Additions and Renovations to

Princeton Middle School

217 Walnut Ln, Princeton, NJ 08540

Princeton Public Schools

25 Valley Rd, Princeton, NJ 08540

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NJDCA Electronic Release Stamp

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Project Name
Addition and Renovations to Princeton Middle School

Project Owner Name
Princeton Public Schools

Project Location
217 Walnut Lane, Princeton, NJ 08540

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5516B

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Drawing Name
Title Sheet and Drawing Index

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
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Drawing Number
G001

HOSE BIBB	
WALL HYDRANT	
CLEAN-OUT/PLUG OUTLET	
CLEAN-OUT DECK PLATE OR GRADE PLATE	
"P" TRAP	
BOTTOM PIPE CONNECTION	
TOP PIPE CONNECTION	
ELBOW TURNED DOWN	
ELBOW TURNED UP/CONNECTION TO VERTICAL LINE	
VALVE IN VERTICAL	
GATE OR BALL VALVE	
BALL VALVE	
CHECK VALVE	
OS&Y (OUTSIDE SCREW & YOKE) VALVE	
GAS COCK	
RELIEF VALVE	
UNION	
FLOOR DRAIN	
PUMP	
METER	
CIRCUIT SETTER ASSEMBLY	
BPA BACKFLOW PREVENTER ASSEMBLY	
REGULATOR	

PLUMBING ABBREVIATIONS

AW	ACID WASTE	IE	INVERT ELEVATION
CO	CLEANOUT	LAV	LAVATORY
CODP	CLEANOUT DECK PLATE	OSY	OUTSIDE SCREW & YOKE GATE VALVE
COG	CLEANOUT GRADE		
COWP	CLEANOUT WALL PLATE	PSI	POUNDS PER SQUARE INCH (GAUGE)
CW	COLD WATER		
DN	DOWN (PENETRATES FLOOR SLAB)	SAN	SANITARY
DFU	DRAINAGE FIXTURE UNIT	ST	STORM
EJDIS	EJECTOR DISCHARGE	SQ FT	SQUARE FOOT
EWC	ELECTRIC WATER COOLER	TP	TRAP PRIMER
FPWH	FROST PROOF WALL HYDRANT	TW	TEMPERED WATER
FD	FLOOR DRAIN	UG	UNDERGROUND
FU	FIXTURE UNIT	UP	UP (PENETRATES FLOOR SLAB)
FT	FEET	UR	URINAL
G	GAS	V	VENT
GPM	GALLONS PER MINUTE	VIF	VERIFY IN FIELD
GAL	GALLONS	VTR	VENT THROUGH ROOF
HB	HOSE BIBB	WC	WATER CLOSET
HW	HOT WATER	WFU	WATER FIXTURE UNITS
HWR	HOT WATER RETURN	WHA	WATER HAMMER ARRESTOR
IW	INDIRECT WASTE		

APPLICABLE CODES & STANDARDS:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST CODES AND SUBCODES AS ADOPTED BY THE STATE OF NEW JERSEY:

- NEW JERSEY UNIFORM CONSTRUCTION CODE (NJUCC)
- REHABILITATION SUBCODE 5:23-6
- ADMINISTRATIVE CODE: TITLE 6
- 2021 INTERNATIONAL BUILDING CODE - NJ EDITION
- 2023 NATIONAL ELECTRICAL CODE
- 2021 NATIONAL STANDARD PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2021 INTERNATIONAL FUEL GAS CODE
- 2019 ASHRAE 90.1 ENERGY STANDARD
- 2022 NFPA STANDARD 13
- REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION

9. DO NOT USE ANY PART OF THE OWNER'S BUILDING AS A SHOP, EXCEPT PARTS DESIGNATED FOR SUCH PURPOSES BY THE OWNER.
10. ALL CONTRACT WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE WRITTEN SPECIFICATIONS FOR THIS PROJECT WHICH ARE CONSIDERED TO BE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. ALL CONTRACTORS AND SUBCONTRACTORS SHALL MAINTAIN (AT THE JOB SITE) AND REFER TO COPIES OF THE WRITTEN SPECIFICATIONS AS PART OF THESE DRAWINGS. REFER TO THE WRITTEN SPECIFICATIONS IN CONJUNCTION WITH THE PLANS FOR FULL PROJECT SCOPE. IN ALL CASES OF DISCREPANCY BETWEEN PLANS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN AND WHERE IT IS UNCLEAR, SUCH CASES SHALL BE REFERRED TO THE ENGINEER FOR ADJUDICATION.
11. ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND RELATED HVAC, ELECTRICAL, FIRE PROTECTION, ARCHITECTURAL, INTERIOR DECOR AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER PRIOR TO BID SUBMISSION.
12. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID FOR THE PROPOSED WORK. HE SHALL BE RESPONSIBLE TO VERIFY FIELD CONDITIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO SUBMISSION OF BIDS IN WRITING.
13. THE PLUMBING CONTRACTOR SHALL REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED HVAC, ELECTRICAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, THE PLUMBING CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS AND TRADES ON THIS PROJECT TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
14. CONTRACTOR SHALL COORDINATE HIS SCHEDULING WITH THE OWNER AND GENERAL CONTRACTOR TO COMPLY WITH THE OWNERS USAGE OF THE BUILDING.
15. IF ANY UNEXPECTED DISCOVERY OF SUSPECTED HAZARDOUS MATERIALS IS MADE DURING THE COURSE OF WORK, THE CONTRACTOR SHALL REPORT THE DISCOVERY IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL STOP ANY WORK THAT MAY DISTURB THE SUSPECTED HAZARDOUS MATERIAL. CONTRACTOR SHALL RESUME WORK AFTER ALL HAZARDOUS MATERIAL HAS BEEN REMEDIATED.
16. CONTRACTOR RESPONSIBLE FOR THE PROPER CARE OF ALL OWNER'S EQUIPMENT AND/OR FURNISHINGS WHICH ARE REQUIRED TO BE TEMPORARILY REMOVED, STORED OR RELOCATED. CONTRACTOR SHALL REPLACE, REPAIR OR REIMBURSE OWNER FOR ALL DAMAGES TO SUCH PROPERTIES AT FULL REPLACEMENT VALUE AND EQUIVALENCY. CONTRACTOR SHALL ADVISE OWNER FOR DISPOSITION OR REMOVED EQUIPMENT AND/OR MATERIALS.
17. CONTRACTOR'S WORK MAY BE REQUIRED OUTSIDE OF DESIGNATED SPACE. ALL SYSTEMS BEING DEMOLISHED AND REMOVED, MODIFIED, AND/OR TERMINATED SHALL BE FIELD VERIFIED TO INSURE NO WORK PERFORMED, INSIDE OR OUTSIDE OF THE DESIGNATED SPACE, SHALL DISRUPT ANY SERVICE OR SYSTEMS OF ANY OTHER AREAS. IF ANY CONDITIONS ARISE THAT ARE NOT IDENTIFIED ON DRAWINGS, IMMEDIATE NOTIFICATION SHALL BE PROVIDED TO THE ENGINEER OR OWNER. NO WORK SHALL PROCEED WITHOUT APPROVALS FROM ENGINEER OR OWNER.
18. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND MAY HAVE TO BE ADAPTED TO COMPLY WITH EXISTING BUILDING CONDITIONS. CONTRACTOR SHALL SUBMIT PLUMBING SHOP DRAWINGS, INDICATING LOCATIONS, AND ROUTING OF DUCTS, PIPING, AND WIRING.
19. PIPING SHOWN ON DRAWINGS SHOW THE GENERAL RUN AND CONNECTIONS AND MAY OR MAY NOT IN ALL PARTS BE SHOWN IN ITS EXACT POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTING THE PIPING SUITABLE IN EVERY RESPECT FOR THE WORK. PIPING SHALL BE INSTALLED SO THAT ACCESS, CLEARANCE, HEADROOM AND PITCH ARE MAINTAINED. CONTRACTORS OF THE VARIOUS TRADES SHALL COORDINATE THE INSTALLATION.
20. ALL CONTRACTORS SHALL PROVIDE CUTTING AND PATCHING FOR THEIR RESPECTIVE TRADES.
21. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF THE PLUMBING WORK AND REPLACE ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
22. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTION OF DOMESTIC WATER, GAS, SANITARY AND VENT PIPING INCLUDING VALVES, TRIMS AND EQUIPMENT, TO PLUMBING FIXTURES AT LOCATIONS INDICATED ON THE PLANS.
23. RUN ALL DOMESTIC WATER AND SANITARY WASTE AT LOWEST LEVEL, AND SANITARY VENT AS HIGH AS POSSIBLE THROUGHOUT ENTIRE BUILDING. INSTALL LONG RUNS OF PIPING WITHIN STEEL (JOIST) SPACE AND OTHER PIPING TIGHT TO BOTTOM OF STEEL. COORDINATE AND VERIFY WITH OTHER CONTRACTORS SO AS NOT TO INTERFERE WITH DUCTWORK, LIGHTING SYSTEMS, ETC.
24. ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS, SOFFITS WITH OTHER MECHANICAL/ELECTRICAL FEEDS. PLUMBING CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR CHASE LOCATIONS TO COORDINATE ALL VERTICAL PIPING ROUTING. ALL SUCH LOCATIONS ARE TO BE REVIEWED WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
25. ALL PLUMBING FIXTURES/APPLIANCES SHALL HAVE THEIR OWN INDEPENDENT SHUT-OFF VALVES, INSTALLED IN AN EASILY ACCESSIBLE AND CONVENIENT LOCATION. EACH DOMESTIC WATER BRANCH LINE SHALL HAVE ITS OWN SHUT-OFF VALVE.
26. CONNECT GAS PIPING TO APPLIANCES USING MANUAL SHUTOFF VALVES AND UNIONS. INSTALL VALVE WITHIN 72 INCHES OF EACH GAS FIRED APPLIANCE AND EQUIPMENT. INSTALL UNION BETWEEN VALVE AND APPLIANCE OR EQUIPMENT.
27. DOMESTIC HOT WATER HEATER TEMPERATURE/PRESSURE RELIEF VALVES SHALL BE PIPED FULL SIZE TO THE NEAREST APPROVED STANDPIPE OR FLOOR DRAIN. THIS REQUIREMENT SHALL BE APPLICABLE TO ALL DOMESTIC WATER HEATERS EXCEPT INSTANTANEOUS WATER HEATERS.
28. THE PLUMBING CONTRACTOR SHALL RUN OUT ALL BUILDING DRAINAGE AND WASTE LINES TO WITHIN 5'-0" OF THE BUILDING FOUNDATION AND MAKE FINAL CONNECTIONS TO SITE SYSTEMS AS INDICATED ON PLANS. COORDINATE WITH SITE ENGINEER.
29. FURNISH AND INSTALL PIPE SLEEVES OR SLEEVE SEAL SYSTEMS AS REQUIRED. SEE SPECIFICATION FOR DETAILS.
30. ALL PIPING SYSTEM PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE SEALED WITH UL APPROVED FIRE RESISTANT JOINT SEALER TO MAINTAIN FIRE,SMOKE AND DRAFT INTEGRITY OF STRUCTURE. SPECIFIED TECHNOLOGIES "PENSIL 200" OR EQUAL, TWO-PART FOAMED-IN-PLACE SILICONE SEALANT. FIRE RESISTANT SEALER SHALL BE TESTED IN ACCORDANCE WITH ASTM 814. INSTALL SEALANT, INCLUDING FOAMING, PACKING AND OTHER ACCESSORY MATERIALS TO FILL OPENINGS WHERE FIRE-RATED WALL PENETRATIONS OCCUR. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY TESTERS AND INSPECTION AGENCY.
31. ALL PENETRATIONS IN FOUNDATION WALLS AND FLOORS INCLUDING SLAB PENETRATIONS SHALL BE SUBSTANTIALLY SEALED BY UTILIZING A NON-CRACKING POLYURETHANE OR SIMILAR CAULK, OR EQUIVALENT IN ORDER TO CLOSE OFF THE SOIL GAS (RADON) ENTRY ROUTES AS REQUIRED BY CODE.
32. INSULATE ALL NEW HOT WATER AND COLD WATER PIPING SYSTEMS. INSULATION SHALL BE INSTALLED AS A COMPLETE SYSTEM INCLUDING VALVES, FITTINGS, ETC. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
33. INSULATE ROOF DRAIN & OVERFLOW DRAIN BODIES AND ALL INTERIOR STORM PIPING. INSULATION SHALL BE INSTALLED AS A COMPLETE SYSTEM INCLUDING FITTINGS, ETC. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
34. ALL CONTRACTORS REMOVING ANY EQUIPMENT, PIPES, DUCTS, CONDUITS, ETC SHALL PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
35. PROVIDE GAS PIPING SUPPORTS ON ROOF AT ALL DIRECTION CHANGES AND STRAIGHT RUNS WITH SPACING NOT EXCEEDING LENGTHS STATED IN TABLE 415.1 OF IFGC, 2018 FOR MATERIALS AND LISTED PIPE SIZES. SUPPORTS SHALL BE SADDLE BLOCK ROLLER TYPE WITH PIPE SECURED TO STAND WITH CLAMP OR METAL BAND. SUPPORT SHALL NOT BE SECURED TO ROOF SURFACE. BOTTOM OF PIPING SHALL BE MINIMUM 3 1/2" ABOVE ROOF SURFACE.
36. WHERE SLABS ARE CUT FOR UNDERSLAB PIPING OR BEING REPLACED, COORDINATE WITH ARCHITECTURAL DRAWINGS TO PITCH FLOOR TO FLOOR DRAIN.
37. ALL FLOOR DRAIN TRAPS SHALL BE PROVIDED WITH DEEP SEAL TRAPS.
38. THE PLUMBING CONTRACTOR SHALL PROVIDE A COMPLETE SET OF "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT CONCEALED OR EMBEDDED PIPES, PIPE CONNECTIONS AND ACCESS DOORS. THESE PLANS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM BID DOCUMENTS.

HWR-2 HOT WATER RETURN PUMP: BELL AND GOSSETT MODEL NBF-10S/LW; LEAD-FREE ALL BRONZE CIRCULATING PUMP, 1 GPM @ 13 FT OF HEAD, 52 WATTS AT 115V, 2800 RPM. PROVIDE WITH TIMER AND AQUASTAT WIRED IN SERIES FOR PUMP CONTROL AND WITH 1/2" SWEAT CONNECTIONS.

MV-1 MIXING VALVE: LEONARD VALVE 'ECO-MIX' MODEL TM-520B-LF-DT-IT-TC, LEAD FREE DUAL VALVE MIXING VALVE WITH 3/4" INLETS AND 1" OUTLET, INLET CHECK STOPS, WALL SUPPORT, OUTLET DIAL THERMOMETER, INLET THERMOMETERS, TEST CONNECTION. ASSE 1070 CERTIFIED. MINIMUM FLOW 1.0 GPM. VALVE SHALL BE PIPED AND INSTALLED PER MANUFACTURERS REQUIREMENTS.

MV-2 THERMOSTATIC MIXING VALVE: LEONARD "ECO-MIX" MODEL TM-26-LF-BDT HIGH-LOW, LEAD FREE WITH 3/4" INLETS, 3/4" OUTLET, INLET CHECK STOPS, WALL SUPPORT, OUTLET DIAL THERMOMETER AND BALL VALVE AND ROUGH BRONZE FINISH. ASSE 1017 CERTIFIED. MINIMUM FLOW 1 GPM. VALVE SHALL BE PIPED AND INSTALLED PER MANUFACTURERS REQUIREMENTS.

FPWH FROST PROOF WALL HYDRANT: JR SMITH #5509QT NON-FREEZE WITH INTEGRAL VACUUM BREAKER.

FPRH FROST PROOF ROOF HYDRANT: JR SMITH FIGURE 5906-H, GALVANIZED CASING, 3/4" HOSE THREAD OUTLET, ADJUSTABLE WHEEL LOCK HANDLE, DECK FLANGE, UNDERDECK CLAMP, AND VACUUM BREAKER.

WHA WATER HAMMER ARRESTER: SIOUX CHIEF HYDRA-RESTER OR APPROVED EQUAL. SIZE PER MANUFACTURER'S REQUIREMENTS. SUPPLY WITH JR SMITH 4762-CL 6" X 6" STAINLESS STEEL ACCESS PANEL WITH CYLINDER LOCK.

IMB-1 REFRIGERATOR ICE MACHINE BOX: OATEY MODEL #39114 12K WITH QUARTER TURN VALVE AND 5x6 BOX FOR RECESSED MOUNTING.

ESMV EMERGENCY SHOWER & EYEWASH FIXTURE MIXING VALVE: BRADLEY MODEL #S19-2200-B-P, EFX60 THERMOSTATIC MIXING VALVE WITH WALL BRACKET AND PRE-PIPED ASSEMBLY WITH SHUT OFF VALVES.

TP-1 TRAP PRIMER: MIFAB MODEL M2-500-NPB, PRESSURE ACTIVATED, BRASS CONSTRUCTION, 1/2" INLET AND OUTLET, WITH BUILT IN REPLACEABLE SEDIMENT FILTER.

RPZ-1 CHEMICAL DISPENSER CW MAKE UP BACKFLOW PREVENTION ASSEMBLY: WATTS SERIES LF009 QT, LEAD FREE REDUCED PRESSURE ZONE ASSEMBLY, 3/4" WITH QUARTER TURN BALL VALVES (QT), AND AIR GAP FITTING. PIPE AIR GAP DRAIN TIGHT AGAINST WALL AND TERMINATE 6" ABOVE MOP SINK RIM WITH 45 DEGREE ELBOW. ATTACH TO WALL WITH BRACKETS MAXIMUM 12" ON CENTER.

RPZ-2 MECHANICAL CW MAKE UP BACKFLOW PREVENTION ASSEMBLY: WATTS SERIES LF009 QT, LEAD FREE REDUCED PRESSURE ZONE ASSEMBLY, 1" WITH QUARTER TURN BALL VALVES (QT), AND AIR GAP FITTING. PIPE AIR GAP DRAIN TO FUNNEL FLOOR DRAIN AND SPILL ABOVE GRATE.

HB-1 CHEMICAL DISPENSER HOSE BIB: CHICAGO 998-RCF WITH BUILT IN VACUUM BREAKER, TEE HANDLE, 3/4" HOSE THREAD OUTLET AND ROUGH CHROME FINISH.

RPZ-3 DISHWASHER DRAIN TEMPERING VALVE BACKFLOW PREVENTION ASSEMBLY: WATTS SERIES LF009 QT-S, LEAD FREE REDUCED PRESSURE ZONE ASSEMBLY,1/2" WITH QUARTER TURN BALL VALVES (QT), STRAINER (S) AND AIR GAP FITTING. PIPE AIR GAP DRAIN TO FLOOR SINK AND SPILL ABOVE GRATE.

TMV-1 MIXING VALVE: LEONARD VALVE 'ECO-MIX' MODEL 270-LF-BRKT-DT, LEAD FREE MIXING VALVE WITH 1/2" INLETS AND 1/2" OUTLET, INLET CHECK STOPS, WALL SUPPORT AND OUTLET DIAL THERMOMETER. ASSE 1017 AND 1070 CERTIFIED. MINIMUM FLOW 0.25 GPM. VALVE SHALL BE PIPED AND INSTALLED PER MANUFACTURERS REQUIREMENTS.

DRAIN SCHEDULE

FD-1 FLOOR DRAIN: JR SMITH #2005 SQUARE TOP, FLASHING COLOR, CAST IRON BODY, ADJUSTABLE STRAINER, WITH #2692 QUAD CLOSE TRAP SEAL AND DEEP SEAL P-TRAP. SIZE PER PLAN.

FD-2 FLOOR DRAIN: JR SMITH FIGURE #2110-M 8" DIAMETER TOP, FLASHING COLLAR, CAST IRON BODY, DUCTILE IRON GRATE, WITH 2692 QUAD CLOSE TRAP SEAL AND DEEP SEAL TRAP. PER PLAN.

FD-3 FUNNEL DRAIN: SAME AS FD-2 EXCEPT WITH FIGURE 9704 8 3/4" X 3 3/4" STAINLESS STEEL OVAL FUNNEL ATTACHED TO GRATE. SIZE PER PLAN.

FD-4 ACID WASTE FLOOR DRAIN: ORION MODEL #FD-COMBO-BL-PP-SS-SQ FLOOR DRAIN WITH SQUARE 6" STAINLESS STEEL STRAINER AND POLYPROPYLENE PIPING OUTLET, ADJUSTABLE STRAINER, TRAP PRIMER CONNECTION AND DEEP SEAL TRAP. SIZE PER PLAN.

CODP CLEAN OUT DECK PLATE: JR SMITH FIGURE 4023, MEDIUM-DUTY CAST IRON CLEANOUT WITH ROUND ADJUSTABLE SCORIATED SECURED NICKEL BRONZE TOP. TAPER THREAD, BRONZE PLUG. SIZE PER PLAN. IN AREAS WITH CARPET, TOP SHALL BE CARPET CLAMPING TYPE SUFFIX "X".

COG CLEAN OUT GRADE: JR SMITH FIGURE 4233L-M, EXTRA HEAVY DUTY CAST IRON CLEANOUT WITH DUCTILE IRON COVER. SIZE PER PLAN.

COWP CLEAN OUT WALL PLATE: JR SMITH FIGURE 4422C, WALL CLEANOUT WITH ACCESS COVER, TAPER THREAD, BRONZE PLUG. SIZE PER PLAN.

ANT-1 ACID NEUTRALIZATION TANK: TOWN & COUNTRY #NT-175, 175 GALLON CAPACITY, 45 GALLON USABLE CAPACITY, SEAMLESS HDPE, CONFORMING TO ASTM D-2148, HEAVY DUTY BOLTED COVER WITH NEOPRENE GASKET , 4" INLET AND OUTLET, 4" VENT CONNECTION . CONTRACTOR TO PROVIDE LIMESTONE CHIPS OF SUFFICIENT AMOUNT FOR (3) FILLINGS. LIMESTONE CHIPS SHALL BE OF A RANDOM MIXTURE OF 1" TO 3" DIAMETER CONTAINING AT LEAST 90% CALCIUM CARBONATE. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

ST-1 SAMPLING TANK : TOWN & COUNTRY #NT-5M, HDPE, ASTM 2148, 5 GALLON CAPACITY WITH 4" INLET AND OUTLET AND PH GLASS ELECTRODE AND HOLDER AND 3" FLANGE AND GASKETED PH PROBE INLET.

PHMP-1 PH MONITORING PANEL : TOWN AND COUNTRY PLASTICS # PHCP-100 SINGLE POINT PH MONITOR, 115 VOLT.

RD ROOF DRAIN: JR SMITH FIGURE #1015 CAST IRON ROOF DRAIN WITH ADJUSTABLE EXTENSION. PROVIDE WITH UNDERDECK CLAMP, SUMP RECEIVER AND CAST IRON DOME. SIZE PER PLAN.

OD OVERFLOW ROOF DRAIN. OVERFLOW ROOF DRAIN STANDPIPE. SEE DETAIL ON ARCHITECTURAL DRAWINGS. OVERFLOW ROOF DRAIN STANDPIPE SHALL BE SAME DIAMETER AS ROOF DRAIN. SIZE PER PLAN.

FS-1 FLOOR SINK: JR SMITH FIGURE 3101, 8.5" SQUARE SANI-CEPTOR ACID RESISTANT INDIRECT WASTE DRAIN, SEDIMENT BUCKET, FLASHING CLAMP AND NICKEL BRONZE RIM. PROVIDE GRATE TO SUIT INDIRECT WASTE PIPING DISCHARGE. SIZE PER PLAN.

FS-2 FLOOR SINK: JR SMITH FIGURE 3161, 12.5" SANI-CEPTOR 10" DEEP ACID RESISTANT INDIRECT WASTE DRAIN, SEDIMENT BUCKET, FLASHING CLAMP AND NICKEL BRONZE RIM. PROVIDE GRATE TO SUIT INDIRECT WASTE PIPING DISCHARGE. SIZE PER PLAN.

FD-6 FUNNEL DRAIN: JR SMITH FIGURE 3821-DBS 4" DIAMETER CAST IRON INDIRECT WASTE FUNNEL DRAIN WITH 2" OUTLET, 2" TRAP AND DOME BOTTOM STRAINER WITH ACID RESISTANT COATED INTERIOR AND EXTERIOR.

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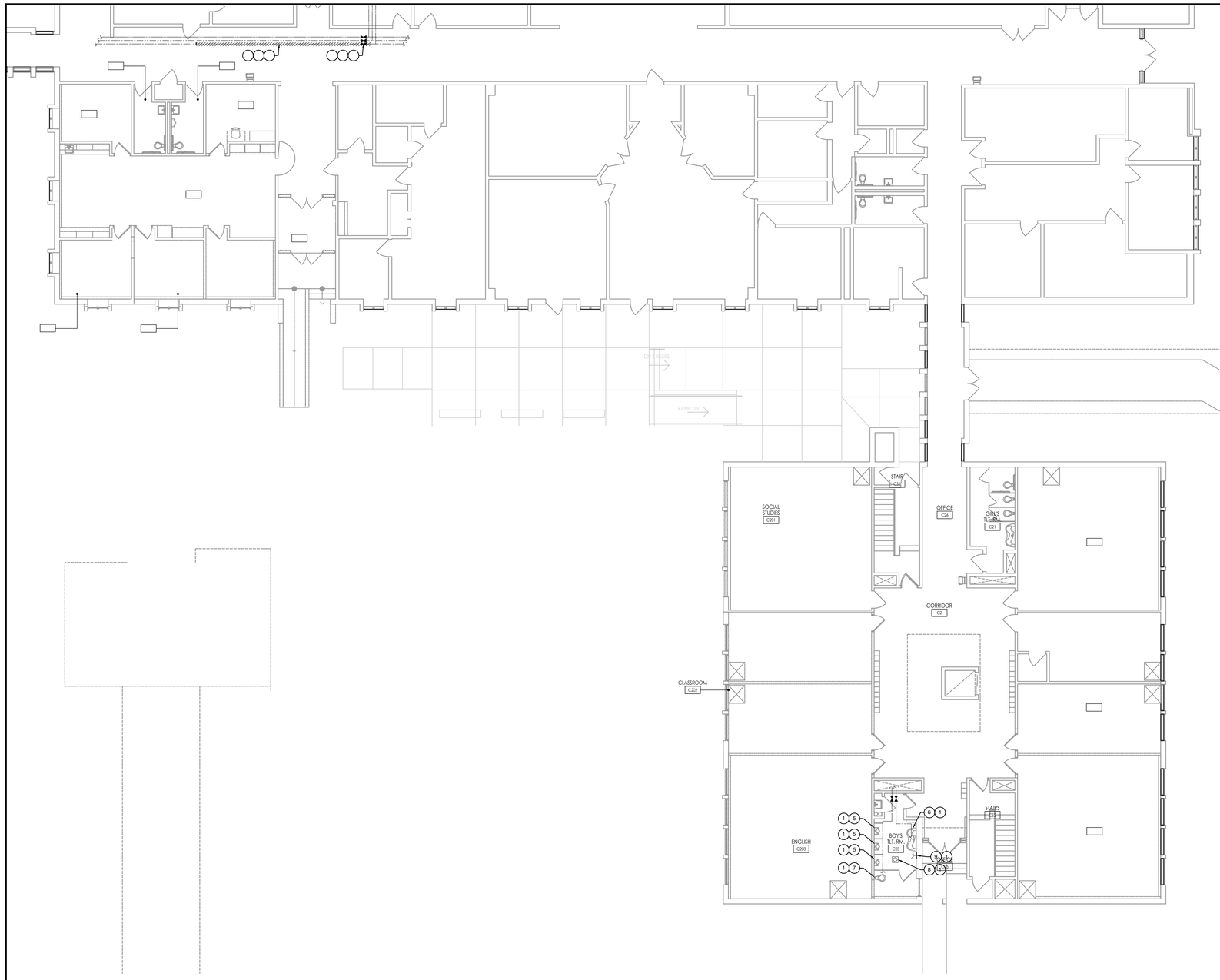
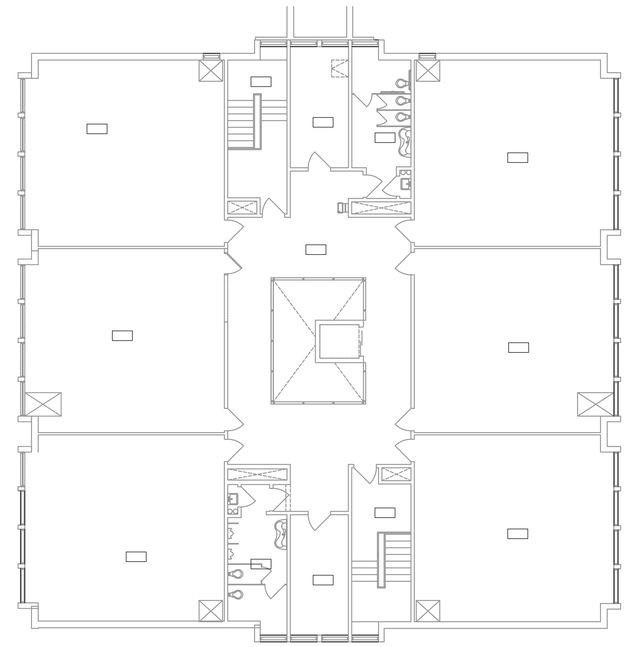


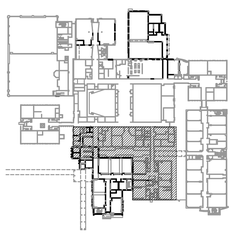


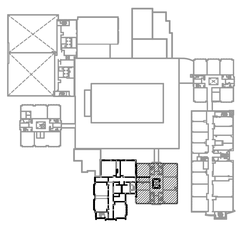
DEMOLITION KEY NOTES

1. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING.
2. CAREFULLY REMOVE EXISTING CEILING TILE FOR THIS WORK AND REINSTALL IN ORIGINAL CONDITION. CONTRACTOR RESPONSIBLE TO REPLACE ANY CEILING TILE DAMAGED AS PART OF THIS WORK WITH NEW TILE TO MATCH EXISTING.
3. REMOVE EXISTING 21/2" COLD WATER PIPING ABOVE CEILING BACK AS INDICATED AND MAKE READY FOR RECONNECTION TO NEW PIPING. SEE NEW WORK PLAN. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. REMOVE EXISTING 2 1/2" SHUT OFF VALVE AND REPLACE WITH NEW 3" SHUT OFF VALVE. SEE NEW WORK PLAN.
5. DISCONNECT AND REMOVE EXISTING URINAL AND FLUSH VALVE, CLEAN AND RETURN TO OWNER. REMOVE SANITARY PIPING BACK TO BEHIND WALL AND CAP WATER TIGHT. REMOVE EXISTING COLD WATER PIPING IN WALL AND BACK UP TO ABOVE CEILING BACK TO MAIN AND CAP WATER TIGHT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
6. DISCONNECT AND REMOVE EXISTING WALL HUNG LAVATORY SYSTEM, CLEAN AND RETURN TO OWNER. REMOVE SANITARY PIPING BACK TO BEHIND WALL AND CAP WATER TIGHT. REMOVE EXISTING HOT AND COLD WATER PIPING IN WALL AND BACK UP TO ABOVE CEILING BACK TO MAIN AND CAP WATER TIGHT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
7. DISCONNECT AND REMOVE EXISTING FLOOR MOUNTED WATER CLOSET AND FLUSH VALVE, CLEAN AND RETURN TO OWNER. REMOVE CLOSET FLANGE AND SANITARY PIPING BACK TO CONNECTION TO MAIN BELOW FLOOR AND CAP WATER TIGHT. REMOVE RELATED VENT PIPING BACK UP TO ABOVE CEILING AND PREPARE FOR EXTENSION TO NEW VENT PIPING. SEE NEW WORK PLAN. REMOVE EXISTING COLD WATER PIPING IN WALL AND BACK UP TO MAIN ABOVE CEILING AND CAP WATER TIGHT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
8. DISCONNECT AND REMOVE EXISTING FLOOR DRAIN. REMOVE SANITARY PIPING BACK TO CONNECTION TO MAIN AND CAP WATER TIGHT. REMOVE RELATED VENT PIPING BACK UP TO CONNECTION TO MAIN ABOVE CEILING AND CAP WATER TIGHT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
9. DISCONNECT AND REMOVE EXISTING WALL MOUNTED HOSE BIB. REMOVE EXISTING COLD WATER PIPING IN WALL AND BACK UP TO CONNECTION TO MAIN ABOVE CEILING AND CAP WATER TIGHT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

FIRST FLOOR DEMOLITION PLAN - BLOCK A

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





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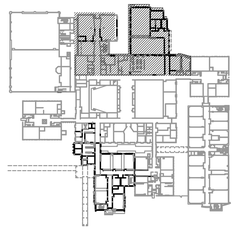
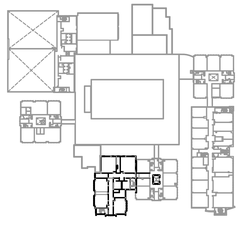
UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

EXISTING BAND STORAGE A100.1
EXISTING OFFICE A101
EXISTING MUSIC OFFICE A103
EXISTING ENSEMBLE A104
EXISTING PIPING TO REMAIN
EXIST. 6" SAN
GIRLS T.T. RM. A13
IDF A12
ORCHESTRA ROOM A101
CORRIDOR AC1
BOYS T.T. RM. A11
FAC. T.T. RM. G35A
LIFE SKILLS G34
ALL GENDER T.T. RM. G33B
T.T. RM. G34B
GENERAL WORKS G36A
RECEIVING
STOR. G109C
STOR. G109C
KITCHEN G109
STOR. G108A

FIRST FLOOR DEMOLITION PLAN - BLOCK B

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





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KEY NOTES

1. 3" SANITARY UP TO CODP.
2. 4" SANITARY UP TO CODP.
3. 6" STORM UP TO CODP.
4. OFFSET AND DROP TO LOWER ELEVATION. PROVIDE 6" SANITARY UP TO CODP TO SWEEP OFFSET.
5. 3" SANITARY UP TO FD-2.
6. 2" VENT UP.
7. 3" SANITARY UP TO FD-1.
8. 2" SANITARY UP TO LAVATORY.
9. 4" SANITARY UP TO WATER CLOSET.
10. 2" SANITARY UP TO P-5A.
11. 8" STORM UP TO COG.
12. 6" STORM UP.
13. 2" SANITARY UP TO URINAL.
14. 2" SANITARY UP.
15. 6" FIRE MAIN UP.
16. 4" SANITARY UP.
17. SAW CUT FLOOR AS REQUIRED TO INSTALL NEW UNDERSLAB PIPING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
18. 3" SANITARY UP TO P-4.
19. 3" SANITARY UP.
20. COORDINATE LOCATION OF PIPING WITH RADON VENT RISERS. SEE ARCHITECTURAL DRAWINGS.
21. DURING DEMOLITION AND PRIOR TO NEW CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF EXISTING UNDER SLAB PIPING INCLUDING THE BRANCHES SERVING THE EXISTING FIXTURES ABOVE ON THE SECOND FLOOR WITH UNDERGROUND UTILITY LOCATOR APPARATUS AND/OR GROUND PENETRATING RADAR. AFTER THE LOCATION OF THE EXISTING PIPING IS VERIFIED, CONTRACTOR SHALL SAW CUT FLOOR, EXCAVATE, AND VERIFY THE DEPTH AND SIZE AND DIRECTION OF FLOW OF THE EXISTING SANITARY PIPING AND MAKE CONNECTION TO EXISTING SANITARY PIPING AS INDICATED. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTIONS. RECONNECT TO ALL THE EXISTING BRANCH LINES SERVING THE EXISTING FIXTURES ABOVE ON THE SECOND FLOOR. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
22. THE UNDERSLAB PIPING INDICATED ON THE DRAWING SHALL BE ADJUSTED AS REQUIRED TO SUIT FIELD CONDITIONS TO MAKE ACTUAL CONNECTION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
23. FIELD VERIFY EXACT LOCATION, SIZE AND DIRECTION OF FLOW OF EXISTING PIPING.
24. DURING DEMOLITION AND PRIOR TO NEW CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF EXISTING UNDER SLAB PIPING WITH UNDERGROUND UTILITY LOCATOR APPARATUS AND/OR GROUND PENETRATING RADAR. AFTER THE LOCATION OF THE EXISTING PIPING IS VERIFIED, CONTRACTOR SHALL SAW CUT FLOOR, EXCAVATE, AND VERIFY THE DEPTH AND SIZE AND DIRECTION OF FLOW OF THE EXISTING SANITARY PIPING AND MAKE CONNECTION TO EXISTING SANITARY PIPING AS INDICATED. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTIONS. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

UNDERSLAB PIPING PLAN - BLOCK A

SCALE: 1/8" = 1' 0"

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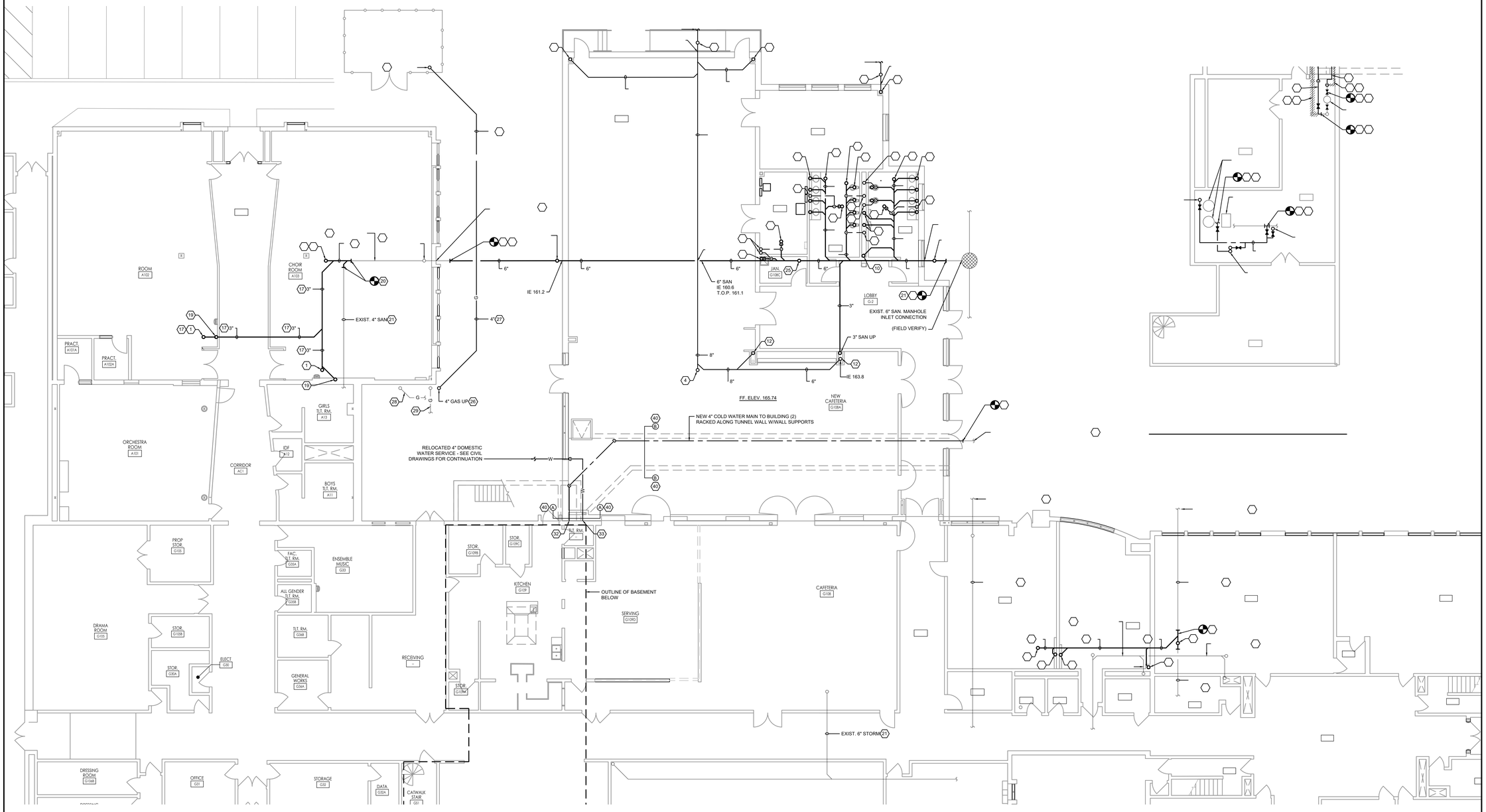
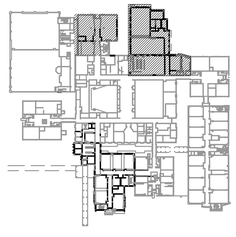


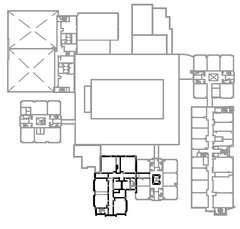
UNDERSLAB PIPING PLAN - BLOCK B

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

KEY NOTES

1. 3" SANITARY UP TO CODP.
2. 4" SANITARY UP TO CODP.
3. 8" STORM UP TO COG.
4. 8" STORM UP TO CODP.
5. 3" SANITARY UP TO FD-2.
6. 2" VENT UP.
7. 3" SANITARY UP TO FD-1.
8. 2" SANITARY UP TO LAVATORY.
9. 4" SANITARY UP TO WATER CLOSET.
10. 2" SANITARY UP TO P-5A.
11. 4" STORM UP.
12. 6" STORM UP.
13. 2" SANITARY UP TO URINAL.
14. CONNECT NEW 4" DOMESTIC WATER SERVICE PIPING TO EXISTING PIPING TO CONNECTED TO EXISTING WATER METER. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION.
15. 6" FIRE SERVICE UP.
16. 4" VENT UP.
17. SAW CUT FLOOR AS REQUIRED TO INSTALL NEW UNDERSLAB PIPING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
18. 3" SANITARY UP TO P-4.
19. 2" SANITARY UP TO P-6A.
20. DURING DEMOLITION AND PRIOR TO NEW CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF EXISTING UNDER SLAB PIPING WITH UNDERGROUND UTILITY LOCATOR APPARATUS AND/OR GROUND PENETRATING RADAR. AFTER THE LOCATION OF THE EXISTING PIPING IS VERIFIED, CONTRACTOR SHALL SAW CUT FLOOR, EXCAVATE, AND VERIFY THE DEPTH AND SIZE AND THE DIRECTION OF FLOW OF THE EXISTING SANITARY PIPING AND MAKE CONNECTION TO EXISTING SANITARY PIPING AS IS INDICATED. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTIONS. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
21. FIELD VERIFY EXACT LOCATION, SIZE AND DIRECTION OF FLOW OF EXISTING PIPING.
22. 4" STORM UP TO COG.
23. CONNECT NEW 6" CAST IRON SANITARY PIPING TO EXISTING 6" SANITARY PIPING. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION.
24. 2" SANITARY UP TO P-7A.
25. 6" SANITARY UP TO CODP.
26. PROVIDE STEEL TO PE TRANSITION FITTING AT GRADE. ALL EXPOSED PIPE SHALL BE STEEL.
27. UNDERGROUND GAS PIPE SHALL BE APPROVED POLYETHYLENE GAS PIPE. INSTALL AS INDICATED ON PE GAS PIPE TRENCH DETAIL ON DRAWING P8.0.
28. EXISTING GAS SERVICE TO REMAIN. FIELD VERIFY EXACT LOCATION.
29. EXISTING UNDERGROUND GAS LINE TO EXISTING MECHANICAL ROOM TO REMAIN. FIELD VERIFY EXACT LOCATION.
30. 2" SANITARY UP TO WM.
31. CONNECT NEW 4" COLD WATER TO EXISTING 4" COLD WATER PIPING. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE NEW CONNECTION.
32. NEW 4" BUILDING (2) COLD WATER. FOR CONTINUATION SEE BASEMENT WATER PIPING PLAN ON THIS DRAWING.
33. NEW 4" RELOCATED DOMESTIC WATER SERVICE. FOR CONTINUATION SEE BASEMENT WATER PIPING PLAN ON THIS DRAWING.
34. 1 1/2" VENT UP.
35. DISCONNECT AND REMOVE EXISTING 4" DOMESTIC WATER SERVICE PIPING UPSTREAM AND RELOCATE NEW 4" DOMESTIC WATER SERVICE PIPING INTO NEW PIPE TUNNEL.
36. DISCONNECT AND REMOVE EXISTING BUILDING (2) 4" COLD WATER MAIN PIPING AND REROUTE NEW PIPING INTO NEW PIPE TUNNEL.
37. CONNECT NEW RELOCATED BUILDING (2) 4" COLD WATER PIPING TO EXISTING PIPING. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION.
38. NEW 4" BUILDING (2) COLD WATER PIPING.
39. NEW 4" DOMESTIC WATER SERVICE PIPING.
40. REFER TO MECHANICAL DRAWING M5.0 FOR SECTION VIEW.
41. CONNECT TO EXISTING HOT WATER PIPING. MAKE CONNECTION TO EXISTING HOT WATER PIPING UPSTREAM OF EXISTING MASTER MIXING VALVE. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE NEW CONNECTION.
42. CONNECT NEW 3/4" COLD WATER TO EXISTING 1 1/2" COLD WATER PIPING. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE NEW CONNECTION.





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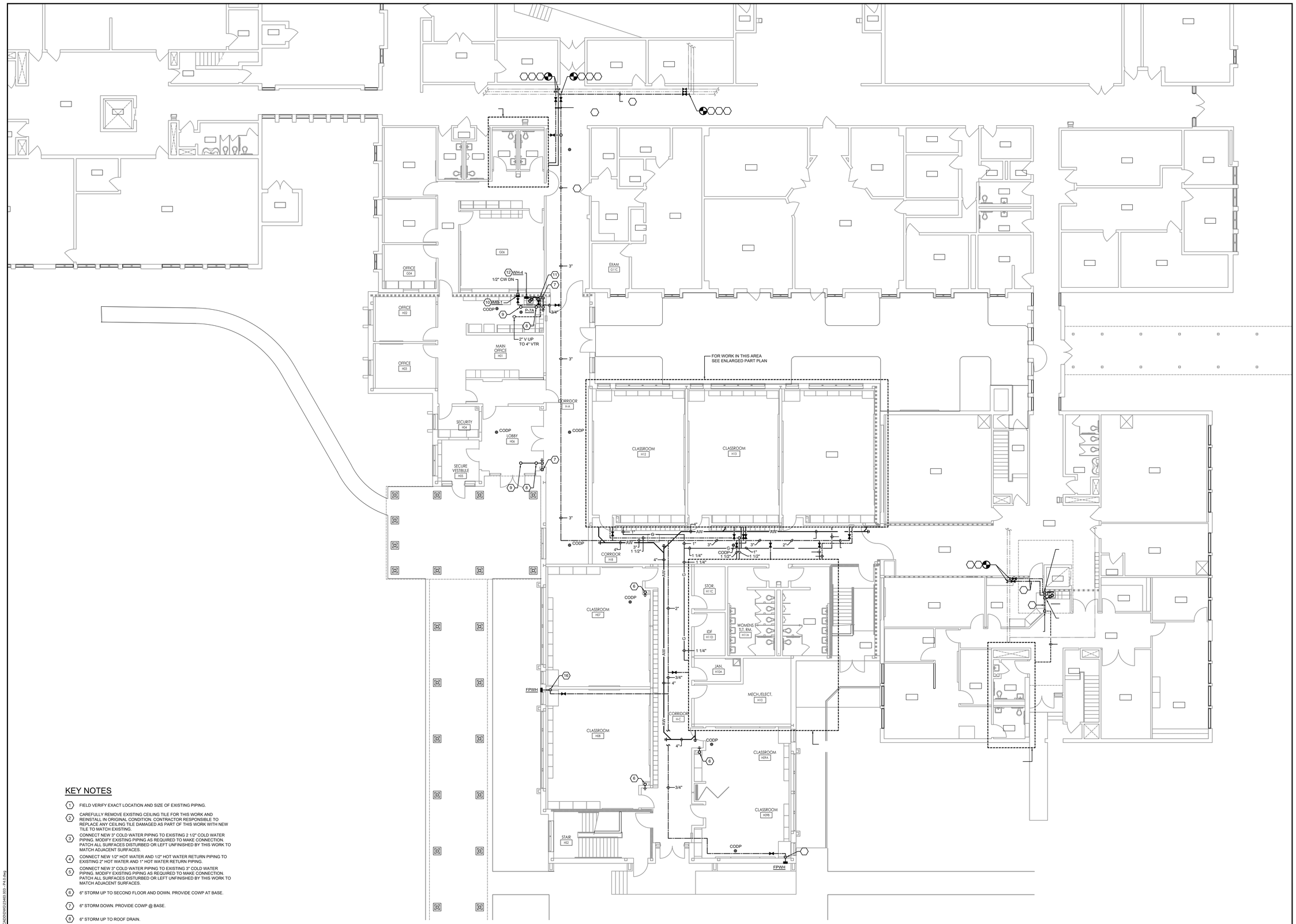
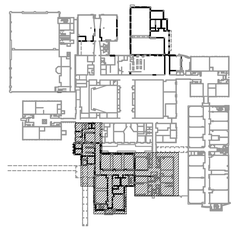


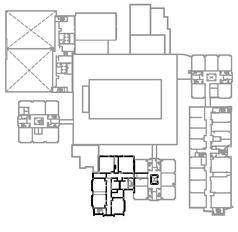
KEY NOTES

1. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING.
2. CAREFULLY REMOVE EXISTING CEILING TILE FOR THIS WORK AND REINSTALL IN ORIGINAL CONDITION. CONTRACTOR RESPONSIBLE TO REPLACE ANY CEILING TILE DAMAGED AS PART OF THIS WORK WITH NEW TILE TO MATCH EXISTING.
3. CONNECT NEW 3" COLD WATER PIPING TO EXISTING 2 1/2" COLD WATER PIPING. MODIFY EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. CONNECT NEW 1/2" HOT WATER AND 1/2" HOT WATER RETURN PIPING TO EXISTING 2" HOT WATER AND 1" HOT WATER RETURN PIPING.
5. CONNECT NEW 3" COLD WATER PIPING TO EXISTING 3" COLD WATER PIPING. MODIFY EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
6. 6" STORM UP TO SECOND FLOOR AND DOWN. PROVIDE COWP AT BASE.
7. 6" STORM DOWN. PROVIDE COWP @ BASE.
8. 6" STORM UP TO ROOF DRAIN.
9. 6" STORM UP TO OVERFLOW DRAIN.
10. RECESS REFRIGERATOR ICE MAKE BOX INTO CONCRETE BLOCK WALL. DROP COLD WATER PIPING DOWN THRU CONCRETE BLOCK CORES.
11. 3/4" COLD WATER AND 2" SANITARY DOWN. PROVIDE COWP AT BASE. 2" VENT UP. EXTEND WATER PIPING TO SINK AND TANKLESS HEATER AND SANITARY PIPING BENEATH COUNTER TO SINK IN NEAT MANNER. WATER PIPING SHALL BE INSTALLED TIGHT TO WALL. PROVIDE ESCUTCHEONS AT CABINET PENETRATIONS.
12. INSTALL TANKLESS WATER HEATER BELOW SINK INSIDE SINK CABINET. EXTEND HOT WATER FROM HEATER TO SINK FAUCET. PROVIDE SUPPLY STOP VALVE ON COLD WATER SUPPLY TO WATER HEATER.
13. CONNECT NEW 1/2" COLD AND 1/2" HOT WATER PIPING TO EXISTING 2 1/2" COLD WATER AND 1 1/4" HOT WATER PIPING. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTIONS. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
14. RACK PIPING ON WALL ABOVE CEILING.
15. ROUTE VENT PIPING THRU WALL.
16. 3/4" COLD WATER DOWN. COORDINATE WITH UNIT VENTILATOR INSTALLATION.

FIRST FLOOR PLAN - BLOCK A

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





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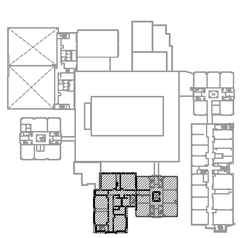
KEY NOTES

1. 6" STORM UP TO ROOF DRAIN.
2. 6" STORM UP TO OVERFLOW DRAIN.
3. 6" STORM DOWN TO FIRST FLOOR.

SECOND FLOOR PLAN - BLOCK A

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



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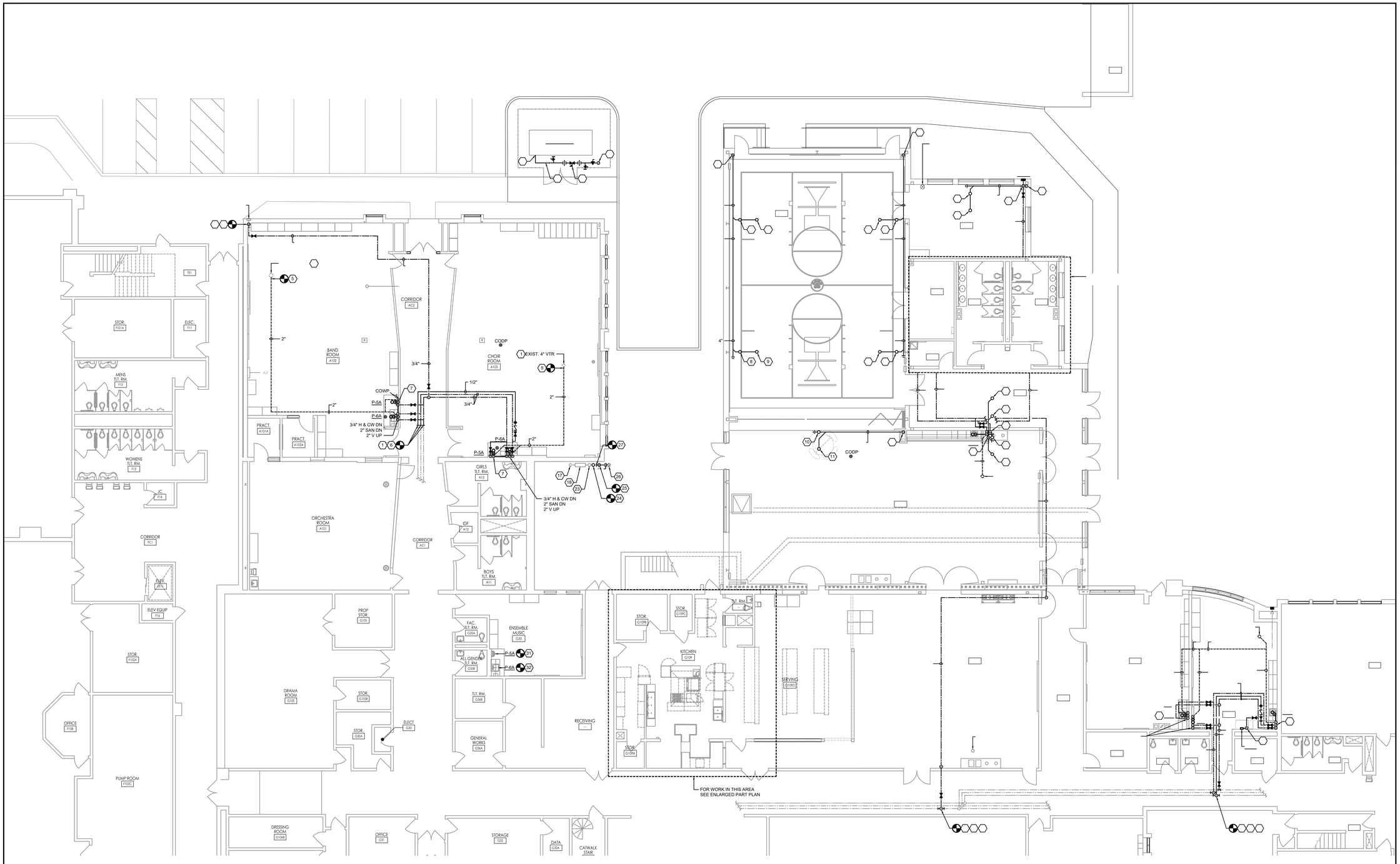
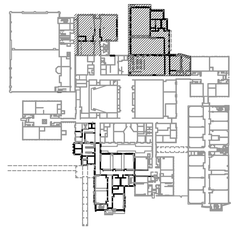
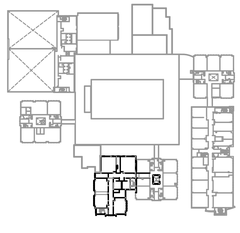


KEY NOTES

1. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING.
2. CAREFULLY REMOVE EXISTING CEILING TILE FOR THIS WORK AND REINSTALL IN ORIGINAL CONDITION. CONTRACTOR RESPONSIBLE TO REPLACE ANY CEILING TILE DAMAGED AS PART OF THIS WORK WITH NEW TILE TO MATCH EXISTING.
3. CONNECT NEW 2 1/2" COLD WATER PIPING TO EXISTING 3" COLD WATER PIPING. MODIFY EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. CONNECT NEW 3/4" COLD WATER PIPING TO EXISTING 3/4" COLD WATER PIPING CONNECTED TO EXISTING FPWH. MODIFY EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
5. CONNECT NEW 2" VENT TO EXISTING 4" VENT THRU ROOF. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION.
6. CONNECT NEW 3/4" COLD WATER, 3/4" HOT WATER AND 1/2" HOT WATER RETURN PIPING TO EXISTING 3/4" COLD WATER, 3/4" HOT WATER AND 1/2" HOT WATER RETURN PIPING. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTIONS.
7. 1 1/2" SANITARY DOWN. 1 1/2" VENT UP AND 1/2" COLD WATER DOWN. EXTEND 2" SANITARY ABOVE FLOOR HORIZONTALLY THRU FURRED OUT WALL TO SINK DROP.
8. 4" STORM UP TO ROOF DRAIN.
9. 4" STORM UP TO OVERFLOW DRAIN.
10. 6" STORM UP TO ROOF DRAIN.
11. 6" STORM UP TO OVERFLOW DRAIN.
12. 4" STORM DOWN. PROVIDE COWP @ BASE.
13. 6" STORM DOWN. PROVIDE COWP @ BASE.
14. CONNECT NEW 1" COLD WATER , 1" HOT WATER AND 1/2" HOT WATER RETURN PIPING TO EXISTING 2 1/2" COLD WATER, 1 1/2" HOT WATER AND 1" HOT WATER RETURN PIPING. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING TO MAKE CONNECTIONS.
15. 3/4" COLD WATER DOWN.
16. 3/4" HOT WATER, 3/4" COLD WATER AND 3" SANITARY DOWN INSIDE PIPE CHASE. PROVIDE 3" COWP AT BASE. 2" VENT UP. EXTEND WATER AND SANITARY PIPING BENEATH COUNTER TO SINK IN NEAT MANNER. WATER PIPING SHALL BE INSTALLED TIGHT TO WALL. PROVIDE ESCUTCHEONS AT CABINET PENETRATIONS.
17. EXISTING GAS SERVICE TO REMAIN.
18. EXISTING GAS METER ASSEMBLY TO REMAIN.
19. 4" GAS DOWN. PROVIDE STEEL TO PE PIPE TRANSITION AT GRADE. ALL EXPOSED PIPE SHALL BE STEEL.
20. CONTRACTOR SHALL TAKE PRESSURE READINGS OF GAS PRESSURE TO PROPERLY SELECT REGULATOR SPRING RATES. REGULATOR SHALL BE ANSI Z21.80 COMPLIANT LOCK - UP TYPE. SET OUTLET PRESSURE TO GENERATOR PRESSURE REQUIREMENTS. PROVIDE VENT CAP WITH VENT PROTECTOR POINTED DOWNWARD. PROVIDE CAPPED TEE FITTINGS UPSTREAM AND DOWNSTREAM OF REGULATOR FOR ATTACHMENT OF PRESSURE MEASURING INSTRUMENTS. REGULATOR SHALL BE INSTALLED SO THAT THERE IS MINIMUM 10 PIPE DIAMETERS OF STRAIGHT PIPE UPSTREAM AND DOWNSTREAM OF REGULATOR. SEE GAS RISER DIAGRAM.
21. 3" SCHEDULE 40 STEEL PIPING. INSTALL PIPING ON GENERATOR CONCRETE PAD. PROVIDE PIPE SUPPORTS ATTACHED TO GENERATOR CONCRETE PAD. SPACING SHALL NOT EXCEED 5'-0" OC. CLEAN, PRIME AND PAINT PIPING WITH TWO COATS OF MARINE GRADE RUST RESISTANT PAINT. ADJUST PIPE LENGTH AND ROUTING AS REQUIRED TO SUIT ACTUAL GENERATOR UNIT CONNECTION LOCATION. SEE GAS RISER DIAGRAM.
22. FIELD VERIFY SIZE AND LOCATION OF UNIT CONNECTION AND PROVIDE TRANSITION FITTINGS AS REQUIRED AND APPROVED CORRUGATED STAINLESS STEEL FLEXIBLE GAS CONNECTOR (CSA/AGA CERTIFIED).
23. EXISTING 3" GAS UP TO REMAIN.
24. CONNECT NEW 6" GAS TO EXISTING 6" VALVED AND CAPPED OUTLET AT EXISTING GAS MANIFOLD. EXTEND 6" GAS RISER UP TO ROOF. SEE GAS RISER DIAGRAM.
25. RECONNECT NEW 6" MANIFOLD EXTENSION TO EXISTING 2" GAS DROPPING DOWN TO BELOW GRADE. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE RECONNECTION. SEE GAS RISER DIAGRAM FOR CLARIFICATION.
26. REMOVE EXISTING 4" GAS DROPPING DOWN TO BELOW GRADE SERVING EXISTING GENERATOR AND CAP BACK TO TEE. REMOVE EXISTING UNDERGROUND GAS LINE TO EXISTING GENERATOR. SEE PLUMBING DEMOLITION DRAWING P2.1 FOR CONTINUATION.
27. DISCONNECT EXISTING 2" GAS DROP. REMOVE EXISTING 6 X 2 REDUCER AND CONNECT NEW 6" PIPING TO EXTEND 6" MANIFOLD. RECONNECT TO EXISTING 2" PIPING DROPPING DOWN TO BELOW GRADE. CONNECT TO NEW 4" GAS DROPPING DOWN TO NEW GENERATOR. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE RECONNECTION. SEE GAS RISER DIAGRAM FOR CLARIFICATION.
28. 4" GAS DOWN. PROVIDE STEEL TO PE PIPE TRANSITION AT GRADE. ALL EXPOSED PIPE SHALL BE STEEL. PROVIDE SHUT OFF VALVE IN PIPE DROP. SEE GAS RISER DIAGRAM FOR CLARIFICATION.
29. 1/2" COLD WATER DOWN, TIGHT TO WALL. PROVIDE PIPE ESCUTCHEON AT CEILING PENETRATION. EXTEND PIPING TO SURFACE MOUNTED REFRIGERATOR ICE MACHINE VALVE BOX.
30. PROVIDE DEDICATED SUPPLY STOP VALVE AND EXTEND 3/8" HW TO DISHWASHER. PROVIDE SINK TAILPIECE WITH BUILT IN DISHWASHER CONNECTION TAP AND MAKE CONNECTION TO DISHWASHER DRAIN.
31. EXTEND 1 1/2" SANITARY, 1 1/2" VENT, AND 1/2" COLD WATER AND CONNECT TO EXISTING PIPING BEHIND WALL FROM REMOVED SINK. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTIONS TO NEW WATER COOLER. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
32. EXTEND 1 1/2" SANITARY, 1 1/2" VENT, 1/2" HOT WATER AND 1/2" CW AND CONNECT TO EXISTING PIPING BEHIND WALL FROM REMOVED SINK. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTIONS TO NEW SINK. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.





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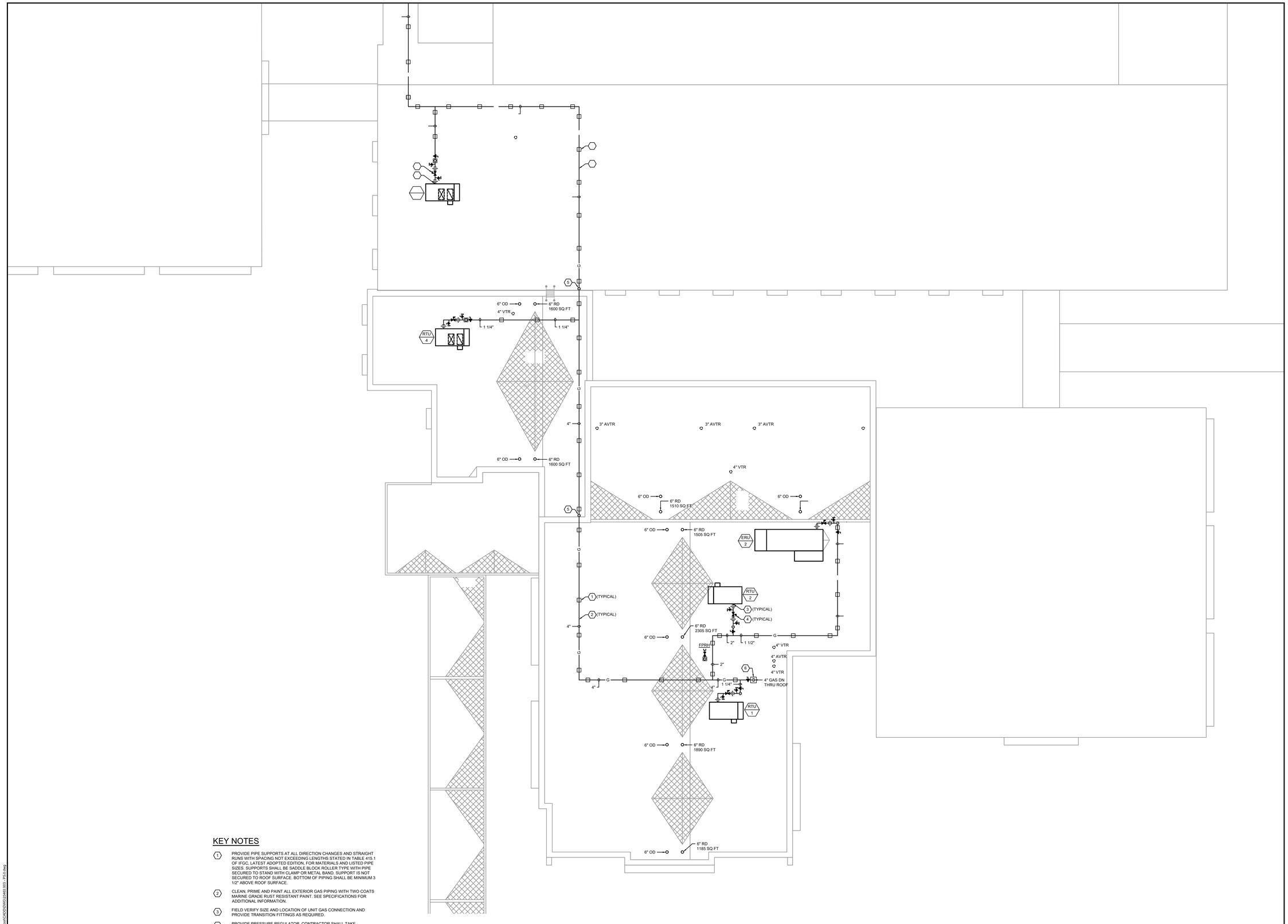
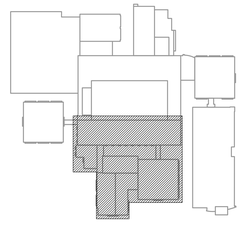


KEY NOTES

1. PROVIDE PIPE SUPPORTS AT ALL DIRECTION CHANGES AND STRAIGHT RUNS WITH SPACING NOT EXCEEDING LENGTHS STATED IN TABLE 415.1 OF IFGC, LATEST ADOPTED EDITION. FOR MATERIALS AND LISTED PIPE SIZES. SUPPORTS SHALL BE SADDLE BLOCK ROLLER TYPE WITH PIPE SECURED TO STAND WITH CLAMP OR METAL BAND. SUPPORT IS NOT SECURED TO ROOF SURFACE. BOTTOM OF PIPING SHALL BE MINIMUM 3 1/2" ABOVE ROOF SURFACE.
2. CLEAN, PRIME AND PAINT ALL EXTERIOR GAS PIPING WITH TWO COATS MARINE GRADE RUST RESISTANT PAINT. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. FIELD VERIFY SIZE AND LOCATION OF UNIT GAS CONNECTION AND PROVIDE TRANSITION FITTINGS AS REQUIRED.
4. PROVIDE PRESSURE REGULATOR. CONTRACTOR SHALL TAKE PRESSURE READING FOR GAS PRESSURE TO PROPERLY SELECT REGULATOR SPRING RATES. REGULATORS SHALL BE ANSI Z21.80 COMPLIANT LOCK UP TYPE. PROVIDE WITH VENT CAP POINTED DOWNWARD WITH BUILT IN INSECT SCREEN. VENTS TO BE LOCATED MINIMUM 10'-0" AWAY FROM ALL OUTSIDE AIR INTAKES. REFER TO MECHANICAL DRAWINGS FOR ROOFTOP HVAC EQUIPMENT GAS PRESSURE REQUIREMENTS. PROVIDE VALVED AND CAPPED TEE FITTING WITH THREADED TAPPING FOR CONNECTION OF PRESSURE MEASURING DEVICE UPSTREAM AND DOWNSTREAM OF REGULATOR IN COMPLIANCE WITH THE IFGC SECTION 410.2, LATEST ADOPTED EDITION.
5. PROVIDE PIPE SUPPORTS ATTACHED TO WALL AT TOP AND BOTTOM OF RISE.
6. PROVIDE & INSTALL ROOF PORTAL PATE CO OR EQUAL. PROVIDE SEPARATE BOOT FOR EACH PIPE. DO NOT PASS MORE THAN (1) PIPE THRU EACH NIPPLE TO FACILITATE PROPER SEALING.

