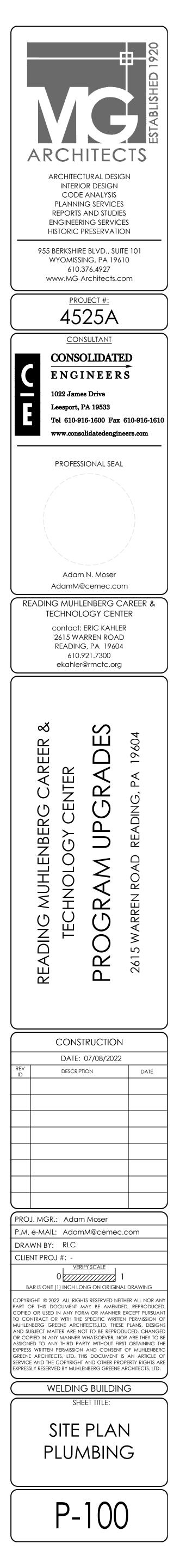
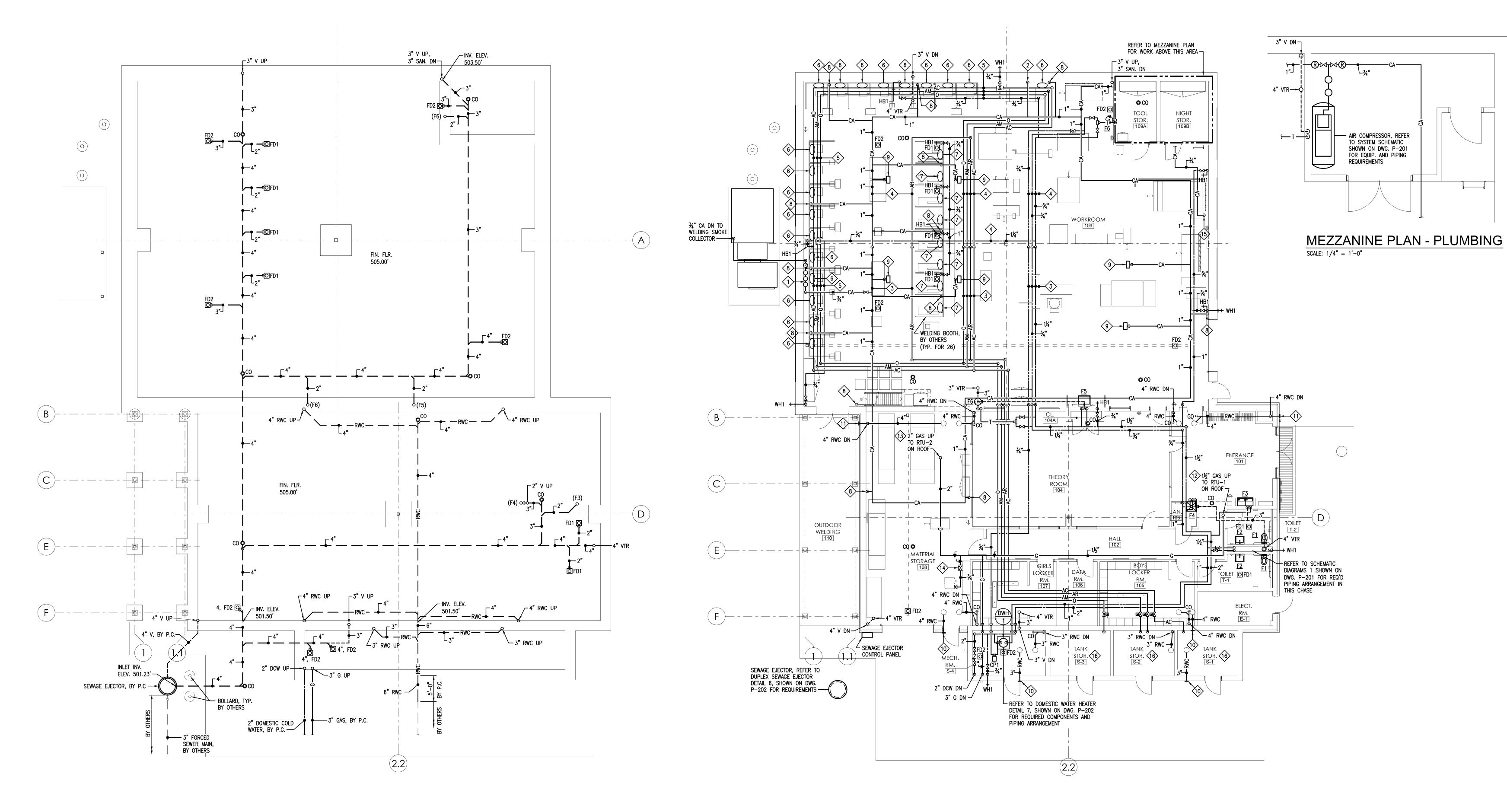


SITE PLAN - PLUMBING



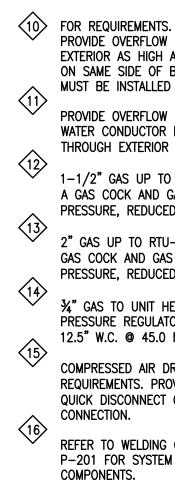


#### FOUNDATION PLAN - PLUMBING SCALE: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"

# **KEYED DRAWING NOTES:**

- P.C. TO MOUNT WELDING SMOKE COLLECTOR EQUIPMENT MFG'R. PROVIDED MOISTURE TRAP/AIR FILTER/AIR PRESSURE REGULATOR ASSEMBLY ON WALL ABOVE WELDING BOOTH IN AN ACCESSIBLE LOCATION.
- 2 PROVIDE A 1/2" COMPRESSED AIR DROP DOWN TO DOWNDRAFT TABLE AND CONNECT TO ELECTRO/PNEUMATIC DAMPER ACTUATOR INSTALLED IN EXHAUST DUCTWORK.
- 3 INSTALL BOTTOM OF PIPING ABOVE DUCTWORK AT APPROXIMATELY 18'-2" A.F.F., COORDINATE FINAL INSTALLED HEIGHT IN FIELD WITH OTHER UTILITIES PRIOR TO INSTALLATION.
- 4 INSTALL BOTTOM OF PIPING ABOVE DUCTWORK AT APPROXIMATELY 16'-0" A.F.F., COORDINATE FINAL INSTALLED HEIGHT IN FIELD WITH OTHER UTILITIES PRIOR TO INSTALLATION.
- 5 OFFSET PIPING AND RACK MOUNT VERTICALLY ALONG EXTERIOR WALL, COORDINATE INSTALLED HEIGHT OF PIPING RACK IN FIELD WITH OTHER UTILITIES PRIOR TO INSTALLATION.
- $\langle 6 \rangle$  provide 1/2" oxygen, 1/2" argon/co2 (MIX), 1/2" acetylene down to WELDING BOOTH, REFER TO WELDING GAS DISTRIBUTION SYSTEM SCHEMATIC SHOWN ON DWG. P-201 FOR ADDITIONAL INFORMATION.
- PROVIDE 1/2" OXYGEN, 1/2" ARGON, 1/2" ACETYLENE DOWN TO WELDING BOOTH, REFER TO WELDING GAS DISTRIBUTION SYSTEM SCHEMATIC SHOWN ON DWG. P-201 FOR ADDITIONAL INFORMATION.  $\langle 8 \rangle$  compressed air drop, refer to detail 3 shown on dwg. P-202 for
- REQUIREMENTS.
- $\langle 9 \rangle$  compressed air hose reel, refer to detail 1 shown on dwg. P-202

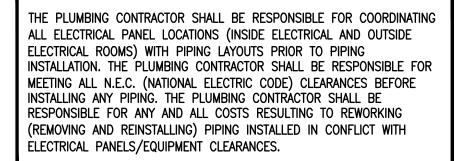


FLOOR PLAN - PLUMBING

PROVIDE OVERFLOW DRAIN OUTLET J.R. SMITH MODEL 1775, STUB THROUGH EXTERIOR AS HIGH AS POSSIBLE, WHERE MULTIPLE OVERFLOW DRAINS EXIT ON SAME SIDE OF BUILDING, ALL DRAINS FOR A GIVEN ROOFING SYSTEM MUST BE INSTALLED AT SAME ELEVATION. PROVIDE OVERFLOW DRAIN OUTLET J.R. SMITH MODEL 1775, DROP RAIN WATER CONDUCTOR DOWN AS REQUIRED TO STUB BOTTOM OF PIPE THROUGH EXTERIOR WALL 1'-0'' Above finished grade. 1-1/2" GAS UP TO RTU-1 ON ROOF, PRIOR TO UNIT CONNECTION PROVIDE A GAS COCK AND GAS PRESSURE REGULATOR SIZED FOR 2 PSI INLET PRESSURE, REDUCED TO 10.5" W.C. @ 150.0 MBH. 2" GAS UP TO RTU-2 ON ROOF, PRIOR TO UNIT CONNECTION PROVIDE A GAS COCK AND GAS PRESSURE REGULATOR SIZED FOR 2 PSI INLET PRESSURE, REDUCED TO 10.5" W.C. @ 292.5 MBH. 34" GAS TO UNIT HEATER, PROVIDE A GAS COCK AND A VENTLESS GAS

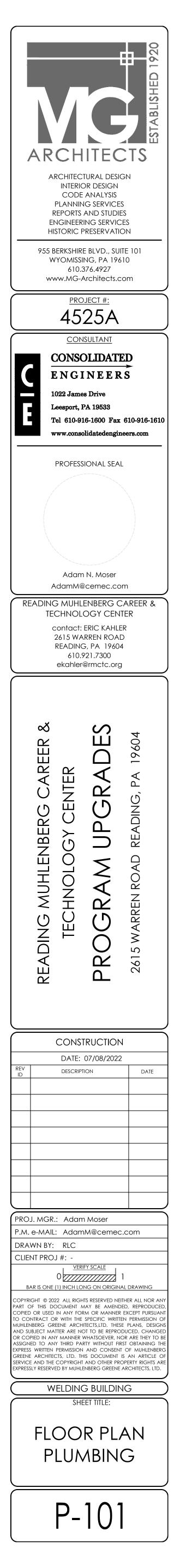
PRESSURE REGULATOR SIZED FOR 2 PSI INLET PRESSURE, REDUCED TO 12.5" W.C. @ 45.0 MBH. COMPRESSED AIR DROP, REFER TO DETAIL 3 SHOWN ON DWG. P-202 FOR REQUIREMENTS. PROVIDE 3/8" EPDM COMPRESSED AIR RUBBER HOSE FROM QUICK DISCONNECT OVER TO PLASMA CUTTING TABLE AND MAKE FINAL

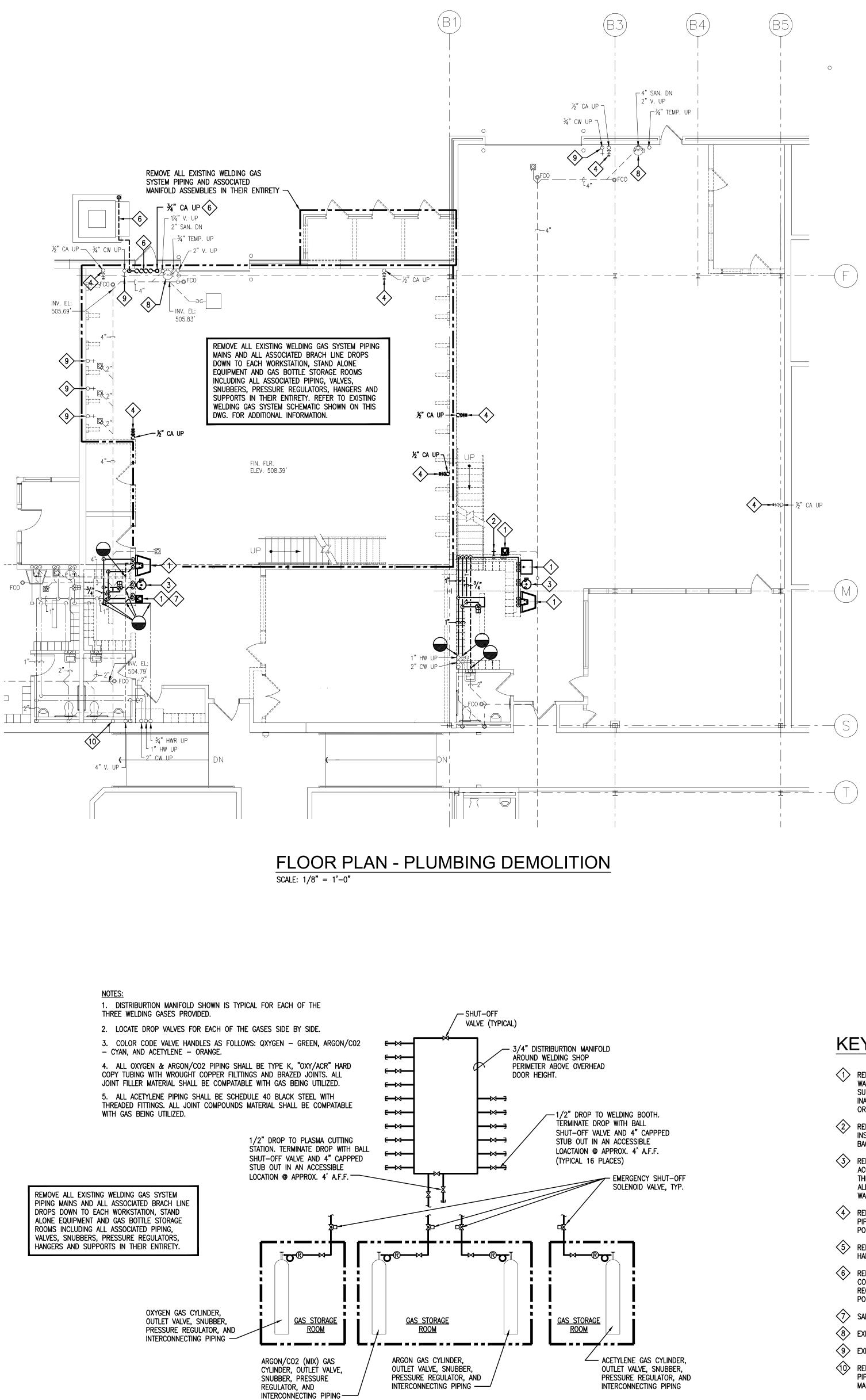
REFER TO WELDING GAS DISTRIBUTION SYSTEM SCHEMATIC SHOWN ON DWG. P-201 FOR SYSTEM PIPING REQUIREMENTS, SIZES AND SYSTEM



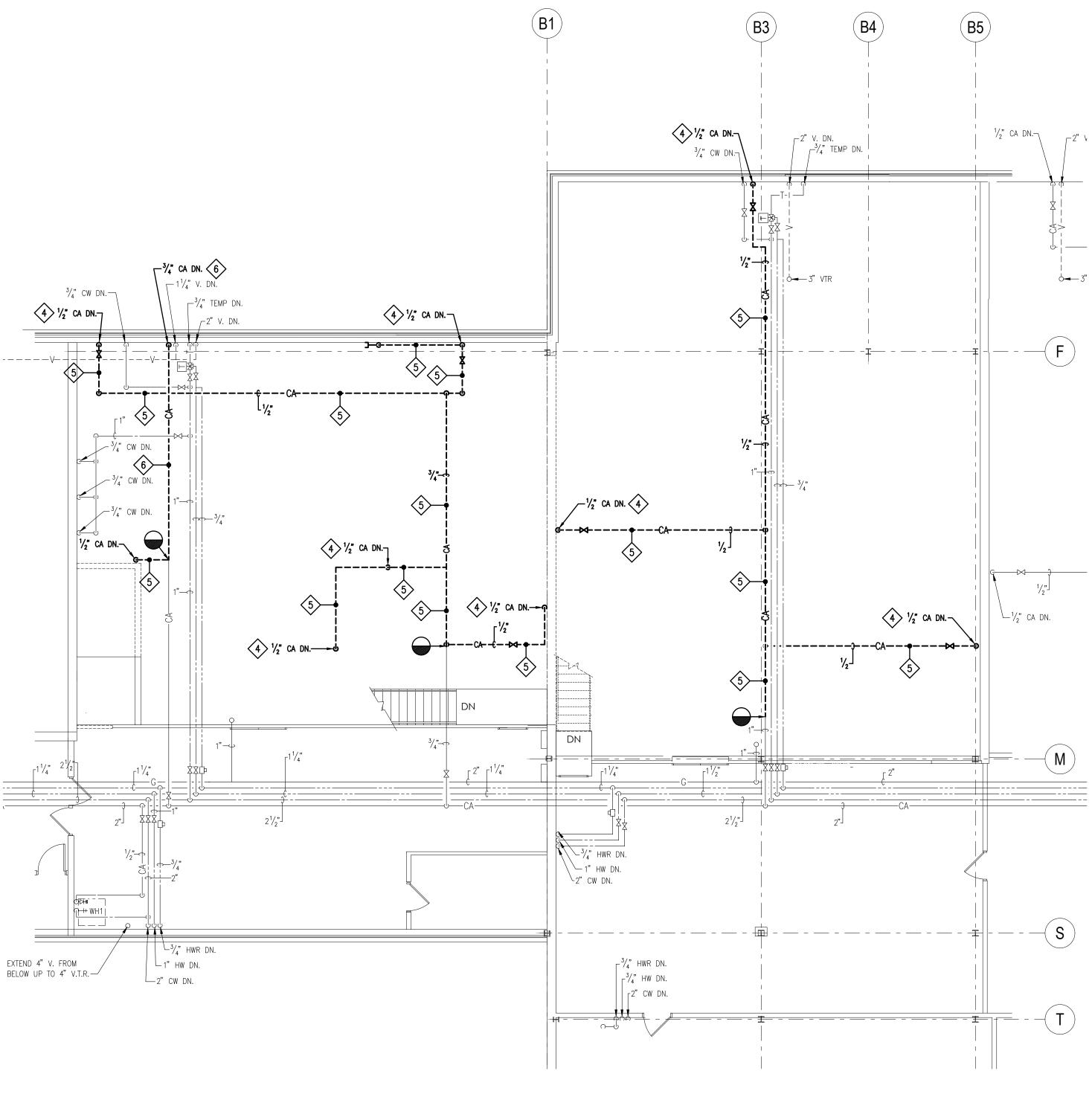
# DRAWING NOTES:

- 1. REFER TO DRAWING P-201 FOR PLUMBING GENERAL PROJECT NOTES.
- 2. PROVIDE THE MINIMUM REQUIRED SERVICE CLEARANCES FOR ALL EQUIPMENT AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.





**EXISTING WELDING GAS DISTRIBUTION SYSTEM SCHEMATIC** NO SCALE



#### **KEYED DRAWING NOTES:**

- (1) REMOVE EXISTING PLUMBING FIXTURE AND ALL ASSOCIATED ACCESSIBLE DOMESTIC WATER, VENT AND SANITARY PIPING, INSULATION, VALVES, HANGERS AND SUPPORTS IN THEIR ENTIRETY BACK TO POINTS INDICATED AND CAP. CAP ALL INACCESSIBLE DOMESTIC WATER AND SANITARY PIPING CONCEALED WITHIN WALL OR BELOW FINISHED FLOOR.
- $\langle 2 \rangle$  remove existing hose bib and all associated domestic water piping, INSULATION, VALVES, HANGERS AND SUPPORTS. REMOVE DOMESTIC WATER PIPING BACK TO MAIN OR NEXT ACTIVE BRANCH LINE AND CAP.
- (3) REMOVE EXISTING EMERGENCY EYEWASH STATION AND ALL ASSOCIATED ACCESSIBLE DOMESTIC WATER, VENT AND SANITARY PIPING, INSULATION, VALVES, THERMOSTATIC MIXING VALVE, HANGERS AND SUPPORTS IN THEIR ENTIRETY. CAP ALL INACCESSIBLE DOMESTIC WATER AND SANITARY PIPING CONCEALED WITHIN WALL OR BELOW FINISHED FLOOR.
- (4) REMOVE EXISTING COMPRESSED AIR DROP AND ALL ASSOCIATED COMPRESSED AIR PIPING, COUPLERS, VALVES, HANGERS AND SUPPORTS IN THEIR ENTIRE BACK TO POINT INDICATED.
- (5) REMOVE EXISTING COMPRESSED AIR PIPING AND ALL ASSOCIATED VALVES, HANGERS AND SUPPORTS IN THEIR ENTIRETY BACK TO POINT INDICATED AND CAP.
- (6) REMOVED EXISTING COMPRESSED AIR PIPING FROM EXISTING WELDING SMOKE COLLECTOR AND ALL ASSOCIATED MOISTURE TRAPS, FILTERS, AIR PRESSURE REGULATORS, VALVES, HANGERS AND SUPPORTS IN THEIR ENTIRETY BACK TO POINT INDICATED AND CAP.
- $\langle 7 \rangle$  salvage existing water cooler with bottle filler for reuse.
- $\langle 8 \rangle$  existing emergency eye wash and all associated piping to remain.
- $\langle 9 
  angle$  existing hose bib and all associated piping to remain.
- $\langle 10 \rangle$  remove existing indirect waste receptor, trap primer and all associated PIPING, INSULATION, HANGERS AND SUPPORTS IN THEIR ENTIRETY, CAP BOTH AT ΜΔΙΝ

# **MEZZANINE PLAN - PLUMBING DEMOLITION**

SCALE: 1/8" = 1'-0"

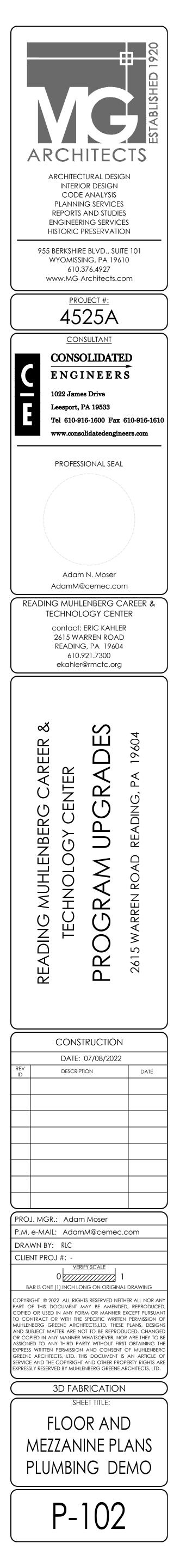
## **GENERAL DEMOLITION NOTES:**

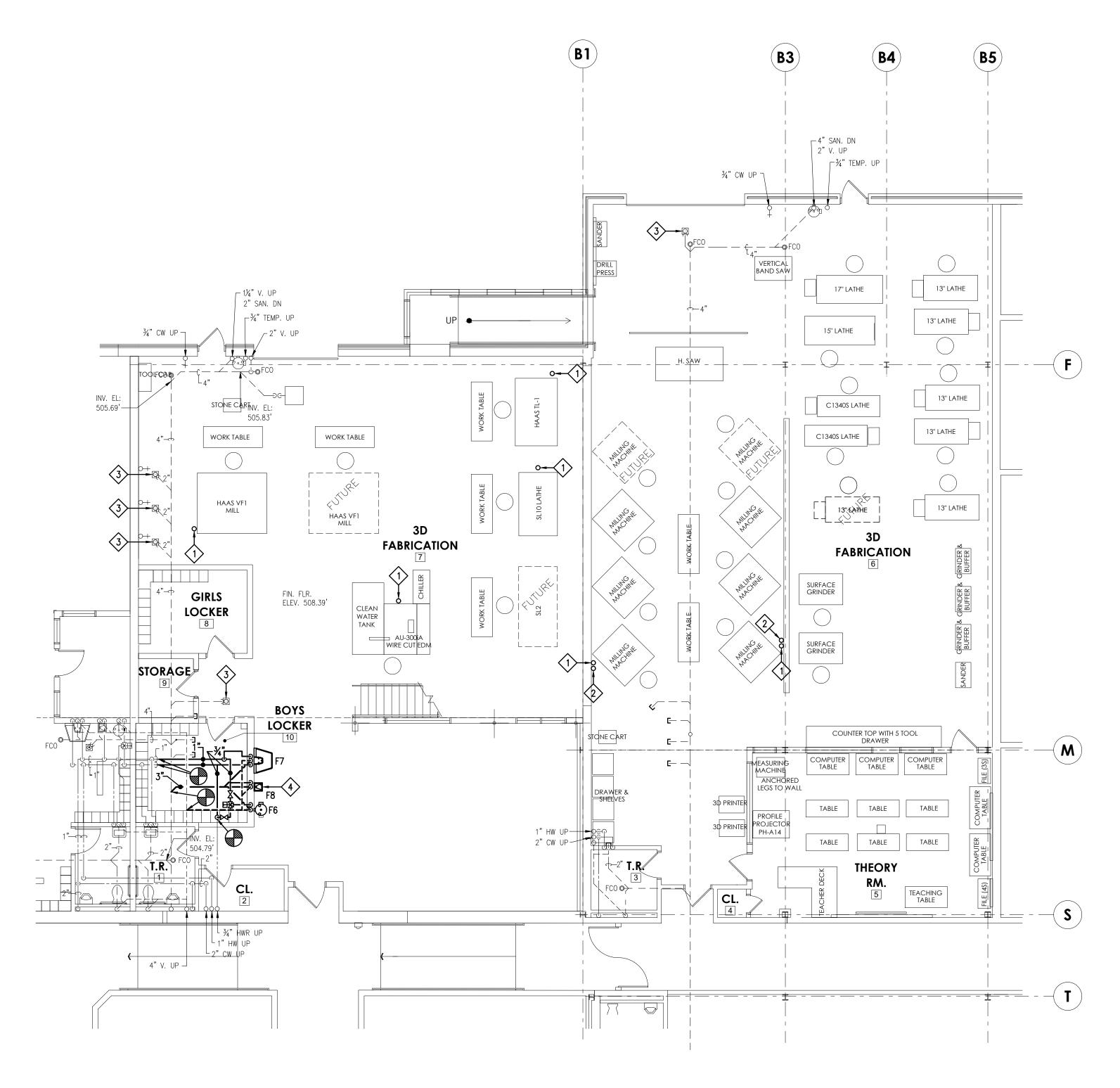
- 1. REFER TO DRAWING P-201 FOR PLUMBING GENERAL PROJECT NOTES.
- 2. THE PLUMBING CONTRACTOR SHALL COORDINATE THE SALVAGE AND DISPOSAL OF ALL EQUIPMENT AND MATERIAL WITH THE OWNER. THE PLUMBING CONTRACTOR SHALL RETURN TO THE OWNER ANY ITEMS NOTED OR NOT NOTED, ON THE DRAWINGS, AT THE OWNERS REQUEST. ALL REMAINING EQUIPMENT AND MATERIAL SHALL BE DISPOSED OF BY THE PLUMBING CONTRACTOR.
- 3. THE PLUMBING CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AS REQUIRED TO ACCOMMODATE PROJECT PHASING.
- 4. REFER TO PROJECT PHASING DRAWING(S) AND SCHEDULE. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACCOMMODATE PROJECT PHASING.
- 5. ALL PATCHING & REPAIRING OF SURFACES AND HOLES LEFT OPEN DUE TO DEMOLITION OR REMOVAL OF EXISTING PIPING & EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR. PATCH EXISTING CONSTRUCTION AS REQUIRED TO MATCH ADJACENT SURFACES OR TO RECEIVE NEW FINISHES AS SCHEDULED UNLESS OTHERWISE INDICATED ON THE ARCHITECTURAL DRAWING.
- 6. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, PATCHING, EXCAVATION AND BACKFILLING REQUIRED TO COMPLETE ALL INDICATED WORK.
- 7. ALL EXISTING PIPING AND EQUIPMENT SHOWN MUST BE VERIFIED IN THE FIELD. ANY PLUMBING EQUIPMENT NOT SHOWN SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO REMOVAL.
- 8. ALL SALVAGED EQUIPMENT MUST BE STORED BY THE CONTRACTOR IN A WEATHER TIGHT AND HEATED ENCLOSURE. CAP ALL FITTINGS AND OR EQUIPMENT OPENINGS TO PREVENT DEBRIS FROM ENTERING THE DEVICE WHILE IN STORAGE
- 9. PLUMBING CONTRACTOR WILL BE RESPONSIBLE TO REMOVE AND REPLACE ALL EXISTING CEILING SYSTEMS THAT ARE NOT NOTED TO BE REMOVED BY THE G.C. ON THE ARCHITECTURAL DRAWINGS, IN ALL AREAS WHERE REQUIRED PLUMBING WORK IS INDICATED.
- 10. PLUMBING CONTRACTOR SHALL PROVIDE GROUND PENETRATING RADAR TO LOCATE EXISTING UNDER-SLAB UTILITIES PRIOR TO SAW CUTTING AND EXCAVATION FOR NEW UNDER FLOOR UTILITIES. PLUMBING CONTRACTOR WILL BE FINANCIALLY RESPONSIBLE TO REPAIR OR REPLACE ANY UTILITY LINES INADVERTENTLY DAMAGED DUE TO IMPROPER IDENTIFICATION.

THE DEMOLITION WORK INDICATED IS INTENDED TO ASSIST THE CONTRACTOR AND GIVE GENERAL INFORMATION. THE CONTRACTOR SHAL BE REQUIRED TO VISIT THE PROJECT SITE PRIOR TO BIDDING TO FULLY ACQUAINT HIMSELF WITH THE EXTENT OF ALL DEMOLITION WORK WHICH IS NECESSARY TO COMPLETE THE ALTERATIONS AND NEW CONSTRUCTION AS DESCRIBED IN THE CONTRACT DOCUMENTS. ALL DEMOLITION WORK REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE WHETHER INDICATED ON THE DRAWING OR NOT. THE CONTRACTOR WILL NOT BE ENTITLED TO ANY CLAIMS FOR ADDITIONAL COMPENSATION RELATED TO REQUIRED DEMOLITION.

## **DRAWING NOTES:**

- 1. REFER TO DRAWING P-201 FOR PLUMBING GENERAL PROJECT NOTES.
- 2. PROVIDE REQUIRED SERVICE CLEARANCE FOR ALL PLUMBING UNITS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
- 3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF PLUMBING CEILING OUTLETS AND OTHER CEILING MOUNTED DEVICES. ANY CEILING REMOVAL REQUIRED FOR WORK TO BE COMPLETED UNDER THIS CONTRACT, THAT IS NOT INDICATED ON THE ARCHITECTURAL PLANS, SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. CEILINGS REMOVED BY THIS CONTRACTOR SHALL BE REPLACE AND/OR REPAIRED BY HIM, AS PER SPECIFICATIONS





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

THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ELECTRICAL PANEL LOCATIONS (INSIDE ELECTRICAL AND OUTSIDE ELECTRICAL ROOMS) WITH PIPING LAYOUTS PRIOR TO PIPING INSTALLATION. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL N.E.C. (NATIONAL ELECTRIC CODE) CLEARANCES BEFORE INSTALLING ANY PIPING. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS RESULTING TO REWORKING (REMOVING AND REINSTALLING) PIPING INSTALLED IN CONFLICT WITH ELECTRICAL PANELS/EQUIPMENT CLEARANCES.

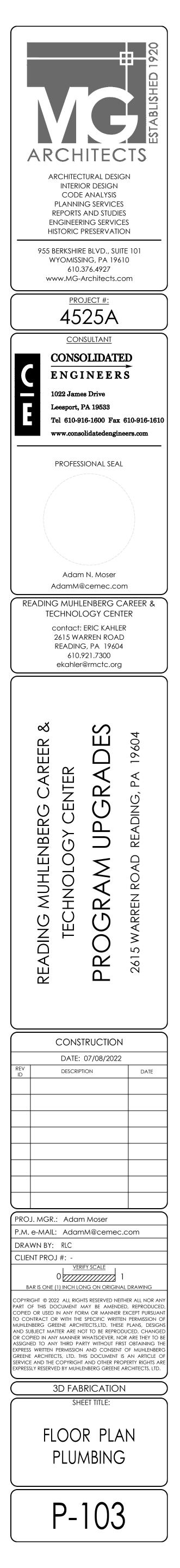
#### DRAWING NOTES:

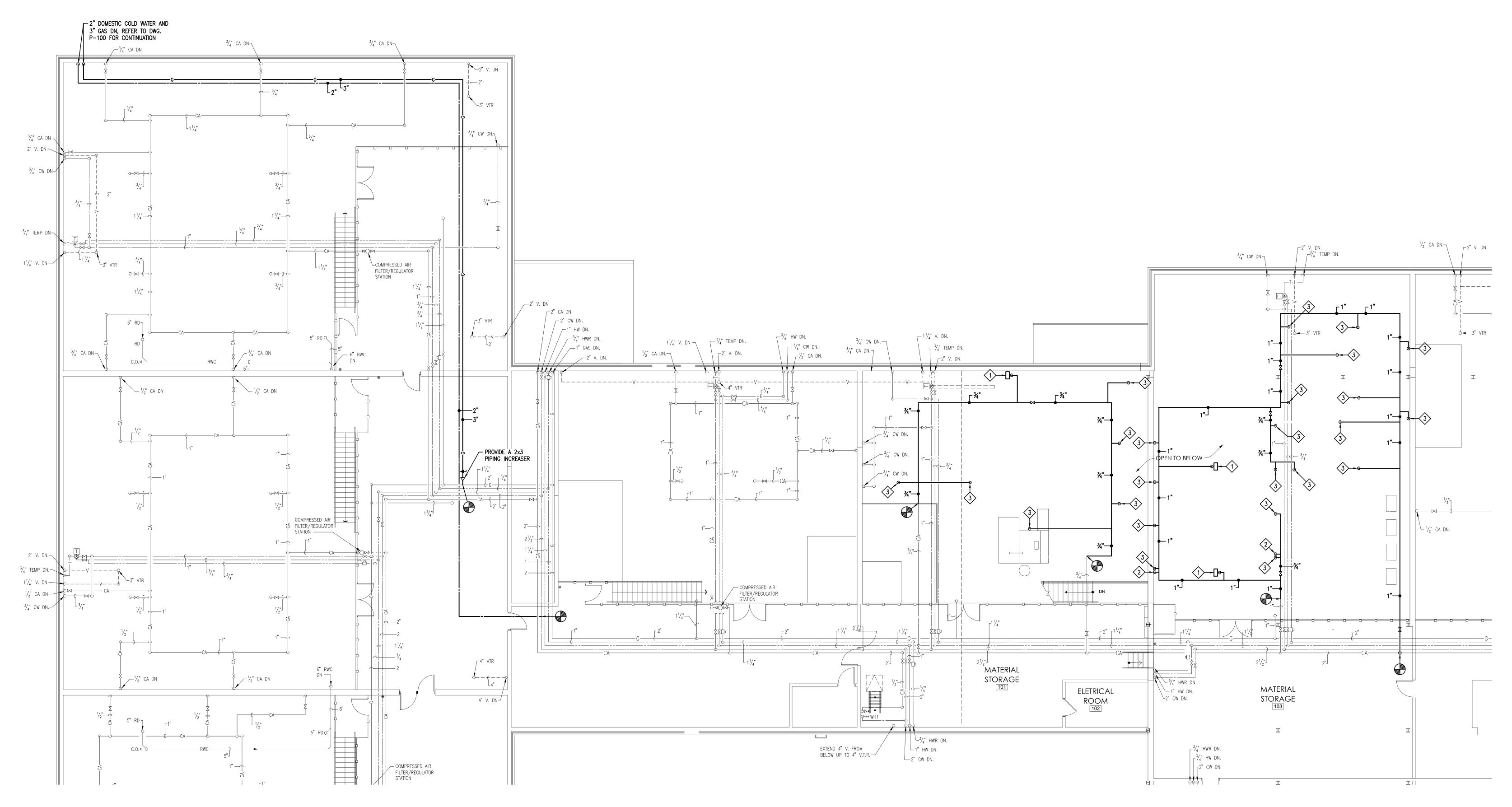
WORK.

- 1. REFER TO DRAWING P-201 FOR PLUMBING GENERAL PROJECT NOTES.
- 2. PROVIDE REQUIRED SERVICE CLEARANCE FOR ALL PLUMBING UNITS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
- 3. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, PATCHING, EXCAVATION, BACKFILLING AND COMPACTION REQUIRED TO COMPLETE ALL INDICATED
- ALL EXISTING PIPING AND EQUIPMENT SHOWN MUST BE VERIFIED IN THE FIELD.
   THE PLUMBING CONTRACTOR SHALL PROVIDE GROUND PENETRATING RADAR TO
- LOCATE EXISTING UNDER-SLAB UTILITIES PRIOR TO SAW CUTTING AND EXCAVATION FOR NEW UNDER FLOOR UTILITIES. THE PLUMBING CONTRACTOR WILL BE FINANCIALLY RESPONSIBLE TO REPAIR OR REPLACE ANY UTILITY LINES INADVERTENTLY DAMAGED DUE TO IMPROPER IDENTIFICATION.
- 6. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL 18" x 18" ACCESS PANELS WITH PLASTER FRAME IN ALL GYPSUM BOARD CEILINGS AT ALL NEW AND EXISTING ISOLATION VALVE LOCATIONS.

# KEYED DRAWING NOTES:

- EXTEND 3/8" FLEXIBLE EPDM RUBBER COMPRESSED AIR HOSE DOWN TO SHOP EQUIPMENT AND MAKE FINAL EQUIPMENT CONNECTION.
- EXTEND 1/2" COMPRESSED AIR LINE DOWN TO LOW WALL AND TERMINATE QUICK DISCONNECT COUPLER, 4" BELOW TO TOP OF WALL.
- $\langle 3 \rangle$  provide pro-set trap seal in existing drain inlet.
- REINSTALL SALVAGED WATER COOLER WITH BOTTLER FILLER IN THIS LOCATION. PROVIDE A CHROME PLATED BRASS TAIL PIECE, TRAP ASSEMBLY AND ANGLE STOP VALVE WITH SUPPLY LINE.





#### PARTIAL MEZZANINE PLAN - PLUMBING SCALE: 1/8" = 1'-0"

THE	PII
ALL	
ELEC	
INST/ MEET	
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RESE	
(REN ELEC	
LLEU	<b>UNIC</b>

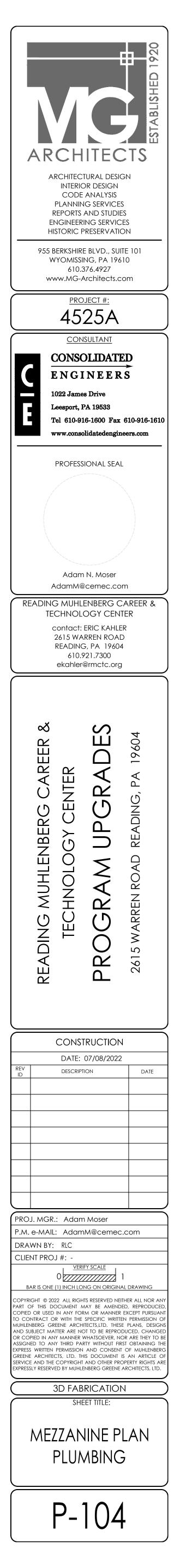
LUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LECTRICAL PANEL LOCATIONS (INSIDE ELECTRICAL AND OUTSIDE RICAL ROOMS) WITH PIPING LAYOUTS PRIOR TO PIPING LATION. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR IG ALL N.E.C. (NATIONAL ELECTRIC CODE) CLEARANCES BEFORE LING ANY PIPING. THE PLUMBING CONTRACTOR SHALL BE NSIBLE FOR ANY AND ALL COSTS RESULTING TO REWORKING VING AND REINSTALLING) PIPING INSTALLED IN CONFLICT WITH RICAL PANELS/EQUIPMENT CLEARANCES.

