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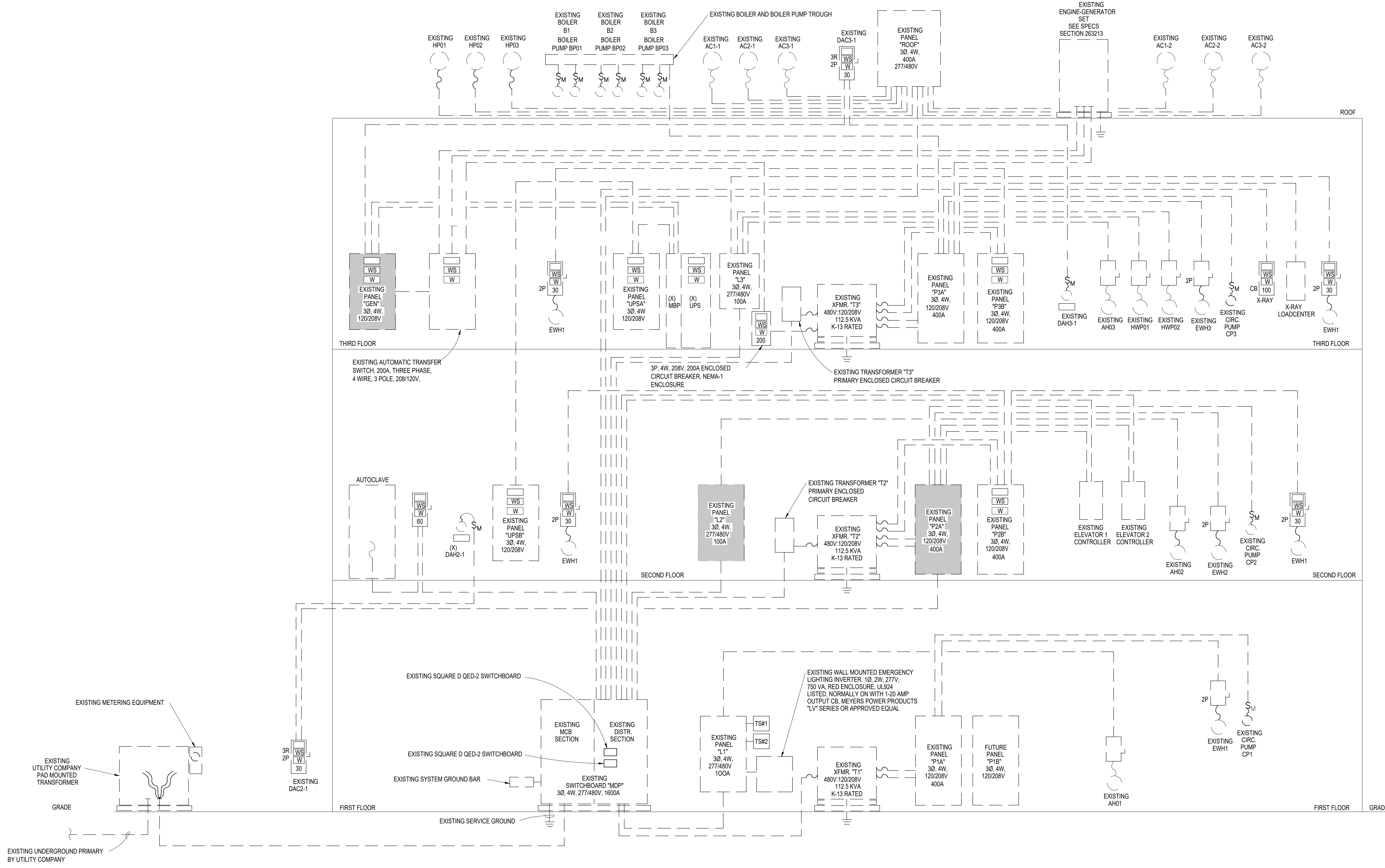
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**1 (X)POWER RISER DIAGRAM**

NOT TO SCALE

NOTE: THE EXISTING POWER RISER DIAGRAM IS FROM DRAWINGS OF A PREVIOUS UPFIT AND HAS NOT BEEN VERIFIED. POINTS OF CONNECTION TO EXISTING PANELS ARE HIGHLIGHTED.

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NO.	DATE	ISSUE NOTE

Project Manager JRB	Drawn By AJC
Date 02.09.2024	Reviewed By RDM
Project ID	

Sheet Title

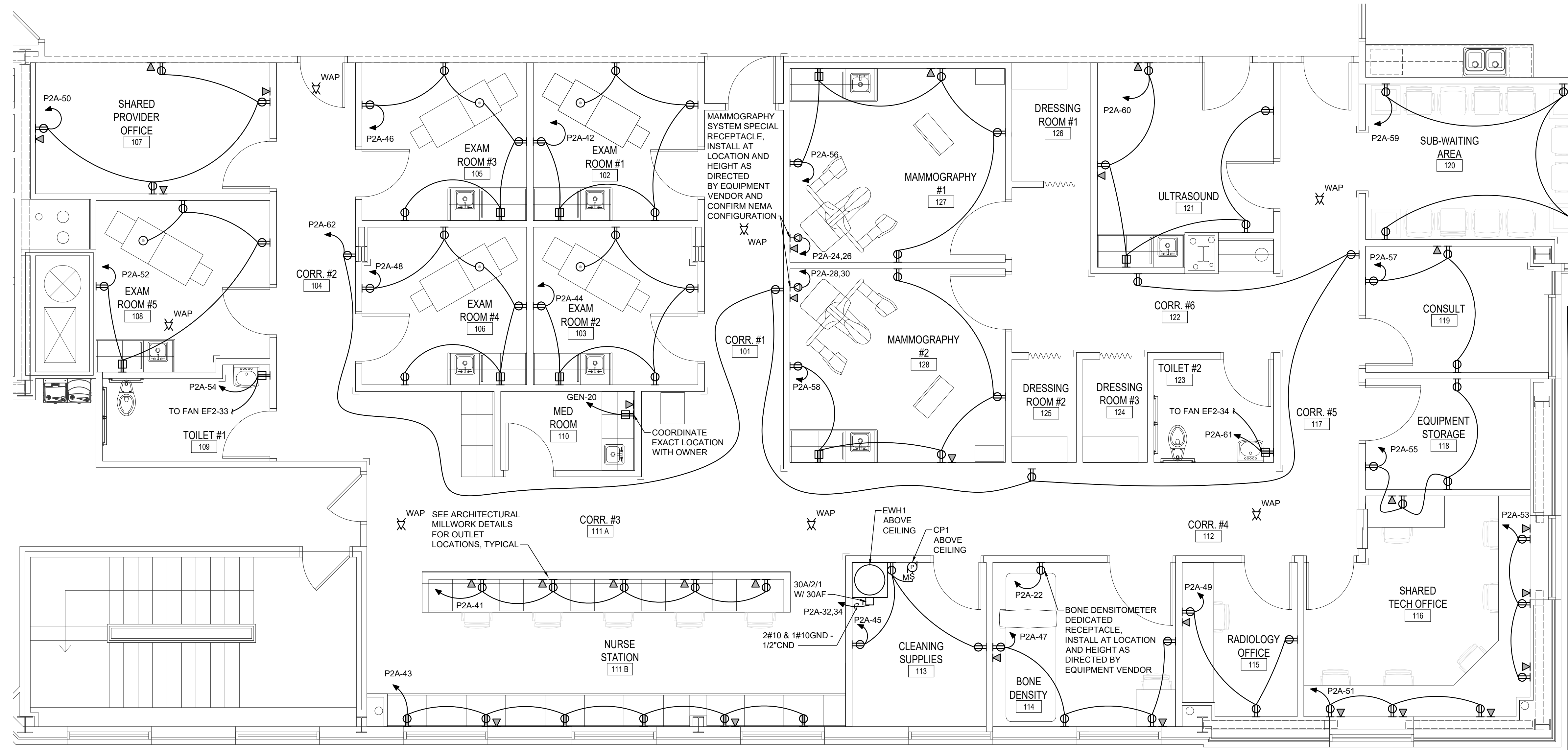
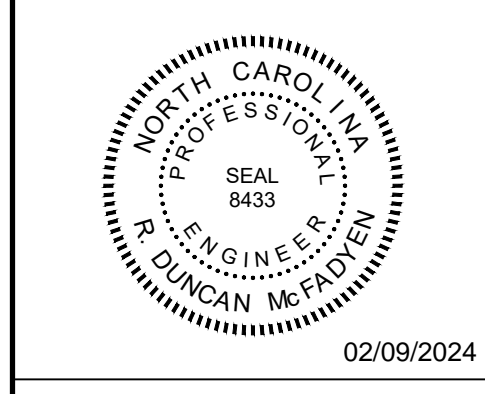
**ELECTRICAL  
POWER RISER  
DIAGRAM**

Sheet No.

**E-0.3**







**MINIMUM CONDUCTOR SIZE CHART**  
 PROVIDE THE FOLLOWING MINIMUM SIZES FOR BRANCH CIRCUIT CONDUCTORS.

CONDUCTOR SIZE (AWG)	BRANCH CIRCUIT BREAKER TRIP (AMPERES)	CIRCUIT VOLTAGE MAXIMUM ALLOWABLE CIRCUIT LENGTH (FEET)			
		120	208	240	277
#12	15	81	141	163	188
#10	15	135	234	270	312
#8	15	204	355	409	473
#12	20	61	106	122	141
#10	20	101	175	202	233
#8	20	153	266	307	354
#10	30	67	117	135	155
#8	30	102	177	204	236