ROOF PLAN - BLOCK A

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



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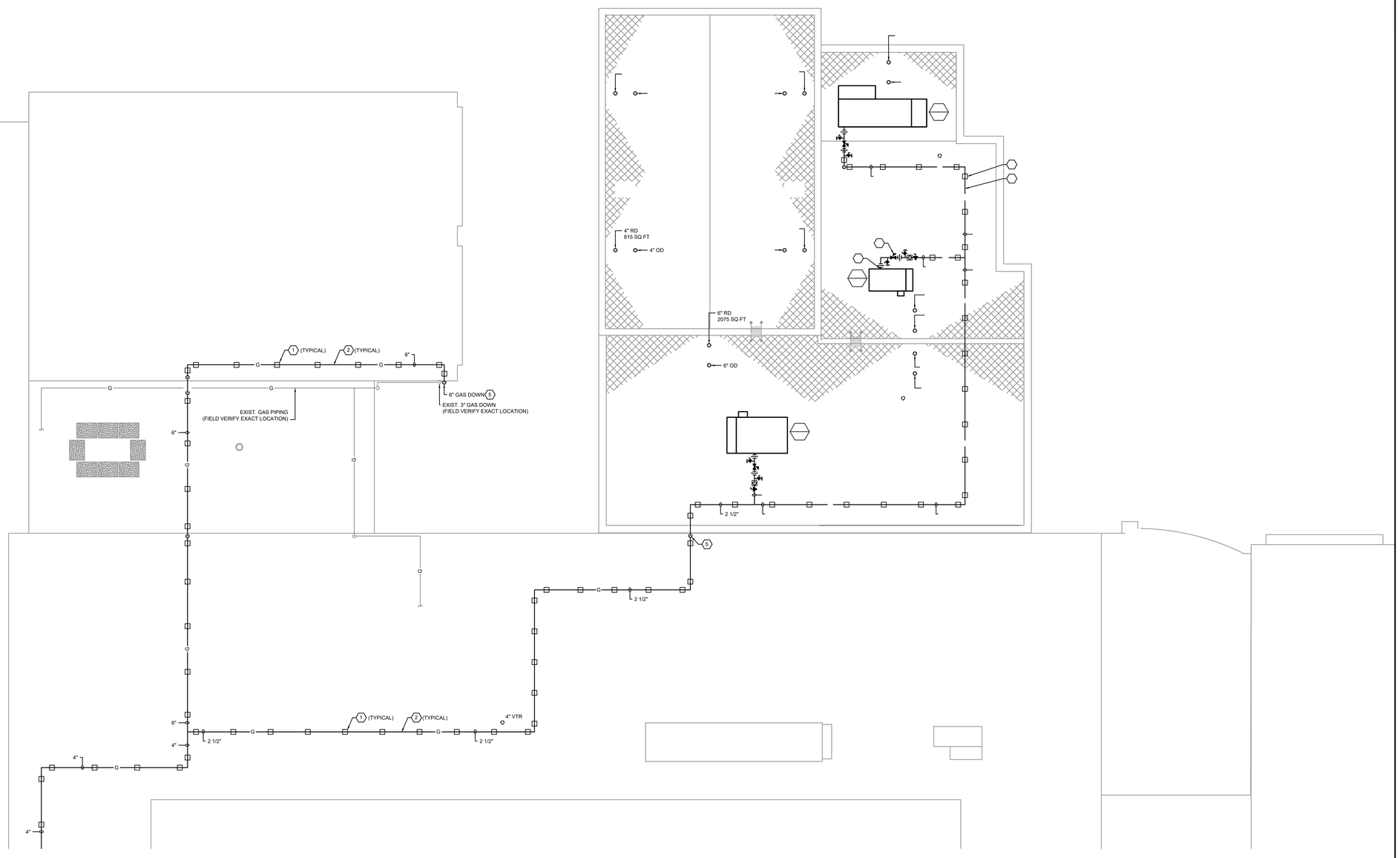
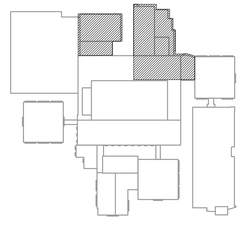


KEY NOTES

1. PROVIDE PIPE SUPPORTS AT ALL DIRECTION CHANGES AND STRAIGHT RUNS WITH SPACING NOT EXCEEDING LENGTHS STATED IN TABLE 415.1 OF IFGC, LATEST ADOPTED EDITION, FOR MATERIALS AND LISTED PIPE SIZES. SUPPORTS SHALL BE SADDLE BLOCK ROLLER TYPE WITH PIPE SECURED TO STAND WITH CLAMP OR METAL BAND. SUPPORT IS NOT SECURED TO ROOF SURFACE. BOTTOM OF PIPING SHALL BE MINIMUM 3 1/2" ABOVE ROOF SURFACE.
2. CLEAN, PRIME AND PAINT ALL EXTERIOR GAS PIPING WITH TWO COATS MARINE GRADE RUST RESISTANT PAINT. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. FIELD VERIFY SIZE AND LOCATION OF UNIT GAS CONNECTION AND PROVIDE TRANSITION FITTINGS AS REQUIRED.
4. PROVIDE PRESSURE REGULATOR. CONTRACTOR SHALL TAKE PRESSURE READING FOR GAS PRESSURE TO PROPERLY SELECT REGULATOR SPRING RATES. REGULATORS SHALL BE ANSI Z21.80 COMPLIANT LOCK UP TYPE. PROVIDE WITH VENT CAP POINTED DOWNWARD WITH BUILT IN INSECT SCREEN. VENTS TO BE LOCATED MINIMUM 10'-0" AWAY FROM ALL OUTSIDE AIR INTAKES. REFER TO MECHANICAL DRAWINGS FOR ROOFTOP HVAC EQUIPMENT GAS PRESSURE REQUIREMENTS. PROVIDE VALVED AND CAPPED TEE FITTING WITH THREADED TAPPING FOR CONNECTION OF PRESSURE MEASURING DEVICE UPSTREAM AND DOWNSTREAM OF REGULATOR IN COMPLIANCE WITH THE IFGC SECTION 410.2, LATEST ADOPTED EDITION.
5. PROVIDE PIPE SUPPORTS ATTACHED TO WALL AT TOP AND BOTTOM OF RISE.

ROOF PLAN - BLOCK B

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



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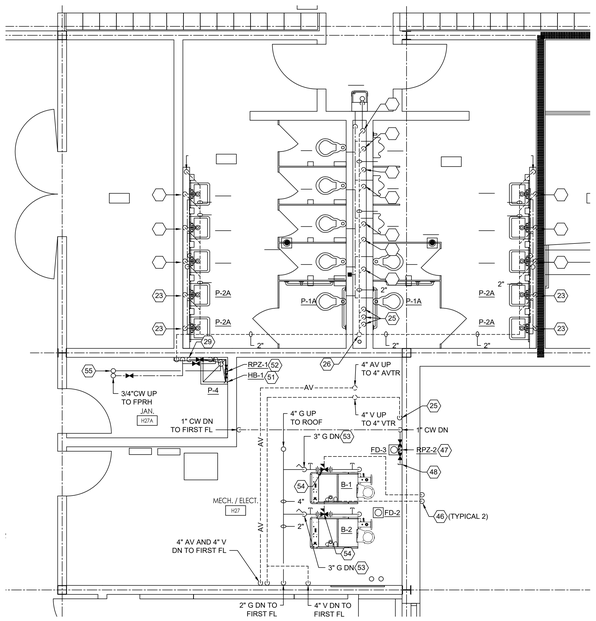
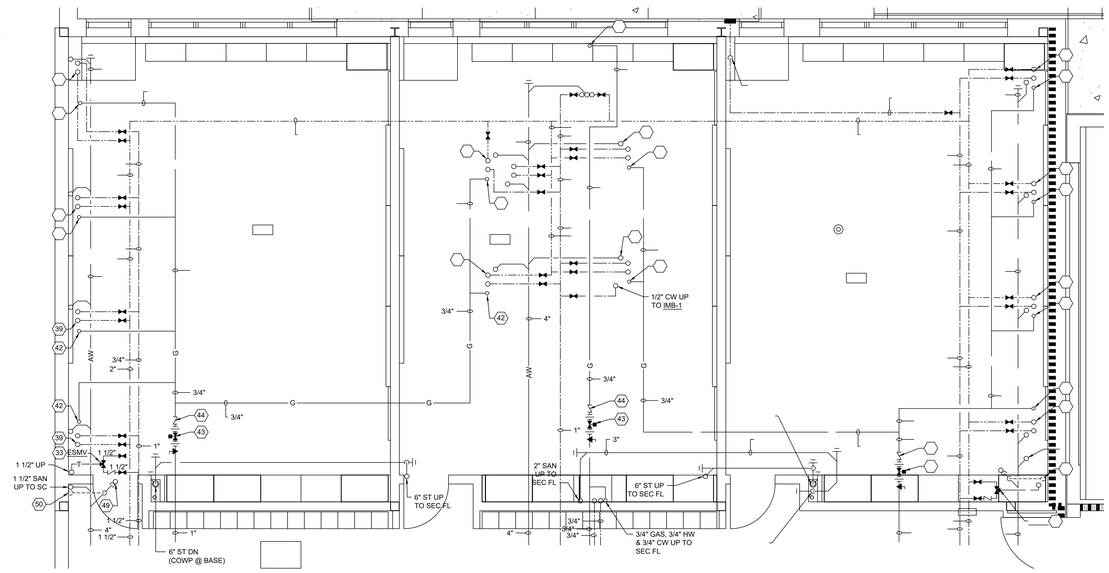
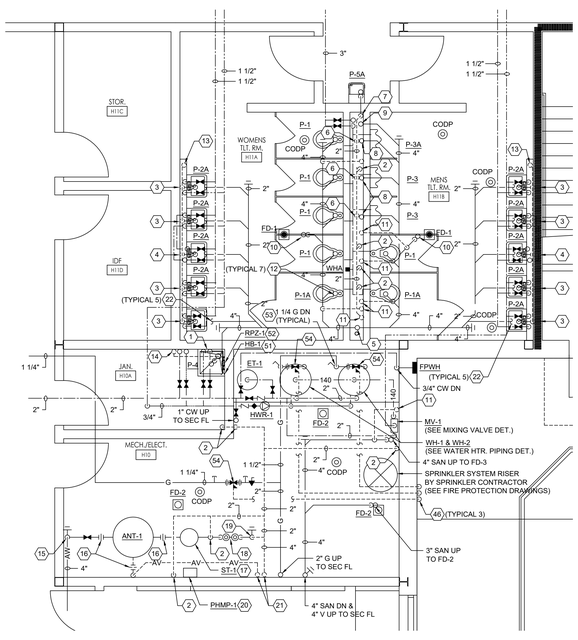


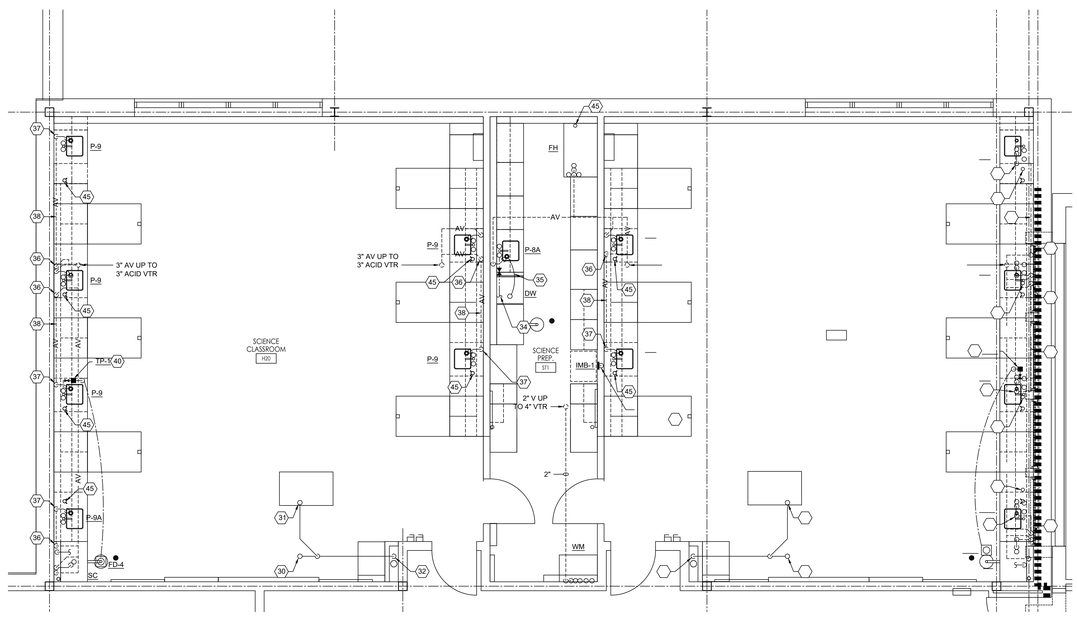
PART PLAN - H27, H27A, H28A, H28B
SCALE: 1/4" = 1'-0"



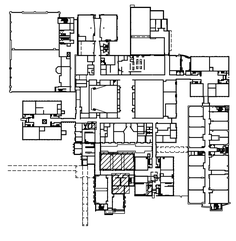
PART PLAN - H12, H13, H14
SCALE: 1/4" = 1'-0"

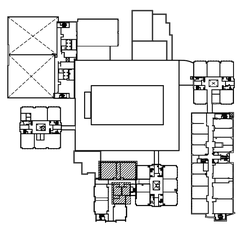


PART PLAN - H11, H11A, H12A, H12B
SCALE: 1/4" = 1'-0"



PART PLAN - H20, H21
SCALE: 1/4" = 1'-0"





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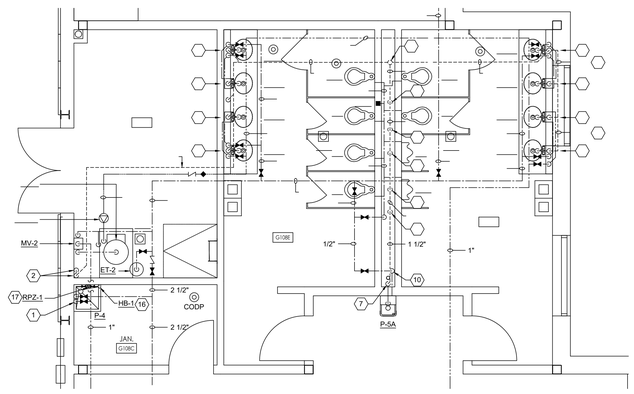
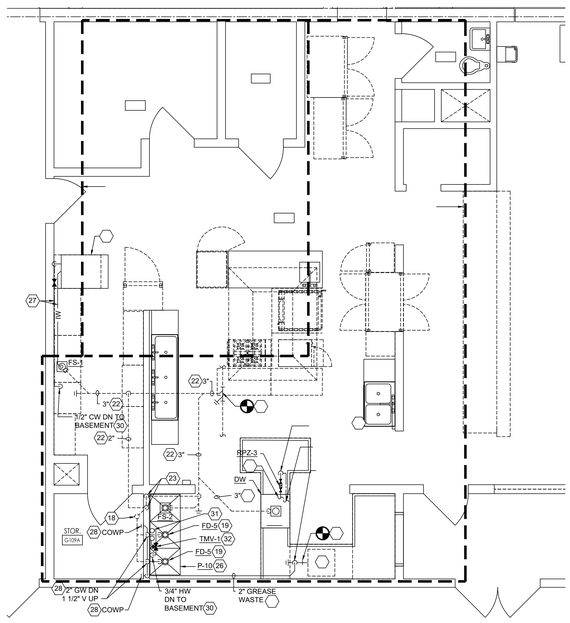


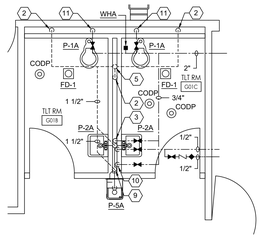
PART PLAN - G108C, G108D, G108E, G108F

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



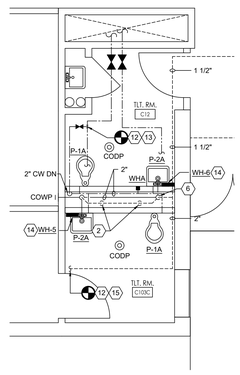
PART PLAN - G109

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



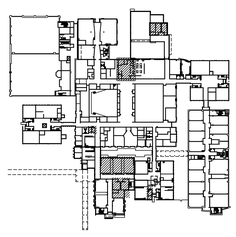
PART PLAN - G01B, G01C

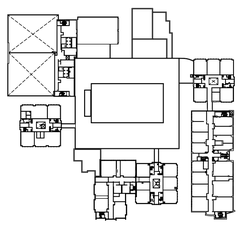
SCALE: 1/4" = 1'-0"



PART PLAN - C12, C103C

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





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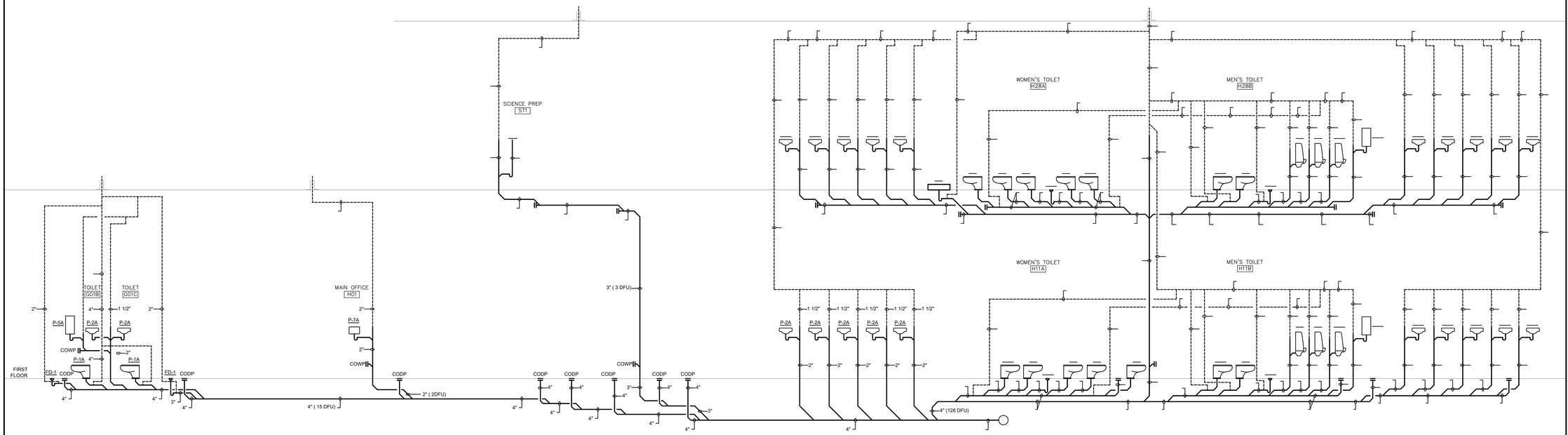
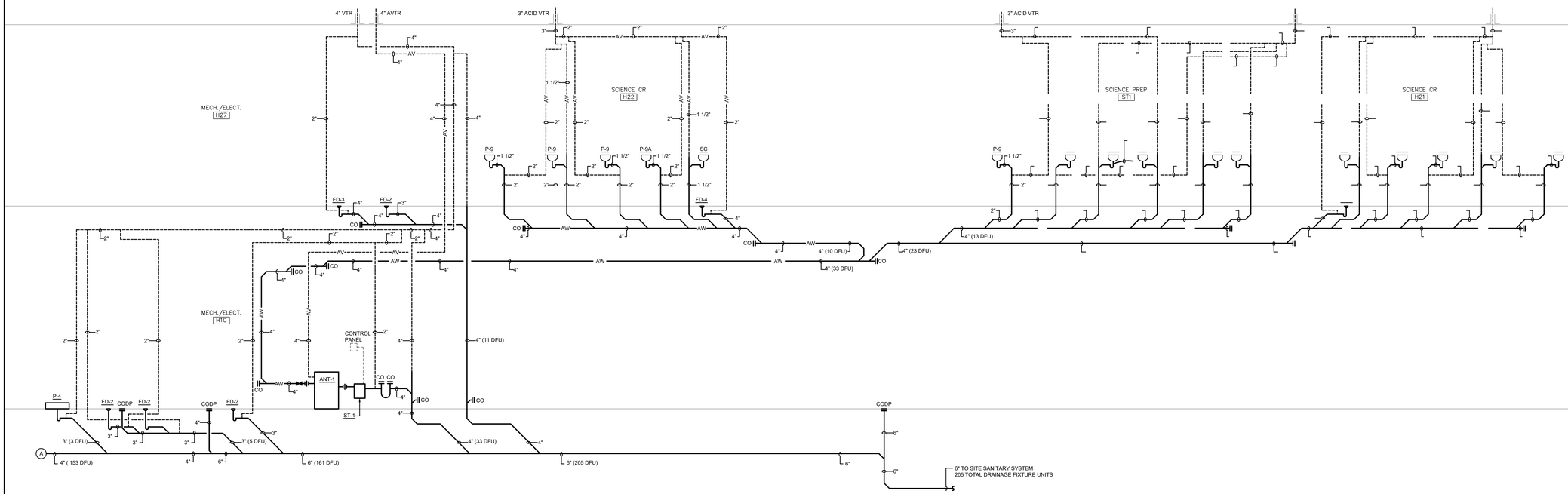


SANITARY RISER - BLOCK "A"

NOT TO SCALE

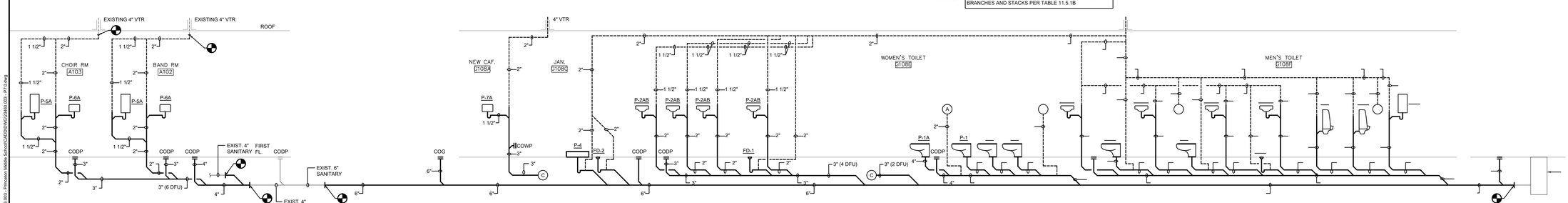
SANITARY BUILDING DRAIN PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 11.5.1A @ 1/8" SLOPE AND HORIZONTAL BRANCHES AND STACKS PER TABLE 11.5.1B



SANITARY RISER - BLOCK "A"

NOT TO SCALE

SANITARY BUILDING DRAIN PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 11.5.1A @ 1/8" SLOPE AND HORIZONTAL BRANCHES AND STACKS PER TABLE 11.5.1B



SANITARY RISER - BLOCK "B"

NOT TO SCALE

SANITARY BUILDING DRAIN PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 11.5.1A @ 1/8" SLOPE AND HORIZONTAL BRANCHES AND STACKS PER TABLE 11.5.1B

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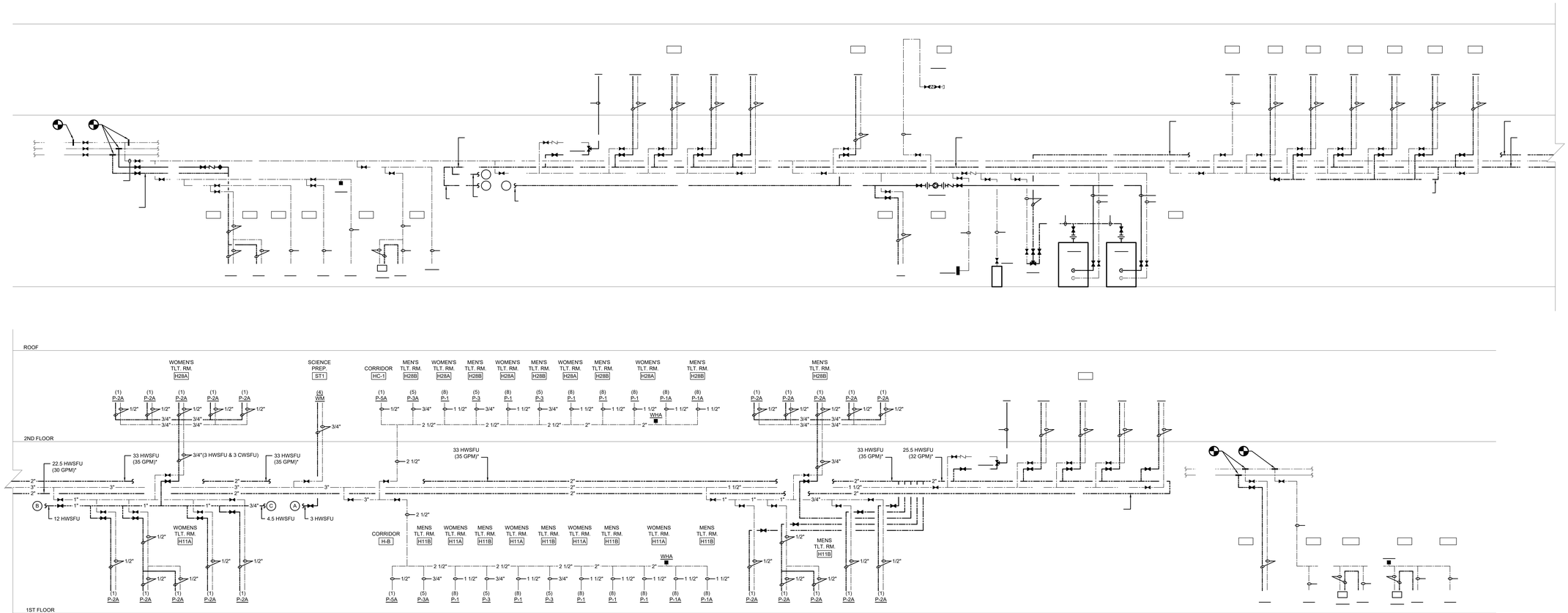
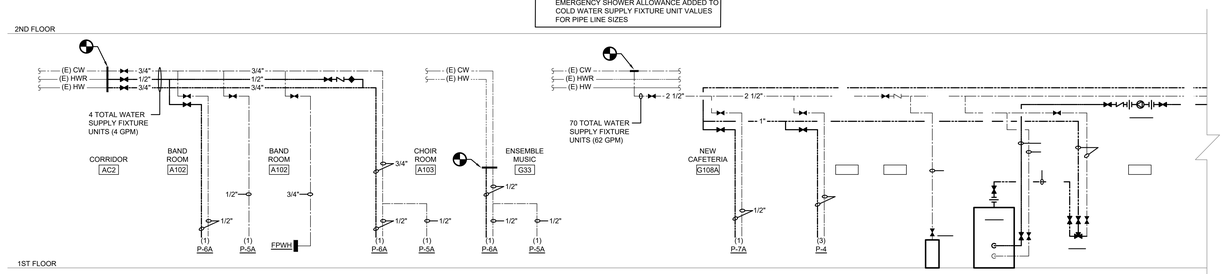


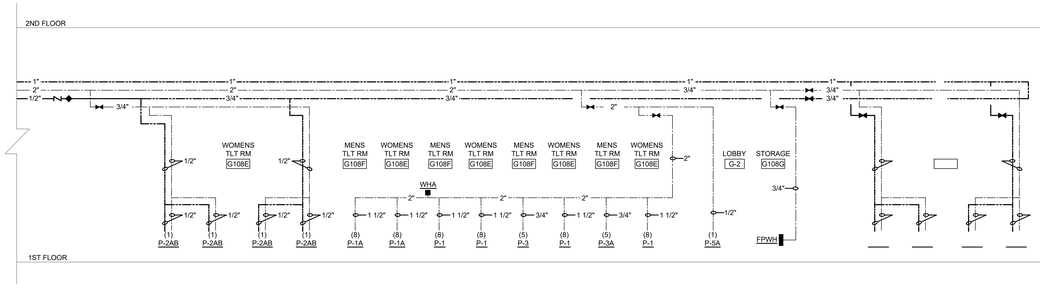
DOMESTIC WATER RISER DIAGRAM - BLOCK A

NOT TO SCALE

FAUCETS SHALL BE INSTALLED WITH AIR GAPS PER NSPC 10.5.1, FROST PROOF WALL HYDRANTS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS AND FLUSHOMETERS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS INSTALLED IN COMPLIANCE WITH NSPC 10.5.5

* DENOTES 15 GPM EMERGENCY SHOWER ALLOWANCE ADDED TO HOT WATER SUPPLY FIXTURE UNIT (HWSFU) VALUES AND 25 GPM EMERGENCY SHOWER ALLOWANCE ADDED TO COLD WATER SUPPLY FIXTURE UNIT VALUES FOR PIPE LINE SIZES

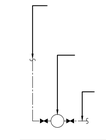




DOMESTIC WATER RISER DIAGRAM - BLOCK B

NOT TO SCALE

FAUCETS SHALL BE INSTALLED WITH AIR GAPS PER NSPC 10.5.1, FROST PROOF WALL HYDRANTS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS AND FLUSHOMETERS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS INSTALLED IN COMPLIANCE WITH NSPC 10.5.5



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Architecture
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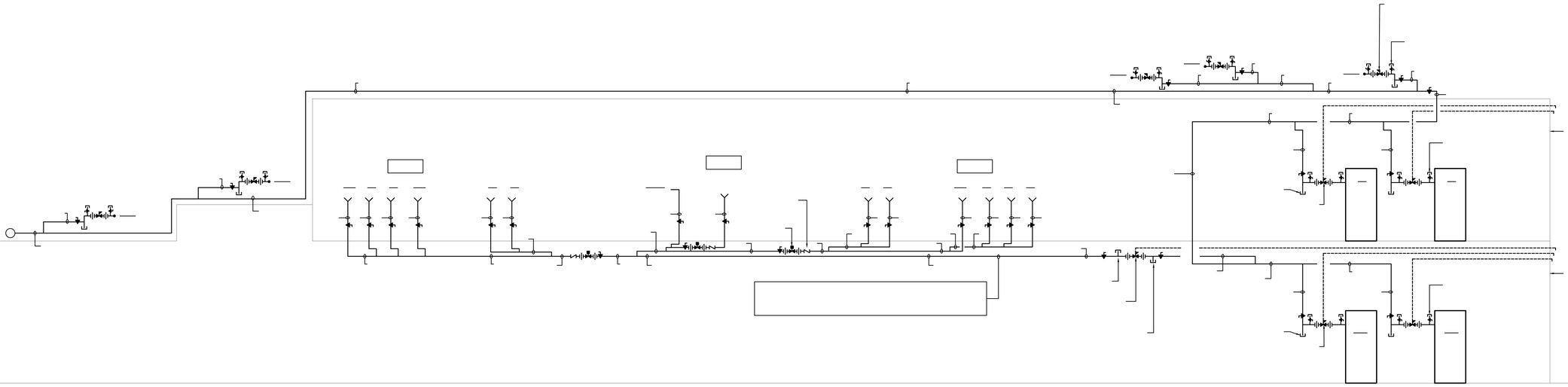
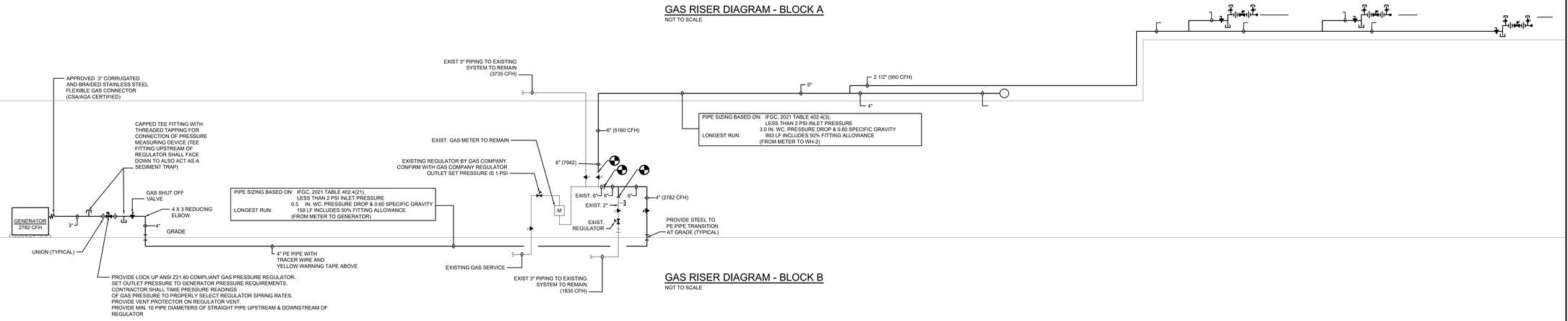
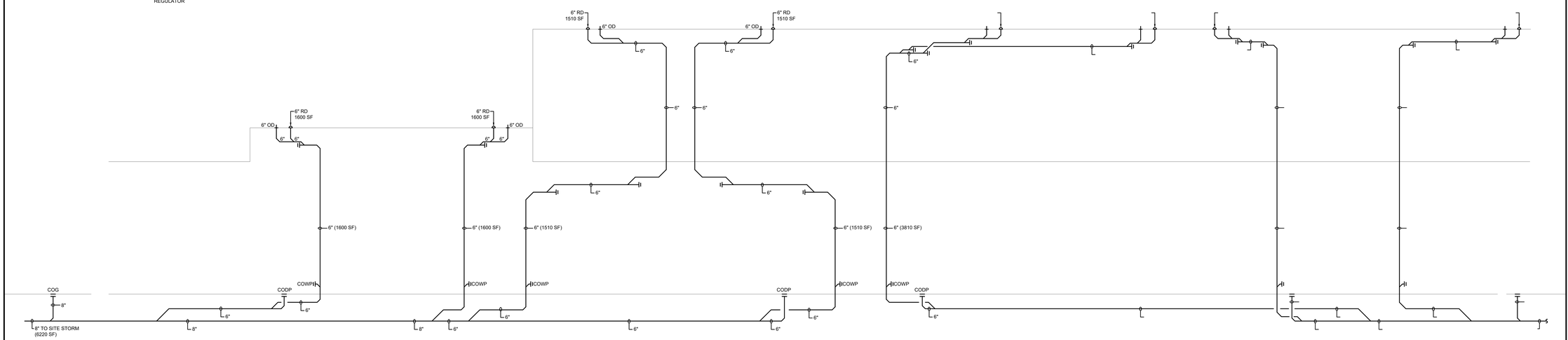


GAS RISER DIAGRAM - BLOCK A
NOT TO SCALE

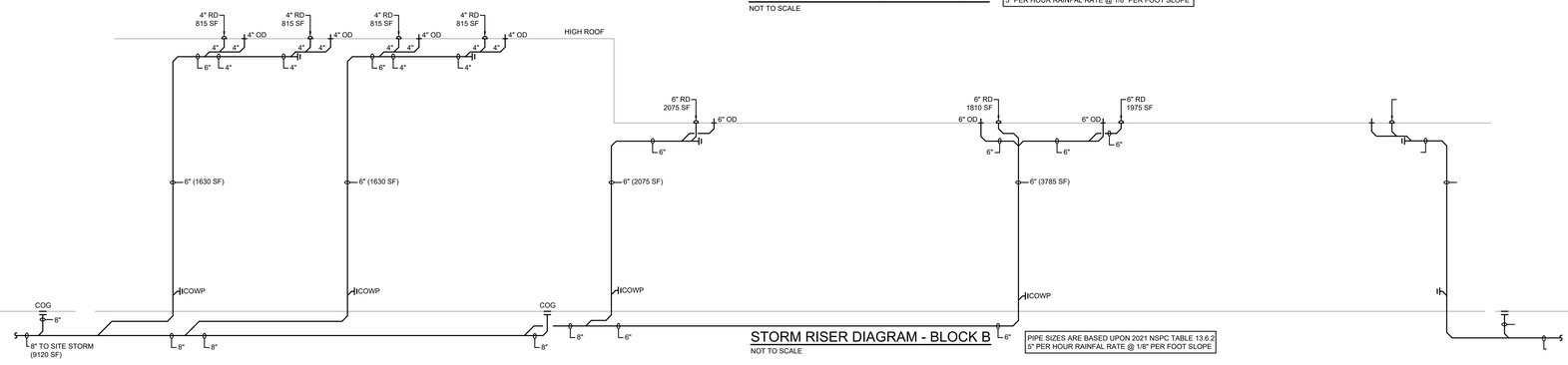


GAS RISER DIAGRAM - BLOCK B
NOT TO SCALE



STORM RISER DIAGRAM - BLOCK A
NOT TO SCALE

PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 13.6.2
5" PER HOUR RAINFAL RATE @ 1/8" PER FOOT SLOPE



STORM RISER DIAGRAM - BLOCK B
NOT TO SCALE

PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 13.6.2
5" PER HOUR RAINFAL RATE @ 1/8" PER FOOT SLOPE

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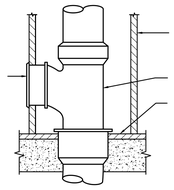

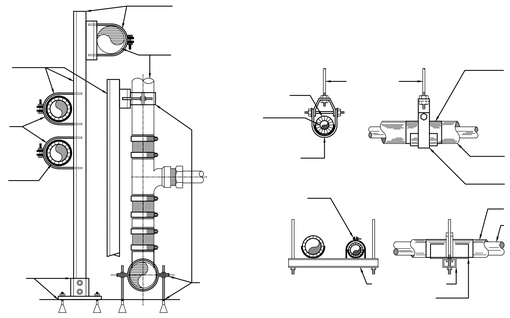

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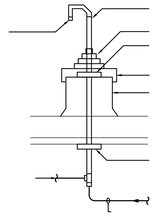
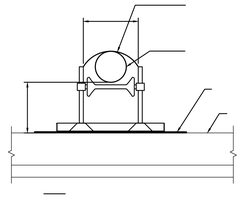
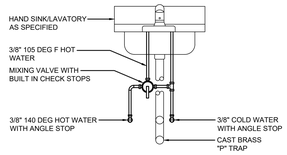
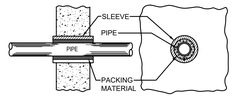






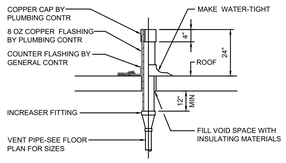
MIXING VALVE AT HAND SINKS AND LAVATORIES
NOT TO SCALE



(CONCRETE AND FOUNDATION WALLS)

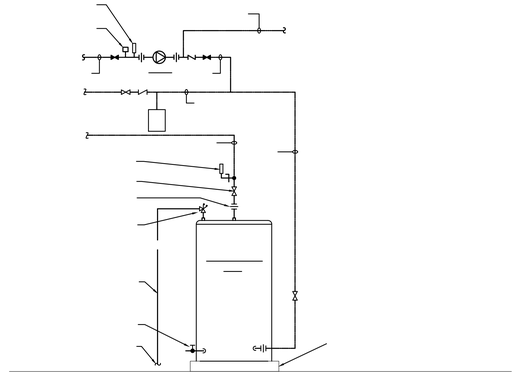
NOTE:
NO STRUCTURAL STRAIN SHOULD BE TRANSMITTED FROM ANY WALL TO THE PIPING SYSTEM THE SLEEVING, RELIEVING ARCH, OR STRUCTURAL BEAM SUPPORT METHODS PROTECT THE PIPING FROM SUPERIMPOSED LOADS THE "PACKING" MATERIAL AROUND THE PIPE IS FLEXIBLE ENOUGH TO RESPOND TO SETTLING IN THE STRUCTURE OR PIPING

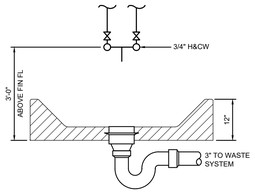
WALL PENETRATION PIPE SLEEVE DETAIL
NOT TO SCALE



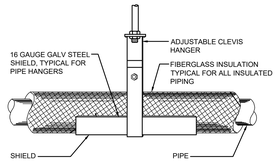
NOTES:
1. MINIMUM SIZE OF VENT EXTENSION THROUGH ROOF TO BE 3".
2. CHANGE OF DIAMETER TO BE MADE AT LEAST 12" BELOW ROOF.
3. VENT PIPE TO EXTEND 24" ABOVE ROOF AND TO BE SEALED WATERTIGHT BY PROPER FLASHING.
4. ALL VENT RISERS SHALL BE OFFSET AS REQUIRED TO CLEAR ROOF STRUCTURE, DUCTWORK OR MECH ROOFTOP UNITS. PLUMBING CONTRACTOR TO COORDINATE WITH OTHER TRADES.
5. ROOFING CONTRACTOR SHALL SUPPLY BOOT FLASHING FOR RUBBER ROOF SYSTEMS.

VENT INCREASER DETAIL
NOT TO SCALE

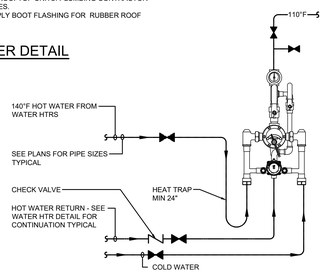




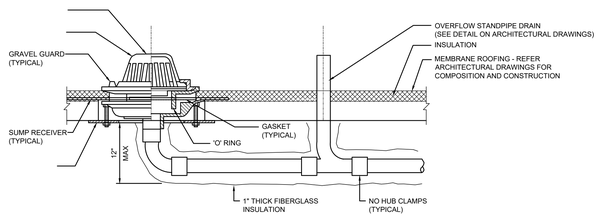
SERVICE SINK DETAIL
NOT TO SCALE



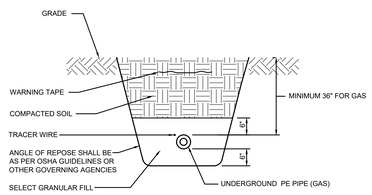
TYPICAL PIPE HANGER DETAIL
NOT TO SCALE



HIGH LOW MIXING VALVE DETAIL (MV-1 & MV-2)
NOT TO SCALE

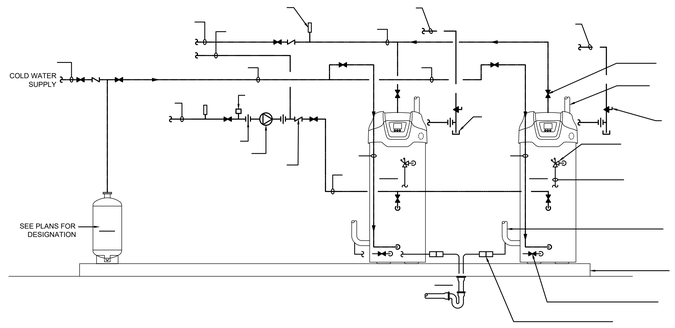


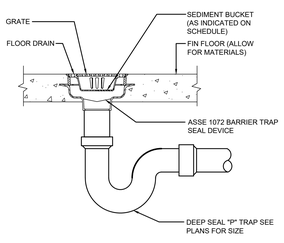
ROOF DRAIN AND OVERFLOW DRAIN DETAIL
NOT TO SCALE



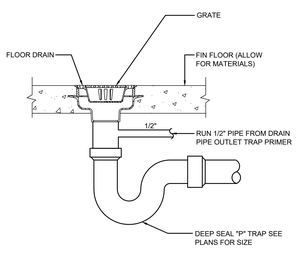
PE GAS PIPE TRENCH DETAIL
NOT TO SCALE

NOTES:
1. REMOVE AND HAUL OFF SITE ALL EXCESS SITE SOIL.
2. RESTORE ALL SURFACES TO ORIGINAL CONDITION.

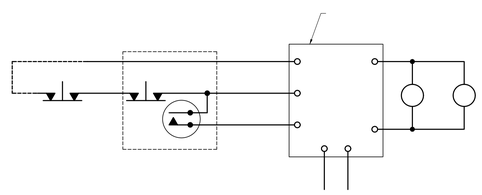




TYPICAL FLOOR DRAIN DETAIL
NOT TO SCALE



ACID WASTE FLOOR DRAIN DETAIL
NOT TO SCALE



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THE SAME AGENCY HAVING JURISDICTION AFTER INSTALLATION. FIRE SUPPRESSION CONSTRUCTION DRAWINGS SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE AREA WHERE THE PROJECT IS LOCATED.

8. SPRINKLER HEADS SHALL NOT INTERFERE WITH LIGHTING FIXTURES, SPEAKERS, DUCTWORK, AIR CONDITIONING DIFFUSERS AND GRILLES, ETC. COORDINATE WITH ARCHITECT'S REFLECTED CEILING PRIOR TO SUBMITTING SHOP DRAWING.

9. THE FIRE PROTECTION DRAWINGS ARE INTENDED TO INDICATE, ONLY DIAGRAMMATICALLY, THE EXTENT AND THE GENERAL CHARACTER AND LOCATIONS OF THE WORK INCLUDED.

10. COORDINATE ALL FIRE SPRINKLER WORK WITH ARCHITECTURAL REFLECTED CEILING PLANS AND OTHER TRADES. SPRINKLER SHALL BE LOCATED IN CENTER OF CEILING TILE OR IN QUARTER POINT OF 4' DIMENSION AND CENTER OF 2' DIMENSION.

11. ALL SPRINKLER PIPING SHALL BE SEISMICALLY BRACED AND PITCHED FOR DRAINAGE.

12. CHANGES OR SUBSTITUTIONS OF EQUIPMENT WILL NOT BE ALLOWED WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER. ALL COSTS RESULTING FROM THE SELECTION OF OTHER THAN SPECIFIED EQUIPMENT SHALL BE BORNE BY THE CONTRACTOR, INCLUDING, BUT NOT LIMITED TO WORK AFFECTING OTHER CONTRACTORS, THE OWNER, OR RE-DESIGN ISSUES.

13. ALL INDICATED WORK SHALL BE PERFORMED BY THE FIRE PROTECTION CONTRACTOR UNLESS OTHERWISE NOTED.

14. DO NOT USE ANY PART OF THE OWNER'S BUILDING AS A SHOP, EXCEPT PARTS DESIGNATED FOR SUCH PURPOSES BY THE OWNER.

15. ALL CONTRACT WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE WRITTEN SPECIFICATIONS FOR THIS PROJECT WHICH ARE CONSIDERED TO BE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. ALL CONTRACTORS AND SUBCONTRACTORS SHALL MAINTAIN (AT THE JOB SITE) AND REFER TO COPIES OF THE WRITTEN SPECIFICATIONS AS PART OF THESE DRAWINGS. REFER TO THE WRITTEN SPECIFICATIONS IN CONJUNCTION WITH THE PLANS FOR FULL PROJECT SCOPE. IN ALL CASES OF DISCREPANCY BETWEEN PLANS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN AND WHERE IT IS UNCLEAR, SUCH CASES SHALL BE REFERRED TO THE ENGINEER FOR ADJUDICATION.

16. ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND RELATED HVAC, ELECTRICAL, FIRE PROTECTION, ARCHITECTURAL, INTERIOR DECOR AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER PRIOR TO BID SUBMISSION.

17. THE FIRE PROTECTION CONTRACTOR SHALL REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED HVAC, ELECTRICAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, THE FIRE PROTECTION CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS AND TRADES ON THIS PROJECT TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.

18. CONTRACTOR SHALL COORDINATE HIS SCHEDULING WITH THE GENERAL CONTRACTOR.

19. IF ANY UNEXPECTED DISCOVERY OF SUSPECTED HAZARDOUS MATERIALS, IE ASBESTOS, IS MADE DURING THE COURSE OF WORK, THE CONTRACTOR SHALL REPORT THE DISCOVERY IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL STOP ANY WORK THAT MAY DISTURB THE SUSPECTED HAZARDOUS MATERIAL. CONTRACTOR SHALL RESUME WORK AFTER ALL HAZARDOUS MATERIAL HAS BEEN REMEDIATED.

20. CONTRACTOR RESPONSIBLE FOR THE PROPER CARE OF ALL OWNER'S EQUIPMENT AND/OR FURNISHINGS WHICH ARE REQUIRED TO BE TEMPORARILY REMOVED, STORED OR RELOCATED. CONTRACTOR SHALL REPLACE, REPAIR OR REIMBURSE OWNER FOR ALL DAMAGES TO SUCH PROPERTIES AT FULL REPLACEMENT VALUE AND EQUIVALENCY. CONTRACTOR SHALL ADVISE OWNER FOR DISPOSITION OR REMOVED EQUIPMENT AND/OR MATERIALS.

21. PIPING SHOWN ON DRAWINGS SHOW THE GENERAL RUN AND CONNECTIONS AND MAY OR MAY NOT IN ALL PARTS BE SHOWN IN ITS EXACT POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTING THE PIPING SUITABLE IN EVERY RESPECT FOR THE WORK. PIPING SHALL BE INSTALLED SO THAT ACCESS, CLEARANCE, HEADROOM AND PITCH ARE MAINTAINED. CONTRACTORS OF THE VARIOUS TRADES SHALL COORDINATE THE INSTALLATION.

22. ALL CONTRACTORS SHALL PROVIDE CUTTING AND PATCHING FOR THEIR RESPECTIVE TRADES.

23. ALL SPRINKLER PIPING TO RUN AS HIGH AS POSSIBLE. ALL MAINS SHALL BE RUN TIGHT TO STEEL. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR.

24. ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS, SOFFITS WITH OTHER MECHANICAL/ELECTRICAL FEEDS. ALL SUCH LOCATIONS ARE TO BE REVIEWED WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

25. ALL PIPING SYSTEM PENETRATIONS OF FIRE-RATED WALLS AND FLOOR SHALL BE SEALED WITH UL APPROVED FIRE RESISTANT JOINT SEALER, SPECIFIED TECHNOLOGIES "PENSIL 200" OR EQUAL, TWO-PART FOAMED-IN-PLACE SILICONE SEALANT. FIRE RESISTANT SEALER SHALL BE TESTED IN ACCORDANCE WITH ASTM 814. INSTALL SEALANT, INCLUDING FORMING, PACKING AND OTHER ACCESSORY MATERIALS TO FILL OPENINGS WHERE FIRE-RATED WALL PENETRATIONS OCCUR. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY TESTERS AND INSPECTION AGENCY.

26. ALL CONTRACTORS REMOVING ANY EQUIPMENT, PIPES, DUCTS, CONDUITS, ETC. SHALL PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

27. REFER TO SPECIFICATIONS FOR SPRINKLER HEAD AND ESCUTCHEON FINISHES AND COLORS.

28. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE A COMPLETE SET OF "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT CONCEALED OR EMBEDDED PIPES, PIPE CONNECTIONS AND ACCESS DOORS. THESE PLANS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM BID DOCUMENTS.

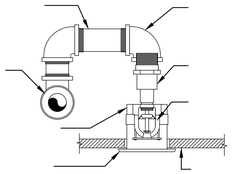
29. GUARANTEE ALL WORK, MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE (1) YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY.

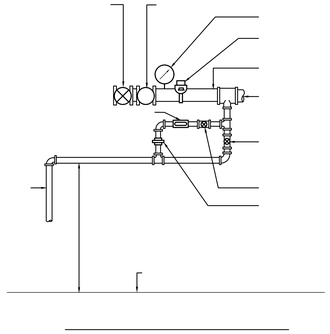
3. ALL DROP NIPPLES SHALL BE 1" UNLESS OTHERWISE NOTED.

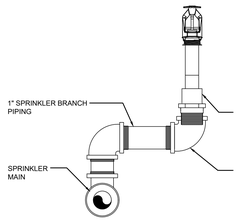
APPLICABLE CODES:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST CODES AND SUBCODES AS ADOPTED BY THE STATE OF NEW JERSEY:

- NEW JERSEY UNIFORM CONSTRUCTION CODE (NJUCC)
- REHABILITATION SUBCODE 5:23-6
- ADMINISTRATIVE CODE: TITLE 6
- 2021 INTERNATIONAL BUILDING CODE - NJ EDITION
- 2020 NATIONAL ELECTRICAL CODE
- 2021 NATIONAL STANDARD PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2021 INTERNATIONAL FUEL GAS CODE
- 2019 ASHRAE 90.1 ENERGY CONSERVATION CODE
- 2019 NFPA 13
- REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION

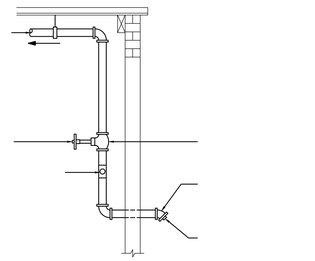


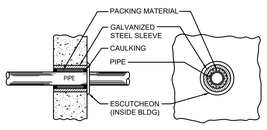




UPRIGHT PENDANT SPRINKLER HEAD
NOT TO SCALE

PIPE THRU RATED WALL
NOT TO SCALE

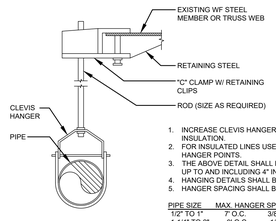




(CONCRETE AND FOUNDATION WALLS)

NOTE:
NO STRUCTURAL STRAIN SHOULD BE TRANSMITTED FROM ANY WALL TO THE PIPING SYSTEM. THE SLEEVING, RELIEVING ARCH, OR STRUCTURAL BEAM SUPPORT METHODS PROTECT THE PIPING FROM SUPERIMPOSED LOADS THE "PACKING" MATERIAL AROUND THE PIPE IS FLEXIBLE ENOUGH TO RESPOND TO SETTLING IN THE STRUCTURE OR PIPING

WATERTIGHT PIPE SLEEVE DETAIL
NOT TO SCALE

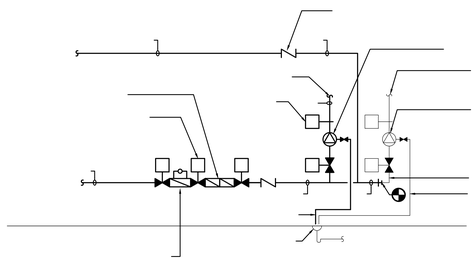


1. INCREASE CLEVIS HANGER SIZE TO ALLOW FOR INSULATION.
2. FOR INSULATED LINES USE STEEL PIPE SHIELDS AT HANGER POINTS.
3. THE ABOVE DETAIL SHALL BE USED ONLY FOR LINES UP TO AND INCLUDING 4" IN SIZE.
4. HANGING DETAILS SHALL BE SUBMITTED FOR REVIEW.
5. HANGER SPACING SHALL BE AS FOLLOWS:

PIPE SIZE	MAX. HANGER SPACING	MIN. ROD SIZE
1/2" TO 1"	7' O.C.	3/8"
1-1/4" TO 2"	9' O.C.	1/2"
2-1/2" TO 4"	10' O.C.	1/2"

6. REPAIR OF FIRE PROOFING AT REMOVED AND NEW SUPPORT CONNECTIONS.

TYPICAL HANGER DETAIL
NOT TO SCALE



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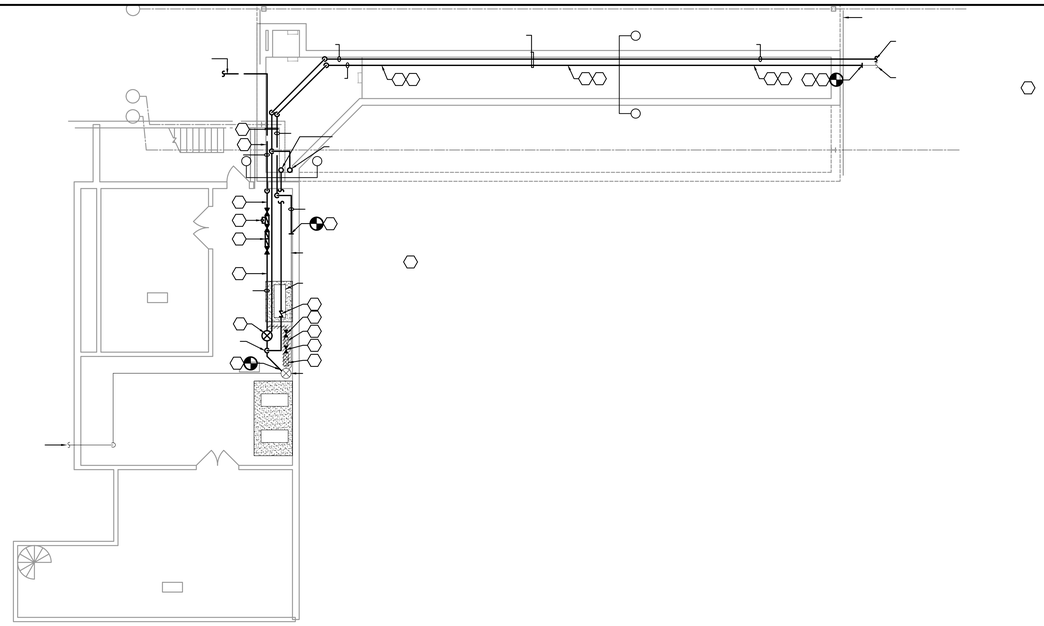

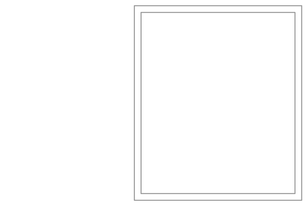

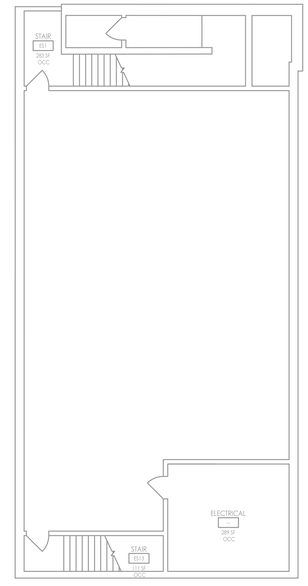

BASEMENT SPRINKLER PLAN

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

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F V H D P C . C O M

Project Name
Addition and Renovations to Princeton Middle School

Project Owner Name
Princeton Public Schools

Project Location
217 Walnut Lane, Princeton, NJ 08540

Project Number
5516B

Project Date
10.10.2025

Checked By
AHG

Drawn By
JD

Scale
AS NOTED

Drawing Name
FIRE PROTECTION BASEMENT PLAN

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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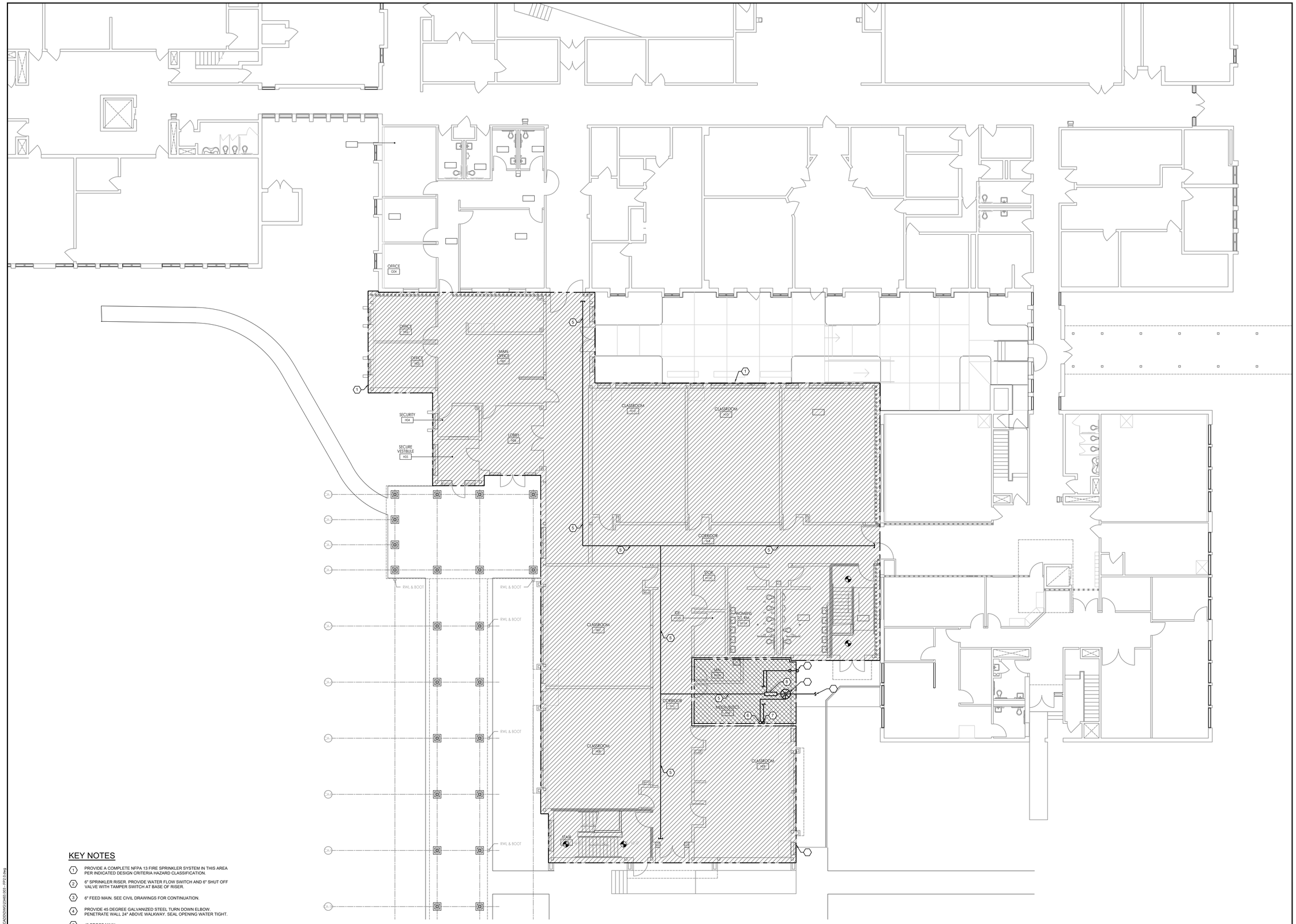
AMIN H. GOMAA, PE
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE04842100

Drawing Number
FP2.0



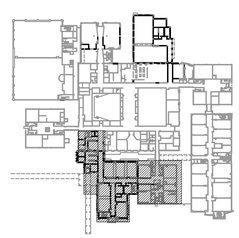
KEY NOTES

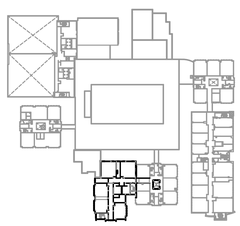
1. PROVIDE A COMPLETE NFPA 13 FIRE SPRINKLER SYSTEM IN THIS AREA PER INDICATED DESIGN CRITERIA HAZARD CLASSIFICATION.
2. 6" SPRINKLER RISER. PROVIDE WATER FLOW SWITCH AND 6" SHUT OFF VALVE WITH TAMPER SWITCH AT BASE OF RISER.
3. 6" FEED MAIN. SEE CIVIL DRAWINGS FOR CONTINUATION.
4. PROVIDE 45 DEGREE GALVANIZED STEEL TURN DOWN ELBOW. PENETRATE WALL 24" ABOVE WALKWAY. SEAL OPENING WATER TIGHT.
5. 4" CROSS MAIN.
6. 4" BULK MAIN UP TO SECOND FLOOR.
7. SPRINKLER DRAIN UP TO SECOND FLOOR.
8. FIRST FLOOR CONTROL VALVE ASSEMBLY. SEE DETAIL ON DRAWING FP1.0.

SYMBOL	SPRINKLER DESIGN CRITERIA
	HAZARD CLASSIFICATION : LIGHT
	SPACES : CLASSROOMS, TOILET ROOMS, CORRIDORS, VESTIBULE, STAIRS, OFFICES DENSITY : 0.10 GPM PER SQ FT DESIGN AREA : 1500 SQ FT MAX AREA PER SPRINKLER : 200 SQ FT INSIDE AND OUTSIDE HOSE STREAM ALLOWANCE : 100 GPM SPRINKLER TYPE : CONCEALED, QUICK RESPONSE
	HAZARD CLASSIFICATION : ORDINARY GROUP 1
	SPACES : MECHANICAL/ELECTRICAL ROOMS, JANITOR'S CLOSET, STORAGE ROOMS DENSITY : 0.15 GPM PER SQ FT DESIGN AREA : 1500 SQ FT MAX AREA PER SPRINKLER : 130 SQ FT INSIDE AND OUTSIDE HOSE STREAM ALLOWANCE : 250 GPM SPRINKLER TYPE : UPRIGHT, QUICK RESPONSE

FIRST FLOOR FLOOR PLAN - BLOCK A

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





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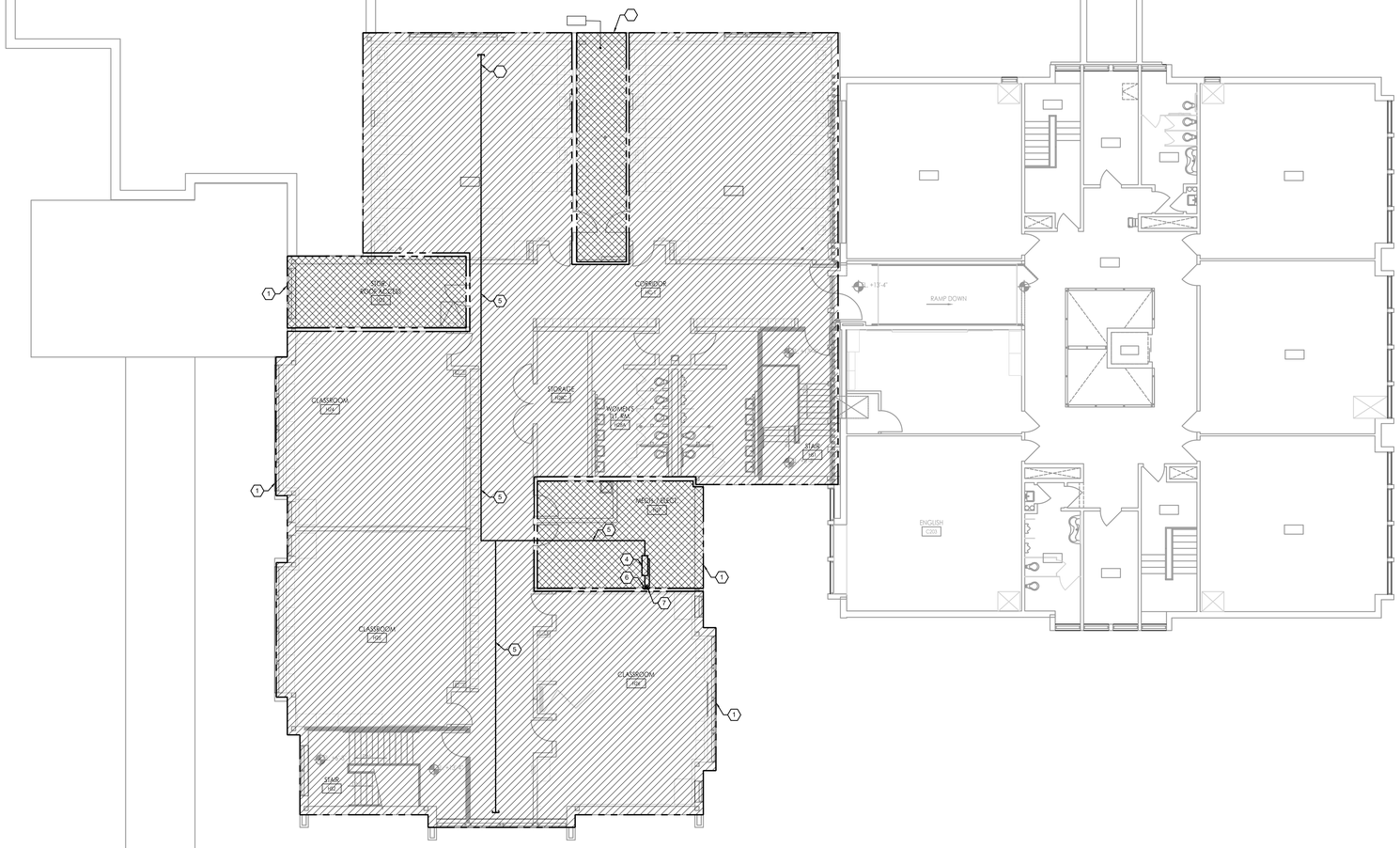


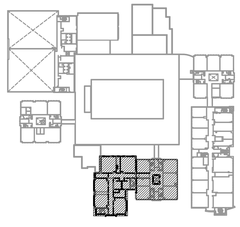
KEY NOTES

1. PROVIDE A COMPLETE NFPA 13 FIRE SPRINKLER SYSTEM IN THIS AREA PER INDICATED DESIGN CRITERIA HAZARD CLASSIFICATION.
2. SPRINKLER RISER. SEE SPRINKLER RISER DETAIL ON DRAWING FP1.0.
3. FIRE MAIN BY SPRINKLER CONTRACTOR. SEE CIVIL DRAWINGS FOR CONTINUATION.
4. SECOND FLOOR CONTROL VALVE ASSEMBLY. SEE DETAIL ON DRAWING FP1.0.
5. 4" CROSS MAIN.
6. 4" BULK MAIN DOWN TO FIRST FLOOR.
7. SPRINKLER DRAIN DOWN TO FIRST FLOOR.

