

Mark	Date	Description
	02/12/2010	ISSUED FOR CONSTRUCTION
	12/11/2009	DESIGN DEVELOPMENT
	10/23/2009	SCHEMATIC DESIGN

Drawing Status

**ISSUED FOR CONSTRUCTION**

Drawing Title

**ELECTRICAL LEGEND, NOTES & DETAILS**

PA / PE: WRH Drawn By: RJB

Drawing Number

**E00.1**

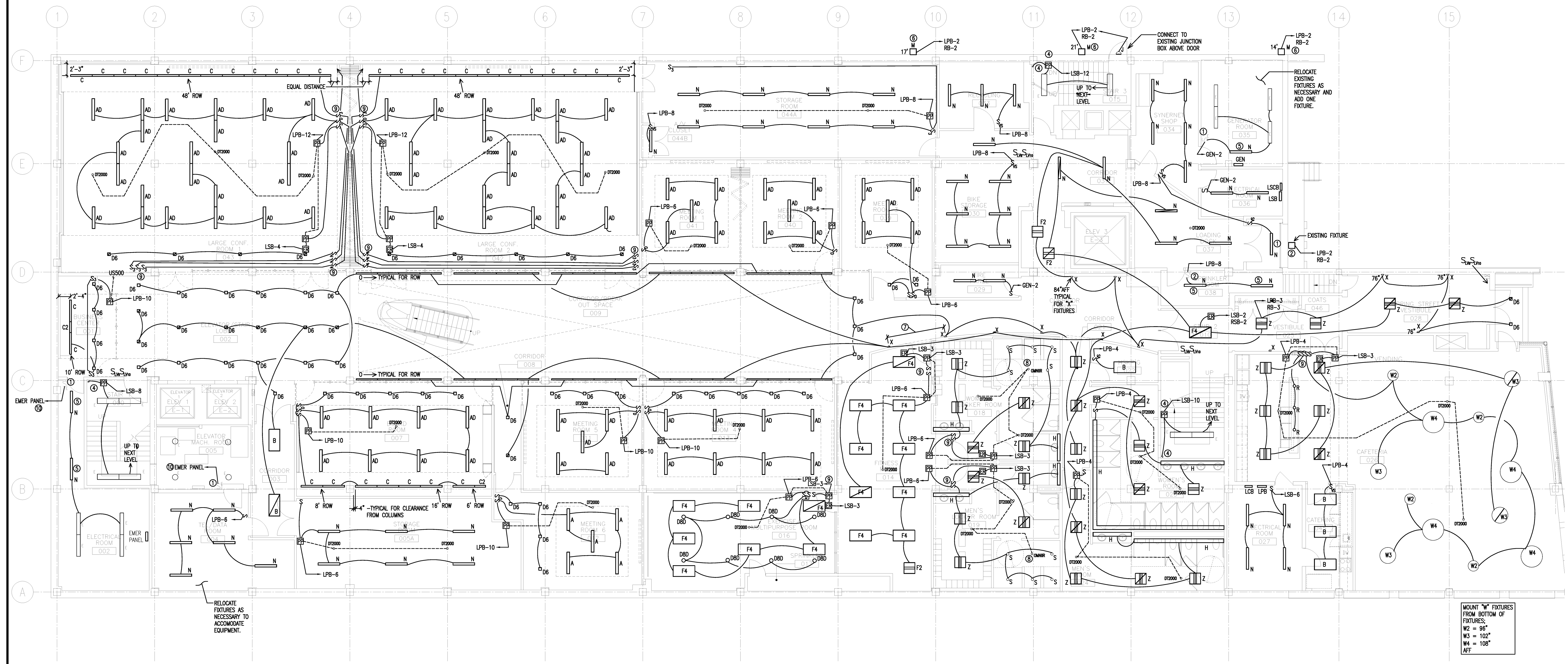
Project Title

**110 FREE STREET BUILDING RENOVATIONS**

PORTLAND, MAINE

HA Project No. **09146**

Key Plan



- LIGHTING KEY NOTES**
- CONNECT TO EXISTING JUNCTION BOX/CIRCUIT.
  - CONNECT EXISTING LIGHTING AND/OR EXISTING SWITCH TO NEW BRANCH CIRCUIT.
  - CONNECT TO LIGHT FIXTURES AND/OR OCCUPANCY SENSORS WITHIN ROOM, UNLESS NOTED OTHERWISE.
  - PROVIDE INFRARED MOTION SENSOR HUBBELL #LOIT AND #LJPP POWER PACK. PROVIDE SENSORS ON 1st, 2nd & 3rd FLOORS. PROVIDE ADDITIONAL POWER PACKS IF NECESSARY TO ACCOMMODATE QUANTITY OF SENSORS REQUIRED.
  - CONNECT NEW FIXTURES TO EXISTING BACK BOX AND CONDUCTORS.
  - COORDINATE FINAL LOCATION WITH ARCHITECTURAL ELEVATION DRAWINGS.
  - MOUNT FIXTURES EQUAL DISTANCE APART. COORDINATE WITH ARCHITECTURAL ELEVATION DRAWING FOR FINAL LOCATION. TYPICAL FOR ALL FIXTURES ON THIS WALL.
  - PROVIDE HUBBELL #OMNIR OCCUPANCY SENSOR WITH HUBBELL #OPE PROTECTIVE ENCLOSURE OR EQUAL.
  - PROVIDE SEPARATE BACKBOX FOR LIFE SAFETY LIGHTING CIRCUIT.
  - EXISTING LIGHTING AND/OR EXISTING SWITCH TO EXISTING PANEL BRANCH CIRCUIT.

- GENERAL NOTES**
- COORDINATE ALL WORK WITH OTHER TRADES.
  - ALL UNUSED CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
  - COORDINATE FINAL LOCATION OF LIGHTING FIXTURES IN ELECTRICAL/MECHANICAL ROOMS WITH INSTALLED EQUIPMENT AND OTHER TRADES.
  - MOUNT LIGHTING POWER PANELS AND EMERGENCY RELAYS ABOVE CEILING IN ACCESSIBLE LOCATIONS.

MOUNT "W" FIXTURES FROM BOTTOM OF FIXTURES:  
W2 = 96"  
W3 = 102"  
W4 = 108"  
AFF

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**ISSUED FOR CONSTRUCTION**

Drawing Title

**ELECTRICAL LIGHTING GROUND FLOOR PLAN**

PA / PE: WRH Drawn By: RJB

Drawing Number

**E10.0**

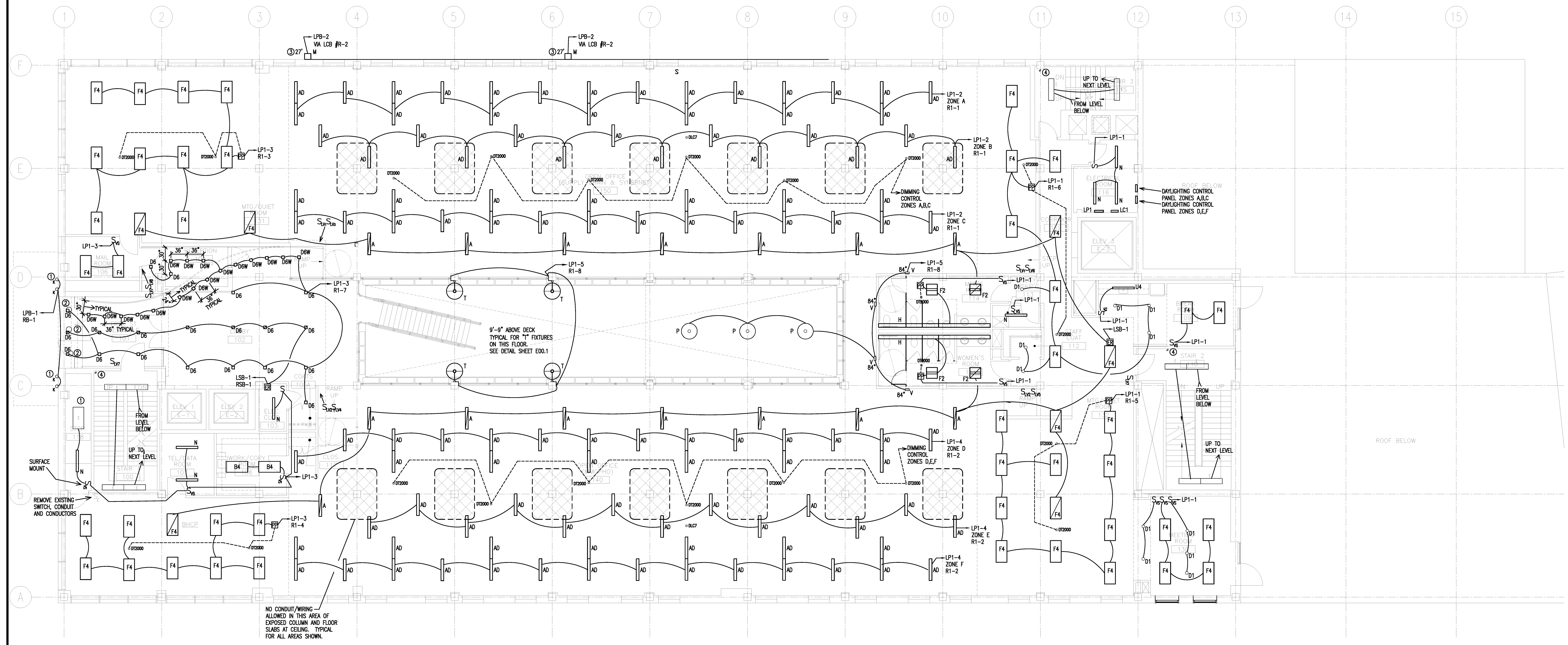
Project Title

**110 FREE STREET BUILDING RENOVATIONS**

PORTLAND, MAINE

HA Project No. **09146**

Key Plan



- LIGHTING KEY NOTES**
- CONNECT NEW FIXTURES TO EXISTING BACKBOXES AND CONDUCTORS. PROVIDE NEW CIRCUIT.
  - REMOVE EXISTING FIXTURE, CONDUIT AND CONDUCTORS BACK TO SOURCE.
  - COORDINATE FINAL LOCATION WITH ARCHITECTURAL EXTERIOR ELEVATION DRAWINGS.
  - PROVIDE INFRARED SENSOR HUBBELL #LOOT, CONNECT TO POWER PACK ON GROUND FLOOR.

- GENERAL NOTES**
- COORDINATE ALL WORK WITH OTHER TRADES.
  - ALL UNUSED CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
  - MOUNT LIGHTING POWER PACKS AND EMERGENCY RELAYS ABOVE CEILING IN ACCESSIBLE AREA.

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Drawing Status

**ISSUED FOR CONSTRUCTION**

Drawing Title

**ELECTRICAL LIGHTING FIRST FLOOR PLAN**

PA / PE: WRH Drawn By: RJB

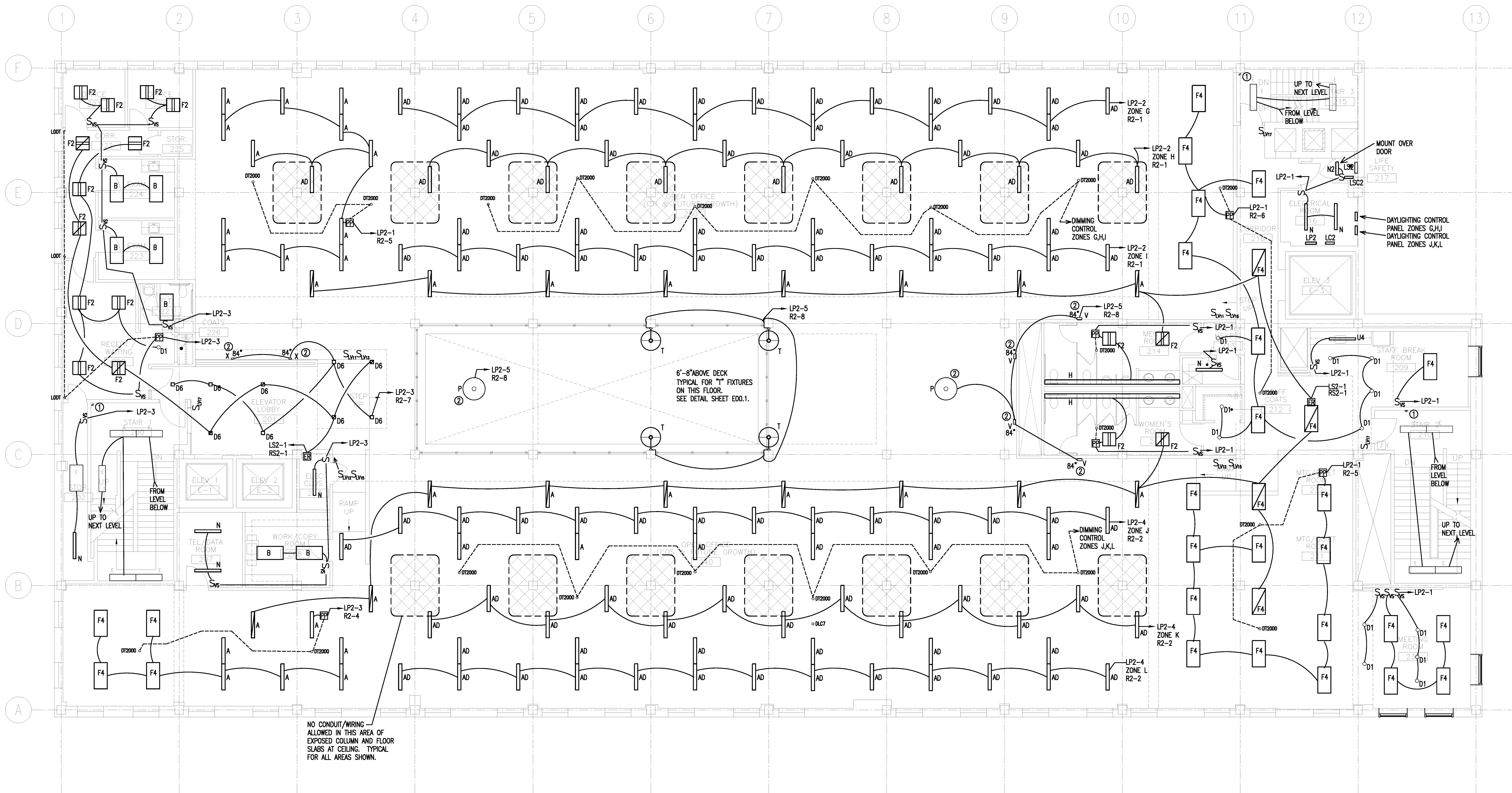
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**E10.01**

Issue Dates	
02/12/2010	ISSUED FOR CONSTRUCTION
12/11/2009	DESIGN DEVELOPMENT
10/23/2009	SCHEMATIC DESIGN
Mark	Date Description

Drawing Status	
<b>ISSUED FOR CONSTRUCTION</b>	
Drawing Title	
<b>ELECTRICAL LIGHTING SECOND FLOOR PLAN</b>	
PA / PE: WRH	Drawn By: RJB
Drawing Number	
<b>E10.2</b>	

Drawing Status	
<b>ISSUED FOR CONSTRUCTION</b>	
Drawing Title	
<b>ELECTRICAL LIGHTING SECOND FLOOR PLAN</b>	
PA / PE: WRH	Drawn By: RJB
Drawing Number	
<b>E10.2</b>	



**LIGHTING KEY NOTES**

- ① PROVIDE INFRARED SENSOR HUBBELL #L00T, CONNECT TO POWER PACK ON GROUND FLOOR.
- ② COORDINATE FINAL LOCATION OF FIXTURE WITH ARCHITECTURAL PLAN AND ELEVATION DRAWINGS.