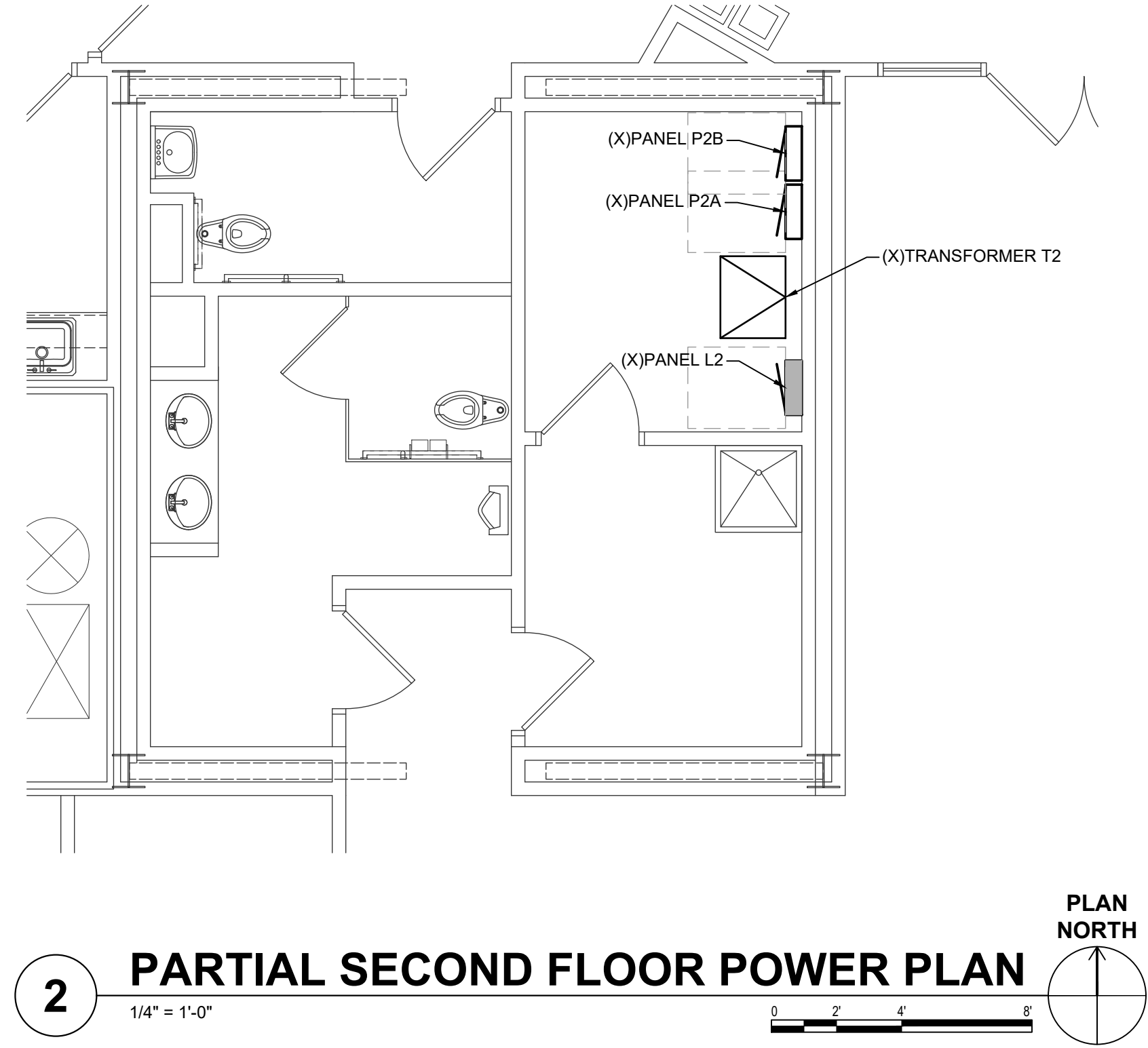
CONDUCTOR SIZE (AWG)	BRANCH CIRCUIT BREAKER TRIP (AMPERES)	CIRCUIT VOLTAGE MAXIMUM ALLOWABLE CIRCUIT LENGTH (FEET)		
		208	240	480
#12	15	163	188	377
#10	15	270	312	624
#12	20	122	141	283
#10	20	202	234	468
#10	30	135	156	312
#8	30	205	236	473
#8	40	153	177	354
#6	40	239	276	553
#8	50	123	142	283
#6	50	191	221	442
#6	60	159	184	368
#4	60	245	283	567

**NOTES:**

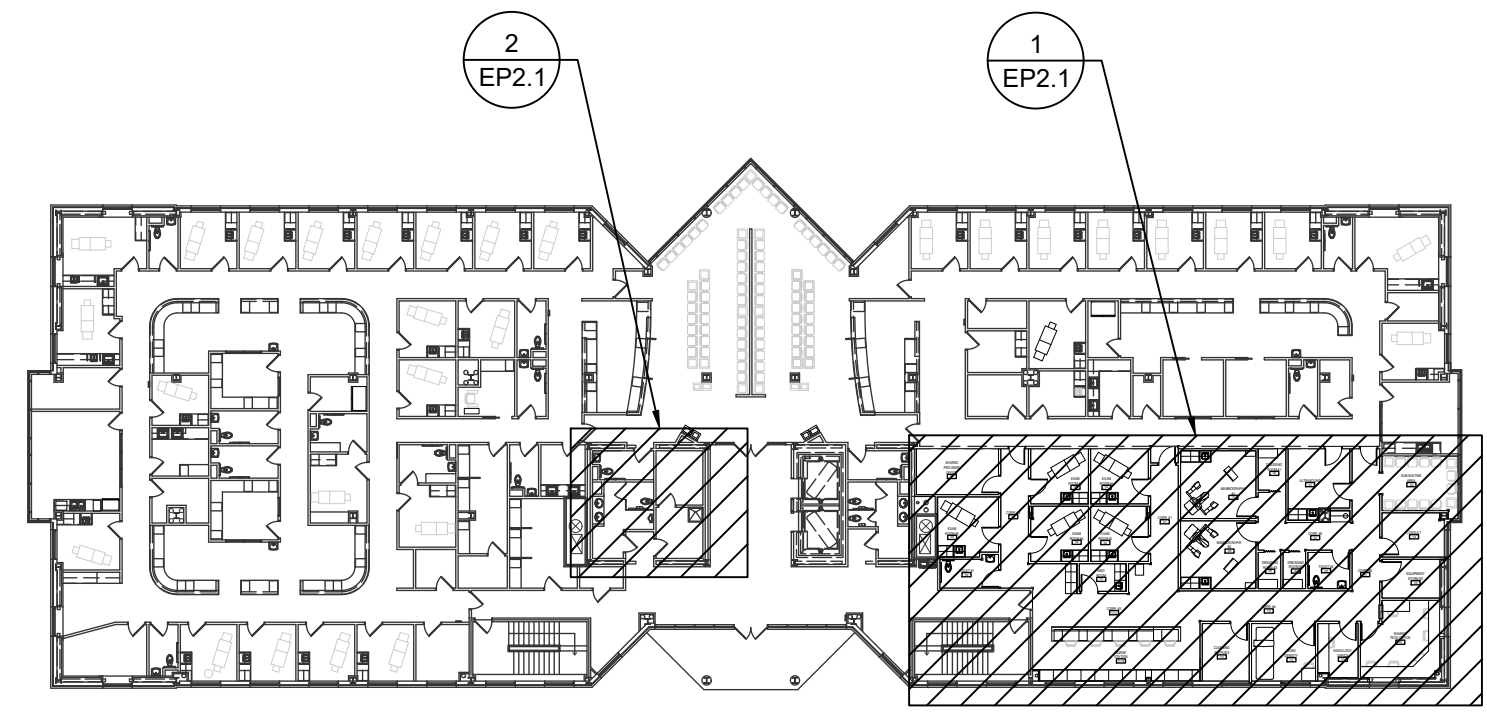
- CONDUCTOR LENGTHS ARE BASED ON SINGLE & THREE PHASE, 90% POWER FACTOR LOADS USING 75°C COPPER CONDUCTORS IN EMT RACEWAYS TO ACHIEVE NO MORE THAN 3 PERCENT VOLTAGE DROP.
- CALCULATIONS ASSUME LOADS OF 80% OF CIRCUIT BREAKER TRIP (12A, 16A & 24A, 32A, 40A & 48A, RESPECTIVELY) ARE CONCENTRATED AT THE END OF THE CIRCUITS.
- IF LOAD CHARACTERISTICS DIFFER FROM ABOVE, CALCULATE USING KNOWN CHARACTERISTICS AND SUBMIT CALCULATIONS TO THE ARCHITECT/ENGINEER DOCUMENTING 3% OR LESS VOLTAGE DROP UNDER THE ACTUAL LOAD CONDITIONS.
- WHEN A DEDICATED SINGLE LOAD LESS THAN NOTED ABOVE IS KNOWN, THE CONTRACTOR MAY UTILIZE SMALLER CONDUCTORS UPON SUBMISSION OF VOLTAGE DROP CALCULATIONS DOCUMENTING 3% OR LESS VOLTAGE DROP. THE MINIMUM LOAD SHALL BE ASSUMED TO BE 60% OF THE CB TRIP RATING REGARDLESS OF ACTUAL DEDICATED LOAD.
- USE THE LARGER OF THE CONDUCTORS INDICATED ON THE DRAWINGS OR THIS TABLE.

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**1 PARTIAL SECOND FLOOR POWER PLAN**  
 1/4" = 1'-0"