SYMBOL	SPRINKLER DESIGN CRITERIA
	HAZARD CLASSIFICATION : LIGHT
	SPACES : CLASSROOMS, TOILET ROOMS, CORRIDORS, STAIRS. DENSITY : 0.10 GPM PER SQ FT DESIGN AREA : 1500 SQ FT MAX AREA PER SPRINKLER : 200 SQ FT INSIDE AND OUTSIDE HOSE STREAM ALLOWANCE : 100 GPM SPRINKLER TYPE : CONCEALED, QUICK RESPONSE
	HAZARD CLASSIFICATION : ORDINARY GROUP 1
	SPACES : MECHANICAL/ELECTRICAL ROOMS, JANITOR'S CLOSET, STORAGE ROOMS, PREP RMS DENSITY : 0.15 GPM PER SQ FT DESIGN AREA : 1500 SQ FT MAX AREA PER SPRINKLER : 130 SQ FT INSIDE AND OUTSIDE HOSE STREAM ALLOWANCE : 250 GPM SPRINKLER TYPE : UPRIGHT, QUICK RESPONSE

SECOND FLOOR FLOOR PLAN - BLOCK A

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



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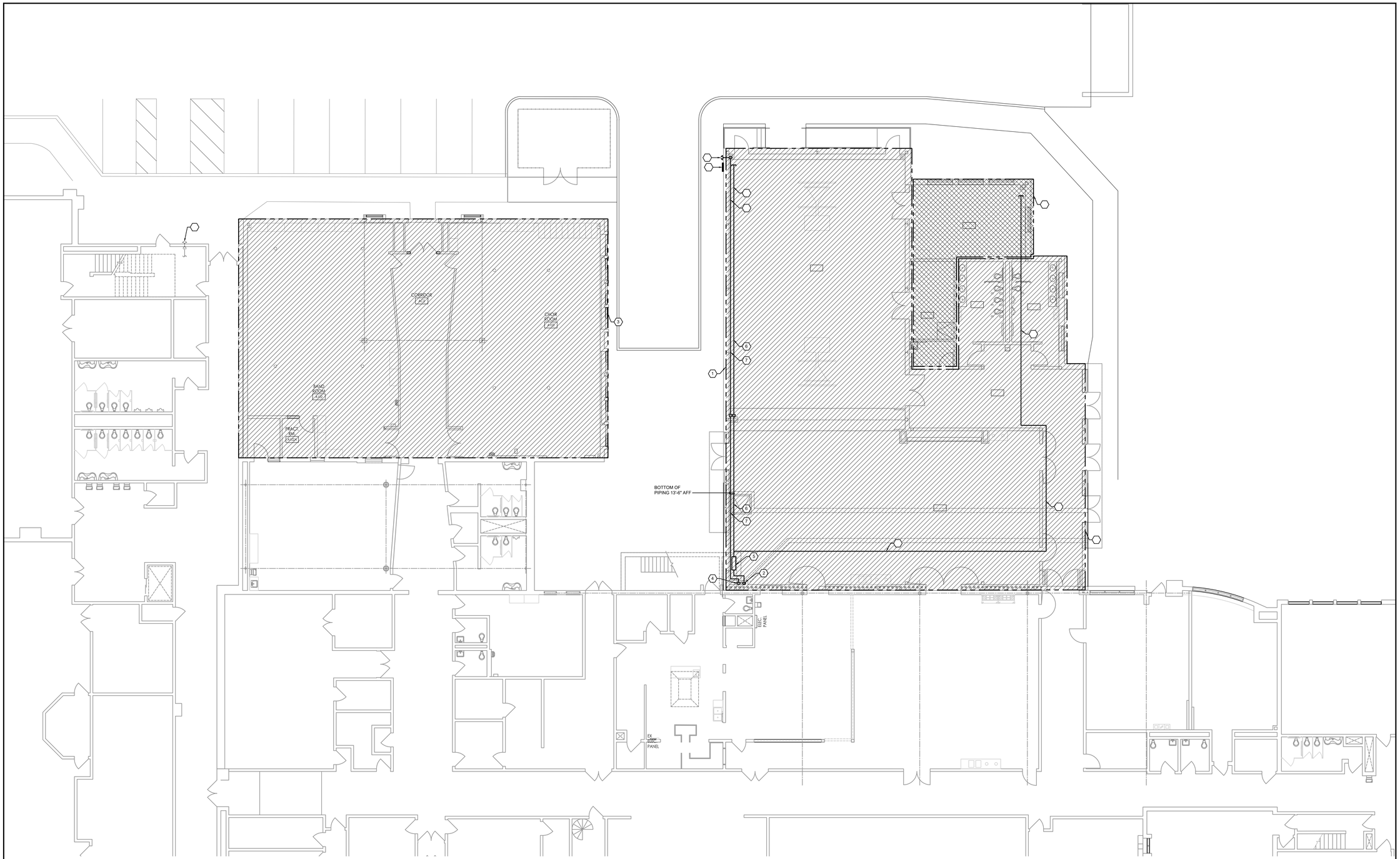


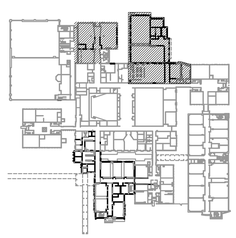
KEY NOTES

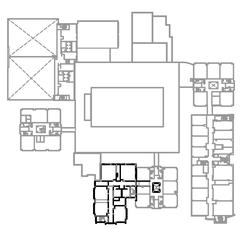
1. PROVIDE A COMPLETE NFPA 13 FIRE SPRINKLER SYSTEM IN THIS AREA PER INDICATED DESIGN CRITERIA HAZARD CLASSIFICATION.
2. 4" FEED MAIN DOWN. FOR CONTINUATION SEE DRAWING FP2.0.
3. REMOVE EXISTING HEADS IN THIS AREA AND MODIFY PIPING TO ACCOMMODATE NEW CEILING LAYOUT, CEILING HEIGHT, DIFFUSERS, DUCTWORK, LIGHTS, CEILING CLOUDS AND EXIT SIGNS. PROVIDE A NEW SPRINKLER HEAD SYSTEM LAYOUT AS PER. NFPA #13 AND INDICATED DESIGN CRITERIA (REFER TO ALL ARCHITECTURAL CEILING LAYOUT AND DEMOLITION DRAWINGS FOR AN EXACT SCOPE OF WORK WITH-IN THE EXISTING BUILDING)
4. 4" FDC LINE DOWN. SEE DRAWING FP2.0 FOR CONTINUATION.
5. FLOOR CONTROL VALVE ASSEMBLY. SEE DETAIL ON DRAWING FP1.0.
6. CROSS MAIN.
7. 4" FDC LINE.
8. PROVIDE NEW SIAMESE FIRE DEPARTMENT INLET CONNECTION. CONTRACTOR SHALL CONFIRM REQUIRED THREADING AND TYPE WITH THE LOCAL FIRE SUB CODE OFFICIAL. PROVIDE NEW WEATHER PROOF FDC SIGN ATTACHED TO WALL. MOUNT SIGN ABOVE FDC. SIGN SHALL BE SAME SIZE AND WITH SAME LETTERING AND BACKGROUND COLOR AS EXISTING REMOVED FDC SIGN.
9. PROVIDE 18" X 24" FLOOR PLAN INDICATING FIRE SPRINKLER COVERAGE AREAS. MOUNT INSIDE WEATHER PROOF GLASS FRAMED ENCLOSURE WITH STAINLESS STEEL FRAME ATTACHED TO WALL. MOUNT SO THAT BOTTOM IS APPROXIMATELY 5'-6" ABOVE WALKWAY.
10. DISCONNECT AND REMOVE EXISTING FIRE DEPARTMENT INLET CONNECTION, FDC SIGN AND EXISTING FIRE SPRINKLER COVERAGE AREA FRAMED FLOOR PLAN MOUNTED ON EXTERIOR WALL. REMOVE PIPING BACK TO CONNECTION TO MAIN IN BUILDING CEILING AND CAP WATER TIGHT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

SYMBOL	SPRINKLER DESIGN CRITERIA
	HAZARD CLASSIFICATION : LIGHT
	SPACES : BAND & CHOIR ROOMS, TOILET ROOMS, CORRIDORS, LOBBY, CAFETERIA, MULTI PURP. RM DENSITY : 0.10 GPM PER SQ FT DESIGN AREA : 1500 SQ FT MAX AREA PER SPRINKLER : 200 SQ FT INSIDE AND OUTSIDE HOSE STREAM ALLOWANCE : 100 GPM SPRINKLER TYPE : CONCEALED, QUICK RESPONSE
	HAZARD CLASSIFICATION : ORDINARY GROUP 1
	SPACES : MECHANICAL/ELECTRICAL ROOMS, JANITOR'S CLOSET, STORAGE ROOMS DENSITY : 0.15 GPM PER SQ FT DESIGN AREA : 1500 SQ FT MAX AREA PER SPRINKLER : 130 SQ FT INSIDE AND OUTSIDE HOSE STREAM ALLOWANCE : 250 GPM SPRINKLER TYPE : UPRIGHT, QUICK RESPONSE

FIRST FLOOR FLOOR PLAN - BLOCK B

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





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VD	VOLUME DAMPER		SHUT-OFF VALVE
FD	FIRE DAMPER AND ACCESS DOOR		BALANCE VALVE
M	MOTOR OPERATED DAMPER		THROTTLING VALVE
U	UNDERCUT DOOR		MOTOR OPERATED VALVE, THREE WAY
L	LOUVERED DOOR		MOTOR OPERATED VALVE, TWO WAY
T	THERMOSTAT		CHECK VALVE
S	SENSOR		GAS COCK
H	HUMIDISTAT		UNION
SD	DUCT SMOKE DETECTOR		STRAINER WITH BLOWDOWN
CO2	CO2 DETECTOR		RELIEF VALVE
	CONNECT TO EXISTING		PRESSURE GAUGE
G	NATURAL GAS DETECTOR		THERMOMETER
CN	CO / NOX COMBINATION DETECTOR		AUTOMATIC FLOW CONTROL VALVE - B&G CIRCUIT SETTER OR EQUAL
	POINT OF DISCONNECTION		HVAC UNIT (SEE PLANS AND SCHEDULES) HVAC UNIT CLEARANCE

MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
AD	ACCESS DOOR	MOD	MOTOR OPERATED DAMPER
ATC	AUTOMATIC TEMPERATURE CONTROLS	OA	OUTDOOR AIR
BDD	BACKDRAFT DAMPER	OAI	OUTDOOR AIR INTAKE
BMS	BUILDING MANAGEMENT SYSTEM	OC	ON CENTER
BOD	BOTTOM OF DUCT	OED	OPEN ENDED DUCT
BOP	BOTTOM OF PIPE	PC	PLUMBING CONTRACTOR
CD	CEILING DIFFUSER	RA	RETURN AIR
CO	CLEANOUT	RP	RADIANT PANEL
CFM	CUBIC FEET PER MINUTE	RR	RETURN GRILLE
D	DIAMETER	RR	RETURN REGISTER
E	EXISTING	SA	SUPPLY AIR
EA	EXHAUST AIR	SG	SUPPLY GRILLE
EC	ELECTRICAL CONTRACTOR	SR	SUPPLY REGISTER
EG	EXHAUST GRILLE	TD	TRANSFER DUCT
EG	EXHAUST REGISTER	TG	TRANSFER GRILLE
FO	FLAT OVAL	WMS	WIRE MESH SCREEN
IOM	INSTALLATION AND OPERATION MANUAL	WR	WALL REGISTER

APPLICABLE CODES:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST CODES AND SUBCODES AS ADOPTED BY THE STATE OF NEW JERSEY:

- NEW JERSEY UNIFORM CONSTRUCTION CODE (NJUCC)
- REHABILITATION SUBCODE 5:23-6
- ADMINISTRATIVE CODE: TITLE 6
- 2021 INTERNATIONAL BUILDING CODE - NJ EDITION
- 2020 NATIONAL ELECTRICAL CODE
- 2021 NATIONAL STANDARD PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2021 INTERNATIONAL FUEL GAS CODE
- 2019 ASHRAE 90.1 ENERGY CONSERVATION CODE
- 2019 NFPA 13
- REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION

DOCUMENTS AND RELATED PLUMBING, ELECTRICAL, FIRE PROTECTION, ARCHITECTURAL, INTERIOR DECOR AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER PRIOR TO BID SUBMISSION.

12. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID FOR THE PROPOSED WORK. HE SHALL BE RESPONSIBLE TO VERIFY FIELD CONDITIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO SUBMISSION OF BIDS IN WRITING.
13. THE MECHANICAL CONTRACTOR SHALL REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED PLUMBING, ELECTRICAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, THE MECHANICAL CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS AND TRADES ON THIS PROJECT TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
14. THE MECHANICAL CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND AS-BUILT CONDITIONS PERTAINING TO THE HVAC SYSTEMS. MECHANICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIAL, PARTS, SUPPLIES AND LABOR TO BALANCE ALL HVAC EQUIPMENT TO OWNER'S SATISFACTION.
15. CONTRACTOR SHALL COORDINATE HIS SCHEDULING WITH THE OWNER AND GENERAL CONTRACTOR TO COMPLY WITH THE OWNERS USAGE OF THE BUILDING.
16. IF ANY UNEXPECTED DISCOVERY OF SUSPECTED HAZARDOUS MATERIALS IS MADE DURING THE COURSE OF WORK, THE CONTRACTOR SHALL REPORT THE DISCOVERY IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL STOP ANY WORK THAT MAY DISTURB THE SUSPECTED HAZARDOUS MATERIAL. CONTRACTOR SHALL RESUME WORK AFTER ALL HAZARDOUS MATERIAL HAS BEEN REMEDIATED.
17. CONTRACTOR RESPONSIBLE FOR THE PROPER CARE OF ALL OWNER'S EQUIPMENT AND/OR FURNISHINGS WHICH ARE REQUIRED TO BE TEMPORARILY REMOVED, STORED OR RELOCATED. CONTRACTOR SHALL REPLACE, REPAIR OR REIMBURSE OWNER FOR ALL DAMAGES TO SUCH PROPERTIES AT FULL REPLACEMENT VALUE AND EQUIVALENCY. CONTRACTOR SHALL ADVISE OWNER FOR DISPOSITION OF REMOVED EQUIPMENT AND/OR MATERIALS.
18. CONTRACTOR'S WORK MAY BE REQUIRED OUTSIDE OF DESIGNATED SPACE. ALL SYSTEMS BEING DEMOLISHED AND REMOVED, MODIFIED, AND/OR TERMINATED SHALL BE FIELD VERIFIED TO INSURE NO WORK PERFORMED, INSIDE OR OUTSIDE OF THE DESIGNATED SPACE, SHALL DISRUPT ANY SERVICE OR SYSTEMS OF ANY OTHER AREAS. IF ANY CONDITIONS ARISE THAT ARE NOT IDENTIFIED ON DRAWINGS, IMMEDIATE NOTIFICATION SHALL BE PROVIDED TO THE ENGINEER OR OWNER. NO WORK SHALL PROCEED WITHOUT APPROVALS FROM ENGINEER OR OWNER.
19. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND MAY HAVE TO BE ADAPTED TO COMPLY WITH EXISTING BUILDING CONDITIONS. CONTRACTOR SHALL SUBMIT HVAC SHOP DRAWINGS, INDICATING LOCATIONS, AND ROUTING OF DUCTS, PIPING, AND WIRING.
20. DUCTING AND PIPING SHOWN ON DRAWINGS SHOW THE GENERAL RUN AND CONNECTIONS AND MAY OR MAY NOT IN ALL PARTS BE SHOWN IN ITS EXACT POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTING THE DUCTING/PIPING SUITABLE IN EVERY RESPECT FOR THE WORK. DUCTWORK/PIPING SHALL BE INSTALLED SO THAT ACCESS, CLEARANCE, HEADROOM AND PITCH ARE MAINTAINED. CONTRACTORS OF THE VARIOUS TRADES SHALL COORDINATE THE INSTALLATION. MECHANICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR CHASE AND SOFFIT LOCATIONS TO COORDINATE ALL EXPOSED DUCTWORK & PIPE ROUTING.
21. ALL CONTRACTORS SHALL PROVIDE CUTTING AND PATCHING FOR THEIR RESPECTIVE TRADES.
22. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
23. ALL MECHANICAL EQUIPMENT AND APPLIANCES SHALL BEAR THE LABEL OF AN APPROVING AGENCY. LISTING AND LABELING AGENCY QUALIFICATIONS: A "NATIONALLY RECOGNIZED TESTING LABORATORY" AS DEFINED IN THE INTERNATIONAL MECHANICAL CODE, LATEST ADOPTED EDITION.
24. ALL PENETRATIONS THRU FIRE RATED WALLS, FLOORS, AND CEILINGS SHALL BE SEALED WITH A UL APPROVED FIRESTOP MATERIAL SUITABLE FOR CONSTRUCTION MATERIAL TO MAINTAIN FIRE, SMOKE, AND DRAFT INTEGRITY OF STRUCTURE. FIRE RESISTANT SEALER SHALL BE TESTED IN ACCORDANCE WITH ASTM E84. INSTALL SEALANT, INCLUDING FOAMING, PACKING AND OTHER ACCESSORY MATERIALS TO FILL OPENINGS WHERE FIRE-RATED WALL PENETRATIONS OCCUR. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY TESTERS AND INSPECTION AGENCY.
25. ALL CONTRACTORS REMOVING OR RELOCATING ANY EQUIPMENT, PIPES, DUCTS, CONDUITS, ETC SHALL PATCH ALL SURFACES DISTURBED BY THIS WORK TO MATCH ADJACENT SURFACES.
26. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER HANDLING, DISPOSAL & ASSOCIATED COSTS OF ALL REFRIGERANT MATERIAL, DURING THIS CONTRACT, IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND/OR REGULATIONS.
26. UPON AWARD OF CONTRACT AND SUBSEQUENT REVIEW & RELEASE OF BOILER SHOP DRAWINGS BY ENGINEER OF RECORD, THE CONTRACTOR SHALL FILL OUT AND FILE AIR PERMIT APPLICATIONS REPORT IN A TIMELY MANNER FOR ALL BOILERS. THE CONTRACTOR SHALL ALSO FILL OUT AND FILE INSTALLER/SERVICE VERIFICATION OF FUNCTION TESTING AND OPERATION OF CONTROLS AND SAFETY DEVICES FOR ALL BOILERS. THE CONTRACTOR SHALL PAY ALL FEES FOR THE PERMITS AND INSPECTIONS. PROVIDE THE OWNER AND ENGINEER EACH WITH A COPY OF FILLED OUT FORMS PRIOR TO MAILING. CONTRACTOR MUST SECURE PERMIT PRIOR TO PROJECT CLOSEOUT. SEND FORMS ALONG WITH NJDEP'S REQUIRED FEE TO: NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY BUREAU OF SOURCE REVIEW, CN-27, TRENTON, NEW JERSEY 08625-0027.
33. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE LOCATION OF THERMOSTAT WITH OTHER TRADE.

    PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD. CLEAR; OR ENGINEER APPROVED EQUAL, ON ALL TEMPERATURE SENSORS. AVAILABLE FROM WWW.KELE.COM, 888-397-5353.
34. PROVIDE GAS PIPING SUPPORTS ON ROOF AT ALL DIRECTION CHANGES AND STRAIGHT RUNS WITH SPACING NOT EXCEEDING LENGTHS STATED IN TABLE 415.1 OF IFGC.
    LISTED PIPE SIZES. SUPPORTS SHALL BE SADDLE BLOCK ROLLER TYPE WITH PIPE SECURED TO STAND WITH CLAMP OR METAL BAND. SUPPORT SHALL NOT BE SECURED TO ROOF SURFACE. BOTTOM OF PIPING SHALL BE MINIMUM 3 1/2" ABOVE ROOF SURFACE.
35. ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS OR SOFFITS WITH OTHER PLUMBING/ ELECTRICAL FEEDS.
    ARCHITECTURAL DRAWINGS FOR CHASE & SOFFIT LOCATIONS TO COORDINATE ALL EXPOSED PIPING ROUTING. PROVIDE PIPE ENCLOSURE FOR ALL EXPOSED PIPING LOCATED OUTSIDE THE MECHANICAL ROOM.
    ALL SUCH LOCATIONS SHALL BE REVIEWED WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
    MINIMUM 2 COATS MARINE GRADE EPOXY PRIMER AND 2 COATS OF INTERIOR/EXTERIOR GRADE PAINT. COORDINATE WITH ARCHITECT FOR COLOR SELECTION. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
36. ALL PIPING SHALL BE ORGANIZED NEATLY AND KEPT TIGHT TO WALLS AND CEILING
37. FURNISH AND INSTALL PIPE SLEEVES OR SLEEVE SEAL SYSTEMS AS REQUIRED. SEE SPECIFICATION FOR DETAILS.
38. GRAVITY CONDENSATE PIPING SHALL BE PITCHED MINIMUM 1/8" PER FOOT.
40. ALL CONDENSATE DRAIN PIPING CONNECTION TO CONDENSATE DRAIN RISERS SHALL BE PROVIDED WITH WYE TYPE FITTINGS.
41. ALL DUCTWORK SHALL BE CONNECTED TO MOTORIZED EQUIPMENT WITH FLEXIBLE DUCT CONNECTORS.
42. ALL RIGID DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL. FABRICATION OF DUCTWORK AND INSTALLATION SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS AND RECOMMENDATIONS.
43. ALL DUCTWORK SIZES SHOWN ON DRAWINGS ARE CLEAR INTERNAL DIMENSIONS.
44. ALL INTERIOR DUCTWORK SHALL HAVE DUCT LINER. SEE SPECIFICATION FOR DETAILS.
45. ALL INTERIOR DUCTWORK EXPOSED WITHIN FINISHED SPACES SHALL BE FACTORY FABRICATED DOUBLE WALLED SPIRAL SEAM WITH INTERSTITIAL INSULATION. SEE SPECIFICATION FOR DETAILS.
    DUCTWORK SHALL HAVE STICKERS AND LABELS REMOVE AND PREPARED FOR PAINT. PAINT ALL EXPOSED INDOOR DUCTWORK, REGISTERS/DIFFUSERS, HANGER AND SUPPORTS. PROVIDE MINIMUM 2 COATS PRIMER AND 2 COATS OF INTERIOR GRADE PAINT. COORDINATE WITH ARCHITECT FOR COLOR SELECTION.
46. ALL INTERIOR DUCTWORK CONCEALED OR EXPOSED IN NON-FINISHED AREA, EG ATTIC, ABOVE CEILING, ETC. SHALL BE SINGLE WALLED SPIRAL SEAM EXTERNALLY INSULATED WITH FLEXIBLE DUCTWRAP AND VAPOR BARRIER. SEE SPECIFICATIONS FOR DETAILS.
47. ALL FLEXIBLE DUCTWORK SHALL BE CLASS I, LABELED UL 181. SEE SPECIFICATIONS FOR DETAILS.
    DUCTWORK SHALL NOT BE ACCEPTABLE FOR NEGATIVE PRESSURE APPLICATIONS. FLEXIBLE DUCTWORK SHALL NOT BE ACCEPTABLE FOR NEGATIVE PRESSURE APPLICATION. FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5'-0".
48. ALL EXTERIOR DUCTWORK SHALL HAVE DUCT LINER AND EXTERNAL RIGID INSULATION AND BE COVERED WITH SELF ADHERING PREFABRICATED PROTECTIVE MEMBRANE THAT IS UV AND OZONE RESISTANT. THIS JACKETING SHALL BE FIELD APPLIED IN ACCORDANCE
    SPECIFICATION FOR DETAILS.
49. DURING THE INSTALLATION OF MECHANICAL EQUIPMENT AND ASSOCIATED SYSTEMS, THE CONTRACTOR SHALL IDENTIFY ANY DAMAGE TO FIREPROOFING MATERIAL CAUSED BY WORK OF THE TRADE. THE CONTRACTOR SHALL PROVIDE WRITTEN REPORT DESIGNATION LOCATIONS, TO GENERAL CONTRACTOR, BEFORE FIREPROOFING IS COVERED BY SUBSEQUENT CONSTRUCTION.
50. THE MECHANICAL CONTRACTOR SHALL PROVIDE A COMPLETE SET OF "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT, DUCTWORK, PIPING AND ACCESS DOORS. THESE PLANS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM BID DOCUMENTS.
51. ALL ROOFTOP EQUIPMENT THAT REQUIRES SERVICE SHALL BE LOCATED AT A MINIMUM OF 10'-0" FROM ROOF'S EDGE. GUARDS SHALL BE PROVIDED FOR EQUIPMENT LOCATED WITHIN 10'-0" OF ROOF EDGE. THE GUARDS SHALL BE NOT LESS THAN 42 INCHES IN HEIGHT AND SHALL EXTEND NOT LESS THAN 10'-0" BEYOND EACH END COMPONENT OF EQUIPMENT THAT REQUIRES SERVICE.
52. AFTER COMPLETING SYSTEM INSTALLATION, TESTING, ADJUSTING, AND BALANCING UNIT AND AIR-DISTRIBUTION SYSTEMS, CLEAN FILTER HOUSINGS AND PROVIDE NEW FILTERS FOR ALL HVAC EQUIPMENT. EQUIPMENT THAT REQUIRE FILTER CHANGE INCLUDE BUT NOT LIMITED TO: PACKAGED ROOF TOP UNITS, ENERGY RECOVERY UNITS, ENERGY RECOVERY VENTILATORS, DUCTED INDOOR HEAT PUMPS, FAN COIL UNITS, CASSETTE TYPE HEAT PUMPS, AIR HANDLING UNITS, UNIT VENTILATORS AND FAN POWERED VARIABLE AIR VOLUME TERMINAL UNITS.

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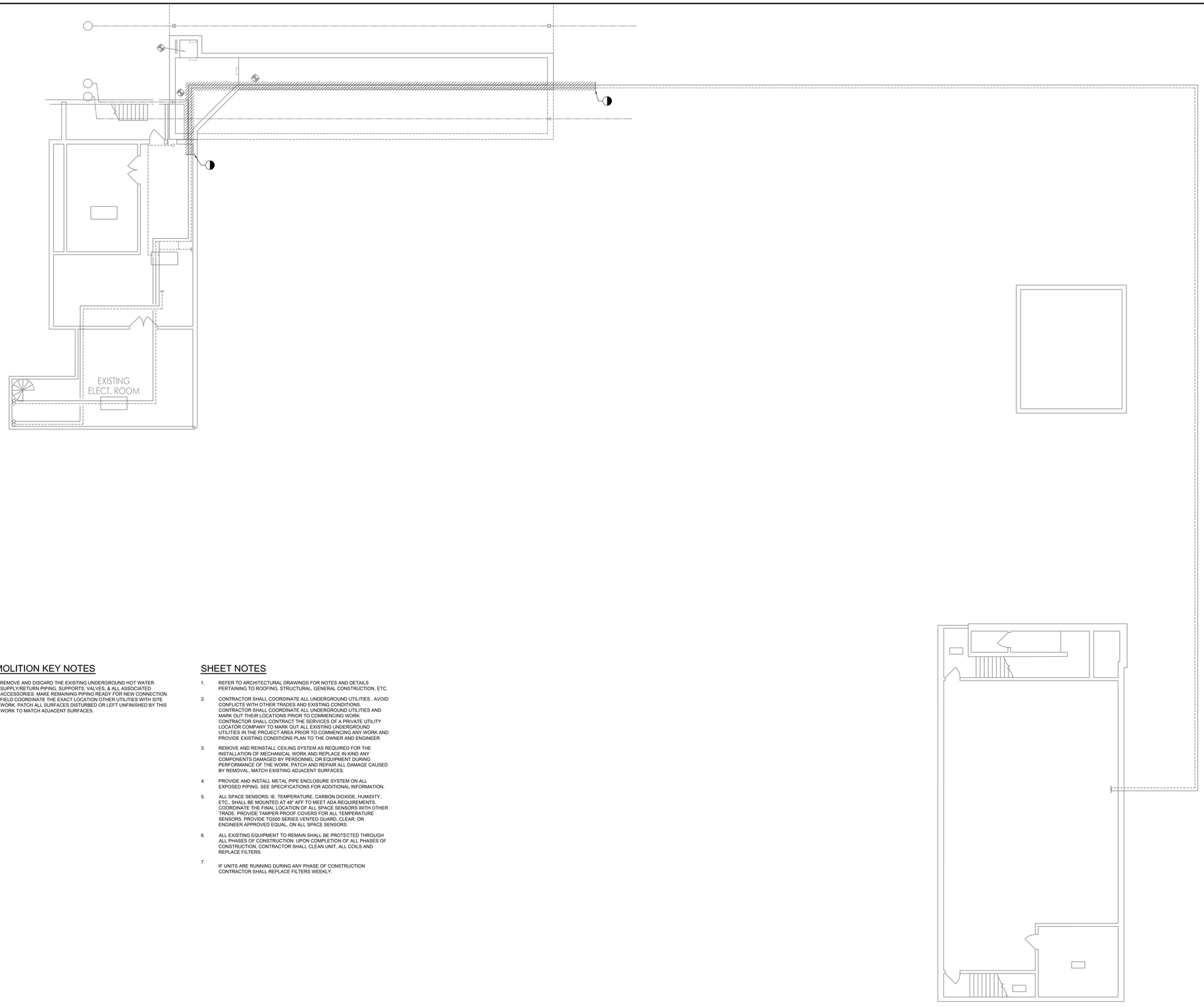
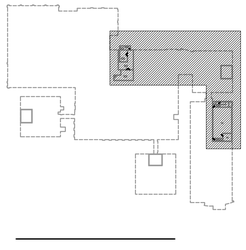


DEMOLITION KEY NOTES

1. REMOVE AND DISCARD THE EXISTING UNDERGROUND HOT WATER SUPPLY/RETURN PIPING, SUPPORTS, VALVES, & ALL ASSOCIATED ACCESSORIES. MAKE REMAINING PIPING READY FOR NEW CONNECTION. FIELD COORDINATE THE EXACT LOCATION OTHER UTILITIES WITH SITE WORK. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES . AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTRACT THE SERVICES OF A PRIVATE UTILITY LOCATOR COMPANY TO MARK OUT ALL EXISTING UNDERGROUND UTILITIES IN THE PROJECT AREA PRIOR TO COMMENCING ANY WORK AND PROVIDE EXISTING CONDITIONS PLAN TO THE OWNER AND ENGINEER.
3. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
4. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR, OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
6. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
7. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.



BASEMENT DEMOLITION PLAN

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

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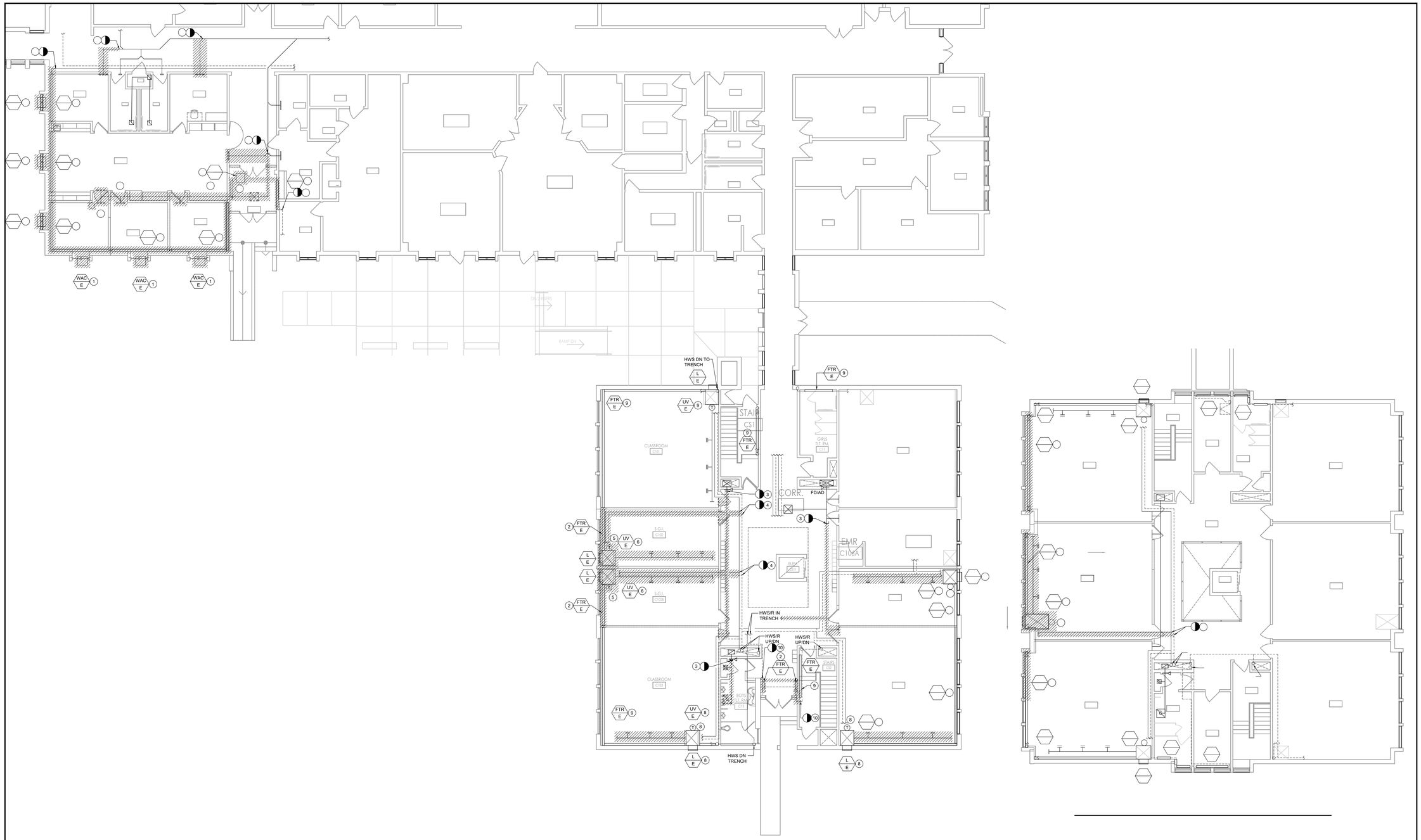


FIRST FLOOR DEMOLITION PLAN - BLOCK A

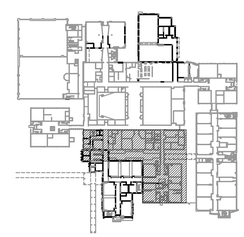
SCALE: 1/8" = 1'-0"

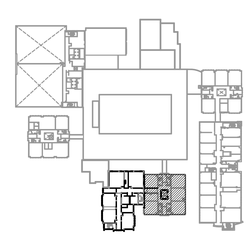
DEMOLITION KEY NOTES

1. REMOVE AND DISCARD EXISTING WINDOW AIR CONDITIONING UNIT, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. PROVIDE NEW PANEL TO MATCH EXISTING ADJACENT GLASS PANEL, FIELD VERIFY THE EXACT DIMENSION OF NEW GLASS PANEL. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
2. REMOVE AND DISCARD EXISTING FIN TUBE, FIN TUBE COVER, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. EXISTING HWS/R, VALVES, SUPPORTS, ETC. TO BE REMOVED AS SHOWN AND MAKE READY FOR CONNECTION TO NEW. SEE NEW WORK FLOOR PLAN FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
3. REMOVE AND DISCARD THAT PORTION OF EXISTING DUCTWORK INCLUDING DAMPERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN. SEE FLOOR PLAN FOR ADDITIONAL INFORMATION. SEAL REMAINING DUCTWORK AIRTIGHT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. REMOVE AND DISCARD THAT PORTION OF EXISTING HWS/R PIPING INCLUDING VALVES, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN AND CAP. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
5. REMOVE AND DISCARD EXISTING THERMOSTAT, CONTROL WIRING/TUBING, ETC. PROVIDE BLANK COVER PLATE. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
6. REMOVE AND DISCARD EXISTING UNIT, OA LOUVER, INSULATED PANEL, DUCTWORK, DAMPERS, REGISTERS/DIFFUSERS, THERMOSTAT, CONDENSATE PIPING THRU WALL, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. REMOVE EXISTING HWS&R BACK TO RESPECTIVE MAINS AND CAP. PATCH AND INFILL ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
7. REMOVE AND DISCARD EXISTING CABINET UNIT HEATER, THERMOSTAT, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. REMOVE PIPING BACK TO RESPECTIVE MAINS AND CAP. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
8. EXISTING UNIT VENTILATOR, LOVER TO REMAIN. REMOVE AND DISCARD THE EXISTING DUCTWORK, SUPPORTS, AND ALL ASSOCIATED ACCESSORIES. MAKE THE MAIN SUPPLY CONNECTION READY FOR NEW. REMOVE AND RELOCATE THE EXISTING T-STAT FOR NEW LOCATION. MODIFY AND EXTEND EXISTING CONTROL WIRING AS REQUIRED FOR RELOCATION. SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
9. EXISTING TO REMAIN.
10. REMOVE AND DISCARD THAT PORTION OF EXISTING HWS/R PIPING INCLUDING VALVES, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN AND PREPARE FOR NEW CONNECTION IN TRENCH. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES . AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTRACT THE SERVICES OF A PRIVATE UTILITY LOCATOR COMPANY TO MARK OUT ALL EXISTING UNDERGROUND UTILITIES IN THE PROJECT AREA PRIOR TO COMMENCING ANY WORK AND PROVIDE EXISTING CONDITIONS PLAN TO THE OWNER AND ENGINEER.
3. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
4. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR; OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
6. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
7. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.





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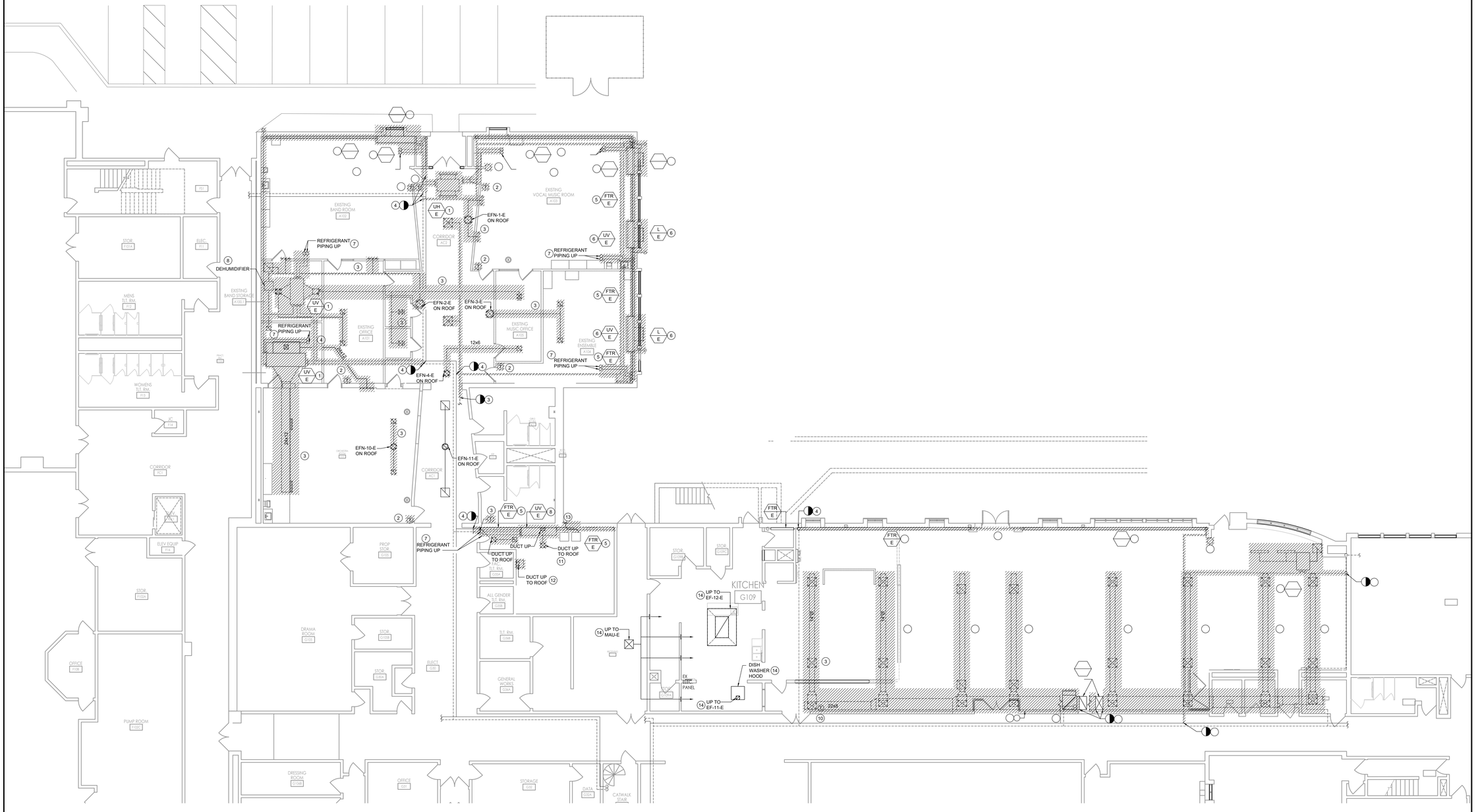

DEMOLITION KEY NOTES

1. REMOVE AND DISCARD EXISTING UNIT, DUCTWORK, DAMPERS, REGISTERS/DIFFUSERS, THERMOSTAT, CONDENSATE PIPING, SUPPORTS, CONTROLS AND ALL ASSOCIATED ACCESSORIES. REMOVE EXISTING HWS&R BACK TO RESPECTIVE MAINS AND CAP. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES. INFILL THE EXISTING WALL PENETRATIONS TO MATCH EXISTING SURFACES.
2. REMOVE AND DISCARD EXISTING THERMOSTAT, CONTROL WIRING/TUBING, ETC. PROVIDE BLANK COVER PLATE. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
3. REMOVE AND DISCARD THAT PORTION OF EXISTING DUCTWORK INCLUDING DAMPERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN. EXISTING ROOF TOP UNIT & ASSOCIATED DUCT DROP, PIPING CONNECTION TO REMAIN. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. REMOVE AND DISCARD THAT PORTION OF EXISTING HWS/R PIPING INCLUDING VALVES, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN AND CAP. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
5. REMOVE AND DISCARD EXISTING FIN TUBE, FIN TUBE COVER, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. EXISTING HWS/R, VALVES, SUPPORTS, ETC. TO BE REMOVED AS SHOWN AND CAPPED. SEE FLOOR PLAN FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
6. REMOVE AND DISCARD EXISTING UNIT, OA LOUVER, INSULATED PANEL, DUCTWORK, DAMPERS, REGISTERS/DIFFUSERS, THERMOSTAT, CONDENSATE PIPING THRU WALL, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. REMOVE EXISTING HWS&R BACK TO RESPECTIVE MAINS AND CAP. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
7. REMOVE AND DISCARD EXISTING REFRIGERANT PIPING, SUPPORTS, AND ALL ASSOCIATED ACCESSORIES. SEE GENERAL NOTE #22. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
8. REMOVE AND DISCARD EXISTING UNIT, SUPPORTS, PIPING, CONTROLS AND ALL ASSOCIATED ACCESSORIES. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
9. EXISTING PIPING & ASSOCIATED ACCESSORIES SERVING EXISTING ROOF TOP UNIT TO REMAIN.
10. REMOVE AND RELOCATE EXISTING THERMOSTAT, CONTROL WIRING/TUBING, ETC. PROVIDE BLANK COVER PLATE. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
11. REMOVE AND DISCARD THAT PORTION OF EXISTING DUCTWORK INCLUDING DAMPERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
12. REMOVE AND DISCARD EXISTING RANGE HOOD AND ALL EXISTING DUCTWORK INCLUDING DAMPERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
13. REMOVE AND DISCARD EXISTING DRYER VENT AND ALL EXISTING DUCTWORK, SUPPORTS, AND ALL ASSOCIATED ACCESSORIES. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
14. EXISTING TO REMAIN.

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
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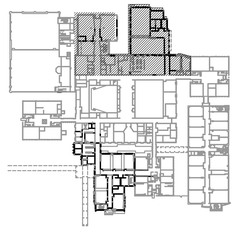
4. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR; OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
6. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
7. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

FIRST FLOOR DEMOLITION PLAN - BLOCK B

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



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DEMOLITION KEY NOTES

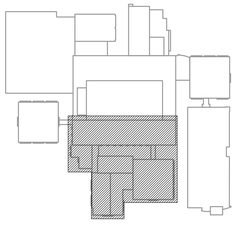
1. REMOVE AND DISCARD THE EXISTING CONDENSING UNIT, SUPPORTS, CONTROLS AND ALL ASSOCIATED ACCESSORIES. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJANCENT SURFACES.
2. REMOVE AND DISCARD THE REFRIGERANT PIPING, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
3. REMOVE AND DISCARD EXISTING PIPE PORTAL. EXISTING CURB TO REMAIN. PROVIDE AND INSTALL NEW WEATHER TIGHT CAP ON EXISTING CURB. SEE DETAIL FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

SHEET NOTES

1. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
2. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

ROOF DEMOLITION PLAN - BLOCK A

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



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William D. Hopkins

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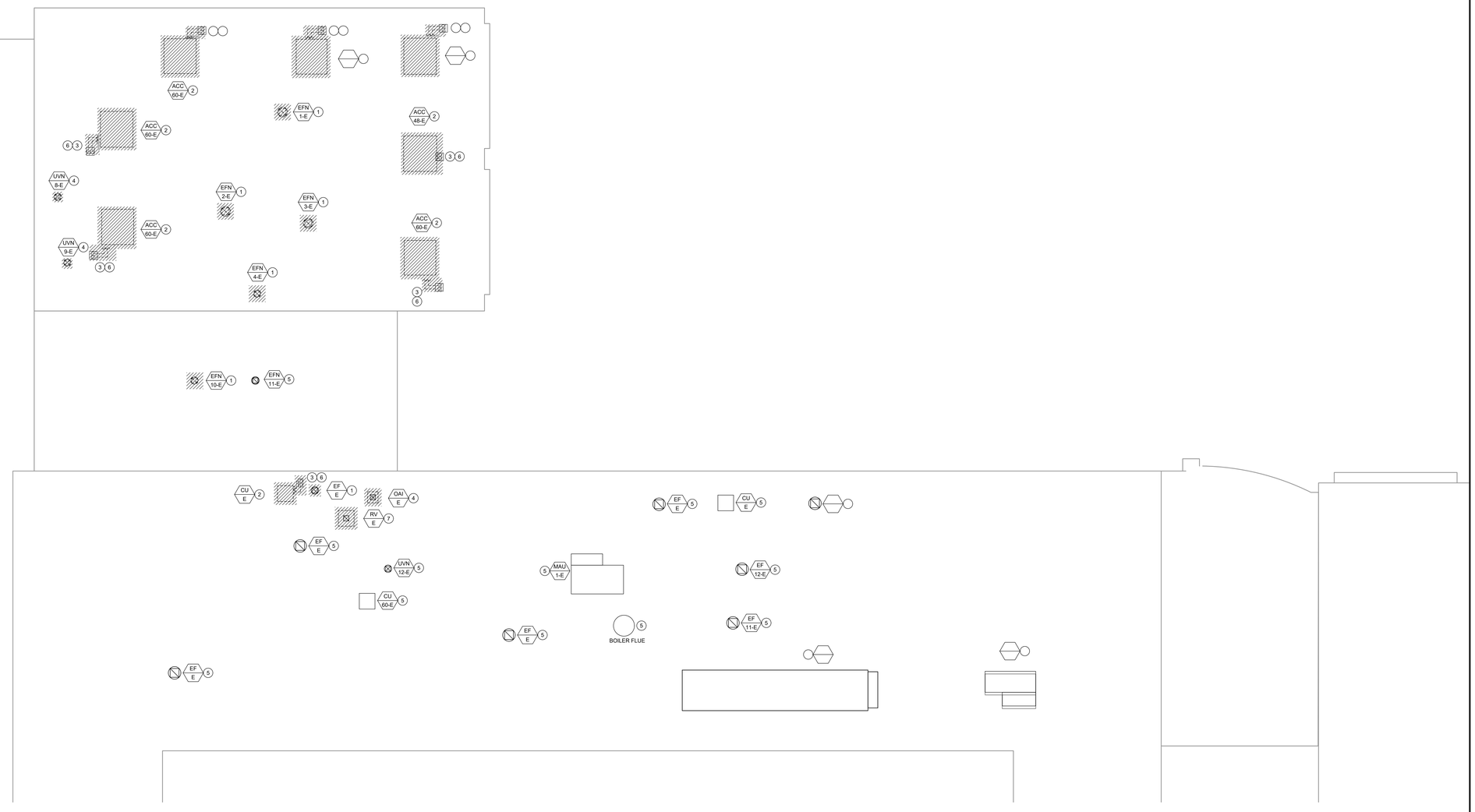

DEMOLITION KEY NOTES

1. REMOVE AND DISCARD EXISTING EXHAUST FAN, DUCTWORK, DAMPERS, REGISTERS/DIFFUSERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. PROVIDE AND INSTALL NEW WEATHER TIGHT CAP ON EXISTING CURB. SEE DETAIL FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
2. REMOVE AND DISCARD THE EXISTING CONDENSING UNIT, SUPPORTS, CONTROLS AND ALL ASSOCIATED ACCESSORIES. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJANCENT SURFACES.
3. REMOVE AND DISCARD THE REFRIGERANT PIPING, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. REMOVE AND DISCARD EXISTING OUTSIDE AIR INTAKE CURB, SUPPORTS AND ALL ASSOCIATED ACCESSORIES.PROVIDE AND INSTALL NEW WEATHER TIGHT CAP ON EXISTING CURB. SEE DETAIL FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
5. EXISTING TO REMAIN
6. REMOVE AND DISCARD EXISTING PIPE PORTAL. EXISTING CURB TO REMAIN. PROVIDE AND INSTALL NEW WEATHER TIGHT CAP ON EXISTING CURB. SEE DETAIL FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
7. REMOVE AND DISCARD EXISTING VENT, DUCTWORK, DAMPERS, REGISTERS/DIFFUSERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. SEE ARCHITECTURE PLAN FOR ADDITIONAL INFORMATION. INFILL THE OPENING AND PATCH THE EXISTING ROOF PENETRATION TO MATCH EXISTING SURFACES. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

SHEET NOTES

1. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.

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ROOF DEMOLITION PLAN - BLOCK B

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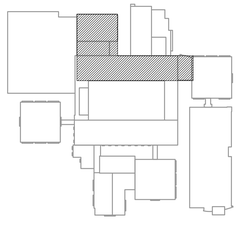

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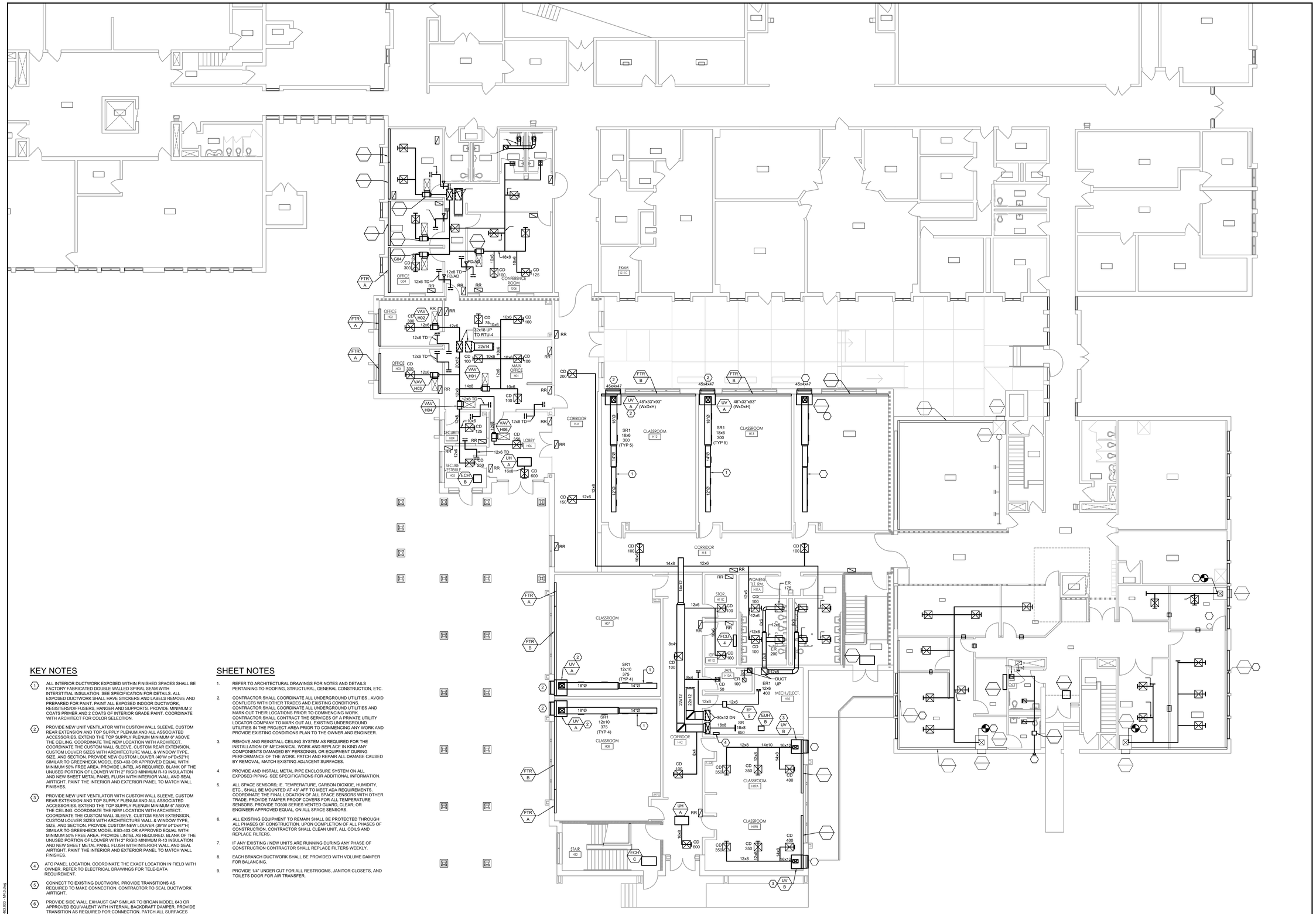


KEY NOTES

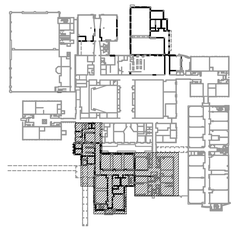
1. ALL INTERIOR DUCTWORK EXPOSED WITHIN FINISHED SPACES SHALL BE FACTORY FABRICATED DOUBLE WALLED SPIRAL SEAM WITH INTERSTITIAL INSULATION. SEE SPECIFICATION FOR DETAILS. ALL EXPOSED DUCTWORK SHALL HAVE STICKERS AND LABELS REMOVE AND PREPARED FOR PAINT. PAINT ALL EXPOSED INDOOR DUCTWORK, REGISTERS/DIFFUSERS, HANGER AND SUPPORTS. PROVIDE MINIMUM 2 COATS PRIMER AND 2 COATS OF INTERIOR GRADE PAINT. COORDINATE WITH ARCHITECT FOR COLOR SELECTION.
2. PROVIDE NEW UNIT VENTILATOR WITH CUSTOM WALL SLEEVE, CUSTOM REAR EXTENSION AND TOP SUPPLY PLENUM AND ALL ASSOCIATED ACCESSORIES. EXTEND THE TOP SUPPLY PLENUM MINIMUM 6" ABOVE THE CEILING. COORDINATE THE NEW LOCATION WITH ARCHITECT. COORDINATE THE CUSTOM WALL SLEEVE, CUSTOM REAR EXTENSION, CUSTOM LOUVER SIZES WITH ARCHITECTURE WALL & WINDOW TYPE, SIZE, AND SECTION. PROVIDE NEW CUSTOM LOUVER (40"W x4"Dx52"H) SIMILAR TO GREENHECK MODEL ESD-403 OR APPROVED EQUAL WITH MINIMUM 50% FREE AREA. PROVIDE LINTEL AS REQUIRED. BLANK OF THE UNUSED PORTION OF LOUVER WITH 2" RIGID MINIMUM R-13 INSULATION AND NEW SHEET METAL PANEL FLUSH WITH INTERIOR WALL AND SEAL AIRTIGHT. PAINT THE INTERIOR AND EXTERIOR PANEL TO MATCH WALL FINISHES.
3. PROVIDE NEW UNIT VENTILATOR WITH CUSTOM WALL SLEEVE, CUSTOM REAR EXTENSION AND TOP SUPPLY PLENUM AND ALL ASSOCIATED ACCESSORIES. EXTEND THE TOP SUPPLY PLENUM MINIMUM 6" ABOVE THE CEILING. COORDINATE THE NEW LOCATION WITH ARCHITECT. COORDINATE THE CUSTOM WALL SLEEVE, CUSTOM REAR EXTENSION, CUSTOM LOUVER SIZES WITH ARCHITECTURE WALL & WINDOW TYPE, SIZE, AND SECTION. PROVIDE CUSTOM NEW LOUVER (39"W x4"Dx47"H) SIMILAR TO GREENHECK MODEL ESD-403 OR APPROVED EQUAL WITH MINIMUM 50% FREE AREA. PROVIDE LINTEL AS REQUIRED. BLANK OF THE UNUSED PORTION OF LOUVER WITH 2" RIGID MINIMUM R-13 INSULATION AND NEW SHEET METAL PANEL FLUSH WITH INTERIOR WALL AND SEAL AIRTIGHT. PAINT THE INTERIOR AND EXTERIOR PANEL TO MATCH WALL FINISHES.
4. ATC PANEL LOCATION. COORDINATE THE EXACT LOCATION IN FIELD WITH OWNER. REFER TO ELECTRICAL DRAWINGS FOR TELE-DATA REQUIREMENT.
5. CONNECT TO EXISTING DUCTWORK. PROVIDE TRANSITIONS AS REQUIRED TO MAKE CONNECTION. CONTRACTOR TO SEAL DUCTWORK AIRTIGHT.
6. PROVIDE SIDE WALL EXHAUST CAP SIMILAR TO BROAN MODEL 643 OR APPROVED EQUIVALENT WITH INTERNAL BACKDRAFT DAMPER. PROVIDE TRANSITION AS REQUIRED FOR CONNECTION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
7. MODIFY THE EXISTING FIN TUBE RADIATOR ENCLOSURE TO MAINTAIN CAPABILITY OF ENCLOSURE REMOVAL FOR PROPER ACCESS AS REQUIRED FOR INSTALLATION OF NEW WALL PARTITION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
8. CONNECT TO EXISTING SUPPLY CONNECTION TO EXISTING UNIT VENTILATOR. PROVIDE NEW TOP SUPPLY PLENUM TO MATCH THE EXISTING UNIT VENTILATOR FINISH AND EXTEND TO MINIMUM 6" ABOVE THE CEILING. FIELD COORDINATE THE SIZE OF THE EXISTING SUPPLY PLENUM. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES . AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTRACT THE SERVICES OF A PRIVATE UTILITY LOCATOR COMPANY TO MARK OUT ALL EXISTING UNDERGROUND UTILITIES IN THE PROJECT AREA PRIOR TO COMMENCING ANY WORK AND PROVIDE EXISTING CONDITIONS PLAN TO THE OWNER AND ENGINEER.
3. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
4. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR, OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
6. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
7. IF ANY EXISTING / NEW UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.
8. EACH BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPER FOR BALANCING.
9. PROVIDE 1/4" UNDER CUT FOR ALL RESTROOMS, JANITOR CLOSETS, AND TOILETS DOOR FOR AIR TRANSFER.

FIRST FLOOR DUCTWORK PLAN - BLOCK A

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



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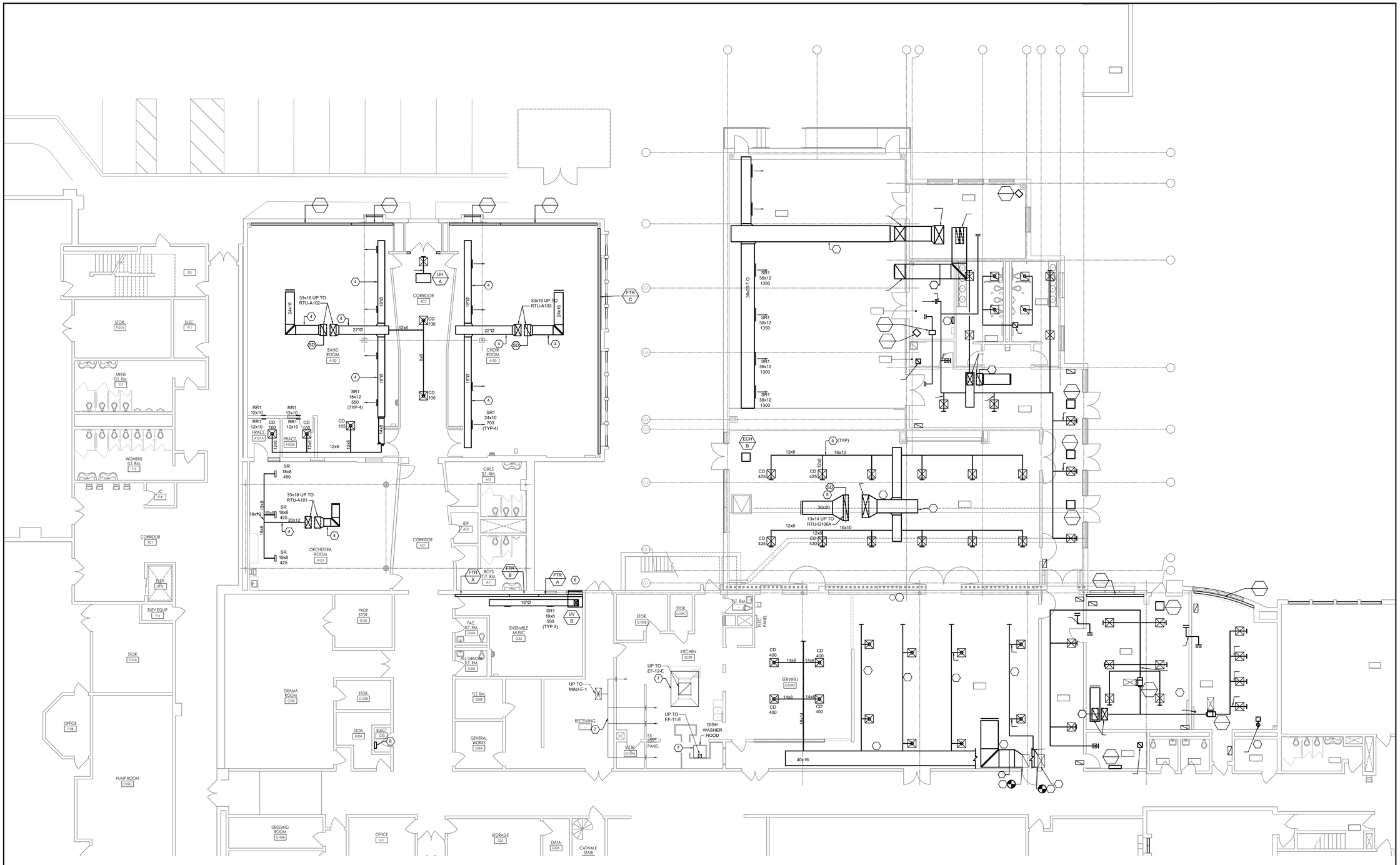

KEY NOTES

1. REBALANCE THE TOTAL SUPPLY AND RETURN AIRFLOW FOR RTU-E (ON ROOF) TO 5200 CFM & OUTSIDE AIR DAMPER TO MINIMUM 2250 CFM AIRFLOW SETPOINT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
2. RELOCATE THE EXISTING THERMOSTAT AT NEW LOCATION. MODIFY & EXTEND EXISTING CONTROL WIRING AS REQUIRED FOR NEW LOCATION. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
3. CONNECT TO EXISTING DUCTWORK. PROVIDE TRANSITIONS AS REQUIRED TO MAKE CONNECTION. CONTRACTOR TO SEAL DUCTWORK AIRTIGHT.
4. ALL INTERIOR DUCTWORK EXPOSED WITHIN FINISHED SPACES SHALL BE FACTORY FABRICATED DOUBLE WALLED SPIRAL SEAM WITH INTERSTITIAL INSULATION. SEE SPECIFICATION FOR DETAILS. ALL EXPOSED DUCTWORK SHALL HAVE STICKERS AND LABELS REMOVE AND PREPARED FOR PAINT. PAINT ALL EXPOSED INDOOR DUCTWORK, REGISTERS/DIFFUSERS, HANGER AND SUPPORTS. PROVIDE MINIMUM 2 COATS PRIMER AND 2 COATS OF INTERIOR GRADE PAINT. COORDINATE WITH ARCHITECT FOR COLOR SELECTION.
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7. EXISTING TO REMAIN.
8. ATC PANEL LOCATION. COORDINATE THE EXACT LOCATION IN FIELD WITH OWNER. REFER TO ELECTRICAL DRAWINGS FOR TELE-DATA REQUIREMENT.
9. PROVIDE AND INSTALL 4" DIA ROUND SOLID 26 GAUGE GALVANIZED DRYER EXHAUST DUCT TO ROOF WITH BACK DRAFT DAMPER AND DRYER ROOF JACK CAP MODEL # DJK486U FOR FLAT ROOF. ALL DRYER DUCT ELBOW SHOULD BE DRYER-ELL MODEL # L190. PROVIDE AND INSTALL DRYER BOX AS PER DETAIL. PROVIDE CLEAN-OUT FOR EVERY CHANGE OF DIRECTION AND AT BOTTOM OF THE DRYER EXHAUST RISER.
10. ROUTE THE 8" DIA KITCHEN EXHAUST DUCTWORK UP TO ROOF TO GRAVITY RELIEF VENT. PROVIDE SUPPORTS AS REQUIRED. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
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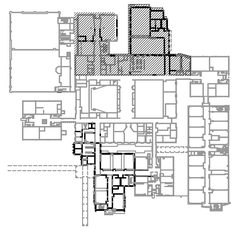
9. PROVIDE 1/4" UNDER CUT FOR ALL RESTROOMS, JANITOR CLOSETS, AND TOILETS DOOR FOR AIR TRANSFER.

