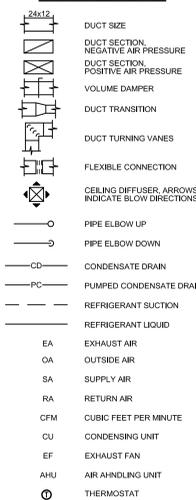


**HVAC LEGEND**



**GENERAL NOTES:**

- CONTRACTOR SHALL EXAMINE ALL CONSTRUCTION DOCUMENTS AND VISIT THE SITE TO BECOME ACQUAINTED WITH THE CONSTRUCTION AND THE EXTENT OF THE WORK.
- CONTRACTOR SHALL PROVIDE ALL MATERIAL AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE, WHETHER SPECIFIED OR IMPLIED.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2021 INTERNATIONAL MECHANICAL CODE AND ALL OTHER REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL GIVE ALL NOTICES, OBTAIN AND PAY FOR ALL PERMITS, DEPOSITS AND FEES NECESSARY.
- DO NOT SCALE THE DRAWINGS FOR EXACT DIMENSIONS. THE DESIGN DRAWINGS ARE DIAGRAMMATIC AND INDICATED THE GENERAL LAYOUT AND CONNECTIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSION, ETC AT THE JOB SITE.
- CONTRACTOR SHALL REVIEW THE WORK OF OTHER TRADES TO PREVENT INTERFERENCE BETWEEN BEAMS, STRUCTURES, PIPING, LIGHTING FIXTURES ETC. BEFORE PROCEEDING WITH NEW WORK.
- CONTRACTOR SHALL GUARANTEE THE ENTIRE JOB AGAINST DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE BINDING REGARDLESS OF MANUFACTURER'S GUARANTEE AND CONTRACTOR SHALL REMOVE AND REPLACE ALL DEFECTIVE MATERIAL REGARDLESS OF CAUSE (EXCEPT FOR DEFECTS TRACEABLE TO IMPROPER MAINTENANCE OR MALICIOUS DESTRUCTION OCCURRING AFTER THE SYSTEM HAS BEEN TURNED OVER).
- ALL MATERIALS USED ANYWHERE IN THE WORK SHALL HAVE NFPA RATING AS FOLLOWS:  
A. FLAME SPREAD--NOT OVER 25  
B. SMOKE DEVELOPED-- NOTE OVER 50  
C. FUEL CONTRIBUTED-- NOTE OVER 25
- SUBMIT TO THE ENGINEER FOR APPROVAL. ELECTRONIC COPIES SPECIFICATION SHEETS OF ALL EQUIPMENT SUPPLIED OR INSTALLED AS PART OF THIS WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING OR EXCEEDING WALL/CEILING/FLOOR ASSEMBLY RATINGS FOR ALL PENETRATIONS. CONTRACTOR SHALL VERIFY LOCATION AND RATING OF ALL FIRE ASSEMBLIES AND PROVIDE INTUMESCENT COLLARS AT ALL PIPE PENETRATIONS FIRE DAMPERS WITH ACCESS PANELS AT ALL DUCT PENETRATION AND FIRE RATED CAULKING AS REQUIRED.
- ALL MECHANICAL EQUIPMENT AND APPLIANCES INSTALLED SHALL BEAR THE LABEL OF AN APPROVED AGENCY.
- ALL TEST SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT INSULATION IS APPLIED.
- EQUIPMENT AND MATERIAL ARE SPECIFIED TO ESTABLISH A STANDARD OF QUALITY. ALL MATERIAL AND EQUIPMENT USED FOR THIS CONTRACT SHALL BE NEW AND UNUSED AND OF THE LATEST MODEL OR DESIGN AVAILABLE.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL STRUCTURAL STEEL, SUPPORTS, BRACES, HANGERS, ETC. REQUIRED FOR HIS CONTRACT UNLESS OTHERWISE NOTED. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT SUPPORT LOCATION AND INSTALLATION WITH ROOFING AND STRUCTURAL CONTRACTOR.
- ALL DUCT SIZES SHOWN ARE INSIDE CLEAR
- MAXIMUM ALLOWABLE LENGTH FOR FLEXIBLE DUCT IS SIX (6') FEET.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING EITHER ENGAGING HIS OWN GENERAL SUBCONTRACTOR OR ONE QUALIFIED BY THE OWNER.
- CONTRACTOR SHALL INFORM THE ENGINEER OF ANY QUESTIONS OR DISCREPANCIES PRIOR TO PRECURSOR AND/OR FABRICATION OF ANY MATERIAL AND INSTALLATION.
- INSTALL ALL EQUIPMENT IN ACCORDANCE TO THE MANUFACTURER'S WRITTEN GUIDELINES.
- MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONNECTION, SUPPORTS, TERMINATIONS, AND ACCESSORIES ASSOCIATED WITH AIR HANDLING UNITS, FANS, ETC.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR WHO WILL PROVIDE POWER WIRING TO ALL MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL PROVIDE ALL CONTROLS AND INTERCONNECTING WIRING AND ACCESSORIES.
- ALL EXTERIOR WALL OPENINGS SHALL BE SLEEVED, PROPERLY CAULKED AND SEALED WITH A HIGH QUALITY SEALANT TO PREVENT INFILTRATION OF MOISTURE AND OUTSIDE AIR.
- PROVIDE VOLUME DAMPERS AT ALL DUCT BRANCHES AND RUNOUTS. AND ELSEWHERE AS REQUIRE TO FACILITATE SYSTEM AIR BALANCING.
- PROVIDE FLEXIBLE CONNECTIONS ON ALL DUCTS AND PIPING CONNECTIONS TO ANY MOTOR DRIVEN MECHANICAL EQUIPMENT (E.G. FANS, AIR HANDLERS, PUMPS, ETC.). INSTALL FLEXIBLE COPPER GROUNDING STRAPS ACROSS ALL FLEXIBLE CONNECTIONS.
- THE INSIDE OF ALL DUCTWORK VISIBLE THROUGH A GRILLE OR DIFFUSER SHALL BE PAINTED FLAT BLACK.
- ACCESS PANELS SHALL BE PROVIDED TO SERVICE ALL DAMPERS AND CONCEALED MECHANICAL EQUIPMENT.
- FINAL LOCATIONS FOR MOUNTING ALL THERMOSTATS SHALL BE COORDINATED WITH THE ENGINEER PRIOR TO INSTALLING ANY CONTROL WORK.
- UPON COMPLETION OF THE WORK, REMOVE ALL EXCESS MATERIAL, DEBRIS, TOOLS, AND EQUIPMENT FROM THE SITE, AND LEAVE THE PREMISES IN A BROOM CLEAN CONDITION.
- CONTRACTOR SHALL PROVIDE AN ELECTRONIC COPY OF OPERATING AND MAINTENANCE INSTRUCTIONS. CONTRACTOR SHALL INSTRUCT THE OWNER OR HIS AGENT WITH REGARD TO THE PROPER USE OF THE SYSTEM UNTIL SUCH INSTRUCTION IS COMPLETE TO THE OWNER'S SATISFACTION.
- ALL MECHANICAL SYSTEMS SHALL BE TESTED, ADJUSTED AND BALANCED. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCING COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE AABC STANDARDS.
- M.C. IS RESPONSIBLE FOR CONTACTING NRG FOR CONTROLS. NEW HVAC SYSTEM CONTROLS MUST BE CONNECTED TO EXISTING BAS SYSTEM, NRG PROPRIETARY SYSTEM. M.C. TO COORDINATE WITH NRG.

**MATERIALS OF CONSTRUCTION:**

**DUCTWORK:**  
EXHAUST DUCTWORK: HOT DIPPED GALVANIZED SHEET METAL, ASTM-A-525. FABRICATE AND INSTALL IN ACCORDANCE WITH THE LATEST EDITION OF THE 'SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.' SMACNA APPROVED JOINTS, SEAMS AND REINFORCING FOR ±3" W.G.  
SUPPLY, RETURN, AND OUTSIDE AIR DUCTWORK: HOT DIPPED GALVANIZED SHEET METAL, ASTM-A-525. FABRICATE AND INSTALL IN ACCORDANCE WITH THE LATEST EDITION OF THE 'SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.' SMACNA APPROVED JOINTS, SEAMS AND REINFORCING FOR ±3" W.G. DUCTWORK SHALL INSULATED WITH FIBERGLAS BLANKET, 3" THICK 1-1/2" P.C.F. DENSITY WITH A MINIMUM R VALUE OF 6.0. PROVIDE WITH ALL PURPOSE JACKET AND VAPOR RETARDER.  
FLEXIBLE DUCTWORK: POLYESTER LAMINATED STEEL WIRE INNER CORE, R-6 LOW DENSITY FIBERGLASS BLANKET INSULATION WITH REINFORCED POLYESTER OUTER JACKET AND VAPOR BARRIER. UL STD. 181 APPROVED, CLASS 1 CONNECTOR. FLEXIBLE DUCTWORK SHALL BE LIMITED TO 6'-0" IN LENGTH.  
VOLUME DAMPERS: SHALL BE MULTIBLADE TYPE, CONSTRUCTED OF ASTM-A-525 HOT DIPPED GALVANIZED SHEET METAL. FABRICATE DAMPERS IN ACCORDANCE WITH THE LATEST EDITION OF THE 'SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.'  
DUCTWORK SEALANT: ALL DUCTWORK SEAMS AND JOINTS SHALL BE SEALED WITH A NON-HARDENING, NON-MIGRATING SEALANT, 3X MAXIMUM ALLOWABLE DUCT SYSTEM LEAKAGE. SEALANT SHALL BE CLEAR IN COLOR.  
DUCTWORK SUPPORT MATERIALS: GALVANIZED STEEL FASTENERS, ANCHORS, RODS, STRAPS, AND TRIM.

**EXHAUST FAN SCHEDULE**

TAG	TYPE	MOUNTING	CFM	ESP"	DRIVE	FAN RPM	MOTOR WATTS	VOLTAGE	BASIS OF DESIGN		NOTES
									MANUFACTURER	MODEL	
EF-1	EXHAUST	CEILING	100	.25	DIRECT	817	17	115/60/1	GREENHECK	SP-AP0511W	1,3,4
EF-2	EXHAUST	CEILING	75	.25	DIRECT	1400	52.4	115/60/1	GREENHECK	SP-A190	3,4
EF-3	EXHAUST	CEILING	300	.25	DIRECT	1000	67	115/60/1	GREENHECK	SP-A250	1,2,3
EF-2	EXHAUST	CEILING	50	.25	DIRECT	1400	52.4	115/60/1	GREENHECK	SP-A190	1,2,3,4

- NOTES:  
1. PROVIDE FAN WITH ECM MOTOR.  
2. SEE ELECTRICAL DRAWINGS FOR CONTROL FROM LIGHT RELAY  
3. PROVIDE ROOF VENT CAP  
4. PROVIDE LOCAL SWITCH CONTROL FOR CONTINUOUS OPERATION

**DIFFUSER SCHEDULE**

TAG	SIZE	NECK	BLOW	BORDER	MANUFACTURER	MODEL	NOTES
CD-1	24x24	DUCT SIZE	HORIZONTAL	LAY-IN	TITUS	OMNI	1
CD-2	12x12	DUCT SIZE	HORIZONTAL	LAY-IN	TITUS	OMNI	1

- NOTES:  
1. MANUFACTURER'S STANDARD BAKED WHITE ENAMEL FINISH

**GRILLE SCHEDULE**

TAG	SIZE	BORDER	MANUFACTURER	MODEL	NOTES
RG-1	24x24	LAY-IN	TITUS	350RL	1
RG-2	12x12	LAY-IN	TITUS	350RL	1
RG-3	18x6	SPIRAL GRILLE	TITUS	SBF	1
RG-4	30x6	SPIRAL GRILLE	TITUS	SBF	1
SG-1	12x8	REGISTER	TITUS	300FS	1
SG-2	10x6	SPIRAL GRILLE	TITUS	S300FL	1
SG-3	14x8	SPIRAL GRILLE	TITUS	S300FL	1

- NOTES:  
1. MANUFACTURER'S STANDARD BAKED WHITE ENAMEL FINISH

**AHU SCHEDULE**

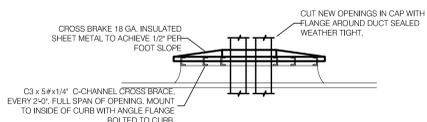
Air Handling Unit Data		Supply Fan Data				Chilled Water Coil										Hot Water Heating Coil												
Tag	Model No.	Max. Length (in.)	Max. Height (in.)	Max. Width (in.)	Max. Weight (lbs)	Airflow (CFM)	E.S.P. (in. w.g.)	Drive	HP	Voltage	HP Each	EAT-DB (°F)	EAT-WB (°F)	LAT-DB (°F)	LAT-WB (°F)	TMBH	SMBH	Flow Rate (gpm)	EWT (°F)	LWT (°F)	Max. Water Pressure Drop (ft/w.c.)	EAT-DB (°F)	LAT-DB (°F)	MBH	Flow Rate (gpm)	EWT (°F)	LWT (°F)	Max. Water Pressure Drop (ft/w.c.)
AHU-1	JCI Solution-XTO-39x54	192	57	53	2822	4000	1.25	Belt Drive	5.0	208/3/60	5.0	79.40	66.20	54.93	53.83	146.8	105.6	27.0	42.0	52.82	9.4	59.00	83.74	109.0	8.90	190.0	164.58	0.30
AHU-2	JCI Solution-XTO-42x36	179	42	36	2627	2500	1.25	Belt Drive	2.0	208/3/60	2.0	82.00	68.40	54.32	53.52	112.6	74.6	24.4	42.0	51.18	3.70	46.00	102.2	147.0	7.00	190.0	46.69	0.50
AHU-3	JCI Solution-XTO-45x66	200	45	66	3853	6450	1.25	Belt Drive	5.0	208/3/60	5.0	79.00	66.00	51.76	51.22	275.7	189.8	55.0	42.0	51.98	4.90	54.00	89.17	252.6	14.0	190.0	152.81	0.90
AHU-4	JCI Solution-XTO-39x63	190	39	63	3394	5100	1.25	Belt Drive	5.0	208/3/60	5.0	78.30	65.40	57.08	55.19	155.7	117.1	38.6	42.0	50.03	5.60	63.00	79.11	90.00	3.60	190.0	138.40	0.10
AHU-5	JCI Solution-XTO-69x81	201	69	81	5521	13600	1.25	Belt Drive	10.0	208/3/60	10.0	77.90	65.00	56.04	54.55	420.6	321.8	78.0	45.0	55.74	7.10	65.40	80.97	231.3	7.00	190.0	121.81	0.20
AHU-6	JCI Solution-XTO-36x45	186	36	45	2794	2850	1.25	Belt Drive	3.0	208/3/60	3.0	80.80	67.30	57.43	56.28	96.50	71.9	19.2	42.0	52.00	1.90	60.00	103.0	135.3	6.00	190.0	143.50	0.30