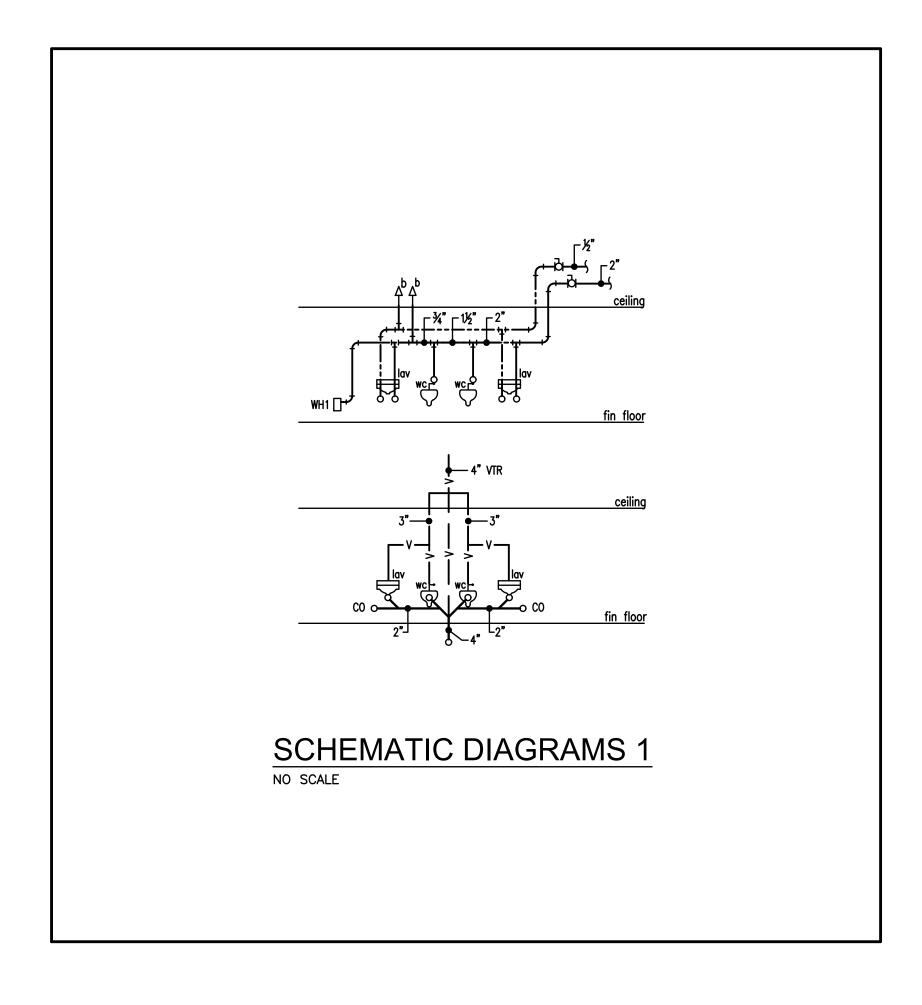
#### DRAWING NOTES:

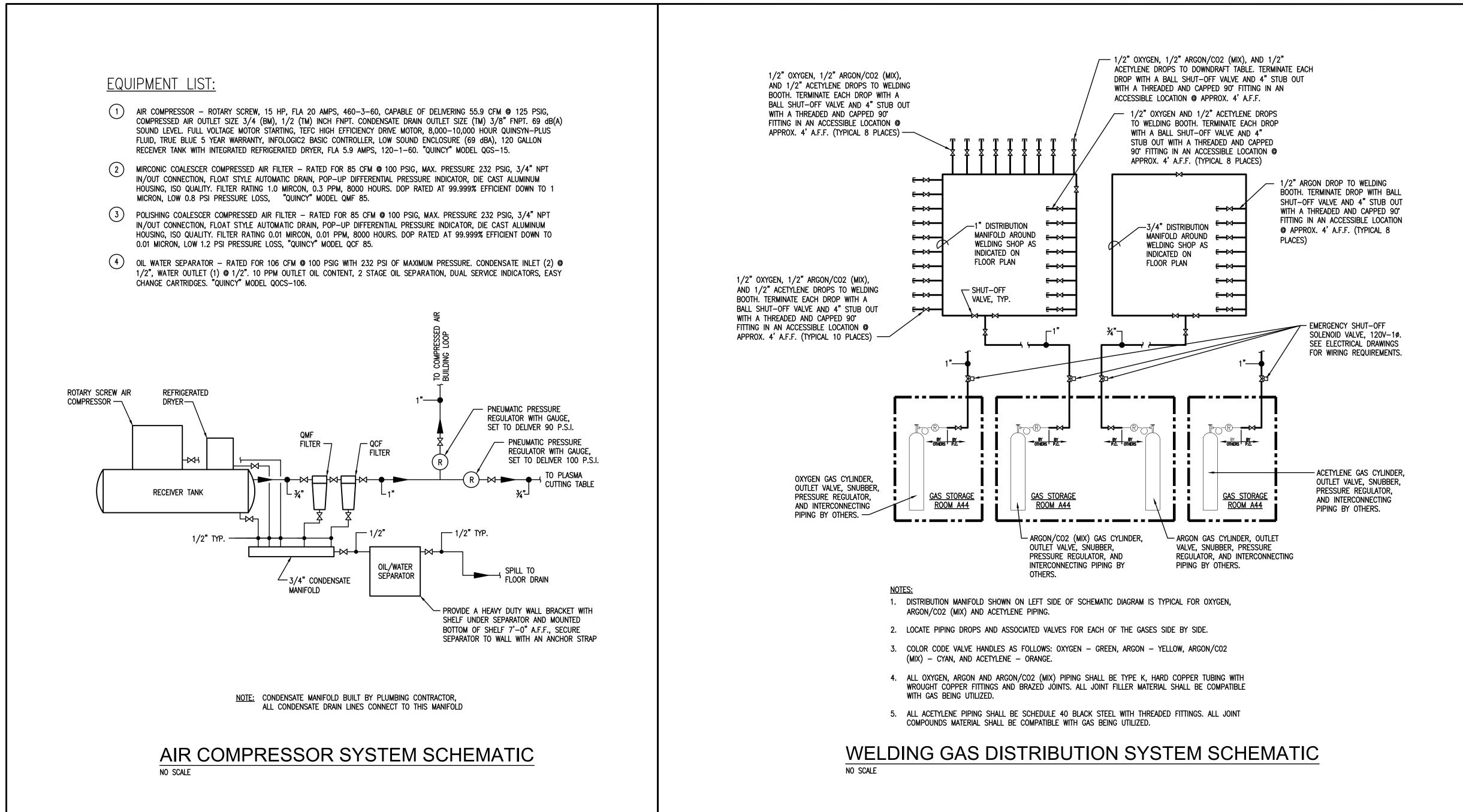
- 1. REFER TO DRAWING P-201 FOR PLUMBING GENERAL PROJECT NOTES.
- PROVIDE REQUIRED SERVICE CLEARANCE FOR ALL PLUMBING UNITS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
- 3. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, PATCHING, EXCAVATION, BACKFILLING AND COMPACTION REQUIRED TO COMPLETE ALL INDICATED WORK.
- 4. ALL EXISTING PIPING AND EQUIPMENT SHOWN MUST BE VERIFIED IN THE FIELD.
  5. THE PLUMBING CONTRACTOR SHALL PROVIDE GROUND PENETRATING RADAR TO LOCATE EXISTING UNDER-SLAB UTILITIES PRIOR TO SAW CUTTING AND EXCAVATION FOR NEW UNDER FLOOR UTILITIES. THE PLUMBING CONTRACTOR WILL BE
- FINANCIALLY RESPONSIBLE TO REPAIR OR REPLACE ANY UTILITY LINES INADVERTENTLY DAMAGED DUE TO IMPROPER IDENTIFICATION.6. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, PLUMBING CONTRACTOR SHALL
- FURNISH AND INSTALL 18" x 18" ACCESS PANELS WITH PLASTER FRAME IN ALL GYPSUM BOARD CEILINGS AT ALL NEW AND EXISTING ISOLATION VALVE LOCATIONS.

### **KEYED DRAWING NOTES:**

- COMPRESSED AIR HOSE REEL, REFER TO DETAIL 1 SHOWN ON DWG. P-202 FOR REQUIREMENTS.
- $\stackrel{\textcircled{}}{2}$  compressed air drop, refer to detail 3 shown on dwg. P-202 for requirements.
- $\stackrel{\checkmark}{3}$  compressed air drop, refer to detail 9 shown on dwg. P-202 for requirements.







SYMBOL	FIXTURE	C.W.	H.W.	TEMPERED	SAN.	VENT	TRAP	MOUNTING	<b>RIM HEIGHT</b>	REMARKS
F1	WATER CLOSET — (ADA)	1"	_	-	4"	2"	-	WALL	17"	-
F2	LAVATORY – (ADA)	1/2"	1/2"	-	1-1/2"	1-1/4"	1-1/4" X 1-1/2"	WALL	34"	-
F3	WATER COOLER – SPLIT LEVEL	1/2"	-	-	1-1/2"	1-1/4"	1-1/4" x 1-1/2"	WALL	32"/ 34"	-
F4	MOP RECEPTOR	3/4"	3/4"	-	3"	2"	3"	FLOOR	12"	-
F5	SERVICE SINK	3/4"	3/4"	-	3"	1-1/2"	3"	WALL	26"	-
F6	EMERGENCY EYEWASH STATION	1/2"	1/2"	1/2"	1-1/2"	1-1/4"	1-1/4" x 1-1/2"	WALL	42"	-
F7	WASHFOUNTAIN	1/2"	1/2"	-	1-1/2"	1-1/4"	1-1/4" X 1-1/2"	WALL	34"	-
F8	(EXISTING) WATER COOLER	1/2"	-	-	1-1/2"	1-1/4"	1-1/4" x 1-1/2"	WALL	34"	-
HB1	HOSE BIB	1/2"	-	-	-	-	-	WALL	30"	-
WH1	NON-FREEZE WALL HYDRANT	1/2"	_	-	-	_	-	WALL	16"	INSTALL BOTTOM OF WALL HYDRANT ON TOP OF BLOCK COURSE

		DOMEST		VATER H	IEATE	R SCHE	DULE						
	SYMBOL	TANK VOLUME	RECOVERY CAPACITY			EL	ECTRICAL	MODEL NO.	DII				
		GALLONS	GPH	TEMP. RISE	NO. OF ELEMENTS	WATTS PER. ELEMENT	SIMULTANEOUS ELEMENT OPERATION	VOLTAGE	MODEL NO.	HGT (IN)	L (IN)	W (IN)	REMARKS
	DWH-1	40	23	80*	2	4500	YES	460/3/60	DEN-40	59	23	21	

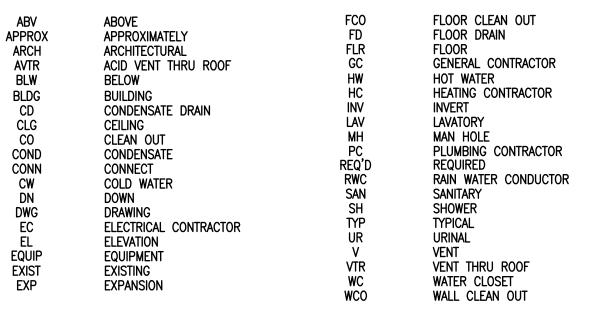
	PUMP	SCH	EDUL	.E					
SYMBOL	G.P.M.	HEAD		PUMP MC	TOR	TYPE	MODEL	MANUF.	REMARKS
STMDUL	<b>О.</b> Г.М.		H.P	R.P.M.	ELECTRIC		MODEL		
CP-1	3	18'	1/6	3300	120-1-60	IN-LINE	PL-36	BELL & GOSSETT	PROVIDE PUMP IN LEAD FREE BRONZE

	BASIS OF DESIGN: A.O. SMITH
	A.O. SMITH
KS	
NJ	

PLUMBING LEGEND (ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT)

$\mathbf{A}$			DOMESTIC COLD WATER
	2-WAY CONTROL VALVE		DOMESTIC COLD WATER
	MIXING VALVE		DOMESTIC HOT WATER
	BACKFLOW PREVENTER		DOMESTIC HOT WATER RECIRC.
	SAFETY RELIEF VALVE	140°	140°F DOMESTIC HOT WATER
入 1		140°R	140°F DOMESTIC HOT WATER RECIRC.
	WATER PRESSURE REDUCING VALVE		SANITARY WASTE
$\rightarrow \rightarrow \rightarrow$	BALL OR BUTTERFLY VALVE		SANITARY WASTE – UNDERGROUND
- <b>A</b> -	CALIBRATED BALANCING VALVE		SANITARY VENT
		AW	ACID WASTE
	CHECK VALVE	— — AV — —	ACID WASTE VENT
<b>K</b> †	STRAINER	G	NATURAL GAS PIPING
✓	GAS COCK		DOUBLE WALL CONTAINMENT GAS PIPING — UNDERGROUND
NVL		GV	GAS VENT PIPING
	GAS REGULATOR	====	GAS VENT PIPING - UNDERGROUND
Ŷ×	WATER HAMMER ARRESTOR - SIZE PER PDI STANDARD	LP	LIQUIFIED PETROLEUM GAS PIPING
	UNION OR FLANGED CONNECTION		RAINWATER CONDUCTOR
M	FLEXIBLE PIPE CONNECTION	— — RWC — —	RAINWATER CONDUCTOR - BELOW
_		CD	CONDENSATE DRAIN PIPING
	FLOW METER	PC	PUMPED CONDENSATE PIPING
-14-	SOLENOID VALVE	T	TEMPERED WATER
Q	PRESSURE GAUGE	S	SOFTENED WATER
		CA	COMPRESSED AIR
Ψ	THERMOMETER	0	OXYGEN
M	WATER METER	——— AC ———	ACETYLENE
-(A)-	AQUASTAT	———— AM ————	ARGON/CO2 (MIX)
↓ 〔	NEEDLE VALVE	AR	ARGON
	TRAP PRIMER	$\diamond$	KEYED DRAWING NOTE
Ø	CONNECT TO EXISTING	$\bigcirc$	KEYED DEMOLITION NOTE
$\bigcirc$	EXTENT OF DEMOLITION		

# ABBREVIATIONS



# GENERAL PROJECT NOTES:

- 1. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING SECTIONS. USE INFORMATION RELATING TO CEILING HEIGHTS, FLOOR TO FLOOR ELEVATIONS, ETC. TO DETERMINE PIPE RISER QUANTITIES AND TO VERIFY ROUTING OF SAME.
- PLUMBING CONTRACTOR IS REQUIRED TO COORDINATE ALL PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES TO ENSURE CORRECT AND QUALITY INSTALLATIONS.
- 3. THE PLUMBING CONTRACTOR SHALL COORDINATE ALL WORK ABOVE THE CEILING WITH THE ELECTRICAL, HVAC, AND GENERAL CONTRACTORS TO INSURE THE SCHEDULED CEILING HEIGHTS CAN BE MAINTAINED.
- 4. ALL LOW VOLTAGE WIRING (UNDER 120V) REQUIRED FOR PLUMBING EQUIPMENT SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS UNLESS OTHERWISE NOTED.

# FLOOR DRAINS:

BLW

CD

CLG

CW

DWG

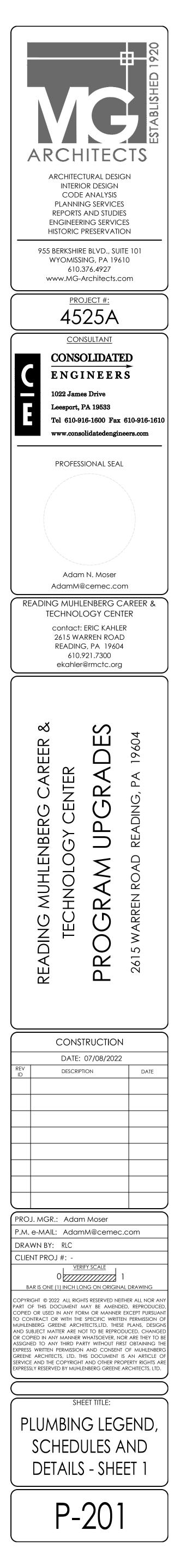
EXP

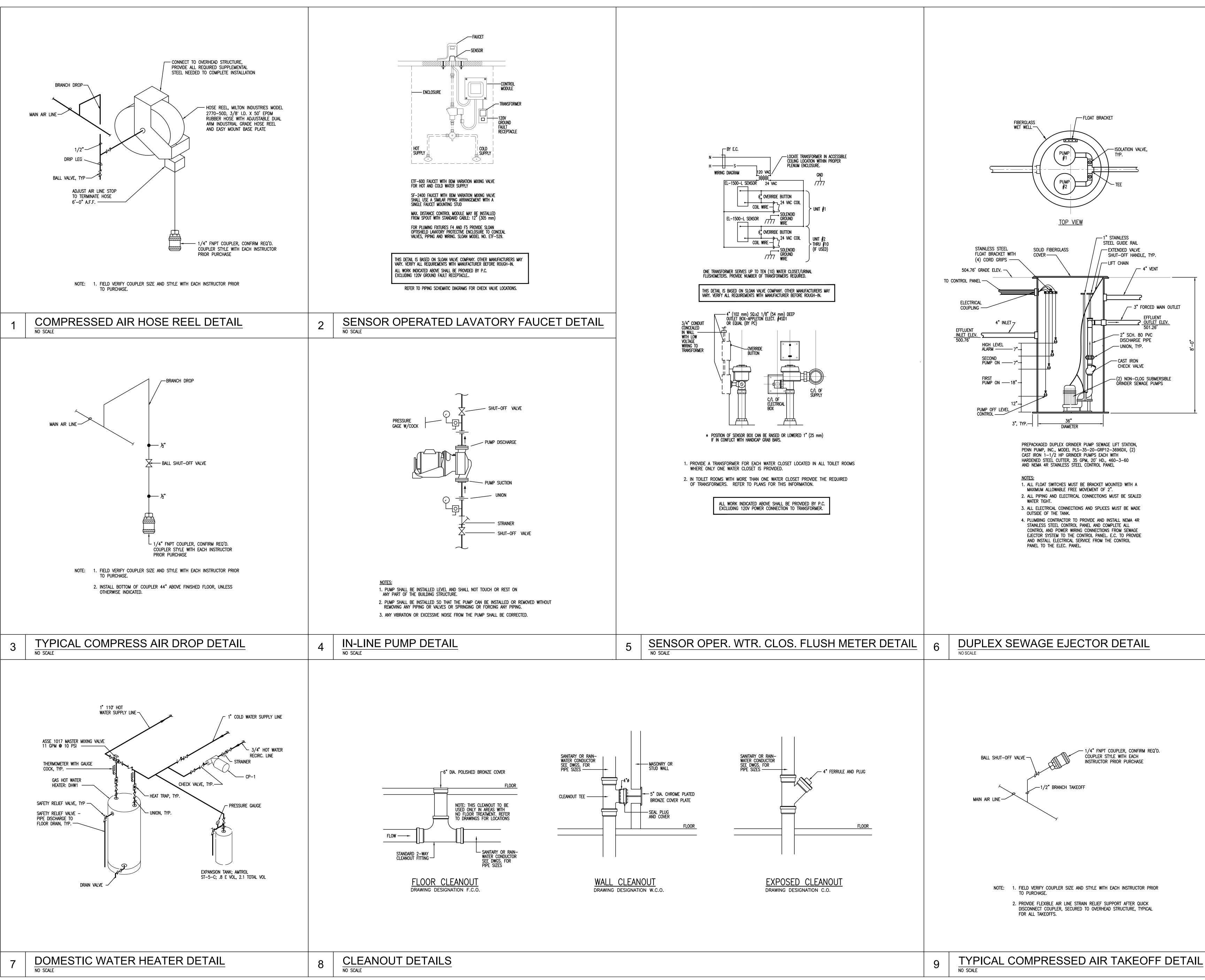
FLOOR DRAIN TYPE DESIGNATIONS AND SIZES ARE INDICATED ON DRAWINGS.

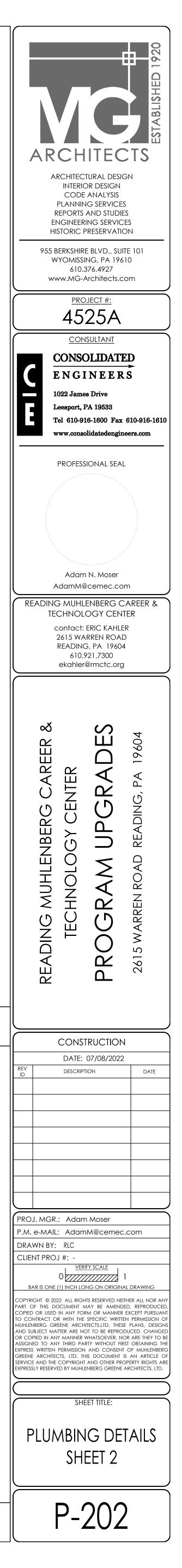
- FD1: CAST-IRON BODY, FLASHING COLLAR, NICKEL BRONZE ADJUSTABLE STRAINER HEAD WITH SECURED GRATE AND BOTTOM OUTLET. J.R. SMITH MODEL 2005-A OR 2005-B. VERIFY GRATE TYPE WITH FLOOR TYPES FOR EACH LOCATION. USE TYPE A FOR SEAMLESS AREAS AND TYPE B FOR TILED AREAS. PROVIDE PRO-SET TRAP SEAL IN DRAIN INLET.
- FD2: CAST-IRON BODY AND FLASHING COLLAR WITH ADJUSTABLE TOP AND TRACTOR GRATE, SEDIMENT BUCKET AND BOTTOM OUTLET. J.R. SMITH MODEL 2230. PROVIDE PRO-SET TRAP SEAL IN DRAIN INLET.

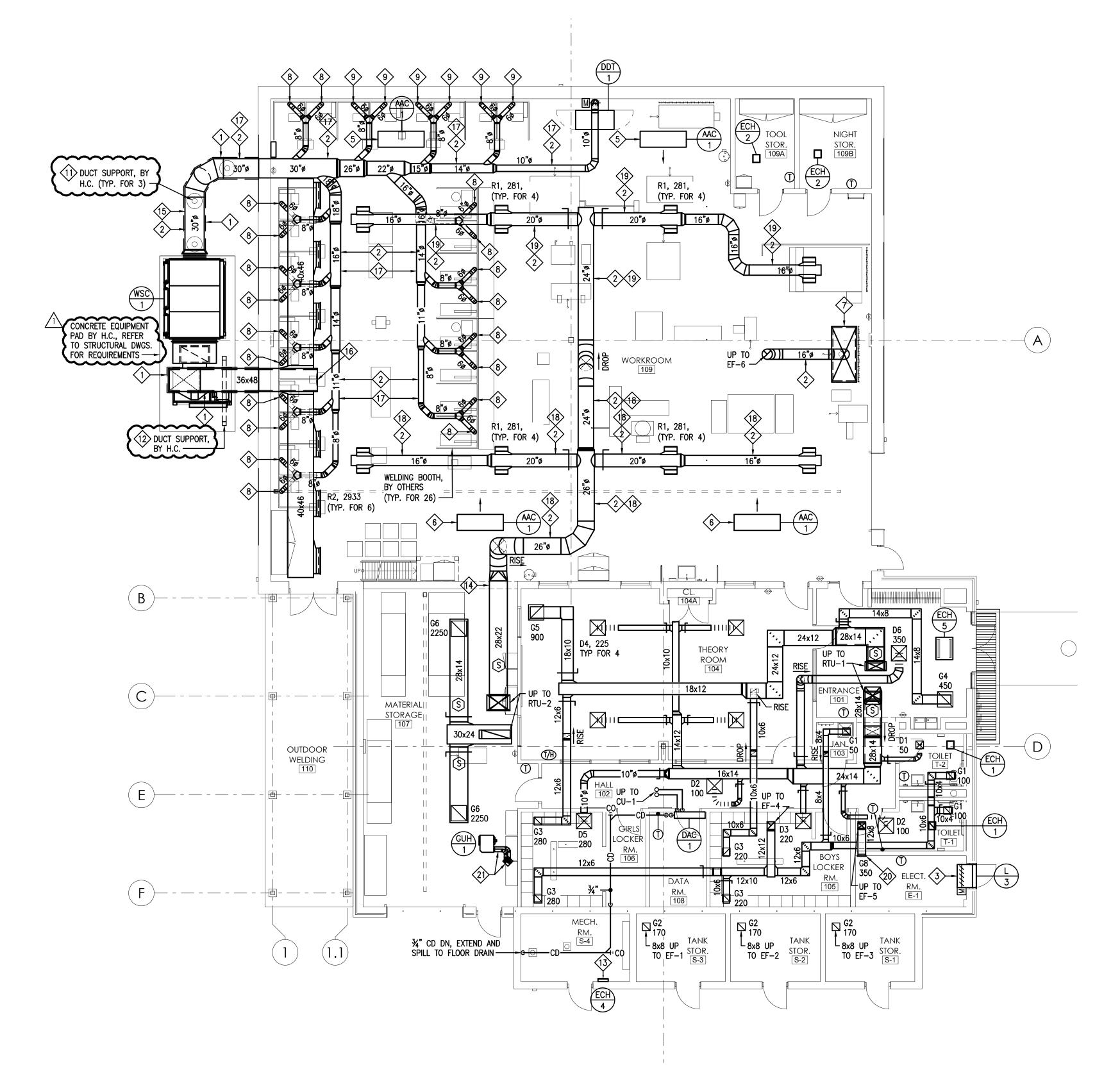
# **ROOF DRAINS:**

ROOF DRAINS ARE PROVIDED BY OTHERS, P.C. IS RESPONSIBLE TO CONNECT TO DRAIN OUTLET(S) AND PROVIDE ALL INDICATED RAIN WATER CONDUCTOR PIPING.



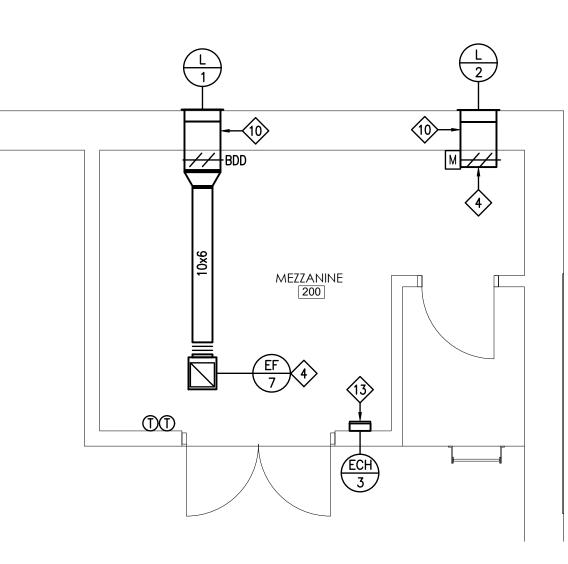




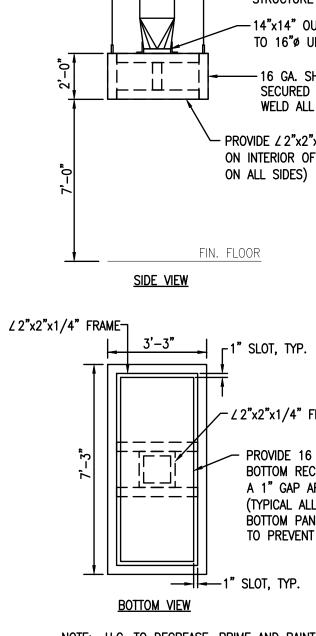


SCALE: 1/8" = 1'-0"

**FLOOR PLAN - HVAC** 

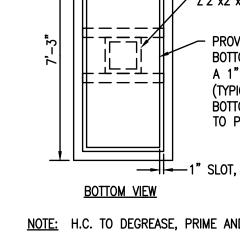


SCALE: 1/4" = 1'-0"



EXHAUST HOOD DETAIL NO SCALE

NOTE: H.C. TO DEGREASE, PRIME AND PAINT WITH 2 COATED OF ENAMEL PAINT, ARCHITECT TO MAKE FINAL COLOR SELECTION.



- PROVIDE 16 GA. FULL SHEET METAL BOTTOM RECESSED INSIDE HOOD 2" WITH A 1" GAP AROUND ENTIRE PERIMETER (TYPICAL ALL SIDES), PROVIDE RECESSED BOTTOM PANEL SUPPORTS AS REQUIRED TO PREVENT OIL CANNING

**MEZZANINE PLAN - HVAC** 

SUSENSION RODS UP TO STRUCTURE ABOVE (TYP.) - 14"x14" OUTLET WITH A TRANSITION

TO 16"Ø UP TO EXHAUST FAN 

SECURED TO ANGLE FRAME, CLEANLY WELD ALL SEAMS AIR TIGHT

- PROVIDE 22"x2"x1/4" FRAME ON INTERIOR OF HOOD (TYP.

/\_\_\_\_\_/ 2"x2"x1/4" FRAME

# **EQUIPMENT SCHEDULES:**

- (AAC) AMBIENT AIR CLEANER, INDUSTRIAL MAID, MODEL T-3500, 3500 CFM @ 1" W.C., 2 HP, 460-3-60, 2.9 FLA., UNIT TO INCLUDE DELTA VFD WITH ON/OFF BUTTONS, VFD DRIVE TO BE SHIPPED LOOSE FOR FIELD AND MOUNTING AND WIRING BY E.C., PROVIDE WITH 2 COMPLETE SETS OF SPARE FILTERS. REFER TO SPECIFICATION SECTION 233950 FOR ADDITIONAL REQUIREMENTS.
- WELDING SMOKE COLLECTOR, AIREX, MODEL PS-30, 17,600 CFM @ 14" T.S.P., 60 HP BLOWER, 460-3-60, REFER TO SPECIFICATION SECTION 233920 FOR ADDITIONAL REQUIREMENTS.
- DOWNDRAFT TABLE, 60" WIDE x 30" DEEP WITH HINGED SIDE PANELS AND A 10" DIAMETER EXHAUST OUTLET CONNECTION WITH ELECTRO/PNEUMATIC DAMPER ASSEMBLY. REFER TO SPECIFICATION SECTION 233920 FOR ADDITIONAL REQUIREMENTS.

THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ELECTRICAL PANEL LOCATIONS (INSIDE ELECTRICAL AND OUTSIDE ELECTRICAL ROOMS) WITH PIPING AND DUCTWORK LAYOUTS PRIOR TO PIPING AND DUCTWORK INSTALLATION. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL N.E.C. (NATIONAL ELECTRIC CODE) CLEARANCES BEFORE INSTALLING ANY PIPING AND DUCTWORK. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS RESULTING TO REWORKING (REMOVING AND REINSTALLING) PIPING AND DUCTWORK INSTALLED IN CONFLICT WITH ELECTRICAL PANELS/EQUIPMENT CLEARANCES.

## DRAWING NOTES:

- 1. REFER TO DRAWING H-501 FOR HVAC GENERAL PROJECT NOTES.
- 2. PROVIDE REQUIRED SERVICE CLEARANCE FOR ALL HVAC UNITS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF HVAC CEILING OUTLETS AND OTHER CEILING MOUNTED DEVICES. ANY CEILING REMOVAL REQUIRED FOR WORK TO BE COMPLETED UNDER THIS CONTRACT, THAT IS NOT INDICATED ON THE ARCHITECTURAL PLANS, SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. CEILINGS REMOVED BY THIS CONTRACTOR SHALL BE REPLACE AND/OR REPAIRED BY HIM, AS PER SPECIFICATIONS.

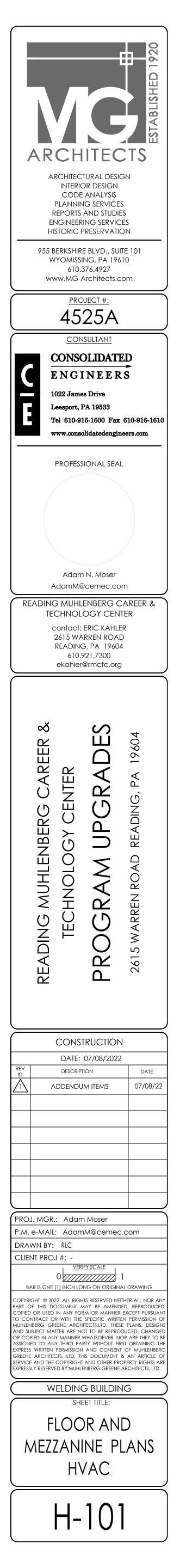
# **KEYED DRAWING NOTES:**

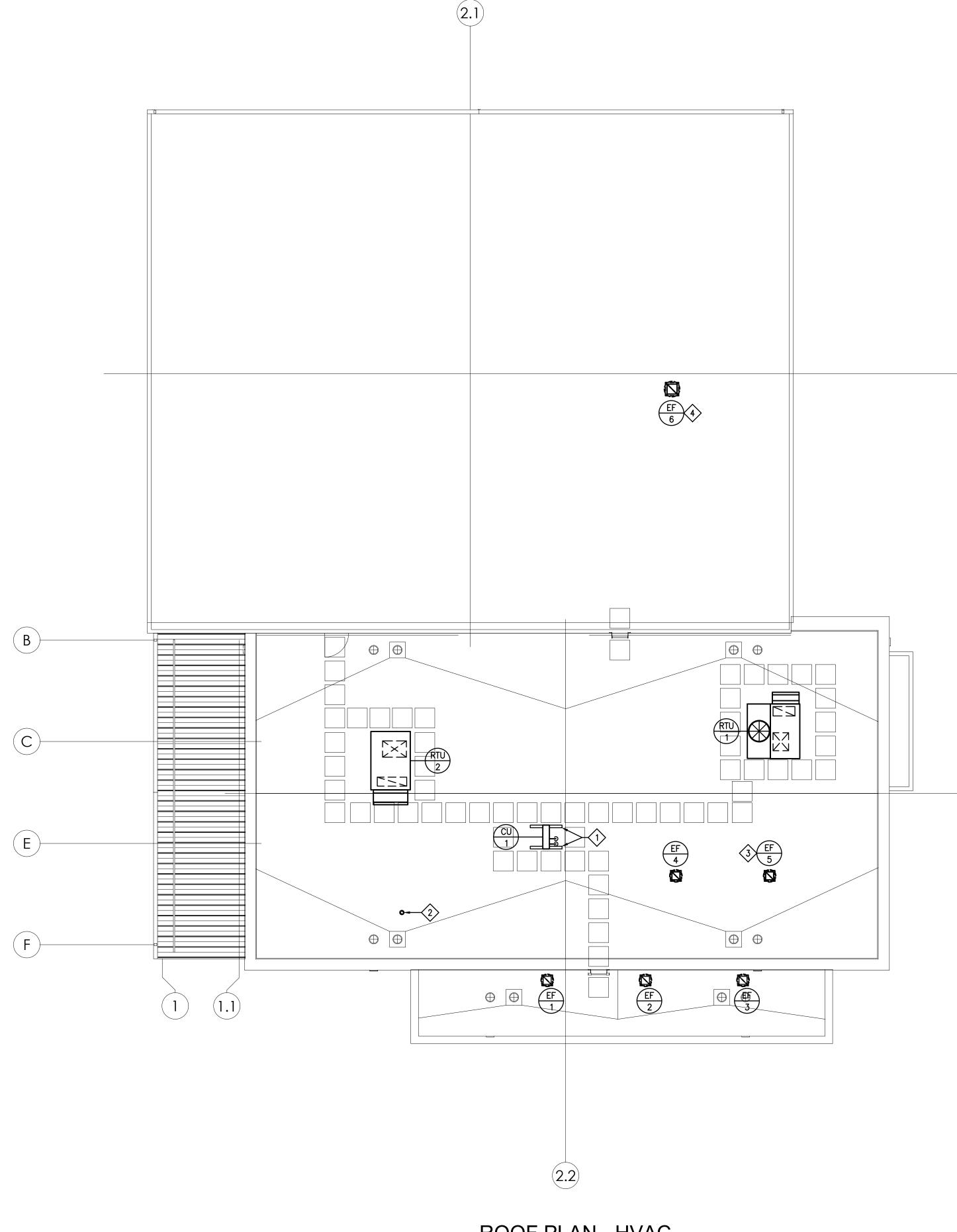
- PROVIDE EXTERIOR DUCT INSULATION SYSTEM AS SPECIFIED, REFER TO SPECIFICATION SECTION 230700 FOR REQUIREMENTS.
- $\langle 2 \rangle$  This ductwork main and associated branch ductwork to be galvanized steel SINGLE WALL SPIRAL.
- $\langle 3 \rangle$  provide full size sheet metal wall sleeve on rear of louver with mod, INTERLOCK EF-5 TO OPEN MOTOR OPERATED DAMPER ON L-3 OUTSIDE AIR INTAKE LOUVER WHEN FAN ENERGIZES, DAMPER SHALL FULLY CLOSE WHEN FAN DE-ENERGIZES.
- $\langle 4 \rangle$  provide full size sheet metal wall sleeve on rear of louver with mod, INTERLOCK EF-7 TO OPEN MOTOR OPERATED DAMPER ON L-2 OUTSIDE AIR INTAKE LOUVER WHEN FAN ENERGIZES, DAMPER SHALL FULLY CLOSE WHEN FAN DE-ENERGIZES.
- PROVIDE ALL REQUIRES SUPPLEMENTAL STEEL AND SUPPORT RODS NEEDED TO HANG UNIT FROM OVERHEAD STRUCTURE, BOTTOM OF UNIT TO BE INSTALLED 12'-6" A.F.F..  $\langle 6 \rangle$  provide all requires supplemental steel and support rods needed to hang unit
- FROM OVERHEAD STRUCTURE, BOTTOM OF UNIT TO BE INSTALLED 14'-0" A.F.F..  $\langle 7 \rangle$  provide exhaust hood, hood to be constructed as indicated on exhaust hood
- DETAIL SHOWN ON THIS SHEET. HOOD TO BE CENTERED OVERTOP TRACK FLAME CUTTING MACHINE. PROVIDE ALL REQUIRES SUPPLEMENTAL STEEL AND SUPPORT RODS NEEDED TO HANG HOOD FROM OVERHEAD STRUCTURE, BOTTOM OF HOOD TO BE INSTALLED 7'-0" A.F.F..
- (8) PROVIDE A 5 FOOT SOURCE CAPTURE FUME COLLECTION ARM WITH MOUNTING BRACKET, HENLEX MODEL V6A52RNCCVJO-WB, PROVIDE ALL REQUIRED SUPPLEMENTAL STEEL NEEDED TO MOUNT BOTTOM OF WALL BRACKET 7'-2" A.F.F., (TYP. FOR 20).
- $\langle 9 \rangle$  reinstall salvaged 5 foot source capture fume collection arm with mounting BRACKET, PROVIDE ALL REQUIRED SUPPLEMENTAL STEEL NEEDED TO MOUNT BOTTOM OF WALL BRACKET 7'-2" A.F.F., (TYP. FOR 6).
- INSTALL LOUVER AND ASSOCIATED DUCTWORK UP IN BETWEEN BAR JOIST AND TIGHT TO UNDERSIDE OF BOND BEAM.

CONCRETE PIER AND ASSOCIATED DUCT SUPPORT BY H.C. (REFER TO STRUCTURAL DWGS. FOR REQUIREMENTS), PROVIDE A FULL PERIMETER 10 GA. STAINLESS STEEL STRAP AROUND ROUND EXHAUST DUCTWORK AT EACH DUCT SUPPORT. PERIMETER STRAP MUST NOT PENETRATE INSULATION JACKET AND IT MUST BE PERMANENTLY SECURED TO MOUNTING POST

 $\sqrt{2}$  duct support by h.c. (refer to structural dwgs. For requirements), provide a FULL PERIMETER UNISTRUT FRAME AROUND ALL SIDES OF RECTANGULAR DUCTWORK AT EACH DUCT SUPPORT. PERIMETER FRAME MUST NOT PENETRATE INSULATION JACKET AND IT MUST BE PERMANENTLY SECURED TO DUCT SUPPORT. 

- (13) INSTALL BOTTOM OF ELECTRIC CABINET HEATER 8" A.F.F..
- (14) INSTALL TOP OF DUCT TIGHT TO UNDERSIDE OF BOND BEAM. TS DROP DUCT ELEVATION AS REQUIRED TO ALIGN WITH WELDING SMOKE COLLECTOR INLET
- CONNECTION.
- (16) INSTALL BOTTOM OF SUPPLY DUCTWORK 12'-8" A.F.F.
- $\langle 1 \rangle$  install centerline of exhaust ductwork main and associated branch ductwork 11'-3" A.F.F., UNLESS OTHERWISE INDICATED.
- $\langle 8 \rangle$  install centerline of supply ductwork main and associated branch ductwork 17'-8" A.F.F..
- (19) INSTALL CENTERLINE OF SUPPLY DUCTWORK MAIN AND ASSOCIATED BRANCH DUCTWORK
- 14'-6" A.F.F..  $\langle 20 \rangle$  INSTALL TOP OF EXHAUST GRILLE 8" BELOW ROOF DECK.
- $\langle 2 \rangle$  provide a concentric vent kit with vertical vent terminal/combustion air inlet ASSEMBLY. PROVIDE 4" COMBUSTION AIR INTAKE DUCT AND 4" EXHAUST VENT DUCT FROM UNIT HEATER TO CONCENTRIC ADAPTER BOX.





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

THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ELECTRICAL PANEL LOCATIONS (INSIDE ELECTRICAL AND OUTSIDE ELECTRICAL ROOMS) WITH PIPING AND DUCTWORK LAYOUTS PRIOR TO PIPING AND DUCTWORK INSTALLATION. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL N.E.C. (NATIONAL ELECTRIC CODE) CLEARANCES BEFORE INSTALLING ANY PIPING AND DUCTWORK. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS RESULTING TO REWORKING (REMOVING AND REINSTALLING) PIPING AND DUCTWORK INSTALLED IN CONFLICT WITH ELECTRICAL PANELS/EQUIPMENT CLEARANCES.