FIRST FLOOR DUCTWORK PLAN - BLOCK B

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



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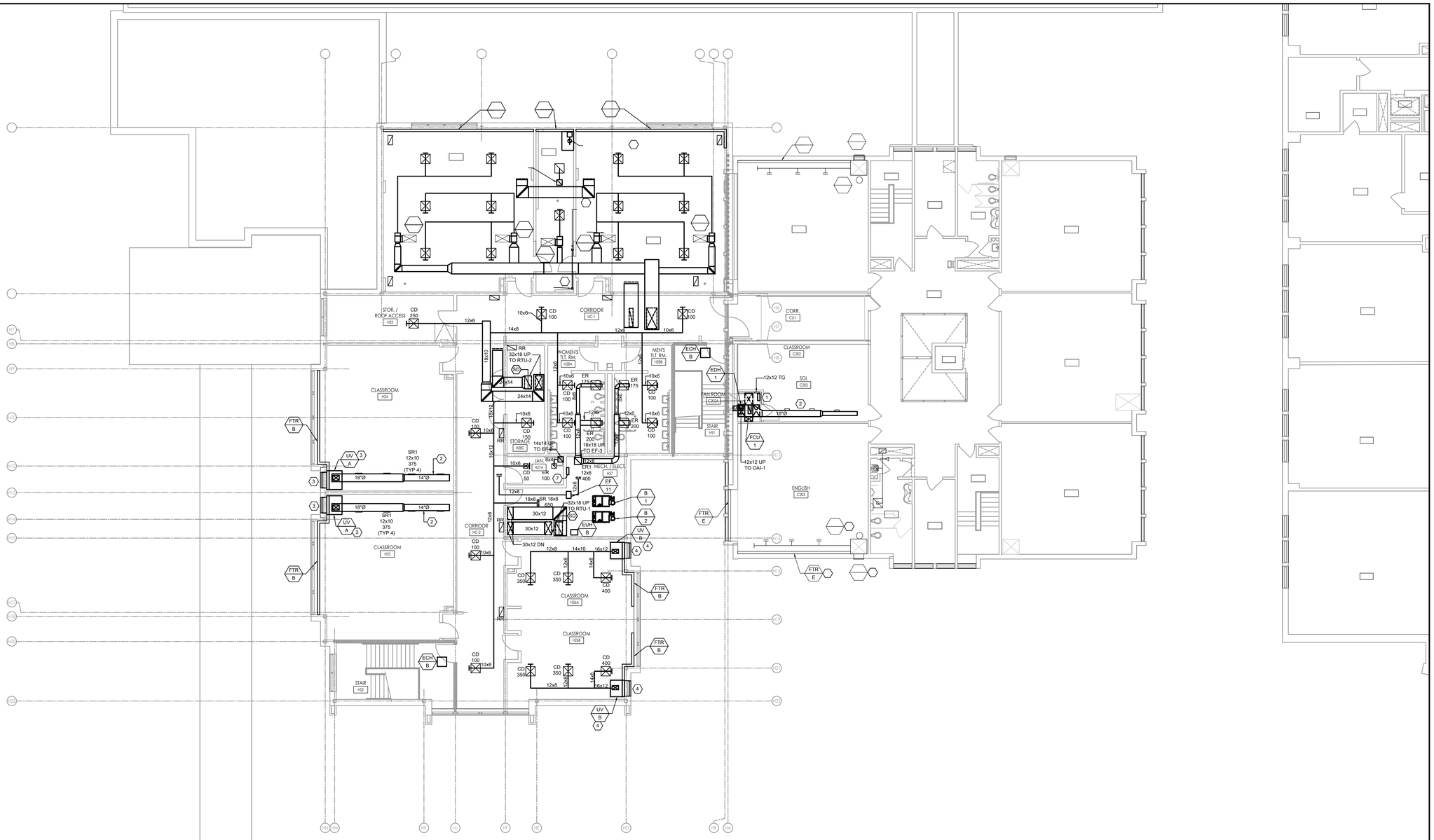

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5. PROVIDE 12" DIA FUME HOOD DUCT WITH MOTORIZED DAMPER TO ROOF. INTERLOCK MOTORIZED DAMPER WITH FUME HOOD EXHAUST FAN LOCATED ON ROOF. SEE FUME HOOD DETAIL FOR ADDITIONAL INFORMATION. PROVIDE 3M 2-HR FIRE WRAP FOR FUME HOOD EXHAUST DUCTWORK EXTENDING FROM DUCT TO ROOF PENETRATION. SEE SPECIFICATION FOR ADDITIONAL INFORMATION. INCLUDE FIRE RATED TERMINATION AT SLAB PENETRATION, AND ROOF PENETRATION.
6. PROVIDE AND INSTALL 4" DIA ROUND SOLID 26 GAUGE GALVANIZED DRYER EXHAUST DUCT TO ROOF WITH BACK DRAFT DAMPER AND DRYER ROOF JACK CAP MODEL # DJK486U FOR FLAT ROOF. ALL DRYER DUCT ELBOW SHOULD BE DRYER-ELL MODEL # L790. PROVIDE AND INSTALL DRYER BOX AS PER DETAIL. PROVIDE CLEAN-OUT FOR EVERY CHANGE OF DIRECTION AND AT BOTTOM OF THE DRYER EXHAUST RISER.
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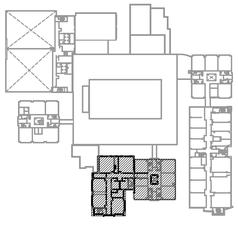
SECOND FLOOR DUCTWORK PLAN - BLOCK A

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



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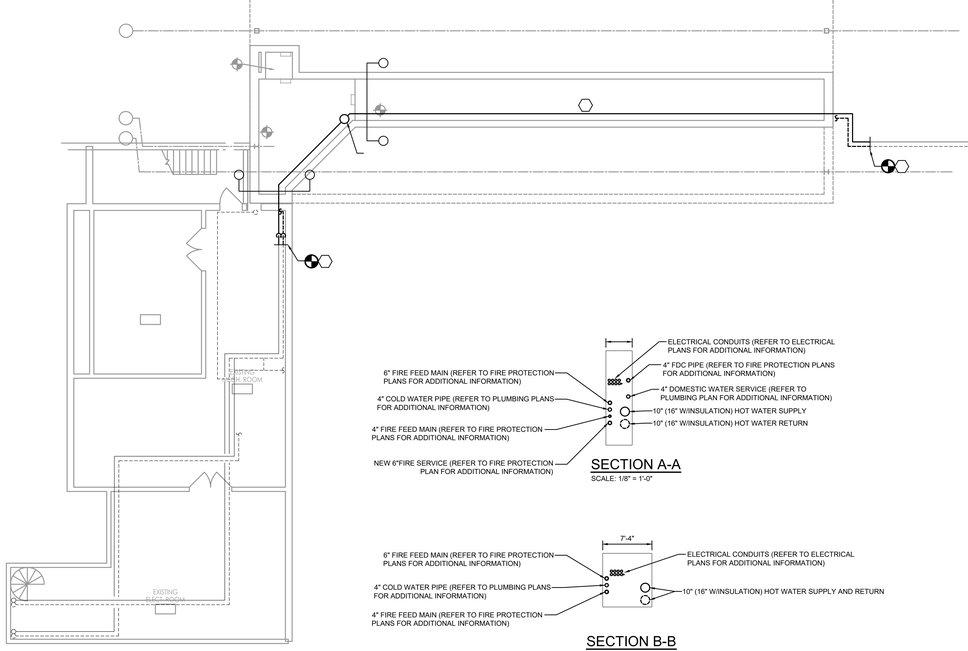
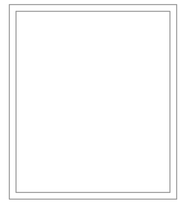


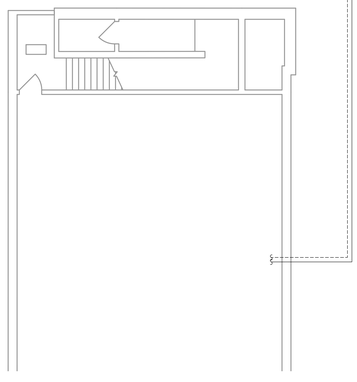
SECTION A-A

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

SECTION B-B

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





BASEMENT NEW PIPING PLAN

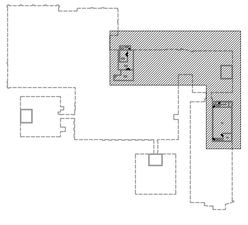
SCALE: 1/8" = 1'-0"

KEY NOTES

1. CONNECT NEW SIZE & TYPE (10" HWS/R) TO EXISTING PIPING. ROUTE THE NEW HOT WATER SUPPLY/RETURN PIPING WITHIN NEW TUNNEL. PROVIDE SCHEDULE 40 PVC PIPE SLEEVE & ROUTE NEW HWS/R PIPING 36" UNDERGROUND AND CONNECTION TO EXISTING UNDERGROUND HOT WATER SUPPLY AND RETURN PIPING. SLEEVE SHALL BE EXTENDED 6" ABOVE FINISHED GRADE/FLOOR. PROVIDE HOT WATER PIPING WITH INSULATION AND JACKET PER SPECIFICATION. PROVIDE PIPING SUPPORTS AS REQUIRED FOR HOT WATER SUPPLY AND RETURN PIPING. COORDINATE THE WORK WITH OTHER TRADES PIPING/CONDUITS PRIOR TO FABRICATION. COORDINATE WORK WITH SITE AND NEW BUILDING ADDITION WORK. NEW REPLACEMENT LINE SHALL BE ACTIVE AND PROTECTED DURING CONSTRUCTION OF NEW ADDITION AND WHEN SCHOOL IS OPEN. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING UNDERGROUND HWS/R PIPING AND PROVIDE TRANSITION AS REQUIRED FOR CONNECTION. VALVING NOT SHOWN FOR CLARITY. SEE PIPING DETAILS AND SPECIFICATION FOR ADDITIONAL INFORMATION.
2. EXISTING UNDERGROUND HOT WATER SUPPLY AND RETURN PIPING TO REMAIN. FIELD VERIFY THE EXACT LOCATION.

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES . AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTRACT THE SERVICES OF A PRIVATE UTILITY LOCATOR COMPANY TO MARK OUT ALL EXISTING UNDERGROUND UTILITIES IN THE PROJECT AREA PRIOR TO COMMENCING ANY WORK AND PROVIDE EXISTING CONDITIONS PLAN TO THE OWNER AND ENGINEER.
3. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL. MATCH EXISTING ADJACENT SURFACES.
4. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR; OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
6. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
7. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION, CONTRACTOR SHALL REPLACE FILTERS WEEKLY.
8. ALL BRANCH PIPING CONNECTED TO TWO OR MORE UNIT VENTILATOR INTERNAL CONDENSATE PUMPS SHALL BE MINIMUM 1" PUMPED CONDENSATE UNLESS OTHERWISE NOTED.
9. PROVIDE PIPE ANCHOR, GUIDE & EXPANSION LOOP SERVING EACH HVAC PIPING AS REQUIRED PER SPECIFICATION. SEE SPECIFICATION AND DETAILS FOR ADDITIONAL INFORMATION.
10. EACH BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPER FOR BALANCING.
11. PROVIDE 1/4" UNDER CUT FOR ALL RESTROOMS, JANITOR CLOSETS, AND TOILETS DOOR FOR AIR TRANSFER.
12. PROVIDE SHUTOFF VALVES AT EACH BRANCH TAKE OFF PIPING SERVING THE UNIT VENTILATOR AND FIN TUBE RADIATOR.



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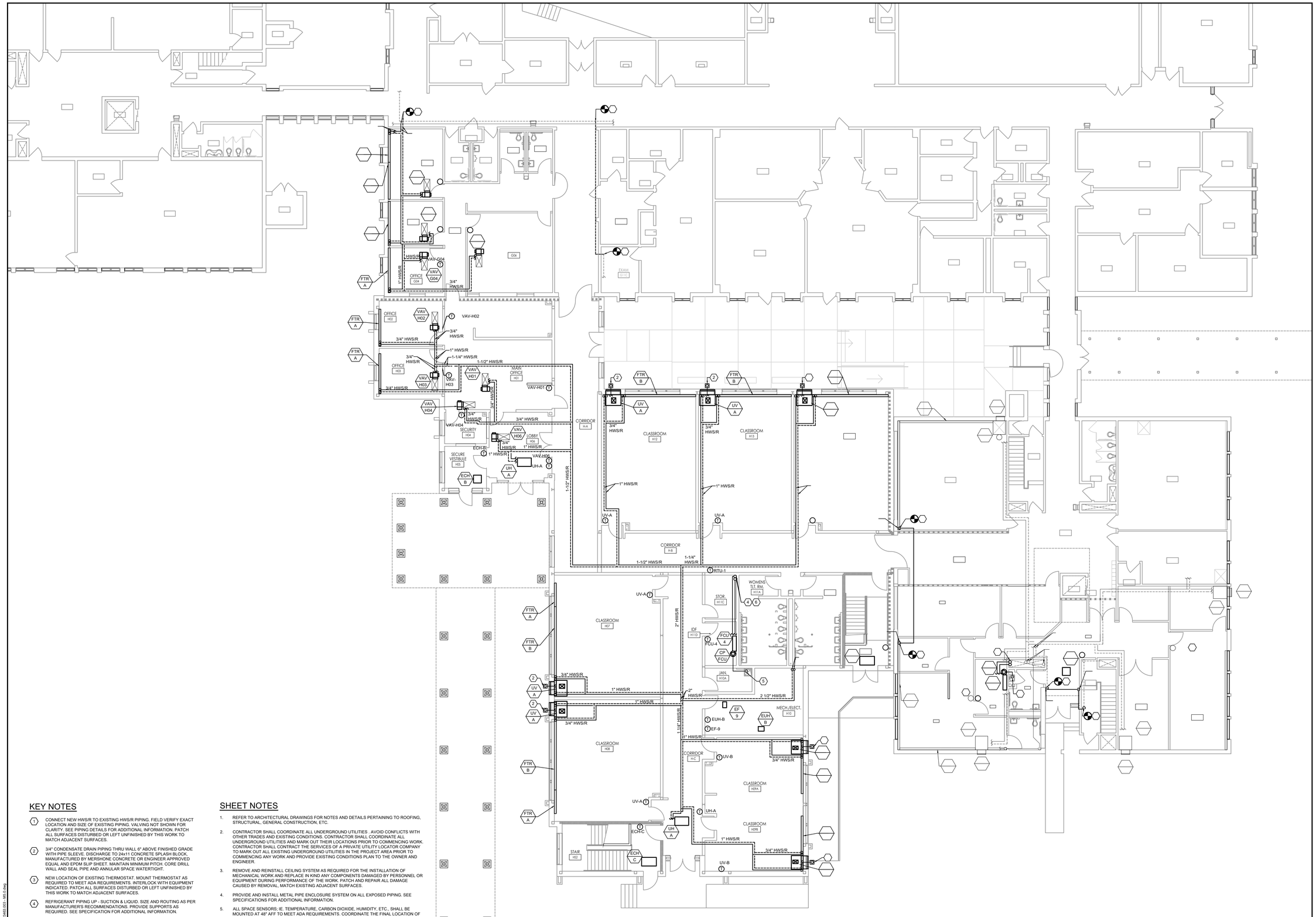

KEY NOTES

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2. 3/4" CONDENSATE DRAIN PIPING THRU WALL 6" ABOVE FINISHED GRADE WITH PIPE SLEEVE. DISCHARGE TO 24x11 CONCRETE SPLASH BLOCK, MANUFACTURED BY MERSHONE CONCRETE OR ENGINEER APPROVED EQUAL AND EPDM SLIP SHEET. MAINTAIN MINIMUM PITCH. CORE DRILL WALL AND SEAL PIPE AND ANNULAR SPACE WATERTIGHT.
3. NEW LOCATION OF EXISTING THERMOSTAT. MOUNT THERMOSTAT AS REQUIRED TO MEET ADA REQUIREMENTS. INTERLOCK WITH EQUIPMENT INDICATED. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. REFRIGERANT PIPING UP - SUCTION & LIQUID. SIZE AND ROUTING AS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPORTS AS REQUIRED. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
5. 3/4" CONDENSATE DRAIN DOWN TO JANITOR SINK WITH CODE REQUIRED AIR GAP; MINIMUM 1" ABOVE RIM OF SINK. MAINTAIN MINIMUM PITCH.
6. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. REFRIGERANT PIPING UP THRU PIPE PORTAL.

SHEET NOTES

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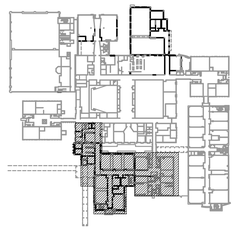
FIRST FLOOR PIPING PLAN - BLOCK A

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



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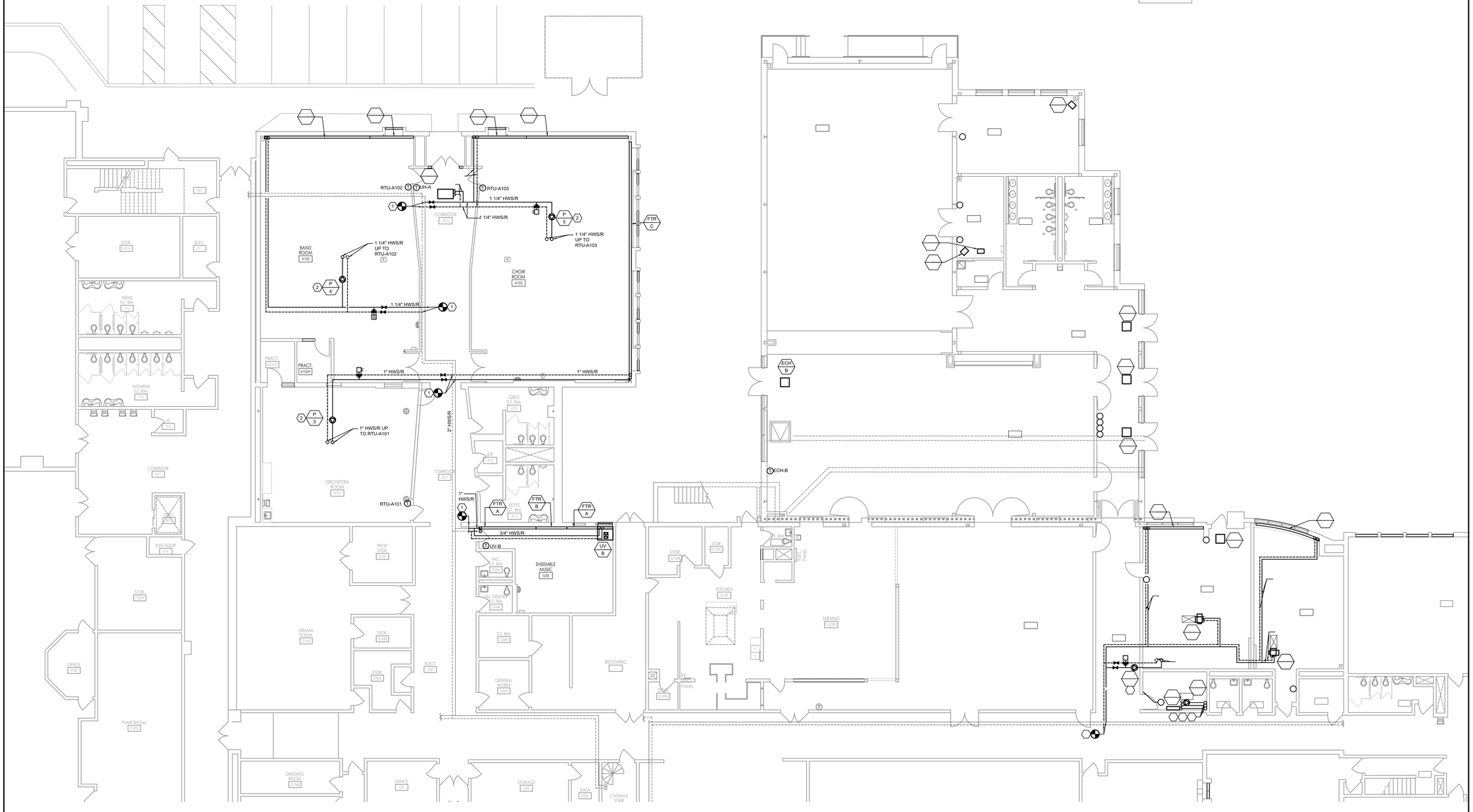

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2. PROVIDE FREEZE PROTECTION PUMP AND 3-WAY VALVE ASSEMBLY AS PER PLAN, SCHEDULE AND DETAIL. INTERLOCK THE FREEZE PROTECTION PUMP WITH ASSOCIATED RTU. REFER TO ATC DIAGRAMS & SPECIFICATION FOR ADDITIONAL INFORMATION.
3. REFRIGERANT PIPING - SUCTION & LIQUID. SIZE AND ROUTING AS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPORTS AS REQUIRED. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
4. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
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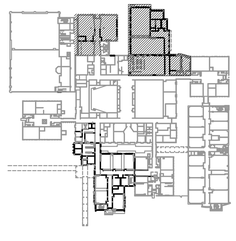
FIRST FLOOR PIPING PLAN - BLOCK B

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



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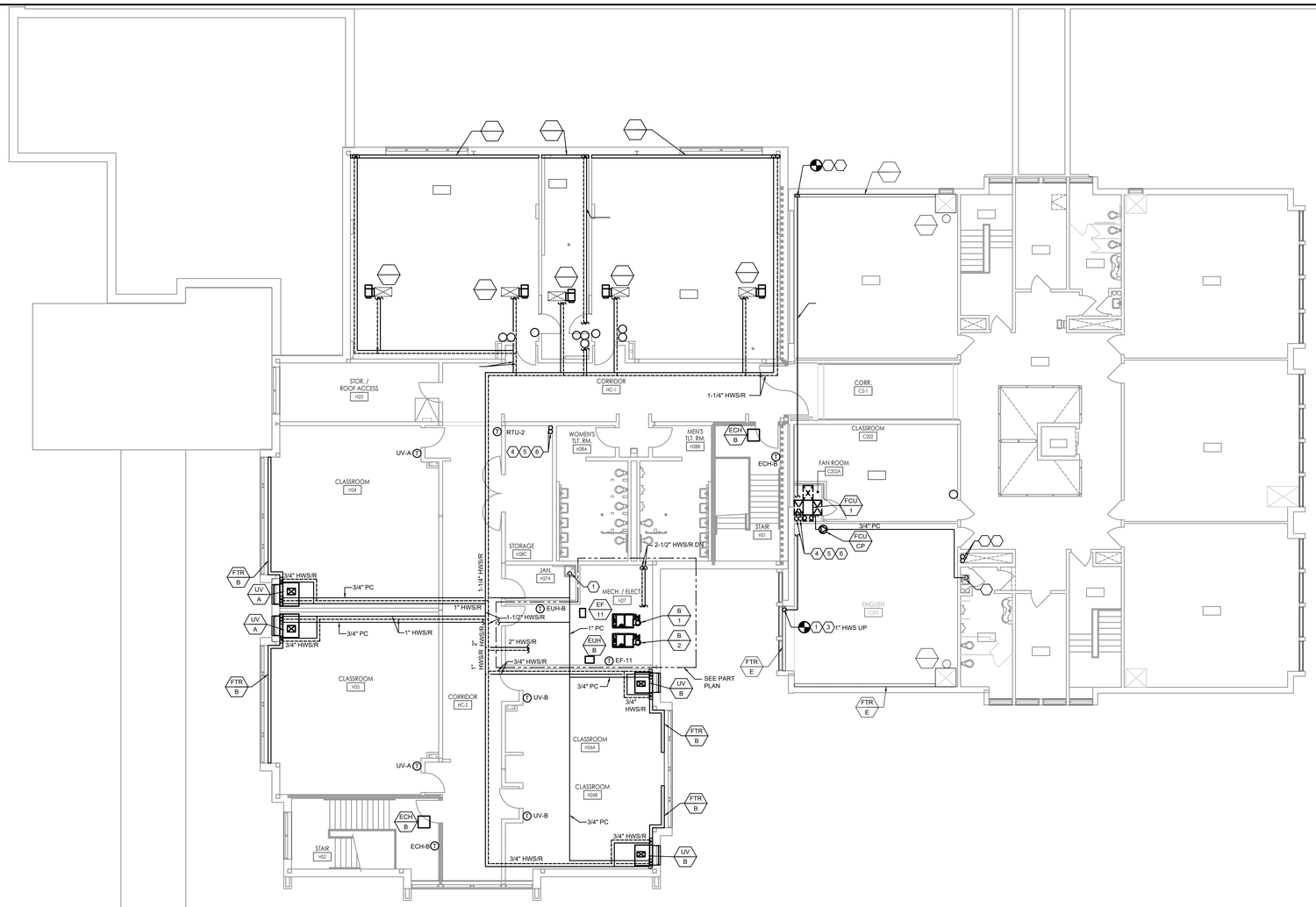

KEY NOTES

1. 1 1/4" CONDENSATE DRAIN DOWN TO JANITOR SINK WITH CODE REQUIRED AIR GAP; MINIMUM 1" ABOVE RIM OF SINK. MAINTAIN MINIMUM PITCH.
2. CONNECT NEW HWS/R TO EXISTING HWS/R PIPING. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING. VALVING NOT SHOWN FOR CLARITY. SEE PIPING DETAILS FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
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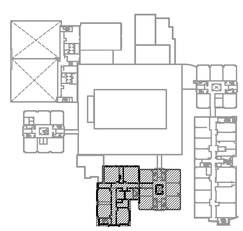
12. PROVIDE SHUTOFF VALVES AT EACH BRANCH TAKE OFF PIPING SERVING THE UNIT VENTILATOR AND FIN TUBE RADIATOR.

SECOND FLOOR PIPING PLAN - BLOCK A

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



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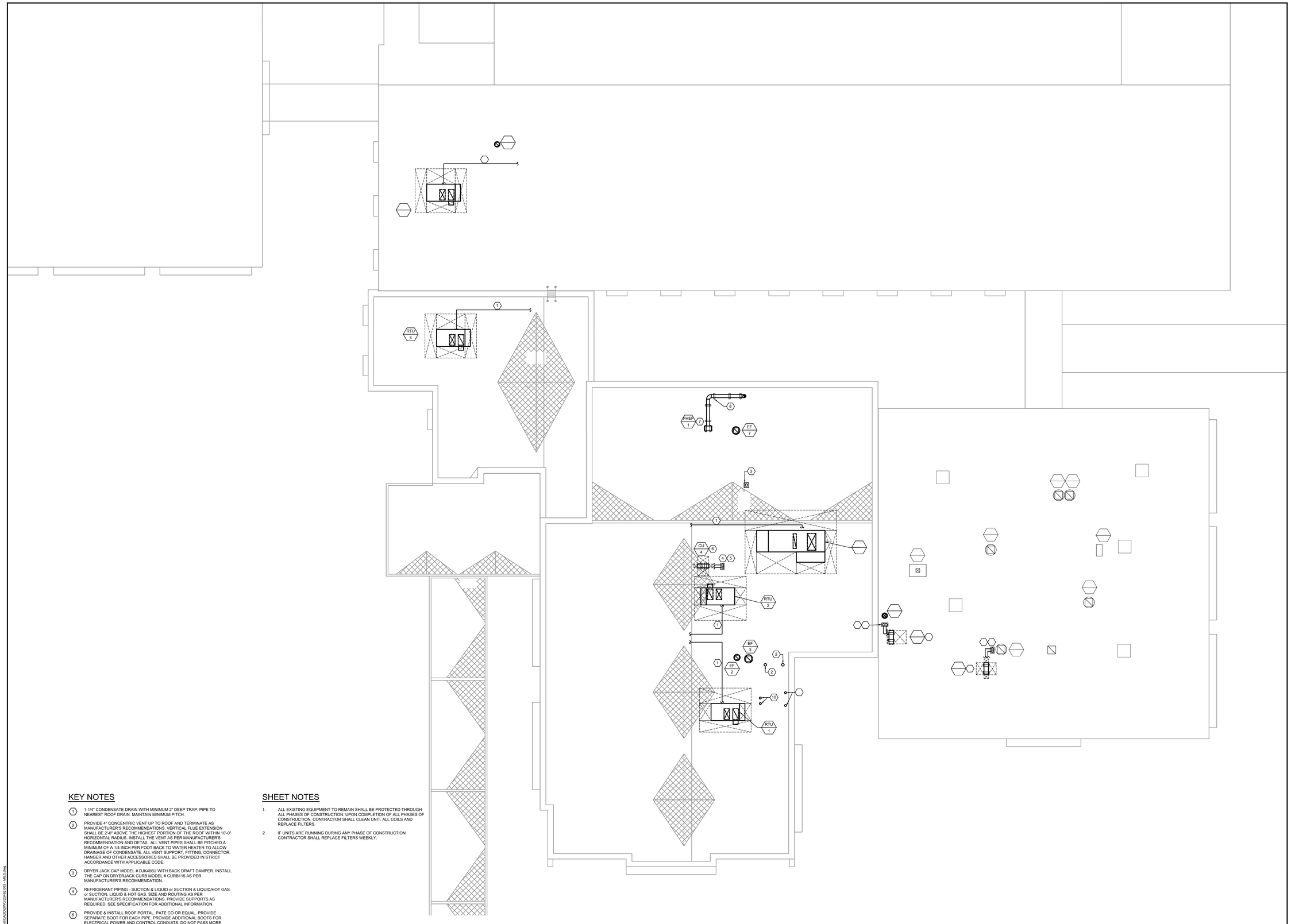


KEY NOTES

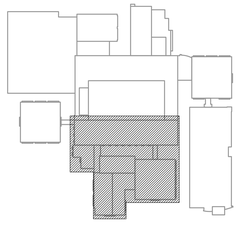
1. 1-1/4" CONDENSATE DRAIN WITH MINIMUM 2" DEEP TRAP. PIPE TO NEAREST ROOF DRAIN. MAINTAIN MINIMUM PITCH.
2. PROVIDE 4" CONCENTRIC VENT UP TO ROOF AND TERMINATE AS MANUFACTURER'S RECOMMENDATIONS. VERTICAL FLUE EXTENSION SHALL BE 2'-0" ABOVE THE HIGHEST PORTION OF THE ROOF WITHIN 10'-0" HORIZONTAL RADIUS. INSTALL THE VENT AS PER MANUFACTURER'S RECOMMENDATION AND DETAIL. ALL VENT PIPES SHALL BE PITCHED A MINIMUM OF A 1/4 INCH PER FOOT BACK TO WATER HEATER TO ALLOW DRAINAGE OF CONDENSATE. ALL VENT SUPPORT, FITTING, CONNECTOR, HANGER AND OTHER ACCESSORIES SHALL BE PROVIDED IN STRICT ACCORDANCE WITH APPLICABLE CODE.
3. DRYER JACK CAP MODEL # DJK486U WITH BACK DRAFT DAMPER. INSTALL THE CAP ON DRYERJACK CURB MODEL # CURB115 AS PER MANUFACTURER'S RECOMMENDATION.
4. REFRIGERANT PIPING - SUCTION & LIQUID or SUCTION & LIQUID/HOT GAS or SUCTION, LIQUID & HOT GAS. SIZE AND ROUTING AS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPORTS AS REQUIRED. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
5. PROVIDE & INSTALL ROOF PORTAL. PATE CO OR EQUAL. PROVIDE SEPARATE BOOT FOR EACH PIPE. PROVIDE ADDITIONAL BOOTS FOR ELECTRICAL POWER AND CONTROL CONDUITS. DO NOT PASS MORE THAN (1) PIPE THRU EACH NIPPLE TO FACILITATE PROPER SEALING.
6. EQUIPMENT/DUCT MOUNTING RAILS WITH RUST RESISTANT UNISTRUT CRADLE FRAMING AROUND ENTIRE PERIMETER. HEIGHT AS REQUIRED TO MAINTAIN MINIMUM 18" BOTTOM OF DUCT ABOVE ROOF. LOCATE SUPPORTS MAXIMUM OF 96" ON CENTER AND AT EACH DIRECTION CHANGE. SEE DETAILS FOR ADDITIONAL INFORMATION.
7. ROUTE 12" DIA FUME HOOD DUCT ON ROOF WITH ROOF SUPPORT AND CONNECT TO NEW FUME HOOD EXHAUST FAN. PROVIDE AIRCRAFT CABLE GUY WIRE SUPPORT FOR FAN NOZZLE.
8. DUCT MOUNTING RAILS WITH RUST RESISTANT UNISTRUT CRADLE FRAMING AROUND ENTIRE PERIMETER. HEIGHT AS REQUIRED TO MAINTAIN MINIMUM 18" BOTTOM OF DUCT ABOVE ROOF. LOCATE SUPPORTS MAXIMUM OF 96" ON CENTER AND AT EACH DIRECTION CHANGE. CONTRACTOR TO COORDINATE SUPPORT PLACEMENT TO MINIMIZE LOCATING SUPPORTS WITHIN CRICKET AREA. SEE DETAILS FOR ADDITIONAL INFORMATION.
9. 6" EXHAUST VENT WITH AERCO EXHAUST MUFFLER UP THRU ROOF. HEATFAB SAF-T VENT CI PLUS, TERMINATE MIN. 72" ABOVE ROOF OR 3'-0" ABOVE ANY MECHANICAL INTAKE WHEN LOCATED WITHIN 10'-0" HORIZONTALLY WITH VELOCITY CONE, RAIN CAP AND LATERAL SUPPORTS (TYP-2).
10. PROVIDE 6" COMBUSTION AIR INTAKE UP TO ROOF. TERMINATE DUCT 30" ABOVE ROOF WITH TEE FITTING AND WIRE MESH SCREEN (TYP-2).

SHEET NOTES

1. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
2. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

ROOF PLAN - BLOCK A

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



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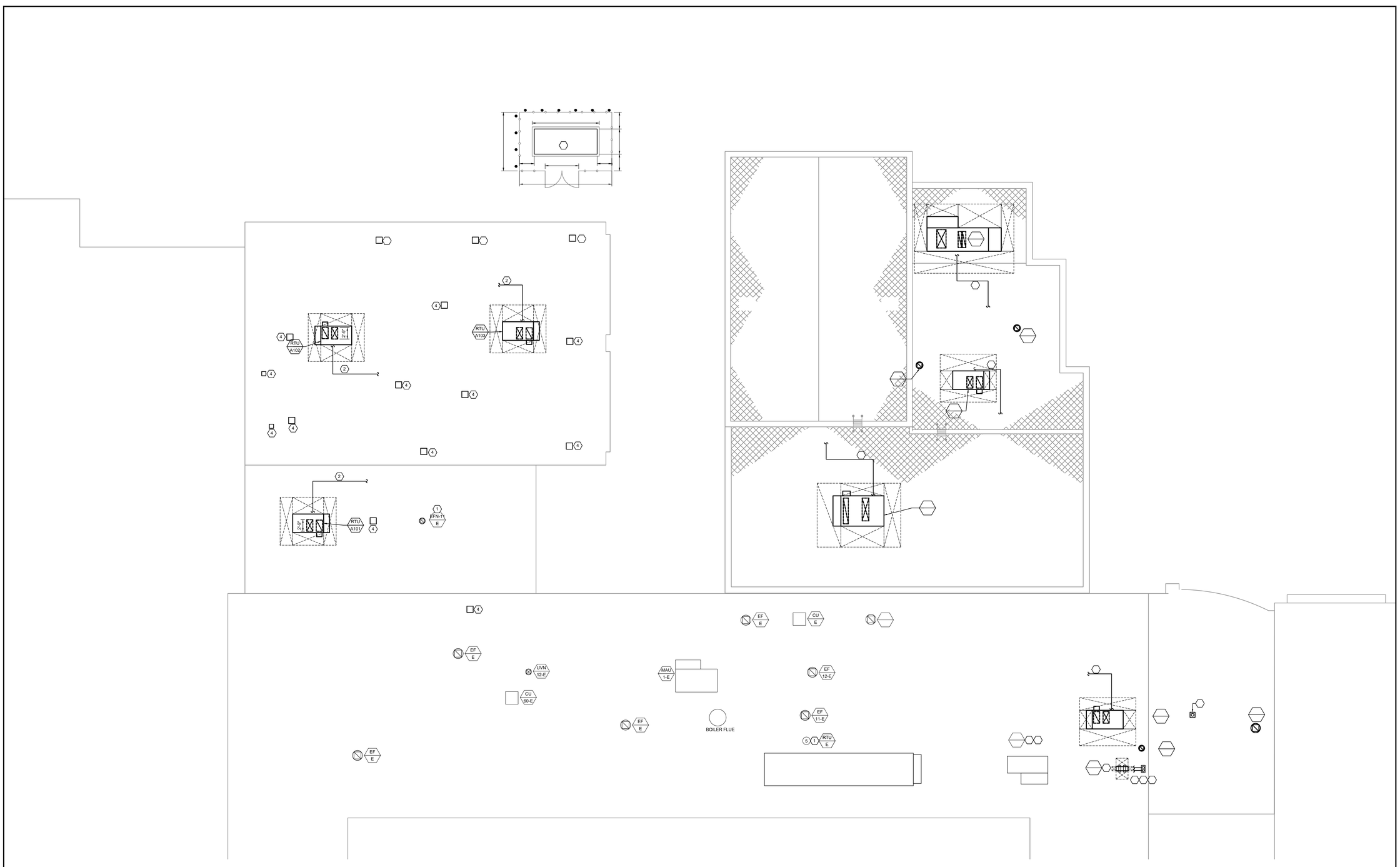


KEY NOTES

1. EXISTING TO REMAIN.
2. 1-1/4" CONDENSATE DRAIN WITH MINIMUM 2" DEEP TRAP. PIPE TO NEAREST ROOF DRAIN. MAINTAIN MINIMUM PITCH.
3. REBALANCE THE TOTAL SUPPLY AND RETURN AIRFLOW FOR RTU-E (ON ROOF) TO 5200 CFM & OUTSIDE AIR DAMPER TO MINIMUM 2250 CFM AIRFLOW SETPOINT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. PROVIDE AND INSTALL NEW WEATHER TIGHT CAP ON EXISTING CURB. SEE DETAIL FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
5. DRYER JACK CAP MODEL # DJK486U WITH BACK DRAFT DAMPER. INSTALL THE CAP ON DRYERJACK CURB MODEL # CURB115 AS PER MANUFACTURER'S RECOMMENDATION.
6. REFRIGERANT PIPING - SUCTION & LIQUID or SUCTION & LIQUID/HOT GAS or SUCTION, LIQUID & HOT GAS. SIZE AND ROUTING AS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPORTS AS REQUIRED. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
7. PROVIDE & INSTALL ROOF PORTAL. PATE CO OR EQUAL. PROVIDE SEPARATE BOOT FOR EACH PIPE. PROVIDE ADDITIONAL BOOTS FOR ELECTRICAL POWER AND CONTROL CONDUITS. DO NOT PASS MORE THAN (1) PIPE THRU EACH NIPPLE TO FACILITATE PROPER SEALING.
8. EQUIPMENT/DUCT MOUNTING RAILS WITH RUST RESISTANT UNISTRUT CRADLE FRAMING AROUND ENTIRE PERIMETER. HEIGHT AS REQUIRED TO MAINTAIN MINIMUM 18" BOTTOM OF DUCT ABOVE ROOF. LOCATE SUPPORTS MAXIMUM OF 96" ON CENTER AND AT EACH DIRECTION CHANGE. SEE DETAILS FOR ADDITIONAL INFORMATION.
9. 3/4" CONDENSATE DRAIN WITH MINIMUM 2" DEEP TRAP. PIPE TO NEAREST ROOF DRAIN. MAINTAIN MINIMUM PITCH.

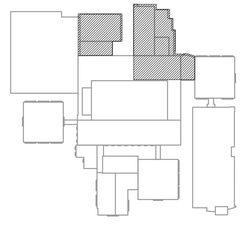
SHEET NOTES

1. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.

2 IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

ROOF PLAN - BLOCK B

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



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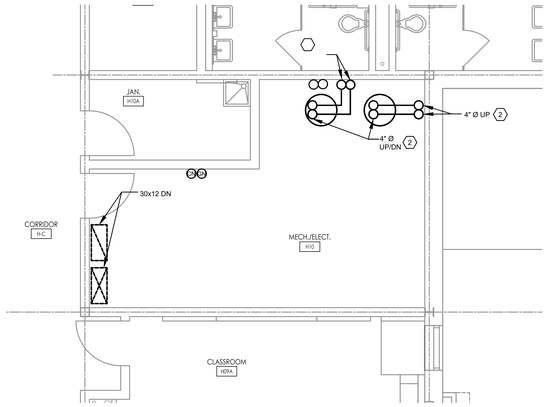
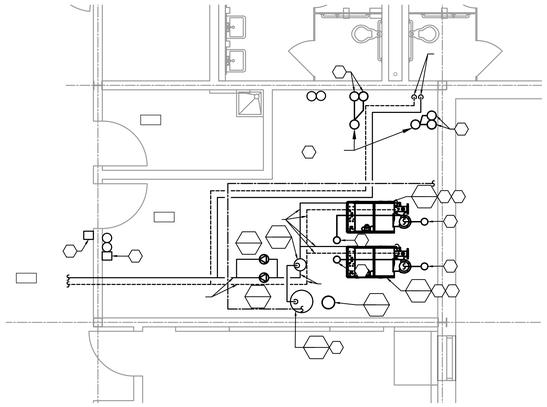


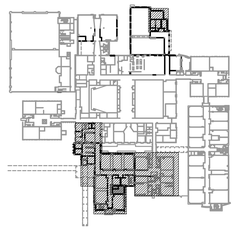
MECHANICAL ROOM PART PLAN - H10

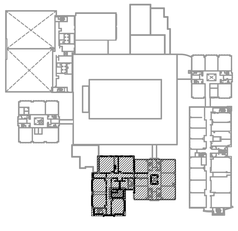
SCALE: 1/4" = 1'-0"



KEY NOTES

1. PROVIDE 4" CONCENTRIC VENT UP TO ROOF AND TERMINATE AS MANUFACTURER'S RECOMMENDATIONS. VERTICAL FLUE EXTENSION SHALL BE 2'-0" ABOVE THE HIGHEST PORTION OF THE ROOF WITHIN 10'-0" HORIZONTAL RADIUS. INSTALL THE VENT AS PER MANUFACTURER'S RECOMMENDATION AND DETAIL. ALL VENT PIPES SHALL BE PITCHED A MINIMUM OF A 1/4 INCH PER FOOT BACK TO WATER HEATER TO ALLOW DRAINAGE OF CONDENSATE. ALL VENT SUPPORT, FITTING, CONNECTOR, HANGER AND OTHER ACCESSORIES SHALL BE PROVIDED IN STRICT ACCORDANCE WITH APPLICABLE CODE.
2. PROVIDE 4" CONCENTRIC VENT UP TO SECOND FLOOR. ALL VENT PIPE SHALL BE PITCHED A MINIMUM OF A 1/4" INCH PER FOOT BACK AT WATER HEATER TO ALLOW DRAINAGE OF CONDENSATE. ALL VENT SUPPORT, FITTING, CONNECTOR, HANGER AND OTHER ACCESSORIES SHALL BE PROVIDED WITH STRICT ACCORDANCE WITH APPLICABLE CODE.
3. PROVIDE EMERGENCY BOILER/BURNER LOCKABLE SHUTDOWN SWITCH WITH BREAK GLASS COVER SERVING BOILERS B-1 AND B-2.
4. 6" EXHAUST VENT WITH AERCO EXHAUST MUFFLER UP THRU ROOF, HEATFAB SAF-T VENT CI PLUS, TERMINATE MIN. 72" ABOVE ROOF OR 3' 0" ABOVE ANY MECHANICAL INTAKE WHEN LOCATED WITHIN 10' 0" HORIZONTALLY WITH VELOCITY CONE, RAIN CAP AND LATERAL SUPPORTS (TYP-2).
5. PROVIDE 6" COMBUSTION AIR INTAKE UP TO ROOF. TERMINATE DUCT 30" ABOVE ROOF WITH TEE FITTING AND WIRE MESH SCREEN (TYP-2).
6. PROVIDE 1" BOILER CONDENSATE DRAIN WITH CONDENSATE NEUTRALIZER KIT TO FLOOR DRAIN (TYP-2).
7. FLOOR MOUNTED EQUIPMENT, PROVIDE 4" REINFORCED CONCRETE PAD. EXTEND THE CONCRETE PAD 6" LARGER THAN EQUIPMENT FOOTPRINT.





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PACKAGED ENERGY RECOVERY UNIT SCHEDULE

| PLAN NO | MANUF MODEL | LOCATION | AREA SERVED | EER | SUPPLY FAN DATA | | | | | | RETURN/EXHAUST DATA | | | | ENERGY RECOVERY WHEEL DATA | | | | | | | | | | | | | | | | | | | | | | | | DX COOLING COIL DATA | | | | GAS-HEAT FURNACE | | | | | | | | | | | | | | | | | | |

G06	CONFERENCE ROOM	445	12	5	0.06	86.70	0.8	108.38	-	-	-	-	115	450	450	115	0	RTU-3
H01	MAIN OFFICE	750	8	5	0.06	85.00	0.8	106.25	-	-	-	-	110	475	475	110	0	RTU-4
H02	OFFICE	190	3	5	0.06	26.40	0.8	33.00	-	-	-	-	45	300	300	45	0	RTU-4
H03	OFFICE	190	3	5	0.06	26.40	0.8	33.00	-	-	-	-	45	300	300	45	0	RTU-4
H04	SECURITY	85	2	5	0.06	15.10	0.8	18.88	-	-	-	-	20	125	125	20	0	RTU-4
H05	SECURE VESTIBULE	115	0	0	0.06	6.90	0.8	8.62	-	-	-	-	25	250	250	25	0	RTU-4
H06	LOBBY	270	4	5	0.06	36.20	0.8	45.25	-	-	-	-	50	350	350	50	0	RTU-4
H07	CLASSROOM	830	24	10	0.12	339.60	0.8	424.50	-	-	-	-	425	1500	1500	425	0	UV-A
H08	CLASSROOM	830	24	10	0.12	339.60	0.8	424.50	-	-	-	-	425	1500	1500	425	0	UV-A
H09A	CLASSROOM	418	13	10	0.12	180.16	0.8	225.20	-	-	-	-	230	1100	1100	230	0	UV-B
H09B	CLASSROOM	418	13	10	0.12	180.16	0.8	225.20	-	-	-	-	230	1100	1100	230	0	UV-B
H10A	JANITOR	75	0	0	0	0.00	0.8	0.00	0	0	1.0	75.00	0	50	0	100	50	EF-2
H10	MECH./ELECT.	341	0	0	0.12	40.92	1.8	22.73	-	-	-	-	0	650	0	0	100	RTU-1
H11A	WOMENS TLT RM	345	0	0	0	0.00	0.8	0.00	5	70	0	350	0	200	0	375	175	EF-3
H11B	MENS TLT RM	345	0	0	0	0.00	0.8	0.00	5	70	0	350	0	200	0	375	175	EF-3
H11C	STOR.	89	0	0	0.06	5.34	0.8	6.67	-	-	-	-	10	100	100	-	-	RTU-1
H11D	IDF	88	0	0	0.06	5.28	0.8	6.60	-	-	-	-	10	100	100	-	-	RTU-1
H12	CLASSROOM	830	24	10	0.12	339.60	0.8	424.50	-	-	-	-	425	1500	1500	425	0	UV-A
H13	CLASSROOM	830	24	10	0.12	339.60	0.8	424.50	-	-	-	-	425	1500	1500	425	0	UV-A
H14	CLASSROOM	830	24	10	0.12	339.60	0.8	424.50	-	-	-	-	425	1500	1500	425	0	UV-A
H-A	CORRIDOR	785	0	0	0.06	47.10	0.8	58.87	-	-	-	-	180	350	350	0	0	RTU-1
H-B	CORRIDOR	820	0	0	0.06	49.20	0.8	61.50	-	-	-	-	75	200	200	0	350	RTU-1
H-C	CORRIDOR	765	0	0	0.06	45.90	0.8	57.38	-	-	-	-	85	200	200	0	50	RTU-1
AC2	CORRIDOR	650	0	0	0.06	39.00	0.8	48.75	-	-	-	-	50	200	200	-	-	RTU-A102
A101	ORCHESTRA ROOM	1051	30	10	0.06	363.06	0.8	453.83	-	-	-	-	525	1300	1300	525	0	RTU-A101
A102	BAND ROOM	1775	52	10	0.06	626.50	0.8	783.13	-	-	-	-	1025	2365	2365	1025	0	RTU-A102
A102A	PRACTICE RM	72	2	10	0.06	24.32	0.8	30.40	-	-	-	-	40	100	100	40	100	RTU-A102
A102B	PRACTICE RM	72	2	10	0.06	24.32	0.8	30.40	-	-	-	-	40	100	100	40	100	RTU-A102
A103	CHOIR ROOM	1975	47	10	0.06	588.50	0.8	735.62	-	-	-	-	900	2800	2800	900	0	RTU-A103
G108	CAFETERIA	3130	90	7.5	0.18	1238.40	0.8	1548.00	-	-	-	-	2600	3600	3600	2600	0	RTU-E
G109D	SERVING	1152	0	7.5	0.18	207.36	0.8	259.20	-	-	-	-	260	1600	1600	260	0	RTU-E
G108A	NEW CAFETERIA	2780	192	7.5	0.18	1940.40	0.8	2425.50	-	-	-	-	2450	5075	5075	2450	0	RTU-G108A
G108B	MULTI-PURPOSE ROOM	2670	168	20	0.18	3840.60	0.8	4800.75	-	-	-	-	4805	8000	8000	4805	0	ERU-1
G108C	JANITOR	70	0	0	0	0.00	0.8	0.00	0	0	1.0	70.00	0	25	0	100	75	EF-5
G108D	MECH. / ELECT.	202	0	0	0.12	24.24	1.8	13.47	-	-	-	-	0	300	0	0	100	RTU-G2
G108E	GIRLS TLT RM	260	0	0	0	0.00	0.8	0.00	4	70	0	280	0	200	0	300	100	EF-4
G108F	BOYS TLT RM	260	0	0	0	0.00	0.8	0.00	4	70	0	280	0	200	0	300	100	EF-4
G108G	STORAGE	505	0	0	0.12	60.60	0.8	75.75	-	-	-	-	0	175	175	0	0	RTU-G2
G33	ENSEMBLE MUSIC	470	11	10	0.12	166.40	0.8	208.00	-	-	-	-	208	1100	1100	-	-	UV-B
G34	LIFE SKILLS	635	13	10	0.12	206.20	0.8	257.75	-	-	-	-	260	725	725	260	0	RTU-G33
G34A	FACULTY DINING	800	30	7.5	0.18	369.00	0.8	461.25	-	-	-	-	465	1000	1000	465	0	RTU-G33
G-1	CORRIDOR	430	0	0	0.06	25.80	0.8	32.25	-	-	-	-	75	160	160	0	25	RTU-G33
G-1A	IDF	125	0	0	0.12	15.00	0.8	18.75	-	-	-	-	35	75	0	100	25	EF-6
G-2	LOBBY	975	0	0	0.06	58.50	0.8	73.13	-	-	-	-	430	1400	1400	0	275	RTU-G2
C202	SGI	460	13	10	0.12	185.20	0.8	231.50	-	-	-	-	235	1125	1125	235	0	FCU-1
C2-1	CORRIDOR	295	0	0	0.06	17.70	0.8	22.13	-	-	-	-	25	-	-	-	-	-
HC-1	CORRIDOR	660	0	0	0.06	39.60	0.8	49.50	-	-	-	-	95	200	200	0	375	RTU-2
HC-2	CORRIDOR	825	0	0	0.06	49.50	0.8	61.88	-	-	-	-	150	300	300	0	50	RTU-2
H20	SCIENCE CLASSROOM	1085	25	10	0.18	445.30	0.8	556.63	0	0	1.0	1085.00	560	2100	2100	560/1100	0	ERU-2
H21	SCIENCE CLASSROOM	1085	25	10	0.18	445.30	0.8	556.63	0	0	1.0	1085.00	560	2100	2100	560/1100	0	ERU-2
H23	STOR./ROOF ACCESS	270	0	0	0.12	32.40	0.8	40.50	-	-	-	-	95	250	0	0	0	RTU-2
H24	CLASSROOM	870	24	10	0.12	344.40	0.8	430.50	-	-	-	-	435	1500	1500	435	0	UV-A
H25	CLASSROOM	865	24	10	0.12	343.80	0.8	429.75	-	-	-	-	435	1500	1500	435	0	UV-A
H26A	CLASSROOM	440	13	10	0.12	182.80	0.8	228.50	-	-	-	-	230	1100	1100	230	0	UV-B
H26B	CLASSROOM	440	13	10	0.12	182.80	0.8	228.50	-	-	-	-	230	1100	1100	230	0	UV-B
H27	MECH/ELEC	345	0	0	0	0.00	0.8	0.00	-	-	-	-	0	650	0	0	100	EF-3
H27A	JANITOR	75	0	0	0.12	9.00	0.8	11.25	0	0	1.0	75.00	0	50	0	100	50	EF-2
H28A	WOMENS TLT RM	345	0	0	0	0.00	0.8	0.00	5	70	0	350.00	0	200	0	375	175	EF-3
H28B	MENS TLT RM	345	0	0	0	0.00	0.8	0.00	5	70	0	350.00	0	200	0	375	175	EF-3
H28C	STORAGE	185	0	0	0.06	11.10	0.8	13.88	-	-	-	-	15	150	0	-	-	RTU-2
ST1	SCIENCE PREP	270	2	10	0.18	68.60	0.8	85.75	0	0	1	270.00	90	400	0	400	0	ERU-2

NOTES:

1. BASED ON 2021 INTERNATIONAL MECHANICAL CODE (IMC), TABLE 403.3, MINIMUM VENTILATION RATES.
2. ASHRAE VENTILATION STANDARD STANDARD 62.1 IS USED AS A SECONDARY REFERENCE SOURCE IF A PARTICULAR ROOM IS NOT INCLUDED IN THE IMC.

1. HANG VIA (4) POINTS FROM CONSTRUCTION ABOVE.
2. REMOTE THERMOSTAT WITH TAMPER COVER AND 2-WAY CONTROL VALVE BY ATC.
3. PROVIDE AQUASTAT TO PROVE HW FLOW.
4. PROVIDE HIGH STATIC MOTOR FOR .4" ESP AT FULL FLOW.

AIR DEVICES SCHEDULE

PLAN NO.	CFM RANGE	NECK SIZE	OVERALL SIZE	MANUFACTURER MODEL	REMARKS	PLAN NO.	CFM RANGE	NECK SIZE	OVERALL SIZE
CD	0-100	6" DIA	12x12	OMNI	SEE NOTES 1 & 6, 7	RR/ER	0-100	-	24x12
CD	101-225	8" DIA	12x12	OMNI	SEE NOTES 1 & 6, 7	RR/ER	101-200	-	24x12
CD	0-100	6" DIA	24x24	OMNI	SEE NOTES 1 & 6, 7	RR/ER	0-1000	-	24x12
CD	101-225	8" DIA	24x24	OMNI	SEE NOTES 1 & 6, 7	RR/ER	0-1000	-	24x24
CD	226-360	10" DIA	24x24	OMNI	SEE NOTES 1 & 6, 7	RR1/ER1	SEE PLANS	-	PLANS
CD	361-550	12" DIA	24x24	OMNI	SEE NOTES 1 & 6, 7				
CD	551-750	14" DIA	24x24	OMNI	SEE NOTES 1 & 6, 7				
CD	751-900	15" DIA	24x24	OMNI	SEE NOTES 1 & 6, 7				
SR	SEE PLANS	-	SEE PLANS	300RL	SEE NOTES 3 & 6, 7				
SR1	SEE PLANS	-	SEE PLANS	S300FS	SEE NOTES 5 & 6, 7				

NOTES:

1. PROVIDE FRAME WITH ACCESSORIES FOR T-BAR LAY-IN DROPPED CEILING GRID OR SURFACE MOUNTED BORDER FOR GYPSUM CEILING APPLICATION. SEE DRAWINGS FOR MOUNTING LOCATION. PROVIDE ACCESSORY ROUND BACK ADAPTER (SIZE AS INDICATED IN SCHEDULE) AND EQUALIZING GRID PROVIDE OPTIONAL DIRECTIONAL BLOW CLIPS WHERE INDICATED ON DRAWINGS. PROVIDE AND INSTALL R-6 FOIL-BACKED INSULATION ON 12x12 MODULE. PROVIDE FACTORY INSTALLED R-6 FOIL-BACKED INSULATION ON 24x24 MODULE.
2. PROVIDE WITH 35° DEFLECTION AT 1/2" BLADE SPACING WITH FRONT BLADE PARALLEL TO LONG DIMENSION. PROVIDE FRAME WITH ACCESSORIES FOR T-BAR LAY-IN CEILING GRID OR SURFACE MOUNTED BORDER FOR GYPSUM CEILING APPLICATION. SEE DRAWINGS FOR MOUNTING LOCATION. PROVIDE SQUARE TO ROUND TRANSITION AS REQUIRED. PROVIDE OPTIONAL OPPOSED BLADE DAMPER.
3. PROVIDE SUPPLY REGISTER WITH DOUBLE DEFLECTION AT 3/4" BLADE SPACING WITH FRONT BLADES PARALLEL TO LONG DIMENSION, OPTIONAL DAMPER AND SURFACE MOUNT BORDER MOUNTING FRAME.
4. PROVIDE RETURN REGISTER WITH SINGLE DEFLECTION AT 3/4" BLADE SPACING WITH BLADES PARALLEL TO LONG DIMENSION, OPTIONAL DAMPER AND SURFACE MOUNT BORDER MOUNTING FRAME.
5. PROVIDE WITH DOUBLE DEFLECTION AT 3/4" BLADE SPACING WITH FRONT BLADES PARALLEL TO SHORT DIMENSION AND ASD (AIR SCOOP DAMPER/EXTRACTOR).
6. PROVIDE STANDARD FINISH - #26 WHITE.
7. PROVIDE REMOTE CABLE OPERATED VOLUME DAMPERS LOCATED IN INACCESSIBLE CONSTRUCTION.

FAN SCHEDULE

PLAN NO	MANUFACTURER MODEL	LOCATION	AREA SERVED	FAN TYPE	FAN PERFORMANCE			ELECTRICAL DATA			
					CFM	TOTAL SP	FAN RPM	HP/ WATTS	RPM	VOLTS/Ø	DRIVE
EF-1	GREENHECK G-095-VG	ROOF	SEE PLAN	CENTRIFUGAL	200	0.5	1301	1/6	1301	115/1	DIRECT
EF-2	GREENHECK G-095-VG	ROOF	SEE PLAN	CENTRIFUGAL	200	0.5	1301	1/6	1301	115/1	DIRECT
EF-3	GREENHECK G-140-VG	ROOF	SEE PLAN	CENTRIFUGAL	1500	0.5	1079	1/2	1079	115/1	DIRECT
EF-4	GREENHECK G-095-VG	ROOF	SEE PLAN	CENTRIFUGAL	300	0.5	1332	1/6	1332	115/1	DIRECT
EF-5	GREENHECK G-097-VG	ROOF	SEE PLAN	CENTRIFUGAL	100	0.5	1120	1/4	1120	115/1	DIRECT
EF-6	GREENHECK G-097-VG	ROOF	SEE PLAN	CENTRIFUGAL	100	0.5	1120	1/4	1120	115/1	DIRECT
EF-7	GREENHECK G-090-VG	ROOF	SEE PLAN	CENTRIFUGAL	400	0.5	1472	1/10	1472	115/1	DIRECT
EF-8	GREENHECK CSP-A390-VG	SEE PLAN	SEE PLAN	CABINET	275	0.5	1318	61 W	1318	115/1	DIRECT
EF-9	GREENHECK CSP-A510-VG	SEE PLAN	SEE PLAN	CABINET	400	0.5	1246	104 W	1246	115/1	DIRECT
EF-10	GREENHECK CSP-A510-VG	SEE PLAN	SEE PLAN	CABINET	400	0.5	1246	104 W	1246	115/1	DIRECT
EF-11	GREENHECK CSP-A510-VG	SEE PLAN	SEE PLAN	CABINET	400	0.5	1246	104 W	1246	115/1	DIRECT

NOTES:

1. MOUNT FAN ON MINIMUM 12" HIGH ROOF CURB.
2. PROVIDE SOLID STATE SPEED CONTROL, NEMA-1 TOGGLE SWITCH, BIRDSCREEN & BACKDRAFT DAMPER.
3. PROVIDE ELECTRICAL DISCONNECT, VIBRATION ISOLATION SUPPORT RODS WITH MOUNTING BRACKETS, SPEED CONTROLLER AND ROUND DUCT CONNECTION.
4. PROVIDE CONTROLS FROM ATC CONTRACTOR.

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NOTES:
1. MOUNT THE UNIT HEATER WITH THE CEILING BRACKET FOR HORIZONTAL DISCHARGE AS PER MANUFACTURER'S RECOMMENDATION WITH ASSOCIATED HARDWARE AND SUPPORTS.
2. PROVIDE UNIT WITH WALL MOUNTED THERMOSTAT.
3. PROVIDE INTEGRAL POWER DISCONNECT SWITCH.
4. MOUNT THE UNIT AT LEAST 8 FEET ABOVE THE FINISHED FLOOR AND AT LEAST 6 INCHES FROM WALL AS PER MANUFACTURER'S RECOMMENDATION.
5. INTEGRATE WITH EXISTING HONEYWELL BMS.PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SETPOINTS AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING SET POINTS.

EXPANSION TANK SCHEDULE

ET / X

PLAN NO	MANUFACTURER MODEL	LOCATION	TANK VOLUME GAL	ACCEPT VOLUME GAL	CHARGE PRESS PSI	SYSTEM CONN INCH	MAX OPER TEMP °F	MAX OPER PRESS PSI	DIMENSIONS (IN.)			DRY WEIGHT LBS	MAX OPER WEIGHT LBS	REMARKS
									LENGTH	HEIGHT	DIA			
ET-1	B & G XYLEM B130	BOILER RM	29.68	10.51	-	1	200	70	-	37	20	125	-	SEE NOTES

NOTES:
1. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD EXTENDING MINIMUM 6" BEYOND EQUIPMENT FOOTPRINT ON ALL SIDES.
2. PROVIDE B&G ATFL AIRTROL TANK FITTING.

PUMP SCHEDULE

P / X

PLAN NO	MANUFACTURER MODEL	LOCATION	SYSTEM SERVED	TYPE	GPM	HEAD FT	NET POS SUCT HD	RPM	EFF %	MOTOR HP	ELECTRICAL DATA	WEIGHT LBS	REMARKS
											VOLTS/Ø		
P-1	BELL & GOSSETT E-82	SEE PLAN	BOILER B-1 & B-2	INLINE	75	45	13.5	1538	67.2	3	460/3	100	SEE NOTES
P-2	BELL & GOSSETT E-82	SEE PLAN	BOILER B-1 & B-2	INLINE	75	45	13.5	1538	67.2	3	460/3	100	SEE NOTES
P-3	BELL & GOSSETT E-90-ECM	SEE PLAN	RTU-A101	INLINE	6	25	7.5	1718	22.4	0.5	208/1	70	SEE NOTES
P-4	BELL & GOSSETT E-90-ECM	SEE PLAN	RTU-A102	INLINE	11	25	7.5	1718	30.5	0.5	208/1	70	SEE NOTES
P-5	BELL & GOSSETT E-90-ECM	SEE PLAN	RTU-A103	INLINE	10	25	7.5	1717	28.9	0.5	208/1	70	SEE NOTES
P-6	BELL & GOSSETT E-90-ECM	SEE PLAN	RTU-G33	INLINE	8	25	7.5	1695	28.3	0.5	208/1	70	SEE NOTES

NOTES:
1. MOUNT THE PUMP FROM BUILDING STRUCTURE.
2. PROVIDE VIBRATION ISOLATION AS PER SPECIFICATION.
3. BALANCE THE PUMP P-3 TO P-6 TO MEET THE HOT WATER COIL FLOW RATE. REFER TO RTU SCHEDULE FOR HOT WATER COIL FLOW RATE.
4. PROVIDE WITH DDC BACNET CONTROLS FOR INTERFACE WITH EXISTING HONEYWELL NIAGARA 4 PLATFORM ATC CONTROL SYSTEM. ATC PANEL SHALL BE BACNET BASED AND PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED PROGRAMMING, GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SETPOINTS AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING.

ELECTRIC CABINET HEATER SCHEDULE

ECH / X

PLAN NO	MANUFACTURER MODEL	LOCATION	HTG CAP KW	MBH	ELECTRICAL DATA		DIMENSION (IN.)			WEIGHT LBS	REMARKS
					VOLTS/Ø	AMPS	LENGTH	WIDTH	HEIGHT		
ECH-A	INDEECO CDIR	SEE PLAN	3.8	12.96	277/1	13.7	24	24	7	30	SEE NOTES
ECH-B	INDEECO CDIR	SEE PLAN	5	17.1	277/1	18.1	24	24	7	30	SEE NOTES
ECH-C	INDEECO CUI (9221C-45)	SEE PLAN	6	27.5	277/1	37	45	26-3/8	9-3/4	160	SEE NOTES

NOTES:
1. MOUNT UNIT FROM STRUCTURE VIA 4 POINTS WITH VIBRATION ISOLATION SUPPORT RODS AND MOUNTING BRACKETS AS PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE CEILING RECESSED MOUNT KIT FOR ECH-A AND ECH-B AND INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE CEILING SURFACE MOUNT KIT FOR ECH-C AND INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.
4. PROVIDE FRONT INLET AND FRONT OUTLET SUPPLY AND RETURN GRILL FOR ECH-C.
5. PROVIDE REMOTE WALL THERMOSTAT WITH TAMPER RESISTANT COVER.
6. PROVIDE DISCONNECT SWITCH.
7. PROVIDE FILTER.
8. PROVIDE KEY LOCK FOR FRONT COVER.
9. COLOR AS SELECTED BY ARCHITECT FROM ALL AVAILABLE COLORS.

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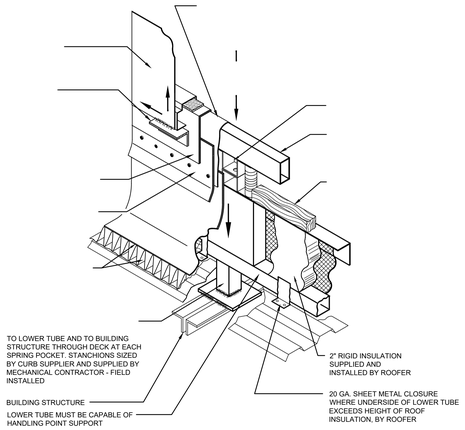
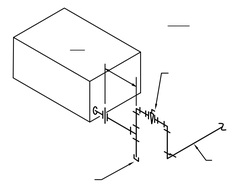


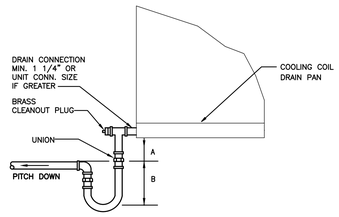
ATTACHMENT OF ISOLATED WIND AND SEISMIC ROOF CURB ON LEVEL OR PITCHED BAR JOIST-SUPPORTED ROOF

NOT TO SCALE



GAS CONNECTION TO ROOFTOP DETAIL

NOT TO SCALE

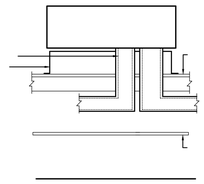


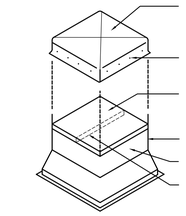
UNIT TYPE	A	B
DRAIN THRU	$1.5H_1$	$3H_1$
BLOW THRU	2" (MIN.)	$2H_1$

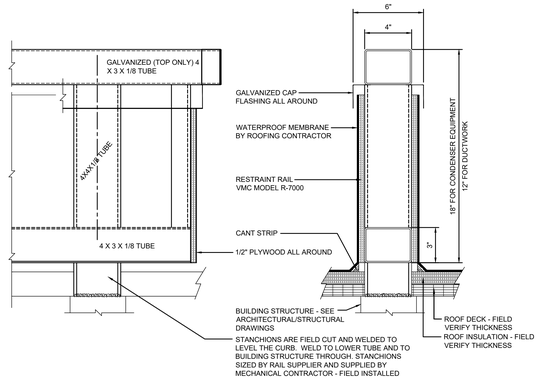
H_1 = FAN SUCTION PRESSURE
H_2 = FAN DISCHARGE PRESSURE
H_3= 150% 1"(MIN.) NEGATIVE STATIC PRESSURE AT FAN INLET

CONDENSATE TRAP DETAIL

NOT TO SCALE

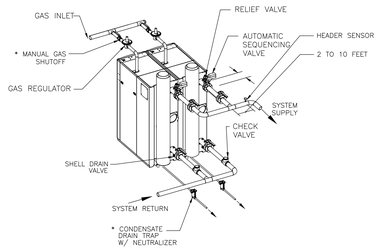






NON-ISOLATED WIND AND SEISMIC RESTRAINT RAIL

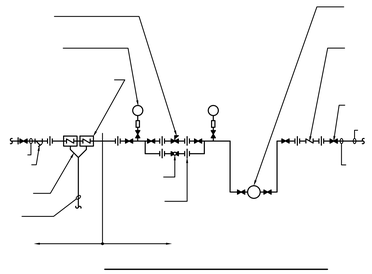
NOT TO SCALE

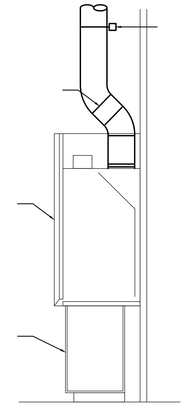


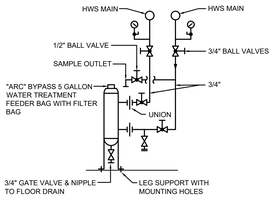
NOTES:
1. FOR ACTUAL QUANTITIES, SIZES AND LOCATIONS OF PIPING AND OTHER CONNECTIONS TO THE HEATER, SEE MANUFACTURER DIMENSIONAL DRAWING.
2. SHELL DRAIN VALVE AND CONDENSATE HOSE SHOULD BE ARRANGED TO PERMIT THE FLUIDS TO DRAIN FREELY, BY GRAVITY, TO A FLOOR DRAIN. RELIEF VALVE DISCHARGE SHOULD BE PIPED TO THE NEAREST FLOOR DRAIN. WHEN NO FLOOR DRAIN IS AVAILABLE, THE RELIEF VALVE DISCHARGE SHOULD BE PIPED VERTICALLY TO A HEIGHT 18" ABOVE THE FLOOR.
3. LOCATE WATER INLET AND OUTLET FITTINGS (i.e.UNIONS, ELBOWS, ETC.) A MINIMUM OF 6" FROM HEATER FITTINGS, TO PREVENT INTERFERENCE WITH REMOVAL OF BOILER PANELS AND COVERS. ALL PIPING AND ELECTRIC CONNECTIONS (SERVICE SWITCHES, CONDUIT BOXES) SHOULD LIKEWISE BE 6" AWAY FROM SIDE PANELS.
4. PROVIDE AERCO CONDENSATE NEUTRALIZER TANK, FOR PROPER CONDENSATE DRAINAGE. THE BOILER AND THE AERCO CONDENSATE TRAP MUST BE ELEVATED 4" OR HIGHER ABOVE THE FLOOR. SEE CONDENSATE TANK INSTRUCTIONS TID-0074 FOR DETAILS.
5. REVIEW BENCHMARK GAS SUPPLY DESIGN GUIDE GF-2030 FOR GAS PIPING INSTALLATION INSTRUCTIONS.
6. HEADER SENSOR MUST BE INSTALLED BETWEEN 2 TO 10 FEET FROM JUNCTION AND FROM LAST UNIT.
7. CONSULT AERCO FOR ADDITIONAL INFORMATION OR DIFFERENT DESIGN CONDITIONS.
8. PROVIDE AUTOMATIC ISOLATION VALVES SERVING THE SUPPLY AND RETURN OF EACH BOILER.
9. WHEN INSTALLING MULTIPLE BOILERS IN FIXED OR VARIABLE FLOW PRIMARY APPLICATIONS, UTILIZE A REVERSE-RETURN METHOD TO ENSURE BALANCED FLOW THROUGH EACH BOILER.
10. THIS DETAIL FROM BOILER MANUFACTURER IS FOR MULTIPLE BOILERS - COMMON HEADER - VARIABLE FLOW PRIMARY.
11. PIPE RELIEF VALVE FULL SIZE TO TERMINATE AT FLOOR DRAIN.
12. PROVIDE FULL SIZE RETURN SYSTEM Y-STRAINER (NOT SHOWN) TO EACH BOILER (TYP).

