# WAYNE STATE UNIVERSITY SCIENCE HALL FIRE ALARM REPLACEMENT

# WSU PROJECT NO. 005-240912 ISSUED FOR BIDS 04/28/2014



Facilities Planning & Management Design & Construction Services 5454 Cass Ave.

Detroit MI 48202

WSU PROJECT NO: 005-240912

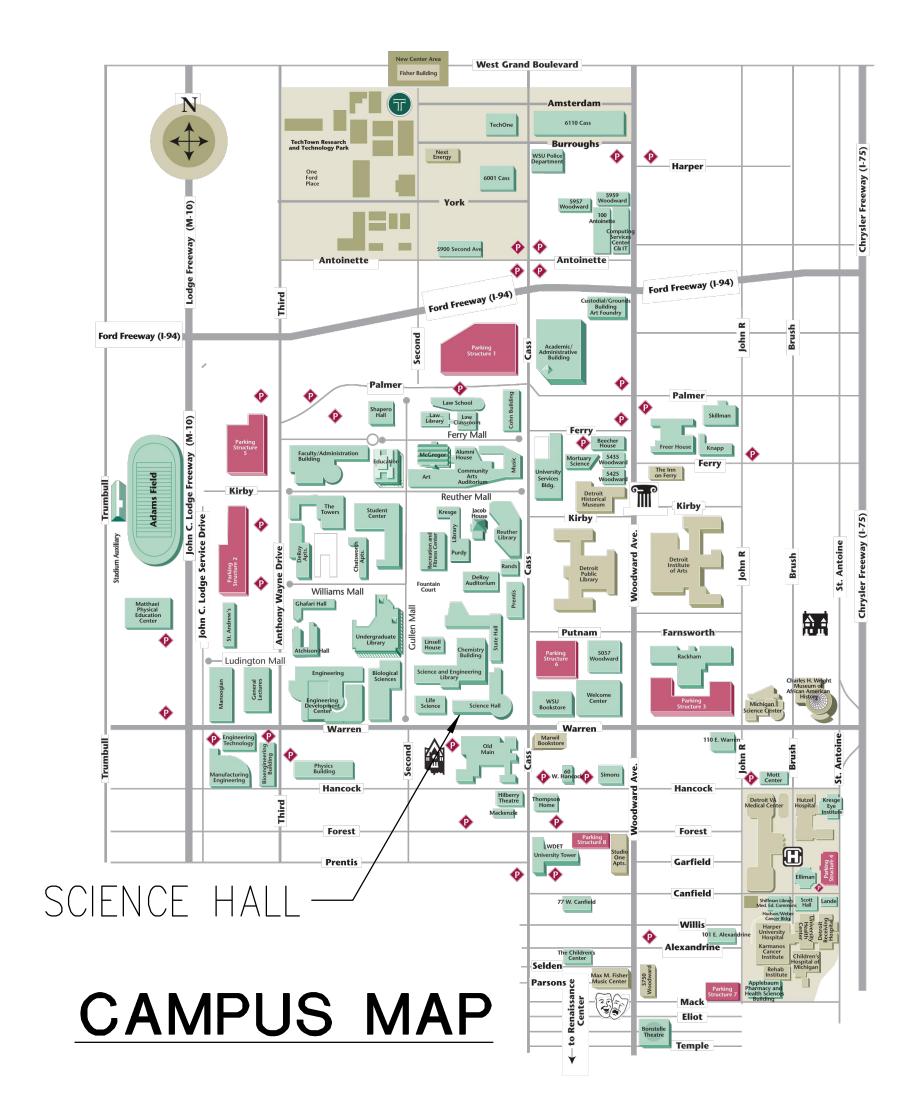


5145 Livernois, Suite 100 Troy, Michigan 48098-3276 Tel: 248-879-5666 Fax: 248-879-0007 www.PeterBassoAssociates.com

PBA PROJECT NO: 2014.0119.00

### **ELECTRICAL DRAWING INDEX**

SHEET NO.	SHEET TITLE
E0.1	ELECTRICAL STANDARDS AND DRAWING INDEX
E0.2	ELECTRICAL STANDARD SCHEDULES
E1.0	BASEMENT ELECTRICAL DEMOLITION PLAN
E1.1	FIRST FLOOR ELECTRICAL DEMOLITION PLAN
E1.2	SECOND FLOOR ELECTRICAL DEMOLITION PLAN
E1.3	THIRD FLOOR ELECTRICAL DEMOLITION PLAN
E1.4	FOURTH FLOOR ELECTRICAL DEMOLITION PLAN
E1.5	MEZZANINE, PENTHOUSE AND SUB-BASEMENT ELECTRICAL DEMOLITION PLAN
E2.0	BASEMENT ELECTRICAL NEW WORK PLAN
E2.1	FIRST FLOOR ELECTRICAL NEW WORK PLAN
E2.2	SECOND FLOOR ELECTRICAL NEW WORK PLAN
E2.3	THIRD FLOOR ELECTRICAL NEW WORK PLAN
E2.4	FOURTH FLOOR ELECTRICAL NEW WORK PLAN
F2 5	MEZZANINE PENTHOUSE AND SUB-BASEMENT ELECTRICAL NEW WORK PLANS



<u>SYMBOL</u>

RGP

<u>DESCRIPTION</u>

CALL STATION

AUTO DIALER

TWO-WAY COMMUNICATION SYSTEM

TWO-WAY COMMUNICATION SYSTEM

TWO-WAY COMMUNICATION SYSTEM

TWO-WAY COMMUNICATION SYSTEM

ANNUNCIATOR & COMMUNICATION PANEL

POWER SUPPLY WITH BATTERY BACK-UP

POWER SUPPLY WITH BATTERY BACK-UP

REMOTE GENERATOR ANNUCIATOR PANEL

AUTOMATIC TRANSFER SWITCH

UN-INTERRUPTABLE POWER SUPPLY

LOW VOLTAGE CONTROL STATION

"X" INDICATES TYPE

TWO-WAY COMMUNICATION SYSTEM AUTO DIALER

WALL MOUNTED LIGHTING FIXTURE LIGHTING FIXTURE

EMERGENCY FIXTURE DIRECTIONAL LIGHTING FIXTURE PENDANT LIGHTING FIXTURE WALL SCONCE LIGHTING TRACK

TRACK LIGHTING FIXTURE POLE MOUNTED LIGHTING FIXTURE POLE MOUNTED LIGHTING FIXTURE - POST TOP BOLLARD LIGHTING FIXTURE EMERGENCY LIGHTING UNIT EXIT LIGHTING FIXTURE WITH DIRECTIONAL ARROWS (SHADED AREA INDICATES FACE) EXIT LIGHTING FIXTURE WITH DIRECTIONAL

ARROWS (SHADED AREA INDICATES FACE)

EXIT LIGHTING FIXTURE — WALL MOUNTED EMERGENCY LOAD TRANSFER DEVICE SINGLE POLE TOGGLE SWITCH TWO POLE TOGGLE SWITCH 3 WAY TOGGLE SWITCH 4 WAY TOGGLE SWITCH KEY OPERATED SWITCH 3 WAY KEY OPERATED SWITCH 4 WAY KEY OPERATED SWITCH

DIMMER SWITCH 3 WAY DIMMER SWITCH PILOT SWITCH

SINGLE RECEPTACLE DUPLEX RECEPTACLE QUAD RECEPTACLE ABOVE COUNTER DUPLEX RECEPTACLE (SIMILAR FOR TAMPER RESISTANT, QUADS, EMERGENCY AND GFI RECEPTACLES) DUPLEX RECEPTACLE-GROUND FAULT CIRCUIT INTERRUPTER DUPLEX EMERGENCY RECEPTACLE TAMPER RESISTANT RECEPTACLE QUAD TAMPER RESISTANT RECEPTACLE ABOVE COUNTER DUPLEX TAMPER RESISTANT RECEPTACLE DUPLEX UPS RECEPTACLE USB RECEPTACLE DUPLEX RECEPTACLE SPECIAL RECEPTACLE - REFER TO ELECTRICAL STANDARD SCHEDULES MULTI-OUTLET RACEWAY MULTI-SERVICE DROP SEE ELECTRICAL DETAILS AND DIAGRAMS SHEET "X" INDICATES TYPE POKE THRU SERVICE FITTING "X" INDICATES TYPE FLOOR BOX SERVICE FITTING "X" INDICATES TYPE ACCESS FLOOR SERVICE FITTING "X" INDICATES TYPE "X" INDICATES TYPE DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES 3-WAY DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES 4-WAY DUAL SWITCHING FOR INNER/OUTER