**GENERAL NOTES**

- 1. COORDINATE ALL WORK WITH OTHER TRADES.
- 2. ALL UNUSED CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
- 3. MOUNT LIGHTING POWER PACKS AND EMERGENCY RELAYS ABOVE CEILING IN ACCESSIBLE AREA.

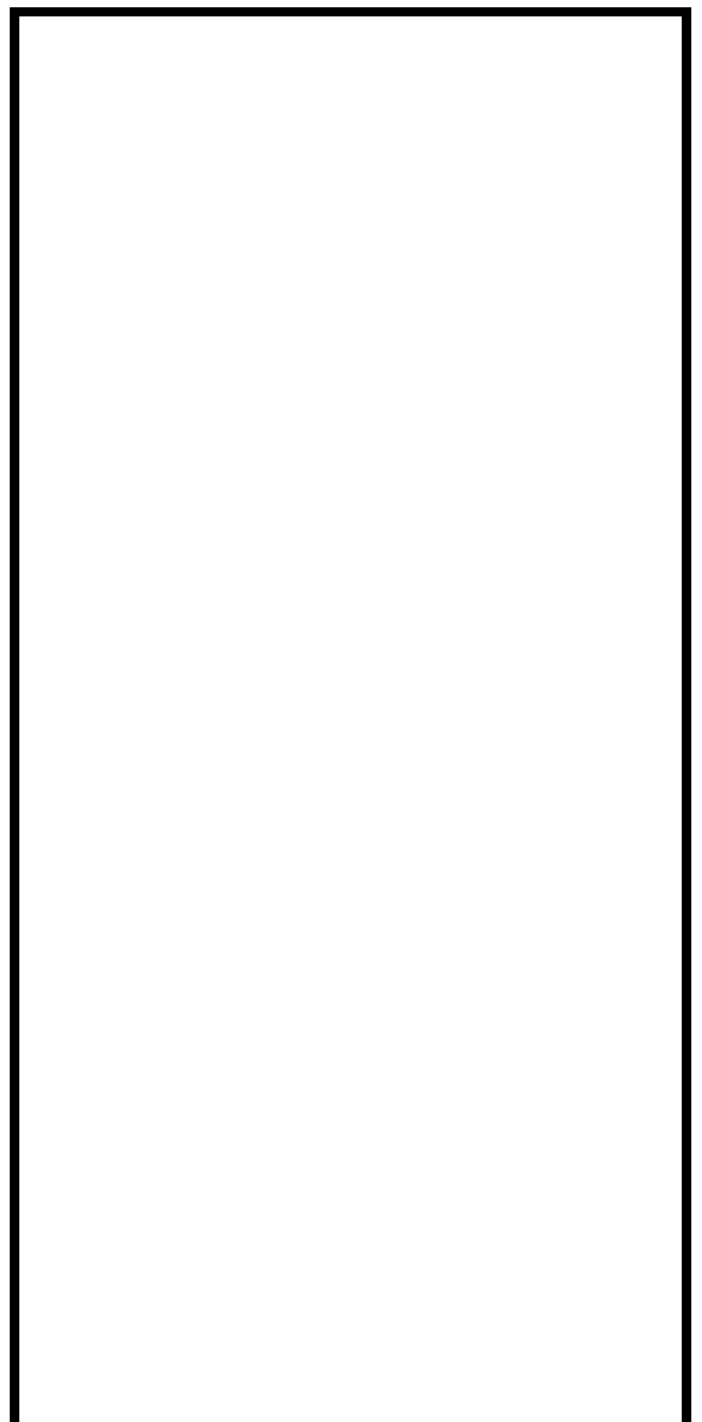
Project Title

**110 FREE STREET BUILDING RENOVATIONS**

PORTLAND, MAINE

HA Project No. **09146**

Key Plan




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12/11/2009	DESIGN DEVELOPMENT	
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Drawing Status

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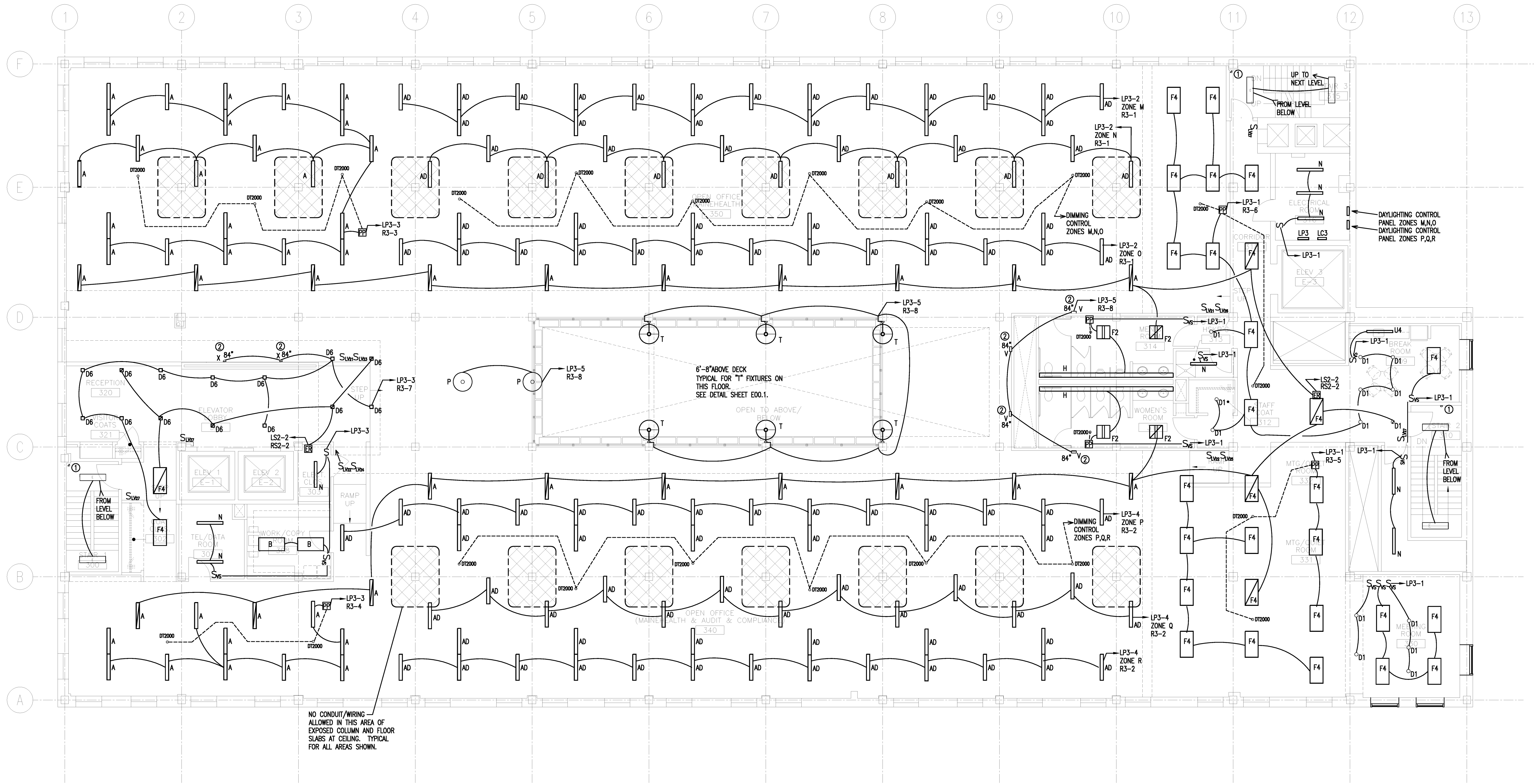
Drawing Title

**ELECTRICAL LIGHTING THIRD FLOOR PLAN**

PA / PE: WRH      Drawn By: RJB

Drawing Number

**E10.3**



NO CONDUIT/WIRING ALLOWED IN THIS AREA OF EXPOSED COLUMN AND FLOOR SLABS AT CEILING. TYPICAL FOR ALL AREAS SHOWN.

- LIGHTING KEY NOTES
- ① PROVIDE INFRARED SENSOR HUBBELL FLUOT, CONNECT TO POWER PACK ON GROUND FLOOR.
  - ② COORDINATE FINAL LOCATION WITH ARCHITECTURAL EXTERIOR ELEVATION DRAWINGS.

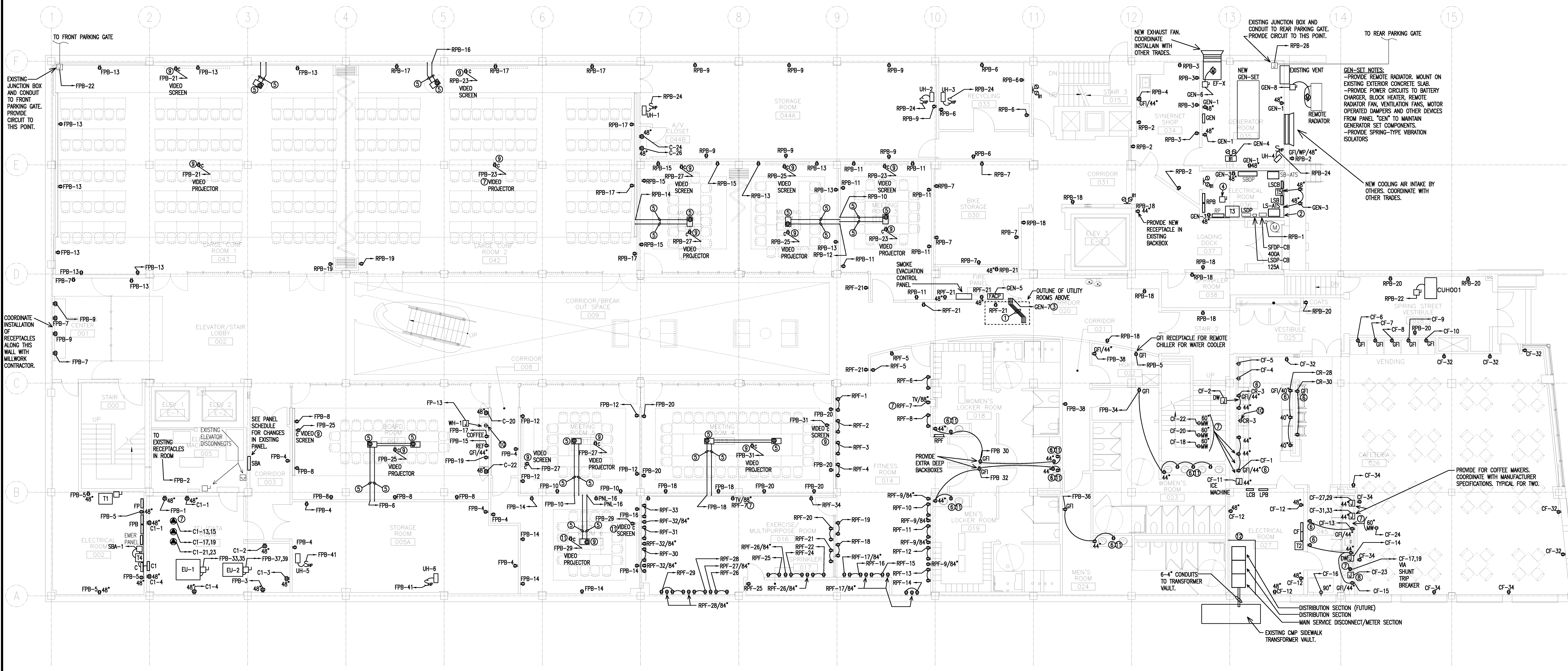
- GENERAL NOTES
- 1. COORDINATE ALL WORK WITH OTHER TRADES.
  - 2. ALL UNUSED CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
  - 3. MOUNT LIGHTING POWER PACKS AND EMERGENCY RELAYS ABOVE CEILING IN ACCESSIBLE AREA.



Project Title  
**110 FREE STREET BUILDING RENOVATIONS**  
PORTLAND, MAINE

HA Project No. **09146**

Key Plan



**POWER KEY NOTES**

- ① PROVIDE 1-3/4" CONDUIT FOR POWER CONDUCTORS TO FIRE ALARM POWER EXTENDERS AND 3-1 1/4" CONDUITS (ONE TO EACH FLOOR) FOR FIRE ALARM INTERCONNECTIONS. SEE ASSOCIATED FLOOR PLAN.
- ② PROVIDE NEW 3/4", SANDED PLYWOOD. PAINT FIRE-RETARDANT BLACK TO MATCH EXISTING, MOUNT FLOOR TO CEILING LINE.
- ③ PROVIDE FEED TO FIRE ALARM POWER EXTENDERS ON ALL FLOORS FROM THIS BRANCH CIRCUIT.
- ④ PROVIDE DISCONNECT FOR TRANSFORMER "T-3". MOUNT NEXT TO EXISTING PANEL.
- ⑤ PROVIDE FLUSH JUNCTION BOX AND 3/4" CONDUIT FOR POWER AND 1" CONDUIT WITH PULL STRING FOR COMMUNICATIONS TO ACCESSIBLE CEILING SPACE.
- ⑥ PROVIDE 20A GFI RECEPTACLE AND RECEPTACLES DOWNLINE AS SHOWN.
- ⑦ COORDINATE FINAL LOCATION AND HEIGHT OF SPECIFIC RECEPTACLE WITH OTHER TRADES, ARCHITECTURAL ELEVATIONS AND OWNER.
- ⑧ PROVIDE JUNCTION BOX AND REQUIRED CONNECTIONS TO FIRE ALARM SUPPRESSION SYSTEM FOR RANGE HOOD. INTERCONNECT WITH FIRE ALARM PANEL AND EXHAUST FAN. COORDINATE WITH MANUFACTURER AND OTHER TRADES. SEE DETAIL SHEET E70.2.
- ⑨ COORDINATE FINAL LOCATION AND REQUIREMENTS OF CEILING MOUNTED A/V RECEPTACLE FOR PROJECTOR AND PROJECTOR SCREEN WITH EQUIPMENT MANUFACTURER AND A/V CONTRACTOR/INSTALLER.
- ⑩ PROVIDE SINGLE RECEPTACLE UNDER SINK FOR WATER CHILLER. COORDINATE INSTALLATION AND LOCATION WITH OTHER TRADES.
- ⑪ PROVIDE RECEPTACLE UNDER SINK FOR SOAP DISPENSER. MOUNT AS HIGH AS POSSIBLE. COORDINATE LOCATION AND INSTALLATION WITH ARCHITECTURAL ELEVATION DRAWING AND OTHER TRADES.
- ⑫ PROVIDE 4" HIGH RAISED HOUSEKEEPING PAD, CONCRETE 45' x 1" CHAMFER ON ALL EDGES, 4" CLEAR OF EQUIPMENT FRONT AND SIDE.