**2 PARTIAL SECOND FLOOR POWER PLAN**  
 1/4" = 1'-0"



**3 KEY PLAN**  
 NOT TO SCALE

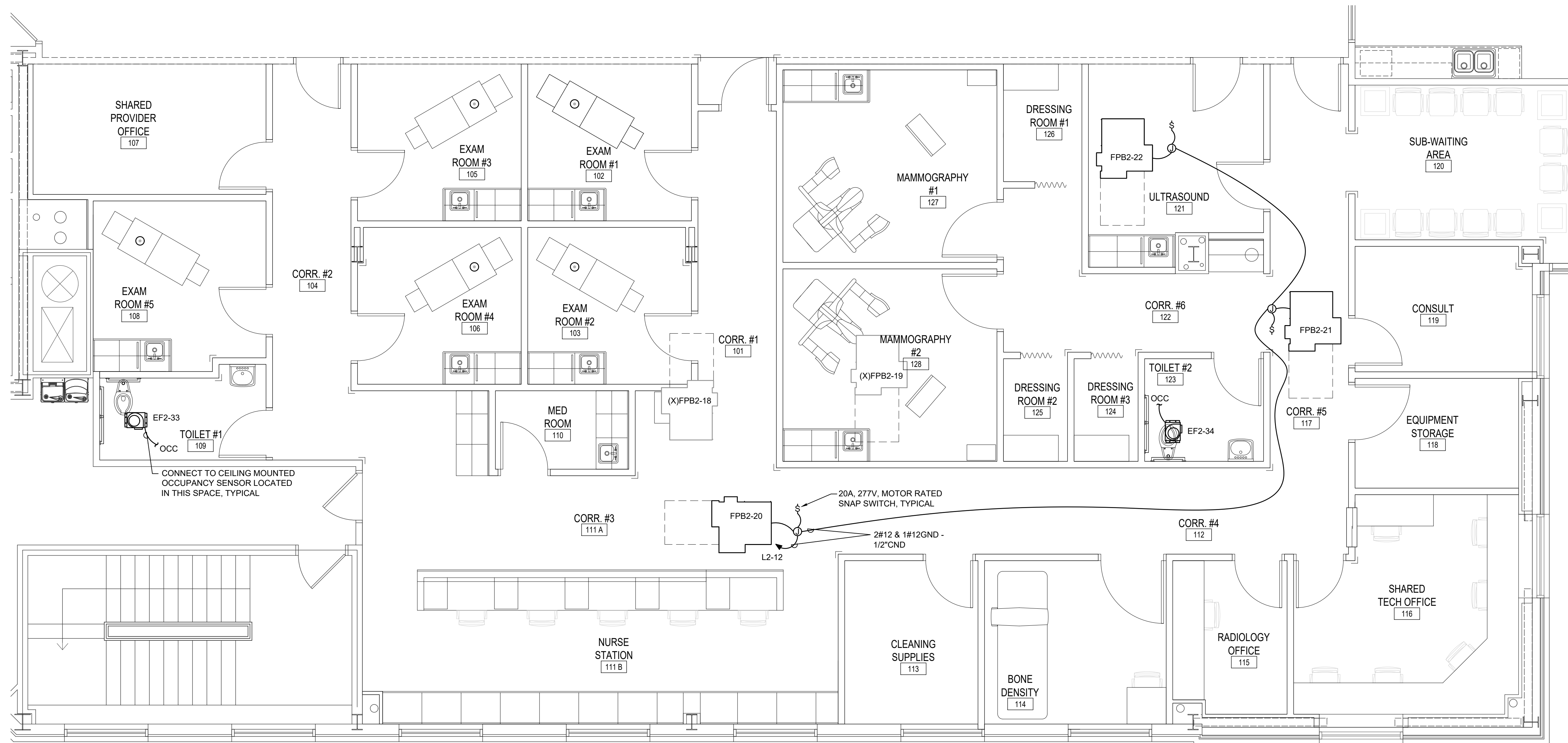
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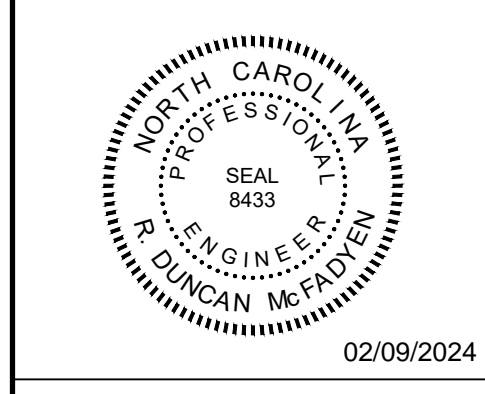
  

Project Manager	Drawn By
JRB	AJC
Date	Reviewed By
02.09.2024	RDM
Project ID	
Sheet Title	
ELECTRICAL POWER SECOND FLOOR PLAN	
Sheet No.	



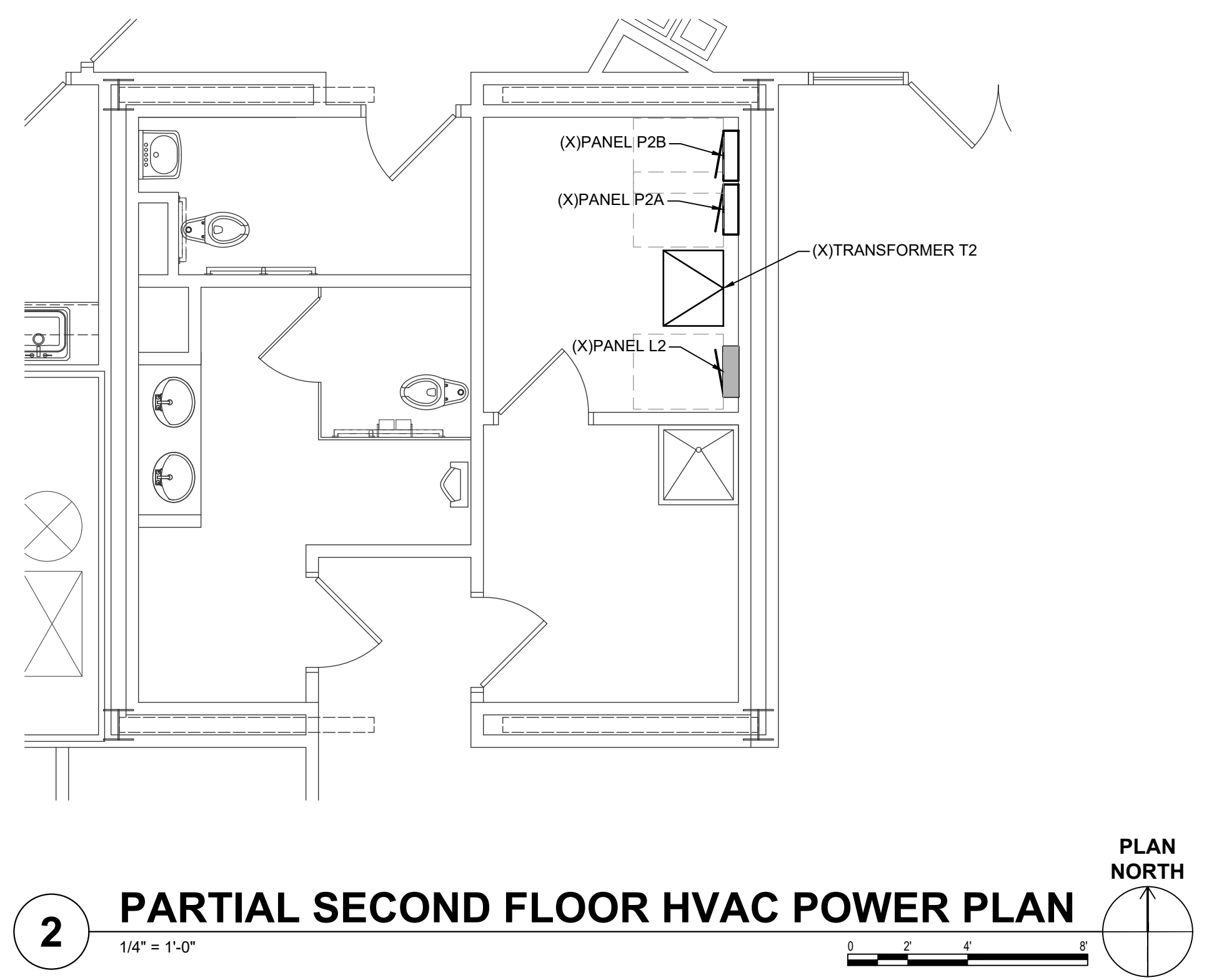
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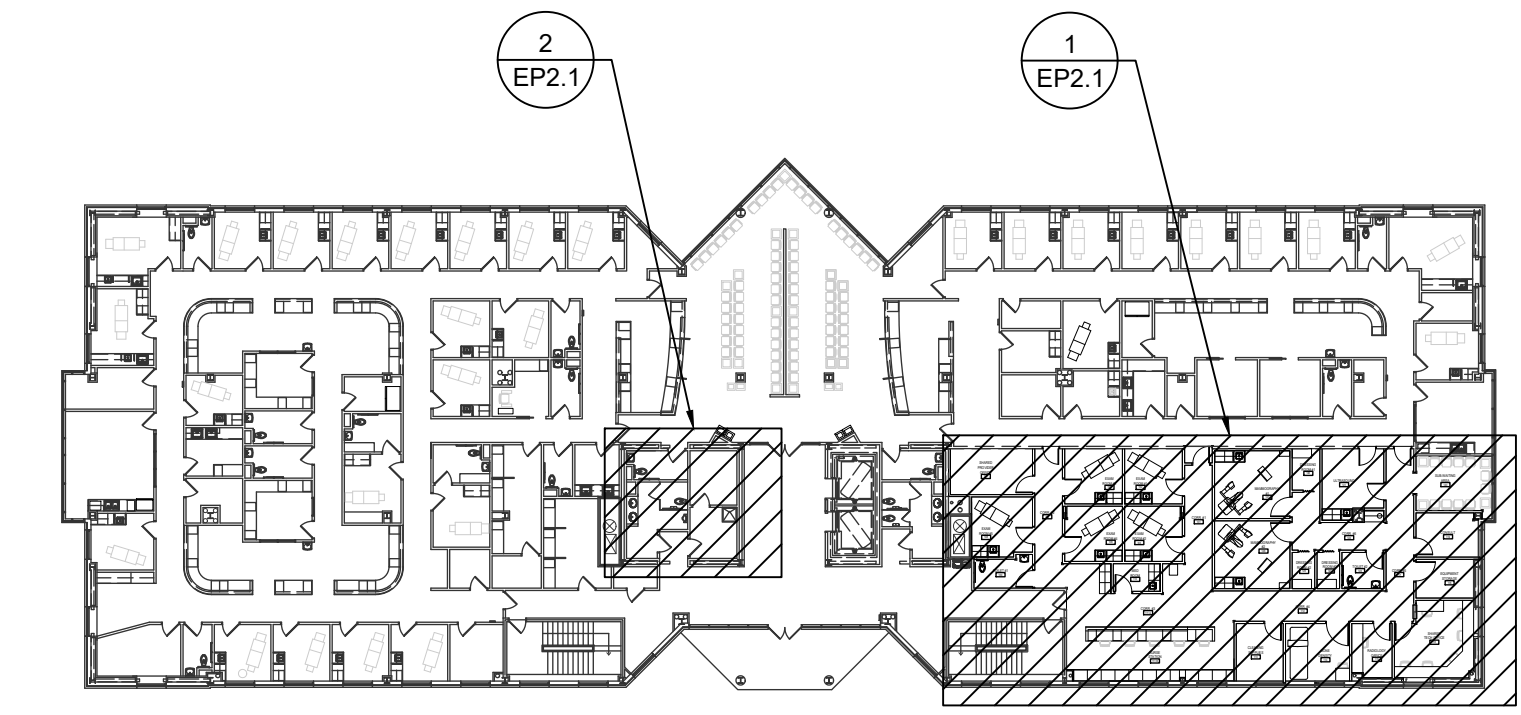


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**1 PARTIAL SECOND FLOOR HVAC POWER PLAN**  
 1/4" = 1'-0"