BOILER PIPING DIAGRAM

NOT TO SCALE







CHEMICAL FEED DETAIL

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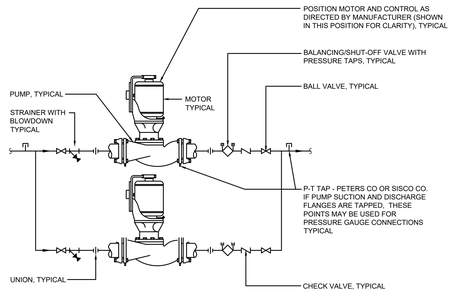

INLINE PUMP DETAIL

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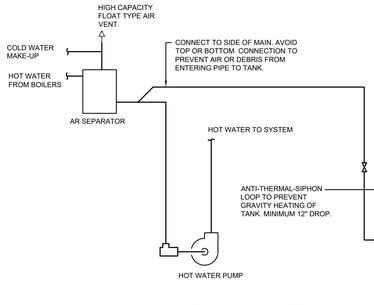
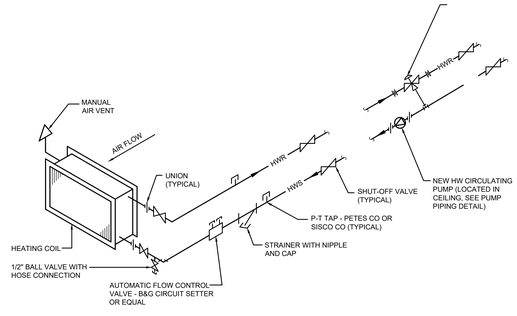


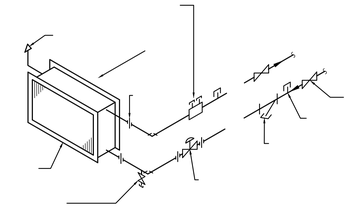
HOT WATER AIR SEPARATOR & EXPANSION TANK PIPING DETAIL

NOT TO SCALE



HOT WATER HEATING COIL WITH FREEZE PROTECTION PUMP DETAIL

NOT TO SCALE



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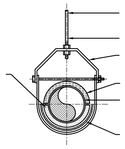
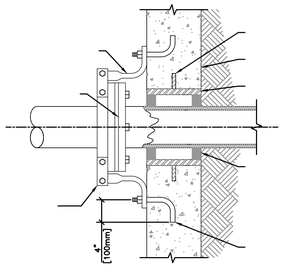
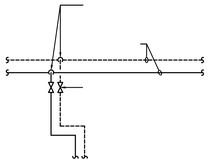
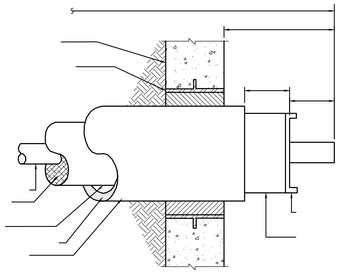
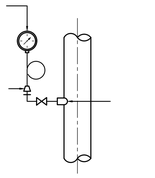
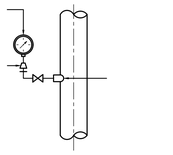


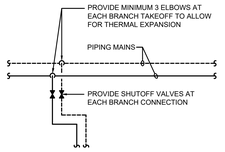




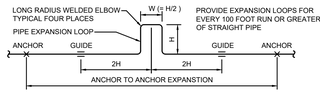








BRANCH TAKEOFF

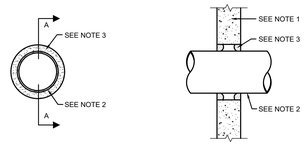


REFERENCE: ASHRAE SYSTEMS & EQUIPMENT HANDBOOK, PIPE BENDS & LOOPS

L = 6.225 x SQUARE ROOT (AAE x D) = 2H + W
AAE = ANCHOR-TO-ANCHOR EXPANSION IN INCHES
D = PIPE OUTSIDE DIAMETER IN INCHES
AAE = UTE x AAD
UTE = UNIT THERMAL EXPANSION IN INCHES PER 100 FEET FOR STEEL AND/OR COPPER PIPE
AAD = ANCHOR-TO-ANCHOR DISTANCE IN FEET
H = EXPANSION LOOP HEIGHT IN FEET
W = EXPANSION LOOP WIDTH IN FEET

EXPANSION LOOP

PIPE EXPANSION DETAIL
NOT TO SCALE

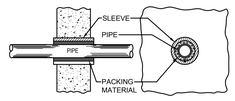


SECTION A-A

NOTES:

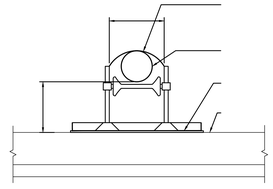
1. FLOOR OR WALL ASSEMBLY - MIN 4 1/2 INCH THICK LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS. MAX DIAMETER OF THROUGH OPENING IS 12 1/4 INCH. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. PIPE OR CONDUIT - NOMINAL 10 INCH DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE. NOMINAL 6 INCH DIAMETER (OR SMALLER) RIGID STEEL CONDUIT, NOMINAL 4 INCH DIAMETER (OR SMALLER) STEEL EMT OR NOMINAL 3 INCH DIAMETER (OR SMALLER) TYPE L (OR HEAVIER) COPPER PIPE. MAXIMUM ONE PIPE OR CONDUIT PER THROUGH OPENING. MAXIMUM ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF OPENING IS 3/4 INCH MINIMUM ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF OPENING IS 0 INCH (POINT CONTACT). PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL.
3. FILL, VOID OR CAVITY MATERIALS* - PUTTY: MOLDABLE PUTTY MATERIAL KNEADED BY HAND AND APPLIED TO FILL ANNULAR SPACE TO A MINIMUM DEPTH OF 1 INCH, FLUSH WITH TOP SURFACE OF FLOOR. IN WALL ASSEMBLIES, REQUIRED PUTTY THICKNESS TO BE INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL. MINNESOTA MINING & MFG. CO. - CP 25WB+. *BEARING THE UL CLASSIFICATION MARKING

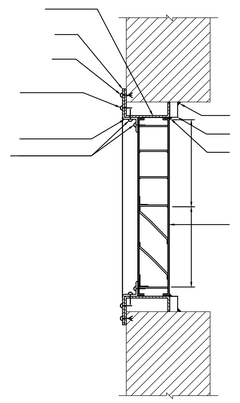
PIPE PENETRATION FIRE STOPPING DETAIL AT FIRE RATED MASONRY
NOT TO SCALE

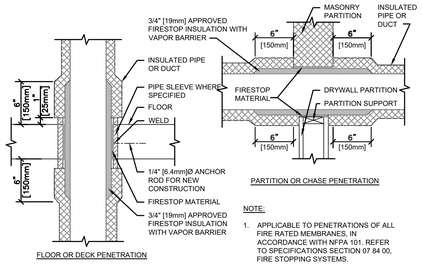


(CONCRETE AND FOUNDATION WALLS)

NOTE:
NO STRUCTURAL STRAIN SHOULD BE TRANSMITTED FROM ANY WALL TO THE PIPING SYSTEM THE SLEEVING, RELIEVING ARCH, OR STRUCTURAL BEAM SUPPORT METHODS PROTECT THE PIPING FROM SUPERIMPOSED LOADS THE "PACKING" MATERIAL AROUND THE PIPE IS FLEXIBLE ENOUGH TO RESPOND TO SETTLING IN THE STRUCTURE OR PIPING







DIMENSIONS AND SIZES IN INCHES

LINE SIZE	3	4	6	8	10	12	14	16	18	20	24
DIMENSION A	3	4	4	4	6	8	10	10	10	12	12
DIMENSION B	18	18	18	18	18	18	18	20	21	22	24
SIZE OF V1	3/4	3/4	3/4	3/4	3/4	3/4	1	1	1	1	1
SIZE OF V2	3/4	3/4	3/4	3/4	3/4	1	1	1	1	1	1

NOTES:

1. FOR LINES 2 1/2" AND SMALLER, USE 3/4" PIPE, VALVES, AND FITTINGS, AND USE DIMENSION "B" EQUAL TO 12" WITH 6" DIRT LEG.
2. PROVIDE TRAP ASSEMBLIES AS SHOWN ON DRAWINGS AND SPECIFICATIONS, OR AS A MINIMUM AS FOLLOWS:
   a. BASE OF RISERS.
   b. CHANGES IN ELEVATION.
   c. ENDS OF MAINS.
   d. AT INTERVALS OF 100 FEET ON MAINS W/PRESSURES OF 100 PSI AND BELOW.
   e. AT INTERVALS OF 250 FEET ON MAINS W/PRESSURES ABOVE 100 PSI.

TYPICAL DRIP LEG DETAIL (FOR LARGE PIPING)
NOT TO SCALE

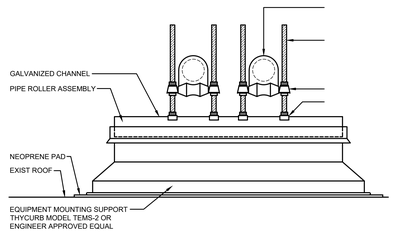
FLOOR OR DECK PENETRATION

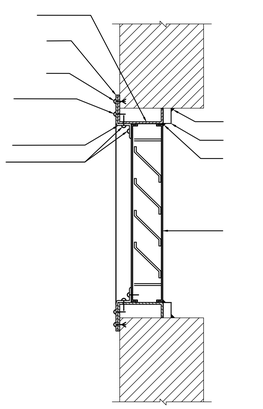
PARTITION OR CHASE PENETRATION

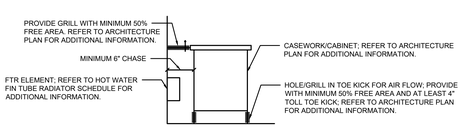
NOTE:

1. APPLICABLE TO PENETRATIONS OF ALL FIRE RATED MEMBRANES, IN ACCORDANCE WITH NFPA 101, REFER TO SPECIFICATIONS SECTION 07 84 00, FIRE STOPPING SYSTEMS.

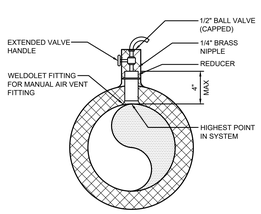
PIPE/DUCT PENETRATION OF SMOKE/FIRE BARRIERS
NOT TO SCALE





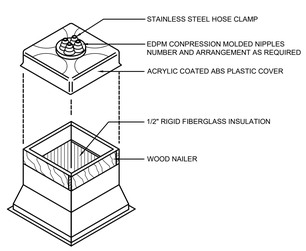


FIN TUBE RADIATOR DETAIL AT CASE WORK
NOT TO SCALE



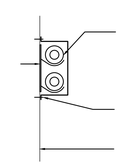
INSTALL MANUAL AIR VENTS AT HIGH POINTS IN PIPING, AT HEAT TRANSFER COILS, AND ELSEWHERE AS REQUIRED FOR SYSTEM AIR VENTING.

MANUAL AIR VENT ASSEMBLY DETAIL
NOT TO SCALE



NOTE: PROVIDE SEPARATE BOOT FOR EACH PIPE. PROVIDE ADDITIONAL BOOTS FOR ELECTRICAL POWER AND CONTROL CONDUITS. DO NOT PASS MORE THAN (1) PIPE THRU EACH NIPPLE TO FACILITATE PROPER SEALING. COORDINATE WITH ELECTRICAL AND PLUMBING CONTRACTOR FOR NUMBER AND ARRANGEMENT OF BOOTS.

PIPE PORTAL DETAIL
NOT TO SCALE



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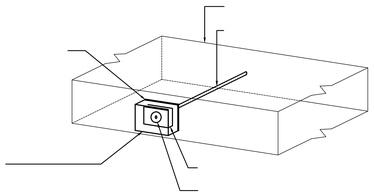
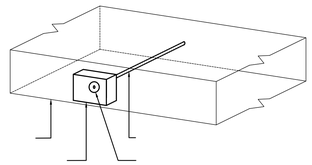
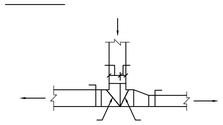
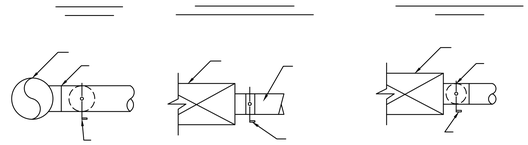
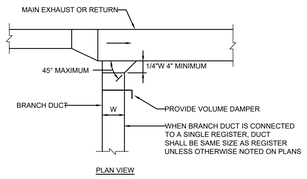


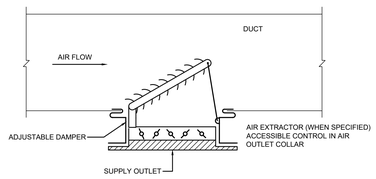




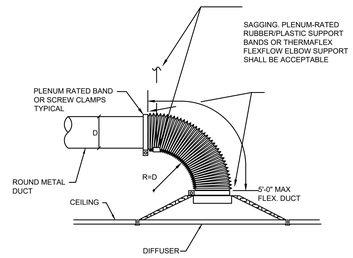




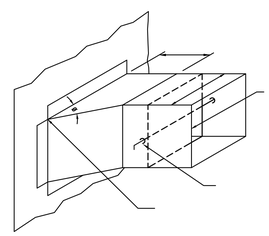
EXHAUST AND/OR RETURN BRANCH DUCT DETAIL
NOT TO SCALE



GRILLE AND REGISTER CONNECTION DETAIL
NOT TO SCALE



DIFFUSER CONNECTION DETAIL
NOT TO SCALE



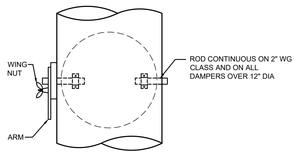


FIG. B
ROUND DAMPER

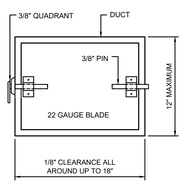


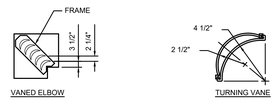
FIG. A
RECTANGULAR DAMPER

RECTANGULAR VOLUME DAMPERS EXCEEDING 1.5 SF SHALL BE OPPOSED BLADE DAMPER TYPE

VOLUME DAMPERS - SINGLE BLADE TYPE
NOT TO SCALE

NOTES
1. LOCKING LUGS INTEGRAL WITH VANE.
2. MAXIMUM UNSUPPORTED VANE LENGTH 36".
3. FRAMES BOLTED OR RIVETED TO ELBOW.
4. VANES AND FRAME SAME GAUGE AS ELBOW.

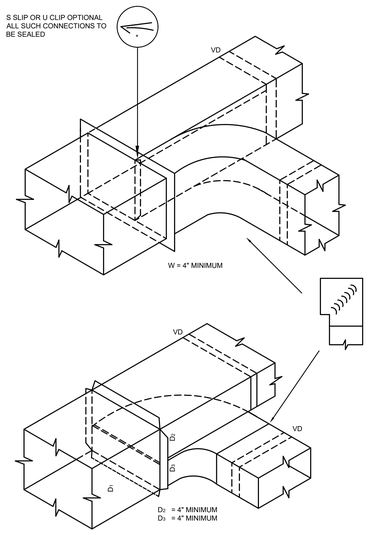
SINGLE THICKNESS
DUCTWORK UNDER 1200 FPM



DOUBLE THICKNESS
DUCTWORK OVER 1200 FPM

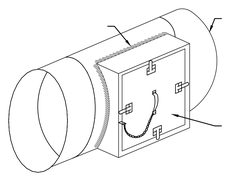
NOTES:
1. LOCKING LUGS INTEGRAL WITH VANE.
2. MAXIMUM UNSUPPORTED VANE LENGTH 48".
3. FRAMES BOLTED OR RIVETED TO ELBOW.
4. VANES AND FRAME SAME GAUGE AS ELBOW.

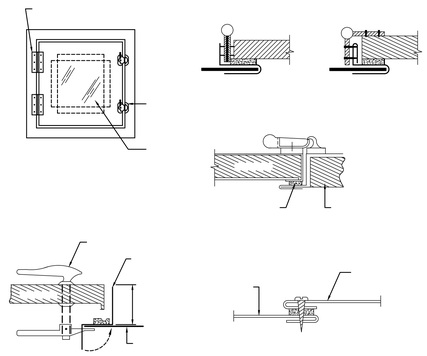
TURNING VANES FOR SQUARE ELBOWS
NOT TO SCALE

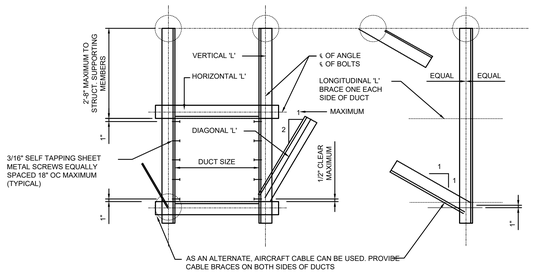


VOLUME CONTROL SHOULD BE BY BRANCH DAMPERS. IF A SPLITTER IS SHOWN ON THE DESIGN ITS LENGTH SHOULD BE 1.5W OR 1.5 D

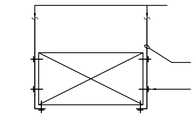
PARALLEL FLOW BRANCHES DETAIL
NOT TO SCALE

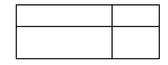






TYPICAL SIDE BRACING FOR RECTANGULAR DUCTS
NOT TO SCALE





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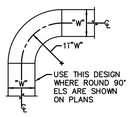
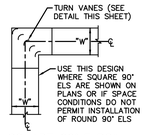
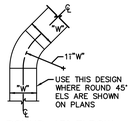


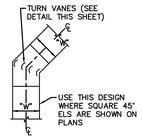
ROUND 90° ELBOW



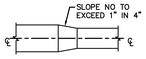
SQUARE 90° ELBOW



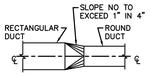
ROUND 45° ELBOW



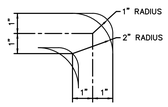
SQUARE 45° ELBOW



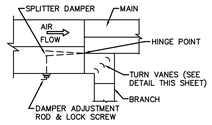
TYPICAL RECTANGULAR TRANSITION



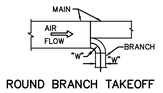
TYPICAL RECTANGULAR TO ROUND TRANSITION



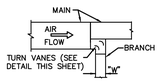
DETAIL OF TURN VANES



TYPICAL SPLITTER DAMPER

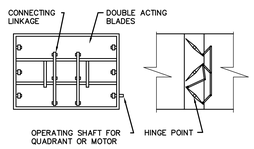


ROUND BRANCH TAKEOFF



SQUARE BRANCH TAKEOFF

CONSTRUCTION OF BRANCH TAKEOFF FROM MAIN



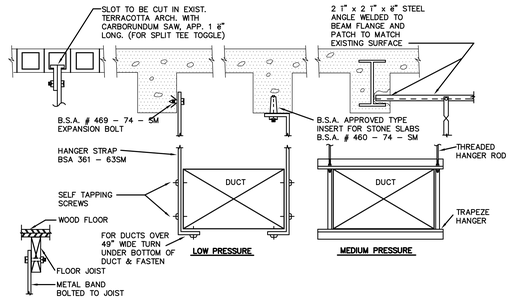
TYPICAL VOLUME DAMPER

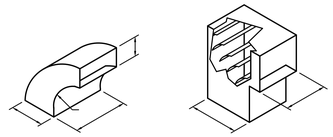
INSTALLATION NOTES

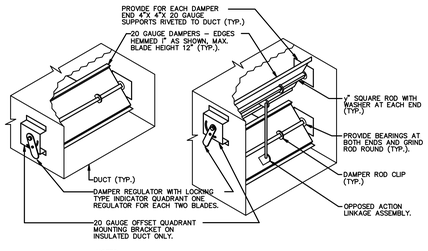
1. ALL DUCTS SHALL BE CONSTRUCTED AND ERECTED IN A NEAT AND WORKMANLIKE MANNER.
2. DUCTS SHALL BE CONSTRUCTED OF THE WEIGHTS GAGES AND MATERIAL SHOWN IN THE SPECIFICATIONS ON THESE DRAWINGS.
3. THE DIMENSIONS SHOWN FOR ALL DUCTS SHOWN IN PLAN GIVE THE WIDTH FIRST AND THEN THE HEIGHT.
4. DUCT RISERS SHOULD BE SUPPORTED BY ANGLES AT EVERY FLOOR.
5. AIR TURN VANES SHALL BE INSTALLED IN ALL ABRUPT ELBOWS TO PREVENT TURBULANCE.
6. DUCTS SHALL BE SECURELY ATTACHED TO THE BUILDING CONSTRUCTION IN AN APPROVED MANNER.
7. DIVERTING TRANSITION PIECES SHALL BE MADE AS GRADUAL AS POSSIBLE.
8. INSTALL PIPE DAMPER AS REQUIRED BY N.F.P.A. PAMPHLET No.90A OR THE LOCAL CODES.
9. ACCESS PANELS SHOULD BE PLACED BEFORE AND/OR AFTER EQUIPMENT INSTALLED IN THE DUCT.
10. WHEN OBSTRUCTION CANNOT BE AVOIDED DUCT AREA SHOULD NOT BE DECREASED MORE THAN 10 PERCEN, AND A STREAMLINED FITTING SHOULD BE USED.
11. FLEXIBLE CONNECTIONS SHOULD BE USED ON BOTH THE INLET AND OUTLET TO ALL FANS.
12. JOINTS AND SEAMS OF SUPPLY DUCTS SHALL BE FASTENED SECURELY AND MADE AIR TIGHT.

LOW VELOCITY DUCT LAYOUT DETAILS

NOT TO SCALE



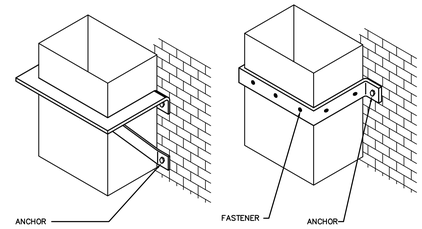




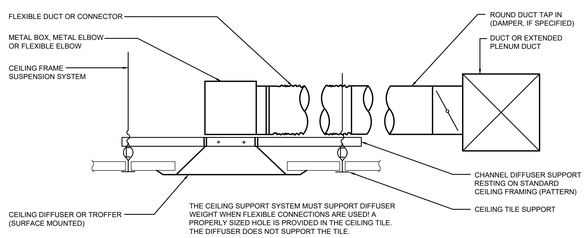
NOTES:
1. USE SINGLE BLADE FOR DUCTS UP TO 12" HIGH AND LESS THAN 29" WIDE.
2. USE MULTIPLE BLADES FOR DUCTS GREATER THAN OR EQUAL TO 29" AND/OR OVER 12" HIGH.

LOW PRESSURE BALANCING DAMPER

NOT TO SCALE

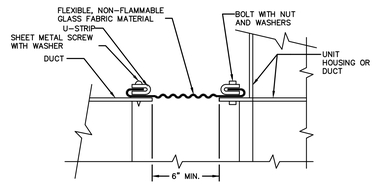


NOTE:
DISTANCE BETWEEN DUCT HUNGERS SHALL BE IN ACCORDANCE WITH RS–13–1 OF NEW YORK CITY BUILDING CODE.



CEILING DIFFUSER BRANCH DUCT DETAIL

NOT TO SCALE



FLEXIBLE CONNECTION DETAIL

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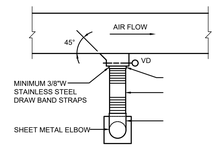
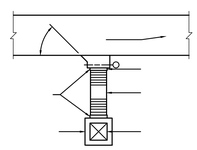
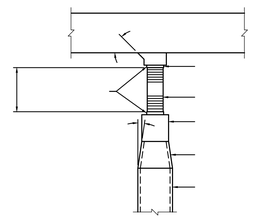
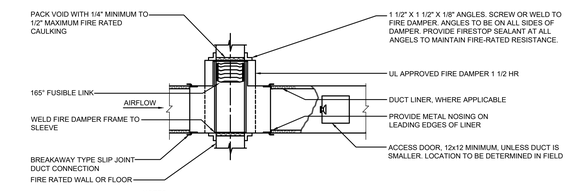




BRANCH DUCT CONNECTION DETAIL

NOT TO SCALE





NOTES:
1. FIRE DAMPER SHALL BE DYNAMIC RATED WITH NEGATOR SPRING FOR CLOSURE FORCE.
2. SEE ARCHITECTURAL DRAWINGS FOR WALL RATINGS.
3. FIRE DAMPER TO BE TYPE B.

FIRE DAMPER DETAIL

NOT TO SCALE

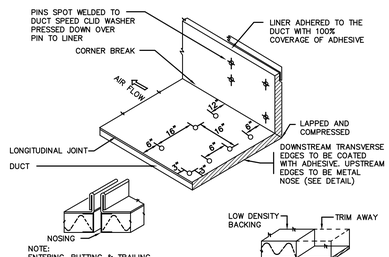
FIRE DAMPER RATING SCHEDULE

BASED ON INTERNATIONAL BUILDING CODE, LATEST ADOPTED EDITION, TABLE 716.3.1, AND INTERNATIONAL MECHANICAL CODE, LATEST ADOPTED EDITION, TABLE 607.3.1.

TYPE OF PENETRATION	MINIMUM DAMPER RATING (HOUR)
LESS THAN 3-HOUR FIRE-RESISTANCE-RATED ASSEMBLIES	1 1/2
3-HOUR OR GREATER FIRE-RESISTANCE-RATED ASSEMBLIES	3

NOTES:
1. FIRE DAMPERS SHALL BE REQUIRED IN PENETRATIONS AS LISTED ABOVE, WHICH INCLUDE, BUT ARE NOT LIMITED TO, FIRE-RESISTANCE RATED SHAFT WALLS, FLOOR ASSEMBLIES, CEILING ASSEMBLIES, AND SMOKE BARRIERS.
2. FIRE DAMPERS SHALL HAVE THE MINIMUM FIRE PROTECTION RATING SPECIFIED IN TABLE 607.3.1 OF THE INTERNATIONAL MECHANICAL CODE, LATEST ADOPTED EDITION.
3. TWO HOUR FIRE-RESISTANCE RATED FIRE WALLS INCLUDE, BUT ARE NOT LIMITED TO, BOILER ROOM, ELEVATOR MACHINE ROOM, FIRE PUMP ROOM, SHAFTS, FLOOR PENETRATIONS, AND WHERE NEW ADDITIONS CONNECT TO EXISTING BUILDING.
4. PROVIDE ACCESS DOORS AT ALL FIRE DAMPERS. ACCESS DOOR LOCATIONS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A LABEL HAVING MINIMUM 1/2 INCH HEIGHT LETTERING READING "FIRE DAMPER" IN ACCORDANCE WITH IBC, LATEST ADOPTED EDITION 717.4 AND IMC, LATEST ADOPTED EDITION, 607.4.
5. IBC, LATEST ADOPTED EDITION, 717.5.2, "FIRE BARRIERS", EXCEPTION 3, & IMC, LATEST ADOPTED EDITION, 607.5.2 "FIRE BARRIERS", EXCEPTION 3: FIRE DAMPERS ARE NOT REQUIRED AT HVAC DUCT PENETRATIONS OF FIRE BARRIERS WITH A REQUIRED 1-HOUR OR LESS FIRE-RESISTANCE RATING WHERE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM.
6. IBC, LATEST ADOPTED EDITION, 717.5.4, "FIRE PARTITIONS", EXCEPTION 1, & IMC, LATEST ADOPTED EDITION, 607.5.3 "FIRE PARTITIONS", EXCEPTION 1: FIRE DAMPERS ARE NOT REQUIRED AT HVAC DUCT PENETRATIONS OF FIRE PARTITIONS WHERE PARTITIONS ARE TENANT SEPARATION AND CORRIDOR WALLS IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM.
7. IBC, LATEST ADOPTED EDITION, 717.5.4, "FIRE PARTITIONS", EXCEPTION 3, & IMC, LATEST ADOPTED EDITION 607.5.3 "FIRE PARTITIONS", EXCEPTION 3: FIRE DAMPERS ARE NOT REQUIRED AT HVAC DUCT PENETRATIONS OF FIRE PARTITIONS WHERE DUCT SYSTEM IS CONSTRUCTED OF APPROVED MATERIALS PER IMC, LATEST ADOPTED EDITION, AND THE DUCT PENETRATING THE PARTITION MEETS ALL OF THE SIX FOLLOWING MINIMUM REQUIREMENTS:

   A. THE DUCT SHALL NOT EXCEED 100 SQUARE INCHES.
   B. THE DUCT SHALL BE CONSTRUCTED OF STEEL A MINIMUM OF 0.0217 INCH THICKNESS.
   C. THE DUCT SHALL NOT HAVE OPENINGS THAT COMMUNICATE THE CORRIDOR WITH ADJACENT SPACES OR ROOMS.
   D. THE DUCT SHALL BE INSTALLED ABOVE A CEILING.
   E. THE DUCT SHALL NOT TERMINATE AT A WALL REGISTER IN THE FIRE-RESISTANCE-RATED WALL.
   F. A MINIMUM 12 INCH LONG BY 0.060 INCH THICK STEEL SLEEVE SHALL BE CENTERED IN EACH DUCT OPENING. THE SLEEVE SHALL BE SECURED TO BOTH SIDES OF THE WALL AND ALL FOUR SIDES OF THE SLEEVE WITH MINIMUM 1 1/2 INCH BY 1 1/2 INC BY 0.060 INCH STEEL RETAINING ANGLES. THE RETAINING ANGLES SHALL BE SECURED TO THE SLEEVE AND WALL WITH NO. 10 SCREWS. THE ANNULAR SPACE BETWEEN THE STEEL SLEEVE AND THE WALL OPENING SHALL BE FILLED WITH ROCK (MINERAL) WOOL BATTING ON ALL SIDES.



GENERAL NOTES:
1. NOSING ATTACHED TO DUCT BY RIVETS,SCREWS OR WELDS.
2. NOSING : 24 GA. UP TO 48", OVER 48", SAME GA. AS DUCT

ACOUTICAL DUCT LINER DETAIL

NOT TO SCALE

NOTES:

DRYER VENTING: MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RUNNING ALL DUCTWORK FOR THE DRYER EXHAUST SYSTEM. ALL CONCEALED DRYER DUCTING MUST BE RIGID METAL (GALVANIZED OR ALUMINUM) MINIMUM OF 4" IN DIAMETER, SMOOTH 30 GA. CLEAN, UNOBSTRUCTED, FRICTIONLESS DUCTS (NO FLEXIBLE DUCT ALLOWED IN CONCEALED AREAS). SEAL ALL JOINTS WITH FOIL BACKED PRESSURE SENSITIVE DUCT TAPE MEETING THE REQUIREMENTS OF UL 181. DUCT JOINTS SHALL BE INSTALLED SO THAT THE MALE END OF THE DUCT POINTS IN THE DIRECTION OF THE AIRFLOW. DO NOT USE RIVETS OR SCREWS IN THE JOINTS OR ANYWHERE ELSE IN THE DUCT AS THESE WILL ENCOURAGE LINT COLLECTION.

DRYERBOX® RECEPTACLE (WWW.DRYERBOX.COM) SHALL BE METAL AND BE INSTALLED AS LOW AS POSSIBLE AS TO PERMIT THE PROPER AND SAFE COLLECTION OF THE DRYER TRANSITION HOSE. DRYERBOX SHOULD BE RESTING ON THE BOTTOM PLATE AND BE LOCATED AT OR NEAR THE CENTERLINE OF THE PROPOSED DRYER APPLIANCE. RIGID DUCT SHOULD PENETRATE DRYERBOX PORT 2 INCHES TO PROVIDE FOR FUTURE CONNECTION AND STORAGE OF TRANSITION HOSE. BASEBOARD SHALL BE "BUTTED" UP TO THE FIXED EXTENSION RIM AND SLIGHTLY BACK-CUT. DRYERBOX SHOULD BE CAULKED AND THEN PAINTED WITH THE TRIM PAINT. FOR USAGE IN A ONE-HOUR WALL ASSEMBLY, UL REQUIRES THAT BATT INSULATION BE STUFFED AROUND THE DRYERBOX AND IN THE ENTIRE WALL CAVITY CELL.

LENGTH OF CONCEALED RIGID METAL DUCTING SHALL NOT EXCEED 25 FEET. DEDUCT 5 FEET FROM THE ALLOWABLE LENGTH FOR EVERY 3.5" RADIUS 90 DEGREE ELBOW AND TWO AND A HALF FEET FOR EVERY 45 DEGREE FITTING. DRYER VENTING SHALL BE INDEPENDENT OF ANY OTHER SYSTEMS (CHIMNEYS OR EXHAUST VENTS). TERMINATION OF DRYER VENTING MUST BE TO THE EXTERIOR WITH A PROPER HOOD OR ROOF JACK EQUIPPED WITH A BACK-DRAFT DAMPER. SMALL ORIFICE METAL SCREENING SHOULD NOT BE PART OF THE HOOD OR ROOF JACK AS THIS WILL ACCELERATE LINT ACCUMULATION AND BLOCKAGE. THE HOOD OPENING SHOULD POINT DOWN AND EXHIBIT 12 INCHES OF CLEARANCE BETWEEN THE BOTTOM OF THE HOOD AND THE GROUND OR OTHER OBSTRUCTION. VERIFY MANUFACTURER'S RECOMMENDATIONS FOR ANY OTHER FACTORS.

MANUFACTURER: IN-O-VATE TECHNOLOGIES, INC.
810 SATURN STREET, SUITE 22
JUPITER, FL 33477 USA
(888) 443.7937
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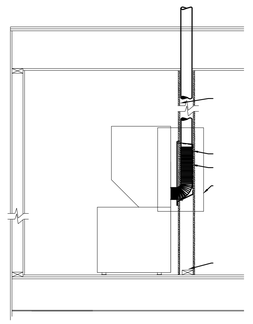

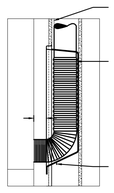

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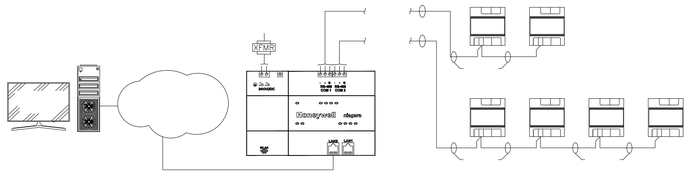

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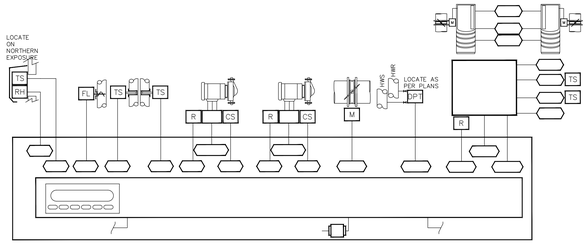

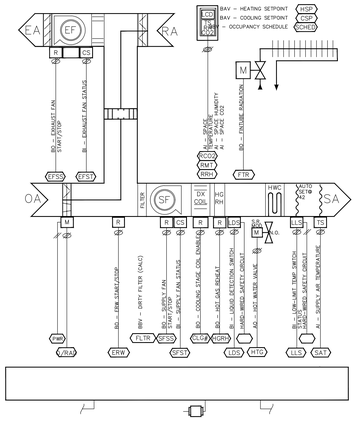

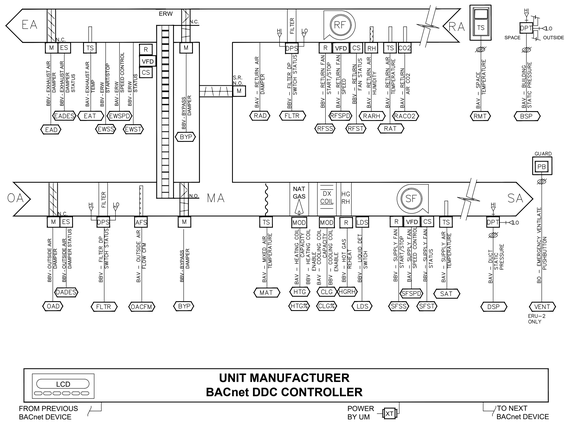

ERU

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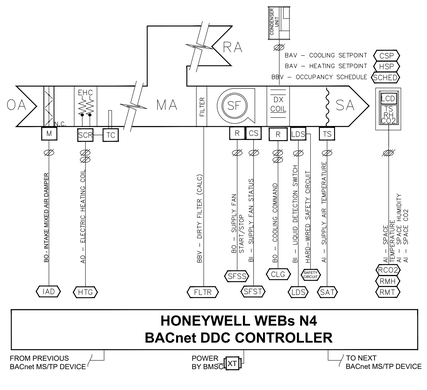
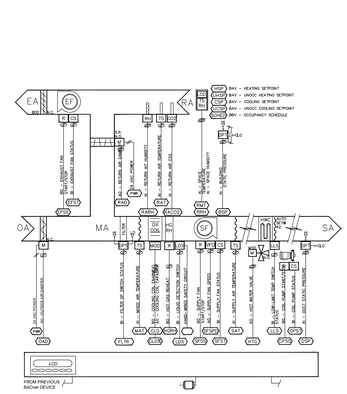


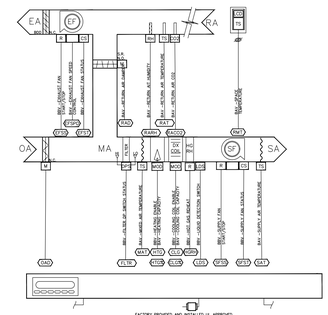
FCU-1/EDH-1/CU-1/OAI-1

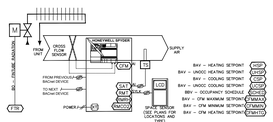
NOT TO SCALE ELECTRICAL HEATING - COOLING



RTU - DX COOLING AND HOT WATER HEATING

NOT TO SCALE DX COOLING w/ HGRH & HW WATER HEATING





VARIABLE AIR VOLUME BOX

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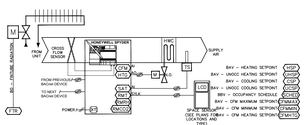
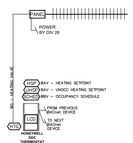


VARIABLE AIR VOLUME BOX

NOT TO SCALE WITH HOT WATER RETREAT



RADIANT CEILING PANEL

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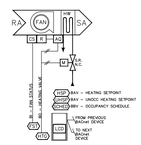

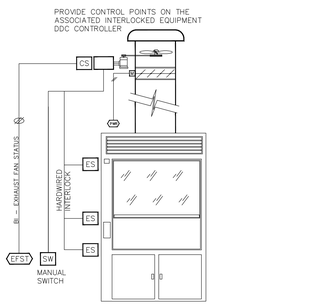

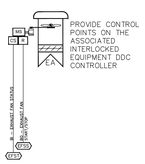

EXHAUST FAN

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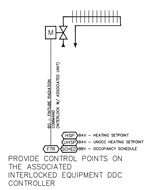
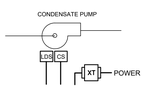


FINTUBE HEATING RADIATION

NOT TO SCALE DDC - INTERLOCKED

TEMPERATURE SENSOR - ATC DIAGRAM

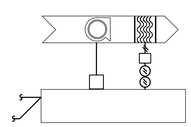
NOT TO SCALE SINGLE POINT MONITORING



CONDENSATE PUMP - ATC DIAGRAM

MONITORING AND ALARM

NOT TO SCALE



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OBSERVATION, EXISTING DESIGN / CONSTRUCTION DOCUMENTS AND EXISTING RECORD DOCUMENTS AND ARE INTENDED TO INDICATE THE SCOPE OF THE WORK AFFECTED BY THIS PROJECT.

9. THE TERM "OTHERS" SHALL BE UNDERSTOOD TO MEAN CONTRACTORS, SUBCONTRACTORS OR TRADESMEN ON THE PROJECT PERFORMING WORK ON THIS PROJECT UNDER SECTIONS OR DIVISIONS OTHER THAN ELECTRICAL WORK.

10. VERIFY THAT FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS INDICATED.

11. PRIOR TO BIDDING VISIT THE PROJECT SITE TO DETERMINE THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. SCHEDULE SITE VISIT WITH OWNER.

12. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR THE INSTALLATION, RELOCATION AND CONNECTION OF THE ELECTRICAL WORK.

13. ALL MATERIAL SHALL BE UNDERWRITERS' LABORATORIES LISTED FOR ITS APPLICATION WHERE SUCH LISTING IS APPLICABLE.

14. ALL EQUIPMENT SHALL BE AS INDICATED OR AS APPROVED BY THE ENGINEER.

15. SUBMIT SHOP DRAWINGS, PRODUCT DATA SHEETS AND WIRING DIAGRAMS FOR ALL ELECTRICAL CONSTRUCTION MATERIALS, DEVICES, EQUIPMENT, APPLIANCES AND SYSTEMS.

16. OBTAIN SHOP DRAWINGS AND WIRING DIAGRAMS FROM OWNER AND OTHER CONTRACTORS FOR THE PROPER INSTALLATION OF RELATED ELECTRICAL WORK AND, UNLESS OTHERWISE NOTED, WIRE ALL CONTROL DEVICES, VALVES, THERMOSTATS, ETC. REQUIRED FOR THE PROPER OPERATION OF THEIR SYSTEMS.

17. OBTAIN ALL PERMITS REQUIRED, HAVE THE WORK INSPECTED FOR CODE COMPLIANCE AND PAY ALL FEES FOR INSPECTION AND CERTIFICATION.

18. MAKE THE NECESSARY ARRANGEMENTS, AND PAY ALL COSTS, FOR TEMPORARY AND/OR PERMANENT ELECTRIC SERVICE FOR THE PROJECT.

19. PROVIDE ADEQUATE TEMPORARY ELECTRICAL LIGHT AND POWER FOR THE PROJECT WORK OF ALL TRADES.

20. MAINTAIN CONTINUITY OF EXISTING CIRCUITS AFFECTED BY THIS WORK WHICH MUST REMAIN IN SERVICE.

21. MAKE ALL MODIFICATIONS NECESSARY TO EXISTING PANELBOARDS AND SWITCHBOARDS TO ACCEPT NEW CIRCUITS.

22. WHERE ELECTRICAL EQUIPMENT (I.E. SWITCHBOARDS, PANELBOARDS, BUS DUCTS, TRANSFORMERS, DISCONNECTS, ETC.) OR SYSTEMS (I.E. FIRE ALARM, SOUND, INTERCOMMUNICATIONS, ALARM, ETC.) IS INDICATED TO BE MODIFIED TO ACCEPT NEW WORK SAID MODIFICATIONS SHALL BE PERFORMED BY ELECTRICAL EQUIPMENT FABRICATORS OR MANUFACTURER'S REPRESENTATIVES WHO CAN AFFECT SUCH MODIFICATIONS WITHOUT VOIDING THE UL LABEL OR MANUFACTURER'S WARRANTIES.

23. WHERE NEW EQUIPMENT IS INDICATED TO BE "RECONNECTED" TO EXISTING WIRING, CONDUIT OR OTHER PART OF AN EXISTING ELECTRICAL SYSTEM, THE CONTRACTOR SHALL MODIFY OR EXTEND THE EXISTING SYSTEM COMPONENTS AS REQUIRED TO MEET THE CONNECTION POINT OF THE NEW ITEM. THE CONTRACTOR SHALL USE MATERIALS AND METHODS THAT MATCH THE EXISTING SYSTEM, OR AS SPECIFIED FOR NEW WORK, WHICHEVER IS MORE SUITABLE FOR THE APPLICATION.

24. WHERE EXISTING EQUIPMENT IS INDICATED TO BE "CONNECTED" OR "RECONNECTED" TO NEW WIRING, CONDUIT, ETC, THE CONTRACTOR SHALL FABRICATE AND INSTALL THE NEW SYSTEM CONNECTIONS TO MATCH THE CONNECTION POINTS AND OTHER REQUIREMENTS OF THE EXISTING EQUIPMENT. WHERE THE EXISTING EQUIPMENT MUST BE REMOVED AND REINSTALLED TO FACILITATE THE REMOVAL OF THE OLD CONNECTIONS AND/ OR THE CONNECTION OF THE NEW MATERIAL, THAT WORK SHALL BE A PART OF THIS CONTRACT.

25. EXACT LOCATION OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD.

26. REFER TO APPROVED REFLECTED CEILING PLANS FOR EXACT LIGHTING LAYOUTS.

27. REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER TRADES FOR EQUIPMENT LOCATIONS AND CONTROLS.

28. GROUNDING AND BONDING SHALL MEET NEC AND EQUIPMENT / SYSTEM MANUFACTURER'S REQUIREMENTS.

29. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF DEBRIS GENERATED BY HIS WORK AND WORKERS AT THE END OF EACH WORKING DAY AND FOR GENERAL GOOD HOUSEKEEPING BY HIS WORKERS. CONTRACTOR SHALL PROVIDE REQUIRED REFUSE CONTAINERS.

30. DISCONNECT AND REMOVE FROM THE PREMISES, OR STORE ON THE PREMISES IF REQUESTED BY THE OWNER, ALL EQUIPMENT FIXTURES, DEVICES, RACEWAY, WIRING, CABLE, SUPPORTING DEVICES, ETC. REMOVED OR ABANDONED AS A RESULT OF THIS WORK. MAKE SAFE ALL WIRING AND CABLE WHICH MUST REMAIN IN SERVICE.

31. REMOVE AND RELOCATE EXISTING EQUIPMENT, FIXTURES, DEVICES, ETC. AS INDICATED AND AS REQUIRED TO CLEAR NEW WORK. EXTEND AND CONNECT NEW WIRING TO EXISTING.

32. DISCONNECT AND REMOVE, OR TEMPORARILY RELOCATE, EXISTING LIGHTING FIXTURES, LOUDSPEAKERS, ETC. TO CLEAR THE INSTALLATION OF NEW DUCTWORK, PIPING, EQUIPMENT, ETC. THROUGHOUT THE ENTIRE RENOVATED AREAS AND REINSTALL WHEN WORK IS COMPLETE. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS FOR THE EXTENT OF THE WORK. PROVIDE TEMPORARY NORMAL AND EMERGENCY LIGHTING; AND TEMPORARILY RECONNECT LOUDSPEAKERS, ETC. UNTIL THE CEILING IS REINSTALLED. EXTEND EXISTING WIRING TO NEW LOCATIONS AS REQUIRED.

33. TEMPORARILY RELOCATE, EXISTING FIRE ALARM DEVICES, HEAT/SMOKE DETECTORS, ETC. TO CLEAR THE INSTALLATION OF NEW DUCTWORK, PIPING, EQUIPMENT, ETC. THROUGHOUT THE ENTIRE RENOVATED AREA. PROVIDE TEMPORARY SUPPORT OF EXISTING DEVICES AND REINSTALL WHEN WORK IS COMPLETED. RE-TEST THE FIRE ALARM SYSTEM PER NFPA 72 REQUIREMENTS. EXISTING FIRE ALARM DEVICES SHALL NOT BE DISABLED OR REMOVED FROM SERVICE. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL PLANS AND SPECIFICATIONS FOR THE EXTENT OF THIS WORK.

34. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF ELECTRICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. COORDINATE WITH ARCHITECT.

35. PERFORM ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE WORK. CUT NO STRUCTURAL MEMBER WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. FINISH AND PAINT ALL PATCHED SURFACES WITH TWO COATS OF PAINT TO MATCH EXISTING SURFACES AS CLOSELY AS POSSIBLE. SEAL OPENINGS VERMIN AND WATER PROOF AND MAINTAIN FIRE RATING. USE SPECIFIED TECHNOLOGIES, INC. "SPECSEAL" SERIES LCI FOR PENETRATIONS

36. ALL PENETRATIONS IN FOUNDATION WALLS AND FLOORS INCLUDING SLAB PENETRATIONS SHALL BE SUBSTANTIALLY SEALED BY UTILIZING A NON-CRACKING POLYURETHANE OR SIMILAR CAULK OR EQUIVALENT TO CLOSE OFF THE SOIL GAS ENTRY ROUTES. ALL CONDUITS IN THE SPACE BELOW THE FOUNDATION FLOOR WHICH PENETRATE THESE BARRIERS SHALL HAVE THREADED OR SOLVENTED FITTINGS.

37. ALL NEW RACEWAY, WIRING AND CABLE IN NEW AND EXISTING FINISHED SPACES SHALL BE RUN CONCEALED IN NEW AND EXISTING CONSTRUCTION UNLESS OTHERWISE INDICATED. CUT AND PATCH AS REQUIRED. PROVIDE PULLBOXES, SIZE AND TYPE AS REQUIRED.

38. EXPOSED RACEWAY, WHERE PERMITTED BY THE ARCHITECT AND ENGINEER, SHALL BE RUN TRUE, PLUMB AND PARALLEL OR PERPENDICULAR TO BUILDING LINES. RIGID METAL CONDUIT, 3/4 INCH MINIMUM, SHALL BE USED OUTDOORS; ELECTRICAL METALLIC TUBING, 3/4 INCH MINIMUM, SHALL BE USED IN INDOOR UNFINISHED SPACES; SURFACE METAL RACEWAY (WIREMOLD) SHALL BE USED IN INDOOR FINISHED SPACES.

39. ALL WIRING SHALL BE COPPER CONDUCTOR WITH 600 VOLTS INSULATION IN METAL RACEWAY WITH APPROVED FITTINGS UNLESS OTHERWISE INDICATED.

40. FEEDERS AND BRANCH CIRCUITS UNDERGROUND IN RACEWAY: TYPE THHN-THWN 90 DEGREE C

41. INTERIOR FEEDERS AND BRANCH CIRCUITS IN RACEWAY: TYPE THHN 90 DEGREE C.

42. BRANCH CIRCUIT HOMERUNS TO FIRST OUTLET: TYPE THHN IN RACEWAY. AFTER THE FIRST OUTLET BOX, APPROVED CABLE MAY BE USED.

43. FEEDERS SHALL BE MINIMUM #8 AWG; BRANCH CIRCUIT WIRING MINIMUM #12 AWG; CONTROL WIRING MINIMUM #14 AWG; UNLESS OTHERWISE INDICATED. FEEDER AND BRANCH CIRCUIT WIRING LARGER THAN #10 AWG SHALL BE STRANDED CONDUCTOR; #10 AWG AND SMALLER, STRANDED CONDUCTOR OR SOLID CONDUCTOR; CONTROL WIRING, STRANDED CONDUCTOR.

INTERLOCK WIRING FOR PLUMBING EQUIPMENT AND SYSTEMS SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR; ALL ELECTRICAL POWER WIRING TO CONTROL PANELS, MOTOR OPERATED DAMPERS, MOTOR STARTERS, MOTORS AND ALL MECHANICAL DEVICES THAT REQUIRE LINE VOLTAGE POWER SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR; ALL CONTROL AND INTERLOCK WIRING FROM AUTOMATIC TEMPERATURE CONTROL PANELS TO CONTROLLED OR INTERLOCKED DEVICES SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE MECHANICAL OR AUTOMATIC TEMPERATURE CONTROL CONTRACTOR; REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS.

54. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL 120V CONTROL POWER WIRING FEEDERS AND CIRCUIT BREAKERS REQUIRED FOR THE INSTALLATION OF MECHANICAL EQUIPMENT. STARTERS AND POWER DISCONNECT SWITCHES SHALL BE BY THE MECHANICAL CONTRACTOR. REFER TO SPECIFICATION SECTIONS AND COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXTENT OF WORK REQUIRED.

55. WIRE EXIT SIGNS AND EMERGENCY LIGHTING FIXTURES (UNIT EQUIPMENT) TO LOCAL AREA LIGHTING CIRCUIT SERVING THE RESPECTIVE AREA AHEAD OF SWITCH / DIMMER CONTROL.

56. WIRE ELECTRONIC TRAP PRIMERS TO NEAREST AVAILABLE 1P20A 120 VAC CIRCUIT UNLESS OTHERWISE INDICATED. REFER TO PLUMBING FLOOR PLANS AND SCHEDULES FOR LOCATIONS.

57. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION AND INSTALLATION DETAILS AND VERIFY ALL MANUFACTURER'S REQUESTS PRIOR TO ANY SUBMISSION FOR CONSIDERATION BY THE ARCHITECT, ENGINEER OR OWNER.

58. WIRING RUNS INDICATED ON THE DRAWINGS EXPRESS THE INTENT OF CIRCUIT ASSIGNMENT AND SWITCH CONTROL. ACTUAL WIRING METHODS USED SHALL BE SUITED FOR THE CONSTRUCTION OF THE BUILDING. REFER TO DRAWINGS OF OTHER TRADES AND EXISTING CONDITIONS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS. NUMBER OF CONDUCTORS IS NOT ALWAYS INDICATED

59. PROVIDE DISCONNECTS FOR ALL APPLIANCES, EQUIPMENT, MOTORS AND CONTROLLERS.

60. PROVIDE UN-SWITCHED 125 VOLT 20 AMP RECEPTACLE OUTLETS LOCATED ON THE SAME LEVEL AND WITHIN 25 FEET OF ALL HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT UNLESS OTHERWISE NOTED.

61. ROUTE RACEWAYS THROUGH ROOF USING DEDICATED ROOF JACKS OR PITCH POCKETS. RUN RACEWAY ON ROOF ON DEDICATED ROOF SUPPORTS EIGHT INCHES HIGH MINIMUM.

62. PROVIDE SEISMIC RESTRAINTS AND ANCHORS FOR EQUIPMENT, FIXTURES, RACEWAY, ETC. AS REQUIRED BY INTERNATIONAL BUILDING CODE CHAPTER 16 - STRUCTURAL DESIGN AND CHAPTER 17 - STRUCTURAL TESTING AND INSPECTIONS AND AS SPECIFIED IN SPECIFICATION SECTION "SEISMIC CONTROLS".

63. ALL 125 VOLT, SINGLE PHASE, 15- AND 20-AMPERE SINGLE AND DUPLEX RECEPTACLES WHICH DO NOT SERVE A DEDICATED APPLIANCE AND ARE WITHIN A 6 FOOT RADIUS OF A SINK, ARE INSTALLED IN WET LOCATIONS, ARE INSTALLED IN BATHROOMS, ON ROOFS, OR OUTDOORS WITH DIRECT GRADE ACCESS, SHALL BE GROUND FAULT CIRCUIT INTERRUPTING TYPE WHERE AVAILABLE OR SHALL BE PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTING CIRCUIT BREAKERS.

64. DO NOT INSTALL EXPOSED WIRING, OR CABLE NOT UL LISTED FOR THE PURPOSE; WOOD SUPPORTS OR ANCHORAGES; NONMETALLIC CONDUIT, BOXES OR FITTINGS; OR VINYL, PLASTIC, NYLON, OR OTHER COMBUSTIBLE OR SMOKE PRODUCING IDENTIFICATION OR CONSTRUCTION MATERIALS IN THE SPACE ABOVE HUNG CEILINGS USED AS A PLENUM FOR THE RETURN OF ENVIRONMENTAL AIR.

65. TEST SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, CABLES, BUS DUCTS, SWITCHES, CIRCUIT BREAKERS, GROUNDING SYSTEM, GROUND FAULT PROTECTION SYSTEM, SURGE ARRESTORS AND TVSS DEVICES IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CURRENT EDITION OF THE INTERNATIONAL ELECTRICAL TESTING ASSOCIATION ACCEPTANCE TESTING SPECIFICATIONS FOR ELECTRIC POWER DISTRIBUTION EQUIPMENT AND SYSTEMS (NETA ATS). PERFORM EACH VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST LISTED.

66. PROVIDE TWO SETS OF OPERATION AND MAINTENANCE MANUALS, BOUND AND INDEXED, WITH INSTRUCTIONS FOR ALL ELECTRICAL DEVICES, EQUIPMENT, APPLIANCES AND SYSTEMS.

67. PROVIDE ONE SET OF REPRODUCIBLE CONTRACT DRAWINGS, OR DIGITAL DATA FILES USING SAME SOFTWARE PROGRAM, VERSION, AND OPERATING SYSTEM AS CONTRACT DOCUMENTS, THAT HAVE BEEN REVISED AND ANNOTATED TO REFLECT THE AS-BUILT CONDITIONS OF THE PROJECT.

68. DELIVER CERTIFICATES OF ELECTRICAL AND OTHER INSPECTIONS, OR COPIES THEREOF, TO THE OWNER AT THE COMPLETION OF THE PROJECT WITH COPIES TO THE ENGINEER.

69. GUARANTEE ALL WORK IN WRITING TO THE OWNER AGAINST ANY AND ALL DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE AND PERFORM ALL CORRECTIVE WORK AT NO COST TO THE OWNER.

70. A CONTRACTOR MAKING A BID FOR WORK ON THIS PROJECT IS MADE AWARE BY THIS NOTE THAT IT IS THE INTENT OF THE OWNER TO HAVE A COMPLETELY INSTALLED JOB. THE CONTRACTOR MAKING A BID FOR THIS WORK WARRANTS THAT HE WILL COMPLETE AND WIRE, PROVIDING ALL NECESSARY ELECTRICAL WORK FOR EQUIPMENT SHOWN AND / OR DETAILED ON ANY PROJECT DRAWINGS OR SPECIFICATIONS AND NOT JUST THOSE COMMONLY REFERRED TO AS A SINGLE TRADE DRAWING UNLESS SPECIFICALLY IDENTIFIED ELSEWHERE AS WORK OF OTHER TRADES. WHERE EQUIPMENT REQUIRING WIRING IS SPECIFIED OR SHOWN ON DRAWINGS OTHER THAN ELECTRICAL DRAWINGS, OR INDICATED, OR IMPLIED, SUCH AS ON SHOP DRAWINGS SUBMITTED LATER, THE CONTRACTOR CAN AND SHALL REQUEST DIRECTION REGARDING CIRCUIT SIZING PROTECTION AND ROUTING WHERE NECESSARY BUT SHALL UNDERSTAND ALL NECESSARY WORK TO COMPLETE THE INSTALLATION SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER OR PROJECT.

71. THE INSTALLATION OF ALL ELECTRICAL WORK INDICATED ON ALL ELECTRICAL DRAWINGS AND IN THE SPECIFICATIONS AND ANY SUBSEQUENT BULLETINS OR ADDENDA SHALL COMPLY WITH NEW JERSEY ADMINISTRATIVE CODE TITLE 6A.

72. THE SPACE ABOVE THE HUNG CEILING(S) IS USED AS A PLENUM FOR THE RETURN OF ENVIRONMENTAL AIR. DO NOT INSTALL EXPOSED WIRING, OR CABLE NOT UL LISTED FOR THE PURPOSE; WOOD SUPPORTS OR ANCHORAGES; NONMETALLIC CONDUIT, BOXES OR FITTINGS; OR VINYL, PLASTIC, NYLON, OR OTHER COMBUSTIBLE OR SMOKE PRODUCING IDENTIFICATION OR CONSTRUCTION MATERIALS IN THIS SPACE.

73. PRE-EXISTING CONDITIONS ARE EXEMPT PER NJAC 5:23-6.8(D)10. "EXISTING WORKING CLEARANCES, CLEAR SPACE, ACCESS AND ENTRANCE DIMENSIONS TO WORKING SPACES, ILLUMINATION, HEADROOM CLEARANCES, AND LOCATION OF OVERCURRENT PROTECTION DEVICES SHALL BE ALLOWED TO REMAIN WITHOUT MODIFICATION."

74. A FIRE ALARM SYSTEM MEETING CURRENT CODES IS NOT REQUIRED TO BE INSTALLED IN THE PORTIONS OF THE EXISTING BUILDING THAT ARE NOT BEING RENOVATED, ALTERED OR REMODELED. NJAC 5:23-6.8(B)4.

75. THE EXISTING FIRE ALARM CONTROL PANEL IS BEING UPGRADED AND THE ADDITION OF FIRE ALARM DEVICES IN THE NEW ADDITION AND RENOVATED AREAS OF THE EXISTING BUILDING WILL NOT INCREASE THE LOAD ON THE EXISTING FIRE ALARM SYSTEM. NJAC 5:23-6.5(C) AND 5:23-6.6(C).

76. PROVIDE HEAVY GAUGE WELDED WIRE MESH PROTECTIVE GUARDS ON ALL FIRE ALARM DEVICES, CLOCKS, LOUDSPEAKERS, CALL INITIATING DEVICES, EXIT LIGHTS, EMERGENCY LIGHTING UNITS AND BATTERY PACKS IN CAFETERIAS, MULTIPURPOSE ROOMS, GYMNASIUMS, WEIGHT ROOMS, LOCKER ROOMS, BOILER ROOMS, MECHANICAL ROOMS, LOADING DOCKS, RECEIVING AREAS, PIPE SPACES, PIPE TUNNELS, STAGES, STORAGE ROOMS, SHOPS AND SHAFTS, ON THE BUILDING EXTERIOR, AND OTHER SPACES AND AREAS WHERE [DEVICES ARE] SUBJECT TO DAMAGE OR ACCIDENTAL OPERATION FROM SPORTS, PHYSICAL ACTIVITIES, GENERAL HOUSEKEEPING, MAINTENANCE, OR THE MOVEMENT OF SUPPLIES, MATERIALS, FURNITURE AND EQUIPMENT.

77. ALL NEW CONSTRUCTION AND RENOVATION WORK SHOWN ON THE DRAWINGS AND CONTAINED IN THE SPECIFICATIONS (UNLESS OTHERWISE NOTED AS "NOT IN CONTRACT" OR "N.I.C.") IS THE RESPONSIBILITY OF THE SINGLE PRIME GENERAL CONTRACTOR. REFERENCES TO SPECIFIC TRADE SUBCONTRACTORS (PLUMBING, MECHANICAL, ELECTRICAL, ETC.) ARE PROVIDED TO ASSIST THE SINGLE PRIME GENERAL CONTRACTOR IN THE DELINEATION OF SUBCONTRACTOR WORK. THE SINGLE PRIME GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DELINEATION OF ITS SUBCONTRACTORS' WORK AND THEREFORE SHALL NOT RELY ON SPECIFIC TRADE REFERENCES SHOWN ON THE CONTRACT DOCUMENTS.

X Y Z	"X" DENOTES FRAME SIZE OF SWITCH (AMPS) "Y" DENOTES SIZE OF FUSE (AMPS) "Z" DENOTES QTY OF FUSES
	CURRENT TRANSFORMER (CT)
M	ELECTRICAL METER
	UTILITY TRANSFORMER
N E L X Y	TRANSFER SWITCH "X" TYPE OF SWITCH ATS: AUTOMATIC TRANSFER SWITCH MTS: MANUAL TRANSFER SWITCH "Y" DENOTES SWITCH SIZE (AMPS)
G X Y	EMERGENCY / STANDBY GENERATOR WITH (1) OUTPUT CIRCUIT BREAKER "X" DENOTES SIZE OF CIRCUIT BREAKER (AMPS) "Y" DENOTES # OF POLES
	FIRE PUMP CONTROLLER

DEMOLITION NOTES:

1. DEMOLITION SHALL INCLUDE THE REMOVAL OF ALL ASSOCIATED WIRING, CONDUIT, DISCONNECT SWITCHES, ETC UNLESS SPECIFICALLY NOTED OTHERWISE.
2. WHERE WIRING/CONDUIT SERVING AN EXISTING PIECE OF EQUIPMENT RUNS BELOW GRADE, CONTRACTOR SHALL REMOVE ALL WIRING BACK TO THE SOURCE AND CUT CONDUIT FLUSH WITH EXISTING FLOOR. PROVIDE A WATERPROOF SEAL AROUND ALL OPENINGS
3. THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING ELECTRICAL SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
4. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
5. THE CONTRACTOR SHALL REMOVE ALL ELECTRICAL LIGHT FIXTURES COMPLETE WITH ASSOCIATED WIRING, CONDUITS, ETC. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING WIRING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES AND OTHER DEVICES AND PROVIDE BYPASS CONNECTIONS NECESSARY TO MAKE CIRCUITS AFFECTED CONTINUOUS AND READY FOR OPERATION. OTHERWISE, WIRING SHALL BE REMOVED BACK TO THE NEAREST ELECTRICAL JUNCTION BOX THAT IS TO REMAIN OR TO PANELBOARD.
6. ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS.
7. EXISTING PANEL DIRECTORIES AFFECTED BY THE WORK SHALL BE MODIFIED TO REFLECT THE BRANCH CIRCUIT WIRING CHANGES.
8. PORTIONS OF FEEDER RUNS TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ENERGIZED, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED. NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL RESPECTS, CABLE TYPE, CONDUCTOR AMPACITY, CONDUIT SIZES, ETC.
9. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER HANDLING, DISPOSAL, AND ASSOCIATED COSTS OF ALL MATERIAL REMOVED FROM FIXTURES, DURING THIS CONTRACT, IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES AND/OR REGULATIONS.
10. DISCONNECT AND REMOVE FROM THE PREMISES, OR STORE ON THE PREMISES IF REQUESTED BY THE OWNER, ALL EQUIPMENT AND LIGHT FIXTURES, AND SUPPORTING DEVICES REMOVED AS A RESULT OF THIS WORK.
11. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING CEILING SYSTEM INCLUDING BUT NOT LIMITED TO GRID, TILES, AND SUPPORT AND SHALL REPLACE IN KIND ANY DAMAGED CEILING COMPONENTS.
12. PRIOR TO RELOCATION OR DEMOLITION OF ANY LIGHTING FIXTURES, ALL CONTROLLED LIGHTING FIXTURES SHALL BE THOROUGHLY DECOMMISSIONED FROM THE EXISTING LIGHTING CONTROL SYSTEMS. REFER TO EXISTING SYSTEM MANUFACTURER'S WRITTEN INSTALLATION AND DECOMMISSIONING INSTRUCTIONS.

MOUNTING HEIGHTS

HEIGHT	DESCRIPTION
10'-0"	EMERGENCY BATTERY UNITS (OR 1'-0" BELOW CEILING)
90" TO 6" BELOW CLG	FIRE ALARM AUDIBLE ALARM SIGNALS
7'-6" TO 8'-0"	FIRE ALARM COMBINATION ALARM SIGNALS
7'-0" TO 8'-0"	FIRE ALARM VISUAL SIGNALS
6'-6"	TOP OF ELECTRICAL PANEL BOARDS (LIGHTING OR POWER)
6'-0"	TOP OF HIGHEST ELECTRICAL DISCONNECT SWITCH OR STARTER
4'-0"	TOP OF WALL MOUNTED DEVICES SUCH AS LIGHT SWITCHES, MANUAL MOTOR STARTERS, THERMOSTATS, TELEPHONE/INTERCOM HANDSETS, FIRE ALARM PULLSTATIONS, ETC.
4'-0"	TOP OF WALL MOUNTED WIREMOLD (U.N.O.)
2'-0"	BOTTOM OF RECEPTACLES IN MECHANICAL ROOMS, REPAIR GARAGES, AND EXTERIOR OF BUILDING.
1'-6"	BOTTOM OF RECEPTACLES, TELEPHONE/TELEDATA OUTLETS, TELEVISION JACKS, ETC.
0'-0"	FINISHED FLOOR ELEVATION.

