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Capital Projects Phase 2

HIGH SCHOOL	SED# 03-15-02-06-0-011-027
K-8	SED# 03-15-02-06-0-020-017
BUS GARAGE	SED# 03-15-02-06-5-010-011
BSN	SED# 03-15-02-06-4-015-006
BSS	SED# 03-15-02-06-4-014-006

HA PN 2024-239



VOLUME 2
HIGH SCHOOL

Mechanical, Plumbing, Electrical

K-8, BUS MAINTENANCE, BUS STORAGE

Structural, Architectural, Mechanical, Plumbing, Electrical

Issued for Bidding
December 1, 2025

VOLUME 1

* GENERAL

CS-100	COVER SHEET
CS-101	SHEET INDEX
ALL GN-100	GENERAL NOTES
ALL GN-101	ABBREVIATIONS, SYMBOL LEGEND, AND LINTEL SCHEDULE
ALL GN-102	PARTITION LEGEND AND MISC. DETAILS

HIGH SCHOOL

HS CODE COMPLIANCE

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HS CC-101	HIGH SCHOOL 2ND FLOOR EXISTING COMPOSITE PLAN
HS CC-102	FIRST FLOOR BASEMENT UNIT E CODE COMPLIANCE PLAN
HS CC-103	SECOND FLOOR UNIT E CODE COMPLIANCE PLAN

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HS H002	HIGH SCHOOL BASEMENT ABATEMENT AREA 2
HS H003	HIGH SCHOOL 1ST FLOOR ABATEMENT AREA 1
HS H004	HIGH SCHOOL 1ST FLOOR ABATEMENT AREA 2
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HS H007	HIGH SCHOOL 2ND FLOOR ABATEMENT AREA 2
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HS C115	ALTERNATE 4 UTILITY PLAN
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HS LANDSCAPE

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VOLUME 2

HIGH SCHOOL CONTINUED

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K-8 ELECTRICAL

K-8 E-100	MOTHER'S ROOM ELECTRICAL RENOVATION PLANS
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BUS GARAGE & BUS STORAGE FACILITIES

BGBS STRUCTURAL

BG S-101	BUS GARAGE FOUNDATION PLAN

BGBS ARCHITECTURAL

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BS A-100	BUS STORAGE BUILDINGS FLOOR PLANS

BGBS MECHANICAL

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BG M-101	BUS GARAGE WASH BAY MECHANICAL DEMOLITON AND RENOVATION PLANS
BG M-300	BUS GARAGE MECHANICAL SCHEDULES & DETAILS
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BGBS PLUMBING

BG P-100	BUS GARAGE PLUMBING DEMOLITION AND RENOVATION PLANS
BG P-200	PUBLIC WORK, ONE STEP WASH TRUCK WASH, FRESH WATER SYSTEM, PLUMBING SCHEMATIC
BG P-300	PLUMBING DETAILS & SCHEDULES

BGBS ELECTRICAL

BG E-100	BUS GARAGE ELECTRICAL DEMOLITION AND RENOVATION PLANS
BG E-101	BUS GARAGE BUS WASH ELECTRICAL DEMOLITION AND RENOVATION PLANS
BS E-102	BUS STORAGE BUILDING - SOUTH ELECTRICAL RENOVATION PLAN

REVISIONS

Issued for Bidding
December 1, 2025

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

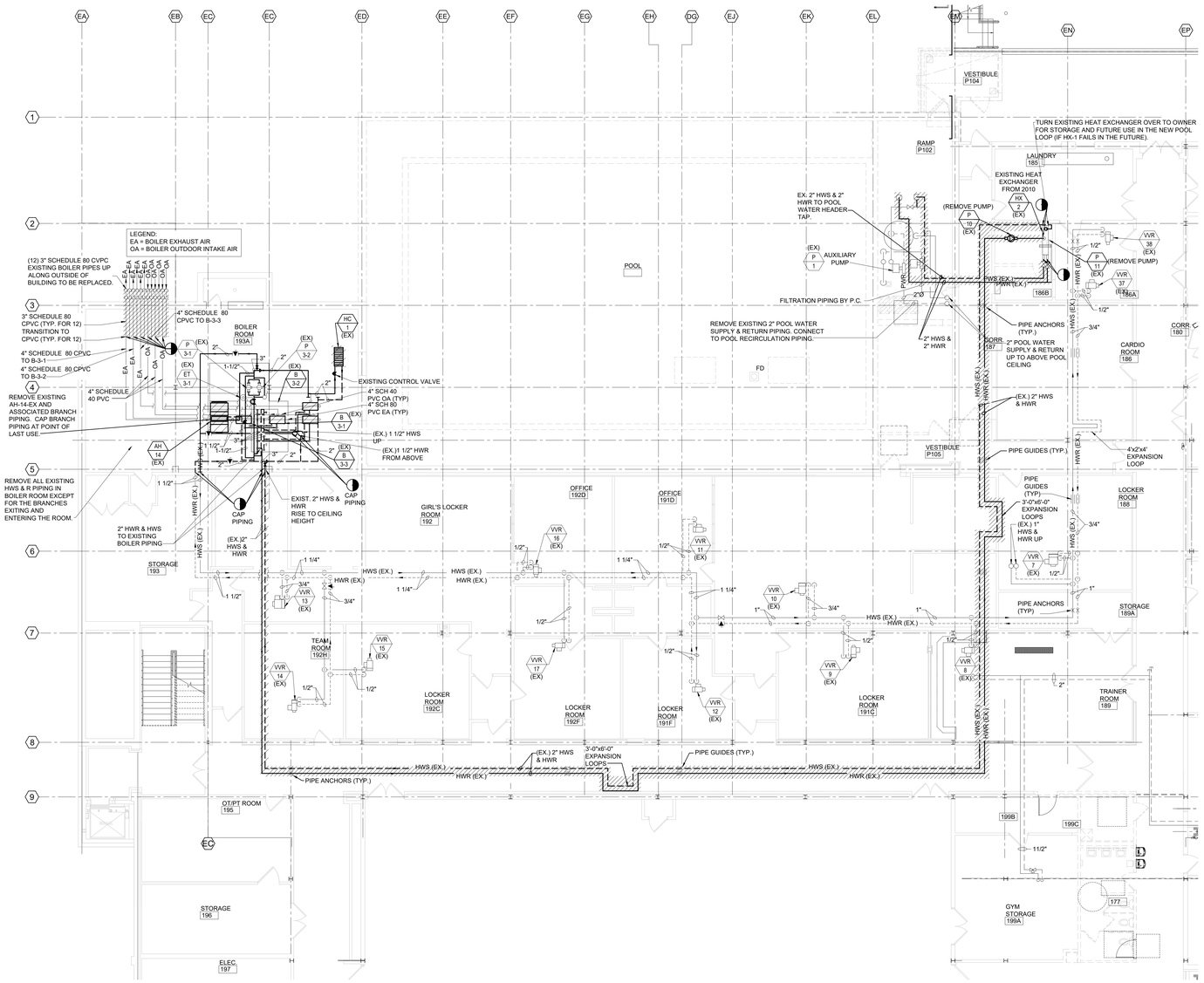
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE: SHEET INDEX

DRAWN BY:	PROJECT NO.:
S.C.	2024-239P
CHECKED BY: R.S.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: CS-101

CAD FILE: 4239-ALL-CS-101.DWG
PLOT DATE: 11/25/2025

J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2__CAD__HS__Phase2\arch\4239-ALL-CS-101.dwg, 11/25/2025 1:38:28 PM, _DWG To PDF.pc3



FIRST FLOOR - UNIT E
MECHANICAL PIPING DEMOLITION PLAN
SCALE: 1/8"=1'-0"

1 / MD-100

NORTH
BUILDING NORTH

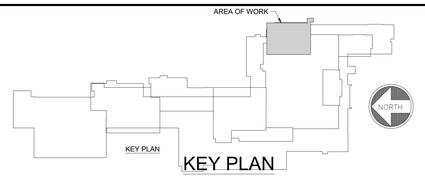


EXISTING BOILER AND WATER HEATER INTAKES AND EXHAUSTS
SCALE: NOT TO SCALE

2 / MD-100

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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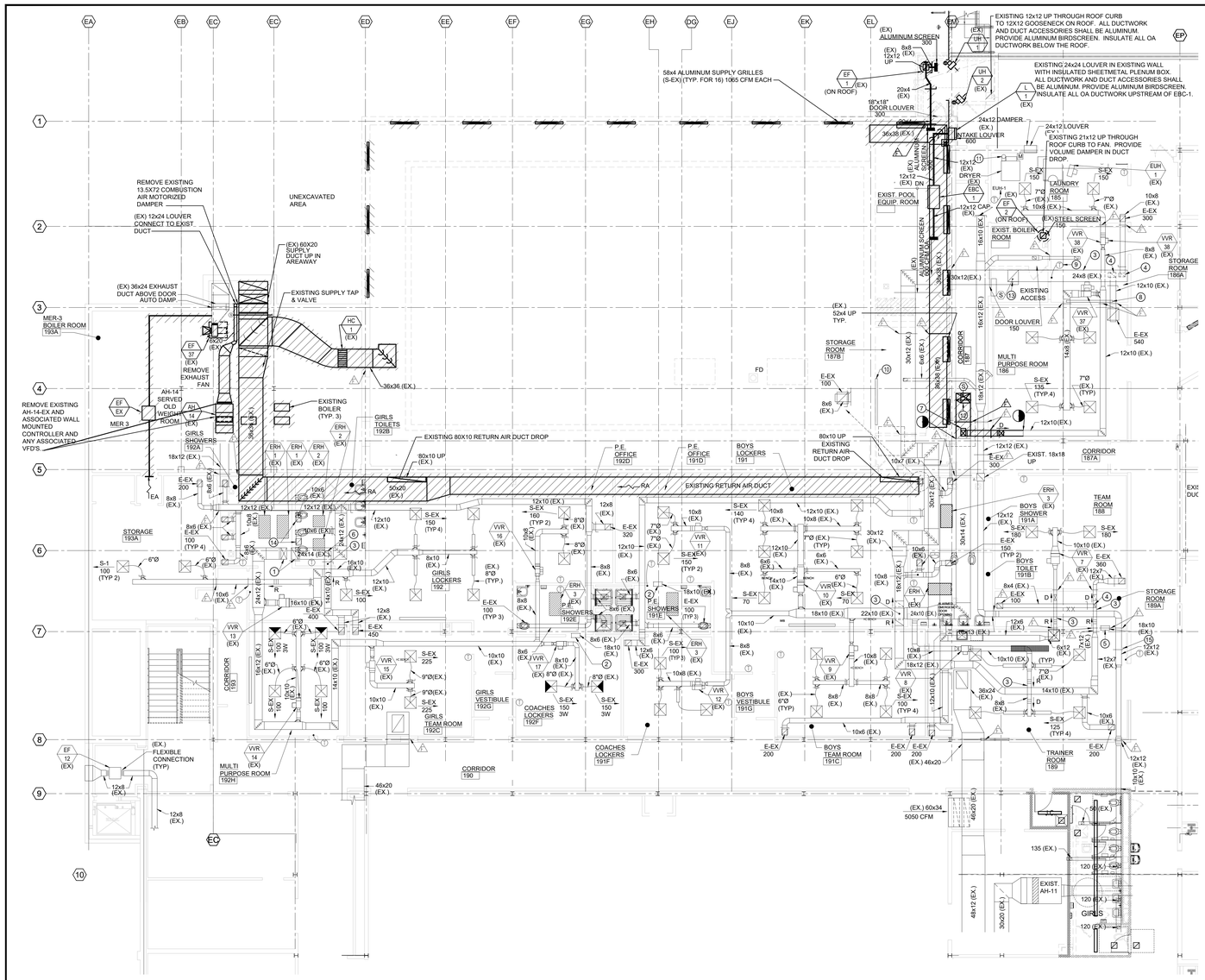
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - UNIT E
MECHANICAL PIPING DEMOLITION PLAN

DRAWN BY:	PROJECT NO.:
F.G.	2024-239P
CHECKED BY:	BUILDING: / DRAWING NO.:
M.P.	HS / MD-100
DATE: 12-01-2025	

DWG FILE:
PLOT DATE: 10/28/25



NORTH
BUILDING NORTH

1 MD-101

FIRST FLOOR - UNIT E
MECHANICAL DUCTWORK DEMOLITION PLAN

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

2 MD-101

LARGE SCALE FILTER ROOM
MECHANICAL DUCTWORK DEMOLITION PLAN

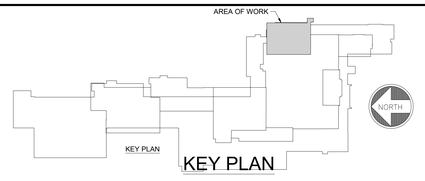
SCALE: 1/4"=1'-0"

KEY NOTES:

1. 24x12 SUPPLY FROM ABOVE AND 24x14 RETURN UP (RTU-4).
2. T-1 , 300 (BOTH SIDES).
3. RUN DUCT UP BETWEEN JOISTS.
4. RISE TO UNDERSIDE OF R/A DUCT.
5. T-1 , 100 (BOTH SIDES).
6. DROP TO TOP OF R/A DUCT.
7. 12x10 DUCT OFF THE TOP OF S/A DUCT.
8. EXISTING 8'-0" E.B.B. RELOCATED.
9. RELOCATED EXISTING THERMOSTAT.
10. EXISTING 8'-0" E.B.B. & CONTROLS RELOCATED.
11. 6" DRYER EXHAUST UP TO ROOF. PROVIDE CLEAN OUT IN BOTTOM OF VERTICAL RISE.
12. 20x20 TRANSITION DOWN TO 30x14 SUPPLY FROM ABOVE (RTU-3).
13. 24x22 RETURN UP (RTU-3).
14. E-1, 150.
15. BALANCE TO 545 CFM.
16. 32"x7-3/4" BRICK VENT

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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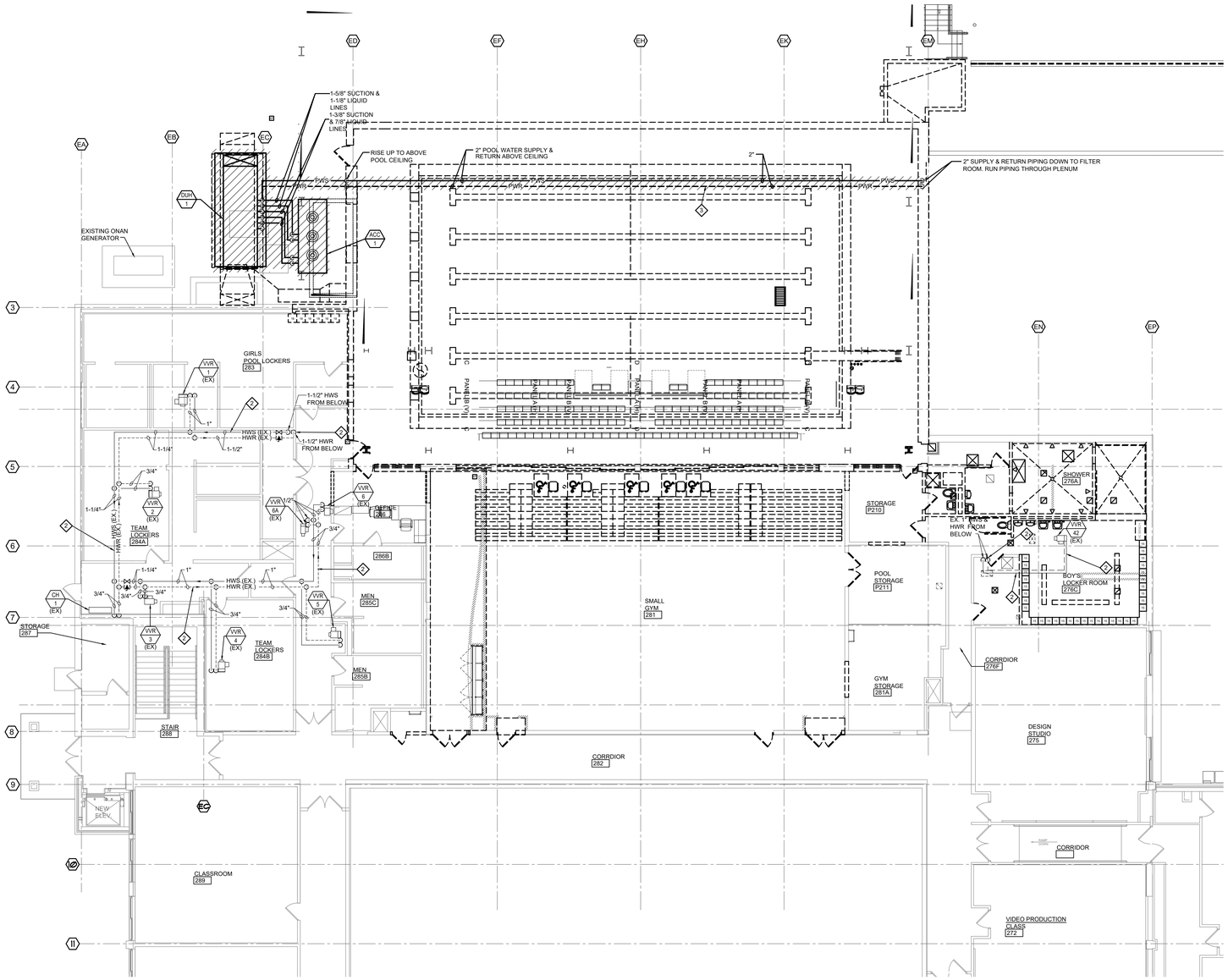
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - UNIT E
MECHANICAL DUCTWORK DEMOLITION PLAN

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / MD-101
DATE: 12-01-2025	

DWG FILE: 2024-239P-MD-101.DWG
PLOT DATE: 11/20/2025



DEMOLITION KEY NOTES:

1. REMOVE EXISTING PIPING.
2. EXISTING HWR & HWS PIPING TO REMAIN.
3. REMOVE EXISTING PIPING TO EXTENT SHOWN. PATCH ALL WALL AND FLOOR OPENINGS TO MATCH SURROUNDING SURFACES.

SECOND FLOOR - UNIT E
MECHANICAL PIPING DEMOLITION PLAN

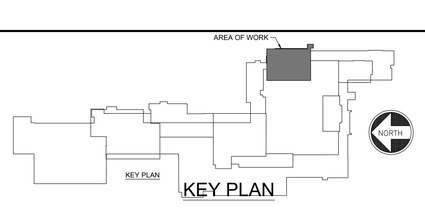
1 / MD-102

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

NORTH

BUILDING NORTH

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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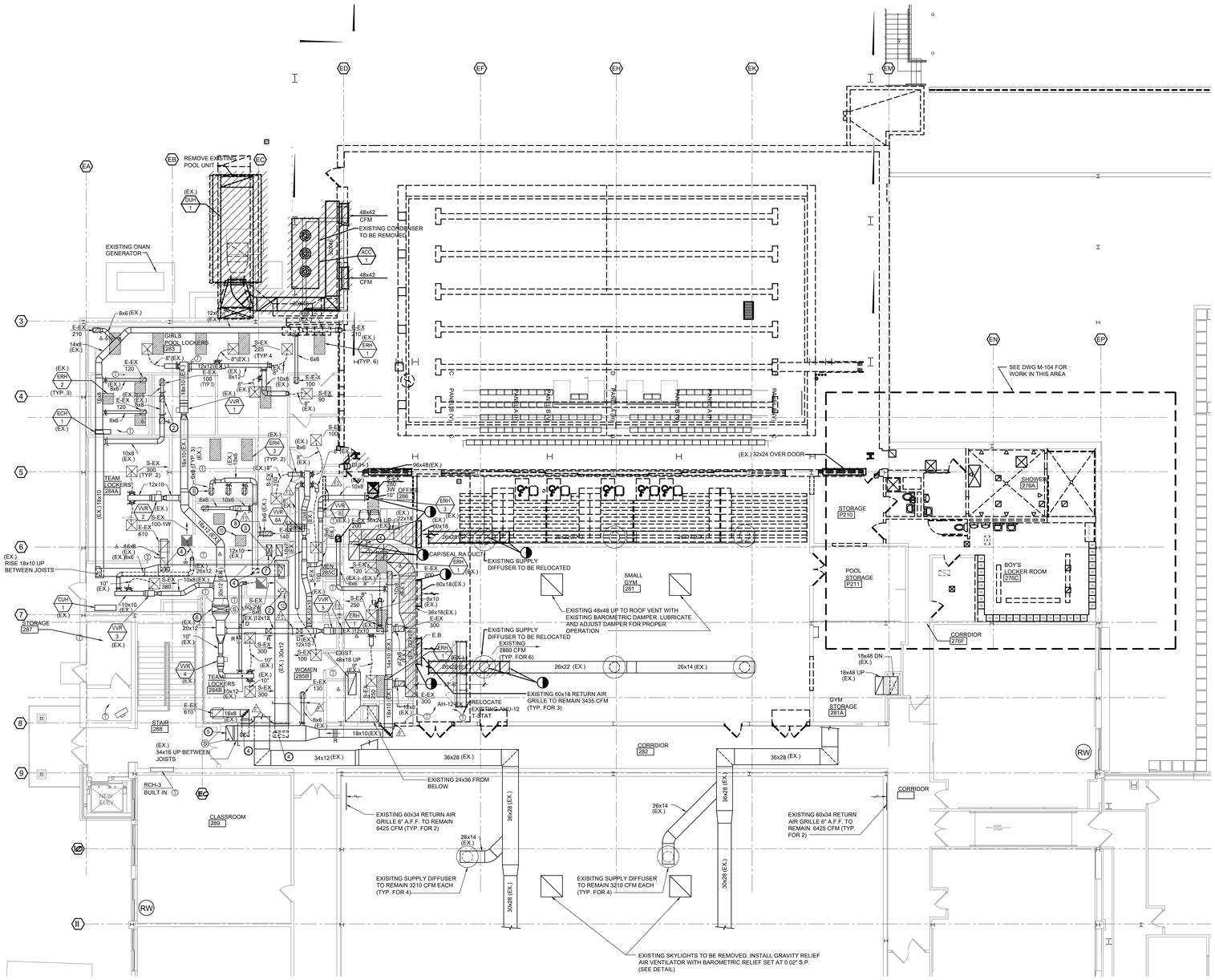
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR - UNIT E
MECHANICAL PIPING DEMOLITION PLAN

DRAWN BY:	PROJECT NO.:
F.G.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / MD-102
DATE: 12-01-2025	

REVISIONS

DATE: 12/8/2025 11:53:03 AM
PLOT DATE: 11/3/2025



SECOND FLOOR - UNIT E
MECHANICAL DUCTWORK DEMOLITION PLAN

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

NORTH

BUILDING NORTH

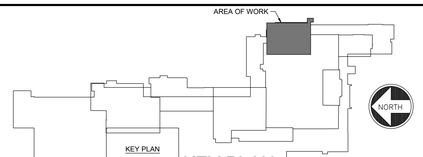
1 / MD-103

KEY NOTES:

1. T-1 , (BOTH SIDES) 80 CFM.
2. PROVIDE DROP COLLAR.
3. DROP 26x12 FROM BETWEEN JOISTS TO 30x12.
4. RISE TO UNDERSIDE OF R/A DUCT.
5. 34x16 UP THROUGH ROOF (RTU-5).
6. 38x12 DOWN FROM ROOF (RTU-5).
7. 24x12 SUPPLY & 24x14 RETURN DUCT FROM ROOF (RTU-4) DOWN THROUGH CHASE TO 1ST FLR. PROVIDE FIRE DAMPER AT FLOOR. SEE DWG M-1.1 FOR CONT.
8. E-1, 120 (TYP. 2).
9. E-1, 80 (TYP. 3).
10. ERH 2 (TYP. 2).
11. 20x12 FROM ABOVE.
12. E-1, 60.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
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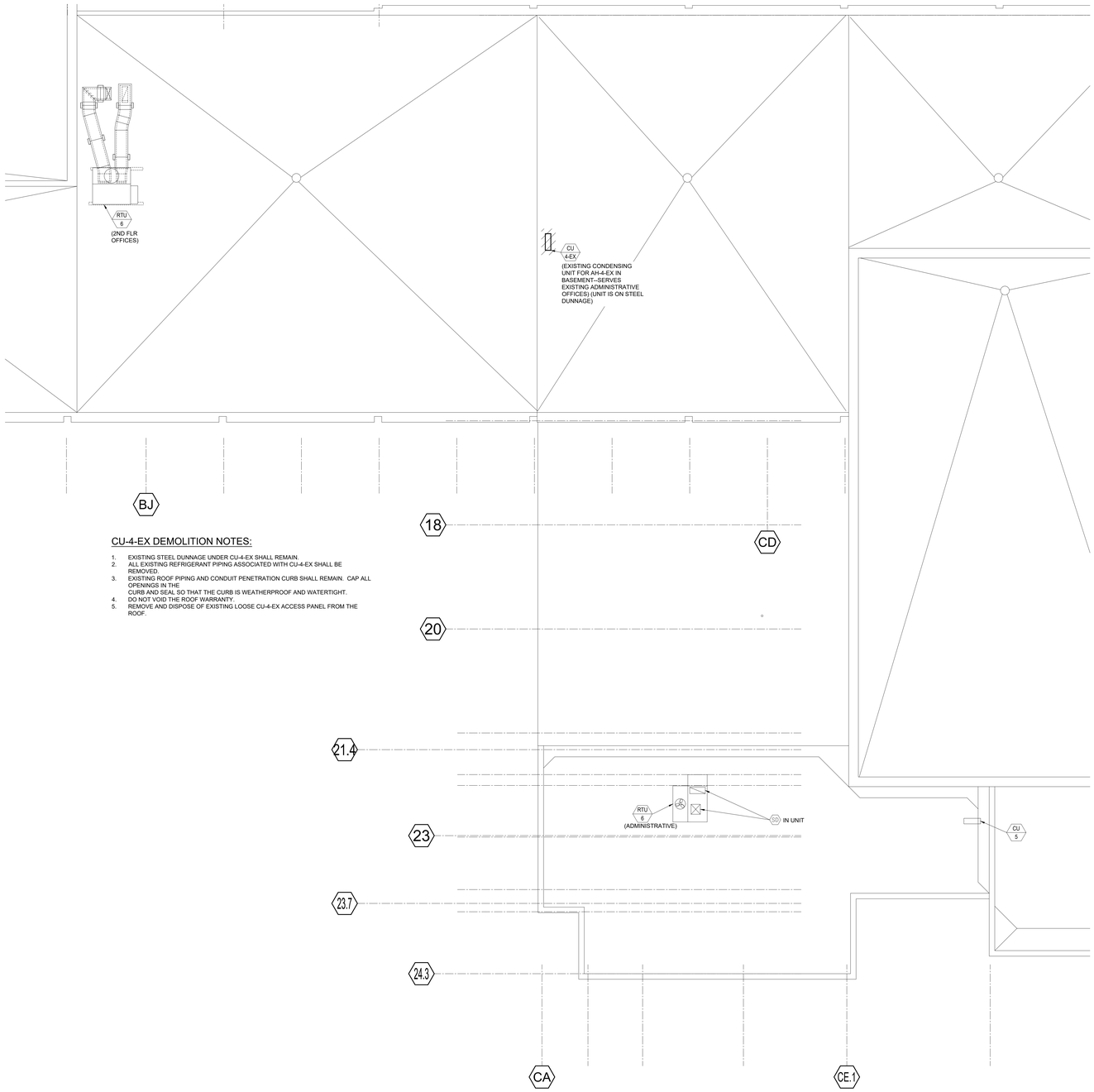
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR - UNIT E
MECHANICAL DUCTWORK DEMOLITION PLAN

DRAWN BY:	PROJECT NO.:
F.G.	2024-239P
CHECKED BY: M.P.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: MD-103

CAD FILE: 4239-HS-MD-103.DWG
PLOT DATE: 1/12/2025



CU-4-EX DEMOLITION NOTES:

1. EXISTING STEEL DUNNAGE UNDER CU-4-EX SHALL REMAIN.
2. ALL EXISTING REFRIGERANT PIPING ASSOCIATED WITH CU-4-EX SHALL BE REMOVED.
3. EXISTING ROOF PIPING AND CONDUIT PENETRATION CURB SHALL REMAIN. CAP ALL OPENINGS IN THE CURB AND SEAL SO THAT THE CURB IS WEATHERPROOF AND WATERTIGHT.
4. DO NOT VOID THE ROOF WARRANTY.
5. REMOVE AND DISPOSE OF EXISTING LOOSE CU-4-EX ACCESS PANEL FROM THE ROOF.

1 / MD-104

ADMINISTRATIVE PARTIAL ROOF DEMOLITION PLAN

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

REVISIONS

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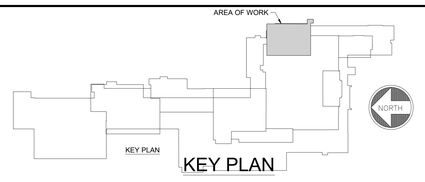
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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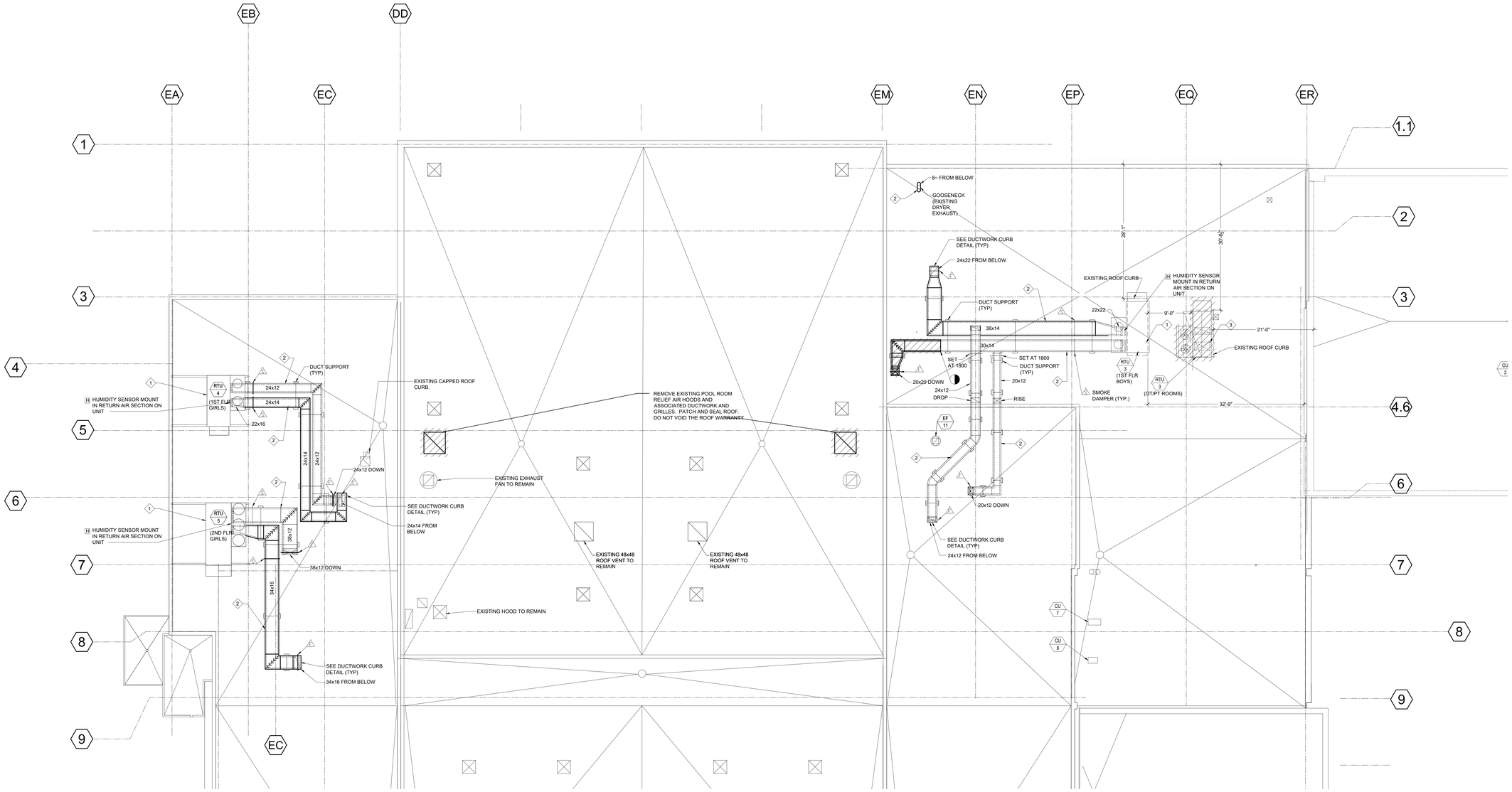
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
ADMINISTRATIVE PARTIAL ROOF DEMOLITION PLAN

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / MD-104
DATE: 12-01-2025	

CAD FILE:
PLOT DATE: 11/25/25



1 MD-105 HVAC ROOF DEMOLITION PLAN

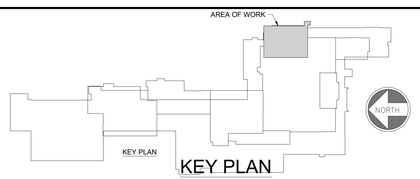
SCALE: 1/8"=1'-0"

DEMOLITION KEY NOTES:

1. EXISTING ROOFTOP UNIT TO REMAIN.
2. EXISTING ROOFTOP DUCTWORK TO REMAIN TO EXTENT SHOWN.
3. REMOVE EXISTING ROOFTOP UNIT AND ROOF CURB. TEMPORARILY PROTECT THE OPENING IN THE ROOF FROM LEAKING WATER/SNOW/ETC. INTO BUILDING. PREPARE ROOFING FOR NEW UNIT CURB. ROOF SHALL BE PATCHED TO MATCH SURROUNDING SURFACES. DO NOT VOID THE ROOF WARRANTY.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
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PROJECT TITLE:
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Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
ROOF LEVEL DEMOLITION PLAN

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / MD-105
DATE: 12-01-2025	

CAD FILE: 4239-HS-MD-105.DWG
PLOT DATE: 11/20/2025

GENERAL NOTES:

1. THESE GENERAL NOTES SHALL APPLY TO ALL M SERIES DRAWINGS, IN COORDINATION WITH DIVISION 23 SECTIONS, AND FRONT END (DIVISION 0 AND 1) REQUIREMENTS. ALL WORK ASSOCIATED WITH THE M SERIES DRAWINGS SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID CONFLICTS.

2. ALL WORK SHALL BE PERFORMED IN COOPERATION WITH THE OWNER (AND/OR OWNER'S REPRESENTATIVE) AND THE ARCHITECT/ENGINEER THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE CONSTRUCTION SCHEDULE ESTABLISHED BY THE OWNER AND ARCHITECT, AND SHALL IMMEDIATELY REPORT ANY DELAYS IN MATERIALS RECEIPT INCLUDING CIRCUMSTANCES CAUSING DELAYS.

3. CONTRACT DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK AND TO INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE LOCATION OF EQUIPMENT, DUCTWORK, PIPING, AND ACCESSORIES. THE INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND VERIFYING ALL CONDITIONS, DIMENSIONS, AND LOCATIONS PRIOR TO BIDDING PROJECT. CHECK PROJECT DRAWINGS PRIOR TO INSTALLATION FOR INTERFERENCES WITH OTHER TRADES. SHOULD THE CONTRACTOR FIND SUCH INTERFERENCES, THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK WITH OTHERS. THE OWNER RESERVES THE RIGHT TO MAKE REASONABLE CHANGES PRIOR TO ROUGH-IN WITHOUT ADDED EXPENSE. DIMENSIONS INDICATED ARE SUBJECT TO VERIFICATION OF EXACT SITE CONDITIONS AT THE TIME OF INSTALLATION.
   - THE CONTRACTOR SHALL INSTALL ALL DUCTWORK, PIPING, EQUIPMENT, ETC. IN A WORKMAN LIKE MANNER WITH QUALIFIED CONTRACTORS.

4. ALL MECHANICAL WORK SHALL BE INSTALLED PER LOCAL MECHANICAL CODE, HEALTH CODE, FIRE CODE, ENERGY CONSERVATION CODE, AND BUILDING CODE. ALL WORK SHALL COMPLY TO ACCORDANCE OF LOCAL, STATE AND FEDERAL REGULATIONS AND OTHER AUTHORITIES HAVING JURISDICTION.

5. CONTRACTOR RESPONSIBLE FOR PAYING FOR ALL FEES ASSOCIATED WITH OBTAINING PERMITS, INSPECTIONS, ETC.

6. THE MECHANICAL CONTRACTOR SHALL BE LICENSED IN THE LOCAL JURISDICTION PRIOR TO BIDDING ON PROJECT. CONTRACTOR TO CONTACT CITY/TOWNSHIP TO VERIFY LICENSE TO ENSURE THEY ARE CURRENT.

7. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. ANY CONFLICTS WITH INSTALLATION AND MANUFACTURER RECOMMENDATIONS SHALL BE REPORTED TO ENGINEER.

8. CUTTING AND PATCHING - ALL NOTES BELOW HOLD THE COMMON CONDITION "UNLESS OTHERWISE NOTED".
   - FOR RENOVATIONS: THE CONTRACTOR REQUIRING CUTTING SHALL BE RESPONSIBLE FOR HISHER OWN WORK. WHETHER DESCRIBED IN THE CONTRACT DOCUMENTS OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING CUTTING AND PATCHING REQUIREMENTS WITH OTHER TRADES.
   - FOR NEW CONSTRUCTION: ALL CUTTING AND PATCHING THROUGH ALL WALL, CEILING, ETC. SHALL BE PROVIDED BY MECHANICAL CONTRACTOR IN COORDINATION WITH THE GENERAL WORK. ALL PAINTING AND FINISHING SHALL BE DONE BY GENERAL CONTRACTOR. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH GENERAL CONTRACTOR.
   - OPENINGS MADE POST-FINISH: IF AN OPENING IS REQUIRED IN A FINISHED SURFACE, AFTER COMPLETION, DUE TO LACK OF COORDINATION OR PROPER SCHEDULE MAINTENANCE, THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CUTTING AND PATCHING REQUIRED TO FINISH SPECIFIC MECHANICAL WORK AND RESTORE THE FINISHED SURFACE TO PREVIOUS CONDITION.
   - UNDERGROUND PIPING (NEW CONSTRUCTION): TRENCHING SHALL BE BY GENERAL CONTRACTOR. PIPE INSTALLATION WITH APPROPRIATE BEDDING MATERIAL SHALL BE BY THE MECHANICAL CONTRACTOR. BACKFILL ABOVE PIPE AND BEDDING SHALL BE BY THE GENERAL CONTRACTOR BASED ON REQUIREMENTS OF THE STRUCTURAL PLANS AND SPECIFICATIONS.
   - UNDERGROUND PIPING FINISHED FLOORS OTHER THAN CONCRETE: UNLESS OTHERWISE NOTED, TRENCHING, EXCAVATION, BACKFILLING, COMPACTION AND RESTORATION OF THE FLOORING SUBSTRATE SHALL BE PERFORMED BY THIS CONTRACTOR. FINAL FINISHED FLOOR SHALL BE BY OTHERS.
   - UNDERGROUND PIPING FOR FINISHED CONCRETE FLOORS: UNLESS OTHERWISE NOTES, TRENCHING, EXCAVATION, BACKFILLING, COMPACTION, AND RESTORATION OF FINISHED FLOORING SYSTEM SHALL BE PERFORMED BY THIS CONTRACTOR.
   - EQUIPMENT OPENINGS: OPENINGS REQUIRED FOR REMOVAL OF EXISTING EQUIPMENT OR INSTALLATION OF NEW EQUIPMENT SUPPLIED UNDER THIS CONTRACT SHALL BE CUT AND PATCHED BY THIS CONTRACTOR.

9. FURNISH AND INSTALL ALL NEW EQUIPMENT AND MATERIALS AS DESCRIBED HEREIN. ANY MATERIAL, OPERATION, METHOD, OR DEVICE MENTIONED, LISTED OR NOTED WITHIN THIS SPECIFICATION SHALL BE FURNISHED BY THIS CONTRACTOR UNLESS SPECIFICALLY MENTIONED AS BEING FURNISHED OR INSTALLED BY OTHERS.

10. ALL PIPING AND DUCT PENETRATING ALL FIRE-RATED WALLS, CEILINGS, FLOORS, ROOFS, ETC. SHALL BE FIRE STOPPED IN ACCORDANCE WITH DIVISION 7.

11. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE COMPLETE AND OPERABLE SYSTEMS, INCLUDING OPERATIONAL PROPERTIES TO THE EXTENT NECESSARY TO LINK MULTIPLE COMPONENTS OF THE SYSTEMS TOGETHER AND TO INTERFACE WITH SYSTEMS PROVIDED BY OTHERS. THE MECHANICAL CONTRACTOR SHALL GUARANTEE ALL SYSTEMS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. THE CONTRACTOR SHALL PROVIDE OWNER WITH ALL NECESSARY OPERATION AND MAINTENANCE MANUALS, SHOP DRAWINGS, WIRING DIAGRAMS, AS-BUILT DRAWINGS, AND WARRANTY PAPERWORK UPON COMPLETION OF THE PROJECT.

12. THE CONTRACTOR SHALL COORDINATE WITH G.C. FOR LOCATIONS OF ACCESS PANELS PROVIDED BY G.C. IN NON-ACCESSIBLE CEILING AND WALLS FOR ALL VALVES, SHOCK ABSORBERS, VOLUME DAMPERS AND ALL OTHER ITEMS THAT REQUIRE ACCESS TO PROPERLY MAINTAIN OR SERVICE.

13. ALL PIPING PENETRATIONS THROUGH EXPOSED WALLS SHALL BE PROVIDED WITH CHROME ESCUTCHEONS AND SEAL TO WALL OR CEILING.

14. ALL NATURAL GAS PIPING SHALL BE INSTALL PER NEW YORK FUEL GAS CODE AND AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL PROVIDE SHUT OFF GAS VALVE FOR ALL EQUIPMENT UTILIZING GAS. CONTRACTOR SHALL PROVIDE 6" DIRT LEG (MINIMUM) FOR ALL EQUIPMENT UTILIZING GAS.

15. EQUIPMENT CONNECTIONS:
   - ALL EQUIPMENT SHALL BE PROVIDED WITH UNIONS AND SHUT-OFF VALVES WHETHER DETAILED OR NOT.
   - ALL MECHANICAL HYDRONIC OR REFRIGERANT EQUIPMENT SHALL BE PROVIDED WITH SHUT OFF VALVES.
   - THIS CONTRACTOR SHALL MAKE FINAL HYDRONIC AND REFRIGERANT CONNECTIONS TO PIPING/EQUIPMENT FURNISHED BY OTHERS, UNLESS OTHERWISE NOTED.

17. ALL PENETRATIONS THROUGH ROOFING MEMBRANE AND ROOF DECKING SHALL BE PERFORMED BY AN INSTALLER CERTIFIED BY THE ROOFING SYSTEM MANUFACTURER TO MAINTAIN ROOF SYSTEM WARRANTY.

18. FOR PROJECTS WITH APPROVED USE OF PVC AND CPVC PIPING, SUCH PIPING SHALL BE PROHIBITED IN THE FOLLOWING LOCATIONS.
   - AREAS OF ASSEMBLY.
   - RETURN AIR PLENUMS.
   - EXIT DISCHARGE CORRIDORS.
   - STAIRS.

19. RODENTPROOFING - IN OR ON STRUCTURES WHERE OPENINGS HAVE BEEN MADE IN FLOORS CEILINGS, OR WALLS FOR THE PASSAGE OF DUCT OR PIPE, SUCH OPENINGS SHALL BE CLOSED AND PROTECTED WITH APPROVED METAL COLLARS THAT ARE SECURELY FASTENED TO THE ADJOINING STRUCTURE.

20. STRUCTURAL SAFETY - IN THE PROCESS OF INSTALLING OR REPAIRING ANY PART OF A MECHANICAL SYSTEM, THE FINISHED FLOOR, WALLS, CEILINGS, TILE OR ANY OTHER PART OF THE BUILDING OR PREMISES THAT MUST BE CHANGED OR REPLACED SHALL REMAIN IN A STRUCTURALLY SAFE CONDITION IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING CODE OF NEW YORK STATE.

21. PROTECTION OF DUCTS, PIPES AND MECHANICAL SYSTEM COMPONENTS - PIPING, DUCT AND OTHER SYSTEM COMPONENTS SHALL BE INSTALLED IN SUCH A MANNER SO AS TO PREVENT CORROSION, BREAKAGE, FREEZING, AND PHYSICAL DAMAGE BY OTHER BUILDING COMPONENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING CODE OF NEW YORK STATE.

22. EXISTING SITE UTILITIES - UNDERGROUND UTILITY LOCATIONS ARE NOT GUARANTEED, NOR IS THERE ANY GUARANTEE THAT ALL EXISTING UTILITIES, WHETHER FUNCTIONAL OR ABANDONED, WITHIN THE PROJECT AREA ARE SHOWN. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL DAMAGES RESULTING FROM THE CONTRACTOR'S WORK. CONTRACTOR SHALL CONTACT DIG SAFELY NEW YORK (DSNY) - 800-962-7962 FOR STAKEOUT REQUESTS.

23. COORDINATE ALL EQUIPMENT & DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS.

24. COORDINATE ALL PENETRATIONS THROUGH EXTERIOR WALLS WITH ARCHITECTURAL DRAWINGS.

25. THE CONTRACTOR SHALL CHECK AND VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE BEFORE PROCEEDING WITH THE WORK. HE SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER FOR CORRECTION PRIOR TO BEGINNING ANY WORK. DISCOVERY OF ANY DISCREPANCIES AFTER WORK HAS COMMENCED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

26. ALL EQUIPMENT-HVAC CONTRACTOR MUST REVIEW THE EQUIPMENT SCHEDULES, SPECIFICATIONS, AND DRAWINGS IN ALL CONTRACT DOCUMENTS AND SUBSEQUENT SHOP DRAWINGS. ALL LABOR AND MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM AS PART OF THE CONTRACT. FAILURE TO REVIEW DOES NOT RELIEVE THE CONTRACTOR OF FULFILLING CONTRACTUAL OBLIGATIONS.

27. REFER TO ARCHITECTURAL DRAWINGS AND SHOP DRAWINGS FOR FINAL CONNECTIONS AND EXACT LOCATIONS FOR ALL WORK REQUIRED FOR EQUIPMENT NOT FURNISHED UNDER THIS CONTRACT.

28. COORDINATE INSTALLATION OF NEW WORK WITH ARCHITECTURAL, STRUCTURAL, PLUMBING, POWER AND LIGHTING PLANS. CONTRACTOR SHALL TAKE ALL INTERFERENCE INTO CONSIDERATION. PROVIDE ALL NECESSARY OFFSETS OR TRANSITIONS WITH EQUIVALENT AREAS TO MATCH DUCT SIZES AS INDICATED ON DRAWINGS.

29. DO NOT INSTALL ANY MECHANICAL WORK ABOVE ELECTRICAL PANELS.

30. DO NOT INSTALL ANY MECHANICAL WORK ABOVE OR THROUGH ELEVATOR EQUIPMENT ROOM UNLESS SPECIFICALLY SERVING EQUIPMENT ROOM.

31. FOR ALL BRANCH DUCT CONNECTIONS TO MAIN TRUNK, PROVIDE 45° TRANSITION FITTING OR CONICAL TAP FOR ROUND DUCT. BUTT FITTINGS ARE NOT PERMITTED. PROVIDE MANUAL VOLUME DAMPER WITH LOCKING QUADRANT AN ALL BRANCH RUNOUTS TO GRILLES AND DIFFUSERS.

32. PROVIDE TURNING VANES IN ALL MITERED ELBOWS OR PROVIDE ELBOWS WITH CENTERLINE RADIUS EQUAL TO 1.5 TIMES DUCT WIDTH.

33. INSTALL ALL FIRE DAMPERS AND CEILING RADIATION DAMPERS IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. PROVIDE UL FIRE DAMPERS WITH BLADES OUT OF AIR STREAM AND ACCESS DOORS. FIRE DAMPERS IN TRANSFER DUCTS ONLY MAY HAVE BLADES IN AIR STREAM.

34. SLEEVE AND SEAL ALL PIPE OR DUCT PENETRATIONS OF WALL AND FLOORS. PACK VOID BETWEEN PIPE OR DUCT AND SLEEVE WITH INSULATION IN NON-RATED WALLS AND FLOORS. PACK VOID BETWEEN PIPE OR DUCT AND SLEEVE WITH INSULATION IN FIRE-RATED WALLS AND FLOORS, APPLY INTUMESCENT FIRE SAFING COMPOUND AT PENETRATION, MAINTAINING INTEGRITY AND RATING OF FIRE SEPARATION. SLEEVES THROUGH FLOORS SHALL EXTEND 2" ABOVE FLOOR AND BE GROUTED INTO PLACE AND WATERPROOFED. PIPING THROUGH EXTERIOR WALLS SHALL BE SLEEVED AND SEALED WEATHER TIGHT.

35. SHUTDOWN OF SERVICES SHALL BE COORDINATED AND SCHEDULED WITH THE OWNER.

36. THE HVAC CONTRACTOR SHALL DISCONNECT AND CAP ALL SUPPLY, RETURN, AND EXHAUST AIR OUTLETS THAT ARE STILL ACTIVE IN THE PROJECT AREA DURING CONSTRUCTION.

37. THE HVAC CONTRACTOR SHALL REFER TO THE PHASING PLAN TO DETERMINE THE EXTENT OF WORK AND TEMPORARY SYSTEM CONNECTIONS NECESSARY FOR EACH PHASE.

38. ALL DUCT AND UNIT MOUNTED SMOKE DETECTORS FOR MECHANICAL EQUIPMENT AND DAMPERS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR, WIRED TO FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR, WITH UNIT SHUTDOWN CONTROL WIRING BY THE MECHANICAL CONTRACTOR.

39. HVAC CONTRACTOR SHALL PROVIDE ALL TRANSFORMERS AS REQUIRED FOR DUCT-MOUNTED DAMPER ACTUATORS OR THE DDC CONTROLS SYSTEM.

40. ALL WORK SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER SO THAT DISRUPTION OF AREAS INVOLVED IS KEPT TO A MINIMUM. ANY ACCIDENTAL INTERRUPTIONS TO SERVICES SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR WITH OUT ANY ADDITIONAL COST TO THE OWNER.

41. PRIOR TO SUBMITTING BIDS AND DURING CONSTRUCTION, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES AND COORDINATE THE INSTALLATION WITH ALL TRADES AND EXISTING CONDITIONS. COORDINATION OF WORK IF NECESSARY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

42. PROVIDE ALL DAMPERS, SHEAVES, AND BELTS AS REQUIRED FOR BALANCING.

43. THE HVAC CONTRACTOR SHALL CENTER AND/OR ALIGN REGISTERS, DIFFUSERS, AND EQUIPMENT WITH ADJACENT ARCHITECTURAL FEATURES.

44. INSTALL FIRE DAMPERS AS REQUIRED PER NFPA 101 AND NFPA 90A.

45. ALL HVAC INSTALLATIONS SHALL COMPLY WITH NFPA 101.

46. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC, PLUMBING, AND FIRE PROTECTION) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.

47. PROVIDE INTERNAL VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT, PIPING AND DUCTWORK AS SPECIFIED TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.

48. MAINTAIN A MINIMUM OF 6'-8" CLEARANCE TO UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.

49. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.

50. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENT BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE AABC STANDARDS.

51. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.

52. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND DIVISION 16 OF THE SPECIFICATION.

53. WHEN MECHANICAL WORK (HVAC, PLUMBING, SHEET METAL, FIRE PROTECTION, ETC.) IS SUBCONTRACTED, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACT PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR, WHOSE DECISION SHALL BE FINAL.

54. ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING, DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE RESPECTIVE CONTRACTOR.

55. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS, AND OTHER CONCEALED MECHANICAL EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO GENERAL CONTRACTOR FOR INSTALLATION. DUCT ACCESS PANELS INSTALLED BY HVAC CONTRACTOR.

56. ALL DUCTWORK, PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C-CLAMPS SHALL NOT BE PERMITTED.

57. MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHALL NOT BE SUPPORTED FROM METAL DECK.

58. ALL ROOF MOUNTED EQUIPMENT CURBS FOR EQUIPMENT PROVIDED BY THE MECHANICAL CONTRACTOR SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.

59. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.

60. REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION.

61. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.

62. CERTAIN ITEMS SUCH AS RISES AND DROPS IN DUCTWORK, ACCESS DOORS, VOLUME DAMPERS, ETC., ARE INDICATED ON THE CONTRACT DRAWINGS FOR CLARITY FOR A SPECIFIC LOCATION REQUIREMENT AND SHALL NOT BE INTERPRETED AS THE EXTENT OF THE REQUIREMENTS FOR THESE ITEMS.

63. UNLESS OTHERWISE SHOWN, LOCATE ALL ROOM THERMOSTATS 44" (CENTERLINE) ABOVE FINISHED FLOOR. NOTIFY THE ENGINEER OF ANY ROOMS WHERE THE ABOVE LOCATION CANNOT BE MAINTAINED OR WHERE THERE IS A QUESTION ON LOCATION. COORDINATE INSTALLATION WITH OTHER SENSORS AND SWITCHES TO MAINTAIN AESTHETIC APPEARANCE. WHERE THERMOSTATS ARE LOCATED NEAR LIGHT SWITCHES, THEY SHALL MATCH THE HEIGHT OF THE SWITCH. ATC CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND DETERMINE SUITABLE LOCATION IN WHICH THE SENSOR IS NOT NEGATIVELY EFFECTED BY HEAT OR COOLING SOURCES.

64. ALL DUCTWORK DIMENSIONS, AS SHOWN ON THE DRAWINGS, ARE INTERNAL CLEAR DIMENSIONS AND DUCT SIZE SHALL BE INCREASED TO COMPENSATE FOR DUCT LINING THICKNESS.

65. COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING, AND OTHER CEILING ITEMS AND MAKE MINOR DUCT MODIFICATIONS TO SUIT.

66. UNLESS OTHERWISE NOTED, ALL DUCTWORK IS OVERHEAD, TIGHT TO THE UNDERSIDE OF THE STRUCTURE, WITH SPACE FOR INSULATION IF REQUIRED.

67. PROVIDE ACCESS DOORS IN DUCTWORK TO PROVIDE ACCESS FOR ALL SMOKE DETECTORS, FIRE DAMPERS, SMOKE DAMPERS, VOLUME DAMPERS, HUMIDIFIERS, COILS, AND OTHER ITEMS LOCATED IN THE DUCTWORK WHICH REQUIRE SERVICE AND/OR INSPECTION.

68. PROVIDE ACCESS DOORS IN DUCTWORK FOR OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL FANS, VALVES, AND MECHANICAL EQUIPMENT.

69. SEE SPECIFICATIONS FOR DUCTWORK GAUGES, BRACING, HANGERS, AND OTHER REQUIREMENTS.

70. EXTERIOR LOUVERS ARE INDICATED IN THE MECHANICAL SCHEDULES. LOUVER SIZES, LOCATIONS, AND DETAILS SHALL BE COORDINATED WITH GENERAL CONTRACTOR. LOUVER SIZES, LOCATIONS, MOUNTING, AND DETAILS SHALL BE COORDINATED WITH OTHER TRADES INVOLVED.

71. STRUCTURAL STEEL FABRICATOR AND INSTALLER SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL FRAMED OPENINGS IN ROOF WITH APPROVED EQUIPMENT MANUFACTURERS. (OPENINGS SUCH AS, BUT NOT LIMITED TO MECHANICAL UNITS, EXHAUST FANS, CURB MOUNTED EQUIPMENT, ROOF DRAINS, SKYLIGHTS, STAIR OPENINGS, ROOF HATCHES, DUCT THROUGH ROOF PENETRATIONS, EXPANSION JOINTS, ETC.) EXACT SIZES AND EXACT LOCATIONS OF OPENINGS ARE TO BE VERIFIED WITH THE APPROVED SHOP DRAWINGS ISSUED FOR THE INSTALLATION. THE EXACT SIZES SHALL BE COORDINATED PRIOR TO ANY FABRICATION AND INSTALLATION BY ANY/ALL TRADES. SIZES AND LOCATIONS INDICATED ON CONTRACT DRAWINGS ARE DIAGRAMMATIC AND FOR INFORMATION ONLY.

72. ANY FABRICATION AND/OR INSTALLATION WHICH HAS NOT BEEN PROPERLY COORDINATED WITH APPROVED EQUIPMENT MANUFACTURER AND MUST BE REPAIRED, RELOCATED, ALTERED, REPLACED, RE-INSTALLED OR MODIFIED IN ANY MANNER, WILL BE DONE TO THE SATISFACTION OF THE OWNER, AT NO ADDITIONAL COST TO THE OWNER OR DESIGN PROFESSIONAL.

73. THESE DRAWINGS REFLECT INFORMATION ON EXISTING BUILDING SERVICES GATHERED BY LIMITED FIELD INVESTIGATION AND PREVIOUS CONSTRUCTION DRAWINGS (NOT AS-BUILT DRAWINGS). THE EXACT LOCATION, ARRANGEMENT, AND SIZES OF EXISTING DEVICES AND EQUIPMENT MAY BE DIFFERENT FROM THAT SHOWN ON THESE DRAWINGS. ALL BIDDERS ARE REQUIRED TO INVESTIGATE EXISTING BUILDING CONDITIONS (AND UNFORESEEN CONDITIONS) PRIOR TO SUBMITTING THEIR BIDS AND PROVIDE ALL REQUIRED FIELD AND SITE MEASUREMENTS PRIOR TO ORDERING ANY NEW COMPONENTS, DEVICES, CONTROLS, DUCTWORK/PIPING, OR EQUIPMENT.

74. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.

75. CEILINGS THAT NEED TO BE TEMPORARILY REMOVED TO ALLOW FOR THE INSTALLATION OF DUCTWORK, PIPING OR EQUIPMENT, AND ARE NOT SCHEDULED TO BE REMOVED ON THE ARCHITECTURAL DRAWINGS, SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR. COORDINATE THE REMOVAL AND THE REPLACEMENT WITH THE ELECTRICAL CONTRACTOR AND THE FIRE PROTECTION CONTRACTOR.

76. MECHANICAL CONTRACTOR SHALL REPLACE (IN-KIND) ALL CEILING TILES AND CEILING GRID SEGMENTS THAT GET DAMAGED DURING DEMOLITION OR CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

77. M.C. SHALL PROVIDE COORDINATION SHOP DRAWINGS OF HVAC DUCTWORK AND PIPING COORDINATED WITH LIGHTING, PLUMBING, AND FIRE PROTECTION. FIELD VERIFY ALL DIMENSIONS AND UNFORESEEN CONDITIONS WITH AT LEAST 1 SITE SURVEY.

HVAC LEGEND

DUCT SYMBOL	DESCRIPTION
	DUCT - UP THRU ROOF - POSITIVE PRESSURE
	DUCT - UP THRU ROOF - NEGATIVE PRESSURE
	DUCT - UP - POSITIVE PRESSURE
	DUCT - UP - NEGATIVE PRESSURE
	DUCT - DOWN - POSITIVE PRESSURE
	DUCT - DOWN - NEGATIVE PRESSURE
XX"x"	DUCT SIZE - FIRST FIGURE IS SIZE SHOWN
	FLEXIBLE CONNECTION
	ACOUSTICALLY LINED DUCTWORK
FLEX	FLEXIBLE DUCT
	VOLUME DAMPER
S D	DUCT SMOKE DETECTOR
	RADIUS ELBOW (MIN R/W = 1.5)
OR	RECTANGULAR ELBOW WITH TURNING VANES

DUCT SYMBOL	DESCRIPTION
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE DAMPER
	CAPPED DUCT
	DUCT TRANSITION FROM RECTANGULAR TO ROUND
	DUCT TRANSITION FROM RECTANGULAR TO RECTANGULAR
	SQUARE TO ROUND BRANCH DUCT

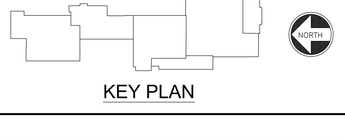
MISC. SYMBOLS	DESCRIPTION
	CEILING GRILLE (G) REGISTER (R)
	CEILING DIFFUSER (D)
	LINEAR DIFFUSER (D)
	DOOR LOUVER OR UNDERCUT
	ROOF EXHAUST FAN
	NON-POWERED ROOF VENTILATOR
T	THERMOSTAT
	REMOVE EXISTING EQUIPMENT
	EXISTING EQ UIPMENT TO REMAIN
	NEW EQUIPMENT

PIPING SYMBOL	DESCRIPTION
	VIBRATION ISOLATOR
	UNIT HEATER
	POINT OF DISCONNECTION & CONNECTION
	WALL REGISTER OR GRILLE
	AIR FLOW
	PIPING RISE
	PIPING DROP
	BOTTOM PIPE CONNECTION
	TOP PIPE CONNECTION
CD	CONDENSATE DRAIN
G	NATURAL GAS
RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID

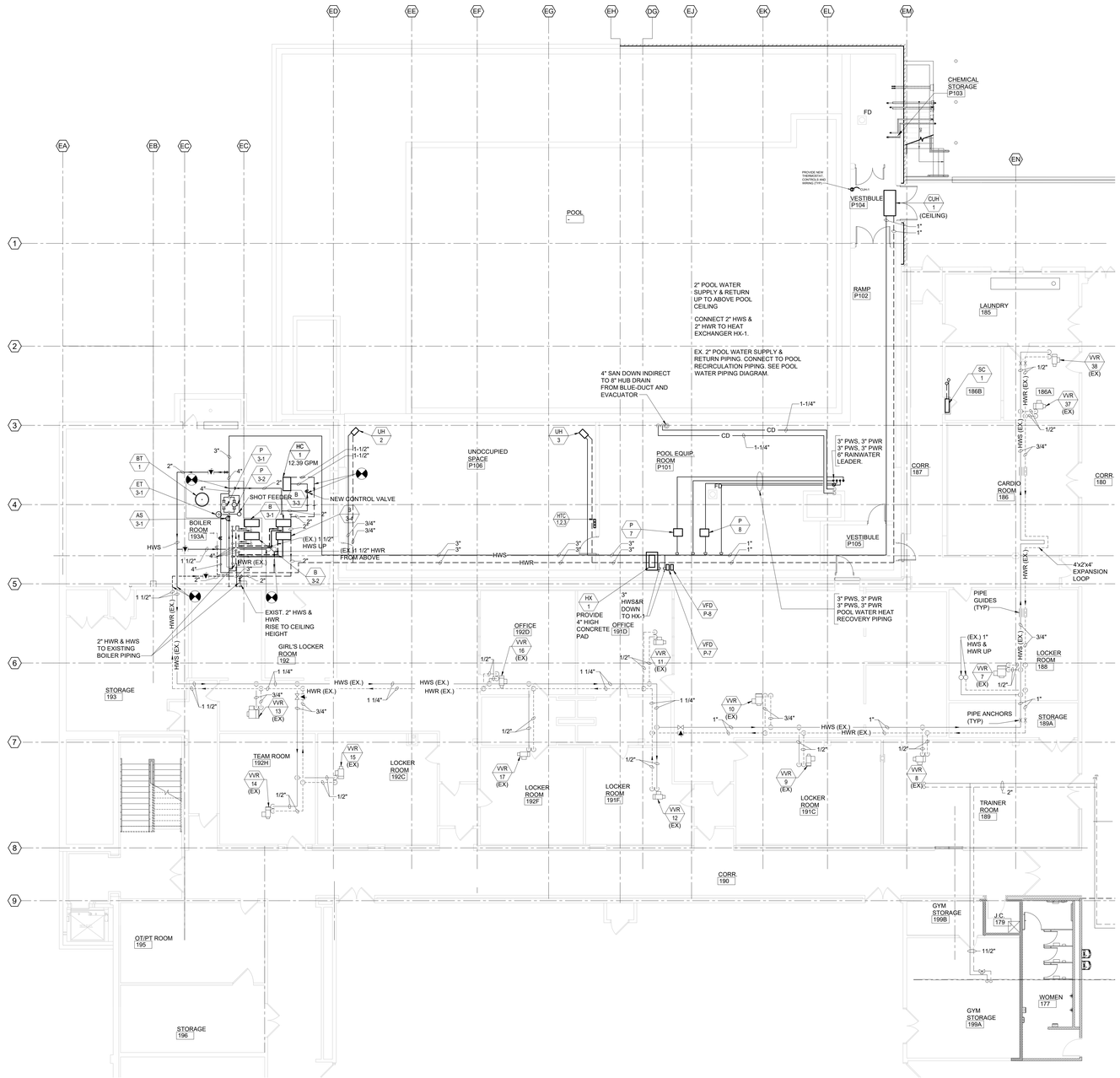
ABBREVIATION	DESCRIPTION
AAD	AUTOMATIC DAMPER
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP IN. WG
ATU	AIR TERMINAL UNIT
AWT	AVERAGE WATER TEMPERATURE
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACK DRAFT DAMPER
BFS	BOILER FEED STATION
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
CIR	CAST IRON RADIATION
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
D	DIFFUSER
db	DRY BULB (°F)
DDC	DIRECT DIGITAL CONTROL
DHW	DOMESTIC HOT WATER
DIA, ø	DIAMETER
DN	DOWN
DWG	DRAWING
DX	DIRECT EXPANSION
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE (°F)
EC	ELECTRICAL CONTRACTOR
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WET BULB (°F)
EWT	ENTERING WATER TEMPERATURE (°F)
F	FAN
° F	DEGREES FAHRENHEIT
FA	FREE AREA (SQ. FT.)
FCU	FAN COIL UNIT
FD	FIRE DAMPER (WITH ACCESS DOOR)
FLA	FULL LOAD AMPS
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FSD	FIRE-SMOKE DAMPER (WITH ACCESS DOOR)
FT or '	FEET (OF HEAD)
FTR	FIN TUBE RADIATION
G	GRILLE
GAL	GALLONS
GC	GENERAL CONSTRUCTION CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
KW	KILOWATTS
L	LOUVER
LAT	LEAVING AIR TEMPERATURE (°F)
LBS	POUNDS
LD	LOUVER/DAMPER
LDB	LEAVING DRY BULB
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE (°F)
MA	MIXED AIR
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BTUH
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTDOOR AIR
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR / RELIEF AIR
RTU	ROOF TOP UNIT
RV	ROOF VENT
SL	SKYLIGHT
SCCV	SELF CONTAINED CONTROL VALVE
UH	UNIT HEATER
UV	UNIT VENTILATOR
V	VENT

REVISIONS

Issued for Bidding
December 1, 2025



KEY PL



GENERAL NOTES:

1. ANY POOL EVACUATOR EXHAUST DUCT BELOW GRADE (OR BELOW TOP OF SLAB) WILL BE BLUEDUCT. ANY EVACUATOR DUCT ABOVE GRADE (OR ABOVE TOP OF SLAB) WILL BE WELDED LIQUIDTIGHT 316L STAINLESS STEEL.
2. PROVIDE CONTINUOUSLY WELDED LIQUID TIGHT 316L STAINLESS STEEL DUCT FOR ALL ABOVE GROUND DUCT CONNECTED TO EF-1.
3. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
4. CEILINGS THAT NEED TO BE TEMPORARILY REMOVED TO ALLOW FOR THE INSTALLATION OF DUCTWORK, PIPING OR EQUIPMENT, AND ARE NOT SCHEDULED TO BE REMOVED ON THE ARCHITECTURAL DRAWINGS, SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR. COORDINATE THE REMOVAL AND THE REPLACEMENT WITH THE ELECTRICAL CONTRACTOR AND THE FIRE PROTECTION CONTRACTOR.
5. MECHANICAL CONTRACTOR SHALL REPLACE (IN-KIND) ALL CEILING TILES AND CEILING GRID SEGMENTS THAT GET DAMAGED DURING DEMOLITION OR CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
6. M.C. SHALL PROVIDE COORDINATION SHOP DRAWINGS OF HVAC DUCTWORK AND PIPING COORDINATED WITH LIGHTING, PLUMBING, AND FIRE PROTECTION. FIELD VERIFY ALL DIMENSIONS AND UNFORESEEN CONDITIONS WITH AT LEAST 1 SITE SURVEY.

