELOCATED	SPST	SINGLE POLE SINGLE THROW
GC	GENERAL CONTRACTOR	WP	WEATHER PROOF
GFCI	GROUND FAULT CIRCUIT INTERRUPT	20A	20 AMP
IBC	INTERNATIONAL BUILDING CODE	3W	3 WIRE
IG	ISOLATED GROUND	20/1	20 AMP, SINGLE PHASE
HP	HORSEPOWER		
LV	LOW VOLTAGE		

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**PHASING NOTE:**  
REFER TO ARCHITECTURAL  
PHASING PLAN A001 FOR  
PROJECT PHASING.




## KEY PLAN - 4TH FLOOR



## KEY PLAN - 6TH FLOOR



		CONSULTANT	ARCHITECT/ENGINEER OF RECORD	STAMP	Office of Construction and Facilities Management	Drawing Title <b>ELECTRICAL NOTES SYMBOLS AND ABBREVIATIONS</b>	Phase <b>CONSTRUCTION DOCUMENTS</b>	Project Title <b>INSTALL PERIMETER HEAT TO IMAGING AND 4-EAST</b>	Project Number <b>585-17-105</b>
		<b>NORTHERN DESIGN WORKS</b>	 engineers • consultants • commissioning MEP Associates, LLC   2720 Arbor Court   San Clara, WI 54701 Phone: 715.837.5880   Fax: 715.837.5848   www.mepassociates.com MEP PROJECT NO.: GSD-17-24			Approved: Project Director	FULLY SPRINKLERED	Location <b>IRON MOUNTAIN, MICHIGAN</b>	Building Number <b>No. 1</b>
BID SET	06/18/2018	420 RAIL STREET NEGAUNEE, MI 49866 PHONE: 906-475-6616 NDW PROJECT NUMBER: 1718			<b>VA</b> U.S. Department of Veterans Affairs			Issue Date <b>JUNE 18, 2018</b>	Drawing Number <b>E001</b> Dwg. 22 of 24
100% REVIEW	1/30/2018							Checked <b>CJS</b>	
50% REVIEW	12/6/2017							Drawn <b>TDM</b>	
Revisions:	Date:								



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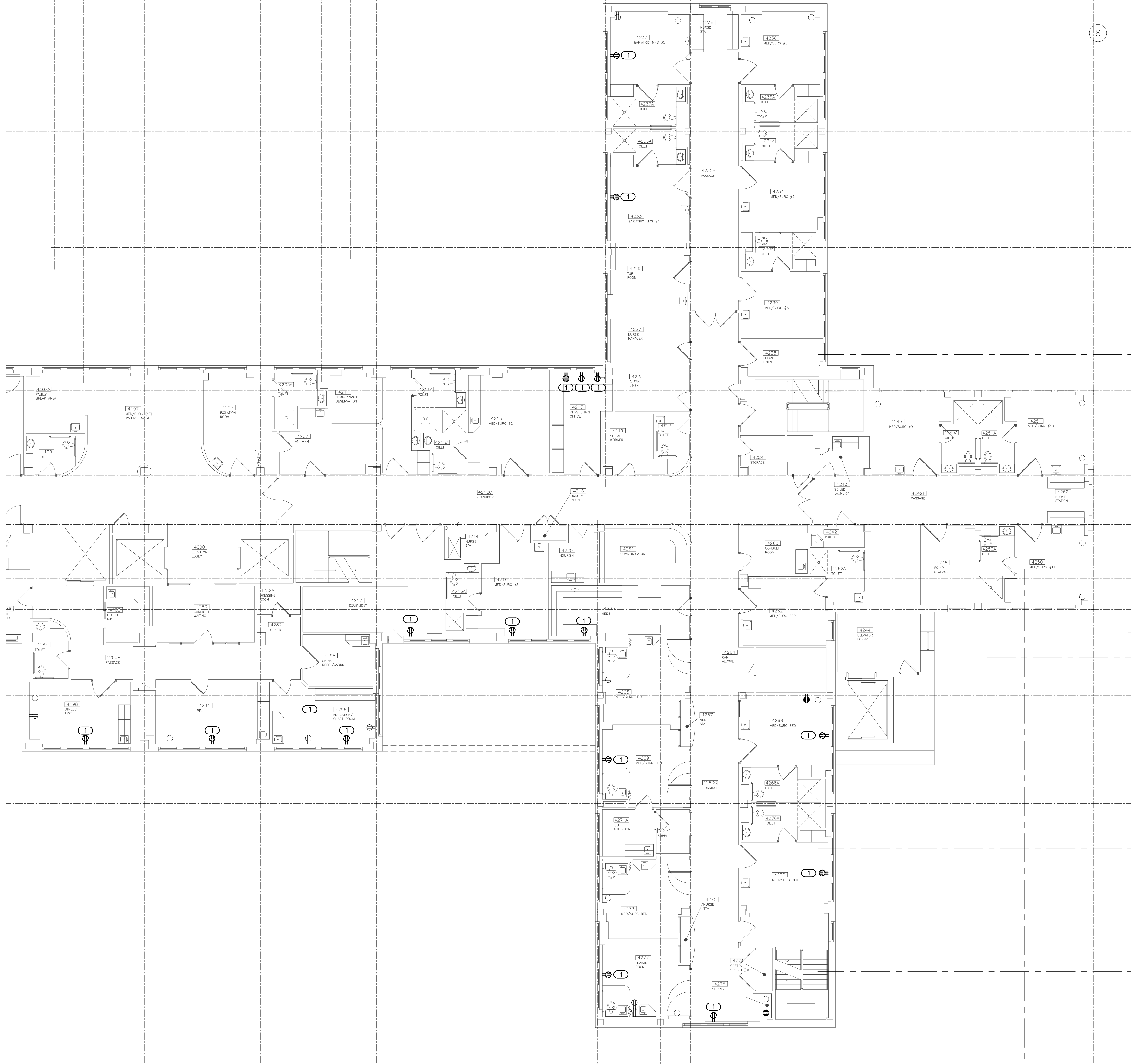
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### GENERAL NOTES