**POWER GENERAL NOTES**

1. COORDINATE ALL WORK WITH OTHER TRADES.
2. ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
3. COORDINATE ALL SERVICE ENTRANCE WORK WITH CENTRAL MAINE POWER COMPANY.

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Mark	Date	Description
Issue Dates		

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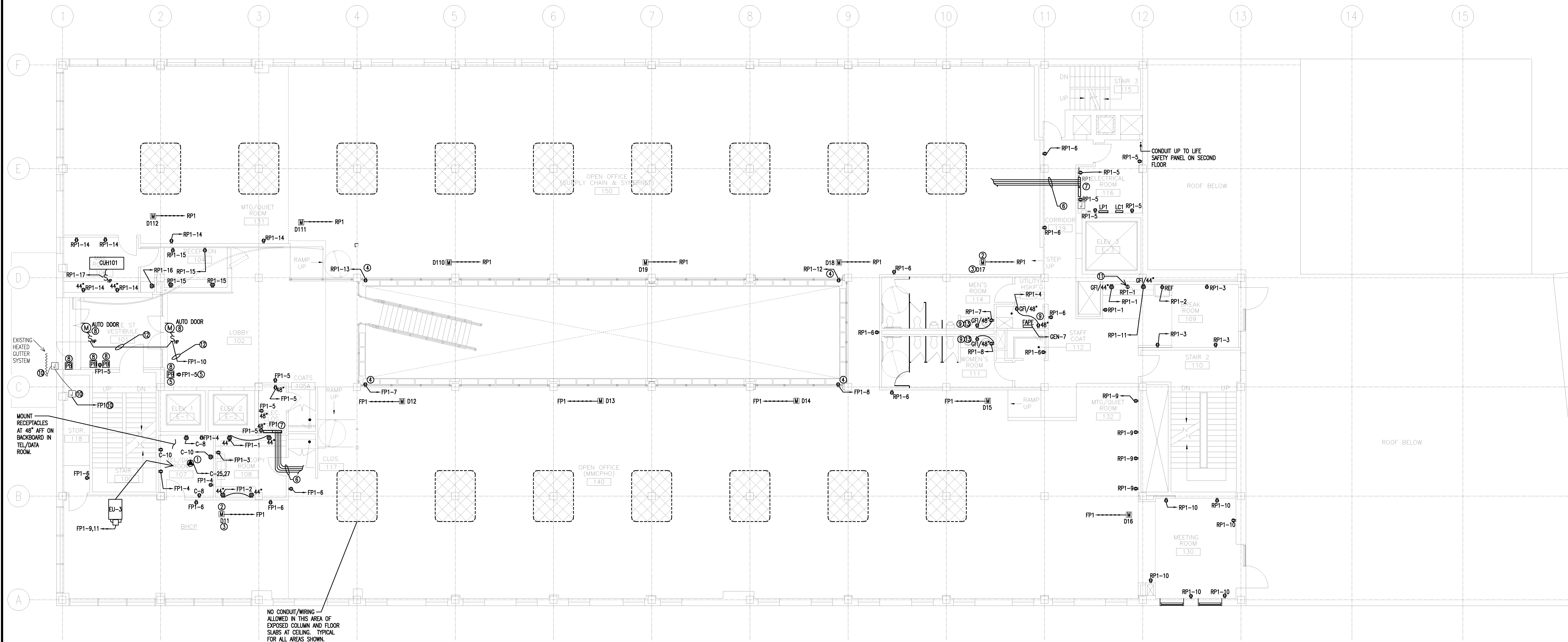
Drawing Title  
**ELECTRICAL POWER GROUND FLOOR PLAN**  
PA / PE: WRH Drawn By: RJB

Drawing Number  
**E20.0**

Project Title  
**110 FREE STREET BUILDING RENOVATIONS**  
PORTLAND, MAINE

HA Project No. **09146**

Key Plan



**POWER KEY NOTES**

- ① PROVIDE NEMA L6-30 RECEPTACLE FOR UNINTERRUPTIBLE POWER SUPPLY. MOUNT ON RACK. COORDINATE WITH OTHER TRADES.
- ② UNDERFLOOR 12"x12" MDB (MAIN DISTRIBUTION BOX), CONDUIT AND CONDUCTORS, FURNISHED AND INSTALLED BY RAISED FLOOR MANUFACTURER/CONTRACTOR. ELECTRICAL CONTRACTOR SHALL TERMINATE CIRCUITS IN NEW ELECTRICAL PANEL. CONTRACTOR SHALL LABEL CIRCUIT CONDUCTOR WITH MDB NUMBER, APPROXIMATE LOCATIONS OF MDB'S. COORDINATE WITH OTHER TRADES. TYPICAL FOR ALL MDB'S SHOWN.
- ③ LABEL MDB'S IN SUCCESSION ORDER. EXAMPLE: D11/FP1 = D (DISTRIBUTION BOX), 1 (FIRST FLOOR), 1 (NUMBER OF BOX), FP1 (PANEL SOURCE) AND CIRCUIT. TYPICAL FOR ALL MDB'S SHOWN.
- ④ RECEPTACLE TO BE RECESSED IN RAISED FLOOR. PROVIDE BROWN RECEPTACLE AND BRUSHED STAINLESS PLATE MOUNT IN WOODWORK BEHIND PLANTERS AROUND RAISED FLOOR.
- ⑤ COORDINATE DEVICE BACKBOXES CENTERED IN HORIZONTAL LINE ON THIS WALL. COORDINATE FINAL LOCATION WITH ARCHITECTURAL ELEVATION DRAWINGS.
- ⑥ TYPICAL CONDUIT/CONDUCTOR RUNS FROM MDB'S, BY RAISED FLOOR CONTRACTOR.
- ⑦ ELECTRICAL CONTRACTOR SHALL TERMINATE CIRCUITS FROM MDB'S IN NEW ELECTRICAL PANEL. EACH MDB SHALL HAVE SIX CIRCUITS WITH SEPARATE NEUTRALS, SIZE #10 AWG. CONTRACTOR SHALL LABEL CIRCUIT CONDUCTORS WITH MDB NUMBER AND UNDERFLOOR ACCESS MODULE NUMBER. COORDINATE WITH OTHER TRADES. TYPICAL FOR ALL MDB'S SHOWN.
- ⑧ PROVIDE BACKBOX, DISCONNECT SWITCH, CONDUIT AND CONDUCTORS FOR POWER AND CONTROL FOR AUTOMATIC DOOR OPENERS. FOLLOW MANUFACTURERS RECOMMENDATIONS.
- ⑨ PROVIDE 20A GF1 RECEPTACLE AND CONNECT RECEPTACLES DOWNLINE TO LOAD SIDE OF GF1 RECEPTACLE AS SHOWN.
- ⑩ EXISTING HEATED GUTTER SYSTEM TO STAY IN SERVICE. RE-CIRCUIT AS REQUIRED. CONTRACTOR SHALL VERIFY SYSTEM IS FUNCTIONAL AND REPLACE IF NECESSARY. PROVIDE BREAKER AS REQUIRED IN PANEL "FP1".
- ⑪ PROVIDE SINGLE RECEPTACLE UNDER SINK FOR WATER CHILLER. MOUNT AS HIGH AS POSSIBLE. COORDINATE FINAL LOCATION WITH OTHER TRADES.
- ⑫ COORDINATE INSTALLATION OF CONDUIT AND CONDUCTORS TO AUTO DOOR WITH ARCHITECTURAL PLANS, DETAILS AND ELEVATION DRAWINGS.
- ⑬ PROVIDE RECEPTACLE UNDER SINK FOR SOAP DISENSER. MOUNT AS HIGH AS POSSIBLE. COORDINATE LOCATION AND INSTALLATION WITH ARCHITECTURAL ELEVATION DRAWING AND OTHER TRADES.

**POWER GENERAL NOTES**

1. COORDINATE ALL WORK WITH OTHER TRADES.
2. ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
3. ALL RECEPTACLE HEIGHTS SHOWN ARE TAKEN FROM TOP OF RAISED FLOOR WHERE APPLICABLE.

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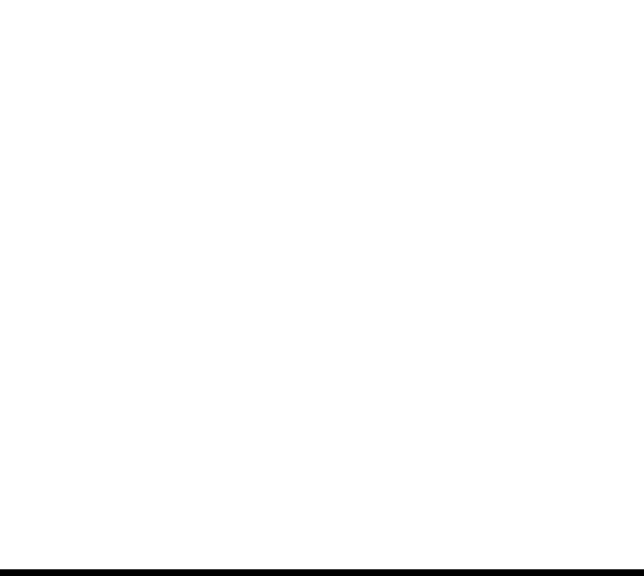
Drawing Title  
**ELECTRICAL POWER FIRST FLOOR PLAN**  
PA / PE: WRH Drawn By: RJB  
Drawing Number



Project Title  
**110 FREE STREET BUILDING RENOVATIONS**  
PORTLAND, MAINE

HA Project No. **09146**

Key Plan

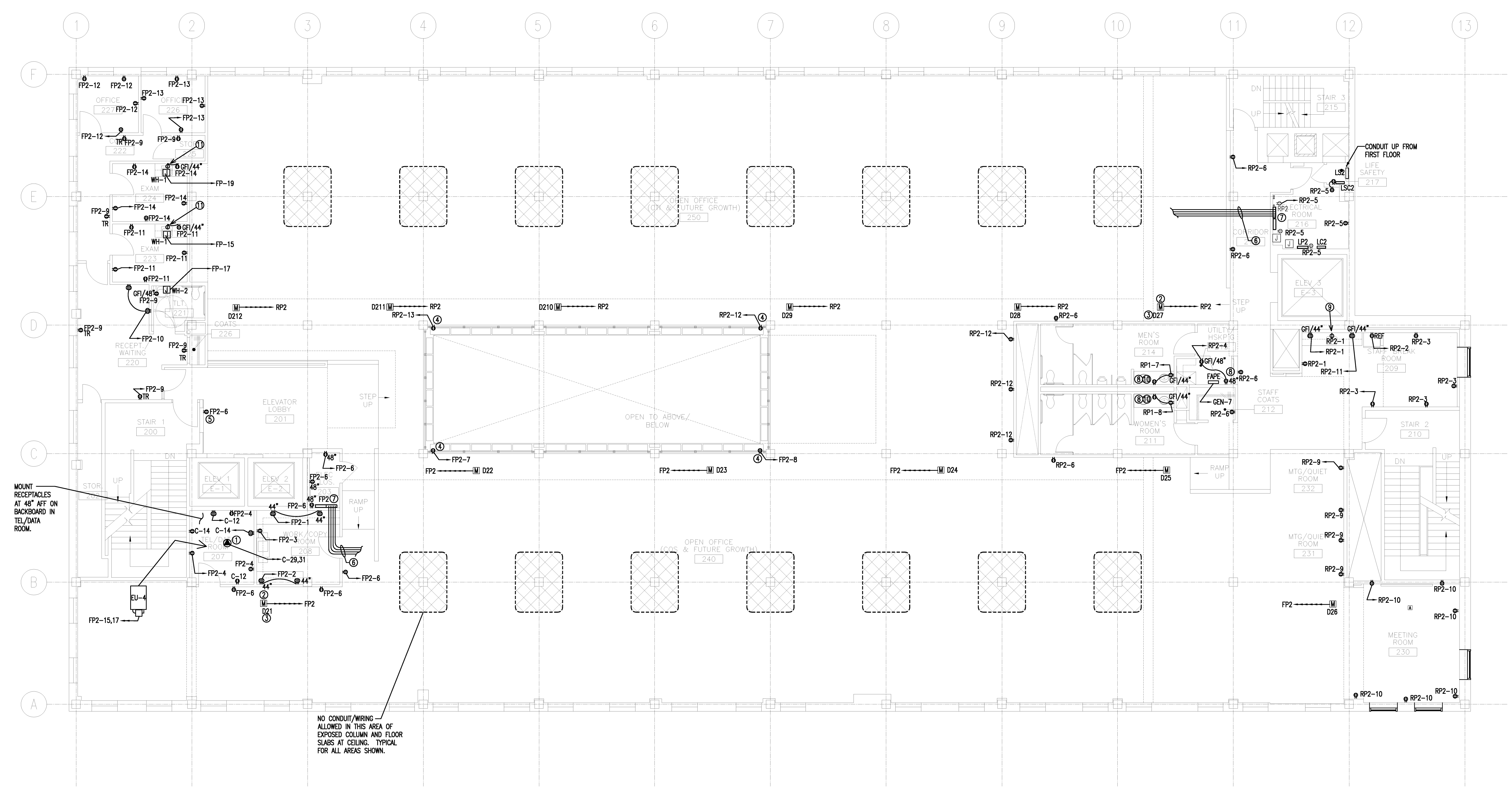


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12/11/2009	DESIGN DEVELOPMENT
10/23/2009	SCHEMATIC DESIGN

Drawing Status  
**ISSUED FOR CONSTRUCTION**

Drawing Title  
**ELECTRICAL POWER SECOND FLOOR PLAN**  
PA / PE: WRH Drawn By: R, J, B

Drawing Number  
**E20.2**



NO CONDUIT/WIRING ALLOWED IN THIS AREA OF EXPOSED COLUMN AND FLOOR SLABS AT CEILING. TYPICAL FOR ALL AREAS SHOWN.