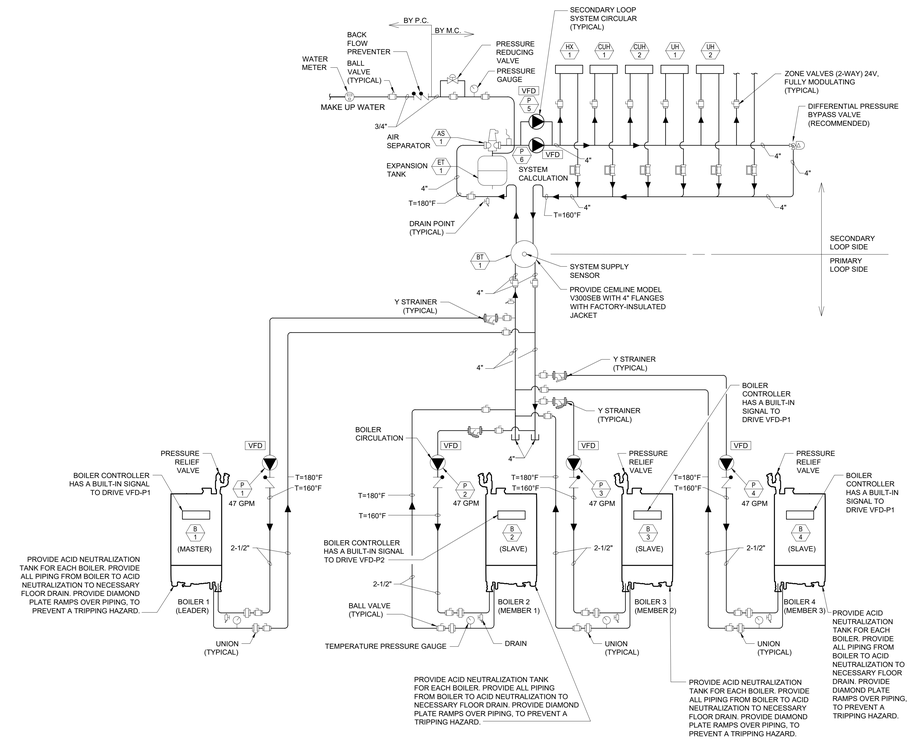
NORTH
BUILDING NORTH

1
M-100

FIRST FLOOR - UNIT E
MECHANICAL PIPING RENOVATION PLAN

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

1. HVAC CONTRACTOR SHALL PROVIDE ALL PWS &R PIPING BETWEEN PDU-1 AND THE TEES ON THE POOL WATER FILTRATION LOOP PER THE PIPING SCHEMATIC ON DRAWING HS M-X.X PLAN VIEW OF PWS&R PIPING SHALL BE PROVIDED. HVAC CONTRACTOR SHALL PROVIDE THE HWS&R PIPING ON THE HOT SIDE OF HX-1 PER PLAN VIEW ON DRAWING HS M-X.X. AQUATICS CONTRACTOR SHALL PROVIDE PWS&R PIPING ON THE COLD SIDE OF HX-1 PER AQUATICS DRAWINGS AND DRAWING HS M-X.X. REFER TO THE HX-1 DETAIL NOTES ON HS M-X.X.
2. HVAC CONTRACTOR SHALL PROVIDE HEAT TRACE OF PWS&R PIPING ON THE ROOF. HEAT TRACE SCOPE OF WORK WILL BE CLARIFIED. BASIS OF DESIGN: DELTA-THERM.



1. MAINTAIN FLOW RATES BASED ON SYSTEM PIPING REQUIREMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL EQUIPMENT AND DETAILING REQUIRED BY PENNSYLVANIA L &I CODE.

NOTES:

1. BOILER CONTROLLER SHALL TAKE FULL CONTROL OF BOILER OPERATION.
2. BAS SHALL PROVIDE THE FOLLOWING:
   - SETPOINT SIGNAL (ADJUSTABLE THROUGH BACNET CARD)
   - MONITORING OF ALL BOILER CENTURY POINTS (LOCAL AND REMOTE)
   - BACKNET/ LONWORKS

CONDENSING BOILER PIPING SCHEMATIC

SCALE: NOT TO SCALE

POOL PIPING RESPONSIBILITY MATRIX

HEATER TYPE	AQUATICS CONTRACTOR SHALL PROVIDE	MECHANICAL CONTRACTOR SHALL PROVIDE
DEHUMIDIFICATION SYSTEM HEAT RECOVERY (PDU-1)	CONNECTION TO POOL WATER RECIRCULATION UPSTREAM OF PRIMARY HEATER WITH BYPASS VALVE AND FLANGED CONNECTIONS	DEHUMIDIFICATION UNIT ALL PIPING FROM POOL MECHANICAL ROOM TO IN/OUT OF PDU-1 UNIT CONTROLS BOOSTER PUMPS P-7 AND P-8 & STARTER (VFD)
HOT WATER HEAT EXCHANGERS	POOL WATER PIPING AQUASTAT HEAT EXCHANGER	HOT WATER PIPING CONTROL VALVE

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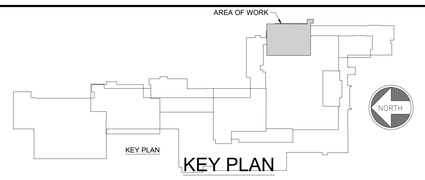

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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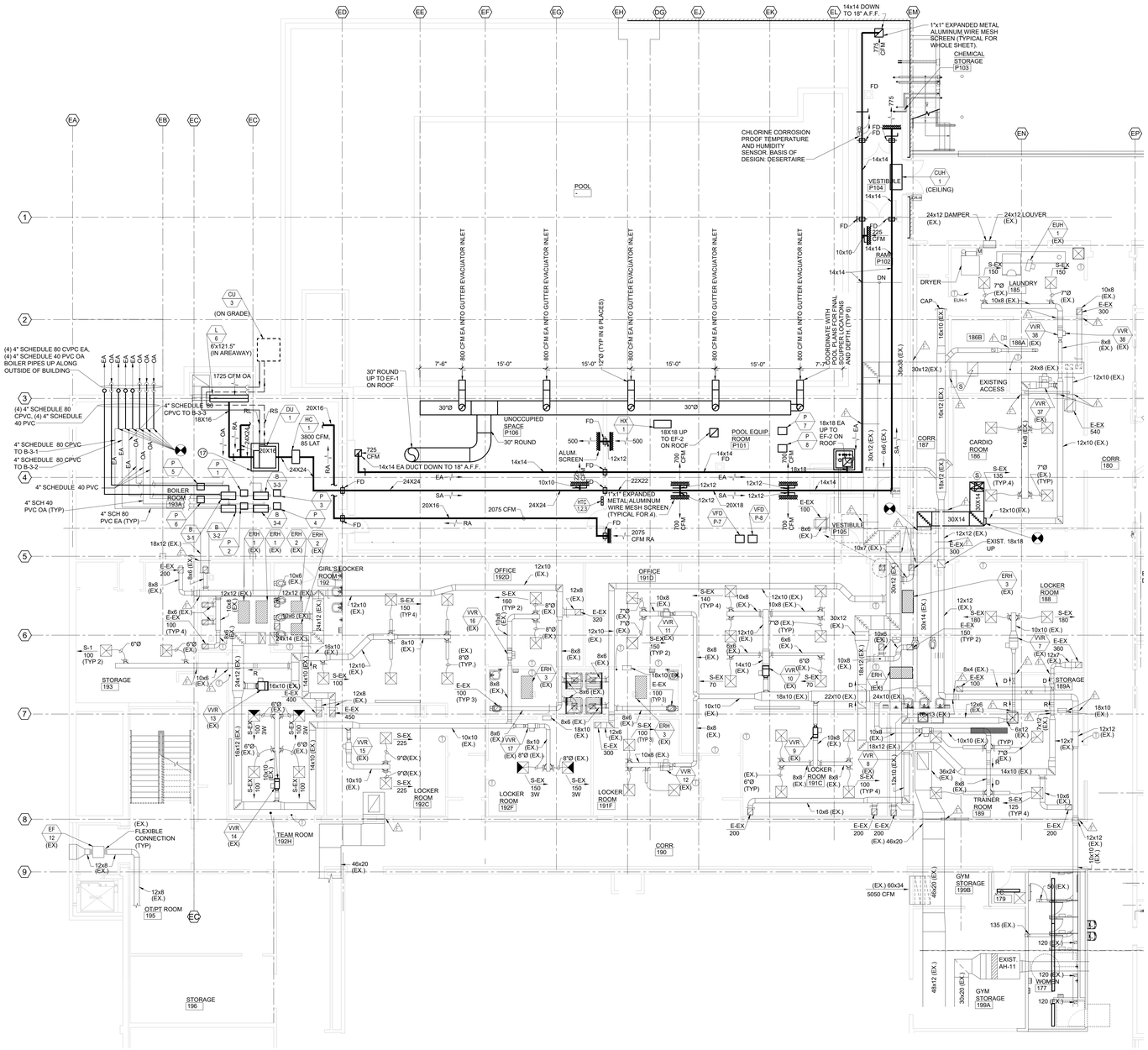
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - UNIT E
MECHANICAL PIPING RENOVATION PLAN

DRAWN BY:	PROJECT NO.:
F.G.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-100
DATE: 12-01-2025	

CAD FILE: H:\EXP\LEA\TEL 11/5/2025



AIR CHANGE SCHEDULE

ROOM	AREA	VOLUME	MIN AC/HR	MIN EA/SA CFM
CHEMICAL STORAGE P103	152 S.F.	1368 S.F.	60 AC/HR	1370 CFM

KEY NOTES:

1. EXISTING 24x12 SUPPLY FROM ABOVE AND 24x14 RETURN UP (RTU-4).
2. EXISTING T-1 , 300 (BOTH SIDES).
3. EXISTING RUN DUCT UP BETWEEN JOISTS.
4. EXISTING RISE TO UNDERSIDE OF R/A DUCT.
5. EXISTING T-1 , 100 (BOTH SIDES).
6. EXISTING DROP TO TOP OF R/A DUCT.
7. EXISTING 12x10 DUCT OFF THE TOP OF S/A DUCT.
8. EXISTING 8'-0" E.B.B. RELOCATED.
9. EXISTING RELOCATED EXISTING THERMOSTAT.
10. EXISTING 8'-0" E.B.B. & CONTROLS RELOCATED.
11. EXISTING 6" DRYER EXHAUST UP TO ROOF. PROVIDE CLEAN OUT IN BOTTOM OF VERTICAL RISE.
12. EXISTING 20x20 TRANSITION DOWN TO 30x14 SUPPLY FROM ABOVE (RTU-3).
13. EXISTING 24x22 RETURN UP (RTU-3).
14. EXISTING E-1, 150.
15. EXISTING BALANCE TO 545 CFM.
16. EXISTING 32"x7-3/4" BRICK VENT
17. NEW 6" HIGH CONCRETE HOUSEKEEPING PAD BY MECHANICAL CONTRACTOR

GENERAL NOTES:

1. ALL DUCTWORK, DUCTWORK ACCESSORIES AND HANGER FOR DU-1 AND EF-2 SHALL BE ALUMINUM FOR CORROSION RESISTANCE.
2. ANY POOL EVACUATOR EXHAUST DUCT BELOW GRADE (OR BELOW TOP OF SLAB) WILL BE BLUEDUCT. ANY EVACUATOR DUCT ABOVE GRADE (OR ABOVE TOP OF SLAB) WILL BE WELDED LIQUIDTIGHT 316L STAINLESS STEEL.
3. PROVIDE CONTINUOUSLY WELDED LIQUID TIGHT 316L STAINLESS STEEL DUCT FOR ALL ABOVE GROUND DUCT CONNECTED TO EF-1.
4. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
5. CEILINGS THAT NEED TO BE TEMPORARILY REMOVED TO ALLOW FOR THE INSTALLATION OF DUCTWORK, PIPING OR EQUIPMENT, AND ARE NOT SCHEDULED TO BE REMOVED ON THE ARCHITECTURAL DRAWINGS, SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR. COORDINATE THE REMOVAL AND THE REPLACEMENT WITH THE ELECTRICAL CONTRACTOR AND THE FIRE PROTECTION CONTRACTOR.
6. MECHANICAL CONTRACTOR SHALL REPLACE (IN-KIND) ALL CEILING TILES AND CEILING GRID SEGMENTS THAT GET DAMAGED DURING DEMOLITION OR CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
7. M.C. SHALL PROVIDE COORDINATION SHOP DRAWINGS OF HVAC DUCTWORK AND PIPING COORDINATED WITH LIGHTING, PLUMBING, AND FIRE PROTECTION. FIELD VERIFY ALL DIMENSIONS AND UNFORESEEN CONDITIONS WITH AT LEAST 1 SITE SURVEY.
8. ALL FIRE DAMPERS ON THIS DRAWING SHALL BE ALL ALUMINUM.

NORTH
BUILDING NORTH

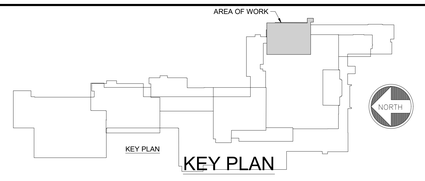
1
M-101

FIRST FLOOR - UNIT E
MECHANICAL DUCTWORK RENOVATION PLAN

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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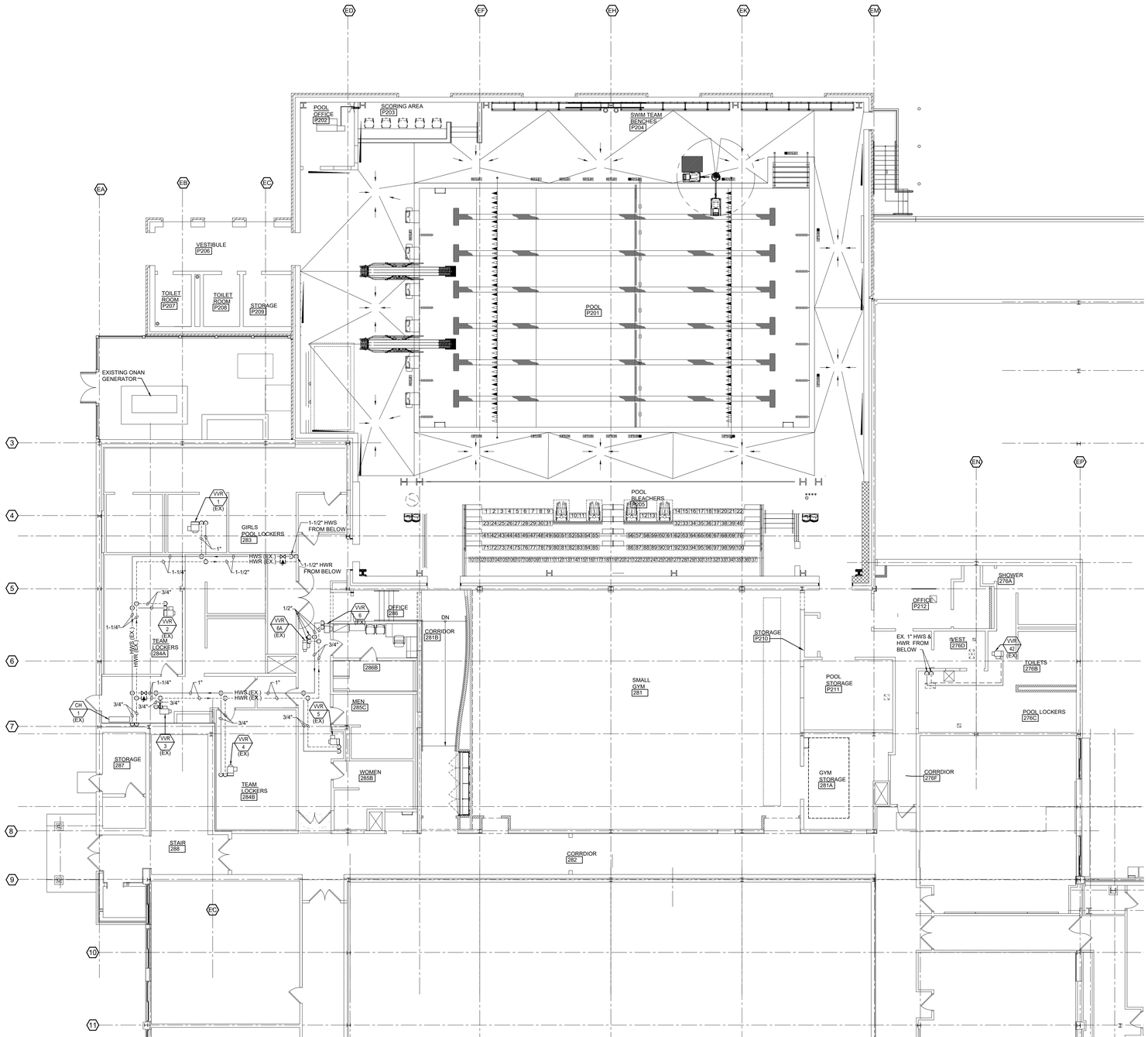
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - UNIT E
MECHANICAL DUCTWORK RENOVATION PLAN

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-101
DATE: 12-01-2025	

DWG FILE: M-101.dwg
PLOT DATE: 11/25/2025



SECOND FLOOR - UNIT E
MECHANICAL PIPING RENOVATION PLAN

1 / M-102

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

NORTH

BUILDING NORTH

GENERAL NOTES:

1. ANY POOL EVACUATOR EXHAUST DUCT BELOW GRADE (OR BELOW TOP OF SLAB) WILL BE BLUEDUCT. ANY EVACUATOR DUCT ABOVE GRADE (OR ABOVE TOP OF SLAB) WILL BE WELDED LIQUIDTIGHT 316L STAINLESS STEEL.
2. PROVIDE CONTINUOUSLY WELDED LIQUID TIGHT 316L STAINLESS STEEL DUCT FOR ALL ABOVE GROUND DUCT CONNECTED TO EF-1.
3. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
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5. MECHANICAL CONTRACTOR SHALL REPLACE (IN-KIND) ALL CEILING TILES AND CEILING GRID SEGMENTS THAT GET DAMAGED DURING DEMOLITION OR CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
6. M.C. SHALL PROVIDE COORDINATION SHOP DRAWINGS OF HVAC DUCTWORK AND PIPING COORDINATED WITH LIGHTING, PLUMBING, AND FIRE PROTECTION. FIELD VERIFY ALL DIMENSIONS AND UNFORESEEN CONDITIONS WITH AT LEAST 1 SITE SURVEY.

REVISIONS

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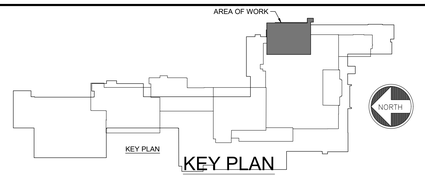
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
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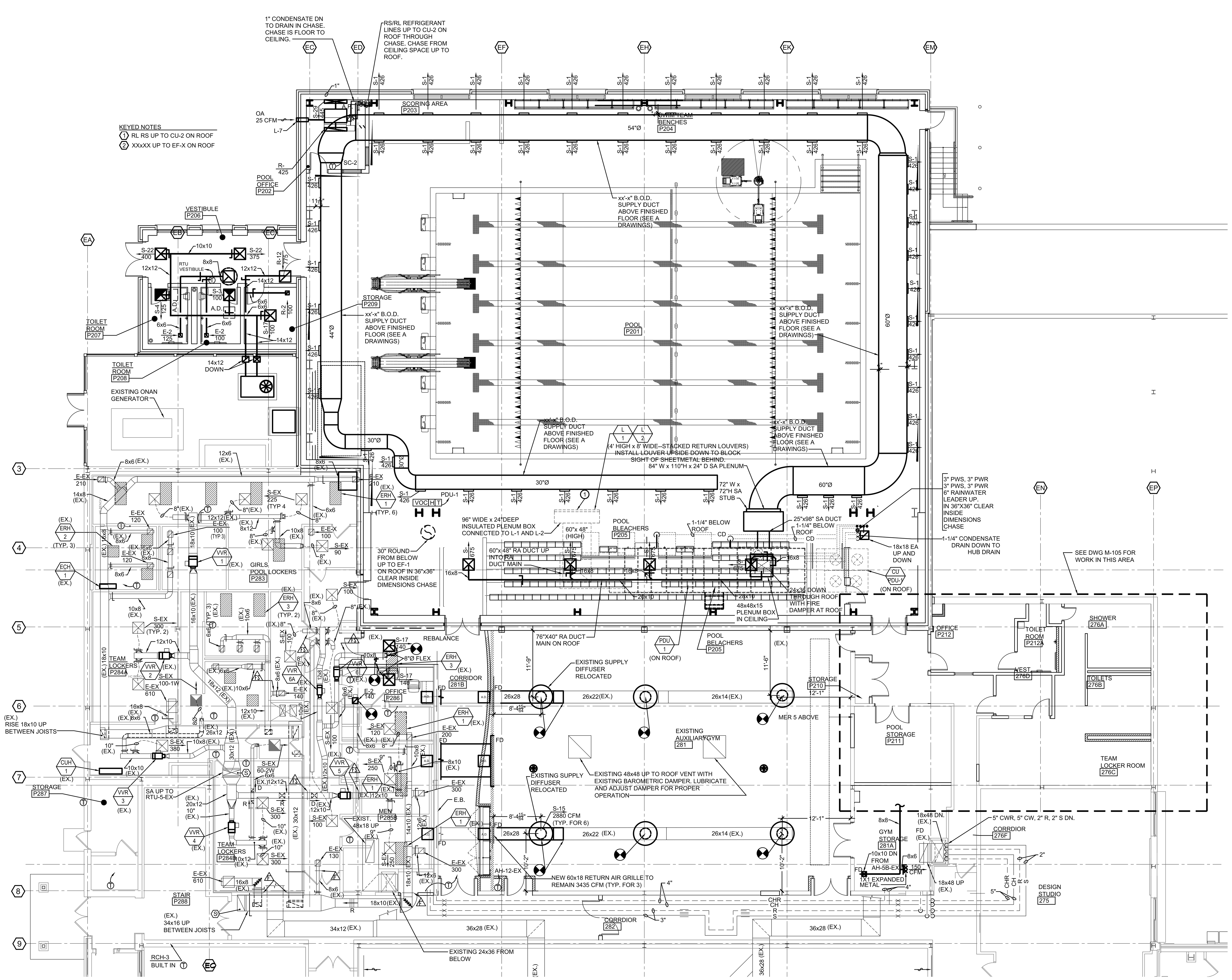
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR - UNIT E
MECHANICAL PIPING RENOVATION PLAN

DRAWN BY:	PROJECT NO.:	
F.G.	2024-239P	
CHECKED BY: M.P.	BUILDING HS	DRAWING NO.: M-102
DATE: 12-01-2025		

CAD FILE: 2024-06-04 SEC DWG
PLOT DATE: 11/26/2025



SECOND FLOOR - UNIT E MECHANICAL DUCTWORK RENOVATION PLAN

1 / M-103 — SCALE: 1/8"=1'-0"

BUILDING NORTH

LEGEND:

- © NEW CO2 SENSOR(S)
- T OR Ⓣ NEW THERMOSTAT OR TEMPERATURE SENSOR
- CO NEW CARBON MONOXIDE DETECTOR (SIMPLEX MODEL 4098-9773 BASE WITH TRUE ALARM ANALOG ADDRESSABLE SOUNDER)
- H OR Ⓗ NEW HUMIDISTAT OR HUMIDITY SENSOR
- VOC NEW VOC (AND CO2) SENSOR (TAG VOC-1)
- © NEW CO2 SENSOR(S)

KEYED NOTES

1. ALUMINUM SCREEN (TYPICAL)
2. CPVC CONCENTRIC VENT THROUGH ROOF 4" CPVC INTAKE AND 4" CPVC EXHAUST BELOW ROOF
3. MOUNT AT 8'-0" A.F.F. TO PREVENT VANDALISM
4. PROVIDE DUCT DROP SIZE EQUAL TO SIZE OF THE OPENING ON ROOFTOP UNIT. PROVIDE FIRE DAMPER AT ROOF PENETRATION. SEE ROOF PLAN FOR ADDITIONAL FIRE DAMPER LOCATIONS.

OUTDOOR DUCTWORK INSULATION NOTES:

- JOHNSON CITY, NY = BROOME COUNTY = CLIMATE ZONE 6A.
- MINIMUM SUPPLY AND RETURN DUCT INSULATION PER IECC = R-12.
- RIGID FIBERGLASS INSULATION SHALL BE 3" THICK TO ACHIEVE THIS MINIMUM R-12 VALUE.
- EPDM ROOFING RUBBER SHALL BE ADHERED TO THE INSULATION AND WILL ADD THICKNESS.
- PROVIDE 3" ALL AROUND BOTH THE SUPPLY AND RETURN DUCTS (FOR OVERALL OUTDOOR DUCT DIMENSIONS, ADD 6" TO THE DUCT SIZES ON THE DRAWINGS PLUS THE DUCT WALL THICKNESS PLUS THE EPDM RUBBER ROOFING). SEE OUTDOOR ROOFTOP DUCTWORK SUPPORT DETAIL ON M DRAWINGS.

NOTES:

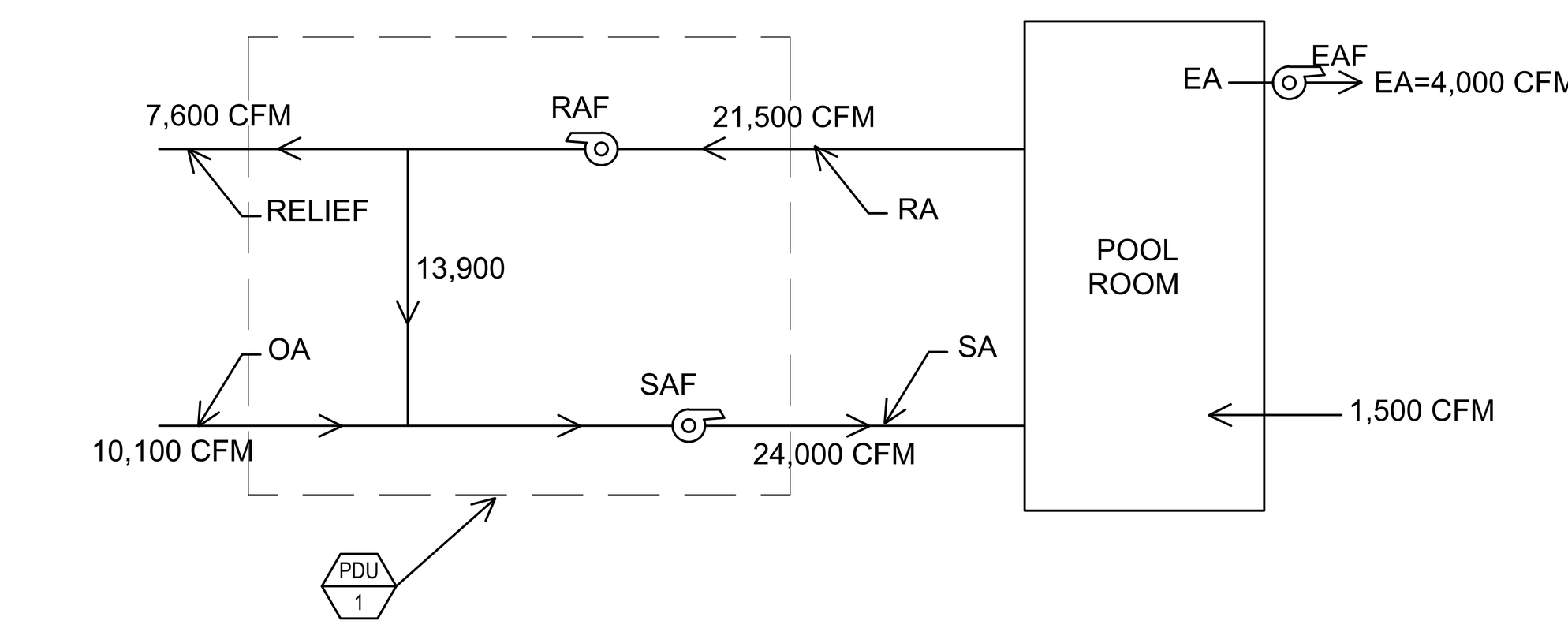
1. ALL DUCTWORK AND DUCT ACCESSORIES SHOWN ON THIS DRAWING SHEET (IN AND ADJACENT TO THE POOL AND ON THE ROOF) SAHLL BE ALUMINUM. STAINLESS STEEL DUCTWORK AND DUCT ACCESSORIES ARE NOT APPROVED (STAINLESS STEEL IS READILY ATTACKED BY CHLORIDES IN THE MOIST POOL AREAS AND WILL CORRODE).
2. PER ASHRAE 2019 HVAC APPLICATIONS HANDBOOK, PROVIDE 3 TO 5 CFM PER SQUARE FOOT OF AIRFLOW ON EXTERIOR GLASS, ALL EXTERIOR WINDOWS IN EXTERIOR SURFACES, AND OTHER CONDENSATION-PRONE AREAS SHOULD BE BLANKETED WITH SUPPLY AIR WITH NO "GAPS" IN AIRFLOW WASHING THE EXTERIOR WASHING THE EXTERIOR WALL AND WINDOWS.
3. POOL P101 (PDU-1) AIRFLOWS:

AT WALLS:	10,500 CFM
ACROSS ROOF:	5,500 CFM
ABOVE POOL BLEACHERS P205:	6,000 CFM
ABOVE VESTIBULE P206:	500 CFM
ABOVE AND BELOW SCORERS P203:	1,500 CFM
PDU-1 SUBTOTAL:	24,000 CFM

POOL ROOM 201 AIR BALANCE SCHEDULE

MODE	PDU-1 SA CFM	EVACUATOR EF-1 EA CFM	PDU-1 RA CFM	PDU-1 EA/ RELIEF AIR CFM	PDU-1 OA CFM	NET (PRESSURIZATION CFM)
MAX OA	24,000	4,000	21,500	7,600	10,100	-1500
PURGE	24,000	4,000	21,500	9,500	12,000	-1500
UNOCCUPIED	24,000	4,000	--	0	2,500	-1,500
OCCUPIED	24,000	4,000	21,500	7,600	10,100	-1500
EVENT	24,000	4,000	21,500	7,600	10,100	-1,500

SWIMMING POOL AIR BALANCE
PDU-1 SA = 24,000 CFM SA
EVACUATOR EA = 4,000 CFM EA (POOL GUTTER)
POOL AREA RA = 21,500 CFM RA
PDU-1 EXHAUST AIR = 7,600 CFM EA (RELIEF AIR)
PDU-1 OUTDOOR AIR =10,100 CFM OA
PDU-1 RETURN AIR (INTERNAL) = 13,900 CFM RA



DUCTWORK PAINTING:

1. PREPARE ALL DUCTWORK AND DUCT ACCESSORIES SHOWN ON THIS PLAN FOR FIELD PAINTING PER THE ARCHITECTURAL DRAWINGS. DO NOT RUN ANY HVAC EQUIPMENT DURING PAINTING TO AVOID PAINT OVERSPRAY INSIDE THE NEW HVAC EQUIPMENT. IF TEMPORARY HEATING, VENTILATION, OR AIR CONDITIONING IS NEEDED, THE MECHANICAL CONTRACTOR SHALL PROVIDE THAT AT NO ADDITIONAL COST TO THE OWNER.

NOTE:
HANGING LOADS UP TO 80# MAXIMUM SPACED NO CLOSER THAN 24" ON-CENTER MAY BE SUSPENDED FROM THE 2-1/2" DECK USING ANKORE WEDGE BOLTS (MANUFACTURED BY EPIC METALS) WHICH HAVE A SPECIFIC PROFILE TO MATCH THE DECK PROFILE. OTHERWISE HANGING LOADS MUST BE SUSPENDED FROM SUPPLEMENTAL STEEL PROVIDED BY THE TRADE CONTRACTORS.

DUCTWORK SUPPORTS:

1. ALL DUCTWORK IN THE POOL ROOM SHALL BE SUPPORTED BY TWO HALF-ROUND BANDS SUPPORTED BY RODS ON BOTH SIDES (MAXIMUM HANGER SPACING FOR 66" ROUND DUCT IS 12'-0" O.C.). ALL OF THE HANGING MATERIAL SHALL BE STAINLESS STEEL OR ALUMINUM. ALL DUCTWORK SHALL BE HUNG FROM STRUCTURAL STEEL (NOT ROOF DECKING). ALL HANGING MATERIALS SHALL BE PAINTED (PAINT, NUMBER OF COATS, AND COLOR SHALL BE BY ARCHITECT). ALL DUCTWORK AND HANGERS IN THE SCOPE OF THIS PROJECT SHALL COMPLY WITH THE LATEST EDITION OF THE SMACNA DUCT CONSTRUCTION STANDARDS.

CLASS 1	MIN. REQUIRED GAGE FOR SPIRAL PIPE UNDER NEG. PRESSURE						
NEG. PRESSURE, IN W.G.	2	4	6	10	15	20	30
DIAMETER, in.							
4	22 ga.	22 ga.	22 ga.	22 ga.	22 ga.	22 ga.	22 ga.
6	22 ga.	22 ga.	22 ga.	22 ga.	22 ga.	20 ga.	20 ga.
8	22 ga.	22 ga.	22 ga.	20 ga.	20 ga.	18 ga.	18 ga.
10	22 ga.	20 ga.	20 ga.	18 ga.	18 ga.	16 ga.	16 ga.
12	22 ga.	20 ga.	18 ga.	16 ga.	16 ga.	16 ga\F	16 ga\F+1
14	20 ga.	18 ga.	16 ga.	16 ga.	16 ga\F	16 ga\F	16 ga\F+1
16	18 ga.	16 ga.	16 ga.	16 ga\F	16 ga\F	16 ga\F+1	16 ga\F+1
18	18 ga.	16 ga.	18 ga\F	16 ga\F	16 ga\F+1	16 ga\F+1	16 ga\F+2
20	16 ga.	16 ga.	18 ga\F	16 ga\F	16 ga\F+1	16 ga\F+1	16 ga\F+2
22	16 ga.	18 ga\F	18 ga\F	16 ga\F	16 ga\F+1	16 ga\F+1	16 ga\F+2
24	16 ga.	18 ga\F	16 ga\F	16 ga\F+1	16 ga\F+1	16 ga\F+2	
30	18 ga\F	16 ga\F	16 ga\F	16 ga\F+1	16 ga\F+2	16 ga\F+2	
36	18 ga\F	16 ga\F	16 ga\F+1	16 ga\F+1	16 ga\F+2		
42	18 ga\F	16 ga\F	16 ga\F+1	16 ga\F+2			
48	16 ga\F	16 ga\F+1	16 ga\F+1	16 ga\F+2			
54	16 ga\F	16 ga\F+1	16 ga\F+2				
60	16 ga\F	16 ga\F+1	16 ga\F+2				
66	16 ga\F	16 ga\F+1	16 ga\F+2			NOT DESIGNED	
72	16 ga\F+1	16 ga\F+2					
78	16 ga\F+1	16 ga\F+2					
84	16 ga\F+1	16 ga\F+2					
90	16 ga\F+1	16 ga\F+2					
96	16 ga\F+1						

TABLE 11-6.2 MINIMUM REQUIRED GAGE FOR CLASS 1 ALUMINUM SPIRAL PIPE

NOTES:

a. SELECT MINIMUM GAGE FROM APPLICABLE BENDING TABLE PRIOR TO USING THIS TABLE.
b. THE SELECTIONS LISTED IN THIS TABLE ARE BASED ON THE STRENGTH CHARACTERISTICS OF ASTM B209, TYPE 3003-H14, WITH SOME MINOR MODIFICATIONS TO MAKE THE RESULTS VALID FOR ASTM B209, TYPE 5052-H32 AND 6061-T4.
c. CALLS DISPLAY THE MINIMUM REQUIRED GAGE FOR A PARTICULAR DUCT DIAMETER AND PRESSURE RATING.
d. A GAGE NUMBER BY ITSELF REPRESENTS AN UNSTIFFENED SPIRAL PIPE.
e. A GAGE NUMBER FOLLOWED BY (\F) REPRESENTS SPIRAL PIPE STIFFENED AT 12FT INTERVALS, OR A 12 FT LENGTH OF PIPE WITH SUITABLE FLANGES ON THE ENDS.
f. A GAGE NUMBER FOLLOWED BY (\F+1) REPRESENTS SPIRAL PIPE STIFFENED AT 6FT INTERVALS, OR A 6FT LENGTH OF PIPE WITH FLANGES ON THE ENDS AND ONE INTERMEDIATE STIFFENER.
g. ALTERNATE SOLUTIONS ARE POSSIBLE, SEE ALTERNATE PRESSURE CAPACITY TABLE, TABLE 11-6.3.

ELECTRIC HEAT TRACE NOTES:

1. ALL WATER PIPING EXPOSED TO AMBIENT TEMPERATURES ON THIS PROJECT SHALL BE HEAT TRACED AND INSULATED (MINERAL WOOL 1200 OR APPROVED EQUAL). SYSTEM SHALL BE AS REPRESENTED BY GASSEW ASSOCIATES. THIS INCLUDES ALL PWS, PWR, AND CONDENSATE PIPING ABOVE THE ROOF LINE FEEDING PDU-1 AND ALL PWS AND PWR PIPING ABOVE VESTIBULE P123. HTC = HEAT TRACE CONTROL PANEL.
   - HTC-1--CIRCUIT A: 50 GPM: 3" PWS (30 FEET OF POOL WATER SUPPLY) PIPE MATERIAL: SCHEDULE 80 CVPC, 3" PWR (30 FEET OF POOL WATER RETURN) PIPE MATERIAL: SCHEDULE 80 CVPC
   - HTC-2--CIRCUIT B: 60 GPM: 3" PWS (30 FEET POOL WATER SUPPLY) PIPE MATERIAL: SCHEDULE 80 CVPC, 3" PWR (30 FEET POOL WATER RETURN) PIPE MATERIAL: SCHEDULE 80 CVPC
   - HTC-3--1-1/2" CONDENSATE (10 FEET OF COOLING COIL CONDENSATE) PIPE MATERIAL: SCHEDULE 40 PVC
2. INSULATION FOR PIPING GETTING HEAT TRACED SHALL BE 2" THICK MINERAL WOOL 1200 WITH WEATHERPROOF AND WATERTIGHT ALUMINUM ALL SERVICE JACKET (ASJ). PROVIDE ALUMINUM SKIN ON THE CPVC AND PVC PIPING BEING HEAT TRACED PER THE HEAT TRACE DETAILS. PROVIDE (1) HEAT TRACE SENSOR FOR EACH HEAT TRACE CONTROL PANEL ABOVE.
3. E.C. SHALL PROVIDE (3) 120V/1 PHASE, 20 AMP CIRCUITS (ONE FOR EACH HEAT TRACE CONTROL PANEL (HTC-1, HTC-2, HTC-3)). E.C. SHALL PROVIDE POWER FROM HTC-1, HTC-2, AND HTC-3 TO THE HEAT TRACE ITSELF.
4. BASIS OF DESIGN: DELTA-THERM.
5. PROVIDE HEAT TRACE ALARM TO BAS UPON LOSS OF CONTINUITY.
6. PROVIDE HEAT TRACE CONTROLLERS HTC-1, HTC-2, AND HTC-3 (TRACE MATE) IN UNOCCUPIED SPACE P106(COORDINATE FINAL LOCATION WITH OWNER).
7. CONTACT INFORMATION:

Jeff Gassew
Gassew Associates, Inc.
Office: (610) 259-9771
Cell: (610) 416-1667
Fax: 610-259-9560

GENERAL NOTES:

1. ANY POOL EVACUATOR EXHAUST DUCT BELOW GRADE (OR BELOW TOP OF SLAB) WILL BE BLUEDUCT. ANY EVACUATOR DUCT ABOVE GRADE (OR ABOVE TOP OF SLAB) WILL BE WELDED LIQUIDTIGHT 316L STAINLESS STEEL.
2. PROVIDE CONTINUOUSLY WELDED LIQUID TIGHT 316L STAINLESS STEEL DUCT FOR ALL ABOVE GROUND DUCT CONNECTED TO EF-1.
3. H-SHAPED ROOF DUCT SUPPORTS BY MECHNICAL CONTRACTOR. FIELD VERIFY ALL DIMENSIONS AND ALL ROOF CONSTRUCTION. BASIS OF DESIGN: PHP SYSTEMS/DESIGN OR EQUAL (SEE ROOF DUCT DETAIL) MAXIMUM SPACING = 8'-0" CENTERS
4. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
5. CEILINGS THAT NEED TO BE TEMPORARILY REMOVED TO ALLOW FOR THE INSTALLATION OF DUCTWORK, PIPING OR EQUIPMENT, AND ARE NOT SCHEDULED TO BE REMOVED ON THE ARCHITECTURAL DRAWINGS, SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR. COORDINATE THE REMOVAL AND THE REPLACEMENT WITH THE ELECTRICAL CONTRACTOR AND THE FIRE PROTECTION CONTRACTOR.
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8. ALL FIRE DAMPERS ON THIS DRAWING SHALL BE ALL ALUMINUM.

KEY NOTES:

1. ONE LOUVER SHALL BE ABOVE THE OTHER. EACH LOUVER SHALL BE BALANCED TO 10,250 CFM PER THE ROOM AIR BALANCE NOTES.
2. PROVIDE BOTTOM OF DF-1 AND DF-2 ABOVE BOTTOM OF ROOF JOIST/TRUSS.

DF-1 AND DF-2: ARIUS LAYOUT GENERAL NOTES:

- SUGGESTED FAN LOCATIONS ARE TENTATIVE AND CAN BE MOVED A FEW FEET IN ANY DIRECTION.
- FINAL LOCATIONS TO BE DETERMINED BASED ON THE FOLLOWING:
  FANS TO HAVE CLEAR PATH TO FLOOR
  FANS TO HAVE 3' CLEARANCE FROM FIRE SUPPRESSION.
- FANS INTENDED TO BE MOUNTED WITHIN 18"-24" OF THE ROOF DECK.
- ELECTRICAL SUPPLY REQUIRED WITHIN 60" OF THE FAN LOCATION.
- REFER TO CURRENT IOM AND DATA SHEETS FOR ELECTRICAL AND INSTALLATION REQUIREMENTS.

LAYOUT PREPARED BY TAYLOR HOROWITZ, AIRIUS FANS, FOR LAYOUT CLARIFICATIONS HIS CONTACT INFORMATION IS 720-204-1235 OR TAYLOR.HOROWITZ@AIRIUSFANS.COM

REVISIONS

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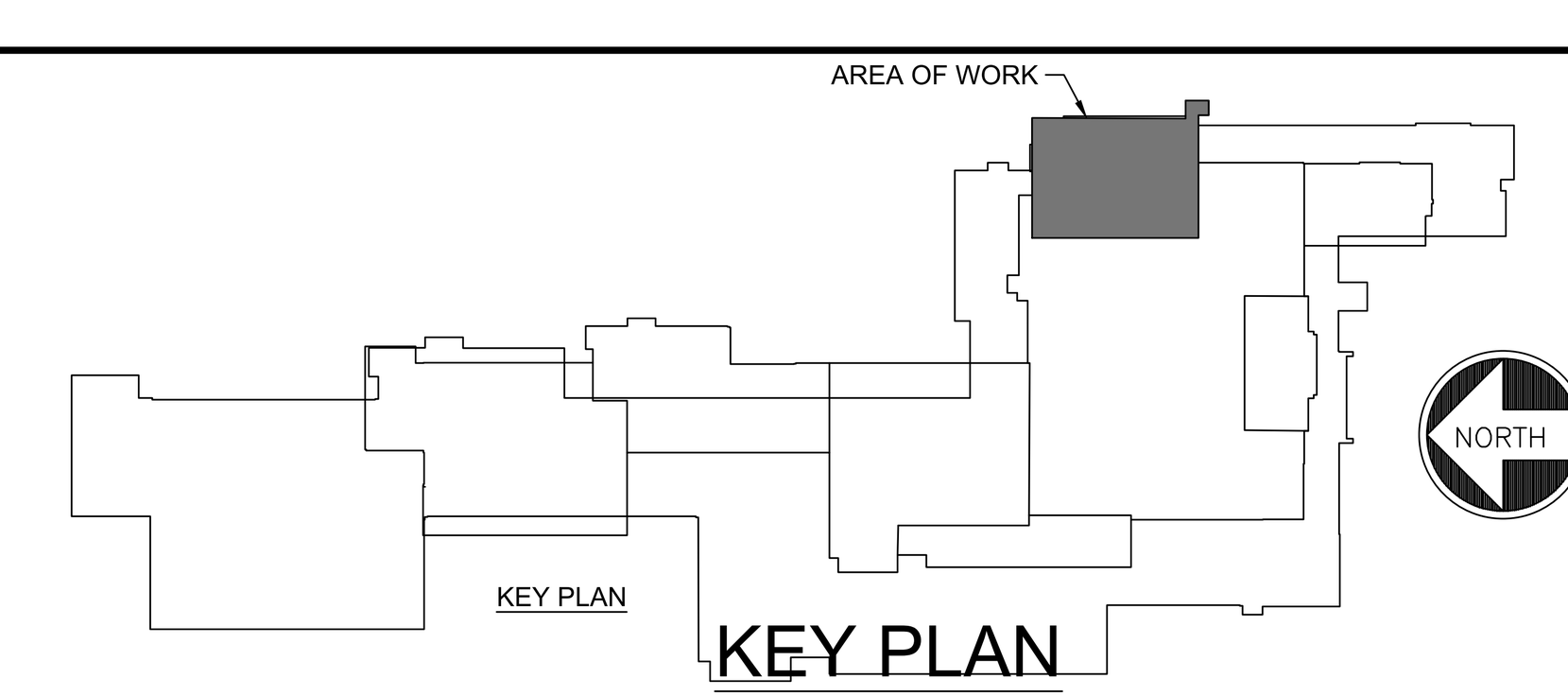

KEY PLAN

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19/2024

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Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR - UNIT E MECHANICAL DUCTWORK RENOVATION PLAN

DRAWN BY:	PROJECT NO.:
F.G.	2024-239P
CHECKED BY: M.P.	BUILDING: HS / DRAWING NO.: M-103
DATE: 12-01-2025	

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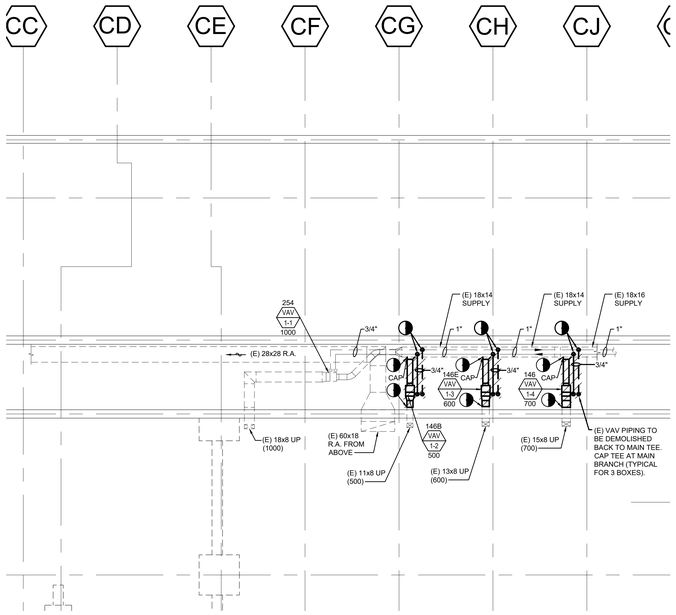
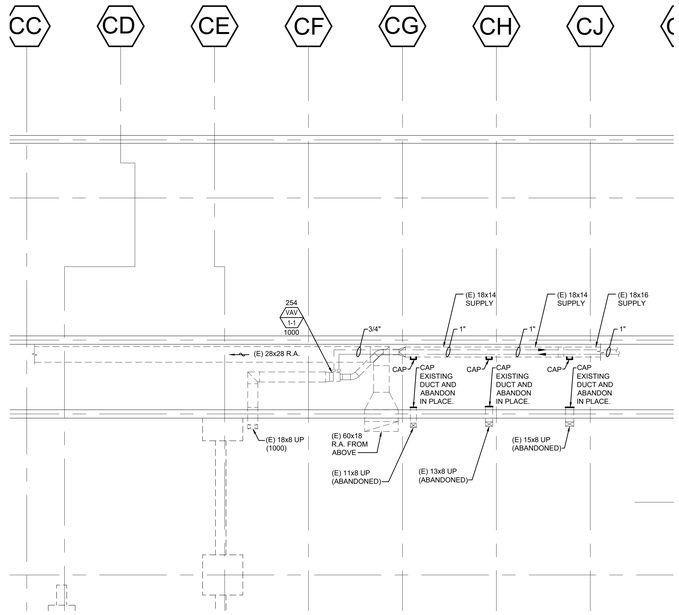
PLOT DATE: 11/25/2025



1 M-104

BASEMENT FLOOR UNDER GUIDANCE DEMOLITION PLAN

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



2 M-104

BASEMENT FLOOR UNDER GUIDANCE RENOVATION PLAN

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

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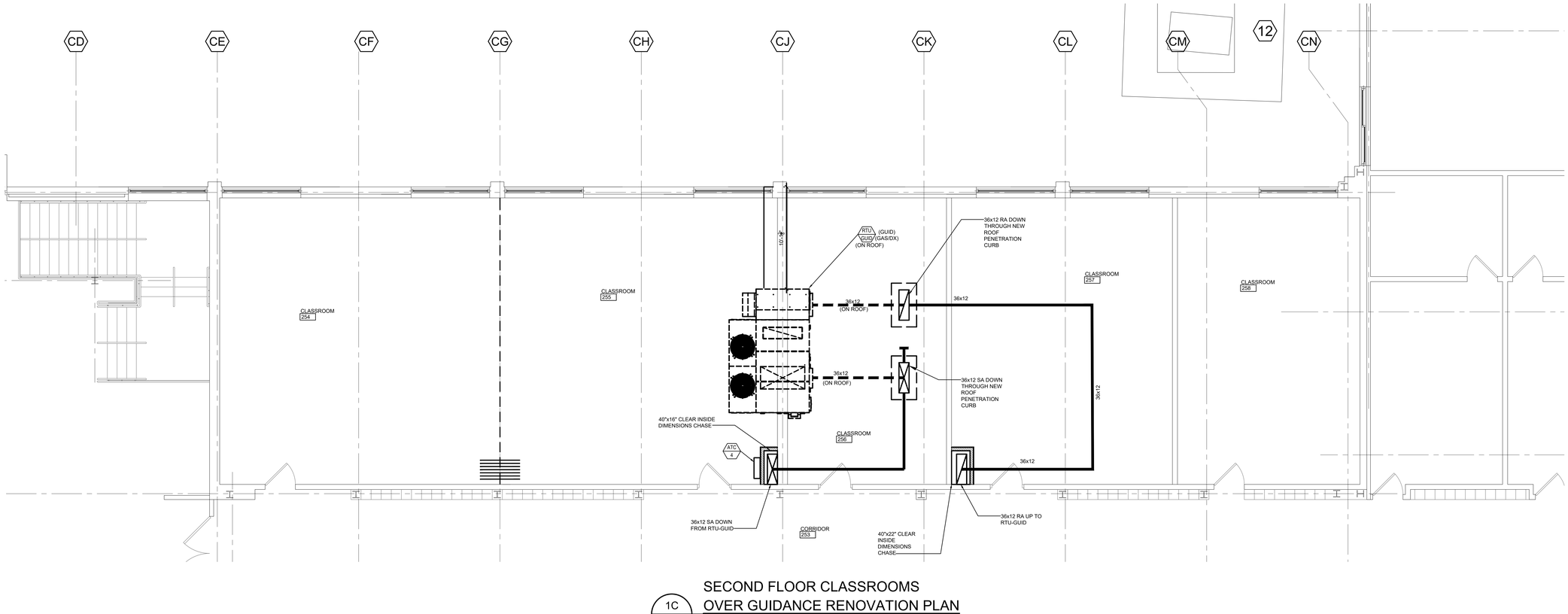

1C M-104

SECOND FLOOR CLASSROOMS OVER GUIDANCE RENOVATION PLAN

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central
School District
Johnson City, NY

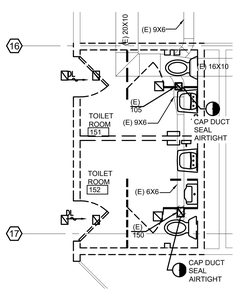
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

POOL LOCKER ROOM,
TOILET AND SHOWER ROOM
PLANS

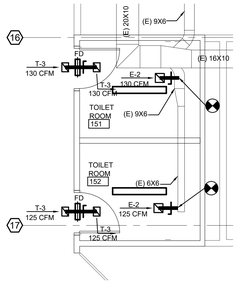
DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-104
DATE:	
12-01-2025	

DWG FILE: C:\Revit Models\Drawings\M-104 Guidance.rvt
PLOT DATE: 11/25/2025



1A M-105 TOILET ROOMS 151/152 DEMOLITION PLAN

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



1B M-105 TOILET ROOMS 151/152 RENOVATION PLAN

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

GENERAL NOTES:

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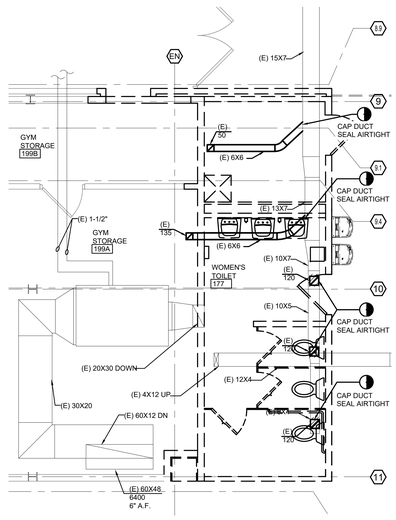
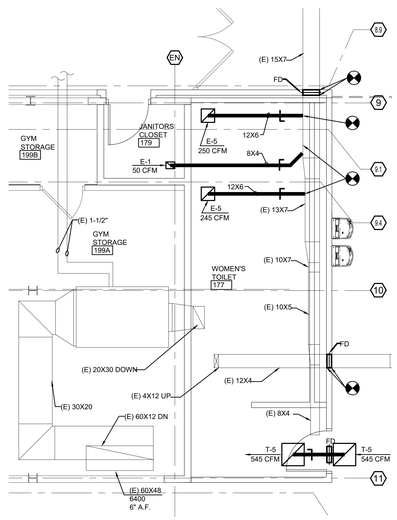


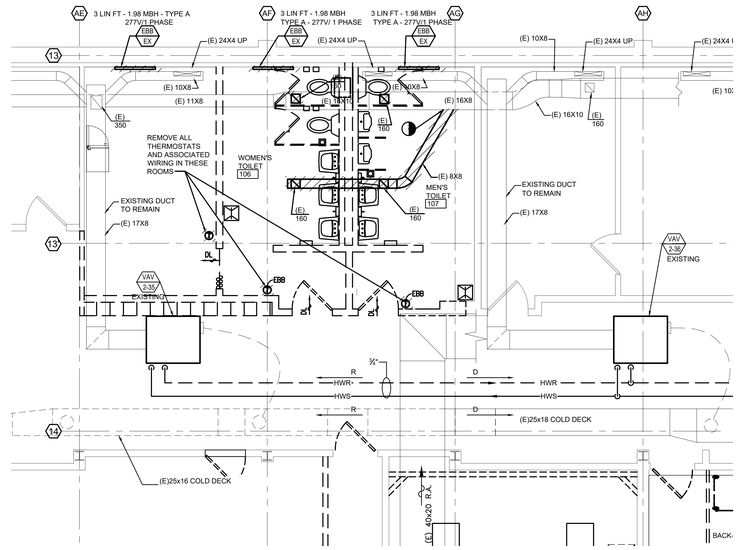
2A M-105 GIRLS TOILET ROOM 177 @ SOUTH LOBBY - DEMOLITION PLAN

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



2B M-105 GIRLS TOILET ROOMS 177 @ SOUTH LOBBY -RENOVATION PLAN

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

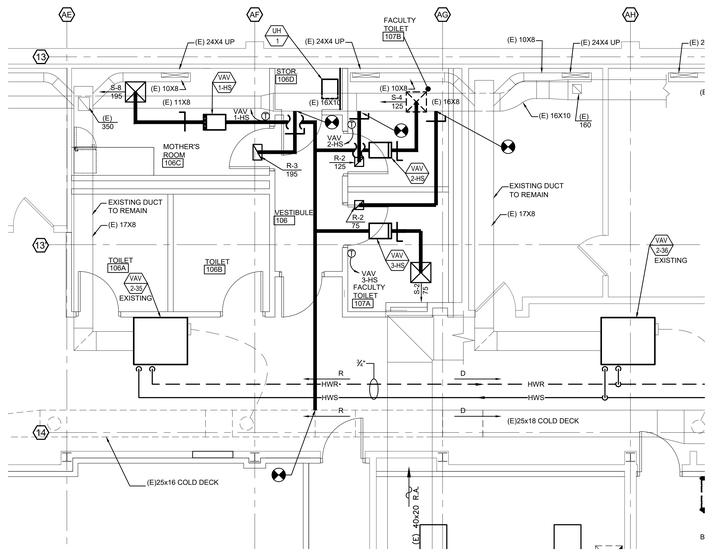


EXISTING EBB (ELECTRIC BASEBOARD) NOTES:

1. TYPE A ELECTRIC BASEBOARD = 190 WATTS PER FOOT
2. TYPE B ELECTRIC BASEBOARD = 300 WATTS PER FOOT

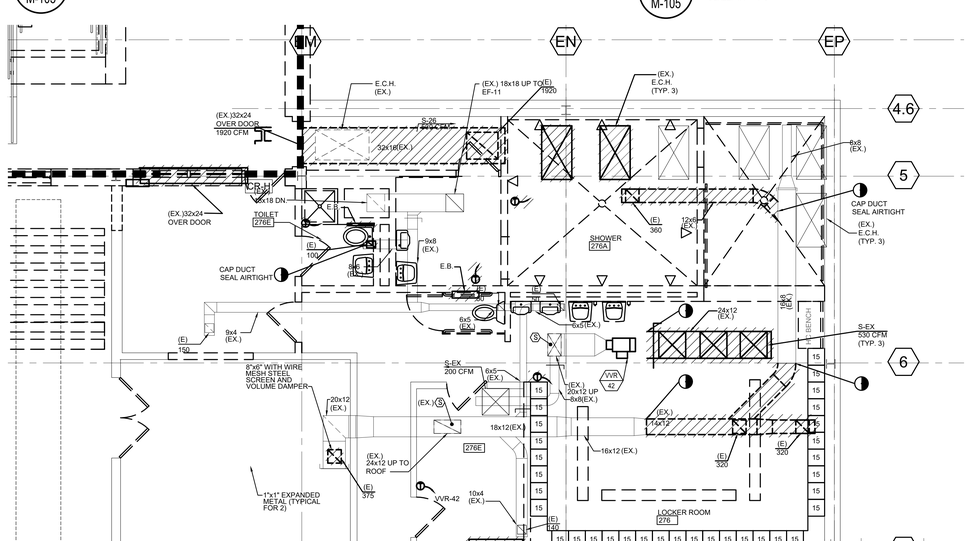
3A M-105 TOILET ROOMS ACROSS FROM KITCHEN - DEMOLITION PLAN