LAMPS OF FLUORESCENT LIGHT FIXTURES

ILLUMINATED TOGGLE SWITCH FOR CONTROL OF

OCCUPANCY SENSOR REFER TO ELECTRICAL

STANDARD SCHEDULES

LIGHTING ON CRITICAL POWER-ILLUMINATED

WHEN SWITCH IS IN "OFF" POSITION

DIGITAL TIME SWITCH

LOW VOLTAGE SWITCH

OCCUPANCY SENSOR

OCCUPANCY SENSOR

"X" INDICATES TYPE

MUSIC/DISASTER SPEAKER

JUNCTION BOX HARD WIRE POWER CONNECTION AUTOMATIC DOOR CONTROLLER AUTOMATIC DOOR PUSH PAD OPERATOR GROUND ROD GROUND CONNECTION CONDUIT SLEEVE WITH BUSHINGS LENGTH AS REQUIRED "X" INDICATES CONDUIT SIZE CONDUIT UP CONDUIT DOWN EMPTY BOX FOR FUTURE TELECOMMUNICATION OUTLET ABOVE COUNTER EMPTY BOX FOR FUTURE TELECOMMUNICATION OUTLET EMPTY BOX FOR FUTURE CEILING MOUNTED TELECOMMUNICATION OUTLET | REFER TO TELECOMMUNICATION OUTLET KXXXXX ⊢TGB ─ —TMGB—

<u>DESCRIPTION</u>

MOTOR

CONTROL PANEL

MANUAL CONTROLLER

MAGNETIC CONTROLLER

VARIABLE FREQUENCY CONTROLLER.

COMBINATION MAGNETIC CONTROLLER

NON-FUSIBLE DISCONNECT SWITCH

FUSIBLE DISCONNECT SWITCH

ENCLOSED CIRCUIT BREAKER

PUSH BUTTON STATION

<u>SYMBOL</u>

/0/

STANDARD "X" INDICATES TYPE SCHEDULES ABOVE COUNTER TELECOMMUNICATION OUTLET "X" INDICATES TYPE TELECOMMUNICATION CEILING MOUNTED OUTLET "X" INDICATES TYPE EMU TELECOMMUNICATION BACKBOARD TELECOMMUNICATION GROUNDING BUS BAR TELECOMMUNICATION MAIN GROUNDING BUS BAR INTERCOM OUTLET HOSPITAL PAGING SPEAKER SPEAKER - WALL MOUNTED MICROPHONE VOLUME CONTROL/STATION SELECTOR SIGNALING BELL SINGLE FACE CLOCK - CEILING MOUNTED SINGLE FACE CLOCK - WALL MOUNTED DOUBLE FACE CLOCK - CEILING MOUNTED DOUBLE FACE COMBINATION CLOCK/SPEAKER CEILING MOUNTED DOUBLE FACE CLOCK - WALL MOUNTED DOUBLE FACE COMBINATION CLOCK/SPEAKER WALL MOUNTED

TIME CLOCK

CONTACTOR

PHOTOCELL

TWIST TIMER

<u>DESCRIPTION</u> SECURITY CAMERA MOTION DETECTOR SECURITY KEY SWITCH

<u>SYMBOL</u>

FACP

FAA

NAC

DOOR CONTACT ACCESS CONTROL STATION DURESS PUSH BUTTON STATION DELAYED EGRESS REQUEST TO EXIT STATION

<u>SYMBOL</u>

**--• •--**||₁

ELECTRICAL

CIRCUIT BREAKER DRAWOUT CIRCUIT BREAKER MANUALLY/ OPERATED

DRAWOUT CIRCUIT BREAKER

ELECTRICALLY/ OPERATED AUTOMATIC OR MANUAL TRANSFER SWITCH

FUSE TRANSFORMER CURRENT TRANSFORMER POTENTIAL TRANSFORMER LIGHTNING ARRESTOR PANELBOARD "X" INDICATES PANELBOARD NAME

STRESS CONE TERMINATION SECURITY KEY INTERLOCK ENGINE GENERATOR UTILITY METER

ELECTRONIC METERING UNIT AMMETER VOLTMETER AMMETER SWITCH VOLTMETER SWITCH SURGE PROTECTIVE DEVICE CONTROL RELAY

TIME DELAY RELAY THERMAL OVERLOAD RELAY NORMALLY OPEN CONTACTS NORMALLY CLOSED CONTACTS N.O. PUSH BUTTON SINGLE CIRCUIT N.C. PUSH BUTTON SINGLE CIRCUIT

"X-X" INDICATES TYPE BRANCH CIRCUIT PANELBOARD MOTOR CONTROL CENTER

TRANSFORMER DISTRIBUTION PANEL GROUND BUS PLUG IN BUSWAY FEEDER BUSWAY

⊢FB ⊢

<u>DESCRIPTION</u> MANUAL FIRE ALARM BOX

SMOKE DETECTOR DUCT SMOKE DETECTOR REMOTE TEST STATION (FOR DUCT DETECTOR)

PROJECTED BEAM DETECTOR FIRE ALARM BELL FIRE ALARM AUDIBLE NOTIFICATION APPLIANCE

THERMAL DETECTOR

IF NO RATING SHOWN, APPLIANCE IS 15cd FIRE ALARM COMBINATION VISUAL/ AUDIBLE "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd

FIRE ALARM VISUAL NOTIFICATION APPLIANCE

"XX" INDICATES CANDELA RATING

FIRE ALARM COMBINATION VISUAL/ AUDIBLE NOTIFICATION APPLIANCE— CEILING MOUNTED "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd FIRE ALARM VISUAL NOTIFICATION APPLIANCE CEILING MOUNTED "XX" INDICATES CANDELA RATING

IF NO RATING SHOWN, APPLIANCE IS 15cd FIREFIGHTERS PHONE JACK

FIRE ALARM CONTROL PANEL FIRE ALARM ANNUNCIATOR PANEL NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL ADDRESSABLE MONITORING MODULE