- NOTES:  
1. Provide Angle Filter rack with (2) sets of 2" MERV 8 Filters  
2. Provide 2 foot deep Pipe Chase at Cooling Coil and Heating Coil Sections  
3. Provide Full perimeter 6" tall Base Rail  
4. Provide Service Lights in all accessible sections and Convenience Outlet at the Supply Fan Section  
5. Provide Factory mounted and wired VFD with Disconnect Switch  
6. Provide 14" tall roof curb

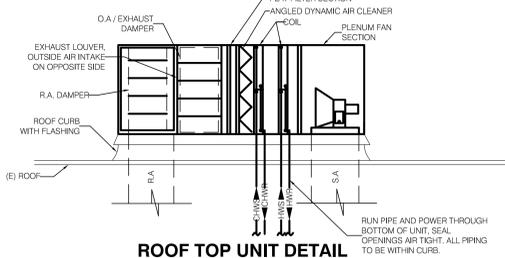
**PACKAGED ROOFTOP UNIT SCHEDULE (HW HEAT/DX COOLING)**

TAG	MANUFACTURER	MODEL	AREA SERVED	CFM		SUPPLY FAN				DX COOLING (MODULATING)						HOT WATER HEAT				FILTER	ELECTRICAL CHARACTERISTICS			OPERATING WEIGHT (LB)	NOTES		
				SA	OA	HP	TSP INCH	ESP INCH	MBH (TOT)	MBH (SENS)	EAT	LAT	REFRIG (TYP)	MBH (H)	HWC #	AIR	WATER	VOLT/PH/HZ	MCA		MOCP						
RTU-7	JCI	AD25C0C02E1AAT12B2	BCCD	7435	657	7.5	--	1.25	290.6	200.5	77.2	65.6	54.8	54.0	R-410A	153	7	63.6	--	190	160	MERV-8	208/3/60	143.7	175	2325	1 THROUGH 4
RTU-8	JCI	ZJ120C00R2B8BA2A3	Maintenance area	3344	291	3.4	--	1.25	121.4	84.0	77.3	65.8	54.0	53.8	R-410A	62	8	63.0	--	190	160	MERV-8	208/3/60	54.9	60	1185	1 THROUGH 4
RTU-9	JCI	ZJ061C00B2B8BA2A4	Shared Conference Room	1500	309	1.5	--	1.25	62.0	35.6	79.1	68.1	57.1	55.0	R-410A	32	9	63.0	--	190	160	MERV-8	208/3/60	34	45	930	1 THROUGH 4

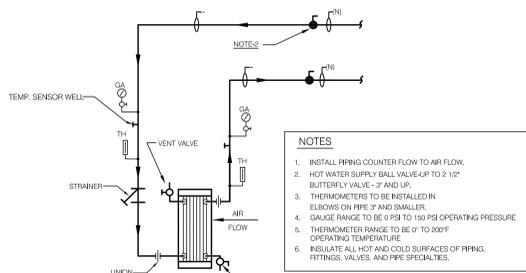
- NOTES:  
1. Provide Angle Filter rack with (2) sets of 2" MERV 8 Filters  
2. Provide Service Lights in all accessible sections and Convenience Outlet at the Supply Fan Section  
3. Provide Factory mounted and wired VFD with Disconnect Switch  
4. Provide 14" tall roof curb, Economizer, and Outside Air Hood



**O.A. ROOF CURB CAP ELEVATION VIEW DETAIL**



**ROOF TOP UNIT DETAIL**



**PIPING ARRANGEMENT- HOT WATER COIL**

- NOTES:  
1. INSTALL PIPING COUNTER FLOW TO AIR FLOW.  
2. HOT WATER SUPPLY BALL VALVE UP TO 2 1/2" BUTTERFLY VALVE - 3" AND UP.  
3. THERMOMETERS TO BE INSTALLED IN ELBOWS ON PIPE 2" AND SMALLER.  
4. GAUGE RANGE TO BE 0 PSB TO 150 PSB OPERATING PRESSURE.  
5. THERMOMETER RANGE TO BE 0° TO 200°F OPERATING TEMPERATURE.  
6. INSULATE ALL HOT AND COLD SURFACES OF PIPING, FITTINGS, VALVES, AND PIPE SPECIALTES.



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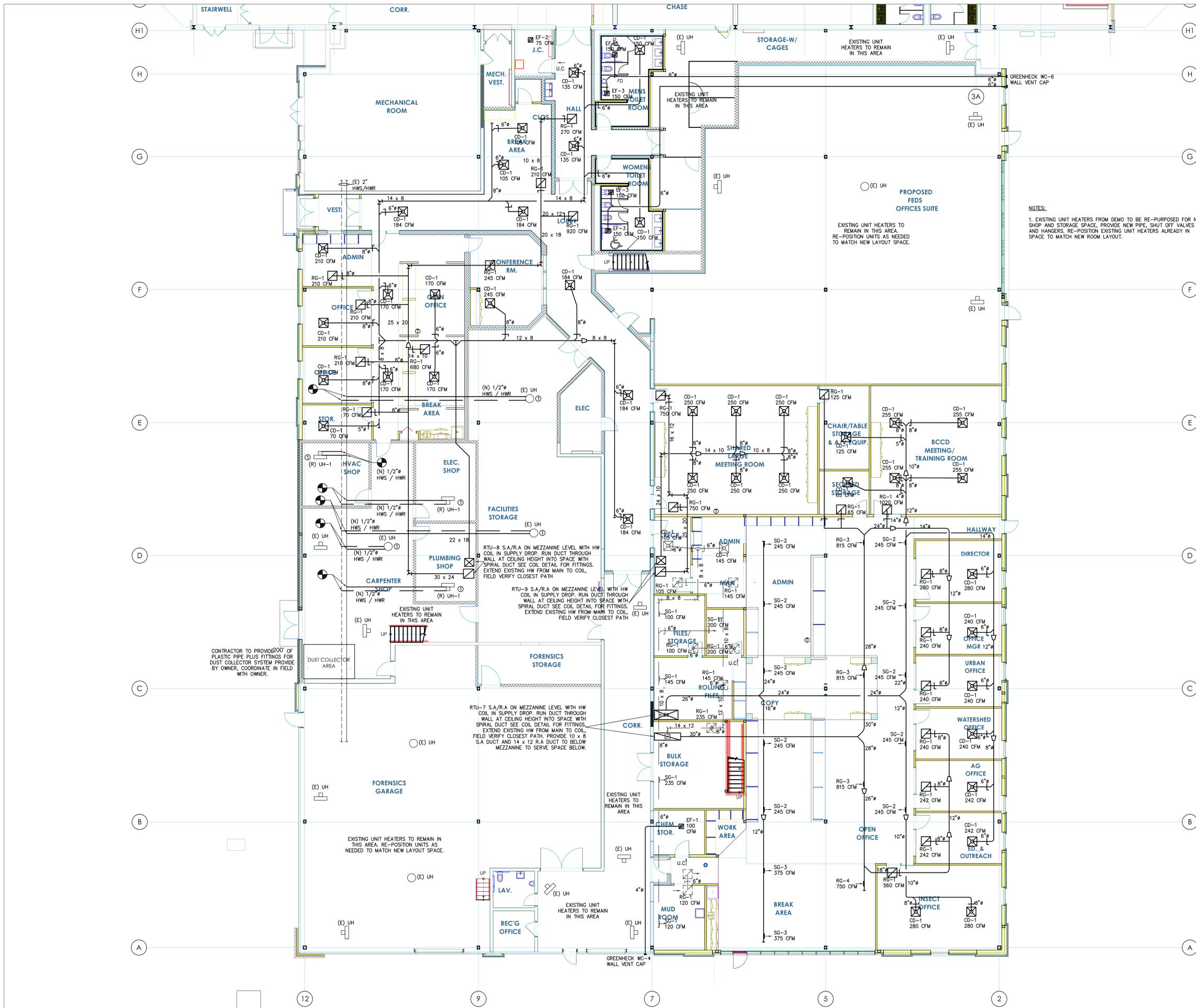
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SHEET TITLE:  
**HVAC GENERAL NOTES, LEGEND & SCHEDULE**

**H001**



FIRST FLOOR HVAC PLAN  
SCALE: 1/8"=1'-0"



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1	CONSTRUCTION/PERMIT ISSUE	06/29/23

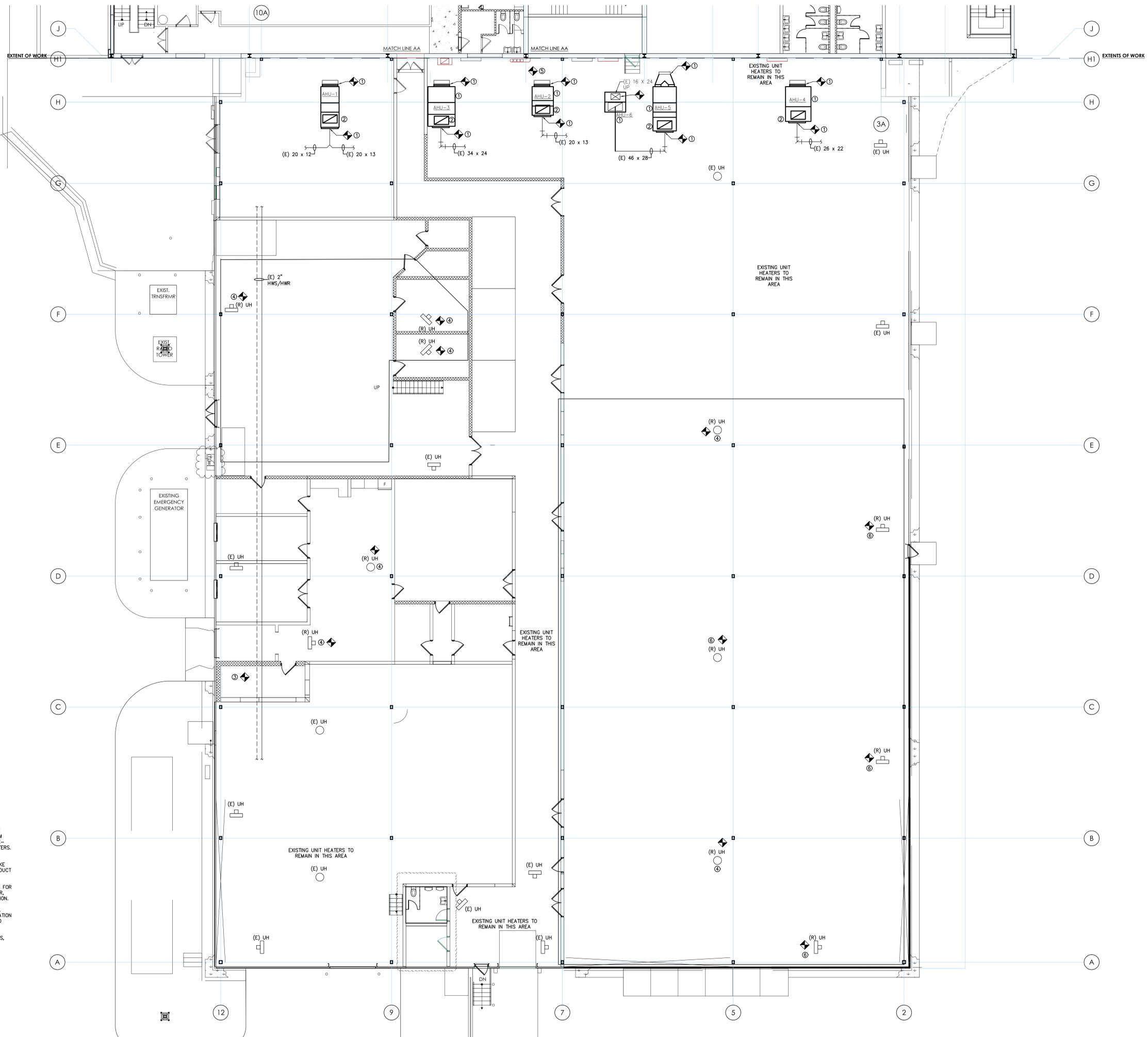
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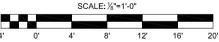
**H100**



**DEMO NOTES:**

1. DEMO AHU'S IN THEIR ENTIRETY. DEMO DUCT BACK TO FLEX COLLARS AND PLENUM BOXES FOR MULTI-ZONE UNITS, PLENUM BOXES TO REMAIN. DISCONNECT HOT AND CHILLED WATER PIPE - RETAIN SHUT OFF VALVES, PRESSURE GAUGE, AND THERMOMETERS. REMOVE ALL EQUIPMENT PADS AND HANGERS.
2. DEMO OUTSIDE AIR DUCT UP THROUGH ROOF. REMOVE INTAKE HOOD ON ROOF, DEMO CURB AND INCORPORATE OUTSIDE AIR DUCT OPENING INTO NEW DUCT WORK OPENING - FIELD COORDINATE.
3. CONTRACTOR TO REMOVE DUST COLLECTOR IN ITS ENTIRETY FOR RE-USE. FIELD COORDINATE ALL PARTS AND DUCT WITH OWNER. SUPPLY PARTS NEEDED TO REINSTALL AT OWNERS NEW LOCATION.
4. REMOVE UNIT HEATERS FOR RE-USE IN FORENSIC STORAGE. HVAC, PLUMBING AND ELECTRICAL SHOP. IF UNIT HEATER LOCATION IS WITH IN AREA OF NEW WORK, RE-POSITION UNIT HEATER TO MATCH ROOM LAYOUT.
5. DEMO AND CAP ALL EXISTING EXHAUST DUCT IN BATHROOMS. REMOVE ANY DUCT THAT INTERFERES WITH NEW.
6. DEMO EXISTING UNIT HEATERS IN THEIR ENTIRETY. REMOVE HANGERS, DEMO PIPE BACK TO HOT WATER MAIN AND CAP.