**POWER KEY NOTES**

1. PROVIDE NEMA L6-30 RECEPTACLE FOR UNINTERRUPTIBLE POWER SUPPLY. MOUNT ON RACK. COORDINATE WITH OTHER TRADES.
2. UNDERFLOOR 12"x12" MDB (MAIN DISTRIBUTION BOX), CONDUIT AND CONDUCTORS, FURNISHED AND INSTALLED BY RAISED FLOOR MANUFACTURER/CONTRACTOR. ELECTRICAL CONTRACTOR SHALL TERMINATE CIRCUITS IN NEW ELECTRICAL PANEL. CONTRACTOR SHALL LABEL CIRCUIT CONDUCTOR WITH MDB NUMBER. APPROXIMATE LOCATIONS OF MDB'S SHOWN. COORDINATE WITH OTHER TRADES. TYPICAL FOR ALL MDB'S SHOWN.
3. LABEL MDB'S IN SUCCESSION ORDER. EXAMPLE: D21/FP1 = D (DISTRIBUTION BOX), 2(SECOND FLOOR), 1(NUMBER OF BOX), FP1(PANEL SOURCE) AND CIRCUIT. TYPICAL FOR ALL MDB'S SHOWN.
4. RECEPTACLE TO BE RECESSED IN RAISED FLOOR. PROVIDE BROWN RECEPTACLE AND BRUSHED STAINLESS PLATE MOUNT IN WOODWORK BEHIND PLANTERS AROUND RAISED FLOOR.
5. COORDINATE DEVICE BACKBOXES CENTERED IN HORIZONTAL LINE ON THIS WALL. COORDINATE FINAL LOCATION WITH ARCHITECTURAL ELEVATION DRAWINGS.
6. TYPICAL CONDUIT/CONDUCTOR RUNS FROM MDB'S, BY RAISED FLOOR CONTRACTOR.
7. ELECTRICAL CONTRACTOR SHALL TERMINATE CIRCUITS FROM MDB'S IN NEW ELECTRICAL PANEL. EACH MDB SHALL HAVE SIX CIRCUITS WITH SEPARATE NEUTRALS, SIZE #10 AWG. CONTRACTOR SHALL LABEL CIRCUIT CONDUCTORS WITH MDB NUMBER AND UNDERFLOOR ACCESS MODULE NUMBER. COORDINATE WITH OTHER TRADES. TYPICAL FOR ALL MDB'S SHOWN.
8. PROVIDE 20A GFI RECEPTACLE AND CONNECT RECEPTACLES DOWNLINE TO LOAD SIDE OF GFI RECEPTACLE AS SHOWN.
9. PROVIDE SINGLE RECEPTACLE UNDER SINK FOR WATER CHILLER. MOUNT AS HIGH AS POSSIBLE. COORDINATE FINAL LOCATION WITH OTHER TRADES.
10. PROVIDE RECEPTACLE UNDER SINK FOR SOAP DISPENSER. MOUNT AS HIGH AS POSSIBLE. COORDINATE LOCATION AND INSTALLATION WITH ARCHITECTURAL ELEVATION DRAWING AND OTHER TRADES.
11. PROVIDE SINGLE RECEPTACLE UNDER SINK FOR POWERED FAUCET. MOUNT AS HIGH AS POSSIBLE. COORDINATE FINAL LOCATION WITH OTHER TRADES.

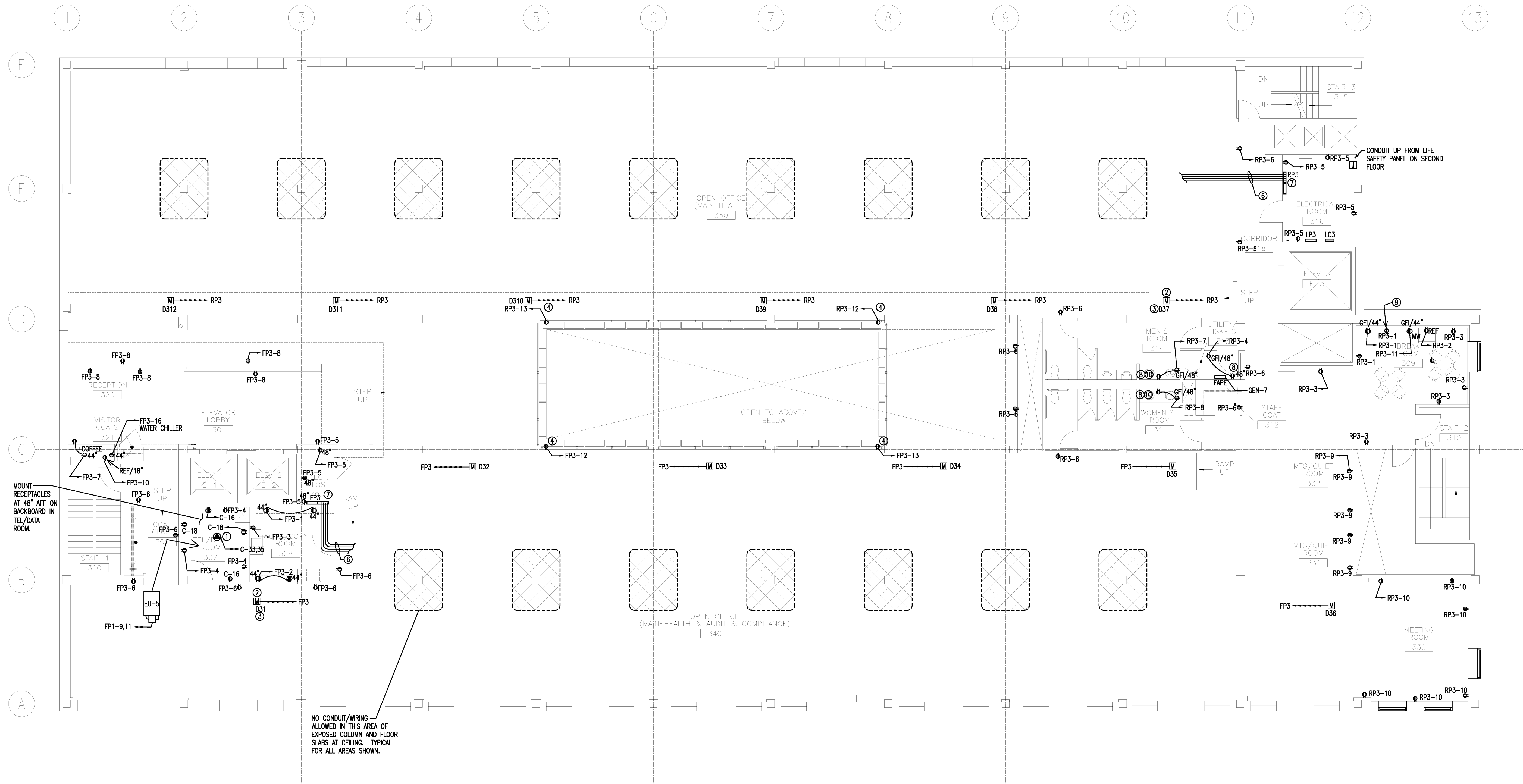
**POWER GENERAL NOTES**

1. COORDINATE ALL WORK WITH OTHER TRADES.
2. ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
3. ALL RECEPTACLE HEIGHTS SHOWN ARE TAKEN FROM TOP OF RAISED FLOOR WHERE APPLICABLE.

Project Title  
**110 FREE STREET BUILDING RENOVATIONS**  
 PORTLAND, MAINE

HA Project No. **09146**

Key Plan



MOUNT RECEPTACLES AT 48" AFF ON BACKBOARD IN TEL/DATA ROOM.

NO CONDUIT/WIRING ALLOWED IN THIS AREA OF EXPOSED COLUMN AND FLOOR SLABS AT CEILING. TYPICAL FOR ALL AREAS SHOWN.

**POWER KEY NOTES**

- ① PROVIDE NEMA L6-30 RECEPTACLE FOR UNINTERRUPTIBLE POWER SUPPLY. MOUNT ON RACK. COORDINATE WITH OTHER TRADES.
- ② UNDERFLOOR 12"x12" MDB (MAIN DISTRIBUTION BOX), CONDUIT AND CONDUCTORS, FURNISHED AND INSTALLED BY RAISED FLOOR MANUFACTURER/CONTRACTOR. ELECTRICAL CONTRACTOR SHALL TERMINATE CIRCUITS IN NEW ELECTRICAL PANEL. CONTRACTOR SHALL LABEL CIRCUIT CONDUCTOR WITH MDB NUMBER, APPROXIMATE LOCATIONS OF MDB'S SHOWN. COORDINATE WITH OTHER TRADES. TYPICAL FOR ALL MDB'S SHOWN.
- ③ LABEL MDB'S IN SUCCESSION ORDER. EXAMPLE: D31/FP1 = D (DISTRIBUTION BOX), 3 (THIRD FLOOR), 1 (NUMBER OF BOX), FP1 (PANEL SOURCE) AND CIRCUIT. TYPICAL FOR ALL MDB'S SHOWN.
- ④ RECEPTACLE TO BE RECESSED IN RAISED FLOOR. PROVIDE BROWN RECEPTACLE AND BRUSHED STAINLESS PLATE MOUNT IN WOODWORK BEHIND PLANTERS AROUND RAISED FLOOR.
- ⑤ COORDINATE DEVICE BACKBOXES CENTERED IN HORIZONTAL LINE ON THIS WALL. COORDINATE FINAL LOCATION WITH ARCHITECTURAL ELEVATION DRAWINGS.
- ⑥ TYPICAL CONDUIT/CONDUCTOR RUNS FROM MDB'S, BY RAISED FLOOR CONTRACTOR.
- ⑦ ELECTRICAL CONTRACTOR SHALL TERMINATE CIRCUITS FROM MDB'S IN NEW ELECTRICAL PANEL. EACH MDB SHALL HAVE SIX CIRCUITS WITH SEPARATE NEUTRALS, SIZE #10 AWG. CONTRACTOR SHALL LABEL CIRCUIT CONDUCTORS WITH MDB NUMBER AND UNDERFLOOR ACCESS MODULE NUMBER. COORDINATE WITH OTHER TRADES. TYPICAL FOR ALL MDB'S SHOWN.
- ⑧ PROVIDE 20A GF1 RECEPTACLE AND CONNECT RECEPTACLES DOWNLINE TO LOAD SIDE OF GF1 RECEPTACLE AS SHOWN.
- ⑨ PROVIDE SINGLE RECEPTACLE UNDER SINK FOR WATER CHILLER. MOUNT AS HIGH AS POSSIBLE. COORDINATE FINAL LOCATION WITH OTHER TRADES.
- ⑩ PROVIDE RECEPTACLE UNDER SINK FOR SOAP DISPENSER. MOUNT AS HIGH AS POSSIBLE. COORDINATE LOCATION AND INSTALLATION WITH ARCHITECTURAL ELEVATION DRAWING AND OTHER TRADES.

**POWER GENERAL NOTES**

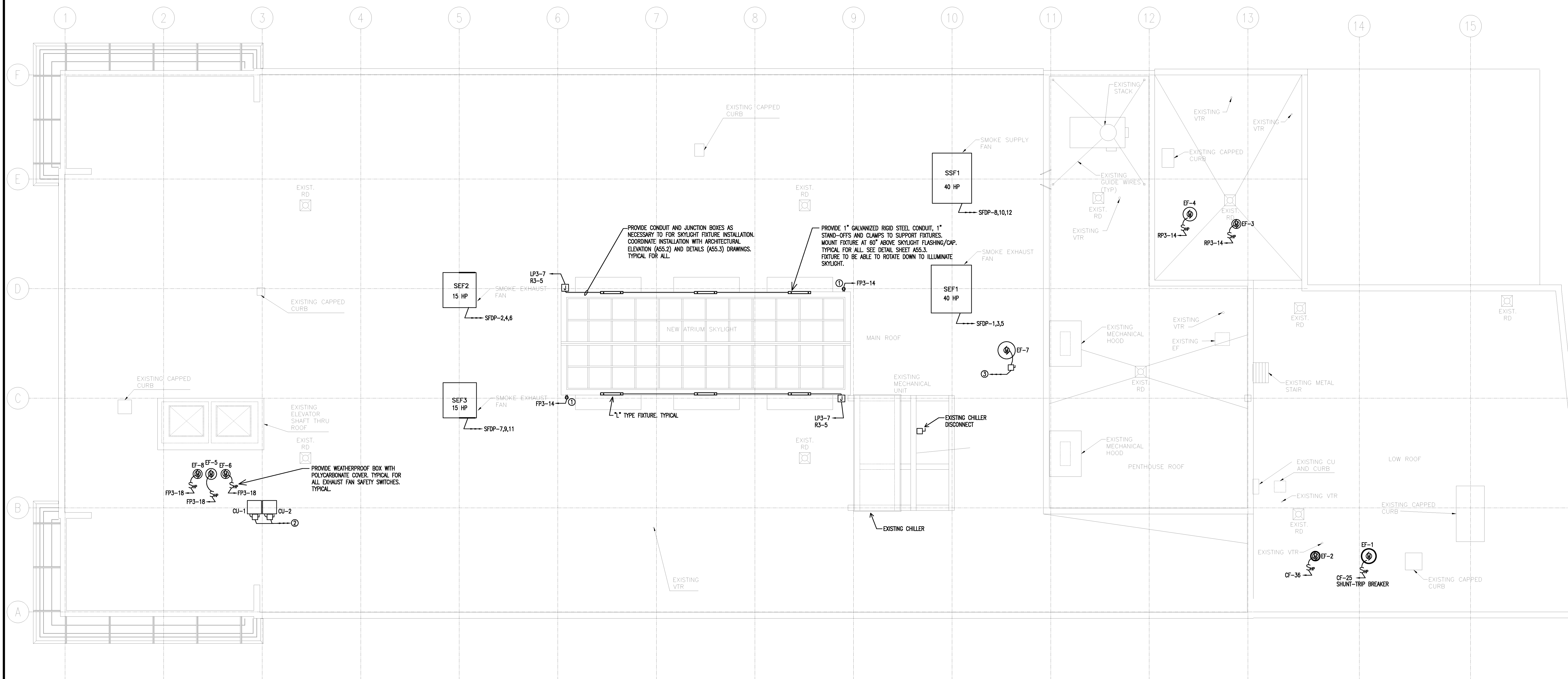
1. COORDINATE ALL WORK WITH OTHER TRADES.
2. ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
3. ALL RECEPTACLE HEIGHTS SHOWN ARE TAKEN FROM TOP OF RAISED FLOOR WHERE APPLICABLE.