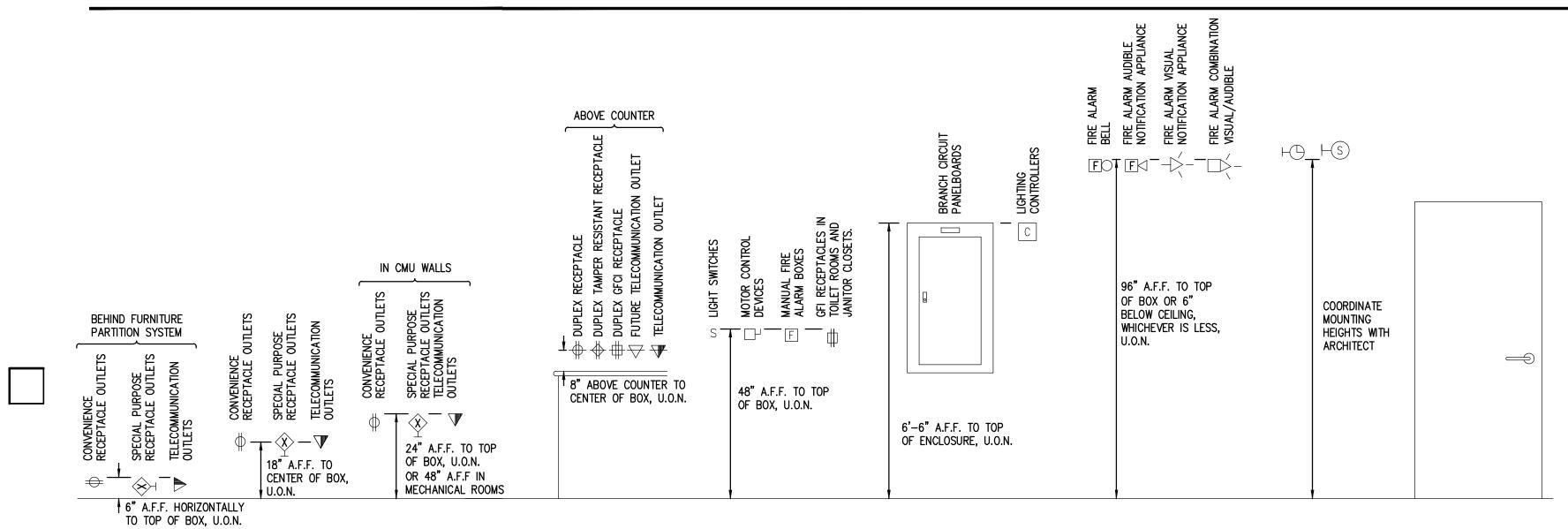
ADDRESSABLE CONTROL MODULE TAMPER SWITCH FLOW SWITCH

MAGNETIC DOOR RELEASE

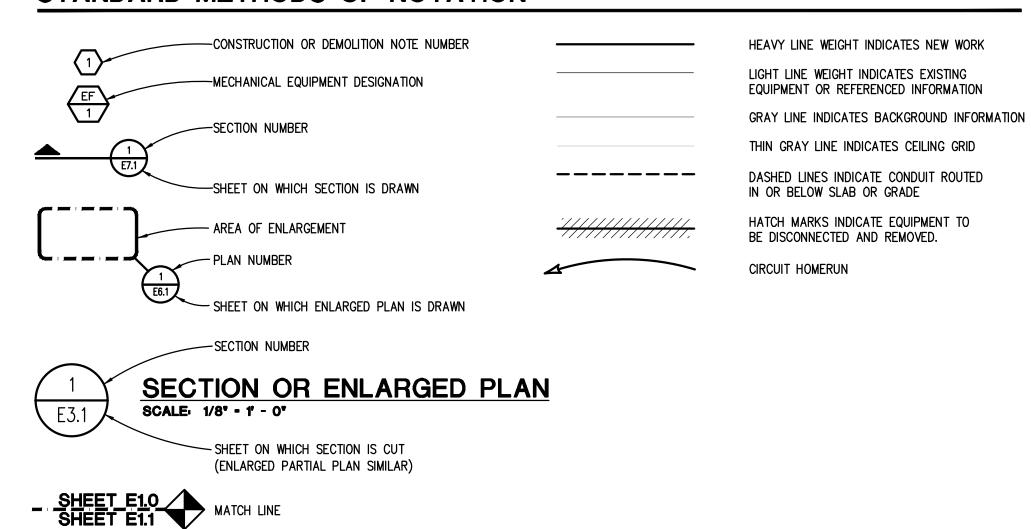
**ELECTRICAL ABBREVIATION LIST** ABBREVIATION DESCRIPTION ABBREVIATION DESCRIPTION ABBREVIATION DESCRIPTION AMPERES G/GRD/EG GROUND ON CENTER AMPERES FRAME (BREAKER RATING) GROUND FAULT CIRCUIT INTERRUPTER ABOVE FINISH FLOOR HAND-OFF-AUTO PUSHBUTTON STATION AMPS INTERRUPTING CAPACITY HORSEPOWER AUDIENCE LEFT HIGH VOLTAGE POTENTIAL TRANSFORMER AUDIENCE RIGHT HERTZ POWER DISTRIBUTION PANEL AMPERES TRIP (BREAKER SETTING) AUTOMATIC TRANSFER SWITCH ISOLATED GROUND RECEPTACLE RECEPTACLE DISTRIBUTION PANEL JUNCTION BOX RECEPTACLE PANEL BREAKER KILOVOLT RSC RIGID STEEL CONDUIT BOLTED PRESSURE SWITCH KILOVOLT - AMPERES SCHED SCHEDULE CONDUIT KILOWATT CIRCUIT BREAKER KILOWATT - HOURS SWITCHBOARD CIRCUIT SWITCHGEAR LIGHTNING ARRESTOR CURRENT TRANSFORMER LIGHTING PANEL TERMINAL BOX DEMOLITION LIGHTING DISTRIBUTION PANEL LDP TELECOMMUNICATIONS DIMENSION TAMPER PROOF MAXIMUM DISCONNECT MCB MAIN CIRCUIT BREAKER TTB TELEPHONE TERMINAL BACKBOARD DISTRIBUTION PANEL TYPICAL MCC MOTOR CONTROL CENTER DOWNSTAGE MAIN DISTRIBUTION PANEL DRAWING U.O.N. UNLESS OTHERWISE NOTED MECHANICAL EMERGENCY BATTERY UNIT UPSTAGE MINIMUM ELECTRICAL CONTRACTOR **VOLTS** MISCELLANEOUS ELECTRICAL MAIN LUGS ONLY EM/ EMERG **EMERGENCY** MOUNTED **WEATHERPROOF** ELECTRICAL METALLIC TUBING MOUNTING ELECTRICALLY OPERATED TRANSFORMER MOTOR ELECTRIC WATER COOLER EXPLOSION PROOF NEUTRAL **EXISTING** NORMALLY CLOSED FIRE ALARM NATIONAL ELECTRICAL CODE RELOCATED FULL LOAD AMPS NON-FUSIBLE NOT IN CONTRACT FOH FRONT OF HOUSE NIGHT LIGHT

> NORMALLY OPEN NOT TO SCALE

STANDARD MOUNTING HEIGHTS



STANDARD METHODS OF NOTATION



**ELECTRICAL DRAWING INDEX** 

<u>SHEET NO.</u> SHEET TITLE ELECTRICAL STANDARDS AND DRAWING INDEX E0.1 E0.2 ELECTRICAL STANDARD SCHEDULES E1.0 BASEMENT ELECTRICAL DEMOLITION PLAN E1.1 FIRST FLOOR ELECTRICAL DEMOLITION PLAN E1.2 SECOND FLOOR ELECTRICAL DEMOLITION PLAN E1.3 THIRD FLOOR ELECTRICAL DEMOLITION PLAN

E1.4 FOURTH FLOOR ELECTRICAL DEMOLITION PLAN E1.5 MEZZANINE, PENTHOUSE AND SUB-BASEMENT ELECTRICAL DEMOLITION PLANS BASEMENT ELECTRICAL NEW WORK PLAN

E2.0 E2.1 FIRST FLOOR ELECTRICAL NEW WORK PLAN E2.2 SECOND FLOOR ELECTRICAL NEW WORK PLAN E2.3 THIRD FLOOR ELECTRICAL NEW WORK PLAN E2.4

FOURTH FLOOR ELECTRICAL NEW WORK PLAN E2.5 MEZZANINE, PENTHOUSE AND SUB-BASEMENT ELECTRICAL NEW WORK PLANS

ATE

E0.1

			SYSTEM OUTPUTS														
				ANNUNCIATION					NOTIFICATION						FIRE SAFETY		
		INITIATE FIRE ALARM SIGNAL	IDENTIFY ALARM AT FACP	ANNUNCIATE SUPERVISORY SIGNAL AT FACP	ANNUNCIATE TROUBLE SIGNAL AT FACP	RING TROUBLE BELL (WHEN PROVIDED)	OPERATE ALARM NOTIFICATION APPLIANCES CONTINUOUSLY	ACTIVATE VOICE/ALARM COMMUNICATION SYSTEM	TRANSMIT ALARM SIGNAL TO REMOTE ALARM RECEIVING STATION (VIA SECURITY SYSTEM)	TRANSMIT SUPERVISORY SIGNAL TO REMOTE ALARM RECEIVING STATION (VIA SECURITY SYSTEM)	TRANSMIT TROUBLE SIGNAL TO REMOTE ALARM RECEIVING STATION (VIA SECURITY SYSTEM)	RECORD EVENTS IN THE SYSTEM MEMORY	SHUTDOWN HVAC UNIT SERVING ZONE IN ALARM VIA CONTROL MODULE (INTERLOCK)	SWITCH HVAC EQUIPMENT CONTROLS TO FIRE ALARM MODE	CLOSE SMOKE DAMPERS IN AIR DUCT SYSTEM SERVING ZONE WHERE ALARM WAS INITIATED		
	MANUAL FIRE BOX OPERATION				_ <	~	0	•			F		S	S	3		
_	SMOKE DETECTOR OPERATION		•				•	•									
NOTTATION	DUCT DETECTOR OPERATION			•						•			•	•			
<u>E</u>	AUTOMATIC SPRINKLER SYSTEM WATER FLOW OPERATION	•	•				•	•	•								
	SPRINKLER SYSTEM OPERATION IN THE AREA SERVED BY SMOKE EXHAUST SYSTEM		•				•		•								
	ALARM SIGNAL FROM SUPPRESSION SYSTEM	•	•				•	•	•			•					
STEM	SUPERVISORY SIGNAL FROM SUPPRESSION SYSTEM			•		•				•		•					
EXTERNAL SYSTEM INPUT	TROUBLE SIGNAL FROM SUPPRESSION SYSTEM				•	•						•					
TERN.	SMOKE DETECTION IN AREA SERVED BY SUPPRESSION SYSTEM		•				•	•	•			•					
	FIRE PROTECTION SYSTEM VALVE TAMPER OPERATION					•				•		•					
	OPEN CIRCUIT, SHORT CIRCUIT, OR GROUND FAULT ON INITIATING DEVICE, SIGNALING LINE, OR NOTIFICATION APPLIANCE CIRCUIT.				•	•					•	•					
	OPENING, TAMPERING, OR REMOVAL OF ALARM-INITIATING DEVICES				•	•					•	•					
St	OPENING, TAMPERING, OR REMOVAL OF SUPERVISORY SIGNAL INITIATING DEVICES				•	•					•	•					
	LOSS OF PRIMARY POWER OF FACP				•	•					•	•					
STATUS	GROUND OR SIGNAL BREAK IN FACP INTERNAL CIRCUITS				•	•					•	•					
	ABNORMAL AC VOLTAGE AT THE FACP				•	•					•						
	STANDBY BATTERY CIRCUITRY BREAK				•	•					•	•					
	FAILURE OF BATTERY CHARGING SYSTEM				•	•					•	•					
	ABNORMAL POSITION OF ANY SWITCH AT THE FACP				•	•					•	•					