**HVAC DEMO PLAN**



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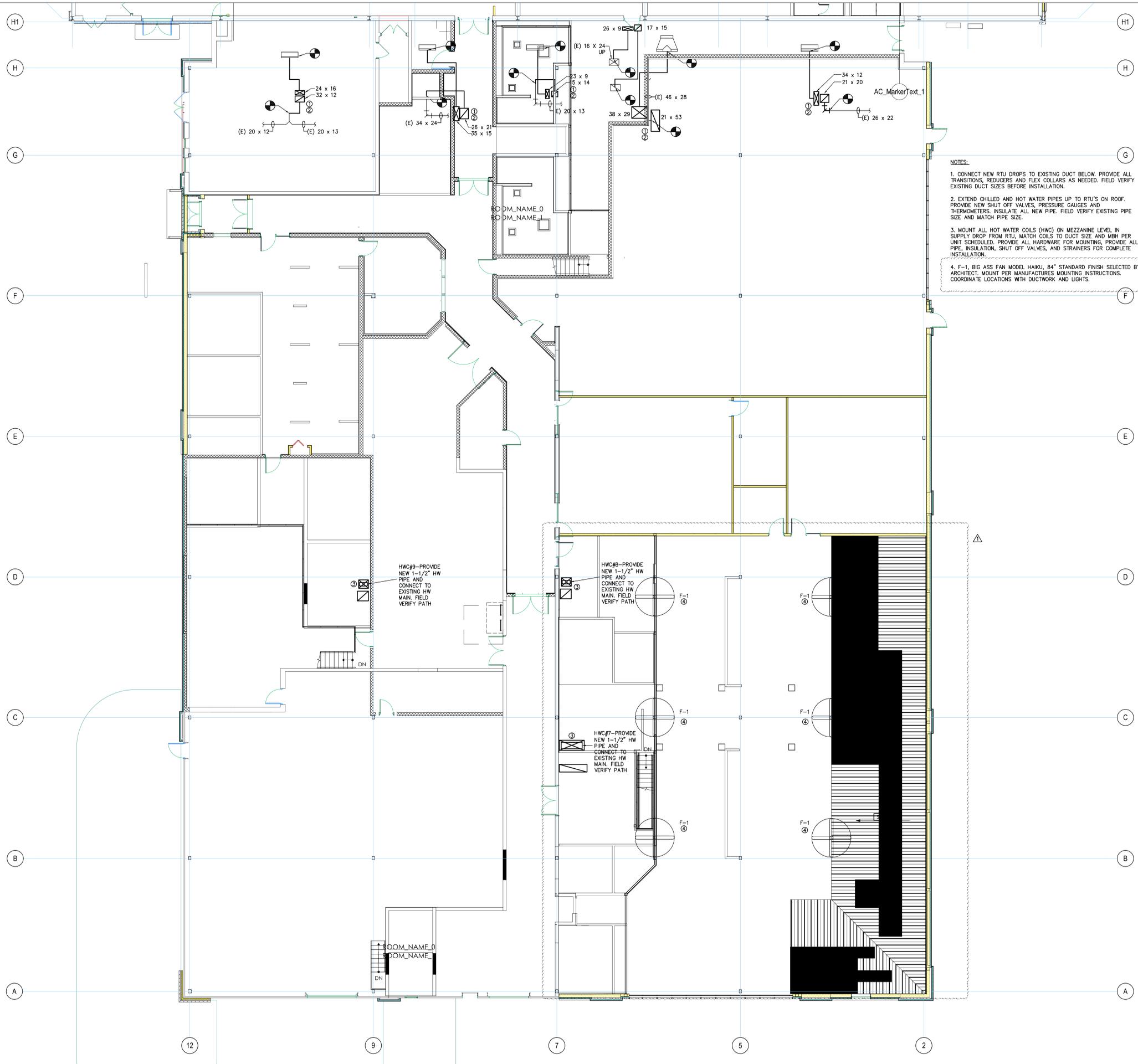
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SHEET TITLE:  
**HVAC DEMO PLAN**

**H100D**



- NOTES:**
1. CONNECT NEW RTU DROPS TO EXISTING DUCT BELOW. PROVIDE ALL TRANSITIONS, REDUCERS AND FLEX COLLARS AS NEEDED. FIELD VERIFY EXISTING DUCT SIZES BEFORE INSTALLATION.
  2. EXTEND CHILLED AND HOT WATER PIPES UP TO RTU'S ON ROOF. PROVIDE NEW SHUT OFF VALVES, PRESSURE GAUGES AND THERMOMETERS. INSULATE ALL NEW PIPE. FIELD VERIFY EXISTING PIPE SIZE AND MATCH PIPE SIZE.
  3. MOUNT ALL HOT WATER COILS (HWC) ON MEZZANINE LEVEL IN SUPPLY DROP FROM RTU. MATCH COILS TO DUCT SIZE AND MBH PER UNIT SCHEDULED. PROVIDE ALL HARDWARE FOR MOUNTING, PROVIDE ALL PIPE, INSULATION, SHUT OFF VALVES, AND STRAINERS FOR COMPLETE INSTALLATION.
  4. F-1, BIG ASS FAN MODEL HAKU, 84" STANDARD FINISH SELECTED BY ARCHITECT. MOUNT PER MANUFACTURER'S MOUNTING INSTRUCTIONS. COORDINATE LOCATIONS WITH DUCTWORK AND LIGHTS.

**MEZZANINE LEVEL HVAC PLAN**  
SCALE: 1/4"=1'-0"



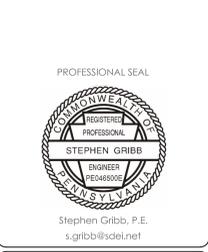
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**FACILITY UPGRADES**  
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ISSUED

DATE: ISSUED 3/30/23

REV	ISSUE	DATE
REV	PROGRESS ISSUE	03/23/23
1	CONSTRUCTION/PERMIT ISSUE	06/29/23

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SHEET SCALE: 1  
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SHEET TITLE:  
**MEZZANINE LEVEL HVAC PLAN**

**H101**



ROOF NEW WORK PLAN  
SCALE: 1/8"=1'-0"



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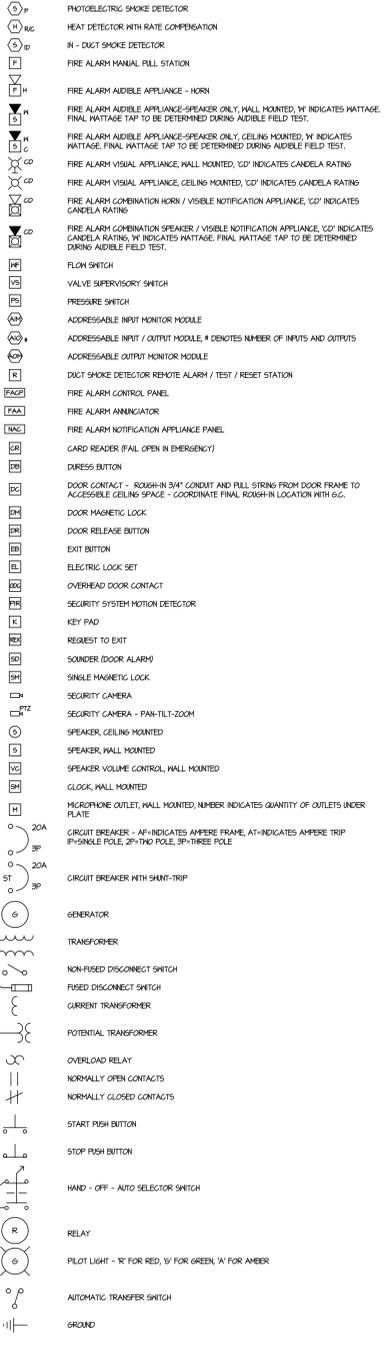
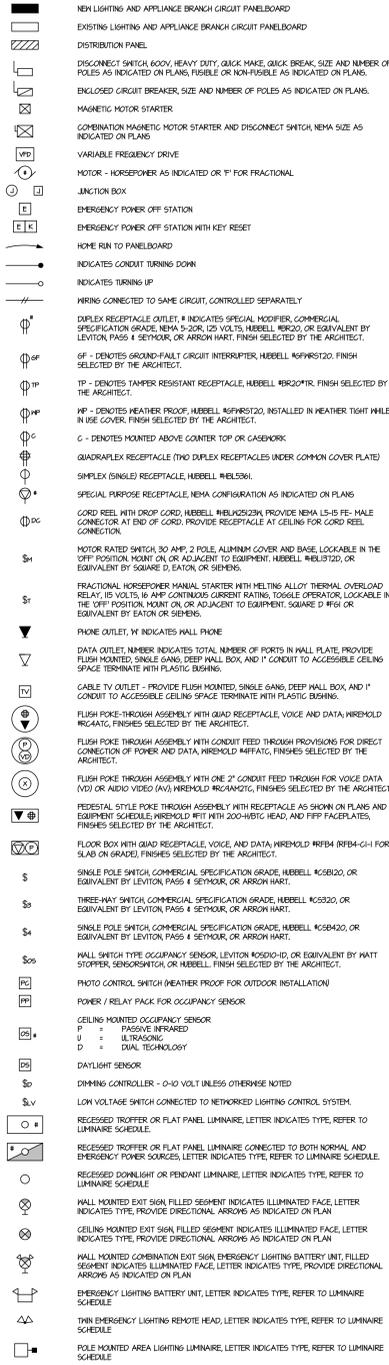
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SHEET TITLE:  
**HVAC ROOF NEW WORK PLAN**

**H200**

# ELECTRICAL LEGEND

NOTE: THIS LEGEND IS A STANDARD AND SOME ITEMS MAY NOT APPLY.



## ABBREVIATIONS

AF	AMPERE FRAME	MCB	MAIN CIRCUIT BREAKER
AFB	ABOVE FINISHED FLOOR	MDF	MAIN DISTRIBUTION FRAME
ALC	ALFES INTERRUPTING CURRENT	MCC	MOTOR CONTROL CENTER
AL	ALUMINUM	MCCM	MOTOR CENTER
AS	AMP SENSOR	MB	MOUNTING HEIGHT
AT	AMPERE TRIP	ML	MAIN LUGS ONLY
ATS	AUTOMATIC TRANSFER SWITCH	MT	MOUNT
AC	AIR CONDITIONING	N	NEUTRAL
AFS	ABOVE FINISHED GRADE	NC	NORMALLY CLOSED
CB	CIRCUIT BREAKER	NC	NOT IN CONTRACT
CCT	CIRCUIT	NO	NUMBER
CL	CURRENT LIMITING	NO	NOT TO SCALE
CLF	CURRENT LIMITING FUSE	NO	NOT TO SCALE
CLE	CIRCUIT	OF	OWNER FURNISHED EQUIPMENT
CONTR	CONTRACTOR	PH	PHASE
CONTR	CONTRACTOR	PNL	PANEL
CAB	CABINET	PR	PRIMARY
CO	CONDUIT	PT	POTENTIAL TRANSFORMER
CO	COPPER	PVC	POLYVINYL CHLORIDE
COND	CONDUITING UNIT BY OTHERS	REC	RECESSED
DISC	DISCONNECT	REC	RECEPTACLE
DIST	DISTRIBUTION	RE	RECESSED
D.D.	DRAIN OUT	RET	RETURN FAN
DWG	DRAWING	REL	EXISTING SHOWN RELOCATED
EBH	ELECTRIC BASEBOARD HEAT	RH	ROOM
EC	ELECTRICAL CONTRACTOR	SCHED	SCHEDULE
EF	EMERGENCY	SEC	SECONDARY
ELEC	ELECTRICAL	SE	SUPPLY FAN
EM	EMERGENCY	SE	SECONDARY KEY RELEASE UNIT
EHT	ELECTRICAL METALLIC TUBING	SN	SOLID NEUTRAL
ED	EXISTING TO BE DEMOLISHED	SN	SWITCH
E	EXISTING TO REMAIN	SNB	SHUTTERBOARD
ER	EXISTING TO BE RELOCATED	SNR	SHUTTERBOARD
EW	ELECTRIC WATER COOLER	SR	THE RELAY RELAY
DWH	ELECTRIC WATER HEATER	TEL	TELEPHONE
FA	FIRE ALARM	TRF	TRANSFER FAN
FDR	FEEDER	TP	TINIST PAIR
FIXT	FUTURE	TRP	TYPICAL
FL	FUSE	UH	UNIT HEATER
GN	GROUND	UCN	UNLESS OTHERWISE NOTED
GP	GROUND FAULT INTERRUPTER	V	VOLT
HDA	HAND - OFF - AUTOMATIC SWITCH	W	WATT
HP	HORSEPOWER	WTR	WEATHERPROOF
HZ	HERTZ	XFR	TRANSFORMER
IDP	INTERMEDIATE DISTRIBUTION FRAME		
IS	ISOLATED GROUND		
JB	JUNCTION BOX		
KB	KILOAMPERE		
KVA	KILOVOLT-AMPERES		
KN	KILOWATT		
L	LIGHT		
L.D.	LIGHT EMITTING DIODE		
LTO	LIGHTING		
LTK	LAMP		

## ELECTRICAL EQUIPMENT MOUNTING HEIGHTS

WALL MOUNTED FIRE ALARM AIDIBLE NOTIFICATION APPLIANCE (OR AS SHOWN ON ARCHITECTURAL DETAILS)	4" BELOW FINISHED CEILING
TV MONITOR OUTLETS AND SERVICE RECEPTACLES FOR SHELF MOUNTED TV	8'-0" ABOVE FINISHED FLOOR
WARNING AND SIGNALING LUMINAIRES / SIGNS	CENTERED ABOVE DOOR OR WINDOW OPENING
FIRE ALARM VISUAL NOTIFICATION APPLIANCE MOUNTED AT 6'-0" MEASURED FROM THE FINISHED FLOOR TO THE BOTTOM OF THE DEVICE OR 4' BELOW FINISHED CEILING MEASURED FROM THE FINISHED CEILING TO THE TOP OF THE DEVICE, WHICHEVER IS LOWER	6'-0" ABOVE FINISHED FLOOR
TOP OF FLUSH AND SURFACE MOUNTED LIGHTING CONTROL PANELS OR POWER PANELS/GARDERS AND TELEPHONE CABINETS, TOP OF HIGHEST ELECTRICAL SAFETY DISCONNECT SWITCHES	6'-6" ABOVE FINISHED FLOOR
WALL MOUNTED TELEPHONE AND WALL MOUNTED INTERCOMS	4'-0" ABOVE FINISHED FLOOR
WALL MOUNTED ELECTRICAL DEVICES, SUCH AS LIGHTING SWITCHES, MANUAL MOTOR STARTERS, THERMOSTATS, AND FIRE ALARM PULL STATIONS	4'-0" ABOVE FINISHED FLOOR
GF OUTLETS IN TOILET ROOMS ALL FLOOR EQUIPMENT IN LABS AND EQUIPMENT ROOMS	3'-6" ABOVE FINISHED FLOOR
ELECTRICAL RECEPTACLES INCLUDING THOSE USED WITH MECHANICAL SPACES AND ELEVATOR ROOMS, TELEPHONE DATA, AND COMMUNICATION OUTLETS CAVY AND JUNCTION BOXES	1'-6" ABOVE FINISHED FLOOR
WALL GLOCK AT 8'-0" OR CENTER BETWEEN DOOR FRAME AND GULLY	8'-0" ABOVE FINISHED FLOOR

MOUNTING HEIGHTS ARE TO CENTER OF OUTLETS UNLESS SPECIFICALLY NOTED OTHERWISE. IN MASONRY CONSTRUCTION, THE ABOVE HEIGHTS SHALL BE USED FOR REFERENCE TO FINISHED FLOOR OR BRICK COURSE.

THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE ARCHITECTURAL DRAWINGS OR SPECIFICATIONS.

LUMINAIRE SCHEDULE									
TYPE	DESCRIPTION	MANUFACTURER (OR EQUIVALENT)	CATALOG NO.	LAMPS	BALLAST / DRIVER	VOLTS	MTG	RMK	
A1	2'x2' L.E.D. TROFFER, FLOATING FLAT CENTER LENS.	XTRALIGHT	ART-2-3000L-35K-DIM-F	80-CRI, 3500K, 3000 LUMEN, 30 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR		
A2	SIMILAR TO TYPE A1, EXCEPT IN 2'x4' FORMAT	XTRALIGHT	ART-2-4500L-35K-DIM-F	80-CRI, 3500K, 4500 LUMEN, 45 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR		
B1	2'x2' BACK LIT L.E.D. FLAT PANEL WITH SWITCHABLE LUMEN OUTPUT AND COLOR TEMPERATURE	COLUMBIA	CBT2-L335	80-CRI, 3500K, 3000 LUMEN, 28 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR		
B2	SIMILAR TO TYPE B1 EXCEPT IN 2'x4' FORMAT	COLUMBIA	CBT2-L340	80-CRI, 3500K, 4400 LUMEN, 38 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR		
C1	4' LINEAR, VARIOUS TIGHT L.E.D. LUMINAIRE WITH RIBBED, FROSTED ACRYLIC LENS, STAINLESS STEEL LATCHES, PENDANT MOUNT	XTRALIGHT	VTE-4-5000L-35K-DIM-RFA-PND-SS	80-CRI, 3500K, 3000 LUMENS, 45 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	P 1		
C2	SIMILAR TO TYPE C1, EXCEPT WALL MOUNTED WITH 45 DEG. ANGLE BRACKET	XTRALIGHT	VTE-4-5000L-35K-DIM-RFA-PND-SSL	80-CRI, 3500K, 3000 LUMENS, 45 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	WS 2		
C3	SIMILAR TO TYPE C1, EXCEPT WITH 3500 LUMEN LIGHT ENGINE	XTRALIGHT	VTE-4-3500L-35K-DIM-RFA-PND-SSL	80-CRI, 3500K, 3500 LUMENS, 45 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	P 3		
D1	4' LINEAR, L.E.D. STRIP LUMINAIRE WITH RIBBED, FROSTED ACRYLIC LENS, PENDANT MOUNT	XTRALIGHT	LRS-4-5000L-35K-DIM	80-CRI, 3500K, 5000 LUMENS, 45 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	P 4		
F1	4" ROUND, FLANGED DOWNLIGHT, REGRESSED SOUTH LENS, NARROW FLOOD OPTICS, WHITE WHITE FLANGE FINISH, AIRTIGHT / IC HOUSING	SPECIALTY LIGHTING INDUSTRIES	CR6D-RF-FAU-C16-C14-35-24-C1-P14-91A	80-CRI, 3500K, 1075 LUMENS, 19 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR		
F2	6" ROUND, FLANGED DOWNLIGHT, REGRESSED SOUTH LENS, FLOOD OPTICS, WHITE WHITE FLANGE FINISH, AIRTIGHT / IC HOUSING	SPECIALTY LIGHTING INDUSTRIES	CR6D-RF-FAU-C16-35-38-C1-P14-91A	80-CRI, 3500K, 2235 LUMENS, 19 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR		
F3	6" ROUND, FLANGED DOWNLIGHT, REGRESSED SOUTH LENS, FLOOD OPTICS, FLANGE FINISH SELECTED BY THE ARCHITECT, AIRTIGHT / IC HOUSING	SPECIALTY LIGHTING INDUSTRIES	CR6D-RF-FAU-C16-35-38-C1-XXX-91A	80-CRI, 3500K, 2235 LUMENS, 19 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR 5		
F4	2.5" ROUND, FLANGED DOWNLIGHT, REGRESSED SOUTH LENS, SPOT OPTICS, AIRTIGHT / IC HOUSING, CLEAR GLASS DECOORATIVE ELEMENT, ARCHITECT TO CHOOSE REEL AND FLANGE FINISH	SPECIALTY LIGHTING INDUSTRIES	SCOD-R-DG-FP-C14-33K-10-C1-911	80-CRI, 3500K, 1075 LUMENS, 15 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR 6		
F5	4" ROUND, FLANGED DOWNLIGHT, REGRESSED SOUTH LENS, NARROW FLOOD OPTICS, FLANGE FINISH SELECTED BY THE ARCHITECT, AIRTIGHT / IC HOUSING	SPECIALTY LIGHTING INDUSTRIES	CR6D-RF-OR-FAU-C20-35-24-C1-XXX-91A	80-CRI, 3500K, 1425 LUMENS, 21 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR 5		
G1	LINEAR L.E.D. WALL SLOT, 2" REGRESSED, SOFT DIFFUSE LENS, WHITE WHITE FINISH	LITECONTROL	4L-W52-L5-D-XX-XX-SOF-C1-35K-0700-500-18-5UM	80-CRI, 3500K, 700 LUMENS, 6.1 WATT, 90° L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR 7		
H1	LINEAR INDIRECT COVE LUMINAIRE TO BE INSTALLED IN ARMSTRONG AXIOM COVE SYSTEM	VOSE	707-29-5L-XXX-AC-AP-4P-2-0-2-50-359-C1-0-A-0	80-CRI, 3500K, 750 LUMENS, 6.7 WATT, 90° L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR 8		
J1	RLM LUMINAIRE WITH 17" ARM MOUNT, FROSTED GLASS DOME, ARCHITECT TO SELECT ALL LUMINAIRE FINISHES	SPECTRUM	WS12-100V-15L-35K-7F2-CP104-PA17	80-CRI, 3500K, 1500 LUMEN, 15 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	WS		
K1	DECOORATIVE L.E.D. HIGH BAY LUMINAIRE, CAST GLASS REFLECTOR, SINGLE METAL RING BOTTOM RING, ARCHITECT TO SELECT ALL LUMINAIRE FINISHES	SPECTRUM	GRX16GV-37L-35K-D100K-1CM-HM-GR16-XXX-XXX	80-CRI, 3500K, 3700 LUMEN, 28 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	P		
L1	CONTINUOUS LINEAR L.E.D. DOWNLIGHT, INTEGRAL DRIVER, ARCHITECT TO SELECT TRIM FINISH	SPECIALTY LIGHTING INDUSTRIES	SL1DC-LTRC-AP-36-F4-35-5Y1-XXX	80-CRI, 3500K, 316 LUMENS, 7.3 WATT, 90° L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	CR 9		
M1	2" LINEAR, LENS, PENDANT LUMINAIRE, TO BE SHIPPED BETWEEN ARCHITECTURAL PANELS, ARCHITECT TO SELECT FINISH	SPECIALTY LIGHTING INDUSTRIES	SL2DC-LF-STM-36-XXX-R8-35-5Y1-XXX	80-CRI, 3500K, 790 LUMENS, 10 WATT, 90° L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	P		
N1	37" DIA. ARCHITECTURAL PENDANT WITH UP AND DOWN LIGHT COMPONENTS, SUN ALUMINUM HOUSING, SEPARATE UP LIGHT AND DOWN LIGHT CONTROL, ARCHITECT TO SELECT FINISHES	IMPACT ARCHITECTURAL LIGHTING	PS917-35-XX-35-5K-XXX-1237-020M	80-CRI, 3500K, 4985 LUMENS, 21 WATT UP, 2135 LUMENS, 23 WATT DOWN, L.E.D. LIGHT ENGINES	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	P		
O1	WEDGE SHAPED ARCHITECTURAL WALL SCENE, WIDE OPTICAL DISTRIBUTION, TEXTURED BLACK FINISH	LITHONIA	WDSGE LED P1 30K BDCR15 W MVLT DMG DBLXKD	80-CRI, 3000K, 1200 LUMENS, 19 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	WS		
O2	SIMILAR TO TYPE O1, EXCEPT WITH SURFACE MOUNTED BACK BOX	LITHONIA	WDSGE LED P1E 30K BDCR15 W MVLT PBRM DMG DBLXKD	80-CRI, 3000K, 1200 LUMENS, 19 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	WS		
P1	WEDGE SHAPED ARCHITECTURAL WALL PACK, I.E.S. TYPE B CUT OFF OPTICAL DISTRIBUTION, TEXTURED BLACK FINISH	LITHONIA	WDSGE LED P2 30K BDCR15 DMG DBLXKD	80-CRI, 3000K, 6985 LUMENS, 59 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	WS		
P2	SIMILAR TO TYPE P1, EXCEPT WITH SURFACE MOUNTED BACK BOX	LITHONIA	WDSGE LED P2 30K BDCR15 PBRM DMG DBLXKD	80-CRI, 3000K, 6985 LUMENS, 59 WATT L.E.D. LIGHT ENGINE	MFR'S STD 10%, 0-10V DIMMING DRIVER	120-277	WS		
X	SINGLE FACE EXIT SIGN, WHITE, DIE-CAST ALUMINUM HOUSING, AC ONLY	EMERGENSEE	SEXP-PC2-R-W	RED L.E.D.'S	N/A	120-277	S		
X1	DOUBLE FACE EXIT SIGN, WHITE, DIE-CAST ALUMINUM HOUSING, AC ONLY	EMERGENSEE	SEXP-PC2-R-W	RED L.E.D.'S	N/A	120-277	S		

### MOUNTING LEGEND

C = CEILING  
W = WALL  
S = SURFACE  
R = RECESSED

### NOTES

- IN FORENSIC'S GARAGE, SUSPEND AT 12" A.F.F. TO BOTTOM. IN ALL OTHER SPACES, SUSPEND AT 10" A.F.F. TO BOTTOM.
- WALL MOUNT AT 9" A.F.F. TO BOTTOM OF LUMINAIRE.
- IN MEZZANINES, SUSPEND AT 9" A.F.F. TO BOTTOM OF LUMINAIRE.
- PROVIDE CHAIN OR STAINLESS STEEL AIRCRAFT CABLE ACCESSORY. IN FIRST FLOOR STORAGE AND CORRIDORS, SUSPEND AT 10" TO BOTTOM. IN MEZZAN SPACES, SUSPEND AT 9" A.F.F. TO BOTTOM.
- PROVIDE FULL COMPATIBILITY WITH ARMSTRONG WOODWORKS REGULAR CEILING SYSTEM.
- CENTER ABOVE COUNTER BELOW.
- WALL SLOT SYSTEM SHALL BE CONTINUOUS FROM WALL TO WALL AS INDICATED. PROVIDE STRAIGHT EXTENSIONS AS REQUIRED TO ASSURE A CONTINUOUS APPEARANCE. PROVIDE END CAPS AT EACH END.
- LUMINAIRE TO BE INSTALLED IN ARMSTRONG AXIOM COVE SYSTEM. VERIFY SPECIFIC AXIOM SYSTEM WITH ARCHITECT PRIOR TO ORDERING LUMINAIRE. CONTRACTOR TO FIELD VERIFY LENGTH OF EACH COVE SECTION AND SUBMIT DIMENSIONED SHOP DRAWINGS INDICATING DETAILS OF EACH SECTION AND OVERALL SYSTEM IN EACH OFFENSE MEETING ROOM.
- PROVIDE FULL COMPATIBILITY WITH ARMSTRONG WOODWORKS GRILLE FORTÉ CEILING SYSTEM.