**2 PARTIAL SECOND FLOOR HVAC POWER PLAN**  
 1/4" = 1'-0"



**3 KEY PLAN**  
 NOT TO SCALE

REV.	DATE	DESCRIPTION

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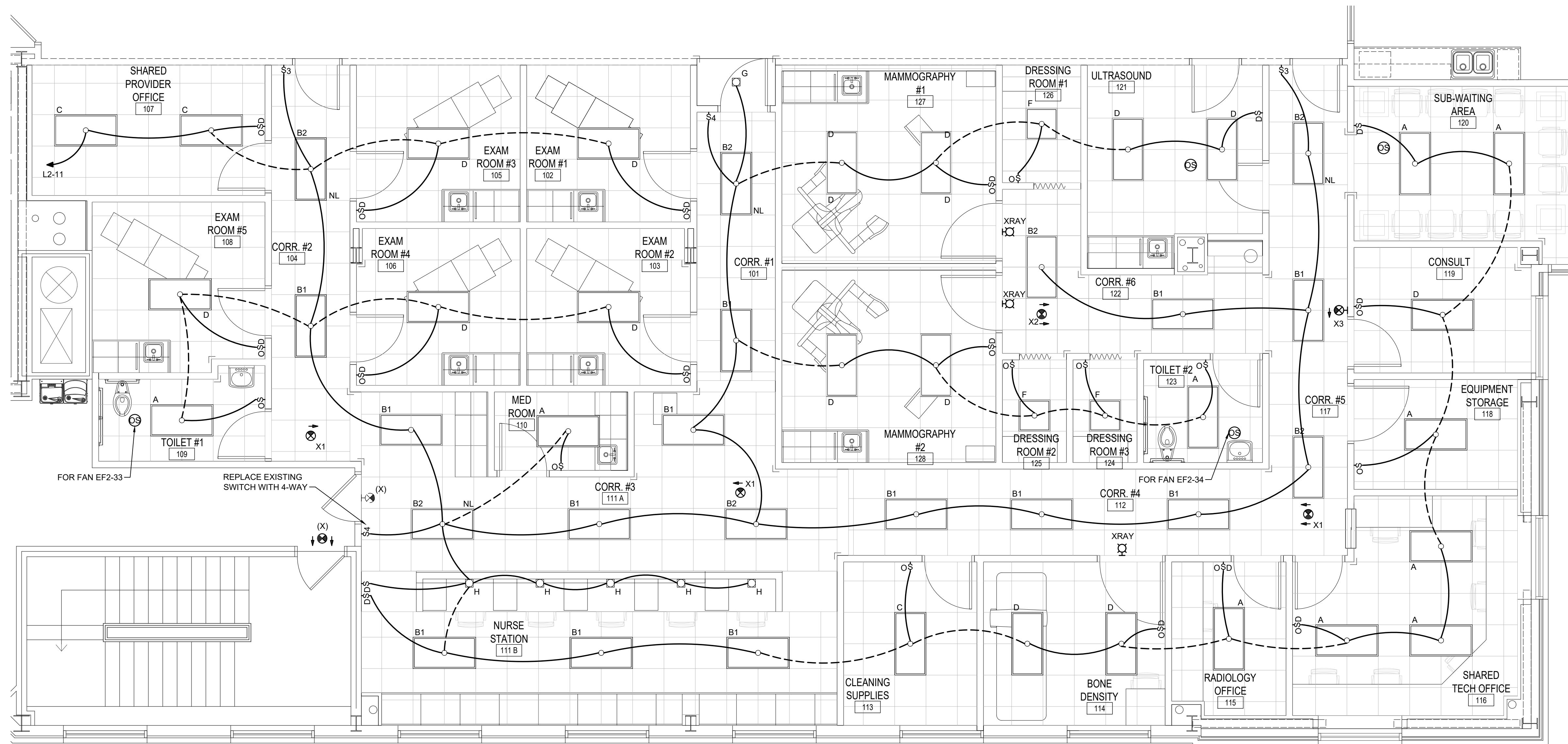
  

Project Manager	JRB	Drawn By	AJC
Date	02.09.2024	Reviewed By	RDM
Project ID			

Sheet Title	ELECTRICAL HVAC POWER SECOND FLOOR PLAN		
Sheet No.			

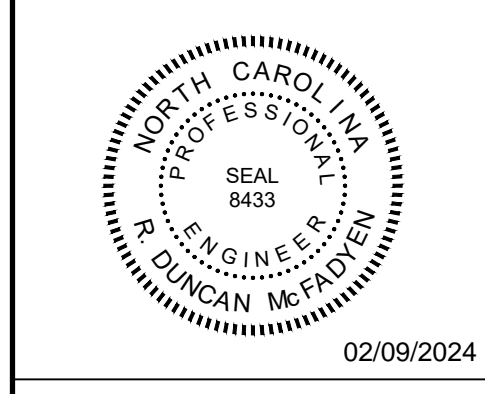
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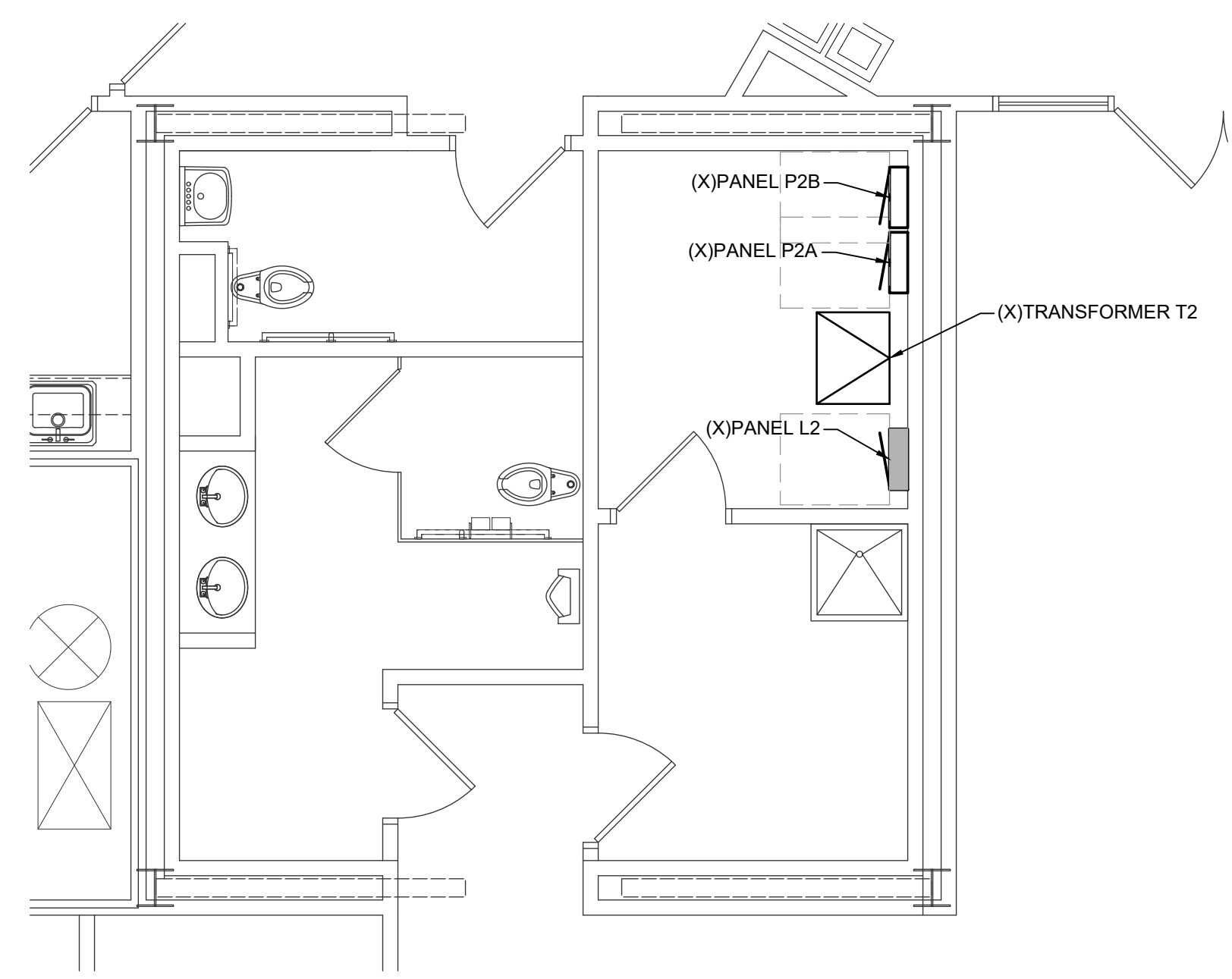
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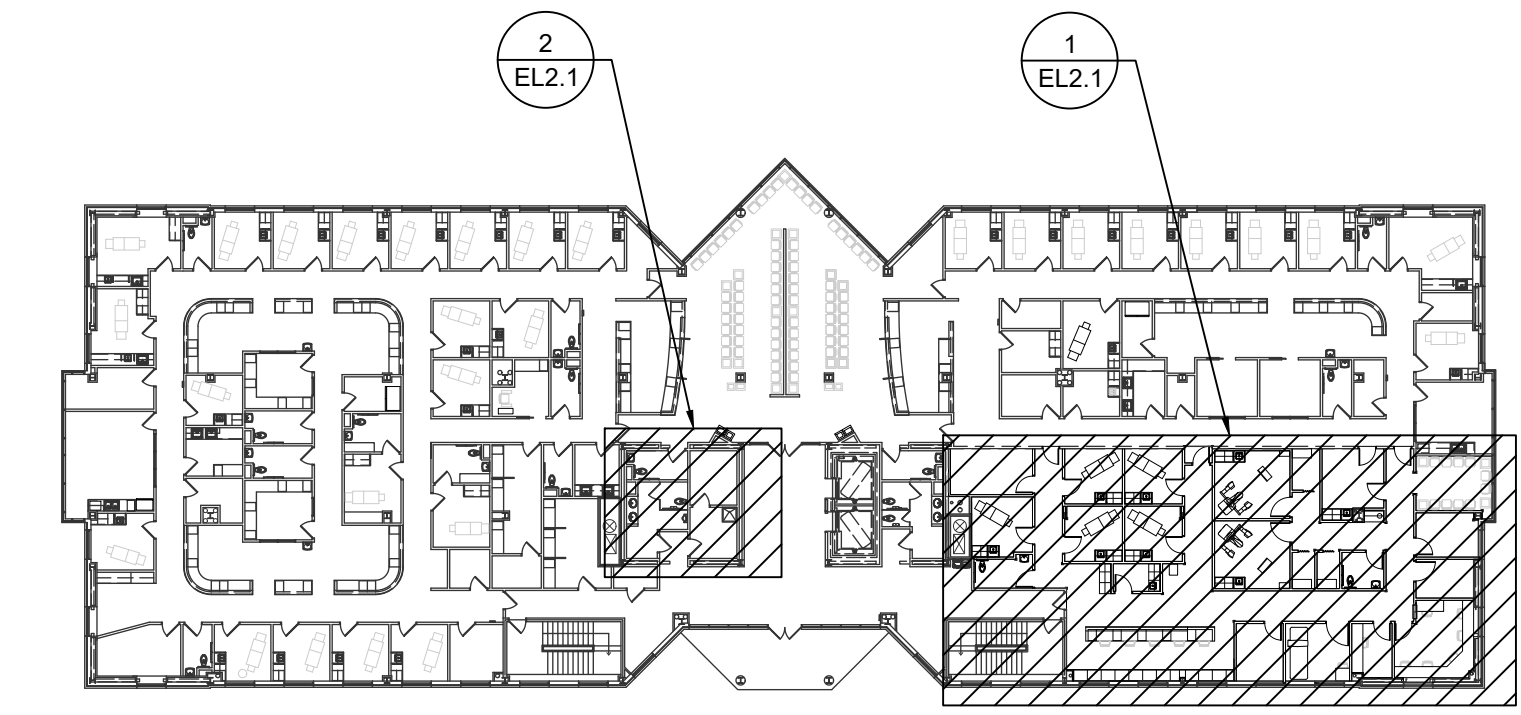
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**1 PARTIAL SECOND FLOOR LIGHTING PLAN**  
1/4" = 1'-0"  
PLAN NORTH



**2 PARTIAL SECOND FLOOR LIGHTING PLAN**  
1/4" = 1'-0"  
PLAN NORTH



**3 KEY PLAN**  
NOT TO SCALE

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Project Manager JRB	Drawn By AJC
Date 02.09.2024	Reviewed By RDM
Project ID	
Sheet Title	

ELECTRICAL LIGHTING  
SECOND FLOOR PLAN

Sheet No.