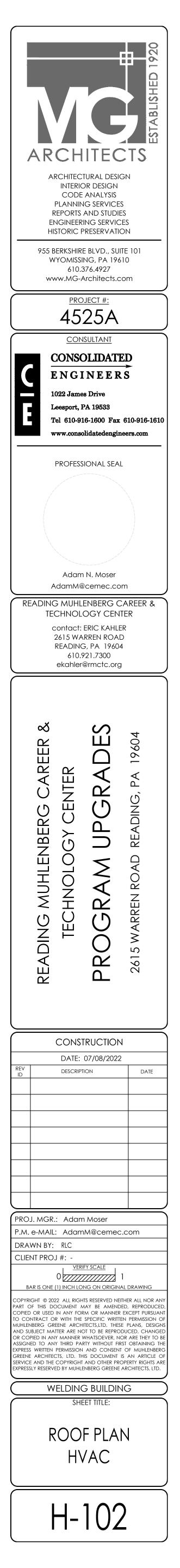
#### **DRAWING NOTES:**

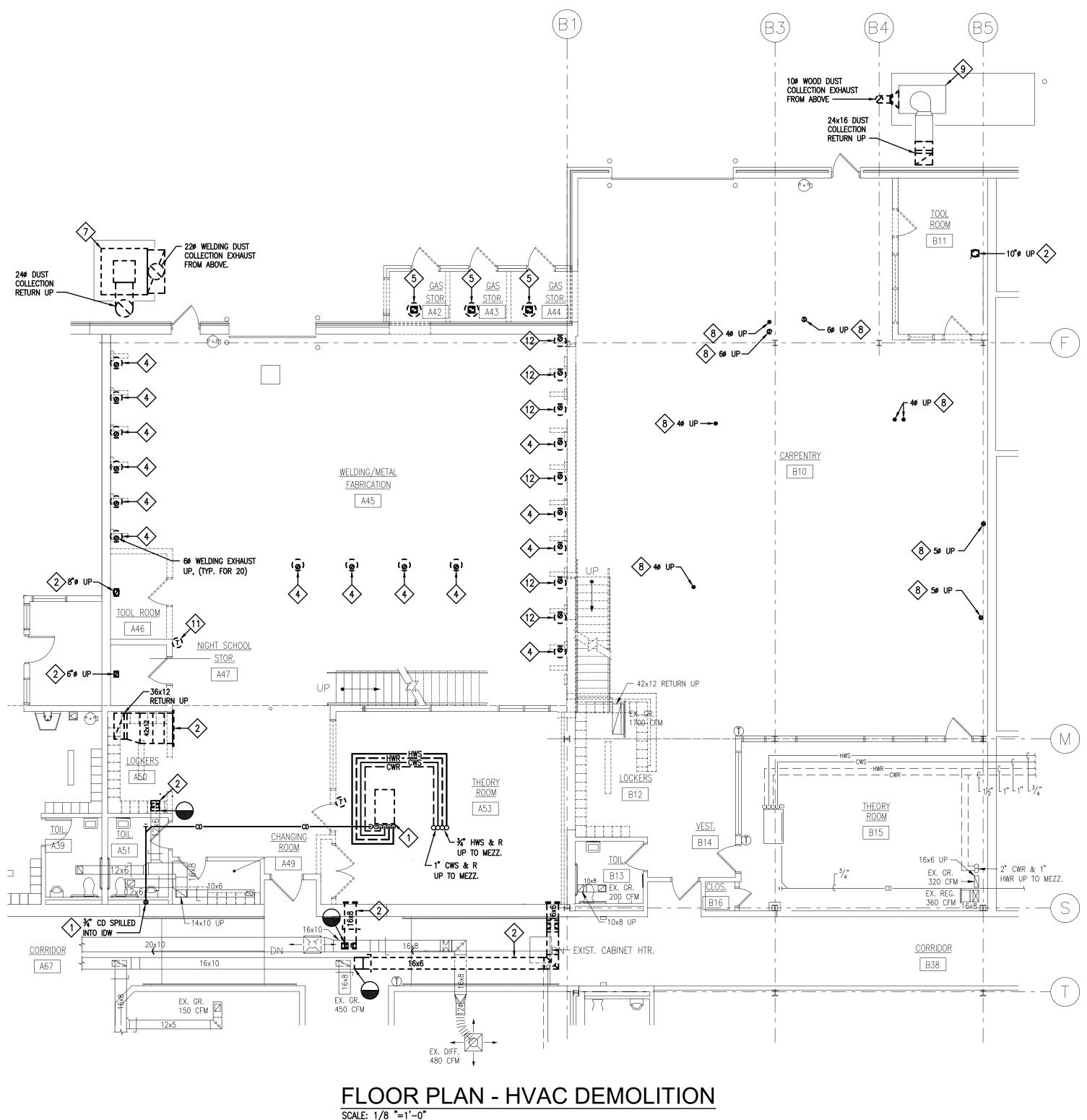
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- 1. REFER TO DRAWING H-501 FOR HVAC GENERAL PROJECT NOTES.
- 2. PROVIDE REQUIRED SERVICE CLEARANCE FOR ALL HVAC UNITS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
- 3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF HVAC CEILING OUTLETS AND OTHER CEILING MOUNTED DEVICES. ANY CEILING REMOVAL REQUIRED FOR WORK TO BE COMPLETED UNDER THIS CONTRACT, THAT IS NOT INDICATED ON THE ARCHITECTURAL PLANS, SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. CEILINGS REMOVED BY THIS CONTRACTOR SHALL BE REPLACE AND/OR REPAIRED BY HIM, AS PER SPECIFICATIONS.

## **KEYED DRAWING NOTES:**

- PROVIDE 4" WIDE X 4'-0" LONG X 18" HIGH EQUIPMENT RAILS, PATE MODEL ES-2, (TYP FOR 2).
- 2 concentric vent kit from GUH-1 below, terminate concentric vent so bottom of combustion air intake is a minimum of 3'-0" above finished roof.
- $\overleftrightarrow{3}$  INTERLOCK EF-5 TO OPEN MOTOR OPERATED DAMPER ON L-3 OUTSIDE AIR INTAKE LOUVER WHEN FAN ENERGIZES, DAMPER SHALL FULLY CLOSE WHEN FAN DE-ENERGIZES.
- INTERLOCK EF-6 WITH TRACK FLAME CUTTING MACHINE. EXHAUST FAN SHALL ENERGIZE WHEN MACHINE IS TURNED ON, EXHAUST FAN SHALL BE DE-ENERGIZED WHEN MACHINE IS TURNED OFF.

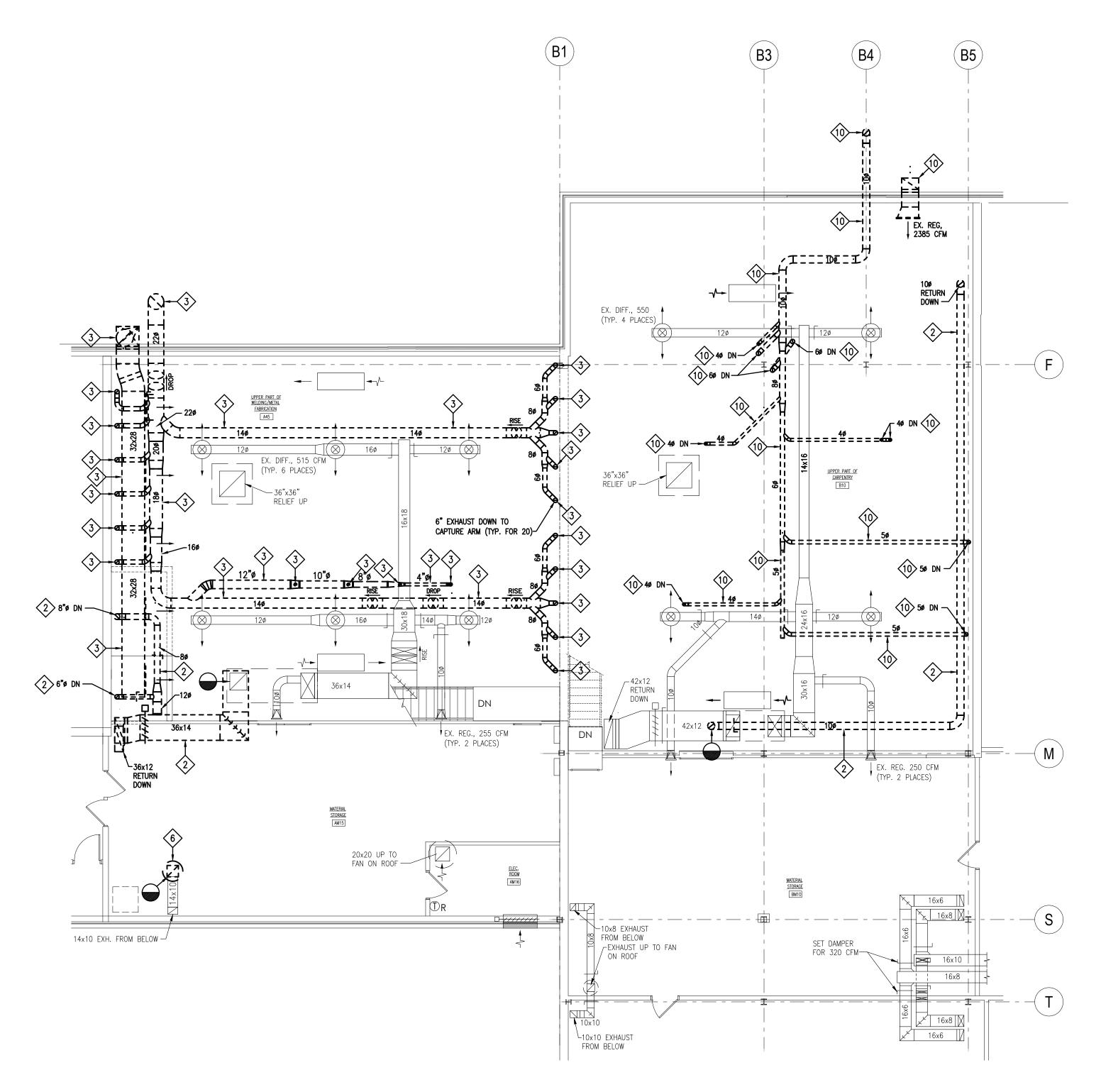




#### DRAWING NOTES:

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- 2. PROVIDE REQUIRED SERVICE CLEARANCE FOR ALL HVAC UNITS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
- 3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF HVAC CEILING OUTLETS AND OTHER CEILING MOUNTED DEVICES. ANY CEILING REMOVAL REQUIRED FOR WORK TO BE COMPLETED UNDER THIS CONTRACT, THAT IS NOT INDICATED ON THE ARCHITECTURAL PLANS, SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. CEILINGS REMOVED BY THIS CONTRACTOR SHALL BE REPLACE AND/OR REPAIRED BY HIM, AS PER SPECIFICATIONS.

$\langle \rangle$	REMOVE EXISTING FAN COIL AND ALL ASSOCIATED DUCTWORK, PIPING, VALVES, INSULATION, HANGERS, SUPPORTS AND CONTROLS IN THEIR ENTIRETY. EXISTING CHILLED WATER AND HEATING SYSTEM PIPING TO BE REMOVED BACK TO MAINS LOCATED IN MEZZANINE AND CAPPED. REMOVE CONDENSATE DRAIN PIPING BACK INDIRECT WASTE RECEPTOR LOCATED IN TOILET ROOM A51 IN ITS ENTIRETY.
2>	REMOVE DUCTWORK AND ALL ASSOCIATED GRILLES, REGISTERS, DIFFUSERS, INSULATION, HANGERS AND SUPPORTS IN THEIR ENTIRETY, BACK TO POINT(S) INDICATED AND CAP.
\$	REMOVE EXISTING FUME EXHAUST DUCTWORK AND ALL ASSOCIATED INSULATION, HANGERS AND SUPPORTS IN THEIR ENTIRETY.
	REMOVE EXISTING WELDING SMOKE EXHAUST DUCTWORK AND ASSOCIATED SOUR CAPTURE FUME COLLECTION ARM, HANGERS AND SUPPORTS IN THEIR ENTIRETY.
\$	REMOVE EXISTING ROOF TOP MOUNTED EXHAUST FAN, EXISTING ROOF CURB SH REMAIN. CAP REMAINING ROOF CURB WITH 2 LAYERS OF 3/4" EXTERIOR GRADE PLYWOOD, AND COVER WITH WATERTIGHT 18 GA. GALVANIZED SHEET METAL CAP EXTENDS 4" OVER EXISTING ROOF CURB. TERMINATE SHEET METAL CAP WITH A TURNED OUT DRIP EDGE ON ALL SIDES AND SECURE IN PLACE. PROVIDE 2" R POLY-ISO RIGID INSULATION IN THROAT OF ROOF CURB.
\$	REMOVE EXISTING ROOF TOP MOUNTED EXHAUST FAN, EXISTING ROOF CURB SHREMAIN FOR REUSE.
$\Diamond$	REMOVE EXISTING WELDING SMOKE EXHAUST COLLECTOR ASSEMBLY AND ALL ASSOCIATED DUCTWORK, HANGERS, SUPPORTS CONTROLS IN ITS ENTIRETY. EXIS CONCRETE EQUIPMENT PAD TO BE REMOVED BY OTHERS.
8>	REMOVE EXISTING WOOD DUST EXHAUST DUCTWORK AND ALL ASSOCIATED BLAST



## **KEYED DRAWING NOTES:**

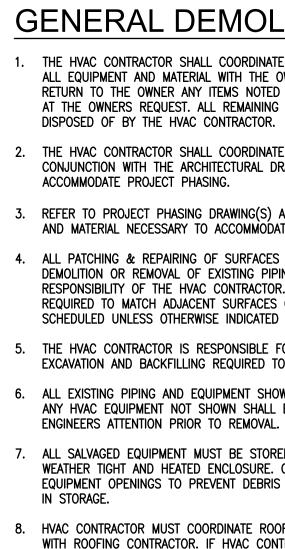
ANGERS, SUPPORTS AND CONTROLS IN THEIR ENTIRETY. EXISTING AND HEATING SYSTEM PIPING TO BE REMOVED BACK TO MAINS EZZANINE AND CAPPED. REMOVE CONDENSATE DRAIN PIPING BACK TO RECEPTOR LOCATED IN TOILET ROOM A51 IN ITS ENTIRETY.

NG ROOF TOP MOUNTED EXHAUST FAN, EXISTING ROOF CURB SHALL REMAINING ROOF CURB WITH 2 LAYERS OF 3/4" EXTERIOR GRADE COVER WITH WATERTIGHT 18 GA. GALVANIZED SHEET METAL CAP THAT VER EXISTING ROOF CURB. TERMINATE SHEET METAL CAP WITH A 1/4"DRIP EDGE ON ALL SIDES AND SECURE IN PLACE. PROVIDE 2" RIGID INSULATION IN THROAT OF ROOF CURB.

NG ROOF TOP MOUNTED EXHAUST FAN, EXISTING ROOF CURB SHALL EUSE.

NG WELDING SMOKE EXHAUST COLLECTOR ASSEMBLY AND ALL JCTWORK, HANGERS, SUPPORTS CONTROLS IN ITS ENTIRETY. EXISTING JIPMENT PAD TO BE REMOVED BY OTHERS. NG WOOD DUST EXHAUST DUCTWORK AND ALL ASSOCIATED BLAST GATE, RIGID AND/OR FLEXIBLE DUCT EQUIPMENT CONNECTION, HANGERS AND SUPPORTS IN THEIR ENTIRETY.

- (9) EXISTING WOOD DUST COLLECTOR AND ASSOCIATED CONCRETE EQUIPMENT TO REMAIN. REMOVE ALL ASSOCIATED DUCTWORK, HANGERS, SUPPORTS, AND CONTROLS IN ITS ENTIRETY. FORWARD EXISTING CONTROL PANEL AND ALL ASSOCIATED CONTROL DEVICES BACK TO THE OWNER. CAP ALL REMAINING OPEN DUCT CONNECTIONS ON EXISTING DUST COLLECTOR WITH SHEET METAL CAPS AND SEAL WATERTIGHT. (1) REMOVE EXISTING WOOD DUST COLLECTOR DUCTWORK AND ALL ASSOCIATED,
- INSULATION, HANGERS AND SUPPORTS IN THEIR ENTIRETY.  $\langle 1 \rangle$  TEMPORARILY REMOVE EXISTING THERMOSTAT AND STORE FOR REUSE.
- $\langle\!\!\!12\rangle$  remove existing welding smoke exhaust ductwork and associated henlex SOURCE CAPTURE FUME COLLECTION ARM, HANGERS AND SUPPORTS IN THEIR ENTIRETY. SALVAGE HENLEX ARTICULATED SOURCE CAPTURE ARM ASSEMBLY FOR REUSE, (TYP. FOR 6).



**MEZZANINE PLAN - HVAC DEMOLITION** SCALE: 1/8" = 1'-0"

## **GENERAL DEMOLITION NOTES:**

1. THE HVAC CONTRACTOR SHALL COORDINATE THE SALVAGE AND DISPOSAL OF ALL EQUIPMENT AND MATERIAL WITH THE OWNER. THE HVAC CONTRACTOR SHALL RETURN TO THE OWNER ANY ITEMS NOTED OR NOT NOTED, ON THE DRAWINGS, AT THE OWNERS REQUEST. ALL REMAINING EQUIPMENT AND MATERIAL SHALL BE DISPOSED OF BY THE HVAC CONTRACTOR.

2. THE HVAC CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AS REQUIRED TO ACCOMMODATE PROJECT PHASING.

3. REFER TO PROJECT PHASING DRAWING(S) AND SCHEDULE. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACCOMMODATE PROJECT PHASING. 4. ALL PATCHING & REPAIRING OF SURFACES AND HOLES LEFT OPEN DUE TO DEMOLITION OR REMOVAL OF EXISTING PIPING & EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR. PATCH EXISTING CONSTRUCTION AS REQUIRED TO MATCH ADJACENT SURFACES OR TO RECEIVE NEW FINISHES AS SCHEDULED UNLESS OTHERWISE INDICATED ON THE ARCHITECTURAL DRAWING.

5. THE HVAC CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, PATCHING, EXCAVATION AND BACKFILLING REQUIRED TO COMPLETE ALL INDICATED WORK. 6. ALL EXISTING PIPING AND EQUIPMENT SHOWN MUST BE VERIFIED IN THE FIELD. ANY HVAC EQUIPMENT NOT SHOWN SHALL BE BROUGHT TO THE

7. ALL SALVAGED EQUIPMENT MUST BE STORED BY THE CONTRACTOR IN A WEATHER TIGHT AND HEATED ENCLOSURE. CAP ALL FITTINGS AND OR EQUIPMENT OPENINGS TO PREVENT DEBRIS FROM ENTERING THE DEVICE WHILE IN STORAGE.

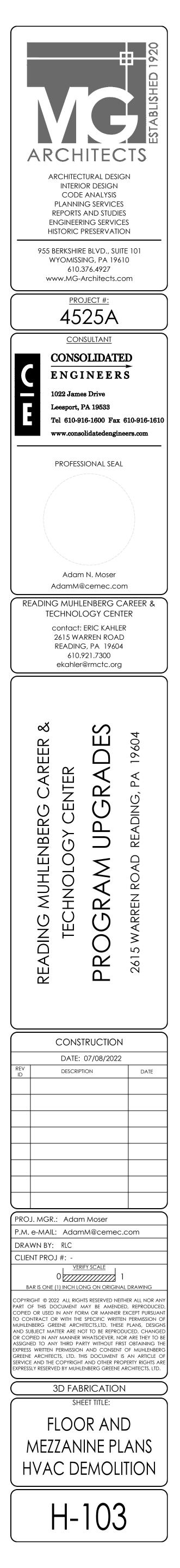
8. HVAC CONTRACTOR MUST COORDINATE ROOF MOUNTED EQUIPMENT REMOVAL WITH ROOFING CONTRACTOR. IF HVAC CONTRACTOR CHOOSES TO REMOVE ROOF MOUNTED EQUIPMENT PRIOR TO ROOFING CONTRACTOR BEING READY TO PATCH ROOF, HVAC CONTRACTOR MUST TEMPORARILY COVER REMAINING ROOF CURB WEATHER TIGHT.

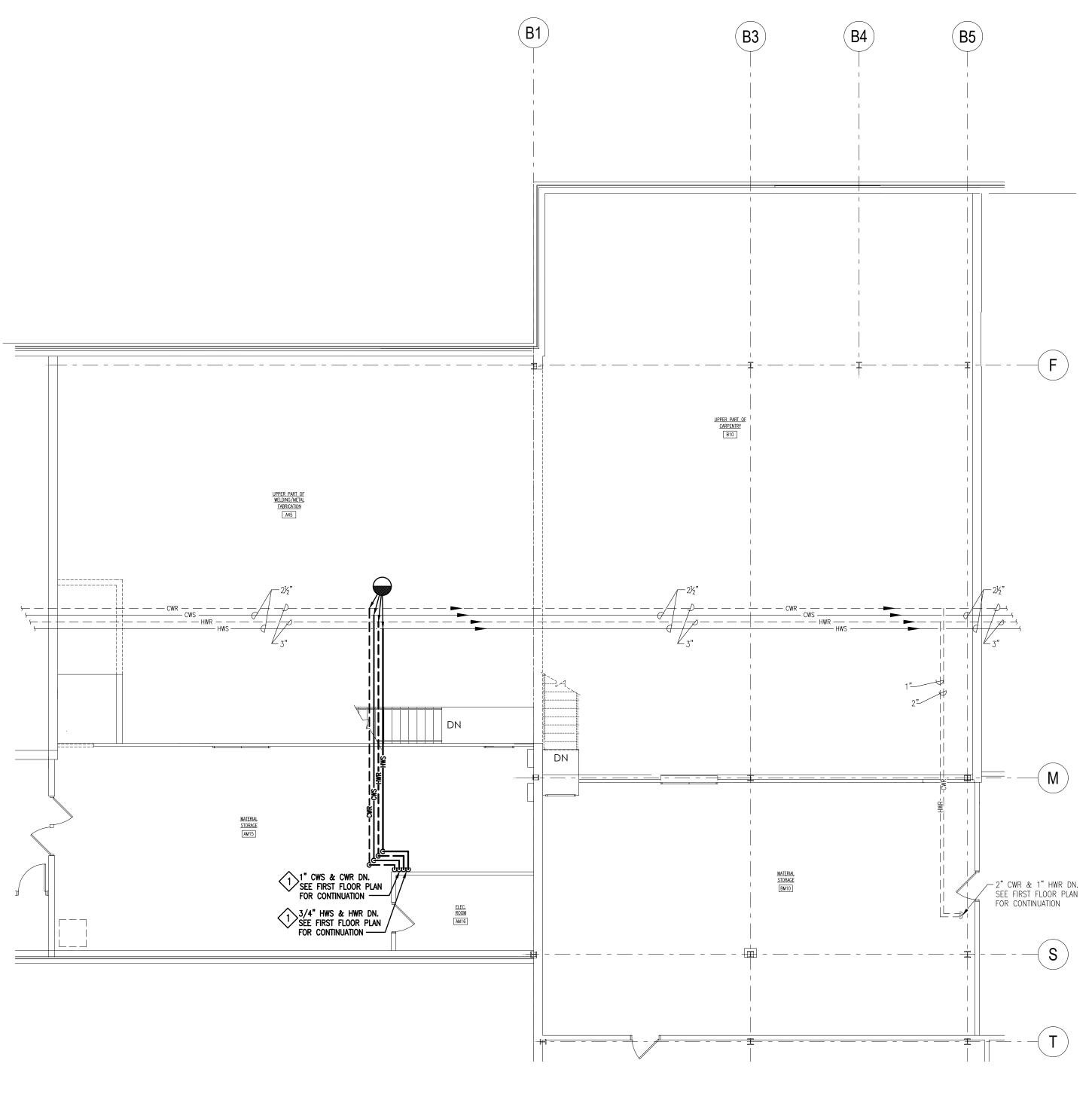
9. PRIOR TO REMOVAL OF ANY EXISTING HVAC EQUIPMENT THAT CONTAINS REFRIGERANT THE HVAC CONTRACTOR SHALL REMOVE AND RECOVER THE ENTIRE CONTENT OF THE REFRIGERANT AND ALL ASSOCIATED OIL IN THE EXISTING EQUIPMENT. ALL REFRIGERANT/OIL RECOVERY EQUIPMENT IS REQUIRED TO BE CERTIFIED BY AN EPA-APPROVED TESTING ORGANIZATION TO ASSURE THAT THE EQUIPMENT MEETS EPA STANDARDS BASED ON THE TESTING METHOD ESTABLISHED BY AHRI STANDARD 740. REMOVAL OF ALL CFC AND HCFC REFRIGERANTS MUST CONFORM TO THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY. ALL WORK IS TO BE PERFORMED BY AN EPA CERTIFIED TECHNICIAN.

10. IN AREAS WHERE THE EXISTING HVAC SYSTEM WILL REMAIN AND THE SPACE IS SCHEDULED TO RECEIVE NEW ACOUSTICAL CEILINGS AS INDICATED ON THE ARCHITECTURAL DRAWINGS, THE HVAC CONTRACTOR WILL BE RESPONSIBLE TO TEMPORARILY REMOVE, THOROUGHLY CLEAN AND STORE ALL EXISTING CEILING MOUNTED GRILLES, REGISTERS AND DIFFUSERS. ONCE THE CEILING REPLACEMENT IS COMPLETE, THE HVAC CONTRACTOR SHALL REINSTALL AND RECONNECT ALL EXISTING TEMPORARILY REMOVED HVAC CEILING MOUNTED GRILLES, REGISTERS AND DIFFUSERS.

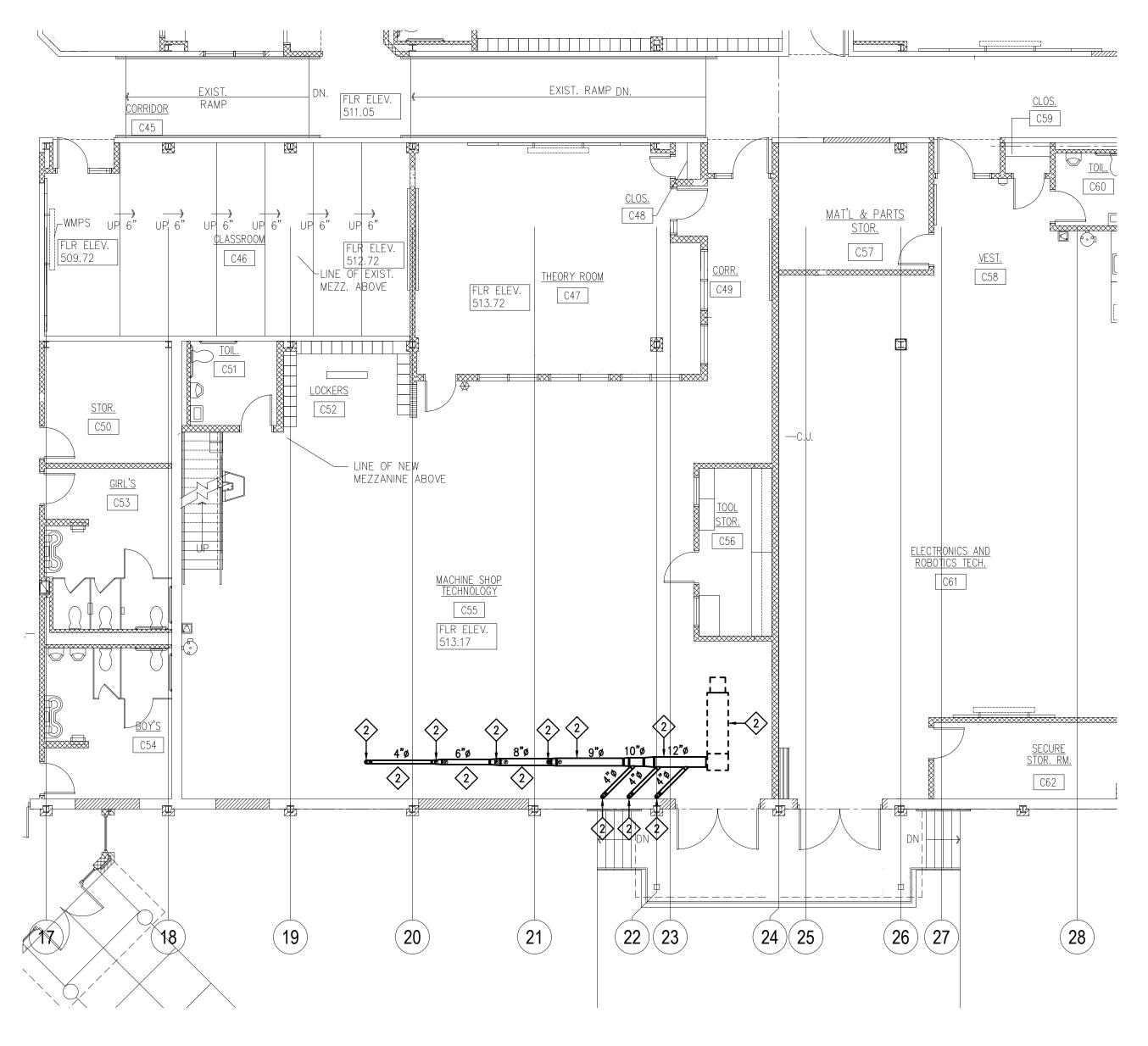
11. HVAC CONTRACTOR WILL BE RESPONSIBLE TO REMOVE AND REPLACE ALL EXISTING CEILING SYSTEMS THAT ARE NOT NOTED TO BE REMOVED BY THE G.C. ON THE ARCHITECTURAL DRAWINGS, IN ALL AREAS WHERE REQUIRED HVAC WORK IS INDICATED.

THE DEMOLITION WORK INDICATED IS INTENDED TO ASSIST THE CONTRACTOR AND GIVE GENERAL INFORMATION. THE CONTRACTOR SHALL BE REQUIRED TO VISIT THE PROJECT SITE PRIOR TO BIDDING TO FULLY ACQUAINT HIMSELF WITH THE EXTENT OF ALL DEMOLITION WORK WHICH IS NECESSARY TO COMPLETE THE ALTERATIONS AND NEW CONSTRUCTION AS DESCRIBED IN THE CONTRACT DOCUMENTS. ALL DEMOLITION WORK REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE WHETHER INDICATED ON THE DRAWING OR NOT. THE CONTRACTOR WILL NOT BE ENTITLED TO ANY CLAIMS FOR ADDITIONAL COMPENSATION RELATED TO REQUIRED DEMOLITION.





# MEZZANINE PLAN - HVAC PIPING DEMOLITION SCALE: 1/8" = 1'-0"



# DRAWING NOTES:

- 1. REFER TO DRAWING H-501 FOR HVAC GENERAL PROJECT NOTES.
- 2. PROVIDE REQUIRED SERVICE CLEARANCE FOR ALL HVAC UNITS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER. 3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF
- HVAC CEILING OUTLETS AND OTHER CEILING MOUNTED DEVICES. ANY CEILING REMOVAL REQUIRED FOR WORK TO BE COMPLETED UNDER THIS CONTRACT, THAT IS NOT INDICATED ON THE ARCHITECTURAL PLANS, SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. CEILINGS REMOVED BY THIS CONTRACTOR SHALL BE REPLACE AND/OR REPAIRED BY HIM, AS PER SPECIFICATIONS.

### **KEYED DRAWING NOTES:**

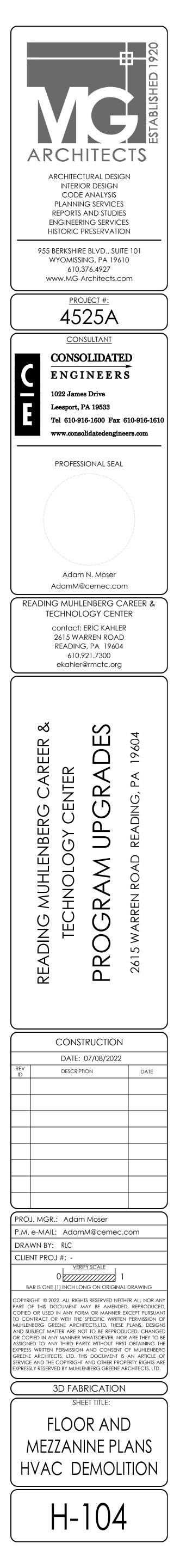
- (1) REMOVE EXISTING FAN COIL AND ALL ASSOCIATED DUCTWORK, PIPING, VALVES, INSULATION, HANGERS, SUPPORTS AND CONTROLS IN THEIR ENTIRETY. EXISTING CHILLED WATER AND HEATING SYSTEM PIPING TO BE REMOVED BACK TO MAINS LOCATED IN MEZZANINE AND CAPPED. REMOVE CONDENSATE DRAIN PIPING BACK TO INDIRECT WASTE RECEPTOR LOCATED IN TOILET ROOM A51 IN ITS ENTIRETY.
- (2) CAREFULLY REMOVE EXISTING DUST COLLECTOR AND ALL ASSOCIATED DUCTWORK, FITTINGS, BLAST GATES, EQUIPMENT HOSES, HANGERS, SUPPORTS, WALL/FLOOR BRACKETS AND CONTROLS IN THEIR ENTIRETY. SALVAGE DUST COLLECTOR AND ALL ASSOCIATED DUCTWORK AND OTHER SYSTEM COMPONENTS FOR REUSE.

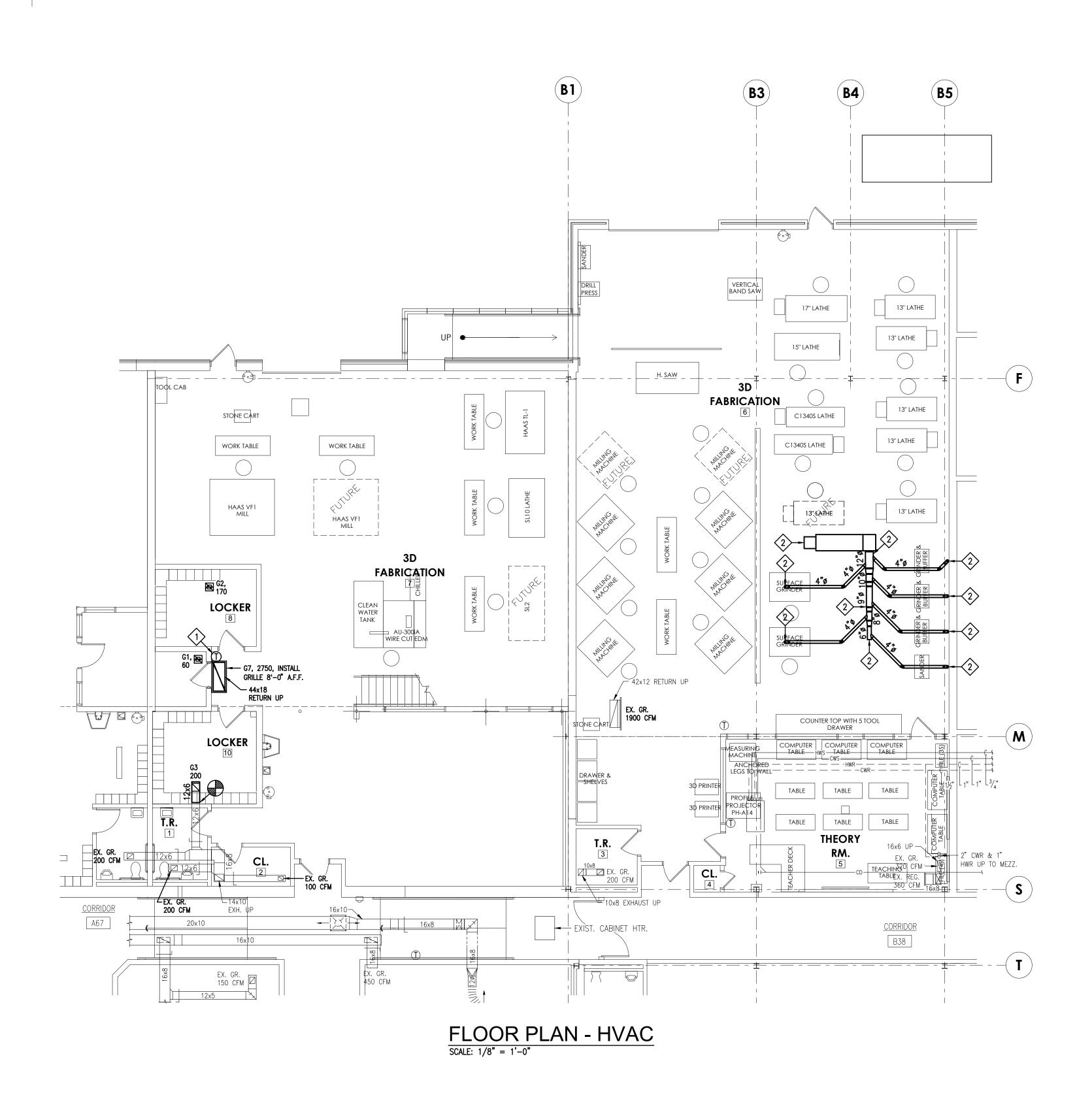
# **GENERAL DEMOLITION NOTES:**

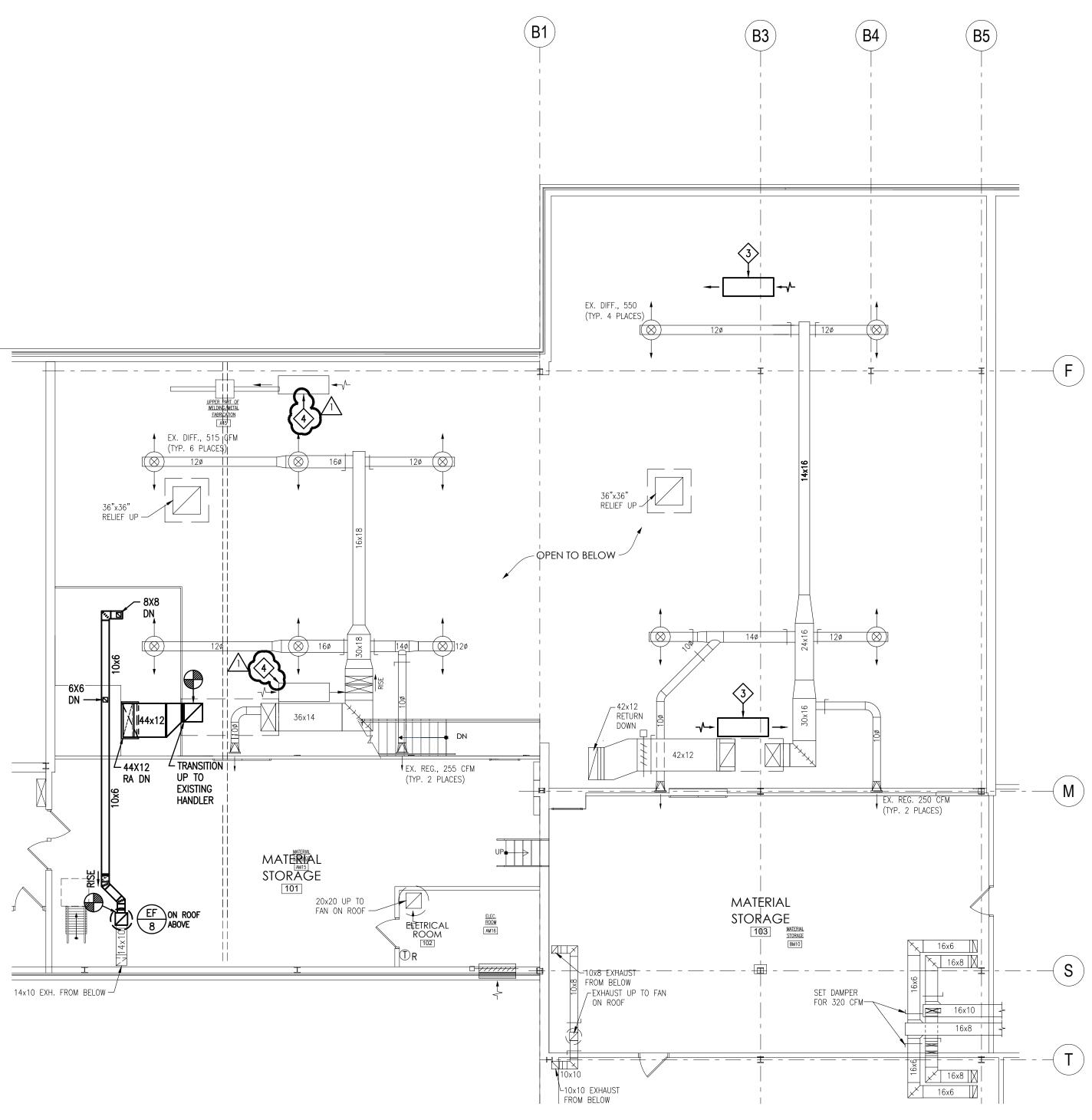
- 1. THE HVAC CONTRACTOR SHALL COORDINATE THE SALVAGE AND DISPOSAL OF ALL EQUIPMENT AND MATERIAL WITH THE OWNER. THE HVAC CONTRACTOR SHALL RETURN TO THE OWNER ANY ITEMS NOTED OR NOT NOTED, ON THE DRAWINGS, AT THE OWNERS REQUEST. ALL REMAINING EQUIPMENT AND MATERIAL SHALL BE DISPOSED OF BY THE HVAC CONTRACTOR.
- 2. THE HVAC CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AS REQUIRED TO ACCOMMODATE PROJECT PHASING.
- 3. REFER TO PROJECT PHASING DRAWING(S) AND SCHEDULE. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACCOMMODATE PROJECT PHASING.
- 4. ALL PATCHING & REPAIRING OF SURFACES AND HOLES LEFT OPEN DUE TO DEMOLITION OR REMOVAL OF EXISTING PIPING & EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR. PATCH EXISTING CONSTRUCTION AS REQUIRED TO MATCH ADJACENT SURFACES OR TO RECEIVE NEW FINISHES AS SCHEDULED UNLESS OTHERWISE INDICATED ON THE ARCHITECTURAL DRAWING.
- 5. THE HVAC CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, PATCHING, EXCAVATION AND BACKFILLING REQUIRED TO COMPLETE ALL INDICATED WORK. 6. ALL EXISTING PIPING AND EQUIPMENT SHOWN MUST BE VERIFIED IN THE FIELD. ANY HVAC EQUIPMENT NOT SHOWN SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO REMOVAL.
- IN STORAGE.
- 8. HVAC CONTRACTOR MUST COORDINATE ROOF MOUNTED EQUIPMENT REMOVAL WITH ROOFING CONTRACTOR. IF HVAC CONTRACTOR CHOOSES TO REMOVE ROOF MOUNTED EQUIPMENT PRIOR TO ROOFING CONTRACTOR BEING READY TO PATCH ROOF, HVAC CONTRACTOR MUST TEMPORARILY COVER REMAINING ROOF CURB WEATHER TIGHT.