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DATE: ISSUED 3/30/23		
REV#	DESCRIPTION	DATE
1	ISSUED FOR PERMITS / CONSTRUCTION	6/29/23
A	ISSUED FOR REVIEW	3/22/23

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CLIENT PROJ #:

GRAPHIC SCALE  
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BAR & ONE (1) INCH LONG ON ORIGINAL DRAWINGS

SHEET TITLE:  
**ELECTRICAL LEGEND & ABBREVIATIONS**

**E001**

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

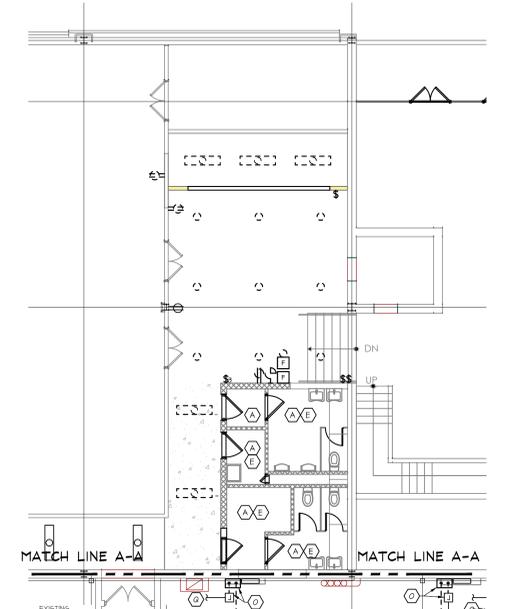
**GENERAL DEMOLITION NOTES**

- EXISTING AIR HANDLING UNITS AH-1 THROUGH AH-6 HAVE DUCT SMOKE DETECTORS IN THE RETURN DUCTWORK. COORDINATE WITH THE HVAC CONTRACTOR. THE EXTENT OF REMOVAL OF RETURN DUCTWORK, IF REQUIRED, CAREFULLY DISCONNECT AND REMOVE THE DETECTOR. AFTER DUCTWORK IS COMPLETE AND THE HVAC CONTRACTOR HAS INSTALLED THE SAMPLING TUBE, INSTALL A NEW ADDRESSABLE SMOKE DETECTOR AND CONNECT TO THE FIRE ALARM SYSTEM.
- WHERE LUMINAIRES ARE REMOVED, THEY SHALL BE DISPOSED OF LEGALLY OFF SITE. RECYCLE ALL FLUORESCENT LAMPS IN ACCORDANCE WITH LOCAL AND STATE REQUIREMENTS.

**KEYED DEMOLITION NOTES**

- DISCONNECT AND REMOVE ALL EXISTING LUMINAIRES IN THIS SPACE, INCLUDING ALL CONDUITS, BOXES, SUPPORTS, WIRING, AND ASSOCIATED SWITCHES.
- REPLACE EXISTING RECEPTACLE AND COVER PLATE WITH NER AS SPECIFIED, AND CONNECT TO EXISTING BRANCH CIRCUIT.
- REMOVE ALL EXISTING RECEPTACLES IN THE EXISTING CARPENTERS SHOP, INCLUDING ALL ABOVE-GRADE CONDUIT, BOXES, SUPPORTS, WIRING COMPLETE TO EXISTING PANEL 'C'. CUT CONDUIT STUB-UPS OFF BELOW THE FLOOR SURFACE AND GROUT SHUT. COORDINATE FLOOR PATTERNS WITH THE GENERAL CONTRACTOR.
- REMOVE EXISTING PANEL 'C' COMPLETE, INCLUDING ALL BRANCH CIRCUITS, ABOVE GRADE CONDUITS, FEEDER, COMPLETE TO THE MAIN DISTRIBUTION SWITCHBOARD. CUT CONDUIT STUB-UPS OFF BELOW THE FLOOR SURFACE AND GROUT SHUT. COORDINATE FLOOR PATTERNS WITH THE GENERAL CONTRACTOR. RETURN ALL REMOVED BRANCH CIRCUIT BREAKERS TO THE OWNER'S STOCK.
- REMOVE ALL EXISTING RECEPTACLES IN THIS SPACE. REMOVE ALL ABOVE-GRADE CONDUIT, BOXES, SUPPORTS, WIRING COMPLETE TO SOURCE EXCEPT THAT IF THE BRANCH CIRCUIT SERVES RECEPTACLES THAT ARE TO REMAIN, IT SHALL BE MAINTAINED CONTINGENT. IF REQUIRED, CUT CONDUIT STUB-UPS OFF BELOW THE FLOOR SURFACE AND GROUT SHUT. COORDINATE FLOOR PATTERNS WITH THE GENERAL CONTRACTOR.
- EXISTING EXHAUST FAN TO REMAIN. RE-ROUTE BRANCH CIRCUIT THROUGH NEW OCCUPANCY CONTROLS. REFER TO LIGHTING PLANS AND DIAGRAMS FOR ADDITIONAL INFORMATION.
- RELOCATE EXISTING EXHAUST FAN COMBINATION STARTER TO ACCOMMODATE WALL REMOVAL. REMOVE BRANCH CIRCUIT TO NEW JUNCTION BOX IN CEILING SPACE AND EXTEND TO NEW LOCATION. REFER TO DRAWING E201 FOR NEW LOCATION.
- EXISTING EXHAUST FAN TO REMAIN.
- EXISTING UNIT HEATER TO REMAIN.
- DISCONNECT POWER FROM EXISTING UNIT HEATER. REMOVE DISCONNECT SWITCH, IF REQUIRED, PROVIDE NEW JUNCTION BOX IN CEILING SPACE TO MAINTAIN BRANCH CIRCUIT TO OTHER UNIT HEATERS WHICH REMAIN OTHERWISE REMOVE TO SOURCE.
- DISCONNECT POWER FROM EXISTING EXHAUST FAN. INCLUDE BRANCH CIRCUIT AND CONTROL WIRING COMPLETE TO SOURCE.
- DISCONNECT POWER FROM EXISTING EXHAUST FAN. REMOVE DISCONNECT SWITCH AT FAN. REMOVE COMBINATION STARTER AND BRANCH CIRCUIT WIRING AND CONDUIT COMPLETE TO SOURCE.
- DISCONNECT POWER FROM EXISTING DUST COLLECTOR. RELOCATE EXISTING COMBINATION STARTER AND DISCONNECT SWITCH TO NEW DUST COLLECTOR LOCATION. REMOVE BRANCH CIRCUIT WIRING AND CONDUIT COMPLETE TO SOURCE. REFER TO DRAWING E201 FOR NEW LOCATION.
- DISCONNECT POWER FROM AHU, REMOVE DISCONNECT SWITCH, REMOVE FEEDER FROM DISCONNECT SWITCH TO V.F.D. COMPLETE.
- DISCONNECT POWER FROM EXISTING V.F.D. REMOVE V.F.D. AND BRANCH CIRCUIT CONDUIT AND WIRING TO NEW JUNCTION BOX IN CEILING SPACE. RETURN V.F.D. TO THE OWNER.
- EXISTING BRANCH CIRCUIT HOMERUN TO PANEL 'H' TO REMAIN.
- EXISTING BRANCH CIRCUIT HOMERUN TO PANEL 'B' TO REMAIN.
- DISCONNECT POWER FROM EXISTING V.F.D. REMOVE V.F.D. AND BRANCH CIRCUIT CONDUIT AND WIRING COMPLETE TO SOURCE. RETURN V.F.D. TO THE OWNER.

NOTE: RETAIN (R) FLUORESCENT LUMINAIRES IN THE FUTURE FEDERAL SITE. LOCATE AS INDICATED ON DRAWING E01.



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

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DRAWN BY: S.B.G.  
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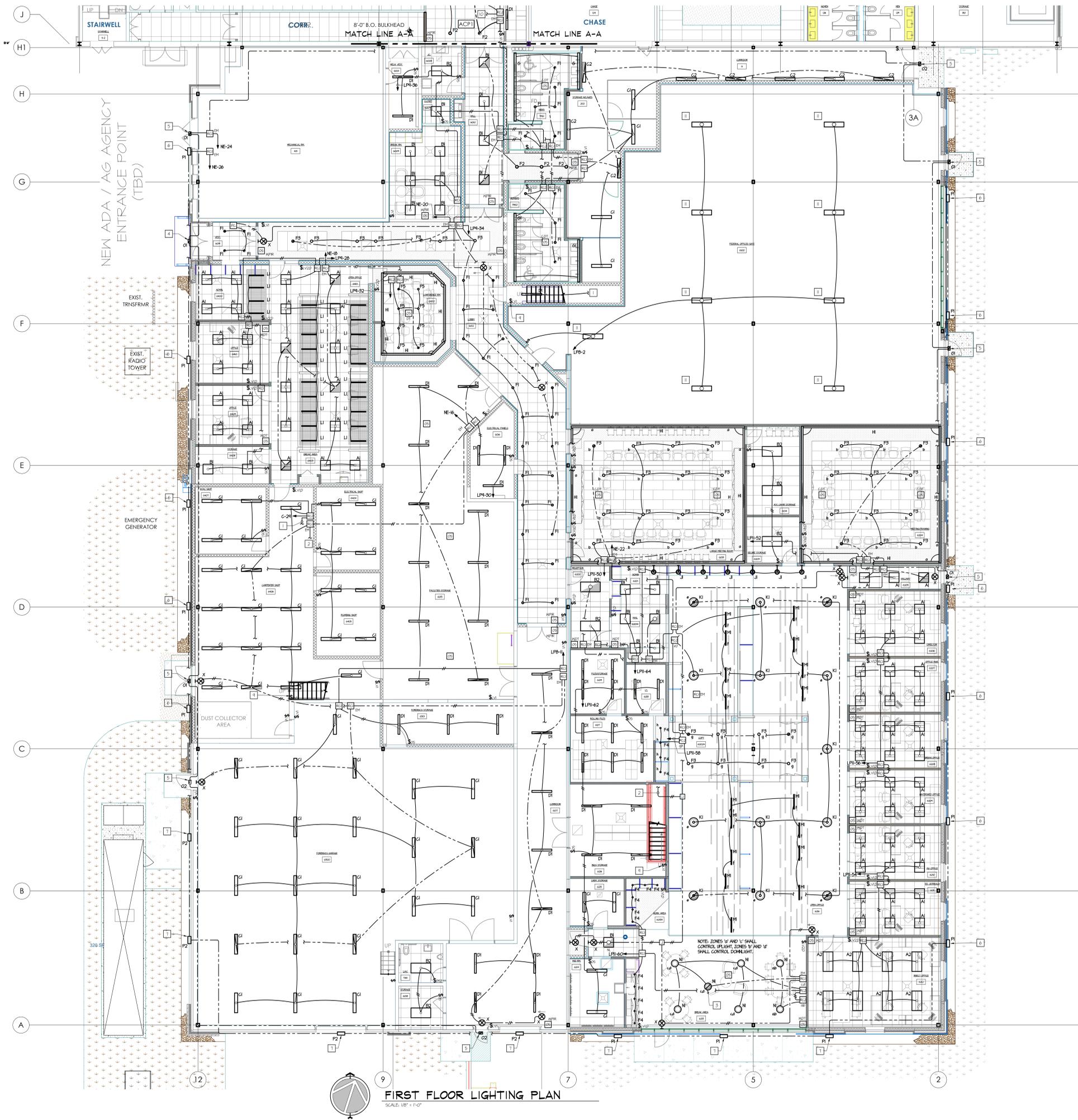
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SHEET TITLE:  
**ELECTRICAL DEMOLITION PLAN**

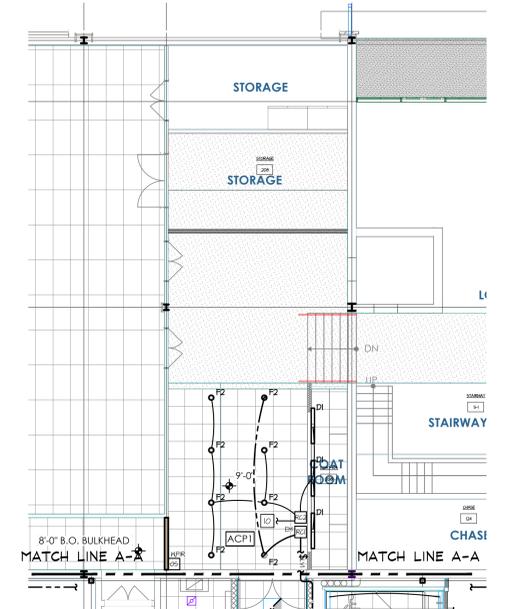
**ED101**

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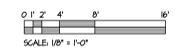


**KEYED DRAWING NOTES**

- 1 UP TO ROOM CONTROLLER ON MEZZANINE LEVEL. REFER TO DRAWING E02 FOR CONTINUATION.
- 2 UP TO UL 424 EMERGENCY ROOM CONTROLLER ON MEZZANINE LEVEL. REFER TO DRAWING E02 FOR CONTINUATION.
- 3 CONNECT DOWNLIGHT DRIVER TO UL 424 EMERGENCY ROOM CONTROLLER.
- 4 MOUNT APPROXIMATELY 8'-6" A.F.F. TO BOTTOM OF LUMINAIRE.
- 5 MOUNT APPROXIMATELY 8'-0" A.F.F. TO CENTER OF LUMINAIRE.
- 6 CENTER LUMINAIRE VERTICALLY IN UPPERMOST HALL PANEL, APPROXIMATELY 11'-0" A.F.F.
- 7 CENTER LUMINAIRE APPROXIMATELY 11'-0" A.F.F.
- 8 EXTEND 3/4" Ø MIO GND TO NORMALLY ENERGIZED BUS OF EXISTING PANEL NET; PROVIDE NEW 20 AMP SINGLE POLE CIRCUIT BREAKER.
- 9 LOW VOLTAGE SWITCH FOR MANUAL CONTROL OF MEZZANINE LIGHTING.
- 10 CONNECT TO UNSWITCHED LEG OF EXISTING BRANCH CIRCUIT SERVING LIGHTING REMOVED FROM THIS AREA.
- 11 EXISTING LUMINAIRE RELOCATED AND USED AS TEMPORARY LIGHTING FOR THE FUTURE FEDERAL SUITE.