IMPORTANT NOTE:

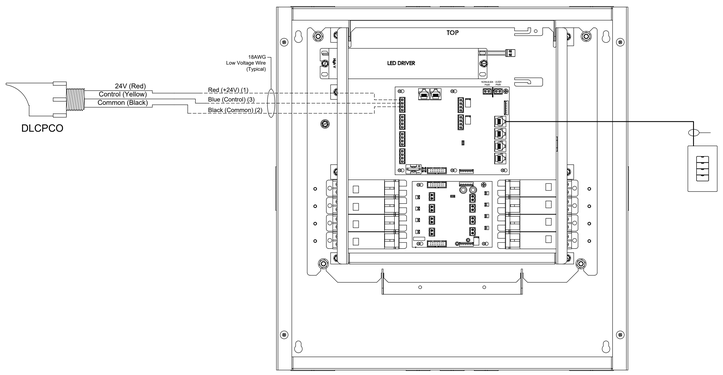
THE CONTRACTOR SHALL PROVIDE JUNCTION BOXES, CONDUIT AND DRAG LINES FOR USE BY THE OWNER'S VENDOR(S) FOR THE FOLLOWING SYSTEMS: TELE-DATA, INTERCOM, SECURITY, CARD ACCESS, AND VIDEO SURVEILLENCE. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF ALL LOW VOLTAGE SYSTEM DEVICES WITH THE OWNERS VENDOR PRIOR TO INSTALLATION OF BACKBOXES, CONDUIT AND WIRING.

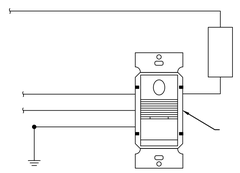
		AND 0-10V DIMMING.								
A2		2X4 RECESSED LED HIGH PERFORMANCE RECESSED FIXTURE WITH WHITE HOUSING, ANGLED NARROW RAIL, DIFFUSE CENTER, AND 0-10V DIMMING. PROVIDE EMERGENCY BATTERY PACK.	FINELITE	HPR-SL-ANR-2X4-V-835-DCO-96LG-UNV-SC-FC-10%-CX-96LG	INCLUDED	LD	1	UNV	45.7	RECESSED
A3		ROW MOUNTED 2.5" WIDE LED DIRECT LINEAR PENDANT LIGHTING FIXTURES WITH FLUSH DIFFUSER, FLAT END CAPS, CUSTOM COLOR HOUSING, AND 0-10V DIMMING. LENGTH OF ROWS AS SHOWN ON PLANS.	FINELITE	HPX-P-D-XXFT-S-835-F-120V-SC-FC10%-(MTG)-FE-(FINISH)	INCLUDED	LD	1	120V	3.3 W / FOOT	PENDANT
A4		ROW MOUNTED 2.5" WIDE LED DIRECT LINEAR PENDANT LIGHTING FIXTURES WITH FLUSH DIFFUSER, FLAT END CAPS, CUSTOM COLOR HOUSING, AND 0-10V DIMMING. LENGTH OF ROWS AS SHOWN ON PLANS. PROVIDE EMERGENCY BATTERY PACK IN SECTIONS SHOWN.	FINELITE	HPX-P-D-XXFT-S-835-F-120V-SC-FC10%-(MTG)-FE-(FINISH)-LGD18W	INCLUDED	LD	1	120V	3.3 W / FOOT	PENDANT
A5		CURVE 2.5" WIDE LED DIRECT AIRCRAFT CABLE MOUNTED LIGHTING FIXTURE WITH CUSTOM PATTERN AND LENGTHS, SOFT DIFFUSE LENS, CUSTOM COLOR HOUSING, AND 0-10V DIMMING. LENGTH AND SHAPE OF ROWS AS SHOWN ON PLANS.	CORONET	LS2.CURVE-X-35-HIGH-UNV-DB-CC-AC-FL-OTHER-XX-STD	INCLUDED	LD	1	UNV	7.5 W / FOOT	AIRCRAFT CABLE
A5E		CURVE 2.5" WIDE LED DIRECT AIRCRAFT CABLE MOUNTED LIGHTING FIXTURE WITH CUSTOM PATTERN AND LENGTHS, SOFT DIFFUSE LENS, CUSTOM COLOR HOUSING, AND 0-10V DIMMING. LENGTH AND SHAPE OF ROWS AS SHOWN ON PLANS. PROVIDE EMERGENCY BATTERY IN SHADED PORTIONS OF FIXTURE.	CORONET	LS2.CURVE-X-35-HIGH-UNV-DB-CC-AC-FL-OTHER-XX-STD-EMPCK	INCLUDED	LD	1	UNV	7.5 W / FOOT	AIRCRAFT CABLE
A6		4" ROUND OPEN REFLECTOR DOWNLIGHT WITH REGRESSED LENS, WHITE TRIM, AND 0-10V DIMMING. PROVIDE EMERGENCY BATTERY PACK.	HE WILLIAMS	4DR-TL-L20/835-XX-XX-DIM-UNV RW-OF-CS-WW-MWT-AM-N-XX	INCLUDED	LD	1	UNV	19.8	RECESSED
A7		5'-0" DIAMETER DIRECT/INDIRECT PENDANT LED FIXTURES, 1.5" WIDE WITH CUSTOM COLOR FINISH AND 0-10V DIMMING. CONFIRM COLOR AND MOUNTING WITH THE ARCHITECT.	SPI LIGHTING	AIP12097-L54W-UNV-3500K-DF80-DIM1-(MTG)-DIR-OAH-(FINISH)	INCLUDED	LD	1	120V	54	PENDANT
A7E		5'-0" DIAMETER DIRECT/INDIRECT PENDANT LED FIXTURES, 1.5" WIDE WITH CUSTOM COLOR FINISH AND 0-10V DIMMING. CONFIRM COLOR AND MOUNTING WITH THE ARCHITECT. PROVIDE REMOTE EMERGENCY BATTERY.	SPI LIGHTING	AIP12097-L54W-UNV-3500K-DF80-DIM1-(MTG)-DIR-OAH-(FINISH)-EMR	INCLUDED	LD	1	120V	54	PENDANT
A8		6'-0" DIAMETER DIRECT/INDIRECT PENDANT LED FIXTURES, 1.5" WIDE WITH CUSTOM COLOR FINISH AND 0-10V DIMMING. CONFIRM COLOR AND MOUNTING WITH THE ARCHITECT.	SPI LIGHTING	AIP12176-L66W-UNV-3500K-DF80-DIM1-(MOUNTING)-DIR-OAH-(FINISH)	INCLUDED	LD	1	120V	66	PENDANT
A9		7'-0" DIAMETER DIRECT/INDIRECT PENDANT LED FIXTURES, 1.5" WIDE WITH CUSTOM COLOR FINISH AND 0-10V DIMMING. CONFIRM COLOR AND MOUNTING WITH THE ARCHITECT.	SPI LIGHTING	AIP12177-L85W-UNV-3500K-DF80-DIM1-(MTG)-DIR-OAH-(FINISH)	INCLUDED	LD	1	120V	85	PENDANT
A9E		8'-0" DIAMETER DIRECT/INDIRECT PENDANT LED FIXTURES, 1.5" WIDE WITH CUSTOM COLOR FINISH AND 0-10V DIMMING. CONFIRM COLOR AND MOUNTING WITH THE ARCHITECT.	SPI LIGHTING	AIP12208-L85W-UNV-3500K-DF80-DIM1-(MTG)-DIR-OAH-(FINISH)	INCLUDED	LD	1	120V	85	PENDANT
A9E		8'-0" DIAMETER DIRECT/INDIRECT PENDANT LED FIXTURES, 1.5" WIDE WITH CUSTOM COLOR FINISH AND 0-10V DIMMING. CONFIRM COLOR AND MOUNTING WITH THE ARCHITECT. PROVIDE REMOTE EMERGENCY BATTERY.	SPI LIGHTING	AIP12208-L85W-UNV-3500K-DF80-DIM1-(MTG)-DIR-OAH-(FINISH)-EMR	INCLUDED	LD	1	120V	85	PENDANT
A10		16" DIAMETER PENDANT MOUNTED LED LOW-BAY LIGHTING FIXTURE WITH MARINE GRADE DIE CAST ALUMINUM HOUSING, WHITE FINISH, CLEAR PRISMATIC POLYCARBONATE REFRACTOR AND LENS, WIRE GUARD, AND 0-10V DIMMING.	KENALL	EPLB-16-E-(MTG)-CA-GW-192L-35K8-DCC-DV-WG	INCLUDED	LD	1	120V	192	PENDANT
A10E		16" DIAMETER PENDANT MOUNTED LED LOW-BAY LIGHTING FIXTURE WITH MARINE GRADE DIE CAST ALUMINUM HOUSING, WHITE FINISH, CLEAR PRISMATIC POLYCARBONATE REFRACTOR AND LENS, WIRE GUARD, AND 0-10V DIMMING. PROVIDE EMERGENCY BATTERY PACK.	KENALL	EPLB-16-E-(MTG)-CA-GW-192L-35K8-DCC-DV-WG-LEL	INCLUDED	LD	1	120V	192	PENDANT
A11		4'-0" LINEAR LED LIGHTING FIXTURE WITH WHITE HOUSING PAINTED AFTER FABRICATION, CURVED FROSTED ACRYLIC LENS, SURFACE, WALL OR PENDANT MOUNTED AS SHOWN ON THE PLANS.	COLUMBIA	MPS4-35-LW-C-W-ED-U-PAF	INCLUDED	L	1	120V	26.9	REFER TO PLANS
A11E		4'-0" LINEAR LED LIGHTING FIXTURE WITH WHITE HOUSING PAINTED AFTER FABRICATION, CURVED FROSTED ACRYLIC LENS, SURFACE, WALL OR PENDANT MOUNTED AS SHOWN ON THE PLANS. PROVIDE EMERGENCY BATTERY PACK.	COLUMBIA	MPS4-35-LW-C-W-ED-U-PAF-ELL14	INCLUDED	L	1	120V	26.9	REFER TO PLANS
A12		8'-0" LINEAR LED LIGHTING FIXTURE WITH WHITE HOUSING PAINTED AFTER FABRICATION, CURVED FROSTED ACRYLIC LENS, SURFACE, WALL OR PENDANT MOUNTED AS SHOWN ON THE PLANS.	COLUMBIA	MPS8-35-LW-C-W-ED-U-PAF	INCLUDED	L	1	120V	52.8	REFER TO PLANS
A12E		8'-0" LINEAR LED LIGHTING FIXTURE WITH WHITE HOUSING PAINTED AFTER FABRICATION, CURVED FROSTED ACRYLIC LENS, SURFACE, WALL OR PENDANT MOUNTED AS SHOWN ON THE PLANS. PROVIDE EMERGENCY BATTERY PACK.	COLUMBIA	MPS8-35-LW-C-W-ED-U-PAF-ELL14	INCLUDED	L	1	120V	52.8	REFER TO PLANS
B		2.5" WIDE RECESSED LINEAR LENSED LED LIGHTING FIXTURE, WHITE HOUSING WITH FLUSH DIFFUSER AND 0-10V DIMMING. LENGTH AS SHOWN ON PLANS.	FINELITE	HPX-R-D-XXFT-S-835-F-120V-SC-FC10%-(CLG)	INCLUDED	LD	1	120V	3.2 W / FOOT	RECESSED GRID
B2E		4 FOOT SETION, 2.5" WIDE RECESSED LINEAR LENSED LED LIGHTING FIXTURE, WHITE HOUSING WITH FLUSH D DIFFUSER AND 0-10V DIMMING AND LENGTH AS SHOWN ON PLANS. PROVIDE EMERGENCY BATTERY PACK IN SECTIONS SHOWN.	FINELITE	HPX-R-D-4FT-S-835-F-120V-SC-FC10%-(CLG)-LGD18W	INCLUDED	LD	1	120V	3.2 W / FOOT	RECESSED GRID
B3		14 FEET LONG, 2.5" WIDE RECESSED LINEAR LENSED LED LIGHTING FIXTURE, WHITE HOUSING WITH FLUSH DIFFUSER AND 0-10V DIMMING. LENGTH AS SHOWN ON PLANS.	FINELITE	HPX-R-D-XXFT-B-835-F-120V-SC-FC10%-(CLG)	INCLUDED	LD	1	120V	57.4	RECESSED GRID
B4E		5" WIDE SURFACE MOUNTED LINEAR LENSED 4'-0" LED STAIRWELL LIGHTING FIXTURE WITH MARINE GRADE WHITE HOUSING, UV STABILIZED DIFFUSE POLYCARBONATE LENS, ROUNDED END CAPS AND INTEGRAL MOTION SENSOR. PROVIDE EMERGENCY BATTERY PACK.	KENALL	MLHA5-48-R-MW-PP-45L35K-DCC-DV-MS-LEL	INCLUDED	LD	1	120V	45	WALL OR CEILING SURFACE
C		2'-0" LONG UNDERCABINET LIGHTING FIXTURE, WHITE HOUSING, HARDWIRED WITH UNIT MOUNTED ROCKER SWITCH.	COLUMBIA	CUC2-CS-ED120	INCLUDED	L	1	120V	14	SURFACE
C2		4'-0" LONG UNDERCABINET LIGHTING FIXTURE, WHITE HOUSING, HARDWIRED WITH UNIT MOUNTED ROCKER SWITCH.	COLUMBIA	CUC4-CS-ED120	INCLUDED	L	1	120V	25	SURFACE
D		14" DIAMETER SURFACE MOUNTED CANOPY DOWNLIGHT WITH WHITE HOUSING, WET LOCATION, AND POLYCARBONATE LENS.	KENALL	HAFS14-MW-PP-16L-35K8-DIM1-DV	INCLUDED	CW	1	UNV	16	SURFACE CANOPY
DE		14" DIAMETER SURFACE MOUNTED CANOPY DOWNLIGHT WITH WHITE HOUSING, WET LOCATION, POLYCARBONATE LENS, AND INTEGRAL EMERGENCY BATTERY PACK.	KENALL	HAFS14-MW-PP-16L-35K8-DIM1-DV-LEL	INCLUDED	CW	1	UNV	16	SURFACE CANOPY
E		2" WIDE RECESSED LINEAR SLOT LIGHTING FIXTURE ON CENTER TO THE GRID, WHITE HOUSING WITH FLUSH DIFFUSER AND 0-10V DIMMING. LENGTH AS SHOWN ON PLANS.	JLC TECH	GEM2-MW-MO-XXFT-(CLG)-DW-(MTG)-W-UNV	INCLUDED	LD	1	120V	6.1 W / FOOT	RECESSED GRID
EE		2" WIDE RECESSED LINEAR SLOT LIGHTING FIXTURE ON CENTER TO THE GRID, WHITE HOUSING WITH FLUSH DIFFUSER AND 0-10V DIMMING. LENGTH AS SHOWN ON PLANS. PROVIDE EMERGENCY BATTERY PACK IN SECTIONS SHOWN.	JLC TECH	GEM2-MW-MO-4FT-(CLG)-DW-(MTG)-W-UNV	INCLUDED	LD	1	120V	6.1 W / FOOT	RECESSED GRID

EX		LED EXIT SIGN WITH RED LETTERS, WHITE THERMOPLASTIC HOUSING, WIREGUARD, CEILING OR WALL MOUNTED, WITH OR WITHOUT DIRECTIONAL ARROWS AS SHOWN ON PLANS AND SELF-DIAGNOSTICS.								

NOTES:

1. VERIFY ALL CEILING TYPES AND OPERATING VOLTAGES PRIOR TO ORDERING FIXTURES.
2. ALL FIXTURE FINISHES AND COLOR SELECTIONS SHALL BE AS SELECTED BY THE ARCHITECT.
3. COORDINATE THE HEIGHT OF ALL SUSPENDED FIXTURES WITH THE OWNER, ARCHITECT, AND ENGINEER PRIOR TO INSTALLATION.
4. COORDINATE LAMP COLORS (30K, 35K OR 40K) WITH THE ARCHITECT PRIOR TO ORDERING FIXTURES.
5. ALL FIXTURE FINISHES AND COLOR SELECTIONS SHALL BE AS SELECTED BY THE ARCHITECT.



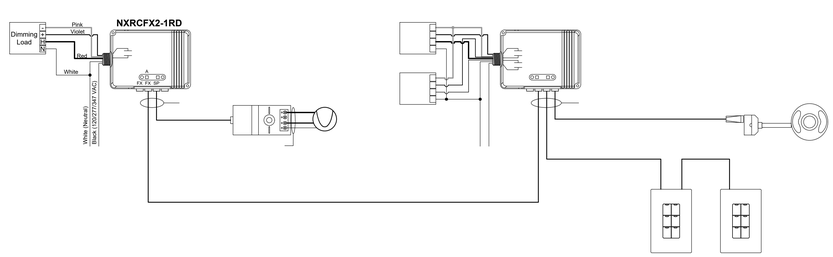


NORMAL POWER LIGHTING CONTROL PANEL WIRING SCHEMATIC

NOT TO SCALE

LIGHTING CONTROL SEQUENCE OF OPERATION:

1. CORRIDOR AND COMMON AREA LIGHTING: TIMECLOCK ON AND OFF WITH AFTER HOURS OCCUPANCY SENSOR OVERRIDE ON/OFF.
2. EXTERIOR LIGHTING: PHOTOCELL "ON" AND TIMER CONTROL "OFF".
3. WATTSTOPPER OR APPROVED EQUAL.



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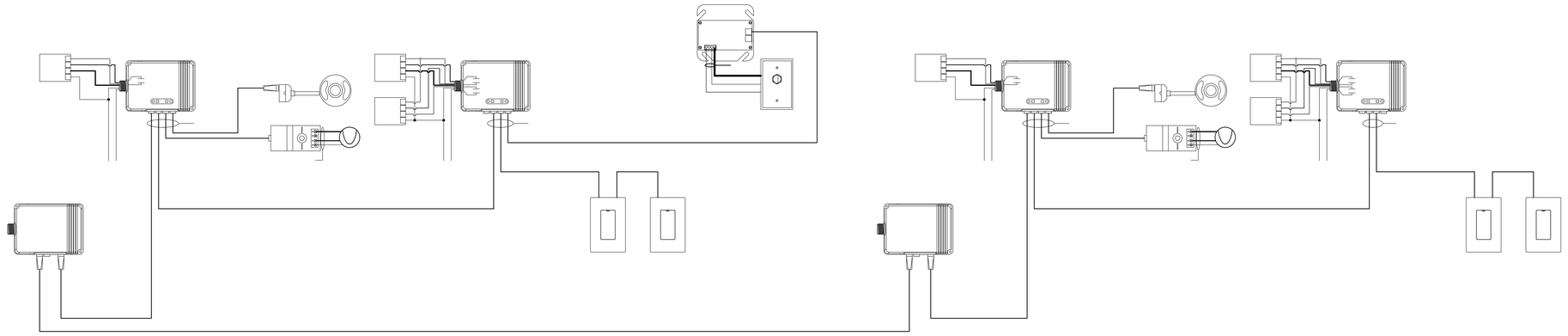
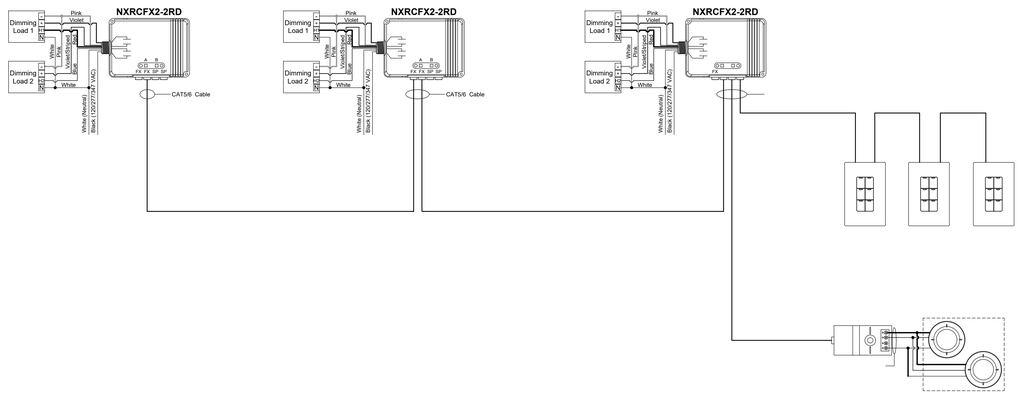


TYPICAL NX LIGHTING CONTROL WITH PARTITION SENSOR DETAIL

NOT TO SCALE

REFER TO FLOOR PLANS FOR QUANTITIES AND TYPES



TYPICAL NX LIGHTING CONTROL WITH HIGH BAY SENSOR DETAIL

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REFER TO FLOOR PLANS FOR QUANTITIES AND TYPES

FVHD Fravisky Velez Hopkins Duthie P.C.

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William D. Hopkins

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SHEET NOTES

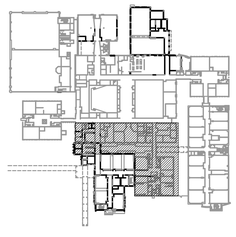
1. ALL EXISTING WIRING DEVICES AND LIGHTING FIXTURES SHALL BE EXISTING TO REMAIN UNLESS SHOWN FOR DEMOLITION OR INDICATED TO BE RELOCATED ON THE THIS DRAWING AND ARCHITECTURAL DRAWINGS. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION AREAS.
2. REFER TO NEW WORK PLANS FOR NEW LOCATIONS OF RELOCATED WIRING DEVICES, LIGHTING FIXTURES, COMMUNICATIONS DEVICES AND FIRE ALARM DEVICES, ETC.
3. MAINTAIN CONTINUITY OF ALL BRANCH CIRCUITS TO EXISTING WIRING DEVICES AND LIGHTING TO REMAIN.
4. MAINTAIN CONTINUITY OF ALL FIRE ALARM CIRCUITS AND TEMPORARILY SUPPORT SMOKE DETECTORS FROM STRUCTURAL CEILING DURING DEMOLITION FOR REINSTALLATION TO CEILINGS AS REQUIRED.
5. DISCONNECT AND REMOVE ALL DEVICES IN WALLS INDICATED FOR DEMOLITION BACK TO SOURCE OR LAST DEVICE TO REMAIN. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION AREAS.
6. TURN OVER ALL SECURITY SYSTEM DEVICES, MOTION SENSORS, CARD READERS, PROJECTORS, SPECIALTY SPEAKERS, ETC. TO THE OWNER AFTER DEMOLITION UNLESS SPECIFICALLY DIRECTED TO BE DISCARDED BY THE OWNER.

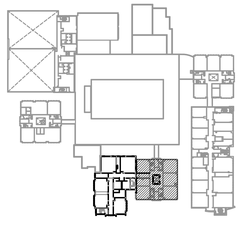
KEY NOTES

1. ALL INTERIOR WIRING DEVICES, ETC. THIS AREA (WITH THE EXCEPTION OF THE ELEVATOR AND ELEVATOR MACHINE ROOM), SHALL BE DISCONNECTED AND REMOVED BACK TO SOURCE OR LAST DEVICE TO REMAIN.
2. ALL EXISTING CEILING MOUNTED DEVICES AND LIGHTING THIS AREA SHALL BE DISCONNECTED AND REMOVED BACK TO SOURCE OR LAST DEVICE TO REMAIN.
3. EXISTING EXTERIOR WIFI ROUTERS TO BE DISCONNECTED, REMOVED AND TURNED OVER TO THE OWNER.
4. EXISTING LIGHTING AND CONTROLS THIS ROOM TO BE DISCONNECTED, REMOVED, AND REPLACED WITH NEW. COIL BRANCH CIRCUIT WIRING FOR RECONNECTION TO NEW FIXTURES. OTHER EXISTING CEILING MOUNTED DEVICES TO BE REMOVED FROM CEILING AND SUPPORTED FOR RECONNECTION TO NEW CEILING.
5. EXISTING ELEVATOR AND ELEVATOR MACHINE ROOM DEVICES, EQUIPMENT, LIGHTING, ETC. SHALL BE EXISTING TO REMAIN.
6. ALL WIRING DEVICES, LIGHTING, FIRE ALARM, DATA, ETC. THIS AREA SHALL BE DISCONNECTED AND REMOVED BACK TO SOURCE OR LAST DEVICE TO REMAIN UNLESS OTHERWISE NOTED.
7. EXISTING PANEL(S) TO REMAIN.
8. EXISTING BOGEN MULTI-COM 2000 INTERCOM SYSTEM RACK AND ALL ASSOCIATED WIRING TO BE RELOCATED AND EXTENDED AS REQUIRED FOR A COMPLETE AND OPERATIONAL RELOCATION. REFER TO LOW VOLTAGE PLANS FOR NEW RACK LOCATION.
9. EXISTING SIEMENS FIRE ALARM CONTROL PANEL, COMMUNICATOR, BATTERIES, ETC. TO BE RELOCATED TO NEW MAIN OFFICE AREA.
10. EXISTING FIRE ALARM ANNUNCIATOR TO BE RELOCATED TO NEW SECURE VESTIBULE.
11. ALL WIRING DEVICES, LIGHTING, FIRE ALARM, DATA, ETC. THIS AREA SHALL BE DISCONNECTED AND REMOVED BACK TO SOURCE OR LAST DEVICE TO REMAIN.

FIRST FLOOR DEMOLITION PLAN - BLOCK A

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





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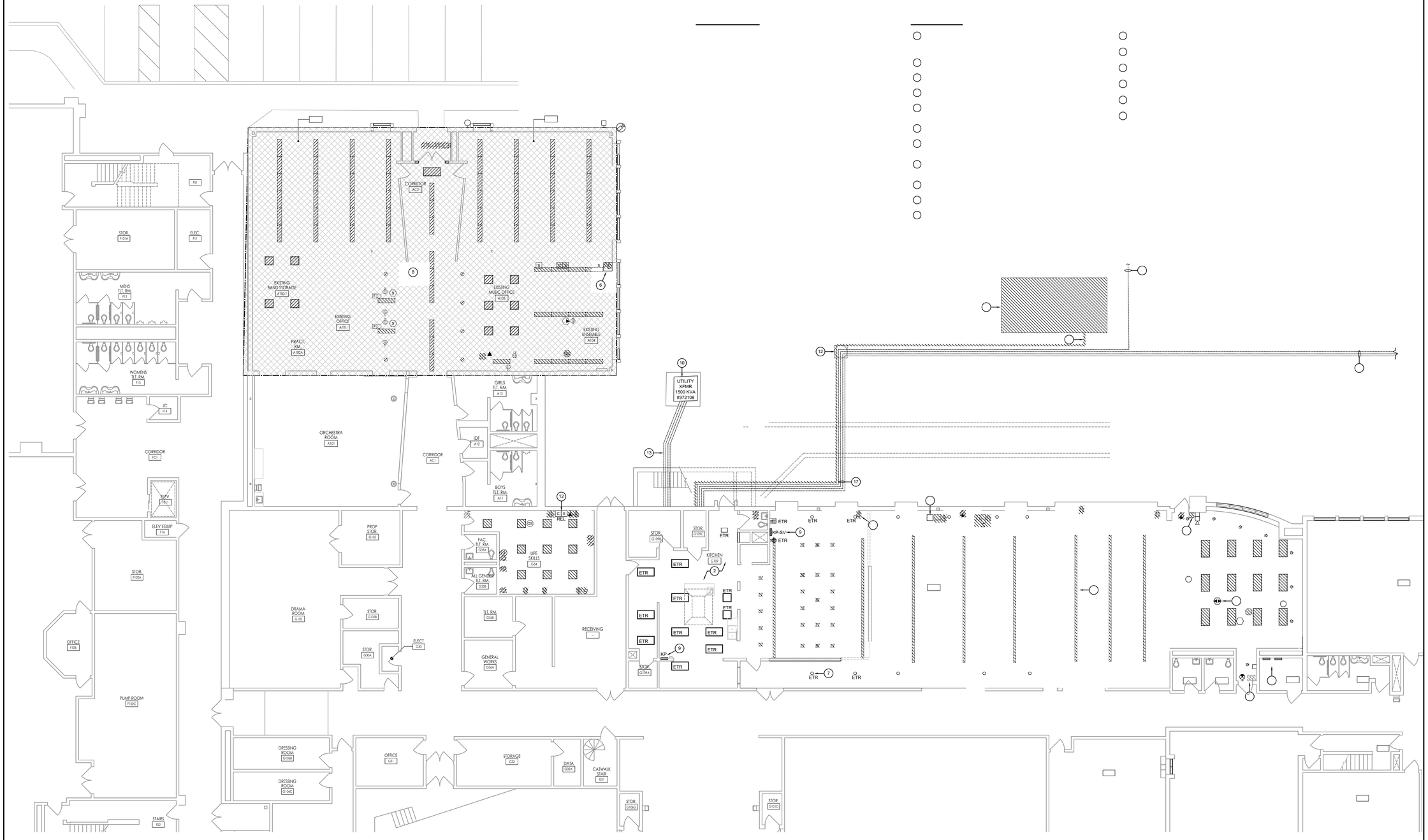
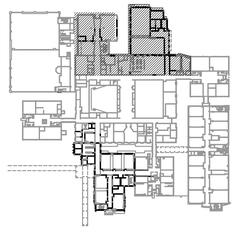
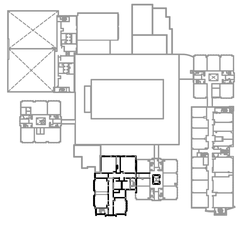


FIRST FLOOR DEMOLITION PLAN - BLOCK B

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





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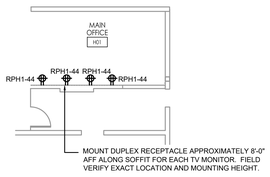


FIRST FLOOR MAIN OFFICE SOFFIT

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

SHEET NOTES

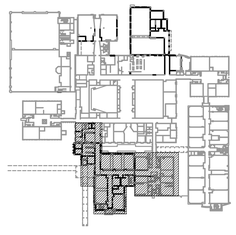
1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
2. CONTRACTOR SHALL CAREFULLY COORDINATE ALL ELECTRICAL EQUIPMENT LOCATIONS AND CLEARANCES. PANEL AND EQUIPMENT SIZES SHOWN ON THE PLANS ARE BASED ON SQUARE D.
3. CIRCUIT ELECTRONIC TRAP PRIMERS TO THE NEAREST RECEPTACLE CIRCUIT SERVING THE AREA LOCATED - 2#12 & 1#12EG IN 3/4"C. REFER TO PLUMBING PLANS FOR EXACT LOCATIONS.
4. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
5. UNLESS SHOWN ON THIS PLAN AS NEW OR RELOCATED, ALL EXISTING WIRING DEVICES SHALL REMAIN.
6. "ETR" DESIGNATES SPECIFIC EXISTING EQUIPMENT OR DEVICES TO REMAIN.
7. ALL EXTERIOR RECEPTACLES SHALL BE TAMPER RESISTANT GFCI TYPE WITH CAST ALUMINUM IN-USE LOCKABLE COVER.

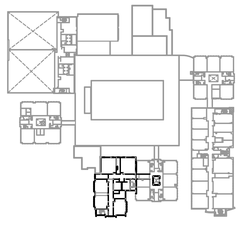
KEY NOTES

1. NEW PANELS AND TRANSFORMER LOCATION. REFER TO ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. NEW EM RECEPTACLES FOR NURSES OFFICE REFRIGERATOR AND ICE MAKERS. FIELD COORDINATE EXACT LOCATIONS.
3. TWO (2) 4" CORE DRILLS UP TO FLOOR ABOVE FOR LOW VOLTAGE AND DATA WIRING.
4. EXISTING PANEL(S) TO REMAIN.
5. QUAD OUTLET FOR CLASSROOM AUDIO CABINET. FIELD VERIFY EXACT MOUNTING HEIGHT AND LOCATION.
6. NEW 30 KVA TRANSFORMER T-EMH TRAPEZE MOUNTED FROM STRUCTURAL CEILING.
7. PROJECTOR RECEPTACLE. FIELD VERIFY MOUNTING HEIGHT WITH PROJECTOR MANUFACTURER AND INSTALLATION INSTRUCTIONS.
8. IDF QUAD OUTLET AND UPS OUTLET. FIELD COORDINATE EXACT LOCATION AND NEMA CONFIGURATION WITH THE OWNER.
9. EXISTING MDF ROOM RACKS / EQUIPMENT ALREADY POWERED BY GENERATOR CIRCUITS.

FIRST FLOOR POWER PLAN - BLOCK A

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





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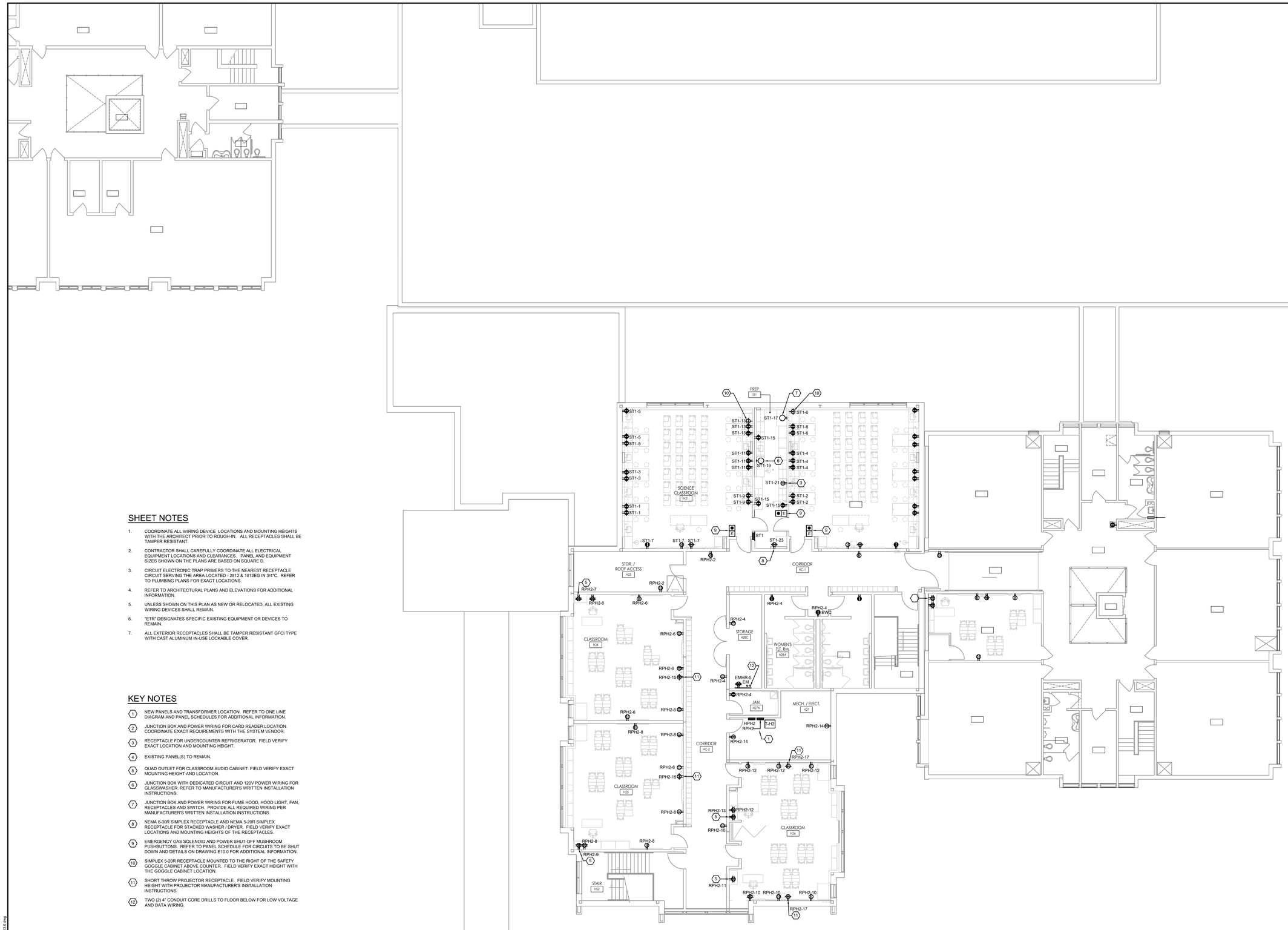
SHEET NOTES

1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
2. CONTRACTOR SHALL CAREFULLY COORDINATE ALL ELECTRICAL EQUIPMENT LOCATIONS AND CLEARANCES. PANEL AND EQUIPMENT SIZES SHOWN ON THE PLANS ARE BASED ON SQUARE D.
3. CIRCUIT ELECTRONIC TRAP PRIMERS TO THE NEAREST RECEPTACLE CIRCUIT SERVING THE AREA LOCATED - 2#12 & 1#12EG IN 3/4"C. REFER TO PLUMBING PLANS FOR EXACT LOCATIONS.
4. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
5. UNLESS SHOWN ON THIS PLAN AS NEW OR RELOCATED, ALL EXISTING WIRING DEVICES SHALL REMAIN.
6. "ETR" DESIGNATES SPECIFIC EXISTING EQUIPMENT OR DEVICES TO REMAIN.
7. ALL EXTERIOR RECEPTACLES SHALL BE TAMPER RESISTANT GFCI TYPE WITH CAST ALUMINUM IN-USE LOCKABLE COVER.

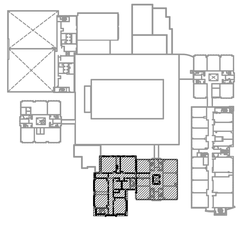
KEY NOTES

1. NEW PANELS AND TRANSFORMER LOCATION. REFER TO ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. JUNCTION BOX AND POWER WIRING FOR CARD READER LOCATION. COORDINATE EXACT REQUIREMENTS WITH THE SYSTEM VENDOR.
3. RECEPTACLE FOR UNDERCOUNTER REFRIGERATOR. FIELD VERIFY EXACT LOCATION AND MOUNTING HEIGHT.
4. EXISTING PANEL(S) TO REMAIN.
5. QUAD OUTLET FOR CLASSROOM AUDIO CABINET. FIELD VERIFY EXACT MOUNTING HEIGHT AND LOCATION.
6. JUNCTION BOX WITH DEDICATED CIRCUIT AND 120V POWER WIRING FOR GLASSWASHER. REFER TO MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
7. JUNCTION BOX AND POWER WIRING FOR FUME HOOD, HOOD LIGHT, FAN, RECEPTACLES AND SWITCH. PROVIDE ALL REQUIRED WIRING PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
8. NEMA 6-30R SIMPLEX RECEPTACLE AND NEMA 5-20R SIMPLEX RECEPTACLE FOR STACKED WASHER / DRYER. FIELD VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS OF THE RECEPTACLES.
9. EMERGENCY GAS SOLENOID AND POWER SHUT-OFF MUSHROOM PUSHBUTTONS. REFER TO PANEL SCHEDULE FOR CIRCUITS TO BE SHUT DOWN AND DETAILS ON DRAWING E10.0 FOR ADDITIONAL INFORMATION.
10. SIMPLEX 5-20R RECEPTACLE MOUNTED TO THE RIGHT OF THE SAFETY GOGGLE CABINET ABOVE COUNTER. FIELD VERIFY EXACT HEIGHT WITH THE GOGGLE CABINET LOCATION.
11. SHORT THROW PROJECTOR RECEPTACLE. FIELD VERIFY MOUNTING HEIGHT WITH PROJECTOR MANUFACTURER'S INSTALLATION INSTRUCTIONS.
12. TWO (2) 4" CONDUIT CORE DRILLS TO FLOOR BELOW FOR LOW VOLTAGE AND DATA WIRING.



SECOND FLOOR POWER PLAN - BLOCK A

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



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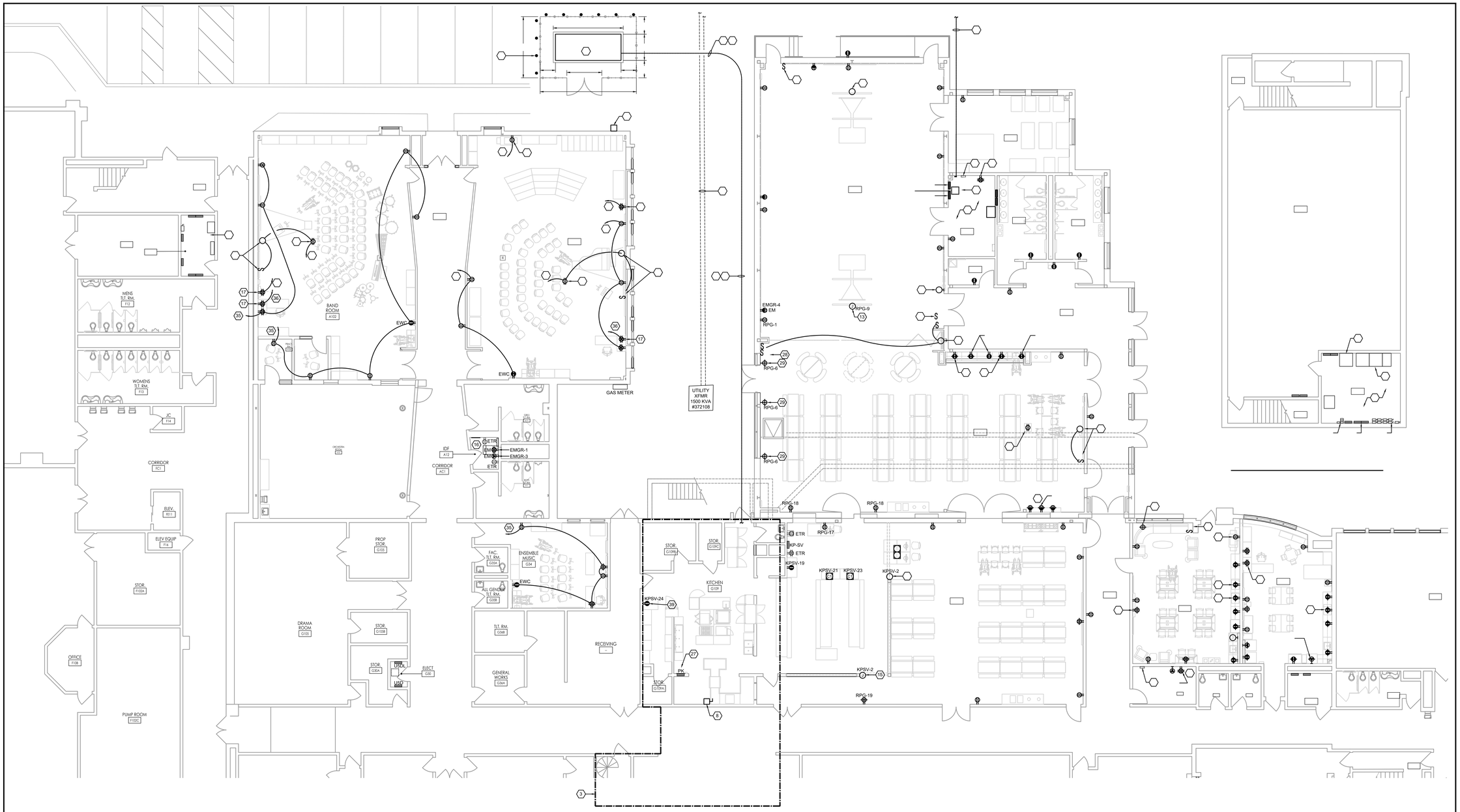
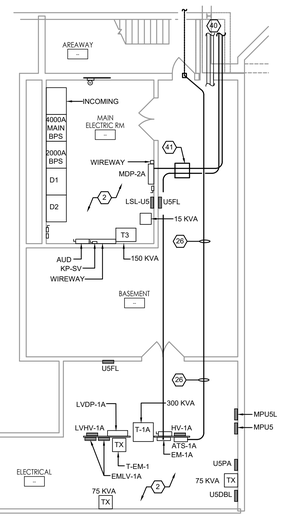


FIRST FLOOR POWER PLAN - BLOCK B

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

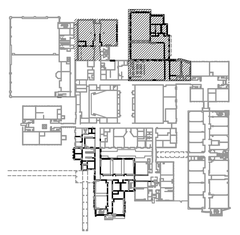


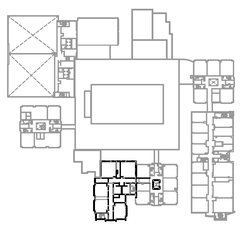
BASEMENT PART PLAN - BLOCK B

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

KEY NOTES

1. NEW PANELS AND TRANSFORMER LOCATION. REFER TO ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. ALL EQUIPMENT THIS ROOM IS SHOWN FOR LOCATION / REFERENCE AND IS EXISTING TO REMAIN.
3. REFER TO BASEMENT PART PLAN BLOCK B THIS DRAWING.
4. REFER TO BASEMENT PART PLAN BLOCK E THIS DRAWING.
5. EXISTING BLOCK E DISTRIBUTION SWITCHBOARD 480Y/277V, 3 PHASE, 4 WIRE, 2000A SQUARE D QED-2 SWITCHBOARD.
6. EXISTING 208Y/120V, 3 PHASE, 4 WIRE, 800A QED SWITCHBOARD.
7. MOTORIZED SHADE MECHONET POWER STATION. PROVIDE ALL 120V POWER WIRING AND ALL LOW VOLTAGE WIRING AS REQUIRED FOR THE SYSTEM. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS AND INSTALL PER THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND SHOP DRAWINGS FOR A COMPLETE AND OPERATIONAL SYSTEM.
8. DISCONNECT SWITCH FOR NEW DISHWASHING EQUIPMENT.
9. DUPLEX RECEPTACLE FOR UNDERCOUNTER REFRIGERATOR. FIELD COORDINATE EXACT LOCATION AND MOUNTING HEIGHT.
10. DUPLEX RECEPTACLE FOR MICROWAVE OVEN. FIELD COORDINATE EXACT LOCATION AND MOUNTING HEIGHT.
11. NEW 250KW GENERATOR. REFER TO CIVIL SITE PLAN FOR EXACT LOCATION. REFER TO ONE LINE DIAGRAM AND DETAILS FOR ADDITIONAL GENERATOR AND ENCLOSURE AREA INFORMATION. FIELD VERIFY EXACT CONDUIT ROUTING WITH THE SITE CONTRACTOR AND EXISTING FIELD CONDITIONS. DIMENSIONS SHOWN ARE APPROXIMATE AND BASED ON THE BASIS OF DESIGN GENERATOR. CONTRACTOR SHALL VERIFY GENERATOR SIZE WITH APPROVED SHOP DRAWINGS. GENERATOR MUST FIT WITHIN THE FENCE ENCLOSURE AREA SHOWN AND MEET ALL CODE REQUIRED CLEARANCES.
12. JUNCTION BOX AND POWER WIRING FOR OPERABLE MOTORIZED PARTITION. PROVIDE ALL REQUIRED DEVICES, WIRING, AND CONDUIT AND INSTALL PER THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. FIELD VERIFY EXACT LOCATIONS OF DEVICES.
13. JUNCTION BOX AND POWER WIRING FOR MOTORIZED BACKSTOP. COORDINATE EXACT WIRING REQUIREMENTS AND CONTROL WIRING WITH THE EQUIPMENT VENDOR. CONTROLLED VIA PORTER POWR-TOUCH4.
14. GENERATOR FEEDERS, BLOCK HEATER, BATTERY CHARGER, AND CONTROL WIRING CONDUITS. REFER TO ONE LINE DIAGRAM AND PANEL SCHEDULES FOR QUANTITIES AND SIZES.
15. JUNCTION BOX AND POWER WIRING FOR MOTORIZED COILING DOOR. PROVIDE ALL REQUIRED DEVICES, WIRING, AND CONDUIT AND INSTALL PER THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. FIELD VERIFY EXACT LOCATIONS OF DEVICES.
16. EXISTING IDF ROOM. ALL EXISTING EQUIPMENT, RACKS, ETC. TO REMAIN. PROVIDE NEW QUAD RECEPTACLE AND UPS RECEPTACLE AS SHOWN. FIELD COORDINATE EXACT LOCATION AND NEMA CONFIGURATION WITH THE OWNER.
17. QUAD OUTLET FOR CLASSROOM AUDIO CABINET. FIELD VERIFY EXACT MOUNTING HEIGHT AND LOCATION.
18. DEDICATED MICROWAVE OVEN RECEPTACLE.
19. DEDICATED COPY MACHINE RECEPTACLE.
20. NEW15 KVA TRANSFORMER T-EMG TRAPEZE MOUNTED FROM STRUCTURAL CEILING.
21. QUAD OUTLET FOR GYMNASIUM AUDIO CABINET. FIELD VERIFY EXACT MOUNTING HEIGHT AND LOCATION.
22. CHARGING STATION RECEPTACLES WITH INTEGRAL USB PORTS.
23. APPROXIMATE LOCATION OF EXISTING UNDERGROUND PRIMARY DUCTBANK. CONTRACTOR SHALL ENGAGE THE SERVICES OF A UTILITY MARKOUT COMPANY IN ADDITION TO NEW JERSEY ONE CALL.
24. CONTRACTOR SHALL USE CAUTION AND HAND DIG IN THIS AREA DUE TO EXISTING UNDERGROUND UTILITIES. REFER TO CIVIL SITE PLAN FOR EXISTING AND NEW UNDERGROUND UTILITIES.
25. CONCRETE VEHICULAR BOLLARD. SEE DETAIL SHEETS (TYPICAL).
26. ROUTE POWER AND CONTROL CONDUITS TO EXISTING AUTOMATIC TRANSFER SWITCH (ATS) IN BASEMENT ELECTRIC ROOM TIGHT TO CEILING AND OFFSET AS REQUIRED DUE TO EXISTING CEILING CONDITIONS. PROVIDE ALL REQUIRED PULLBOXES PER NEC.
27. EXISTING KITCHEN PANEL PK TO REMAIN.
28. MOTORIZED SHADE LOW VOLTAGE CONTROLLER WALL SWITCH(S). PROVIDE LOW VOLTAGE WIRING TO SHADES, AND FROM SHADES TO THE MECHONET POWER STATION. FIELD VERIFY EXACT LOCATION. REFER TO MOTORIZED SHADE SHOP DRAWINGS FOR FULL EXTENT OF THE WORK.
29. SIMPLEX NEMA 5-15R RECEPTACLE FOR MOTORIZED SHADE POWER. FIELD COORDINATE EXACT REQUIREMENTS WITH THE SHADE MANUFACTURER. PROVIDE ALL JUNCTION BOXES, RECEPTACLES, WIRING AND CONDUIT REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION. REFER TO MANUFACTURER'S SHOP DRAWINGS FOR EXACT REQUIREMENTS AND LOCATIONS. TYPICAL FOR ALL.
30. PORTER POWR-TOUCH 4 CONTROLLER LOCATION FOR MOTORIZED BACKSTOPS AND DIVIDER CURTAIN CONTROL. PROVIDE 2-GANG JUNCTION BOX AND FIELD VERIFY EXACT LOCATION WITH THE ARCHITECT. COORDINATE EXACT WIRING REQUIREMENTS AND CONTROL WIRING WITH THE EQUIPMENT VENDOR.
31. CEILING MOUNTED PROJECTOR AND RECEPTACLE.
32. JUNCTION BOX FOR PROJECTOR SCREEN POWER. FIELD COORDINATE EXACT LOCATION AND CONTROLS WITH THE EQUIPMENT VENDOR. PROVIDE KEY SWITCH OPERATOR (OR LOCKING COVER FOR MANUFACTURER SUPPLIED SWITCH).
33. SHORT THROW PROJECTOR RECEPTACLE. FIELD VERIFY MOUNTING HEIGHT WITH PROJECTOR MANUFACTURER'S INSTALLATION INSTRUCTIONS.
34. IDF QUAD OUTLET AND UPS OUTLET. FIELD COORDINATE EXACT LOCATION AND NEMA CONFIGURATION WITH THE OWNER.
35. HOME RUN TO EXISTING CIRCUIT MADE AVAILABLE BY DEMOLITION THIS ROOM OR AREA - 3#12 MC.
36. DEDICATED HOME RUN FOR AV CABINET TO EXISTING CIRCUIT MADE AVAILABLE BY DEMOLITION THIS ROOM OR AREA - 3#12 MC.
37. DEDICATED HOME RUN FOR COPY MACHINE TO EXISTING CIRCUIT MADE AVAILABLE BY DEMOLITION THIS ROOM OR AREA - 3#12 MC.
38. TWO (2) 2" EMPTY CONDUITS WITH DRAG LINES OUT TO HANDHOLE AT FUTURE WALK-IN BOX AREA ON SITE. REFER TO DRAWING E3.4 FOR CONTINUATION.
39. RELOCATED ICE MACHINE. PROVIDE NEW RECEPTACLE AS SHOWN.
40. CONDUITS TO PIPE TUNNEL. REFER TO DRAWING E3.4 AND ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
41. PULLBOX SIZED PER NEC. FIELD COORIDNATE EXACT LOCATION.
42. GENERATOR REMOTE EMERGENCY-STOP SWITCH LOCATION WITH DUAL ACTION SOUNDING COVER AND LABELED "EMERGENCY GENERATOR SHUT-DOWN".





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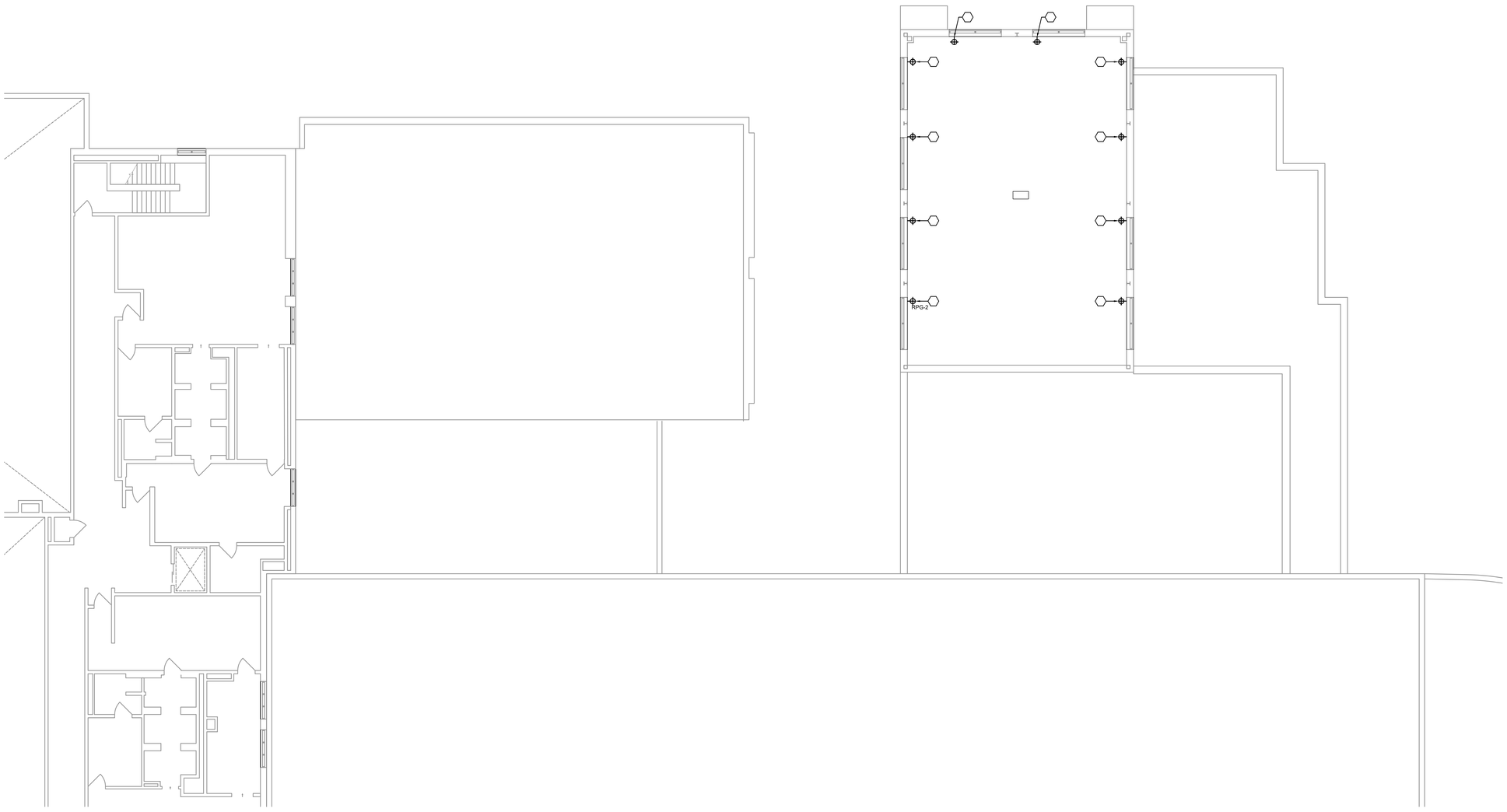
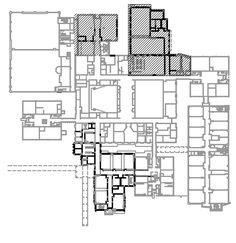


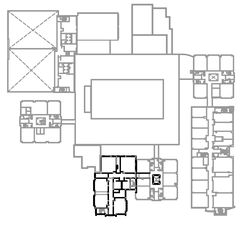
UPPER LEVEL PLAN - BLOCK B

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

KEY NOTES

1. SIMPLEX NEMA 5-15R RECEPTACLE FOR MOTORIZED SHADE POWER. FIELD COORDINATE EXACT REQUIREMENTS WITH THE SHADE MANUFACTURER. PROVIDE ALL JUNCTION BOXES, RECEPTACLES, WIRING AND CONDUIT REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION. REFER TO MANUFACTURER'S SHOP DRAWINGS FOR EXACT REQUIREMENTS AND LOCATIONS. TYPICAL FOR ALL.





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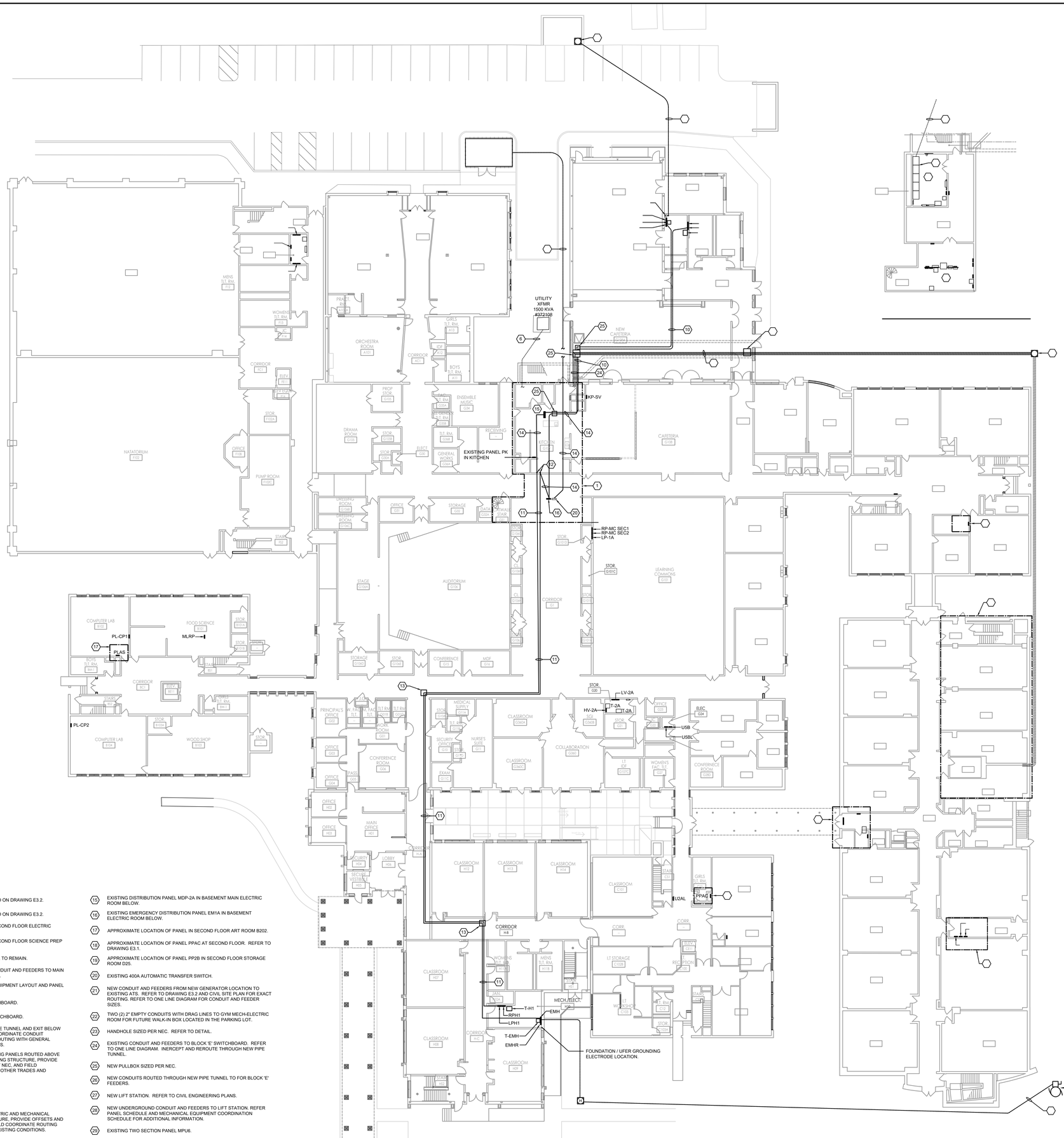

KEY NOTES

1. SEE BASEMENT PART PLAN THIS SHEET AND ON DRAWING E3.2.
2. SEE BASEMENT PART PLAN THIS SHEET AND ON DRAWING E3.2.
3. APPROXIMATE LOCATION OF PANELS IN SECOND FLOOR ELECTRIC ROOM.
4. APPROXIMATE LOCATION OF PANELS IN SECOND FLOOR SCIENCE PREP ROOM.
5. EXISTING UTILITY COMPANY TRANSFORMER TO REMAIN.
6. EXISTING UNDERGROUND SECONDARY CONDUIT AND FEEDERS TO MAIN DISTRIBUTION SWITCHBOARD IN BASEMENT.
7. REFER TO DRAWING E3.2 FOR SPECIFIC EQUIPMENT LAYOUT AND PANEL DESIGNATIONS.
8. EXISTING 4000A MAIN DISTRIBUTION SWITCHBOARD.
9. EXISTING 2000A E-WING DISTRIBUTION SWITCHBOARD.
10. NEW CONDUIT AND FEEDERS THROUGH PIPE TUNNEL AND EXIT BELOW GRADE TO NEW G-WING PANELS. FIELD COORDINATE CONDUIT PENETRATION LOCATIONS AND CONDUIT ROUTING WITH GENERAL CONTRACTOR AND WORK OF OTHER TRADES.
11. NEW CONDUIT AND FEEDERS TO NEW H-WING PANELS ROUTED ABOVE CORRIDOR CEILING. ROUTE TIGHT TO CEILING STRUCTURE, PROVIDE OFFSETS AND PULLBOXES AS REQUIRED BY NEC, AND FIELD COORDINATE ROUTING WITH THE WORK OF OTHER TRADES AND EXISTING CONDITIONS.
12. CONDUITS DOWN TO BASEMENT BELOW.
13. PULLBOX SIZED PER NEC.
14. CONDUITS ROUTED THRU BASEMENT ELECTRIC AND MECHANICAL ROOMS. ROUTE TIGHT TO CEILING STRUCTURE, PROVIDE OFFSETS AND PULLBOXES AS REQUIRED BY NEC, AND FIELD COORDINATE ROUTING WITH THE WORK OF OTHER TRADES AND EXISTING CONDITIONS.
15. EXISTING DISTRIBUTION PANEL MDP-2A IN BASEMENT MAIN ELECTRIC ROOM BELOW.
16. EXISTING EMERGENCY DISTRIBUTION PANEL EM1A IN BASEMENT ELECTRIC ROOM BELOW.
17. APPROXIMATE LOCATION OF PANEL IN SECOND FLOOR ART ROOM B202.
18. APPROXIMATE LOCATION OF PANEL PPAC AT SECOND FLOOR. REFER TO DRAWING E3.1.
19. APPROXIMATE LOCATION OF PANEL PP2B IN SECOND FLOOR STORAGE ROOM D25.
20. EXISTING 400A AUTOMATIC TRANSFER SWITCH.
21. NEW CONDUIT AND FEEDERS FROM NEW GENERATOR LOCATION TO EXISTING ATS. REFER TO DRAWING E3.2 AND CIVIL SITE PLAN FOR EXACT ROUTING. REFER TO ONE LINE DIAGRAM FOR CONDUIT AND FEEDER SIZES.
22. TWO (2) 2" EMPTY CONDUITS WITH DRAG LINES TO GYM MECH-ELECTRIC ROOM FOR FUTURE WALK-IN BOX LOCATED IN THE PARKING LOT.
23. HANDHOLE SIZED PER NEC. REFER TO DETAIL.
24. EXISTING CONDUIT AND FEEDERS TO BLOCK 'E' SWITCHBOARD. REFER TO ONE LINE DIAGRAM. INERCEPT AND REROUTE THROUGH NEW PIPE TUNNEL.
25. NEW PULLBOX SIZED PER NEC.
26. NEW CONDUITS ROUTED THROUGH NEW PIPE TUNNEL TO FOR BLOCK 'E' FEEDERS.
27. NEW LIFT STATION. REFER TO CIVIL ENGINEERING PLANS.
28. NEW UNDERGROUND CONDUIT AND FEEDERS TO LIFT STATION. REFER PANEL SCHEDULE AND MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR ADDITIONAL INFORMATION.
29. EXISTING TWO SECTION PANEL MPU6.
30. ROUTE CONDUIT TIGHT TO CEILING. PROVIDE ANY OFFSETS AND PULLBOXES AS REQUIRED ALONG LENGTH OF RUN.

OVERALL FIRST FLOOR POWER PLAN

SCALE: 1/16" = 1'-0"

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SHEET NOTES

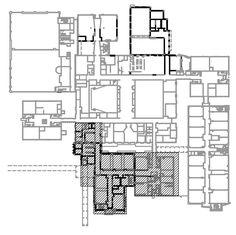
1. REFER TO LOW VOLTAGE & FIRE ALARM PLANS, AND FIRE ALARM RISER DIAGRAM FOR ADDITIONAL DUCT SMOKE DETECTOR INFORMATION.
2. FOR ADDITIONAL SCOPE OF WORK RELATED TO THE BUILDING MANAGEMENT SYSTEM AND HVAC CONTROLS, PLEASE REFER TO SPECIFICATION SECTION 230900 - INSTRUMENTATION AND CONTROL FOR HVAC EQUIPMENT
3. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT EQUIPMENT LOCATIONS.

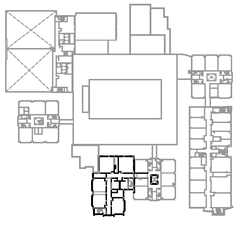
KEY NOTES

1. MECHANICAL EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR LOCAL POWER DISCONNECT INFORMATION AND PANEL SCHEDULES FOR CIRCUIT, WIRE AND CONDUIT SIZES. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS. (TYPICAL).
2. ATC PANEL LOCATION. COORDINATE WITH MECHANICAL CONTRACTOR AND CATWALK EQUIPMENT.
3. MOTORIZED DAMPER. PROVIDE 120V POWER TO ACTUATORS.
4. JUNCTION BOX AND POWER WIRING FOR FUTURE RADON VENT FAN. REFER TO DETAILS ON ARCHITECTURAL PLANS.