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10/23/2009	SCHEMATIC DESIGN
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Issue Dates	

Drawing Status  
**ISSUED FOR CONSTRUCTION**

Drawing Title  
**ELECTRICAL POWER THIRD FLOOR PLAN**  
 PA / PE: WRH Drawn By: RJB

Drawing Number  
**E20.3**



**KEY NOTES**

- ① PROVIDE 20A GFCI RECEPTACLE, POWERED FROM THIRD FLOOR PANEL "FP3", MOUNT AT 24" AFG. PROVIDE POLYCARBONATE IN-USE COVER. SEAL ALL ROOF PENETRATIONS FROM BELOW.
- ② PROVIDE NEW 30A HACR BREAKER IN EXISTING PANEL "PH". SEE RISER DIAGRAM SHEET E51.0.
- ③ PROVIDE POWER FROM EXISTING "SPARE" 20A BREAKER IN EXISTING PANEL "PH". RELABEL BREAKER.

**POWER GENERAL NOTES**

1. COORDINATE ALL WORK ON ROOF WITH OTHER TRADES.
2. ALL PENETRATIONS THRU ROOF SHALL BE PROPERLY SEALED.
3. ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.

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Drawing Status

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Drawing Title

**ELECTRICAL ROOF PLAN**

PA / PE: WRH Drawn By: RJB

Drawing Number

**E20.4**

**ROOF FLOOR PLAN**  
1/8" = 1'-0" REF: --

E1

Project Title  
**110 FREE STREET BUILDING RENOVATIONS**  
 PORTLAND, MAINE

HA Project No. **09145**

Key Plan



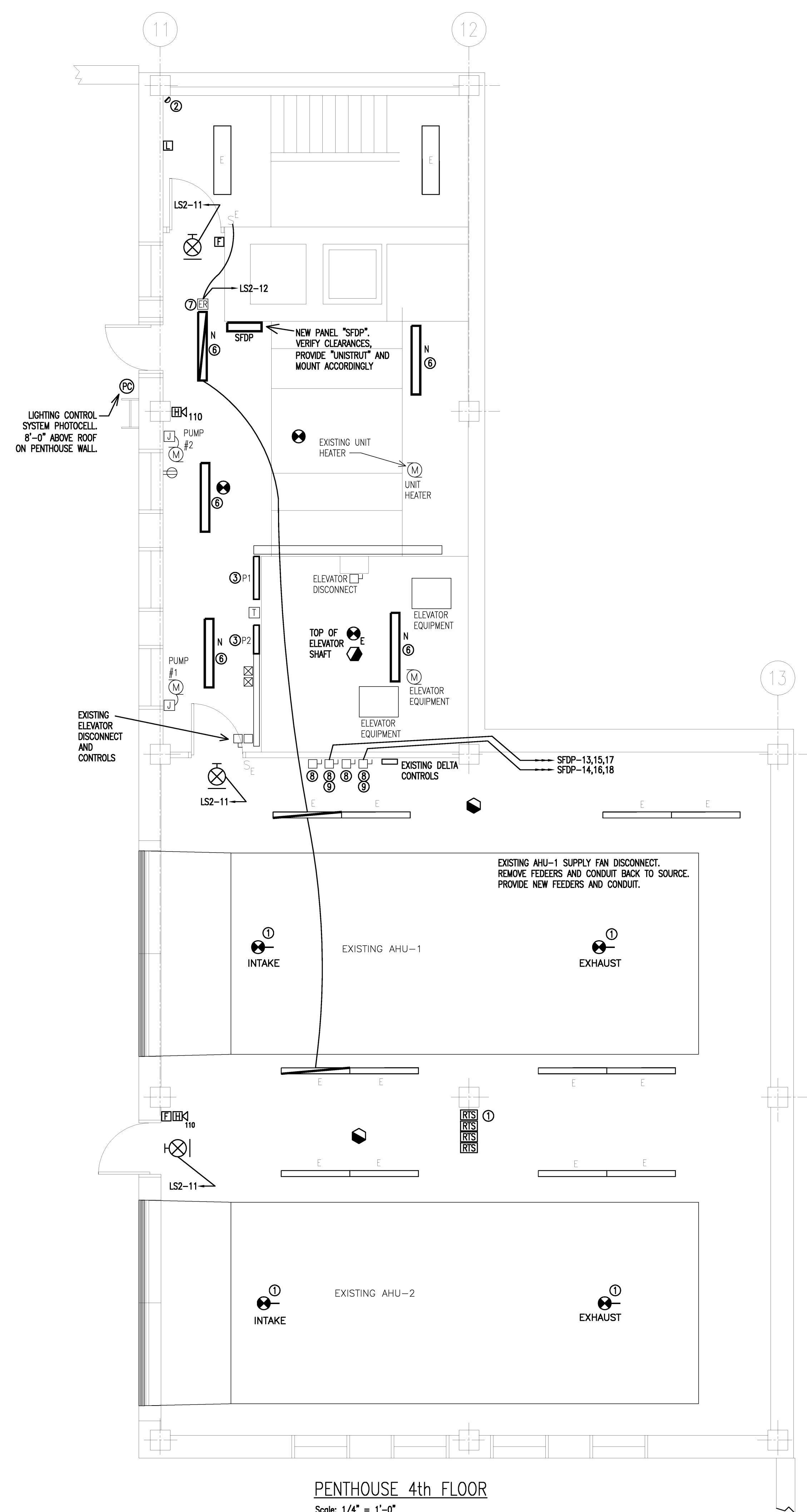
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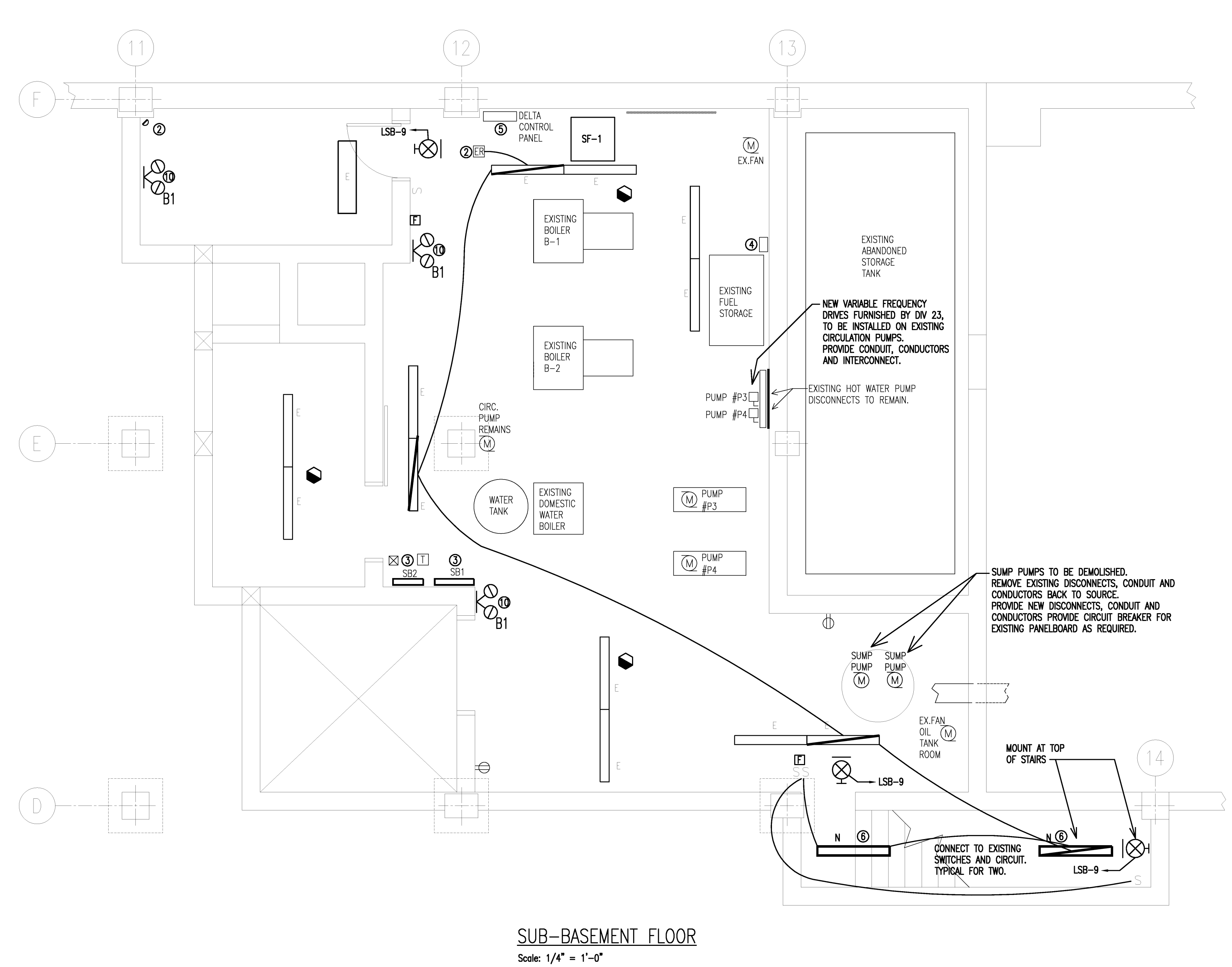
Drawing Title  
**ELECTRICAL NEW WORK  
 PENTHOUSE &  
 SUB-BASEMENT PLAN**

PA / PE: WRH Drawn By: RJB  
 Drawing Number

**E20.5**



- KEY NOTES**
- PROVIDE DUCT SMOKE DETECTORS AND REMOTE TEST STATIONS. COORDINATE WITH OTHER TRADES FOR LOCATION.
  - PROVIDE INFRARED SENSOR HUBBELL #LOOT, CONNECT TO POWER PACK AND STAIRWELL LIGHTING FIXTURES.
  - EXISTING PANELS TO REMAIN. PROVIDE NEW CIRCUIT PLACARDS AND MARK SPARE BREAKERS ACCORDINGLY.
  - EXISTING FUEL TANK CONTROLS. CONNECT TO PANEL "GEN" ON GROUND FLOOR GENERATOR ROOM.
  - EXISTING CONTROLS TO BE REMOVED. DISCONNECT CIRCUIT AND RECONNECT TO NEW EQUIPMENT CONTROLS. COORDINATE WITH CONTROLS CONTRACTOR.
  - CONNECT NEW FIXTURE TO EXISTING LIGHTING CIRCUIT.
  - CONNECT EMERGENCY RELAY TO NEW FIXTURE AND EXISTING CIRCUIT.
  - EXISTING DISCONNECT REMAINS.
  - PROVIDE NEW BRANCH FEEDER AS INDICATED. SEE RISER DIAGRAM SHEET ES1.0.
  - CONNECT TO BATTERY PACK IN GENERATOR ROOM.



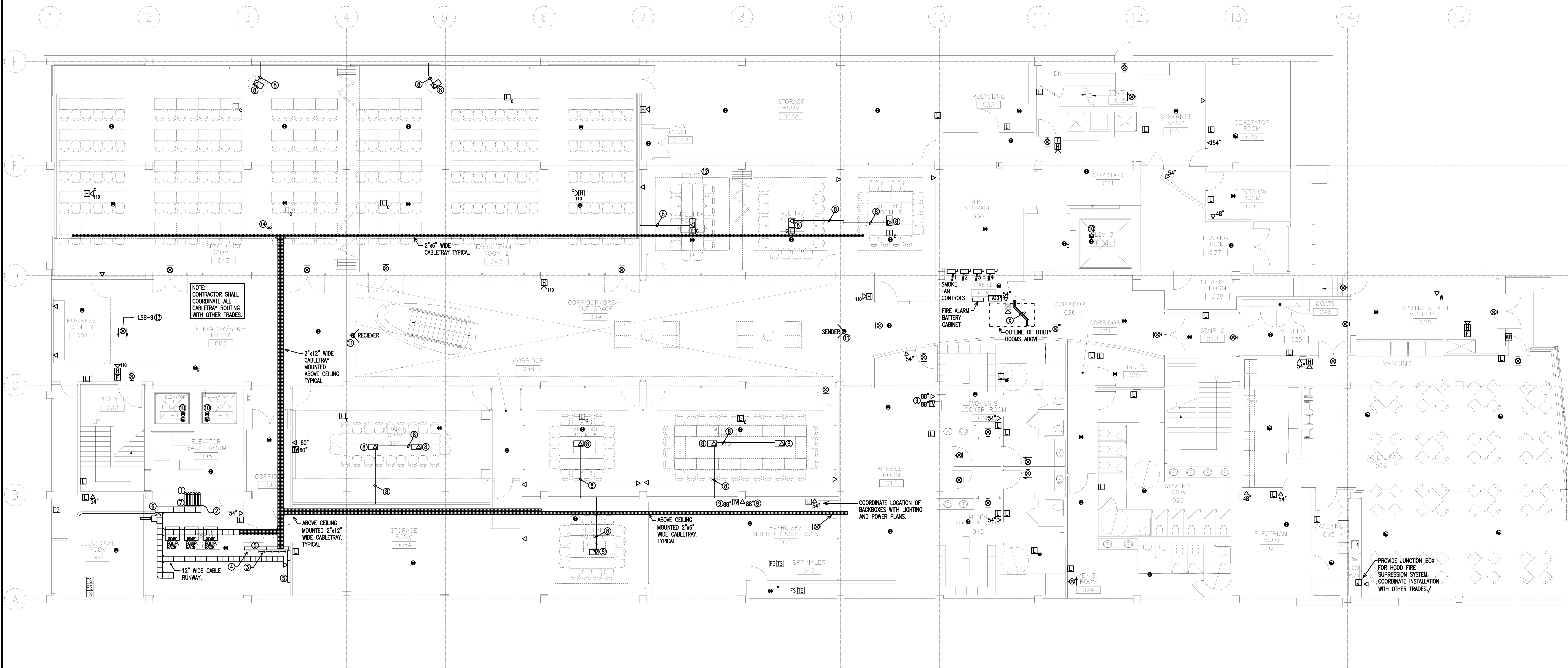
- POWER GENERAL NOTES**
- ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
  - COORDINATE ALL SERVICE WORK WITH CENTRAL MAINE POWER COMPANY.