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



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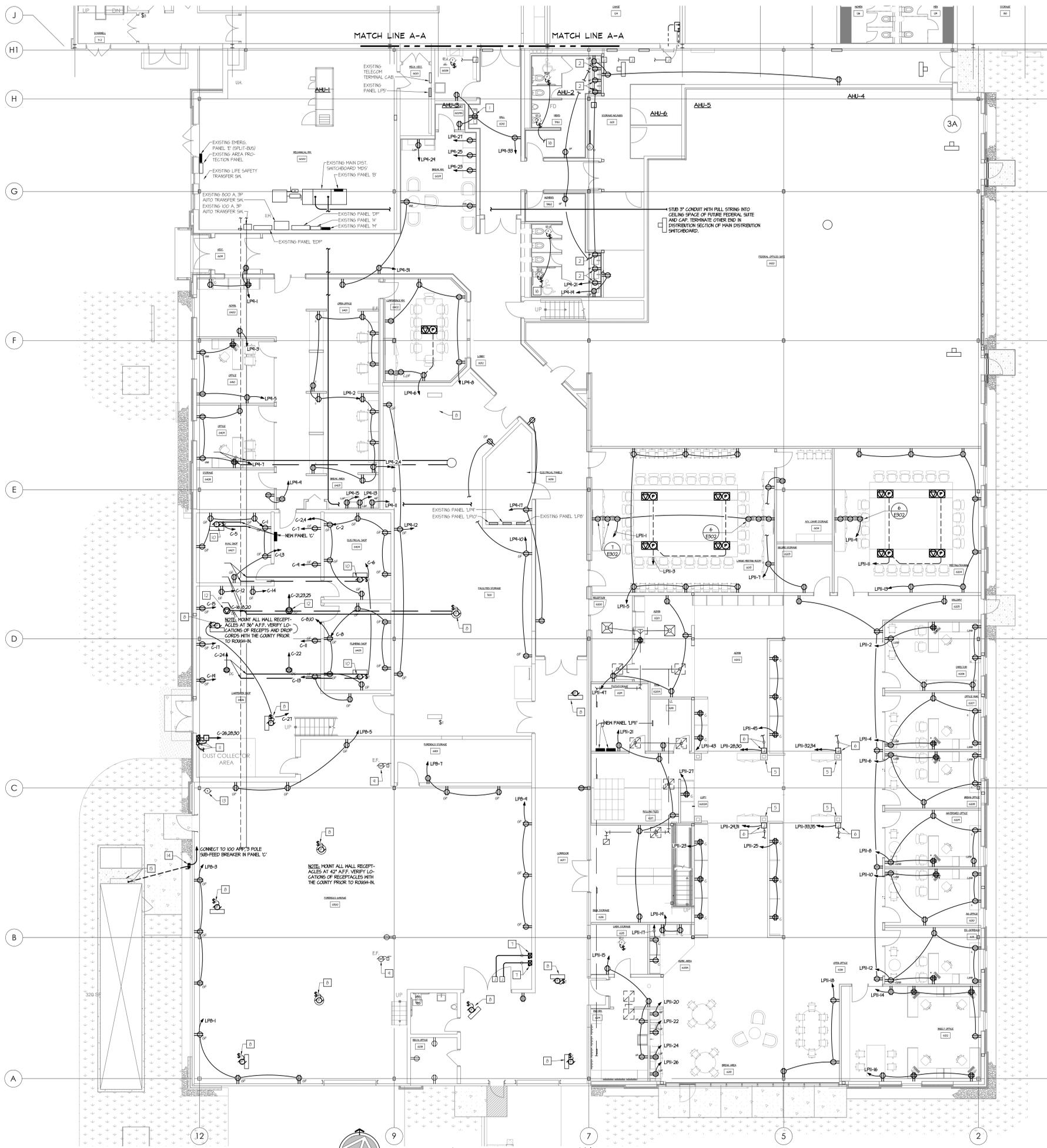
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SHEET TITLE:  
**FIRST FLOOR  
LIGHTING PLAN**

**E101**

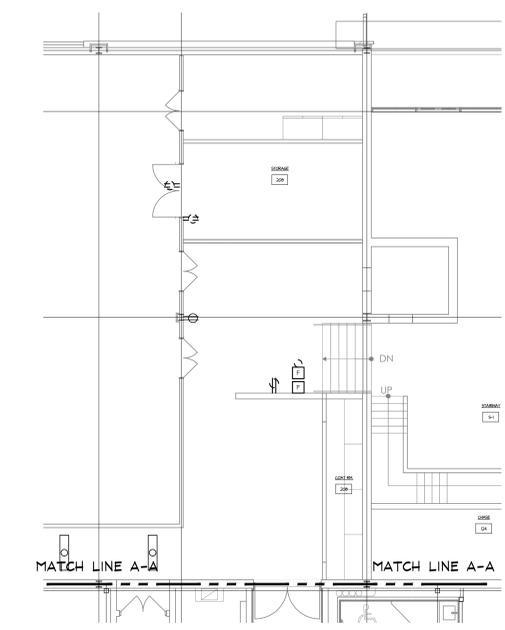
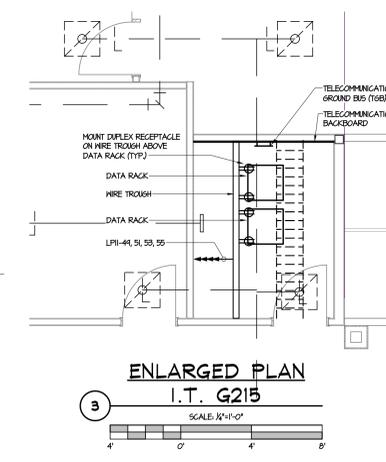
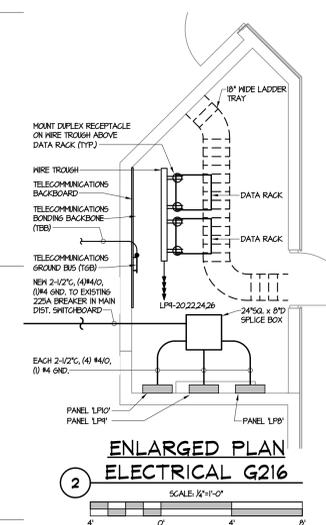
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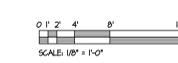
**KEYED DRAWING NOTES**

- 1 CONCEAL RECEPTACLE BEHIND WATER COOLER ENCLOSURE.
- 2 RECEPTACLE DEDICATED FOR AUTOMATED FACSET AT VANITY. COORDINATE MOUNTING HEIGHT WITH THE PLUMBING CONTRACTOR.
- 3 NEW VARIABLE FREQUENCY DRIVE FACTORY MOUNTED TO AIR HANDLING UNIT.
- 4 NEW 30 AMP 3 POLE, NEMA 1, NON-FUSED DISCONNECT SWITCH BY E.G. MOUNT TO UNIT EXTERIOR. COORDINATE INSTALLATION WITH THE E.V.A.C. CONTRACTOR.
- 5 CONCEAL BRANCH CIRCUITS TO WORK STATIONS AND WORK COUNTERS WITHIN COLUMN.
- 6 PROVIDE FLUSH HALL BOX FOR FURNITURE POWER IN-FEED. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT RAMP TO FURNITURE SYSTEM CONNECTION POINT. VERIFY REQUIREMENTS WITH SPECIFIC FURNITURE SUPPLIER PRIOR TO ROUGH-IN.
- 7 EXTEND 3/4" C, (1/2" Ø) 2 GND. FROM NEH JUNCTION BOX TO RELOCATED EXHAUST FAN COMBINATION STARTER AND CONNECT.
- 8 EXISTING UNIT HEATER.
- 9 EXISTING EXHAUST FAN.
- 10 RELOCATED UNIT HEATER.
- 11 INSTALL RELOCATED COMBINATION STARTER AND 3 POLE DISCONNECT SWITCH AND CONNECT TO DUST COLLECTOR AND SHAKER AS PER PREVIOUS INSTALLATION. RESTORE ALL INTERLOCKS PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 12 CORD REEL WITH 35' #124 50K GORD. HEBBELL CAT. #HEB182924. TERMINATE WITH NEMA L15-20 TMSF LOK FEMALE CONNECTOR.
- 13 EXISTING AIR COMPRESSOR.
- 14 100 AMP, 3 POLE, NON-FUSED, NEMA 4X DISCONNECT SWITCH.
- 15 TERMINATE FEEDER IN ELECTRICAL EQUIPMENT ENCLOSURE MOUNTED ON EXTERIOR OF SHOOT HOUSE CONTAINER.
- 16 CONNECT EXHAUST FAN TO LIGHTING CIRCUIT. REFER TO DRAWING E101.



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

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

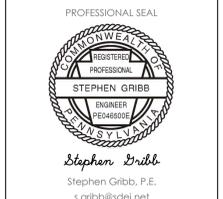


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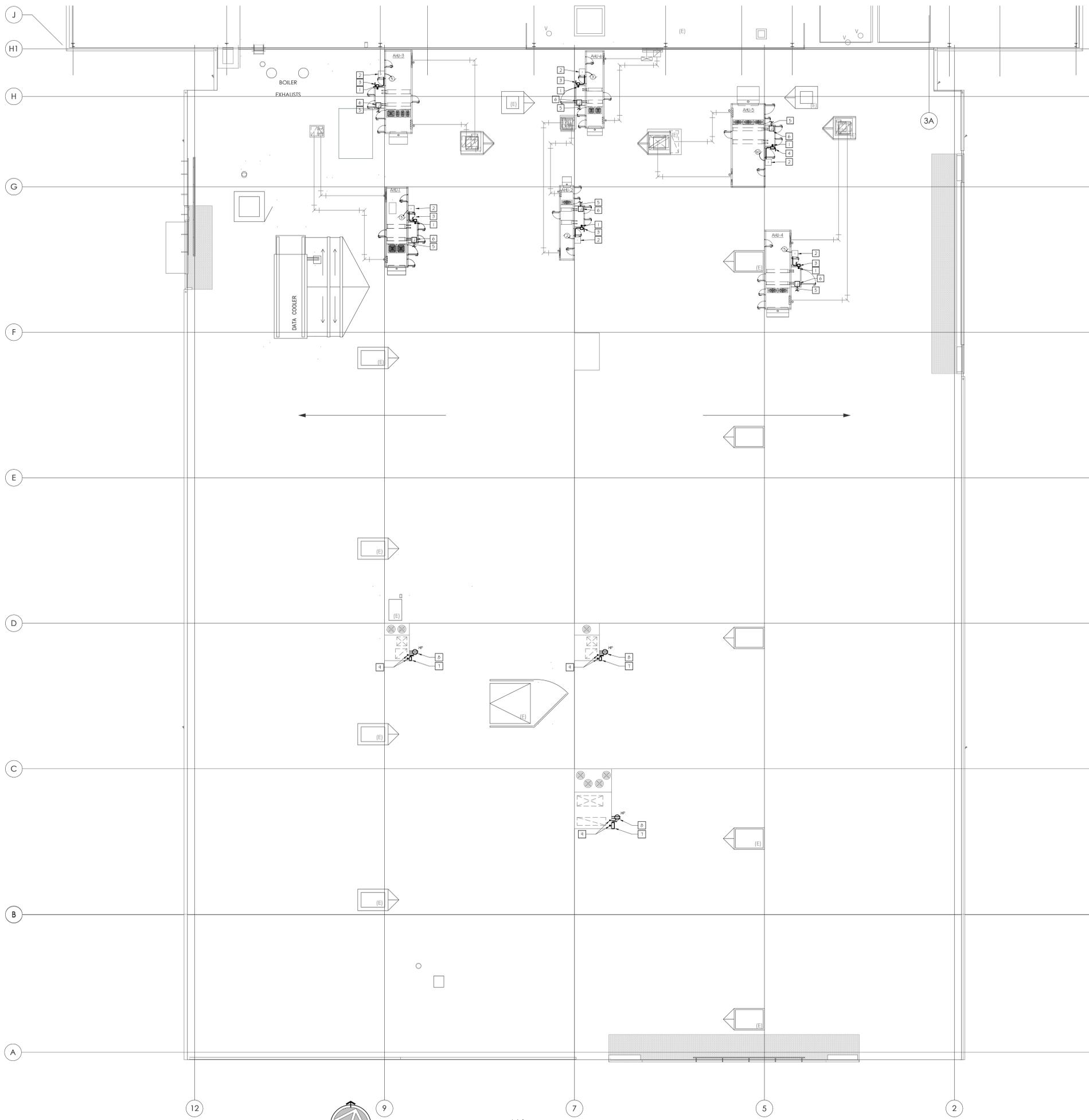
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SHEET TITLE:  
**FIRST FLOOR POWER PLAN**

**E201**



**KEYED DRAWING NOTES**

- 1 ROUTE NEW ROOF TOP AIR HANDLER BRANCH CIRCUIT DOWN TO CEILING SPACE BELOW VIA ROOF TOP UNIT PIPE CHASE AND ROOF CURB. COORDINATE INSTALLATION WITH THE H.V.A.C. AND GENERAL CONTRACTOR.
- 2 VARIABLE FREQUENCY DRIVE FACTORY MOUNTED TO EXTERIOR OF ROOF TOP AIR HANDLING UNIT.
- 3 NEW 50 AMP, 3 POLE, NEMA 4X, NON-FUSED DISCONNECT SWITCH, BY E.G. MOUNT TO UNIT EXTERIOR. COORDINATE INSTALLATION WITH THE H.V.A.C. CONTRACTOR.
- 4 NEW 60 AMP, 3 POLE, NEMA 4X, NON-FUSED DISCONNECT SWITCH, BY E.G. MOUNT TO UNIT EXTERIOR. COORDINATE INSTALLATION WITH THE H.V.A.C. CONTRACTOR.
- 5 3W/2, (2W/2) AND, CONNECT TO CONVENIENCE RECEPTACLE AND UNIT MOUNTED LIGHTING. COORDINATE THE INSTALLATION WITH THE H.V.A.C. CONTRACTOR.
- 6 ROUTE NEW BRANCH CIRCUIT SERVING CONVENIENCE RECEPTACLE AND UNIT MOUNTED LIGHTING DOWN TO CEILING SPACE BELOW VIA ROOF TOP UNIT PIPE CHASE AND ROOF CURB. COORDINATE INSTALLATION WITH THE H.V.A.C. AND GENERAL CONTRACTOR. REFER TO DRAWING E201 FOR CONTINUATION.
- 7 DISCONNECT SWITCH FURNISHED AS A FACTORY INSTALLED OPTION WITH THE R.T.U. ELECTRICAL SHALL CONNECT POWER TO LINE SIDE.
- 8 WEATHER-PROOF, GFCI RECEPTACLE FURNISHED AS A FACTORY INSTALLED OPTION WITH THE R.T.U. ELECTRICAL CONTRACTOR SHALL CONNECT TO BRANCH CIRCUIT INDICATED.
- 9 ROUTE BRANCH CIRCUIT / FEEDER THROUGH ROOF CURB. COORDINATE INSTALLATION WITH THE H.V.A.C. CONTRACTOR.