FIRST FLOOR HVAC POWER PLAN - BLOCK A

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





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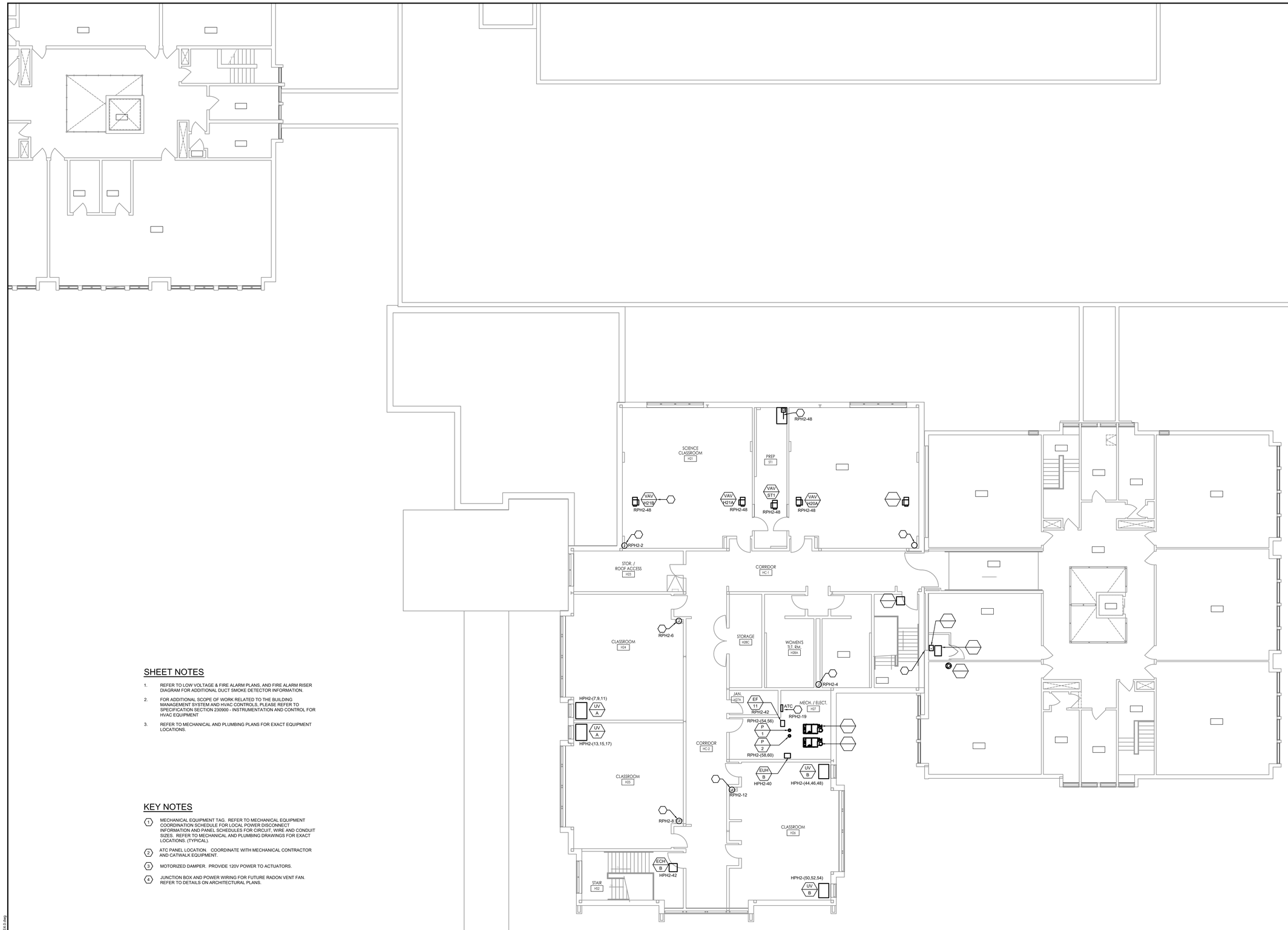


SHEET NOTES

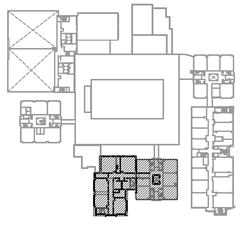
1. REFER TO LOW VOLTAGE & FIRE ALARM PLANS, AND FIRE ALARM RISER DIAGRAM FOR ADDITIONAL DUCT SMOKE DETECTOR INFORMATION.
2. FOR ADDITIONAL SCOPE OF WORK RELATED TO THE BUILDING MANAGEMENT SYSTEM AND HVAC CONTROLS, PLEASE REFER TO SPECIFICATION SECTION 230900 - INSTRUMENTATION AND CONTROL FOR HVAC EQUIPMENT
3. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT EQUIPMENT LOCATIONS.

KEY NOTES

1. MECHANICAL EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR LOCAL POWER DISCONNECT INFORMATION AND PANEL SCHEDULES FOR CIRCUIT, WIRE AND CONDUIT SIZES. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS. (TYPICAL).
2. ATC PANEL LOCATION. COORDINATE WITH MECHANICAL CONTRACTOR AND CATWALK EQUIPMENT.
3. MOTORIZED DAMPER. PROVIDE 120V POWER TO ACTUATORS.
4. JUNCTION BOX AND POWER WIRING FOR FUTURE RADON VENT FAN. REFER TO DETAILS ON ARCHITECTURAL PLANS.

SECOND FLOOR HVAC POWER PLAN - BLOCK A

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



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FIRST FLOOR HVAC POWER PLAN - BLOCK B

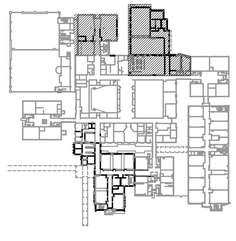
SCALE: 1/8" = 1'-0"

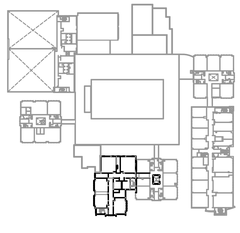
SHEET NOTES

1. REFER TO LOW VOLTAGE & FIRE ALARM PLANS, AND FIRE ALARM RISER DIAGRAM FOR ADDITIONAL DUCT SMOKE DETECTOR INFORMATION.
2. FOR ADDITIONAL SCOPE OF WORK RELATED TO THE BUILDING MANAGEMENT SYSTEM AND HVAC CONTROLS, PLEASE REFER TO SPECIFICATION SECTION 230900 - INSTRUMENTATION AND CONTROL FOR HVAC EQUIPMENT
3. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT EQUIPMENT LOCATIONS.

KEY NOTES

1. MECHANICAL EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR LOCAL POWER DISCONNECT INFORMATION AND PANEL SCHEDULES FOR CIRCUIT, WIRE AND CONDUIT SIZES. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS. (TYPICAL).
2. ATC PANEL LOCATION. COORDINATE WITH MECHANICAL CONTRACTOR AND CATWALK EQUIPMENT.
3. MOTORIZED DAMPER. PROVIDE 120V POWER TO ACTUATORS.
4. HOME RUN TO EXISTING 1 POLE, 20 AMP CIRCUIT BREAKER MADE AVAILABLE BY DEMOLITION OF EXISTING MECHANICAL EQUIPMENT THIS ROOM OR AREA. PROVIDE NEW 1 POLE, 20A CIRCUIT BREAKER (IF REQUIRED) - 2#12 & 1#12EG IN 3/4"C.
5. HOME RUN TO EXISTING 1 POLE, 20 AMP CIRCUIT BREAKER MADE AVAILABLE BY DEMOLITION OF EXISTING MECHANICAL EQUIPMENT THIS ROOM OR AREA. PROVIDE NEW 2 POLE, 20A CIRCUIT BREAKER (IF REQUIRED) - 2#12 & 1#12EG IN 3/4"C.
6. JUNCTION BOX AND POWER WIRING FOR FUTURE RADON VENT FAN. REFER TO DETAILS ON ARCHITECTURAL PLANS.





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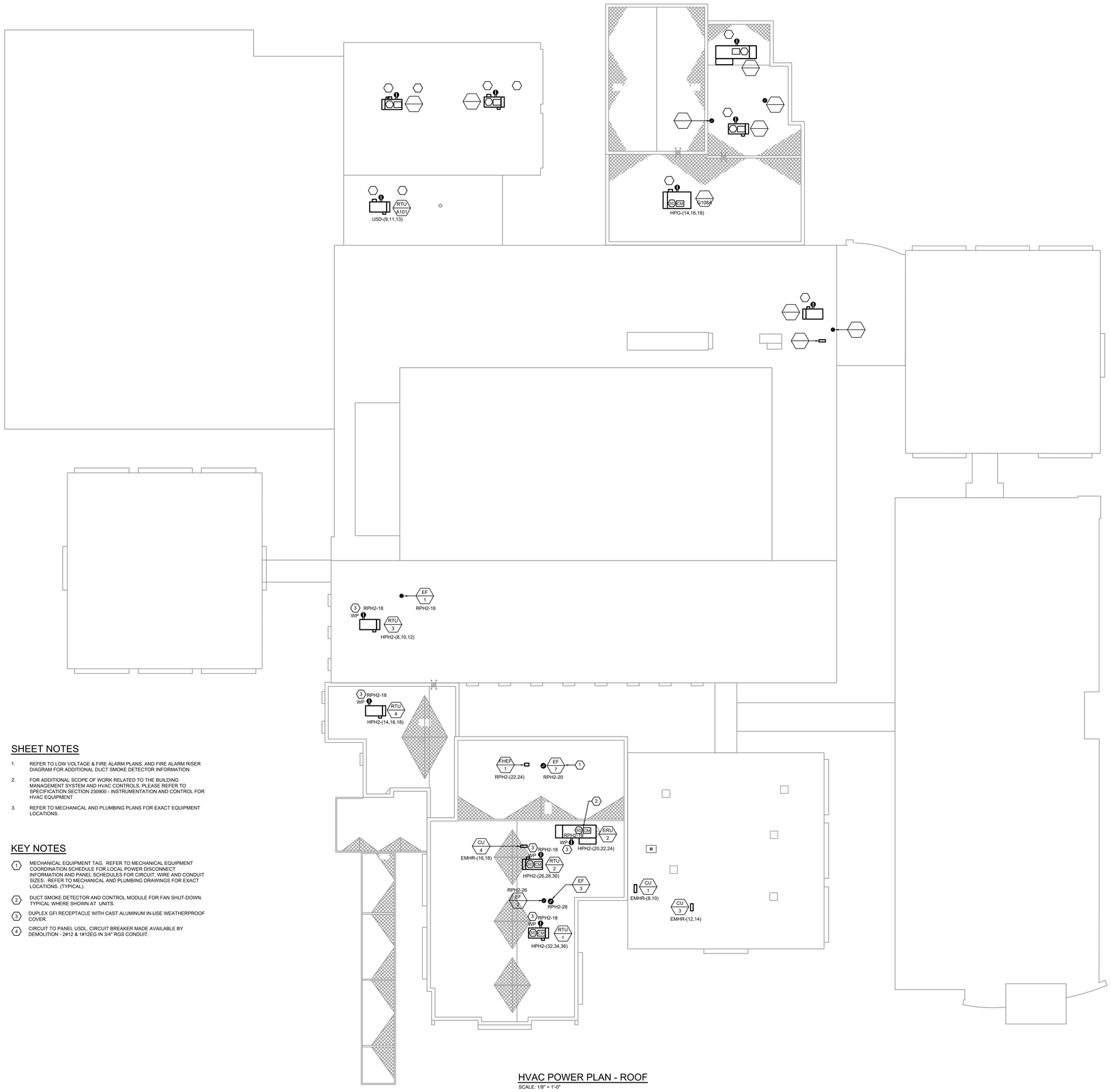

SHEET NOTES

1. REFER TO LOW VOLTAGE & FIRE ALARM PLANS, AND FIRE ALARM RISER DIAGRAM FOR ADDITIONAL DUCT SMOKE DETECTOR INFORMATION.
2. FOR ADDITIONAL SCOPE OF WORK RELATED TO THE BUILDING MANAGEMENT SYSTEM AND HVAC CONTROLS, PLEASE REFER TO SPECIFICATION SECTION 230900 - INSTRUMENTATION AND CONTROL FOR HVAC EQUIPMENT
3. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT EQUIPMENT LOCATIONS.

KEY NOTES

1. MECHANICAL EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR LOCAL POWER DISCONNECT INFORMATION AND PANEL SCHEDULES FOR CIRCUIT, WIRE AND CONDUIT SIZES. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS. (TYPICAL).
2. DUCT SMOKE DETECTOR AND CONTROL MODULE FOR FAN SHUT-DOWN. TYPICAL WHERE SHOWN AT UNITS.
3. DUPLEX GFI RECEPTACLE WITH CAST ALUMINUM IN-USE WEATHERPROOF COVER.
4. CIRCUIT TO PANEL USDL, CIRCUIT BREAKER MADE AVAILABLE BY DEMOLITION - 2#12 & 1#12EG IN 3/4" RGS CONDUIT.

HVAC POWER PLAN - ROOF

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

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SHEET NOTES

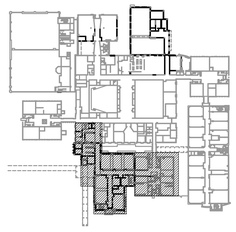
1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. CONTRACTOR SHALL COORDINATE ALL LIGHTING LOCATIONS, MOUNTING HEIGHTS AND SWITCHING LOCATIONS WITH THE ARCHITECTURAL PLANS PRIOR TO ROUGH-IN. REFER TO LIGHTING CONTROLS DRAWINGS.
3. ALL EXIT, UNIT EMERGENCY LIGHTING AND FIXTURE EMERGENCY BATTERY PACKS SHALL BE CONNECTED TO THE LINE SIDE OF THE CIRCUIT SERVING AREA LOCATED AND AHEAD OF ANY SWITCHING OR LIGHTING CONTROL.
4. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING SHALL BE EXISTING TO REMAIN.

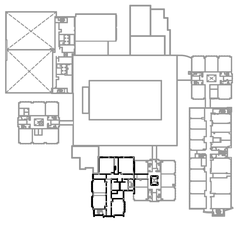
KEY NOTES

1. LIGHTING THIS ROOM OR ANY ROOM WITH PANELBOARDS SHALL NOT HAVE AUTOMATIC CONTROLS PER NEC. PROVIDE GENERAL USE SNAP SWITCHES.
2. EXISTING STAIRWELL LIGHTING TO REMAIN.
3. EXTERIOR WALLPACK LIGHTING FIXTURE MOUNTED AT 10'-0" AFF TO BOTTOM OF FIXTURE.
4. EXTERIOR WALLPACK LIGHTING FIXTURE MOUNTED AT ABOVE EXTERIOR EXIT SIGN. COORDINATE WITH THE ARCHITECT.
5. NEW CORRIDOR LIGHTING FIXTURES TO BE CIRCUITED TO EXISTING CORRIDOR LIGHTING CIRCUIT AND CONTROLS SERVING THIS AREA - 3#12 MC.

FIRST FLOOR LIGHTING PLAN - BLOCK A

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





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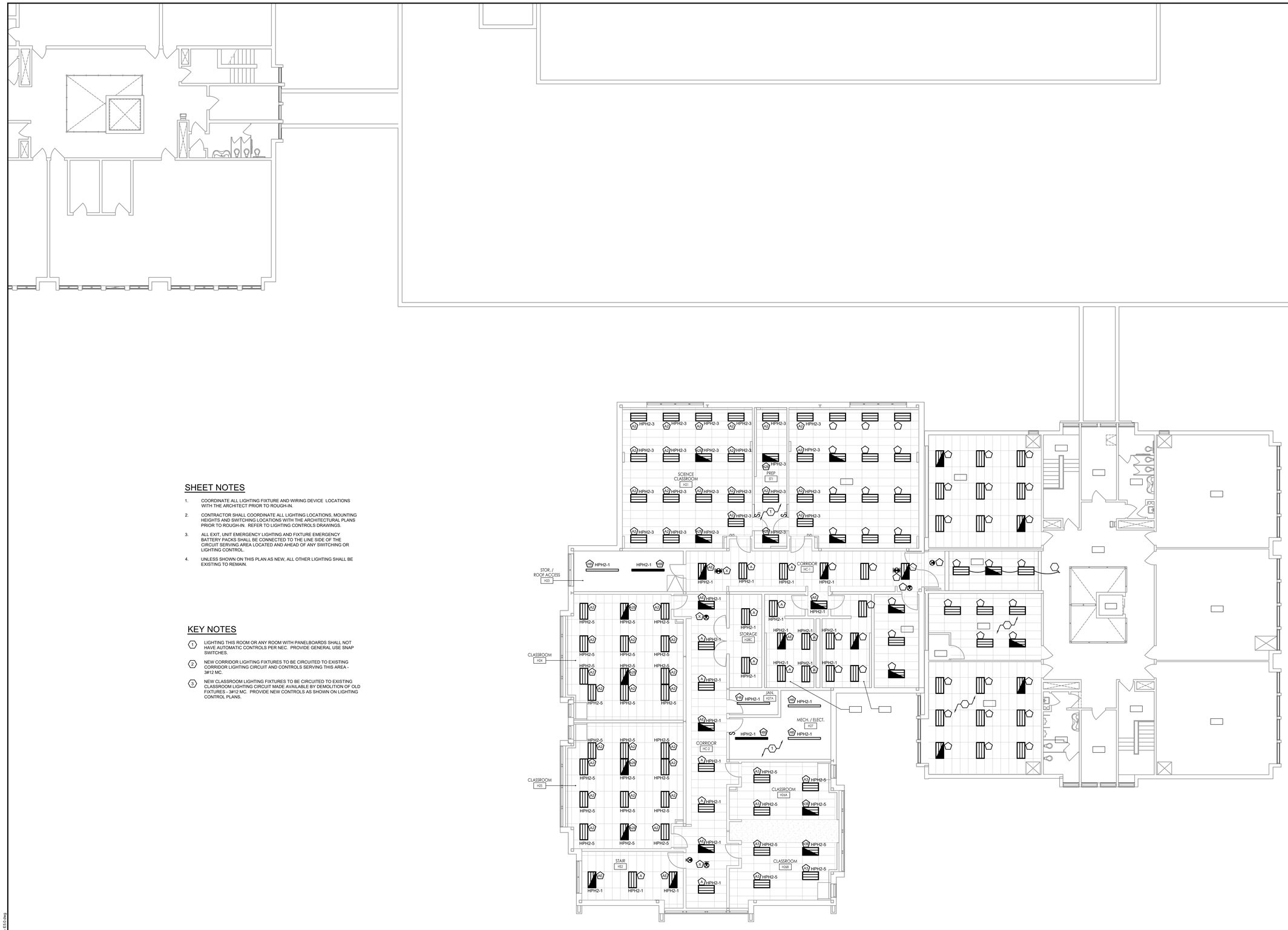


SHEET NOTES

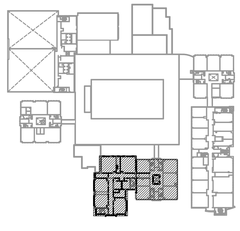
1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. CONTRACTOR SHALL COORDINATE ALL LIGHTING LOCATIONS, MOUNTING HEIGHTS AND SWITCHING LOCATIONS WITH THE ARCHITECTURAL PLANS PRIOR TO ROUGH-IN. REFER TO LIGHTING CONTROLS DRAWINGS.
3. ALL EXIT, UNIT EMERGENCY LIGHTING AND FIXTURE EMERGENCY BATTERY PACKS SHALL BE CONNECTED TO THE LINE SIDE OF THE CIRCUIT SERVING AREA LOCATED AND AHEAD OF ANY SWITCHING OR LIGHTING CONTROL.
4. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING SHALL BE EXISTING TO REMAIN.

KEY NOTES

1. LIGHTING THIS ROOM OR ANY ROOM WITH PANELBOARDS SHALL NOT HAVE AUTOMATIC CONTROLS PER NEC. PROVIDE GENERAL USE SNAP SWITCHES.
2. NEW CORRIDOR LIGHTING FIXTURES TO BE CIRCUITED TO EXISTING CORRIDOR LIGHTING CIRCUIT AND CONTROLS SERVING THIS AREA - 3#12 MC.
3. NEW CLASSROOM LIGHTING FIXTURES TO BE CIRCUITED TO EXISTING CLASSROOM LIGHTING CIRCUIT MADE AVAILABLE BY DEMOLITION OF OLD FIXTURES - 3#12 MC. PROVIDE NEW CONTROLS AS SHOWN ON LIGHTING CONTROL PLANS.

SECOND FLOOR LIGHTING PLAN - BLOCK A

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



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STOR. F103A
ELEC. F11
MENS TLT. RM. F12
WOMENS TLT. RM. F13
JC F14
CORRIDOR FC1
ELEV. FE1
ELEV EQUIP F16
STOR. F102A
OFFICE F108
PUMP ROOM F102C
PRACT. RM. A102A
ORCHESTRA ROOM A101
CHOIR ROOM A103
GIRLS TLT. RM. A13
IDF A12
CORRIDOR AC1
BOYS TLT. RM. A11
PROP STOR. G105
DRAMA ROOM G105
STOR. G108
STOR. G30A
ELECT G30
FAC. TLT. RM. G35A
ALL GENDER TLT. RM. G33B
TLT. RM. G36B
GENERAL WORKS G36A
ENSEMBLE MUSIC G34
RECEIVING
STOR. G109LE
STOR. G109C
STOR. G109A
KITCHEN G109
EMG-2
EMG-6
EMG-8
ETR
STOR. G108
STOR. G102
STOR. G103
STOR. G104
STOR. G105
STOR. G106
STOR. G107
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STOR. G114
STOR. G115
STOR. G116
STOR. G117
STOR. G118
STOR. G119
STOR. G120
STOR. G121
STOR.

Controls Legend

*Bridge module example reference.

- * LV connection line is low voltage 18-22 AWG
- * CAT5 connection line is CAT5 cable for SIP protocol
- * FX Network connection line is powered CAT5
- * FX Bacnet connection line is CAT5 network cable FX protocol
- * LNV connection line represents line voltage
- * LV-LNV connection represents line and low voltage *Connection line types are for reference only and may not be shown on drawings.

	(1) DLCPCO PHOTOCELL SENSOR, OUTDOOR, WHITE		(47) NXSIMDT-OMNI NX SENSOR MODULE, DUAL TECH, 360° LENS, WHITE
	(1) LHRDMMTS2-N-WH LIGHTHAWK2 DIMMER DUAL TECHNOLOGY WALL SWITCH SENSOR WITH INTELLISAPT, SINGLE RELAY, TWO BUTTONS, 120/277VAC, 1000 SQ. FT.		(1) NXSW2-4-WH NX DIGITAL SMART SWITCH, FOUR BUTTON, MOMENTARY, PILOT
	(4) LHRMTS1-G-WH LIGHTHAWK MULTI-TECHNOLOGY WALL SWITCH SENSOR WITH INTELLISAPT, SINGLE CIRCUIT, ONE BUTTON, 120/277VAC, 1000 SQ. FT., PHOTOCELL		(26) NXSW2-6-WH NX DIGITAL SMART SWITCH, SIX BUTTON, MOMENTARY, PILOT
NXP 2	(1) NX PANEL=NXP2-PNL-8-8-U-S NXP2 SERIES LIGHTING CONTROL PANEL		(17) NXSW2-OO-WH NX DIGITAL SPECIALTY ON/OFF SWITCH
	(1) NXCI NX SMART PORT CONTACT INTEFACE MODULE		(16) NXSW2-ORLO-WH NX DIGITAL SPECIALTY ON/RAISE/LOWER/OFF SWITCH
	(14) NXDS NX DAYLIGHT SENSOR		(1) NXWPS NX WALL PARTITION SENSOR
	(2) NXHNB2 NX HUBNET NETWORK BRIDGE MODULE		(19) RJ45ADAPTER RJ45 ADAPTER FOR OCCUPANCY AND DAYLIGHT SENSORS
1HO	(34) NXRCFX2-1RD-UNV NX ROOM CONTROLLER, FX, 1 RELAY, 0 - 10V DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE		(21) WSP-L360-WH WASP2 HIGH BAY SENSOR LENS, 360° COVERAGE AREA
2HO	(23) NXRCFX2-2RD-UNV NX ROOM CONTROLLER, FX, 2 RELAY, 0 - 10V DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE		(21) WSPSM24V HCS WASP2 FL, HIGH BAY SENSOR WITH DAYLIGHTING, SURFACE MNT, 24VDC (POWER PACK REQUIRED), FORM C RELAY

NOTES:

1. All device locations are approximate, refer to manufacturers installation instructions prior to installation.
2. Occupancy sensors utilizing ultrasonic technology must be located a minimum of four to six feet from HVAC supply and return vents.
3. 360 degree Occupancy sensors utilizing ultrasonic technology must be located a minimum of two feet from the wall.
4. Sensors mounted over a door must be placed one foot inside the threshold.
5. All switches are displayed as White. Please refer to your Bill of Material for correct color on each project.
6. By default line voltage wall switch occupancy sensors are selected as Ground leakage devices. If installation requires Neutral connection, please refer to your Bill of Material to for appropriate model number.
7. Contractor is responsible for: proper sensitivity & time delay settings (for non-adaptive products), recommended placement and verification of circuits with respect to power placement.
8. Contractor is responsible for field verification of required number of Power Packs/Smart Packs/Room Controllers:
   - One Power Pack/Room Controller is required for each circuit to be controlled.
   - One Room Controller can handle a total of 30 load points per module (see install instructions).
   - One power pack is required for every four sensors in the zone.
   - If multiple circuits are to be controlled by a sensor, an auxiliary relay can be used in conjunction with the power pack.
   - The maximum number of sensors that can be put on a power pack is to be reduced by one for each slave pack used.
   - Contractor is responsible for ensuring that the bill of materials complies with the intended design, project specifications and local codes.
9. NX Network is a powered network; do not connect NX Network CAT5 cables to standard Ethernet devices. Consult factory if additional network segments are required. Current is not liable for any damage caused.
10. If the distance between the Signal Generating Devices (Area Controller, NX Panel, NXHDI or NXHNB) exceeds 100 meters (328 feet) of cable, a Power over Ethernet Router (not provided by Current) will need to be installed.
11. The placement of the photocells are not the exact placement. They may need to be moved to a more optimum location per the individual room conditions.

SHEET NOTES

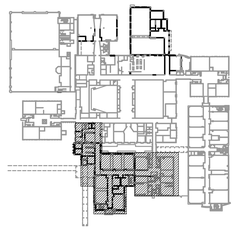
1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING AND CONTROLS SHALL BE EXISTING TO REMAIN.
3. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED VIA TIMECLOCK WITH OCCUPANCY SENSOR OVERRIDE. PROVIDE KEY SWITCHES FOR LOCAL CONTROL BY AUTHORIZED PERSONNEL ONLY.

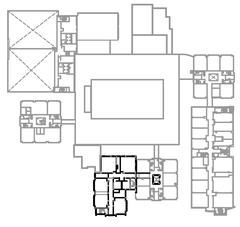
KEY NOTES

1. EXTERIOR LIGHTING TO BE CONTROLLED VIA PHOTOCELL AND TIME CONTROLLER.
2. LOWER CASE LETTER DESIGNATES SWITCHING ARRANGEMENT (TYPICAL).
3. PROVIDE KEY SWITCHES IFOR MANUAL OVERRIDE OF RESTROOM, STAIRWELL AND CORRIDOR LIGHTING FIXTURES FOR USE BY AUTHORIZED PERSONNEL ONLY. (TYPICAL).
4. ROOMS AND SPACES WITH PANELBOARDS AND MECHANICAL EQUIPMENT SHALL HAVE NO AUTOMATIC LIGHTING CONTROLS.
5. PHOTOCELL FOR EXTERIOR LIGHTING CONTROL. FIELD VERIFY EXACT LOCATION.
6. NEW CORRIDOR LIGHTING TO BE CONTROLLED VIA EXISTING CORRIDOR LIGHTING CONTROLS.
7. PROVIDE CONTROL PANEL FOR EXTERIOR AND CORRIDOR LIGHTING TIMECLOCK CONTROL. FIELD VERIFY EXACT LOCATION.

FIRST FLOOR LIGHTING CONTROLS PLAN - BLOCK A

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





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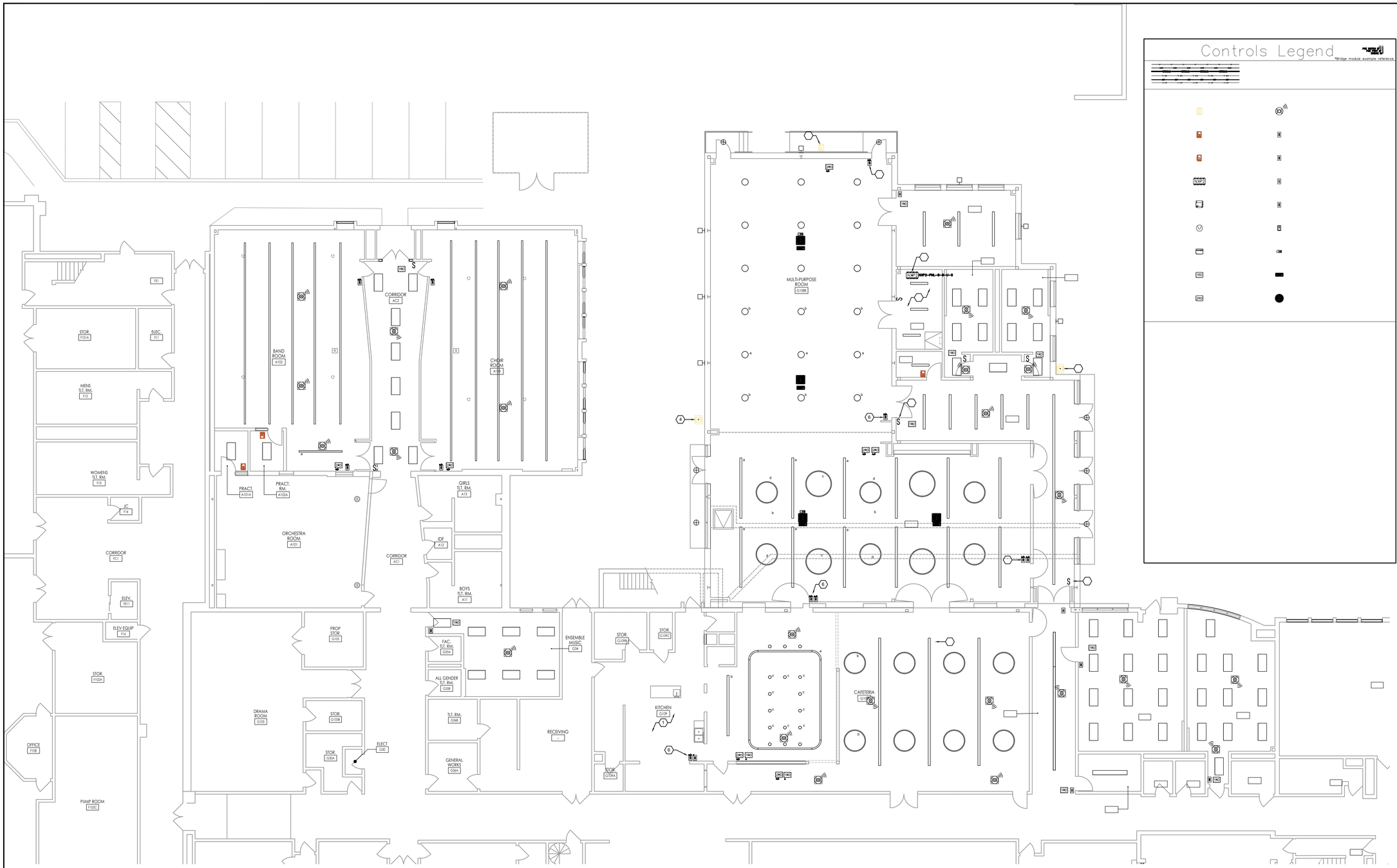


SHEET NOTES

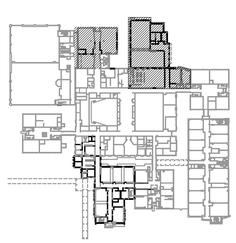
1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING AND CONTROLS SHALL BE EXISTING TO REMAIN.
3. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED VIA TIMECLOCK WITH OCCUPANCY SENSOR OVERRIDE. PROVIDE KEY SWITCHES FOR LOCAL CONTROL BY AUTHORIZED PERSONNEL ONLY.

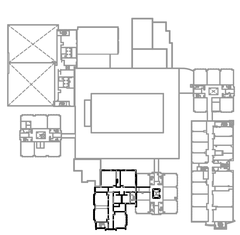
KEY NOTES

1. ROOMS AND SPACES WITH PANELBOARDS AND MECHANICAL EQUIPMENT SHALL HAVE NO AUTOMATIC LIGHTING CONTROLS.
2. LOWER CASE LETTER DESIGNATES SWITCHING ARRANGEMENT (TYPICAL).
3. PROVIDE CONTROL PANEL FOR EXTERIOR AND CORRIDOR LIGHTING TIMECLOCK CONTROL. FIELD VERIFY EXACT LOCATION.
4. PHOTOCELL FOR EXTERIOR LIGHTING CONTROL.
5. PROVIDE KEY SWITCHES IFOR MANUAL OVERRIDE OF RESTROOM, STAIRWELL AND CORRIDOR LIGHTING FIXTURES FOR USE BY AUTHORIZED PERSONNEL ONLY. (TYPICAL).
6. CAFETERIA AND GYMNASIUM SWITCH LOCATIONS TO BE FIELD VERIFIED WITH THE OWNER. SWITCHES SHOULD BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL.

FIRST FLOOR LIGHTING CONTROLS PLAN - BLOCK B

SCALE: 1/8" = 1'-0"
REFER TO DRAWINGS E5.3 AND E5.4 FOR CONTROL LEGEND





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Controls Legend

*Bridge module example reference.

- * LV connection line is low voltage 18-22 AWG
- * CAT5 connection line is CAT5 cable for SP protocol
- * NX Network connection line is powered CAT5
- * FX Bus connection line is CAT5 cable for network cable FX protocol
- * 120/277VAC connection line is line voltage
- * LV/LV/NV connection represents line and line voltage *Connection line types are for reference only and may not be shown on drawings.

	(1) DLCPCO PHOTOCELL SENSOR, OUTDOOR, WHITE		(47) NXSMDT-OMNI NX SENSOR MODULE, DUAL TECH, 360° LENS, WHITE
	(1) LHRDMMTS2-N-WH LIGHTMARK2 DIMMER DUAL TECHNOLOGY WALL SWITCH SENSOR WITH INTELLIGENT, OFF/DUAL, RELAY, TWO BUTTONS, 120/277VAC, 1000 SQ. FT.		(1) NXSW2-4-WH NX DIGITAL SMART SWITCH, FOUR BUTTON, MOMENTARY, PILOT
	(4) LHRMTS1-G-WH LIGHTMARK MULTI-TECHNOLOGY WALL SWITCH SENSOR WITH INTELLIGENT, RELAY, ONE BUTTON, 120/277VAC, 1000 SQ. FT., PHOTOCELL		(26) NXSW2-6-WH NX DIGITAL SMART SWITCH, SIX BUTTON, MOMENTARY, PILOT
NXP2	(1) NX PANEL=NXP2-PNL-8-8-U-S NXP2 SERIES LIGHTING CONTROL PANEL		(17) NXSWQ-OO-WH NX DIGITAL SPECIALTY ON/OFF SWITCH
	(1) NXCI NX SMART PORT CONTACT INTEFACE MODULE		(16) NXSWQ-ORLO-WH NX DIGITAL SPECIALTY ON/RAISE/LOWER/OFF SWITCH
	(14) NXDS NX DAYLIGHT SENSOR		(1) NXWPS NX WALL PARTITION SENSOR
	(2) NXHNB2 NX HUBNET NETWORK BRIDGE MODULE		(19) RJ45ADAPTER RJ45 ADAPTER FOR OCCUPANCY AND DAYLIGHT SENSORS
NRC	(34) NXRCFX2-1RD-UNV NX ROOM CONTROLLER, FX, 1 RELAY, 0 - 10V DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE		(21) WSP-L360-WH WASP2 HIGH BAY SENSOR LENS, 360° COVERAGE AREA
2RC	(23) NXRCFX2-2RD-UNV NX ROOM CONTROLLER, FX, 2 RELAY, 0 - 10V DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE		(21) WSPSM24V HCS WASP2 FL, HIGH BAY SENSOR WITH DAYLIGHTING, SURFACE MNT., 24VDC (POWER PACK REQUIRED), FORM C RELAY

NOTES:

1. All device locations are approximate, refer to manufacturers installation instructions prior to installation.
2. Occupancy sensors utilizing ultrasonic technology must be located a minimum of four to six feet from HVAC supply and return vents.
3. 360 degree Occupancy sensors utilizing ultrasonic technology must be located a minimum of two feet from the wall.
4. Sensors mounted over a door must be placed one foot inside the threshold.
5. All switches are displayed as White. Please refer to your Bill of Material for correct color on each project.
6. By default line voltage wall switch occupancy sensors are selected as Ground leakage devices. If installation requires Neutral connection, please refer to your Bill of Material to for appropriate model number.
7. Contractor is responsible for: proper sensitivity & time delay settings (for non-adaptive products), recommended placement and verification of circuits with respect to power placement.
8. Contractor is responsible for field verification of required number of Power Packs/Smart Packs/Room Controllers:
   - One Power Pack/Room Controller is required for each circuit to be controlled.
   - One Room Controller can handle a total of 30 load points per module (see install instructions).
   - One power pack is required for every four sensors in the zone.
   - If multiple circuits are to be controlled by a sensor, an auxiliary relay can be used in conjunction with the power pack.
   - The maximum number of sensors that can be put on a power pack is to be reduced by one for each slave pack used.
   - Contractor is responsible for ensuring that the bill of materials complies with the intended design, project specifications and local codes.
9. NX Network is a powered network; do not connect NX Network CAT5 cables to standard Ethernet devices. Consult factory if additional network segments are required. Current is not liable for any damage caused.
10. If the distance between the Signal Generating Devices (Area Controller, NX Panel, NXHDI or NXHNB) exceeds 100 meters (328 feet) of cable, a Power over Ethernet Router (not provided by Current) will need to be installed.
11. The placement of the photocells are not the exact placement. They may need to be moved to a more optimum location per the individual room conditions.

SHEET NOTES

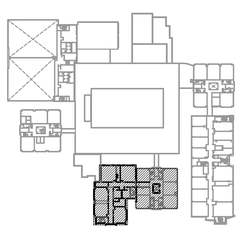
1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING AND CONTROLS SHALL BE EXISTING TO REMAIN.
3. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED VIA TIMECLOCK WITH OCCUPANCY SENSOR OVERRIDE. PROVIDE KEY SWITCHES FOR LOCAL CONTROL BY AUTHORIZED PERSONNEL ONLY.

KEY NOTES

1. NEW CORRIDOR LIGHTING TO BE CONTROLLED VIA EXISTING CORRIDOR LIGHTING CONTROLS.
2. LOWER CASE LETTER DESIGNATES SWITCHING ARRANGEMENT (TYPICAL).
3. PROVIDE KEY SWITCHES IFOR MANUAL OVERRIDE OF RESTROOM, STAIRWELL AND CORRIDOR LIGHTING FIXTURES FOR USE BY AUTHORIZED PERSONNEL ONLY. (TYPICAL).
4. ROOMS AND SPACES WITH PANELBOARDS AND MECHANICAL EQUIPMENT SHALL HAVE NO AUTOMATIC LIGHTING CONTROLS.

SECOND FLOOR LIGHTING CONTROLS PLAN - BLOCK A

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



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SHEET NOTES

1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. REFER TO SYMBOL LIST ON DRAWING E1.0 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
4. UNLESS SHOWN AS DEMOLITION ON DEMOLITION PLANS, OR AS NEW ON THIS SHEET, EXISTING LOW VOLTAGE DEVICES SHALL BE EXISTING TO REMAIN.

KEY NOTES

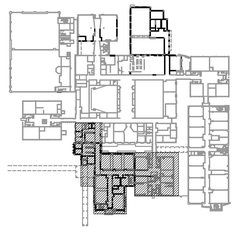
1. DATA, TELEPHONE AND HDMI JUNCTION BOXES AT TEACHER'S AV CABINET LOCATION. REFER TO SYMBOL LIST.
2. 2" CONDUIT SLEEVE(S) INTO ROOM. PROVIDE QUANTITY AS SHOWN (TYPICAL).
3. LOCAL AUDIO SYSTEM WITH HDMI CABLES TO CEILING TEACHING SPEAKER, REMOTE MICROPHONE WITH VOLUME CONTROL AND SOURCE SETTING, AND SHORT THROW PROJECT.
4. CEILING MOUNTED WIRELESS ACCESS (WIFI) ROUTER LOCATION.
5. DATA OUTLET FOR SHORT THROW PROJECTOR MOUNTED 78" AFF (TYPICAL).
6. CLOCK/SPEAKER LOCATION. REFER TO SYMBOL LIST (TYPICAL).
7. TELEPHONE MOUNTED AT 48" AFF (TYPICAL).
8. TV MOUNTED ON SOFFIT. COORDINATE EXACT HEIGHT WITH ARCHITECT.
9. AREA OF REFUGE MASTER STATION. LOCATE IN MAIN OFFICE OR SECURITY OFFICE. FIELD COORDINATE EXACT LOCATION WITH THE OWNER PRIOR TO ROUGH-IN. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
10. TWO (2) 4" CONDUIT SLEEVES UP TO SECOND FLOOR.

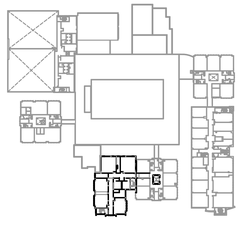
FIRST FLOOR MAIN OFFICE SOFFIT

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

FIRST FLOOR LOW VOLTAGE PLAN - BLOCK A

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





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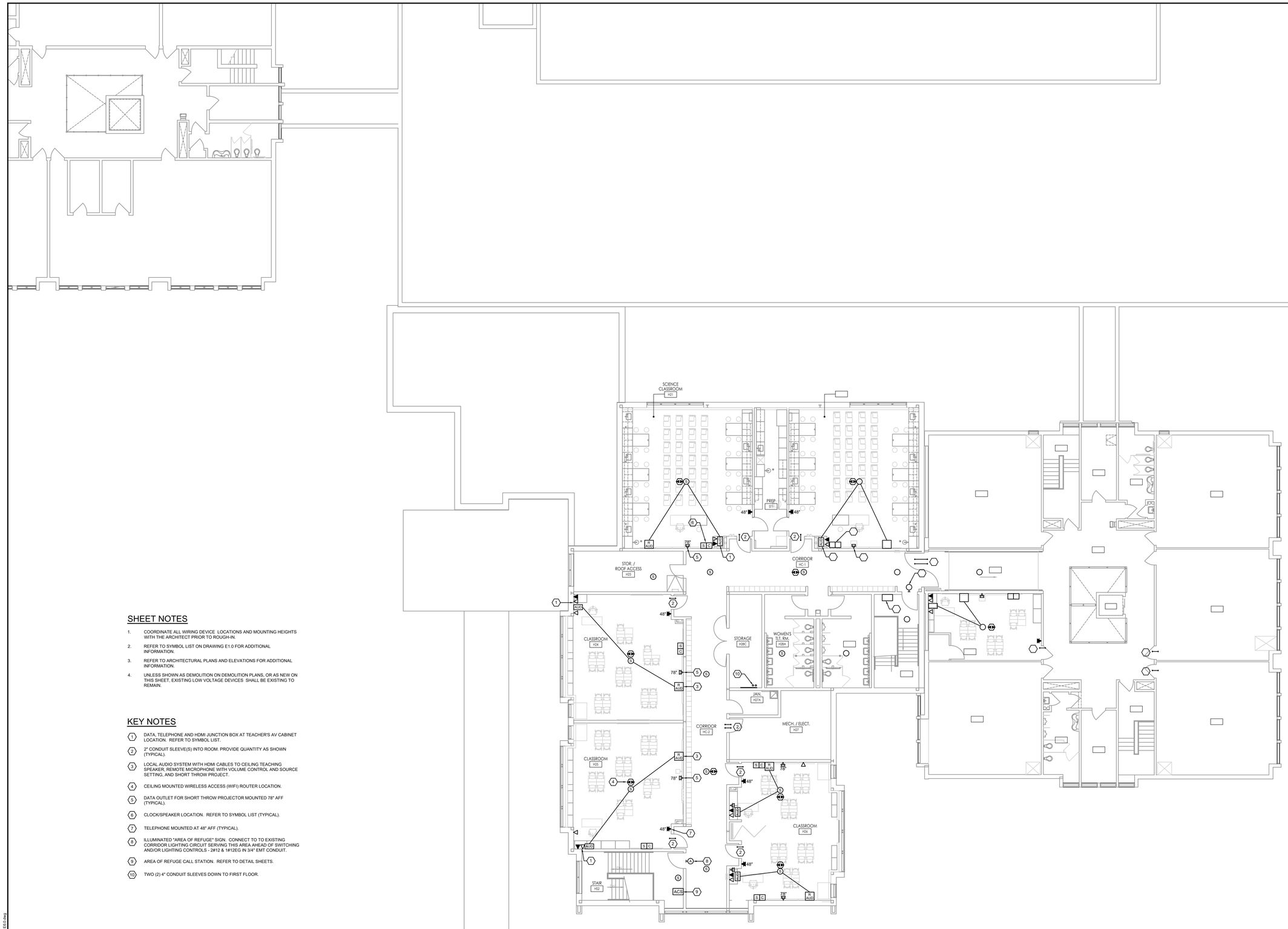


SHEET NOTES

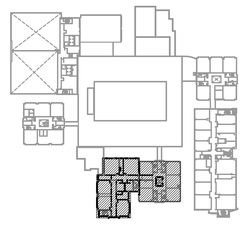
1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. REFER TO SYMBOL LIST ON DRAWING E1.0 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
4. UNLESS SHOWN AS DEMOLITION ON DEMOLITION PLANS, OR AS NEW ON THIS SHEET, EXISTING LOW VOLTAGE DEVICES SHALL BE EXISTING TO REMAIN.

KEY NOTES

1. DATA, TELEPHONE AND HDMI JUNCTION BOX AT TEACHER'S AV CABINET LOCATION. REFER TO SYMBOL LIST.
2. 2" CONDUIT SLEEVE(S) INTO ROOM. PROVIDE QUANTITY AS SHOWN (TYPICAL).
3. LOCAL AUDIO SYSTEM WITH HDMI CABLES TO CEILING TEACHING SPEAKER, REMOTE MICROPHONE WITH VOLUME CONTROL AND SOURCE SETTING, AND SHORT THROW PROJECT.
4. CEILING MOUNTED WIRELESS ACCESS (WIFI) ROUTER LOCATION.
5. DATA OUTLET FOR SHORT THROW PROJECTOR MOUNTED 78" AFF (TYPICAL).
6. CLOCK/SPEAKER LOCATION. REFER TO SYMBOL LIST (TYPICAL).
7. TELEPHONE MOUNTED AT 48" AFF (TYPICAL).
8. ILLUMINATED "AREA OF REFUGE" SIGN. CONNECT TO TO EXISTING CORRIDOR LIGHTING CIRCUIT SERVING THIS AREA AHEAD OF SWITCHING AND/OR LIGHTING CONTROLS - 2#12 & 1#12EG IN 3/4" EMT CONDUIT.
9. AREA OF REFUGE CALL STATION. REFER TO DETAIL SHEETS.
10. TWO (2) 4" CONDUIT SLEEVES DOWN TO FIRST FLOOR.

SECOND FLOOR LOW VOLTAGE PLAN - BLOCK A

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



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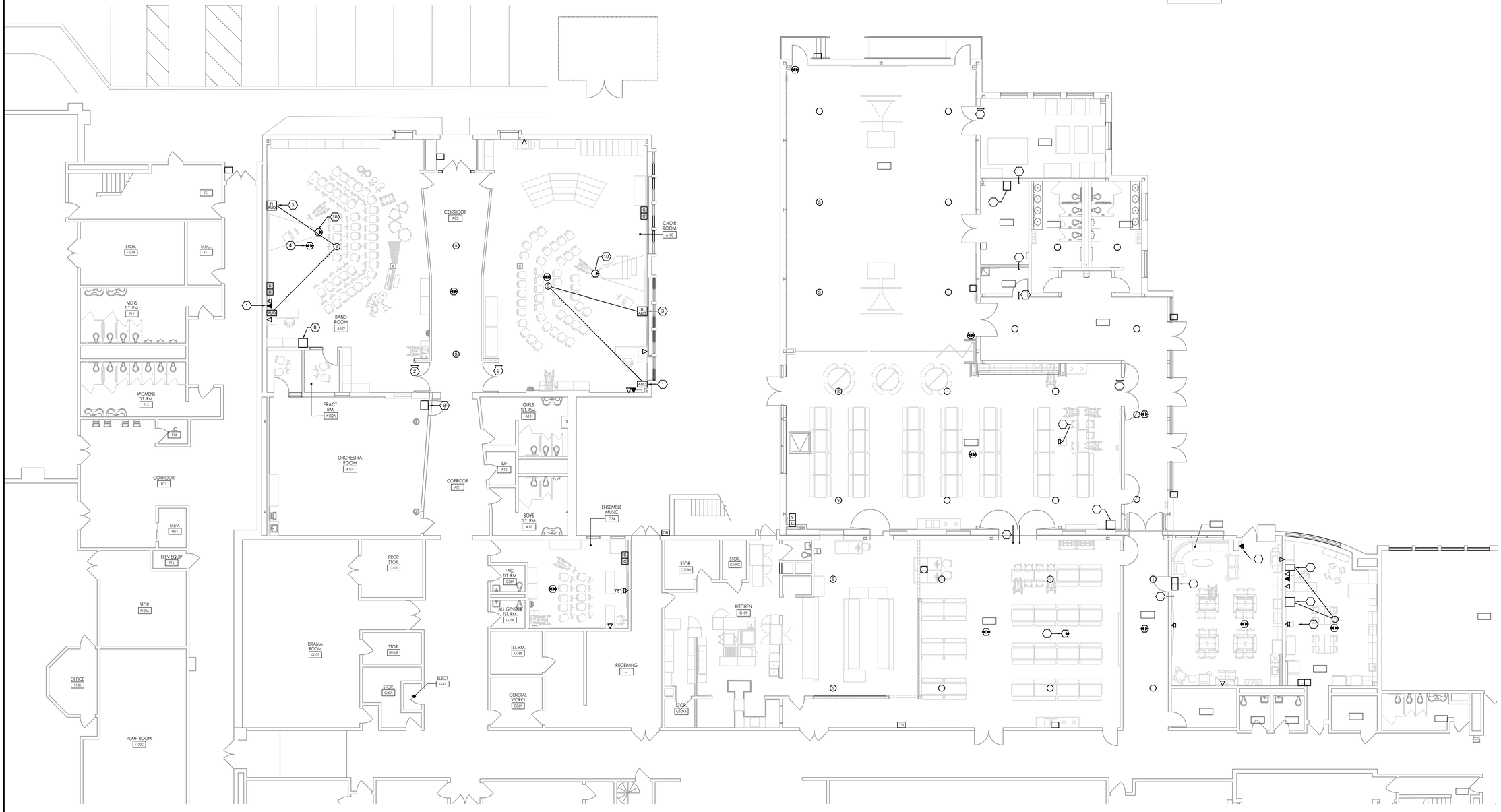


FIRST FLOOR LOW VOLTAGE PLAN - BLOCK B

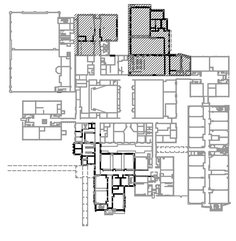
SCALE: 1/8" = 1'-0"

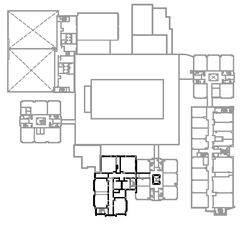
SHEET NOTES

1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. REFER TO SYMBOL LIST ON DRAWING E1.0 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
4. UNLESS SHOWN AS DEMOLITION ON DEMOLITION PLANS, OR AS NEW ON THIS SHEET, EXISTING LOW VOLTAGE DEVICES SHALL BE EXISTING TO REMAIN.

KEY NOTES

1. DATA, TELEPHONE AND HDMI JUNCTION BOX AT TEACHER'S AV CABINET LOCATION. REFER TO SYMBOL LIST.
2. 2" CONDUIT SLEEVE(S) INTO ROOM. PROVIDE QUANTITY AS SHOWN (TYPICAL).
3. LOCAL AUDIO SYSTEM WITH HDMI CABLES TO CEILING TEACHING SPEAKER, REMOTE MICROPHONE WITH VOLUME CONTROL AND SOURCE SETTING, AND SHORT THROW PROJECTOR.
4. CEILING MOUNTED WIRELESS ACCESS (WIFI) ROUTER LOCATION.
5. DATA OUTLET FOR SHORT THROW PROJECTOR MOUNTED 78" AFF (TYPICAL).
6. CLOCK/SPEAKER LOCATION. REFER TO SYMBOL LIST (TYPICAL).
7. TELEPHONE MOUNTED AT 48" AFF (TYPICAL).
8. AUDIO SYSTEM RACK LOCATION.
9. AUDIO SYSTEM RACK LOCATION (ALTERNATE BID).
10. CEILING MOUNTED DATA OUTLET FOR PROJECTOR.





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SHEET NOTES

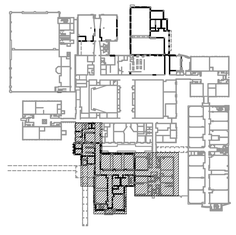
1. DEVICES MARKED "ETR" ARE EXISTING TO REMAIN. DEVICES MARKED "REL" ARE RELOCATED. REFER TO DEMOLITION PLANS FOR ORIGINAL LOCATIONS.
2. UNLESS SHOWN AS NEW OR RELOCTED ON THIS PLAN, ALL OTHER FIRE ALARM DEVICES, PANELS, DETECTORS, ETC. SHALL BE EXISTING TO REMAIN.

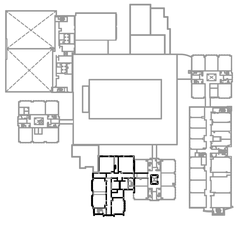
KEY NOTES

1. NEW FIRE ALARM REMOTE ANNUNCIATOR PANEL.
2. EXISTING FIRE ALARM CONTROL PANEL LOCATION.
3. EXISTING STAIRWELL FIRE ALARM DEVICES TO REMAIN.
4. NEW FIRE ALARM EXPANDER PANEL. FIELD COORDINATE EXACT LOCATION WITH THE FIRE ALARM SYSTEM INTEGRATOR.
5. CO DETECTOR TO BE LOCATED AT FIRST AIR OUTLET FROM GAS-FIRED ROOFTOP UNITS. COORDINATE EXACT LOCATIONS WITH THE MECHANICAL CONTRACTOR.
6. COORDINATE EXACT QUANTITIES AND LOCATIONS OF FLOW AND TAMPER SWITCHES WITH THE FIRE PROTECTION SYSTEM SHOP DRAWINGS.

FIRST FLOOR FIRE ALARM PLAN - BLOCK A

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





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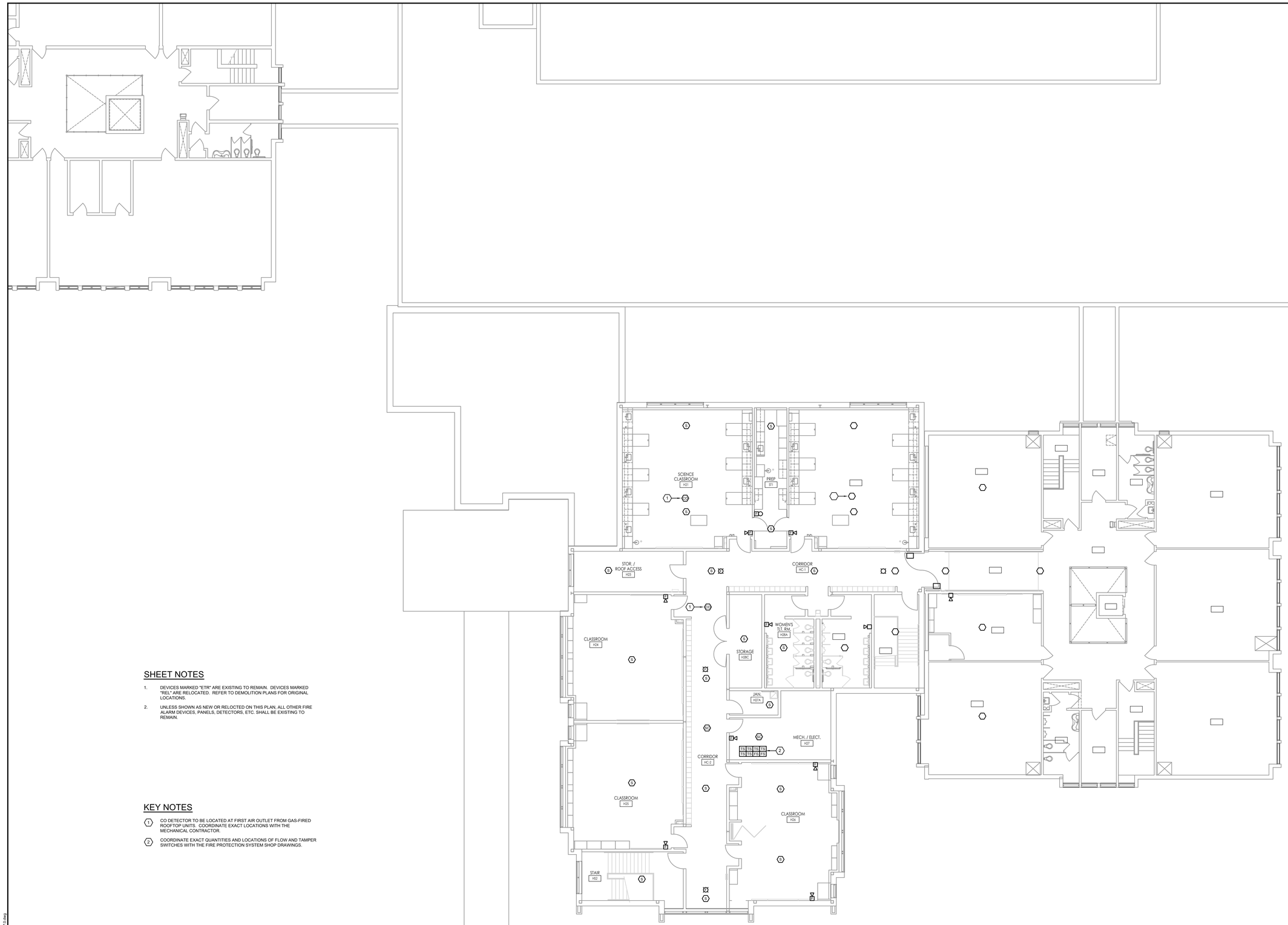


SHEET NOTES

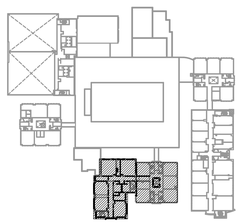
1. DEVICES MARKED "ETR" ARE EXISTING TO REMAIN. DEVICES MARKED "REL" ARE RELOCATED. REFER TO DEMOLITION PLANS FOR ORIGINAL LOCATIONS.
2. UNLESS SHOWN AS NEW OR RELOCTED ON THIS PLAN, ALL OTHER FIRE ALARM DEVICES, PANELS, DETECTORS, ETC. SHALL BE EXISTING TO REMAIN.

KEY NOTES

1. CO DETECTOR TO BE LOCATED AT FIRST AIR OUTLET FROM GAS-FIRED ROOFTOP UNITS. COORDINATE EXACT LOCATIONS WITH THE MECHANICAL CONTRACTOR.
2. COORDINATE EXACT QUANTITIES AND LOCATIONS OF FLOW AND TAMPER SWITCHES WITH THE FIRE PROTECTION SYSTEM SHOP DRAWINGS.

SECOND FLOOR FIRE ALARM PLAN - BLOCK A

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



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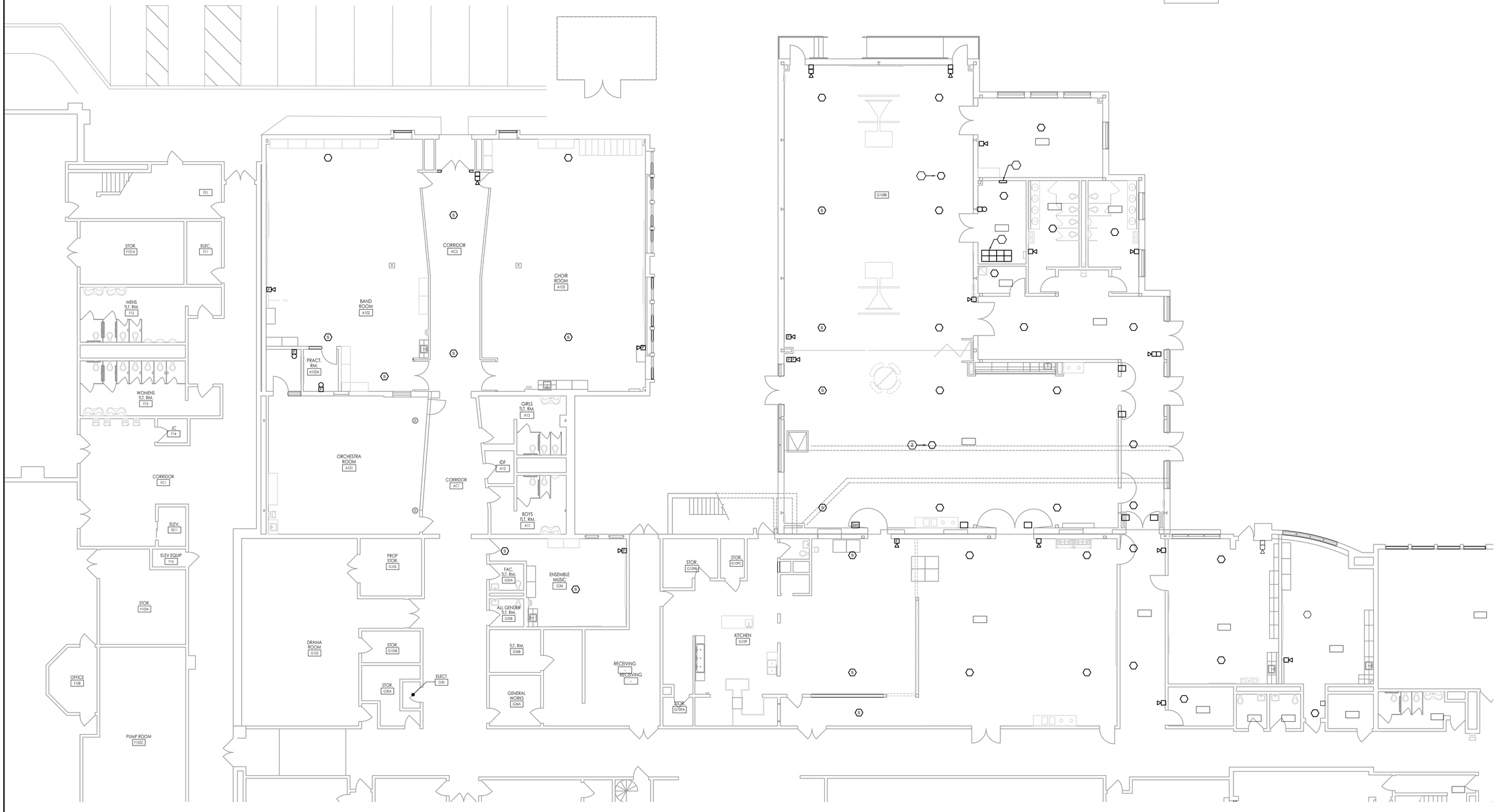


FIRST FLOOR FIRE ALARM PLAN - BLOCK B

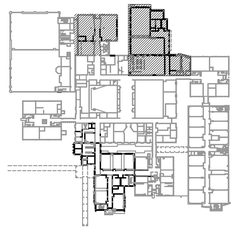
SCALE: 1/8" = 1'-0"

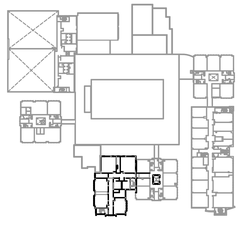
SHEET NOTES

1. DEVICES MARKED "ETR" ARE EXISTING TO REMAIN. DEVICES MARKED "REL" ARE RELOCATED. REFER TO DEMOLITION PLANS FOR ORIGINAL LOCATIONS.
2. UNLESS SHOWN AS NEW OR RELOCTED ON THIS PLAN, ALL OTHER FIRE ALARM DEVICES, PANELS, DETECTORS, ETC. SHALL BE EXISTING TO REMAIN.
3. ALL GYMNASIUM DEVICES SHALL BE PROTECTED WITH A WIREGUARD. ALL WIRELESS ACCESS POINT WIREGUARDS SHALL BE WI-FI COMPATIBLE.

KEY NOTES

1. NEW FIRE ALARM EXPANDER PANEL. FIELD COORDINATE EXACT LOCATION WITH THE FIRE ALARM SYSTEM INTEGRATOR.
2. CO DETECTOR TO BE LOCATED AT FIRST AIR OUTLET FROM GAS-FIRED ROOFTOP UNITS. COORDINATE EXACT LOCATIONS WITH THE MECHANICAL CONTRACTOR.
3. COORDINATE EXACT QUANTITIES AND LOCATIONS OF FLOW AND TAMPER SWITCHES WITH THE FIRE PROTECTION SYSTEM SHOP DRAWINGS.





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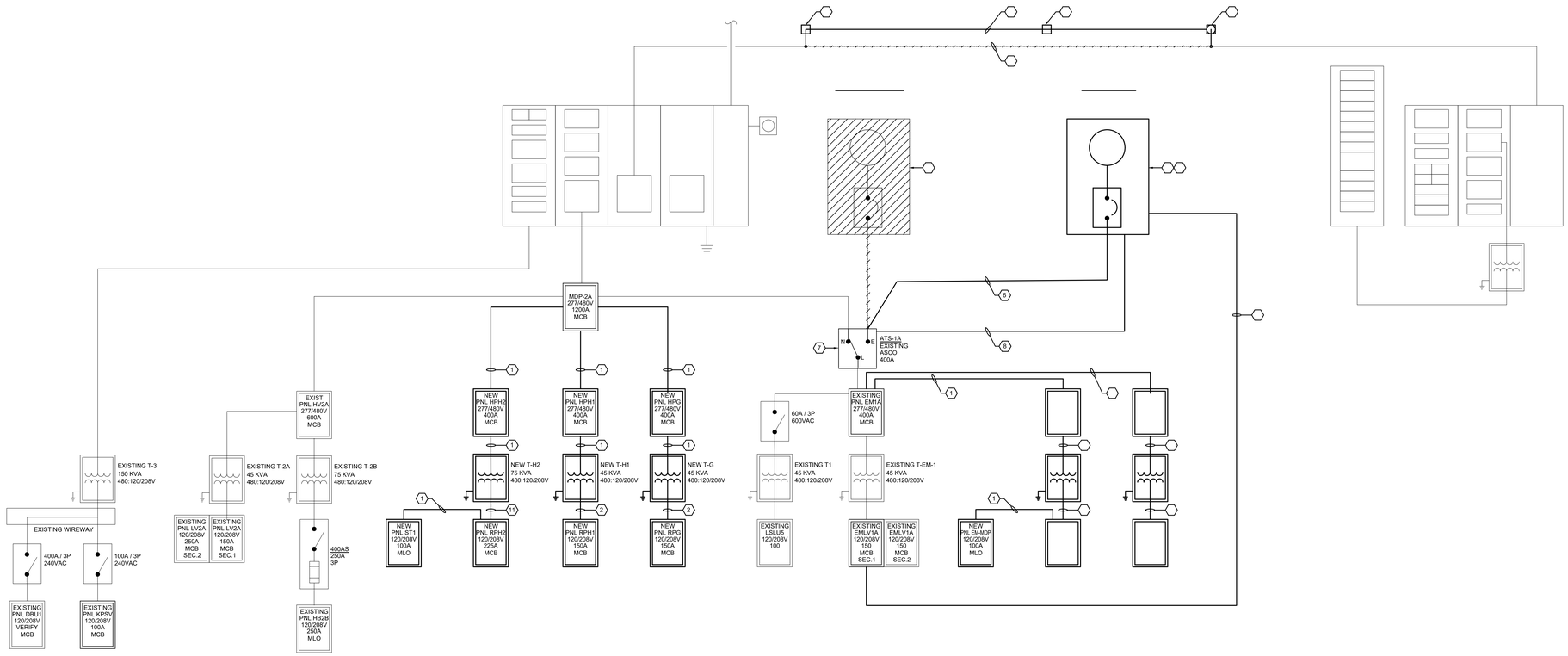

LINETYPE LEGEND	
	DEMOLITION
	EXISTING
	EXISTING (MODIFED)
	NEW

ONE LINE DIAGRAM - NEW DISTRIBUTION AND PARTIAL EXISTING

NOT TO SCALE

KEY NOTES

1. SEE PANEL SCHEDULES
2. 4#1/0 & 1#6 EG IN 2" EMT CONDUIT.
3. 4#6 & 1#10 EG IN 1 1/4" EMT CONDUIT.
4. NEW 250 KVA GENERATOR AT NEW LOCATION. BASIS OF DESIGN IS KOHLER MODEL #250REZXB OR APPROVED EQUAL.
5. EXISTING GENERATOR TO BE DISCONNECTED, REMOVED AND TURNED OVER TO THE OWNER AFTER INSTALLATION OF NEW GENERATOR.
6. 4#600 KCMIL & 1#3 EG IN 4" EMT CONDUIT FROM GENERATOR TO EXISTING ATS IN BASEMENT.
7. EXISTING ASCO 3-POLE, OPEN TRANSITION AUTOMATIC TRANSFER SWITCH TO REMAIN.
8. PROVIDE 1" EMPTY CONDUIT WITH DRAG LINE FOR USE BY THE GENERATOR VENDOR FOR CONTROL WIRING, ETC.
9. POWER FOR GENERATOR BLOCK HEATER, ALTERNATOR STRIP HEATER AND BATTERY CHARGER. REFER TO PANEL SCHEDULES.
10. 4#3 & 1#8EG IN 1 1/2" EMT CONDUIT.
11. 4#4/0 & 1#4EG IN 2 1/2" EMT CONDUIT
12. NEW PULLBOX SIZED PER NEC.
13. EXISTING CONDUIT AND FEEDERS TO BLOCK 'E' SWITCHBOARD TO BE INTERCEPTED AND REROUTED THROUGH NEW PIPE TUNNEL.
14. FIVE (5) SETS OF 4#600 KCMIL & 1#600 KCMIL EG EACH IN 4" CONDUIT TO MATCH EXISTING FEEDERS. FIELD VERIFY EXACT CONDUIT AND FEEDER SIZES.
15. NEW HANDHOLE SIZED PER NEC.
16. PROVIDE GENERATOR REMOTE EMERGENCY-STOP SWITCH WITH DUAL ACTION SOUNDING COVER AND LABELED "EMERGENCY GENERATOR SHUT-DOWN". REFER TO DRAWING E3.2 FOR LOCATION.