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



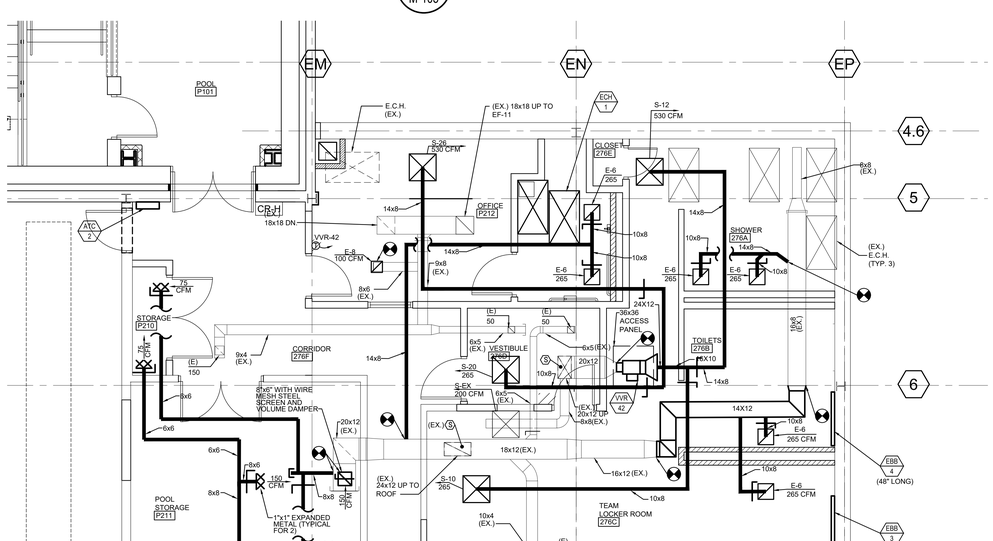
3B M-105 TOILET ROOMS ACROSS FROM KITCHEN - RENOVATION PLAN

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



4A M-105 POOL LOCKER ROOM AND TOILET DEMOLITION PLAN

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



4B M-105 POOL LOCKER ROOM AND TOILET RENOVATION PLAN

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:

FIRST FLOOR
TOILET ROOM DEMOLITION & RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-105
DATE: 12-01-2025	

CAD FILE PLOT DATE: 12/2/2025 10:59:55 AM

GENERAL NOTES:

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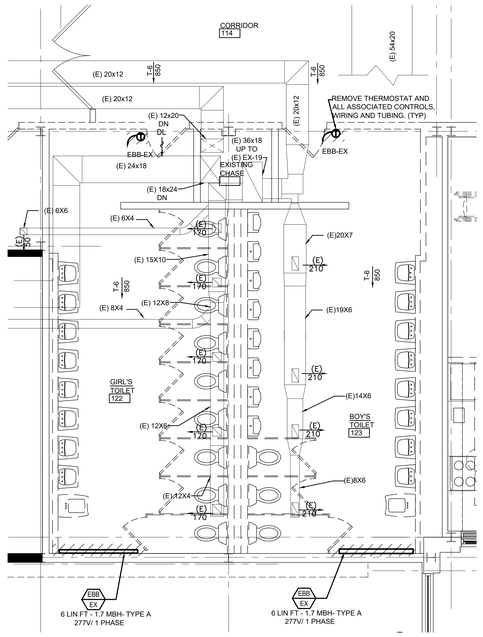


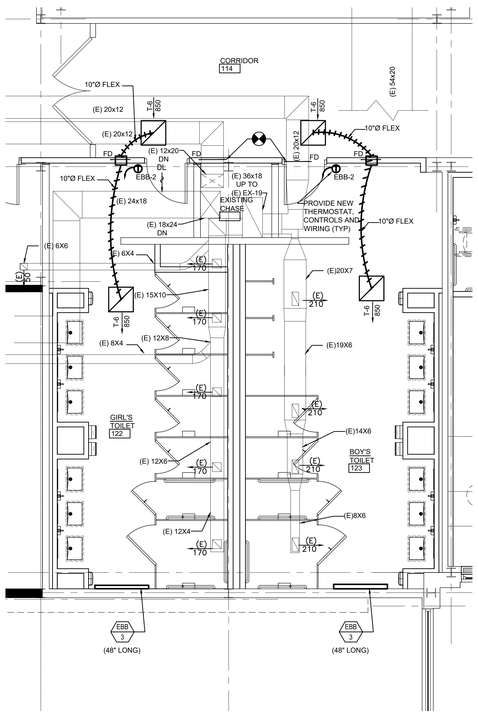
EXISTING EBB (ELECTRIC BASEBOARD) NOTES:

1. TYPE A ELECTRIC BASEBOARD = 190 WATTS PER FOOT
2. TYPE B ELECTRIC BASEBOARD = 300 WATTS PER FOOT

1 M-106

TOILET ROOMS122/123 FIRST FLOOR - DEMOLITION PLAN

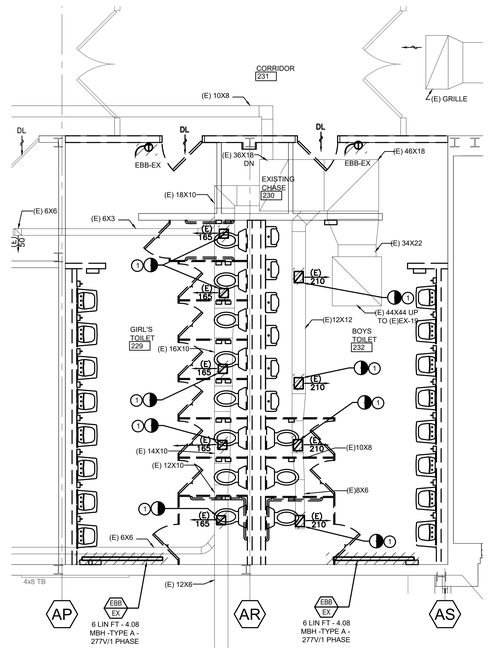
SCALE: 1/4" = 1'-0"



2 M-106

TOILET ROOMS 122/123 FIRST FLOOR - FLOOR PLAN

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



3 M-106

TOILET ROOMS NEAR EXISTING RAMP & ACROSS FROM LIBRARY - DEMOLITION PLAN

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

KEYED NOTES:

① REMOVE EXHAUST GRILLE AND DAMPER. CAP BRANCH DUCT. SEAL AIRTIGHT

EXISTING EBB (ELECTRIC BASEBOARD) NOTES:

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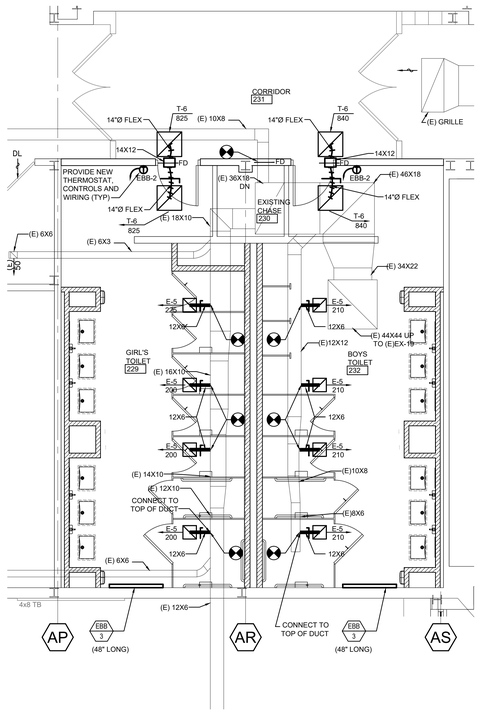
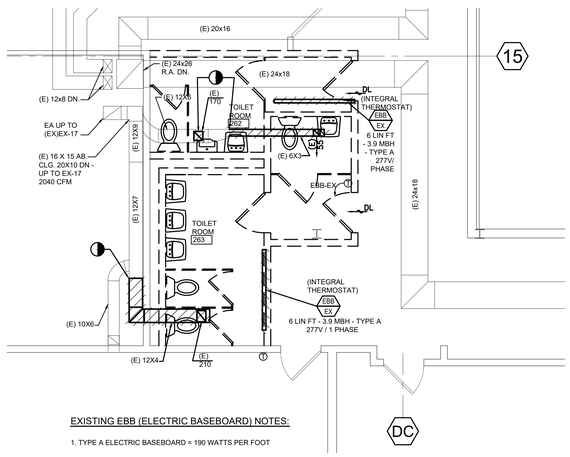
2. TYPE B ELECTRIC BASEBOARD = 300 WATTS PER FOOT



4 M-106

TOILET ROOMS NEAR EXISTING RAMP & ACROSS FROM LIBRARY - PROPOSED FLOOR PLAN

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



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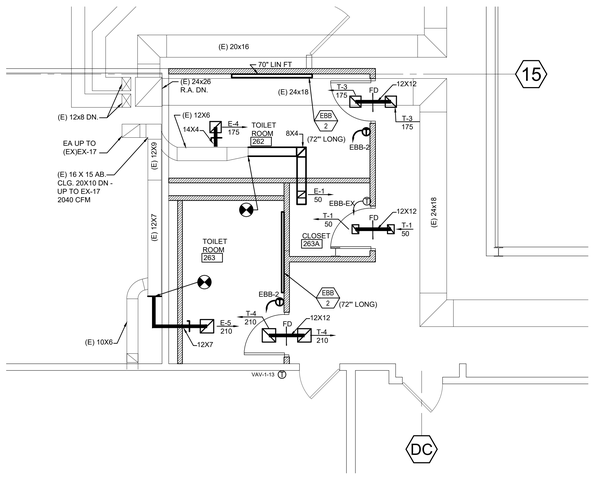
5 M-106

TOILET ROOMS 262/263 DEMOLITION PLAN

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



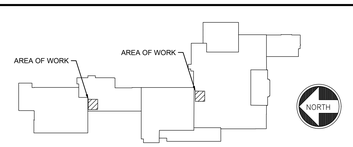
6 M-106

TOILET ROOMS 262/263 PROPOSED FLOOR PLAN

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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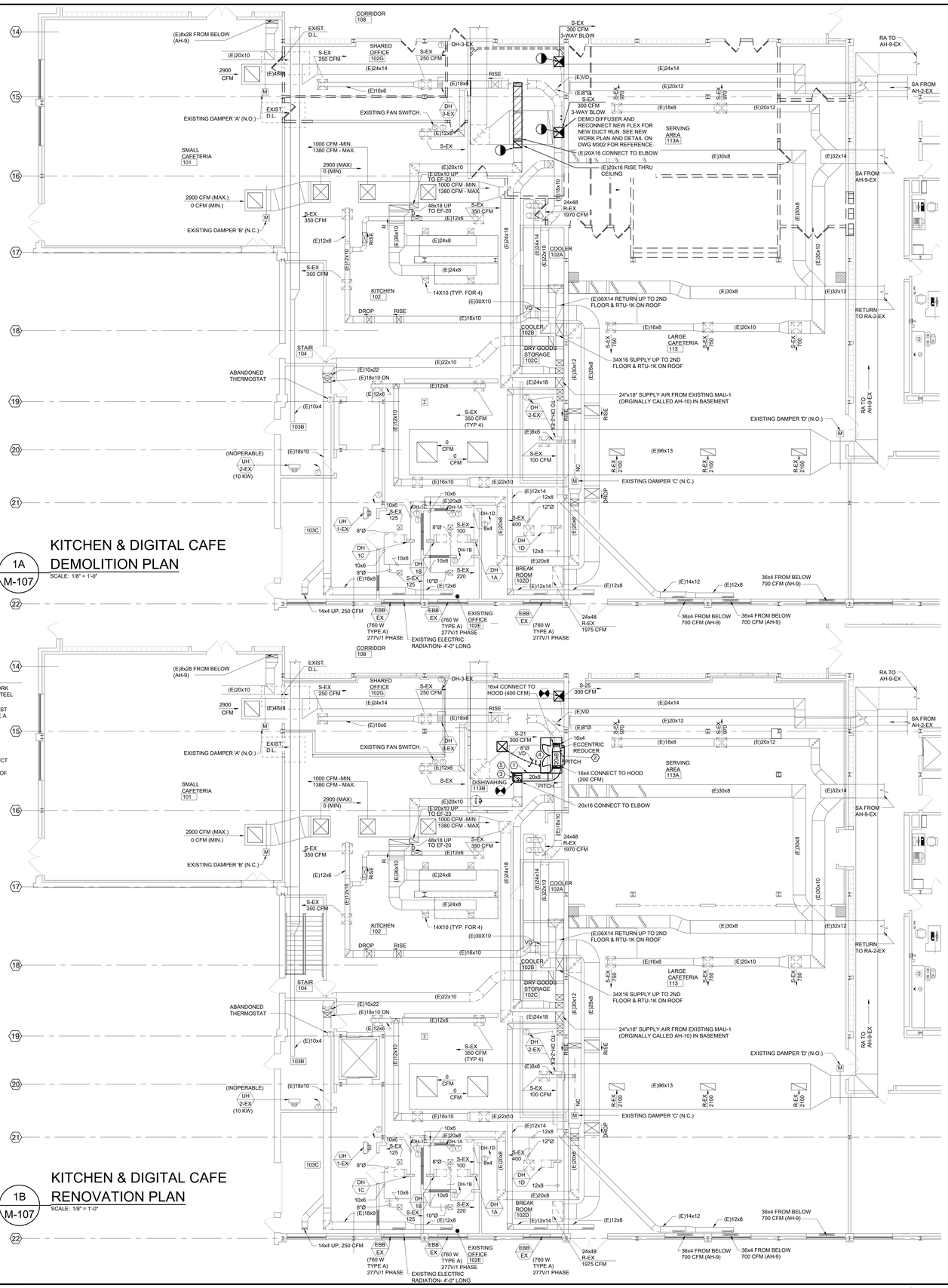
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR TOILET ROOM DEMOLITION & RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	DRAWING NO.:
M.P.	M-106
DATE: 12-01-2025	BUILDING: HS

DWG FILE: 2024-239P.RVT
PLOT DATE: 11/26/2025



1A
M-107

KITCHEN & DIGITAL CAFE DEMOLITION PLAN

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

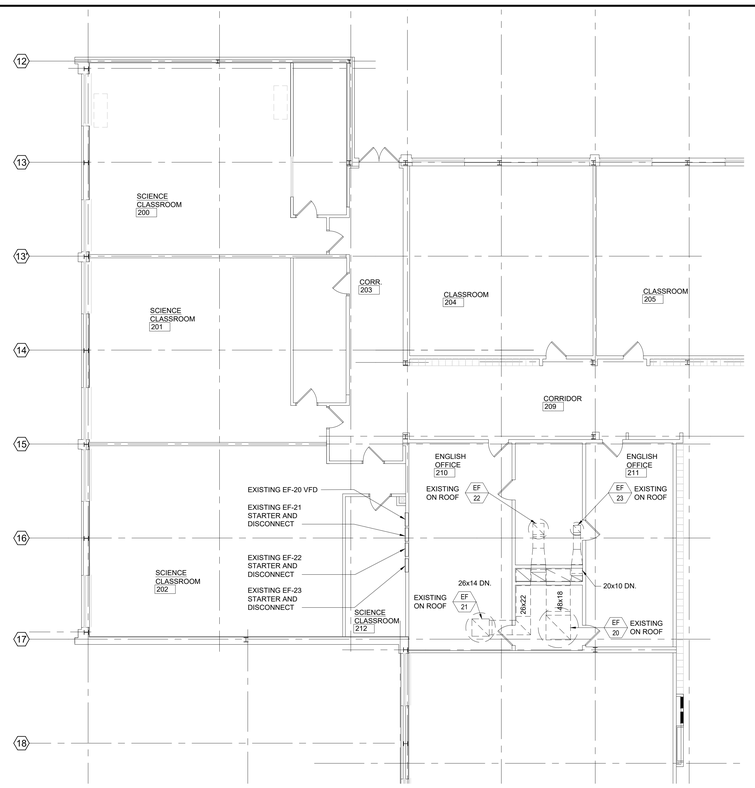
KEYED NOTES:

1. ALL DISHWASHER DUCTWORK SHALL BE 304 STAINLESS STEEL
2. PITCH DOWN TOWARDS DISHWASHER DUCT EXHAUST OUTLET. DUCT SHALL HAVE A FLAT BOTTOM.
3. 20x16 RISE THRU CEILING WITH OFFSET TO AVOID LIGHTS
4. CONNECT FLEX DUCT TO DEMOLISHED DIFFUSER DUCT RUN. SEE DWG M302 FOR DETAIL ON CONTINUATION OF DUCT CONNECTION
5. OFFSET

1B
M-107

KITCHEN & DIGITAL CAFE RENOVATION PLAN

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



1C
M-107

SECOND FLOOR PARTIAL PLAN

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

GENERAL NOTES:

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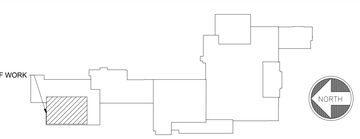
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

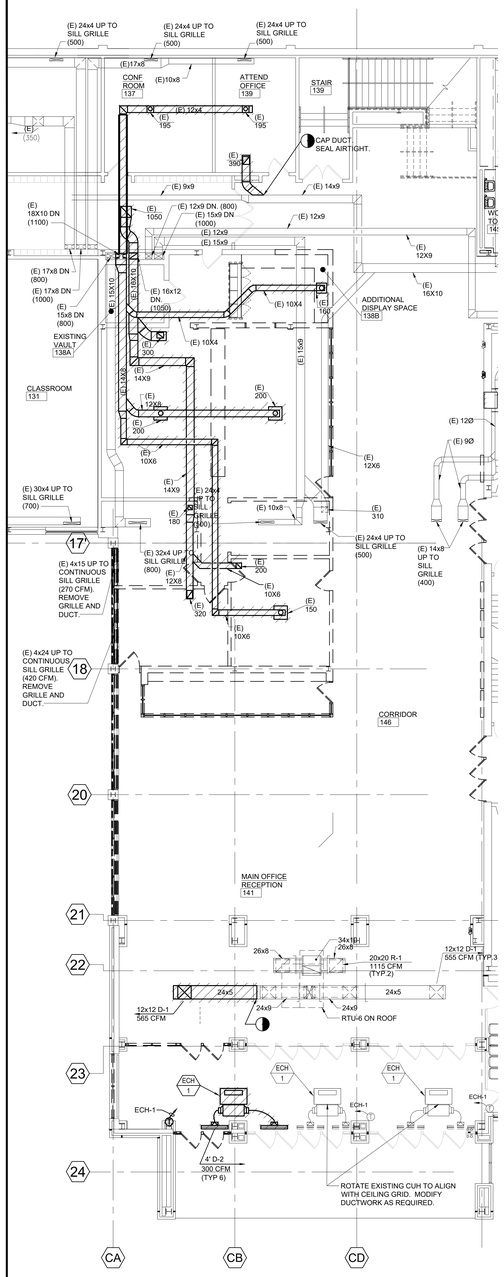
Capital Project 2025 2026
Phase 2

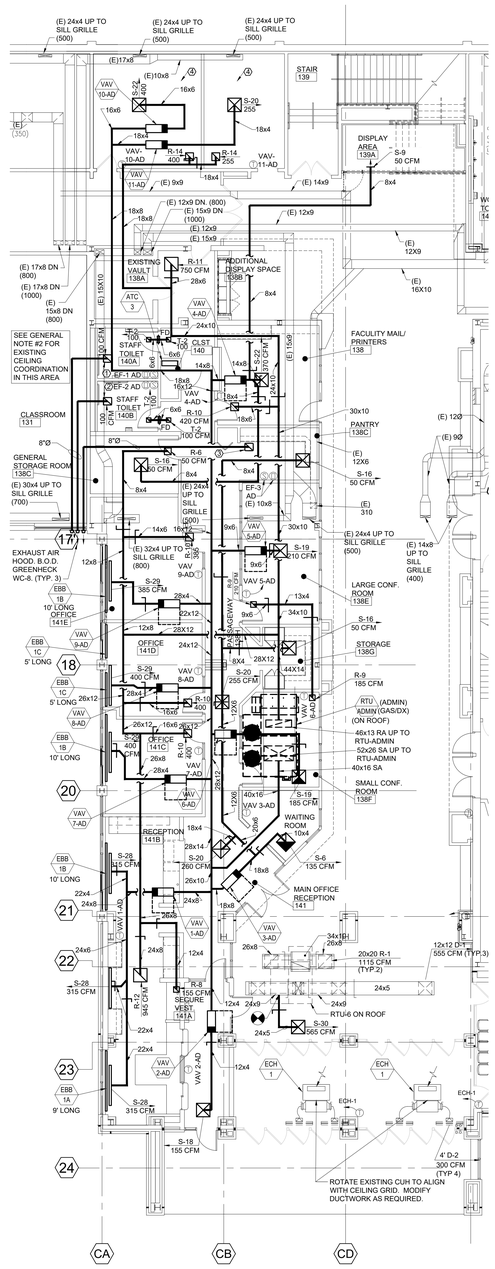
DRAWING TITLE:

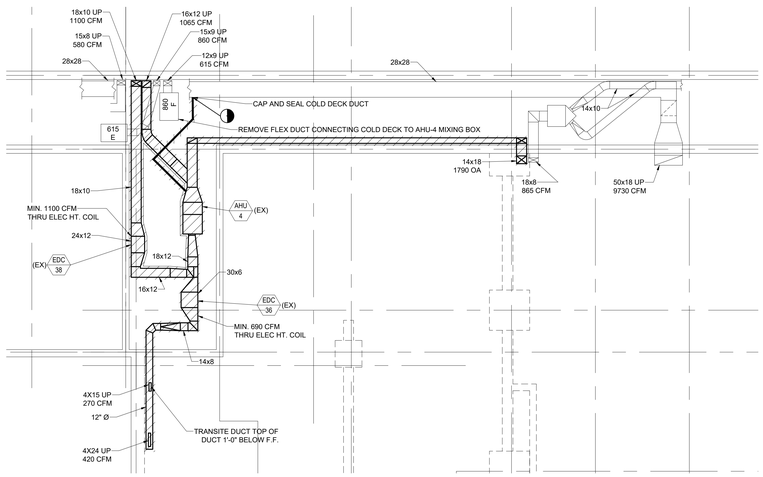
FIRST FLOOR - KITCHEN AND DIGITAL CAFE PLANS

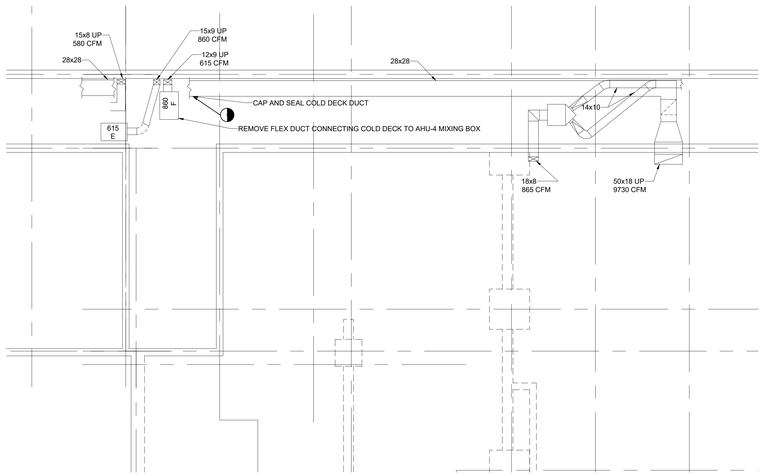
DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING
M.P.	HS
DATE: 12-01-2025	DRAWING NO.: M-107

DWG FILE:
PLOT DATE: 12/2/2025









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3. MECHANICAL CONTRACTOR SHALL REPLACE (IN-KIND) ALL CEILING TILES AND CEILING GRID SEGMENTS THAT GET DAMAGED DURING DEMOLITION OR CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. M.C. SHALL PROVIDE COORDINATION SHOP DRAWINGS OF HVAC DUCTWORK AND PIPING COORDINATED WITH LIGHTING, PLUMBING, AND FIRE PROTECTION. FIELD VERIFY ALL DIMENSIONS AND UNFORESEEN CONDITIONS WITH AT LEAST 1 SITE SURVEY.

NORTH / BUILDING NORTH

3 / M-108 — ADMINISTRATIVE PARTIAL DEMOLITION BASEMENT PLAN
SCALE: 1/8" = 1'-0"

NORTH / BUILDING NORTH

4 / M-108 — ADMINISTRATIVE PARTIAL RENOVATION BASEMENT PLAN
SCALE: 1/8" = 1'-0"

NORTH / BUILDING NORTH

1 / HS-M-108 — ADMINISTRATIVE DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

NORTH / BUILDING NORTH

2 / M-108 — ADMINISTRATIVE PROPOSED FLOOR PLAN
SCALE: 1/8" = 1'-0"

KEYED NOTES

1. EF-1-AD. 100 CFM EXHAUST. 100 CFM SIZED. OCCUPANCY = FAN ON. NO OCCUPANCY = FAN OFF.
2. EF-2-AD. 100 CFM EXHAUST. 100 CFM SIZED. OCCUPANCY = FAN ON. NO OCCUPANCY = FAN OFF.
3. EF-3-AD. 150 CFM EXHAUST. 175 CFM SIZED. FAN TO OPERATE DURING OCCUPIED HOURS.
4. REMOVE AND PROVIDE NEW CEILINGS IN THIS ROOM AS REQUIRED TO COMPLETE THE MECHANICAL WORK (AT NO ADDITIONAL COST TO THE OWNER). COORDINATE WITH ALL TRADES.

REVISIONS

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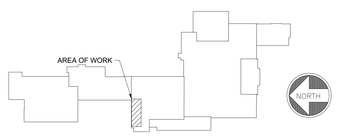
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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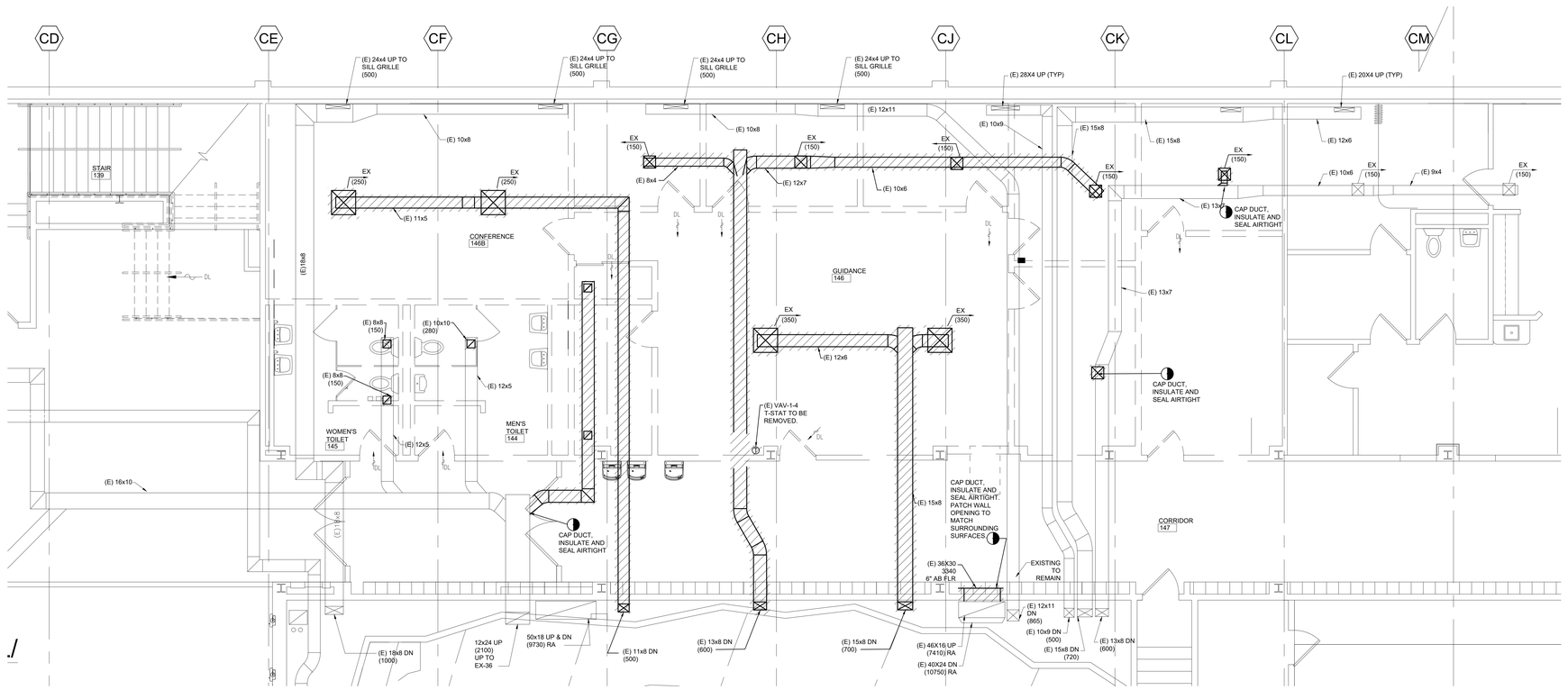
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - ADMINISTRATIVE & AUDITORIUM ENTRY PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY: M.P.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: M-108

CAD FILE PLOT DATE: 11/20/2025



1 M-109

GUIDANCE OFFICE DEMOLITION PLAN

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

GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
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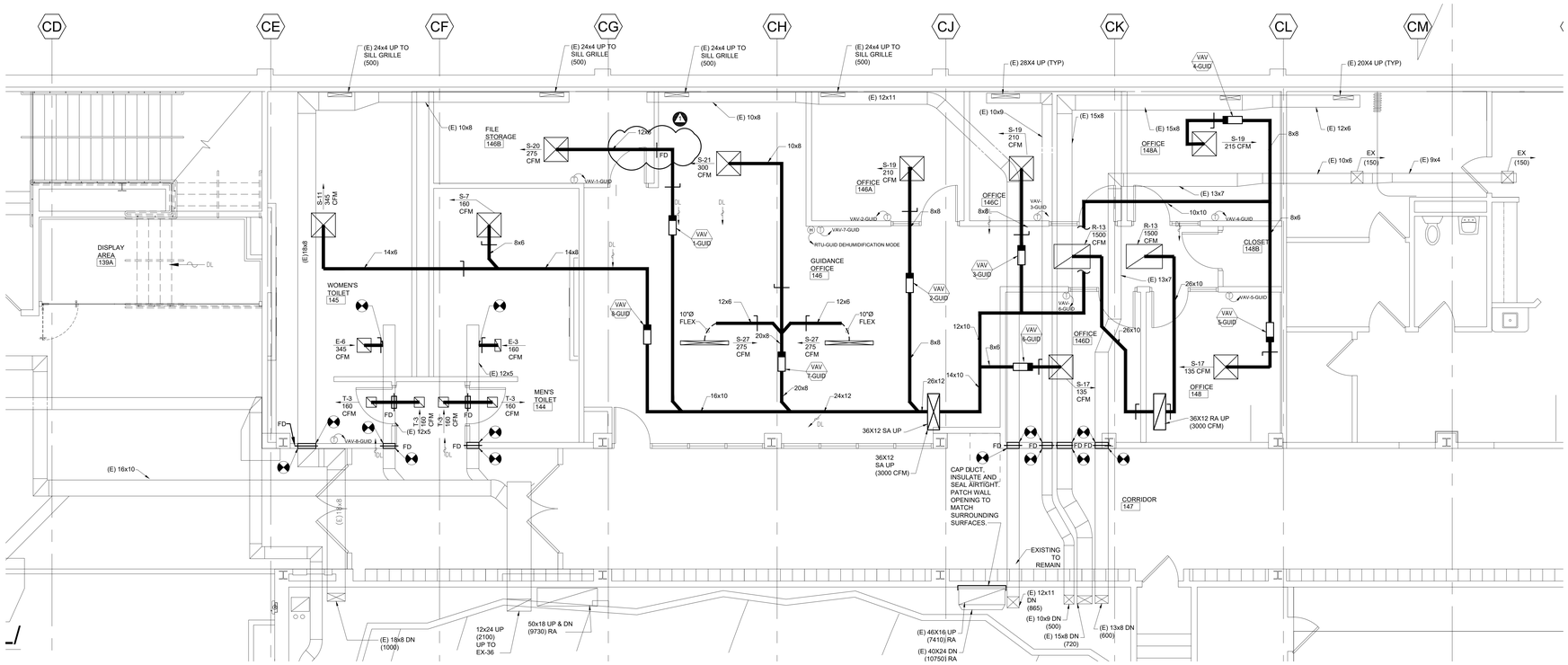


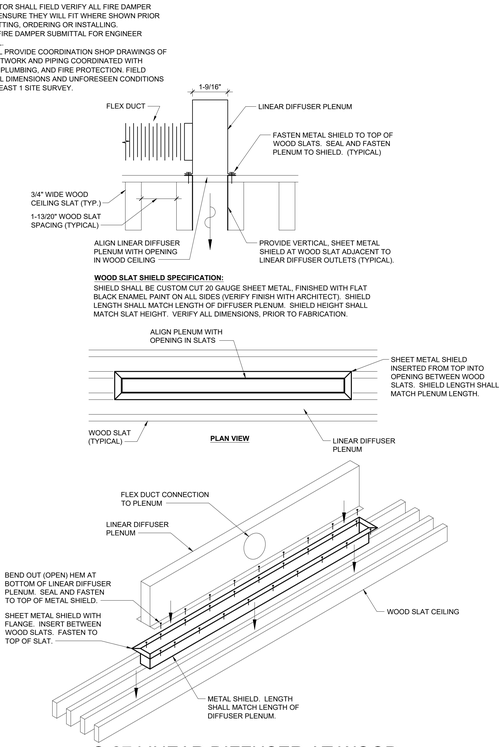
2 M-109

GUIDANCE OFFICE PROPOSED FLOOR PLAN

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

GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL FIRE DAMPER SIZES TO ENSURE THEY WILL FIT WHERE SHOWN PRIOR TO SUBMITTING, ORDERING OR INSTALLING.
2. PROVIDE FIRE DAMPER SUBMITTAL FOR ENGINEER APPROVAL.
3. M.C. SHALL PROVIDE COORDINATION SHOP DRAWINGS OF HVAC DUCTWORK AND PIPING COORDINATED WITH LIGHTING, PLUMBING, AND FIRE PROTECTION. FIELD VERIFY ALL DIMENSIONS AND UNFORESEEN CONDITIONS WITH AT LEAST 1 SITE SURVEY.



S-27 LINEAR DIFFUSER AT WOOD CEILING IN GUIDANCE DETAIL

NOT TO SCALE

REVISIONS

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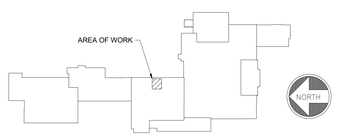
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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19/2024

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - GUIDANCE OFFICE DEMOLITION & RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-109
DATE: 12-01-2025	

DIGITAL PLOT DATE: 12/2025

GENERAL NOTES:

1. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
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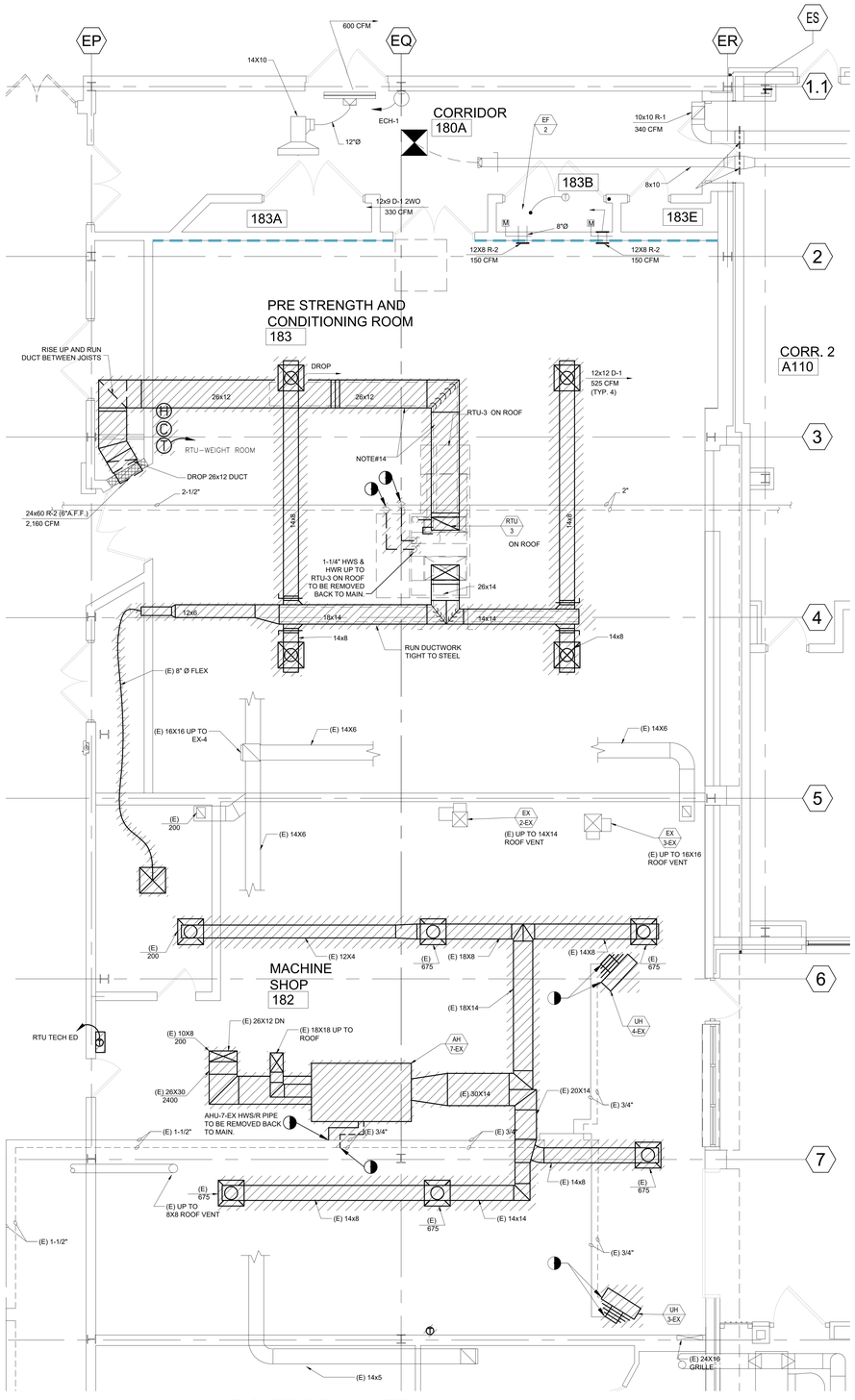
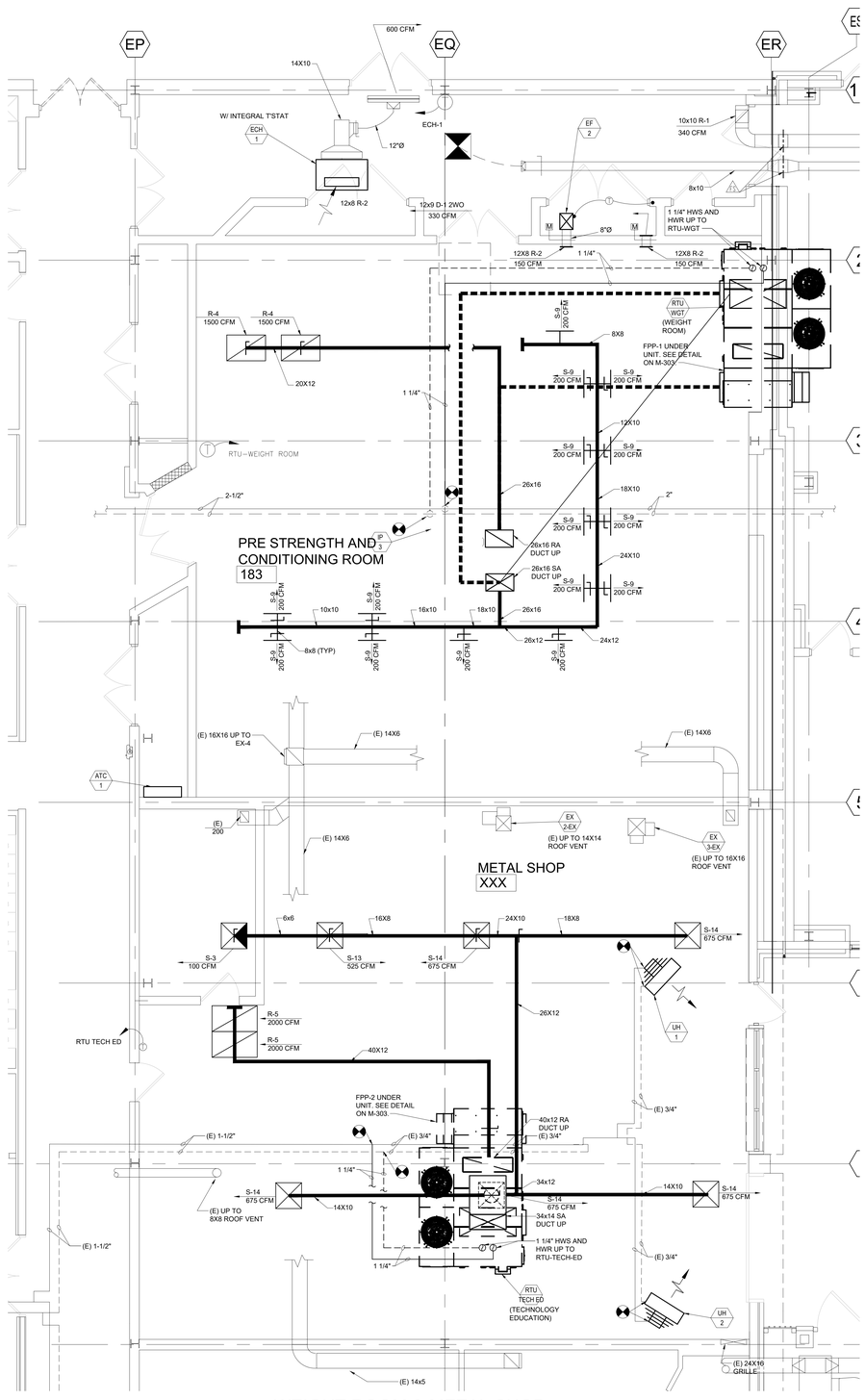


NORTH
BUILDING NORTH

1 M-110

WEIGHT ROOM & METAL SHOP DEMOLITION PLAN

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



NORTH
BUILDING NORTH

2 M-110

WEIGHT ROOM & METAL SHOP RENOVATION (NEW WORK) PLAN

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

REVISIONS

Issued for Bidding
December 1, 2025

AREA OF WORK

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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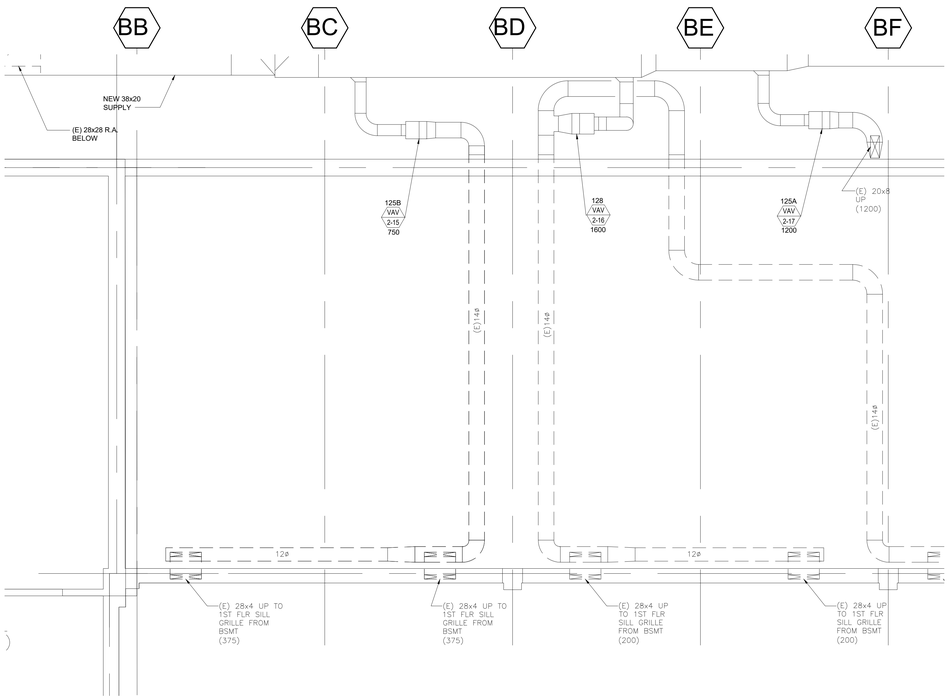
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - WEIGHT ROOM & METAL SHOP PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-110
DATE: 12-01-2025	

CAD FILE:
PLOT DATE: 1/2025

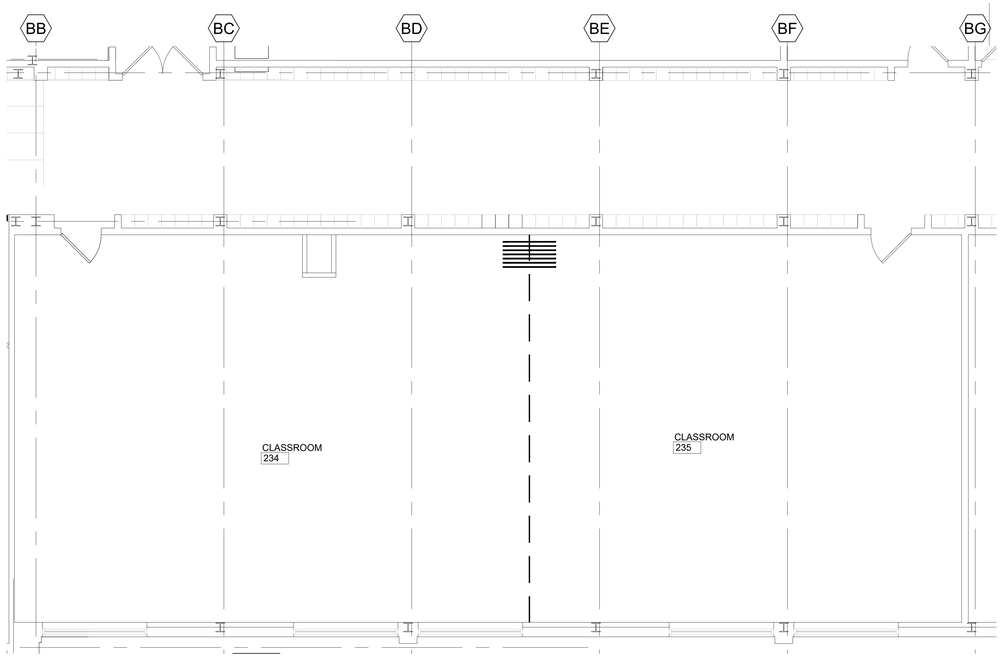


NORTH
BUILDING NORTH

1 / M-111

LIVING CENTER BASEMENT PLAN

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

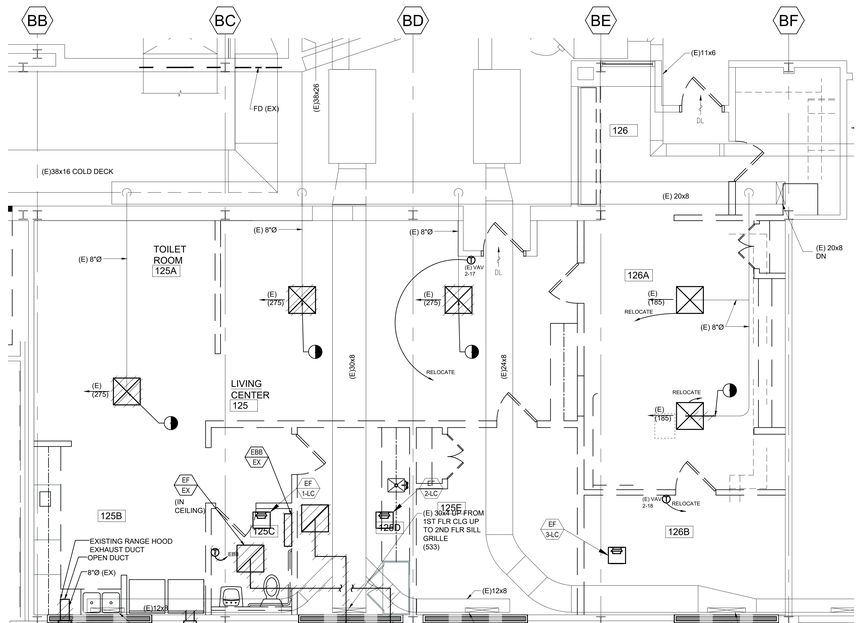


NORTH
BUILDING NORTH

2 / M-111

SECOND FLOOR PLAN - NEW WORK

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



NORTH
BUILDING NORTH

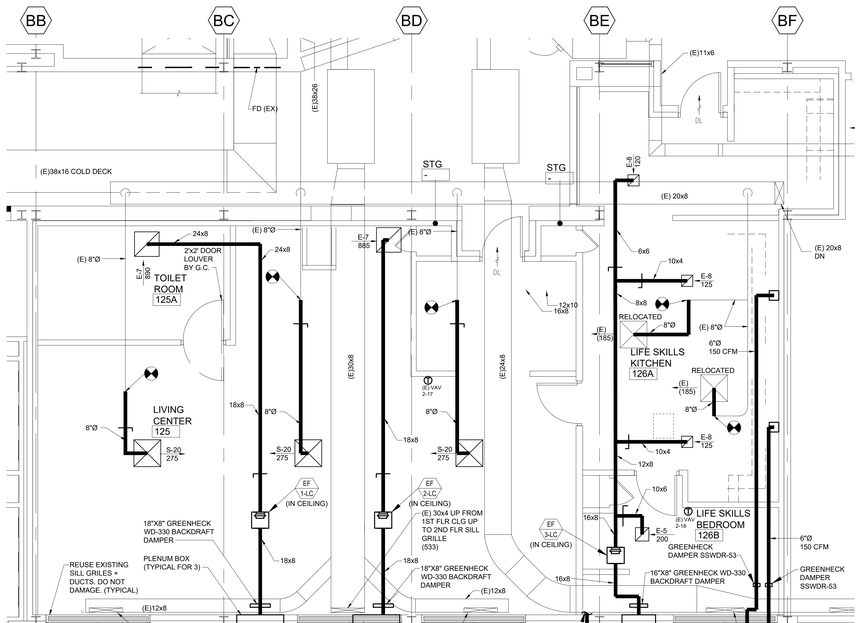
3 / M-111

LIVING CENTER DEMOLITION PLAN

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

KEYED NOTES:

1. RIGID INSULATE, CAP AND SEAL EXHAUST OPENING WITH STAINLESS STEEL SHEETMETAL.



NORTH
BUILDING NORTH

4 / M-111

LIVING CENTER FIRST FLOOR PLAN - NEW WORK

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

GENERAL NOTES:

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REVISIONS

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December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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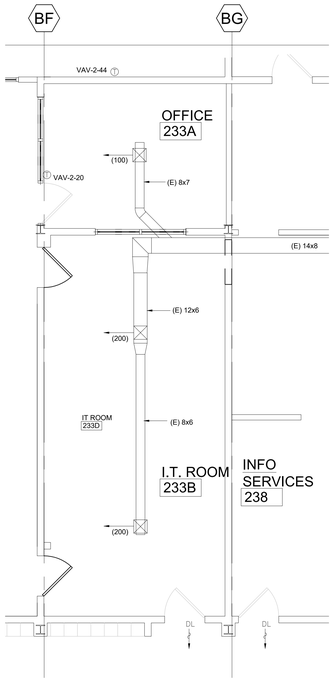
19/2024

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR
LIVING CENTER
DEMO AND RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-111
DATE: 12-01-2025	

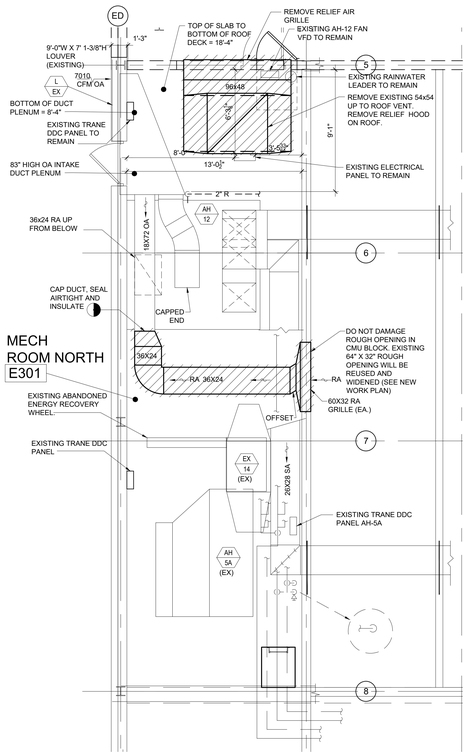
DWG FILE: 4306-B-M111.DWG
PLOT DATE: 12/2025



1 M-112

ROOM 233D IT DEMOLITION PLAN

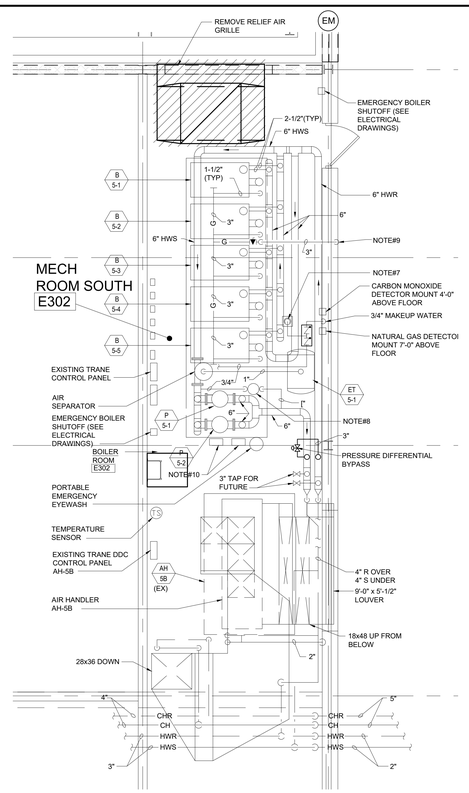
SCALE: 1/4" = 1'-0"



3 M-112

FAN ROOM NORTH DEMOLITION PLAN

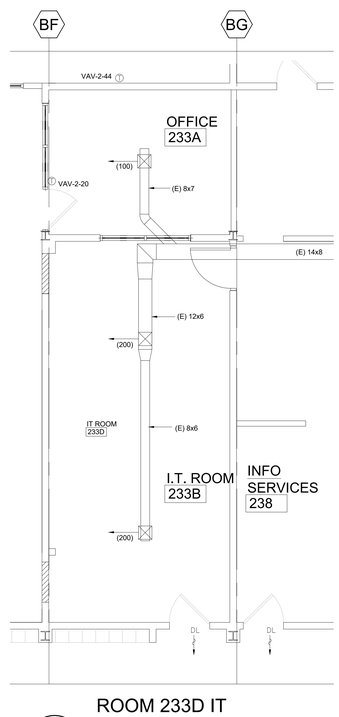
SCALE: 1/4" = 1'-0"



5 M-112

FAN ROOM SOUTH DEMOLITION PLAN

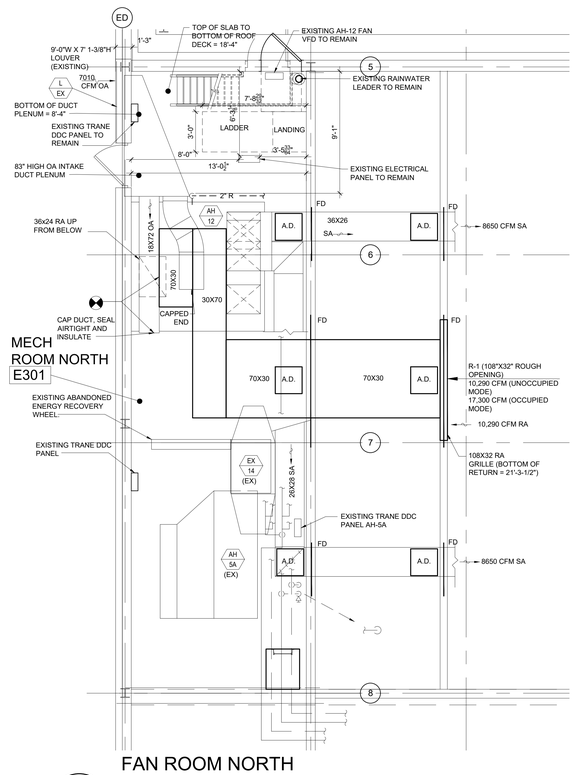
SCALE: 1/4" = 1'-0"



2 M-112

ROOM 233D IT RENOVATION PLAN

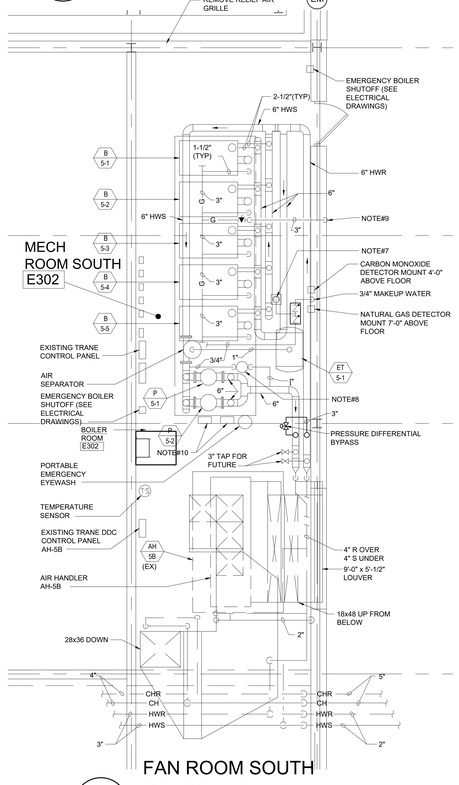
SCALE: 1/4" = 1'-0"



4 M-112

FAN ROOM NORTH RENOVATION PLAN

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



6 M-112

FAN ROOM SOUTH RENOVATION PLAN

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

AH-12-EX ROOM AIR BALANCE:

(SERVES SMALL GYM 281)
SA = 17,300 CFM
OA = 7010 CFM
RA = 10,290 CFM
RELIEF AIR = 7010 CFM

GENERAL NOTES:

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REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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19/2024

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

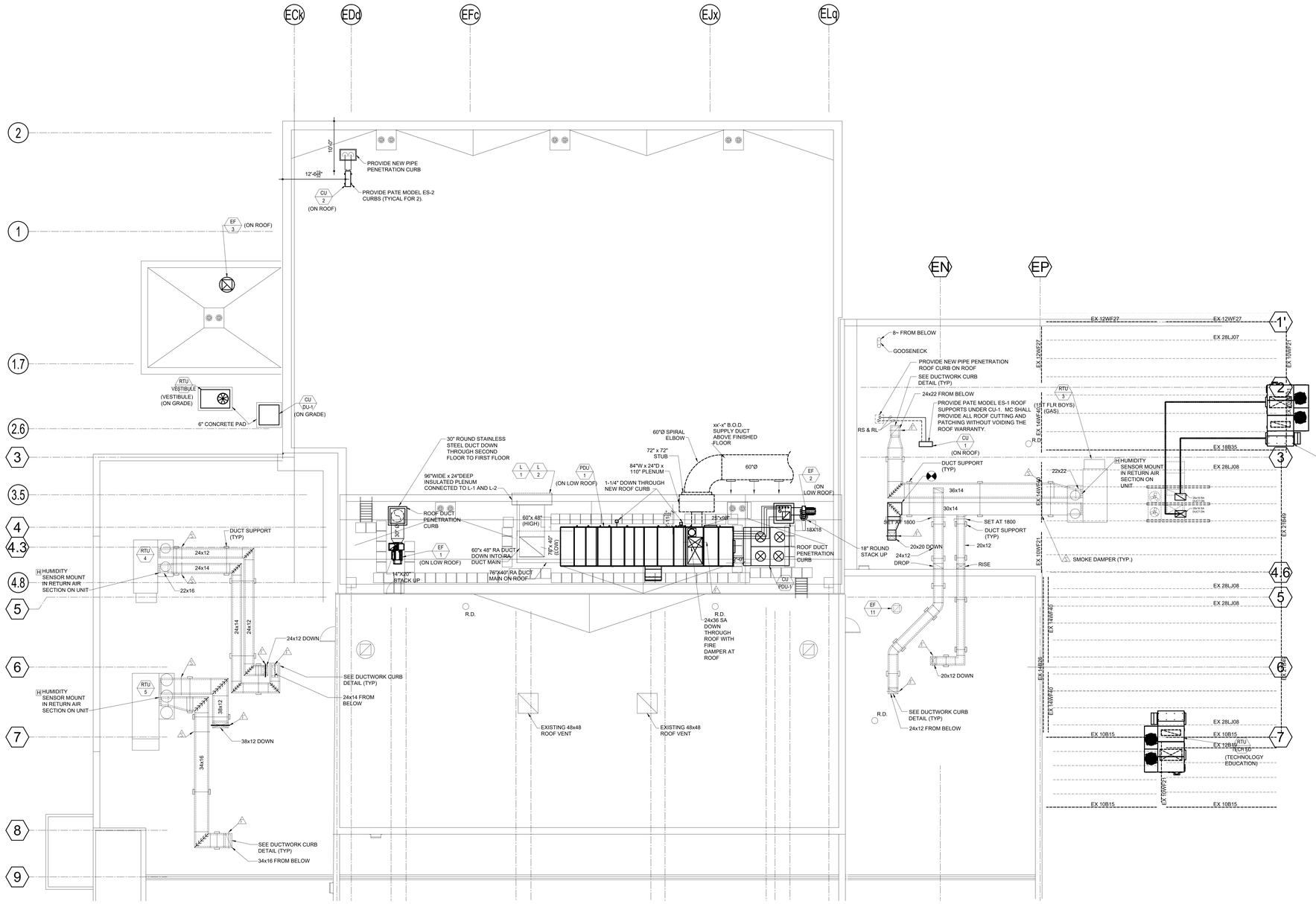
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

SECOND FLOOR
RM 222 & RM 233D IT &
FAN ROOMS PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-112
DATE: 12-01-2025	

CAD FILE:
PLOT DATE: 10/20/25



1 / M-113 — HVAC ROOF RENOVATION PLAN

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

GENERAL NOTES:

1. ANY POOL EVACUATOR EXHAUST DUCT BELOW GRADE (OR BELOW TOP OF SLAB) WILL BE BLUEDUCT. ANY EVACUATOR DUCT ABOVE GRADE (OR ABOVE TOP OF SLAB) WILL BE WELDED LIQUIDTIGHT 316L STAINLESS STEEL.
2. PROVIDE CONTINUOUSLY WELDED LIQUID TIGHT 316L STAINLESS STEEL DUCT FOR ALL ABOVE GROUND DUCT CONNECTED TO EF-1.
3. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
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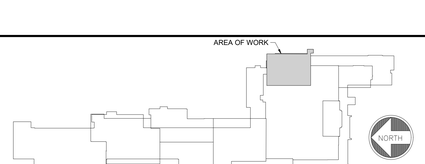
6. M.C. SHALL PROVIDE COORDINATION SHOP DRAWINGS OF HVAC DUCTWORK AND PIPING COORDINATED WITH LIGHTING, PLUMBING, AND FIRE PROTECTION. FIELD VERIFY ALL DIMENSIONS AND UNFORESEEN CONDITIONS WITH AT LEAST 1 SITE SURVEY.
7. ALL FIRE DAMPERS ON THIS DRAWING SHALL BE ALL ALUMINUM.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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SEALS:

HIGHLAND ASSOCIATES
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

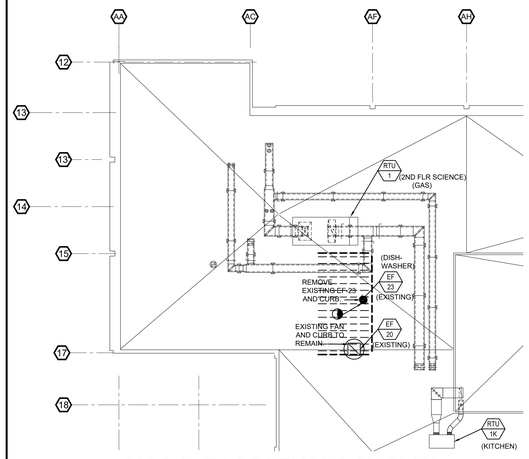
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

ROOF LEVEL RENOVATION PLAN

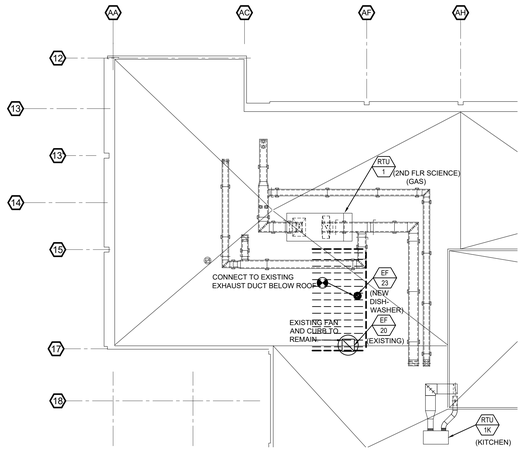
DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING: / DRAWING NO.:
M.P.	HS / M-113
DATE: 12-01-2025	

DWG FILE: 2024-239 M113.DWG
PLOT DATE: 11/26/2025



PARTIAL ROOF DEMOLITION PLAN

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



PARTIAL ROOF RENOVATION PLAN

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

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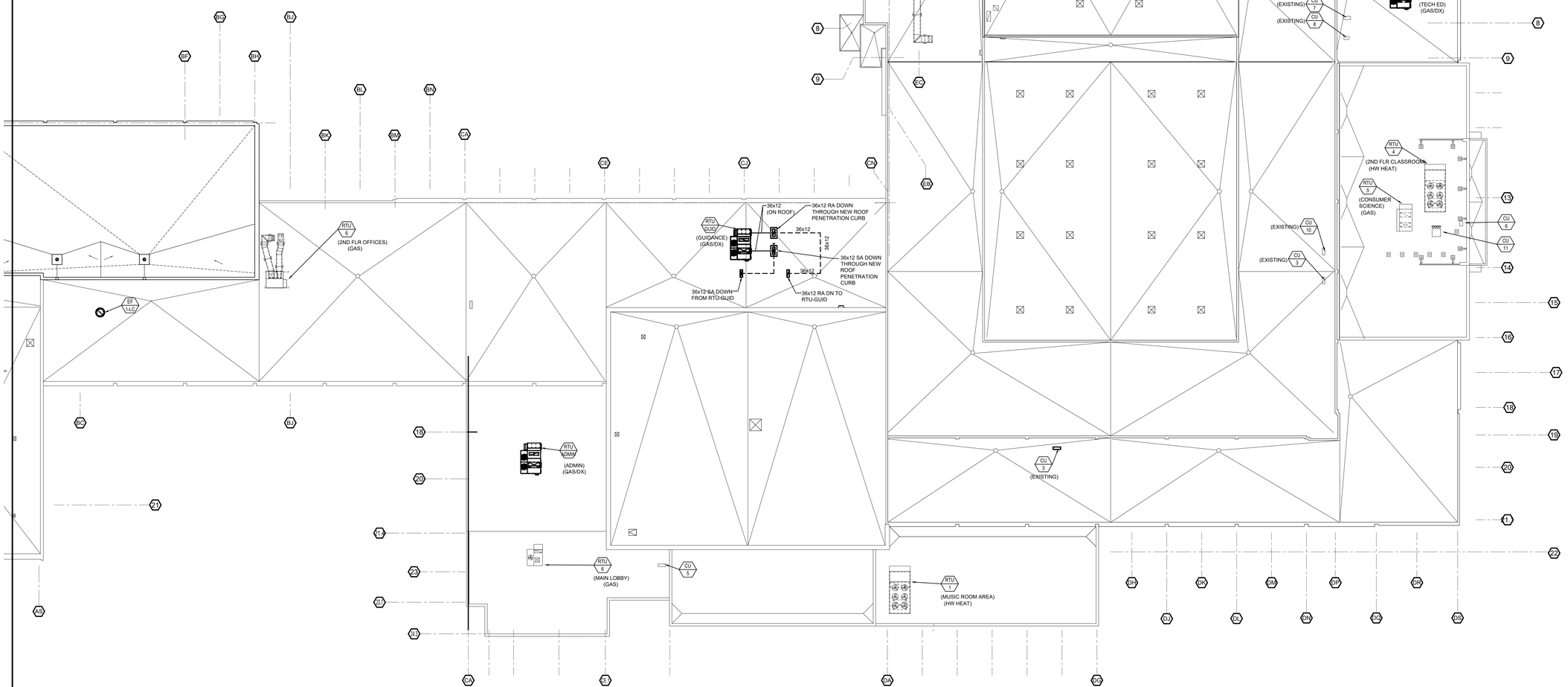


COMPOSITE ROOF PLAN

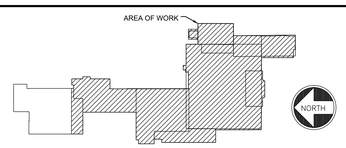
SCALE: 1/16" = 1'-0"

GAS HEAT	
SYSTEM	ROOM NAME
RTU-1K	KITCHEN
RTU-1	2ND FLR SCIENCE
RTU-2	2ND FLR SCIENCE
RTU-3	1ST FLR BOYS
RTU-4	1ST FLR GIRLS
RTU-5	2ND FLR SCIENCE
RTU-5	CONSUMER SCIENCE
RTU-6	2ND FLR OFFICES
RTU-6	MAIN LOBBY
RTU-7	1ST FLR STEM LAB

HOT WATER	
SYSTEM	ROOM NAME
RTU-2	ALTERNATE CRS.
RTU-3	OT/PT ROOM
RTU-4	2ND FLR CLASSROOMS
RTU-6	MUSIC ROOM

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
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Johnson City, NY

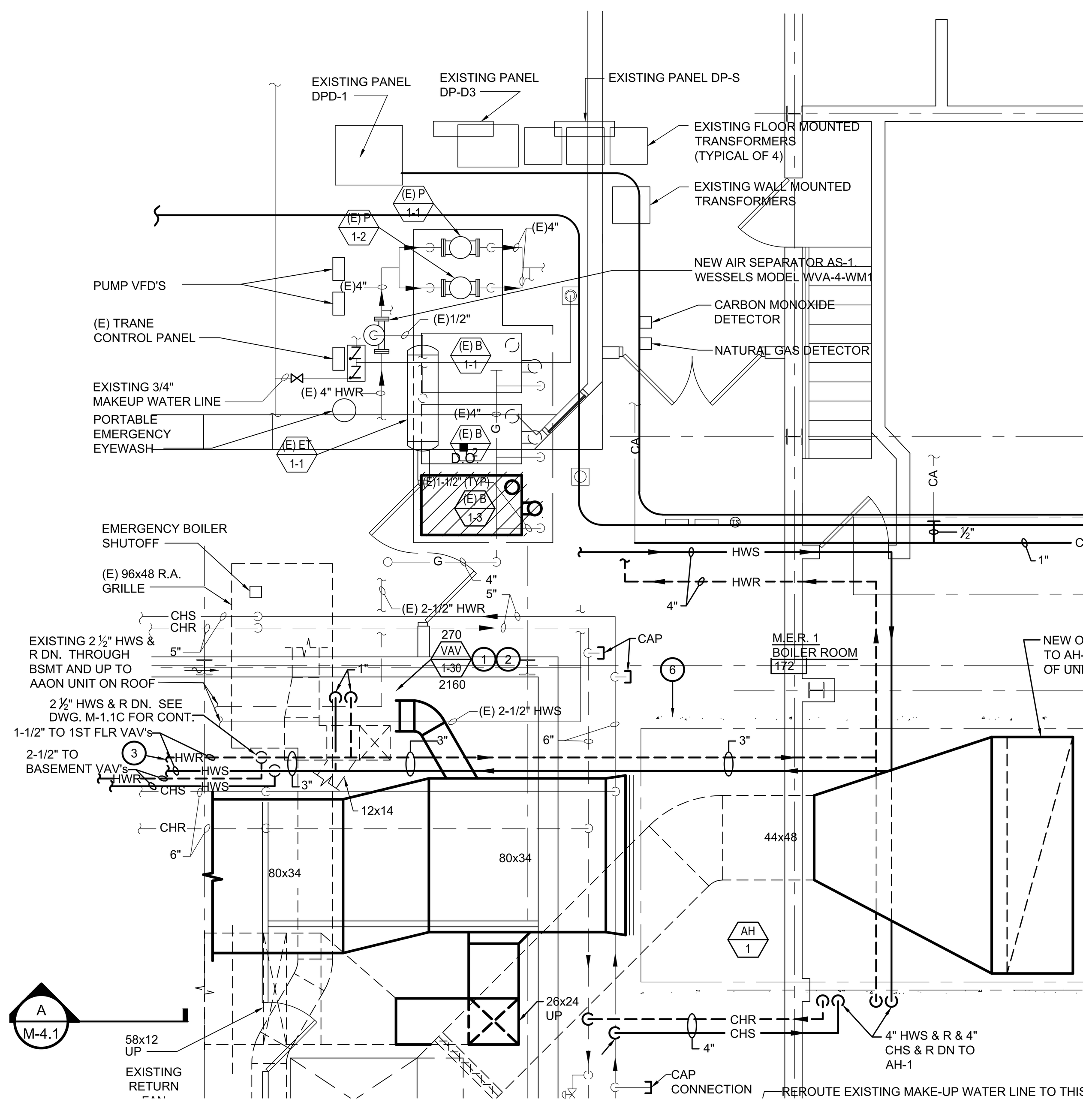
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

ROOF COMPOSITE PLAN

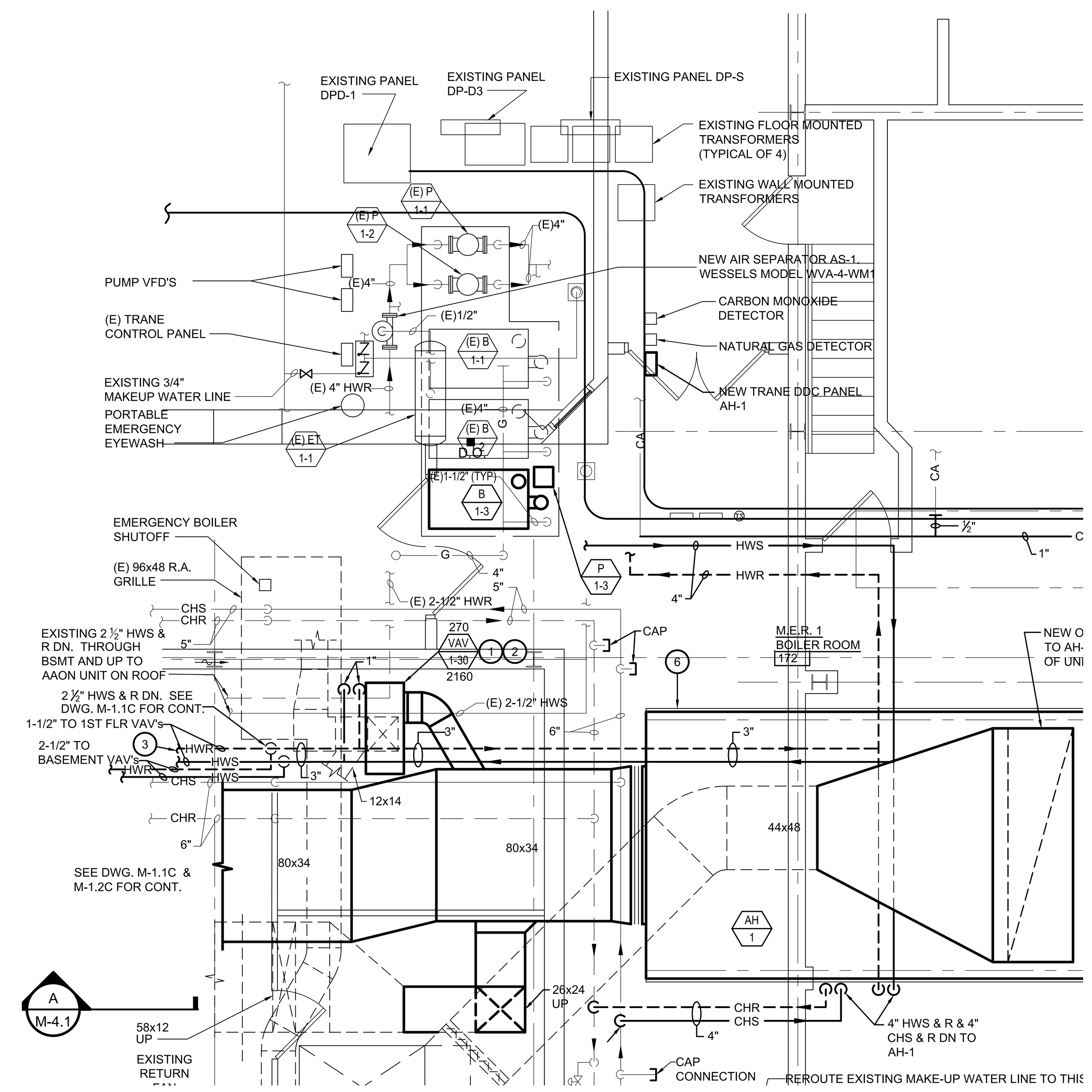
DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING: / DRAWING NO.:
M.P.	HS / M-114
DATE: 12-01-2025	

DWG FILE: 239-M-114.DWG
PLOT DATE: 11/25/25



M.E.R. 1 - BOILER ROOM 172 FLOOR PLAN - HVAC DEMOLITION

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



M.E.R. 1 - BOILER ROOM 172 FLOOR PLAN - HVAC RENOVATION

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

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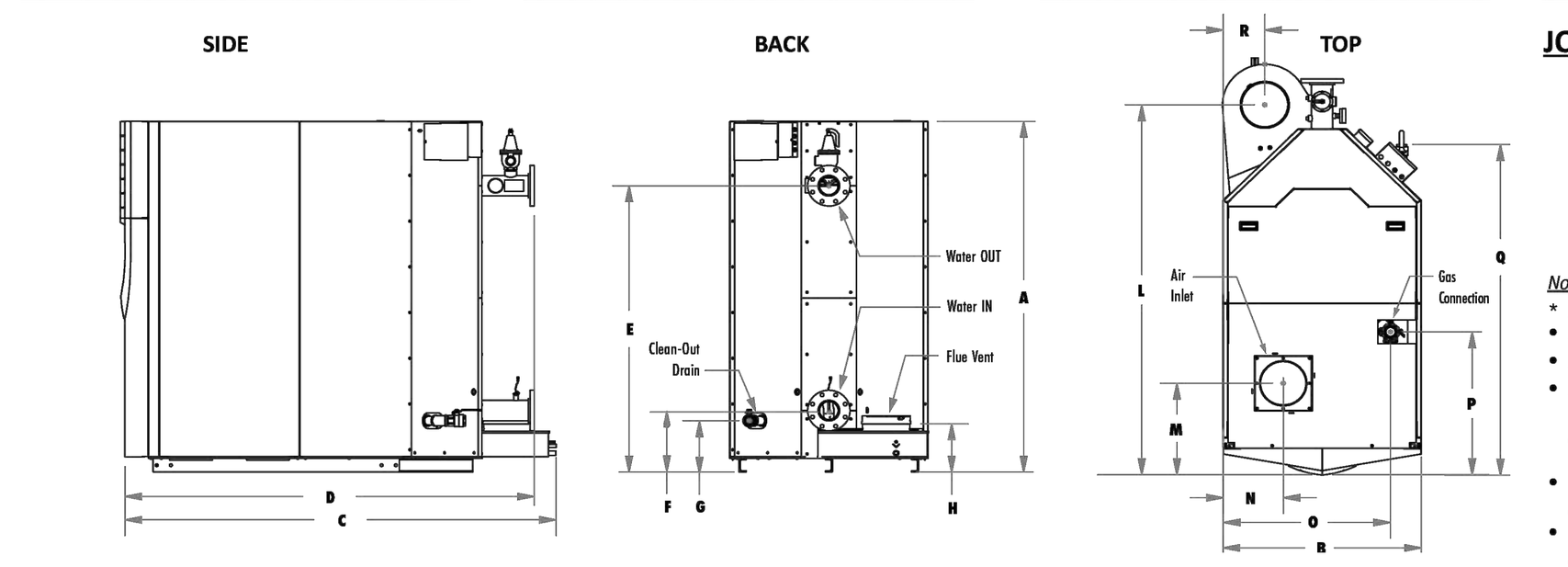
CREST COMMERCIAL CONDENSING BOILER
Submittal Sheet

Lochinvar® HIGH EFFICIENCY BOILERS & WATER HEATERS

MODELS FB 0751 - FB 6001 Series 1**
FBN-Sub-16

Job Name: Johnson City CSD
Location: High School
Contractor: Trane Company
Type Gas: Natural
Engineer: Highland Associates
Model #: FBN1251
Agent/Wholesaler: Ferguson
Equipment Tag(s):

SIDE | BACK | TOP



JOB NOTES:

Notes:
* *Insert "N" for natural gas and "L" for LP gas models.*
* *Indoor installation only.*
* *Low NOx Operation.*
* *Lochinvar should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.*
* *The ratings have been determined under the provisions governing forced draft burners.*
* *The Net AHRI water ratings shown are based on a piping and pickup allowance of 1.15.*

AHRI CERTIFIED

	Model Number	Input MBH Min	Input MBH Max	Gross Output MBH	Net AHRI Rating MBH	Combustion Efficiency	Thermal Efficiency	Turndown	Flow Rate GPM Min	Flow Rate GPM Max	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	R	Gas Conn.	Water Inlet/ Outlet	Air Intake	Vent Size	Oper. Weight (with water)	Ship. Weight (lbs.)
○	FB*0751	50	750	722	628	96.4%	96.2%	15:1	18	750	78"	30"	55-1/2"	57-5/8"	66-1/8"	11-7/8"	11-3/8"	11-1/4"	51"	13"	8-3/4"	26-3/4"	23-3/4"	49-1/2"	7-3/8"	1-1/4"	3"	6"	6"	1,768	1,560
○	FB*1001	50	999	961	836	96.4%	96.2%	20:1	18	350	78"	30"	56-1/2"	57-5/8"	66-1/8"	11-7/8"	11-3/8"	11-1/4"	51"	13"	8-3/4"	26-3/4"	23-1/8"	49-1/2"	6-1/2"	1-1/4"	3"	6"	6"	1,838	1,596
✓	FB*1251	62.5	1,250	1,203	1,046	96.4%	96.2%	20:1	18	350	78"	30"	56-1/2"	57-3/4"	66-1/8"	11-7/8"	11-3/8"	11-1/4"	51-3/8"	13"	8-3/4"	26- 3/4"	21-5/8"	49-1/2"	6-1/2"	1-1/2"	3"	6"	8"	1,975	1,648
○	FB*1501	60	1,500	1,443	1,255	96.4%	96.2%	25:1	25	350	78"	30"	67-3/4"	68"	65-3/8"	12-3/8"	11-3/8"	11-1/4"	62-3/8"	15-7/8"	9"	26-7/8"	27-7/8"	59-1/4"	5-1/8"	1-1/2"	4"	8"	8"	2,307	1,961
○	FB*1751	70	1,750	1,684	1,464	96.4%	96.2%	25:1	25	350	78"	30"	66-1/4"	68"	65-3/8"	12-3/8"	11-3/8"	11-1/4"	61-1/2"	15-7/8"	9"	27"	27-1/8"	58-3/4"	5-1/8"	1-1/2"	4"	8"	8"	2,458	2,017
○	FB*2001	80	1,999	1,923	1,672	96.4%	96.2%	25:1	25	350	78"	30"	66-1/2"	68"	65-3/8"	12-3/8"	11-3/8"	11-1/4"	61-1/2"	15-7/8"	9"	27"	26-3/4"	58-3/4"	5-1/8"	1-1/2"	4"	8"	8"	2,570	2,087
○	FB*2501	125	2,500	2,400	2,087	96.1%	96.0%	20:1	25	350	77-3/4"	35"	83-3/4"	83-3/4"	63-3/4"	13-1/2"	11-1/4"	10-1/2"	76-1/4"	19-3/4"	9-1/4"	28-3/4"	32"	71"	7-1/4"	2"	4"	8"	9"	3,600	2,577
○	FB*3001	150	3,000	2,883	2,507	96.1%	96.0%	20:1	25	350	77-3/4"	35"	83-3/4"	83-3/4"	63-3/4"	13-1/2"	11-1/4"	10-1/2"	76-1/4"	19-3/4"	9-1/4"	28-3/4"	32"	71"	7-1/4"	2"	4"	10"	10"	3,900	2,881
○	FB*3501	175	3,500	3,364	2,925	96.1%	96.0%	20:1	45	350	77-3/4"	42"	91-1/2"	86-3/4"	63-1/2"	13-1/4"	11-1/2"	10-3/4"	82"	20-1/4"	12-3/4"	35-1/2"	31-3/4"	73-1/4"	8-3/4"	2"	4"	10"	10"	4,600	3,218
○	FB*4001	333.3	3,999	3,843	3,342	96.1%	96.0%	12:1	45	350	77-3/4"	45-1/2"	103-1/2"	99"	63-1/2"	13-3/4"	11-1/2"	10-3/4"	94"	24-3/4"	13-1/2"	39-1/2"	42-1/4"	85-1/4"	10-1/2"	2-1/2"	4"	12"	12"	5,200	3,805
○	FB*5001	499.9	4,999	4,804	4,177	96.1%	96.0%	10:1	50	600	77-3/4"	46-1/2"	102-1/4"	99-1/2"	63-1/2"	15"	11-1/2"	10-3/4"	92-1/2"	22"	14"	39-3/4"	39-1/2"	84"	9"	2-1/2"	6"	14"	14"	5,900	4,101
○	FB*6001	600	6,000	5,766	5,014	96.1%	96.0%	10:1	60	600	77-3/4"	50"	102-3/4"	99-3/4"	63-1/4"	14-3/4"	11-1/2"	10-3/4"	93-1/4"	20"	15-3/4"	43-1/2"	36-1/2"	83-3/4"	9-1/4"	3"	6"	14"	14"	6,900	4,711

Information subject to change without notice. Dimensions shown are approximate and should not be used for construction purposes.

CREST® CONDENSING BOILER



ENERGY STAR 0751-2001
AHRI CERTIFIED
USA

Codes & Registrations

ANSI Z21.13/CSA Certified
ASME Certified, "H" Stamp / National Board
California Code Compliant
Canadian Registration Number (CRN)
CSD1 / Factory Mutual / GE Gap Compliant
South Coast Air Quality Management District Qualified & Energy Star Rated (FB 0751-2001)

Smart Touch™ Features

CON-X-US Remote Connect
SMART TOUCH Touchscreen Operating Control
Full-Color 8" Touchscreen LCD Display
Built-in Cascading Sequencer for up to 8 Boilers
› Built-in Redundancy
› Cascade Multiple Sized Boilers
› Lead/Lag Cascade
› Efficiency Optimized Cascade
Front-End Loading Capability with Copper-Fin II® and Power-Fin® Boilers
Building Management System Integration with 0-10 VDC Input
BACnet MSTP Communications
Outdoor Reset Control with Outdoor Air Sensor
Password Security
Domestic Hot Water Prioritization
› DHW tank piped with priority in the boiler loop
› DHW tank piped as a zone in the system with the pumps controlled by the Smart System
› DHW Modulation Limiting
› Separately Adjustable SH/DHW Switching Times
Low Water Flow Safety Control & Indication
Inlet & Outlet Temperature Readout
Freeze Protection
Service Reminder
Time Clock
Data Logging
› Hours Running, Space Heating
› Hours Running, Domestic Hot Water
› Hours Running, Modulation Rate
› Ignition Attempts
› Last 10 Lockouts
Programmable System Efficiency Optimizers
› Night Setback
› Anti-Cycling
› Outdoor Air Reset Curve
› Ramp Delay
› Boost Temperature & Time
› Modulation Factor Control
Three Pump Control
› System Pump
› Boiler Pump
› Domestic Hot Water Pump
High-Voltage Terminal Strip
› 120V/1PH/60Hz Power Supply (FB 0751-2001)
› 208V/3PH/60Hz Power Supply (FB 2501-3501)
› 480V/3PH/60Hz Power Supply (FB 4001-6001)
› System Pump, Boiler Pump and DHW Pump Power
Low-Voltage Terminal Strip
› 24 VAC Auxiliary Device Relay
› Auxiliary Proving Switch Contacts
› Alarm on Any Failure Contacts
› Runtime Contacts
› DHW Thermostat Contacts
› Unit Enable/Disable Contacts
› System Sensor Contacts
› DHW Tank Sensor Contacts
› Outdoor Air Sensor Contacts
› Cascade Contacts
› 0-10 VDC BMS External Control Contact
› 0-10 VDC Variable Speed Boiler Pump Control Contact

Standard Features

Proof of Closure Valve (FB 6001)
Modulating Burner with up to 25:1 Turndown
Direct-Spark Ignition
Low NOx Operation
Sealed Combustion
Air Inlet Filter
Low Gas Pressure Operation
Vertical and Horizontal Direct Venting
› Direct Vent up to 100 Feet
› PVC, CPVC, Polypropylene or AL29-4C (FB 0751-4001)
› AL29-4C (FB 0751-6001)
ASME "H" Stamped Heat Exchanger
316L Stainless Steel Fire Tubes
160 psi Working Pressure
On/Off Switch
Adjustable High Limit with Manual Reset
Low Water Cutoff with Manual Reset & Test
High & Low Gas Pressure Switches w/Manual Reset
Low Air Pressure Switches
Condensate Trap w/Blocked Drain Switch
Drain Valve
System Sensor
Outdoor Air Sensor
Inlet & Outlet Temperature Sensors
High-Voltage Terminal Strip
Low-Voltage Terminal Strip
Downstream Gas Test Cocks
50 psi ASME Relief Valve
Temperature & Pressure Gauge
Zero Clearances to Combustible Materials
High Altitude Models Available
SCCR of 5,000 A
10-Year Limited Warranty (See Warranty for Details)
1-Year Warranty on Parts (See Warranty for Details)

Optional Equipment

☐ Alarm on Any Failure
ASME Relief Valve Option:
☐ 75 psi ☐ 100 psi ☐ 125 psi ☐ 150 psi
☐ BMS Gateway - BACnet IP or LonWorks
☑ Condensate Neutralization Kit
☐ Common Vent Kits Damper
☐ Modbus Communication
Short Circuit Current Rating (SCCR) Options:
FB 2501 - 6001
☐ 100,000 A
☐ 200,000 A
☐ Motorized Isolation Valve
☐ RealTime O_2 Feedback™
☐ Variable Speed Boiler Pump
☐ Wireless Outdoor Temperature Sensor
Electrical Transformer Options (Shipped Loose):
› FB 0751-2001
☐ 208V/3PH/60Hz → 120V/1PH/60Hz
☐ 480V/3PH/60Hz → 120V/1PH/60Hz
☐ 600V/3PH/60Hz → 120V/1PH/60Hz
› FB 2501-3501
☐ 480V/3PH/60Hz → 208V/3PH/60Hz
☐ 600V/3PH/60Hz → 208V/3PH/60Hz
› FB 4001-6001
☐ 208V/3PH/60Hz → 480V/3PH/60Hz
☐ 600V/3PH/60Hz → 480V/3PH/60Hz

Lochinvar® HIGH EFFICIENCY BOILERS & WATER HEATERS
Lochinvar, LLC
300 Maddox Simpson Parkway
Lebanon, Tennessee 37090
P: 615.889.8900 / F: 615.547.1000
Lochinvar.com

9/24—Printed in U.S.A.

B-1-3 DETAILS

N.T.S.

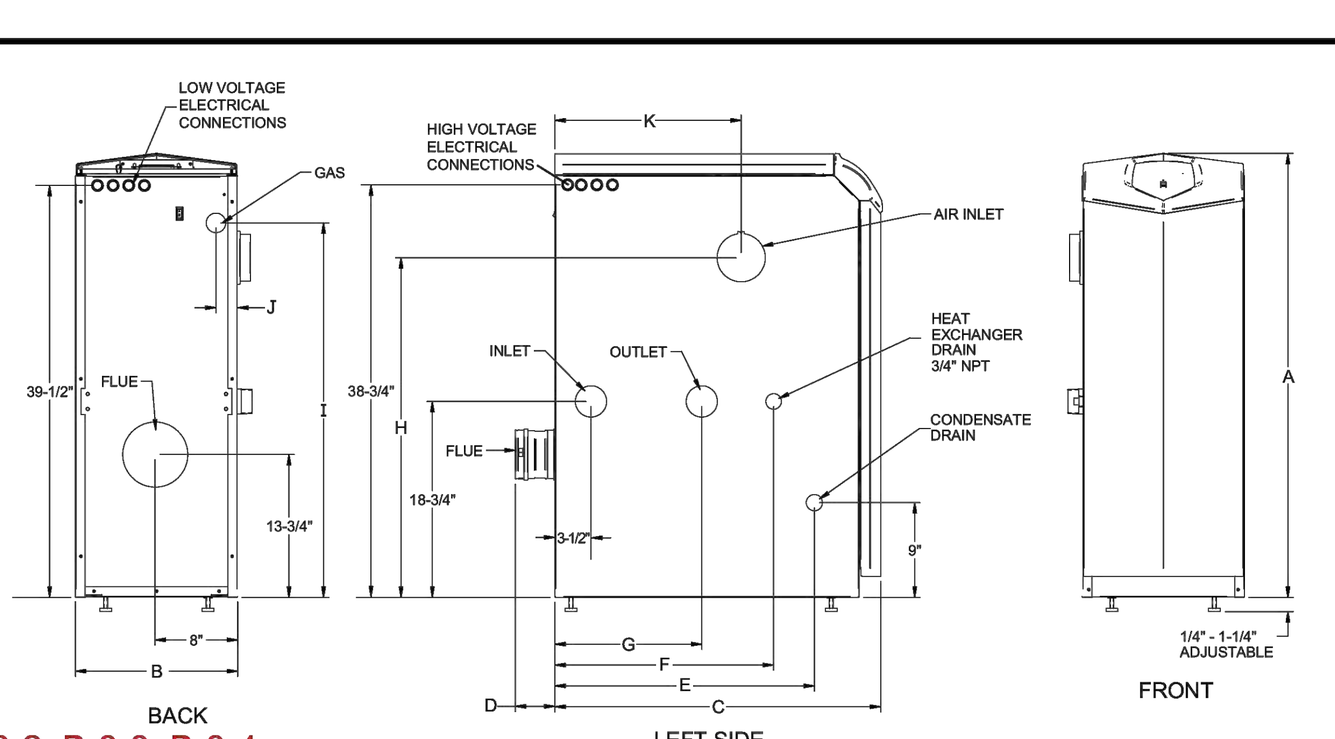
Lochinvar® HIGH EFFICIENCY BOILERS & WATER HEATERS

KNIGHT XL COMMERCIAL BOILER
Submittal Sheet KBX-Sub-07

KNIGHT XL COMMERCIAL CONDENSING HEATING BOILERS

Job Name: ______
Location: ______
Engineer: ______
Wholesaler: ______
Contractor: ______
Model No. ______
Type Gas: ______
Equipment Tag(s): ______

NOTES:



B-3-1, B-3-2, B-3-3, B-3-4

Knight XL Heating Boiler AHRI CERTIFIED | Dimensions and Specifications

	Model No.	Input Min MBH	Input Max MBH	Thermal Eff.	Gross Output MBH	Net AHRI Rating MBH	A	B	C	D	E	F	G	H	I	J	K	Gas Conn.	Water Conn.	Air Inlet	Vent Size	Ship Wt. (lbs.)
○	KBN400	80	399	94.0%	376	327	42-1/2"	15-1/2"	27-3/4"	3-3/4"	20-3/4"	21"	14"	34"	34"	2"	18-3/4"	1"	1-1/2"	4"	4"	280
○	KBN501	100	500	94.0%	470	409	42-1/2"	15-1/2"	31-1/2"	3-3/4"	25-1/2"	21"	14"	32-1/2"	36"	2"	18"	1"	1-1/2"	4"	4"	310
○	KBN601	120	600	94.0%	564	490	42-1/2"	15-1/2"	36-1/4"	3-3/4"	25"	21"	14"	36"	32-3/4"	5-1/2"	19-1/2"	1"	2"	4"	4"	340
○	KBN701	140	700	94.0%	658	572	42-1/2"	15-1/2"	40-1/4"	3-3/4"	29"	23"	17"	36"	32-3/4"	3-1/4"	23-1/2"	1"	2"	4"	6"	370
○	KBN801	160	800	94.0%	752	654	42-1/2"	15-1/2"	45-1/4"	3-3/4"	33-1/4"	23"	17"	36"	32-3/4"	3-1/4"	27-3/4"	1"	2"	4"	6"	405

Notes:
* *Indoor installation only. All information subject to change. Change "N" to "L" for LP gas models.*
* *The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15.*
* *Lochinvar should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.*
* *The ratings have been determined under the provisions governing forced draft burners.*

KNIGHT® COMMERCIAL BOILER XL



Standard Features

› 94% Thermal Efficiency
› Modulating Burner with 5:1 Turndown
› Direct-Spark Ignition
› Low NOx Operation
› Sealed Combustion
› Low Gas Pressure Operation
› ASME Stainless Steel Heat Exchanger
› ASME Certified, "H" Stamped Gasketless HEX
› 160 psi Working Pressure
› 50 psi ASME Relief Valve
› Highly efficient, condensing design
› Vertical & Horizontal Direct-Vent
› Category IV venting up to 100 feet
› PVC, CPVC, Polypropylene or AL29-4C Venting up to 100 Feet
› Factory Supplied Sidewall Vent Termination
› Smart System Control
› Other Features
› On/Off Switch
› Adjustable High Limit w/ Manual Reset
› Automatic Reset High Limit
› Flow Switch
› Flue Temperature Sensor
› Low Air Pressure Switch
› Temperature & Pressure Gauge
› Adjustable Leveling Legs
› Condensate Trap
› Zero Clearances to Combustible Material
› 10 Year Limited Warranty (See Warranty)

Smart System Features

› SMART SYSTEM Digital Operating Control
› Multi-Color Graphic LCD Display w/Navigation Dial
› Three Reset Temperature Inputs with curves for three set point temperature inputs
› Built in Cascading Sequencer for up to 8 Boilers
› Multiple Size Boiler Cascade
› Lead Lag
› Efficiency Optimization
› Outdoor Reset Control with Outdoor Air Sensor
› Programmable System Efficiency Optimizers
› Night Setback
› DHW Night Setback
› Anti-Cycling
› Outdoor Air Reset Curve
› Ramp Delay
› Boost Temperature & Time
› Three Pump Control
› System Pump w/Parameter for Continuous Operation
› Boiler Pump With Variable Speed Pump Control*
› Domestic Hot Water Pump
› Domestic Hot Water Prioritization
› DHW tank piped with priority in the boiler loop
› DHW tank piped as a zone in the system with the pumps controlled by the Smart System
› DHW Modulation Limiting
› Separately Adjustable SH/DHW Switching Times*
› Building Management System Integration
› 0-10VDC Input to Control Modulation or Set Point
› 0-10VDC Input Signal from Variable Speed System Pump*
› 0-10VDC Modulation Rate Output
› 0-10VDC Input to Enable/Disable call for heat
› Access to BMS Settings through Display
› High Voltage Terminal Strip
› 120 VAC / 60 Hertz / 1 Phase Power Supply
› Three sets of Pump Contacts with Pump Relays
› Low Voltage Terminal Strip
› 24 VAC Device Relay
› Proving Switch Contacts
› Flow Switch Contacts
› Alarm on Any Failure Contacts
› Runtime Contacts
› DHW Thermostat Contacts
› 3 Space Heat Thermostat Contacts
› System Sensor Contacts
› DHW Tank Sensor Contacts
› Outdoor Air Sensor Contacts
› Cascade Contacts
› 0-10 VDC BMS External Control Contact
› 0-10 VDC Boiler Rate Output Contacts
› 0-10 VDC Variable Speed System Pump Signal Input
› 0-10 VDC Signal to Control Variable Speed Boiler Pump
› Modbus Contacts
› Time Clock
› Data Logging
› Hours Running, Space Heating
› Hours Running, Domestic Hot Water
› Ignition Attempts
› Last 10 Lockouts
› Other Features
› Low Water Flow Safety Control & Indication
› Password Security
› Inlet & Outlet Temperature Readout
› Customizable Freeze Protection Parameters
› Custom Maintenance Reminder with Contractor Info
*Exclusive feature, available only from Lochinvar

Optional Equipment

☐ Alarm Bell
☐ Condensate Neutralization Kit
☐ Concentric Vent Kit (KB400-KB601)
☐ BMS Gateway to LON or BacNet IP
☐ BACnet MSTP Communication
☐ High & Low Gas Pressure Switches w/ Manual Reset (KB501-KB801)
☐ MODBUS Communication
☐ Multi Temperature Loop Control
☐ Low Water Cutoff w/Manual Reset & Test
☐ Boiler Circulation Pump
☐ Variable Speed Boiler Pump
☐ SMART SYSTEM PC Software
☐ Stainless Steel Vent Kits (KB701-KB801)
☐ Stack Frame
☐ 30 psi ASME Relief Valve
☐ 75 psi ASME Relief Valve
☐ 100 psi ASME Relief Valve
☐ 125 psi ASME Relief Valve
☐ 150 psi ASME Relief Valve

Firing Codes

☐ M9 Standard Construction
☐ M7 California Code
☐ M13 CSD1 / FM / GE Gap (KB501-KB801)

Venting Options

☐ Direct Vent Vertical
☐ Direct Vent Horizontal
☐ Vertical Vent with Sidewall Air Intake
☐ Sidewall Vent with Rooftop Air Intake
☐ Vertical Vent with Optional Room Air
☐ Sidewall Vent with Optional Room Air

Lochinvar® HIGH EFFICIENCY BOILERS & WATER HEATERS
Lochinvar, LLC
300 Maddox Simpson Parkway
Lebanon, Tennessee 37090
P: 615.889.8900 / F: 615.547.1000
Lochinvar.com
AHRI CERTIFIED

11/17—Printed in U.S.A.

B-3-1, B-3-2, B-3-3, B-3-4

Lochinvar® High Efficiency Water Heaters, Boilers and Pool Heaters

KNIGHT XL® BOILER PRODUCT SUMMARY (KB) 399,000 - 800,000 BTU/HR

	KB-400	KB-501	KB-601	KB-701	KB-801
WATER					
GALLON CAPACITY	3.4	4.2	4.2	5.0	5.7
HEATING SURFACE (SQ. FT.)	41.8	50.8	50.8	57.8	65.3
WATER CONNECTIONS	1-1/2"	1-1/2"	2"	2"	2"
DRAIN	3/4"	3/4"	3/4"	3/4"	3/4"
20°F ΔT WATER FLOW (GPM)	37	47	55	65	74
HEAD LOSS (FT. OF HD.)	21	23	31	30	33
35°F ΔT WATER FLOW (GPM)	21	26	32	37	42
HEAD LOSS (FT. OF HD.)	8	10	13	11	12
MAX. WORKING PRESSURE (PSI)	160	160	160	160	160
# OF RELIEF VALVES	1	1	1	1	1
RELIEF VALVE SIZE	3/4"	3/4"	3/4"	3/4"	3/4"
RELIEF VALVE RATING (MBH)	697	697	697	1,352	1,352
RELIEF VALVE PRESSURE RATING (PSI)	50	50	50	50	50
GAS					
INLET CONNECTION	1"	1"	1"	1"	1"
MAX. INLET PRESSURE, NAT	14" w.c.	14" w.c.	14" w.c.	14" w.c.	14" w.c.
MIN. INLET PRESSURE, NAT	4.0" w.c.	4.0" w.c.	4.0" w.c.	4.0" w.c.	4.0" w.c.
MAX. INLET PRESSURE, LP	14" w.c.	14" w.c.	14" w.c.	14" w.c.	14" w.c.
MIN. INLET PRESSURE, LP	8.0" w.c.	8.0" w.c.	8.0" w.c.	8.0" w.c.	8.0" w.c.
BTU/HR INPUT	399,000	500,000	600,000	700,000	800,000
BTU/HR OUTPUT (HIGH FIRE)	372,267	466,500	567,600	660,100	752,000
BTU/HR OUTPUT (LOW FIRE)	74,453	93,300	113,520	132,020	150,400
ELECTRICAL					
VOLTAGE/HEATER	120	120	120	120	120
VOLTAGE/CONTROL	24	24	24	24	24
TOTAL AMPS	1.5	1.7	2.7	2.7	2.7
# OF ELECTRICAL CONNECTIONS	1	1	1	1	1
DIMENSIONS					
HEIGHT	42-1/2"	42-1/2"	42-1/2"	42-1/2"	42-1/2"
WIDTH	15-1/2"	15-1/2"	15-1/2"	15-1/2"	15-1/2"
DEPTH	27"	31-1/4"	36-1/4"	40-1/4"	45-1/4"
SERVICE CLEARANCES					
FRONT	24"	24"	24"	24"	24"
BACK	14"	14"	14"	14"	14"
RIGHT SIDE	0"	0"	0"	0"	0"
LEFT SIDE (PIPING)	24"	24"	24"	24"	24"
TOP	24"	24"	24"	24"	24"
DIRECT VENTING					
SIZE	4"	4"	4"	6"	6"
VENT CATEGORY	IV	IV	IV	IV	IV
VENT MATERIAL	PVC	PVC	PVC	PVC	PVC

Lochinvar, LLC • 300 Maddox Simpson Pkwy • Lebanon, TN 37090 • 615-889-8900 / Fax: 615-547-1000
www.Lochinvar.com

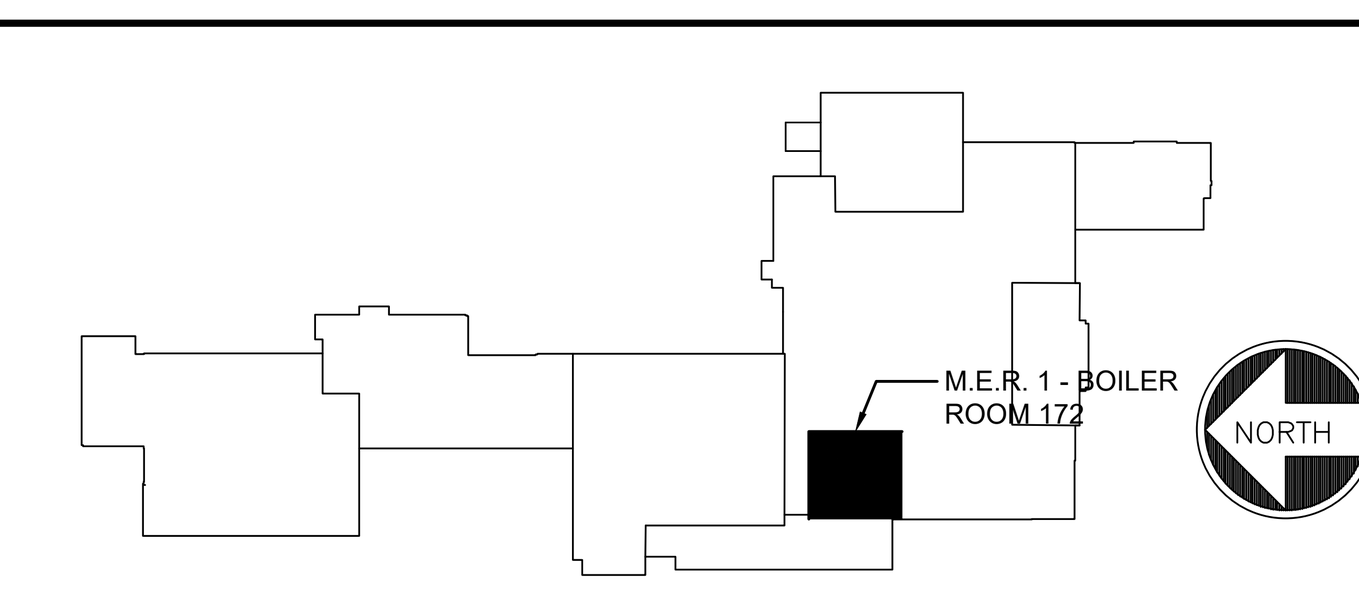
KBX-PS-05 (Replaces KBX-PS-04 06/10) 08/13-Printed in U.S.A.

B-3-1, B-3-2, B-3-3, B-3-4 DETAILS

N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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HIGHLAND ASSOCIATES
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

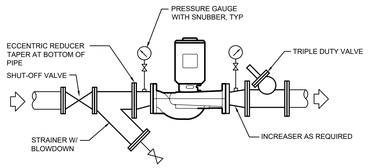
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
M.E.R. 1 FLOOR PLAN
HVAC RENOVATION

DRAWN BY: J.A.H. / M.P.
PROJECT NO.: 2024-239P
CHECKED BY: A.J.L.
BUILDING: HS
DRAWING NO.: M-115
DATE: 12-01-2025

CAD FILE: 1185-HS-M-4.1
PLOT DATE:



INLINE PUMP DETAIL

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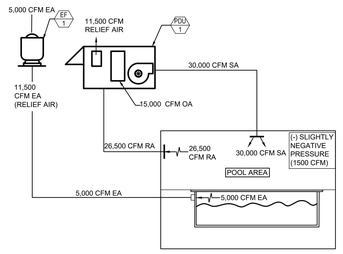

AIRFLOW SCHEMATIC

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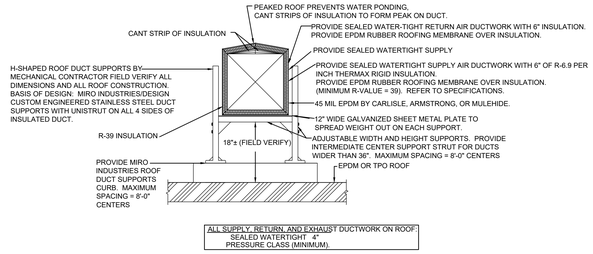

TYPICAL ROOFTOP DUCTWORK SECTIONAL VIEW AND SUPPORT DETAIL

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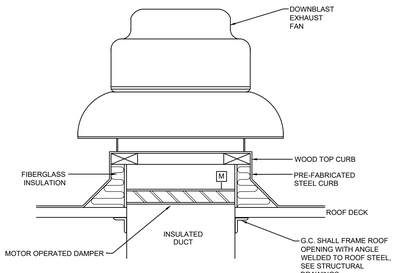

DOWNBLAST EXHAUST FAN DETAIL

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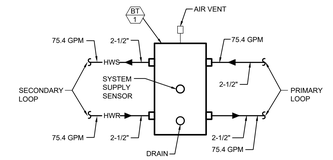

BUFFER TANK DETAIL

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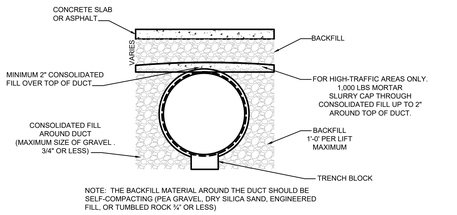
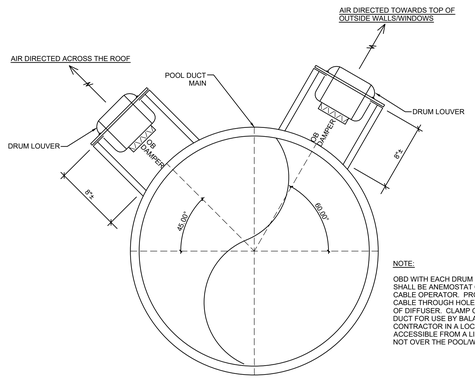


NOTE: THE BACKFILL MATERIAL AROUND THE DUCT SHOULD BE SELF-COMPACTING (PEA GRAVEL, DRY SILICA SAND, ENGINEERED FILL, OR TUMBLED ROCK ½" OR LESS)

30" ROUND BLUE DUCT TRENCH AND BACKFILL DETAIL

SCALE: NOT TO SCALE

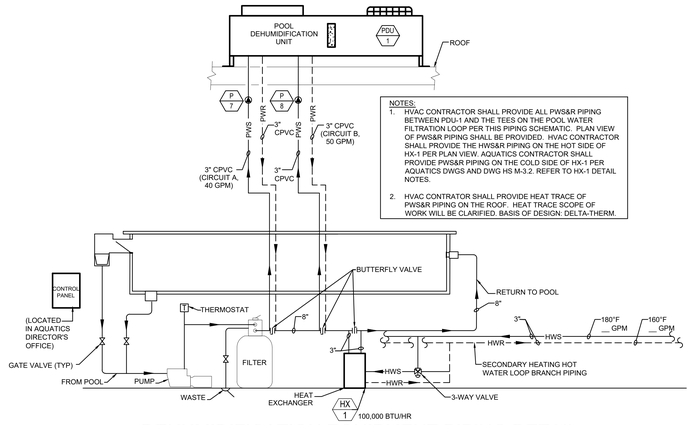


NOTE:

OBD WITH EACH DRUM LOUVER SHALL BE ANEMOSTAT OB-6 WITH CABLE OPERATOR. PROVIDE CABLE THROUGH HOLE IN SIDE OF DIFFUSER. CLAMP CABLE TO DUCT FOR USE BY BALANCING CONTRACTOR IN A LOCATION ACCESSIBLE FROM A LIFT THAT IS NOT OVER THE POOL/WATER.

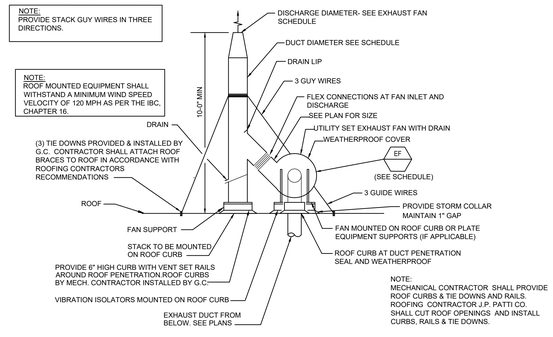
POOL DRUM LOUVER (S-1 DIFFUSER) DETAIL

SCALE: NOT TO SCALE



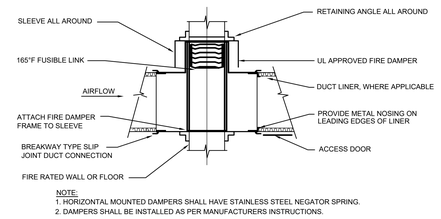
DEHUMIDIFICATION EQUIPMENT PIPING DETAIL

SCALE: NOT TO SCALE



UTILITY SET EXHAUST FAN DETAIL

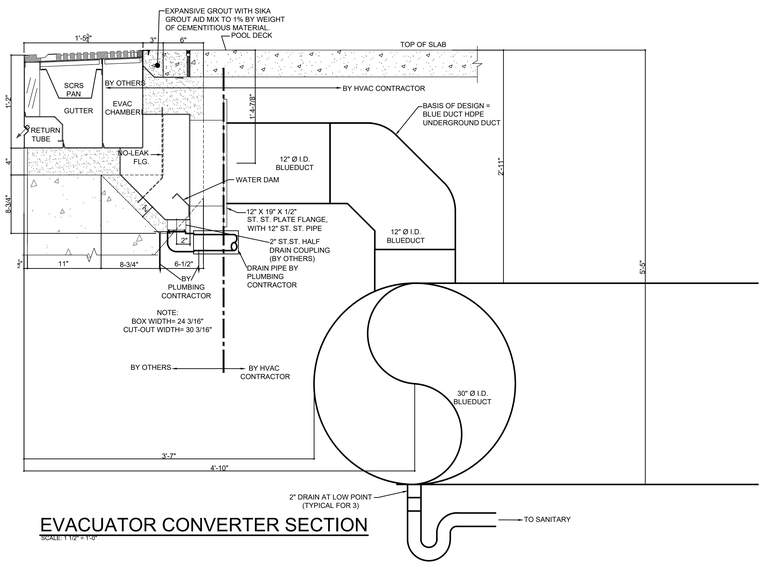
SCALE: NOT TO SCALE



NOTE:
1. HORIZONTAL MOUNTED DAMPERS SHALL HAVE STAINLESS STEEL NEGATOR SPRING.
2. DAMPERS SHALL BE INSTALLED AS PER MANUFACTURERS INSTRUCTIONS.

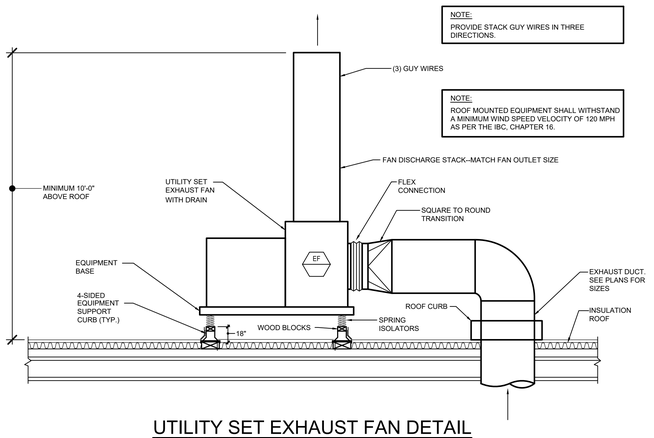
TYPE B FIRE DAMPER DETAIL

SCALE: NOT TO SCALE



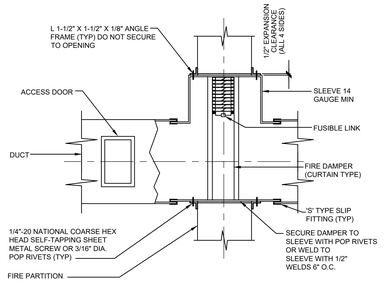
EVACUATOR CONVERTER SECTION

SCALE: 1 1/2" = 1'-0"



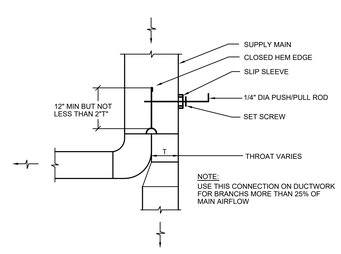
UTILITY SET EXHAUST FAN DETAIL

SCALE: NOT TO SCALE



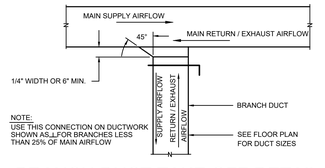
TYPICAL VERTICAL FIRE DAMPER

SCALE: NOT TO SCALE



DUCT DIVISION DETAIL

SCALE: NOT TO SCALE

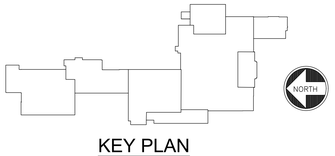


BRANCH DUCT TAKE OFF DETAIL

SCALE: NOT TO SCALE

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
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architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

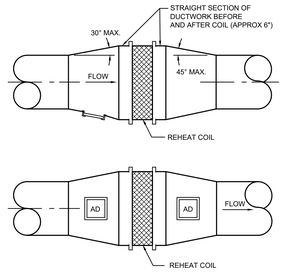
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-200
DATE: 12-01-2025	

CAD FILE: PLOT DATE: 11/20/2025



REHEAT COIL INSTALLATION DETAIL
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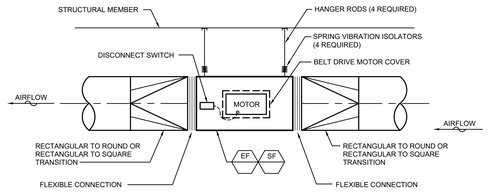
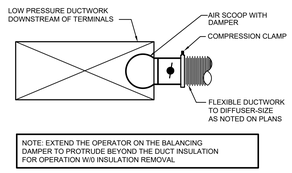


DETAIL ELEVATION AT IN-LINE FANS
SCALE: NOT TO SCALE



DIFFUSER TAP-OFF DETAIL
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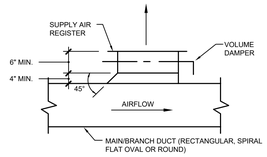
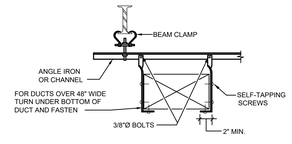
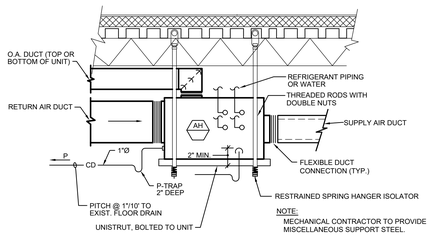


TYPICAL SUPPLY REGISTER DETAIL
SCALE: NOT TO SCALE

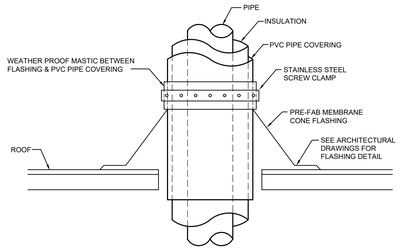


DUCT SIZE	HANGER SIZE	MAX. SPACING
UP THRU 2 SQ. FT.	1" X 1/16"	8' - 0"
2 THRU 4 SQ. FT.	1" X 1/8"	8' - 0"
4 THRU 10 SQ. FT.	1" X 1/8"	6' - 0"
OVER 10 SQ. FT.	1" X 1/8"	4' - 0"

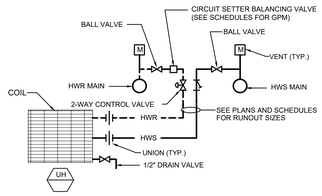
DUCT HANGING DETAIL AND SCHEDULE OF SUPPORTS
SCALE: NOT TO SCALE



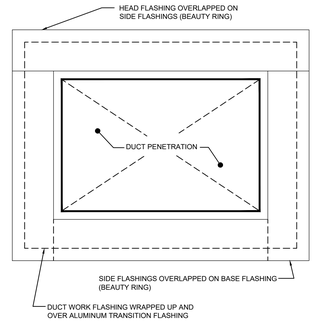
AIR HANDLING UNIT SUPPORT DETAIL
SCALE: NOT TO SCALE



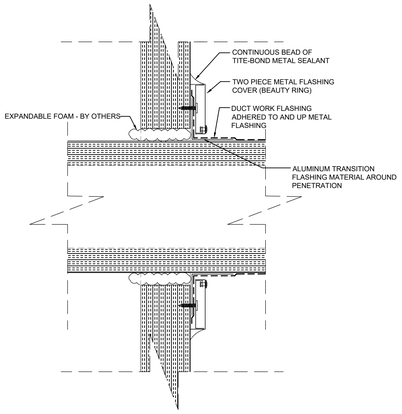
ROOF PENETRATION DETAIL FOR INSULATED PIPING
SCALE: NOT TO SCALE



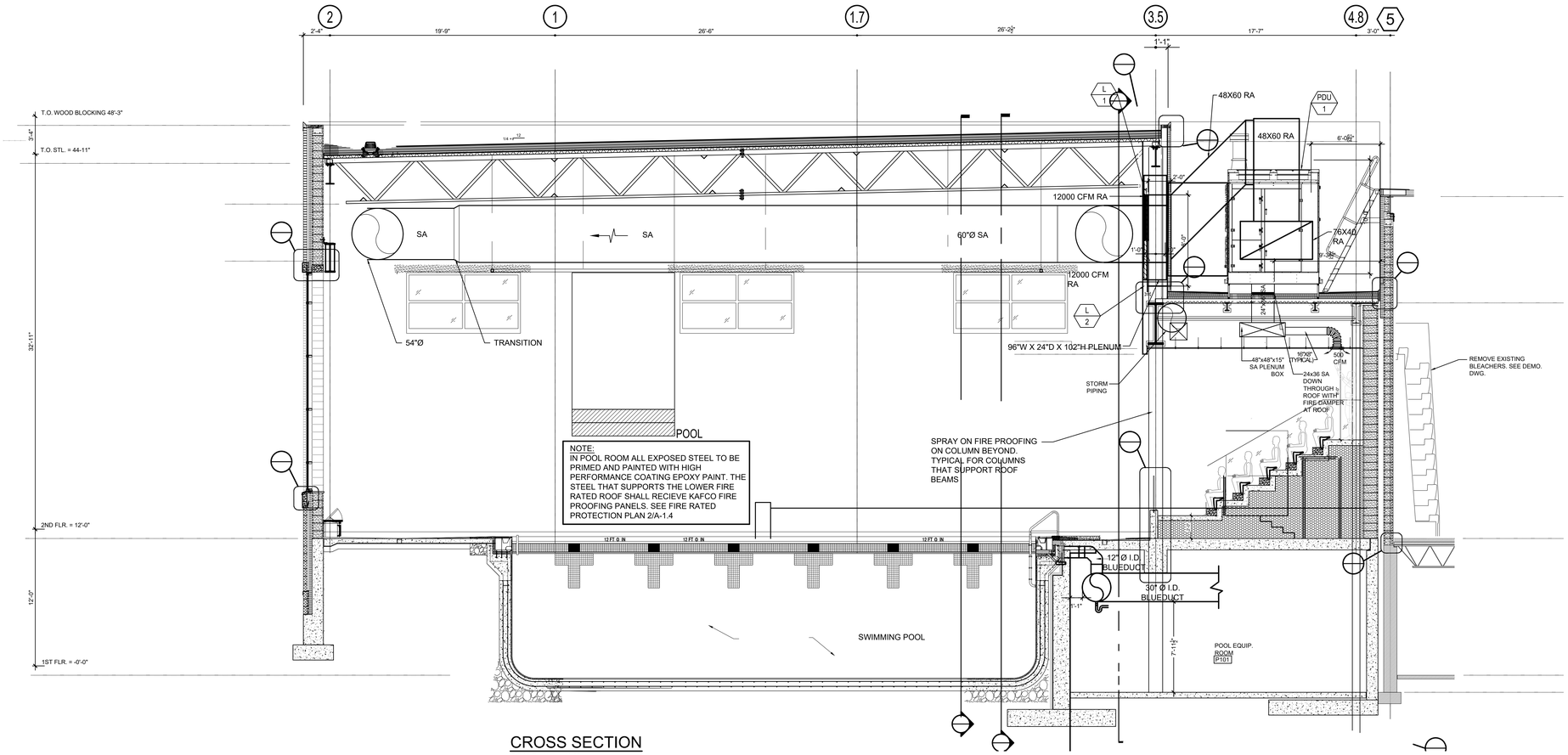
UNIT & CABINET UNIT HEATER PIPING DETAIL
SCALE: NOT TO SCALE



WALL PANEL PENETRATION DETAIL: ELEVATION
SCALE: NOT TO SCALE



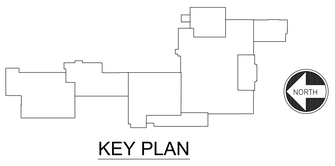
WALL PANEL PENETRATION DETAIL: SECTION
SCALE: NOT TO SCALE



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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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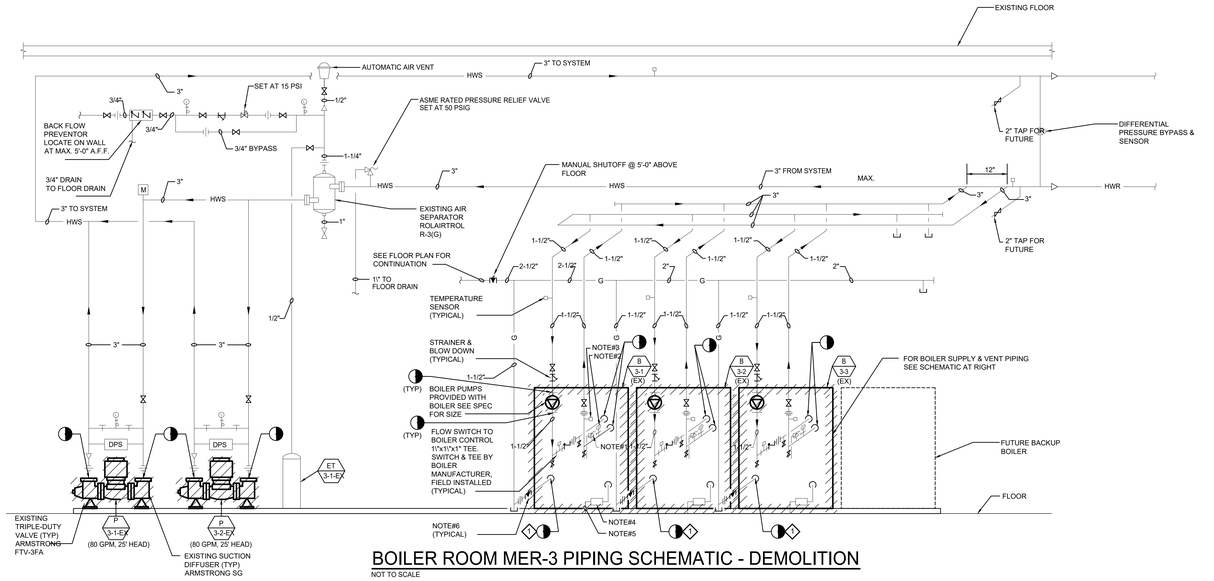
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-201
DATE: 12-01-2025	

PLOTTED: 12/8/2025 8:57:23 PM
PLOT BY: Brian Hall
FILE LOCATION: C:\Users\BrianHall\Highland Associates\Highland Associates - Documents\Projects\2024-239P Johnson City Central School District\Phase 2\Drawings\Mechanical\2024-239P-M-201.dwg

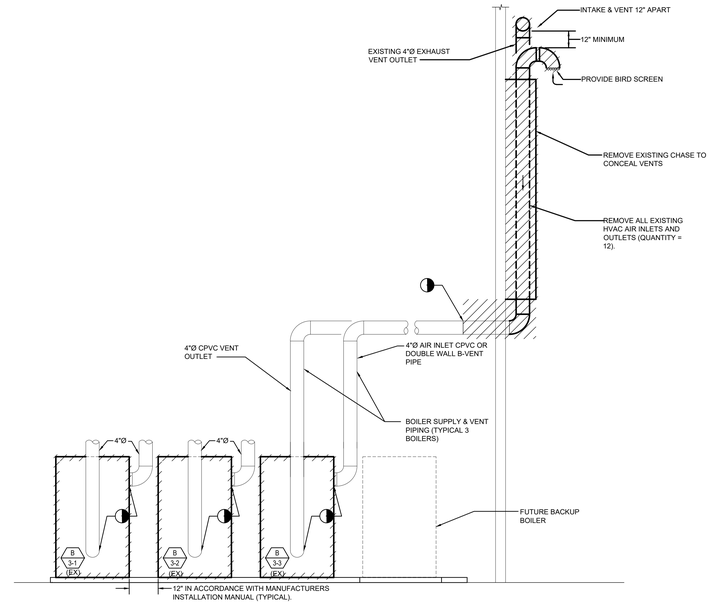


BOILER ROOM MER-3 PIPING SCHEMATIC - DEMOLITION

NOT TO SCALE

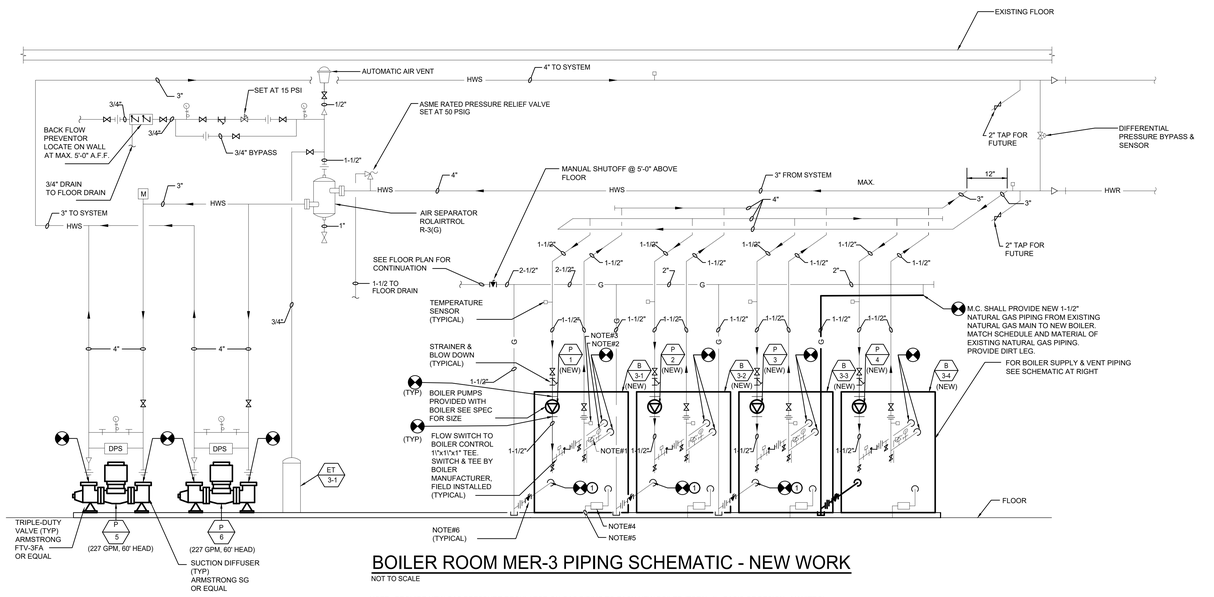
KEY NOTES:

1. M.C. SHALL DISCONNECT EXISTING 1-1/2" NATURAL GAS PIPING TO EXISTING BOILER WHICH IS OF EQUAL SIZE AND GAS LOAD TO NEW BOILER. PREPARE PIPING FOR RECONNECTION TO NEW BOILER (PROVIDE TEMPORARY CAPS IF NEEDED).