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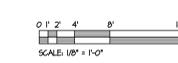
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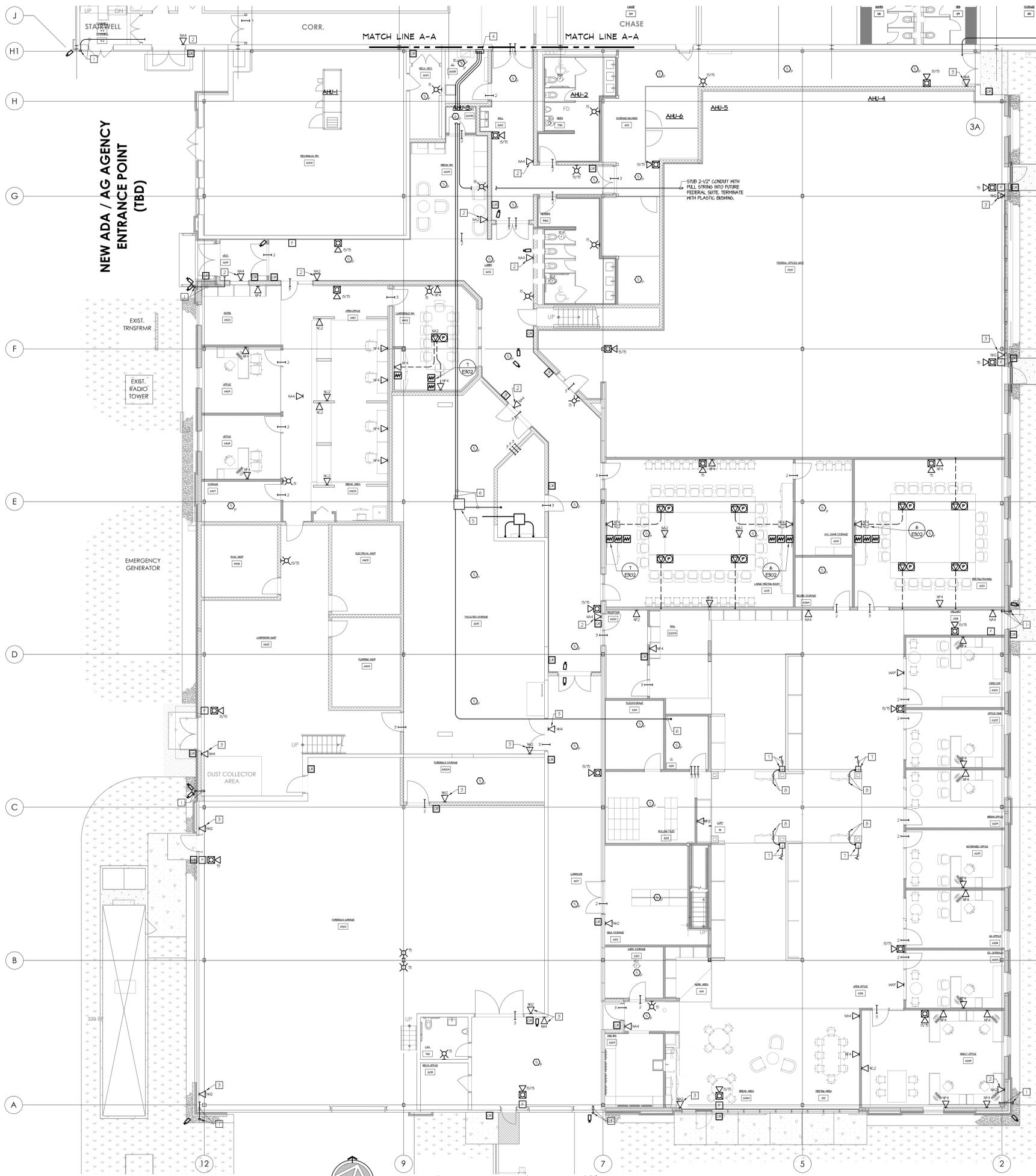
SHEET TITLE:  
**ROOF POWER PLAN**

**E202**

**1 ROOF POWER PLAN**  
 SCALE: 1/8" = 1'-0"



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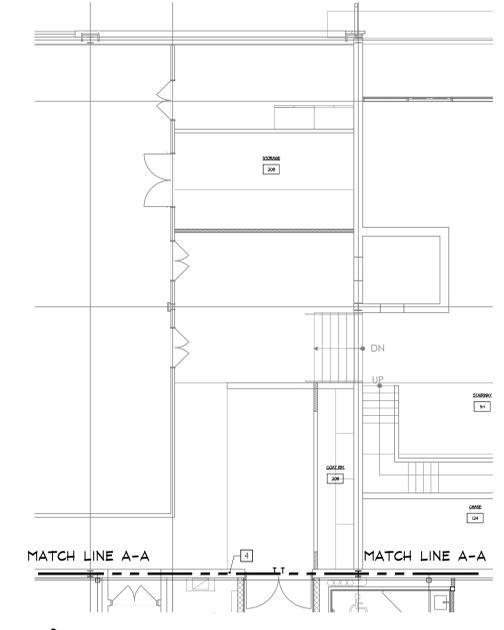
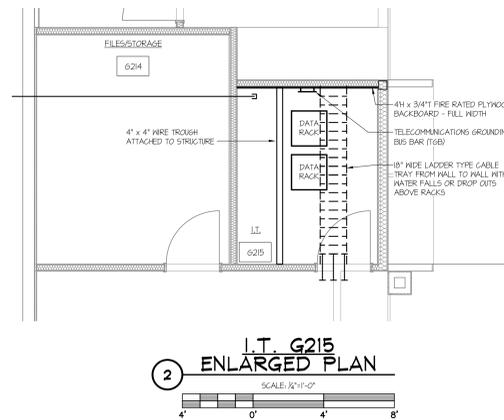
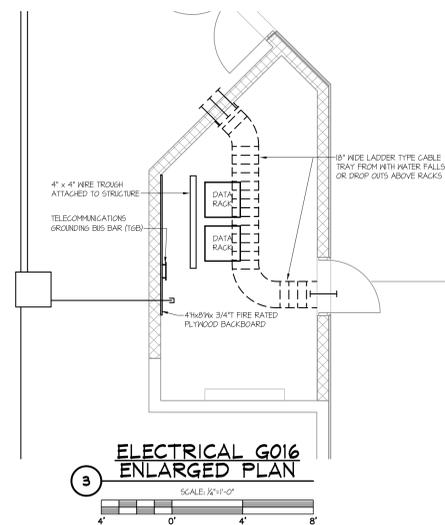
1 FIRST FLOOR SYSTEMS PLAN  
SCALE: 1/8" = 1'-0"

KEYED DRAWING NOTES

- 1 FINISH AND INSTALL 3/4" CONDUIT SLEEVE THROUGH WALL BETWEEN CEILING CAVITY AND EXTERIOR CAMERA LOCATION. INSTALL OWNER FINISHED BACK BOX AT CAMERA LOCATION AND TERMINATE CONDUIT SLEEVE. TERMINATE CONDUIT IN CEILING SPACE WITH PLASTIC BUSHING.
- 2 LOCATE DATA OUTLET ABOVE CEILING. COORDINATE FINAL LOCATION TO BE ACCESSIBLE FROM A REMOVED CEILING PANEL.
- 3 LOCATE DATA OUTLET ON WALL, APPROXIMATELY 4" ABOVE FINISHED FLOOR.
- 4 1/2" 50. x 6" DEEP, NEMA 1 PULL BOX WITH HINGED COVER FOR DATA CABLES. WALL MOUNT APPROXIMATELY 4" ABOVE FINISHED FLOOR TO CENTER.
- 5 2 1/2" 50. x 6" DEEP, NEMA 1 PULL BOX WITH HINGED COVER FOR DATA CABLES. MOUNT TO UNDERSIDE OF ROOF STRUCTURE.
- 6 2" CONDUIT WITH (3) 12 STRAND, MULTI-MODE FIBER OPTIC CABLE AND (4) 4 PAIR UTP CAT 6 CABLES.
- 7 PROVIDE FLUSH WALL BOX FOR FURNITURE DATA IN-FEED. PROVIDE 2" LIQUID TIGHT FLEXIBLE METAL CONDUIT PIPE TO FURNITURE SYSTEM BACKWAY CONNECTION POINT. VERIFY REQUIREMENTS WITH SPECIFIC FURNITURE SUPPLIER PRIOR TO ROUGH-IN.
- 8 EXTEND 2" CONDUIT FROM BOX TO ABOVE CEILING CONCEAL CONDUIT WITHIN COLUMN. PROVIDE (4) CAT 6 DATA CABLES PER REPRESENTATION TO DATA RACK IN I.T. 625. VERIFY EXACT QUANTITY OF WORKSTATIONS WITH ARCHITECT AND OWNER.

DATA NETWORK SYMBOL KEY

- |      |  |
|------|--|
| ▽ 2  | PHONE/DATA OUTLET - FLUSH MOUNTED, 4" SQUARE BOX WITH SINGLE GANG TRIM, 1/8" AFF WITH 1" CONDUIT TO ABOVE ACCESSIBLE CEILING PLenum - NUMBER INDICATES QUANTITY OF PORTS - HUBBELL #5626 STAINLESS STEEL DECORATOR COVER PLATE WITH HUBBELL #5626 DECORATOR OUTLET FRAME.  |
| F    | 18" ABOVE FINISHED FLOOR   |
| C    | 12" ABOVE FINISHED CEILING   |
| K    | 48" ABOVE FINISHED FLOOR   |
| H    | 80" ABOVE FINISHED FLOOR   |
| A    | ABOVE CEILING - PROVIDE SINGLE GANG OUTLET BOX WITH 60CMHET IN KICKOUT, MOUNT BOX TO STRUCTURE ABOVE CEILING.  |
| B    | BOX WITH BLANK COVER AND 3/4" CONDUIT TO ABOVE CEILING   |
| E    | EXISTING   |
| (NG) | HARD CEILING LOCATION  |
| 1    | 5/11 E2 PATH SERIES 22 - BY ELECTRICAL CONTRACTOR  |
| 2    | 5/11 E2 PATH SERIES 33 - BY ELECTRICAL CONTRACTOR  |
| 3    | 5/11 E2 PATH SERIES 33 WITH CONDUIT ATTACHMENT PLATE AND LENGTH OF 4" CONDUIT AS REQUIRED TO REACH ACCESSIBLE CEILING - BY ELECTRICAL CONTRACTOR SUPPORT CONDUIT FROM STRUCTURE AND PROVIDE PLASTIC BUSHING IN MASONRY CONSTRUCTION. THE ABOVE HEIGHTS SHALL BE USED FOR REFERENCE TO NEAREST BLOCK OR BRICK CORNER. |



1 FIRST FLOOR SYSTEMS PLAN  
SCALE: 1/8" = 1'-0"



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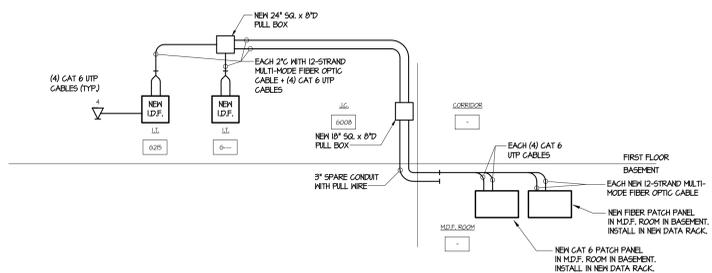
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SHEET TITLE:  
FIRST FLOOR  
SPECIAL SYSTEMS  
PLAN

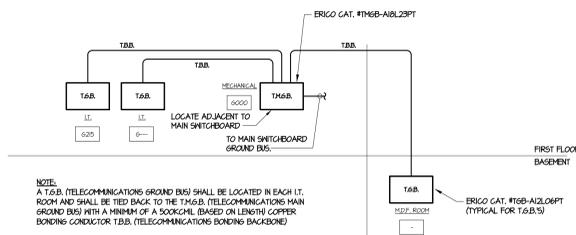
E301

0 1 2 3 4 5 6 7 8  
SCALE: 1/8" = 1'-0"



9 DATA NETWORK RISER DIAGRAM

NOT TO SCALE



8 TELECOMMUNICATION GROUNDING RISER

NOT TO SCALE

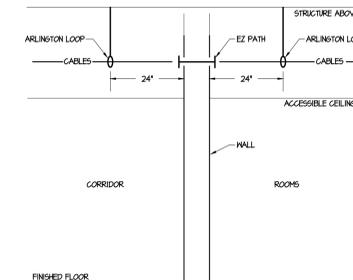
QUANTITY OF DATA CABLES IN CONDUIT

CONDUIT SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"
QUANTITY OF CABLES	4	6	11	18	26	42	74	112	147	188