1. SALVAGE ALL CIRCUIT FROM RELOCATED RECEPTACLES. PROVIDE NEW WIRING FROM NEAREST ELECTRICAL BOX FOR ALL CONDUCTORS IN EACH RECEPTACLE LOCATION AS REQUIRED.
2. EXTEND CONDUIT TO LOCATION IN WALL WHERE POSSIBLE.
3. ASSUME "RELOCATED" RECEPTACLES ARE "RELOCATED 4" HORIZONTALLY."

### KEYED NOTES

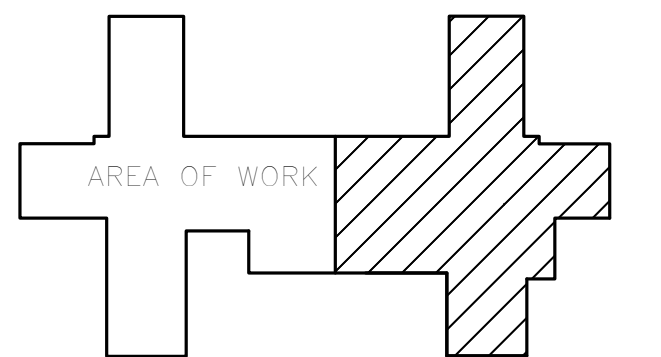
- ① RECEPTACLE SHALL BE RELOCATED FOR NEW STEAM CONVECTOR. COORDINATE WITH MECHANICAL CONTRACTOR ON EXACT LOCATION OF NEW CONVECTOR. INSTALL RELOCATED RECEPTACLE IN WALL AT SAME HEIGHT.



① **FOURTH FLOOR EAST ELECTRICAL PLAN**  
1/8" = 1'-0"



PHASING NOTE:  
REFER TO ARCHITECTURAL  
PHASING PLAN A001 FOR  
PROJECT PHASING.