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

- 7. ALL SALVAGED EQUIPMENT MUST BE STORED BY THE CONTRACTOR IN A WEATHER TIGHT AND HEATED ENCLOSURE. CAP ALL FITTINGS AND OR EQUIPMENT OPENINGS TO PREVENT DEBRIS FROM ENTERING THE DEVICE WHILE
- 9. PRIOR TO REMOVAL OF ANY EXISTING HVAC EQUIPMENT THAT CONTAINS REFRIGERANT THE HVAC CONTRACTOR SHALL REMOVE AND RECOVER THE ENTIRE CONTENT OF THE REFRIGERANT AND ALL ASSOCIATED OIL IN THE EXISTING EQUIPMENT. ALL REFRIGERANT/OIL RECOVERY EQUIPMENT IS REQUIRED TO BE CERTIFIED BY AN EPA-APPROVED TESTING ORGANIZATION TO ASSURE THAT THE EQUIPMENT MEETS EPA STANDARDS BASED ON THE TESTING METHOD ESTABLISHED BY AHRI STANDARD 740. REMOVAL OF ALL CFC AND HCFC REFRIGERANTS MUST CONFORM TO THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY. ALL WORK IS TO BE PERFORMED BY AN EPA CERTIFIED TECHNICIAN.
- 10. IN AREAS WHERE THE EXISTING HVAC SYSTEM WILL REMAIN AND THE SPACE IS SCHEDULED TO RECEIVE NEW ACOUSTICAL CEILINGS AS INDICATED ON THE ARCHITECTURAL DRAWINGS, THE HVAC CONTRACTOR WILL BE RESPONSIBLE TO TEMPORARILY REMOVE, THOROUGHLY CLEAN AND STORE ALL EXISTING CEILING MOUNTED GRILLES, REGISTERS AND DIFFUSERS. ONCE THE CEILING REPLACEMENT IS COMPLETE, THE HVAC CONTRACTOR SHALL REINSTALL AND RECONNECT ALL EXISTING TEMPORARILY REMOVED HVAC CEILING MOUNTED GRILLES, REGISTERS AND DIFFUSERS.
- 11. HVAC CONTRACTOR WILL BE RESPONSIBLE TO REMOVE AND REPLACE ALL EXISTING CEILING SYSTEMS THAT ARE NOT NOTED TO BE REMOVED BY THE G.C. ON THE ARCHITECTURAL DRAWINGS, IN ALL AREAS WHERE REQUIRED HVAC WORK IS INDICATED.
- THE DEMOLITION WORK INDICATED IS INTENDED TO ASSIST THE CONTRACTOR AND GIVE GENERAL INFORMATION. THE CONTRACTOR SHALL BE REQUIRED TO VISIT THE PROJECT SITE PRIOR TO BIDDING TO FULLY ACQUAINT HIMSELF WITH THE EXTENT OF ALL DEMOLITION WORK WHICH IS NECESSARY TO COMPLETE THE ALTERATIONS AND NEW CONSTRUCTION AS DESCRIBED IN THE CONTRACT DOCUMENTS. ALL DEMOLITION WORK REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE WHETHER INDICATED ON THE DRAWING OR NOT. THE CONTRACTOR WILL NOT BE ENTITLED TO ANY CLAIMS FOR ADDITIONAL COMPENSATION RELATED TO REQUIRED DEMOLITION.









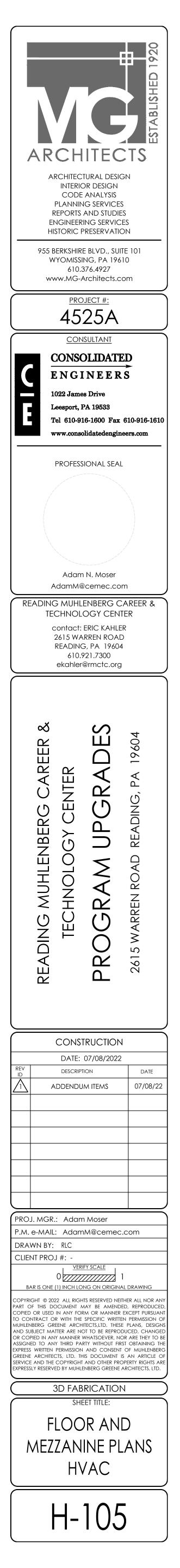
THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ELECTRICAL PANEL LOCATIONS (INSIDE ELECTRICAL AND OUTSIDE ELECTRICAL ROOMS) WITH PIPING AND DUCTWORK LAYOUTS PRIOR TO PIPING AND DUCTWORK INSTALLATION. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL N.E.C. (NATIONAL ELECTRIC CODE) CLEARANCES BEFORE INSTALLING ANY PIPING AND DUCTWORK. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS RESULTING TO REWORKING (REMOVING AND REINSTALLING) PIPING AND DUCTWORK INSTALLED IN CONFLICT WITH ELECTRICAL PANELS/EQUIPMENT CLEARANCES.

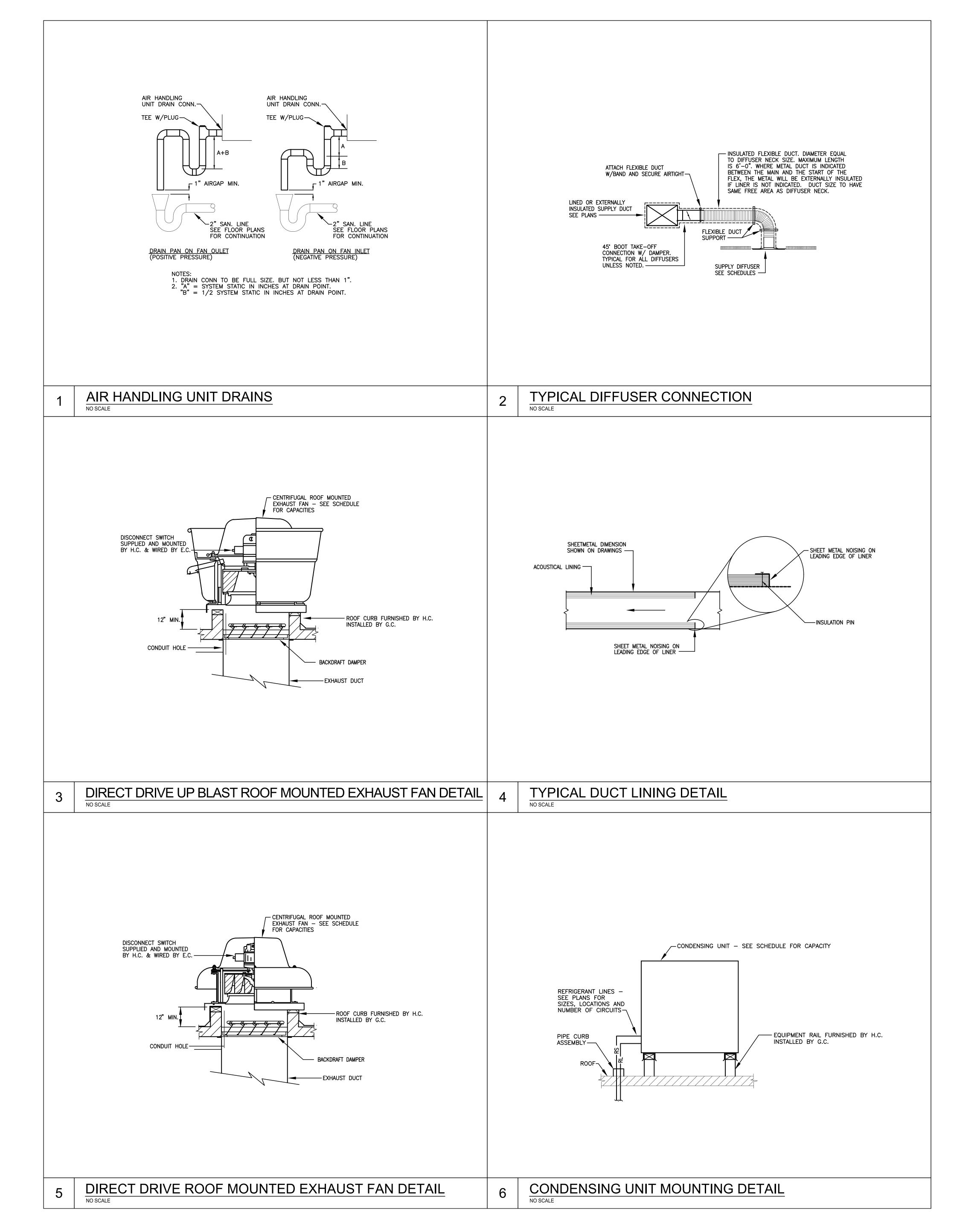
#### **DRAWING NOTES:**

- 1. REFER TO DRAWING H-501 FOR HVAC GENERAL PROJECT NOTES.
- 2. PROVIDE REQUIRED SERVICE CLEARANCE FOR ALL HVAC UNITS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
- 3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF HVAC CEILING OUTLETS AND OTHER CEILING MOUNTED DEVICES. ANY CEILING REMOVAL REQUIRED FOR WORK TO BE COMPLETED UNDER THIS CONTRACT, THAT IS NOT INDICATED ON THE ARCHITECTURAL PLANS, SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. CEILINGS REMOVED BY THIS CONTRACTOR SHALL BE REPLACE AND/OR REPAIRED BY HIM, AS PER SPECIFICATIONS.

## **KEYED DRAWING NOTES:**

- REINSTALL SALVAGED THERMOSTAT AND EXTEND EXISTING CONTROL WIRING AS REQUIRED
- REINSTALL SALVAGED DUST COLLECTOR (AIR FLOW SYSTEMS F120), THOROUGHLY CLEAN INTERIOR OF ALL REUSED SALVAGED GALVANIZED STEEL DUCTWORK AND ASSOCIATED SYSTEM COMPONENTS FROM THE PREVIOUS INSTALLATION. PROVIDE NEW GALVANIZED STEEL DUCTWORK AS REQUIRED TO ACCOMMODATE NEW SYSTEM LAYOUT. REINSTALL ALL SALVAGED BLAST GATES, FITTINGS TRANSITIONS AND FLEXIBLE HOSES AS REQUIRED TO RECONNECT ALL BUFFERS/GRINDERS AND SURFACE GRINDERS. PROVIDE (1) NEW ADDITIONAL 4"X4"X4" YEE FITTING AND THE REQUIRED TRANSITIONS AND FLEXIBLE HOSES NEEDED TO CONNECT THE ADDED SANDER. FURNISH A NEW ALUMINUM MESH PRE-FILTER AND A NEW 95% MAIN FILTER AND INSTALL THEM INTO THE EXISTING UNIT, (FIELD VERIFY UNIT'S FILTER SIZE AND TYPE PRIOR TO ORDERING REPLACEMENTS). 3 REMOVE EXISTING AMBIENT AIR CLEANER (AIR FLOW SYSTEMS F-70R), ROTATE UNIT 180° (TO PROVIDE A CIRCULAR AIR PATTERN BETWEEN BOTH ROOMS) AND REINSTALL UNIT IN SAME LOCATION AND AT SAME HEIGHT. FURNISH NEW UNIT FILTERS, STAGE 1 - 2"X10 SQ. FT. POLY PAD PRE-FILTER AND A STAGE 2 - 98% MULTI POCKET BAG FILTER WITH 66 SQ. FT. OF MEDIA AND INSTALL THEM INTO THE EXISTING UNIT, (FIELD VERIFY UNIT'S FILTER SIZES AND TYPES PRIOR TO ORDERING REPLACEMENTS).  $\langle 4 \rangle$  existing ambient air cleaner (air king model m-25 wa) shall remain. Furnish NEW FILTERS FOR EACH UNIT, STAGE 1 - 2" X 10 SQ. FT. POLY PAD PRE-FILTER AND A STAGE 2 – 98% MULTI POCKET BAG FILTER WITH 110 SQ. FT. OF MEDIA AND INSTALL THEM INTO EACH EXISTING UNIT, (FIELD VERIFY UNIT'S FILTER SIZES AND TYPES PRIOR TO ORDERING REPLACEMENTS).





# **GENERAL PROJECT NOTES:**

- 1. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING SECTIONS. USE INFORMATION RELATING TO CEILING HEIGHTS, FLOOR TO FLOOR ELEVATIONS, ETC. TO DETERMINE PIPE AND DUCT RISER QUANTITIES AND TO VERIFY ROUTING OF SAME.
- 2. REFRIGERANT PIPING RUNS BETWEEN DX EVAPORATOR COILS AND THEIR ASSOCIATED AIR-COOLED CONDENSING UNITS SHALL BE SIZED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. RUN LENGTHS SHALL BE CALCULATED FROM PLANS, BUILDING SECTIONS AND FIELD CONDITIONS. ALL REFRIGERANT PIPING SHALL BE CONCEALED. PROVIDE ALL REQUIRED TRAPS IN VERTICAL REFRIGERANT RISERS AND ALL MISCELLANEOUS REFRIGERANT COMPONENTS THAT ARE INDICATED IN THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 3. HVAC CONTRACTOR IS REQUIRED TO COORDINATE ALL HVAC WORK WITH THE WORK OF ALL OTHER TRADES TO ENSURE CORRECT AND QUALITY INSTALLATIONS.
- 4. DUCT FITTINGS THAT ARE BETWEEN STRAIGHT SECTIONS OF DUCT THAT IS SHOWN LINED SHALL ALSO BE LINED.
- 5. DUCT DIMENSIONS GIVEN ARE METAL (OUTSIDE) DIMENSIONS UNLESS OTHERWISE NOTED.
- THE HVAC CONTRACTOR SHALL COORDINATE ALL WORK ABOVE THE CEILING WITH THE ELECTRICAL, PLUMBING, FIRE PROTECTION AND GENERAL CONTRACTORS TO INSURE THE SCHEDULED CEILING HEIGHTS CAN BE MAINTAINED.
- 7. ALL LOW VOLTAGE WIRING (UNDER 120V) REQUIRED FOR HVAC EQUIPMENT SHALL BE PROVIDED BY THE HVAC CONTRACTOR PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS UNLESS OTHERWISE NOTED.
- 8. IN AREAS WHERE THE EXISTING HVAC SYSTEM WILL REMAIN AND THE SPACE IS SCHEDULED TO RECEIVE NEW ACOUSTICAL CEILINGS AS INDICATED ON THE ARCHITECTURAL DRAWINGS, THE HVAC CONTRACTOR WILL BE RESPONSIBLE TO TEMPORARILY REMOVE, THOROUGHLY CLEAN AND STORE ALL EXISTING CEILING MOUNTED GRILLES, REGISTERS AND DIFFUSERS. ONCE THE CEILING REPLACEMENT IS COMPLETE, THE HVAC CONTRACTOR SHALL REINSTALL AND RECONNECT ALL EXISTING TEMPORARILY REMOVED HVAC CEILING MOUNTED GRILLES, REGISTERS.
- 9. HVAC CONTRACTOR WILL BE RESPONSIBLE TO REMOVE AND REPLACE ALL EXISTING CEILING SYSTEMS THAT ARE NOT NOTED TO BE REMOVED BY THE G.C. ON THE ARCHITECTURAL DRAWINGS, IN ALL AREAS WHERE REQUIRED HVAC WORK IS INDICATED.
- 10. GENERAL CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE ALL REQUIRED WALL LINTELS.

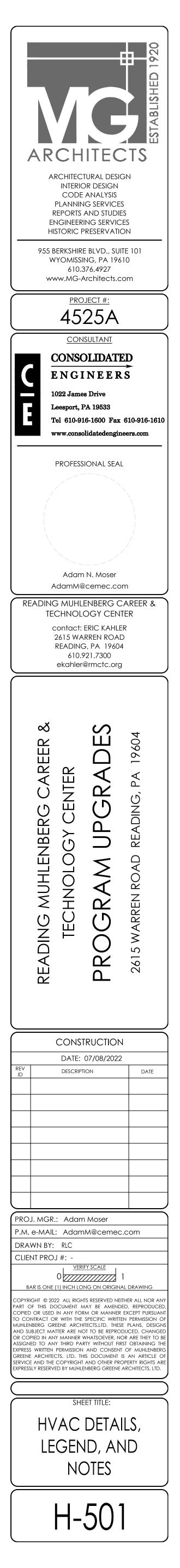
# HVAC LEGEND

(ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT)

	(ALE STMBOLS MAT NOT ALL ET		
	2-WAY CONTROL VALVE	—— HWS ——	HEATING WATER SUPPLY
	3-WAY CONTROL VALVE	HWR	HEATING WATER RETURN
	BACKFLOW PREVENTER	DTS	DUAL TEMPERATURE WATER SUPPLY
$\mathbf{k}$	SAFETY RELIEF VALVE	DTR	DUAL TEMPERATURE WATER RETURN
-&- +	WATER PRESSURE REDUCING VALVE	CWS	CHILLED WATER SUPPLY
	BALL OR BUTTERFLY VALVE	CWR	CHILLED WATER RETURN
	CALIBRATED BALANCING VALVE	— cs —	CONDENSER WATER SUPPLY
⊣∕₽	CHECK VALVE	CR	CONDENSER WATER RETURN
+	STRAINER	HPWS	HEAT PUMP WATER SUPPLY
	TRIPLE DUTY VALVE	HPWR	HEAT PUMP WATER RETURN
Ц Ц	HIGH CAPACITY AUTOMATIC AIR VENT	PWS	POOL WATER SUPPLY
· 个	MANUAL AIR VENT	PWR	POOL WATER RETURN
	UNION OR FLANGED CONNECTION	RL	REFRIGERANT LIQUID
— <del>M</del> —	FLEXIBLE PIPE CONNECTION	RS	REFRIGERANT SUCTION
$\Box$	FLOW METER	FOS	FUEL OIL SUPPLY
	ELECTROMAGNETIC FLOW METER	FOR	FUEL OIL RETURN
	SOLENOID VALVE	FOG	FUEL OIL GAGE
T	TEMPERATURE SENSOR	FOV	FUEL OIL VENT
(H)	HUMIDITY SENSOR	CD	CONDENSATE DRAIN
$\odot$	CO2 SENSOR		VERTICAL FIRE DAMPER – 1 1/2 HR
S	SENSOR	<b>—</b>	HORIZONTAL FIRE DAMPER – 1 1/2 HR
$\bigcirc$	TEMPERATURE/HUMIDITY SENSOR	3	VERTICAL FIRE DAMPER – 3 HR
$\Box$	ACCESS DOOR	Ŭ <b>♦</b> <sub>3</sub>	HORIZONTAL FIRE DAMPER – 3 HR
$\heartsuit$	PRESSURE GAUGE	$\sum_{s}$	VERTICAL SMOKE DAMPER
Ū _	THERMOMETER	Č,	HORIZONTAL SMOKE DAMPER
·	P/T PLUG	S/F	VERTICAL COMBINATION SMOKE / FIRE DAMPER
E	ELECTRIC OPERATOR	S, I S/F	HORIZONTAL COMBINATION SMOKE / FIRE DAMPER
Р	PNEUMATIC OPERATOR	(#)	KEYED DRAWING NOTE
-(A)-	AQUASTAT	<b>#</b>	KEYED DEMOLITION DRAWING NOTE
S	SMOKE DETECTOR FURNISHED BY OTHERS INSTALLED BY HC		CONNECT TO EXISTING
$\downarrow$	NEEDLE VALVE	$\overline{\mathbf{\Theta}}$	EXTENT OF DEMOLITION
M <del>-////</del>	MOTOR OPERATED DAMPER	<b>⊨</b> ==	INDICATES LINED DUCTWORK
В	BOILER EMERGENCY SHUT-DOWN SWITCH		(SEE SPECS FOR MATERIAL)
	EXISTING CONDITIONS	j− <b>†</b> −j	INDICATES MANUAL
	NEW OR DEMOLITION WORK AS INDICATED	Ì <u>⊢</u> L_Ì	BALANCING DAMPER
	DEMOLITION		

## ABBREVIATIONS

ABOVE
ACOUSTICALLY LINED
ALUMINUM
BACKDRAFT DAMPER
BELOW
CEILING
DOWN
ELECTRICAL CONTRACTOR
EACH
EXISTING
EXHAUST
EXISTING
FLOOR
GENERAL CONTRACTOR
GENERAL TRADES CONTRACTOR
HVAC CONTRACTOR
MOTOR OPERATED DAMPER
OUTSIDE AIR
PLUMBING CONTRACTOR
PACKAGED TERMINAL AIR CONDITIONER
RETURN AIR
ROOFING CONTRACTOR
REQUIRED
SUPPLY AIR
TYPICAL
UNIT VENTILATOR
VOLUME DAMPER - MANUAL
WITH



DIF	USER	SCHE	EDULE					
SYMBOL	NECK SIZE	FACE SIZE	BORDER TYPE	BLOW	MODEL	N. C.	MANUFACTURER	REMARKS
D1	6 <b>"</b> ø	9x9	SURFACE	2 WAY	TDC	< 20	TITUS	
D2	6 <b>"</b> ø	18x18	LAYIN	2 WAY	TDC	< 20	TITUS	PROVIDE W/ 24"x24" PANEL
D3	8"ø	18x18	LAYIN	2 WAY	TDC	< 20	TITUS	PROVIDE W/ 24"x24" PANEL
D4	8"ø	18x18	LAYIN	4 WAY	TDC	< 20	TITUS	PROVIDE W/ 24"x24" PANEL
D5	10 <b>"</b> ø	18x18	LAYIN	2 WAY	TDC	< 20	TITUS	PROVIDE W/ 24"x24" PANEL
D6	12 <b>"</b> ø	18x18	LAYIN	4 WAY	TDC	< 20	TITUS	PROVIDE W/ 24"x24" PANEL

	GRILLE	e and	REGIST	ER SC	CHEDULE	
SYMBOL	SIZE	MODEL	N.C.	BORDER TYPE	MANUFACTURER	REMARKS
G1	6x6	350FL	<20	SURFACE	TITUS	
G2	8x8	350FL	<20	SURFACE	TITUS	
G3	10x10	350FL	<20	SURFACE	TITUS	
G4	12x12	350FL	<20	SURFACE	TITUS	
G5	18x18	350FL	<20	LAYIN	TITUS	PROVIDE W/ 24"x24" PANEL
G6	24x24	50F	<20	SURFACE	TITUS	
G7	44x18	350FL	<20	SURFACE	TITUS	
G8	12x8	350FL	<20	SURFACE	TITUS	
R1	16x6	272FL	<20	SURFACE	TITUS	
R2	40x36	112RL	<20	SURFACE	TITUS	

																<u>BASIS OF DESIG</u> AAON										
	CI	FAN DATA		TA		UN	DATA	COOLING					HOT GAS REHEAT				GAS HEATING			MAXIMUM	NOMINAL					
YMBOL	TOTAL	DESIGN OA	E.S.P.	H.P.	RPM	MODEL	ELEC.	M.C.A.	MAX. FUSE OR CIRCUIT BKR.	EADB	EAWB	LADB		TOTAL M.B.H.	SENSIBLE M.B.H.	CAPACITY MBH	RH	LADB	LAWB E.A.T	NO. OF STAGES	INPUT M.B.H.	OUTPUT M.B.H.	OPERATING WEIGHT	DIMENSIONS L x W x H	REMARKS	
Ü—1	2000	770	1.25"	2	1697	RN-008-3-0-EA09	460-3-60	23	35	81.3 <b>°</b> F	66.8 <b>°</b> F	52.6 <b>°</b> F	51.8 <b>°</b> F	89.7	60.6	42.0	48.0	72.0	59.5 46.2°	- 8:1	150.0	120.0	1450 LBS.	100" x 79" x 44"		
U–2	4500	1425	1.12"	5	1608	RN-009-3-0-0000	460-3-60	10	15	-	-	-	-	-	-	-	-	-	- 50.8*	- 10:1	292.5	234.0	1400 LBS.	111" x 60" x 51"		

FINAL UNIT SELECTION BY THE MANUFACTURER. 2. REFER TO PLANS FOR UNIT CONFIGURATIONS. UNITS WITH THE SAME SYMBOL NUMBER MAY HAVE LEFT OR RIGHT HAND CONNECTIONS AND/OR REQUIRE DIFFERENT CONFIGURATIONS.

> EXHAUST FAN SCHEDULE FAN DATA DRIVE CFM SYMBOL SP INTE H.P. RPM ELECTRICAL 170 1/3 | 1140 | 120V-1ø DIRECT EF-1 0.25" EF-2 170 1/3 0.25" 1140 120V-1ø DIRECT 1/3 EF-3 170 0.25" 1140 DIRECT 120V-1ø 770 0.62" 1/2 1072 DIRECT EF-4 120V-1ø DIRECT 1345 120V-1ø EF-5 350 0.38" 1/8 EF-6 1350 0.75" 3/4 1099 | 120V-1ø DIRECT EF-7 250 0.44" 83 WATTS 1149 120V-1ø DIRECT 0.69" 1/2 1140 120V-1ø DIRECT EF-8 930

NOTES: 1. MODEL NUMBERS ARE INDICATED FOR REFERENCE ONLY. THE DUTIES AND CAPACITIES ARE TO BE USED FOR FINAL UNIT SELECTION BY THE MANUFACTURER.

E	ELECTRIC CABINET HEATER SCHEDULE											
SYMBOL	FAN DATA		FAN DATA		WATTS	MOUNTING		WALL OPENING	RECESS	CABINET	MODEL	REMARKS
	CFM ELECTRICAL AMPS	AMPS			DEPTH	DEPTH FINISH						
ECH-1	65	120-1-60	4.7	500		10-3/4" x 12-1/2"	9-3/4" x 11"	3.75 <b>"</b>	STANDARD COLOR	QCH1101	PROVIDE WITH INTEGRAL DISCONNECT SWITCH, T-BAR FRAME KIT AND WALL MOUNTED THERMOSTAT	
ECH-2	65	120-1-60	4.7			10-3/4" x 12-1/2"		3.75"	STANDARD COLOR	QCH1101	PROVIDE WITH INTEGRAL DISCONNECT SWITCH AND SURFACE MOUNTED FRAME AND WALL MOUNTED THERMOSTAT	
ECH-3	65	120-1-60	6.3			10-3/4" x 12-1/2"		3.75"	STANDARD COLOR	CWH1151DSAG	PROVIDE WITH INTEGRAL DISCONNECT SWITCH, INTEGRAL THERMOSTAT AND SURFACE MOUNTING FRAME	
ECH-4	65	277-1-60	7.3	2000	SURFACE MOUNTED WALL	10-1/2" x 12-1/2"	9-1/2" x 11-1/4"	3.75 <b>"</b>	STANDARD COLOR	CWH1207DSAG	PROVIDE WITH INTEGRAL DISCONNECT SWITCH, INTEGRAL THERMOSTAT AND SURFACE MOUNTING FRAME	
ECH-5	250	460-3-60	6.0	4000	FULLY RECESSED CEILING	35" x 26-3/8"	35" x 26-3/8"	9.75 <b>"</b>	STANDARD COLOR	CU935	PROVIDE WITH INTEGRAL DISCONNECT SWITCH, WALL MOUNTED THERMOSTAT FRONT ARCHITECTURAL EXTRUDED ALUM. INLET AND OUTLET GRILLES AND RECESSED TRIM KIT	

NOTES: 1. MODEL NUMBERS ARE INDICATED FOR REFERENCE ONLY. THE DUTIES AND CAPACITIES ARE TO BE USED FOR FINAL UNIT SELECTION BY THE MANUFACTURER. 2. DIMENSIONS ARE FOR REFERENCE ONLY. REFER TO VENDOR'S SHOP DRAWINGS FOR ACTUAL CONSTRUCTION DIMENSIONS.

AIR												
SYMBOL	MBH	SUCTION TEMP.	AMBIENT TEMP.	COMPRESSER STAGES	UNIT WIRI Elec	NG MCA	MOP	WEIGHT	MODEL	MANUFACTURER	OPTIONS	REMARKS
CU-1	18.0	45 <b>°</b> F	95 <b>°</b> F	VARIABLE	208V- 1ø	11	15	120 lbs.	PUY-A18NKA7	MITSUBISHI	PROVIDE W/ WIND BAFFLES FOR COOLING OPERATION DOWN TO -40° F	SPLIT SYSTEM W/ DAC-1

NOTES: 1. MODEL NUMBERS ARE INDICATED FOR REFERENCE ONLY. THE DUTIES AND CAPACITIES ARE TO BE USED FOR FINAL UNIT SELECTION BY THE MANUFACTURER.

		FAN DATA		ELECTRICAL			INPUT	OUTPUT	CFH NAT.				
SYMBOL	CFM	RPM	H.P.	VOLTAGE	FLA	MOP	(MBH)	(MBH)	GAS	MOUNTING	MODEL	REMARKS	
GUH-1	629	1550	.06	115V-1ø	3.4	15	45	37.4	45	HORIZONTAL	UDAS-45		

BASIS	OF	DESIGN:	

CONNECTION WITH AN 120 VOLT CONVENIENCE OUTLET, STEP DOWN TRANSFORMER AND FACTORY PRE-WIRED NON-FUSED DISCONNECT SWITCH.

4. FURNISH EACH UNIT WITH A FULLY INSULATED, 20" HIGH ROOF CURB.

6. FURNISH RTU-1 WITH SPRING ISOLATION RAILS WITH 2" STATIC DEFLECTION.

7. PROVIDE EACH UNIT WITH AN AIR PURIFICATION SYSTEM, PLASMA AIR 660 SERIES.

						BASIS OF DESIGN: LOREN COOK
BMS TERLOCK	DAMPER	SONES	CONTROL	MOUNTING	MODEL	REMARKS
NO	BDD	6.4	CONTINUOUS	ROOF	ACRU-D	PROVIDE W/ AMCA A SPARK RESISTANT AND EXPLOSION PROOF CONSTRUCTION, 18" HIGH ROOF CURB, BACKDRAFT DAMPER AND EXPLOSION PROOF NON-FUSED DISCONNECT SWITCH
NO	BDD	6.4	CONTINUOUS	ROOF	ACRU-D	PROVIDE W/ AMCA A SPARK RESISTANT AND EXPLOSION PROOF CONSTRUCTION, 18" HIGH ROOF CURB, BACKDRAFT DAMPER AND EXPLOSION PROOF NON-FUSED DISCONNECT SWITCH
NO	BDD	6.4	CONTINUOUS	ROOF	ACRU-D	PROVIDE W/ AMCA A SPARK RESISTANT AND EXPLOSION PROOF CONSTRUCTION, 18" HIGH ROOF CURB, BACKDRAFT DAMPER AND EXPLOSION PROOF NON-FUSED DISCONNECT SWITCH
YES	BDD	7.3	TIME OF DAY SCHEDULE	ROOF	ACE-D	PROVIDE WITH 18" HIGH ROOF CURB, BACKDRAFT DAMPER, NON-FUSED DISCONNECT SWITCH AND SPEED CONTROLLER
YES	BDD	6.8	REVERSE ACTING T-STAT	ROOF	ACE-D	PROVIDE WITH 18" HIGH ROOF CURB, BACKDRAFT DAMPER, NON-FUSED DISCONNECT SWITCH AND SPEED CONTROLLER
YES	BDD	9.6	INTERLOCK W/ TRACK CUTTER	ROOF	ACE-D	PROVIDE WITH 18" HIGH ROOF CURB, BACKDRAFT DAMPER, NON-FUSED DISCONNECT SWITCH AND SPEED CONTROLLER
NO	BDD	2.0	REVERSE ACTING T-STAT	INLINE	GN	PROVIDE WITH BACKDRAFT DAMPER, NON-FUSED DISCONNECT SWITCH AND SPEED CONTROLLER
YES	BDD	8.3	TIME OF DAY SCHEDULE	ROOF	ACE-D	PROVIDE WITH ROOF CURB ADAPTER, BACKDRAFT DAMPER, NON-FUSED DISCONNECT SWITCH AND SPEED CONTROLLER

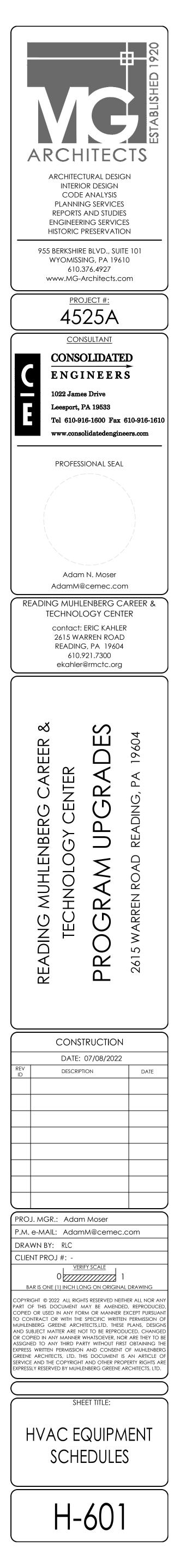
2. PROVIDE EACH UNIT WITH A CEILING SUSPENSION KIT AND A VERTICAL COMBUSTION AIR/VENT KIT WITH CONCENTRIC ADAPTER.

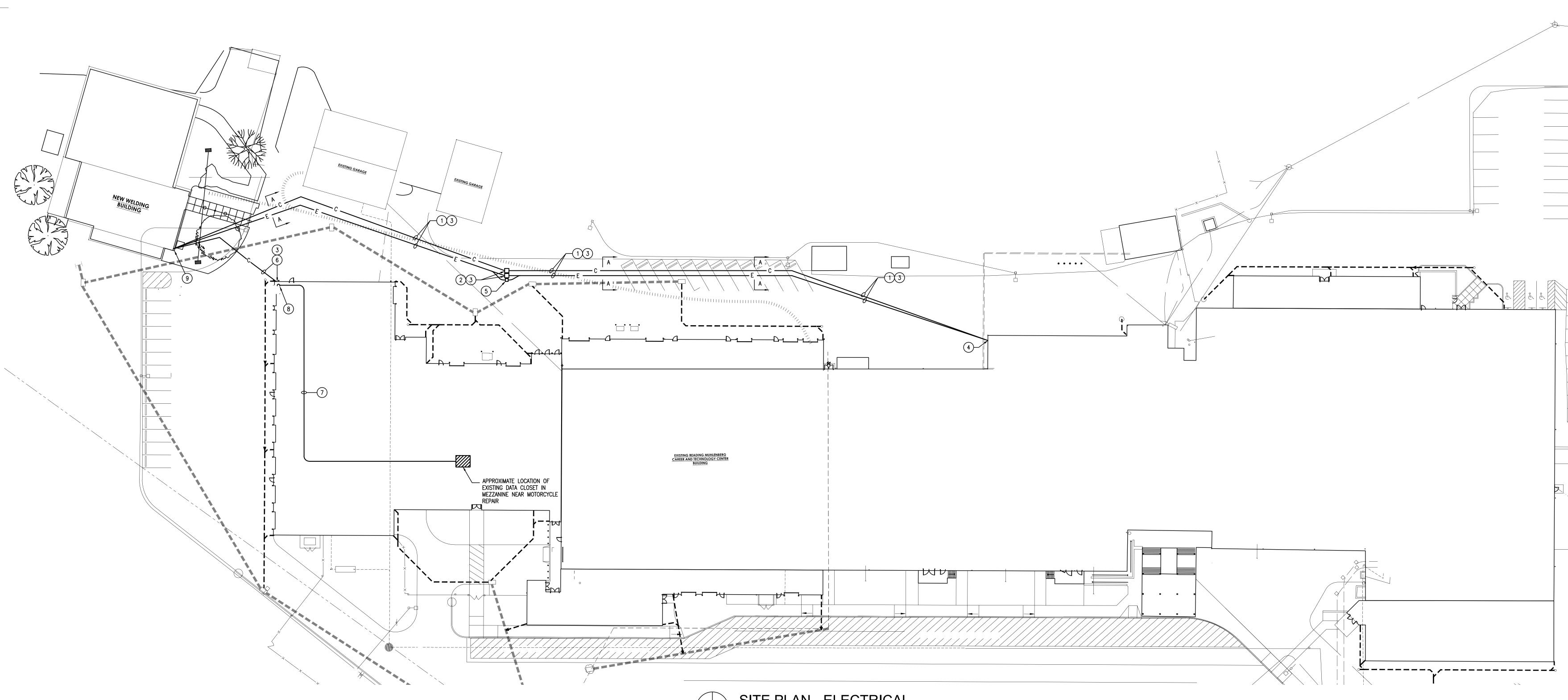
DU	CTLESS	AIR	CONDITIC	NER SO	CHEDUL	E		<u>BASIS OF DESIGN:</u> MITSUBISHI
SYMBOL	DESCRIPTION	CFM	NOM. COOLING	TOT. AMPS	MAX. FUSE	ELEC	MODEL	OPTIONS
DAC-1	WALL EVAP.	375	18.0	1.0	N/A	208-1-60	PKA-A18LA	PROVIDE W/ INTEGRAL CONDENSATE PUMP AND WALL MOUNTED THERMOSTAT

NOTES: 1. MODEL NUMBERS ARE INDICATED FOR REFERENCE ONLY. THE DUTIES AND CAPACITIES ARE TO BE USED FOR FINAL UNIT SELECTION BY THE MANUFACTURER.

	LOUVER SCHEDULE								
SYMBOL	FUNCTION	CFM	WIDTH x HEIGHT	MIN. FREE AREA (SQ. FT.)	STATIC PRESSURE	MODEL	REMARKS		
L-1	EXHAUST	240	18" x 12"	0.50	.04"	ECD-635			
L-2	INTAKE	240	18" x 12"	0.50	.05"	ECD-635			
L-3	INTAKE	350	36" x 12"	0.90	.04"	ECD-635			

NOTE: PROVIDE EACH LOUVER IN A CUSTOM POWDER COATED FINISH, ARCHITECT TO SELECT COLOR.