FIRE ALARM MATRIX
NO SCALE

RACEWAY		METALLIC TUBING (EMT)	SURFACE RACEWAY	CONDUIT (FMC)	. CONDUIT (IMC)	CONDUIT (LFMC)	STEEL CONDUIT	
		ELECTRICAL METALLI	SUS	FLEXIBLE METAL CONDUIT (FMC)	INTERMEDIATE METAL CONDUIT (IMC)	LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)	RIGID	
	EXPOSED NOT SUBJECT TO PHYSICAL DAMAGE — UNFINISHED SPACES	Х						
	EXPOSED NOT SUBJECT TO PHYSICAL DAMAGE — FINISHED SPACES		Х					
30R	CONCEALED IN CEILINGS, INTERIOR WALL AND PARTITIONS	Х						
INDOOOR	CONNECTED TO VIBRATING EQUIPMENT			Х		Х		USE LFMC IN DAMP/WET LOCATIONS
	DAMP AND WET LOCATIONS				Х		Х	
	OPTICAL FIBER OR COMMUNICATIONS CABLE IN SPACES USED FOR ENVIRONMENTAL AIR	Х						
	CONCEALED GENERAL PURPOSE DISTRIBUTION OF OPTICAL FIBER OR COMMUNICATION CABLE	Х						

1. 'X' INDICATES ACCEPTABLE SELECTION.
2. REFER TO "CONDUCTORS AND CABLES" SPECIFICATION FOR APPLICATION LIMITATIONS OF AC/MC CABLE.



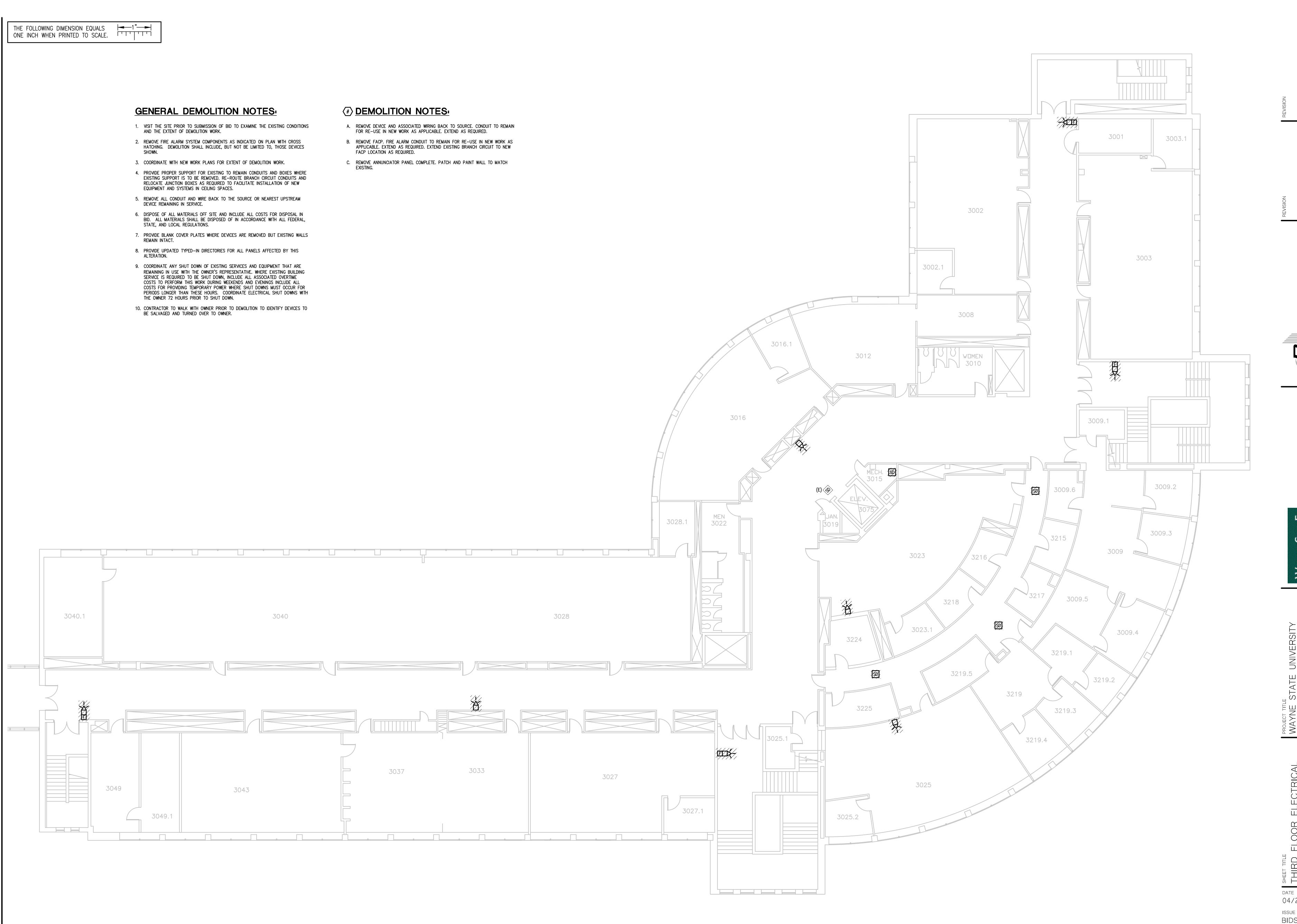
ISSUE BIDS

NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

SHEET No.

a:\2014\2014—0119—00\Cad\2014—0119—E1—DPO.dwa, E10, 4/28/2014 8:32:21 AM. Brandon Mumm, Peter Basso Ass

q:\2014\2014-0119-00\Cad\2014-0119-E1-DP1.dwq, E11, 4/28/2014 8:32:28 AM, Brandon Mumm, Peter Basso Associates Inc.





THIRD FLOOR ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" - 1' - 0"

- VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
- 2. REMOVE FIRE ALARM SYSTEM COMPONENTS AS INDICATED ON PLAN WITH CROSS HATCHING. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE DEVICES SHOWN.
- 3. COORDINATE WITH NEW WORK PLANS FOR EXTENT OF DEMOLITION WORK.
- 4. PROVIDE PROPER SUPPORT FOR EXISTING TO REMAIN CONDUITS AND BOXES WHERE EXISTING SUPPORT IS TO BE REMOVED. RE—ROUTE BRANCH CIRCUIT CONDUITS AND RELOCATE JUNCTION BOXES AS REQUIRED TO FACILITATE INSTALLATION OF NEW EQUIPMENT AND SYSTEMS IN CEILING SPACES.
- 5. REMOVE ALL CONDUIT AND WIRE BACK TO THE SOURCE OR NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
- 6. DISPOSE OF ALL MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.
- 7. PROVIDE BLANK COVER PLATES WHERE DEVICES ARE REMOVED BUT EXISTING WALLS REMAIN INTACT.
- 8. PROVIDE UPDATED TYPED—IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS ALTERATION.
- 9. COORDINATE ANY SHUT DOWN OF EXISTING SERVICES AND EQUIPMENT THAT ARE REMAINING IN USE WITH THE OWNER'S REPRESENTATIVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COSTS TO PERFORM THIS WORK DURING WEEKENDS AND EVENINGS INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER WHERE SHUT DOWNS MUST OCCUR FOR PERIODS LONGER THAN THESE HOURS. COORDINATE ELECTRICAL SHUT DOWNS WITH THE OWNER 72 HOURS PRIOR TO SHUT DOWN.
- 10. CONTRACTOR TO WALK WITH OWNER PRIOR TO DEMOLITION TO IDENTIFY DEVICES TO BE SALVAGED AND TURNED OVER TO OWNER.