**KEY PLAN - 4TH FLOOR**  
NOT TO SCALE



BID SET	06/18/2018
100% REVIEW	1/30/2018
SOX REVIEW	12/8/2017
Revisions:	Date:

CONSULTANT
<b>NORTHERN DESIGN WORKS</b>
420 RAIL STREET NEGAUNEE, MI 49866 PHONE: 906-475-6616 NDW PROJECT NUMBER: 1718

ARCHITECT/ENGINEER OF RECORD
<b>MEP</b> ASSOCIATES, LLC
engineers   consultants   commissioning MEP Associates, LLC   2720 Arbor Court   Eau Claire, WI 54601 Phone: 715.837.5680   Fax: 715.837.5680   www.mepassociates.com MEP PROJECT NO.: G29.17.04

STAMP

Office of Construction and Facilities Management
<b>VA</b> U.S. Department of Veterans Affairs

Drawing Title <b>FOURTH FLOOR EAST ELECTRICAL PLAN</b>
Approved: Project Director

Phase <b>CONSTRUCTION DOCUMENTS</b>
<b>FULLY SPRINKLERED</b>

Project Title <b>INSTALL PERIMETER HEAT TO IMAGING AND 4-EAST</b>
Location <b>IRON MOUNTAIN, MICHIGAN</b>
Issue Date <b>JUNE 18, 2018</b>
Checked <b>CJS</b>
Drawn <b>TDM</b>

Project Number <b>585-17-105</b>
Building Number <b>No. 1</b>
Drawing Number <b>EP140</b>
Dwg 23 of 24

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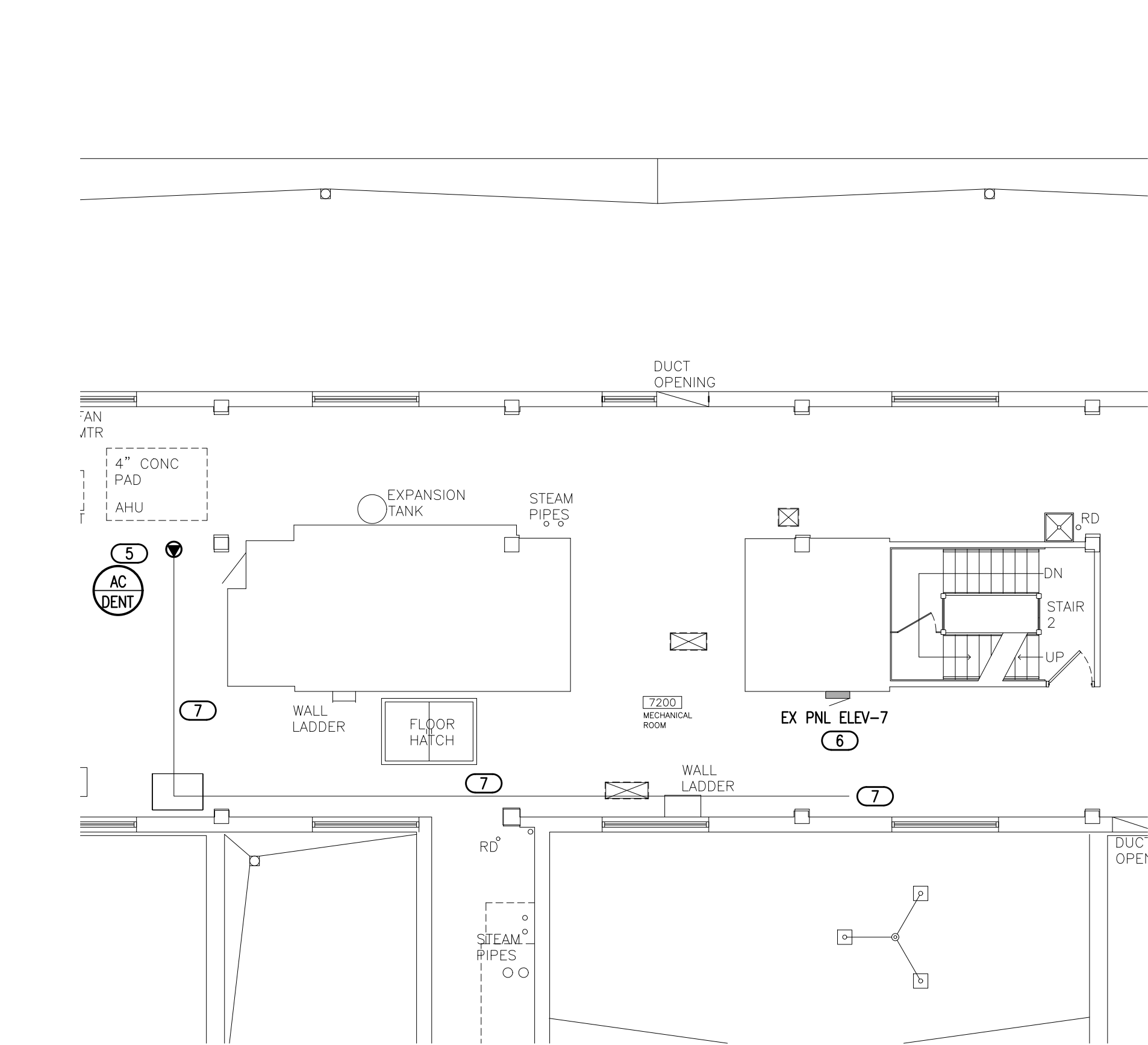