# SITE PLAN - ELECTRICAL

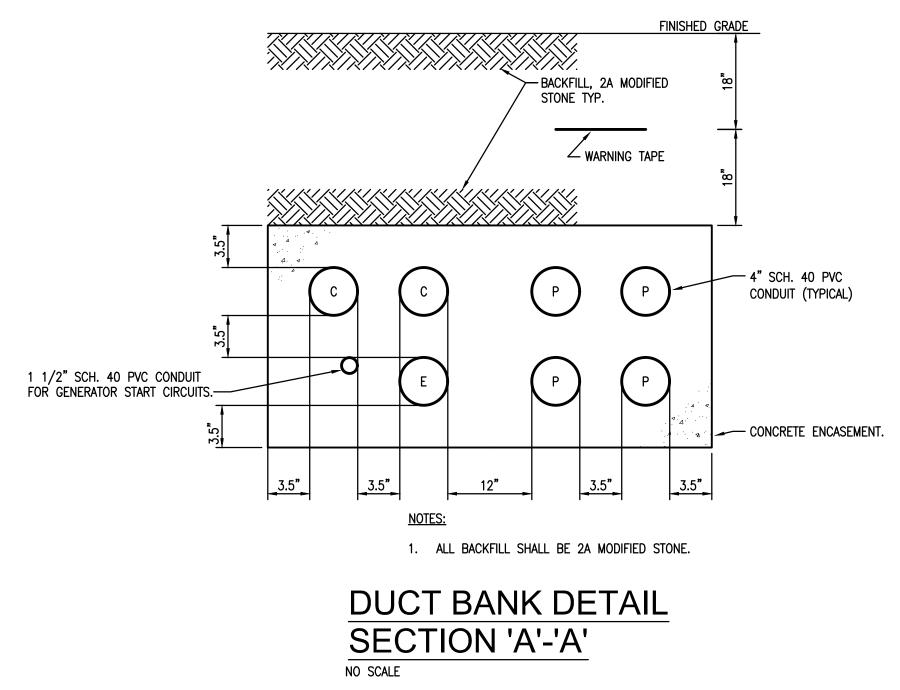
#### DRAWING NOTES:

- 1. COMMUNICATIONS/POWER UNDERGROUND DUCTBANK. PROVIDE (2) 4" COMMUNICATIONS (1) 4" NORMAL/EMERGENCY POWER AND (4) 4" POWER SCHEDULE 40PVC CONDUITS.
- 2. PROVIDE 36"x36"X36" FLUSH IN GROUND TIER 22 BOX. QUAZITE CAT NO. PG3636BG36 GASKETED, OPEN BOTTOM BOX. PROVIDE GASKETED TIER 22 COVER.
- PROVIDE "COMMUNICATIONS" OR "ELECTRIC" LOGO ON BOX COVER.
  3. CUTTING, PATCHING AND EXCAVATION OF ASPHALT AREA(S) BY E.C. E.C. SHALL INSTALL CONDUIT, CONCRETE ENCASEMENT AND STONE BACKFILL. ASPHALT BASE AND FINAL COAT BY G.C.
- 4. REFER TO DWG. E-002 FOR CONTINUATION.
- 5. PROVIDE 24"x24"X24" FLUSH IN GROUND TIER 22 BOX. QUAZITE CAT NO. PG2424BG24 GASKETED. OPEN BOTTOM BOX. PROVIDE GASKETED TIER 22 COVER PROVIDE "ELECTRIC" LOGO ON BOX COVER. PATCH WALL AT CONDUIT PENETRATION.
- 6. (1) 4" SCHEDULE 40 PVC CONDUIT FOR COMUNICATIONS. STUB UP OUTSIDE BUILDING LOW ON WALL, EXTEND CONDUIT INSIDE LOW ON WALL. PROVIDE CONCRETE ENCASEMENT. PROVIDE (1) 6-STRAND SINGLEMODE AND (1) 6-STRAND MULTIMODE F.O. CABLE PER SPEC IN 4" CONDUIT FROM DATA CLOSET IN MEZZ. TO NEW WELDING BUILDING DATA CLOSET.
- (1) 4" CONDUIT RUN AS HIGH AS POSSIBLE ABOVE GARAGE AREA AND ACROSS MEZZ. TO EXISTING DATA CLOSET. PROVIDE (1) 6-STRAND SINGLEMODE AND (1) 6-STRAND MULTIMODE F.O. CABLE PER SPEC. FROM EXISTING DATA CLOSET TO NEW WELDING BUILDING DATA CLOSET.
- BROP CONDUIT DOWN INSIDE WALL AS LOW AS POSSIBLE BEFORE EXITING BUILDING.
   REFER TO DWG. E-102 FOR CONTINUATION.

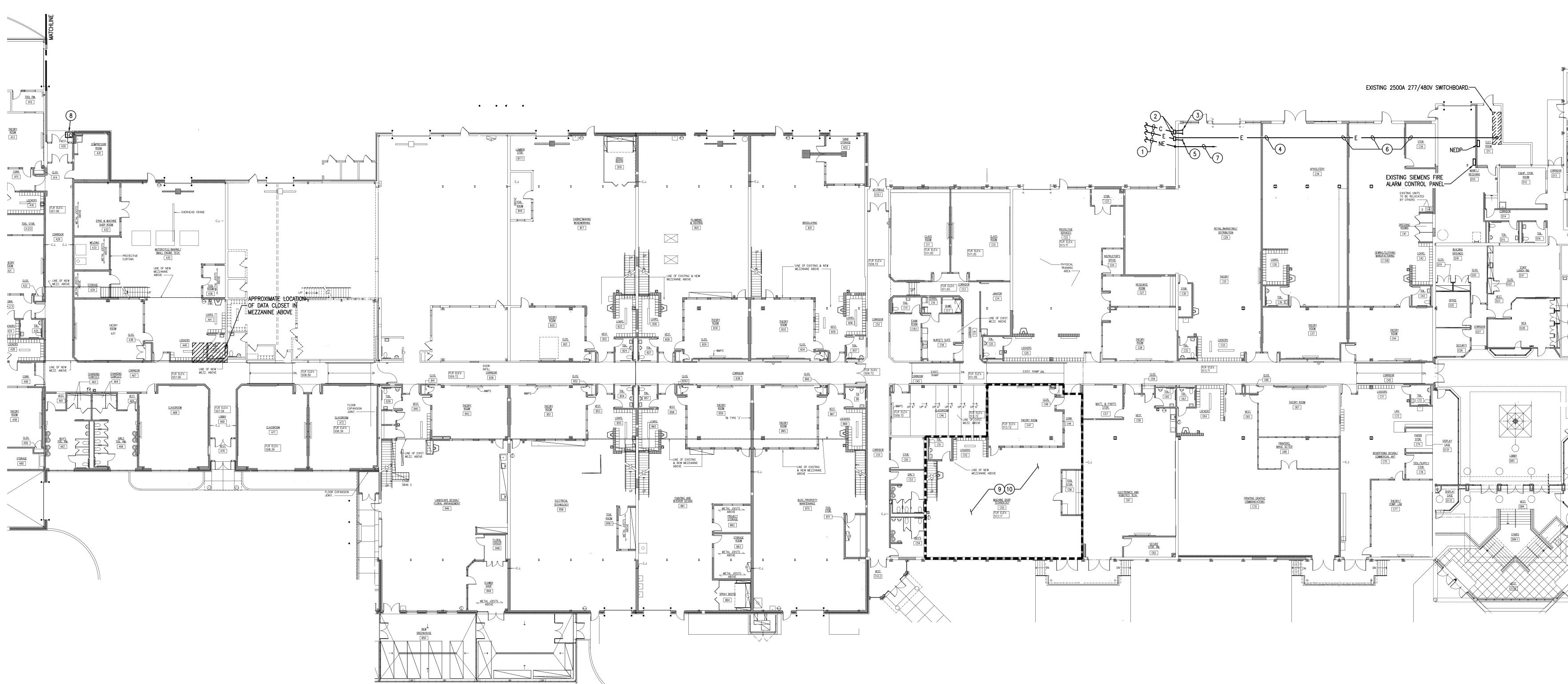
## GENERAL SITE NOTES:

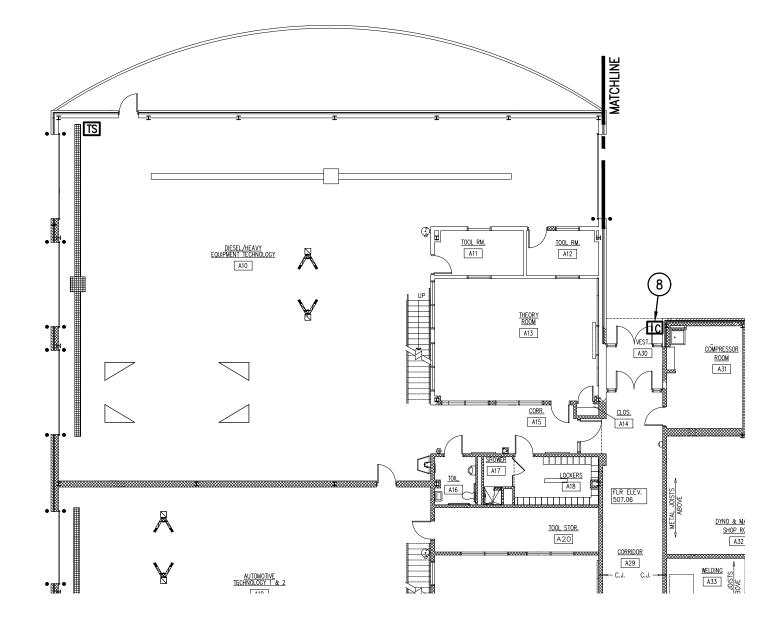
- 1. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, ALL EXPOSED EXTERIOR CONDUIT SHALL BE RIGID GALVANIZED STEEL, ALL INTERIOR CONDUIT SHALL BE EMT. ALL UNDERGROUND ELBOWS SHALL BE LARGE SWEEP R.G.S. PVC ELBOWS ARE NOT PERMITTED.
- 2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES USING PA-ONE CALL, REVIEWING THE SITE SURVEY DRAWINGS AND REQUESTING ANY INFORMATION THE OWNER MAY BE ABLE TO PROVIDE ABOUT THE LOCATION OF TRENCHING AND EXCAVATING FOR ALL EXTERIOR CONDUITS, UNDERGROUND PULL BOXES, TRANSFORMER VAULTS, EQUIPMENT PADS, ETC.
- 3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL KNOWN AND UNKNOWN UNDERGROUND UTILITIES AND EQUIPMENT FOR BOTH EXTERIOR AND INTERIOR
- APPLICATIONS WITH THE USE OF GROUND PENETRATING RADAR (GPR) BEFORE TRENCHING, SAW CUTTING, AND EXCAVATING. THE CONTRACTOR WILL BE
- RESPONSIBLE FOR REPAIRING ANY BELOW GRADE UTILITIES THAT ARE DAMAGED DUE TO FAILURE TO VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES. SIGNED AND DATED DOCUMENTATION OF GPR SHALL BE AVAILABLE UPON REQUEST











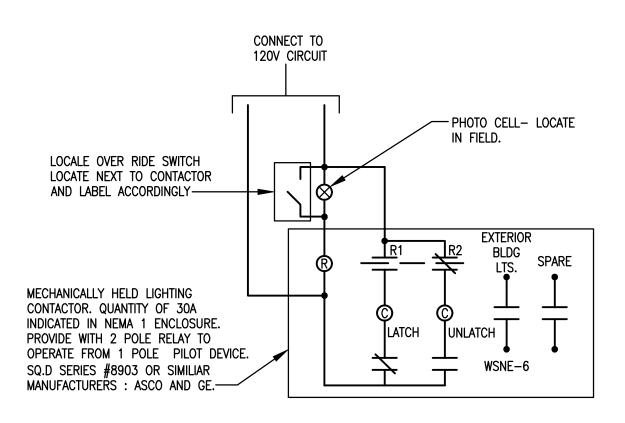


#### PARTIAL OVERALL FLOOR PLAN SCALE: 1/16" = 1'-0"

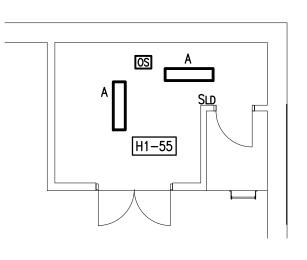
# ⑦ DRAWING NOTES:

- 1. UNDERGROUND COMMUNICATIONS/POWER DUCTBANK. SEE DWG. E-001 FOR REQUIREMENTS.
- 2. PROVIDE NEMA 3R PULL BOX ON WALL (AS HIGH AS POSSIBLE) (1) COMMUNICATIONS, (1) POWER.
- 3. STUB (2) 4" COMMUNICATIONS CONDUITS FROM JUNCTION BOX INTO ROOM C29 AS HIGH AS POSSIBLE. CONDUITS FOR INTERCOM & FIRE ALARM CABLES.
- 4. RUN (3) 4" CONDUITS (AS HIGH AS POSSIBLE) THRU ROOMS TO MAIN 277/480V SWITCHBOARD. REFER TÒ POWER RISER DIAGRÁM FOR FEEDER SIZE.
- 5. STUB (1) 4" SPARE POWER CONDUIT FROM JUNCTION BOX INTO ROOM C29 PROVIDE PULL STRING.
- 6. G.C. SHALL REMOVE, ADD REPLACE CEILING GRID AND TILE AS REQUIRED TO INSTALL POWER CONDUITS, INTERCOM FIBER (SEE SPEC'S) AND FIRE ALARM CABLE. INTERCOM & FIRE ALARM CABLES SHALL BE IN CONDUIT IN EXPOSED AREAS. 7. (1) 4" CONDUIT RUN ABOVE ACCESSIBLE CEILINGS & EXPOSED AREAS TO 'NEDP'.
- 8. E.C. TO INSTALL SURFACE A-PHONE INTERCOM BOX (SUPPLIED BY OWNER) E.C. TO PROVIDE CAT 6 CABLE FROM INTERCOM STATION TO EXISTING MEZZANIŃE DATA CLOSET. PROVIDE TERMINATIONS. CABLE RUN THROUGH EXPOSED AREAS SHALL BE RUN IN CONDUIT.
- BE RUN IN CONDUIT. E.C. SHALL BE RESPONSIBLE TO DISCONNECT ALL EXISTING 3D MANUFACTURING EQUIPMENT FOR REMOVAL. E.C. SHALL DISCONNECT AND REMOVE ALL ASSOCIATED EQUIPMENT CONDUIT AND WIRING BACK TO SOURCE (EXISTING BUS DUCT OR PANELBOARD). BUS DUCT DISCONNECT OPENING SHALL BE PLUGGED SO CONDUIT/ SJO CORD OPENING IS CLOSED. ALL EXISTING 3D MANUFACTURING EQUIPMENT SHALL BE RELOCATED TO NEW SPACE BY G.C. E.C. SHALL BE RESPONSIBLE TO RECONNECT ALL EXISTING 3D MANUFACTURING EQUIPMENT ONCE RELOCATED TO NEW SPACE. E.C. SHALL BE RESPONSIBLE TO DOCUMENT ALL EXISTING EQUIPMENT CIRCUITRY (VOLTAGE, PHASE, AMPS) PRIOR TO DISCONNECTING THE EXISTING EQUIPMENT. REFER TO ALL PROJECT GENERAL ELECTRICAL AND DEMOLITION NOTES
- ON DRAWING E-201. 10. E.C. SHALL DISCONNECT AND RELOCATE EXISTING STARTER AND REMOTE START/STOP PUSHBUTTON CONTROLS ASSOCIATED WITH CEILING HUNG DUST COLLECTOR LOCATED IN ROOM. SEE DRAWING E-106 FOR RELOCATED EQUIPMENT LOCATIONS.





NO SCALE

























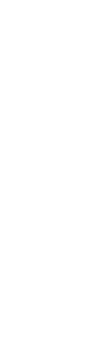








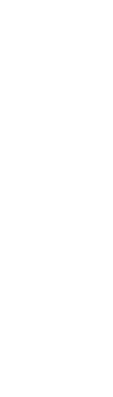






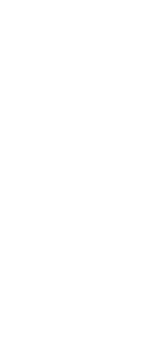








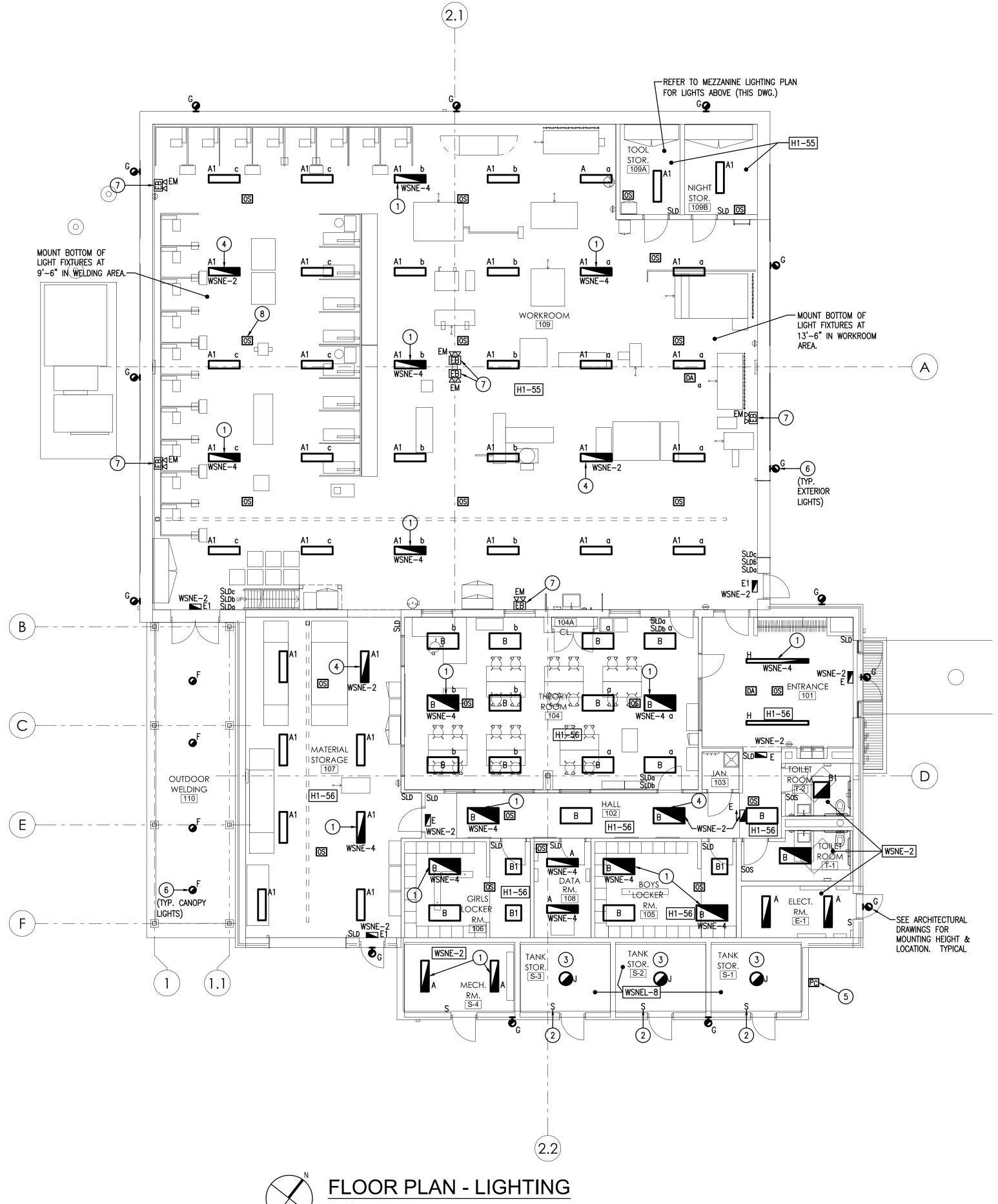


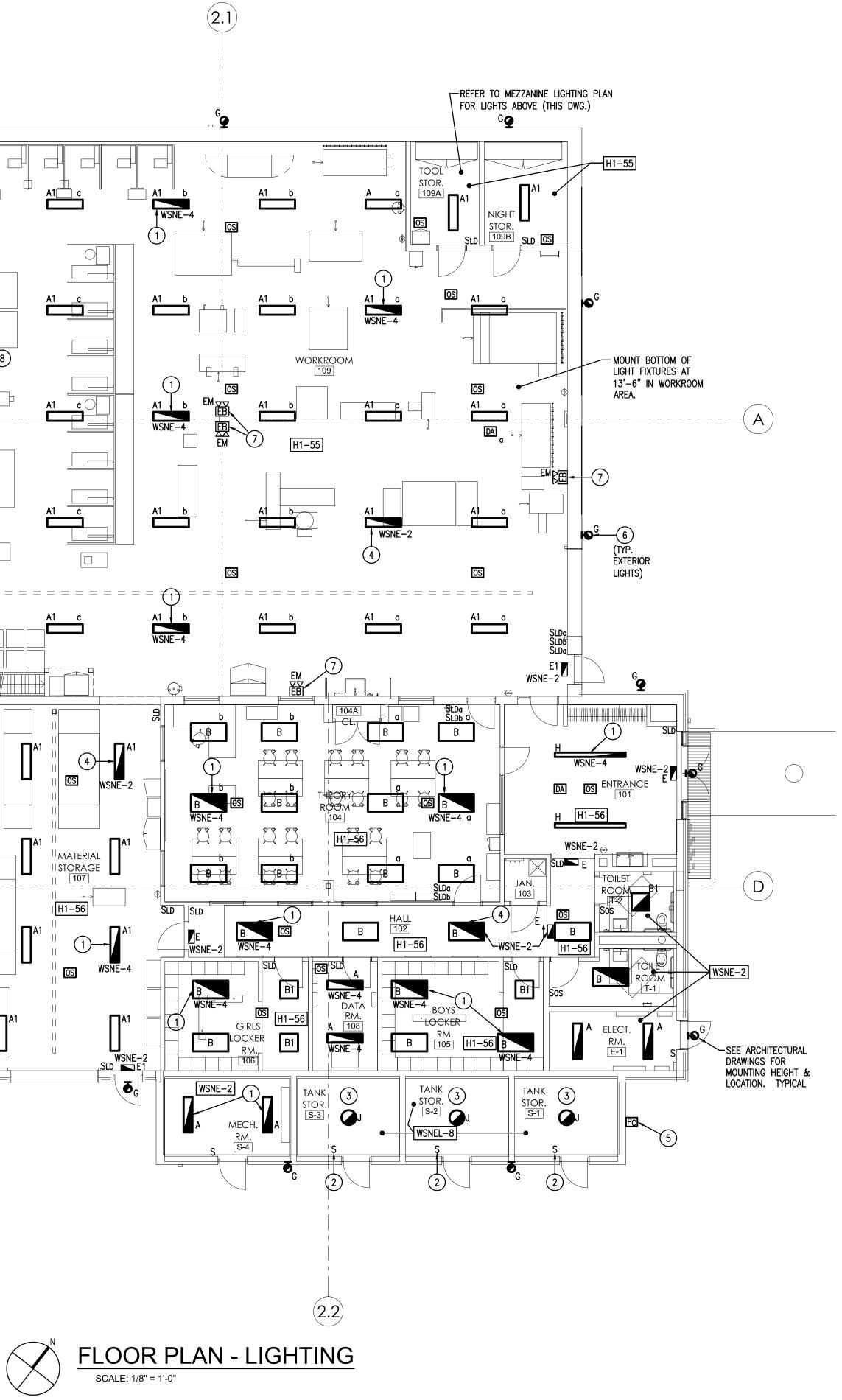


## EXTERIOR LIGHTING CONTACTOR DETAIL



- 1. FIXTURE TO DIM WITH OTHER ROOM LTS.
- 2. PROVIDE EXPLOSION PROOF SEALED SWITCH (20 AMP, 120 VOLT)
- 3. ALL WIRING IN ROOM SHALL BE EXPLOSION PROOF TYPE.
- 4. FIXTURE WIRED TO 24/7 LIGHTING CIRCUIT.
- 5. MOUNT EXTERIOR LIGHTING PHOTOCELL AS HIGH AS POSSIBLE ON WALL.
- 6. CIRCUIT ALL EXTERIOR LIGHTS (TYPES 'G' & 'F') TOGETHER ON CIRCUIT WSNE-6. CIRCUIT SHALL BE RUN VIA EXTERIOR LIGHTING CONTACTOR.
- CONNECT "EM" LIGHT FIXTURE TO UNSWITCHED "CONSTANT" SIDE OF GENERAL LIGHTING CIRCUIT.
- 8. PROVIDE HIGH BAY TYPE OCCUPANCY SENSOR (TYP. IN WORK ROOM 109).

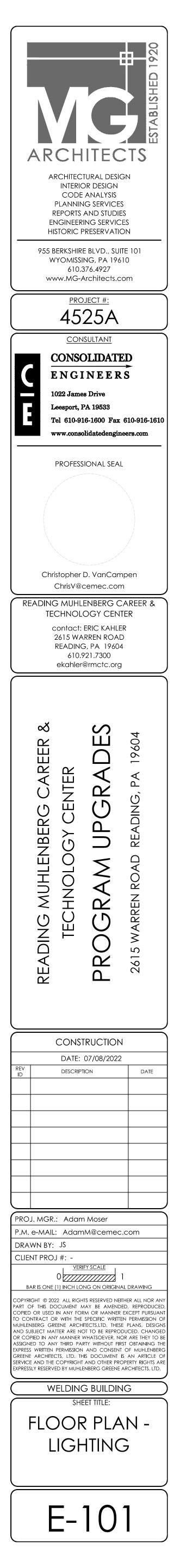


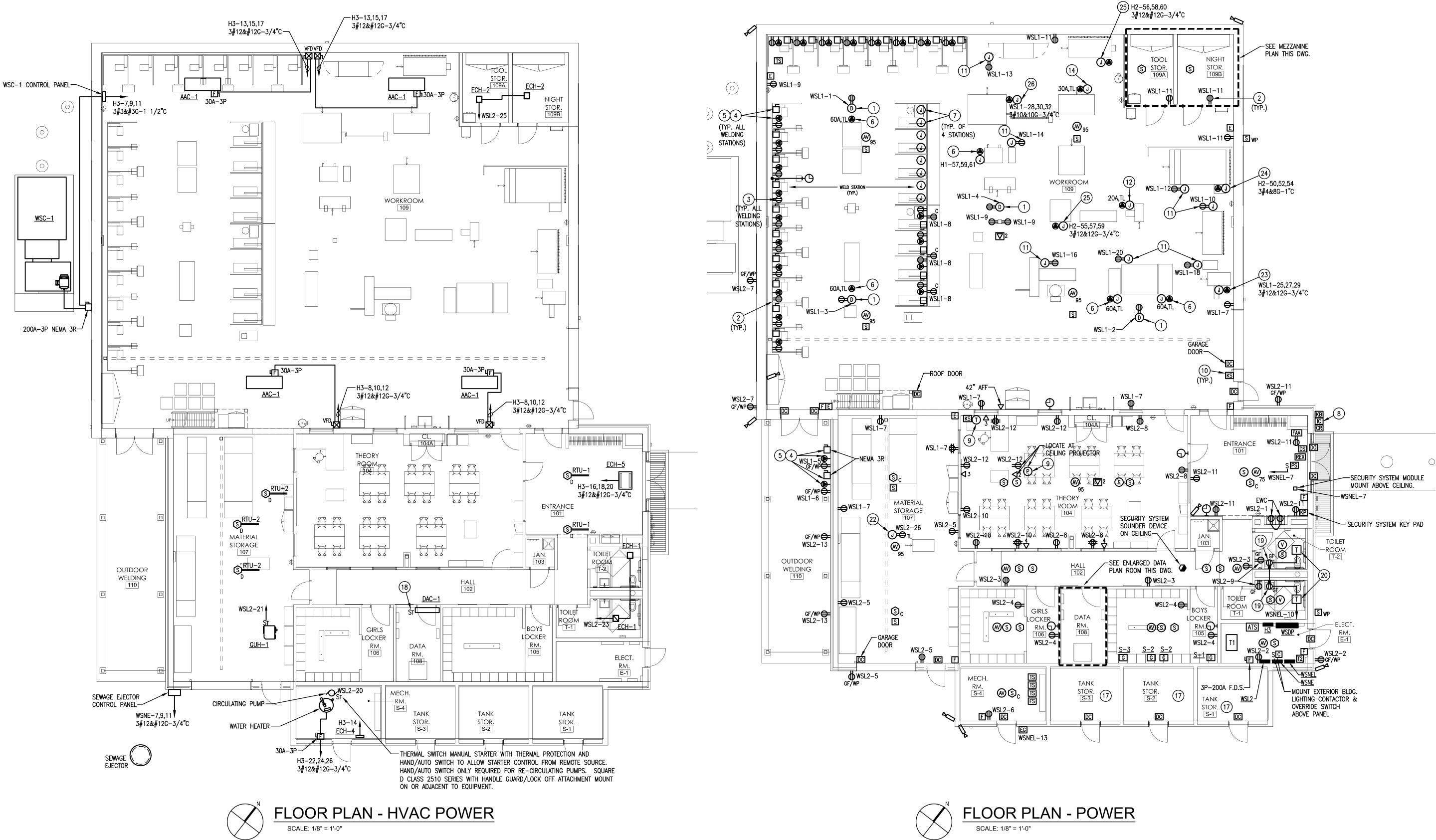


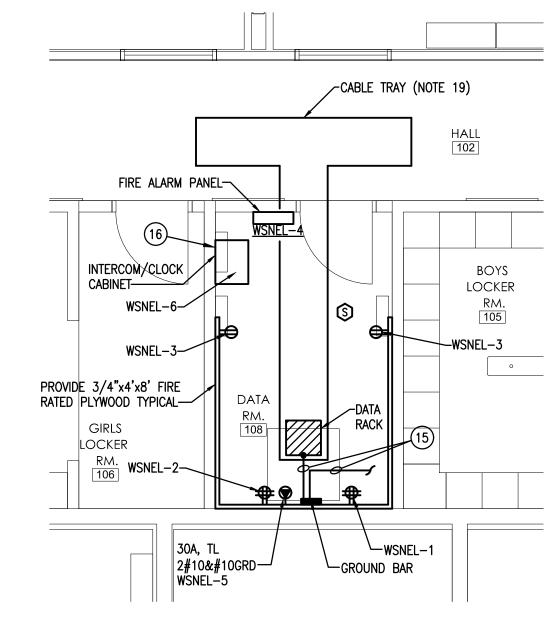
		LIGHTING	i FIXTL	JRE SC	CHEDULE		M	HE APPROVED SUBSTITUTES ARE APPROVED AS ANUFACTURERS ONLY. FIXTURES MUST MEET RAWING AND SPECIFICATION REQUIREMENTS.
TYPE	MANUFACTURER	CATALOG NUMBER	WATTS	VOLTS	MOUNTING	APPROVED S	UBSTITUTES	REMARKS
Α	DAYBRITE	V3W45IL840DIMLPA	35	UNV.	SURFACE/PENDANT	COLUMBIA	LITHONIA	NOTE 1
A1	DAYBRITE	V3W47OL840DIMLPA	50	UNV.	PENDANT	COLUMBIA	LITHONIA	NOTE 1
В	DAYBRITE	2FXP43L4DSDIM	39	UNV.	RECESSED	COLUMBIA	LITHONIA	
B1	DAYBRITE	2FXP38L2DSDIM	33	UNV.	RECESSED	COLUMBIA	LITHONIA	
С	NOT USED	-	_	-	-	-	_	-
D	NOT USED	-	_	_	-	-	_	-
E	LITHONIA	TLE-NOTE 4-R	1	UNV.	UNIVERSAL	COLUMBIA	DAYBRITE	NOTE 4
E1	LITHONIA	LVSAB-R-UM-DL	1	UNV.	UNIVERSAL	COLUMBIA	DAYBRITE	NOTE 4
F	ALCON LIGHTING	12302-P-B-8-13/11-40K-A40	13 DOWN 11 UP	UNV.	NOTE 5	GOTHOM	COLUMBIA	NOTE 5&6, UP/DOWN LIGHT
G	GARDCO	101L-32-700-NW-G1-4-DD-CC	70	UNV.	WALL	LITHONIA		NOTE 6 & 7
Н	FOCAL POINT	FOSS-FL80-875LF-40K-1C-UNV-L11-G-CLV24-CUSTOM COLOR-8'	30W / 4'	UNV.	PENDANT	LITHONIA	COLUMBIA	DIRECT 20%, INDIRECT 80%, NOTE 6
J	SUPER BRIGHT LEDS.COM	EPLS-40-60-WG-P-U-G-N	60	120	SURFACE	CROUSE WINDS CO.		PROVIDE MOUNTING BRACKET, EXPLOSION PROOF RATED
К	NOT USED	-	_	-	-	-	_	-
EM	LITHONIA	ELM6L-LTP-WO		MVOLT	SURFACE WALL	COLUMBIA	DAYBRITE	EM BATT. PACK, WHITE

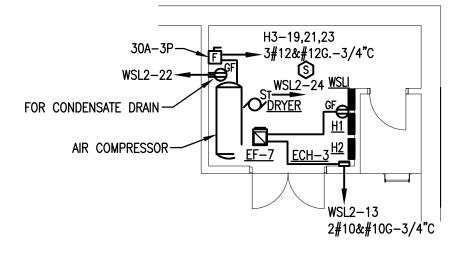
#### LIGHTING FIXTURE SCHEDULE NOTES:

- 1. PROVIDE STAINLESS STEEL MOUNTING HARDWARE AND STAINLESS STEEL CHAIN (LENGTH REQUIRED). 2. VERIFY GRID SIZE WITH ARCHITECTURAL PLANS.
- 3. PROVIDE MOUNTING HARDWARE AND CHAIN (LENGTH REQUIRED). 4. PROVIDE SINGLE/DOUBLE FACE AS DESIGNATED ON PLAN.
- 5. PROVIDE CUSTOM STEM/LENGTH. 6. PROVIDE CUSTOM COLOR.
- 7. REFER TO ARCHITECTURAL EXTERIOR ELEVATION DWG'S FOR LOCATION & MOUNTING HEIGHT.

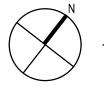




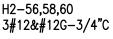








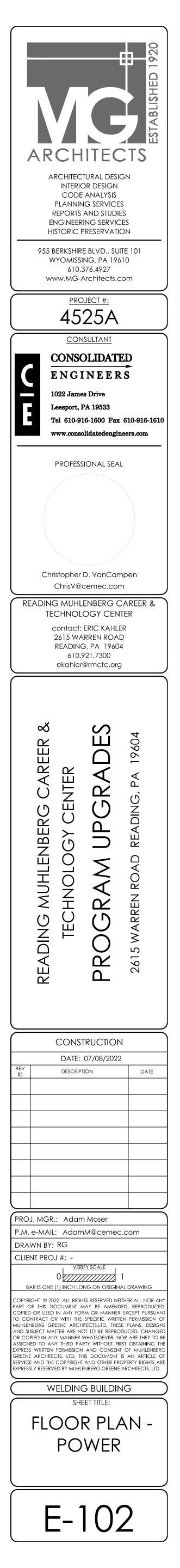


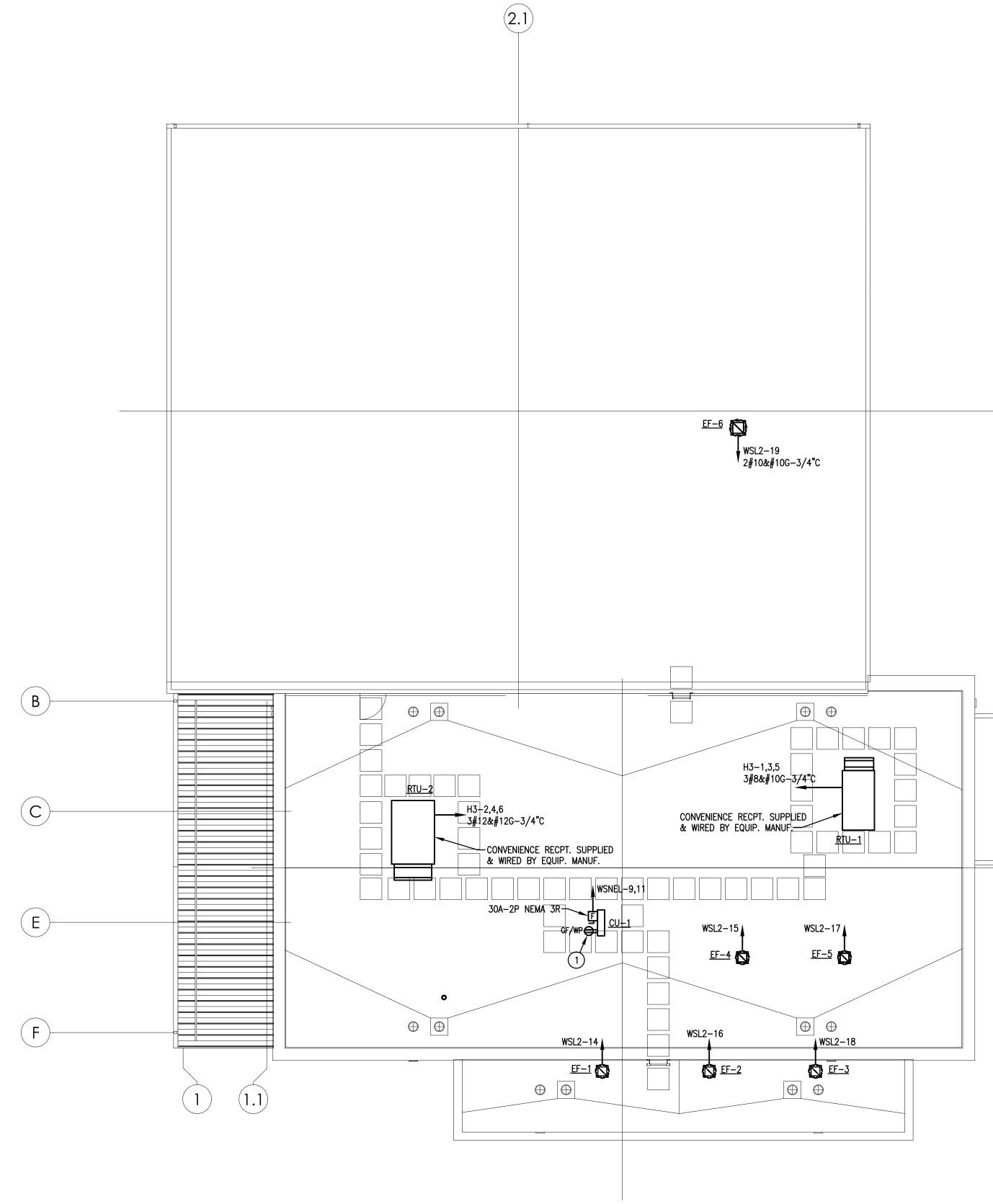


### **I DRAWING NOTES:**

- 1. CABLE DROP REEL. PROVIDE MISCELLANEOUS STEEL FOR MOUNTING. SEE LEGEND FOR CATALOG NUMBER.
- 2. ALL 120V, 20AMP RECEPTACLES LOCATED IN WELDING WORKROOM 109 SHALL BE GROUND FAULT RECEPTACLE TYPE. RECEPTACLES LOCATED AT CABLE DROP REELS SHOULD BE STANDARD 20 AMP RECPT. WITH GROUND FAULT TYPE CIRCUIT BREAKER PROTECTION. RECPT'S AT ENDS OF SJO CORD DROPS SHALL BE TWIST LOCK RECEPT'S W/GF CIRCUIT BREAKERS.
- 3. ALL WELDER STATION 120V, 20 AMP GROUND FAULT RECEPTACLES SHALL BE PROVIDED WITH 'WHILE IN USE COVER' TO PROTECT RECEPTACLE. EACH COVER SHALL BE LABELED WITH WELDING BOOTH AND CIRCUIT BREAKER NUMBER.
- 4. PROVIDE 60A, 3Ø, 480 VOLT TWIST LOCK RECEPTACLE AND BOX, WITH 3P-60A NFDS ABOVE. WIRE 60A RECEPT VIA DISCONNECT SWITCH. LABEL FRONT OF DISCONNECT WITH WELDING STATION NUMBER AND CIRCUIT BREAKER NUMBER. RECPT. SHALL BE COORDINATED WITH OWNER'S EXISTING WELDER STATION PLUGS. VERIFY MTG. HT & EXACT LOCATION OF RECPT. & NFDS W/ OWNER PRIOR TO ROUGH-IN.
- 5. RUN 3#4W/#8GRD VIA 1" CONDUIT TO PANEL 'H1' OR 'H2' RESPECTIVELY FROM EACH WELDING STATION N.F.D.S. LABEL N.F.D.S. WITH CIRCUIT & BOOTH NUMBER. PROVIDE NEMA 3R NFDS FOR OUTSIDE WELDING STATION DISCONNECTS.
- 6. PROVIDE OVERHEAD 480 VOLT, 60A 30 TWIST LOCK RECEPTACLE AT TABLE OR PORTABLE WELDER LOCATION. PROVIDE SJO CORD DOWN FROM ABOVE. RUN 3#4W/#8GRD-1"C. TO PANEL 'H1' OR 'H2' RESPECTIVELY. LABEL CIRCUIT WITH BOOTH NUMBER.
- 7. PROVIDE (1) 480V 3Ø JUNCTION BOX & ONE 120V 1Ø JUNCTION BOX UP AT STEEL. RUN 1" CONDUIT FROM 480 VOLT JUNCTION BOX LOCATION TO PANEL 'H2'. RUN 3/4" CONDUIT FROM 120V JUNCTION BOX LOCATION TO PANEL WSL1. CONDUIT & BOXES FOR FUTURE WELDER STATIONS.
- 8. MOUNT FLUSH WALL BOX FOR INTERCOM STATION. BOX SUPPLIED BY OWNER'S VENDOR. RUN CAT 6 DATA CABLE FROM IC STATION TO DATA RACK.
- 9. RUN (2) HDMI CABLES FROM TEACHER'S DESK INPUT LOCATION TO PROJECTOR. E.C. SHALL BE RESPONSIBLE TO MOUNT PROJECTOR BRACKET, RUN POWER, DATA & HDMI CABLES/CONNECTIONS. PROJECTOR BY OTHERS. VERIFY DESK LOCATION IN FIELD W/OWNER PRIOR TO ROUGH-IN.
- 10. VERIFY E-STOP EXACT LOCATION W/OWNER PRIOR TO ROUGH-IN.
- 11. PROVIDE JUNCTION BOX AT STEEL. DROP 120 VOLT 10 WIRING (SJO) FROM OVERHEAD JUNCTION BOX TO ABOVE SHOP EQUIPMENT. HEIGHT OF CONNECTION/EXACT LOCATION OF DROP SHALL BE VERIFIED WITH OWNER SO IT DOES NOT INTERFERE WITH OPERATION OF EQUIPMENT. PROVIDE RECPT./HARD WIRE CONNECTION AS REQUIRED. RECPT. SHALL BE TWIST LOCK L5–20R TYPE.
- 12. PROVIDE OVERHEAD 480 VOLT, 20 AMP 30 TWIST LOCK RECPT. AT TABLE. PROVIDE SJO CORD DOWN FROM JUNCTION BOX TO ABOVE TABLE. RUN 3#12W/#12GRD -3/4"C TO PANEL 'H2'. LABEL CIRCUIT "DRILL PRESS". PROVIDE L16-20R RECPT. (H2-44,46,48)
- 13. PROVIDE OVERHEAD 480 VOLT, 20 AMP 30 TWIST LOCK RECPT. FOR AIR COMPRESSOR. PROVIDE SJO CORD DOWN FROM JUNCTION BOX TO ABOVE. RUN 3#12W/#12GRD -3/4"C TO PANEL 'H2'. PROVIDE L16-20R RECPT. (H2-43,45,47)
- 14. PROVIDE OVERHEAD 480 VOLT, 30 AMP 30 TWIST LOCK RECPT. (L16-30R) FOR SCOTCHMAN METAL BREAK. PROVIDE SJO CORD DOWN FROM JUNCTION BOX TO ABOVE. RUN 3#10W/#10GRD -3/4"C TO PANEL 'H2'. (H2-49,51,53)
- 15. PROVIDE 4/0 COPPER GROUND FROM GROUND BAR TO 'WSDP' AND FROM GROUND BAR TO DATA RACK. PROVIDE CONNECTIONS.
- 16. GROUND INTERCOM RACK TO MEET MANUFACTURERS REQUIREMENTS OR MINIMUM #10AWG.
- 17. PROVIDE EXPLOSION PROOF FITTINGS AND DEVICES TO MEET N.E.C REQUIREMENTS.
- 18. CONNECT INDOOR UNIT TO ASSOCIATED ROOFTOP CONDENSING UNIT CU. TERMINAL BLOCK WITH WIRING (QUANTITY AND SIZE) PER MANUFACTURER RECOMMENDATIONS.
- 19. PROVIDE RECEPTACLE FOR SINK SENSOR, VERIFY EXACT LOCATION WITH P.C.
- 20. PROVIDE CONNECTION TO TRANSFORMER FOR FLUSH VALVES. VERIFY EXACT LOCATION WITH P.C.
- 21. PROVIDE 24"W x 4"D CABLE TRAY RUN ABOVE RACK TO ABOVE ACCESSIBLE CEILING IN CORRIDOR. PROVIDE SUPPORT, FITTINGS ETC.
- 22. HOIST JUNCTION & RECPT. MOUNT UP HIGH. VERIFY EXACT LOCATION & HEIGHT W/EQUIPMENT SUPPLIER.
- 23. PROVIDE OVERHEAD 208 VOLT, 20 AMP, 30 TWIST-LOCK REPT. FOR LATHE. PROVIDE SJO CORD DOWN FROM JUNCTION BOX TO ABOVE. CONNECT TO PANEL INDICATED.
- 24. PROVIDE OVERHEAD 480 VOLT, 60 AMP, 30 TWIST-LOCK REPT. FOR PLASMA CUTTER. PROVIDE SJO CORD DOWN FROM JUNCTION BOX TO ABOVE. CONNECT TO PANEL INDICATED.
- 25. PROVIDE OVERHEAD 480 VOLT, 20 AMP, 30 TWIST-LOCK REPT. FOR DRILL PRESS OR BAND SAW. PROVIDE SJO CORD DOWN FROM JUNCTION BOX TO ABOVE. CONNECT TO PANEL INDICATED.
- 26. PROVIDE OVERHEAD 208 VOLT, 30 AMP, 30 TWIST-LOCK REPT. FOR HYDRAULIC PRESS. PROVIDE SJO CORD DOWN FROM JUNCTION BOX TO ABOVE. CONNECT TO PANEL INDICATED.