Project Title

**110 FREE STREET BUILDING RENOVATIONS**  
PORTLAND, MAINE

HA Project No. **09146**

Key Plan



**SYSTEMS KEY NOTES**

- ① 6-4" CONDUIT SLEEVES TO TEL/DATA ROOMS ABOVE, TWO FOR EACH FLOOR. PROVIDE FIRESTOP. SEE FLOOR PLAN DRAWINGS.
- ② ATTACH/BOND TO GROUND BLOCK.
- ③ PROVIDE PUNCH DOWN BLOCKS FOR TELEPHONE LINES. COORDINATE WITH SERVICE PROVIDER.
- ④ PROVIDE GROUND BUS BAR, CHATSWORTH #10622-12, BUS BAR INSULATORS CHATSWORTH #10622-00 AND 1-#3/0 CU TO MAIN SERVICE GROUND.
- ⑤ PROVIDE 3/4" SANDED PLYWOOD, PAINT WITH TWO COATS OF FLAME RETARDANT WHITE, PAINT, MOUNT 4" OFF WALL FROM 24" AFF TO 72" AFF. (2 WALLS)
- ⑥ EXISTING TELEPHONE CONDUIT/CABLES. TERMINATE ON PUNCH-DOWN BLOCKS. COORDINATE WITH SERVICE PROVIDER.
- ⑦ PROVIDE COMMUNICATIONS FIRESTOP FOR 4" CONDUIT CABLE ACCESS.
- ⑧ CONDUIT AND FLUSH MOUNT TERMINATION BOX, PROVIDED BY ELECTRICAL CONTRACTOR. PROVIDE DATA JACK AND COMMUNICATIONS AS NEEDED. COORDINATE WITH OWNER. SEE POWER DRAWINGS FOR ADDITIONAL CONDUIT REQUIREMENTS.
- ⑨ COORDINATE LOCATION WITH ARCHITECTURAL ELEVATIONS AND OTHER TRADES.
- ⑩ PROVIDE HEAT AND SMOKE DETECTORS AT TOP AND BOTTOM OF SHAFT.
- ⑪ SURFACE MOUNT BEAM SMOKE DETECTOR SENDER ON FIRST FLOOR SLAB AND FEED FROM FIRST FLOOR RAISED FLOOR. ALIGN WITH RECEIVER AT OPPOSITE END OF ATRIUM OPENING. CONNECT TO FIRE ALARM SMOKE FAN EXHAUST SYSTEM.
- ⑫ COORDINATE FINAL LOCATION WITH A/V VENDOR/INSTALLER.
- ⑬ POWER ALL EXIT SIGNS ON THIS FLOOR FROM THIS CIRCUIT. TYPICAL FOR ALL.
- ⑭ PROVIDE 2-4" CONDUITS, GROUNDING BUSHINGS WITH BOND CONDUCTOR FROM GROUND FLOOR TO FIRST FLOOR FOR ROUTING OF TEL/DATA CABLES.

**SYSTEMS GENERAL NOTES**

1. COORDINATE ALL WORK WITH OTHER TRADES.
2. UNDERFLOOR SPACE SHALL BE PROPERLY SEALED AT ALL PENETRATIONS.
3. ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
4. PROVIDE PLENUM RATED CABLE FOR ALL LOW VOLTAGE CABLING INSTALLATIONS.
5. COORDINATE FINAL LOCATIONS OF FIRE ALARM DEVICES, INCLUDING SMOKE DETECTORS, FIRE PULLS AND AUDIBLE/VISUAL DEVICES WITH ARCHITECTURAL ELEVATION AND FIT-UP DRAWINGS AND CEILING SYSTEM REQUIREMENTS.
6. CABLE OPENINGS IN FLOORS SHALL BE MADE SMOOTH OR SHALL BE OTHERWISE PROTECTED TO PRECLUDE THE POSSIBILITY OF DAMAGE TO THE CABLES.
7. ALL EXPOSED NON CURRENT CARRYING METAL PARTS OF AN INFORMATION TECHNOLOGY SYSTEM SHALL BE BONDED TO THE EQUIPMENT GROUND WITH #6 AWG, CU CONDUCTOR MINIMUM.
8. CONTRACTOR SHALL ACQUIRE AND ADHERE TO MAINE MEDICAL CENTER'S TELECOMMUNICATIONS NETWORK SERVICES SPECIFICATIONS.
9. ALL CILING MOUNTED DEVICES SHALL BE MOUNTED IN THE 6" UTILITY ZONES OF THE "TECH ZONE" CEILING WHERE APPLICABLE. COORDINATE WITH CEILING MANUFACTURER AND OTHER TRADES.

**IS/IT/AV/TELECOM COORDINATION NOTES:**

1. CONTRACTOR SHALL PROVIDE ALL CABLE TRAY, BACKBOXES, PULL STRINGS, CONDUIT, FIRESTOPPING FOR ALL IS/AV/TELECOM PATHWAYS AND LOW VOLTAGE CABLING.
2. ALL IS/IT/TELECOM/AV CABLING, JACKS, PUNCHDOWN BLOCKS AND TERMINATIONS TO BE PROVIDED BY (OTHERS), MAINE MEDICAL CENTER APPROVED VENDOR.
3. ALL CEILING AND WALL MOUNTED POWER FOR AV EQUIPMENT (CAMERAS, PLASMAS, ETC...) SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

**UNDERFLOOR COORDINATION NOTES:**

1. CONTRACTOR SHALL PROVIDE COORDINATE LOCATION OF UNDER FLOOR CABLETRAY WITHIN RAISED FLOOR GRID PATTERN WITH RAISED FLOOR EQUIPMENT INSTALLER/VENDOR.
2. UNDER FLOOR CABLETRAY SHALL BE MOUNTED 1-1/2" ABOVE THE FLOOR SLAB.

**GROUND FLOOR PLAN**  
1/8" = 1'-0" REF: --

E1

02/12/2010	ISSUED FOR CONSTRUCTION	
12/11/2009	DESIGN DEVELOPMENT	
10/23/2009	SCHEMATIC DESIGN	
Mark	Date	Description
Issue Dates		

Drawing Status

**ISSUED FOR CONSTRUCTION**

Drawing Title

**ELECTRICAL SYSTEMS GROUND FLOOR PLAN**

PA / PE: WRH Drawn By: R,JB

Drawing Number

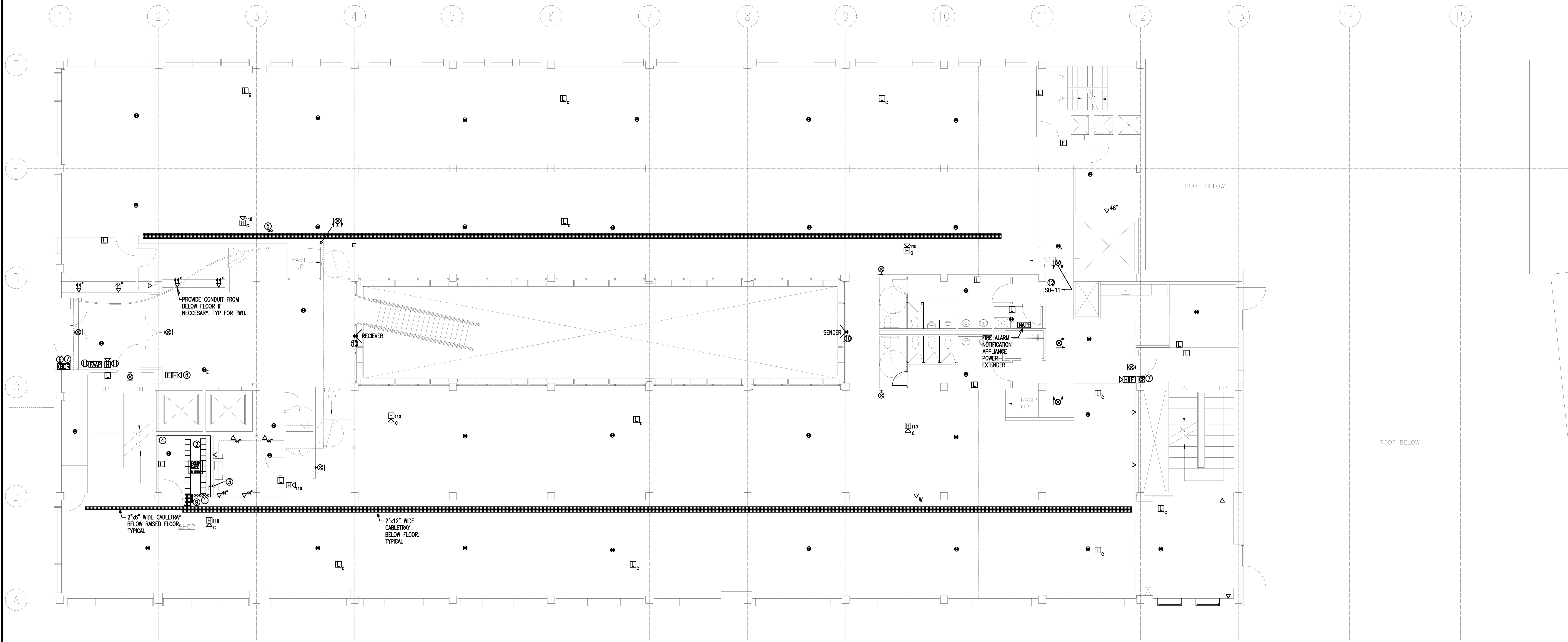
**E30.0**

Project Title

**110 FREE STREET BUILDING RENOVATIONS**  
PORTLAND, MAINE

HA Project No. **09146**

Key Plan



**SYSTEMS KEY NOTES**

- ① 6-4" CONDUIT SLEEVES FROM TEL/DATA ROOM, TWO FOR EACH FLOOR. PROVIDE FIRESTOP.
- ② PROVIDE 12" CABLE LADDER TRAY, PER MAINE MEDICAL CENTER REQUIREMENTS.
- ③ PROVIDE GROUND BUS BAR, CHATSWORTH #10622-12, BUS BAR INSULATORS CHATSWORTH #10622-00 AND TERMINATION CONNECTORS, BOND WITH 3/0 CU BONDING CONDUCTOR THRU TO BASEMENT TEL/DATA ROOM GROUND BAR.
- ④ PROVIDE 3/4" SANDED PLYWOOD, PAINT WITH TWO COATS OF FLAME RETARDANT WHITE PAINT. MOUNT 4" OFF WALL FROM 24" AFF TO 72" AFF. (2 WALLS)
- ⑤ 2-4" CONDUITS FROM CEILING SPACE BELOW INTO FIRST FLOOR RAISED FLOOR SPACE FOR COMMUNICATIONS CABLING.
- ⑥ EXISTING KNX BOX.
- ⑦ PROVIDE BACKBOX, CONDUIT AND PULL STRING TO ACCESSIBLE CEILING SPACE. SURFACE RACEWAY IN STARWELLS ALLOWED. SEE DETAIL SHEET E00.1.
- ⑧ COORDINATE DEVICE BACKBOXES CENTERED IN HORIZONTAL LINE ON THIS WALL. COORDINATE FINAL LOCATION WITH ARCHITECTURAL ELEVATION DRAWINGS.
- ⑨ PROVIDE 2" "SPEED SLEEVE", HILTI #CP653, OUT OF TEL/DATA ROOM TO ACCESSIBLE CEILING SPACE.
- ⑩ SURFACE MOUNT BEAM SMOKE DETECTOR SENDER ON FIRST FLOOR SLAB AND FEED FROM FIRST FLOOR RAISED FLOOR. ALIGN WITH RECEIVER AT OPPOSITE END OF ATRIUM OPENING. CONNECT TO FIRE ALARM SMOKE FAN EXHAUST SYSTEM.
- ⑪ COORDINATE DEVICE BACKBOX LOCATIONS ON THIS WALL WITH ARCHITECTURAL ELEVATION DETAIL "C1" ON DRAWING AB1.3.
- ⑫ POWER ALL EXIT SIGNS ON THIS FLOOR FROM THIS CIRCUIT. TYPICAL FOR ALL.

**SYSTEMS GENERAL NOTES**

1. COORDINATE ALL WORK WITH OTHER TRADES.
2. UNDERFLOOR SPACE SHALL BE PROPERLY SEALED AT ALL PENETRATIONS.
3. ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
4. PROVIDE PLENUM RATED CABLE FOR ALL LOW VOLTAGE CABLING INSTALLATIONS.
5. COORDINATE FINAL LOCATIONS OF FIRE ALARM DEVICES, INCLUDING SMOKE DETECTORS, FIRE PULLS AND AUDIBLE/VISUAL DEVICES WITH ARCHITECTURAL FIT-UP DRAWINGS AND CEILING SYSTEM REQUIREMENTS.
6. CABLE OPENINGS IN FLOORS SHALL BE MADE SMOOTH OR SHALL BE OTHERWISE PROTECTED TO PRECLUDE THE POSSIBILITY OF DAMAGE TO THE CABLES.
7. ALL EXPOSED NON CURRENT CARRYING METAL PARTS OF AN INFORMATION TECHNOLOGY SYSTEM SHALL BE BONDED TO THE EQUIPMENT GROUND WITH #6 AWG, CU CONDUCTOR MINIMUM.
8. CONTRACTOR SHALL ACQUIRE AND ADHERE TO MAINE MEDICAL CENTER'S TELECOMMUNICATIONS NETWORK SERVICES 16600 SPECIFICATIONS.
9. ALL CEILING MOUNTED DEVICES SHALL BE MOUNTED IN THE 6" UTILITY ZONES OF THE "TECH ZONE" CEILING. COORDINATE WITH CEILING MANUFACTURER AND OTHER TRADES.

**IS/IT/AV/TELECOM COORDINATION NOTES:**

1. CONTRACTOR SHALL PROVIDE ALL CABLE TRAY, BACKBOXES, PULL STRINGS, CONDUIT, FIRESTOPPING FOR ALL IS/AV/TELECOM PATHWAYS AND LOW VOLTAGE CABLING.
2. ALL IS/IT/TELECOM/AV CABLING, JACKS, PUNCHDOWN BLOCKS AND TERMINATIONS TO BE PROVIDED BY (OTHERS), MAINE MEDICAL CENTER APPROVED VENDOR.
3. ALL CEILING AND WALL MOUNTED POWER FOR AV EQUIPMENT (CAMERAS, PLASMAS, ETC...) SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

**UNDERFLOOR COORDINATION NOTES:**

1. CONTRACTOR SHALL PROVIDE COORDINATE LOCATION OF UNDER FLOOR CABLETRAY WITHIN RAISED FLOOR GRID PATTERN WITH RAISED FLOOR EQUIPMENT INSTALLER/VENDOR.
2. UNDER FLOOR CABLETRAY SHALL BE MOUNTED 1-1/2" ABOVE THE FLOOR SLAB.