# **#** DEMOLITION NOTES:

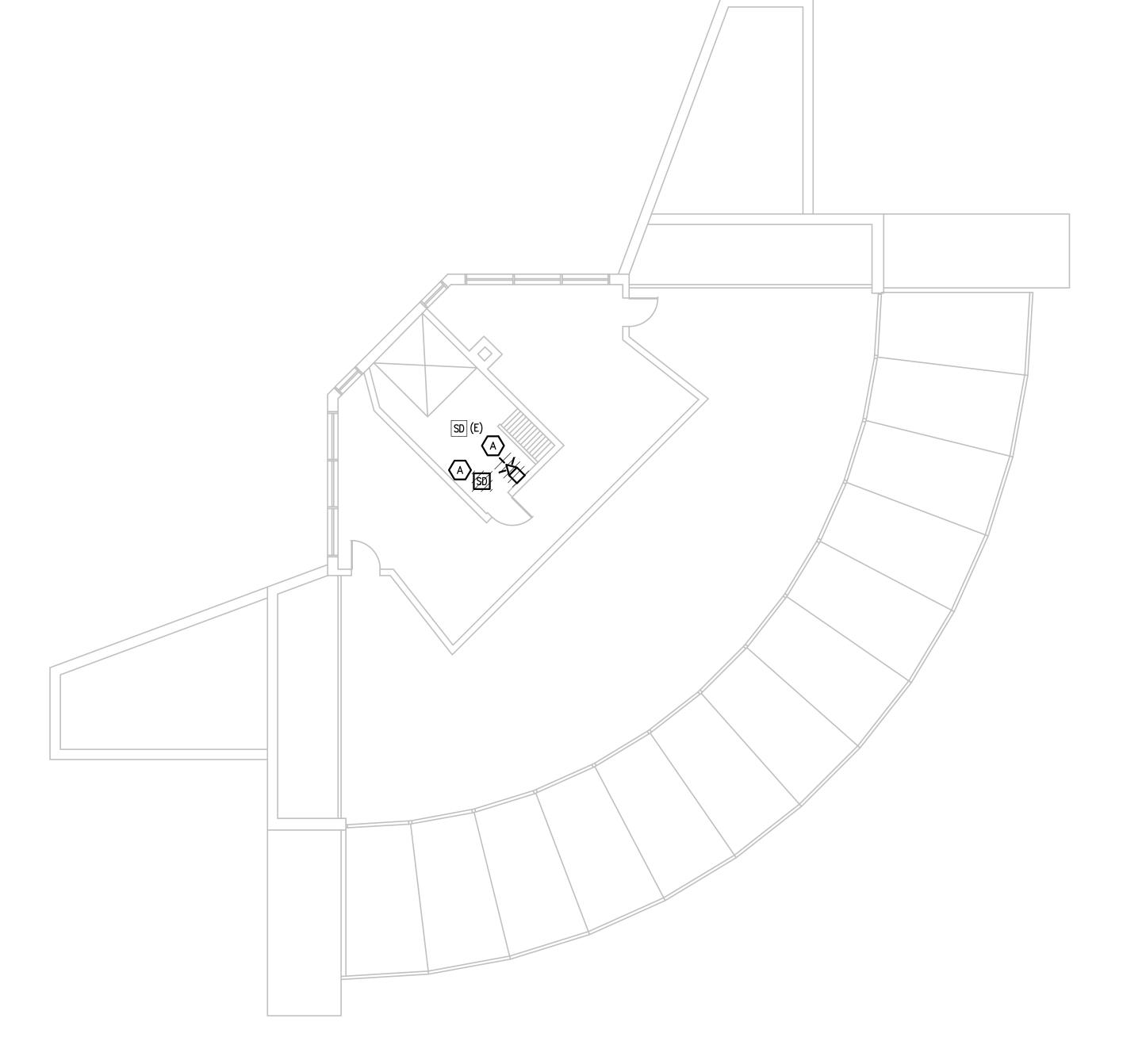
- A. REMOVE DEVICE AND ASSOCIATED WIRING BACK TO SOURCE. CONDUIT TO REMAIN FOR RE-USE IN NEW WORK AS APPLICABLE. EXTEND AS REQUIRED.
- B. REMOVE FACP. FIRE ALARM CONDUIT TO REMAIN FOR RE—USE IN NEW WORK AS APPLICABLE. EXTEND AS REQUIRED. EXTEND EXISTING BRANCH CIRCUIT TO NEW FACP LOCATION AS REQUIRED.
- C. REMOVE ANNUNCIATOR PANEL COMPLETE. PATCH AND PAINT WALL TO MATCH





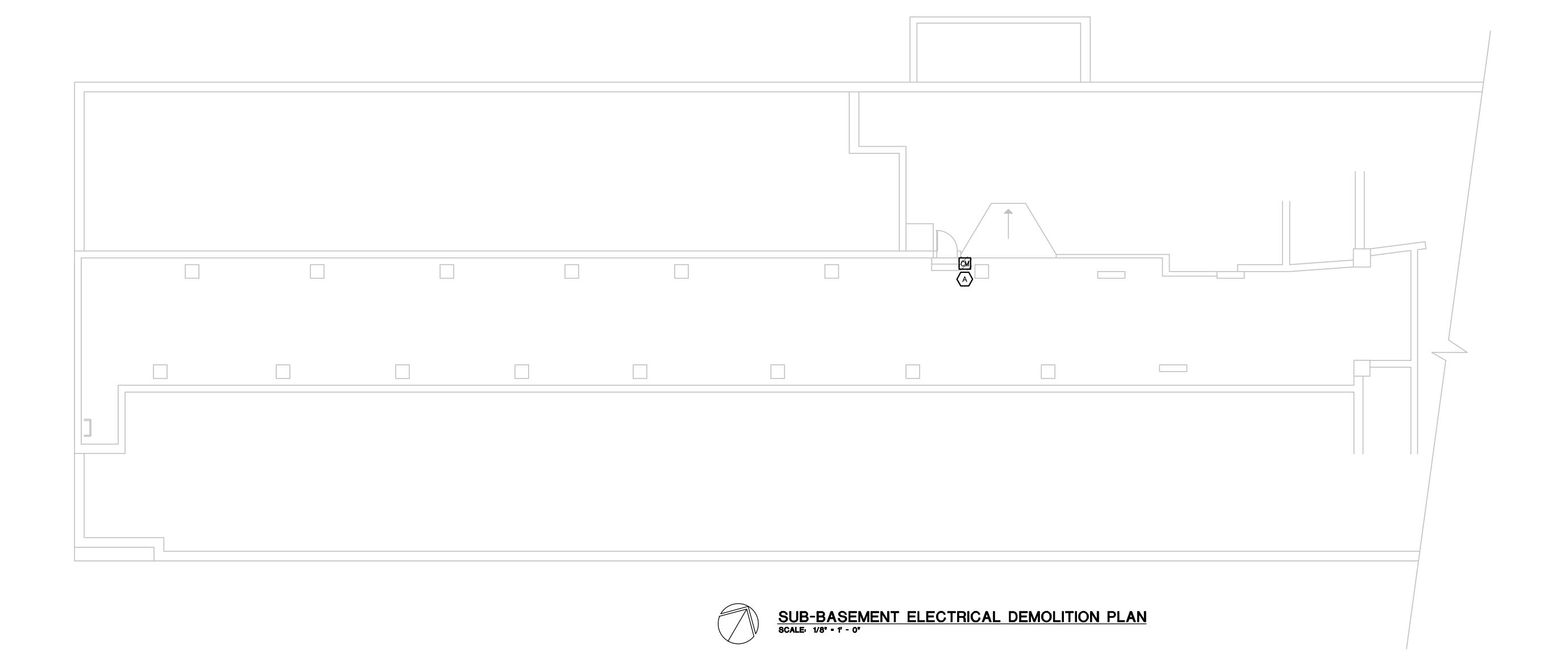
FOURTH FLOOR ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" - 1' - 0"