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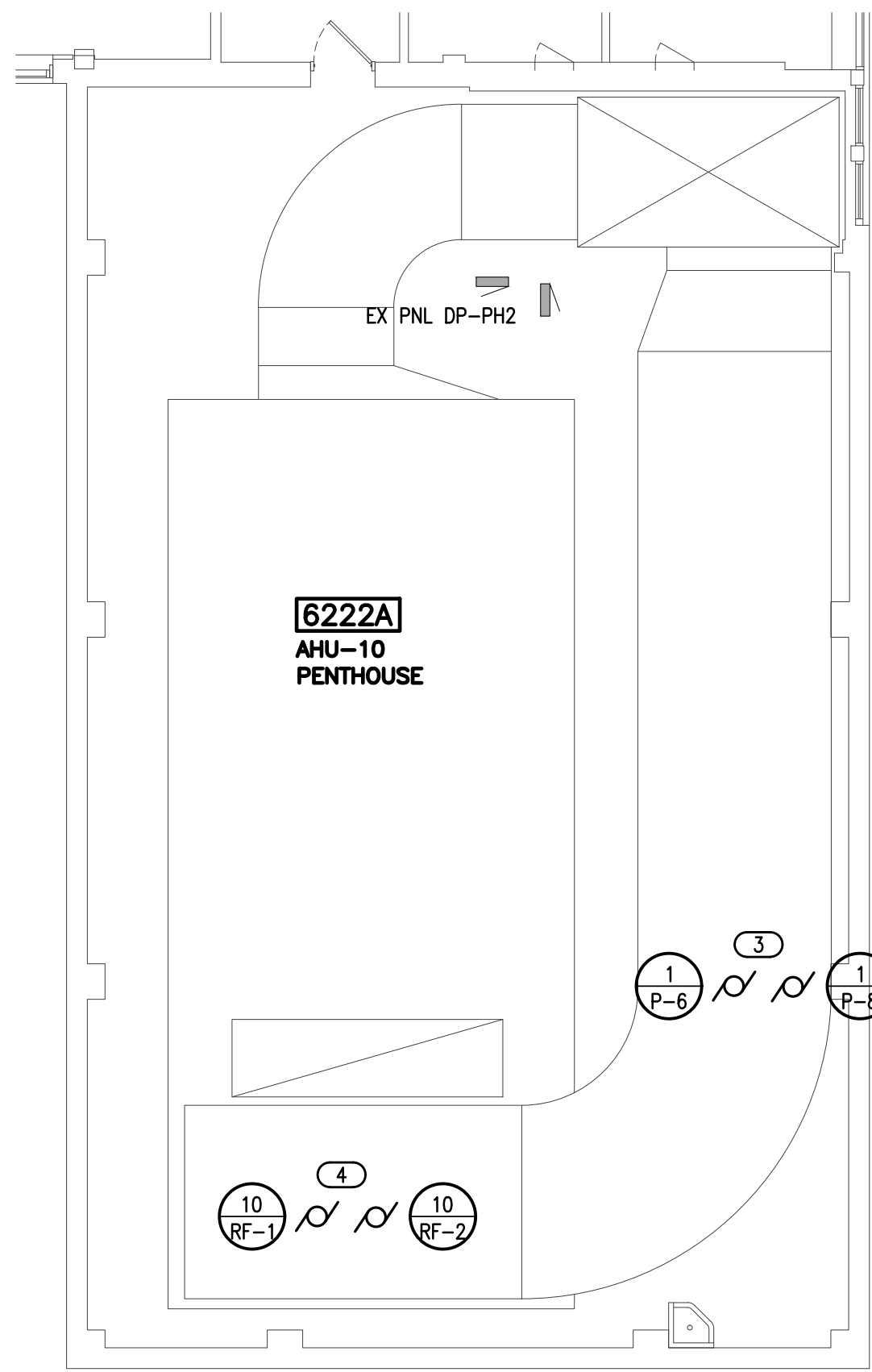
EQUIPMENT COORDINATION SCHEDULE																			
TAG	DESCRIPTION	HP / KW	MCA / RLA / FLA	VOLTS	CONDUCTORS			CONDUIT	LOCATION	PANEL	CIRCUIT	BREAKER SIZE	STARTER			DISCONNECT			NOTE
					PH	N	GND						TYPE	FURNISHED BY	INSTALLED BY	TYPE	FURNISHED BY	INSTALLED BY	
1-P-6	PUMP	15 HP		208/3	(3) #2	-	#8	1 1/2"	SEE PLANS	DP-PH2	8	90/3	VFD	MC	EC	VFD	MC	EC	
1-P-8	PUMP	15 HP		208/3	(3) #2	-	#8	1 1/2"	SEE PLANS	DP-PH2	6	90/3	VFD	MC	EC	VFD	MC	EC	
10-RF1	AHU RETURN FAN	20 HP		208/3	(3) #1	-	#8	2"	SEE PLANS	DP-PH2		100/3	VFD	MC	EC	VFD	MC	EC	
10-RF2	AHU RETURN FAN	20 HP		208/3	(3) #1	-	#8	2"	SEE PLANS	DP-PH2		100/3	VFD	MC	EC	VFD	MC	EC	
AC-DENT	AIR COMPRESSOR		87.7 FLA	208/3	(3) #1	-	#8	2"	SEE PLANS	ELEV-7		125/3	EX		EX	EX	EX	EX	1
GENERAL NOTES: A. COORDINATE INSTALLATION OF MOTORS WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS. B. CONTROL WIRING SHALL BE BY MECHANICAL CONTRACTOR UNLESS NOTED OTHERWISE. C. MCA=MINIMUM CIRCUIT AMPS; MOCP=MAXIMUM OVER-CURRENT PROTECTION; RLA=RATED LOAD AMPS; FLA=FULL LOAD AMPS D. EC=ELECTRICAL CONTRACTOR; MC=MECHANICAL CONTRACTOR; INT=INTERGRAL TO UNIT; EQM=EQUIPMENT MANUFACTURER, COMB=COMBINATION STARTER/DISCONNECT, VFD=VARIABLE FREQUENCY DRIVE																			
MOTOR SCHEDULE NOTES: 1. EXISTING AIR COMPRESSOR IS FED FROM PANEL DP-PH2. REMOVE EXISTING CONDUCTORS FROM UNIT TO PANEL. REFEED EQUIPMENT FROM PANEL ELEV-7.																			