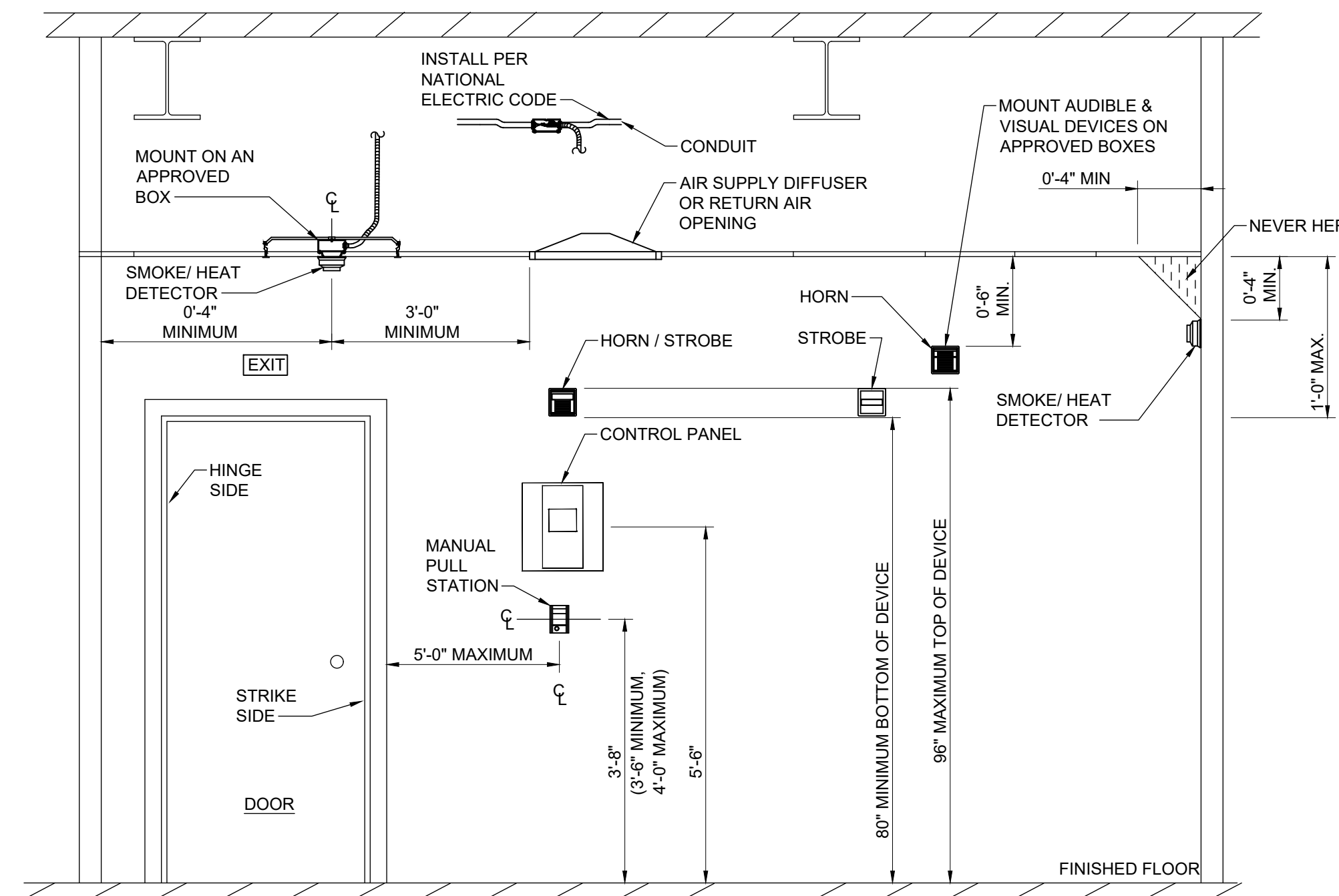
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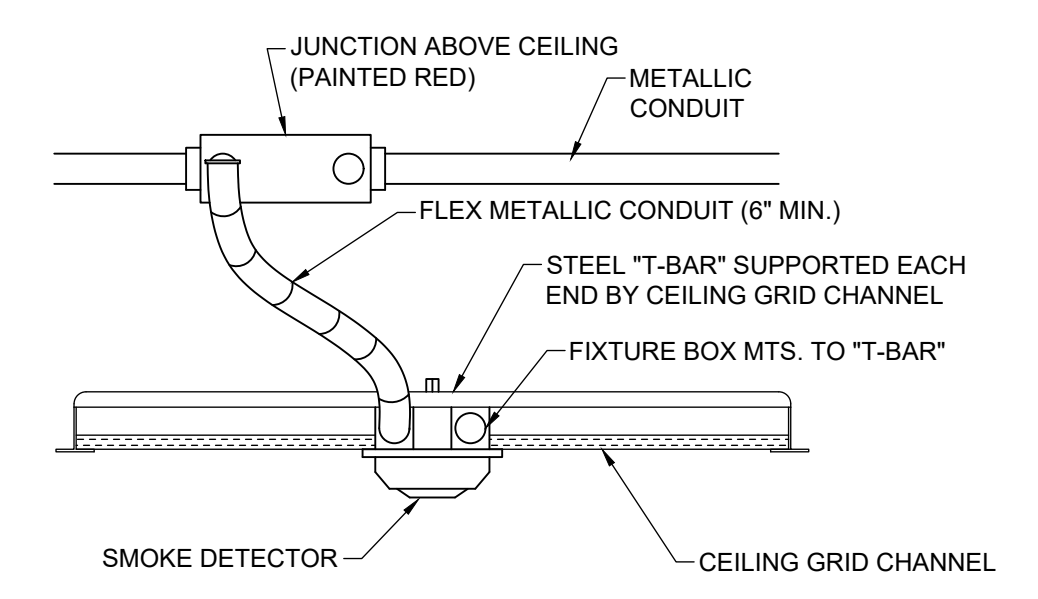
FIRE ALARM LEGEND	
SYMBOL	DESCRIPTION
	FIRE ALARM MANUAL STATION, 48" AFF
	FIRE ALARM ABORT KILL SWITCH, 48" AFF
	FIRE DEPT. KNOX BOX, 60" AFF
	FIRE ALARM HORN/STROBE DEVICE, 80" AFF, "15cd" INDICATES CANDELA RATING
	FIRE HORN (ONLY) DEVICE, 80" AFF
	FIRE ALARM HORN/STROBE DEVICE, CEILING MOUNTED, "15cd" INDICATES CANDELA RATING
	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15cd" INDICATES CANDELA RATING
	FIRE ALARM VISUAL (ONLY) CEILING MOUNTED "15cd" INDICATES CANDELA RATING
	FIRE ALARM SPEAKER/STROBE DEVICE, 80" AFF, "15cd" INDICATES CANDELA RATING
	FIRE ALARM SPEAKER DEVICE, 80" AFF
	FIRE ALARM SPEAKER/STROBE DEVICE, CEILING MOUNTED, "15cd" INDICATES CANDELA RATING
	FIRE ALARM SPEAKER DEVICE, CEILING MOUNTED
	FIRE ALARM BELL, 80" AFF
	FIRE ALARM BELL/STROBE, 80" AFF
	FIRE ALARM CHIME, 80" AFF, "15cd" INDICATES CANDELA RATING
	FIRE ALARM CHIME/STROBE, 80" AFF, "15cd" INDICATES CANDELA RATING
	FIRE ALARM CHIME/STROBE, CEILING MOUNTED, "15cd" INDICATES CANDELA RATING
	HEAT DETECTOR, CEILING MOUNTED
	SMOKE DETECTOR, CEILING MOUNTED
	SMOKE/CO2 DETECTOR, CEILING MOUNTED
	DUCT MOUNTED SMOKE DETECTOR
	DUCT MOUNTED HEAT DETECTOR
	DOOR HOLD OPEN DEVICE BY G.C.
	FIRE ALARM LINEAR BEAM SMOKE DETECTOR, INSTALLED APPROX. 12" BELOW CEILING, OR PER LISTING. PROVIDE REMOTE TEST/STATUS SWITCH AT 80" AFF BELOW DEVICE
	SPRINKLER FLOW SWITCH
	SPRINKLER TAMPER SWITCH
	LEVEL SWITCH
	PRESSURE SWITCH
	TEMPERATURE SWITCH
	REMOTE INDICATING DEVICE (RAIL), CEILING MOUNTED
	REMOTE INDICATING DEVICE (RAIL), WALL MOUNTED
	MONITOR MODULE
	MONITOR MODULE, WALL MOUNTED
	ISOLATION MODULE
	CONTROL MODULE
	CONTROL MODULE, WALL MOUNTED
	FIRE ALARM CONTROL PANEL (FACP)
	FIRE ALARM REMOTE ANNUNCIATOR PANEL
	GAS VALVE CONTROL MODULE
	END OF LINE RESISTOR (EOR)

(SYMBOLS SHOWN ARE FOR REFERENCE ONLY AND MAY NOT IMPLY CONTRACTUAL REQUIREMENTS)