PENTHOUSE ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" - 1' - 0"



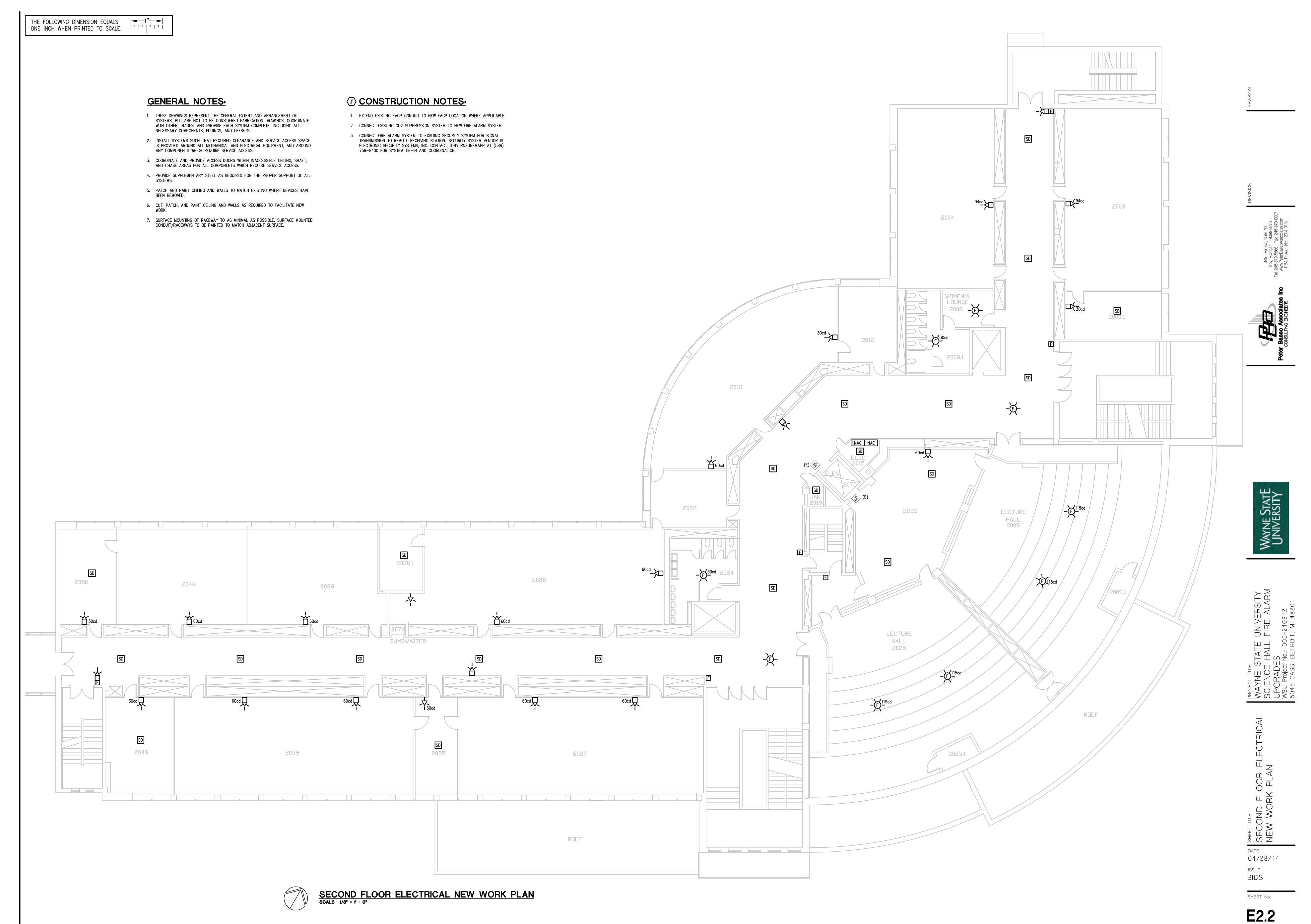
### **GENERAL DEMOLITION NOTES:**

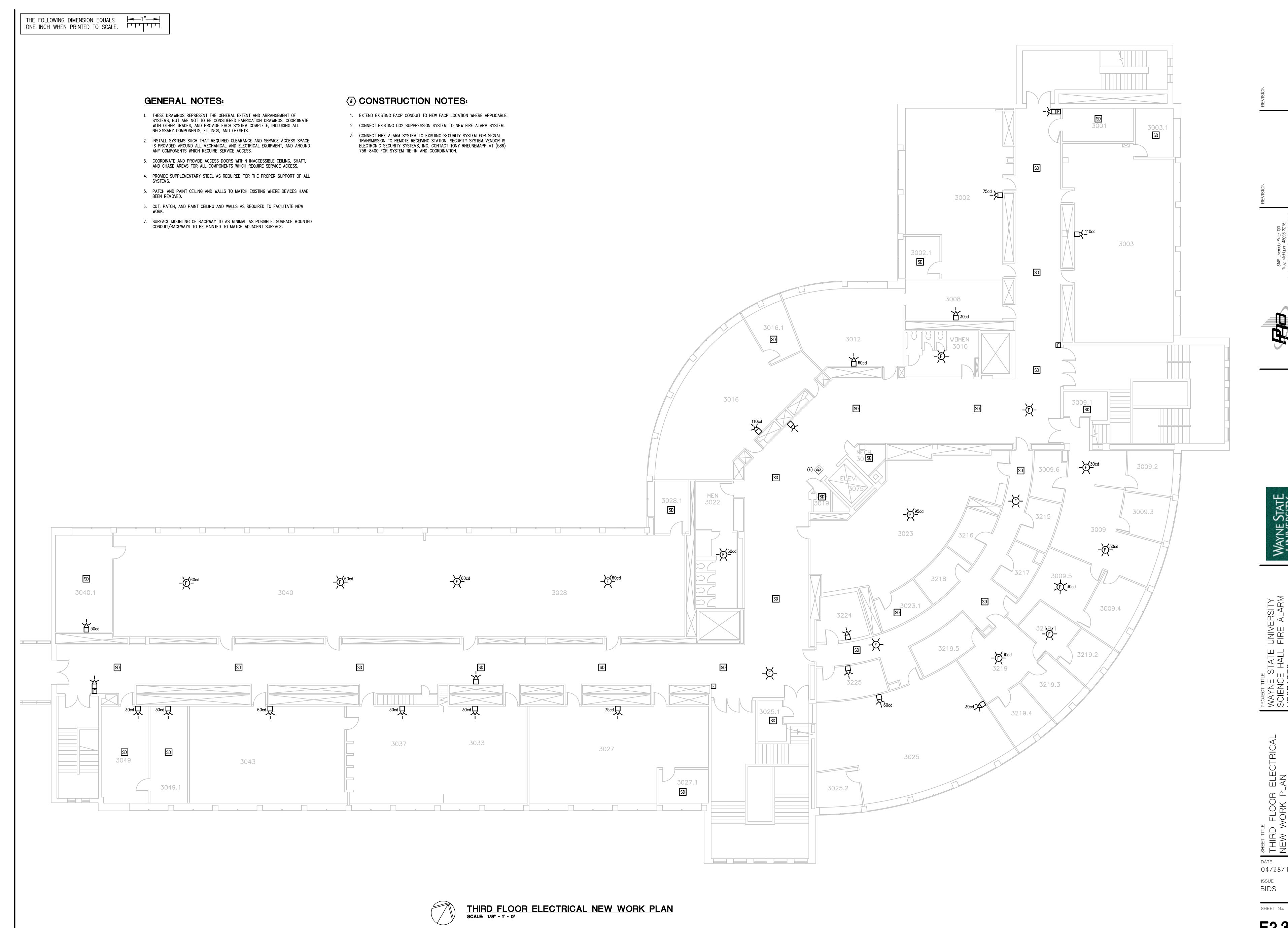
- VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
- 2. REMOVE FIRE ALARM SYSTEM COMPONENTS AS INDICATED ON PLAN WITH CROSS HATCHING. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE DEVICES
- 3. COORDINATE WITH NEW WORK PLANS FOR EXTENT OF DEMOLITION WORK.
- 4. PROVIDE PROPER SUPPORT FOR EXISTING TO REMAIN CONDUITS AND BOXES WHERE EXISTING SUPPORT IS TO BE REMOVED. RE-ROUTE BRANCH CIRCUIT CONDUITS AND RELOCATE JUNCTION BOXES AS REQUIRED TO FACILITATE INSTALLATION OF NEW EQUIPMENT AND SYSTEMS IN CEILING SPACES.
- REMOVE ALL CONDUIT AND WIRE BACK TO THE SOURCE OR NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
- 6. DISPOSE OF ALL MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.
- 7. PROVIDE BLANK COVER PLATES WHERE DEVICES ARE REMOVED BUT EXISTING WALLS REMAIN INTACT.
- 8. PROVIDE UPDATED TYPED—IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS ALTERATION.
- 9. COORDINATE ANY SHUT DOWN OF EXISTING SERVICES AND EQUIPMENT THAT ARE REMAINING IN USE WITH THE OWNER'S REPRESENTATIVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COSTS TO PERFORM THIS WORK DURING WEEKENDS AND EVENINGS INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER WHERE SHUT DOWNS MUST OCCUR FOR PERIODS LONGER THAN THESE HOURS. COORDINATE ELECTRICAL SHUT DOWNS WITH THE OWNER 72 HOURS PRIOR TO SHUT DOWN.
- 10. CONTRACTOR TO WALK WITH OWNER PRIOR TO DEMOLITION TO IDENTIFY DEVICES TO BE SALVAGED AND TURNED OVER TO OWNER.