ENLARGED DATA ROOM PLAN SCALE: 1/4" = 1'-0"



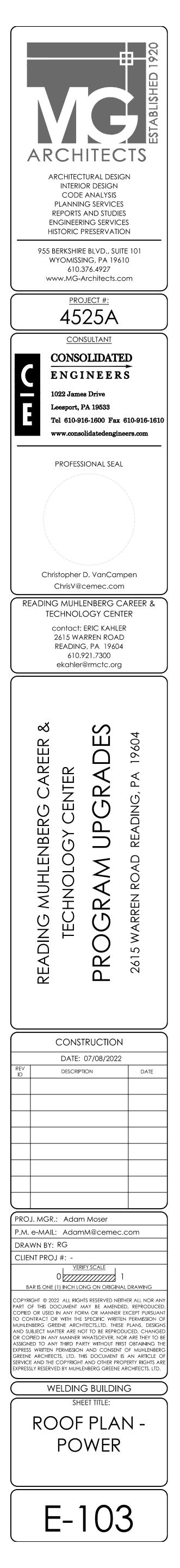


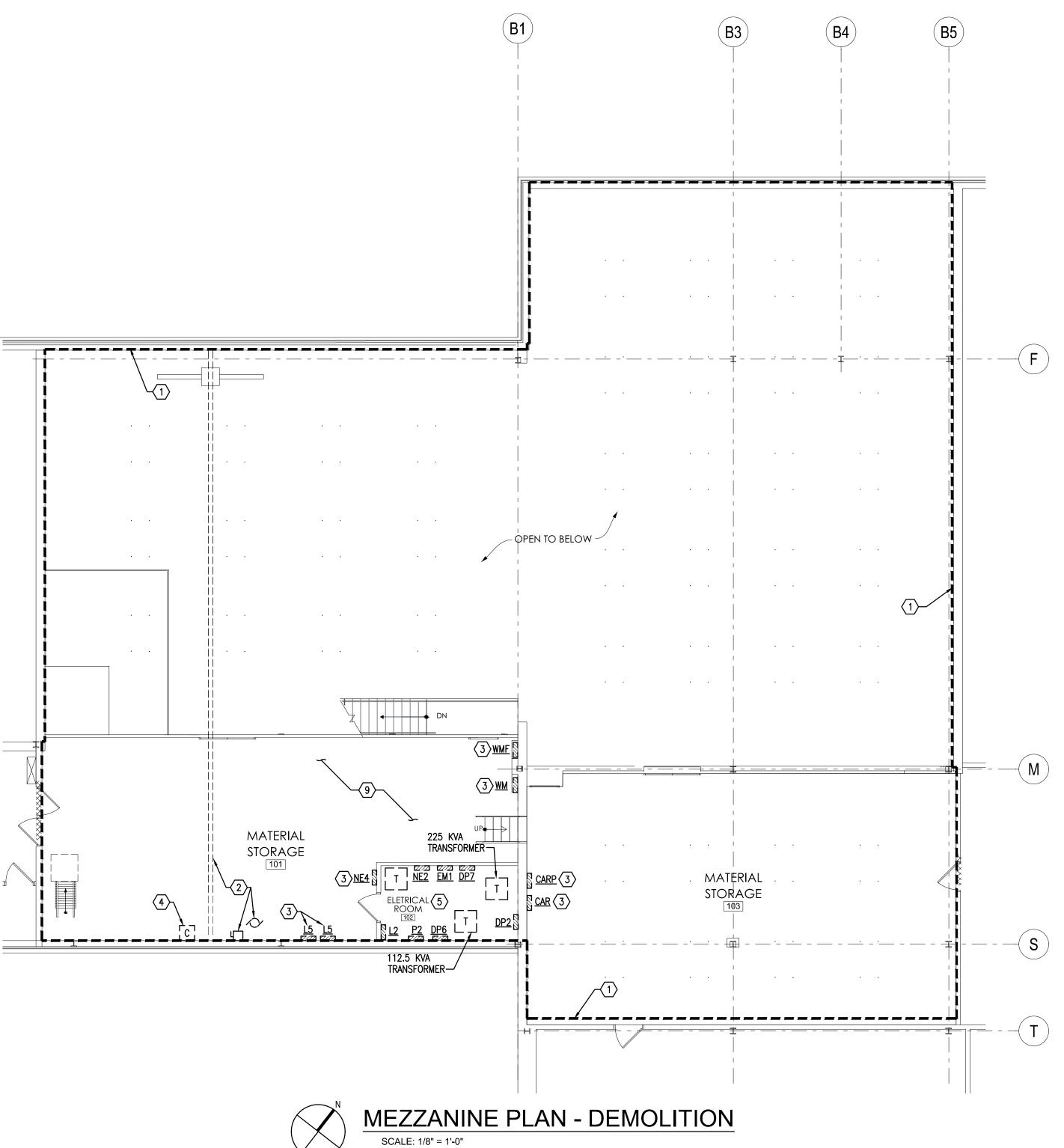


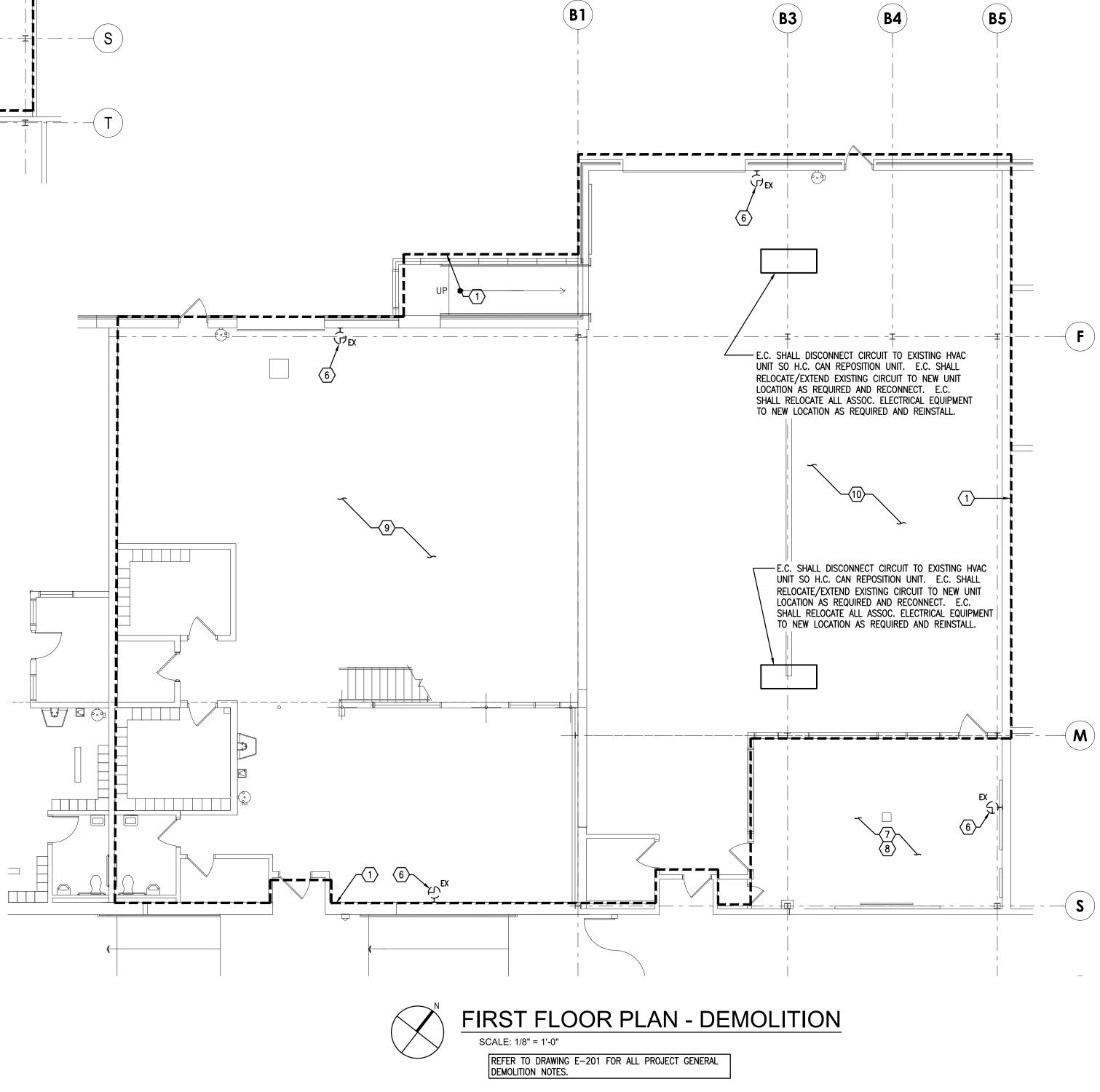
FLOOR PLAN - POWER SCALE: 1/8" = 1'-0"

## DRAWING NOTES:

 MOUNT ROOFTOP RECEPTACLE ON OR ADJACENT TO UNIT MINIMUM 18" ABOVE ROOF. CONNECT TO NEAREST UNSWITCHED CORRIDOR OR STORAGE ROOM 120V RECEPTACLE CIRCUIT VIA 2#12&#12G-3/4"C.

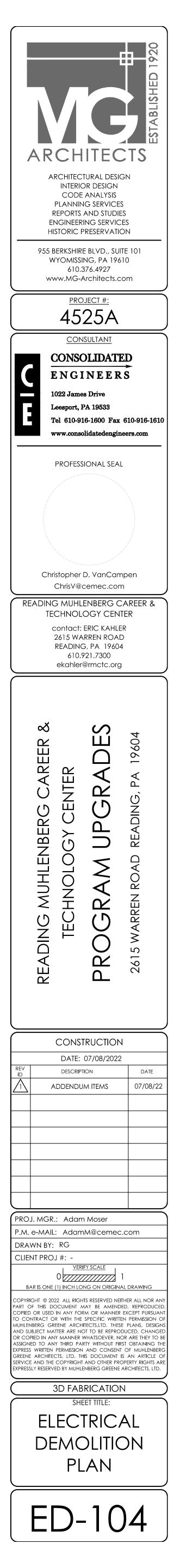


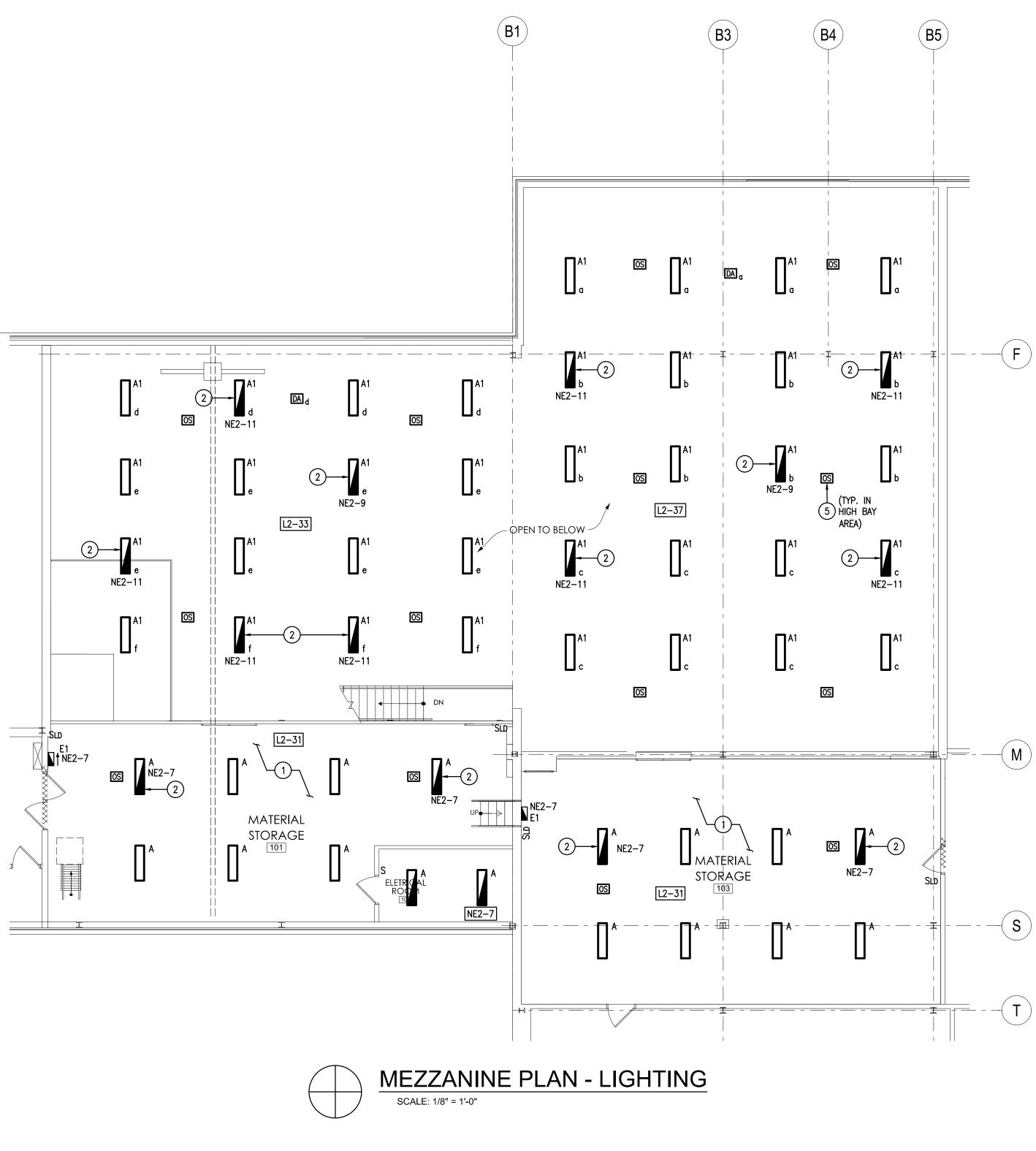


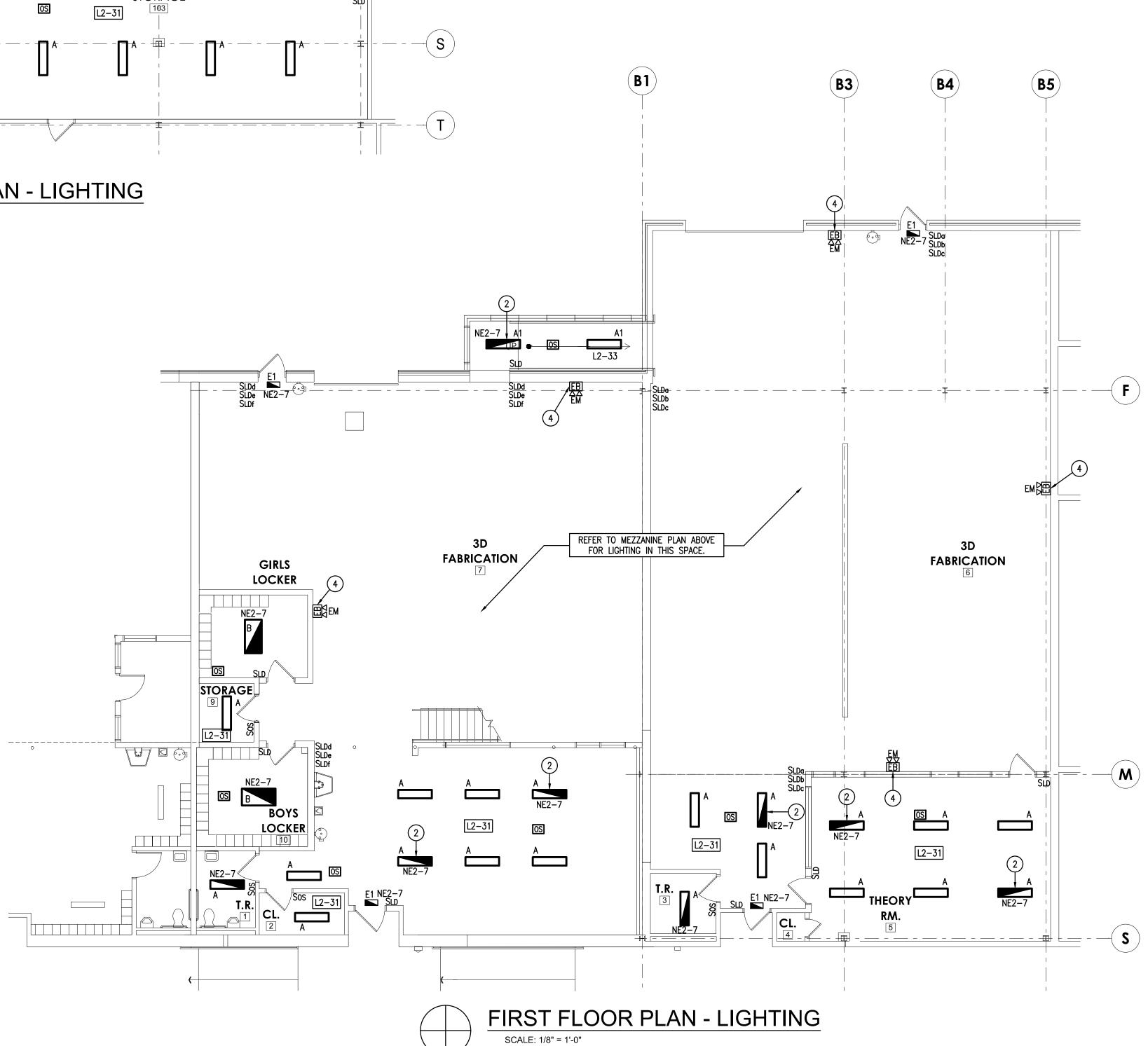


#### DEMO NOTES:

- 1. DISCONNECT AND REMOVE ALL ELECTRICAL EQUIPMENT FROM SPACE UNLESS NOTED OTHERWISE. EQUIPMENT SHALL INCLUDE BUT NOT LIMITED TO: WIRING DEVICES, LIGHT FIXTURES. CLOCKS, SPEAKERS, DATA WIRING, DISCONNECTS, PANELS, SECURITY DEVICES, HANGER SUPPORTS, FIRE ALARM DEVICES, ETC. REMOVE ALL CONDUIT AND WIRING.
- 2. EXISTING CRANE TO REMAIN.
   3. EXISTING PANEL TO REMAIN.
- 4. EXISTING PANEL 'WM' CONTACTOR TO REMAIN.
- 5. ALL ELECTRICAL ROOM PANELS AND TRANSFORMERS TO REMAIN UNLESS NOTED OTHERWISE.
- EXISTING DIGITAL CLOCK TO REMAIN.
   DISCONNECT AND REMOVE EXISTING THEORY ROOM LIGHTS, SWITCHES/CONTROLS, CONDUIT
- & WIRING. B. ELECTRICAL DEVICES IN EXISTING THEORY ROOM TO REMAIN UNLESS NOTED OTHERWISE.
- ELECTRICAL DEVICES IN EXISTING THEORY ROOM TO REMAIN, LINLESS NOTED OTHERWISE.
   E.C. SHALL BE RESPONSIBLE TO DISCONNECT ALL EXISTING WELDING EQUIPMENT FOR REMOVAL. E.C. SHALL DISCONNECT AND REMOVE ALL ASSOCIATED EQUIPMENT CONDUIT AND WIRING BACK TO SOURCE (EXISTING PANELBOARD). ALL EXISTING WELDING EQUIPMENT SHALL BE RELOCATED TO NEW SPACE BY G.C. E.C. SHALL BE RESPONSIBLE TO RECONNECT ALL EXISTING WELDING EQUIPMENT ONCE RELOCATED TO NEW SPACE. E.C. SHALL BE RESPONSIBLE TO DOCUMENT ALL EXISTING EQUIPMENT CIRCUITRY (VOLTAGE,
- PHASE, AMPS) PRIOR TO DISCONNECTING THE EXISTING EQUIPMENT. REFER TO ALL PROJECT GENERAL ELECTRICAL AND DEMOLITION NOTES ON DRAWING E-201.
  10. E.C. SHALL BE RESPONSIBLE TO DISCONNECT ALL EXISTING CARPENTRY EQUIPMENT FOR
- REMOVAL. E.C. SHALL DISCONNECT AND REMOVE ALL ASSOCIATED EQUIPMENT CONDUIT AND WIRING BACK TO SOURCE (EXISTING PANELBOARD). ALL EXISTING CARPENTRY EQUIPMENT SHALL BE REMOVED BY OTHERS. REFER TO ALL PROJECT GENERAL ELECTRICAL AND DEMOLITION NOTES ON DRAWING E-201.

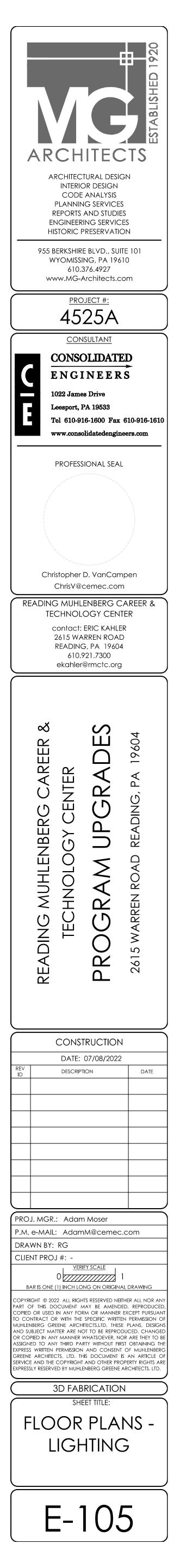


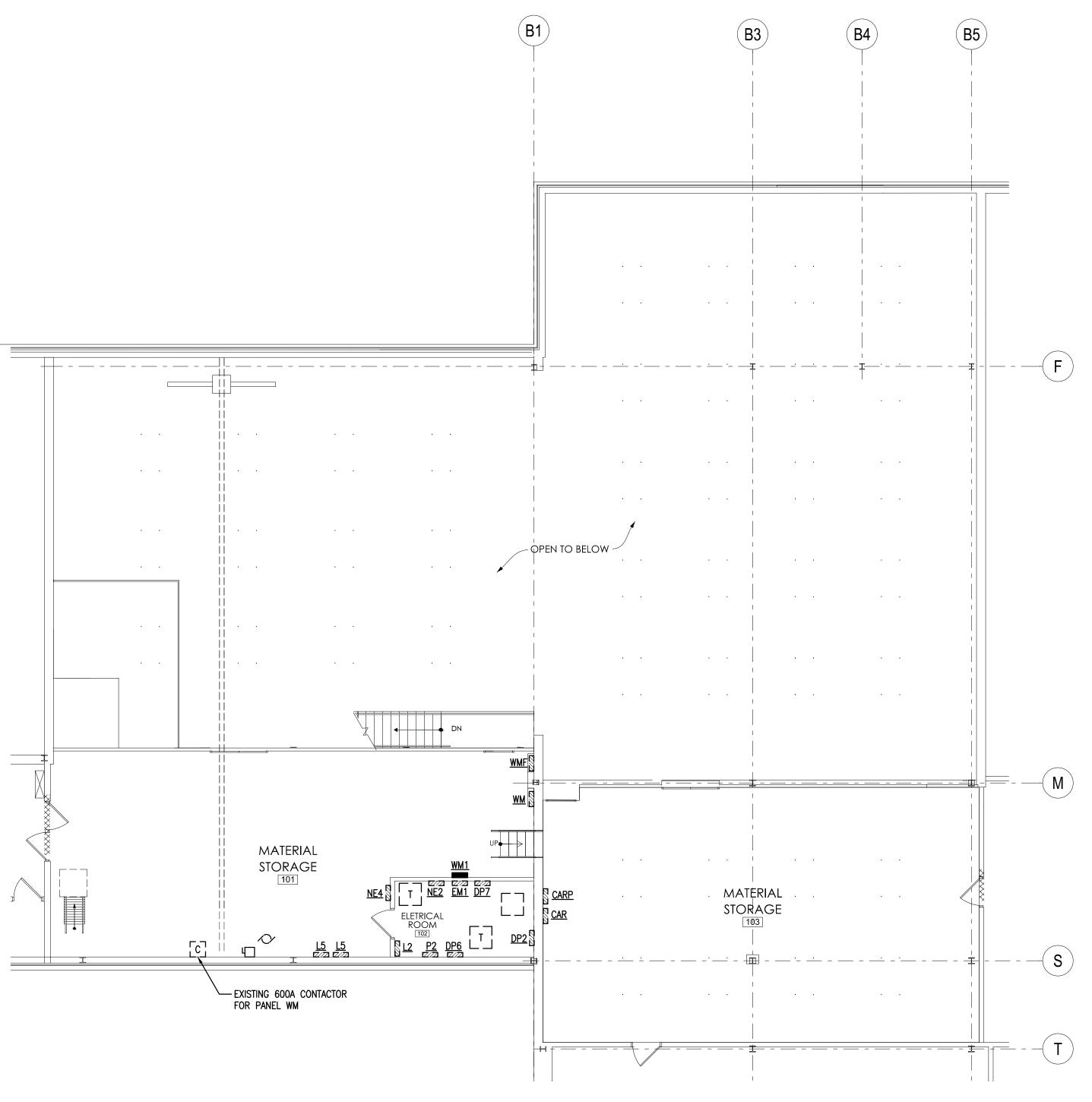




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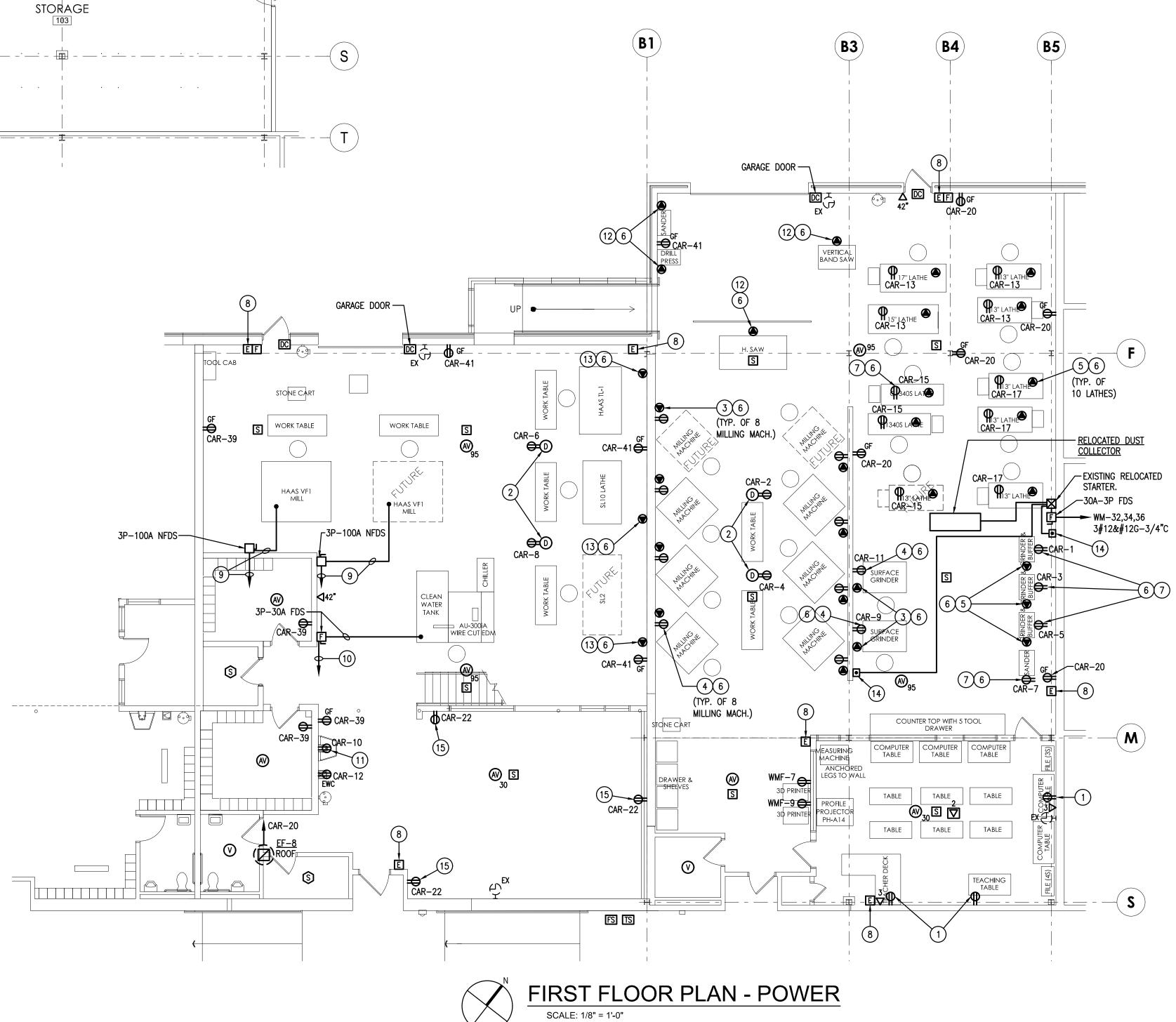
- 1. INSTALL LIGHT FIXTURES EVENLY THROUGHOUT SPACE. AROUND EXIST PIPING, CONDUIT, ETC.
- 2. FIXTURE TO DIM WITH OTHER ROOM LIGHT FIXTURES.
- 3. FIXTURE TO BE WIRED TO 24/7 NE CIRCUIT.
- 4. CONNECT EMERGENCY ONLY LIGHT FIXTURE TO ROOM LINE SIDE (CONSTANT) GENERAL LIGHTING CIRCUIT.
- 5. PROVIDE HIGH BAY OCCUPANCY SENSOR (TYP. IN HIGH OPEN AREA 3D MANUFACTURING SHOP AREA).





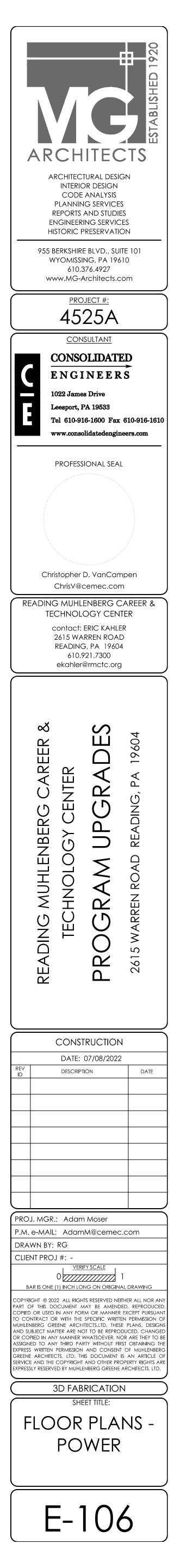


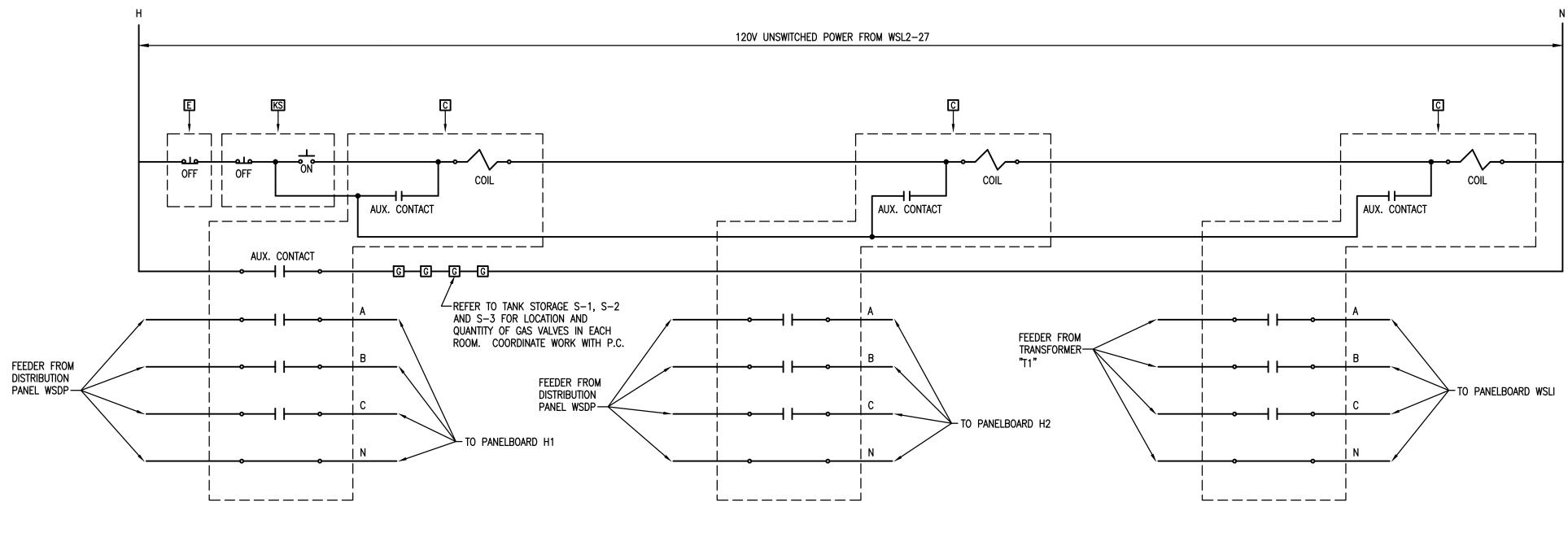
MEZZANINE PLAN - POWER SCALE: 1/8" = 1'-0"



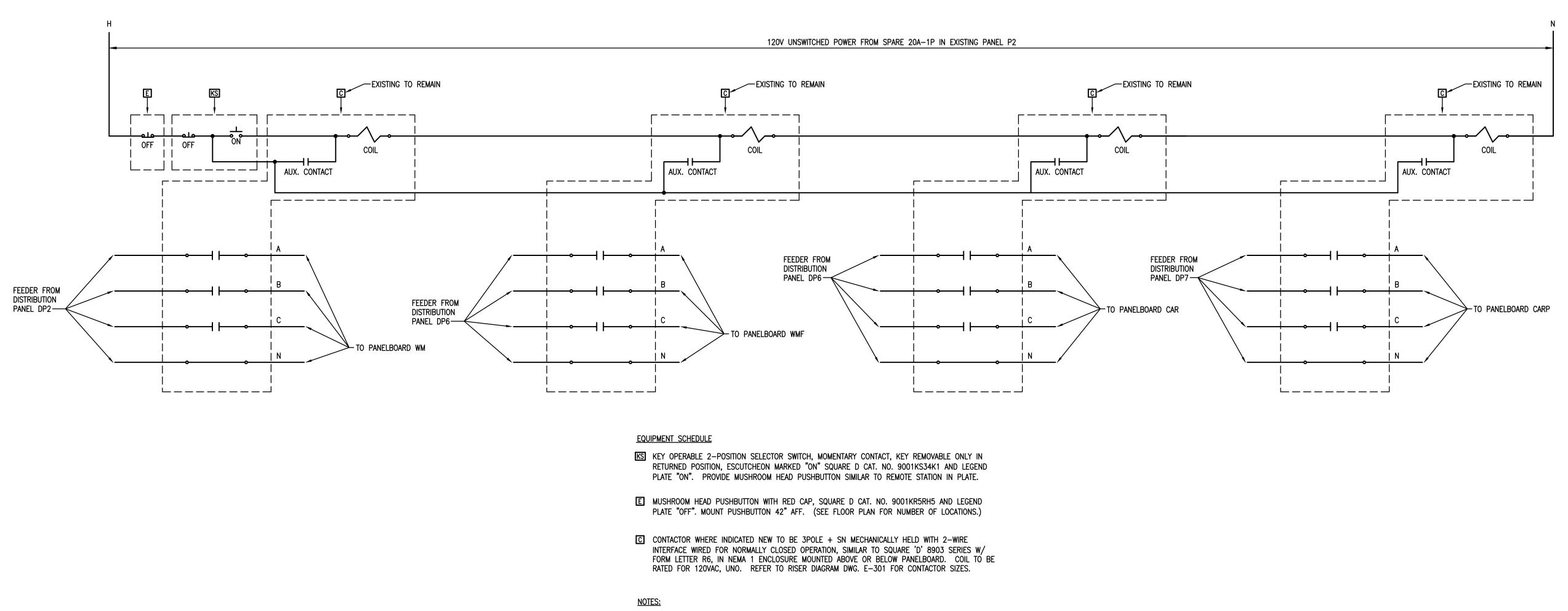
#### **#** KEYED DRAWING NOTES:

- 1. ADD DUPLEX RECEPTACLE INTO EXISTING NON METALLIC RACEWAY. CONNECT RECEPTACLE TO EXISTING CIRCUIT IN RACEWAY.
- 2. CABLE DROP CORD. PROVIDE MISCELLANEOUS STEEL FOR MOUNTING. SEE LEGEND FOR CATALOG NUMBER.
- PROVIDE 480V 3Ø 20 AMP TWIST LOCK RECPT FOR MILLING MACHINE OR GRINDER (VERIFY HEIGHT W/INSTRUCTOR PRIOR TO IN INSTALLING). RUN 3#12W/#12GRD.-3/4"C TO PANEL 'WM1'. CONNECT TO 3P-20A CIRCUIT BREAKER. RECPT TO MATCH OWNERS EQUIP PLUG.
- PROVIDE 120V 1Ø 20 AMP TWIST LOCK RECPT (VERIFY HEIGHT W/INSTRUCTOR PRIOR TO IN INSTALLING). RUN 2#12W/#12GRD.-3/4"C TO PANEL 'CAR'. CONNECT TO 1P-20A CIRCUIT BREAKER.
- PROVIDE 480V 3Ø 20 AMP TWIST LOCK RECPT FOR LATHE OR BUFFER. RUN 3#12W/#12GRD.-3/4"C TO PANEL 'WM' OR 'WM1'. CONNECT TO 3P-20A CIRCUIT BREAKER. RECPT TO MATCH OWNERS EQUIP PLUG. PROVIDE SJO CORD FROM JUNCTION BOX AT STEEL DOWN TO EQUIPMENT.
- COORDINATE EXACT LOCATION OF RECPT. WITH OWNER PRIOR TO INSTALLING TO MAKE SURE LOCATION OF RECPT. DOES NOT INTERFERE WITH OPERATION OF EQUIPMENT.
- PROVIDE 120V 1Ø 20 AMP TWIST LOCK RECPT. RUN 2#12W/#12GRD.-3/4"C TO PANEL 'WMF'. CONNECT TO 1P-20A CIRCUIT BREAKER. PROVIDE SJO CORD FROM JUNCTION BOX AT STEEL DOWN TO RECPT AT EQUIPMENT.
- 8. CONNECT EMERGENCY STOP TO PANEL CONTACTORS FOR PANELS 'WMF', 'WM', 'CAR', & 'CARP'.
- RUN 3#3W/#8GRD.-1 1/4"C TO PANEL 'WMF'. CONNECT TO 3P-80A C.B. RUN TO MILL OVERHEAD AND DROP DOWN FROM JUNCTION BOX ABOVE AT STEEL WITH SJO CABLE. MAKE HARD CONNECTION TO EQUIP.
- RUN 3#10W/#10GRD. -3/4"C TO PANEL 'WM'. CONNECT TO 3P-30A C.B. RUN TO WIRE CUT EDM OVERHEAD WITH SJO CORD FROM JUNCTION BOX TO EQUIP. PROVIDE HARD CONNECTION.
- WASH FOUNTAIN, COORDINATE RECEPTACLE LOCATION WITH P.C.
   PROVIDE 240V, 20A, 3Ø TWISTLOCK RECPT. RUN
- 3#12&#12GRD.-3/4"C TO PANEL 'CARP'. CONNECT TO SPARE 3P-15A CIRCUIT BREAKER IN PANEL. RELABEL PANEL SCHEDULE CORRECTLY WITH EQUIPMENT NAME.
- PROVIDE 240V, 40A, 3Ø TWIST LOCK RECPT. RUN 3#8&#10GRD.-3/4"C TO EXISTING PANEL 'CARP'. REMOVE EXISTING CIRCUIT BREAKER AND REPLACE W/40A-3P CIRCUIT BREAKER & CONNECT. RELABEL PANEL SCHEDULE CORRECTLY WITH EQUIPMENT NAME.
- EXISTING RELOCATED START/STOP PUSH BUTTON CONTROL. PROVIDE ALL REQUIRED WIRING IN 3/4" CONDUIT AND CONNECT TO EXISTING RELOCATED STARTER AS REQUIRED.
- 15. COORDINATE EXACT LOCATION WITH STORAGE RACKING TO ENSURE RECEPTACLES ARE ACCESSIBLE.