GENERAL NOTES	
1.	REMOVE AND REINSTALL LIGHTING AS REQUIRED FOR MECHANICAL INSTALLATION. COORDINATE WITH MECHANICAL CONTRACTOR.

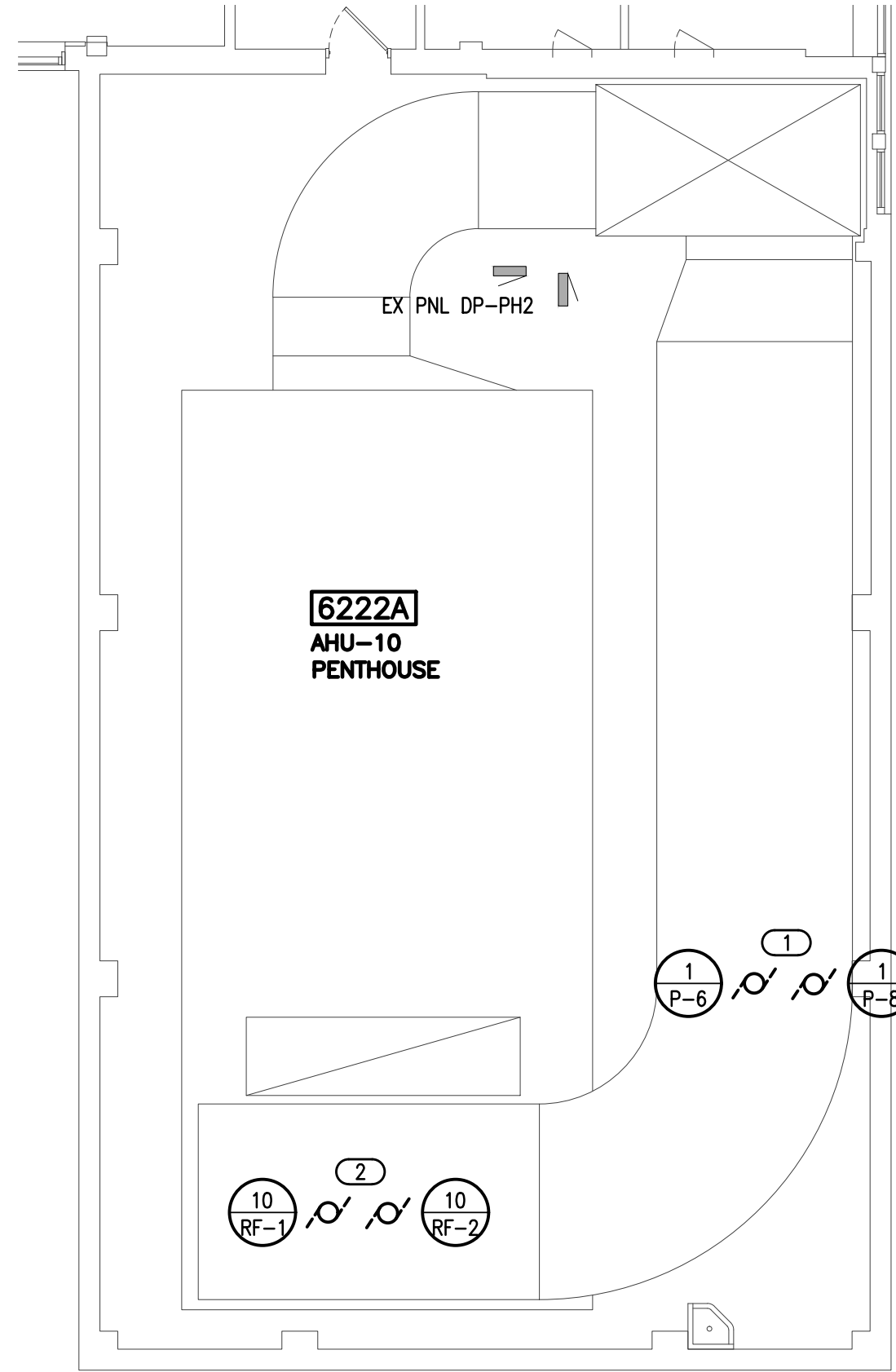
KEYED NOTES	
1	REMOVE EXISTING CONNECTIONS TO PUMPS 1-P-6 AND 1-P-8. REMOVE CONDUIT, CONDUCTORS, AND ALL ASSOCIATED EQUIPMENT/WIRING BACK TO SOURCE. PUMPS ARE CURRENTLY FED FROM EX PNL DP-PH2.
2	REMOVE EXISTING CONNECTIONS AHU 10 RETURN FANS. REMOVE CONDUIT, CONDUCTORS, VFDs, AND ALL ASSOCIATED EQUIPMENT/WIRING BACK TO SOURCE. PUMPS ARE CURRENTLY FED FROM EX PNL DP-PH2.
3	INSTALL CONNECTION TO NEW PUMPS 1-P-6 AND 1-P-8. FEED SHALL BE FROM EX PNL DP-PH2. PROVIDE NEW CIRCUIT BREAKERS IN PANEL FOR NEW PUMPS. INSTALL VFDs IN LOCATION SHOWN. VERIFY FINAL VFD LOCATION WITH OWNER PRIOR TO INSTALLATION.
4	INSTALL CONNECTION TO NEW AHU 10 RETURN FANS. FEED SHALL BE FROM EX PNL DP-PH2. PROVIDE NEW CIRCUIT BREAKERS IN PANEL FOR NEW PUMPS. INSTALL VFDs IN LOCATION SHOWN. VERIFY FINAL VFD LOCATION WITH OWNER PRIOR TO INSTALLATION.
5	REMOVE EXISTING CONNECTION TO AC-DENT. EQUIPMENT IS CURRENTLY FED FROM DP-PH2. SALVAGE ALL STARTERS, DISCONNECTS, AND EXISTING EQUIPMENT. REFEED AC-DENT FROM PANEL ELEV-7.
6	PROVIDE NEW 125A/3 BREAKER IN PANEL TO FEED AC-DENT. EXISTING PANEL IS SQUARE D.
7	EXISTING CONDUIT FOR AC-DENT. CONDUIT CONTINUES TO 6TH FLOOR TO PANEL DP-PH2. MODIFY EXISTING CONDUIT TO FEED FROM PANEL ELEV-7. REMOVE ABANDONED CONDUIT.