BOILER ROOM MER-3 INTAKE & VENT PIPING SCHEMATIC - DEMOLITION

NOT TO SCALE



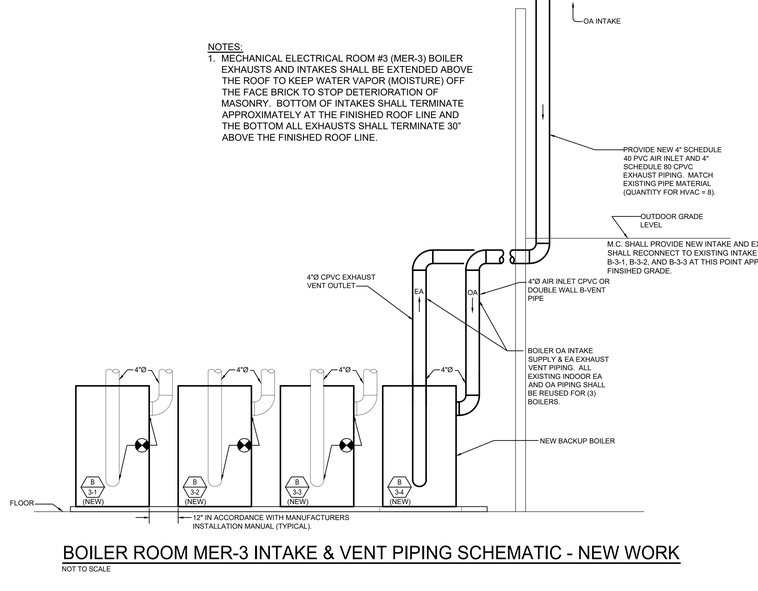
BOILER ROOM MER-3 PIPING SCHEMATIC - NEW WORK

NOT TO SCALE

NOTE: PROVIDE NEW GAS PRESSURE REGULATOR ON GAS PIPING TO EACH NEW BOILER (TOTAL 4). BASIS OF DESIGN: MAXITROL

KEY NOTES:

1. M.C. SHALL RECONNECT 1-1/2" NATURAL GAS PIPING TO NEW BOILER WHICH IS OF EQUAL SIZE AND GAS LOAD TO OLD BOILER. PROVIDE ALL REQUIRED FITTINGS. MATCH SIZE, MATERIAL, AND SCHEDULE OF EXISTING GAS PIPING.



BOILER ROOM MER-3 INTAKE & VENT PIPING SCHEMATIC - NEW WORK

NOT TO SCALE

REVISIONS

Issued for Bidding
December 1, 2025

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:

MECHANICAL DETAILS

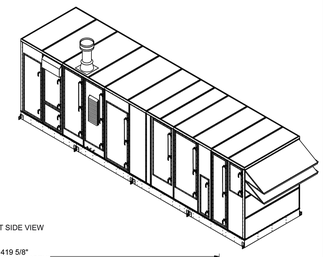
DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-202
DATE: 12-01-2025	

DWG FILE: M-202-HS.DWG
PLOT DATE: 12/2025

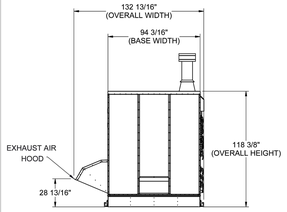
G1000-113

GENERAL NOTES FOR APPLICABLE SHEETS:

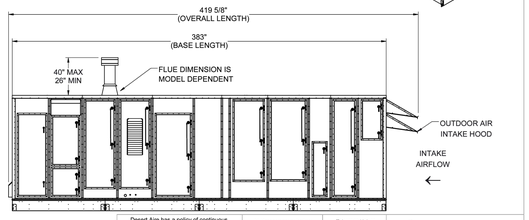
LEFT HAND ACCESS SHOWN IN ALL VIEWS
RIGHT HAND ACCESS OPTIONS LOCATED WITH SAME DIMENSIONS ON OPPOSITE SIDE UNLESS OTHERWISE SPECIFIED
WEIGHTS SHOWN REFLECT FULLY OPTIONED ESTIMATED UNIT WEIGHT



BACK VIEW



LEFT SIDE VIEW



UNIT SIZE	ESTIMATED WEIGHT (lbs.)
45-50 TONS	16500

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ALL DIMENSIONS ARE IN INCHES
TOLERANCE ± 1/8"

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

Part weight

Tolerance Unless Otherwise Specified
X.X ± 125
X.XX ± 060
X.XXX ± 030
Angles ± 1°

Drawn ASV | Date Released 1/19/2018
Sheet 1/10
Scale NTS | Rev 1

Description SP 40-50 TON SPLIT SINGLE GAS
Page Title GENERAL ARRANGEMENT
Drawing Number G1000-113

DESERT AIRE
N120 W18485 FREISTADT RD
GERMANTOWN, WI 53022
Tel: (262) 946-7400
Fax: (262) 946-7401

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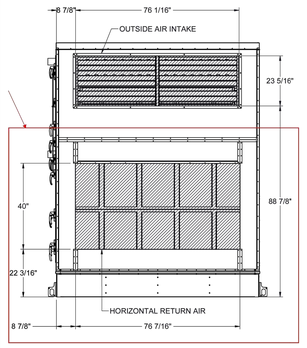
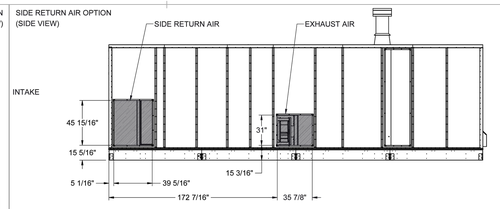
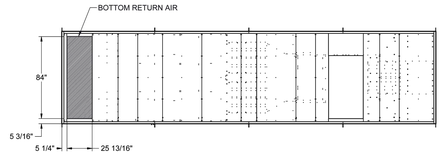
HORIZONTAL RETURN AIR OPTION
(INTAKE VIEW)



SIDE RETURN AIR OPTION
(SIDE VIEW)



BOTTOM RETURN AIR OPTION
(VIEW FROM ABOVE)



NOTES:
REFER TO SHEET 1 FOR GENERAL NOTES
HOODS REMOVED FOR CLARITY
ACCESS SIDE RETURN AIR OPTION WILL SHIFT FILTER SECTION DOORS TO NON-ACCESS SIDE
OUTSIDE AIR INTAKE LOCATED IN THE SAME POSITION REGARDLESS OF OPTIONS

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TOLERANCE ± 1/8"

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

Part weight

Tolerance Unless Otherwise Specified
X.X ± 125
X.XX ± 060
X.XXX ± 030
Angles ± 1°

Drawn ASV | Date Released 1/19/2018
Sheet 3/10
Scale NTS | Rev 1

Description SP 40-50 TON SPLIT SINGLE GAS
Page Title INTAKE OPTIONS GA
Drawing Number G1000-113

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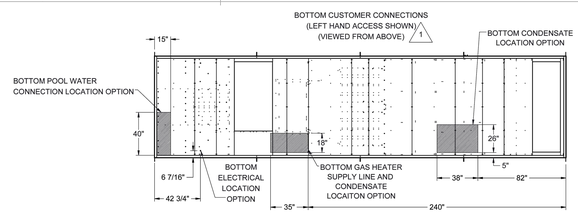
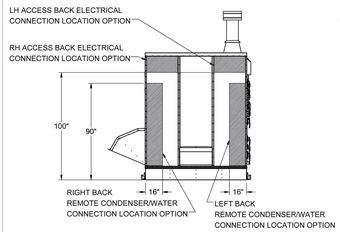
G1000-113

CUSTOMER CONNECTION LINE SIZE (in.)		
UNIT SIZE	45 TONS	50 TONS
CONDENSATE (PVC)	1 1/2	1 1/2
GAS (MNPT)	2	2
GAS CONDENSATE (PVC)	1	1
DISCHARGE LINE CIRCUIT A (CU)	1 1/8	1 1/8
LIQUID LINE CIRCUIT A (CU)	3/4	7/8
DISCHARGE LINE CIRCUIT B (CU)	1 1/8	1 1/8
LIQUID LINE CIRCUIT B (CU)	7/8	7/8
POOL WATER LINE CIRCUIT A (CPVC)	1	2
POOL WATER LINE CIRCUIT B (CPVC)	2	2
COOLING LOOP (CU)	2 1/2	3

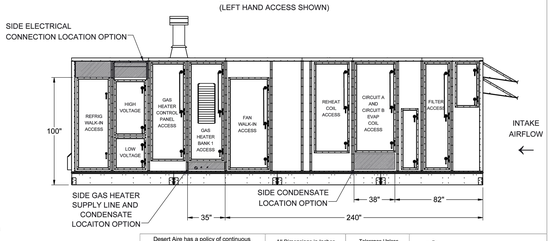
BOTTOM CUSTOMER CONNECTIONS
(LEFT HAND ACCESS SHOWN)
(VIEWED FROM ABOVE) 1



BACK CONNECTIONS VIEW
(NO ORIENTATION CHANGE FOR RH OR LH ACCESS)



LEFT SIDE CONNECTION VIEW
(LEFT HAND ACCESS SHOWN)



NOTES:
1 REFER TO SHEET 1 FOR GENERAL NOTES
LEFT HAND ACCESS SHOWN IN ALL VIEWS
RIGHT HAND ACCESS OPTIONS LOCATED WITH SAME DIMENSIONS ON OPPOSITE SIDE UNLESS OTHERWISE SPECIFIED

FILTER INFORMATION						
UNIT SIZE	OA QTY	OA SIZE	REPLACEMENT PART NUMBER	RA QTY	RA SIZE	REPLACEMENT PART NUMBER
45-50 TONS	10	18 X 24 X 4	870-056	10	18 X 24 X 4	870-056

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All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

Part weight

Tolerance Unless Otherwise Specified
X.X ± 125
X.XX ± 060
X.XXX ± 030
Angles ± 1°

Drawn ASV | Date Released 1/19/2018
Sheet 2/10
Scale NTS | Rev 1

Description SP 40-50 TON SPLIT SINGLE GAS
Page Title CUSTOMER INTERFACE GA
Drawing Number G1000-113

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GERMANTOWN, WI 53022
Tel: (262) 946-7400
Fax: (262) 946-7401

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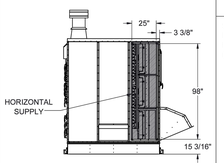
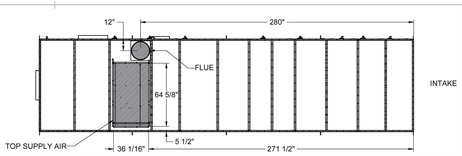
G1000-113

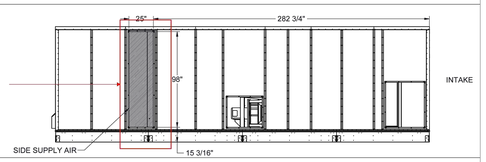
HORIZONTAL SUPPLY OPTION
RIGHT HAND ACCESS OPTION ONLY
REFER TO PAGE 4 FOR LEFT HAND ACCESS
(BACK VIEW)



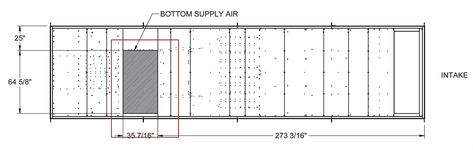
TOP SUPPLY OPTION
RIGHT HAND ACCESS OPTION ONLY
REFER TO PAGE 4 FOR LEFT HAND ACCESS
(TOP VIEW)



SIDE SUPPLY OPTION
RIGHT HAND ACCESS OPTION ONLY
REFER TO PAGE 4 FOR LEFT HAND ACCESS
(LEFT SIDE VIEW)



BOTTOM SUPPLY OPTION
RIGHT HAND ACCESS OPTION ONLY
REFER TO PAGE 4 FOR LEFT HAND ACCESS
(VIEW FROM ABOVE)



NOTES:
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All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

Part weight

Tolerance Unless Otherwise Specified
X.X ± 125
X.XX ± 060
X.XXX ± 030
Angles ± 1°

Drawn ASV | Date Released 1/19/2018
Sheet 5/10
Scale NTS | Rev 1

Description SP 40-50 TON SPLIT SINGLE GAS
Page Title RH ACCESS DISCH OPTIONS GA
Drawing Number G1000-113

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GERMANTOWN, WI 53022
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Fax: (262) 946-7401

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PDU-1 DETAIL

N.T.S.

NOTE: CONTRACTOR SHALL PROVIDE GAS FURNACE WITH A FLUE EXTENSION SO THAT THE EXHAUST OUTLET IS ABOVE THE SCREENWALL AND ROOF CANOPY.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

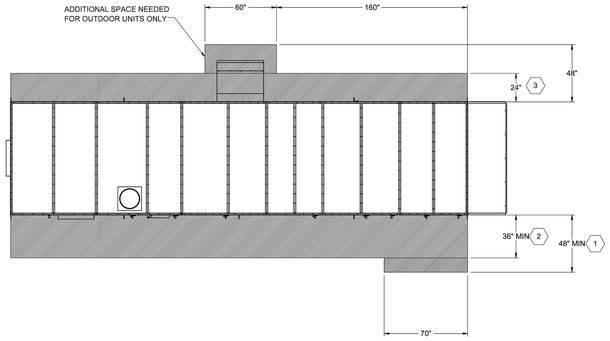
DRAWING TITLE:

MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-203
DATE:	
12-01-2025	

DO NOT SCALE PLOT PLANS - 10/30/25

G1000-113



1. 96" RECOMMENDED FOR FILTER ACCESS.
2. 120" CLEARANCE ON ACCESS SIDE RECOMMENDED FOR FAN AND COIL SERVICE
3. REQUIRED FOR ASSEMBLY OF SECTIONED UNITS ONLY

NOTES:
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All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

Part weight

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

Drawn: ASV | Date Released: 1/19/2018
Sheet: 6/10
Scale: NTS | Rev.: 1
Description: SP 40-50 TON SPLIT SINGLE GAS
Page Title: UNIT CLEARANCE GA
Drawing Number: G1000-113

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GERMANTOWN, WI 53022
Tel: (262) 946-7400
Fax: (262) 946-7401

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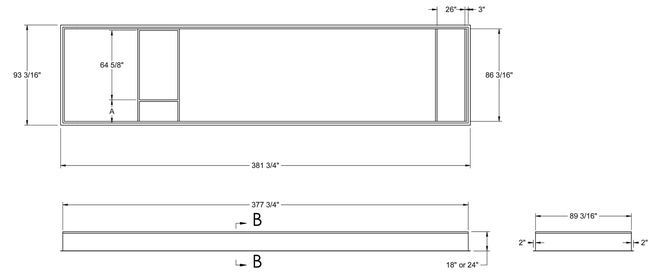
G1000-113

NOTES:
REFER TO SHEET 1 FOR GENERAL NOTES

1. 14 GA GALVANIZED STEEL CONSTRUCTION
2. PRIME PAINTED AFTER FABRICATION
3. PRESSURE TREATED WOOD NAILERS
4. 1-1/2" THICK 3LB/FT^3 FIBERGLASS PERIMETER INSULATION
5. INTERNAL ANGLE REINFORCEMENT
6. CURB TO BE SHIPPED KNOCKED DOWN

UNIT TON	ACCESS	18" CURB	24" CURB	A
40-50	RIGHT HAND	CB-50NGR2-18	CB-50NGR2-24	3
40-50	LEFT HAND	CB-50NGL2-18	CB-50NGL2-24	21 9/16



NUMBER AND LOCATION OF CROSS SUPPORTS IS DEPENDANT UPON THE GUAGE OF MATERIAL USED TO CONSTRUCT THE CURB.
DUCT SUPPORT CONFIGURATION LENGTH OF CURB, AND WIDTH OF CURB.
INSTALLATION INSTRUCTIONS INCLUDED WITH CURB
SHIPMENT INDICATE THE REQUIRED POSITION FOR FIELD ASSEMBLED CURBS.

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TOLERANCE ± 1/8"

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

Part weight

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

Drawn: ASV | Date Released: 1/19/2018
Sheet: 7/10
Scale: NTS | Rev.: 1
Description: SP 40-50 TON SPLIT SINGLE GAS
Page Title: CURB DETAIL GA
Drawing Number: G1000-113

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Fax: (262) 946-7401

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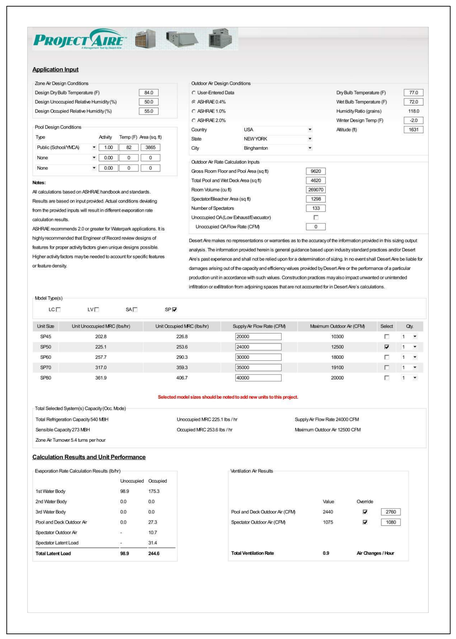


Application Input

Zone Air Design Conditions

Design Dry Bulb Temperature (F)	84.0
Design Unoccupied Relative Humidity (%)	50.0
Design Occupied Relative Humidity (%)	55.0

Pool Design Conditions

Type	Activity	Temp (F)	Area (sq ft)
Public (School/YMCA)	1.00	82	3665
None	0.00	0	0
None	0.00	0	0

Notes:
All calculations based on ASHRAE handbook and standards.
Results are based on input provided. Actual conditions deviating from the provided inputs will result in different evaporation rate calculation results.
ASHRAE recommends 2.0 or greater for Waterpark applications. It is highly recommended that Engineer of Record review designs of features for proper activity factors given unique designs possible. Higher activity factors may be needed to account for specific features or feature density.

Outdoor Air Design Conditions

(*: User-Entered Data	
(*: ASHRAE 0.4%	
(*: ASHRAE 1.0%	
(*: ASHRAE 2.0%	
Country	USA
State	NEW YORK
City	Binghamton
Dry Bulb Temperature (F)	77.0
Wet Bulb Temperature (F)	72.0
Humidity Ratio (grains)	118.0
Winter Design Temp (F)	-2.0
Altitude (ft)	1631

Outdoor Air Rate Calculation Inputs

Gross Room Floor and Pool Area (sq ft)	9620
Total Pool and Wet Deck Area (sq ft)	4620
Room Volume (cu ft)	2690670
Spectator/Bleacher Area (sq ft)	1298
Number of Spectators	133
Unoccupied OA(Low Exhaust/Evacuation)	
Unoccupied OA Flow Rate (CFM)	0

Desert Aire makes no representations or warranties as to the accuracy of the information provided in this sizing output analysis. The information provided herein is general guidance based upon industry standard practices and/or Desert Aire's past experience and shall not be relied upon for a determination of sizing. In no event shall Desert Aire be liable for damages arising out of the capacity and efficiency values provided by Desert Aire or the performance of a particular production unit in accordance with such values. Construction practices may also impact unwanted or unintended infiltration or exfiltration from adjoining spaces that are not accounted for in Desert Aire's calculations.

Model Type(s):
LC☐ LVT☐ SA☐ SP☑

Unit Size	Unit Unoccupied MRC (Btu/hr)	Unit Occupied MRC (Btu/hr)	Supply Air Flow Rate (CFM)	Maximum Outdoor Air (CFM)	Select	Qty.
SP40	202.8	226.8	20000	10000	☐	1
SP50	225.1	253.6	24000	12000	☑	1
SP60	257.7	290.3	30000	18000	☐	1
SP70	317.0	359.3	35000	19100	☐	1
SP80	361.9	406.7	40000	20000	☐	1

Selected model sizes should be noted to add new units to this project.

Total Selected System(s) Capacity(Doc, Mode)
Total Refrigeration Capacity:540 MBH
Sensible Capacity:273 MBH
Zone Air Turnover:5.4 turns per hour
Unoccupied MRC:225.1 Btu / hr
Occupied MRC:253.6 Btu / hr
Supply Air Flow Rate:24000 CFM
Maximum Outdoor Air :12000 CFM

Calculation Results and Unit Performance

Evaporation Rate Calculation Results (lb/hr)

	Unoccupied	Occupied
1st Water Body	98.9	175.3
2nd Water Body	0.0	0.0
3rd Water Body	0.0	0.0
Pool and Deck Outdoor Air	0.0	27.3
Spectator Outdoor Air	-	10.7
Spectator Latent Load	-	31.4
Total Latent Load	**98.9**	**244.6**

Ventilation Air Results

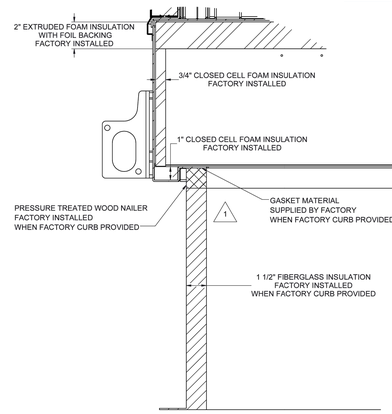
	Value	Override	
Pool and Deck Outdoor Air (CFM)	2440	☑	2760
Spectator Outdoor Air (CFM)	1075	☑	1080
Total Ventilation Rate	**0.9**		**Air Changes / Hour**

PDU-1 LOAD CALCULATIONS

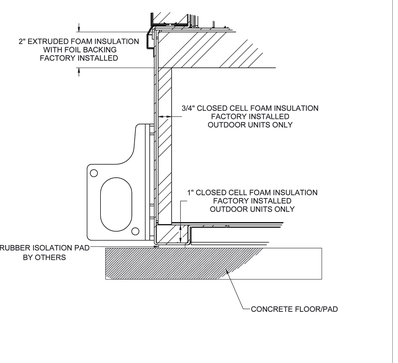
N.T.S.

G1000-113

CURB MOUNT | PAD MOUNT



1 ALL EXPOSED METAL TO BE SPRAY FOAM INSULATION AFTER INSTALLATION



NOTES:
REFER TO SHEET 1 FOR GENERAL NOTES
SEE SHEET 6 NOTES FOR CURB SPECIFICATIONS

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All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

Part weight

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

Drawn: ASV | Date Released: 1/19/2018
Sheet: 8/10
Scale: NTS | Rev.: 1
Description: SP 40-50 TON SPLIT SINGLE GAS
Page Title: MOUNTING DETAILS GA
Drawing Number: G1000-113

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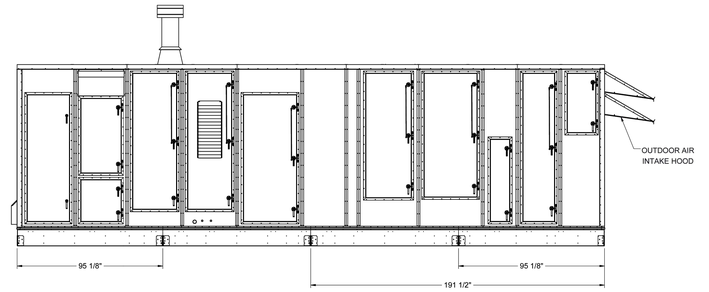
G1000-113

SHIP LOOSE ITEMS
FLUE

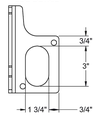
DA PART NO	DESCRIPTION	QTY
515-059	B-VENT 12" X 36"	1
515-058	FLASHING 12"	1
525-057	VENT CAP 12"	1
515-056	COLLAR 12"	1

SHIP LOOSE ITEMS
EXHAUST HOOD

DA PART NO	DESCRIPTION	QTY
HOOD	EXHAUST ASSEMBLY	1
807-023	SCREW #8-18X1/2 SS	36
990-105	CAULK WHITE	1



LUG DETAIL



NOTES:
REFER TO SHEET 1 FOR GENERAL NOTES AND HOOD DETAILS

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TOLERANCE ± 1/8"

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

Part weight

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

Drawn: ASV | Date Released: 1/19/2018
Sheet: 9/10
Scale: NTS | Rev.: 1
Description: SP 40-50 TON SPLIT SINGLE GAS
Page Title: SHIPPING/LIFTING DETAILS GA
Drawing Number: G1000-113

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PDU-1 DETAIL

N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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HIGHLAND ASSOCIATES
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

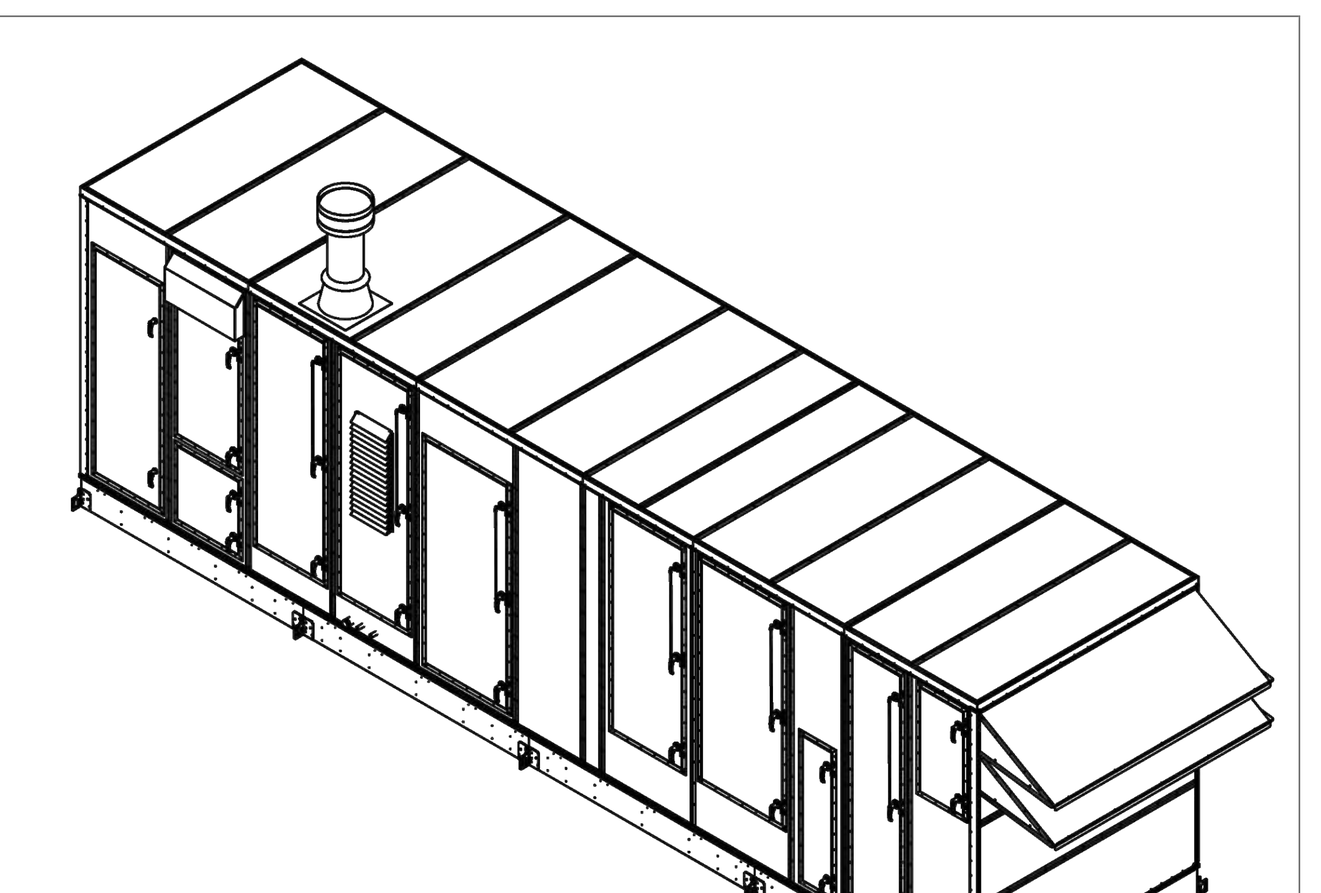
DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	HS / M-204
DATE: 12-01-2025	

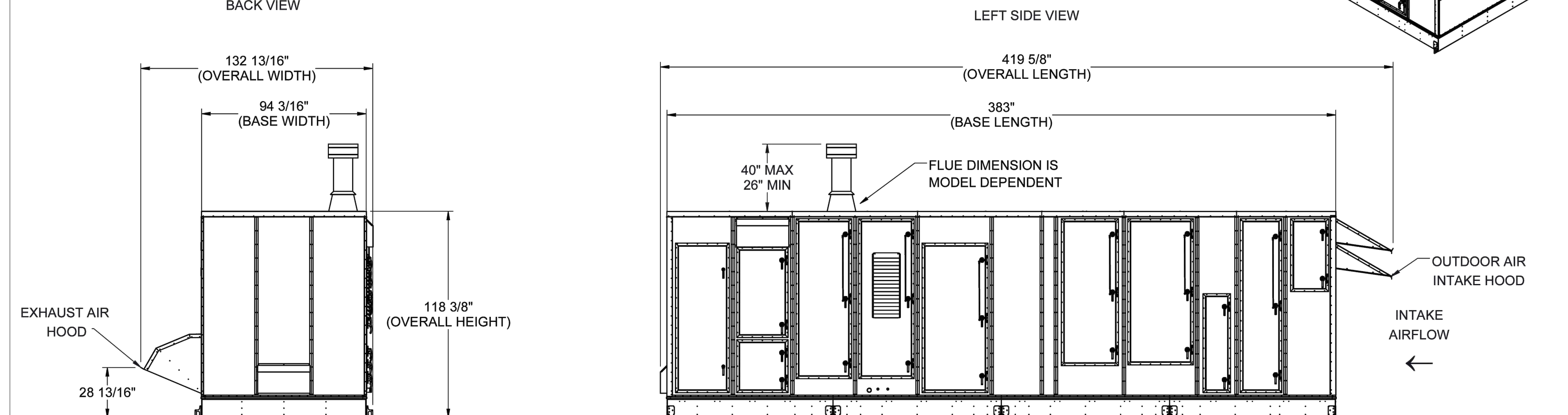
DATE/TIME PLOTTED: 11/25/2025

G1000-113

GENERAL NOTES FOR APPLICABLE SHEETS:

LEFT HAND ACCESS SHOWN IN ALL VIEWS
RIGHT HAND ACCESS OPTIONS LOCATED WITH SAME DIMENSIONS ON OPPOSITE SIDE UNLESS OTHERWISE SPECIFIED
WEIGHTS SHOWN REFLECT FULLY OPTIONED ESTIMATED UNIT WEIGHT





UNIT SIZE	ESTIMATED WEIGHT (lbs.)
45-50 TONS	16500

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Third Angle Projection

Part weight

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X.XX ±.060
X.XXX ±.030
Angles ±1°

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Sheet: 1/10 | Page Title: GENERAL ARRANGEMENT
Scale: NTS | Rev.: 1 | Drawing Number: G1000-113

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SelectAire™ Series Dehumidifiers

PRODUCT SCOPE

Quantity: 1
Model #: SP50RRG40
Tag #: DHU-1
Unit Weight: 16,500 lbs

Capacities:
- Supply Air: 24000 CFM
- Outside Air: 10100 CFM
- Exhaust Air: 12000 CFM Dehumidification
- EAT: 84.0 °F DB / 71.3 °F WB
- Total Cooling Capacity: 542 MBH
- Total Sensible Capacity: 274.20 MBH
- Moisture Removal Capacity: 253.6 lb/hr
- Total Heat of Rejection: 691 MBH

DX Refrigeration System:
- Refrigerant Type: R-454B
- Scroll Compressors – Dual Circuit
- Circuit A: Remote Condenser
- Circuit B: Remote Condenser
- Hot Gas Reheat Condenser Coil
- PKG Cond Coil Coating: Not Applicable
- Receiver w/ Flooding Valve

Airflow Configuration:
- Supply Discharge Location: Bottom
- Return Intake Location: Access
- Exhaust Disch Location: Opposite Access
- S/A & R/A ESP: 2.50 and 1.50 in WC
- Supply TSP: 6.97 in WC
- Supply Fan Type: VFD
- E/A & O/A ESP: 0.30 and 0.30 in WC
- Exhaust TSP: 4.06 in WC
- Exhaust Fan Type: EC

Air Filters:
- Main Filters: MERV 8

Enclosure:
- Location: Outdoor
- Access: Right
- Separate Electrical Compartment
- Refrigeration Component Vestibule
- R12 Double Wall

Condensate Drain Pan:
- 18-Gauge Stainless Steel, Sloped
- 1-1/2 in. MPT Drain Connection

Unit Electrical:
- Main Power (V/Ph/Hz): 460/3/60
- MCA (Amps): 172
- MOPD (Amps): 200
- SCCR (kA): 65
  When protected by Class J, T, or RK1 fuses
- Disconnect: Included, Fused

Controls:
- Model CM3560
- T/RH Sensor: Factory Installed in Return
- Occupancy Timer w/ BMS Override
- Pressure Transducers
- Remote Display: Included
- Building Pressure Controls: Provided
- BMS Compatibility: BACnet MS/TP
- Condensate Overflow Switch: Included
- Dirty Filter Switch: Included
- Voltage / Phase Monitor: Included
- Power for GFI/LED: Customer 120VAC
- OSA Pre-Filter & Mist Elim: Included
- Fan Backdraft Dampers: Included
- Roof Curb: 18" High
- Source Capture: None/By Others

Water Condenser
- Circuit A Condenser: Pool Water
- Circuit B Condenser: Pool Water

Air Cooled Condenser:
- Model #: RCES035C4S23341
- # of Fans: 4
- Unit Weight: 1574 lbs
- Voltage/Phase/Hz - 460/3/60
- MCA (Amps): 14.6
- MOPD (Amps): 15
- SCCR: 5kA
- Rated Ambient Condition - 100 °F

Auxiliary Heat:
- Gas - Natural Gas
- Capacity: 1200 MBH
- Control Signal: Modulating

Warranties (Parts Only):
- Standard Warranty: 2 years
- Compressor Warranty: 5 Years
- Air Side Coil Warranty: 10 Years

MCA/MOPD Calculation

0

Project Johnson City High School
Tag DHU-1

Series SP50
Aux Heat Gas Heat - Natural Gas
Refrigerant R-454B

S/A Airflow	24000	cfm @	4.00	in ESP
S/A Blower Motor (ea)	15	HP		
S/A Blower Motor (qty)	4			
E/A Airflow	12000	cfm @	0.60	in ESP
E/A Blower Motor (ea)	8.0	HP		
E/A Blower Motor (qty)	2			
Pkgd Cond Motor (ea)	0.0	HP		
Pkg Cond Motor (qty)	0			
Ext. Source Capture Mtr	0	HP		

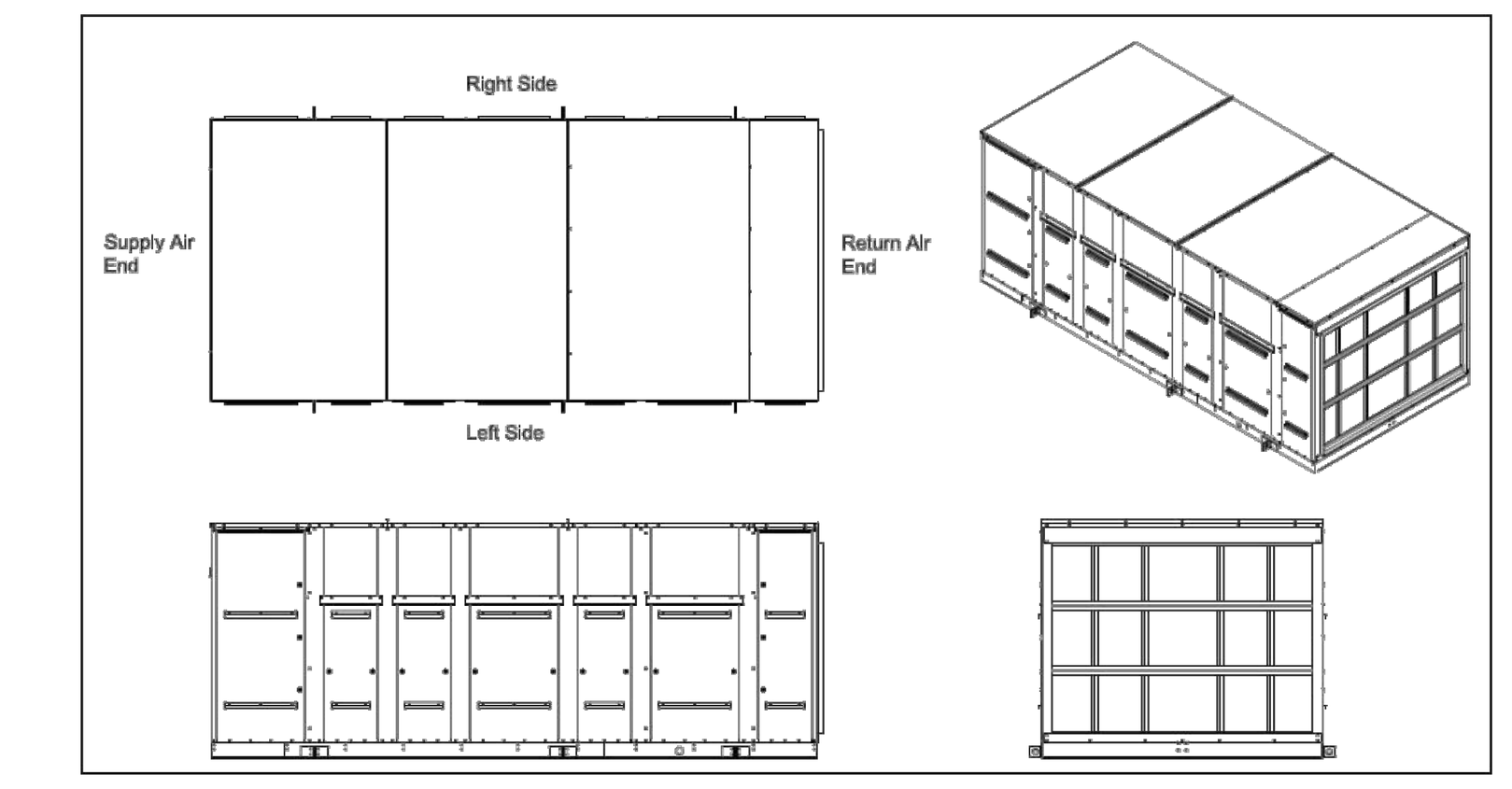
Voltage 460/3/60

	FLA
Compressor 1	33.1
Compressor 2	38.8
Compressor 3	0.0
Compressor 4	0.0
S/A Blwr Motor (ea)	17.7
E/A Blwr Motor (ea)	7.4
Pkgd Cond Motor (ea)	0.0
Ext. Source Capture Mtr	0
Electric Heater (single point)	N/A
Total Transformer (VA)	2500

Unit MCA	172	Amps
Unit MOPD	200	Amps

SelectAire™ Series Dehumidifiers

UNIT CONNECTIONS & CLEARANCES



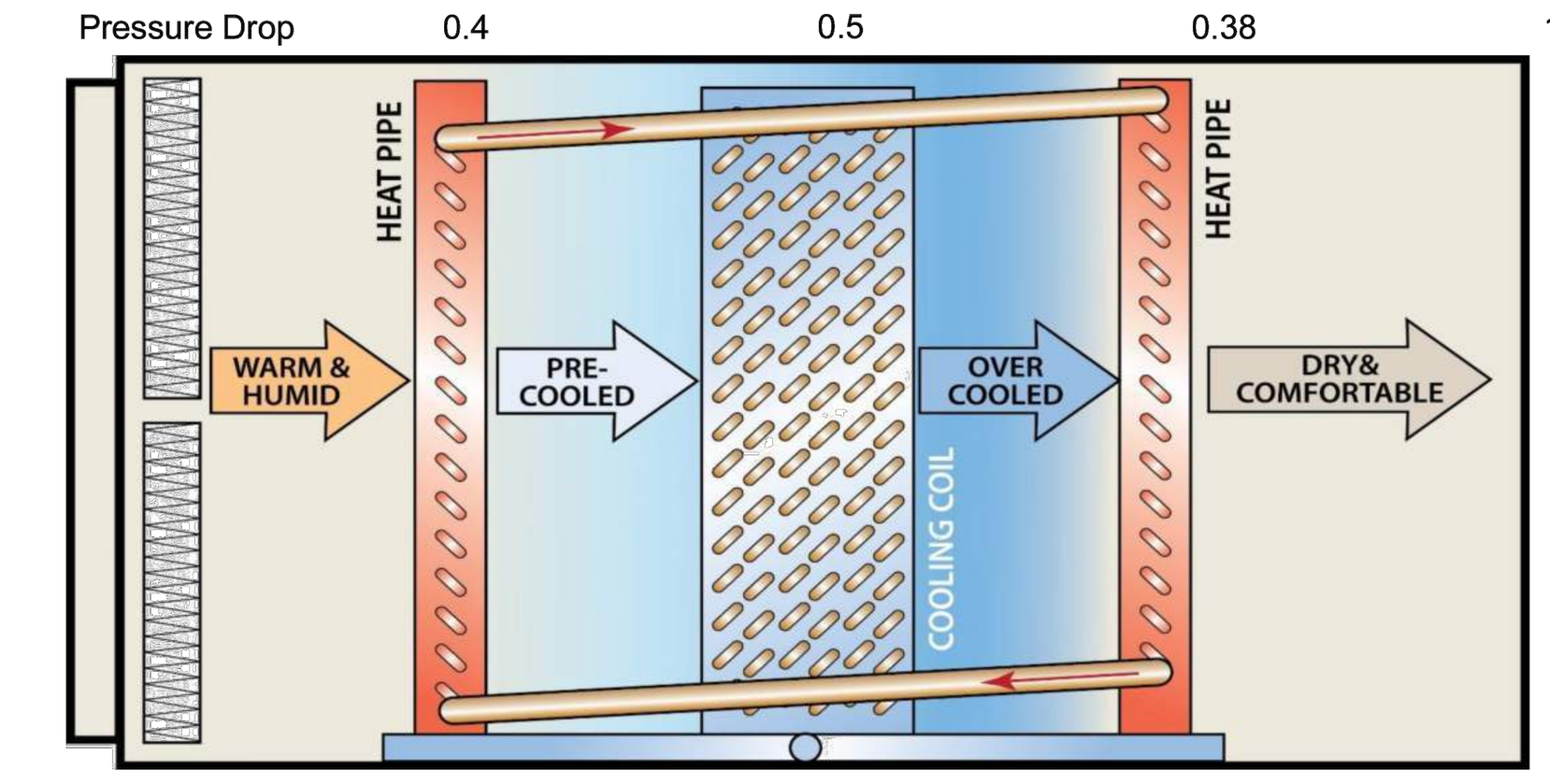
Utility	Location
Electrical, Filter and Service Access	Right
Cooling Condenser Connection	Bottom
Water Piping Connection(s)	Bottom
Aux Heat Connection	Access
Condensate Drain	Right
Supply Air Discharge	Bottom / Right Side
Return Air Intake	Access
Exhaust Discharge	Opposite Access

Notes:
1. Electrical door clearance typically requires 36" clearance on Utility side shown. Refer to local codes. See General Arrangement drawing for specific location of electrical enclosure.
2. 48" clearance at filter rack locations recommended for ease of maintenance.
3. A clearance at one side equivalent to the unit width should be considered for major service such as heat exchanger replacement.

SelectAire Plus Heat Pipe Performance

Project: Johnson City High School 1/20/2025
ool **Model:** SP50

	Entering		Pre-Cool		Off Evap. Coil		Post Heat Pipe	
	84	F db	71.3	F db	54.3	F db	67.1	F db
	71.3	F wb	67.0	F wb	53.8	F wb	58.6	F wb
	102.6	gr	98.8	gr	64.7	gr	64.7	gr
	55	% RH	81%	RH	97%	RH	61%	RH
Pressure Drop	0.4		0.5		0.38		1.28	in WC



PDU-1 DETAILS

N.T.S.
NOTE: CONTRACTOR SHALL PROVIDE GAS FURNACE WITH A FLUE EXTENSION SO THAT THE EXHAUST OUTLET IS ABOVE THE SCREENWALL AND ROOF CANOPY.

Bell & Gossett GPX™

Gasketed Plate Heat Exchanger Specification Sheet

175 Standard Parkway
Cheektowaga, New York 14227
1-800-447-7700
www.xylem.com/bellgossett

Customer
Inquiry Number 873417
Date Wednesday, May 31, 2023
Item Number

Performance of One Unit: P7 PN: BY5442 **Units Connected in Parallel:** 1

Fluid Name	Water	Water
Total Flow	76.8 GPM	62.5 GPM
Inlet Temperature	180.0 °F	60.0 °F
Outlet Temperature	160.0 °F	84.0 °F
Operating Pressure	0.0 PSIG	0.0 PSIG
Pressure Drop, Allow./Calc	10.0/9.9 PSIG	10.0/6.5 PSIG
Density	60.8 lb/ft3	62.2 lb/ft3
Viscosity	0.4 cp	1.0 cp
Specific Heat	1.00 Btu/lbm,°F	1.00 Btu/lbm,°F
Thermal Conductivity	0.38 Btu/ft,h,°F	0.35 Btu/ft,h,°F
Specified Fouling Factor	0.00000 hr,ft2,°F/Btu	0.00000 hr,ft2,°F/Bt

Total Heat Exchanged	750,000.0 Btu/h
LMTD	98.0 °F
Overall Heat Transfer Coefficient, Clean/Dirty	1,526.8/1,526.8 Btu/hr,ft2,°F
Overall Heat Transfer Coefficient, Service	780.9 Btu/hr,ft2,°F
Effective Surface Area	9.8 ft2
Excess Surface	95.5 %

Construction

Number of Passes * Channels	1*7		1*7
Total Number of Plates		15	
Pressure, Design/Test	150/195(PSIG)		150/195(PSIG)
Design Temperature, min/max	32/284(°F)		32/284(°F)
Internal Volume	0.0(ft3)		0.0(ft3)
Inlet Connection(Location)	F1, 316SS stub end w/150# steel LJF 2.0 "		F3, 316SS stub end w/150# steel LJF 2.0 "
Outlet Connection(Location)	F4, 316SS stub end w/150# steel LJF 2.0 "		F2, 316SS stub end w/150# steel LJF 2.0 "

Plate Material	Titanium
Plate Thickness	0.5 mm
Plate Mix	TK
Gasket Material	NITRILE HT
Empty/Flooded Weight	213 / 219 lb
Frame Size / Max. Frame Capacity	15.7 inch / 49 plates
Approvals	ASME Sect VIII Div 1 w/U stamp.

Note: Customer to verify fluid/material compatibility.

Performance evaluation is dependent on customers' ability to provide sufficiently accurate measurements.

Nicholas Blase

Version No.: ESP: V1/31/2023

HX-1 DETAILS

N.T.S.

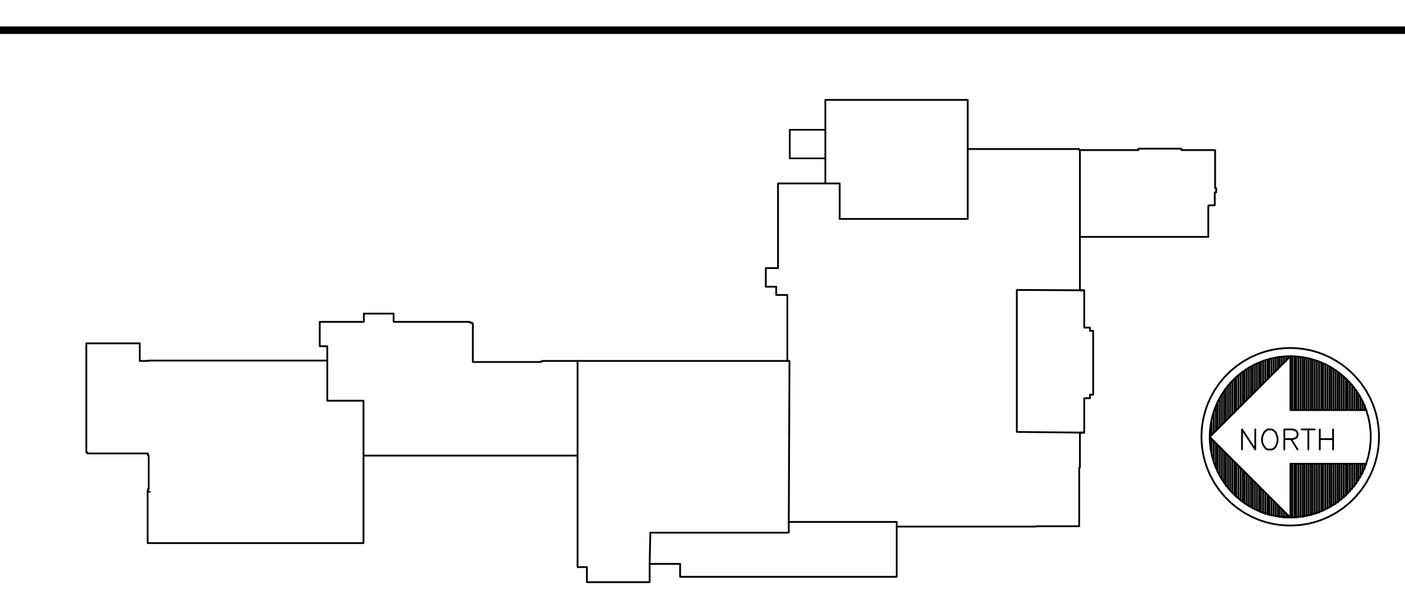
NOTE:
1. HX-1 SHALL BE PROVIDED BY AQUATICS/POOL CONTRACTOR.
2. BOOSTER PUMPS, FLOW SWITCHES, CONTROLS, AND PIPING UP TO THE UNITS SHALL BE PROVIDED BY THE M.C.
3. PIPING ON POOL SIDE OF HX-1 SHALL BE PROVIDED BY AQUATICS/ POOL CONTRACTOR.
4. HEATING HOT WATER PIPING AND CONTROL VAVLES ON THE HOT SIDE OF HX-1 SHALL BE PROVIDED BY THE M.C.
5. ATC CONTRACTOR SHALL PROVIDE 2-WAY MODULATING VALVE ON HOT SIDE OF HX-1.

(2024) B-3-1 B-3-2 B-3-3, B-3-4 Loads				Source		
Location	Load	MBH	GPM	Job #	DWG	Location
BOILER 193A	AH-14	130	13	(1968 Original job) (HA 2018-573)	M2	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2018-573 M DRAWINGS
BOILER 193A	HC-	0	0	2000-339	M10	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2000-339 M DRAWINGS
186D	New Pool HX-1 - hot side	1000	102.4	-	M10	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2000-339 M DRAWINGS
	New Pool HX-1 - cold side	-	-			
186D	Pool HX-2-EX - SHELL			2000-339?	M10?	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2000-339 M DRAWINGS
	Pool HX-2-EX - TUBE	660	55			
VESTIBULE - P104	CUH-1	69.8	6.98	2024-239P	M100	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2
GIRLS LOCKERS - 192	VVR-13	32.2	3.2	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
MULTI PURPOSE ROOM - 192H	VVR-14	8.6	1.3	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
GIRLS TEAM ROOM - 192C	VVR-15	10.6	1.1	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
P.E. OFFICE - 192D	VVR-16	7	0.7	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
COACHES LOCKERS - 192F	VVR-17	6.8	0.7	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
P.E. OFFICE - 191D	VVR-11	6.8	0.7	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
COACHES LOCKERS - 191F	VVR-12	6.8	0.7	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
BOYS LOCKERS - 191	VVR-10	30.8	3.1	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
BOYS TEAM ROOM - 191C	VVR-9	11	1.1	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
TRAINER ROOM - 189	VVR-8	11.3	1.16	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
TEAM ROOM - 188	VVR-7	11	1.1	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
STORAGE ROOM - 186A	VVR-37	11.8	1.21	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
STORAGE ROOM - 186A	VVR-38	6.8	0.7	2013-279	M1.6	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
EXISTING BOYS LOCKERS - 276	VVR-42	46.5	3.8	2013-279	M1.8	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
GIRLS SHOWERS - 283B	VVR-1	46.4	4	2013-279	M1.8	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
GIRLS TEAM LOCKERS - 284A	VVR-2	19	1.5	2013-279	M1.8	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
CORR - 285	VVR-6	13.7	0.68	2013-279	M1.8	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
CORR - 285	VVR-6A	14.7	1.25	2013-279	M1.8	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
GIRLS TEAM AREA - 284	CH-1	21.7	3	2013-279	M1.8	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
GIRLS TEAM AREA - 284	VVR-3	23.4	1.75	2013-279	M1.8	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
GIRLS TEAM LOCKERS - 284B	VVR-4	14	1.7	2013-279	M1.8	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
CORR - 285	VVR-5	30.3	2.38	2013-279	M1.8	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2013-279 M DRAWINGS
Totals		2251	214.21			
BOILERS ROOM 193A						
		OUTPUT MBH				
B-3-1-EX	BOILER 193A	451		2010-051	M115	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2010-051P M DRAWINGS
B-3-2-EX	BOILER 193A	451		2010-051	M115	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2010-051P M DRAWINGS
B-3-3-EX	BOILER 193A	451		2010-051	M115	J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2\Submission\11-26-24 Survey\2010-051P M DRAWINGS
Totals		1353				

NOTE:
1. HX-2-EX. 40°F DELTA T, 55 GPM. 1,100 MBH.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY: M.P.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: M-205

CAD FILE: 4239-HS-M-205.DWG
PLOT DATE: 11/25/2025

RCE/RCF SERIES

RCE SERIES™ - RCF SERIES™ REMOTE CONDENSERS



REMOTE CONDENSERS FOR LARGE APPLICATIONS

Desert Aire designs RCE Series™ and RCF Series™ Remote Condensers to complement Desert Aire dehumidification and indoor climate control systems demanding large commercial thermal transfer solutions.

RCE Series and RCF Series Remote Condensers are featured in Standard (RCE) and Quiet (RCF) models for application flexibility and performance. Vertical airflow models fulfill most application needs; horizontal airflow models are available upon request.

Desert Aire supplies RCE Series and RCF Series Remote Condensers with a commitment to excellence that will provide you with years of reliable service. Our RCE Series and RCF Series Remote Condensers are easy to install too.

HIGH PERFORMANCE, ENERGY EFFICIENCY AND DURABILITY

MOTORS - RCE Series and RCF Series Remote Condensers employ specialized configurations of Electronically Commutated Motors (ECM) and single speed external rotor motors to increase energy efficiency and thermal transfer capabilities. These configurations also provide a greater range of airflow rates.

Electronically Commutated Motors are used on the lead fan of each remote condenser circuit in order to improve head pressure stability; and to run at variable speeds to alter the amount of air the ECM drives through the system. All ECMs are controlled in response to condensing pressure inputs. Single speed motors are run in a Vernier sequence with the lead fan or fans to provide full modulation capability while minimizing cost. The single speed fan motors are cycled on and off using pressure inputs. These configurations allow the ECMs to maintain consistent head pressures by ramping up and down in response to fluctuating loads or varying ambient temperatures.

FANS AND CONTROLS - The specialized configurations of EC and single speed fans with controls provide the lowest possible refrigerant charge and automatically maintain condensing pressures abient temperatures as low as -20°F. Swept fan blades are designed as part of the motor assemblies, not an addition to them. Precise matching of these two components increases energy efficiency and reduces sound pressure to lower levels.

COILS - Round Tube Coils-Enhanced tubing with advanced sinusoidal fin design are provided for optimal performance. Extensive use of 5/16" and 3/8" diameter tubing keeps refrigerant charge to a minimum.

The optional, ElectroFin® E-Coat provides a uniform, flexible coating over the entire coil with negligible impact on thermal conductivity. 100% coverage is assured by the application process, even in the hard to reach center portions of the coil, without bridging between the fins. The ElectroFin E-Coat protects the remote condenser from corrosive airborne particles, and is especially advantageous when your facility is located near a salt water coastline or potential source of corrosive airborne particles.

NOTES: All data contained in this document is subject to change without notice. Please consult factory for most current data. Condensers in this brochure are limited to an elevation difference of 10 feet (Remote Condenser below) and a maximum linear distance of 50 feet. Consult factory for high-lift model options or longer line requirements.

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CABINETS - G90 galvanized steel cabinets provide years of durable finish protection and aesthetic appeal to our RCE Series and RCF Series Remote Condensers. Tall venturi fan panels add to our uncompromised energy efficiency and ultra-low sound. Fully baffled fan cells prevent "wind milling" and enhance performance. Motor lead raceways are fully enclosed to protect wiring.