NO SCALE



3D FABRICATION EMERGENCY PANEL SHUTDOWN DETAIL PANELS 'WM', 'WMF', 'CAR' AND 'CARP' NO SCALE

#### EQUIPMENT SCHEDULE

- KS KEY OPERABLE 2-POSITION SELECTOR SWITCH, MOMENTARY CONTACT, KEY REMOVABLE ONLY IN RETURNED POSITION, ESCUTCHEON MARKED "ON" SQUARE D CAT. NO. 9001KS34K1 AND LEGEND PLATE "ON". PROVIDE MUSHROOM HEAD PUSHBUTTON SIMILAR TO REMOTE STATION IN PLATE.
- E MUSHROOM HEAD PUSHBUTTON WITH RED CAP, SQUARE D CAT. NO. 9001KR5RH5 AND LEGEND PLATE "OFF". MOUNT PUSHBUTTON 42" AFF. (SEE FLOOR PLAN FOR NUMBER OF LOCATIONS.)
- C CONTACTOR TO BE 3POLE + SN MECHANICALLY HELD WITH 2-WIRE INTERFACE WIRED FOR NORMALLY CLOSED OPERATION, SIMILAR TO SQUARE 'D' 8903 SERIES W/ FORM LETTER R6, IN NEMA 1 ENCLOSURE MOUNTED ABOVE OR BELOW PANELBOARD. COIL TO BE RATED FOR 120VAC, UNO. REFER TO RISER DIAGRAM DWG. E-301 FOR CONTACTOR SIZES. G GAS VALVE PROVIDED BY P.C., WIRED BY E.C.

NOTES:

- CONTROL WIRING SHALL BE #14 STRANDED LOW VOLTAGE WIRE. EC SHALL WIRE SELECTOR SWITCH, EMERGENCY PUSHBUTTONS AND CONTACTOR AS INDICATED ABOVE.
- ALL SELECTOR SWITCHES ON PROJECT SHALL BE KEYED ALIKE. PROVIDE (2) KEYS FOR EACH
- 3. PROVIDE LABEL ON COVER OF ENCLOSURE INDICATING ROOM AND EQUIPMENT BEING FED.

SELECTOR SWITCH INDICATED ON THE DRAWINGS.

# WELDING SHOP EMERGENCY PANEL SHUTDOWN DETAIL PANELS 'WSL1', 'H1' AND 'H2'

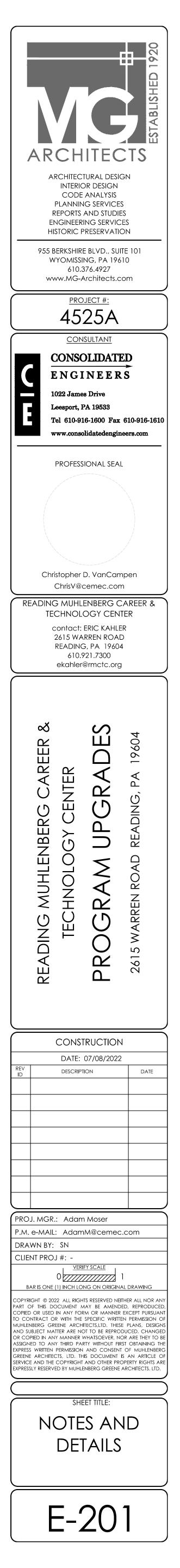
- 1. CONTROL WIRING SHALL BE #14 STRANDED LOW VOLTAGE WIRE. EC SHALL WIRE SELECTOR SWITCH, EMERGENCY PUSHBUTTONS AND CONTACTOR AS INDICATED ABOVE.
- 2. ALL SELECTOR SWITCHES ON PROJECT SHALL BE KEYED ALIKE. PROVIDE (2) KEYS FOR EACH SELECTOR SWITCH INDICATED ON THE DRAWINGS.
- 3. PROVIDE LABEL ON COVER OF ENCLOSURE INDICATING ROOM AND EQUIPMENT BEING FED.

#### GENERAL ELECTRICAL NOTES: (APPLY TO ALL SHEETS)

- 1. THE CONTRACTOR SHALL PROVIDE ALL CIRCUITS (FEEDER AND BRANCH) WITH AN EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH N.E.C. TABLE 250-122.
- WHEN INSTALLING CONDUITS ABOVE CEILING, LOCATE IN SUCH A MANNER TO ALLOW ACCESS TO ALL PIPING, DUCTS, VALVES, AND OTHER DEVICES LOCATED ABOVE CONDUITS.
- CONDUIT SLEEVES MUST BE PROVIDED FOR ALL LOW VOLTAGE WIRING RUN IN OR THROUGH WALLS. 4. IN ROOMS WITHOUT CEILINGS, LOW VOLTAGE WIRING MUST BE RUN IN CONDUIT. NO EXPOSED LOW
- VOLTAGE WIRING WILL BE PERMITTED. 5. THE CONTRACTOR SHALL PROVIDE SPARE CONDUITS FROM RECESSED PANELBOARDS TO ACCESSIBLE
- CEILING SPACES. PROVIDE ONE, ONE-INCH CONDUIT FOR EVERY TWO SPARE POLES IN PANEL. 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY MISCELLANEOUS STEEL REQUIRED FOR MOUNTING ELECTRICAL EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO SIZE STEEL AND INSTALL PROPERLY FOR THE LOAD INTENDED.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS AND DETAILS/ ELEVATIONS TO COORDINATE THE EXACT LOCATION OF ALL ELECTRICAL DEVICES OR EQUIPMENT TO BE INSTALLED IN CASEWORK, CABINETS, GENERAL AREAS, ETC. DRAWINGS SHALL NOT BE SCALED. COORDINATE WITH FINAL CASEWORK LAYOUTS. ANY CONTRACTOR WHO FAILS TO COMPLY SHALL BEAR ALL COSTS OF EACH TRADE FOR DISCONNECTING, REMOVING AND REINSTALLING SYSTEM, EQUIPMENT OR PORTIONS THEREOF.
- EACH TRADE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE AVAILABLE SPACE IN THE CONCEALED 8. AREAS OF THE STRUCTURE. HE MUST COORDINATE ALL THE WORK TO BE DONE AND EQUIPMENT TO BE INSTALLED IN ADVANCE AND PRIOR TO INSTALLING ANY SYSTEM OR PORTION THEREOF.
- 9. THE SPACE ABOVE ALL CEILINGS WILL BE USED AS A RELIEF AIR PLENUM. LOW VOLTAGE WIRING FOR OTHER SYSTEMS MUST BE AN APPROVED AIR PLENUM CABLE, OR RUN IN CONDUIT.
- 10. ALL LOW VOLTAGE WIRING, NOT INSTALLED IN CONDUIT, ABOVE CEILINGS MUST BE RUN PERPENDICULAR AND/OR PARALLEL TO BUILDING STEEL. ALL CABLES MUST BE NEATLY TRAINED AND WIRE TIED TO THE BUILDING STEEL OR INSTALLED ON J-HOOKS OR BRIDLE RINGS. CABLES THAT ARE SIMPLY DRAPED THROUGH STEEL OR RUN AT ODD ANGLES WILL HAVE TO BE REMOVED AND REINSTALLED.
- 11. ALL CONDUIT AND WIRING RUN TO FINISHED SPACES (I.E., CLASSROOMS, CORRIDORS, OFFICES, STORAGE ROOMS, ETC.) MUST BE CONCEALED. CONDUIT MAY BE RUN EXPOSED IN UNFINISHED AREAS (I.E., CRAWL SPACES, MECHANICAL EQUIPMENT ROOMS, ETC.). NO SURFACE RACEWAY MAY BE USED UNLESS SHOWN ON DRAWINGS OR APPROVED BY ENGINEER OR ARCHITECT IN WRITING. IN EXISTING CONSTRUCTION WHERE WALLS ARE SOLIDLY FILLED ONLY (I.E. WITH GROUT) THE CONTRACTOR SHALL PROVIDE SIMILAR TO WIREMOLD V700 SERIES METALLIC RACEWAY AT NO ADDITIONAL COST TO THE OWNER. FINAL ROUTING SHALL BE APPROVED BY ENGINEER/ ARCHITECT. FINISH SELECTED BY ARCHITECT FROM COMPLETE LIST OF STANDARD FINISHES. REFER TO SPECIFICATIONS TO DETERMINE WHERE MC CABLE MAY BE USED.
- 12. OUTLETS MOUNTED BACK TO BACK AND/OR THE USE OF THROUGH BOXES IS NOT PERMITTED.
- 13. THE CONTRACTOR SHALL VERIFY THE MOUNTING HEIGHT (SHOWN ON THE DRAWINGS) OF BUILDING MOUNTED LIGHT FIXTURES WITH THE ARCHITECTS EXTERIOR ELEVATION DRAWINGS PRIOR TO ROUGH-IN.
- 14. THE CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING OF EXISTING SURFACES THAT IS REQUIRED FOR HIS WORK. PATCHING SHALL INCLUDE EVERYTHING EXCEPT FINAL FINISH.
- 15. THE CONTRACTOR SHALL COORDINATE ALL DEVICES ASSOCIATED WITH MECHANICAL, PLUMBING AND ARCHITECTURAL EQUIPMENT INDICATED TO HAVE POWER CONNECTIONS WITH CONTRACTOR PROVIDING EQUIPMENT PRIOR TO ORDERING DEVICES AND ROUGH-INS. THE CONTRACTOR SHALL REQUEST SHOP DRAWINGS FOR ALL EQUIPMENT REQUIRING POWER BEFORE ROUGH-IN.
- 16. FOR WORK REQUIRED WITHIN AREAS OF THE BUILDING WHERE NO GENERAL TRADES WORK IS REQUIRED. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ALL CEILING TILES, INCLUDING INSULATION FOUND ABOVE THE CEILING TO PERFORM HIS WORK. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO NOTIFY THE OWNER/ENGINEER IN WRITING WITH DATED PHOTOGRAPHIC EVIDENCE OF ANY DAMAGED CEILING TILES PRIOR TO REMOVAL. OTHERWISE, THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGED CEILING TILES WITHIN THE AREA OF WORK.
- 17. ALL LOW VOLTAGE (BELOW 120V) COPPER CABLE RUN TO EXTERIOR OF BUILDING MUST BE LIGHTNING PROTECTED PER CODE. CONTRACTOR SHALL PROVIDE SOLID STATE LIGHTNING PROTECTION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 18. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES USING PA-ONE CALL, REVIEWING THE SITE SURVEY DRAWINGS AND REQUESTING ANY INFORMATION THE OWNER MAY BE ABLE TO PROVIDE ABOUT THE LOCATION OF TRENCHING AND EXCAVATING FOR ALL EXTERIOR CONDUITS, LIGHT BASES, UNDERGROUND PULL BOXES, TRANSFORMER VAULTS, EQUIPMENT PADS, ETC.
- 19. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL KNOWN AND UNKNOWN UNDERGROUND UTILITIES AND EQUIPMENT FOR BOTH EXTERIOR AND INTERIOR APPLICATIONS WITH THE USE OF GROUND PENETRATING RADAR (GPR) BEFORE TRENCHING, SAW CUTTING, AND EXCAVATING. THE CONTRACTOR WILL BE RESPONSIBLÉ FOR REPAIRING ANY BELOW GRADE UTILITIES THAT ARE DAMAGED DUE TO FAILURE TO VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES. SIGNED AND DATED DOCUMENTATION OF GPR SHALL BE AVAILABLE UPON REQUEST.
- 20. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL PROVIDE FINAL POWER CONNECTIONS TO ALL POWERED EQUIPMENT FURNISHED BY OTHER CONTRACTORS AND THE OWNER, INCLUDING, BUT NOT LIMITED TO AIR HANDLING EQUIPMENT, HEATING EQUIPMENT, COOLING EQUIPMENT, PUMPS, PLUMBING FIXTURE SENSORS, ELECTRIC WATER COOLERS, OWNERS 3D MANUFACTURING & WELDING SHOP EQUIPMENT, SECURITY GRILLES, DOOR HARDWARE, ELECTRONIC SIGNAGE, ETC.
- 21. UNLESS NOTED OTHERWISE, LIGHT SWITCHES INDICATED IN ROOMS SHALL CONTROL THE LIGHTING WITHIN THAT ROOM. WHERE MULTIPLE SWITCHES ARE INDICATED, REFER TO THE ASSOCIATED DRAWING NOTES AND/OR SUB-LETTER DESIGNATION FOR THE LIGHTING TO BE CONTROLLED BY EACH SWITCH.
- 22. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY AND DOCUMENT VOLTAGE, PHASE AND AMPERAGE OF ALL OWNERS SUPPLIED 3D MANUFACTURING & WELDING EQUIPMENT PRIOR TO ROUGH-IN. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION PRIOR TO ROUGH-IN OF EQUIPMENT OR CONTRACTOR SHALL BARE COSTS TO REWIRE CORRECTLY.

#### **PROJECT GENERAL DEMOLITION NOTES** (APPLY TO ALL SHEETS)

- THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE EXISTING FACILITY AND ALL CONTRACT DRAWINGS TO DETERMINE THE EXTENT OF THE ELECTRICAL DEMOLITION WORK. THE CONTRACTOR SHALL COORDINATE THE DEMOLITION WITH ALL TRADES. THE CONTRACTOR SHALL VISIT THE JOB PRIOR TO BIDING TO FULLY UNDERSTAND THE ELECTRICAL DEMOLITION REQUIRED. NO CHANGE ORDERS WILL BE ACCEPTED AFTER AWARD OF BID FOR ELECTRICAL DEMOLITION. ELECTRICAL DEMOLITION SHALL INCLUDE ALL WORK AS OUTLINED BELOW. COORDINATE ALL DEMOLITION WITH CONSTRUCTION SCHEDULE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL OF THE PLUMBING, HEATING AND ARCHITECTURAL DRAWINGS FOR THE EQUIPMENT BEING REMOVED. ALL EXISTING PLUMBING, HEATING AND ARCHITECTURAL EQUIPMENT ON THOSE DRAWINGS INDICATED TO BE REMOVED, SHALL BE ELECTRICALLY DISCONNECTED BY THE ELECTRICAL CONTRACTOR. ALL EXISTING PLUMBING. HEATING AND ARCHITECTURAL EQUIPMENT SHOWN ON THOSE DRAWINGS TO REMAIN, SHALL REMAIN ELECTRICALLY CONNECTED UNLESS NOTED OTHERWISE ON THE ELECTRICAL DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL OF THE ARCHITECTURAL CASEWORK DRAWINGS. EXISTING DEVICES THAT FALL BEHIND NEW CASEWORK SHALL BE DISCONNECTED, REMOVED AND A BLANK COVER PLATE INSTALLED. REROUTE EXISTING CIRCUIT AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY.
- REMOVE ALL EXISTING CONDUIT AND WIRING BEING ABANDONED. EXISTING CONDUITS IN GOOD 4. CONDITION AND LOCATED CORRECTLY TO ACCOMMODATE NEW WORK MAY REMAIN IN PLACE AND BE REUSED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE PROPER SUPPORT AS PER NEC FOR ANY CONDUITS BEING REUSED.
- RELOCATE OR EXTEND EXISTING CIRCUITS NOT BEING ABANDONED, AS REQUIRED ON A 5 PERMANENT BASIS TO ACCOMMODATE NEW WORK AND MAINTAIN CIRCUIT INTEGRITY.
- 6. CONTRACTOR SHALL PATCH WALLS, FLOORS, CEILINGS, ETC. TO MATCH ADJACENT SURFACES WHERE EXISTING EQUIPMENT IS BEING REMOVED. PATCHING SHALL BE PROVIDED FOR ALL OPENINGS, INCLUDING, BUT NOT LIMITED TO OPENINGS FOR CONDUITS, BOXES, ANCHORS, SWITCHES, RECEPTACLES, FIRE ALARM PULLS AND BELLS, CLOCKS, SPEAKERS, PANELBOARDS, ETC. PATCHING SHALL INCLUDE EVERYTHING, EXCEPT FINAL FINISH. ALL RECESSED BOXES SHALL BE REMOVED WHERE DEVICE WAS REMOVED WITH WALL PATCHES.
- 7. THE OWNER SHALL HAVE FIRST CHOICE OF ANY EXISTING EQUIPMENT OR MATERIALS BEING REMOVED. THE CONTRACTOR SHALL DELIVER ITEMS TO BE SALVAGED BY THE OWNER TO DESIGNATED STORAGE AREA ON THE JOB SITE. ALL EQUIPMENT AND MATERIALS REJECTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR. CONTRACTOR SHALL REMOVE THESE ITEMS FROM THE SITE AND PROPERLY DISPOSE OF THEM.
- 8. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES AND ASSOCIATED WIRING IN AREAS WHERE NEW FIXTURES ARE SHOWN OR OTHERWISE NOTED.
- 9. WHERE DEMOLISHED ITEMS REVEAL UNEVEN CONSTRUCTION, INTERRUPTED FINISHES, ATTACHMENT HOLES AND OTHER CONDITIONS THAT DO NOT MATCH EXISTING ADJACENT FINISH CONSTRUCTION, PATCH TO MATCH EXISTING ADJACENT FINISHES.



# ELECTRICAL LEGEND

(REFER TO SPECIFICATIONS FOR MORE INFORMATION) NOTE: DIMENSIONS ARE TO CENTER OF DEVICE, UNO.

#### LIGHTING FIXTURES (REFER TO LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION AND TYPE)

SYMBOL	DESCRIPTION	
	- LED LIGHTING FIXTURE.	
•	- LIGHTING FIXTURE - NORMAL AND EMERGENCY POWER.	
	- LIGHTING FIXTURE - EMERGENCY POWER ONLY.	
0	- LED LIGHTING FIXTURE.	
O	- WALL MOUNTED LIGHTING FIXTURE.	
Ť	- EXIT LIGHTING FIXTURE - NORMAL AND EMERGENCY POWER - ARROW(S) INDICATE DIRECTIONAL MARK	ERS.
<b>(</b> 0)	– LIGHTING FIXTURE – WALL WASH.	
<0>	– LIGHTING FIXTURE – DOUBLE WALL WASH.	
	- EMERGENCY BATTERY UNIT WITH 2 LAMPS.	
128	- EMERGENCY BATTERY PACK.	
<b>A</b> 1	- EMERGENCY BATTERY PACK REMOTE HEAD. WIRE WITH MINIMUM #10 AWG.	
EX IX	- PHANTOM SYMBOL INDICATES EXISTING ITEM OR AS NOTED ON DRAWINGS.	

#### <u>WIRING</u>

SYMBOL	DESCRIPTION
<u> </u>	HOMERUN TO APPLICABLE PANEL – WIRING SHALL BE 2#12 AWG WITH SEPARATE GROUND WIRE IN 3/4" CONDUIT UNLESS OTHERWISE NOTED. WIRING – CONCEALED AS SPECIFIED OR AS OTHERWISE NOTED.
<del></del>	EQUIPMENT CONNECTED TO SAME CIRCUIT EXCEPT SEPARATELY CONTROLLED.
<u>—</u> ЕМ—	EMERGENCY ONLY CIRCUIT.
NE	NORMAL/ EMERGENCY LIGHTING CIRCUIT.
— NL—	NIGHT LIGHT CIRCUIT.
— SR—	SURFACE RACEWAY – WIREMOLD 700 SERIES (IVORY).
•—	INDICATES VERTICAL RUN OF SURFACE RACEWAY TO ACCESSIBLE CEILING PLENUM.
<u>—Е</u> —	DUCT BANK
—c—	COMMUNICATIONS SERVICE DUCT BANK.
1	INDICATES DRAWING NOTE NUMBER.

#### RECEPTACLES

<u>SYMBOL</u>	DES	SCRIPTION
₽	_	DUPLEX RECEPTACLE – 20 AMP – 120 VOLT 18" AFF.
θ-	-	SINGLE RECEPTACLE – 20 AMP – 120 VOLT 18" AFF.
EWC 🗲	-	ELECTRIC WATER COOLER RECEPTACLE - TYPE PER MANUFACTURER'S RECOMMENDATIONS - COORDINATE HEIGHT WITH EWC.
GF 🗲	-	GROUND FAULT RECEPTACLE – INDIVIDUAL TYPE – 18" ABOVE FINISHED FLOOR.
₩₽ <del>€</del>	-	DUPLEX RECEPTACLE (WITH 'WR' LABEL) WITH WEATHER PROOF COVER – FLUSH – 18" AFF.
<b>e</b> =	-	DUPLEX RECEPTACLE 20 AMP 120 VOLT 18" AFF - WIRED TO NORMAL/EMERGENCY CIRCUIT - PROVIDE RED COVERPLATE.
⊕=	-	QUAD OUTLET – 120V – 20 AMP EACH – TWO DUPLEX TOGETHER WITH ONE COVER PLATE – 18" AFF.
<b>D</b> -	-	SPECIAL OUTLET – SIZE AND TYPE INDICATED – 18" AFF.
	-	SURFACE RACEWAY – PROVIDE RECEPTACLES AS SHOWN (VERIFY MOUNTING HEIGHT) WIREMOLD 700 SERIES OR EQUAL BY HUBBELL (AS SPECIFIED ON DRAWINGS).
c₽	-	DUPLEX RECEPTACLE – 20AMP, 120VOLT – ((C) INDICATES MOUNTED ABOVE COUNTER OR HEIGHT ABOVE BACKSPLASH. COORDINATE EXACT LOCATION WITH ARCHITECT AND CASEWORK DRAWINGS.)
B	-	EMPTY OUTLET BOX WITH BLANK STAINLESS STEEL COVER PLATE AND 1 1/4" CONDUIT WITH PULL STRING TO ABOVE ACCESSIBLE CEILING.

#### EQUIPMENT

SYMBOL	DES	SCRIPTION
Ū	_	JUNCTION BOX - PROVIDE FINAL CONNECTION TO EQUIPMENT.
Ň	_	MOTOR – SIZE AND TYPE AS INDICATED – BY OTHERS. PROVIDE FINAL CONNECTIONS.
	_	MOTOR CONTROLLER - BY OTHERS. PROVIDE FINAL CONNECTIONS.
—	_	PANELBOARD.
7772	-	EXISTING PANELBOARD.
PC	-	PHOTOCELL – TORK MODEL #3010 (MOUNT AS HIGH ON WALL AS POSSIBLE).
С	-	CONTACTOR – MECHANICALLY HELD – SIZE AND TYPE REQUIRED OR NOTED ON DRAWINGS.
E	-	EMERGENCY SHUTDOWN SWITCH – MOUNT 46" AFF.
ΕK	-	EMERGENCY SHUTDOWN SWITCH WITH KEY RESET - MOUNT 46" AFF.
St	-	THERMAL SWITCH MANUAL STARTER WITH THERMAL PROTECTION AND HAND/AUTO SWITCH TO ALLOW STARTER CONTROL FROM REMOTE SOURCE. HAND/AUTO SWITCH ONLY REQUIRED FOR RE-CIRCULATING PUMPS. SQUARE D CLASS 2510 SERIES WITH HANDLE GUARD/LOCK OFF ATTACHMENT MOUNT ON OR ADJACENT TO EQUIPMENT.
Stp	-	THERMAL SWITCH (MANUAL STARTER WITH THERMAL PROTECTION) SQUARE D CLASS 2510 SERIES WITH HANDLE GUARD/LOCK OFF ATTACHMENT AND PILOT LIGHT — FLUSH MOUNTED — MOUNT ON OR ADJACENT TO EQUIPMENT.
St2	-	THERMAL SWITCH (MANUAL STARTER) LEVITON CAT. NO. N1302 DOUBLE POLE, SINGLE THROW 30A-208V-1Ø WITH A LOCK OFF ATTACHMENT IN A NEMA 1 ENCLOSURE. (SIMILAR SQUARE D) - MOUNT ON OR ADJACENT TO EQUIPMENT.
St3	-	THERMAL SWITCH (MANUAL STARTER) SQUARE D CLASS 2510 SERIES THREE POLE, THREE PHASE 30A—208V—3Ø WITH A LOCK OFF ATTACHMENT IN A NEMA 1 ENCLOSURE. — MOUNT ON OR ADJACENT TO EQUIPMENT.
T	-	TRANSFORMER – SIZE AS INDICATED – SEE DRAWING AND SPECIFICATION.
D	-	NON-FUSED DISCONNECT SWITCH - SIZE AND TYPE INDICATED.
Ŀ	-	FUSED DISCONNECT SWITCH - SIZE AND TYPE INDICATED (PROVIDE FUSES AS PER EQUIPMENT MANUFACTURERS REQUIREMENTS).
<b>区</b>	-	COMBINATION STARTER/DISCONNECT SWITCH - SIZE 1 U.N.O PROVIDED BY E.C 60" TO HANDLE.
VFD 🔀	-	VARIABLE FREQUENCY DRIVE - FURNISHED BY OTHERS. INSTALL DRIVE AND PROVIDE FINAL CONNECTIONS.
D	-	CABLE REEL DROP – IRONTON EXTENSION CORD REEL WITH TRIPE TAP 12/3 CORD. PROVIDE MISCELLANEOUS STEEL FOR MOUNTING. UNIT SHALL HAVE 65' RETRACTABLE CORD. MOUNT DUPLEX TWISTLOCK RECPT. WITHIN 4'-0" OF CABLE REEL.
Q	_	EXHAUST FAN - ROOF MOUNTED - PROVIDED BY OTHERS. PROVIDE FINAL CONNECTIONS.
Ř	-	CEILING FAN.

#### SECURITY/ACCESS CONTROL SYSTEMS

<u>SYMBOL</u>	DES	SCRIPTION
N	-	SECURITY SYSTEM CAMERA. PROVIDE CAT 6 CABLE FROM CAMERA TO DATA CLOSET. PROVIDE ALL CONNECTIONS. EXTERIOR CAMERA'S SHALL BE MOUNTED 15' AND 20' WHERE BUILDING ALLOWS. CAMERA OUTLET SHALL BE MOUNTED INSIDE BLDG WITH CABLE RUN THROUGH WALL TO CAMERA. COIL MINIMUM 3'-0" OUTSIDE BLDG CAMERA SUPPLIED AND INSTALLED BY OWNER.
	-	AUDIBLE ALARM FOR SECURITY SYSTEM.
CR	-	CARD READER – PROXIMITY TYPE – 46" AFF. PROVIDE BOX & $3/4$ " CONDUIT TO ACCESSIBLE CEILING ABOVE DOOR. READER PROVIDED BY OWNER. PROVIDE CAT 6 CABLE TO READER BY E.C.
DS	_	ELECTRIFIED DOOR HARDWARE - FURNISHED AND INSTALLED BY OTHERS, WIRED BY E.C.
KP	-	KEY PAD FOR SECURITY SYSTEM $-$ 46" AFF. PROVIDE CARD READER ADJACENT TO KEYPAD SO THAT VALUE CARD MAY ACT AS PASSWORD. PROVIDE $3/4$ " CONDUIT FROM KEY PAD W/ WIRING. ALL WORK BY E.C.
DC	-	DOOR CONTACTS – AT EXTERIOR DOORS, FURNISHED AND INSTALLED BY OTHERS, WIRED BY CONTRACTOR. AT OVERHEAD DOORS AND EXISTING DOORS. CONTACTS SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR. PROVIDE REQUIRED CONDUIT & WIRING.
PS	_	DOOR HARDWARE POWER SUPPLY. SUPPLIED BY OTHERS, INSTALLED AND WIRED BY E.C.
REX	_	REQUEST TO EXIT - CONDUIT & WIRING BY E.C.

#### FIRE ALARM SYSTEM

SYMBOL	DES	SCRIPTION
А	-	FIRE ALARM AUDIO UNIT – 18" BELOW FINISHED CEILING (8' ABOVE FINISHED FLOOR MAX).
(A)	_	FIRE ALARM AUDIO UNIT - (FLUSH CEILING).
$\heartsuit$	_	FIRE ALARM VISUAL UNIT PROVIDE 15 CD UNLESS NUMBER BESIDE. PROVIDE THIS RATING.
$\bigotimes$	-	COMBINATION FIRE ALARM AUDIO/ VISUAL UNIT CEILING MOUNT. PROVIDE 15 CD UNLESS NUMBER BESIDE. PROVIDE THIS RATING.
F	-	FIRE ALARM PULL STATION - 42" ABOVE FINISHED FLOOR TO THE HANDLE.
30 🗸	-	FIRE ALARM VISUAL UNIT—80"AFF OR 6" BELOW FIN. CEILING (WHICHEVER IS LOWEST) TO BOTTOM OF BOX, UNLESS NOTED OTHERWISE. NUMBER BESIDE UNIT INDICATES CANDELA RATING OTHER THAN 15.
$(\mathbf{H})$	-	HEAT DETECTOR.
S	-	SMOKE DETECTOR.
Sc	-	SMOKE / CARBON MONOXIDE DETECTOR - CEILING OR SURFACE ABOVE CEILING MOUNT.
(S <sub>D</sub>	-	DUCT MOUNTED SMOKE DETECTOR WITH REMOTE LED INDICATOR – FURNISHED AND WIRED BY EC – DETECTOR INSTALLED IN DUCT BY MC. REMOTE INDICATOR INSTALLED IN CEILING/WALL BY E.C. AS PER MANUFACTURER REQUIREMENTS.
RT	_	REMOTE TEST STATION FOR DUCT DETECTOR.
FS	_	SPRINKLER FLOW SWITCH – SUPPLIED AND WIRED BY EC; INSTALLED BY OTHERS.
TS	_	SPRINKLER TAMPER SWITCH – SUPPLIED AND WIRED BY EC; INSTALLED BY OTHERS.
FACP	-	FIRE ALARM CONTROL PANEL. PROVIDE 120V POWER FROM NEAREST NORMAL 120V POWER PANEL.
FAA	-	FIRE ALARM ANNUNCIATOR - VERIFY FLUSH OR SURFACE MOUNTING.
30 AV	-	COMBINATION FIRE ALARM AUDIO/ VISUAL UNIT – 80"AFF OR 6" BELOW FIN. CEILING (WHICHEVER IS LOWEST) TO BOTTOM OF BOX, UNLESS NOTED OTHERWISE. NUMBER BESIDE UNIT INDICATES CANDELA RATING OTHER THAN 15.
EG	-	ELECTRIC GONG – FURNISHED BY FIRE PROTECTION CONTRACTOR; INSTALLED AND WIRED BY E.C. PROVIDE POWER AS REQUIRED FROM NEAREST 120V N/E PANEL.
KB	-	KNOX BOX – CONNECT TO FIRE ALARM SYSTEM.

#### <u>SWITCHES</u>

#### <u>SYMBOL</u> <u>DESCRIPTION</u>

S	_	SINGLE POLE SWITCH – 20 AMP – MOUNT 46" AFF.
S2	_	2 POLE SINGLE THROW SWITCH - 20 AMP - MOUNT 46" AFF.
S3	_	THREE WAY LIGHT SWITCH - 20 AMP - MOUNT 46" AFF.
S4	_	FOUR WAY LIGHT SWITCH - 20 AMP - MOUNT 46" AFF.
Sĸ	_	KEY OPERATED LIGHT SWITCH - 20 AMP - MOUNT 46" AFF.
Sзк	-	THREE WAY KEY OPERATED LIGHT SWITCH — 20 AMP — MOUNT 46" AFF.
S4K	-	FOUR WAY KEY OPERATED LIGHT SWITCH – 20 AMP – MOUNT 46" AFF.
SaSb	-	SUB-LETTERS INDICATE INDIVIDUAL BALLAST WIRING - MOUNT 46" AFF.
Sm	-	MOTION SENSING LIGHT SWITCH - MOUNT 46" AFF.
Sp	-	LIGHT SWITCH WITH PILOT LIGHT – 20 AMP – SIMILAR TO P&S PS20AC2-RPL SERIES – MOUNT 46" AFF.
Sup	-	LOW VOLTAGE DIMMER STATION CONNECTED TO LIGHTING CONTROL SYSTEM - MOUNT 46" AFF.
Sos	_	OCCUPANCY SENSING WALL SWITCH – SEE SPECIFICATIONS – MOUNT 46" AFF.
Sdos	-	OCCUPANCY SENSING SINGLE POLE DIMMER LIGHT SWITCH — SIMILAR TO LUTRON MAESTRO MODEL #MSCL—OP153M—XX. ARCHITECT TO SELECT FINISH FROM FULL LIST OF MANUFACTURER STANDARD COLORS. — MOUNT 46" AFF.
OS	-	LOW VOLTAGE CEILING/WALL MOUNTED OCCUPANCY SENSING UNIT POWERED FROM LIGHTING CONTROL SYSTEM – SEE SPECIFICATIONS. VERIFY LOCATION OF SENSOR WITH MANUFACTURER PRIOR TO INSTALLATION.
DA	-	CEILING MOUNTED DAYLIGHT SENSOR — TO BE WIRED INTO LIGHTING CONTROL SYSTEM AS PER MANUFACTURER'S REQUIREMENTS. ATTACHED TO CEILING OR WALL WITH THE USE OF A THREADED NUT. 2—SIDED TAPE SHALL NOT BE ACCEPTABLE. VERIFY LOCATION OF SENSOR WITH MANUFACTURER PRIOR TO INSTALLATION.

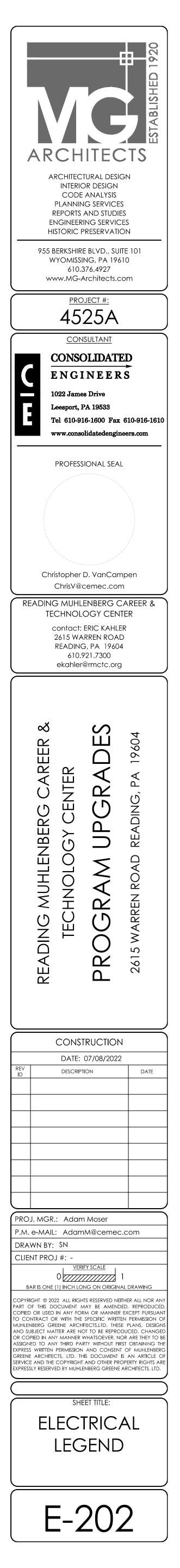
#### COMMUNICATION SYSTEMS

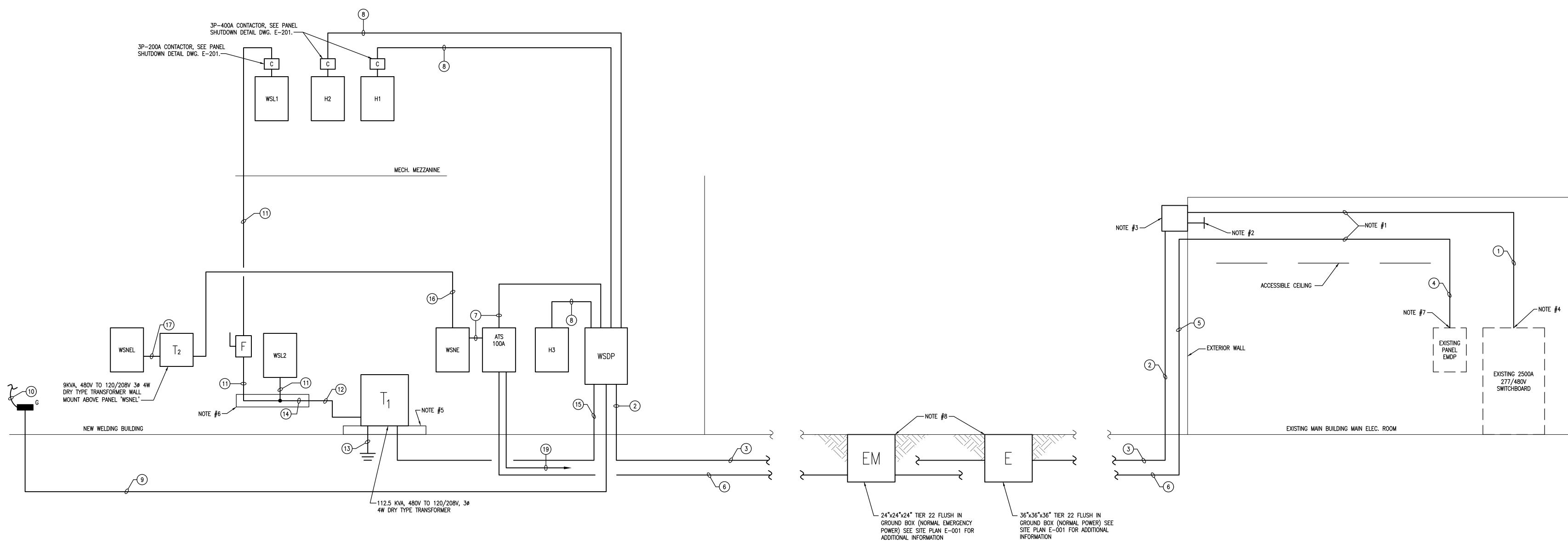
<u>SYMBOL</u>	DES	SCRIPTION
2 Þ	-	DATA OUTLET FLUSH MOUNTED SINGLE GANG 3 1/2" DEEP OUTLET, 18" AFF WITH 1" CONDUIT TO ACCESSIBLE CEILING PLENUM. 'W' INDICATES WALL MOUNTED AT 42" AFF. NUMBER BESIDE SYMBOL DESIGNATES QUANTITY OF DATA CABLES AT THIS LOCATION.
Ю	-	4" CLOCK SYSTEM DIGITAL CLOCK WALL MOUNTED (VERIFY HEIGHT). PROVIDE SYSTEM CORRECTION WIRING. PROVIDE CONNECTION TO NEAREST NORMAL 120V RECEPTACLE CIRCUIT.
S	-	SOUND SYSTEM SPEAKER – FLUSH CEILING MOUNTED (PAGING SYSTEM).
S	-	SOUND SYSTEM SPEAKER – SURFACE WALL MOUNTED (PAGING SYSTEM).
WPS	-	SOUND SYSTEM SPEAKER – EXTERIOR BUILDING SURFACE MOUNTED – WEATHERPROOF – COORDINATE COLOR WITH ARCHITECT. (PAGING SYSTEM)
2	-	WIRELESS ACCESS POINT DATA OUTLET TERMINATED ABOVE ACCESSIBLE CEILING. CLASSROOMS MOUNT ABOVE CEILING NEAR DOOR. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PLENUM RATED BOX AND TERMINATIONS. NUMBER BESIDE SYMBOL DESIGNATES QUANTITY OF DATA CABLES AT THIS LOCATION.
Vc	-	SOUND SYSTEM VOLUME CONTROL – WALL MOUNTED – MOUNT 46" AFF.
P	-	3 1/2" DEEP DOUBLE GANG FLUSH MOUNTED BOX IN CEILING AT INTERACTIVE PROJECTOR OR TELEVISION, FOR AUDIO VISUAL CABLES AS CALLED OUT ON THE DETAIL DRAWING, OR AS OTHERWISE INDICATED IN SPECIFICATIONS OR DRAWINGS. (2) HDMI CABLES RUN FROM TEACHERS DESK TO PROJECTOR.
	-	3 1/2" DEEP DOUBLE GANG FLUSH MOUNTED BOX, 18" AFF (OR AS INDICATED) AT INSTRUCTORS AREA WITH 1 1/2" CONDUIT TO ACCESSIBLE CEILING PLENUM FOR AUDIO VISUAL CABLES AS INDICATED ON DRAWINGS. (2) HDMI CABLES RUN FROM TEACHERS DESK TO PROJECTOR. PROVIDE CONNECTIONS.
	-	AIPHONE INTERCOM STATION – (1– RECESSED UNIT AT WELDING BUILDING LOBBY) ( 1– UNIT SURFACE MOUNTED AT EXIT BESIDE DIESEL MECHANIC EXISTING DOORS). OWNER TO PROVIDE STATION AND TURN OVER BACKBOX FOR E.C. TO INSTALL. RUN CAT 6 CABLE FROM BACK BOX TO DATA CLOSET.