**FIRST FLOOR PLAN**  
1/8" = 1'-0" REF: --

E1

Mark	Date	Description
	02/12/2010	ISSUED FOR CONSTRUCTION
	12/11/2009	DESIGN DEVELOPMENT
	10/23/2009	SCHEMATIC DESIGN

Drawing Status

**ISSUED FOR CONSTRUCTION**

Drawing Title

**ELECTRICAL SYSTEMS  
FIRST FLOOR PLAN**

PA / PE: WRH Drawn By: R,JB

Drawing Number

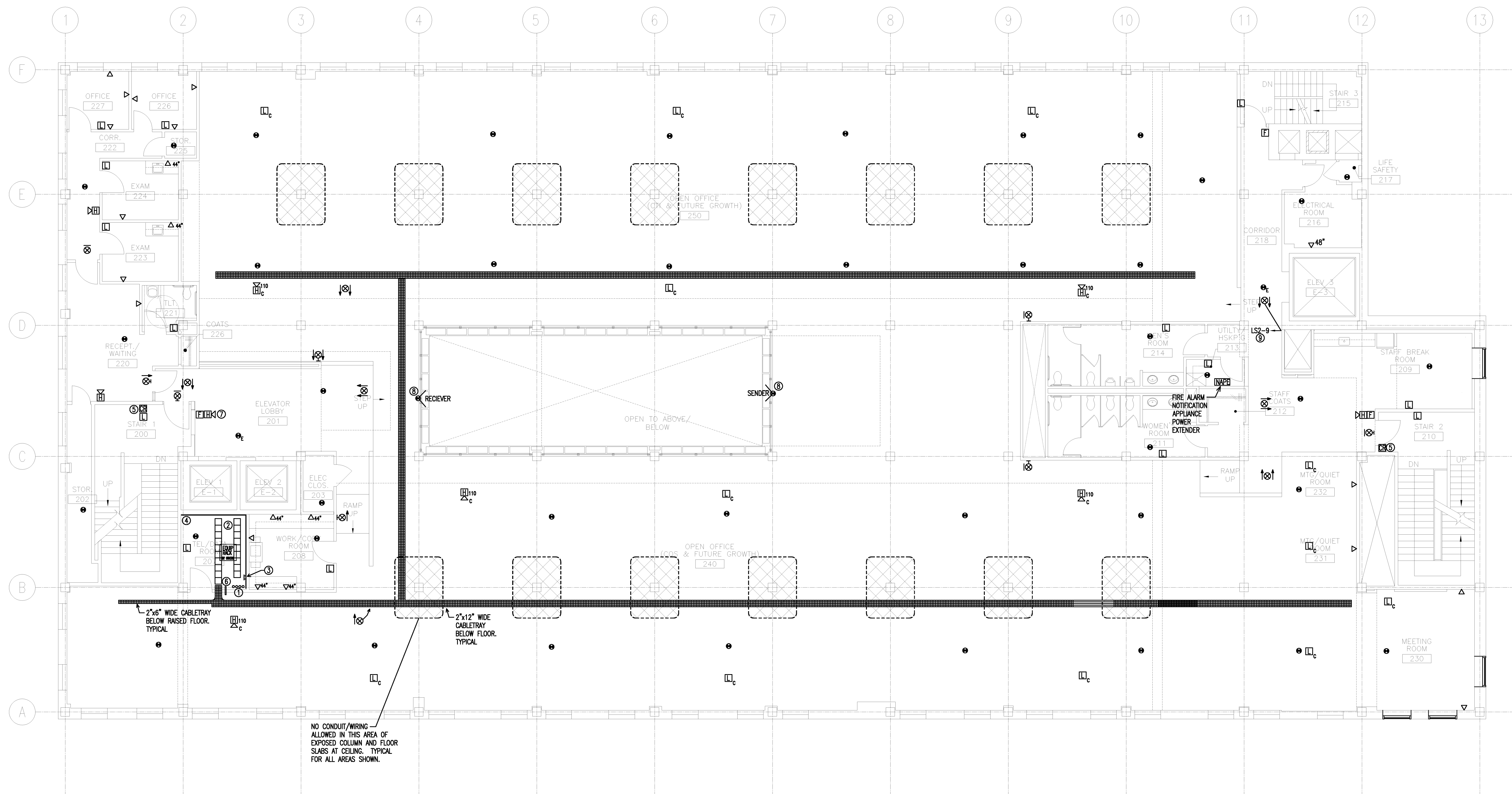
**E30.1**

Project Title

**110 FREE STREET BUILDING RENOVATIONS**  
PORTLAND, MAINE

HA Project No. **09146**

Key Plan



NO CONDUIT/WIRING ALLOWED IN THIS AREA OF EXPOSED COLUMN AND FLOOR SLABS AT CEILING. TYPICAL FOR ALL AREAS SHOWN.

**SYSTEMS KEY NOTES**

- ① 4-4" CONDUIT SLEEVES FROM TEL/DATA ROOM, TWO FOR EACH FLOOR. PROVIDE FIRESTOP.
- ② PROVIDE 12" CABLE LADDER TRAY, PER MAINE MEDICAL CENTER REQUIREMENTS.
- ③ PROVIDE GROUND BUS BAR, CHATSWORTH #10622-12, BUS BAR INSULATORS CHATSWORTH #10622-00 AND TERMINATION CONNECTORS, BOND WITH #3/0 CU BONDING CONDUCTOR THRU TO BASEMENT TEL/DATA ROOM GROUND BAR.
- ④ PROVIDE 3/4" SANDED PLYWOOD, PAINT WITH TWO COATS OF FLAME RETARDANT WHITE PAINT. MOUNT 4" OFF WALL FROM 24" AFF TO 72" AFF. (2 WALLS)
- ⑤ PROVIDE BACKBOX, CONDUIT AND PULL STRING TO ACCESSIBLE CEILING SPACE. SURFACE RACEWAY IN STAIRWELL IS ALLOWED. SEE DETAIL SHEET E00.1.
- ⑥ PROVIDE 2" "SPEED SLEEVE", HULTI #CP653, OUT OF TEL/DATA ROOM TO ACCESSIBLE CEILING SPACE.
- ⑦ COORDINATE DEVICE BACKBOXES CENTERED IN HORIZONTAL LINE ON THIS WALL. COORDINATE FINAL LOCATION WITH ARCHITECTURAL ELEVATION DRAWINGS.
- ⑧ SURFACE MOUNT BEAM SMOKE DETECTOR SENDER ON FIRST FLOOR SLAB AND FEED FROM FIRST FLOOR RAISED FLOOR. ALIGN WITH RECEIVER AT OPPOSITE END OF ATRIUM OPENING. CONNECT TO FIRE ALARM SMOKE FAN EXHAUST SYSTEM.
- ⑨ POWER ALL EXIT SIGNS ON THIS FLOOR FROM THIS CIRCUIT. TYPICAL FOR ALL.

**SYSTEMS GENERAL NOTES**

1. COORDINATE ALL WORK WITH OTHER TRADES.
2. UNDERFLOOR SPACE SHALL BE PROPERLY SEALED AT ALL PENETRATIONS.
3. ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
4. PROVIDE PLENUM RATED CABLE FOR ALL LOW VOLTAGE CABLING INSTALLATIONS.
5. COORDINATE FINAL LOCATIONS OF FIRE ALARM DEVICES, INCLUDING SMOKE DETECTORS, FIRE PULLS AND AUDIBLE/VISUAL DEVICES WITH ARCHITECTURAL FIT-UP DRAWINGS AND CEILING SYSTEM REQUIREMENTS.
6. CABLE OPENINGS IN FLOORS SHALL BE MADE SMOOTH OR SHALL BE OTHERWISE PROTECTED TO PRECLUDE THE POSSIBILITY OF DAMAGE TO THE CABLES.
7. ALL EXPOSED NON CURRENT CARRYING METAL PARTS OF AN INFORMATION TECHNOLOGY SYSTEM SHALL BE BONDED TO THE EQUIPMENT GROUND WITH #6 AWG, CU CONDUCTOR MINIMUM.
8. CONTRACTOR SHALL ACQUIRE AND ADHERE TO MAINE MEDICAL CENTER'S TELECOMMUNICATIONS NETWORK SERVICES 16800 SPECIFICATIONS.
9. ALL CEILING MOUNTED DEVICES SHALL BE MOUNTED IN THE 6" UTILITY ZONES OF THE "TECH ZONE" CEILING. COORDINATE CEILING MANUFACTURER AND WITH OTHER TRADES.

**IS/IT/AV/TELECOM COORDINATION NOTES:**

1. CONTRACTOR SHALL PROVIDE ALL CABLE TRAY, BACKBOXES, PULL STRINGS, CONDUIT, FIRESTOPPING FOR ALL IS/AV/TELECOM PATHWAYS AND LOW VOLTAGE CABLING.
2. ALL IS/AV/TELECOM/AV CABLING, JACKS, PUNCHDOWN BLOCKS AND TERMINATIONS TO BE PROVIDED BY (OTHERS), MAINE MEDICAL CENTER APPROVED VENDOR.
3. ALL CEILING AND WALL MOUNTED POWER FOR AV EQUIPMENT (CAMERAS, PLASMAS, ETC.) SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

**UNDERFLOOR COORDINATION NOTES:**

1. CONTRACTOR SHALL PROVIDE COORDINATE LOCATION OF UNDER FLOOR CABLETRAY WITHIN RAISED FLOOR GRID PATTERN WITH RAISED FLOOR EQUIPMENT INSTALLER/VENDOR.
2. UNDER FLOOR CABLETRAY SHALL BE MOUNTED 1-1/2" ABOVE THE FLOOR SLAB.

Issue Dates	Description
02/12/2010	ISSUED FOR CONSTRUCTION
12/11/2009	DESIGN DEVELOPMENT
10/23/2009	SCHEMATIC DESIGN

Drawing Status

**ISSUED FOR CONSTRUCTION**

Drawing Title

**ELECTRICAL SYSTEMS SECOND FLOOR PLAN**

PA / PE: WRH Drawn By: R,JB

Drawing Number

**E30.2**

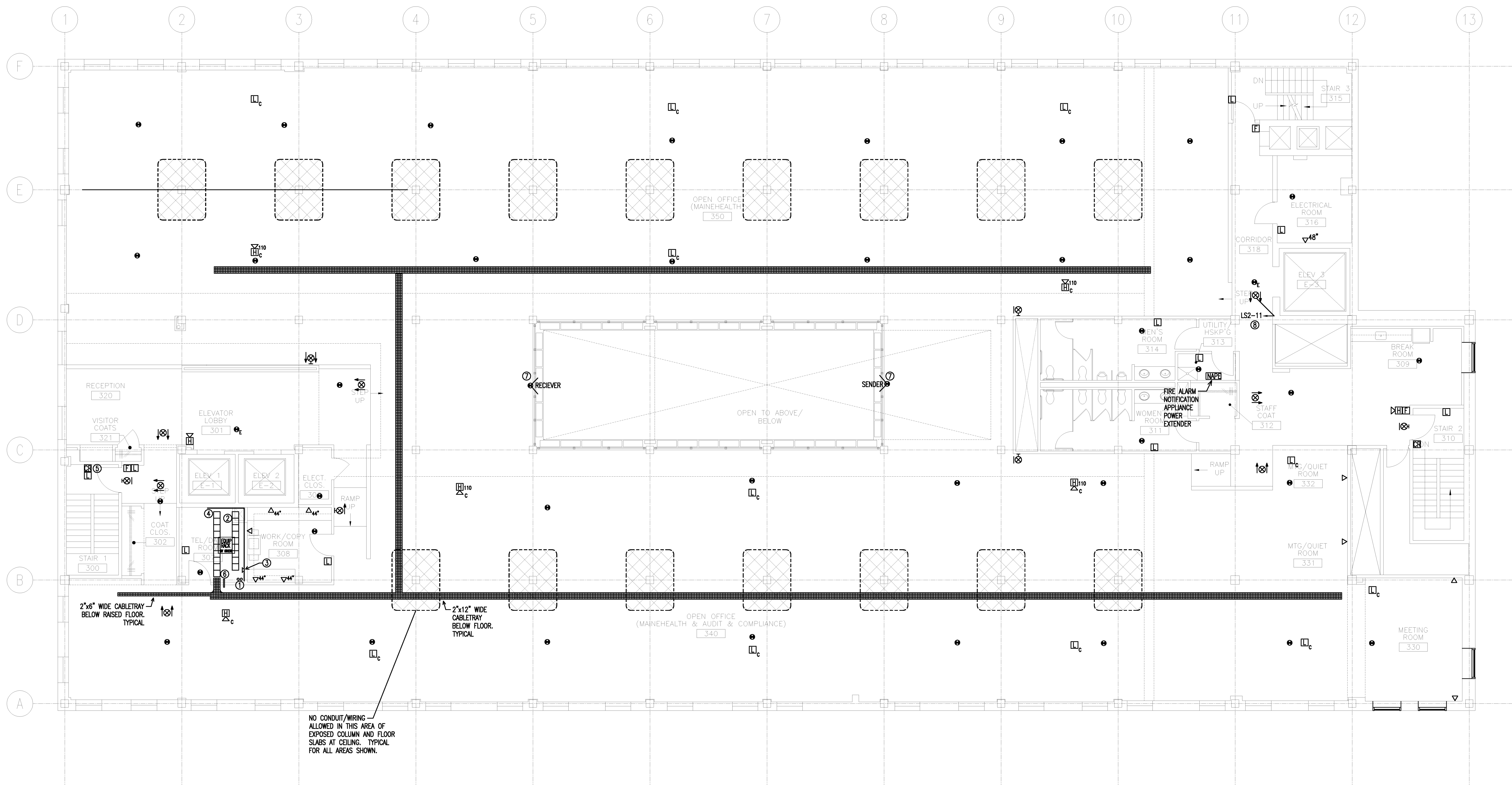
Project Title

**110 FREE STREET BUILDING RENOVATIONS**

PORTLAND, MAINE

HA Project No. **09146**

Key Plan



**SYSTEMS KEY NOTES**

- ① 2-4" CONDUIT SLEEVES FROM TEL/DATA ROOM, TWO FOR EACH FLOOR. PROVIDE FIRESTOP.
- ② PROVIDE 12" CABLE RUNWAY, PER MAINE MEDICAL CENTER REQUIREMENTS.
- ③ PROVIDE GROUND BUS BAR, CHATSWORTH #10622-12, BUS BAR INSULATORS CHATSWORTH #10622-00 AND TERMINATION CONNECTORS, BOND WITH #3/0 CU BONDING CONDUCTOR THRU TO BASEMENT TEL/DATA ROOM GROUND BAR.
- ④ PROVIDE 3/4" SANDED PLYWOOD, PAINT WITH TWO COATS OF FLAME RETARDANT WHITE PAINT. MOUNT 4" OFF WALL FROM 24" AFF TO 72" AFF. (2 WALLS)
- ⑤ PROVIDE BACKBOX, CONDUIT AND PULL STRING TO ACCESSIBLE CEILING SPACE. SURFACE RACEWAY IN STAIRWELLS ACCEPTABLE. SEE DETAIL SHEET EDD.1.
- ⑥ PROVIDE 2" "SPEED SLEEVE", HULTI #CP653, OUT OF TEL/DATA ROOM TO ACCESSIBLE CEILING SPACE.
- ⑦ SURFACE MOUNT BEAM SMOKE DETECTOR SENDER ON FIRST FLOOR SLAB AND FEED FROM FIRST FLOOR RAISED FLOOR. ALIGN WITH RECEIVER AT OPPOSITE END OF ATRIUM OPENING. CONNECT TO FIRE ALARM SMOKE FAN EXHAUST SYSTEM.
- ⑧ POWER ALL EXIT SIGNS ON THIS FLOOR FROM THIS CIRCUIT. TYPICAL FOR ALL.