EASY INSTALLATION

After uncrating, the condenser can easily be lifted into place with the use of eye bolts located on top of the unit. At ground level, the condenser can rest on a solid surface such as a concrete slab. On roofs, the unit should be placed on channels or an I-beam frame.

MULTIPLE REFRIGERATION CIRCUITS

Desert Aire's RCE Series and RCF Series Remote Condensers are available in numerous dual-circuit designs to match the needs of dehumidification systems. Remote condensers with a single row of fans operate based on the highest signal from each circuit. Condensers with two rows of fans operate with independent fan operation for each refrigeration circuit. Available RCE Series and RCF Series configurations include 575V supply voltages.

Elevation above sea level has an effect on the performance of air-cooled condensers. The unit standard capacities shown in the Performance Table as MBH must be multiplied by the correction factors in Table 1 to correct for various elevations.

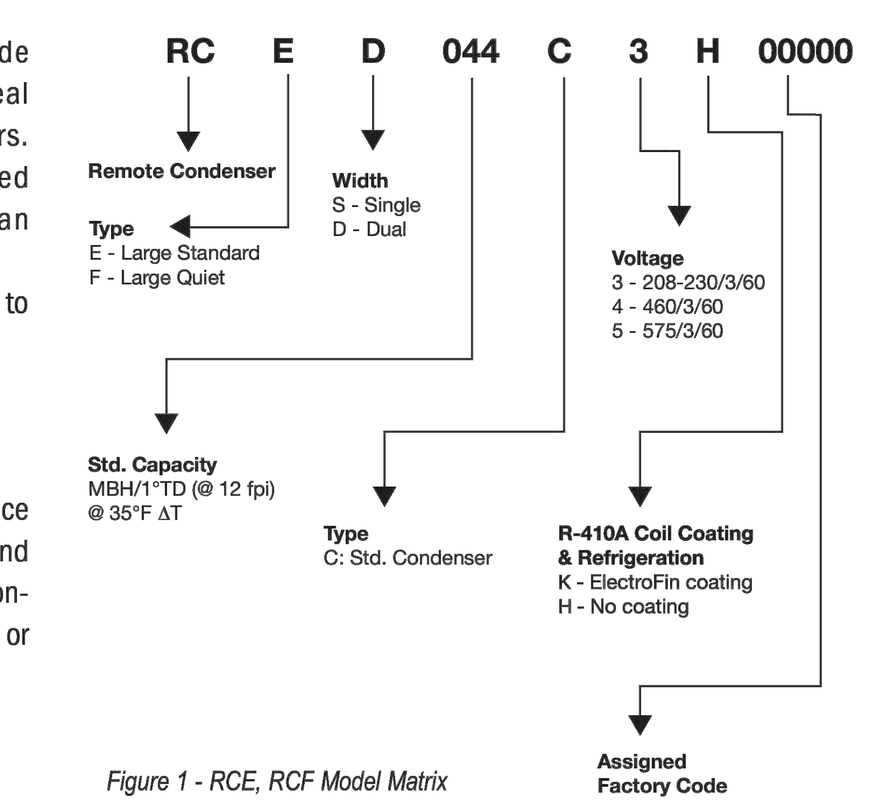

Figure 1 - RCE, RCF Model Matrix

ELEVATION CORRECTION FACTORS

ELEVATION (FEET)	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000
CORRECTION FACTOR	.98	.96	.93	.91	.89	.87	.85	.81

Table 1 - Elevation Correction Factors



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SOUND AND POWER

RCE STANDARD SERIES
Desert Aire's RCE units are for customers seeking the most economical solution for their capacity requirements. This group of condensers offers quality sound and power benefits. Enhanced motor technology using an 1100 rpm blower/fan combination provides lower noise levels and significant energy savings.

RCF QUIET SERIES
Desert Aire's RCF units are for customers seeking exceptional low noise, energy efficiency and capacity solutions. The units feature 500 rpm motors coupled with specially designed blades that are precisely mounted in venturi fan panels to provide unprecedented low sound levels. While RCF units may require more fans, these remote condensers actually require significantly lower power consumption through their optimized blower efficiency.

STANDARD FEATURES
Standard equipment on RCE Series and RCF Series Remote Condensers include a door interlock and a main terminal block for motor lead termination. Also included is a main disconnect switch. Standard control panels are rated at 10 kA SCCR when power is supplied with Class J fuses.

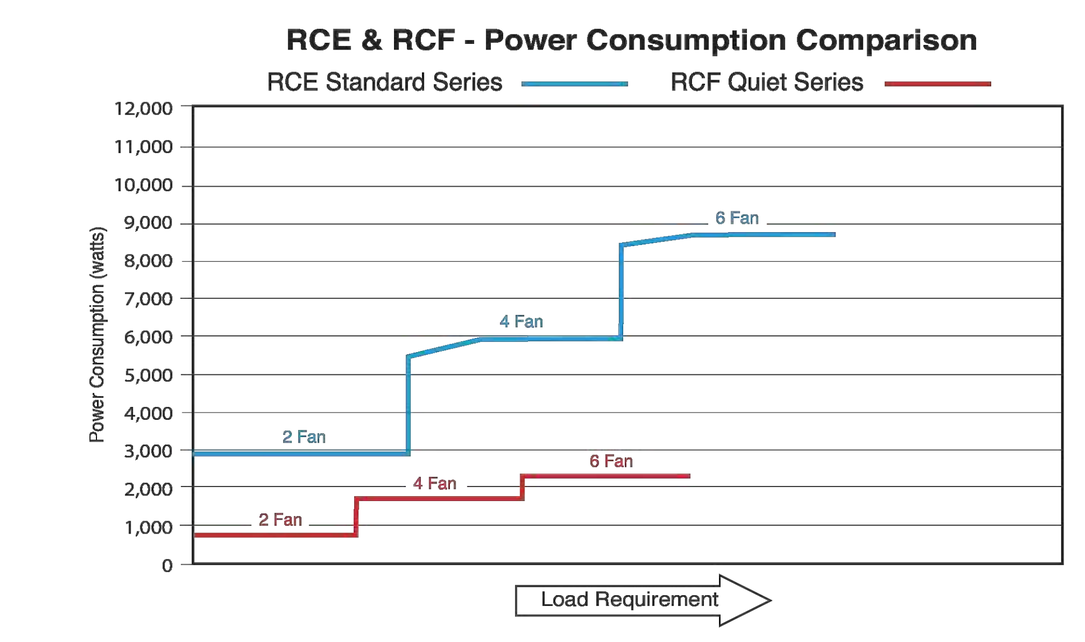

Figure 2 - Power Consumption Comparison

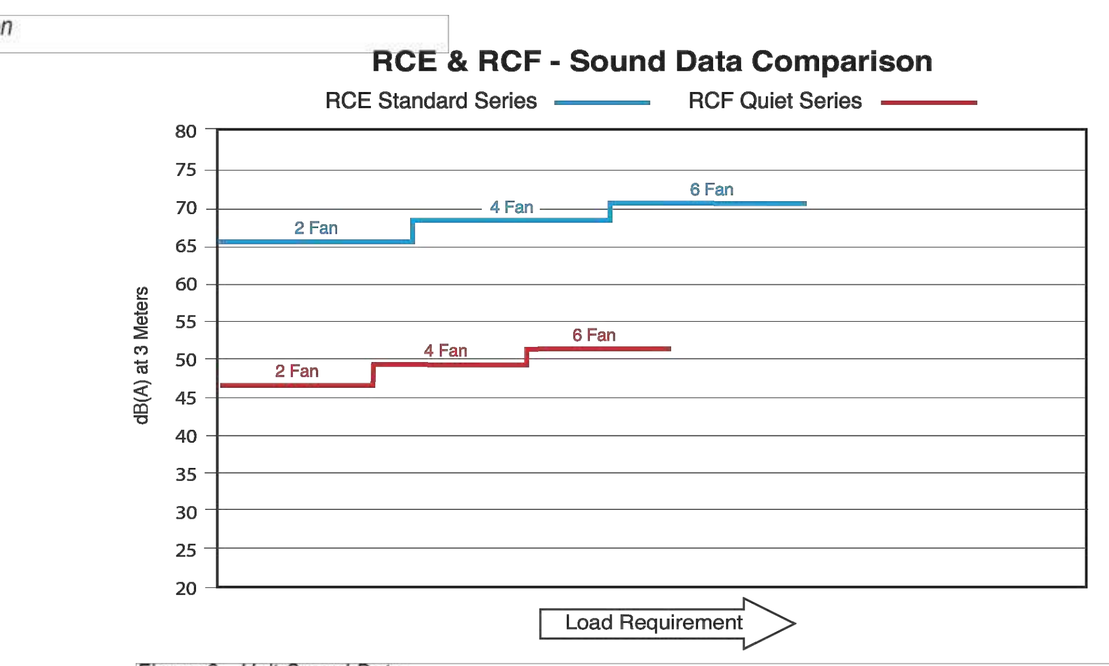

Figure 3 - Unit Sound Data

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ELECTRICAL DATA

	MODEL	CFM	ROC SCCR (208/230/460V)*	208-230/3/60 FLA	208-230/3/60 MCA	208-230/3/60 MOPD**	460/3/60 FLA	460/3/60 MCA	460/3/60 MOPD**	575/3/60 FLA	575/3/60 MCA	575/3/60 MOPD**	Unit kW 3 PHASE
STANDARD	1100 RPM SINGLE STANDARD												
Single Width	RCES018C	22,540	5kA	12.5	14.2	20	6.5	7.4	15	6	6.7	15	2.9
	RCES022C	34,390	5kA	19.3	21	25	10.1	11	15	9.1	9.8	15	4.2
	RCES026C	33,220	5kA	19.3	21	25	10.1	11	15	9.1	9.8	15	4.3
	RCES030C	45,860	5kA	26.1	27.8	30	13.7	14.6	15	12.2	12.9	15	5.6
	RCES035C	44,300	5kA	26.1	27.8	30	13.7	14.6	15	12.2	12.9	15	5.7
	RCES040C	54,480	5kA	32.9	34.6	40	17.3	18.2	20	15.3	16	20	7.3
	RCES046C	52,060	5kA	32.9	34.6	40	17.3	18.2	20	15.3	16	20	7.6
	1100 RPM DUAL STANDARD												
Dual Width	RCED022C	47,090	5kA	25	26.7	30	12.9	13.8	15	11.9	12.7	15	5.4
	RCED029C	45,270	5kA	25	26.7	30	12.9	13.8	15	11.9	12.7	15	5.6
	RCED035C	43,630	5kA	25	26.7	30	12.9	13.8	15	11.9	12.7	15	5.8
	RCED044C	68,050	5kA	38.6	40.3	45	20.1	21	25	18.1	18.9	20	8.4
	RCED052C	65,580	5kA	38.6	40.3	45	20	21	25	18.1	18.9	20	8.7
QUIET	500 RPM SINGLE QUIET												
Single Width	RCFS016C	20,033	5kA	9.9	11.3	15	5.3	6	15	4.5	5.2	15	1.1
	RCFS018C	18,828	5kA	9.9	11.3	15	5.2	6	15	4.5	5.2	15	1.2
	RCFS021C	26,711	5kA	12	13.4	15	6.5	7.2	15	5.3	6	15	1.6
	RCFS023C	25,104	5kA	12	13.4	15	6.5	7.2	15	5.3	6	15	1.6
	RCFS027C	30,737	5kA	14.1	15.5	20	7.7	8.4	15	6.1	6.8	15	2.0
	RCFS030C	28,418	5kA	14.1	15.5	20	7.7	8.4	15	6.1	6.8	15	2.0
	RCFS036C	34,101	5kA	16.2	17.6	20	8.9	9.6	15	6.9	7.6	15	2.4
	RCFS042C	39,789	5kA	18.3	19.7	25	10.1	10.8	15	CF	CF	CF	2.8
	500 RPM DUAL QUIET												
Dual Width	RCFD015C	28,127	5kA	15.6	17	20	8.1	8.8	15	7.3	8	15	1.6
	RCFD020C	36,304	5kA	15.6	17	20	8.1	8.8	15	7.3	8	15	1.6
	RCFD031C	39,353	5kA	19.8	21.2	25	10.5	11.2	15	8.9	9.6	15	2.3
	RCFD036C	36,773	5kA	19.8	21.2	25	10.5	11.2	15	8.9	9.6	15	2.3
	RCFD041C	52,471	5kA	24	25.4	30	12.9	13.6	15	10.5	11.2	15	3.0
	RCFD048C	49,030	5kA	24	25.4	30	12.9	13.6	15	10.5	11.2	15	3.1

** Standard control panels are rated at 10 kA SCCR when power is supplied with Class J fuses.*
*** MOPD - Maximum Overcurrent Protection Device*
CF = Consult Factory

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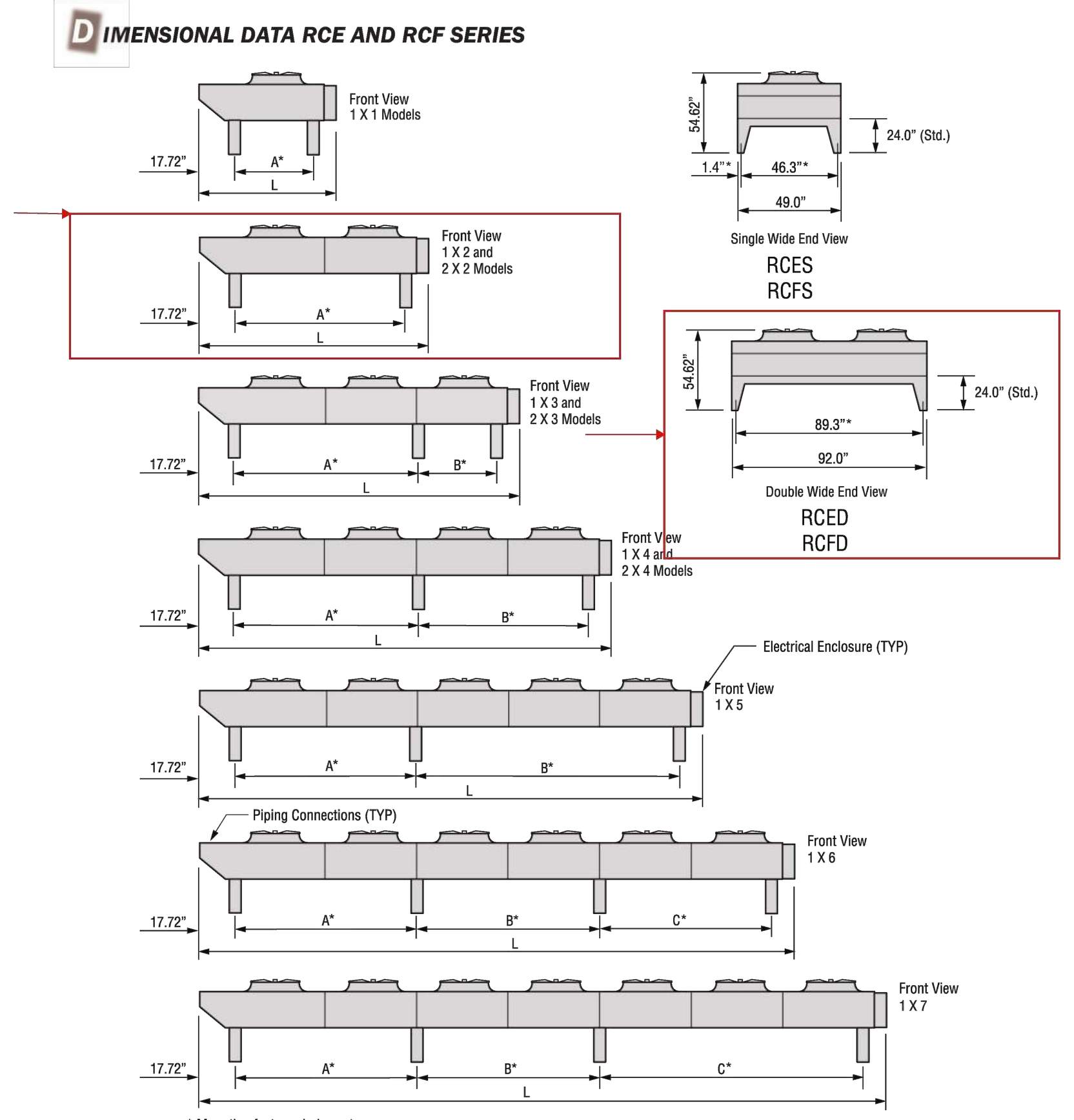
PERFORMANCE, SPECIFICATIONS AND DIMENSIONS TABLE

	MODEL	STANDARD CAPACITY MBH/1°F	DUAL CIRC. CONN (IN)* DISCH. LINE	DUAL CIRC. CONN (IN)* LIQUID LINE	FAN LAYOUT	OVERALL LENGTH	MOUNTING DIMENSIONS (IN) A	MOUNTING DIMENSIONS (IN) B	MOUNTING DIMENSIONS (IN) C	APPROX. NET WT. (LBS)**	DBA***
STANDARD	1100 RPM SINGLE STANDARD										
Single Width	RCES018C	18.00	1 3/8	7/8	1 x 2	138.9	106.2	-	-	869	65.5
	RCES022C	24.73	1 5/8	1 1/8	1 x 3	196.9	111.1	53.1	-	1,186	67.3
	RCES026C	28.16	1 5/8	1 1/8	1 x 3	196.9	111.1	53.1	-	1,246	67.3
	RCES030C	33.49	1 5/8	1 1/8	1 x 4	254.9	111.1	111.1	-	1,497	68.5
	RCES035C	37.72	1 5/8	1 1/8	1 x 4	254.9	111.1	111.1	-	1,574	69.5
	RCES040C	43.57	1 5/8	1 1/8	1 x 5	312.9	111.1	169.1	-	1,658	69.5
	RCES046C	47.76	1 5/8	1 3/8	1 x 5	312.9	111.1	169.1	-	1,746	69.5
	1100 RPM DUAL STANDARD										
Dual Width	RCED022C	23.17	1 5/8	1 1/8	2 x 2	138.9	106.2	-	-	1,301	68.5
	RCED029C	30.18	1 5/8	1 1/8	2 x 2	138.9	106.2	-	-	1,537	68.5
	RCED035C	34.84	1 5/8	1 1/8	2 x 2	138.9	106.2	-	-	1,614	68.5
	RCED044C	47.81	1 5/8	1 3/8	2 x 3	196.9	111.1	53.1	-	2,086	70.3
	RCED052C	54.12	1 5/8	1 3/8	2 x 3	196.9	111.1	53.1	-	2,196	70.3
QUIET	500 RPM SINGLE QUIET										
Single Width	RCFS016C	16.90	1 3/8	7/8	1 x 3	196.9	111.1	53.1	-	1,186	48.3
	RCFS018C	17.97	1 3/8	7/8	1 x 3	196.9	111.1	53.1	-	1,246	48.3
	RCFS021C	22.92	1 5/8	1 1/8	1 x 4	254.9	111.1	111.1	-	1,497	49.5
	RCFS023C	24.10	1 5/8	1 1/8	1 x 4	254.9	111.1	111.1	-	1,574	49.5
	RCFS027C	28.10	1 5/8	1 1/8	1 x 5	312.9	111.1	169.1	-	1,658	50.5
	RCFS030C	28.67	1 5/8	1 1/8	1 x 5	312.9	111.1	169.1	-	1,746	50.5
	RCFS036C	34.66	1 5/8	1 1/8	1 x 6	370.9	111.1	116	111.1	2,068	51.3
	RCFS042C	40.71	1 5/8	1 1/8	1 x 7	428.9	111.1	116	169.1	2,368	52
	500 RPM DUAL QUIET										
Dual Width	RCFD015C	16.88	1 3/8	7/8	2 x 2	138.9	106.2	-	-	1,301	49.5
	RCFD020C	20.60	1 5/8	7/8	2 x 2	138.9	106.2	-	-	1,537	49.5
	RCFD031C	32.73	1 5/8	1 1/8	2 x 3	196.9	111.1	53.1	-	2,086	51.3
	RCFD036C	34.70	1 5/8	1 1/8	2 x 3	196.9	111.1	53.1	-	2,196	51.3
	RCFD041C	44.94	1 5/8	1 1/8	2 x 4	254.9	111.1	111.1	-	2,845	52.5
	RCFD048C	47.26	1 5/8	1 3/8	2 x 4	254.9	111.1	111.1	-	2,999	52.5

** Actual line sizes at 35°F DT. Line connections may vary with different application ratings, so consult the I/O manual or factory.*
***Add 200 LBS for 575V *** Listed DBA values are sound ratings for the maximum number of fans in operation per RC at 3m in accordance with AHRI standard 370-2001.*

Submittal 18328 u71933 [20250120] [08.52].pdf

DIMENSIONAL DATA RCE AND RCF SERIES



* Mounting fastener hole center

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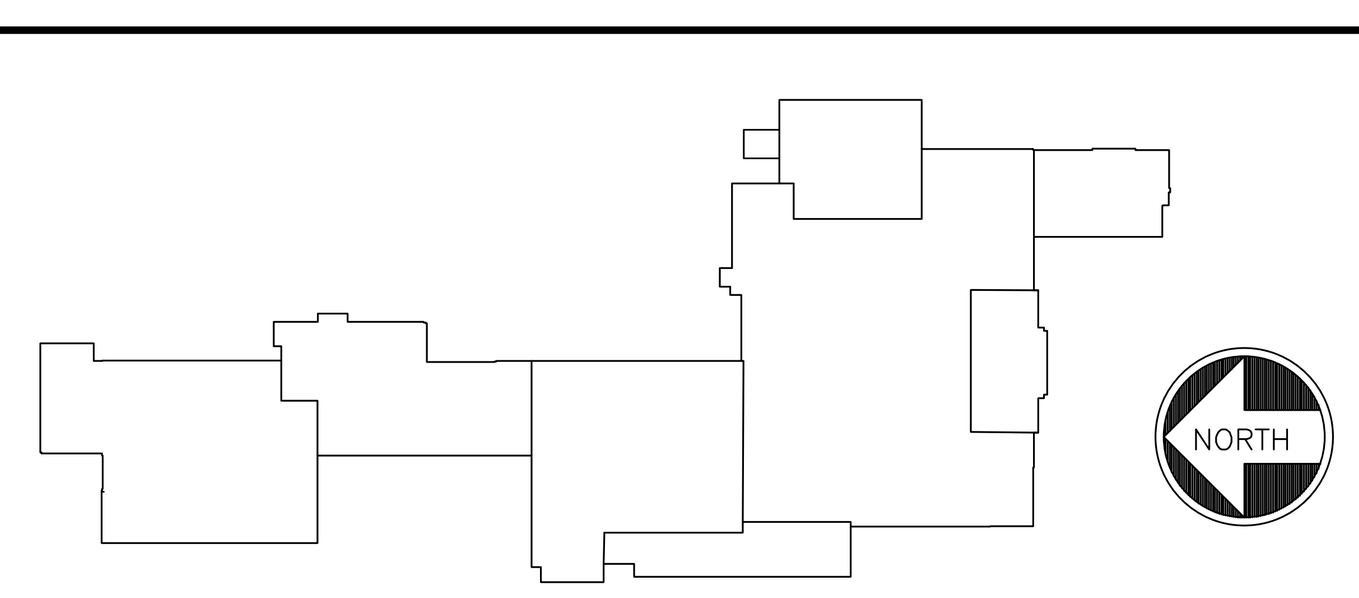
CU- PDU-1 DETAILS

N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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Clarks Summit, PA 18411
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www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY: M.P.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: M-206

CAD FILE: 4239-HS-M-206.DWG
PLOT DATE: 11/25/2025

ROOFTOP AIR HANDLING UNIT SCHEDULE

RTU

TAG	TRANE CONTROLLER TYPE	TOTAL CFM	O/A CFM	SUPPLY FAN SIZE DIA.	SUPPLY FAN QTY. MTRS.	SUPPLY FAN QTY. VFD	SUPPLY FAN HP EA.	SUPPLY FAN BHP EA.	SUPPLY FAN RPM EA.	SUPPLY FAN ESP	SUPPLY FAN TSP	EXHAUST FAN SIZE DIA.	EXHAUST FAN QTY. MTRS.	EXHAUST FAN QTY. VFD	EXHAUST FAN HP EA.	EXHAUST FAN BHP EA.	EXHAUST FAN RPM EA.	EXHAUST FAN ESP	EXHAUST FAN TSP
RTU-WEIGHT ROOM	CAV	3,000	720	-	1	1	-	2.24	2121	3.0	3.38	-	1	1	-	1.15	1680	-	1.5
RTU-TECH ED	CAV	4,000	800	-	1	1	-	3.20	1920	3.0	3.60	-	1	1	-	1.93	2007	-	1.5
RTU-ADMIN	VAV	5,000	540	-	1	1	-	6.32	2409	4.0	5.70	-	1	1	-	2.64	1521	-	2.0
RTU-GUIDANCE	VAV	3,000	300	-	1	1	-	3.15	2821	4.0	4.66	-	1	1	-	1.44	1813	-	2.0
RTU-VESTIBULE	CAV	1,100	-	-	1	1	-	0.577	1100	1.0	1.192	-	-	-	-	-	-	-	-

TAG	EAT(°F) DB	EAT(°F) WB	LAT(°F)(COIL) DB	LAT(°F)(COIL) WB	LAT(°F)(UNIT) DB	LAT(°F)(UNIT) WB	AMB (°F)	COOLING COIL TOTAL MBH	COOLING COIL SENS MBH	COOLING COIL ROWS	COOLING COIL FINS/IN	COOLING COIL AREA FT^2	COMPRESSOR QTY	COMPRESSOR RLA (EACH)	COND. FANS QTY	COND. FANS HP (EACH)	COND. FANS RPM	FILTER BANK EFF.	FILTER BANK TYPE	FILTER BANK QTY	FILTER BANK FACE VEL FPM
RTU-WEIGHT ROOM	77.5	66.1	52.3	52.0	82.3	63.5	-	115.3	73.7	6	14	30	1	-	2	1	-	30%	2" MERV 8	-	-
RTU-TECH ED	77.2	67.8	52.8	52.7	81.2	63.5	-	170.5	94.8	6	14	30	1	-	2	1	-	30%	2" MERV 8	-	-
RTU-ADMIN	78.3	66.6	53.5	53.5	57	55	-	174.6	113.6	6	14	30	1	-	2	1	-	30%	2" MERV 8	-	-
RTU-GUIDANCE	75.1	62.4	48.6	48.3	51.5	49.6	-	105.3	75.6	6	14	30	1	-	2	1	-	30%	2" MERV 8	-	-
RTU-VESTIBULE	78.0	64.7	54.05	53.22	57.14	54.5	-	33.97	25.61	-	-	-	-	-	-	-	-	-	2" MERV 8	-	-

TAG	GAS HEATING SECTION TYPE	INPUT MBH	OUTPUT MBH	EAT(°F)	LAT(°F)	RE-HEAT COIL MBH	RE-HEAT COIL LAT(°F) DB	HEAT WHEEL QTY.	HEAT WHEEL TOTAL MBH	HEAT WHEEL HP EA.	VOLTAGE/ PHASE	FLA	MCA	MOP	MFGR / MODEL
RTU-WEIGHT ROOM	-	-	-	-	-	-	80.2	N/A	N/A	N/A	460/3/60	27.2	29.4	35	TRANE/HORIZON (OAD/N Rev6 - OADG/OANG, SIZE D010
RTU-TECH ED	-	-	-	-	-	-	79	N/A	N/A	N/A	460/3/60	40.8	44.0	50	TRANE/HORIZON (OAD/N Rev6 - OADG/OANG, SIZE D015
RTU-ADMIN	NAT. GAS	150	120	60	82.1	-	-	N/A	N/A	N/A	460/3/60	48.7	51.9	60	TRANE/HORIZON (OAD/N Rev6 - OADG/OANG, SIZE D015
RTU-GUIDANCE	NAT. GAS	150	120	60	96.9	-	-	N/A	N/A	N/A	460/3/60	29.4	31.6	40	TRANE/HORIZON (OAD/N Rev6 - OADG/OANG, SIZE D010
RTU-VESTIBULE	NAT. GAS	100	81	48	115.44	19.55	74.42	N/A	N/A	N/A	460/3/60	-	11	15	TRANE/PRECEDENT - YSK036A4SAM**H0B0C1B1A000000000000000000

MATCHLINE 'A'

MATCHLINE 'A'

WEIGHT (LBS)	MIN. EER	AREA SERVED	REMARKS
3137	10.3	WEIGHT ROOM	1,2,3
3241	9.4	TECHNOLOGY EDUCATION	1,2,3
3385	8.5	ADMINISTRATIVE OFFICES	1,2,3
3236	8.7	GUIDANCE	1,2,3
801	12.0	VESTIBULE	1,2,3

REMARKS:
1. FINAL UNIT SELECTIONS ARE BELOW. RTU-ADMIN AND RTU-GUIDANCE SHALL BE VAV UNITS WITH NATURAL GAS HEAT. RTU-WEIGHT ROOM AND RTU-TECH ED SHALL BE CAV UNITS WITH HOT WATER COIL HEATING WITH A FREEZE PROTECTION PUMP BELOW THE ROOF.
2. PROVIDE FACTORY ROOF CURB
3. PROVIDE ALL RTU'S ON THIS PROJECT WITH FULLY MODULATING HOT GAS REHEAT WITH FULL DEHUMIDIFICATION CONTROLS PROGRAMMED IN THE RTU CONTROLLER.

TRANE

Job Name: JCCSD Capital Project RTU Reno
Prepared For:
Unit Tag: RTU-vestibule
Quantity: 1

Trane Precedent Packaged Rooftop

Unit Overview - YSK036A4SAMH0B0C1B1A000000000000000000**

Application	Unit Size	Supply Fan Airflow	Supply Fan Total Static Pressure	Height	Width	Length	Operating Weight	Elevation
DX Cooling / Gas Heat	3 Ton	1100. cfm	1.192 in H2O	3.91 ft	3.69 ft	5.82 ft	801.0 lb	0.00 ft

Unit Features

Unit Efficiency	Standard Efficiency
Refrigerant	R-454B Refrigerant
EER @ AHRI	12.00 Number
SEER @ AHRI	14.00 Number
EER2 @ AHRI	11.00 Number
SEER2 @ AHRI	13.40 Number
Hinged Service Access/Filters	Standard Panels with 2-in MERV 8 Filters
Through the Base Provisions	Electric and Gas
Disconnect / Circuit Breaker	Non-Fused Disconnect Switch
Convenience Outlet	Powered 15A Convenience Outlet
Fresh Air Selection	Economizer, Comparative Enthalpy with BR
Refrigeration Systems Option	Modulating Hot Gas Reheat (HGRH)



Unit Electrical

Voltage/phase/hertz	460/60/3
MCA	11.00 A
MOP	15.00 A
Condenser Fan FLA	1.60 A
Evaporator Fan FLA	1.70 A
Compressor 1 RLA	5.90 A
Compressor 2 RLA	0.00 A
Compressor Power	2.41 kW
System Power	3.57 kW

Controls

Unit Controls	Symbio 700
Communications Option	Advanced Controls and BACnet BAS

Cooling Section

		Capacity	
Entering Dry Bulb	78.00 F	Gross Total	35.58 MBh
Entering Wet Bulb	64.70 F	Gross Latent	8.36 MBh
Ambient Temp	95.00 F	Gross Sensible	27.22 MBh
Leaving Coil Dry Bulb	54.05 F	Net Total	33.97 MBh
Leaving Coil Wet Bulb	53.22 F	Net Sensible	25.61 MBh
Leaving Unit Dry Bulb	57.14 F	Net Sensible Heat Ratio	75.39 %
Leaving Unit Wet Bulb	54.50 F	Fan Motor Heat	1.10 MBh
Saturated Discharge Temperature	116.60 F	Refrig Charge-Circuit 1	3.6 lb
Saturated Suction Temperature	49.07 F		

Reheat Section

		Capacity	
Hot Gas Reheat	Modulating Hot Gas Reheat (HGRH)	Dehumidification/Hot Gas Reheat	19.55 MBh
Entering Dry Bulb (in HRGH)	73.00 F	Reheat Mode Leaving Unit Temp	75.87 F
Entering Wet Bulb (in HRGH)	64.00 F	Leaving Unit Dew Point in HGRH	56.55 F
Evap Coil LAT DB (HGRH)	57.93 F	Reheat Coil Temperature Rise	16.49 F
Evap Coil LAT WB (HGRH)	57.08 F	Reheat Mode Moisture Removal	0.54 gph
Ambient DB (in HGRH)	70.00 F	Reheat Coil LAT (HGRH)	74.42 F
		Reheat Coil LWB (HGRH)	63.10 F

TRANE

Job Name: JCCSD Capital Project RTU Reno
Prepared For:
Unit Tag: RTU-vestibule
Quantity: 1

Heating Section

Heat Type	Stainless Steel Gas Heat
Heating	Medium Gas Heat
Input Heating Capacity	100.00 MBh
Output Heating Capacity	81.00 MBh
Heating EAT	48.00 F
Heating LAT	115.44 F
Heating Temp Rise	67.44 F
Heating Stages	2

Fan Section

Indoor Fan Data		Indoor Fan Performance	
Airflow Application	Horizontal	Airflow	1100. cfm
Design ESP	1.000 in H2O	Supply Motor Horsepower	0.577 hp
Component SP	0.215 in H2O	Indoor RPM	1100. rpm
Heat SP	-0.023 in H2O	Outdoor Fan Data	
Total SP	1.192 in H2O	Outdoor Fan Drive Type	Direct
Indoor Fan Drive Type	Direct	Outdoor Fan Quantity	1
Indoor Fan Quantity	1.00 Number	Outdoor Fan Type	Propeller
Indoor Fan Type	FC Centrifugal	Filters	
		1st Filter Size and Qty	4 - 20 x 20 x 2

Field Installed Accessories

Roof curb	14" Full Perimeter Knockdown Curb
Humidity sensor	Humidity duct mounted sensor

Acoustics

Sound Path	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Ducted Discharge	87 dB	77 dB	65 dB	65 dB	59 dB	57 dB	57 dB	50. dB
Ducted Inlet	78 dB	73 dB	62 dB	57 dB	51 dB	51 dB	51 dB	45 dB
Outdoor Noise	81 dB	81 dB	80. dB	77 dB	73 dB	69 dB	65 dB	61 dB

Note:Ducted Discharge/Ducted Inlet prediction data conform to -- AHRI 260

TRANE

Job Name: JCCSD Capital Project RTU Reno
Prepared For:
Unit Tag: RTU-vestibule
Quantity: 1

General
Packaged rooftop unit cooling capacities, heating capacities, and efficiencies are certified to the following standards:
- 3 to 5 ton units: AHRI Standard 210/240.
- 6 to 25 ton units: AHRI Standard 340/360.
- Gas Heating Units: ANSI Z21.47 and 10 CFR Part 431 for Commercial Warm Air.
- Convertible airflow.
- Symbio? controls operating range between 40°F and 125°F in cooling mode standard from the factory. Field-installed low ambient kit extends operating range down to 0°F.
- Factory assembled, internally wired, fully charged, and 100 percent run tested to verify cooling operation, fan and blower rotation, and control sequence.
- Colored and numbered wiring internal to the unit for simplified identification.
- cULus listed and classified in accordance for Central Cooling Air Conditioners.
- Unit shall be furnished with a leak detection system from the fact

Casing
- Zinc coated, heavy gauge, galvanized steel.
- Weather resistant pre-painted metal with galvanized substrate.
- Meets ASTM B117, 672 hour salt spray test.
- Removable single side maintenance access panels.
- Lifting handles in maintenance access panels (can be removed and reinstalled by removing fasteners while providing a water and air tight seal).
- Exposed vertical panels and top covers in the indoor air section insulated with a cleanable foil-faced, fire-retardant permanent, odorless glass fiber material.
- Base pan shall have no penetrations within the perimeter of the curb other than the raised 1 inch high downflow supply/return openings to provide an added water integrity precaution, if the condensate drain backs up.
- Base of the unit insulated with 1/8 inch, foil-faced, closed-cell insulation.
- Unit base provisions for forklift and/or crane lifting on three sides of unit.

Hail Guards
- Provides condenser coil protection.

Powered or Unpowered Convenience Outlet
- Powered GFCI, 120V/15A, 2 plug, convenience outlet or unpowered GFCI, 120V/20A, 2 plug, convenience outlet.
- When convenience outlet is powered, a service receptacle disconnect will be available.
- Convenience outlet is powered from the line side of the disconnect or circuit breaker, and therefore will not be affected by the position of the disconnect or circuit breaker.
- Available to order when through-the-base electrical with disconnect switch or circuit breaker option is ordered.

Microchannel Coils
- Optimal heat transfer performance due to flat, streamlined tubes with small ports, and metallurgical tube-to-fin bond.
- Reduce system refrigerant charge by up to 50% leading to better compressor reliability.
- Compact all-aluminum microchannel coils reduce the unit weight.
- Recyclable all aluminum coils All aluminium construction minimizes galvanic corrosion.
- Strong aluminum brazed structure provides better fin protection.
- Flat streamlined tubes more dust resistant and easy to clean.
- Coils leak tested at the factory to ensure the pressure integrity.

Compressors
- All units have direct-drive, hermetic, scroll type compressors with centrifugal type oil pumps.
- Suction gas-cooled motor with voltage utilization range of plus or minus 10 percent of unit nameplate voltage.
- Internal overloads standard with scroll compressors.
- All units have dual compressors.
-Three stages of cooling available on 6 to 17.5 tons units and four stages of cooling available on 20 and 25 tons units.

TRANE

Job Name: JCCSD Capital Project RTU Reno
Prepared For:
Unit Tag: RTU-vestibule
Quantity: 1

Filters
-Two inch pleated media filters shall be available on all models.

Frostat
- Utilized as a safety device.
- Opens to prevent freezing temperatures on evaporator coil.
- Temperature will need to rise to 50°F before closing.
- Utilized in low airflow or high outside air applications (cooling only).

Gas Heating Section
-The heating section shall have a progressive tubular heat exchanger with corrosion-resistant aluminized steel tubes and burners as standard on all models.
-Stainless steel heat exchanger with 409 stainless steel tubes and 439 stainless steel burners shall be optional.
- Induced draft combustion blower shall be used to pull the combustion products through the firing tubes.
- Heater shall use a direct spark ignition (DSI) system.
- On initial call for heat, the combustion blower shall purge the heat exchanger for 20 seconds before ignition.
- After three unsuccessful ignition attempts, entire heating system shall be locked out until manually reset at the thermostat/zone sensor.
- Units shall be suitable for use with natural gas or propane (field-installed kit).

Indoor Fan
- Direct drive plenum fan design - 6 to 25 tons units.
- Plenum fan design - backward-curved fan wheel along with an external rotor direct drive variable speed indoor motor.
- Supply fan speed adjustments can be made using the Symbio 700 or Mobile App.
- Motors are thermally protected.
- Variable speed direct drive motors are high efficiency - 6 to 25 tons.

Heat Exchanger
- Compact cabinet features a tubular heat exchanger in low, medium and high heat capacities.
- Corrosion-resistant aluminized steel tubes and burners are standard on all models.
- Induced draft blower to pull the gas mixture through the burner tubes.
- Direct spark ignition and a flame sensor as a safety device to validate the flame.

Stainless Steel Heat Exchanger
-Thermal magnetic, molded case, HACR circuit breaker with provisions for through-the-base electrical connections.
- Circuit breaker installed within unit in water tight enclosure.
- Wiring provided from the switch to the unit high voltage terminal block.
- Circuit breaker will provide overcurrent protection, sized per NEC and cULus guidelines, and agency recognized by cULus.

Roof Curb
- Designed to mate with the unit?s downflow supply and return.
- Provide support and a water tight installation when installed properly.
- Shall allow field-fabricated rectangular supply/return ductwork to be connected directly to the curb.
- Curb shall be shipped knocked down for field assembly.
- Shall include wood nailer strips.

TRANE

Job Name: JCCSD Capital Project RTU Reno
Prepared For:
Unit Tag: RTU-vestibule
Quantity: 1

Economizer (Standard)
- Available with or without barometric relief.
- Fully modulating 0-100 percent motor and dampers, minimum position setting, preset linkage, wiring harness with plug, spring return actuator and fixed dry bulb control.
- Barometric relief shall provide a pressure operated damper that shall be gravity closing.
- Barometric relief shall prohibit entrance of outside air during the equipment ?off? cycle.
- Optional solid state or differential enthalpy control.
- Arrives in shipping position and shall be moved to the operating position by the installing contractor.

RTU-VESTIBULE
N.T.S.

JCCSD Capital Project RTU Reno May 20, 2025
Product Data - Horizon™ - Outdoor Air Unit (Revision 6)

Size	Qty	Description	Model Number
D010	1	Horizon™ - Outdoor Air Unit (Revision 6)	OADG010F3-DAB1GGD00-G3AEC3AE3-21A00003A-A01C00A00-AA1A00000-00AL00000

Tag(s): RTU-1 wt

Unit Voltage: 460-3-60
Curb Selection: Standard Knockdown Curb - Powered Exhaust Cabinet
Warranty: 1-Year Parts Only (manufacturer warranty)
Warranty: 5-Year Digital/Variable Speed/Standard Scroll Compressor / 25-Year Heat Exchanger
Airflow Configuration: Horizontal Discharge/Horizontal Return
Indoor Coil Type: DX 6-Row
Reheat: Fin & Tube Modulating HGRH
Compressor: Digital Scroll-1st Circuit Only
Outdoor Coil Type: Air Cooled Fin & Tube
Capacity Control: R-454B - Low GWP Refrigerant & No RCC Valve
Heat Type - Primary: Hot Water
Heat Capacity - Primary: 2 Row/10 FPI
Supply Fan Motor Type: Direct Drive w/Shaft Grounding Ring w/VFD
Exhaust Fan Motor Type: Direct Drive w/Shaft Grounding Ring w/VFD
Fan Piezo Rings: Supply & Exhaust Fan Piezo Rings/Taps
Unit Controls: Discharge Air Control - UC600
Building Interface: BACnet
Filter Options: MERV-8,30%
Damper Options: Modulating OA & RA Dampers w/Economizer
Exhaust Dampers: Gravity Dampers
Electrical Options: Non-Fused Disconnect "Circuit Breaker"
Outdoor Air Monitoring: Airflow Probes
Condenser Fan Options: Active (VFD) Head Pressure Low Ambient Control
Hailguards: Hailguards
Installation: Outdoor
Convenience Outlet: Convenience Outlet
Controls Display: TD7 Factory Installed
Cooling Controls: Reliatel
Supply Discharge Air Sensor (FLD)
2 inch Double Wall Construction
Stainless Steel Drip Pan
Blower HP - 3
Blower RPM - 2121
Supply Fan - ANPA 16
Exhaust RPM - 1680
Exhaust HP - 1.5
Exhaust Fan - ANPA 16
Unit Amps - FLA: 27.2 Amps
Min Circuit Ampacity - MCA: 29.4 Amps
Maximum Overcurrent Protection - MOCP: 35 Amps

RTU-WEIGHT ROOM
N.T.S.

JCCSD Capital Project RTU Reno May 20, 2025
Product Data - Horizon™ - Outdoor Air Unit (Revision 6)

Size	Qty	Description	Model Number
D015	1	Horizon™ - Outdoor Air Unit (Revision 6)	OADG015C3-DAB1GGD00-J3AGG3AE3-21A00003A-A01C00A00-AA1A00000-00AL00000

Tag(s): RTU-2 tech

Unit Voltage: 460-3-60
Curb Selection: Standard Knockdown Curb - Powered Exhaust Cabinet
Warranty: 1-Year Parts Only (manufacturer warranty)
Warranty: 5-Year Digital/Variable Speed/Standard Scroll Compressor / 25-Year Heat Exchanger
Airflow Configuration: Vertical Discharge/Vertical Return
Indoor Coil Type: DX 6-Row
Reheat: Fin & Tube Modulating HGRH
Compressor: Digital Scroll-1st Circuit Only
Outdoor Coil Type: Air Cooled Fin & Tube
Capacity Control: R-454B - Low GWP Refrigerant & No RCC Valve
Heat Type - Primary: Hot Water
Heat Capacity - Primary: 2 Row/10 FPI
Supply Fan Motor Type: Direct Drive w/Shaft Grounding Ring w/VFD
Exhaust Fan Motor Type: Direct Drive w/Shaft Grounding Ring w/VFD
Fan Piezo Rings: Supply & Exhaust Fan Piezo Rings/Taps
Unit Controls: Discharge Air Control - UC600
Building Interface: BACnet
Filter Options: MERV-8,30%
Damper Options: Modulating OA & RA Dampers w/Economizer
Exhaust Dampers: Gravity Dampers
Electrical Options: Non-Fused Disconnect "Circuit Breaker"
Outdoor Air Monitoring: Airflow Probes
Condenser Fan Options: Active (VFD) Head Pressure Low Ambient Control
Hailguards: Hailguards
Installation: Outdoor
Convenience Outlet: Convenience Outlet
Controls Display: TD7 Factory Installed
Cooling Controls: Reliatel
Supply Discharge Air Sensor (FLD)
2 inch Double Wall Construction
Stainless Steel Drip Pan
Blower HP - 5
Blower RPM - 1920
Supply Fan - ANPA 18
Exhaust RPM - 2007
Exhaust HP - 3
Exhaust Fan - ANPA 16
Unit Amps - FLA: 40.8 Amps
Min Circuit Ampacity - MCA: 44.0 Amps
Maximum Overcurrent Protection - MOCP: 50 Amps

RTU-TECH ED
N.T.S.

JCCSD Capital Project RTU Reno August 6, 2025
Product Data - Horizon™ - Outdoor Air Unit (Revision 6)

Size	Qty	Description	Model Number
D015	1	Horizon™ - Outdoor Air Unit (Revision 6)	OADG015C3-DAB1GAE00-P3AEJ3AJ3-41A00003A-A01C00A00-AA1A00000-00AL00000

Tag(s): RTU-3 admin

Unit Voltage: 460-3-60
Curb Selection: Standard Knockdown Curb - Powered Exhaust Cabinet
Warranty: 1-Year Parts Only (manufacturer warranty)
Warranty: 5-Year Digital/Variable Speed/Standard Scroll Compressor / 25-Year Heat Exchanger
Airflow Configuration: Vertical Discharge/Vertical Return
Indoor Coil Type: DX 6-Row
Reheat: Fin & Tube Modulating HGRH
Compressor: Digital Scroll-1st Circuit Only
Outdoor Coil Type: Air Cooled Fin & Tube
Capacity Control: R-454B - Low GWP Refrigerant & No RCC Valve
Heat Type - Primary: Indirect Fired NG (IF) - Standard Efficiency (80%)
Heat Capacity - Primary: 150 MBH, (10:1 Turndown)
Supply Fan Motor Type: Direct Drive w/Shaft Grounding Ring w/VFD
Exhaust Fan Motor Type: Direct Drive w/Shaft Grounding Ring w/VFD
Fan Piezo Rings: Supply & Exhaust Fan Piezo Rings/Taps
Unit Controls: Single-Zone VAV - UC600
Building Interface: BACnet
Filter Options: MERV-8,30%
Damper Options: Modulating OA & RA Dampers w/Economizer
Exhaust Dampers: Gravity Dampers
Electrical Options: Non-Fused Disconnect "Circuit Breaker"
Outdoor Air Monitoring: Airflow Probes
Condenser Fan Options: Active (VFD) Head Pressure Low Ambient Control
Hailguards: Hailguards
Installation: Outdoor
Convenience Outlet: Convenience Outlet
Controls Display: TD7 Factory Installed
Cooling Controls: Reliatel
Supply Discharge Air Sensor (FLD)
2 inch Double Wall Construction
Stainless Steel Drip Pan
Blower HP - 10
Blower RPM - 2998
Supply Fan - ANPA 16
Exhaust RPM - 1521
Exhaust HP - 5
Exhaust Fan - ANPA 20
Unit Amps - FLA: 48.6 Amps
Min Circuit Ampacity - MCA: 51.8 Amps
Maximum Overcurrent Protection - MOCP: 60 Amps

RTU-ADMIN
N.T.S.

JCCSD Capital Project RTU Reno August 6, 2025
Product Data - Horizon™ - Outdoor Air Unit (Revision 6)

Size	Qty	Description	Model Number
D010	1	Horizon™ - Outdoor Air Unit (Revision 6)	OADG010F3-DAB1GAE00-K3ACE3AE3-31A00003A-A01C00A00-AA1A00000-00AL00000

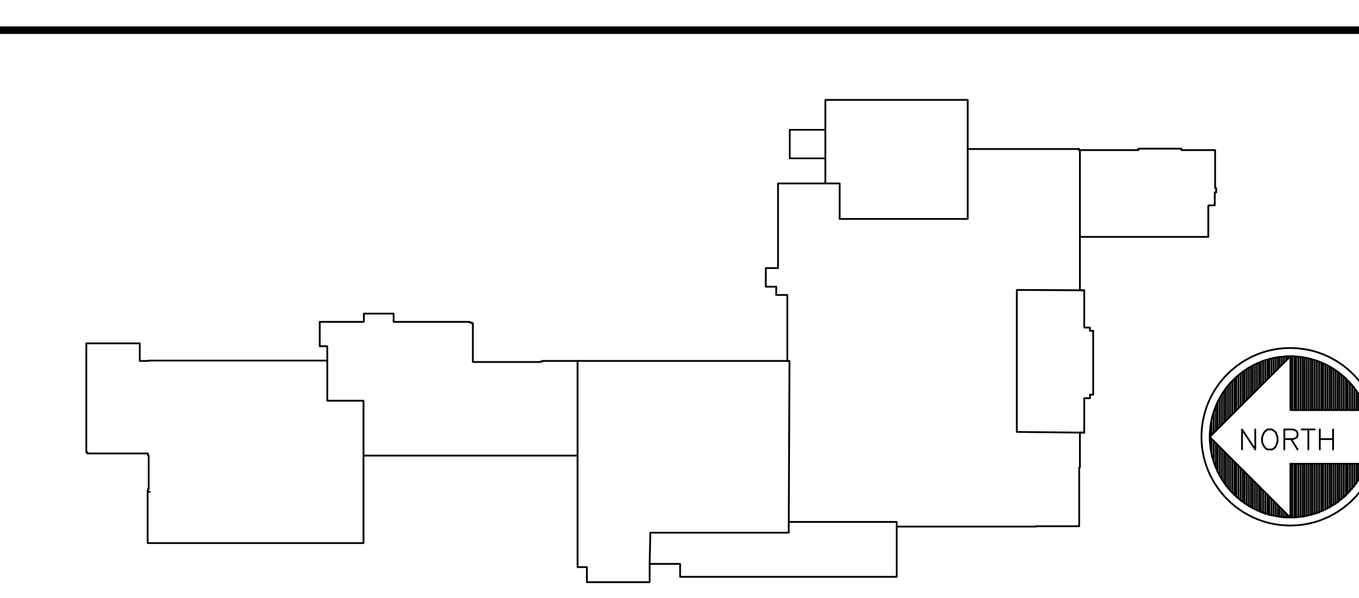
Tag(s): RTU-4 guidance

Unit Voltage: 460-3-60
Curb Selection: Standard Knockdown Curb - Powered Exhaust Cabinet
Warranty: 1-Year Parts Only (manufacturer warranty)
Warranty: 5-Year Digital/Variable Speed/Standard Scroll Compressor / 25-Year Heat Exchanger
Airflow Configuration: Horizontal Discharge/Horizontal Return
Indoor Coil Type: DX 6-Row
Reheat: Fin & Tube Modulating HGRH
Compressor: Digital Scroll-1st Circuit Only
Outdoor Coil Type: Air Cooled Fin & Tube
Capacity Control: R-454B - Low GWP Refrigerant & No RCC Valve
Heat Type - Primary: Indirect Fired NG (IF) - Standard Efficiency (80%)
Heat Capacity - Primary: 150 MBH, (10:1 Turndown)
Supply Fan Motor Type: Direct Drive w/Shaft Grounding Ring w/VFD
Exhaust Fan Motor Type: Direct Drive w/Shaft Grounding Ring w/VFD
Fan Piezo Rings: Supply & Exhaust Fan Piezo Rings/Taps
Unit Controls: Multi-Zone VAV - UC600
Building Interface: BACnet
Filter Options: MERV-8,30%
Damper Options: Modulating OA & RA Dampers w/Economizer
Exhaust Dampers: Gravity Dampers
Electrical Options: Non-Fused Disconnect "Circuit Breaker"
Outdoor Air Monitoring: Airflow Probes
Condenser Fan Options: Active (VFD) Head Pressure Low Ambient Control
Hailguards: Hailguards
Installation: Outdoor
Convenience Outlet: Convenience Outlet
Controls Display: TD7 Factory Installed
Cooling Controls: Reliatel
Supply Discharge Air Sensor (FLD)
2 inch Double Wall Construction
Stainless Steel Drip Pan
Blower HP - 5
Blower RPM - 2825
Supply Fan - ANPA 14
Exhaust RPM - 1813
Exhaust HP - 2
Exhaust Fan - ANPA 16
Unit Amps - FLA: 29.6 Amps
Min Circuit Ampacity - MCA: 31.8 Amps
Maximum Overcurrent Protection - MOCP: 40 Amps

RTU-GUIDANCE
N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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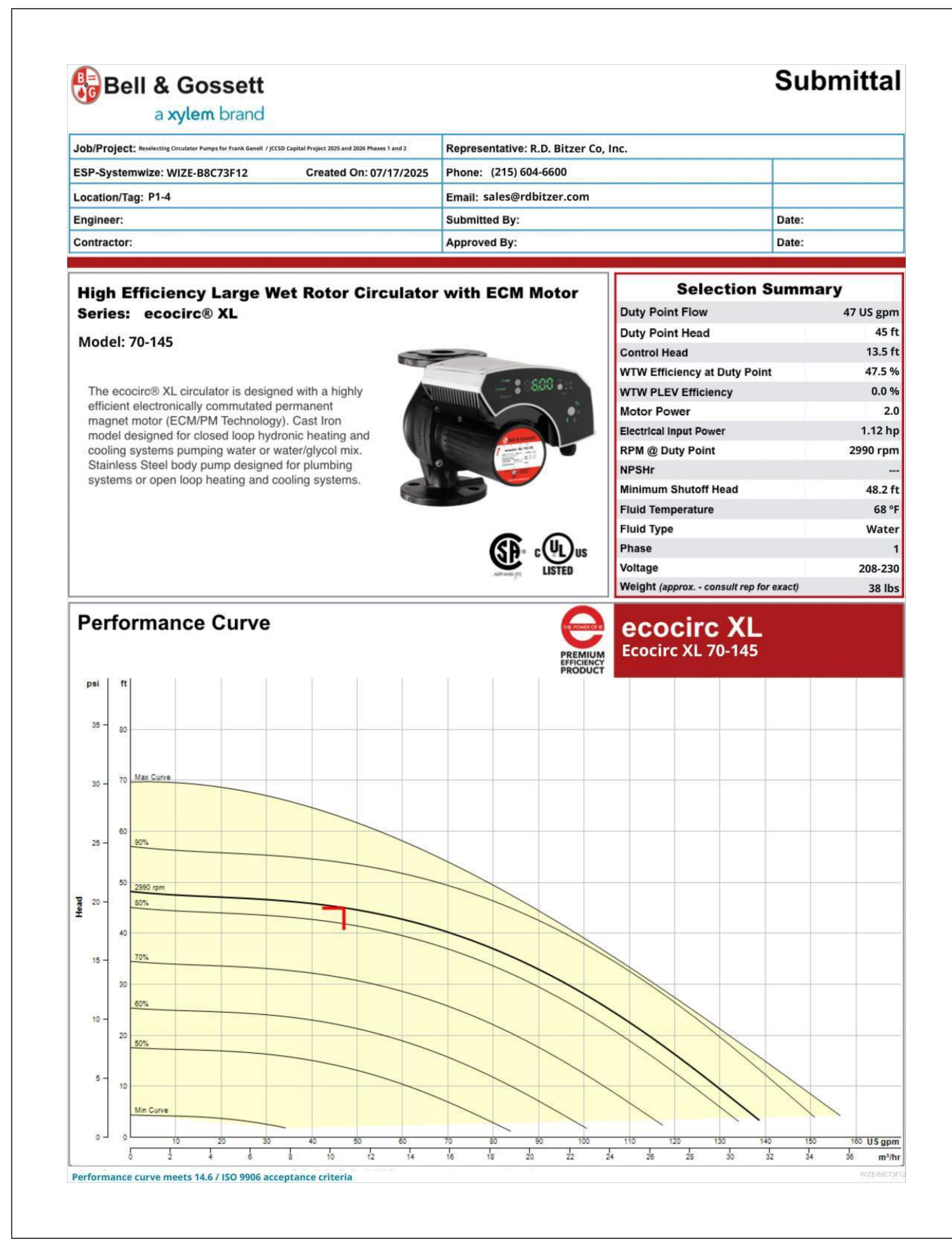
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL SCHEDULES

DRAWN BY: B.H.
PROJECT NO.: 2024-239P
CHECKED BY: M.P.
BUILDING: HS
DRAWING NO.: M-207
DATE: 12-01-2025

CAD FILE: 4239-HS-M-207.DWG
PLOT DATE: 11/25/2025



Bell & Gossett
a xylem brand

Submittal

Job/Project: Reselecting Circulator Pumps for Frank Genell / JCCSD Capital Project 2025 and 2026 Phases 1 and 2	Representative: R.D. Bitzer Co, Inc.
ESP-Systemwize: WIZE-B8C73F12 Created On: 07/17/2025	Phone: (215) 604-6600
Location/Tag: P1-4	Email: sales@rdbitzer.com
Engineer:	Submitted By: Date:
Contractor:	Approved By: Date:

High Efficiency Large Wet Rotor Circulator with ECM Motor
Series: ecocirc® XL

Model: 70-145

The ecocirc® XL circulator is designed with a highly efficient electronically commutated permanent magnet motor (ECM/PM Technology). Cast Iron model designed for closed loop hydronic heating and cooling systems pumping water or water/glycol mix. Stainless Steel body pump designed for plumbing systems or open loop heating and cooling systems.

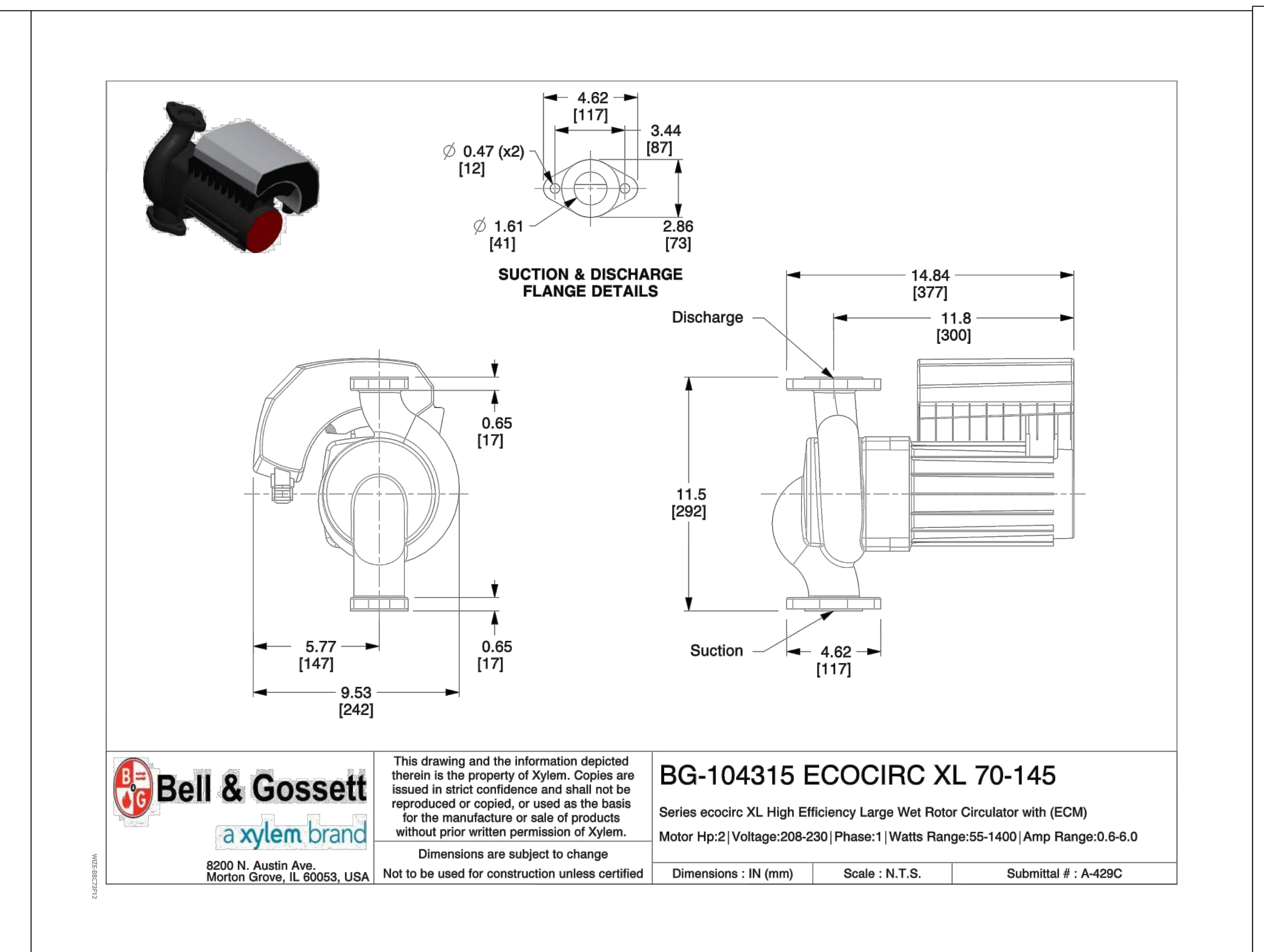
Selection Summary	
Duty Point Flow	47 US gpm
Duty Point Head	45 ft
Control Head	13.5 ft
WTW Efficiency at Duty Point	47.5 %
WTW PLEV Efficiency	0.0 %
Motor Power	2.0
Electrical Input Power	1.12 hp
RPM @ Duty Point	2990 rpm
NPSHr	---
Minimum Shutoff Head	48.2 ft
Fluid Temperature	68 °F
Fluid Type	Water
Phase	1
Voltage	208-230
Weight (approx. - consult rep for exact)	38 lbs

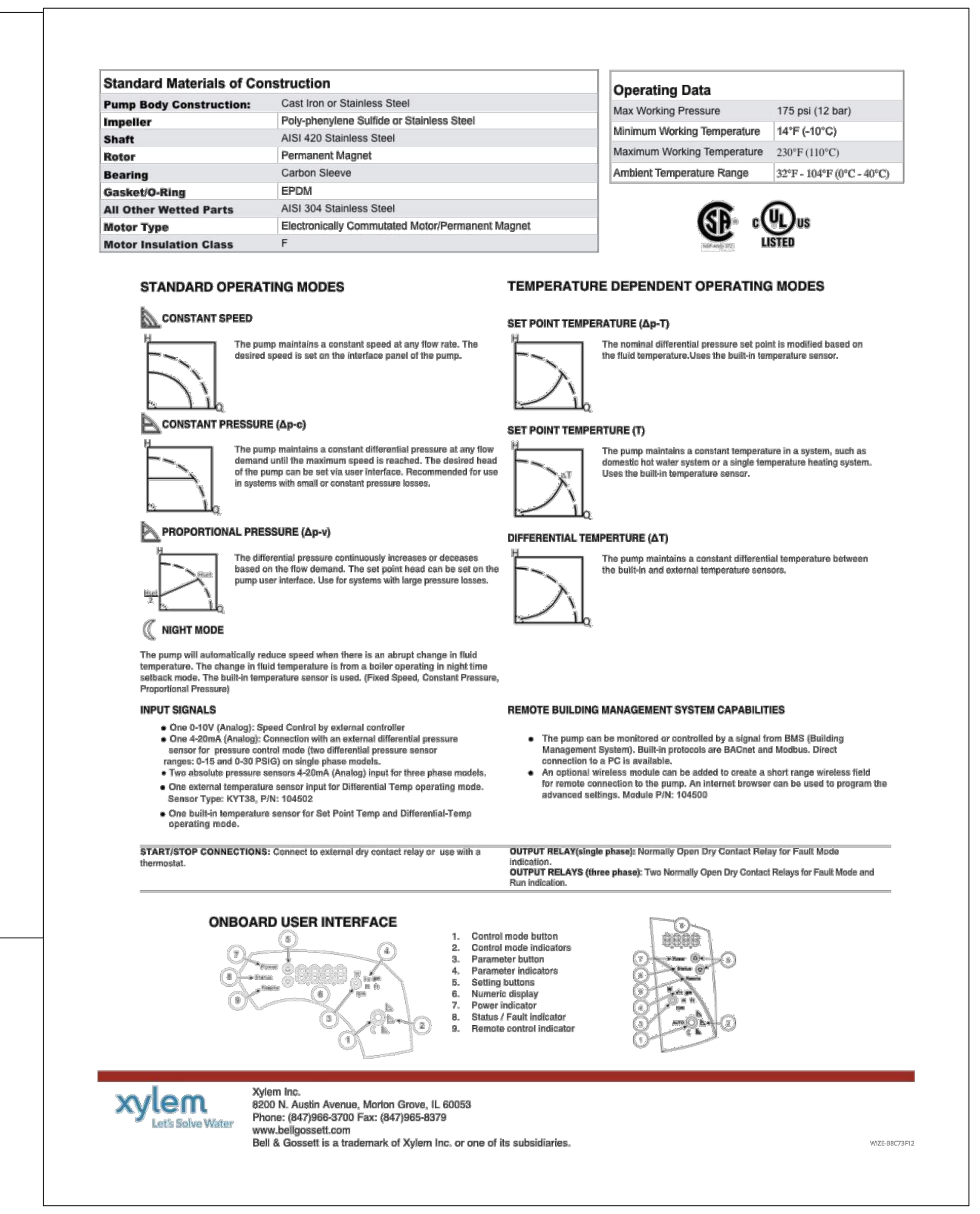
Performance Curve

ecocirc XL
Ecocirc XL 70-145

PREMIUM EFFICIENCY PRODUCT

Performance curve meets 14.6 / ISO 9906 acceptance criteria





Standard Materials of Construction	
Pump Body Construction:	Cast Iron or Stainless Steel
Impeller	Poly-phenylene Sulfide or Stainless Steel
Shaft	AISI 420 Stainless Steel
Rotor	Permanent Magnet
Bearing	Carbon Sleeve
Gasket/O-Ring	EPDM
All Other Wetted Parts	AISI 304 Stainless Steel
Motor Type	Electronically Commutated Motor/Permanent Magnet
Motor Insulation Class	F

Operating Data	
Max Working Pressure	175 psi (12 bar)
Minimum Working Temperature	14°F (-10°C)
Maximum Working Temperature	230°F (110°C)
Ambient Temperature Range	32°F - 104°F (0°C - 40°C)

STANDARD OPERATING MODES

CONSTANT SPEED
The pump maintains a constant speed at any flow rate. The desired speed is set on the interface panel of the pump.