ACCESS CONTROLS LEGEND	
SYMBOL	DESCRIPTION
	PROX READER STATION. PROVIDE AND INSTALL SINGLE GANG OUTLET BOX AT 48" AFF TO TOP OF BOX. PROVIDE 3/4" EMPTY CND TO CEILING CAVITY AND 3/4" EMPTY CND TO DOOR FRAME FOR DOOR STRIKE. PROX READ AND CABLES PROVIDED AND INSTALLED BY OWNER



1 DEVICE MOUNTING DETAIL NOT TO SCALE



2 TYPICAL CEILING MOUNTED DEVICE DETAIL NOT TO SCALE

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Project Manager JRB	Drawn By AJC
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Sheet Title  
**SYSTEMS ABBREVIATIONS, LEGEND & DETAILS**

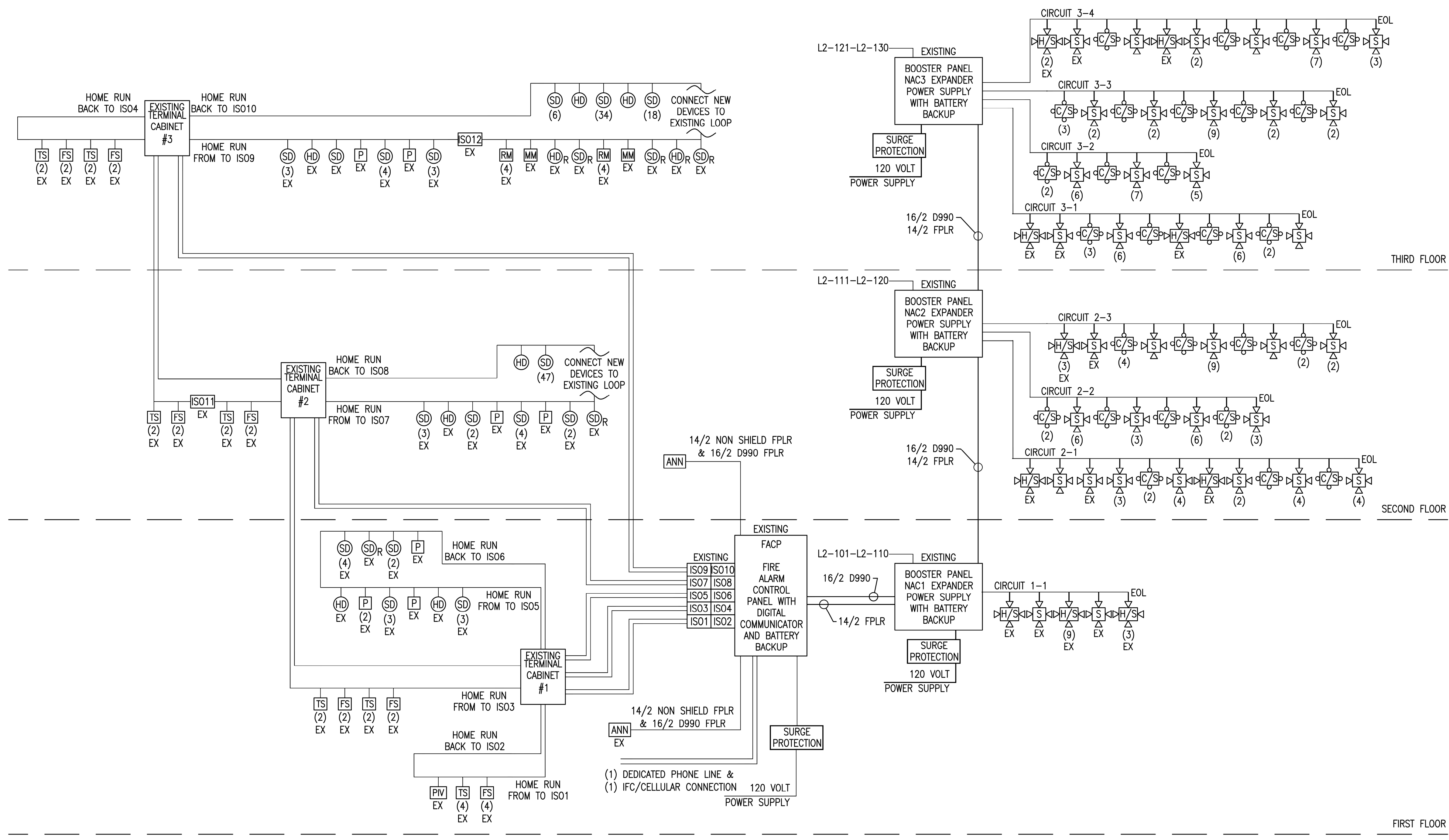
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**FIRE ALARM SYSTEMS LEGEND**

[P]	PULL STATION
[SD]	SMOKE DETECTOR
[SD <sub>R</sub> ]	SMOKE DETECTOR WITH ELEVATOR RECALL
[HD]	HEAT DETECTOR
[HD <sub>R</sub> ]	HEAT DETECTOR WITH ELEVATOR RECALL
[S]	CEILING MOUNTED STROBE WITH CANDELA RATING
[C/S]	CEILING MOUNTED CHIME/STROBE WITH CANDELA RATING
[H/S]	CEILING MOUNTED HORN/STROBE WITH CANDELA RATING
[FACP]	FIRE ALARM PANEL
[ANN]	FIRE ALARM ANNUNCIATOR PANEL
[NAC1]	NAC EXTENDER PANEL
[ISO1]	ISOLATOR PANEL
[TC1]	TERMINAL CABINET
[MM]	MONITOR MODULE
[RM]	RELAY MODULE
[PIV]	POST INDICATOR VALVE
[FS]	FLOW SWITCH
[TS]	TAMPER SWITCH
[EX]	EXISTING



**FIRE ALARM RISER DIAGRAM NOTES:**

1. THE FIRE ALARM RISER DIAGRAM AND SYMBOLS LEGEND IS THAT WHICH WAS PROVIDED BY MODERN EDGE TECHNOLOGIES, PILOT MOUNTAIN, NC, THE FIRE ALARM CONTRACTOR FOR THE 2019 SECOND AND THIRD FLOORS UPFITS. IT IS PROVIDED FOR GUIDANCE AND SHOULD BE VERIFIED. THE SHOP DRAWINGS FOR THAT WORK ARE AVAILABLE FROM THE ENGINEER UPON REQUEST.
2. NEW INITIATING DEVICES, NOTIFICATION APPLIANCES, ETC. NOT SHOWN ON THIS RISER DIAGRAM, BUT SHOWN ON THE SYSTEMS FLOOR PLANS, ARE INTENDED TO BE EXTENDED FROM EXISTING SECOND FLOOR CIRCUITS SHOWN.
3. PROVIDE ADDITIONAL NAC POWER SUPPLIES AND POWER FROM EXISTING BRANCH CIRCUIT PANELS SERVING THE SPACE.
4. SEE SPECIFICATIONS SECTION 283111 FOR ADDITIONAL DETAILS AND REQUIREMENTS.

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

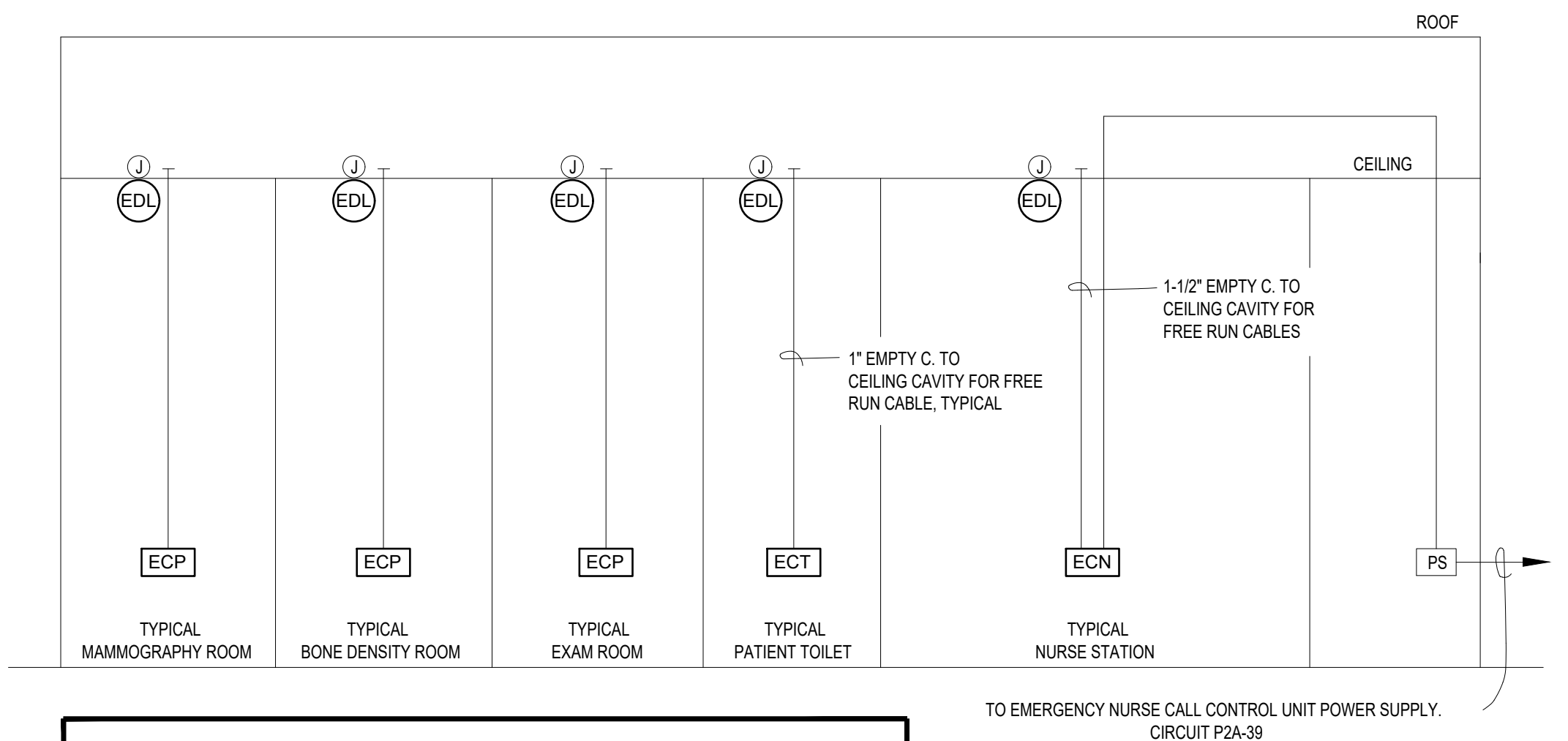
Project Manager JRB	Drawn By AJC
Date 02.09.2024	Reviewed By RDM
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Sheet Title	