SHEET NOTES

1. THE CONTRACTOR SHALL COORDINATE ALL ELECTRIC SERVICE SHUTDOWNS WITH THE OWNER AT LEAST SEVEN (7) DAYS PRIOR TO THE SHUTDOWN. ALL SHUTDOWN WORK SHALL BE PERFORMED ON WEEKENDS.
2. UNLESS NOTED OTHERWISE OR SHOWN AS NEW, ALL PANELS, CIRCUIT BREAKERS, WIRING AND CONDUIT SHALL BE EXISTING TO REMAIN.
3. UNLESS NOTED OTHERWISE, REFER TO PANEL SCHEDULES FOR CONDUIT AND FEEDER SIZES.

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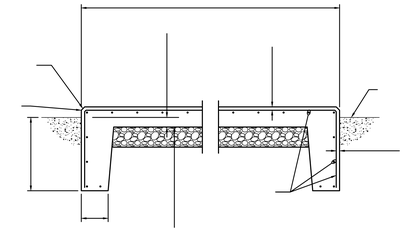
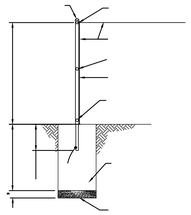
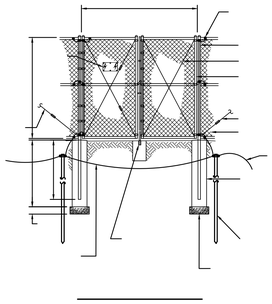
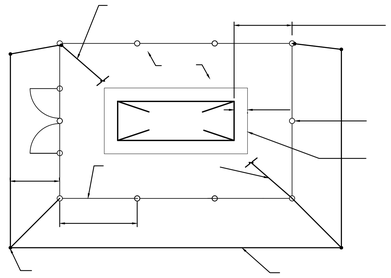


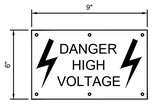
GENERATOR MOUNTING PAD
NOT TO SCALE



FENCE FOOTING GROUNDING
NOT TO SCALE



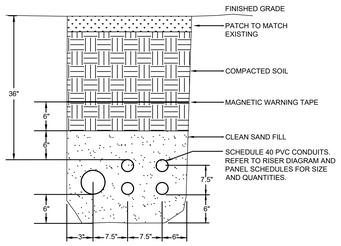




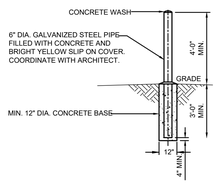
PERMANENTLY (VANDAL-PROOF) ATTACH SIGNS TO ALL SIDES OF FENCE AROUND EQUIPMENT, AT ELEVATION OF 5'-0" ABOVE GRADE. DISTANCE BETWEEN SIGNS NOT TO EXCEED 20'-0".

DANGER SIGN
NOT TO SCALE

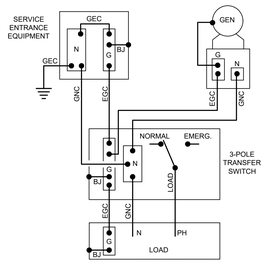
GENERATOR ENCLOSURE AREA FENCE, GATE & GROUNDING DETAILS
NOT TO SCALE



TYPICAL DIRECT BURIED CONDUIT DETAIL
NOT TO SCALE



TYPICAL BOLLARD / BUMPER DETAIL
NOT TO SCALE



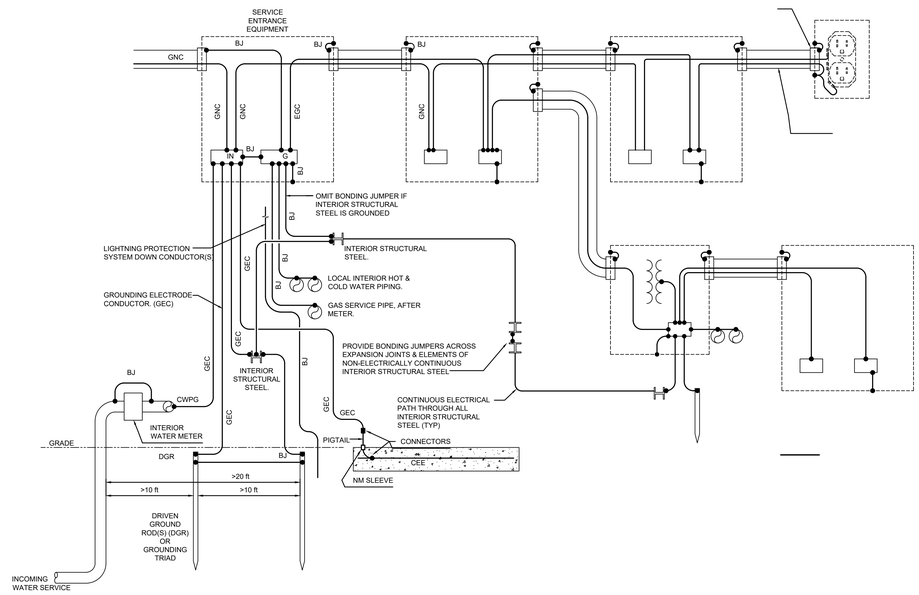
LEGEND

BJ	=	BONDING JUMPER
EGC	=	EQUIPMENT GROUNDING CONDUCTOR
G	=	GROUND BLOCK
GEC	=	GROUNDING ELECTRODE CONDUCTOR
GNC	=	GROUNDED NEUTRAL CONDUCTOR
N	=	NEUTRAL BLOCK
PH	=	PHASE CONDUCTORS

NOTES:

1. DETAIL IS TYPICAL AND IS INTENDED TO ILLUSTRATE METHODS OF GROUNDING AND BONDING OF ELECTRICAL DISTRIBUTION SYSTEM COMPONENTS.
2. BONDING JUMPERS (BJ), GROUNDING ELECTRODE CONDUCTORS (GEC), GROUNDED NEUTRAL CONDUCTORS (GNC), AND EQUIPMENT GROUNDING CONDUCTORS (EGC) SHALL ALL BE INSULATED. BONDING JUMPERS (BJ) MAY BE BARE WHEN WITHIN AN ENCLOSURE OR LESS THAN 6'-0" IN LENGTH. INSULATION COLORS SHALL BE AS FOLLOWS:
   a. BJ: GREEN
   b. GEC: GREEN
   c. GNC: WHITE
   d. EGC: GREEN
3. REFER TO NATIONAL ELECTRICAL CODE "GROUNDING ELECTRODE CONDUCTORS" TABLE (2008 NEC 250.66) AND "EQUIPMENT GROUNDING CONDUCTORS" TABLE (CURRENT ADOPTED NEC 250.122) FOR SIZING OF GROUNDING AND BONDING CONDUCTORS INDICATED ABOVE.

NON SEPARATELY DERIVED GENERATOR SYSTEM WITH 3-POLE ATS
NOT TO SCALE



TYPICAL GROUNDING AND BONDING DETAIL
NOT TO SCALE

NOTES:

1. DETAIL IS TYPICAL AND IS INTENDED TO ILLUSTRATE METHODS OF GROUNDING AND BONDING OF ELECTRICAL DISTRIBUTION SYSTEM COMPONENTS.
2. METHODS OF ESTABLISHING THE GROUNDING ELECTRODE SHALL BE BY MEANS OF ONE OF THE COMBINATIONS OF GROUNDING ELECTRODE CONDUCTORS AND GROUNDING ELECTRODES INDICATED IN THE DETAIL.
3. BONDING JUMPERS (BJ), GROUNDING ELECTRODE CONDUCTORS (GEC), GROUNDED NEUTRAL CONDUCTORS (GNC), AND EQUIPMENT GROUNDING CONDUCTORS (EGC) SHALL ALL BE INSULATED. BONDING JUMPERS (BJ) MAY BE BARE WHEN WITHIN AN ENCLOSURE OR LESS THAN 6'-0" IN LENGTH. INSULATION COLORS SHALL BE AS FOLLOWS:
   a. BJ: GREEN
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   d. EGC: GREEN
4. REFER TO NATIONAL ELECTRICAL CODE "GROUNDING ELECTRODE CONDUCTORS" TABLE (2014 NEC 250.66) AND "EQUIPMENT GROUNDING CONDUCTORS" TABLE (2014 NEC 250.122) FOR SIZING OF GROUNDING AND BONDING CONDUCTORS INDICATED ABOVE.
5. BONDING JUMPER IS NOT REQUIRED FOR RECEPTACLES IF U.L. LISTED AUTO-GROUND WIRING DEVICES ARE USED.
6. BONDING JUMPER IS NOT REQUIRED IF U.L. LISTED AND APPROVED BONDING LOCKNUTS OR BUSHINGS AND NONMETALLIC RACEWAYS AND/OR BOXES ARE USED
7. ELECTRICALLY CONTINUOUS METAL BAR JOISTS IN MASONRY CONSTRUCTION SHALL BE BONDED TO THE SERVICE ENTRANCE EQUIPMENT ENCLOSURE OR TO INTERIOR, GROUNDED, STRUCTURAL STEEL IN OTHER PORTIONS OF THE BUILDING.
8. CONCRETE ENCASED ELECTRODE SHALL BE ELECTRICALLY CONDUCTIVE ALONG ITS ENTIRE LENGTH. PIGTAIL SHALL BE SAME SIZE AND MATERIAL AS GROUNDING ELECTRODE CONDUCTOR. COORDINATE INSPECTION OF PIGTAIL, SLEEVE AND CONNECTION TO ELECTRODE WITH AUTHORITY HAVING JURISDICTION.

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EXISTING MAIN MDS SECTION #D1

PRINCETON MIDDLE SCHOOL — (EXISTING) — JOB: NO.: 23463.003
RATING: 480/277V, 3 PH, 4W, 4000A — LOCATION: MAIN ELECTRIC ROOM

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	EXISTING LOAD	3		400	EXISTING	0.0	0.0	0.0						
2	EXISTING PANEL USPA	3		600	EXISTING	0.0	0.0	0.0						
3	EXISTING PANEL MP-U5	3		400	EXISTING	0.0	0.0	0.0						
4	**EXISTING MDP-2A**	**3**	**167.3 174.0 151.4**	**1200**	**EXISTING**	167.3	174.0	151.4						
5	**EXISTING SERVICE HIGHEST PEAK DEMAND KW**	**3**	**269.4 269.4 269.4**			269.4	269.4	269.4						
	PANEL TYPE: NEMA 1				TOTAL (PHASE)	453.5	470.7	458.1						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 4000A
INTERRUPTING RATING: 65KA SYM.
FED FROM: UTILITY COMPANY TRANSFORMER

TOTAL CONNECTED LOAD: 1392.7 KVA
1677.1 AMPS

NOTES
1. EXISTING 2000A SQUARE D QED SWITCHBOARD SECTION.
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANEL MANUFACTURER AND SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES

EXISTING MAIN MDS SECTION #D2

PRINCETON MIDDLE SCHOOL — (EXISTING) — JOB: NO.: 23463.003
RATING: 480/277V, 3 PH, 4W, 4000A — LOCATION: MAIN ELECTRIC ROOM

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	EXISTING PANEL MLRP IN CLOSET B101 VIA TRANSFORMER	3		100	EXISTING	0.0	0.0	0.0	EXISTING	100		3	EXISTING PANEL USE (OLD GYM)	2
3	EXISTING PANEL USA	3		200	EXISTING	0.0	0.0	0.0						
4	EXISTING PANEL USC	3		400	EXISTING	0.0	0.0	0.0						
5	EXISTING PANELS KP-SV & DB-U1 VIA TRANSFORMER T3	3		400	EXISTING	0.0	0.0	0.0						
6	EXISTING PANEL USB (ROOM G24)	3		200	EXISTING	0.0	0.0	0.0						
7	**EXISTING PANEL USD**	**3**	**27.3 27.3 27.3**	**200**	**EXISTING**	27.3	27.3	27.3						
	PANEL TYPE: NEMA 1				TOTAL (PHASE)	27.3	27.3	27.3						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 4000A
INTERRUPTING RATING: 65KA SYM.
FED FROM: UTILITY COMPANY TRANSFORMER

NOTES
1. EXISTING 2000A SQUARE D QED SWITCHBOARD SECTION.
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANEL MANUFACTURER AND SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES

EXISTING MDP-2A

PRINCETON MIDDLE SCHOOL — (EXISTING) — JOB: NO.: 23463.003
RATING: 480/277V, 3 PH, 4W, 1200A — LOCATION: MAIN ELECTRIC ROOM

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
	MAIN CIRCUIT BREAKER	3		1200		0.0	0.0	0.0						
2	**NEW PANEL HPH1 (H WING MECH / ELEC RM H10)**	**3**	**55.1 60.5 48.4**	**400**	**400 MCM & 1#3EG IN 4"C**	55.1	60.5	48.4	EXISTING	125		3	EXISTING PANEL LP1A	2
3	**NEW PANEL HPH2 (H WING MECH / ELEC RM H10)**	**3**	**56.5 56.1 54.7**	**400**	**600 MCM & 1#3EG IN 4"C**	112.1	113.5	93.0	**400 MCM & 1#3EG IN 4"C**	**400**	**56.6 57.5 58.3**	**3**	**NEW PANEL HPG (G WING MECH/ELEC RM G108D)**	**4**
5	EXISTING PANEL EM-1A VIA ATS-1A	3		400	EXISTING	0.0	0.0	0.0	EXISTING	400		3	EXISTING PANEL HV-1A	6
7	EXISTING PANEL HV-2A	3		600	EXISTING	0.0	0.0	0.0						
8	EXISTING PANEL LVDP-1A VIA TRANSFORMER LVDP-1A	3		500	EXISTING	0.0	0.0	0.0						
	PANEL TYPE: NEMA 1				TOTAL (PHASE)	167.3	174.0	151.4						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 1200A
INTERRUPTING RATING: 65KA SYM.
FED FROM: MAIN DISTRIBUTION SWITCHBOARD

NOTES
1. EXISTING EATON POW-R-LINE
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANEL MANUFACTURER AND SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPAIRES AND SPACES

EXISTING PANEL PPAC

PRINCETON MIDDLE SCHOOL — (EXISTING) — JOB: NO.: 23463.003
RATING: 208/120V, 3 PH, 4W, 225A — LOCATION: 2ND FLOOR CORR C2

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1														2
3	EXISTING LOAD	3		35	EXISTING	0.0	0.0	0.0	EXISTING	35		3	EXISTING LOAD	4
5														6
7	EXISTING LOAD	3		35	EXISTING	0.0	0.0	0.0	EXISTING	35		3	EXISTING LOAD	8
9														10
11														12
13	EXISTING LOAD	2		15	EXISTING	0.0	0.0		EXISTING	15		2	EXISTING LOAD	14
15														16
17	EXISTING LOAD	2		30	EXISTING	0.0	0.0		EXISTING	20		1	EXISTING LOAD	18
19									EXISTING	20		1	EXISTING LOAD	20
21	EXISTING LOAD	1		20	EXISTING	0.0	0.0		EXISTING	20		1	EXISTING LOAD	22
23	EXISTING LOAD	1		15	EXISTING	0.0	0.0		EXISTING	15		1	EXISTING LOAD	24
25	EXISTING LOAD	1		15	EXISTING	0.0	0.0		EXISTING	15		1	EXISTING LOAD	26
27	EXISTING LOAD	1		15	EXISTING	0.0	0.0		EXISTING	15		1	EXISTING LOAD	28
29	EXISTING LOAD	1		20	EXISTING	0.0	0.0		EXISTING	20		1	EXISTING LOAD	30
31	**NEW EWC & RECEPTACLES**	**1**	**0.8**	**20**	**2#12 & 1#12EG IN 3/4"C**	0.8			EXISTING	35		3	EXISTING LOAD	32
33	**NEW AV CABINET QUAD**	**1**	**0.4**	**20**	**2#12 & 1#12EG IN 3/4"C**		0.4							34
35	**NEW RECEPTACLES**	**1**	**1.1**	**20**	**2#12 & 1#12EG IN 3/4"C**			1.1						36
37	SPARE	1		20		0.0			EXISTING	35		3	EXISTING LOAD	38
39	SPARE	1		20			0.0	0.0						40
41	SPARE	1		20										42
	PANEL TYPE: NEMA 1				TOTAL (PHASE)	0.8	0.4	1.1						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 225A
INTERRUPTING RATING: EXISTING KA SYM.
FED FROM: EXISTING PANEL USPB

NOTES
1. EXISTING SQUARE D NQOD PANEL.
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANEL MANUFACTURER AND SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES

EXISTING PANEL KP-SV

PRINCETON MIDDLE SCHOOL — (EXISTING) — JOB: NO.: 23463.003
RATING: 208/120V, 3 PH, 4W, 100A — LOCATION: SERVING LINE

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	EXISTING LOAD	1		20	EXISTING	1.1			**2#12 & 1#12EG IN 3/4"C**	**20**	**1.1**	**1**	**MOTORIZED COILING DOORS**	2
3	EXISTING LOAD	1		20	EXISTING		0.0		EXISTING	20		1	EXISTING LOAD	4
5	EXISTING LOAD	1		20	EXISTING			0.0						6
7	EXISTING LOAD	1		20	EXISTING	0.0			EXISTING	20		1	EXISTING LOAD	8
9	EXISTING LOAD	1		20	EXISTING		0.0		EXISTING	20		1	EXISTING LOAD	10
11	EXISTING LOAD	1		20	EXISTING			0.0	EXISTING	20		1	EXISTING LOAD	12
13	**CASHIER REEL CORD**	**1**	**0.4**	**20**	**2#12 & 1#12EG IN 3/4"C**	0.4			EXISTING	20		1	EXISTING LOAD	14
15	EXISTING LOAD	1		20	EXISTING		0.0		EXISTING	20		1	EXISTING LOAD	16
17	EXISTING LOAD	1		20	EXISTING			0.0	EXISTING	20		1	EXISTING EWC	18
19	**MILK COOLER**	**1**	**1.2**	**20**	**2#12 & 1#12EG IN 3/4"C**	1.2			EXISTING	20		2	EXISTING STEAM TABLE	20
21	**OPEN DISPLAY CASE**	**1**	**1.6**	**20**	**2#12 & 1#12EG IN 3/4"C**		1.6							22
23	**OPEN DISPLAY CASE**	**1**	**1.6**	**20**	**2#12 & 1#12EG IN 3/4"C**			2.7	**2#12 & 1#12EG IN 3/4"C**	**20**	**1.1**	**1**	**RELOCATED ICE MACHINE**	24
25						0.0				30		1	SPARE	26
27	EXISTING FREEZER	3		20	EXISTING		0.0			30		1	SPARE	28
29								0.0		30		1	SPARE	30
	MAIN CIRCUIT BREAKER	3		100	EXISTING	0.0	0.0	0.0						
	PANEL TYPE: NEMA 1				TOTAL (PHASE)	2.6	1.6	2.7						

MOUNTING: SURFACE
MAIN LUGS ONLY
INTERRUPTING RATING: EXISTING KA SYM.
FED FROM: EXITING BLOCK B MIDS- SECTION D2

NOTES
1. EXISTING SQUARE D NQOD PANELBOARD.
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANEL MANUFACTURER AND SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES

NEW PANEL HPG

PRINCETON MIDDLE SCHOOL — (NEW) — JOB: NO.: 23463.003
RATING: 480/277V, 3 PH, 4W, 400A — LOCATION: MECH-ELEC G108D

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1			13.7			26.7					11.0			2
3	PANEL RPG VIA 45 KVA TRANSFORMER T-G	3	16.6	70	**4#4 & 1#6EG IN 1-1/4"C**		27.6		**4#6 & 1#10EG IN 1-1/4"C**	60	11.0	3	ENERGY RECOVERY ERU-1	4
5			17.4					28.4			11.0			6
7			4.5			8.9					4.4			8
9	WATER HEATER WHI-3	3	4.5	25	**4#10 & 1#10EG IN 3/4"C**		8.9		**4#10 & 1#10EG IN 3/4"C**	25	4.4	3	ROOFTOP UNIT RTU-G2	10
11			4.5					8.9			4.4			12
13	SPARE	1		20	2#12 & 1#12EG IN 3/4"C	4.4					4.4			14
15	SPARE	1		20	2#12 & 1#12EG IN 3/4"C		4.4		**4#6 & 1#10EG IN 1"C**	50	4.4	3	ROOFTOP UNIT RTU-G10BA	16
17	SPARE	1		20	2#12 & 1#12EG IN 3/4"C			4.4			4.4			18
19	SPARE	1		20	2#12 & 1#12EG IN 3/4"C	5.1					5.1			20
21	SPARE	1		20	2#12 & 1#12EG IN 3/4"C		5.1		**4#10 & 1#10EG IN 3/4"C**	25	5.1	3	ROOFTOP UNIT RTU-G33	22
23	SPARE	1		20	2#12 & 1#12EG IN 3/4"C			5.1			5.1			24
25	SPARE	1		20	2#12 & 1#12EG IN 3/4"C	5.0			**2#10 & 1#10EG IN 3/4"C**	30	5.0	1	UNIT HEATER EUH-B	26
27	SPARE	1		20	2#12 & 1#12EG IN 3/4"C		3.8		**2#12 & 1#12EG IN 3/4"C**	20	3.8	1	CABINET HEATER ECH-A	28
29	SPARE	1		20	2#12 & 1#12EG IN 3/4"C			3.8	**2#12 & 1#12EG IN 3/4"C**	20	3.8	1	CABINET HEATER ECH-A	30
31	SPARE	1		20	2#12 & 1#12EG IN 3/4"C	3.8			**2#12 & 1#12EG IN 3/4"C**	20	3.8	1	CABINET HEATER ECH-A	32
33	SPARE	1		20	2#12 & 1#12EG IN 3/4"C		5.0		**2#10 & 1#10EG IN 3/4"C**	30	5.0	1	CABINET HEATER ECH-B	34
35	SPARE	1		20	2#12 & 1#12EG IN 3/4"C			5.0	**2#10 & 1#10EG IN 3/4"C**	30	5.0	1	CABINET HEATER ECH-B	36
37	SPARE	1		20	2#12 & 1#12EG IN 3/4"C	2.6					2.6			38
39	SPARE	1		20	2#12 & 1#12EG IN 3/4"C		2.6		**4#12 & 1#12EG IN 3/4"C**	15	2.6	3	MUSIC G34 UV-B	40
41	SPARE	1		20	2#12 & 1#12EG IN 3/4"C			2.6			2.6			42
	PANEL TYPE: NEMA 1				TOTAL (PHASE)	56.6	57.6	56.3						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 300A
INTERRUPTING RATING: 65KA SYM.
FED FROM: EXISTING PANEL MDP-2A

TOTAL CONNECTED LOAD: 172.4 KVA
207.6 AMPS

NOTES
1. ALL NEW PANELS SHALL BE FURNISHED WITH INTEGRAL SURGE PROTECTION.
2. ALL BUSING TO BE COPPER WITH BOLT ON CIRCUIT BREAKERS.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

NEW PANEL RPG

PRINCETON MIDDLE SCHOOL — (NEW) — JOB: NO.: 23463.003
RATING: 208/120V, 3 PH, 4W, 225A — LOCATION: MECH-ELEC G108D

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	0.56 KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	GYM RECEPTACLES	1	0.7	20	2#12 & 1#12EG IN 3/4"C	1.7			2#12 & 1#12EG IN 3/4"C	20	1.0	1	MOTORIZED SHADES	2
3	GYM RECEPTACLES	1	0.9	20	2#12 & 1#12EG IN 3/4"C		1.9		2#12 & 1#12EG IN 3/4"C	20	1.0	1	MOTORIZED SHADES	4
5	EWC & RECEPTACLES	1	1.4	20	2#12 & 1#12EG IN 3/4"C			2.0	2#12 & 1#12EG IN 3/4"C	20	0.6	1	MOTORIZED SHADES	6
7	MOTORIZED BACKSTOPS	1	1.4	20	2#12 & 1#12EG IN 3/4"C	2.0			2#12 & 1#12EG IN 3/4"C	20	0.6	1	MOTOR SHADES / CTRL PNL	8
9	MOTORIZED BACKSTOPS	1	1.4	20	2#12 & 1#12EG IN 3/4"C		1.9		2#12 & 1#12EG IN 3/4"C	20	0.5	1	SHADE CONTROL PANEL	10
11	PORTER GYM CONTROL RELAY	1	1.0	20	2#12 & 1#12EG IN 3/4"C			2.2	2#12 & 1#12EG IN 3/4"C	20	1.2	1	MICROWAVE	12
13	PORTER GYM CONTROL RELAY	1	1.0	20	2#12 & 1#12EG IN 3/4"C	1.7			2#12 & 1#12EG IN 3/4"C	20	0.7	1	RECEPTACLES	14
15	MOTORIZED ROOM DIVIDER	1	1.4	20	2#12 & 1#12EG IN 3/4"C		2.2		2#12 & 1#12EG IN 3/4"C	20	0.8	1	UC REFRIGERATOR	16
17	CAFETERIA RECEPT	1	0.9	20	2#12 & 1#12EG IN 3/4"C			1.4	2#12 & 1#12EG IN 3/4"C	20	0.5	1	RECEPTACLES	18
19	CAFETERIA RECEPT	1	0.9	20	2#12 & 1#12EG IN 3/4"C	1.5			2#12 & 1#12EG IN 3/4"C	20	0.4	1	PROJECTOR & SCREEN	20
21	RECEPTACLES	1	1.1	20	2#12 & 1#12EG IN 3/4"C		2.3		2#12 & 1#12EG IN 3/4"C	20	1.2	1	MICROWAVE	22
23	COPIER	1	1.0	20	2#12 & 1#12EG IN 3/4"C			1.9	2#12 & 1#12EG IN 3/4"C	20	0.9	1	RECEPTACLES	24
25	RECEPTACLES	1	0.4	20	2#12 & 1#12EG IN 3/4"C	1.3			2#12 & 1#12EG IN 3/4"C	20	0.9	1	WASHING MACHINE	26
27	MICROWAVE	1	1.0	20	2#12 & 1#12EG IN 3/4"C		1.4		2#12 & 1#12EG IN 3/4"C	20	0.4	1	IRON RECEPTACLE	28
29	MICROWAVE	1	1.0	20	2#12 & 1#12EG IN 3/4"C			1.4	2#12 & 1#12EG IN 3/4"C	20	0.4	1	AV CABINET QUAD	30
31	REFRIGERATOR	1	1.2	20	2#12 & 1#12EG IN 3/4"C	1.7			2#12 & 1#12EG IN 3/4"C	20	0.5	1	GFI RECEPTACLES	32
33	DISHWASHER W/ GFI (EKR)	1	1.0	20	2#12 & 1#12EG IN 3/4"C		2.1		2#12 & 1#12EG IN 3/4"C	20	0.7	1	REFRIGERATOR	34
35	ELECTRIC DRYER	2	2.5	30	3#10 & 1#10EG IN 3/4"C			3.2	2#12 & 1#12EG IN 3/4"C	20	0.7	1	ROOFTOP RECEPTACLES	36
37	(SPLIT BUS)	2	2.5			3.0			2#12 & 1#12EG IN 3/4"C	20	0.7	1	EXHAUST FAN EF-4	38
39	ELECTRIC RANGE	2	2.5	30	3#10 & 1#10EG IN 3/4"C		5.2		2#12 & 1#12EG IN 3/4"C	20	0.7	1	EXHAUST FAN EF-5	40
41		2	2.5					3.2	2#12 & 1#12EG IN 3/4"C	20	0.7	1	EXHAUST FAN EF-6	42
43	ATC PANEL	1	0.5	20	2#12 & 1#12EG IN 3/4"C	1.2			2#12 & 1#12EG IN 3/4"C	20	0.7	1	FUTURE RADON FANS	44
45	SPARE	1		20			0.3		2#12 & 1#12EG IN 3/4"C	20	0.1	1	HWR-2 PUMP	46
47	SPARE	1		20				0.3	2#12 & 1#12EG IN 3/4"C	20	0.3	1	VAV BOXES & MOD	48
49	SPARE	1		20		0.6			2#12 & 1#12EG IN 3/4"C	20	0.6	1	EF-10 & UHA	50
51	SPARE	1		20			1.3				1.3			52
53	SPARE	1		20				1.3	4#12 & 1#12EG IN 1/4"C	20	1.3	3	UNIT HEATER EUH-A	54
55	SPARE	1		20		1.3					1.3			56
57	SPARE	1		20			0.6				0.6			58
59	SPARE	1		20				0.6	3#12 & 1#12EG IN 3/4"C	20	0.6	2	PUMP P-6	60
	PANEL TYPE: NEMA 1				TOTAL (PHASE)	15.7	16.6	17.4						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 150A
INTERRUPTING RATING: 65KA SYM.
FED FROM: NEW PANEL HPG

TOTAL CONNECTED LOAD: 49.8 KVA
138.3 AMPS

NOTES
1. SINGLE SECTION PANELBOARD. ALL NEW PANELBOARDS SHALL BE PROVIDED WITH INTEGRAL SURGE PROTECTION.
2. ALL BUSSING SHALL BE COPPER WITH BOLT ON BREAKERS ONLY
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

NEW PANEL ST1

PRINCETON MIDDLE SCHOOL — (NEW) — JOB: NO.: 23463.003
RATING: 208/120V, 3 PH, 4W, 100A — LOCATION: PREP ROOM ST1

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	LAB H21 RECEPTACLES	1	0.4	20	2#12 & 1#12EG IN 3/4"C	0.7			2#12 & 1#12EG IN 3/4"C	20	0.4	1	LAB H20 RECEPTACLES	2
3	LAB H21 RECEPTACLES	1	0.4	20	2#12 & 1#12EG IN 3/4"C		0.9		2#12 & 1#12EG IN 3/4"C	20	0.5	1	LAB H20 RECEPTACLES	4
5	LAB H21 RECEPTACLES	1	0.5	20	2#12 & 1#12EG IN 3/4"C			1.0	2#12 & 1#12EG IN 3/4"C	20	0.5	1	LAB H20 RECEPTACLES	6
7	LAB H21 RECEPTACLES	1	0.5	20	2#12 & 1#12EG IN 3/4"C	1.1			2#12 & 1#12EG IN 3/4"C	20	0.5	1	LAB H20 RECEPTACLES	8
9	LAB H21 RECEPTACLES	1	0.4	20	2#12 & 1#12EG IN 3/4"C		0.7		2#12 & 1#12EG IN 3/4"C	20	0.4	1	LAB H20 RECEPTACLES	10
11	LAB H21 RECEPTACLES	1	0.5	20	2#12 & 1#12EG IN 3/4"C			0.9	2#12 & 1#12EG IN 3/4"C	20	0.4	1	LAB H20 RECEPTACLES	12
13	LAB H21 RECEPTACLES	1	0.5	20	2#12 & 1#12EG IN 3/4"C	1.0			2#12 & 1#12EG IN 3/4"C	20	0.5	1	LAB H20 RECEPTACLES	14
15	PREP ROOM RECEPT	1	0.5	20	2#12 & 1#12EG IN 3/4"C		0.5		SPARE				SPARE	16
17	FUME HOOD	1	1.9	20	2#12 & 1#12EG IN 3/4"C			1.9	SPARE				SPARE	18
19	GLASS WASHER	1	1.2	20	2#12 & 1#12EG IN 3/4"C	1.2			SPARE				SPARE	20
21	REFRIGERATOR	1	0.9	20	2#12 & 1#12EG IN 3/4"C		0.9		2#12 & 1#12EG IN 3/4"C	20		1	SPARE	22
23	WASHER / DRYER UNIT	1	1.2	20	2#12 & 1#12EG IN 3/4"C			1.2	2#12 & 1#12EG IN 3/4"C	20		1	SPARE	24
	PANEL TYPE: NEMA 1				TOTAL (PHASE)	4.0	3.1	5.0						

MOUNTING: SURFACE
MAIN LUGS ONLY
INTERRUPTING RATING: 65KA SYM.
FED FROM: NEW PANEL RPHG

TOTAL CONNECTED LOAD: 12.1 KVA
33.5 AMPS

NOTES
1. ALL NEW PANELS SHALL BE FURNISHED WITH INTEGRAL SURGE PROTECTION
2. ALL BUSSING TO BE COPPER WITH BOLT ON BREAKERS ONLY. ALL BREAKERS SHALL BE GFCI TYPE
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANEL MANUFACTURER AND SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.
6. PROVIDE SHUNT TRIP RELAYS TO SHUT DOWN CIRCUITS UPON ACTIVATION OF THE EMERGENCY POWER OFF PUSHBUTTONS.

EXISTING PANEL U5D

PRINCETON MIDDLE SCHOOL — (EXISTING) — JOB: NO.: 23463.003
RATING: 480/277V, 3 PH, 4W, 225A — LOCATION: ELECTRIC G30

CKT NO	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO
1	EXISTING CLOSET LIGHTING	1		20	EXISTING					20		1	SPARE	2
3	EXISTING ROOM G34A LTG	1		20	EXISTING	0.0	0.0			20		1	SPARE	4
5	EXISTING CORRIDRO LIGHTING	1		20	EXISTING			0.0	EXISTING	20		1	EXISTING KITCHEN LTG	6
7	EXISTING CORRIDOR X' LTG	1		20	EXISTING	0.0			EXISTING	20		1	EXIST STORAGE G31 & G32 LTG	8
9			**4.4**				10.9				**6.4**			10
11	**ROOFTOP UNIT RTU-A101**	**3**	**4.4**	**25**	**4#10 & 1#10EG IN 3/4"C**			10.9	**4#6 & 1#10EG IN 3/4"C**	**35**	**6.4**	**3**	**ROOFTOP UNIT RTU-A102**	12
13			**4.4**			10.9					**6.4**			14
15	SPARE	1		20			6.4				6.4			16
17	SPARE	1		20				6.4	**4#6 & 1#10EG IN 3/4"C**	**35**	**6.4**	**3**	**ROOFTOP UNIT RTU-A103**	18
19	SPARE	1		20		6.4					6.4			20
21	SPARE	1		20			0.0			20		1

EXISTING PANEL EM1A

(EXISTING)

PRINCETON MIDDLE SCHOOL
RATING: 480/277V, 3 PH, 4W, 400A
JOB NO.: 23463.003
LOCATION: BASEMENT BLOCK B

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1			3.0			3.0								2
3	EXISTING SUMP PUMPS #3 & #4	3	3.0	20	EXISTING		3.0			20		3	SPARE	4
5			3.0					3.0						6
7	SPARE	3		30		4.0					4.0			8
9							5.6		EXISTING	30	5.6	3	EXISTING PANEL LSLUS VIA TRANSFORMER T-1	10
11								4.7			4.7			12
13	EXISTING PANEL EMLV1A VIA TRANSFORMER EM	3	12.9	70	EXISTING	13.9			EXISTING	20	3.0	1	EXISTING CAFETERIA LTG	14
15			12.9				13.9		EXISTING	20	1.0	1	EXISTING MAIN ELEC RM LTG	16
17			8.9					13.9	EXISTING	20	3.0	1	EXISTING CAFETERIA LTG	18
19	SPARE	1		20		0.0				20		1	SPARE	20
21	SPARE	1		20			3.0	0.0	EXISTING	20	3.0	1	EXISTING CAFETERIA LTG	22
23	SPARE	1		20						20		1	SPARE	24
25	SPARE	1		20		0.0				20		1	SPARE	26
27	**NEW PANEL EMH (H-WING LIFE SAFETY PANEL)**	**3**	**12.4**	**70**	**484 & 1810EG IN 1-1/4"C**		12.4		#N/A			1	SPACE	28
29			**8.8**					8.8	#N/A			1	SPACE	30
31			**7.6**			7.6			#N/A			1	SPACE	32
33	**NEW PANEL EMG (G-WING LIFE SAFETY PANEL)**	**3**	**5.1**	**70**	**484 & 1810EG IN 1-1/4"C**		5.1		#N/A			1	SPACE	34
35			**4.4**					4.4	#N/A			1	SPACE	36
37			**5.0**			5.0			#N/A			1	SPACE	38
39	SPACE	1			#N/A		0.0		#N/A			1	SPACE	40
41	SPACE	1			#N/A			0.0	#N/A			1	SPACE	42
	SPARE (FIELD VERIFY)	3		30		0.0								
							0.0							
								0.0						
	PANEL TYPE: NEMA 1				TOTAL (PHASE):	35.4	42.9	32.7						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 400A
INTERRUPTING RATING: EXISTING KA SYM.
FED FROM: MDS-2A AND ATS-1A

TOTAL CONNECTED LOAD:: 111.1 KVA
133.6 AMPS

NOTES
1. EXISTING SIEMENS TYPE P4 PANELBOARD
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANEL MANUFACTURER AND SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES

EXISTING PANEL EMLV1A #1

(EXISTING)

PRINCETON MIDDLE SCHOOL
RATING: 208/120V, 3 PH, 4W, 225A
JOB NO.: 23463.003
LOCATION: BASEMENT BLOCK B

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	EXIST SUMP CONTROLLER #1&2	1	1.0	20	EXISTING	1.0								2
3	EXISTING SUMP PUMP #1	1	1.0	20	EXISTING		1.0			15		3	SPARE	4
5	EXISTING SUMP PUMP #2	1	1.0	20	EXISTING			1.0						6
7	EXIST SUMP CONTROLLER #5&6	1	1.0	20	EXISTING	2.4					1.4		SPARE	8
9	EXISTING SUMP PUMP #5	1	1.0	20	EXISTING		2.4		EXISTING	20	1.4	3	EXISTING WALK-IN FREEZER	10
11	EXISTING SUMP PUMP #6	1	1.0	20	EXISTING			2.4			1.4		SPARE	12
13	EXISTING IDF G101B	1	1.0	20	EXISTING	2.0			EXISTING	20	1.0	1	EXISTING ROOF FAN KITCHEN	14
15	EXISTING CONDENSATE G101B	1	1.0	20	EXISTING		2.5		EXISTING	20	1.5	1	EXISTING REACH-IN FREEZER	16
17	SPARE	1		20				1.5	EXISTING	20	1.5	1	EXISTING REACH-IN FREEZER	18
19	SPARE	1		20		1.5			EXISTING	20	1.5	1	EXIST WALK-IN EVAPORATOR	20
21	SPARE	1		20			1.0			**20**	**1.0**	**2**	**NEW GENSET BLOCK HEATER**	22
23	SPARE	1		20				1.0		**20**	**1.0**			24
25	SPARE	1		20		1.0				**20**	**1.0**	**1**	**NEW GENSET STRIP HTR**	26
27	SPARE	1		20			1.0			**20**	**1.0**	**1**	**NEW GENSET BATTERY CHGR**	28
29	SPARE	1		20				0.0		20		1	SPARE	30
31	SPARE	1		20		0.0				20		1	SPARE	32
33	SPARE	1		20			0.0			20		1	SPARE	34
35	SPARE	1		20				0.0		20		1	SPARE	36
37	EXISTING A/C ROOM G101B	2		30	EXISTING	0.0			EXISTING	20		2	EXISTING GENSET JACKET HEATER - FUTURE SPARE	38
39							0.0							40
41	SPACE	1			#N/A			0.0	EXISTING	20		1	EXIST GENSET BATT CHARGER	42
	PANEL TYPE: NEMA 1				TOTAL (PHASE):	7.9	7.5	3.9						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 150A
INTERRUPTING RATING: EXISTING KA SYM.
FED FROM: EXISTING PANEL EM1A

TOTAL CONNECTED LOAD:: 34.0 KVA
96.2 AMPS

NOTES
1. EXISTING SQUARE D NQOD PANELBOARD
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANEL MANUFACTURER AND SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES

NEW PANEL EMG (G-WING)

(NEW)

PRINCETON MIDDLE SCHOOL
RATING: 480/277V, 3 PH, 4W, 100A
JOB NO.: 23463.003
LOCATION: ELEC/MECH G108D

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1			1.3			4.7			2#12 & 1#12EG IN 3/4"C	20	3.5	1	NEW GYM LIGHTING	2
3	NEW PANEL EMGR VIA 15 KVA TRANSFORMER T-EMG	3	3.4	25	4#10 & 1#10EG IN 3/4"C		4.4		2#12 & 1#12EG IN 3/4"C	20	1.1	1	GYM CORRIDORS, ETC.	4
5			3.0					5.0	2#12 & 1#12EG IN 3/4"C	20	2.0	1	NEW CAFETERIAL LTG	6
7	PIPE TUNNEL LIGHTING	1		20	2#12 & 1#12EG IN 3/4"C	0.4			2#12 & 1#12EG IN 3/4"C	20	0.4	1	EXTERIOR LIGHTING	8
9	SPARE	1		20			0.0			20		1	SPARE	10
11	SPARE	1		20				0.0		20		1	SPARE	12
13	SPARE	1		20		0.0				20		1	SPARE	14
15	SPARE	1		20			0.0			20		1	SPARE	16
17	SPARE	1		20				0.0		20		1	SPARE	18
19	SPARE	1		20		0.0				20		1	SPARE	20
21	SPARE	1		20			0.0			20		1	SPARE	22
23	SPARE	1		20				0.0		20		1	SPARE	24
25	SPARE	1		20		0.0				20		1	SPARE	26
27	SPARE	1		20			0.0			20		1	SPARE	28
29	SPARE	1		20				0.0		20		1	SPARE	30
	PANEL TYPE: NEMA 1				TOTAL (PHASE):	5.1	4.4	5.0						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 70A
INTERRUPTING RATING: 65KA SYM.
FED FROM: EXISTING PNAEL EM1A

TOTAL CONNECTED LOAD: 14.5 KVA
17.4 AMPS

NOTES
1. ALL NEW PANELS SHALL BE FURNISHED WITH INTEGRAL SURGE PROTECTION.
2. ALL BUSSING TO BE COPPER WITH BOLT ON BREAKERS ONLY
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

NEW PANEL EMGR (G-WING)

(NEW)

PRINCETON MIDDLE SCHOOL
RATING: 208/120V, 3 PH, 4W, 100A
JOB NO.: 23463.003
LOCATION: ELEC/MECH G108D

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	IDF ROOM #A12 QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C	0.9			2#12 & 1#12EG IN 3/4"C	20	0.5	1	CHARGING STATION RECEPT	2
3	IDF ROOM #A12 UPS	1	1.5	20	2#12 & 1#12EG IN 3/4"C		2.0		2#12 & 1#12EG IN 3/4"C	20	0.5	1	CHARGING STATION RECEPT	4
5	IDF ROOM G-1A UPS	1	1.5	20	2#12 & 1#12EG IN 3/4"C			1.7	2#12 & 1#12EG IN 3/4"C	20	0.2	1	CONDENSATE PUMP	6
7	IDF ROOM G-1A QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C	0.4				20		1	SPARE	8
9	3#12 & 1#12EG IN 3/4"C	30	1.3	2	FCU-2 / CU-2		1.3			20		1	SPARE	10
11			1.3					1.2		20		1	SPARE	12
13	SPARE	1		20		0.0				20		1	SPARE	14
15	SPARE	1		20			0.0			20		1	SPARE	16
17	SPARE	1		20				0.0		20		1	SPARE	18
19	SPARE	1		20		0.0				20		1	SPARE	20
21	SPARE	1		20			0.0			20		1	SPARE	22
23	SPARE	1		20				0.0		20		1	SPARE	24
	PANEL TYPE: NEMA 1				TOTAL (PHASE):	1.3	3.4	3.0						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 60A
INTERRUPTING RATING: 65KA SYM.
FED FROM: EXISTING PNAEL EM1A

TOTAL CONNECTED LOAD: 7.6 KVA
21.2 AMPS

NOTES
1. ALL BUSSING TO BE COPPER WITH BOLT ON BREAKERS ONLY
2. ALL RECEPTACLES CIRCUITED TO THIS PANEL SHALL BE COLOR "RED".
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.
6. ALL NEW PANELS SHALL BE FURNISHED WITH INTEGRAL SURGE PROTECTION.

KEY NOTES

(1) PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPARES TO MATCH EXISTING PANELBOARD MANUFACTURER AND SHORT CIRCUIT RATING.

NEW PANEL EMH (H-WING)

(NEW)

PRINCETON MIDDLE SCHOOL
RATING: 480/277V, 3 PH, 4W, 100A
JOB NO.: 23463.003
LOCATION: ELEC/MECH H10

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1			8.3			8.7			2#12 & 1#12EG IN 3/4"C	20	1.4	1	IT OFFICE LIGHTING	2
3	NEW PANEL EMHR VIA 30 KVA TRANSFORMER T-EMH	3	6.1	45	4#6 & 1#10EG IN 1"C		6.1			20		1	SPARE	4
5			4.9					4.9		20		1	SPARE	6
7			2.7			2.7				20		1	SPARE	8
9	NEW DUPLEX SANITARY LIFT STATION & CONTROL PANEL	3	2.7	20	4#10 & 1#10EG IN 1"C		2.7			20		1	SPARE	10
11			2.7					2.7		20		1	SPARE	12
13	SPARE	1		20		0.0				20		1	SPARE	14
15	SPARE	1		20			0.0			20		1	SPARE	16
17	SPARE	1		20				0.0		20		1	SPARE	18
19	SPARE	1		20		0.0				20		1	SPARE	20
21	SPARE	1		20			0.0			20		1	SPARE	22
23	SPARE	1		20				0.0		20		1	SPARE	24
25	SPARE	1		20		0.0				20		1	SPARE	26
27	SPARE	1		20			0.0			20		1	SPARE	28
29	SPARE	1		20				0.0		20		1	SPARE	30
	PANEL TYPE: NEMA 1				TOTAL (PHASE):	12.4	8.8	7.6						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 70A
INTERRUPTING RATING: 65KA SYM.
FED FROM: EXISTING PNAEL EM1A

TOTAL CONNECTED LOAD:: 28.7 KVA
34.6 AMPS

NOTES
1. ALL NEW PANELS SHALL BE FURNISHED WITH INTEGRAL SURGE PROTECTION.
2. ALL BUSSING TO BE COPPER WITH BOLT ON BREAKERS ONLY
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

NEW PANEL EMHR (H-WING)

(NEW)

PRINCETON MIDDLE SCHOOL
RATING: 208/120V, 3 PH, 4W, 100A
JOB NO.: 23463.003
LOCATION: ELEC/MECH G108D

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	NURSE REFRIGERATOR	1	1.2	20	2#12 & 1#12EG IN 3/4"C	1.6					0.4			2
3	NURSE ICE MAKER	1	1.2	20	2#12 & 1#12EG IN 3/4"C		1.2		4#6 & 1#10EG IN 1"C	50	0.0	3	PANE EM-MDF	4
5	2ND FLOOR BACKBOARD	1	0.4	20	2#12 & 1#12EG IN 3/4"C			0.4			0.0			6
7	1ST FLOOR BACKBOARD	1	0.4	20	2#12 & 1#12EG IN 3/4"C	2.7					2.0			8
9	MAIN OFFICE INTERCOM QUAD	1	0.5	20	2#12 & 1#12EG IN 3/4"C		2.5		3#8 & 1#10EG IN 1"C	40	2.0	2	FCU-1 / CU-1	10
11	MAIN OFFICE SOUND QUAD	1	0.5	20	2#12 & 1#12EG IN 3/4"C			2.3			1.8			12
13	MAIN OFFICE FIRE ALARM	1	0.5	20	2#12 & 1#12EG IN 3/4"C	2.3			3#8 & 1#10EG IN 1"C	40	1.8	2	FCU-3 / CU-3	14
15	SECURITY OFFICE RECEPT	1	0.5	20	2#12 & 1#12EG IN 3/4"C		2.4				1.8			16
17	IDF ROOM H113 QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C			2.2	3#8 & 1#10EG IN 1"C	40	1.8	2	FCU-4 / CU-4	18
19	IDF ROOM H113 UPS	1	1.5	20	2#12 & 1#12EG IN 3/4"C	2.0			2#12 & 1#12EG IN 3/4"C	20	0.5	1	CONDENSATE PUMPS	20
21	SPARE	1		20			0.0			20		1	SPARE	22
23	SPARE	1		20				0.0		20		1	SPARE	24
25	SPARE	1		20		0.0				20		1	SPARE	26
27	SPARE	1		20			0.0			20		1	SPARE	28
29	SPARE	1		20				0.0		20		1	SPARE	30
	PANEL TYPE: NEMA 1				TOTAL (PHASE):	8.3	6.1	4.9						

MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 100A
INTERRUPTING RATING: 65KA SYM.
FED FROM: NEW PANEL EMHR

TOTAL CONNECTED LOAD:: 19.2 KVA
53.4 AMPS

NOTES
1. ALL BUSSING TO BE COPPER WITH BOLT ON BREAKERS ONLY
2. ALL RECEPTACLES CIRCUITED TO THIS PANEL SHALL BE COLOR "RED".
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.
6. ALL NEW PANELS SHALL BE FURNISHED WITH INTEGRAL SURGE PROTECTION.

NEW PANEL EM-MDF

(NEW)

PRINCETON MIDDLE SCHOOL
RATING: 208/120V, 3 PH, 4W, 100A
JOB NO.: 23463.003
LOCATION: ELEC/MECH G108D

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	MDP RACK QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C	0.4				20		1	SPARE	2
3	SPARE	1		20			0.0			20		1	SPARE	4
5	SPARE	1		20				0.0		20		1	SPARE	6
7	SPARE	1		20		0.0				20		1	SPARE	8
9	SPARE	1		20			0.0			20		1	SPARE	10
11	SPARE	1		20				0.0		20		1	SPARE	12
13	SPARE	1		20		0.0				20		1	SPARE	14
15	SPARE	1		20			0.0			20		1	SPARE	16
17	SPARE	1		20				0.0		20		1	SPARE	18
	PANEL TYPE: NEMA 1				TOTAL (PHASE):	0.4	0.0	0.0						

MOUNTING: SURFACE
MAIN LUGS ONLY
INTERRUPTING RATING: 65KA SYM.
FED FROM: NEW PANEL EMHR

TOTAL CONNECTED LOAD:: 0.4 KVA
1.0 AMPS

NOTES
1. ALL NEW PANELS SHALL BE FURNISHED WITH INTEGRAL SURGE PROTECTION.
2. ALL BUSSING TO BE COPPER WITH BOLT ON BREAKERS ONLY
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

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P-1	BOILER PUMP	460V-3Ø	3.0		4.8	6.0	15	SEE PANEL SCHEDULES	30	3	15	NEMA 1	NO	
P-2	BOILER PUMP	460V-3Ø	3.0		4.8	6.0	15	SEE PANEL SCHEDULES	30	3	15	NEMA 1	NO	
P-3	FREEZE PROTECTION PUMPS	208V-1Ø	1/2		5.4	6.8	15	SEE DRAWING KEY NOTE	30	2	15	NEMA 1	NO	
P-4	FREEZE PROTECTION PUMPS	208V-1Ø	1/2		5.4	6.8	15	SEE DRAWING KEY NOTE	30	2	15	NEMA 1	NO	
P-5	FREEZE PROTECTION PUMPS	208V-1Ø	1/2		5.4	6.8	15	SEE DRAWING KEY NOTE	30	2	15	NEMA 1	NO	
P-6	FREEZE PROTECTION PUMPS	208V-1Ø	1/2		5.4	6.8	15	SEE PANEL SCHEDULES	30	2	15	NEMA 1	NO	
EDH-1	ELECTRIC DUCT HEATER	208V-1Ø		2.5		12.0	15.0	SEE PANEL SCHEDULES	30	2	15	NEMA 1	NO	
VAV-X	TYPICAL VAV BOX	120V-1Ø						SEE PANEL SCHEDULES	⑨			NEMA 1	NO	
FCU-1	FAN COIL UNIT	208V-1Ø				-	-	SEE PANEL SCHEDULES	⑤	-	-	NEMA 1	NO	POWERED BY CU-1
FCU-2	FAN COIL UNIT	208V-1Ø				-	-	SEE PANEL SCHEDULES	⑤	-	-	NEMA 1	NO	POWERED BY CU-2
FCU-3	FAN COIL UNIT	208V-1Ø				-	-	SEE PANEL SCHEDULES	⑤	-	-	NEMA 1	NO	POWERED BY CU-3
FCU-4	FAN COIL UNIT	208V-1Ø				-	-	SEE PANEL SCHEDULES	⑤	-	-	NEMA 1	NO	POWERED BY CU-4
CU-1	CONDENSING UNIT	208V-1Ø				34.0	60	SEE PANEL SCHEDULES	60	2	60	NEMA 3R	NO	INTERLOCK WITH FCU-1
CU-2	CONDENSING UNIT	208V-1Ø				16.0	30	SEE PANEL SCHEDULES	60	2	30	NEMA 3R	NO	INTERLOCK WITH FCU-2
CU-3	CONDENSING UNIT	208V-1Ø				22.0	40	SEE PANEL SCHEDULES	60	2	40	NEMA 3R	NO	INTERLOCK WITH FCU-3
CU-4	CONDENSING UNIT	208V-1Ø				16.0	30	SEE PANEL SCHEDULES	60	2	30	NEMA 3R	NO	INTERLOCK WITH FCU-4
CP-FCU	CONDENSATE PUMP	120V-1Ø	1/30		1.5	1.9	15	SEE PANEL SCHEDULES	⑧	-	-	NEMA 1	NO	
EF-1	EXHAUST FAN	115V-1Ø	1/6		4.4	5.5	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-2	EXHAUST FAN	115V-1Ø	1/6		4.4	5.5	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-3	EXHAUST FAN	115V-1Ø	1/2		9.8	12.3	20	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-4	EXHAUST FAN	115V-1Ø	1/6		4.4	5.5	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-5	EXHAUST FAN	115V-1Ø	1/4		5.8	7.3	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-6	EXHAUST FAN	115V-1Ø	1/4		5.8	7.3	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-7	EXHAUST FAN	115V-1Ø	1/10		3.0	3.8	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-8	EXHAUST FAN	115V-1Ø			1.5	1.9	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-9	EXHAUST FAN	115V-1Ø			104 WATTS	130 WATTS	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-10	EXHAUST FAN	115V-1Ø			104 WATTS	130 WATTS	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
EF-11	EXHAUST FAN	115V-1Ø			104 WATTS	130 WATTS	15	SEE PANEL SCHEDULES	⑩			NEMA 3R	NO	
FHEF-1	FUME HOOD EXHAUST FAN	208V-1Ø	1/2		5.4	6.8	15	SEE PANEL SCHEDULES	30	2	15	NEMA 3R	NO	
UH-A	HOT WATER UNIT HEATER	115V-1Ø			-	3.9	15	SEE PANEL SCHEDULES	⑦			NEMA1	NO	
EUH-A	ELECTRIC UNIT HEATER	208V-3Ø		3.8	10.9	13.6	20	SEE PANEL SCHEDULES	⑦			NEMA1	NO	
EUH-B	ELECTRIC UNIT HEATER	277V-1Ø		5.0	18.1	22.6	30	SEE PANEL SCHEDULES	⑦			NEMA1	NO	
ECH-A	ELECTRIC CABINET HEATER	277V-1Ø		3.8	13.7	17.1	25	SEE PANEL SCHEDULES	⑦			NEMA1	NO	
ECH-B	ELECTRIC CABINET HEATER	277V-1Ø		5.0	18.1	22.6	30	SEE PANEL SCHEDULES	⑦			NEMA1	NO	
ECH-C	ELECTRIC CABINET HEATER	277V-1Ø		6.0	21.6	27.1	40	SEE PANEL SCHEDULES	⑦			NEMA1	NO	
WH-1	GAS WATER HEATER	120V-1Ø			5.0	6.3	15	SEE PANEL SCHEDULES	30	1	15	NEMA1	NO	
WH-2	GAS WATER HEATER	120V-1Ø			5.0	6.3	15	SEE PANEL SCHEDULES	30	1	15	NEMA1	NO	
WH-3	ELECTRIC WATER HEATER	460V-3Ø		13.5	16.2	20.3	25	SEE PANEL SCHEDULES	30	3	25	NEMA1	NO	
WH-4	ELECTRIC WATER HEATER	277V-1Ø		13.3	48.0	60.0	60	SEE PANEL SCHEDULES	100	1	60	NEMA1	NO	
WH-5	ELECTRIC WATER HEATER	277V-1Ø		5.5	19.8	24.8	30	SEE PANEL SCHEDULES	30	1	30	NEMA1	NO	
WH-6	ELECTRIC WATER HEATER	277V-1Ø		5.5	19.8	24.8	30	SEE PANEL SCHEDULES	30	1	30	NEMA1	NO	
HWR-1	HOT WATER RETURN PUMP	120V-1Ø			92 WATTS		15	SEE PANEL SCHEDULES	⑩			NEMA 1	NO	
HWR-2	HOT WATER RETURN PUMP	120V-1Ø			52 WATTS		15	SEE PANEL SCHEDULES	⑩			NEMA 1	NO	
CIVIL PLANS	SEWAGE LIFT STATION	460V-3Ø	TWO (2) 3 HP		(2) 4.8	(2) 6.0	20	SEE PANEL SCHEDULES	30	3	20	NEMA 3R	CONFIRM	⑪

EQUIPMENT SCHEDULE KEY NOTES

① DATA FROM SPECIFIED MANUFACTURER. REFER TO MECHANICAL DRAWINGS

② QUANTITY AND SIZE OF POWER CONDUCTORS BASED ON DATA FROM SPECIFIED MANUFACTURER. PROVIDE GROUND WIRE IN ACCORDANCE WITH THE PROJECT GENERAL NOTES THIS SHEET.

③ WHERE A FUSE SIZE IS NOT ENTERED IN COLUMN TITLED "FUSE AMPS", THE DISCONNECT MAY BE UNFUSED.

④ EQUIPMENT FURNISHED AND INSTALLED UNDER OTHER SPECIFICATION DIVISIONS, WIRED AND CONNECTED UNDER DIVISION 16, UNLESS NOTED OTHERWISE. DISCONNECT SWITCHES FURNISHED UNDER DIVISION 15.

⑤ INDOOR UNIT FED VIA OUTDOOR CONDENSING UNIT. PROVIDE ALL WIRING AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL INSTALLATION.

⑥ PROVIDE DUCT SMOKE DETECTOR(S).

⑦ UNIT TO BE PROVIDED WITH INTEGRAL DISCONNECT SWITCH.

⑧ PROVIDE HARD WIRED 120V POWER FOR CONDENSATE PUMPS - 2#12 MC. CIRCUIT AS SHOWN OR TO THE NEAREST RECEPTACLE CIRCUIT SERVING THE AREA LOCATED.

⑨ REFER TO MECHANICAL SCHEDULES AND FLOOR PLANS FOR VAV BOX NUMBERS AND LOCATIONS. ELECTRICAL CONTRACTOR SHALL PROVIDE 120V POWER TO CONTROL TRANSFORMER FURNISHED WITH THE UNIT.

⑩ PROVIDE MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION.

⑪ LIFT STATION SHOWN WITH SINGLE POINT POWER CONNECTION TO LIFT STATION CONTROL PANEL. CONTRACTOR SHALL COORDINATE EXACT REQUIREMENTS WITH THE SYSTEM SHOP DRAWINGS, AND PROVIDE ALL REQUIRED POWER, CIRCUIT BREAKERS, ALARM CIRCUIT, TELE/DATA, ETC. FOR A COMPLETE AND OPERATIONAL INSTALLATION.

EQUIPMENT SCHEDULE GENERAL NOTES

1. REFER TO CIVIL ENGINEERING, MECHANICAL, AND PLUMBING PLANS FOR EXACT LOCATIONS OF EQUIPMENT.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL 120V POWER WIRING AND CIRCUIT BREAKERS REQUIRED FOR THE INSTALLATION OF MECHANICAL EQUIPMENT, INCLUDING POWER FOR ALL MOTOR OPERATED DAMPER ACTUATORS, VAV BOXES, ETC. STARTERS AND POWER DISCONNECT SWITCHES SHALL BE BY THE MECHANICAL CONTRACTOR. REFER TO MECHANICAL SPECIFICATION SECTIONS AND COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXTENT OF WORK REQUIRED.
3. DUCT SMOKE DETECTORS SHALL BE PROVIDED AT ALL UNITS OVER 2000 CFM AND MOUNTED ON THE SUPPLY AND RETURN DUCT. DETECTORS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT QUANTITY AND LOCATIONS WITH THE MECHANICAL CONTRACTOR AND MECHANICAL DRAWINGS.

NOTES:

1. READ ACROSS TO THE RIGHT FROM C/B TRIP TO DESIRED VOLTAGE CHARACTERISTICS AND NEXT GREATER DISTANCE THAN CIRCUIT IN QUESTION.
2. READ DOWN TO MINIMUM WIRE SIZE.
3. DISTANCES ARE TO THE CENTER OF CONCENTRATED LOAD SUCH AS CLASSROOM LIGHTING OR THE MIDPOINT OF DISTRIBUTED LOAD SUCH AS CORRIDOR LIGHTING.
4. EQUIPMENT GROUNDING CONDUCTORS SHALL BE INCREASED IN SIZE PROPORTIONATELY PER N.E.C.

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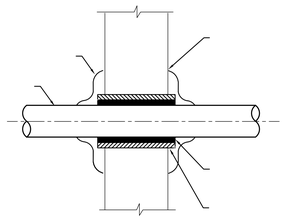
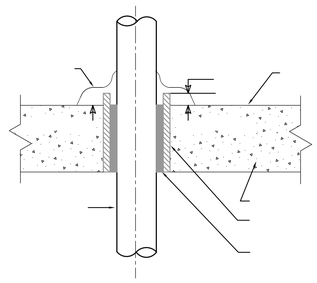
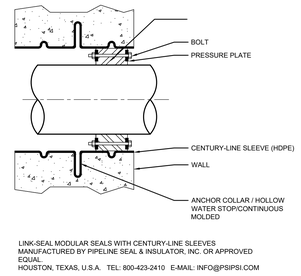


CONDUIT PENETRATION DETAIL
THRU FIRE RATED SOLID WALL





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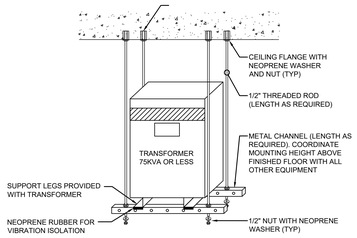
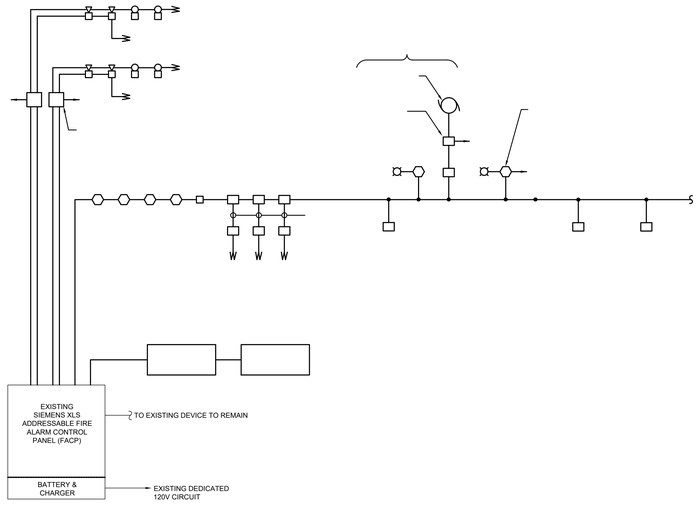
FOUNDATION CONDUIT PENETRATION DETAIL
NOT TO SCALE



TRANSFORMER TRAPEZE MOUNTING DETAIL
NOT TO SCALE



FIRE ALARM RISER DIAGRAM NOTES

1.
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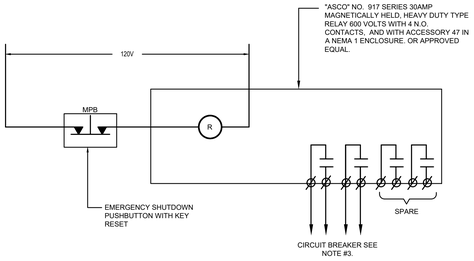
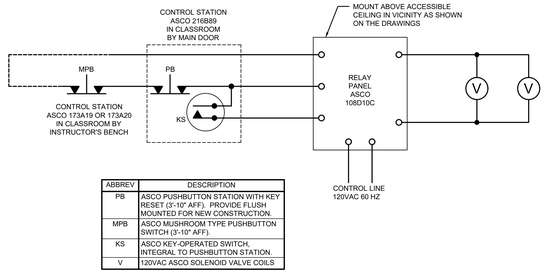


LAB EMERGENCY POWER SHUTDOWN PUSHBUTTON WIRING DIAGRAM
NOT TO SCALE

NOTES:

1. ELECTRICAL CONTRACTOR SHALL LABEL AND PROVIDE ACCESS TO OPERATION OF DEVICE.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE CLEAR POLYCARBONATE PROTECTIVE FLIP GUARD COVER FOR PUSHBUTTON STATION.
3. SEE PANEL SCHEDULES FOR SHUNT TRIP CIRCUIT LOCATIONS.



ABBREV	DESCRIPTION
PB	ASCO PUSHBUTTON STATION WITH KEY RESET (3'-10" AFF). PROVIDE FLUSH MOUNTED FOR NEW CONSTRUCTION.
MPB	ASCO MUSHROOM TYPE PUSHBUTTON SWITCH (3'-10" AFF).
KS	ASCO KEY-OPERATED SWITCH, INTEGRAL TO PUSHBUTTON STATION.
V	120VAC ASCO SOLENOID VALVE COILS

MASTER GAS CONTROL VALVE SCHEMATIC WIRING DIAGRAM
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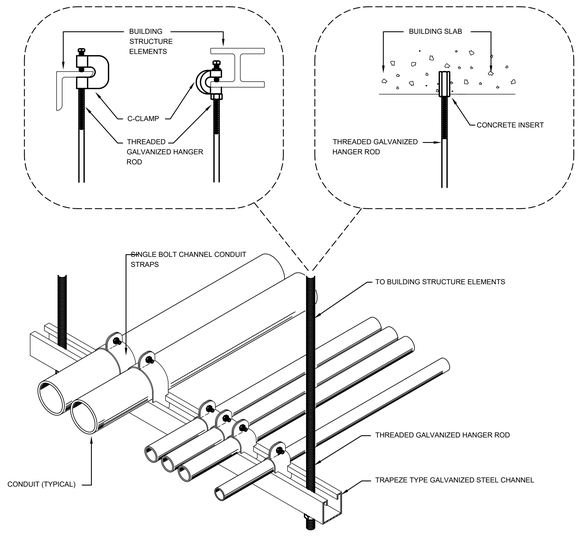
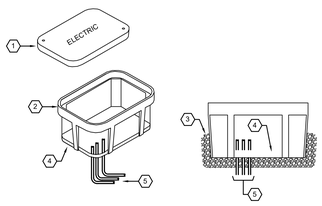


MULTIPLE CONDUIT SUSPENSION SUPPORT DETAIL
NOT TO SCALE



HANDHOLE FOR ELECTRICAL ONLY
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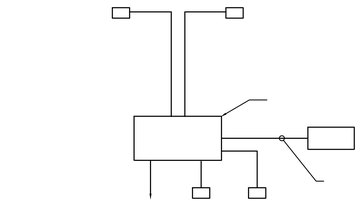
KEY NOTES

1. RECESSED QUAZITE PULLBOX, SIZED PER NEC, WITH GASKETED BOLT-ON COVER. COVER TO BE LABELED "ELECTRIC".
2. TOP OF PULLBOX TO BE FLUSH WITH GRADE OR PAVED SURFACE.
3. MINUMUM 4" OF GRAVEL ON SIDES AND BOTTOM OF PULLBOX.
4. PROVIDE OPEN BOTTOM PULLBOX.
5. CONDUITS TO BE STUBBED UP INTO BOX. PROVIDE CAP FOR SPARE CONDUITS. REFER TO THE FLOOR PLANS, ONE-LINE DIAGRAM, AND PANEL SCHEDULES FOR QTY AND SIZE OF CONDUITS .



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