CONSTANT PRESSURE (Δp-c)
The pump maintains a constant differential pressure at any flow demand until the maximum speed is reached. The desired head of the pump can be set via user interface. Recommended for use in systems with small or constant pressure losses.

PROPORTIONAL PRESSURE (Δp-v)
The differential pressure continuously increases or deceases based on the flow demand. The set point head can be set on the pump user interface. Use for systems with large pressure losses.

NIGHT MODE
The pump will automatically reduce speed when there is an abrupt change in fluid temperature. The change in fluid temperature is from a boiler operating in night time setback mode. The built-in temperature sensor is used. (Fixed Speed, Constant Pressure, Proportional Pressure)

TEMPERATURE DEPENDENT OPERATING MODES

SET POINT TEMPERATURE (Δp-T)
The nominal differential pressure set point is modified based on the fluid temperature.Uses the built-in temperature sensor.

SET POINT TEMPERTURE (T)
The pump maintains a constant temperature in a system, such as domestic hot water system or a single temperature heating system. Uses the built-in temperature sensor.

DIFFERENTIAL TEMPERTURE (ΔT)
The pump maintains a constant differential temperature between the built-in and external temperature sensors.

INPUT SIGNALS
- One 0-10V (Analog): Speed Control by external controller
- One 4-20mA (Analog): Connection with an external differential pressure sensor for pressure control mode (two differential pressure sensor ranges: 0-15 and 0-30 PSIG) on single phase models.
- Two absolute pressure sensors 4-20mA (Analog) input for three phase models.
- One external temperature sensor input for Differential Temp operating mode. Sensor Type: KYT38, P/N: 104502
- One built-in temperature sensor for Set Point Temp and Differential-Temp operating mode.

REMOTE BUILDING MANAGEMENT SYSTEM CAPABILITIES
- The pump can be monitored or controlled by a signal from BMS (Building Management System). Built-in protocols are BACnet and Modbus. Direct connection to a PC is available.
- An optional wireless module can be added to create a short range wireless field for remote connection to the pump. An internet browser can be used to program the advanced settings. Module P/N: 104500

START/STOP CONNECTIONS: Connect to external dry contact relay or use with a thermostat.

OUTPUT RELAY(single phase): Normally Open Dry Contact Relay for Fault Mode indication.
OUTPUT RELAYS (three phase): Two Normally Open Dry Contact Relays for Fault Mode and Run indication.

ONBOARD USER INTERFACE
1. Control mode button
2. Control mode indicators
3. Parameter button
4. Parameter indicators
5. Setting buttons
6. Numeric display
7. Power indicator
8. Status / Fault indicator
9. Remote control indicator

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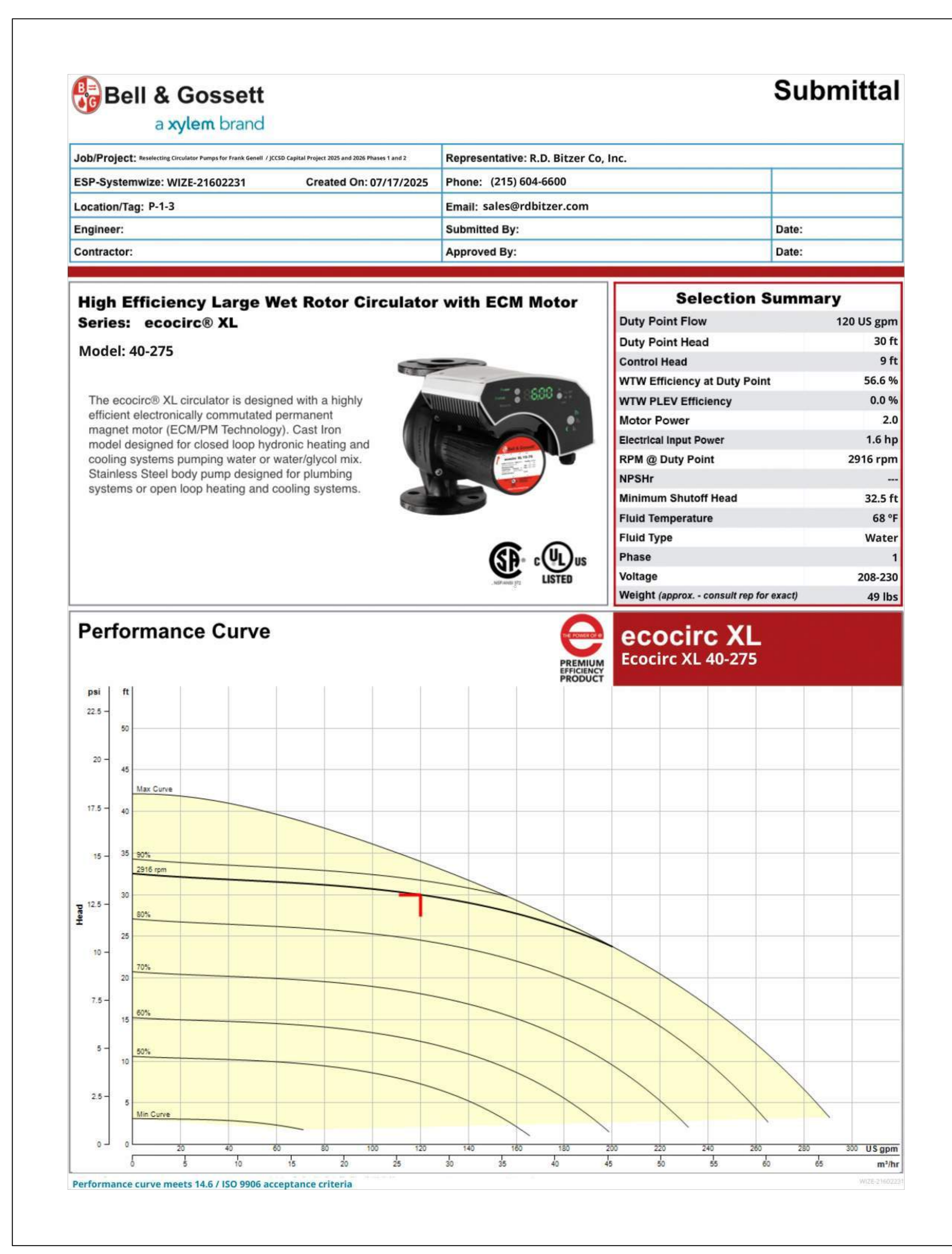
WIZE-B8C73F12

P-1, P-2, P-3, P-4 DETAIL
N.T.S.



Bell & Gossett
a xylem brand

Submittal

Job/Project: Reselecting Circulator Pumps for Frank Genell / JCCSD Capital Project 2025 and 2026 Phases 1 and 2	Representative: R.D. Bitzer Co, Inc.
ESP-Systemwize: WIZE-21602231 Created On: 07/17/2025	Phone: (215) 604-6600
Location/Tag: P-1-3	Email: sales@rdbitzer.com
Engineer:	Submitted By: Date:
Contractor:	Approved By: Date:

High Efficiency Large Wet Rotor Circulator with ECM Motor
Series: ecocirc® XL

Model: 40-275

The ecocirc® XL circulator is designed with a highly efficient electronically commutated permanent magnet motor (ECM/PM Technology). Cast Iron model designed for closed loop hydronic heating and cooling systems pumping water or water/glycol mix. Stainless Steel body pump designed for plumbing systems or open loop heating and cooling systems.

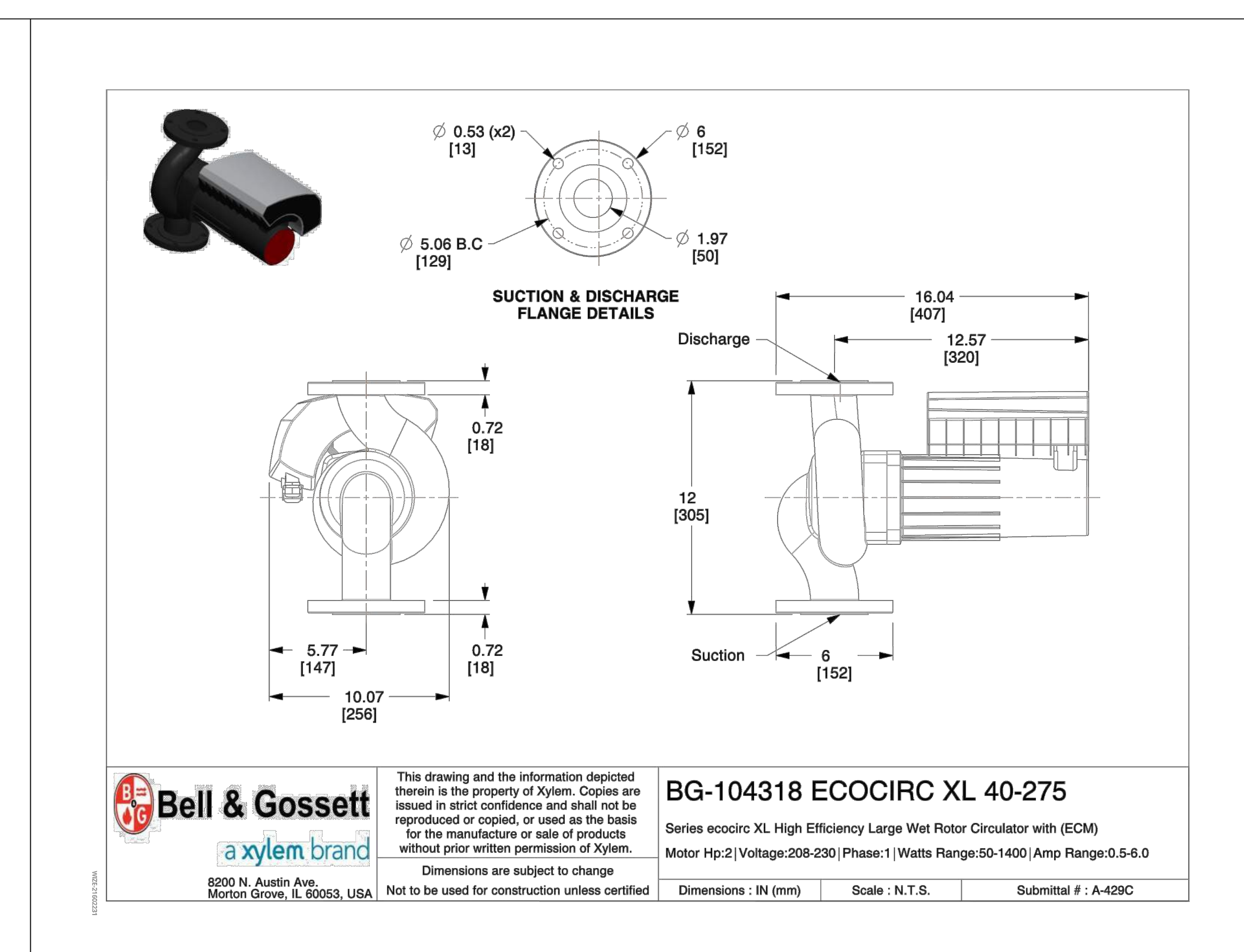
Selection Summary	
Duty Point Flow	120 US gpm
Duty Point Head	30 ft
Control Head	9 ft
WTW Efficiency at Duty Point	56.6 %
WTW PLEV Efficiency	0.0 %
Motor Power	2.0
Electrical Input Power	1.6 hp
RPM @ Duty Point	2916 rpm
NPSHr	---
Minimum Shutoff Head	32.5 ft
Fluid Temperature	68 °F
Fluid Type	Water
Phase	1
Voltage	208-230
Weight (approx. - consult rep for exact)	49 lbs

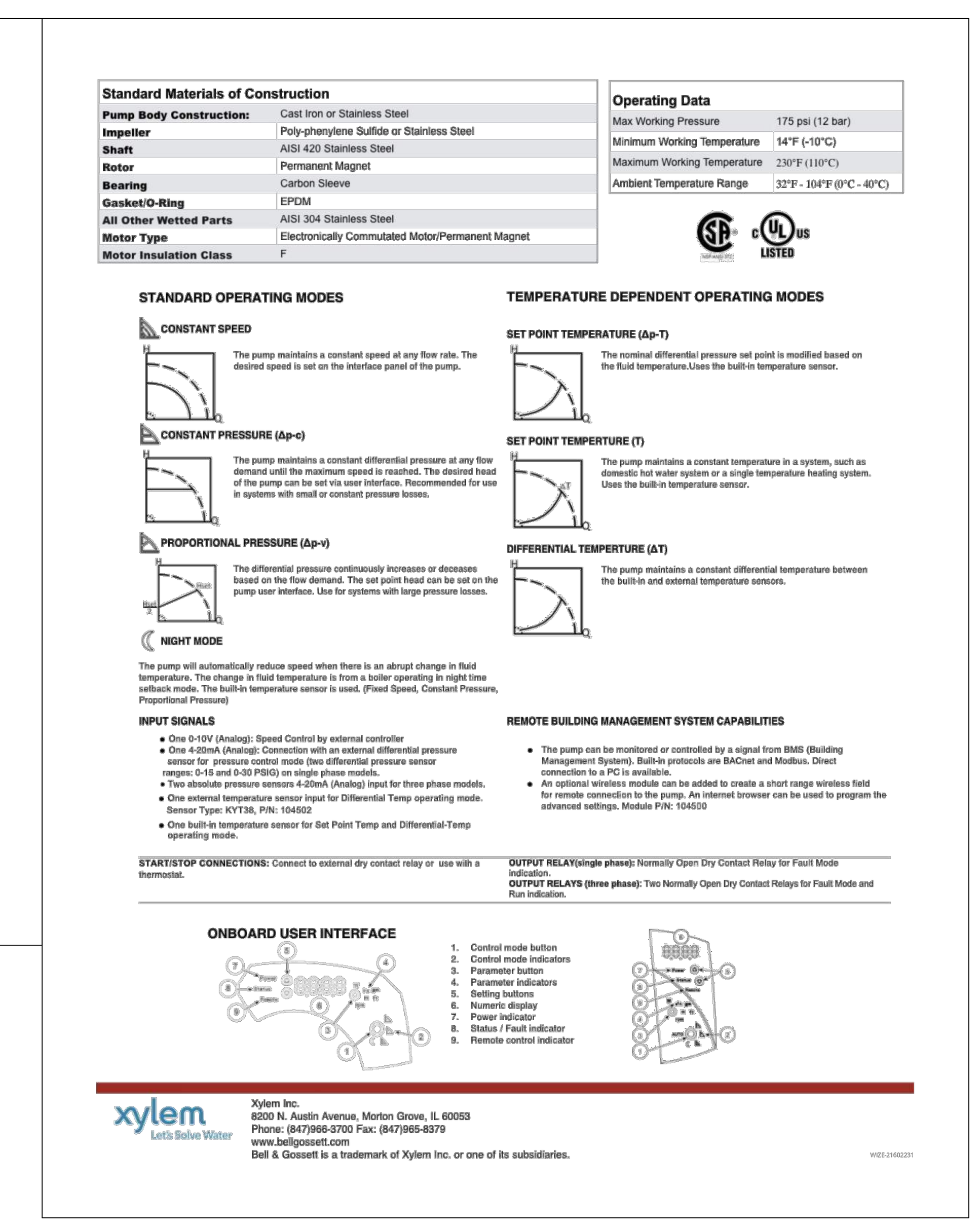
Performance Curve

ecocirc XL
Ecocirc XL 40-275

PREMIUM EFFICIENCY PRODUCT

Performance curve meets 14.6 / ISO 9906 acceptance criteria





Standard Materials of Construction	
Pump Body Construction:	Cast Iron or Stainless Steel
Impeller	Poly-phenylene Sulfide or Stainless Steel
Shaft	AISI 420 Stainless Steel
Rotor	Permanent Magnet
Bearing	Carbon Sleeve
Gasket/O-Ring	EPDM
All Other Wetted Parts	AISI 304 Stainless Steel
Motor Type	Electronically Commutated Motor/Permanent Magnet
Motor Insulation Class	F

Operating Data	
Max Working Pressure	175 psi (12 bar)
Minimum Working Temperature	14°F (-10°C)
Maximum Working Temperature	230°F (110°C)
Ambient Temperature Range	32°F - 104°F (0°C - 40°C)

STANDARD OPERATING MODES

CONSTANT SPEED
The pump maintains a constant speed at any flow rate. The desired speed is set on the interface panel of the pump.

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The differential pressure continuously increases or deceases based on the flow demand. The set point head can be set on the pump user interface. Use for systems with large pressure losses.

NIGHT MODE
The pump will automatically reduce speed when there is an abrupt change in fluid temperature. The change in fluid temperature is from a boiler operating in night time setback mode. The built-in temperature sensor is used. (Fixed Speed, Constant Pressure, Proportional Pressure)

TEMPERATURE DEPENDENT OPERATING MODES

SET POINT TEMPERATURE (Δp-T)
The nominal differential pressure set point is modified based on the fluid temperature.Uses the built-in temperature sensor.

SET POINT TEMPERTURE (T)
The pump maintains a constant temperature in a system, such as domestic hot water system or a single temperature heating system. Uses the built-in temperature sensor.

DIFFERENTIAL TEMPERTURE (ΔT)
The pump maintains a constant differential temperature between the built-in and external temperature sensors.

INPUT SIGNALS
- One 0-10V (Analog): Speed Control by external controller
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- One external temperature sensor input for Differential Temp operating mode. Sensor Type: KYT38, P/N: 104502
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REMOTE BUILDING MANAGEMENT SYSTEM CAPABILITIES
- The pump can be monitored or controlled by a signal from BMS (Building Management System). Built-in protocols are BACnet and Modbus. Direct connection to a PC is available.
- An optional wireless module can be added to create a short range wireless field for remote connection to the pump. An internet browser can be used to program the advanced settings. Module P/N: 104500

START/STOP CONNECTIONS: Connect to external dry contact relay or use with a thermostat.

OUTPUT RELAY(single phase): Normally Open Dry Contact Relay for Fault Mode indication.
OUTPUT RELAYS (three phase): Two Normally Open Dry Contact Relays for Fault Mode and Run indication.

ONBOARD USER INTERFACE
1. Control mode button
2. Control mode indicators
3. Parameter button
4. Parameter indicators
5. Setting buttons
6. Numeric display
7. Power indicator
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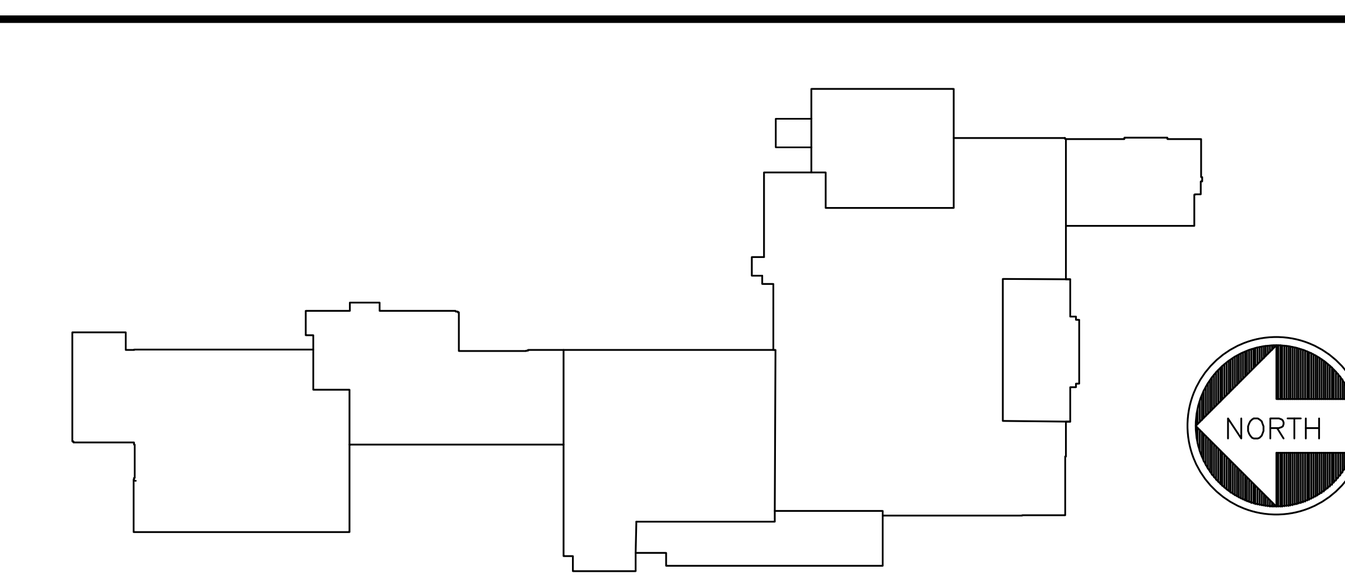
WIZE-21602231

P-1-3 DETAIL
N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:	
B.H.	2024-239P	
CHECKED BY: M.P.	BUILDING: HS	DRAWING NO.: M-208
DATE: 12-01-2025		

CAD FILE: 4239-HS-M-208.DWG
PLOT DATE: 11/25/2025

Bell & Gossett — a xylem brand — Submittal

Job/Project: JCCSD_Capital_Project_2025_and_2026_Phases_1_and_2_P-5-6	Representative: R.D. Bitzer Co, Inc.	
ESP-Systemwize: WIZE-4374CB94 Created On: 07/17/2025	Phone: (215) 604-6600	
Location/Tag: P-5, 6	Email: sales@rdbitzer.com	
Engineer:	Submitted By:	Date:
Contractor:	Approved By:	Date:

Close Coupled In-Line Centrifugal Pump

Series: e-80
Model: 3x3x9.5C

Features & Design
Best in Class Hydraulic Performance
Low Operating and Maintenance Cost
Horizontal or Vertical Installation



The Series e-80 is a highly efficient, heavy duty, close coupled pump designed for horizontal or vertical in-line mounting. The e-80 is available in stainless steel fitted construction, with flows up to 2500 GPM, heads to 380 feet.

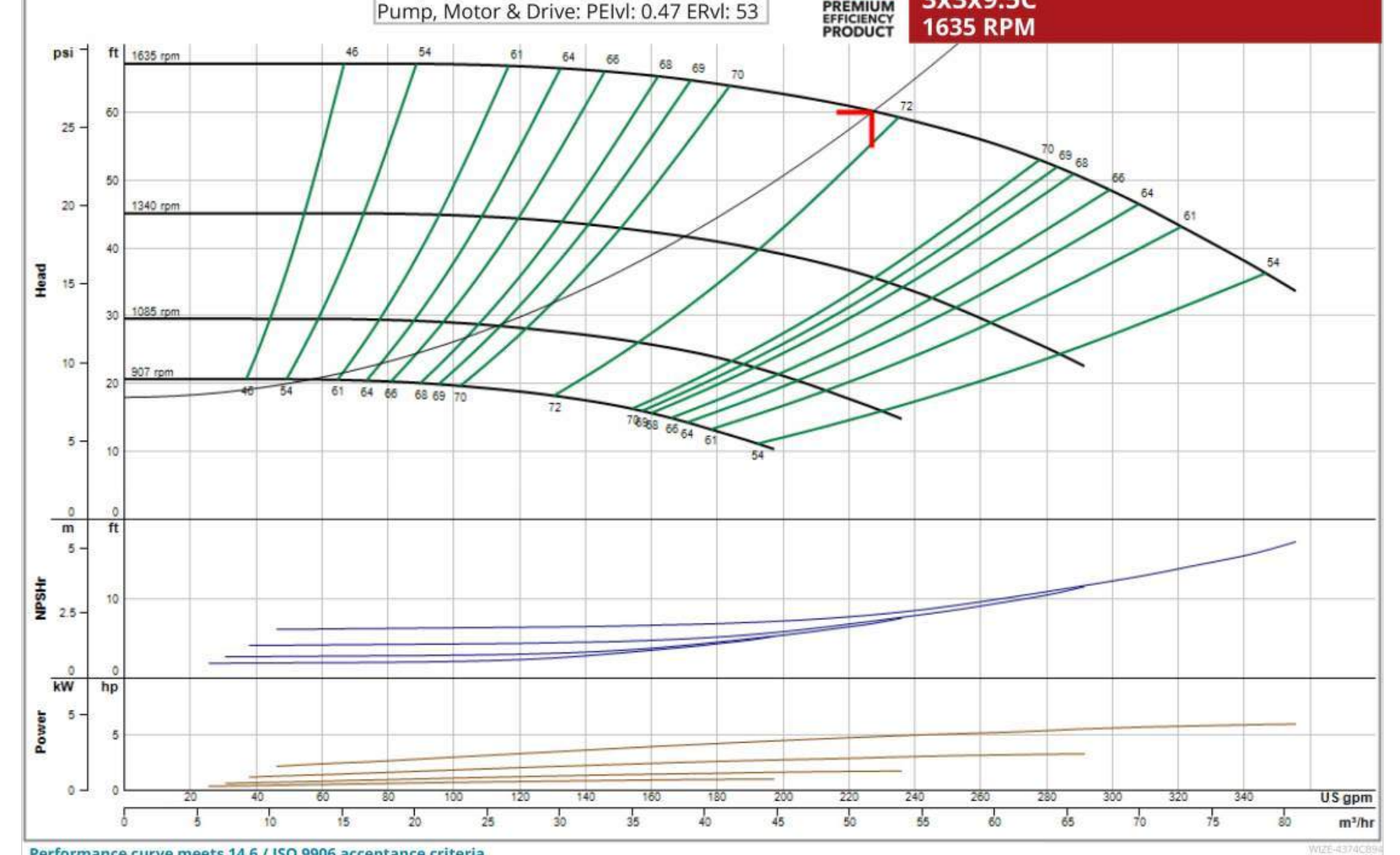
http://bellgossett.com/pumps-circulators/in-line-pumps/series-e-80/

Pump Selection Summary	
Duty Point Flow	227 US gpm
Duty Point Head	60 ft
Control Head	18 ft
Duty Point Pump Efficiency	71.5 %
Part Load Efficiency Value (PLEV)	68.1 %
Impeller Diameter	8.75 in
Motor Power	7.5 hp
Duty Point Power	4.78 bhp
Motor Speed	1800 rpm
RPM @ Duty Point	1635 rpm
NPSHr	8.09 ft
Minimum Shutoff Head	67.1 ft
Minimum Flow at RPM	47 US gpm
Flow @ BEP	235 US gpm
Fluid Temperature	68 °F
Fluid Type	Water
Weight (approx. - consult rep for exact)	300 lbs
Pump Floor Space Calculation	3.22 ft²

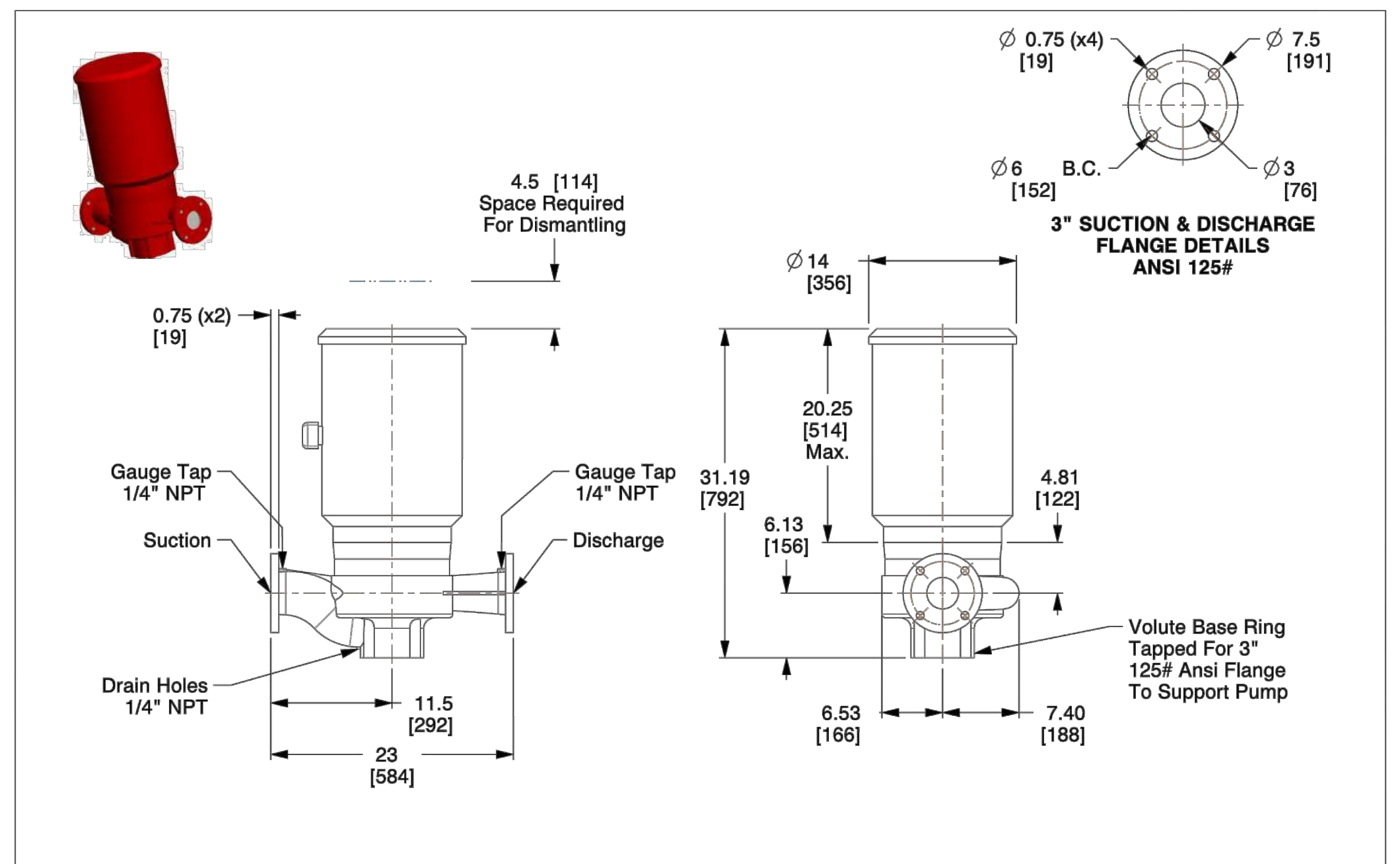
Performance Curve

Energy Efficiency Ratings:
Pump & Motor PEIcl: 0.94 ERcl: 6
Pump, Motor & Drive: PEIvl: 0.47 ERvl: 53

PREMIUM EFFICIENCY PRODUCT — e-80 3x3x9.5C 1635 RPM



Performance curve meets 14.6 / ISO 9906 acceptance criteria



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Dimensions are subject to change

Not to be used for construction unless certified

BG-E80-3x3x9.5C-SS213JM-1-IN

Series e-80 Close Coupled In-Line Centrifugal Pump

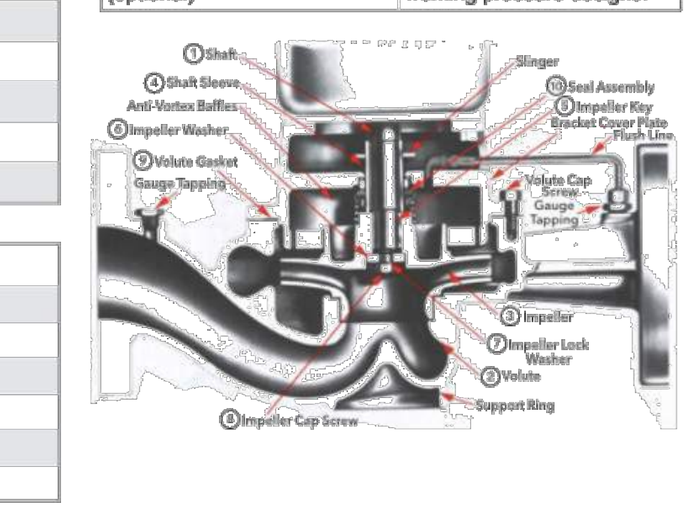
Seal Type:Standard Seal | Motor Frame:213JM | Flange:ANSI 125#

Dimensions : IN (mm) | Scale : N.T.S. | Submittal # : B-139.14B

Standard Materials of Construction	
Construction:	Stainless Steel Fitted Pump
1 Shaft:	Carbon Steel
2 Volute:	Cast Iron ASTM A48 Class B
3 Impeller:	ASTM A743 Grade CF8 - 304 Stainless Steel
4 Shaft Sleeve:	Stainless Steel
5 Impeller Key:	#304 Stainless Steel
6 Impeller Washer:	Carbon Steel
7 Impeller Lock Washer:	#304 Stainless Steel
8 Impeller Cap Screw:	#304 Stainless Steel
9 Volute Gasket:	Cellulose Fiber

10 Standard Mechanical Seal Assembly	
Bellows	Buna N
Faces	Carbon-Ceramic
Metal Parts	Brass or Stainless Steel
Spring	Stainless Steel

Maximum Working Pressure	
Max Working Pressure (standard)	175 psi (12 bar)
Max Working Pressure (optional)	175#, 250#, and 300# working pressure designs.



Pump Options *contact your local rep to configure

TECHNOLOGIC STANDARD FEATURES	
CONTROL METHOD WITH INTEGRATED TECHNOLOGIC® SENSORLESS CONTROL (ITSC)	Factory configured for sensorless operation.
CONTROL METHOD WITH INTEGRATED TECHNOLOGIC® (IT)	Field configurable for sensor by others, building management system input, or optional sensor(s) provided.
ENCLOSURE	NEMA 12 (same as IP55 & UL type 12)
POWER DISCONNECT SWITCH	Included standard. Fused Disconnect Switch optional with three phase input voltage.
HARMONIC SUPPRESSION	Integrated non-saturating dual DC link reactors provide better harmonic performance than a 5% AC line reactor.
COOLING	Fan-cooled through temperature controlled and easy replacement.
AMBIENT TEMPERATURE RATING	14°F to 113°F (-10°C to 45°C)
COMMUNICATION PROTOCOLS	BACnet, Modbus RTU, N2 Metasys, FLN Apogee
ANALOG INPUTS	2 configurable for either voltage (0 to 10VDC) or current(0/4 to 20mA)
ANALOG OUTPUTS	1 (0/4 to 20mA) up to 500 ohm load accurate to 1% of full scale
DIGITAL INPUTS	4 (0 to 24VDC), NPN or PNP, 0 to 24VDC, on 5 msec scan interval, Up to 2 can be configured as pulse inputs.
DIGITAL OUTPUTS	2 (0 to 24VDC), 40mA max current, configurable as pulse outputs.
RELAY OUTPUTS	2 programmable, 240VAC or 400VAC up to 2 A
MINIMUM CONTROL HEAD	______ ft (default set to 40% of design head if not unknown)

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WIZE-4374CB94

P-5, P-6 DETAIL

N.T.S.

Bell & Gossett — a xylem brand — Submittal

Job/Project: JCCSD Capital Project / HIGHLAND ASSOCIATES	Representative: R.D. Bitzer Co., Inc.	
ESP-Systemwize: WIZE-FAECA442 Created On: 05/23/2025	Phone: (215) 604 6600	
Location/Tag: P-7 Water	Email: dcowan@rdbitzer.com	
Engineer:	Submitted By:	Date:
Contractor:	Approved By:	Date:

Close Coupled In-Line Centrifugal Pump

Series: e-80
Model: 1.5x1.5x9.5B

Features & Design
Best in Class Hydraulic Performance
Low Operating and Maintenance Cost
Horizontal or Vertical Installation



The Series e-80 is a highly efficient, heavy duty, close coupled pump designed for horizontal or vertical in-line mounting. The e-80 is available in stainless steel fitted construction, with flows up to 2500 GPM, heads to 380 feet.

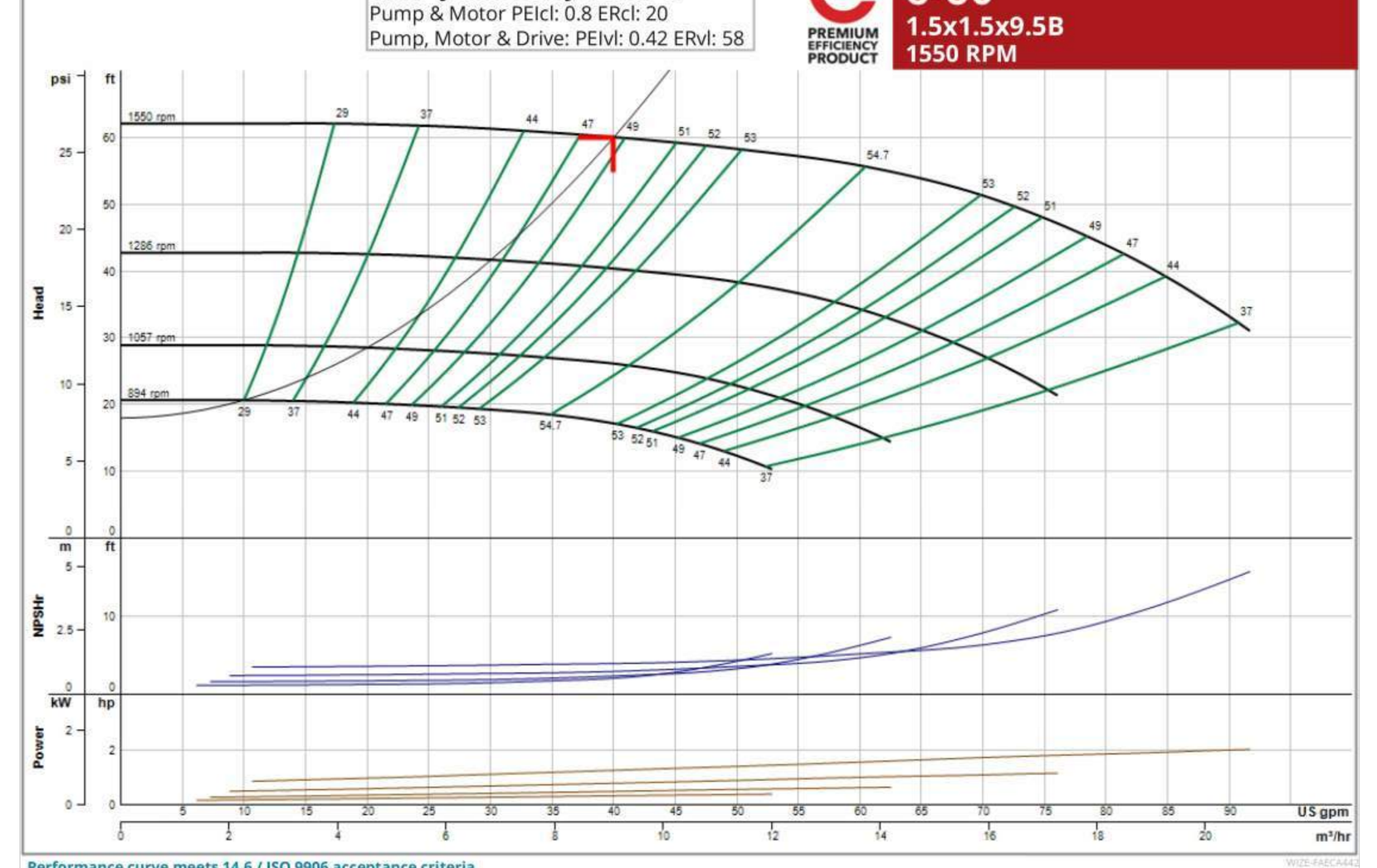
http://bellgossett.com/pumps-circulators/in-line-pumps/series-e-80/

Pump Selection Summary	
Duty Point Flow	40 US pm
Duty Point Head	60 ft
Control Head	18 ft
Duty Point Pump Efficiency	48.7 %
Part Load Efficiency Value (PLEV)	41.1 %
Impeller Diameter	8.625 in
Motor Power	3 hp
Duty Point Power	1.25 bhp
Motor Speed	1800 rpm
RPM @ Duty Point	1550 rpm
NPSHr	3.97 ft
Minimum Shutoff Head	62.1 ft
Minimum Flow at RPM	9.07 US pm
Flow @ BEP	60.5 US pm
Fluid Temperature	68 °F
Fluid Type	Water
Weight (approx. - consult rep for exact)	180 lbs
Pump Floor Space Calculation	1.8 ft

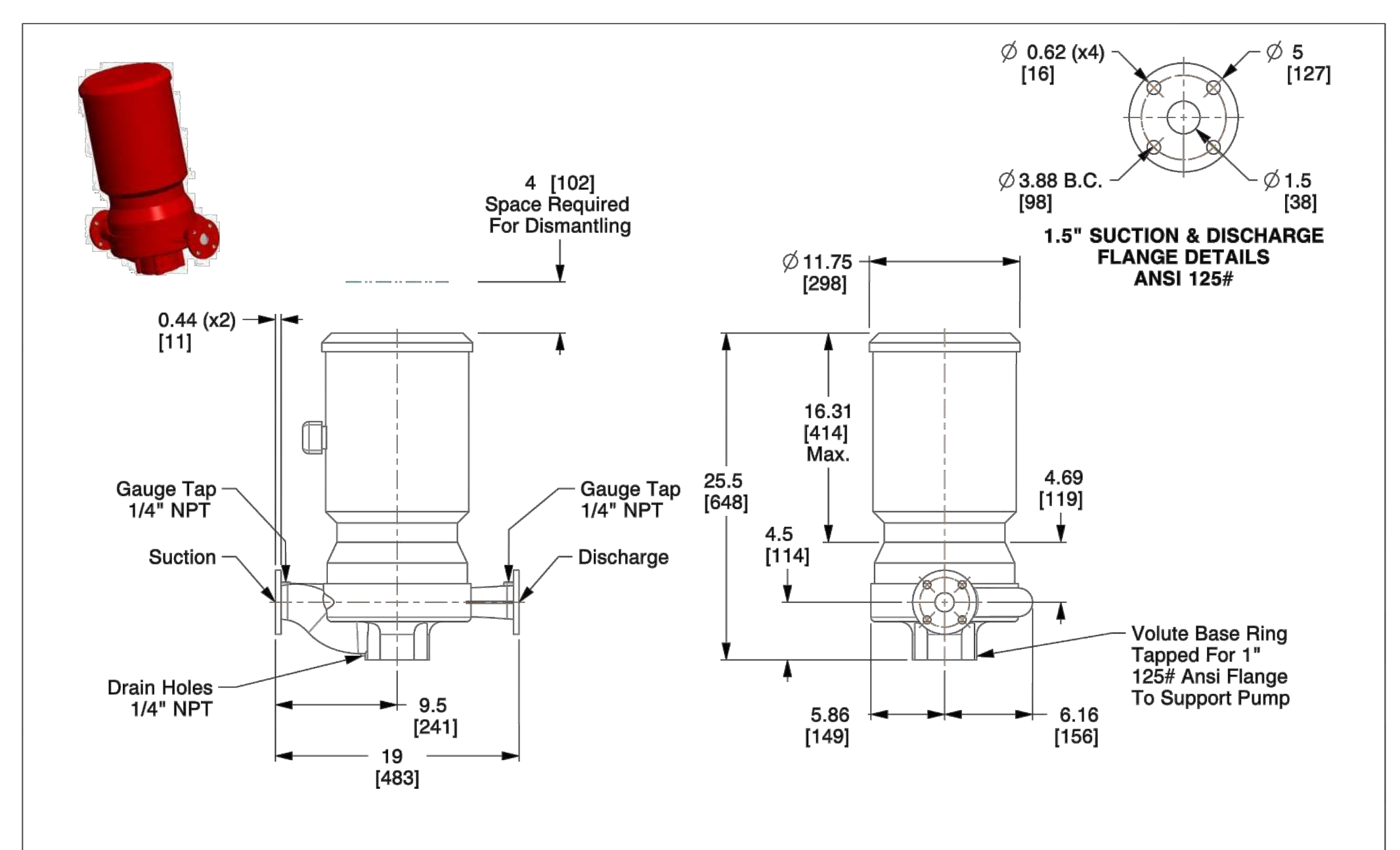
Performance Curve

Ener y Efficiency Ratin s:
Pump & Motor PEIcl: 0.8 ERcl: 20
Pump, Motor & Drive: PEIvl: 0.42 ERvl: 58

PREMIUM EFFICIENCY PRODUCT — e-80 1.5x1.5x9.5B 1550 RPM



Performance curve meets 14.6 / ISO 9906 acceptance criteria



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Dimensions are subject to change

Not to be used for construction unless certified

BG-E80-1.5x1.5x9.5B-SS182JM-1-IN

Series e-80 Close Coupled In-Line Centrifugal Pump

Seal Type:Standard Seal | Motor Frame:182JM | Flange:ANSI 125#

Dimensions : IN (mm) | Scale : N.T.S. | Submittal # : B-139.2B

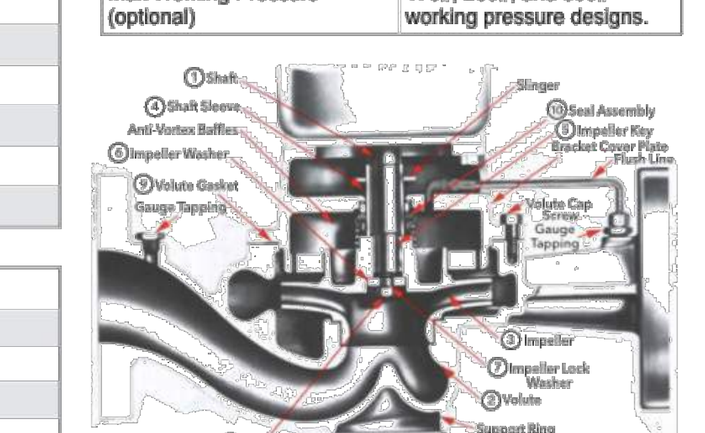
NOTE:

PROVIDE PUMPS P-7 AND P-8 (WHICH PUMP POOL WATER) AS CAST IRON, STAINLESS STEEL FITTED PUMPS, BASIS OF DESIGN BELL AND GOSSETT MODEL e-80. PROVIDE EPOXY LINED, ALL STAINLESS STEEL SEAL AND WEAR RINGS. PROVIDE EPR/CARBON/TUNGSTEN CARBIDE/SS SEAL.

Standard Materials of Construction	
Construction:	Stainless Steel Fitted Pump
1 Shaft:	Carbon Steel
2 Volute:	Cast Iron ASTM A48 Class B
3 Impeller:	ASTM A743 Grade CF8 - 304 Stainless Steel
4 Shaft Sleeve:	Stainless Steel
5 Impeller Key:	#304 Stainless Steel
6 Impeller Washer:	Carbon Steel
7 Impeller Lock Washer:	#304 Stainless Steel
8 Impeller Cap Screw:	#304 Stainless Steel
9 Volute Gasket:	Cellulose Fiber

10 Standard Mechanical Seal Assembly	
Bellows	Buna N
Faces	Carbon-Ceramic
Metal Parts	Brass or Stainless Steel
Spring	Stainless Steel

Maximum Working Pressure	
Max Working Pressure (standard)	175 psi (12 bar)
Max Working Pressure (optional)	175#, 250#, and 300# working pressure designs.



Pump Options *contact your local rep to configure

TECHNOLOGIC STANDARD FEATURES	
CONTROL METHOD WITH INTEGRATED TECHNOLOGIC® SENSORLESS CONTROL (ITSC)	Factory configured for sensorless operation.
CONTROL METHOD WITH INTEGRATED TECHNOLOGIC® (IT)	Field configurable for sensor by others, building management system input, or optional sensor(s) provided.
ENCLOSURE	NEMA 12 (same as IP55 & UL type 12)
POWER DISCONNECT SWITCH	Included standard. Fused Disconnect Switch optional with three phase input voltage.
HARMONIC SUPPRESSION	Integrated non-saturating dual DC link reactors provide better harmonic performance than a 5% AC line reactor.
COOLING	Fan-cooled through temperature controlled and easy replacement.
AMBIENT TEMPERATURE RATING	14°F to 113°F (-10°C to 45°C)
COMMUNICATION PROTOCOLS	BACnet, Modbus RTU, N2 Metasys, FLN Apogee
ANALOG INPUTS	2 configurable for either voltage (0 to 10VDC) or current(0/4 to 20mA)
ANALOG OUTPUTS	1 (0/4 to 20mA) up to 500 ohm load accurate to 1% of full scale
DIGITAL INPUTS	4 (0 to 24VDC), NPN or PNP, 0 to 24VDC, on 5 msec scan interval, Up to 2 can be configured as pulse inputs.
DIGITAL OUTPUTS	2 (0 to 24VDC), 40mA max current, configurable as pulse outputs.
RELAY OUTPUTS	2 programmable, 240VAC or 400VAC up to 2 A
MINIMUM CONTROL HEAD	______ ft (default set to 40% of design head if not unknown)

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Xylem Inc.
8200 N. Austin Avenue, Morton Grove, IL 60053
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www.bellgossett.com
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WIZE-FAECA442

Bell & Gossett — a xylem brand — Submittal

Job/Project: JCCSD Capital Project / HIGHLAND ASSOCIATES	Representative: R.D. Bitzer Co., Inc.	
ESP-Systemwize: WIZE-FAECA442 Created On: 05/23/2025	Phone: (215) 604 6600	
Location/Tag: P-8 Water	Email: dcowan@rdbitzer.com	
Engineer:	Submitted By:	Date:
Contractor:	Approved By:	Date:

Close Coupled In-Line Centrifugal Pump

Series: e-80
Model: 1.5x1.5x9.5B

Features & Design
Best in Class Hydraulic Performance
Low Operating and Maintenance Cost
Horizontal or Vertical Installation



The Series e-80 is a highly efficient, heavy duty, close coupled pump designed for horizontal or vertical in-line mounting. The e-80 is available in stainless steel fitted construction, with flows up to 2500 GPM, heads to 380 feet.

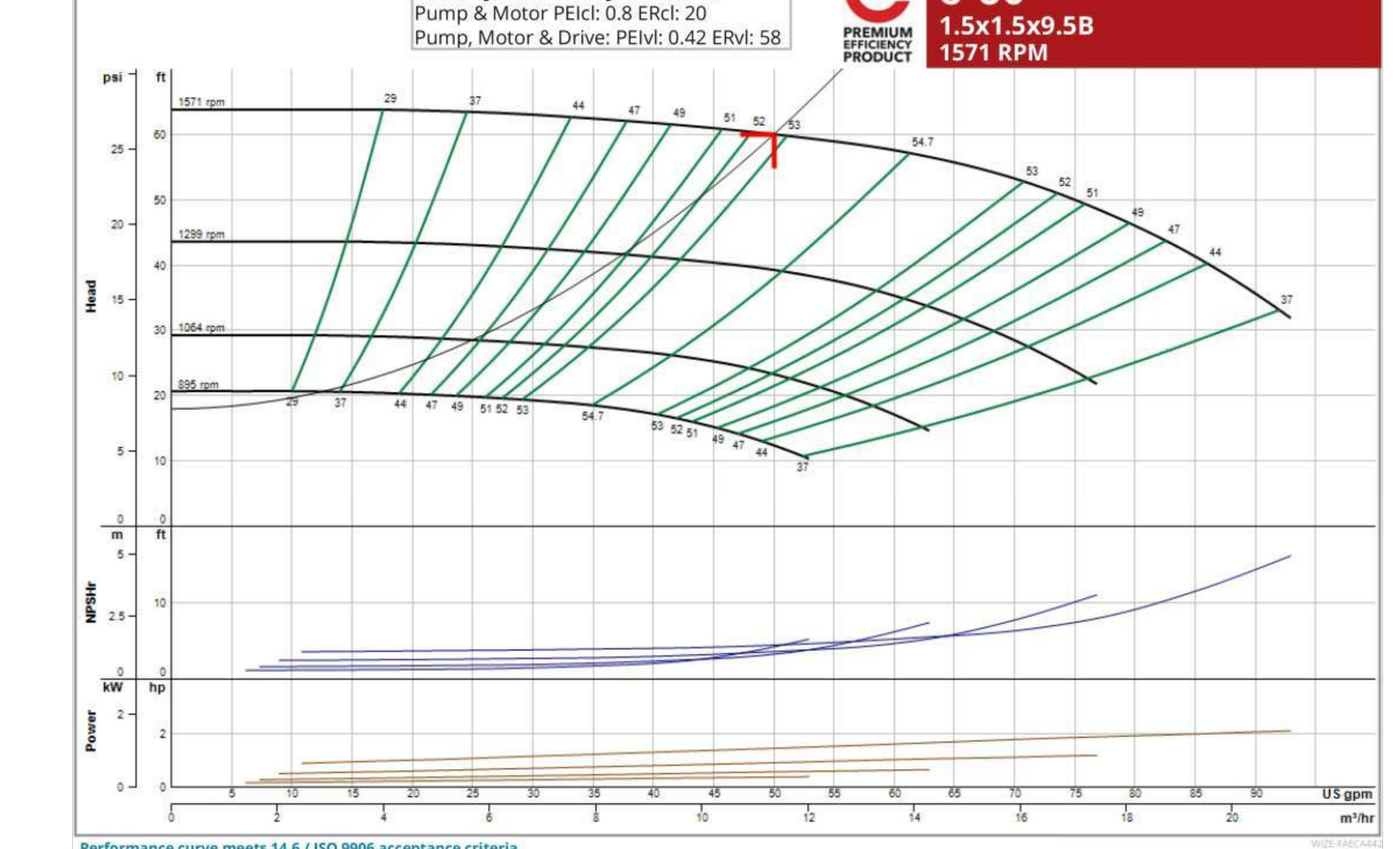
http://bellgossett.com/pumps-circulators/in-line-pumps/series-e-80/

Pump Selection Summary	
Duty Point Flow	50 US pm
Duty Point Head	60 ft
Control Head	18 ft
Duty Point Pump Efficiency	52.9 %
Part Load Efficiency Value (PLEV)	46.1 %
Impeller Diameter	8.625 in
Motor Power	3 hp
Duty Point Power	1.44 bhp
Motor Speed	1800 rpm
RPM @ Duty Point	1571 rpm
NPSHr	4.47 ft
Minimum Shutoff Head	63.8 ft
Minimum Flow at RPM	9.19 US pm
Flow @ BEP	61.3 US pm
Fluid Temperature	68 °F
Fluid Type	Water
Weight (approx. - consult rep for exact)	180 lbs
Pump Floor Space Calculation	1.8 ft

Performance Curve

Ener y Efficiency Ratin s:
Pump & Motor PEIcl: 0.8 ERcl: 20
Pump, Motor & Drive: PEIvl: 0.42 ERvl: 58

PREMIUM EFFICIENCY PRODUCT — e-80 1.5x1.5x9.5B 1571 RPM



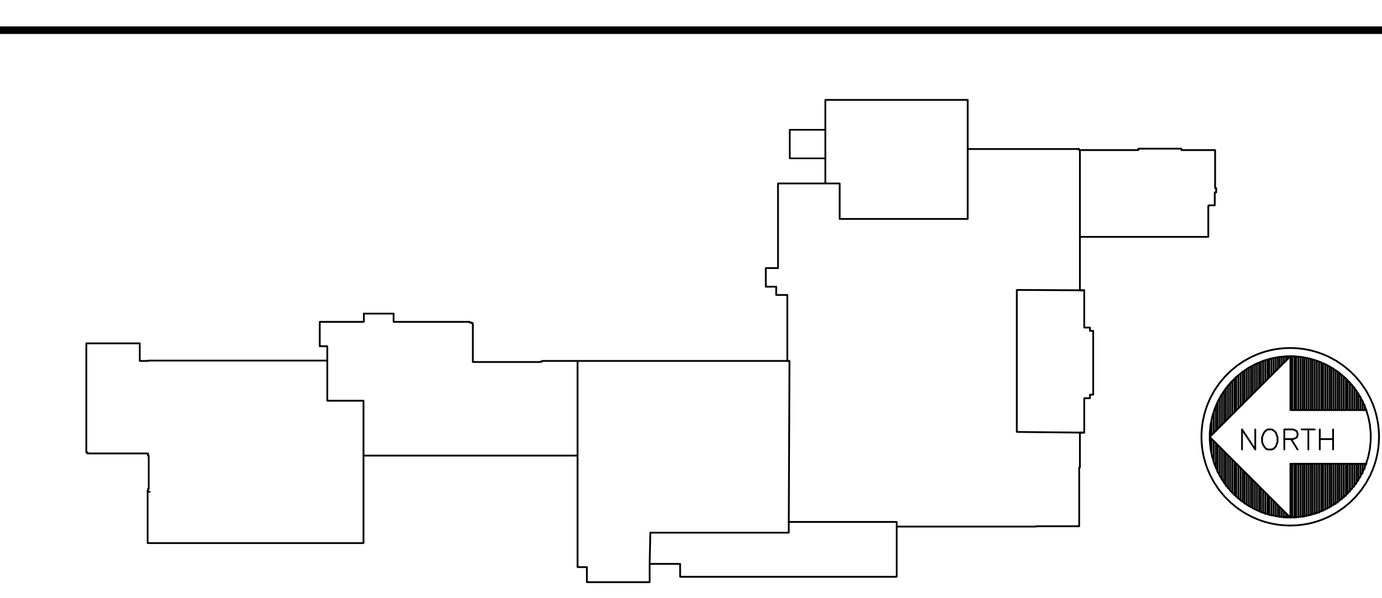
Performance curve meets 14.6 / ISO 9906 acceptance criteria

P-7, P-8 DETAIL

N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:

MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:	
B.H.	2024-239P	
CHECKED BY:	BUILDING	DRAWING NO.:
M.P.	HS	M-209
DATE: 12-01-2025		

CAD FILE: 4239-HS-M-209.DWG
PLOT DATE: 11/25/2025

PACKAGED DEHUMIDIFICATION AND AIR CONDITIONING UNIT AND REMOTE CONDENSER UNIT SCHEDULE

TAG	MAKE	AREA SERVED	MODEL	SUPPLY FAN DATA				EXHAUST FAN DATA		EVAPORATOR COIL						REHEAT COIL	POOL WATER HEAT RECOVERY CIRCUIT A&B						COMPRESSOR				CONDENSER UNIT CU-PDU-1		GAS HEAT		ROOM CONDITIONS	ELECTRICAL			UNIT WEIGHT	REMARKS/ACCESSORIES
				CFM	O/A CFM	E.S.P.	HP	CFM	HP	TOTAL MBH	SENS. MBH	MAX AC SENS. CAPACITY	LATENT CAPACITY	AMB AIR	MOISTURE REMOVAL CAPACITY, LB/HR	TOTAL HEAT REJECTION MBH	CAPACITY MBH		GPM		WPD (FT W.C.)		NO.	FLA #1	FLA #2	REFRIGERANT	MODEL NO.	MCA	MOCP	MBH INPUT	CONTROL		UNIT MCA	UNIT MOP	UNIT VOLTAGE (V/Ph/Hz)		
																	A	B	A	B	A	B													
PDU-1	DESERT-AIRE	POOL AREA	SP50RRG40	24,000	10,100	4.00	15	12,000	8	542 MBH	274.2 MBH	-	267.8 MBH	100	253.6 LB/HR	691 MBH	317	377	40	50	18.6	11.3	2	33.1	38.8	R-454B	RCES035C4S23341	14.6	15	1200	MODULATING	-	172 AMPS	200 AMPS	460/3/60	16,500 LBS	-

REMARKS/ACCESSORIES:
1. PROVIDE UNIT WITH 409 STAINLESS STEEL INDIRECT FIRED STAINLESS STEEL FURNACE WITH MODULATING CONTROL.
2. PROVIDE UNIT WITH MOTOR STARTERS AND FACTORY MOUNTED EXTERNAL NON-FUSED DISCONNECT SWITCH. THE UNIT SHALL HAVE A SINGLE POINT POWER CONNECTION.
3. CONVIENCE OUTLET WILL BE PROVIDED BY THE E.C.
4. PROVIDE 2" PLEATED 30% EFFICIENCY (MERV-8) FILTERS FOR OUTDOOR, RETURN AND EXHAUST AIR.
5. PROVIDE UNIT WITH SCROLL COMPRESSORS AND FOUR CONDENSER FANS.
6. ROOFTOP UNIT SHALL BE FURNISHED WITH FACTORY MOUNTED CONTROLS. PROVIDE UNIT CONTROLLER WITH ADDITIONAL DISPLAY MOUNT IN AQUATIC OFFICE.
7. INSTALL UNIT ON 18 INCH HIGH INSULATED ROOF CURB.
8. PROVIDE UNIT WITH REHEAT COIL.
9. PROVIDE UNIT WITH POOL WATER HEATER.
10. PROVIDE UNIT WITH EXHAUST FAN SIZED TO MAINTAIN THE POOL ROOM NEGATIVE PRESSURE.
11. PROVIDE SPARE SET OF FILTERS FOR EACH FILTER INSTALLED.
12. PROVIDE SUPPLY FAN WITH SOFT START.
13. UNIT DIMENSIONS SHALL BE 419 5/8 INCHES LONG, 132 13/16 INCHES WIDE AND 118 3/8 INCHES HIGH (MAXIMUM). COORDINATE UNIT SIZE, WEIGHT, DUCT CONNECTION SIZES WITH THE G.C. AND STRUCTURAL ENGINEER BEFORE ORDERING.
14. PROVIDE UNIT WITH ENERGY RECOVERY OPTION TO PREHEAT THE OUTSIDE AIR WITH HEAT RECOVERED FROM THE EXHAUST AIR.