**EMERGENCY CALL SYSTEM LEGEND**

SYMBOL	DESCRIPTION
ECN	EMERGENCY CALL NURSE STATION
ECP	EMERGENCY CALL PATIENT STATION, 60" AFF
ECT	EMERGENCY CALL TOILET STATION, 36" AFF
EDL	EMERGENCY CALL DOME LIGHT, CEILING MOUNTED
PS	EMERGENCY CALL SYSTEM POWER SUPPLY
J	JUNCTION BOX, CEILING MOUNTED

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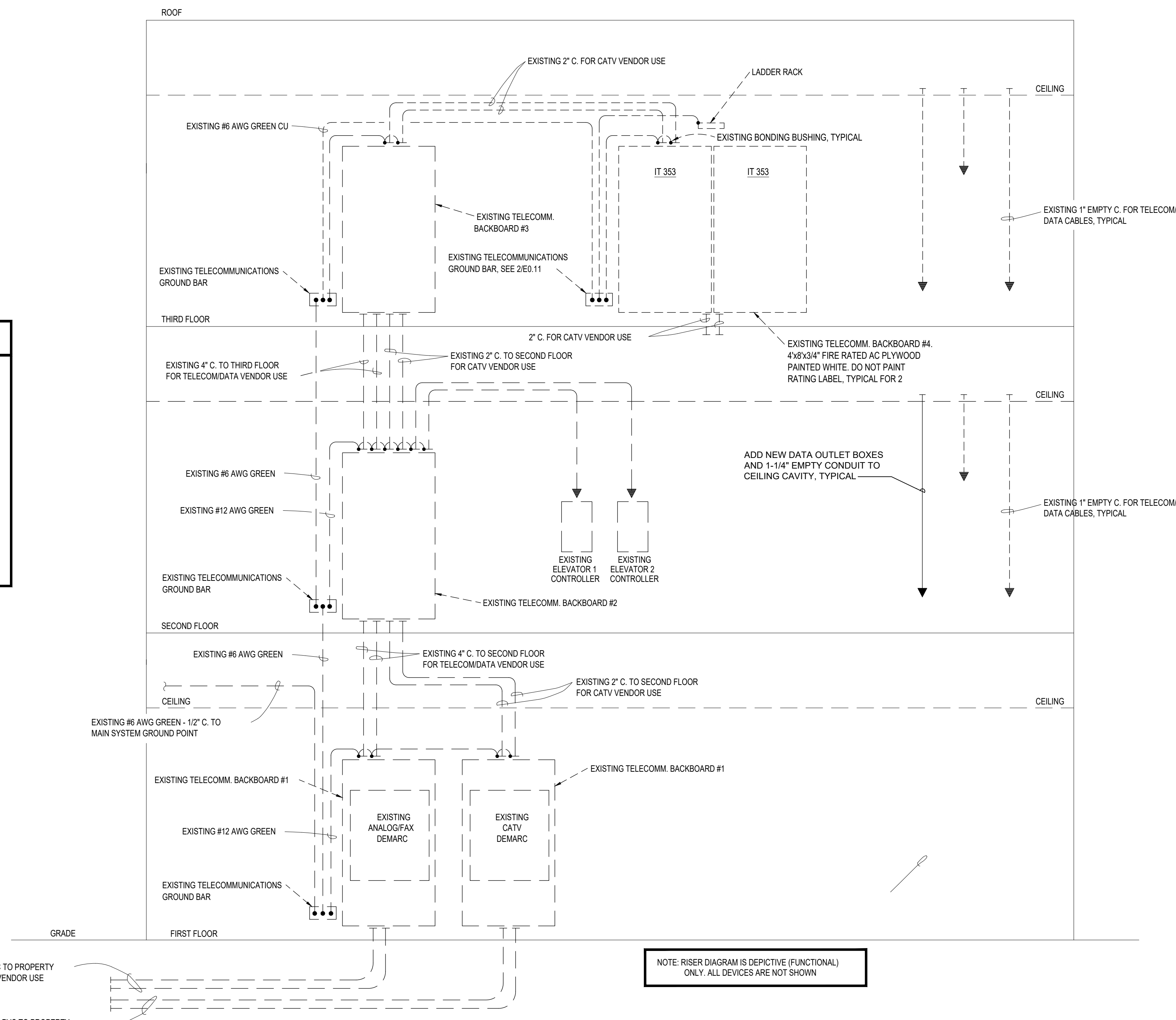


NOTES: 1. FUNCTIONAL EMERGENCY CALL SYSTEM RISER DIAGRAM IS DEPICTIVE (FUNCTIONAL) ONLY. ALL DEVICES ARE NOT INDICATED.  
 2. PROVIDE OUTLET BOX AS REQUIRED BY EMERGENCY CALL DEVICE AND EMPTY 1" C. TO ACCESSIBLE CEILING CAVITY. EMERGENCY CALL DEVICES AND WIRING PROVIDED AND INSTALLED BY E.C.

**1 FUNCTIONAL EMERGENCY CALL SYSTEM RISER DIAGRAM**  
 NOT TO SCALE

**EMERGENCY CALL SYSTEM SPECIFICATIONS:**

- A. PROVIDE EMERGENCY CALL SYSTEM AS SHOWN. THE CONTRACTOR SHALL FURNISH ALL PARTS, MATERIALS, LABOR, ACCESSORIES, CONNECTIONS, EQUIPMENT, PROGRAMMING, ETC. REQUIRED FOR THE SYSTEM TO FUNCTION AS DESCRIBED. PROVIDE ALL DOCUMENTATION, TESTING AND CERTIFICATION SERVICES AS REQUIRED BY ALL PERTINENT CODES AND THE AUTHORITY HAVING JURISDICTION (AHJ). ALL WORK SHALL BE IN COMPLIANCE WITH THE NEC AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. SYSTEM SHALL BE NEW, WITH A FULL WARRANTY (PARTS AND LABOR) OF AT LEAST ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
- B. OPERATION: DEPRESSING A EMERGENCY CALL LAVATORY CORD PUSHBUTTON OR AN EMERGENCY CALL PATIENT BUTTON ON AN EMERGENCY CALL STATION SHALL CAUSE THE APPROPRIATE ANNUNCIATOR INDICATOR TO LIGHT, THE ANNUNCIATOR AUDIBLE TONE DEVICE TO SOUND AND THE CEILING DOME LIGHT AT THE CALL STATION POSITION TO FLASH. UPON ACKNOWLEDGEMENT OF THE CALL BY ACTION AT THE ANNUNCIATOR, THE SYSTEM SHALL RESET AND THE ANNUNCIATOR AND DOME LIGHT INDICATIONS REMOVED.
- C. PROVIDE A SYSTEM FOR THE AREA AND SPACES AS SHOWN ON THE DRAWINGS:
- D. THE SYSTEMS SHALL INCLUDE:
  - 1. A SURFACE MOUNTED ANNUNCIATOR PANEL LOCATED AT EACH NURSES STATION. CORNELL EASY LABEL A-4400 SERIES, SIZED TO ACCOMMODATE THE QUANTITY OF CALL STATIONS INDICATED, PLUS 3 SPARES.
  - 2. A PATIENT CALL STATION WITH CALL CORD IN EACH SPACE AND ROOM AS INDICATED. CORNELL KB-111 SINGLE CALL CORD STATION WITH SW-110 CALL CORD.
  - 3. A PATIENT LAVATORY PULL CORD STATION IN EACH PATIENT TOILET. CORNELL KB-111.
  - 4. A CEILING MOUNTED DOME LIGHT AT EACH SPACE, ROOM AND TOILET INDICATED. CORNELL L-101.
  - 5. THE CALL SYSTEM POWER SUPPLY BATTERY BACKUP AND DOME LIGHT FLASHER MODULE. CORNELL B-5243A POWER SUPPLY WITH BATTERY AND CORNELL P-5000 FLASHER MODULE.
- E. ALL CABLE AND CONDUCTORS SHALL BE AS RECOMMENDED BY THE SYSTEM MANUFACTURER. CABLE SHALL BE INSTALLED FREE-RUN ON J-HOOKS IN THE CEILING CAVITY.
- F. CORNELL SERIES 4000 VISUAL NURSE CALL SYSTEM OR PRE-APPROVED EQUAL.



NOTE: RISER DIAGRAM IS DEPICTIVE (FUNCTIONAL) ONLY. ALL DEVICES ARE NOT SHOWN

**2 FUNCTIONAL TELECOMMUNICATIONS RISER DIAGRAM**  
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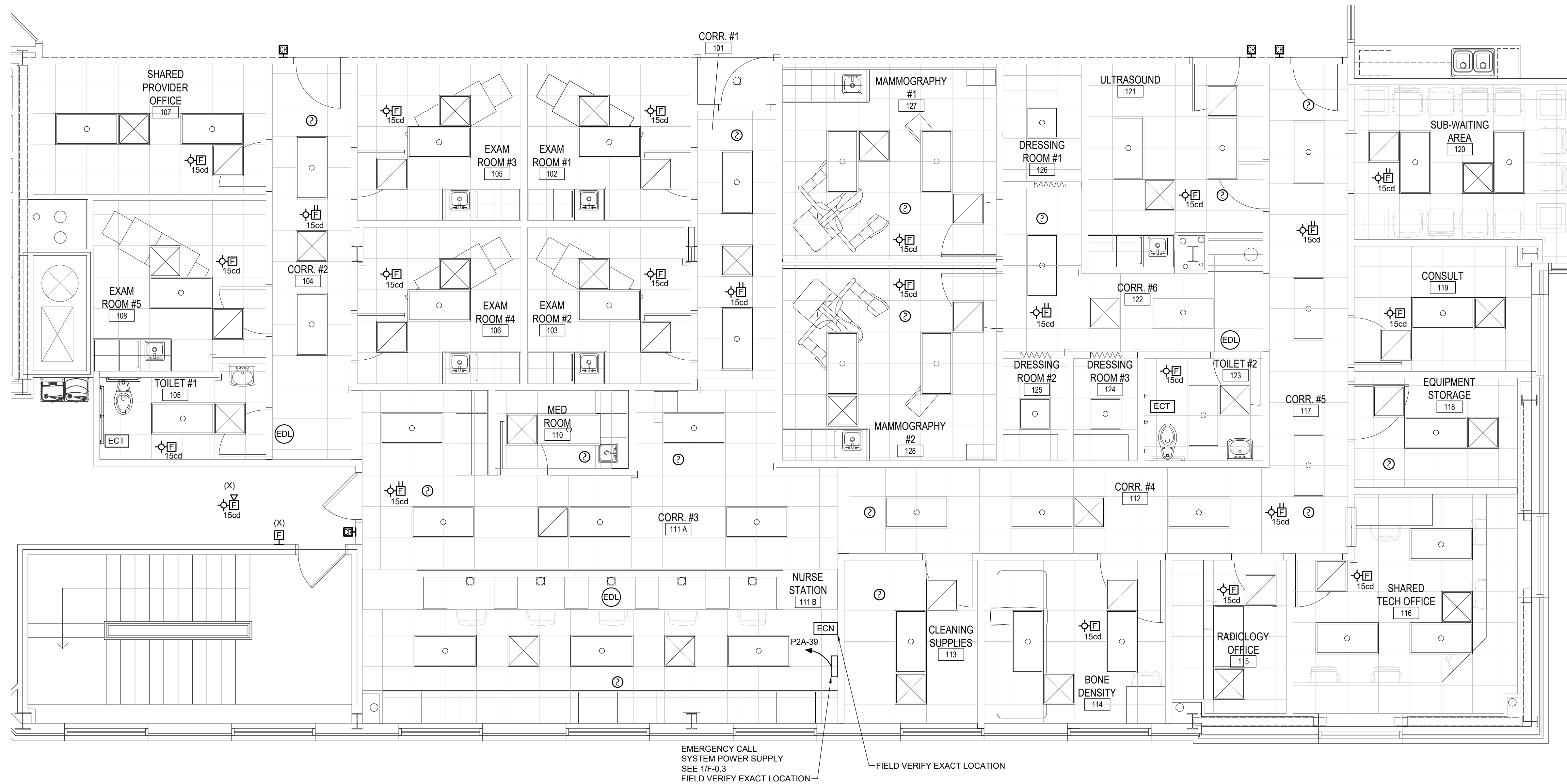
  