**SYSTEMS GENERAL NOTES**

1. COORDINATE ALL WORK WITH OTHER TRADES.
2. UNDERFLOOR SPACE SHALL BE PROPERLY SEALED AT ALL PENETRATIONS.
3. ALL "FUTURE" AND/OR "SPARE" CONDUIT OR CABLE SLEEVES SHALL BE CAPPED.
4. PROVIDE PLENUM RATED CABLE FOR ALL LOW VOLTAGE CABLING INSTALLATIONS.
5. COORDINATE FINAL LOCATIONS OF FIRE ALARM DEVICES, INCLUDING SMOKE DETECTORS, FIRE PULLS AND AUDIBLE/VISUAL DEVICES WITH ARCHITECTURAL FIT-UP DRAWINGS AND CEILING SYSTEM REQUIREMENTS.
6. CABLE OPENINGS IN FLOORS SHALL BE MADE SMOOTH OR SHALL BE OTHERWISE PROTECTED TO PRECLUDE THE POSSIBILITY OF DAMAGE TO THE CABLES.
7. ALL EXPOSED NON CURRENT CARRYING METAL PARTS OF AN INFORMATION TECHNOLOGY SYSTEM SHALL BE BONDED TO THE EQUIPMENT GROUND WITH #6 AWG, CU CONDUCTOR MINIMUM.
8. CONTRACTOR SHALL ACQUIRE AND ADHERE TO MAINE MEDICAL CENTER'S TELECOMMUNICATIONS NETWORK SERVICES 16800 SPECIFICATIONS.
9. ALL CEILING MOUNTED DEVICES SHALL BE MOUNTED IN THE 6" UTILITY ZONES OF THE "TECH ZONE" CEILING. COORDINATE CEILING MANUFACTURER AND WITH OTHER TRADES.

**IS/IT/AV/TELECOM COORDINATION NOTES:**

1. CONTRACTOR SHALL PROVIDE ALL CABLE TRAY, BACKBOXES, PULL STRINGS, CONDUIT, FIRESTOPPING FOR ALL IS/AV/TELECOM PATHWAYS AND LOW VOLTAGE CABLING.
2. ALL IS/AV/TELECOM/AV CABLING, JACKS, PUNCHDOWN BLOCKS AND TERMINATIONS TO BE PROVIDED BY (OTHERS), MAINE MEDICAL CENTER APPROVED VENDOR.
3. ALL CEILING AND WALL MOUNTED POWER FOR AV EQUIPMENT (CAMERAS, PLASMAS, ETC...) SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

**UNDERFLOOR COORDINATION NOTES:**

1. CONTRACTOR SHALL PROVIDE COORDINATE LOCATION OF UNDER FLOOR CABLETRAY WITHIN RAISED FLOOR GRID PATTERN WITH RAISED FLOOR EQUIPMENT INSTALLER/VENDOR.
2. UNDER FLOOR CABLETRAY SHALL BE MOUNTED 1-1/2" ABOVE THE FLOOR SLAB.

Drawing Status

**ISSUED FOR CONSTRUCTION**

Drawing Title

**ELECTRICAL SYSTEMS THIRD FLOOR PLAN**

PA / PE: WRH Drawn By: RJB

Drawing Number

**E30.3**

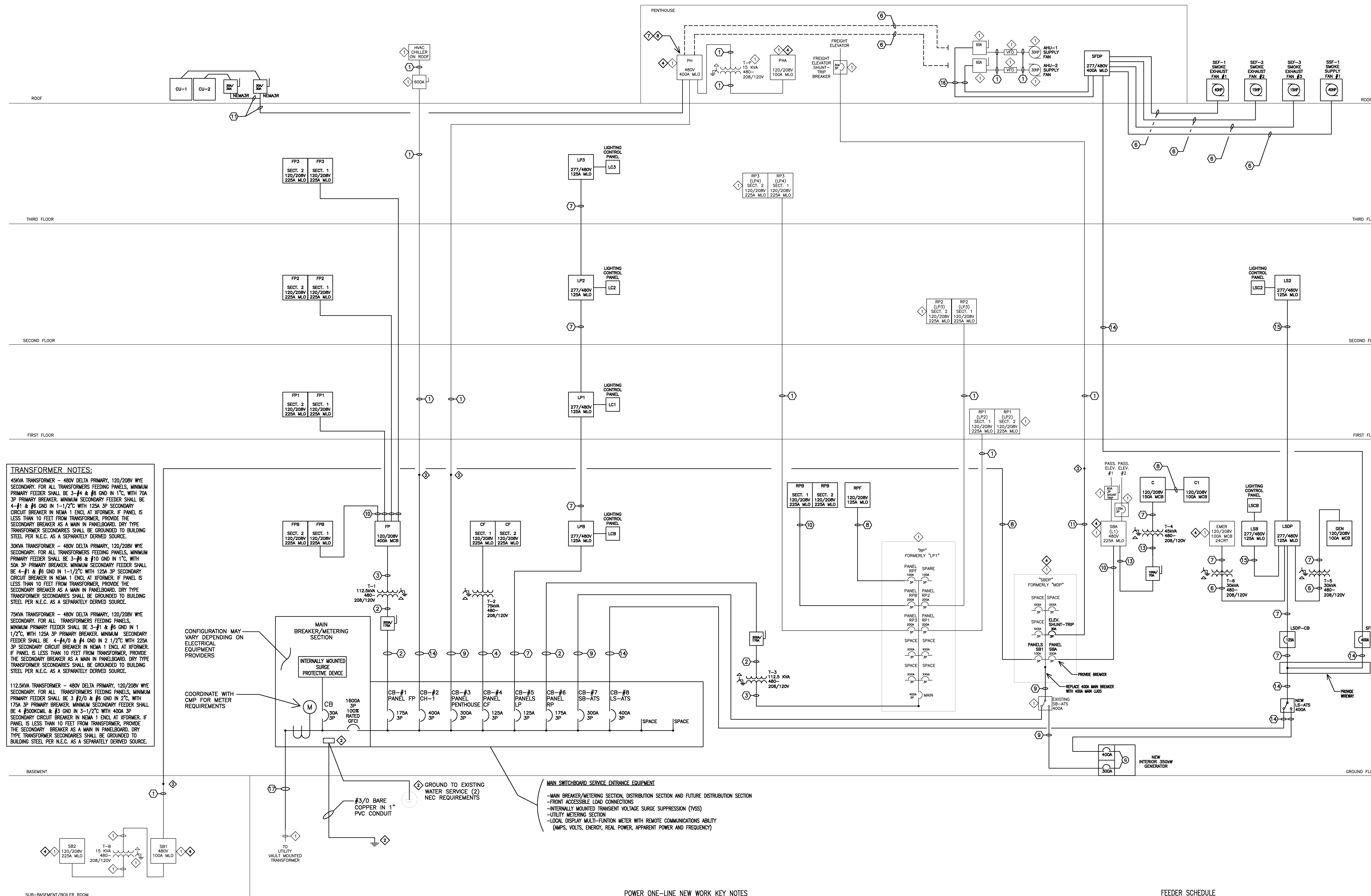




110 FREE STREET BUILDING RENOVATIONS  
 PORTLAND, MAINE

HA Project No. **09146**

Key Plan



**TRANSFORMER NOTES:**  
 45KVA TRANSFORMER - 480V DELTA PRIMARY, 120/208V WYE SECONDARY. FOR ALL TRANSFORMERS FEEDING PANELS, MINIMUM PRIMARY FEEDER SHALL BE 3-#4 & #8 GND IN 1", WITH 70A 3P PRIMARY BREAKER. MINIMUM SECONDARY FEEDER SHALL BE 4-#1 & #6 GND IN 1-1/2" WITH 125A 3P SECONDARY CIRCUIT BREAKER IN NEMA 1 ENCL AT XFORMER. IF PANEL IS LESS THAN 10 FEET FROM TRANSFORMER, PROVIDE THE SECONDARY BREAKER AS A MAIN IN PANELBOARD. DRY TYPE TRANSFORMER SECONDARIES SHALL BE GROUNDED TO BUILDING STEEL PER N.E.C. AS A SEPARATELY DERIVED SOURCE.  
 30KVA TRANSFORMER - 480V DELTA PRIMARY, 120/208V WYE SECONDARY. FOR ALL TRANSFORMERS FEEDING PANELS, MINIMUM PRIMARY FEEDER SHALL BE 3-#6 & #10 GND IN 1", WITH 50A 3P PRIMARY BREAKER. MINIMUM SECONDARY FEEDER SHALL BE 4-#1 & #6 GND IN 1-1/2" WITH 125A 3P SECONDARY CIRCUIT BREAKER IN NEMA 1 ENCL AT XFORMER. IF PANEL IS LESS THAN 10 FEET FROM TRANSFORMER, PROVIDE THE SECONDARY BREAKER AS A MAIN IN PANELBOARD. DRY TYPE TRANSFORMER SECONDARIES SHALL BE GROUNDED TO BUILDING STEEL PER N.E.C. AS A SEPARATELY DERIVED SOURCE.  
 75KVA TRANSFORMER - 480V DELTA PRIMARY, 120/208V WYE SECONDARY. FOR ALL TRANSFORMERS FEEDING PANELS, MINIMUM PRIMARY FEEDER SHALL BE 3-#4 & #8 GND IN 1", WITH 70A 3P PRIMARY BREAKER. MINIMUM SECONDARY FEEDER SHALL BE 4-#1 & #6 GND IN 1-1/2" WITH 125A 3P SECONDARY CIRCUIT BREAKER IN NEMA 1 ENCL AT XFORMER. IF PANEL IS LESS THAN 10 FEET FROM TRANSFORMER, PROVIDE THE SECONDARY BREAKER AS A MAIN IN PANELBOARD. DRY TYPE TRANSFORMER SECONDARIES SHALL BE GROUNDED TO BUILDING STEEL PER N.E.C. AS A SEPARATELY DERIVED SOURCE.  
 112.5KVA TRANSFORMER - 480V DELTA PRIMARY, 120/208V WYE SECONDARY. FOR ALL TRANSFORMERS FEEDING PANELS, MINIMUM PRIMARY FEEDER SHALL BE 3-#1 & #6 GND IN 1", WITH 175A 3P PRIMARY BREAKER. MINIMUM SECONDARY FEEDER SHALL BE 4-#1/0 & #4 GND IN 2-1/2" WITH 225A 3P SECONDARY CIRCUIT BREAKER IN NEMA 1 ENCL AT XFORMER. IF PANEL IS LESS THAN 10 FEET FROM TRANSFORMER, PROVIDE THE SECONDARY BREAKER AS A MAIN IN PANELBOARD. DRY TYPE TRANSFORMER SECONDARIES SHALL BE GROUNDED TO BUILDING STEEL PER N.E.C. AS A SEPARATELY DERIVED SOURCE.

CONFIGURATION MAY VARY DEPENDING ON ELECTRICAL EQUIPMENT PROVIDERS  
 COORDINATE WITH CMP FOR METER REQUIREMENTS

**MAIN SWITCHBOARD SERVICE ENTRANCE EQUIPMENT**  
 -MAIN BREAKER/METERING SECTION  
 -FRONT ACCESSIBLE LOAD CONNECTIONS  
 -INTERNALLY MOUNTED TRANSIENT VOLTAGE SUPPRESSION (TVSS)  
 -UTILITY METERING SECTION  
 -LOCAL DISPLAY MULTI-FUNCTION METER WITH REMOTE COMMUNICATIONS ABILITY (AMPS, VOLTS, ENERGY, REAL POWER, APPARENT POWER AND FREQUENCY)

**POWER ONE-LINE NEW WORK KEY NOTES**

- ① EXISTING ELECTRICAL EQUIPMENT. CONTRACTOR SHALL INSPECT, CLEAN EXISTING ELECTRICAL EQUIPMENT AND CONNECTIONS. CONTRACTOR SHALL REPAIR OR REPLACE AS NECESSARY.
- ② BOND TO BUILDING WATER MAINS (2), MINIMUM OF THREE GROUND ROOS AND CONCRETE REINFORCEMENT BARS AS REQUIRED BY THE N.E.C.
- ③ PROVIDE PULL BOX/JUNCTION BOX IF NECESSARY, SIZE AS REQUIRED BY THE N.E.C. PROVIDE ALL NECESSARY HANGERS AND CONNECTORS TO ACCEPT NEW AND EXISTING CONDUITS TO EXISTING EQUIPMENT.
- ④ PROVIDE REQUIRED NEW BREAKER/S IN EXISTING ELECTRICAL PANEL.
- ⑤ EXISTING PANEL TO BE RE-FED IN NEW WORK. CONTRACTOR SHALL INSPECT, CLEAN EXISTING ELECTRICAL EQUIPMENT AND CONNECTIONS.
- ⑥ REMOVE EXISTING FEEDER (CONDUIT AND CONDUCTORS) BACK TO SOURCE. LABEL BREAKER AS SPARE.
- ⑦ PROVIDE 30A, 3 POLE BREAKER IN EXISTING PANEL.
- ⑧ REMOVE TWO 50A BREAKERS SERVING AHU-1, VFD AND AHU-2, VFD.

**FEEDER SCHEDULE**

- ① EXISTING CONDUIT AND CONDUCTORS.
- ② 3-#2/0 & #6 GND IN 2" CONDUIT.
- ③ 4-#500kcmil & #3 GND IN 3-1/2" CONDUIT.
- ④ 3-#1 & #6 GND IN 1-1/2" CONDUIT.
- ⑤ 4-#4/0 & #4 GND IN 2-1/2" CONDUIT.
- ⑥ 3-#8 & #10 GND IN 1" CONDUIT.
- ⑦ 4-#1 & #6 GND IN 1-1/2" CONDUIT.
- ⑧ 4-#3 & #8 GND IN 1-1/4" CONDUIT.
- ⑨ 4-#350kcmil & #4 GND IN 3" CONDUIT.
- ⑩ 4-#3/0 & #6 GND IN 2-1/2" CONDUIT.
- ⑪ 3-#10 & #10 GND IN 3/4" CONDUIT.
- ⑫ 3-#4 & #8 GND IN 1-1/4" CONDUIT.
- ⑬ 2 SETS OF #3/0 & #3 GND IN 2" CONDUIT.
- ⑭ 4-#8 & #10 GND IN 1" CONDUIT.
- ⑮ 3-#8 & #10 GND IN 1" CONDUIT.
- ⑯ 5 SETS OF 4-#500kcmil & #4/0 GND IN 4" CONDUIT.

ISSUED FOR CONSTRUCTION

ELECTRICAL POWER ONE-LINE DIAGRAM

PA / PE: WRH Drawn By: RJB

**E51.0**