BASED ON 40% FILL OF CONDUIT USING HIGH HITACHI PLUS CATEGORY 6 UTP CABLE

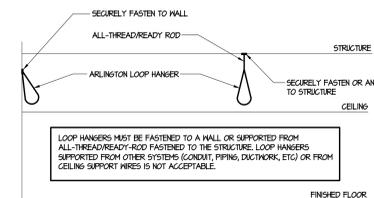
QUANTITY OF DATA CABLES IN EZ PATH

EZ PATH SERIES	22	33
QUANTITY OF CABLES - FLEHM	18	48
QUANTITY OF CABLES - RISER	15	88



1 EZ PATH / CABLE INSTALLATION DETAIL

NO SCALE

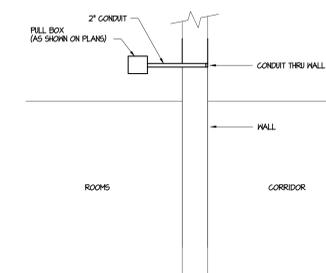


2 LOOP HANGER DETAIL

NO SCALE

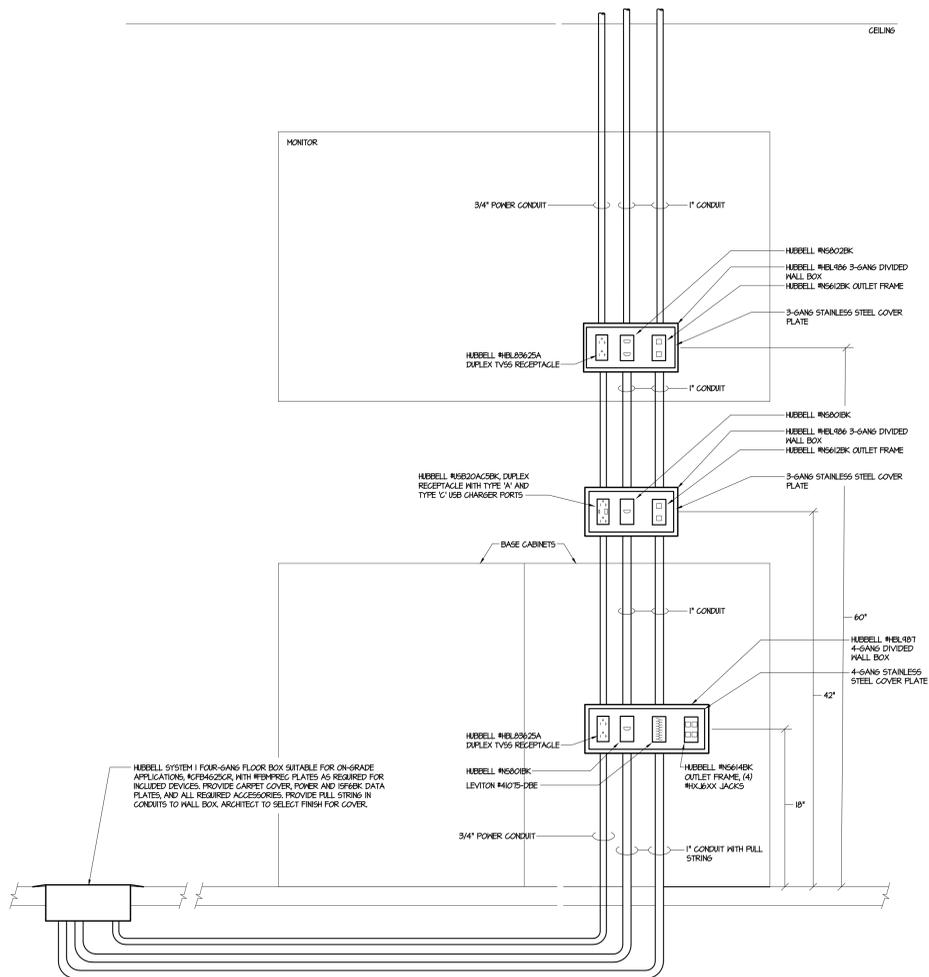
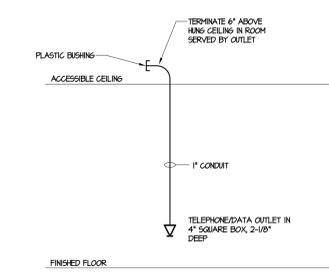
5 CONDUIT PATH THROUGH WALL ELEVATION

NO SCALE



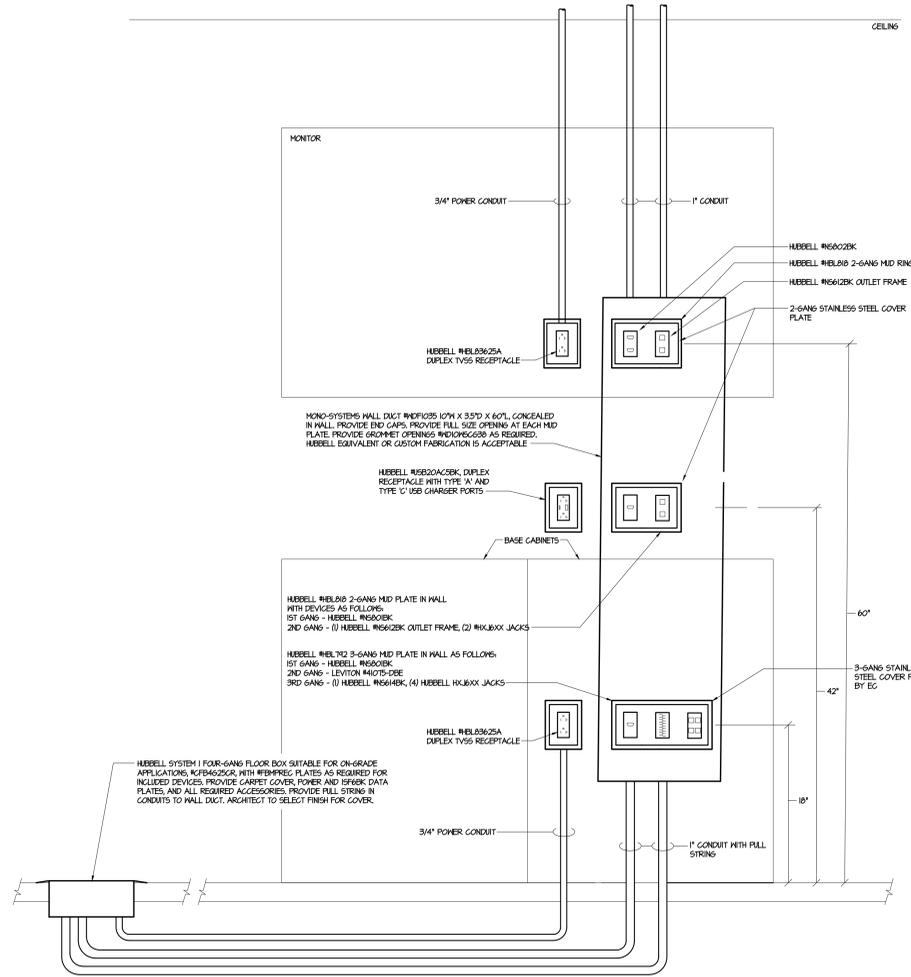
3 TYPICAL TELEPHONE/DATA OUTLET IN NEW WALLS

NO SCALE



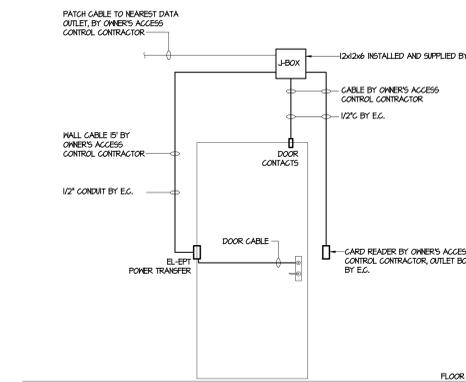
7 CONFERENCE ROOM AV WIRING DETAIL MASONRY WALL CONSTRUCTION

NO SCALE



6 CONFERENCE ROOM AV WIRING DETAIL STUD WALL CONSTRUCTION

NO SCALE



- NOTES:
- CONTROL EQUIPMENT AND J-BOX TO BE MOUNTED ON SECURE SIDE OF DOOR.
  - FA-ACTIVATED DOORS SHOULD BE ANNOTATED AND SHOWN WITH ADDRESSABLE CONTROL RELAY.
  - DOORS SHOULD BE FACTORY PRE-LOADED AND TESTED.

4 ELECTRIC CARD READER FOR DOOR WIRING DIAGRAM

NOT TO SCALE

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PROJECT #:  
**22-0012**

CONSULTANT  
**SDE SYSTEMS DESIGN ENGINEERING, INC.**  
 PROJECT # : 22-0995-0133

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 LEESPORT, PA 19533

ISSUED

REV	DESCRIPTION	DATE
1	ISSUED FOR PERMITS / CONSTRUCTION	6/29/23
A	ISSUED FOR REVIEW	3/22/23

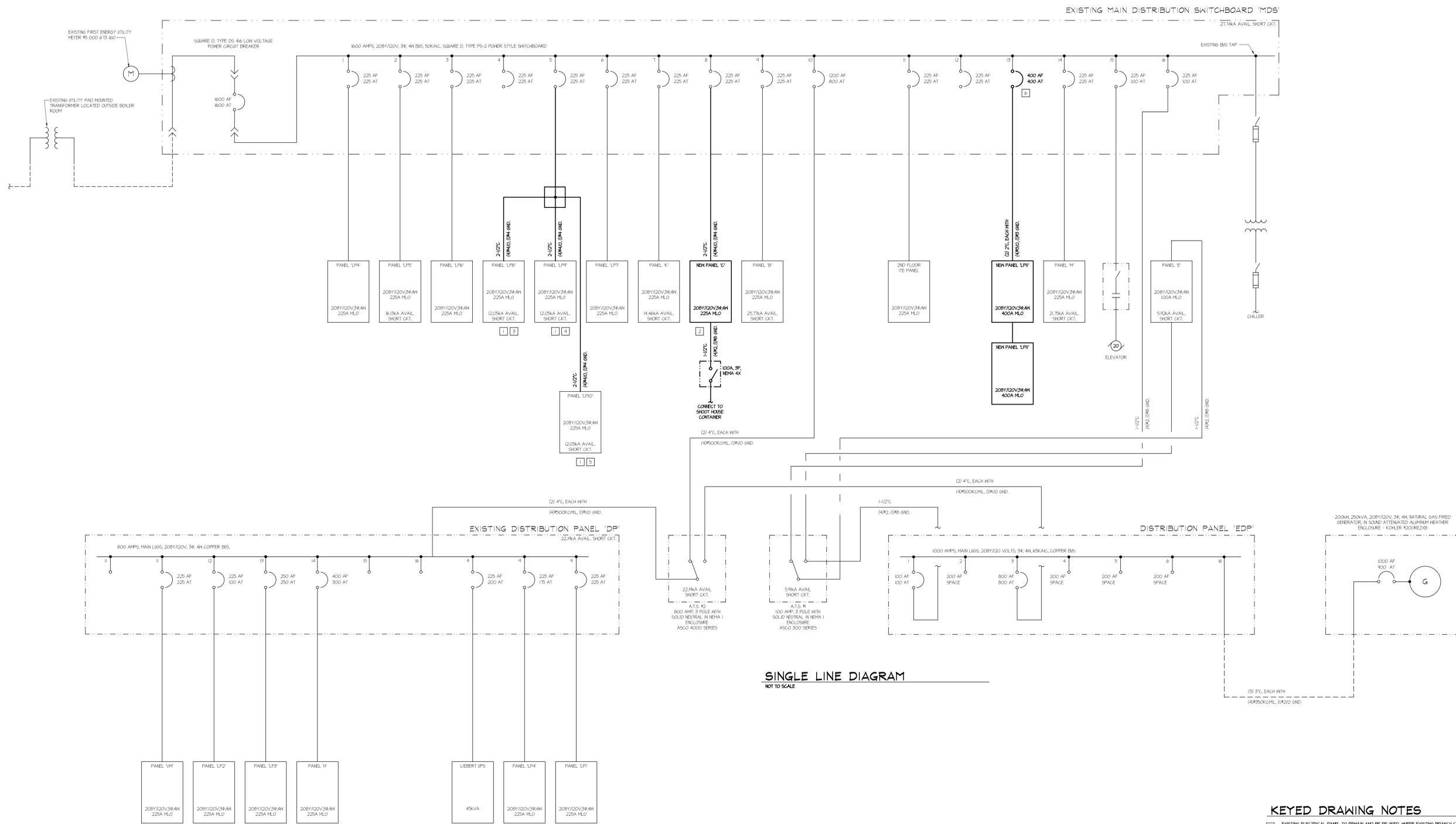
PROJ. MGR.: S. Gribb  
 P.M. e-MAIL: s.gribb@sdei.net  
 DRAWN BY: S.B.G  
 CLIENT PROJ #:  
 SHEET SCALE  
 0 1  
 BAR (OR ONE FT) INCLUDING ORIGINAL DRAWINGS

SHEET TITLE:  
**SPECIAL SYSTEMS DIAGRAMS & DETAILS**

**E302**

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**SINGLE LINE DIAGRAM**  
NOT TO SCALE

**KEYED DRAWING NOTES**

1. EXISTING ELECTRICAL PANEL TO REMAIN AND BE RE-USED, WHERE EXISTING BRANCH CIRCUIT BREAKERS MUST BE REMOVED TO CONFORM TO THE NEW PANEL SCHEDULE, THEY SHALL BE RETURNED TO THE OWNER.
2. REMOVE EXISTING PANEL 'C' COMPLETE, INCLUDING FEEDER WIRING COMPLETE TO MAIN DISTRIBUTION SWITCHBOARD. CUT FEEDER CONDUIT OFF BELOW SLAB AND GROUT 5/MT.
3. REMOVE EXISTING FEEDER WIRING TO PANEL LP'9 COMPLETE TO MAIN DISTRIBUTION SWITCHBOARD. CUT FEEDER CONDUIT OFF BELOW SLAB AND GROUT 5/MT.
4. REMOVE EXISTING FEEDER WIRING TO PANEL LP'10 COMPLETE TO MAIN DISTRIBUTION SWITCHBOARD. CUT FEEDER CONDUIT OFF BELOW SLAB AND GROUT 5/MT.
5. REMOVE EXISTING FEEDER WIRING TO PANEL LP'10' COMPLETE TO MAIN DISTRIBUTION SWITCHBOARD. CUT FEEDER CONDUIT OFF BELOW SLAB AND GROUT 5/MT.
6. REMOVE EXISTING 225A, 3 POLE CIRCUIT BREAKER AND REPLACE WITH NEW BREAKER AS INDICATED. RETURN EXISTING BREAKER TO THE OWNER.



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ISSUED  
DATE: ISSUED 3/30/23

REV	DESCRIPTION	DATE
1	ISSUED FOR PERMITS / CONSTRUCTION	6/29/23
A	ISSUED FOR REVIEW	3/22/23

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P.M. e-MAIL: s.gribb@sdei.net  
DRAWN BY: S.B.G.  
CLIENT PROJ #:

GRAPHIC SCALE  
0 1  
BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING

SHEET TITLE:  
**ELECTRICAL  
SINGLE LINE  
DIAGRAM**

**E501**

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