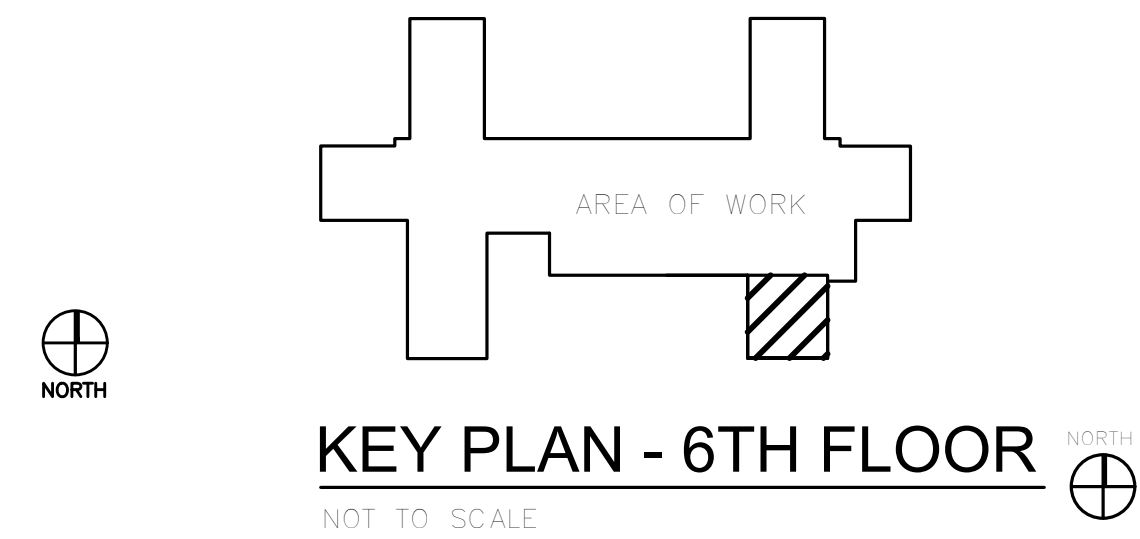
3 SEVENTH FLOOR EAST ELECTRICAL PLAN  
1/8" = 1'-0"



2 SIXTH FLOOR EAST ELECTRICAL PLAN  
1/8" = 1'-0"



1 SIXTH FLOOR EAST ELECTRICAL DEMOLITION PLAN  
1/8" = 1'-0"



KEY PLAN - 6TH FLOOR  
NOT TO SCALE



BID SET	06/18/2018
100% REVIEW	1/30/2018
50% REVIEW	12/18/2017
Revisions:	Date:

CONSULTANT

**NORTHERN  
DESIGN  
WORKS**

420 RAIL STREET  
NEGAUNEE, MI 49866  
PHONE: 906-475-6616  
NDW PROJECT NUMBER: 1718

ARCHITECT/ENGINEER OF RECORD



engineers | consultants | commissioning  
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MEP PROJECT NO.: G29.17.04

STAMP

Office of  
Construction  
and Facilities  
Management



U.S. Department  
of Veterans Affairs

Drawing Title  
SIXTH FLOOR EAST  
ELECTRICAL PLAN

Approved: Project Director

Phase  
CONSTRUCTION  
DOCUMENTS

FULLY SPRINKLERED

Project Title  
INSTALL PERIMETER HEAT TO  
IMAGING AND 4-EAST

Location  
IRON MOUNTAIN, MICHIGAN

Issue Date  
JUNE 18, 2018

Checked  
CJS

Drawn  
TDM

Project Number  
585-17-105  
Building Number  
No. 1

Drawing Number  
EP160

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