## **#** DEMOLITION NOTES:

- A. REMOVE DEVICE AND ASSOCIATED WIRING BACK TO SOURCE. CONDUIT TO REMAIN FOR RE—USE IN NEW WORK AS APPLICABLE. EXTEND AS REQUIRED.
- B. REMOVE FACP. FIRE ALARM CONDUIT TO REMAIN FOR RE-USE IN NEW WORK AS APPLICABLE. EXTEND AS REQUIRED. EXTEND EXISTING BRANCH CIRCUIT TO NEW FACP LOCATION AS REQUIRED.
- C. REMOVE ANNUNCIATOR PANEL COMPLETE. PATCH AND PAINT WALL TO MATCH EXISTING.

E1.5





E2.3

### **GENERAL NOTES:**

 THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS, BUT ARE NOT TO BE CONSIDERED FABRICATION DRAWINGS. COORDINATE WITH OTHER TRADES, AND PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS, AND OFFSETS.

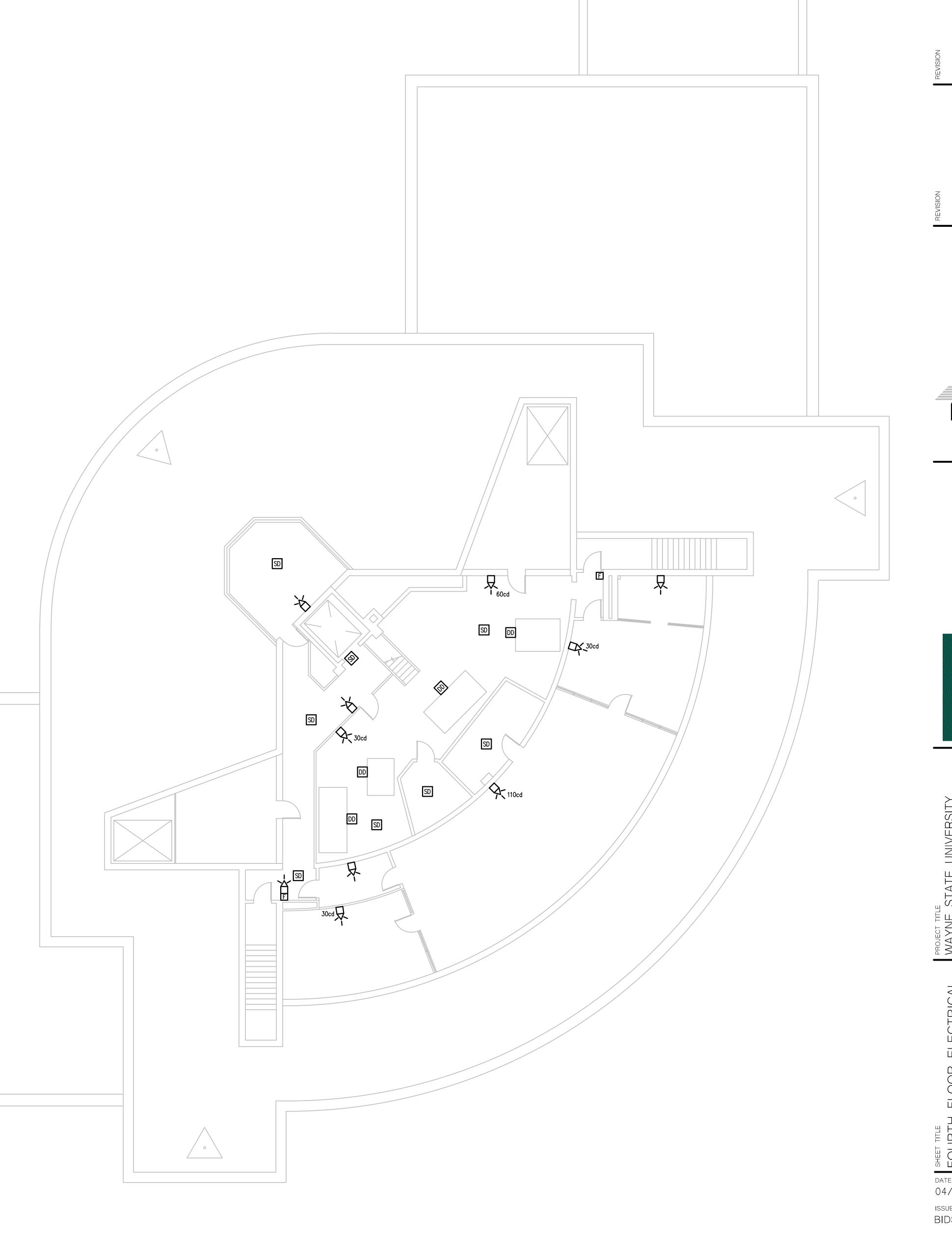
- INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
- COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS.
- 4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.

5. PATCH AND PAINT CEILING AND WALLS TO MATCH EXISTING WHERE DEVICES HAVE

- 6. CUT, PATCH, AND PAINT CEILING AND WALLS AS REQUIRED TO FACILITATE NEW
- 7. SURFACE MOUNTING OF RACEWAY TO AS MINIMAL AS POSSIBLE. SURFACE MOUNTED CONDUIT/RACEWAYS TO BE PAINTED TO MATCH ADJACENT SURFACE.