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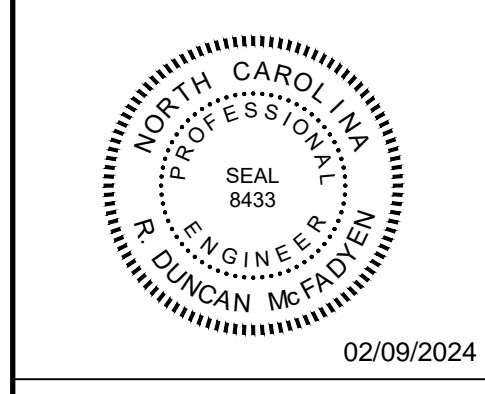
Project Manager	JRB	Drawn By	AJC
Date	02.09.2024	Reviewed By	RDM
Project ID			

Sheet Title: **SYSTEMS TELECOM & EMERGENCY CALL RISER & DETAILS**  
 Sheet No.: **F-0.3**



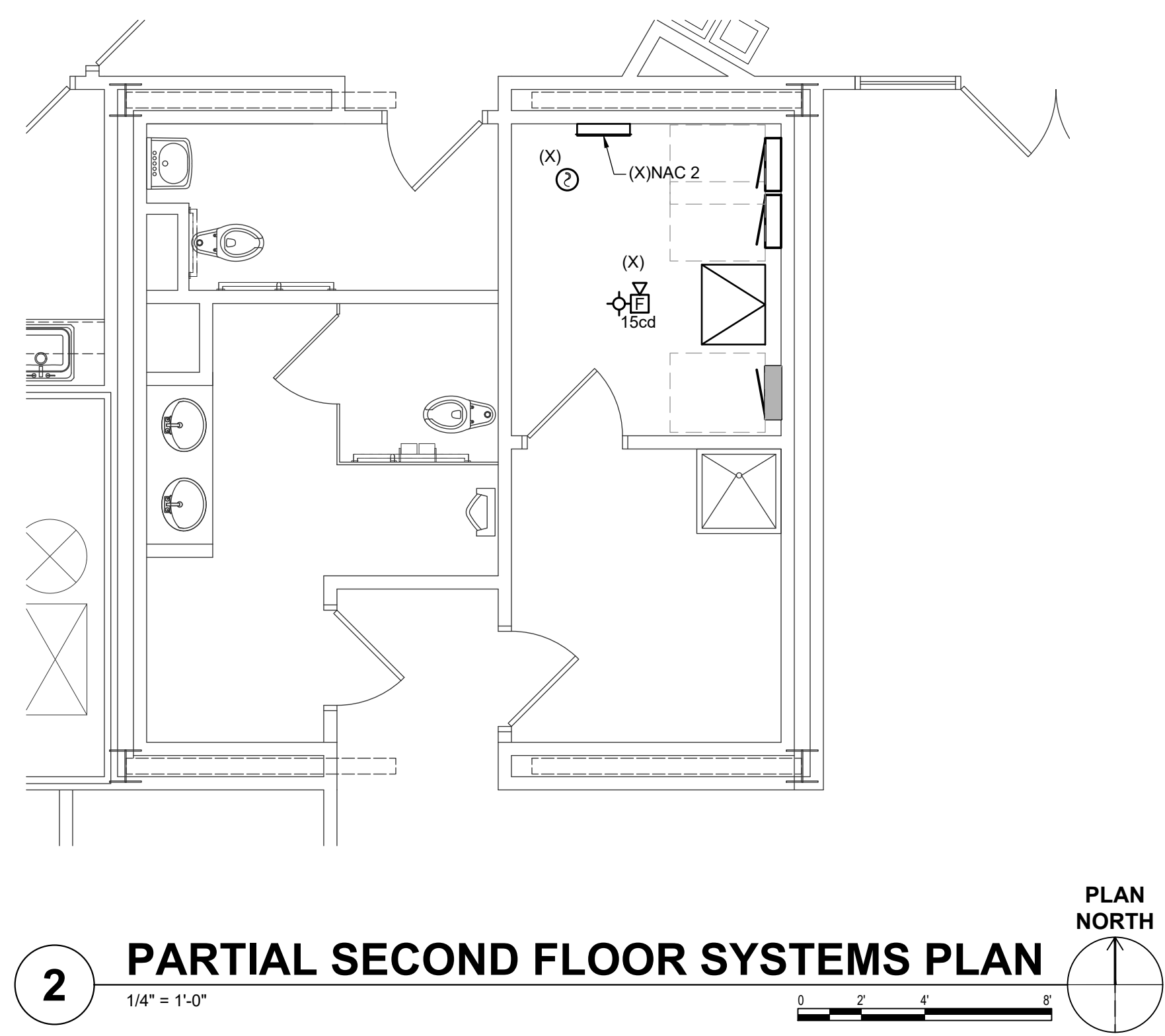
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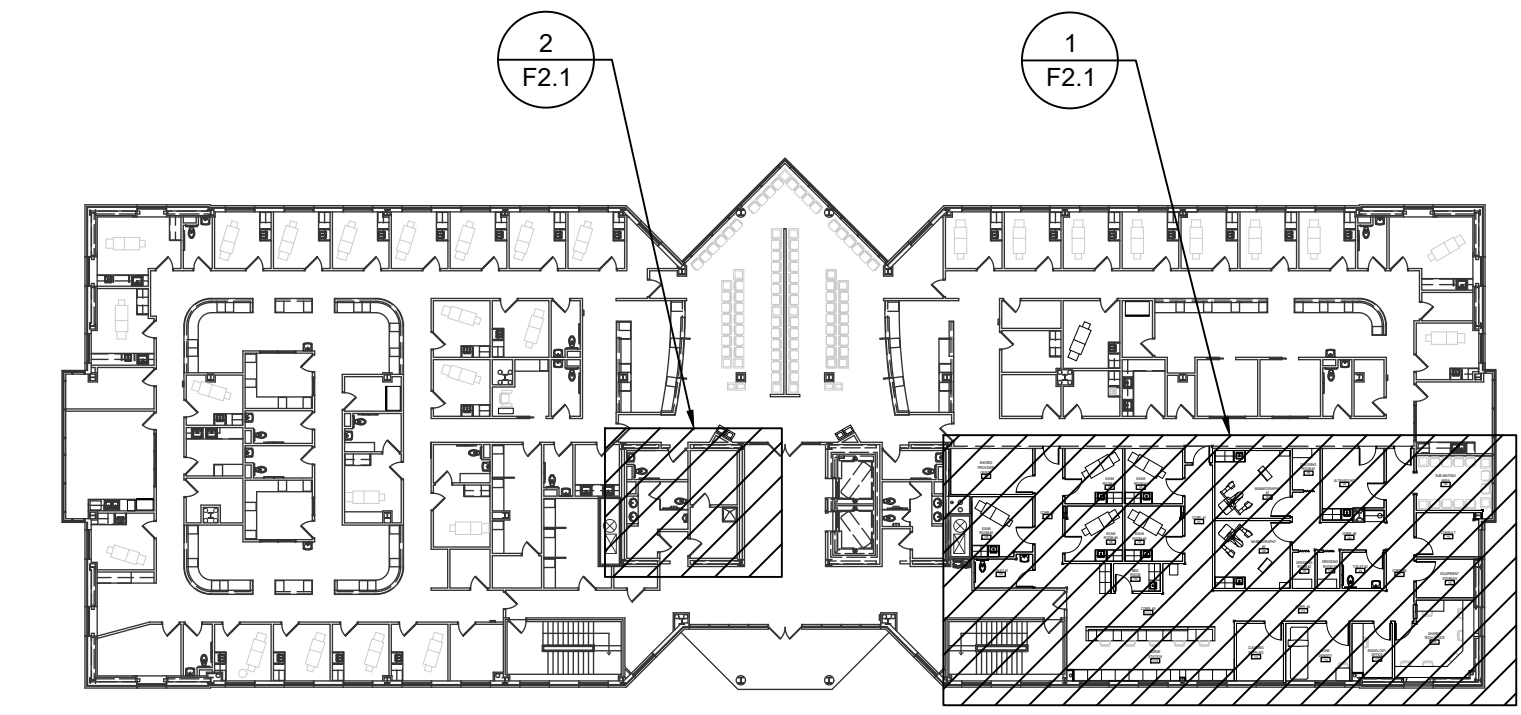


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**1 PARTIAL SECOND FLOOR SYSTEMS PLAN**  
 1/4" = 1'-0"



**2 PARTIAL SECOND FLOOR SYSTEMS PLAN**  
 1/4" = 1'-0"



**3 KEY PLAN**  
 NOT TO SCALE

REV.	DATE	DESCRIPTION

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Date	02.09.2024	Reviewed By	RDM
Project ID			

Sheet Title	<b>SYSTEMS SECOND FLOOR PLAN</b>		
Sheet No.			

**F2.1**