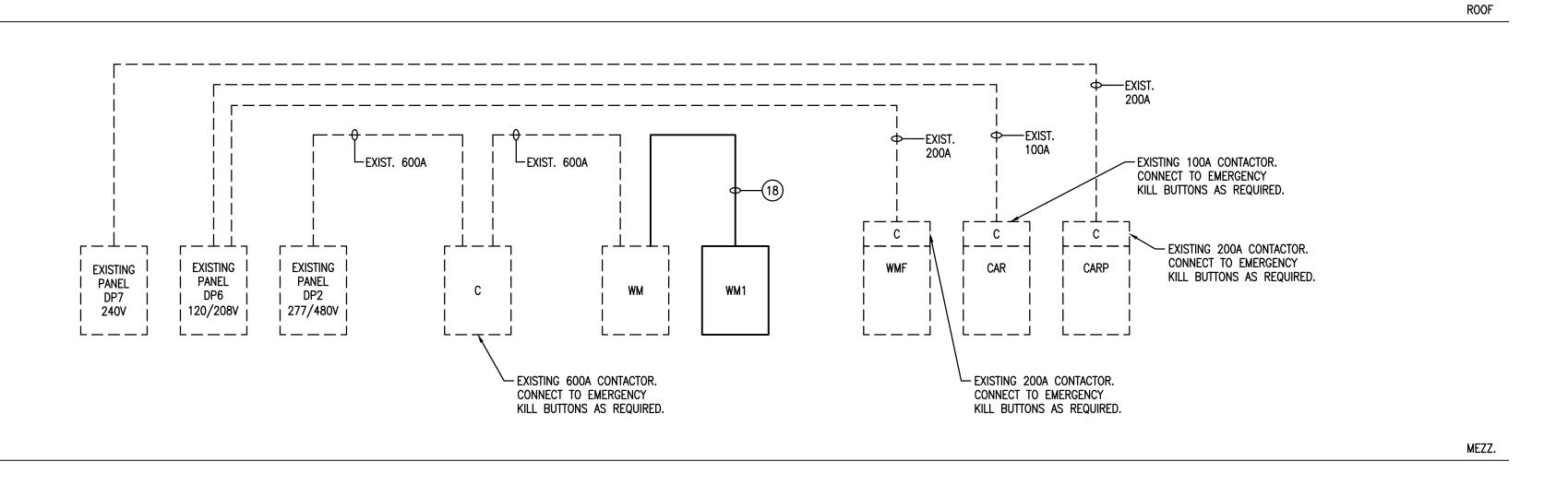
#### ABBREVIATIONS

SYMBOL		DESCRIPTION
AAC	_	AMBIENT AIR CLEANER - BY OTHERS. PROVIDE FINAL CONNECTIONS.
DAC	_	AIR CONDITIONING UNIT - BY OTHERS. PROVIDE FINAL CONNECTIONS.
AFF	-	ABOVE FINISHED FLOOR
AFG	-	ABOVE FINISHED GRADE
rtu	-	AIR HANDLING UNIT - BY OTHERS. PROVIDE FINAL CONNECTIONS.
ATS	-	AUTOMATIC TRANSFER SWITCH – SEE SPECIFICATIONS
В	-	BOILER - BY OTHERS. PROVIDE FINAL CONNECTIONS.
СН	-	CABINET HEATER - BY OTHERS. PROVIDE FINAL CONNECTIONS.
CU	-	CONDENSING UNIT - BY OTHERS. PROVIDE FINAL CONNECTIONS.
DC	-	DUST COLLECTOR - BY OTHERS. PROVIDE FINAL CONNECTIONS.
EF	-	EXHAUST FAN - BY OTHERS. PROVIDE FINAL CONNECTIONS.
EP	-	EXPLOSION PROOF
ERU	-	ENERGY RECOVERY UNITS - BY OTHERS. PROVIDE FINAL CONNECTIONS.
EUH	-	ELECTRIC UNIT HEATER - BY OTHERS. PROVIDE FINAL CONNECTIONS.
EX	-	EXISTING ITEM TO REMAIN
HP	-	HEAT PUMP UNIT - BY OTHERS. PROVIDE FINAL CONNECTIONS
Р	-	PUMP – BY OTHERS. PROVIDE FINAL CONNECTIONS.
TL	-	TWIST-LOCK
UH	-	UNIT HEATER - BY OTHERS. PROVIDE FINAL CONNECTIONS.
UNO	-	UNLESS NOTED OTHERWISE
WH	-	WALL HEATER - BY OTHERS. PROVIDE FINAL CONNECTIONS.
WP	-	WEATHER PROOF
NFDS	-	NON FUSED DISCONNECT SWITCH
FDS	-	FUSED DISCONNECT SWITCH
С	-	INDICATES DEVICES TO BE INSTALLED ABOVE COUNTERTOP OR BACKSPLASH.
		COORDINATE EXACT LOCATION WITH ARCHITECTURAL CASEWORK DRAWINGS.

NOTE: THE ABOVE ELECTRICAL LEGEND IS STANDARD. SOME ITEMS LISTED ARE NOT NECESSARILY USED ON THIS PROJECT. ALL ITEMS LISTED SHALL BE PROVIDED BY THIS CONTRACTOR UNLESS NOTED OTHERWISE.







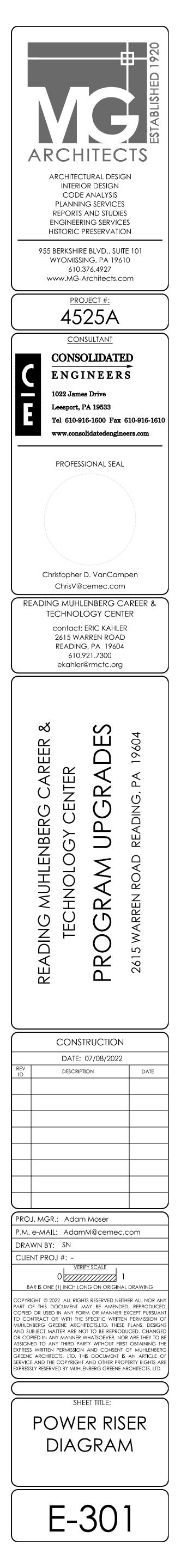
#### PARTIAL POWER RISER DIAGRAM SCALE: NTS

#### POWER RISER NOTES:

- 1. RUN CONDUITS THRU EXPOSED AREAS AND ABOVE ACCESSIBLE CEILINGS AS HIGH AS POSSIBLE.
- 2. STUB SPARE 4" CONDUIT FROM BOX INTO ROOM
- 3. PROVIDE NEMA 3R PULL BOX HIGH ON WALL AS POSSIBLE. SIZE BOX AS REQUIRED.
- 4. PROVIDE NEW 3P-1000A, GF C.B. IN EXISTING 2500A 277/480V SWITCHBOARD.
- PROVIDE CONNECTIONS.
- 5. PROVIDE 3 1/2" HIGH CONCRETE HOUSE CLEANING PAD.
- 6. PROVIDE 12"x12" WIRE THROUGH.
- 7. PROVIDE NEW 3P-100A C.B. IN EXISTING PANEL. PROVIDE CONNECTIONS.
- 8. BOX TO BE USED AS PULL BOX. FEEDER TO RUN THRU BOX. NO SPLICES PERMITTED IN BOX.

# FEEDER SCHEDULE (ALL FEEDERS COPPER):

- (3) 4" <u>"EMT"</u> CONDUITS EACH WITH 4#600KCMIL&#3/0GRD. RUN CONDUITS AS HIGH AS POSSIBLE THRU EXPOSED STRUCTURE AND ABOVE ACCESSIBLE CEILING AREAS.
- 2. (4) 4" "<u>RIGID GALVANIZED STEEL"</u> CONDUITS. (3) CONDUITS WITH 4#600KCMIL&#3/OGRD. CONDUIT SECURED TO OUTSIDE OF WALL. (1) CONDUIT SPARE, PROVIDE PULL STRING IN SPARE CONDUIT.
- 3. (4) 4" <u>"SCHEDULE 40 PVC" CONDUITS.</u> (3) CONDUITS EACH WITH 4#600KCMIL&#3/OGRD. ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC WITH RIGID GÄLVANIZED STEEL LARGE SWEEP ELBOWS. PROVIDE CONCRETE ENCASEMENT. (1) CONDUIT SPARE, PROVIDE PULL STRING IN SPARE CONDUIT.
- 4#3/0&#6GRD.-2 1/2" CONDUIT (EMT) VIA EXPOSED STRUCTURE AND ABOVE ACCESSIBLE CEILING.
- 5. 4#3/0&#6GRD.-2 1/2" CONDUIT (RIGID GALVANIZED STEEL) ON EXTERIOR WALL
- 6. 4#3/0&#6GRD.-4" CONDUIT (SCHEDULE 40 PVC) UNDERGROUND. ALL ELBOWS SHALL BË R.G.S.
- 7. 4#1&#6GRD.-1 1/2" CONDUIT
- 8. 4#500KCMIL&#2GRD.4" CONDUIT
- 9. 4/0 CU GRD.-1" CONDUIT. CONNECT TO DATA CLOSET GROUND BAR.
- 10. 4/0 CU GRD. CONNECT TO DATA RACK
- 11. 4#3/0&#6GRD.-2"CONDUIT.
- 12. 4#500KCMIL&#2GRD.-4"CONDUIT
- 13. 4/0 CU GRD.-1" CONDUIT TO BUILDING STEEL
- 14. 4#500KCMIL&#2GRD
- 15. 3#2/0&#6GRD.-2" CONDUIT
- 16. 3#12&#12GRD.-3/4" CONDUIT
- 17. 4#8&#10GRD.-3/4" CONDUIT
- 18. 3#4/0W#4GRD.-2" CONDUIT
- 19. GENERATOR START CIRCUITS IN 1 1/2" CONDUIT TO MAIN BLDG. GENERATOR. PROVIDE ALL WIRING AND CONNECTIONS.



QUARE 'D' NF (CONTROLLED BY 3P-400A CONTACTOR)	
WITH GRD BAR	

SQUARE 'D' NF (CONTROLLED BY ) WITH GRD. BAR										ATING: 18,000
PANEL: H1	MAINS:		MLO			ø:	3			4 POLES: 84
VOLTS: 277/ 480	MC	UNTING:	SU	RFA	CE			L	LOCATION:	MECH. MEZZANINE
REMARKS & LOCATION	LOAD	BKR	скт	А	в	с	СКТ	BKR	LOAD	REMARKS & LOCATION
OVERHEAD		60	1				2	60		OVERHEAD
WELDER RECPT.			3				4			WELDER RECPT.
AT TABLE (NOTE 1)		3	5				6	3		AT TABLE (NOTE 1)
		60	7				8	60		
WELDER BOOTH (NOTE 1)			9	0001010000			10			WELDER BOOTH (NOTE 1)
		3	11		111100111		12	3		
		60 /	13				14	60 /		
WELDER BOOTH (NOTE 1)			15	2010101000			16			WELDER BOOTH (NOTE 1)
		3	17				18	3		
		60 /	19				20	60 /		
WELDER BOOTH (NOTE 1)			21				22			WELDER BOOTH (NOTE 1)
		3	23				24	3		
		60 /	25				26	60 /		
WELDER BOOTH (NOTE 1)			27				28			WELDER BOOTH (NOTE 1)
		3	29				30	3		
		60 /	31				32	60 /		
WELDER BOOTH (NOTE 1)			33				34			WELDER BOOTH (NOTE 1)
. ,		3	35				36	3		
		60	37				38	60		
WELDER BOOTH (NOTE 1)			39				40			WELDER BOOTH (NOTE 1)
		3	41				42	3		
EXTERIOR WELDER OUTLET		60	43				44	60 /		
(NOTE 1)			45				46			EXTERIOR WELDER OUTLET
		3	47				48	3		
OVERHEAD WELDER OUTLET		60 /	49					60 /		OVERHEAD WELDER OUTLET
AT WELDER TABLE (NOTE 1)			51				52			AT WELDER TABLE (NOTE 1)
		3					54	3		
WELDING SHOP LTS.	1150	20	55				56	20	1100	STOR, THEORY, CORR LOCKER LTS.
		60 /	57				58	20		SPARE
PORTABLEWELDER	8000		59				60	20		SPARE
		3	61				62	20		SPARE
SPARE		20	63				64	20		SPARE
SPARE		20	65	$\left  \right $			66	20		SPARE
FREE SPACE			67				68			FREE SPACE
FREE SPACE			69				70			FREE SPACE
FREE SPACE			71				72			FREE SPACE
FREE SPACE			73				74			FREE SPACE
FREE SPACE			75				76			FREE SPACE
FREE SPACE			77				78			FREE SPACE
FREE SPACE			79				80			FREE SPACE
FREE SPACE			81				82			FREE SPACE
FREE SPACE			83				84			FREE SPACE
NOTE 1 - E.C. SHALL LABEL CIRCI										

QUARE 'D' NQ (CONTROLLED BY	SP-200A CONT	ACTOR)								FED F		1SF
WITH GRD. BAR							•				10,000	
PANEL: WSL1	MAINS:		MLO				3				DLES: 42	2
VOLTS: 120/ 208	MO	UNTING:	SU	RFA	CE			L	LOCATION:	ELEC. ROOM E-	1	
REMARKS & LOCATION	LOAD	BKR	скт	A	в	с	скт	BKR	LOAD	REMARKS & LO	DCATION	
OVERHEAD DROP REEL	180	20 GF	1				2	20	20 GF	OVERHEAD DRO	OP REEL	
OVERHEAD DROP REEL	180	20 GF	3				4	20	20 GF	OVERHEAD DRO	OP REEL	
EXTERIOR WELDER STATION	180	20	5				6	20	180	EXTERIOR WEL	DER STATION	
RECPT'S WELD SHOP	540	20	7				8	20	540	GRINDING TAB	ERECPT'S	
RECPT'S WELD SHOP	540	20	9				10	20	180	120V PWR (VIC	TOR)	
RECPT'S WELD SHOP	540	20	11				12	20	180	120V PWR CUT	TING MACH.	
CUT OFF MACHINE	180	20	13				14	20	180	120V PWR WEL	DING POSITION	1EP
SPARE		20	15				16	20	180	120V PWR BAN	D SAW (HORIZ.	)
SPARE		20	17				18	20	180	120V PWR CHC	P SAW	
SPARE		20	19				20	20	180	120V PWR WEL	D TABLE	
SPARE		20	21				22	20		SPARE		
SPARE		20	23				24	20		SPARE		
		20 🦯	25				26	20		SPARE		
LATHE	3000		27				28	30				
		3	29				30		4000	HYDRAULIC PR	ESS	
BLANK SPACE			31				32	3				
BLANK SPACE			33				34			BLANK SPACE		
BLANK SPACE			35				36			BLANK SPACE		
BLANK SPACE			37				38			BLANK SPACE		
BLANK SPACE			39				40			BLANK SPACE		
BLANK SPACE			41				42			BLANK SPACE		

ST = SHUNT TRIP BREAKER HL = HANDLE LOCK ATTACHMENT PL = HANDLE PADLOCK ATTACHMENT

EXISTING PANEL SQUARE 'D' HC WITH GRD. BAR										ATING:	FED FROM: 18.00	DP2
PANEL: WM	MAINS:	6004	MLO			d٠	3		WIRES:		,	42
VOLTS: 480		UNTING:		RFA			<u> </u>	- I	_OCATION:		· · · · ·	-12
REMARKS & LOCATION	LOAD	BKR	скт	A	в	~	СКТ	BKR	LOAD		KS & LOCATION	
			CRI	~		<u> </u>	CRI				No & LOCATION	
		20	1				2	20				
LATHE (NOTE 1&2)			3				4				(NOTE 1&2)	
		3	5				6	3				
		20	7				8	20				
LATHE (NOTE 1&2)			9				10				(NOTE 1&2)	
		3			_		12	3				
		20	13				14	20				
GRINDER (NOTE 1&2)			15				16			GRINDE	R (NOTE 1&2)	
		3			_		18	3				
		20	19				20	20				
BUFFER (NOTE 1&2)			21				22			BOFFER	(NOTE 1&2)	
		3					24	3				
		20	25				26	225				
BUFFER (NOTE 1&2)			27				28			PANEL	'WM1' (NOTE1)	
		3			_		30	3				
		30	31				32	20				
WIRE CUT EDM (NOTE 1)			33				34		4000		OLLECTOR	
		3	35		_		36	3				
			37				38	+				
			39				40	/				
NOTE 1 - REMOVE EXIST. CIRCUI		$\vee$	41				42	V				

	SQUARE'D' NO											WSNE VIA FED FROM :	TRANSF.
I	WITH GRD. BAR									AIC R4		10.0	
	PANEL: WSNEL	MAINS:	354	мсв			ά٠	3		WIRES:	4	POLES:	24
	VOLTS: 120/ 208	-	DUNTING:		RFA	ĀСЕ			I	LOCATION:	-		24
	REMARKS & LOCATION	LOAD	BKR	скт	A	в	с	скт	BKR	LOAD	REMAR	S & LOCATIO	N
L	DATA RACK	360	20	1				2	20	360	DATA R/	ACK	
IL	DATA CLOSET RECPT'S	360	20	3				4	20	400	FIRE AL	ARM PANEL	
IL	DATA CLOSET 30A, TL	1500	30	5				6	20	100	INTERCO	OM CLOCK CA	B.
۱L	FRONT DOOR PWR. SUPPLY	100	20	7				8	20	180	TANK ST	FOR. RM LTS.	
	CU-1 & AC-1	2288	20	9				10	20	410	TOILET	ROOM SENSO	RS/RECPT'S
			2	11				12	20	0	BLANKS	SPACE	
IL	ELECTRIC GONG	200	20	13				14	20	0	BLANKS	SPACE	
	SPARE	0	20	15				16	20	0	BLANKS	SPACE	
	SPARE	0	20	17				18	20	0	BLANKS	SPACE	
	SPARE	0	20	19				20	20	0	BLANKS	SPACE	
	SPARE	0	20	21				22	20	0	BLANKS	SPACE	
	SPARE	0	20	23				24	20	0	BLANKS	SPACE	

HL = HANDLE LOCK ATTACHMENT

VERIFY NUM BERING WITH OWNER.

PL = HANDLE PADLOCK ATTACHMENT

NOTE 2 - E.C. SHALL LABEL CIRCUIT BREAKER W/ CORRECT BUFFER, GRINDER, OR LATHE NUM BER ON SCHEDULE.

	4004	MIO			<i>d</i> ·	•				18,000 POLES:	84
MAINS:				CE	ø:	3	- ,				84
	50111110.						•	LOOA HON.	WILOTI.		
LOAD	BKR	скт	A	в	с	скт	BKR	LOAD	REMAR	KS & LOCATION	
	60	1				2	60				
		3				4	] /		WELDE	R BOOTH (NOTE 1)	
	3	5				6	3				
	60	7				8	60				
		9				10			WELDE	R BOOTH (NOTE 1)	
	3	11				12	3				
	60	13				14	60				
		15			10000000000	16			WELDE	R BOOTH (NOTE 1)	
	3	17	-			18	3				
	60	19				20	60				
		21				22			WELDE	R BOOTH (NOTE 1)	
						24	3				
	60	25				26	60				
	/	27				28			WELDE	R BOOTH (NOTE 1)	
_	<u> </u>						3				
	60						60				
		L							WELDE	R BOOTH (NOTE 1)	
_	<u> </u>						γ				
	60						60				
		L								RBOOTH (NOTE 1)	
	<u> </u>						Υ				
	20						20				
										RESS	
		<u> </u>					¥,				
	30						60				
									PLASM	ACUITER	
	<u> </u>	<u> </u>					Υ,				
0000	20						15	2000			
3000	/						/			SO DAIND SAVV	
	<u> </u>						<u> </u>				
	-		ľ								
									-		
	20						20				
			-								
	+										
	+										
-	+		-								
-	+										
-	+										
	-	83				84			FREE SI		
		LOAD BKR 60 3 3 60 3 60 3 60 3 60 3 60 3 60 3 60 3 60 3 60 3 60 3 60 3 60 3 60 3 60 3 60 3 60 5 5 5 60 5 5 60 5 5 5 60 5 5 5 5 5 5 6 5 5 5 5 5 5 5 5 5 5 5 5 5	LOAD BKR CKT  LOAD 60 1 3 5 60 7 9 9 3 11 60 13 15 3 17 60 13 15 3 17 60 19 21 3 17 60 19 21 3 17 60 19 21 3 17 60 19 21 3 17 20 3 17 20 3 3 17 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LOAD         BKR         CKT         A           60         1         3         3           3         5         3         3           60         7         9         3           9         3         11         6           60         13         1           60         13         1           60         13         1           60         13         1           15         3         17           60         19         1           21         3         23           60         13         1           21         3         23           60         31         1           323         1         1           33         33         1           33         3         1           33         3         1           33         3         1           33         3         1           33         3         1           33         3         1           341         1         1           300         49         1	LOAD         BKR         CKT         A         B           60         1         3         1         3         1           3         5         3         3         1         3         1           60         7         1         3         1         1         1         1           60         7         1         1         1         1         1         1         1           60         13         1         <	$\begin{tabular}{ c c c c c } &  CKT &  A &  B &  C  \\  A &  A &  A &  A &  A &  A &  A &  $	LOAD         BKR         CKT         A         B         C         CKT           60         1         0         2         3         0         0         4           3         5         0 <td< td=""><td><math display="block">\begin{tabular}{ c c c c c c c } \hline \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ </math></td><td><math display="block">\begin{array}{c c c c c c c c c c c c c c c c c c c </math></td><td>LOAD         BKR         CKT         A         B         C         CKT         BKR         LOAD         REMAR           60         1         0         2         60         WELDE           3         5         0         60         7         0         8         60         WELDE           60         7         0         0         112         3         0         10         WELDE           60         13         0         14         60         3         114         60         WELDE           3         11         0         14         60         WELDE         3         115         14         60         WELDE           3         17         0         18         14         60         WELDE         3           60         19         0         20         60         WELDE         3         3           60         25         0         26         0         3         3         4           3         29         0         30         3         3         4         4           3         3         0         440         3         3         <t< td=""><td>MAINS:         400A MLO         0:         3         WRES:         4         POLES:           LOAD         EKR         CKT         A         B         C         CKT         BKR         LOAD         REMARKS &amp; LOCATION:         MECH. MEZZANINE           LOAD         EKR         CKT         A         B         C         CKT         BKR         LOAD         REMARKS &amp; LOCATION:           60         1         2         60         3         61         3         61         10           3         5         6         3         60         7         8         60         3           60         7         1         8         60         3         WELDER BOOTH (NOTE 1)           3         11         12         2         3         WELDER BOOTH (NOTE 1)           3         13         14         60         1         12         12         12           60         25         26         60         WELDER BOOTH (NOTE 1)         3         3         3           60         31         32         60         3         3         60         3           3         41         42         3</td></t<></td></td<>	$\begin{tabular}{ c c c c c c c } \hline $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	LOAD         BKR         CKT         A         B         C         CKT         BKR         LOAD         REMAR           60         1         0         2         60         WELDE           3         5         0         60         7         0         8         60         WELDE           60         7         0         0         112         3         0         10         WELDE           60         13         0         14         60         3         114         60         WELDE           3         11         0         14         60         WELDE         3         115         14         60         WELDE           3         17         0         18         14         60         WELDE         3           60         19         0         20         60         WELDE         3         3           60         25         0         26         0         3         3         4           3         29         0         30         3         3         4         4           3         3         0         440         3         3 <t< td=""><td>MAINS:         400A MLO         0:         3         WRES:         4         POLES:           LOAD         EKR         CKT         A         B         C         CKT         BKR         LOAD         REMARKS &amp; LOCATION:         MECH. MEZZANINE           LOAD         EKR         CKT         A         B         C         CKT         BKR         LOAD         REMARKS &amp; LOCATION:           60         1         2         60         3         61         3         61         10           3         5         6         3         60         7         8         60         3           60         7         1         8         60         3         WELDER BOOTH (NOTE 1)           3         11         12         2         3         WELDER BOOTH (NOTE 1)           3         13         14         60         1         12         12         12           60         25         26         60         WELDER BOOTH (NOTE 1)         3         3         3           60         31         32         60         3         3         60         3           3         41         42         3</td></t<>	MAINS:         400A MLO         0:         3         WRES:         4         POLES:           LOAD         EKR         CKT         A         B         C         CKT         BKR         LOAD         REMARKS & LOCATION:         MECH. MEZZANINE           LOAD         EKR         CKT         A         B         C         CKT         BKR         LOAD         REMARKS & LOCATION:           60         1         2         60         3         61         3         61         10           3         5         6         3         60         7         8         60         3           60         7         1         8         60         3         WELDER BOOTH (NOTE 1)           3         11         12         2         3         WELDER BOOTH (NOTE 1)           3         13         14         60         1         12         12         12           60         25         26         60         WELDER BOOTH (NOTE 1)         3         3         3           60         31         32         60         3         3         60         3           3         41         42         3

SQUARE 'D' NQ											FED FROM:	TRAN
WITH GRD. BAR			MOD				•			ATING:	10,0	
PANEL: WSL2 VOLTS: 120/ 208	MAINS:	UNTING:		RFA			3		WIRES: LOCATION:		POLES:	42
VOLTS. <u>120/200</u>	WO	on mo.				•	-		LOCATION.			
REMARKS & LOCATION	LOAD	BKR	скт	A	в	с	скт	BKR	LOAD	REMAF	KS & LOCATIO	N
EWC'S	360	20 GF	1				2	20	180	ELECTI	RIC RM RECPTS	<b>.</b>
CORRIDOR RECPT'S	540	20	3	00000000			4	20	540	BOYS/C	GIRLS LOCKER I	RECPT'S
MATERIAL STOR. RECPT'S	540	20	5				6	20	180	MECH.	RM.RECPT.	
MATERIAL STOR. RECPT'S	540	20	7				8	20	540	THEOR	YRM RECPT'S	
TOILET ROOM RECPT'S	360	20	9				10	20	540	THEOR	YRM RECPT'S	
LOBBY RECPT'S	720	20	11				12	20	540	THEOR	YRM RECPT'S	
MEZZEF, RECPT. & ECH	1020	20	13				14	20	864	EF-1 R0	OF	
EF-4 ROOF	1200	20	15				16	20	864	EF-2 R0	OF	
EF-5 ROOF	300	20	17		0000000		18	20	864	EF-3 R0	OOF	
EF-6 ROOF	1660	25	19			0000000	20	20	530	CIRCUL	ATION PUMP	
GUH-1 MATERIAL STORAGE	408	20	21	00101000			22	20	300	AIRCO	MPRESSOR CO	NDENSA
(2) ECH-1'S TOILET ROOM S	1128	20	23		D1000000		24	20	700	AIRCO	MPRESSOR DR	YER
(2) ECH-2'S TOOL & NIGHT STOR.	1128	20	25			00000000	26	20	180	MATS	TORAGE HOIST	
EMERGENCY PANEL SHUTDOWN	300	20	27	00101100			28	20		SPARE		
SPARE		20	29		0000000		30	20		SPARE		
SPARE		20	31				32	20		SPARE		
SPARE		20	33				34	20		(GF BK	R) SPARE	
SPARE		20	35				36	20		(GF BK	R) SPARE	
SPARE		20	37			100000000	38	20		(GF BK	R) SPARE	
SPARE		20	39	approx (19)			40	20		(GF BK	R) SPARE	
SPARE		20	41	1			42	20		GF BK	R) SPARE	

ST = SHUNT TRIP BREAKER HL = HANDLE LOCK ATTACHMENT PL = HANDLE PADLOCK ATTACHMENT

SQUARE 'D' NF CONTROLLED BY 6	500A CONTACT	OR (VIA	PANEL	. 'W	M')						FED FROM :	
WITH GRD. BAR										ATING:	18,000	
PANEL: WM1	MAINS:						3		WIRES:		POLES:	
VOLTS: 480	MC	UNTING:	SU	RFA	CE			L	OCATION:	MEZZ.		
REMARKS & LOCATION	LOAD	BKR	скт	A	в	с	скт	BKR	LOAD	REMAR	S & LOCATION	
		20	1				2	20				
MILLING MACHINE (NOTE 1)			3				4			MILLING	MACHINE (NOTE 1	
		3	5				6	3				
		20	7		01111080111		8	20				
MILLING MACHINE (NOTE 1)			9			0000000	10			MILLING	MACHINE (NOTE 1	
		3		00000000			12	3				
		20	13				14	20				
MILLING MACHINE (NOTE 1)			15				16			MILLING MACHINE (NO		
		3					18	3				
		20	19				20	20				
MILLING MACHINE (NOTE 1)			21				22				MACHINE (NOTE 1	
		3					24	3				
LATHE (NOTE 1)		20	25 27				26 28	20		LATHE(		
		3					28 30	3			NOTE I)	
		20 /	31				30	20				
LATHE (NOTE 1)		20	33				34	20		LATHE(	NOTE 1)	
		3					36	3			10121)	
		20 /	37				38	20				
LATHE (NOTE 1)			39				40				NOTE 1)	
		3	41				42	3			- ,	
NOTE 1 - EC. SHALL LABEL CIRC						MII				L N SCHEDI		

Square 'd' I-line With GRD. Bar Panel: WSDP Volts: 277/ 480	MAINS: M(	1200A DUNTING:		3F RFA		~	3		AIC RA WIRES: OCATION:	
REMARKS & LOCATION	LOAD	BKR	скт	Α	в	с	скт	BKR	LOAD	REMARKS & LOCATION
H1	0	400	1				2	400	0	H2
H3	0	400	3				4	175	0	PANEL 'WSL1' & 'WSL2' VIA TRANSFORMER
ATS	0	100	5				6	60 3	0	SPARE
SPARE	0	100	7				8	100	0	SPARE
SPARE	0	225	9				10	100	0	SPARE SPACE (FUTURE)
SPARE SPACE (FUTURE)	0	100	11				12	100	0	SPARE SPACE (FUTURE)
SPARE SPACE (FUTURE)	0	100	13				14	100	0	SPARE SPACE (FUTURE)

GF = GROUND FAULT PROTECTED BREAKER

ST = SHUNT TRIP BREAKER HL = HANDLE LOCK ATTACHMENT

PL = HANDLE PADLOCK ATTACHMENT

TRANSF. 10,000 ES: 42 CATION ECPTS. CKER RECPT'S PT'S PT'S PT'S JMP ORCONDENSATE OR DRYER HOIST 

WSDP V

WM 18,000 OLES: 42 OCATION CHINE (NOTE 1) CHINE (NOTE 1) CHINE (NOTE 1) CHINE (NOTE 1) 

N BLDG FROM: SWITCHBOARD 22,000 TG SP: SEE BELOW OCATION ' & 'WSL2'

E (FUTURE) E (FUTURE)

WITH GRD. BAR		_					-			ATING: 22,000	
PANEL: H3	MAINS:	400A	MLO			ø:	3	- L	WIRES:	4 POLES: 42	
VOLTS: 277/ 480	MC	DUNTING:	SU	RFA	CE			L	LOCATION:	ELEC. ROOM E-1	
REMARKS & LOCATION	LOAD	BKR	скт	A	в	с	скт	BKR	LOAD	REMARKS & LOCATION	
		35	1				2	20			
RTU-1	17430		3				4		8300	RTU-2	
		3	5				6	3			
		110	7				8	20			
WSC-1	63910		9				10		8466	(2) AAC'S SOUTHSIDE WORKRM	
		3	11				12	3			
		20	13				14	20	2022	ECH-4 MECH. ROOM	
(2) AAC-1'S NORTHSIDE WORKRM	8466		15				16	20			
		3	17				18		4980	ECH-5 ENTRANCE	
		20	19			- and de	20	3			
AIR COM PRESSOR	9130		21				22	20			
		3	23				24		9000	WATER HEATER	
		20	25				26	3			
SPARE			27	000000000			28	20 /			
		3	29				30		0	SPARE	
SPARE	0	20	31				32	3			
SPARE	0	20	33				34	20	0	SPARE	
SPARE	0	20	35				36	20	0	SPARE	
SPARE	0	20	37				38	20	0	SPARE	
SPARE	0	20	39				40	20	0	SPARE	
SPARE	0	20	41				42	20	0	SPARE	
			43				44				
			45				46				
			47				48				
			49				50				
			51				52				
			53				54				
	$\sim$		55				56				
	$\vdash$		57				58				
		$\left  \right\rangle$	59				60				
			61				62	1			
			63		${\boldsymbol{\succ}}$	>	64				
			65	$\downarrow$			66				
			67				68				
			69				70	$\vdash$			
			71	-			72		$\overline{}$		
			73				74				
			75			$\vdash$	76				
			77				78				
			79				80				
			81				82				
			83	$\vdash$			84			$\vdash$	

GF = GROUND FAULT PROTECTED BREAKER

ST = SHUNT TRIP BREAKER HL = HANDLE LOCK ATTACHMENT PL = HANDLE PADLOCK ATTACHMENT

Square 'd' Nq With Grd. Bar FED FROM : ATS AIC RATING: 10,000 MAINS: 100A MCB Ø: 3 WIRES: 4 POLES: 30 PANEL: WSNE VOLTS: 277/ 480 MOUNTING: SURFACE LOCATION: ELEC. ROOM E-1 LOAD BKR CKT A B C CKT BKR LOAD REMARKS & LOCATION REMARKS & LOCATION 
 1
 2
 20
 386
 NIGHT LIGHTS & EXIT SIGNS

 3
 4
 20
 718
 NE LIGHTS
 9,000 PANEL WSNEL 3 5 6 20 1200 EXTERIOR BLDG. LTS. VIA TRANSFORMER 
 7
 8
 20
 0
 SPARE

 9
 10
 20
 0
 SPARE

 3
 11
 12
 20
 0
 SPARE
 SEWAGE EJECTOR 4980 
 0
 20
 13
 14
 20
 0
 SPARE

 0
 20
 15
 16
 BLANK S
 SPARE SPARE BLANK SPACE 
 0
 20
 17
 18

 0
 20
 17
 18

 0
 20
 19
 20

 21
 22

 23
 24

 25
 26

 27
 28

 29
 30
 SPARE BLANK SPACE SPARE BLANK SPACE BLANK SPACE

		OLLED BY 2										FED FROM :	DP6
WITH GRI								-		AIC RA		10,000	
	: WMF	MAINS:		MCB		_	ø: ِ	3	-	WIRES:		POLES:	42
VOLTS	120/ 208	MC	UNTING:	SU	RFA	CE				LOCATION:	MEZZ.		
REM ARKS 8		LOAD	BKR	скт	А	в	с	скт	BKR	LOAD	REMAR	KS & LOCATION	
			80	1				2	80	1			
HAAS VF1 M	MILL (NOTE 1)		3	3 5				4			HAASV	'F1 MILL (NOTE 1)	
3D PRINTER	2	180	20	7				8	15 /				
3D PRINTER	l	180	20	9				10			SPARE	(NOTE 1)	
SPARE			20	11				12	/ 3				
			20	13				14	20	1			
SPARE (NO	RE (NOTE 1)			15 17				16 18	/ .		SPARE	(NOTE1)	
			3 30	17				20	15				
SPARE (NO	TE 1)			21				22			SPARE	(NOTE 1)	
			3	23				24	3	SPARE (NOTE			
			20	25				26	30	1			
SPARE (NO	TE 1)			27				28			SPARE	(NOTE 1)	
			3	29				30					
				31 33				32 34					
				35				36					
				37				38	/	1			
				39				40					
	MOVE EXIST. CIRCUIT BI		$\bigvee$	41				42	V				

EXISTING SQUARE 'D' NQ CONTR WITH GRD. BAR		JONTAG							ATING:	FED FROM: 10.00	DP6	-
PANEL: CAR	MAINS:	100/	MLO		d.	3		WIRES:	4 TING:	POLES:	42	_
VOLTS: 120/ 208		JNTING:		REA	CE		. ,			POLES	42	_
VOLTS. 120/ 200	W OC	JATINO.				-	Ľ	LOCATION.				-
REMARKS & LOCATION	LOAD	BKR	скт	А	вС	скт	BKR	LOAD	REMAR	S & LOCATION	1	
BUFFER	180	20	1			2	20 GF	0	DROP C	ORD AT TABLE	(NOTE 1)	
BUFFER	180	20	3			4	20 GF	0	DROP C	ORD AT TABLE	(NOTE 1)	
BUFFER	180	20	5			6	20 GF	0	DROP C	ORD AT TABLE	(NOTE 1)	
SANDER	180	20	7			8	20 GF	0	DROP C	ORD AT TABLE	(NOTE 1)	
GRINDER	180	20	9			10	15 GF	500	(GF BKR	) WASH FOUNT	AIN RECPT.	E
GRINDER	180	20	11			12	15 GF	500	(GF BKR	) EWC RECPT.		Ē
LATHE COMP SCREEN	180	20	13			14	15 GF	0	SPARE			1
LATHE COMP SCREEN	180	20	15			16	15 GF	0	SPARE			1
LATHE COMP SCREEN	180	20	17			18	15 GF	0	SPARE			E
MILLING MACH. (NOTE 2)	180	20	19			20	20	1200	EF-8 ON	ROOF		E
MILLING MACH. (NOTE 2)	180	20	21			22	20	540	RECPT'S	SMATERIAL ST	ORAGE	E
MILLING MACH. (NOTE 2)	180	20	23			24	20	0	SPARE			E
MILLING MACH. (NOTE 2)	180	20	25			26	20	0	SPARE			E
MILLING MACH. (NOTE 2)	180	20	27			28	20	0	SPARE			Ē
MILLING MACH. (NOTE 2)	180	20	29			30	20	0	SPARE			E
MILLING MACH. (NOTE 2)	180	20	31			32						
MILLING MACH. (NOTE 2)	180	20	33			34						1
3D PRINTER	180	20	35			36						1
3D PRINTER	180	20	37			38						
GEN. PURPOSE RECPT'S	540	20	39			40						
GEN. PURPOSE RECPT'S	540	20	41			42						

NOTE 2 - E.C. SHALL LABEL CIRCUIT BREAKER W/ CORRECT BUFFER, GRINDER, LATHE COM P SCREEN, OR MILLING MACH. NUM BER ON SCHEDULE. VERIFY NUM BERING WITH OWNER. EX: EXISTING CIRCUIT BREAKER TO REMAIN GF = GROUND FAULT PROTECTED BREAKER

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