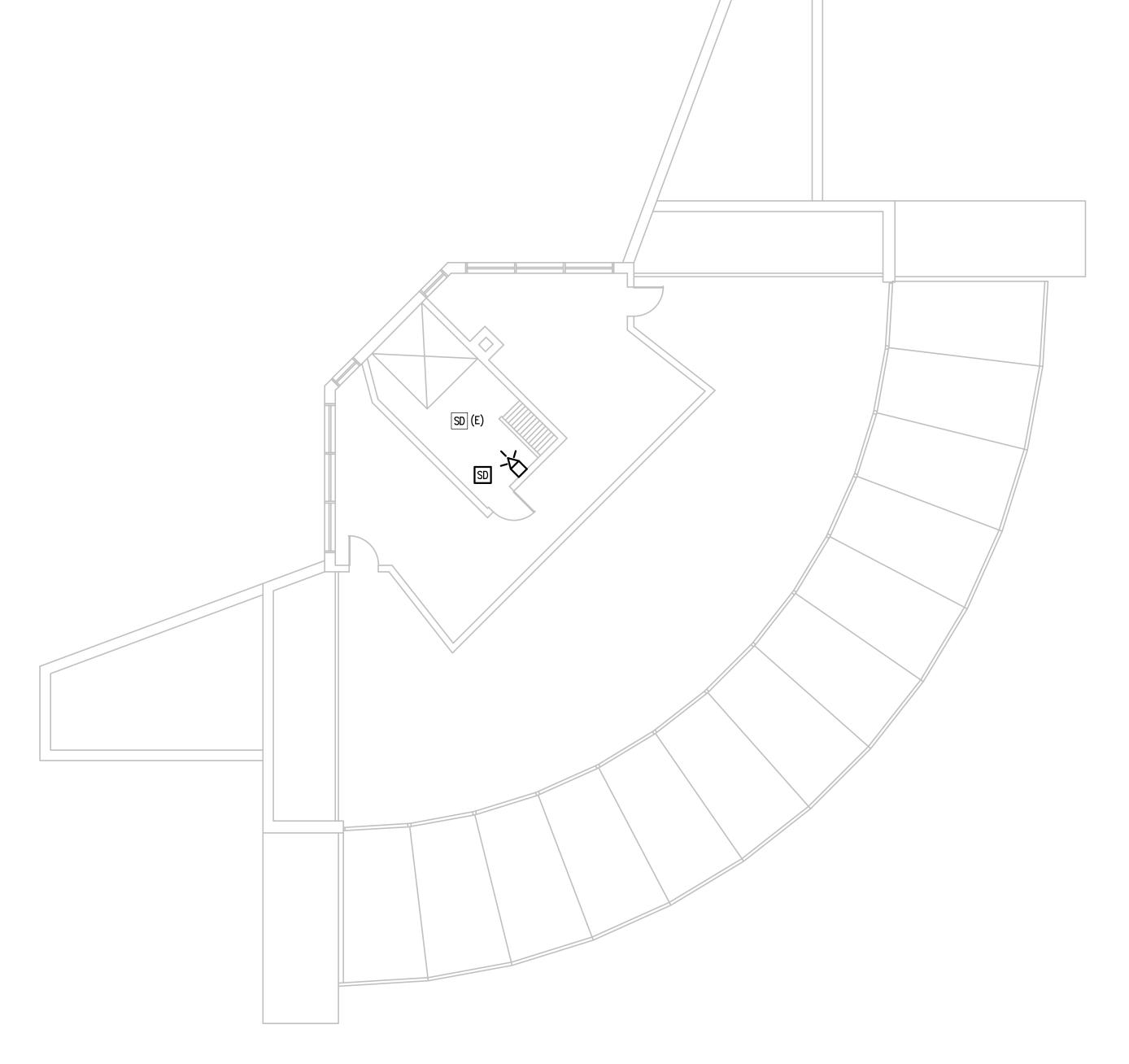
# **EXECUTION NOTES:**

- 1. EXTEND EXISTING FACP CONDUIT TO NEW FACP LOCATION WHERE APPLICABLE.
- 2. CONNECT EXISTING CO2 SUPPRESSION SYSTEM TO NEW FIRE ALARM SYSTEM.
- 3. CONNECT FIRE ALARM SYSTEM TO EXISTING SECURITY SYSTEM FOR SIGNAL TRANSMISSION TO REMOTE RECEIVING STATION. SECURITY SYSTEM VENDOR IS ELECTRONIC SECURITY SYSTEMS, INC. CONTACT TONY RNEUNEMAPP AT (586) 756-8400 FOR SYSTEM TIE-IN AND COORDINATION.



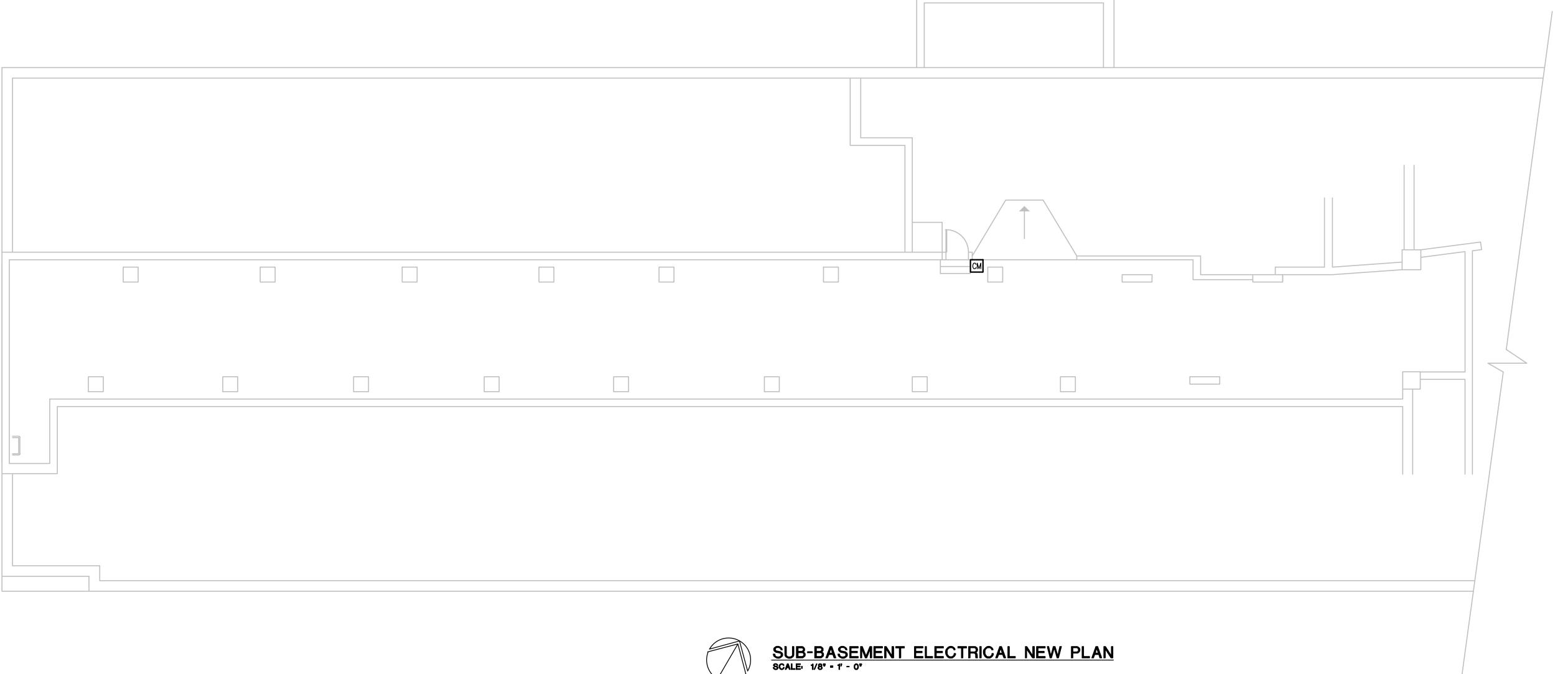
FOURTH FLOOR ELECTRICAL NEW WORK PLAN SCALE: 1/8" - 1' - 0"







PENTHOUSE ELECTRICAL NEW PLAN
SCALE: 1/8' - 1' - 0'



### **GENERAL NOTES:**

- THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS, BUT ARE NOT TO BE CONSIDERED FABRICATION DRAWINGS. COORDINATE WITH OTHER TRADES, AND PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS, AND OFFSETS.
- 2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
- COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS.
- 4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL
- 5. PATCH AND PAINT CEILING AND WALLS TO MATCH EXISTING WHERE DEVICES HAVE BEEN REMOVED.
- 6. CUT, PATCH, AND PAINT CEILING AND WALLS AS REQUIRED TO FACILITATE NEW
- 7. SURFACE MOUNTING OF RACEWAY TO AS MINIMAL AS POSSIBLE. SURFACE MOUNTED CONDUIT/RACEWAYS TO BE PAINTED TO MATCH ADJACENT SURFACE.

### **EXAMPLE 2** CONSTRUCTION NOTES:

- 1. EXTEND EXISTING FACP CONDUIT TO NEW FACP LOCATION WHERE APPLICABLE.
- 2. CONNECT EXISTING CO2 SUPPRESSION SYSTEM TO NEW FIRE ALARM SYSTEM.
- 3. CONNECT FIRE ALARM SYSTEM TO EXISTING SECURITY SYSTEM FOR SIGNAL TRANSMISSION TO REMOTE RECEIVING STATION. SECURITY SYSTEM VENDOR IS ELECTRONIC SECURITY SYSTEMS, INC. CONTACT TONY RNEUNEMAPP AT (586) 756-8400 FOR SYSTEM TIE-IN AND COORDINATION.