HYDRONIC BOILER SCHEDULE

TAG	BOILER BHP	GROSS MAX MBH INPUT	NET MBH OUTPUT	WATER CONTENT GALLONS	PRESSURES		WATERSIDE			BURNER					NOMINAL DIMENSIONS			BASIS OF DESIGN MFR / MODEL	REMARKS
					MAWP	OPERATING	FLUID	GPM	WPD	TYPE	FUEL	MINIMUM - MAXIUM GAS PRESS	FIRING RATE (HIGH FIRE)	VOLTAGE	FLA	MCA	HEIGHT	LENGTH	WIDTH	
B-1-3	-	1,250	1,046	12.51	160	<50	WATER	120	9.2	FLOOR MOUNTED	NATURAL GAS	4" - 14"	1,203,000	120V / 1ϕ	7	9	78"	58.63"	30"	LOCHINVAR CREST / FBN1251	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
B-3-1	-	500	409	4.2	160	<50	WATER	47	2.3	FLOOR MOUNTED	NATURAL GAS	4" - 14"	466,500	120V / 1ϕ	1	-	42.5"	15.5"	27"	LOCHINVAR KNIGHT XL/ KBN501	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
B-3-2	-	500	409	4.2	160	<50	WATER	47	2.3	FLOOR MOUNTED	NATURAL GAS	4" - 14"	466,500	120V / 1ϕ	1	-	42.5"	15.5"	27"	LOCHINVAR KNIGHT XL/ KBN501	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
B-3-3	-	500	409	4.2	160	<50	WATER	47	2.3	FLOOR MOUNTED	NATURAL GAS	4" - 14"	466,500	120V / 1ϕ	1	-	42.5"	15.5"	27"	LOCHINVAR KNIGHT XL/ KBN501	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
B-3-4	-	500	409	4.2	160	<50	WATER	47	2.3	FLOOR MOUNTED	NATURAL GAS	4" - 14"	466,500	120V / 1ϕ	1	-	42.5"	15.5"	27"	LOCHINVAR KNIGHT XL/ KBN501	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

1. PROVIDE FACTORY WIRED CONTROL PANEL WITH INTEGRAL FUSED DISCONNECT AT BOILER. INCLUDE STARTER, OVERLOAD PROTECTION, CONTROL TRANSFORMER AND CONTROLS. FLAME SAFEGUARD CONTROLS TO AUTOMATICALLY RESTART THE BOILER IN THE EVENT OF POWER FAILURE.
2. FURNISH AND INSTALL GAS - FIRED BURNERS AS SPECIFIED. CONTRACTOR SHALL INCLUDE IN BID TO HAVE A BOILER / BURNER REPRESENTIVE. PROVIDE INITIAL START-UP AND TO PROVIDE THE ENGINEER WITH A WRITTEN REPORT THAT THE START-UP HAS MET ALL THE FACTORY REQUIREMENTS.
3. THE CONTRACTOR SHALL MAKE FINAL CONNECTION TO THE GAS TRAIN. THE DIVISION 22 CONTRACTOR SHALL PROVIDE THE GAS PIPING AND TERMINATE NEAR THE BOILER BURNER.4"-14" W.G. GAS PRESSURE.
4. DIVISION 26 CONTRACTOR TO MAKE ONE (1) POWER CONNECTION TO SEQUENCING CONTROL PANEL.
5. ALL OTHER WIRING SHALL BE BY THE M.C.
6. PROVIDE 10 YEAR WARRANTY ON HEAT EXCHANGERS.
7. PROVIDE DIRECT VENTING INTAKE AND EXHAUST PER MANUFACTURER'S RECOMMENDATIONS FOR MATERIAL AND TERMINATION.
8. PROVIDE CONDENSATION NEUTRALIZATION KITS. PIPE CONDENSATE NEUTRALIZATION KITS TO NEAREST EXISTING FLOOR DRAIN. PROVIDE DIAMOND PLATE RAMPS TO PREVENT ALL TRIPPING HAZARDS.
9. BOILER SHALL BE FULLY ASSEMBLED.
10. PROVIDE FLOW SWITCH.
11. PROVIDE LOW WATER CUT-OFF.
12. PROVIDE MANUAL RESET HIGH LIMIT.
13. BOILER SHALL BE SET UP AS A PRIMARY / SECONDARY SYSTEM. VERIFY PIPING CONFIGURATION WITH BOILER MANUFACTURER.
14. HVAC CONTRACTOR SHALL PROVIDE NEW BOILERS WITH A LOCHINVAR SMART SYSTEM CONTROLLERS. THE BAS SHALL COMMUNICATE WITH THIS CONTROLLER
15. PROVIDE BOILER WITH BUILT-IN GAS PRESSURE REGULATOR RATED FOR A MAXIMUM OF 14" W.C. INLET PRESSURE. PROVIDE BOILER WITH BUILT-IN MODULATING GAS VALVE. PROVIDE 5:1 TURNDOWN RATIO.
16. PROVIDE LOW NO_x MODEL WITH SEALED COMBUSTION.

SPLIT-SYSTEM AIR CONDITIONING UNIT SCHEDULE (PUY = COOLING ONLY, PUZ = HEAT PUMP)

INDOOR CEILING OR EXPOSED UNIT											OUTDOOR CONDENSING UNIT							
TAG	MAKE	MODEL	AREA SERVED	TYPE	HTG NOMINAL TONS	SA CFM	COOLING			MCA	ELECTRICAL	TAG	MAKE	MODEL	MOCP	SEER	MCA	ELECTRICAL	REMARKS /ACCESSORIES
							TOT MBH	E.A.T DB/WB	L.A.T DB/WB										
SC-1	TRANE	PKA-A24KA8	HX ROOM 186D	WALL MOUNT	2	775	24	80°F/67°F	-	1.0	208V/230V/1PH/60HZ	CU-1	TRANE	PUZ-HA24NHA1-R1	27	-	17	208V/230V/1ϕ/60HZ	1, 2, 3, 4, 5, 6,7, 8, 9, 10, 11,12,13
SC-2	TRANE	PEAD-A24AA9	OFFICE P202	CEILING SUSPENDED	1.17	742	24	95°F/71°F	-	2.25	208V/230V/1PH/60HZ	CU-2	TRANE	PUZ-HA24NHA1-R1	27	-	17	208V/230V/1ϕ/60HZ	1, 2, 3, 4, 5, 6,7, 9, 10, 11,12,13

NOTES:
1. E.C SHALL PROVIDE INDOOR UNIT AND OUTDOOR CONDENSING UNIT WITH MOTOR STARTER AND DISCONNECT SWITCH.
2. PROVIDE EACH SYSTEM HARD WIRED MITSUBISHI CONTROLLER WITH A 7-DAY PROGRAMMABLE THERMOSTAT AND ABILITY TO TIE INTO ATC SYSTEM.
3. PROVIDE ALL UNITS WITH SINGLE POINT OF POWER CONNECTION. PROVIDE WIND BAFFLES.
4. PROVIDE OUTDOOR UNITS WITH ANTI-RECYCLE TIMERS.
5. PROVIDE UNIT WITH LOW AMBIENT CONTROL (-20°F). PROVIDE A UL 508 LISTED WATER LEVEL DETECTION DEVICE THAT WILL SHUT OFF THE EQUIPMENT IN THE EVENT OF DRAIN BLOCKAGE.
6. PROVIDE CONDENSING UNITS ON "PATE" EQUIPMENT SUPPORTS. M.C. SHALL PROVIDE ALL ROOF CUTTING/PATCHING WITHOUT VOIDING THE ROOF WARRANTY.
7. THE TEMPERATURE SET-POINT FOR THIS ROOM SHALL BE 75 DEGREES F (ADJUSTABLE)
8. PROVIDE UNIT WITH A CONDENSATE PUMP WHICH PLUGS INTO THE TERMINAL STRIP WITHIN THE EVAPORATOR UNIT. PROVIDE UNIT WITH A HIGH PERFORMANCE DRAIN. PUMP WHICH LIFTS THE WATER UP TO 33 INCHES ABOVE THE UNIT.
9. PROVIDE UNIT WITH A BUILT-IN DRAIN SENSOR TO SHUT OFF THE INDOOR UNIT IF A DRAIN IS CLOGGED OR IN THE EVENT OF PUMP MALFUNCTION.
10. WHERE INDOOR SENSIBLE COOLER UNITS ARE SHOWN IN ROOMS WITH NO CEILINGS, PROVIDE UNIT HUNG FROM STRUCTURE WITH THREADED ROD.
11. PROVIDE UNIT CENTERED OVER THE ENTRY DOOR INTO THE ROOM.
12. PROVIDE WALL-MOUNTED MICROPROCESSOR CONTROL WHICH SHALL MONITOR SPACE TEMPERATURE AND HUMIDITY AND SEND AN ALARM TO THE DDC PANEL IF THE TEMPERATURE OR HUMIDITY IN THE ROOM GOES TO HIGH OR LOW (OUT OF RANGE). PROVIDE ALL CONTROLS, WIRING, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE CONTROLLED BY THE UNIT MANUFACTURER'S SPACE THERMOSTAT. THE BMS CONTRACTOR SHALL INSTALL AND WIRE THERMOSTAT. THE BMS CONTRACTOR SHALL PROVIDE THE LOW VOLTAGE CONTROL INTERLOCK WIRING BETWEEN INDOOR AND OUTDOOR UNITS. THE BMS CONTRACTOR SHALL WIRE THE UNIT MANUFACTURER PROVIDED REMOTE ALARM CONTACT TO THE BMS. THE BMS SHALL MONITOR THE SPACE TEMPERATURE IN EACH ALARMING DURING ABNORMAL CONDITIONS. CONSULT OWNER FOR ALARM PARAMETERS. THE SYSTEM SHALL BE CONTROLLED FROM THE DDC CONTROLLER AT EACH UNIT. IT SHALL PROVIDE ALL CONTROL FUNCTIONS.
13. PROVIDE PAR-33MAAJ WIRED REMOTE CONTROLLER, PROVIDE ROOF SUPPORT + STAND FOR OUTDOOR UNIT (AT LEAST 18" HIGH) – BASIS OF DESIGN FOR STAND: PATE MODEL ES-1 (8" HIGH) + MITSUBISHI FACTORY STAND (12" HIGH). PROVIDE SUBMITTAL FOR REVIEW BY STRUCTURAL ENGINEER AND ARCHITECT . PROVIDE BACNET INTERFACE (ONE PER EACH INDOOR UNIT).
14. PROVIDE WIND BAFFLES AND ADVANCED WIND BAFFLES FOR LOW AMBIENT COOLING DOWN TO -20°F OUTDOORS.

EXHAUST FAN SCHEDULE

TAG	CONTROL METHOD	FAN TYPE	CFM	ESP IN. H_20	FAN RPM	FAN DIA.	MOTOR				DRIVE	FAN MATERIAL	DISCHARGE STACK DIA./OUTLET	SERVICE	MFGR / MODEL	REMARKS
							RPM	HP	ENCLOSURE	V/PH/HZ						
EF-1	DESERTAIRE CONTROLLER SHALL INTERLOCK THIS FAN WITH PDU-1	UTILITY	5000	4	2240	19.31	1800	7.5	TEFC	460/3/60	BELT	FRP	20.5 X 14.0	HEATING HOT WATER	DHK / 1825	1-4,6-7
EF-2	DESERTAIRE CONTROLLER SHALL INTERLOCK THIS FAN WITH DU-1.	UTILITY	2000	4	2127	15.88	-	5	TEFC	460/3/60	BELT	FRP	12.2 X 9.59	HEATING HOT WATER	CNW / 250	1-3,5-7
EF-1-LC	INTERLOCK THIS FAN WITH VAV AIR HANLDING UNIT AH-2-EX.	DOWNBLAST	2850	1	746	-	1140	5	TEFC	460/3/60	DIRECT	ALUMINUM	-	LIVING CENTER	G-240-B-VGD	8-21
EF-23	KITCHEN DISHWASHER CONTROLLER SHALL ENERGIZE FAN.	UPBLAST	800	1	1634	-	2160	1	TEFC	460/3/60	DIRECT	ALUMINUM	-	KITCHEN DISHWASHER	CUE-160XP-VG	11,13,18-20,22-27,30-31,33-38
EF-1-AD	INTERLOCK WITH RTU-ADMIN.	CEILING EXHAUST	100	0.5	818	-	-	-	ODP	115/1/60	DIRECT	COMPOSITE	-	ADMIN STAFF TOILET 140A	SP-A200	39-50
EF-2-AD	INTERLOCK WITH RTU-ADMIN.	CEILING EXHAUST	100	0.5	818	-	-	-	ODP	115/1/60	DIRECT	COMPOSITE	-	ADMIN STAFF TOILET 140B	SP-A200	39-50
EF-3-AD	INTERLOCK WITH RTU-ADMIN.	CEILING EXHAUST	175	0.5	900	-	-	-	ODP	115/1/60	DIRECT	COMPOSITE	-	ADMIN PANTRY	SP-A200	39-49,51
EF-3-VEST	INTERLOCK WITH RTU-VESTIBULE.	UPBLAST	250	0.5	1593	-	1725	1/10	TENV	115/1/60	DIRECT	ALUMINUM	-	POOL VESTIBULE TOILETS	CUE-080-VG	13,18-20,22-23,25,27, 33,39,52-55

REMARKS:
1) BELT AND SHAFT GUARD
2) MOTOR COVER
3) ACCESS DOOR
4) 0.75" DRAIN AND PLUG
5) 0.5" DRAIN AND PLUG
6) PROVIDE EF-1, AND EF-2 WITH ROOF CURBS AND DISCONNECT SWITCHES.
7) PROVIDE EF-1 AND EF-2 WITH AN INDOOR VFD IN AN ENCLOSURE RATED AND SEALED FOR USE IN AN INDOOR POOL AREA. BASIS OF DESIGN: YASKAWA. PROVIDE VFD WITH ELECTRONIC BYPASS, FUSED DISCONNECT SWITCH, AND HARMONIC FILTER. PROVIDE EF-1 AND EF-2 WITH AN OUTDOOR DISCONNECT SWITCH. PROVIDE DISCONNECT SWITCH WITH AUXILIARY CONTACT TO INTERLOCK WITH INDOOR VFD (TO TURN OFF VFD WHEN DISCONNECT SWITCH ON ROOF IS TURNED TO "OFF"). MECHANICAL CONTRACTOR SHALL PROVIDE ALL INTERLOCK WIRING AS REQUIRED.
8) CONNECTED LOAD 2645 CFM
9) NEMA Premium Efficient Motor - meets NEMA Table 12-12
10) Motor VFD Rated with Shaft Grounding Protection
11) Motor with Shaft Grounding
12) Motor with 40 Degree C Ambient Temperature
13) Motor Manufactured in USA Only
14) Vari-Green Drive 100+ w/On-Board Potentiometer Dial test
15) Standard Curb Cap Size - 34 Square
16) Switch, NEMA-1, Fused, Heavy Duty (meets Automotive Duty requirments),
17) Shipped with Unit
18) Foam Curb Seal (Factory Applied)
19) Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc
20) Fastener Material: Stainless
21) Birdscreen: Stainless, nom. 82% Free Area Steel (Attached)
22) Motor - Vari-Green EC motor
23) Control - Dial for balancing
24) Standard Curb Cap Size - 22 Square
25) UL/cUL 705 Listed - "Power Ventilators"
26) Switch, NEMA-1, Toggle
27) Junction Box Mounted & Wired in weather-protected motor compartment
28) Coated with Hi-Pro Polyester, Concrete Gray-RAL 7023, Fan And Attached Acc
29) Birdscreen: Aluminum, nom. 86% Free Area
30) Aluminum Wheel Material
31) Conduit Chase Qty 1
32) Damper Shipped Loose, BD-100-PB-16x16, Gravity Operated, Not Coated, Nominal Size
33) High Wind Rated
34) Non-Stick Wheel
35) Birdscreen: Stainless, nom. 85% Free Area
36) External Lifting/Tie Down Points - Set of 4
37) Damper Shipped Loose, VCD-43-PB-16X16, Non Coated, Nominal Size
38) End Switch
39) Switch NEMA-3R,Toggle
40) Motor rated for continuous use
41) Motor with Thermal Overload
42) Motor with CSA Approval
43) Motor with 40 Degree C Ambient Temperature
44) UL/cUL 507 Listed - Electric Fan
45) Solid State Speed Control, 6 Amp, Shipped Loose
46) Round Duct Connector, (PN: RDC-8) Shipped Loose
47) Adjustable easy installation mounting bracket
48) Standard Grille
49) Polypropylene Wheel Material
50) Fan to operate when space is occupied. Provide occupancy sensor.
51) Fan to operate during occupied hours.
52) Composite Wheel Material
53) Birdscreen: Stainless Steel, nom. 89% Free Area.
54) Aluminum Rub Ring
55) Standard Curb Cap Size - 19 Square - GPF-19-G8

VARIABLE SPEED DRIVE SCHEDULE

VFD TAG	DRIVEN EQUIPMENT	MOTOR DATA			ENCLOSURE RATING	HARMONIC MITIGATION	DISCONNECT	BYPASS	VFD ISOLATION SWITCH	VFD MIN. SCCR	BASIS OF DESIGN	NOTES
		QTY	VOLTAGE	HP (EA)								
VFD P-5	P-5	1	460V	5	UL TYPE 1	5% IMPEDANCE	DISCONNECT	NONE	NO	100 KA	ABB ACH850-PDR-07A6-4	1,2,3,4,5,6,7
VFD P-6	P-6	1	460V	5	UL TYPE 1	5% IMPEDANCE	DISCONNECT	NONE	NO	100 KA	ABB ACH850-PDR-07A6-4	1,2,3,4,5,6,7
VFD P-7	P-7	1	460V	3	UL TYPE 1	5% IMPEDANCE	DISCONNECT	NONE	NO	100 KA	ABB ACH850-PDR-04A8-4	1,2,3,4,5,6,7
VFD P-8	P-8	1	460V	3	UL TYPE 1	5% IMPEDANCE	DISCONNECT	NONE	NO	100 KA	ABB ACH850-PDR-04A8-4	1,2,3,4,5,6,7
VFD EF-1	EF-1	1	460V	7.5	UL TYPE 1	5% IMPEDANCE	DISCONNECT	NONE	NO	100 KA	ABB ACH850-PDR-012A-4	1,2,3,4,5,6,7
VFD EF-1	EF-2	1	460V	5	UL TYPE 1	5% IMPEDANCE	DISCONNECT	NONE	NO	100 KA	ABB ACH850-PDR-07A6-4	1,2,3,4,5,6,7
VFD EF-23	EF-23	1	460V	1	UL TYPE 1	5% IMPEDANCE	DISCONNECT	NONE	NO	100 KA	ABB ACH850-PDR-02A1-4	1,2,3,4,5,6,7

NOTES:
1. At minimum, VFD shall include 5% impedance via 5% AC line reactor or dual DC bus chokes sized to 5% equivalent impedance. VFD input Amps Shall Not exceed VFD output Amps.
2. Provide UL1449 surge suppression device.
3. VFD shall include alpha-numeric keypad interface, with display in plain English. (Displays relying solely on codes are not acceptable).
4. Provide internal EMI/RFI filter per IEC 61800-3.
5. VFD shall be BTL Listed for BACnet MS/TP, and also include Modbus and N2.
6. VFD shall include real time clock with battery backup (include 10 year battery).
7. System to meet IEEE 519-2014 based on the harmonic mitigation method(s) identified in the above schedule

CABINET UNIT HEATER SCHEDULE

TAG	TYPE	SIZE (W x H x D)	CFM	MBH	GPM	EWT	EAT	WPD	HP	VOLTAGE	MFR / MODEL	REMARKS
CUH-1	CEILING	59"x25"x9-1/2"	630	69.8	6.98	180	60	3.30	1/10	115V-1PH	STERLING/C-1160	BOTTOM SUPPLY, REAR RETURN

NOTES:
1. HIGH CAPACITY 2-ROW COIL.

ELECTRIC BASEBOARD SCHEDULE

TAG	LENGTH	WATTS	BTU/HR	VOLTAGE	MFGR / MODEL	REMARKS
EBB-1A	108"	4500	15,345	277/1ϕ	INDEECO MODEL 916 - PEDESTAL	PROVIDE REMOTE T'STAT. PROVIDE DISCONNECT SWITCH.
EBB-1B	120"	5000	17,050	277/1ϕ	INDEECO MODEL 916 - PEDESTAL	PROVIDE REMOTE T'STAT. PROVIDE DISCONNECT SWITCH.
EBB-1C	60"	2500	8,525	277/1ϕ	INDEECO MODEL 916 - PEDESTAL	PROVIDE REMOTE T'STAT. PROVIDE DISCONNECT SWITCH.
EBB-2	72"	3000	10,236	277/1ϕ	INDEECO MODEL 916 - PEDESTAL	PROVIDE REMOTE T'STAT. PROVIDE DISCONNECT SWITCH.
EBB-3	48"	3000	10,236	277/1ϕ	INDEECO MODEL 916 - PEDESTAL	PROVIDE REMOTE T'STAT. PROVIDE DISCONNECT SWITCH.
EBB-4	48"	1500	5,118	277/1ϕ	INDEECO MODEL 916 - PEDESTAL	PROVIDE REMOTE T'STAT. PROVIDE DISCONNECT SWITCH.

BUFFER TANK SCHEDULE

TAG	TYPE	GALLON CAPACITY	MFR / MODEL	REMARKS
BT-1	HEATING HOT WATER	300	CEMLINE / V300SEB	NOTES 1, 2, 3, 4, 5, 6, 7, 8

NOTES:
1. R-12.5 INSULATED JACKET WITH REMOVABLE JACKET FOR MINIMAL HEAT LOSS
2. TEXTURED, IMPACT RESISTANT POLYMER JACKET
3. LIGHT-WEIGHT 316L STAINLESS STEEL TANK CONSTRUCTION
4. BUILDWELL
5. DRAIN AND AIR VENT CONNECTIONS
6. 5 YEAR WARRANTY
7. PROVIDE A MINIMUM CLEARANCE AROUND THIS UNFIRED PRESSURE VESSEL = 18"
8. SIZING:

$$V_{MIN} = \frac{1 \times (Q \text{ heat source} - Q \text{ load})}{500 \times (\Delta T)}$$

$$V_{MIN} = \frac{(15 \text{ minutes}) \times (1{,}312{,}000 \text{ Btu/Hr} - 1{,}248{,}000 \text{ Btu/Hr})}{500 \times (180° - 160°)}$$

$$V_{MIN} = 96 \text{ Gallons (Minimum)}$$

LOUVER SCHEDULE

TAG	LOCATION	SYSTEM SERVED	SERVICE	DESIGN CFM	TOTAL VELOCITY (F.P.M.)	DIMENSIONS		DESIGN BASIS	NOTES
						LENGTH (FEET)	HEIGHT (FEET)		
L-1	MECHANICAL PLENUM (POOL AREA)	PDU-1	RETURN	10,250	685	8.0	4.0	RUSKIN-ELF375DX	1,2,3,6,7,8,9
L-2	MECHANICAL PLENUM (POOL AREA)	PDU-1	RETURN	10,250	685	8.0	4.0	RUSKIN-ELF375DX	1,2,3,6,7,8,9
L-3	LIVING CENTER	RANGE HOOD	EXHAUST	150	600	1.0	1.5	RUSKIN-ELM6375DX	1,2,4,5,7,8
L-4	LIVING CENTER	RANGE HOOD	EXHAUST	150	600	1.0	1.5	RUSKIN-ELM6375DX	1,2,4,5,7,8
L-5	LIVING CENTER	DRYER	EXHAUST	-	-	0.25	0.25	GREENHECK WC-4	1,2,4,5,7,8
L-6	BOILER ROOM 193A/MER-3 AREA WAY	DU-1	OUTSIDE AIR	1725	-	6	10'-1.5"	RUSKIN-ELF375DX	1,2,4,6,7,8
L-7	P202 OUTSIDE WALL	SC-2	OUTSIDE AIR	25	-	0.677	0.395	RUSKIN-BV100	-

NOTES:
1. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR FINAL LOCATION
2. COLOR CHOICE BY ARCHITECT (BONE WHITE)
3. DO NOT PROVIDE BIRDSCREEN. PROVIDE 70% PVDF FINISH
4. PROVIDE BIRDSCREEN
5. PROVIDE INTEGRAL FLANGE FRAME
6. PROVIDE STANDARD FRAME
7. M.C. SHALL FIELD VERIFY LOUVER ROUGH OPENING PRIOR TO ORDERING AND INSTALLING
8. SEAL AROUND LOUVER SO IT IS WEATHER-PROOF AND IS WATER TIGHT
9. INSTALL LOUVER UPSIDE DOWN TO BLOCK SIGHT OF SHEETMETAL BEHIND.

EXPANSION TANK/ AIR SEPARATOR

TAG	SYSTEM	APPROX SYSTEM VOLUME GAL	SYSTEM TEMP RANGE		INITIAL PRESS IN TANK PSIG	PRV FILL PRESS AT TANK PSIG	MAX OPER PRESS		TANK SIZE GAL	AIR SEPARATOR					
			MIN	MAX			RELIEF VALVE PSIG	AT TANK PSIG		TAG	SIZE PIPE	GPM	MAX PD	PIPE SIZE TO TANK	COLD WATER FILL SIZE
ET-1	HOT WATER	1400	40	190	20	20	30	30	80	AS-3-1	4"	227	-	3"	3/4"

REMARKS:
1. BASIS OF DESIGN EXPANSION TANK: ARMSTRONG AX-144V
2. BASIS OF DESIGN AIR SEPARATOR: WESSELS WVA-4-WM1 MOUNT UNIT ON CONCRETE PAD ON GRADE.

ELECTRIC UNIT HEATER SCHEDULE

TAG	TYPE	CFM	MBH	KW	HP	VOLTAGE	FLA	MFGR / MODEL	REMARKS
UH-1	HORIZONTAL	380	10.2	3	1/40	208V/1PH	-	MODINE / HER 30	1

REMARKS:
1. PROVIDE WALL-MOUNTED DDC SPACE TEMPERATURE SENSOR.

HOT WATER UNIT HEATER SCHEDULE

TAG	TYPE	CFM	MBH	GPM	WPD FT.H_20	MOTOR			MFGR / MODEL	REMARKS
						RPM	H.P.	VOLTAGE		
UH-2	HORIZONTAL	580	24.8	2.5	2.2	1550	25 W	115V/1PH/60HZ	STERLING / HS-125A	1
UH-3	HORIZONTAL	580	24.8	2.5	2.2	1550	25 W	115V/1PH/60HZ	STERLING / HS-125A	1

REMARKS:
1. PROVIDE WALL-MOUNTED DDC SPACE TEMPERATURE SENSOR.

PUMP SCHEDULE

TAG	SERVICE	TYPE	GPM	PUMP HEAD (FT.)	MOTOR POWER (HP)	BRAKE POWER (BHP)	IMPELLER DIAMETER (IN.)	EFFICIENCY (%)	RPM	VOLTS	FLA	MFGR / MODEL	REMARKS
P-1	BOILER PRIMARY PUMP	INLINE	47	45	2.0	-	-	47.5	2990	208V/1PH	-	BELL & GOSSETT SERIES ECOCIRC XL_70-145	2
P-2	BOILER PRIMARY PUMP	INLINE	47	45	2.0	-	-	47.5	2990	208V/1PH	-	BELL & GOSSETT SERIES ECOCIRC XL_70-145	2
P-3	BOILER PRIMARY PUMP	INLINE	47	45	2.0	-	-	47.5	2990	208V/1PH	-	BELL & GOSSETT SERIES ECOCIRC XL_70-145	2
P-4	BOILER PRIMARY PUMP	INLINE	47	45	2.0	-	-	47.5	2990	208V/1PH	-	BELL & GOSSETT SERIES ECOCIRC XL_70-145	2
P-1-3	BOILER PRIMARY PUMP	INLINE	120	30	2.0	-	-	56.6	2916	208V/1PH	-	BELL & GOSSETT SERIES ECOCIRC XL_40-275	2
P-5	SECONDARY HEATING HOT WATER PUMPS	INLINE	227	60	7.5	4.78	8.75	71.5	1800	460/3PH	-	BELL & GOSSETT SERIES e-80_2.5x2.5x9.5C	2
P-6	SECONDARY HEATING HOT WATER PUMPS	INLINE	227	60	7.5	4.78	8.75	71.5	1800	460/3PH	-	BELL & GOSSETT SERIES e-80_2.5x2.5x9.5C	2
P-7	HEAT RECOVERY PUMP	INLINE	40	60	3	1.25	8.625	48.7	1550	460/3PH	-	BELL & GOSSETT SERIES e-80_1.5x1.5x9.5B	1,2
P-8	HEAT RECOVERY PUMP	INLINE	50	60	3	1.44	8.625	52.9	1571	460/3PH	-	BELL & GOSSETT SERIES e-80_1.5x1.5x9.5B	1,2

REMARKS:
1. P-7, P-8: PROVIDE PUMPS P-7 AND P-8 (WHICH PUMP POOL WATER) AS CAST IRON, STAINLESS STEEL FITTED PUMPS, BASIS OF DESIGN BELL AND GOSSETT MODEL e-80. PROVIDE EPOXY COATED/LINED INTERNALS, ALL STAINLESS STEEL SEAL AND WEAR RINGS, VOLUTE WEAR RING, FKM/EPR/CARBON TUNGSTEN/CERAMIC SS SEAL.
2. PROVIDE VFD.

SWIMMING POOL DESIGN CRITERIA SCHEDULE

DESIGN ITEM	VALUE OR DESCRIPTION
POOL WATER SURFACE AREA	4,620 SQ FT INCLUDING GUTTER CHANNEL
POOL LENGTH	77'-1"
POOL WIDTH	48 FT, 53 FT AT THE STEPS
POOL ROOM LENGTH	108'-6" (MAXIMUM: ROOM IS NOT A SIMPLE RECTANGLE)
POOL ROOM WIDTH	91'-2.5" (MAXIMUM: ROOM IS NOT A SIMPLE RECTANGLE)
POOL ROOM HEIGHT	30'-0"
OCCUPANCY OF SPECTATOR AREA	118
IS SPECTATOR AREA OPEN TO POOL AREA (NON GLASSED OFF)	YES
TARGET ROOM TEMPERATURE (SEE NOTE #1)	84°F (ADJUSTABLE)
TARGET WATER TEMPERATURE (SEE NOTE #1)	82°F (ADJUSTABLE)
TARGET ROOM RELATIVE HUMIDITY	50%-55% RH
AUXILLARY

Ventilation Sizing Summary for RTU-ADMIN-MULTIZONE

Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule — 10/24/2025
Prepared by: Highland Associates — 01:17AM

1. Summary

- Ventilation Sizing Method: **ASHRAE Std 62.1-2016**
- Design Condition: **Minimum flow (heating)**
- Occupant Diversity (D): **1.000**
- Uncorrected Outdoor Air Intake (Vou): **390** CFM
- System Ventilation Efficiency (Ev): **0.800**
- Outdoor Air Intake (Vot): **488** CFM

2. Space Ventilation Analysis

Zone Name / Space Name	Mult.	Minimum Supply Air (CFM) (Vpz)	Space Floor Area (ft²) (Az)	Area Outdoor Air Rate (CFM/ft²) (Ra)	Time Averaged Occupancy (Occupants) (Pz)	People Outdoor Air Rate (CFM/person) (Rp)	Air Distribution Effectiveness (Ez)	Space Outdoor Air (CFM) (Voz)	Breathing Zone Outdoor Air (CFM) (Vbz)	Space Ventilation Efficiency (Evz)
VAV-1-AD										
RECEPTION 141B	1	42	387.0	0.06	2.0	5.00	0.8	**42**	33	0.800
OFFICE 141B	1	18	154.0	0.06	1.0	5.00	0.8	**18**	14	0.800
VAV-2-AD										
SEC. VESTIBULE 141A	1	14	183.0	0.06	0.0	0.00	0.8	**14**	11	0.800
VAV-3-AD										
WAITING - ADMIN	1	26	97.0	0.06	3.0	5.00	0.8	**26**	21	0.800
MAIN OFFICE CORR 141	1	62	823.0	0.06	0.0	0.00	0.8	**62**	49	0.800
TOILET ROOM 140A	1	0	80.0	0.00	1.0	0.00	0.8	**0**	0	0.800
TOILET ROOM 140B	1	0	80.0	0.00	1.0	0.00	0.8	**0**	0	0.800
PANTRY 139B	1	15	101.0	0.12	0.0	0.00	0.8	**15**	12	0.800
STORAGE 138G	1	13	87.0	0.12	0.0	0.00	0.8	**13**	10	0.800
VAV-4-AD										
FACULTY MAIL/PRINT 138	1	18	240.0	0.06	1.0	0.00	0.8	**18**	14	0.800
GENERAL STORAGE 138C	1	19	127.4	0.12	0.0	0.00	0.8	**19**	15	0.800
DISPLAY AREA 139A	1	18	123.0	0.12	0.0	0.00	0.8	**18**	15	0.800
VAV-5-AD										
CONF RM 138E	1	100	255.0	0.06	13.0	5.00	0.8	**100**	80	0.800
VAV-6-AD										
CONF RM 138F	1	69	174.0	0.06	9.0	5.00	0.8	**69**	55	0.800
VAV-7-AD										
OFFICE 141C	1	24	233.0	0.06	1.0	5.00	0.8	**24**	19	0.800
VAV-8-AD										
OFFICE 141D	1	23	224.0	0.06	1.0	5.00	0.8	**23**	18	0.800
VAV-9-AD										
OFFICE 141E	1	27	275.0	0.06	1.0	5.00	0.8	**27**	22	0.800
Totals (incl. Space Multipliers)		**488**							**390**	**0.800**

Hourly Analysis Program 5.10 — Page 1 of 1

RTU-ADMIN MULTIZONE VENTILATION CALCULATION PER ASHRAE STANDARD 62.1:

N.T.S.

Ventilation Sizing Summary for RTU-GUIDANCE-MULTIZONE

Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule — 10/24/2025
Prepared by: Highland Associates — 01:17AM

1. Summary

- Ventilation Sizing Method: **ASHRAE Std 62.1-2016**
- Design Condition: **Minimum flow (heating)**
- Occupant Diversity (D): **1.000**
- Uncorrected Outdoor Air Intake (Vou): **243** CFM
- System Ventilation Efficiency (Ev): **0.800**
- Outdoor Air Intake (Vot): **304** CFM

2. Space Ventilation Analysis

Zone Name / Space Name	Mult.	Minimum Supply Air (CFM) (Vpz)	Space Floor Area (ft²) (Az)	Area Outdoor Air Rate (CFM/ft²) (Ra)	Time Averaged Occupancy (Occupants) (Pz)	People Outdoor Air Rate (CFM/person) (Rp)	Air Distribution Effectiveness (Ez)	Space Outdoor Air (CFM) (Voz)	Breathing Zone Outdoor Air (CFM) (Vbz)	Space Ventilation Efficiency (Evz)
VAV-1GUID										
FILE STORAGE 146B	1	22	148.0	0.12	0.0	0.00	0.8	**22**	18	0.800
VAV-2GUID										
OFFICE 146A	1	17	146.0	0.06	1.0	5.00	0.8	**17**	14	0.800
VAV-3GUID										
OFFICE 146C	1	17	146.0	0.06	1.0	5.00	0.8	**17**	14	0.800
VAV-4GUID										
OFFICE 148A	1	17	148.0	0.06	1.0	5.00	0.8	**17**	14	0.800
VAV-5GUID										
OFFICE 148	1	18	152.0	0.06	1.0	5.00	0.8	**18**	14	0.800
VAV-6GUID										
OFFICE 146D	1	18	152.0	0.06	1.0	5.00	0.8	**18**	14	0.800
VAV-7GUID										
GUIDANCE 146	1	99	899.0	0.06	5.0	5.00	0.8	**99**	79	0.800
VAV-8GUID										
WOMEN'S TOILET 145	1	56	376.0	0.12	7.0	0.00	0.8	**56**	45	0.800
MEN'S TOILET 144	1	39	263.0	0.12	4.0	0.00	0.8	**39**	32	0.800
Totals (incl. Space Multipliers)		**304**							**243**	**0.800**

Hourly Analysis Program 5.10 — Page 1 of 1

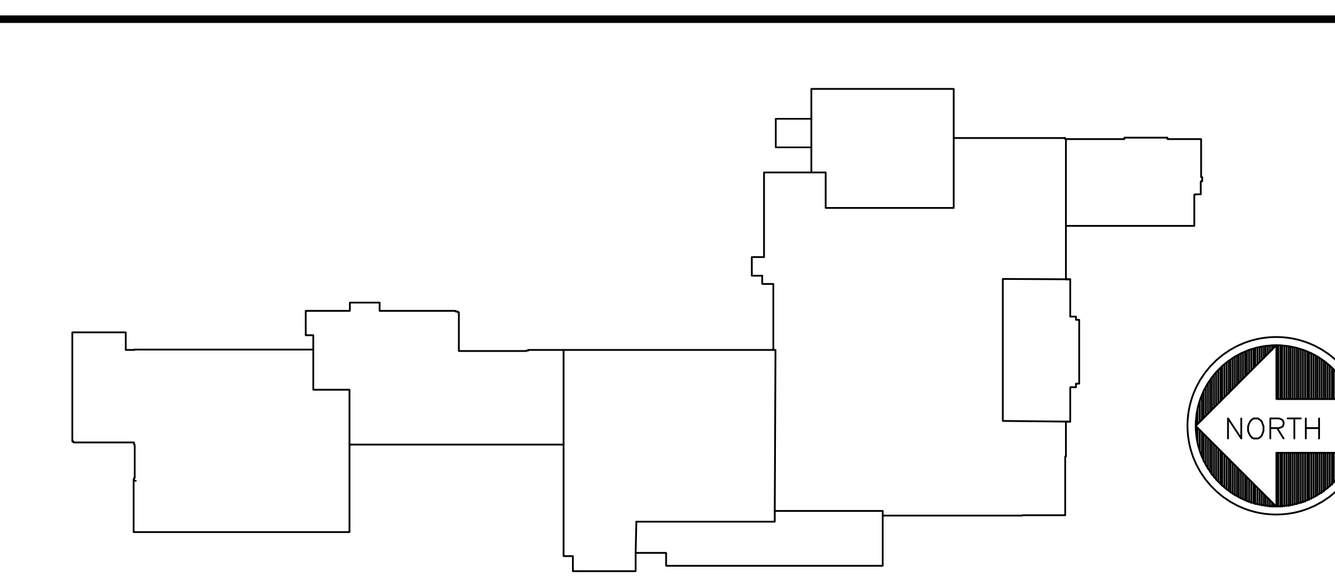
RTU-GUIDEANCE MULTIZONE VENTILATION CALCULATION PER ASHRAE STANDARD 62.1:

N.T.S.

Zone Identification			Standard Case: 2020 Mechanical Code of New York State Verification Rate Procedure											Design Case - Cooling		Design Case - Heating		Design Exhaust
Room or Zone	Occupancy Category	Area (sf)	People Outdoor Air Rate Rp (cfm/per)	Area Outdoor Air Rate Ra (cfm/sf)	Occupant Density (#/1000 sf)	Occupancy (# people) Pz	People OA CFM Vpeo	Area OA CFM - Varea	Breathing Zone Outdoor Air Flow Vbz (cfm)	Zone Air Distribution Effectiveness Ez	Zone Outdoor Air Flow Voz (cfm)	Code Required Exhaust Airflow Rate (cfm/sf) or (cfm/fixture)	Total Exhaust Required (cfm)	Zone Primary Air Flow Vpz (cfm)	Primary Outdoor Air Fraction Zp = Voz/Vpz	Zone Primary Air Flow Vpz (cfm)	Primary Outdoor Air Fraction Zp = Voz/Vpz	Total Exhaust Provided
AHU-1-EX Bus garage Office Space																		
Head Driver M104	Office Buildings - Office space	221	5	0.06	5	2	10.0	13.2	23	0.8	29	0	0	265	0.11	265	0.11	0
Transportation Superintendent M103	Office Buildings - Office space	223	5	0.06	5	2	10.0	13.4	23	0.8	29	0	0	410	0.07	410	0.07	0
Lobby M106	Public Assembly Spaces - Lobbies	173	5	0.06	150	7	35.0	10.4	45	0.8	57	0	0	531	0.11	531	0.11	0
Check-in Office	Office Buildings - Office space	261	5	0.06	5	2	10.0	15.7	26	0.8	32	0	0	345	0.09	345	0.09	0
										AHU-1-EX Bus garage Office Space MIN OA	**147**			1,551		1,551		
PDU-1N																		
Pool P201	Sports & Entertainment - Swimming (pool & deck)	8,091	0	0.48	0	0	0.0	3883.7	3884	0.8	4855	0	0	21,300	0.23	21,300	0.23	7,600
Pool Bleachers P205	Sports & Entertainment - Spectator areas	1,757	7.5	0.06	150	264	1976.6	105.4	2082	0.8	2603			2,700	0.96	2,700	0.96	
Pool Office P202 (SC-2,CU-2/PDU-1N)	Office Buildings - Office space	166	5	0.06	5	2	10.0	10.0	20	0.8	25	0	0	445	0.06	445	0.06	0
										PDU-1 MIN OA	**7482**			24,000		24,000		
DU-1																		
Chem Storage P103	General - Storage rooms	155	0	1	0	0	0.0	155.0	155	0.8	194	1	155	775	0.25	775	0.25	0
Unoccupied Space P106	General - Storage rooms	1,328	0	0.12	0	0	0.0	159.4	159	0.8	199	0	0	225	0.00	225	0.00	0
Pool Equipment Room P101	General - Storage rooms	1,359	0	0.12	0	0	0.0	163.1	163	0.8	204	0	0	2,800	0.07	2,800	0.07	0
										DU-1 MIN OA	**597**			3,800		3,800		
RTU-Technology Education																		
Technology Education	Educational Facilities - Wood/metal shop	1,600	10	0.18	20	25	250.0	288.0	538	0.8	673	0.5	800	2,550	0.26	2,550	0.26	0
Tech EDU Office	Office Buildings - Office space	149	5	0.06	5	1	3.7	8.9	13	0.8	16	0	0	100	0.16	100	0.16	0
										RTU-TE-1 MIN OA	**688**			2,650		2,650		
RTU-Vestibule																		
Office P209	Office Buildings - Office space	137	5	0.06	5	1	5.0	8.2	13	0.8	17	0	0	100	0.17	100	0.17	0
Toilets P207	Toilet	120	0	0	0	1	0.0	0.0	0	0.8	0	0.71	85	125	0.00	125	0.00	125
Toilets P208	Toilet	103	0	0	0	1	0.0	0.0	0	0.8	0	0.71	73	100	0.00	100	0.00	100
Vest P206	General - Corridors	300	0	0.06	0	1	0.0	18.0	18	0.8	23	0	0	775	0.03	775	0.03	0
										RTU-Vest MIN OA	**39**			1,100		1,100		
RTU-Weight Room																		
Weight Room	Sports & Entertainment - Gym, stadium (play area)	1,905	0	0.3	30	30	0.0	571.5	572	0.8	714	0	0	3,000	0.24	3,000	0.24	150
										RTU-WR MIN OA	**714**			3,000		3,000		
RTU-1K (EXISTING UNIT)																		
Shared Office 102G	Office Buildings - Office space	577	5	0.06	5	4	20.0	34.6	55	0.8	68	0	0	500	0.14	500	0.14	0
Dishwashing 102H	Kitchen	507	7.5	0.12	0	3	22.5	60.8	83	0.8	104	0.7	355	600	0.17	600	0.17	440
										RTU-1K (EX) MIN OA	**172**			1,100		1,100		
AHU-9 (EX)																		
Small Cafeteria 101	Food & Beverage Service - Cafeteria/fast food dining	2,221	7.5	0.18	100	50	375.0	399.8	775	0.8	968	0	0	2,900	0.33	2,900	0.33	0
Large Cafeteria 113 (Servery/Stage)	Food & Beverage Service - Cafeteria/fast food dining	3,654	7.5	0.18	100	150	1125.0	657.7	1783	0.8	2228	0	0	2,250	0.99	2,250	0.99	0
Serving Area 113A	Food & Beverage Service - Cafeteria/fast food dining	2,482	7.5	0.18	100	45	337.5	446.8	784	0.8	980	0	0	1,940	0.51	1,940	0.51	0
										AHU-9-(EX) MIN OA	**3197**			7,090		7,090		
MAU-1 (formerly AHU-10(EX)),RTU-1K																		
Kitchen 102	Kitchen	2,850	7.5	0.12	0	10	75.0	342.0	417	0.8	521	0.7	1,995	2,450	0.21	2,450	0.21	10,500
										MAU-1 (formerly AHU-10(EX)),RTU-1K MIN OA	**521**			2,450		2,450		
RTU-Admin																		
General Storage 138C	General - Storage rooms	127	0	0.12	0	0	0.0	15.3	15	0.8	19	0	0	50	0.38	50	0.38	0
Faculty Mail/Printers 138	Miscellaneous Spaces - Copy, printing	240	5	0.06	4	1	4.8	14.4	19	0.8	24	0	0	470	0.05	470	0.05	0
Toilet 140A	General - Storage rooms	80	0	0.12	0	0	0.0	9.6	10	0.8	12	0.71	57	0	0.00	0	0.00	100
Toilet 140B	General - Storage rooms	80	0	0.12	0	0	0.0	9.6	10	0.8	12	0.71	57	0	0.00	0	0.00	100
Pantry 139B	General - Storage rooms	101	0	0.12	0	0	0.0	12.1	12	0.8	15	0	0	50	0.30	50	0.30	150
Storage 138G	General - Storage rooms	85	0	0.12	0	0	0.0	10.2	10	0.8	13	0	0	50	0.26	50	0.26	0
Conference Room 138F	General - Conference/meeting	174	5	0.06	50	9	43.5	10.4	54	0.8	67	0	0	185	0.36	185	0.36	0
Office 141E	Office Buildings - Office space	275	5	0.06	5	1	6.9	16.5	23	0.8	29	0	0	385	0.08	385	0.08	0
Office 141D	Office Buildings - Office space	224	5	0.06	5	1	5.6	13.4	19	0.8	24	0	0	400	0.06	400	0.06	0
Office 141C	Office Buildings - Office space	233	5	0.06	5	1	5.8	14.0	20	0.8	25	0	0	400	0.06	400	0.06	0
Conference Room 138E	General - Conference/meeting	255	5	0.06	50	13	63.8	15.3	79	0.8	99	0	0	210	0.47	210	0.47	0
Waiting	Office Buildings - Reception areas	97	5	0.06	30	3	14.6	5.8	20	0.8	25	0	0	135	0.19	135	0.19	0
Office 141B	Office Buildings - Office space	154	5	0.06	5	1	3.9	9.2	13	0.8	16	0	0	315	0.05	315	0.05	0
Sec. Vest 141A	General - Corridors	183	0	0.06	0	0	0.0	11.0	11	0.8	14	0	0	155	0.09	155	0.09	0
Main Office Corridor 141	General - Corridors	823	0	0.06	0	0	0.0	49.4	49	0.8	62	0	0	515	0.12	515	0.12	0
Display Area 139A	General - Storage rooms	123	0	0.12	0	0	0.0	14.8	15	0.8	18	0	0	515	0.04	515	0.04	0
Main Office Reception 141B	Office Buildings - Office space	387	5	0.06	5	2	9.7	23.2	33	0.8	41	0	0	630	0.07	630	0.07	0
										RTU-Admin MIN OA	**516**			4,465		4,465		
RTU-6-(EX)																		
Corridor 146	General - Corridors	3,526	0	0.06	0	0	0.0	211.6	212	0.8	264	0	0	2,230	0.12	2,230	0.12	0
Display Area 139A	General - Corridors	142	0	0.06	0	0	0.0	8.5	9	0.8	11	0	0	101	0.00	101	0.00	0
										RTU-6-(EX) MIN OA	**275**							
RTU-Guidance																		
Women's Toilet 145	General - Storage rooms	376	0	0.12	0	7	0.0	45.1	45	0.8	56	50	350	345	0.16	345	0.16	345
Mens Toilet 144	General - Storage rooms	263	0	0.12	0	4	0.0	31.6	32	0.8	39	50	200	160	0.25	160	0.25	160
File Storage 146B	General - Storage rooms	170	0	0.12	0	0	0.0	20.4	20	0.8	26	0	0	275	0.09	275	0.09	0
Guidance 146	Office Buildings - Office space	912	5	0.06	5	5	22.8	54.7	78	0.8	97	0	0	850	0.11	850	0.11	0
Office 146A	Office Buildings - Office space	157	5	0.06	5	1	3.9	9.4	13	0.8	17	0	0	210	0.08	210	0.08	0
Office 146C	Office Buildings - Office space	157	5	0.06	5	1	3.9	9.4	13	0.8	17	0	0	210	0.08	210	0.08	0
Office 148A	Office Buildings - Office space	159	5	0.06	5	1	4.0	9.5	14	0.8	17	0	0	215	0.08	215	0.08	0
Office 146D	Office Buildings - Office space	153	5	0.06	5	1	3.8	9.2	13	0.8	16	0	0	135	0.12	135	0.12	0
Office 148	Office Buildings - Office space	154	5	0.06	5	1	3.9	9.2	13	0.8	16	0	0	135	0.12	135	0.12	0
										RTU-Guidance MIN OA	**301**			2,535		2,535		
VAV-2-15 - Living Center																		
Toilet Room 125A	Toilet	146	0	0	0	1	0.0	0.0	0	0.8	0	0.71	104	0	0.00	0	0.00	150
Living Center 125	Educational Facilities - Classrooms (age 9 plus)	1,156	10	0.12	35	31	310.0	138.7	449	0.8	561	0.7	809	1,775	0.32	1,775	0.32	1,625
Storage 126A	General - Storage rooms	10	0	0.12	0	0	0.0	1.2	1	0.8	2	0	0	0	0.00	0	0.00	0
Storage 126	General - Storage rooms	12	0	0.12	0	0	0.0	1.4	1	0.8	2	0	0	0	0.00	0	0.00	0
Connor's Corner 127	General - Storage rooms	93	0	0.12	0	3	0.0	11.2	11	0.8	14	0	0	0	0.00	0	0.00	370
Life Skills Kitchen 128	Kitchen	437	0	0	0	5	0.0	0.0	0	0.8	0	0.7	306	370	0.00	370	0.00	0
Life Skills Bedroom 128A	Hotels, Motels, Resorts, Dormitories - Bedroom/living room	157	5	0.06	10	3	15.0	9.4	24	0.8	31	0	0	200	0.15	200	0.15	200
										VAV-2-15 - Living Center MIN OA	**609**			2,345		2,345		
VAV - 1-HS to 3-HS Mother's Room Suite - HS																		
Faculty 107A	Office Buildings - Office space	77	5	0.06	5	1	5.0	4.6	10	0.8	12	0	0	75	0.16	75	0.16	0
Faculty 107B	Office Buildings - Office space	78	5	0.06	5	1	5.0	4.7	10	0.8	12	0	0	125	0.10	125	0.10	0
Mother's Room 106C	Office Buildings - Office space	145	5	0.06	5	2	10.0	8.7	19	0.8	23	0.71	103	195	0.12	195	0.12	0
Stor. 106D	General - Storage rooms	22	0	0.12	0	1	0.0	2.6	3	0.8	3	0	0	0	0.00	0	0.00	0
										VAV - 1-HS to 3-HS Mother's Room Suite - HS MIN OA	**51**			395		395		
VVR-42 (fed by RTU-3- EX)																		
Boys Pool Locker	Locker Room	1,050	0	0.5	0	50	0.0	525.0	525	0.8	656	0.5	25	1,500	0.44	1,500	0.44	300
										VVR-42 (fed by RTU-3-EX) MIN OA	**656**			1,590		1,590		
RTU-3-EX (Mother's Room Suite - K-8)																		
Mother's Room 148A	Office Buildings - Office space	117	5	0.06	5	2	10.0	7.0	17	0.8	21	0.71	83	100	0.21	100	0.21	220
Team Room 148	General - Conference/meeting	285	5	0.06	50	26	130.0	17.1	147	0.8	184	0.71	202	220	0.84	220	0.84	100
										RTU-3-EX (Mother's Room Suite - K-8) MIN OA	**205**			320		320		
RTU-5-EX - HS																		
OFFICE 286	Office Buildings - Office space	121	5	0.06	5	1	5.0	7.3	12	0.8	15	0	0	140	0.11	140	0.11	200
CORRIDOR 281B	General - Corridors	603	0	0.06	0	1	0.0	36.2	36	0.8	45	0	0	140	0.32	140	0.32	0
										RTU-5-EX - HS MIN OA	**15**			280		280		
AH-5B-EX - HS																		
STORAGE P210	General - Storage rooms	25	0	0.12	0	1	0.0	3.0	3	0.8	4	0	0	75	0.05	75	0.05	0
POOL STORAGE P211	General - Storage rooms	249	0	0.12	0	1	0.0	29.9	30	0.8	37	0	0	150	0.25	150	0.25	0
GYM STORAGE 281A	General - Storage rooms	300	0	0.12	0	1	0.0	36.0	36	0.8	45	0	0	150	0.30	150	0.30	0
										AH-5B-EX - HS	**86**			375		375		

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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architecture | engineering | interior design
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Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL SCHEDULES

DRAWN BY: B.H.
PROJECT NO.: 2024-239P
CHECKED BY: M.P.
BUILDING: HS
DRAWING NO.: M-301
DATE: 12-01-2025

CAD FILE: 4239-HS-M-301.DWG
PLOT DATE: 11/25/2025

Cover Page

ARROW UNITED INDUSTRIES

Representative	Job Information
SB Cottone (0887) 107 East Market Street Scranton, PA 18509	Job: JOHNSON CITY SCHOOL Quote No: Created On: 9/2/2025 Prepared By: Joseph Cottone Printed On: 9/2/2025

Sold To	Ship To
SB COTTONE, INC. 107 EAST MARKET ST SCRANTON, Pennsylvania 18509 USA	

Included Documents

Line #	Description
1	Cover Page
2	Customer Quote Detail No Prices

Customer Detail Quote

ARROW UNITED INDUSTRIES

Representative	Job Information
SB Cottone (0887) 107 East Market Street Scranton, PA 18509	Job: JOHNSON CITY SCHOOL Quote No: Created On: 9/2/2025 Prepared By: Joseph Cottone Printed On: 9/2/2025

Quote For	Ship To
SB COTTONE, INC. 107 EAST MARKET ST SCRANTON, Pennsylvania 18509 USA	

Line Qty Description

1 1 117AV - Fire Dampers 1 1/2 Hr Rated Static
108.0000W x 32.0000H (in)
Frame Size: 108.0000(in) x 32.0000(in)

Options	Values
Material	Galvanized Steel (Standard)
Undersizing	Standard (0.25in Undersize)
Sleeve Type	No Sleeve
Sleeve Gauge and Length	N/A
Transition Type	No Transition
Mark Tag: GRILLE LOCATION	

2 1 117AV - Fire Dampers 1 1/2 Hr Rated Static
70.0000W x 30.0000H (in)
Frame Size: 70.0000(in) x 30.0000(in)

Options	Values
Material	Galvanized Steel (Standard)
Undersizing	Standard (0.25in Undersize)
Sleeve Type	No Sleeve
Sleeve Gauge and Length	N/A
Transition Type	No Transition
Mark Tag: INSIDE WALL LOCATION	

Total Unit SqFt: 38.583

Notes

February 2024 — SD-1.5CFD-24.02

1.5 Hour Rated Curtain Fire Dampers

Dynamic or Static Applications • In-Boxlier • Horizontal or Vertical Mount • Galvanized Steel — Page 1

APPLICATION

Arrow United Industries models 117 and D17 curtain fire dampers are approved for use in walls, floors and partitions of less than 3 hours where the centerline of the blade stack is contained within the depth of the wall, floor or partition. Model 117 dampers are classified for use in static HVAC systems that are automatically shut down in the event of a fire. Model D17 dampers are classified for use in dynamic HVAC systems that remain operational during a fire event.

RATINGS

UL 555 Fire Resistance Rating (models 117 and D17)
Fire Rating: 1½ hours
Dynamic Closure Rating (model D17 only)
Maximum Velocity: 4000 fpm (20.3 m/s)
Maximum Pressure: 8 in. wg (2 kPa)
*see page 2 for complete list of ratings

Construction	Standard	Optional
Frame Material	Galvanized Steel	-
Frame Depth	4¼ (124 mm)	-
Blade Material	Galvanized Steel	-
Closure Springs	Stainless Steel	-
Fusible Link	165°F (74°C)	212°F (100°C)
Mounting	Vertical (117V / D17V)	Horizontal (117H / D17H)

Optional Features

- Sleeves of various depths and thickness - See page 3
- B-Style and C-Style Transitions - See pages 4 - 11
- Pressure Drop Data - See SD-CFDAP
- Tab-lock Retaining Angles - see SI-TLRA
- Flanged duct connections - See SI-ULFDC
- PK1202 Position Indication - See SI-PK1202
- Pull Ring - see SI-PULLRING
- Security Bars - see SD-SB
- Thinline frames - see SD-117F and SD-D17F
- X-style frame w/ integral sleeve - see SI-X-STYLE

Installation Methods

- Standard Installation - see S-FD-1.5
- Shaft wall openings - see S-CDLG-U438
- Grille transfer applications - see SI-GTFD
- Grille access applications - see SI-GAFD
- Out-of-barrier applications - see SI-OOOWFD
- Out-of-barrier C-Style applications - see SI-OOWCFD
- Fire resistant duct assembly - see SI-FAPH
- Corrugated decking - see SI-DECKING
- Sleeve extensions - see SD-SLVEXT
- One side retaining angle applications - see S-FSOS
- Retaining angle or flange under gypsum wallboard - see SI-FUGWB
- Flanged Duct Connection - SI-ULFDC
- Caulking - SI-CAULK

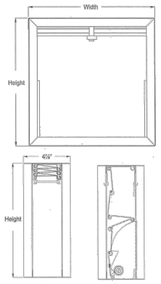
Slide ramp locking teeth shall point down with access from above.

Open Position (117H or D17H)

UNDERWRITERS LABORATORIES INC.®
CLASSIFIED DYNAMIC FIRE DAMPER
CLASSIFIED STATIC FIRE DAMPER
FILE # R19235

This fire damper meets the construction and performance requirements of:

- Underwriters Laboratories Inc. Standard 555
- National Fire Protection Association Standards 80, 90A, 101
- ICC's International Building Code
- California State Fire Marshal Listing #3225-1329:100
- Underwriters Laboratories Inc. approved for dual direction airflow.
- Underwriters Laboratories Inc. Classified for use in fire resistive ratings of less than 3 hours



ARROW UNITED INDUSTRIES
arrowunited.com
450 Riverside Dr • Wyalusing PA. 18853 • Phone 570-746-1888 • Fax 570-746-9286
AUI-18-01-01

February 2024 — SD-1.5CFD-24.02

1.5 Hour Rated Curtain Fire Dampers

Dynamic or Static Applications • In-Boxlier • Horizontal or Vertical Mount • Galvanized Steel — Page 2

MAX SIZE LIMITATIONS

Static Dampers

Horizontal Mount		
Model #	Max Single Panel	Max Assembly
117A	48"W x 48"H	102"W x 48"H
117B	48"W x 42"H	102"W x 42"H
117C	46"W x 41"H	100"W x 41"H

Vertical Mount		
Model #	Max Single Panel	Max Assembly
117A	60"W x 60"H	120"W x 120"H
117B	60"W x 53"H	120"W x 113"H
117C	58"W x 52"H	118"W x 112"H

Dynamic Dampers

Horizontal Mount (2000 fpm, 4 in .w.g.)		
Model #	Max Single Panel	Max Assembly
D17A	24"W x 24"H	72"W x 36"H
	18"W x 36"H	
D17B	24"W x 20"H	72"W x 31"H
	18"W x 31"H	
D17C	22"W x 18"H	70"W x 30"H
	16"W x 30"H	

Horizontal Mount (2000 fpm, 8 in .w.g.)		
Model #	Max Single Panel	Max Assembly
D17A	18"W x 36"H	36"W x 36"H
D17B	18"W x 31"H	36"W x 31"H
D17C	16"W x 30"H	34"W x 30"H

Horizontal Mount (4000 fpm, 4 in .w.g.)		
Model #	Max Single Panel	Max Assembly
D17A	18"W x 36"H	36"W x 36"H
D17B	18"W x 31"H	36"W x 31"H
D17C	16"W x 30"H	34"W x 30"H

Vertical Mount (4000 fpm, 4 in .w.g.)		
Model #	Max Single Panel	Max Assembly
D17A	24"W x 24"H	-
	18"W x 36"H	
D17B	24"W x 20"H	-
	18"W x 31"H	
D17C	22"W x 18"H	-
	16"W x 30"H	

Vertical Mount (2000 fpm, 4 in .w.g.)		
Model #	Max Single Panel	Max Assembly
D17A	36"W x 36"H	72"W x 48"H
		48"W x 72"H
		120"W x 24"H
		24"W x 120"H
D17B	36"W x 31"H	72"W x 44"H
		48"W x 69"H
		139"W x 22"H
		22"W x 116"H
D17C	34"W x 30"H	70"W x 44"H
		46"W x 69"H
		118"W x 19"H
		22"W x 110"H

Vertical Mount (2000 fpm, 8 in .w.g.)		
Model #	Max Single Panel	Max Assembly
D17A	24"W x 24"H	72"W x 48"H
		48"W x 72"H
		120"W x 24"H
		24"W x 120"H
D17B	24"W x 20"H	72"W x 45"H
		48"W x 69"H
		120"W x 20"H
		24"W x 116"H
D17C	22"W x 18"H	70"W x 44"H
		46"W x 68"H
		116"W x 19"H
		22"W x 110"H

Vertical Mount (4000 fpm, 8 in .w.g.)		
Model #	Max Single Panel	Max Assembly
D17A	24"W x 24"H	-
D17B	24"W x 20"H	-
D17C	22"W x 18"H	-

ARROW UNITED INDUSTRIES
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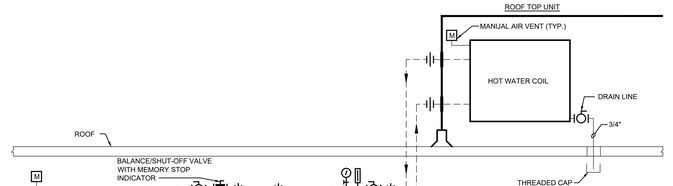
AUI-18-01-01

SMALL GYM 281 FIRE DAMPERS DETAIL

N.T.S.



NOTES:

1. INSTALL PIPING COUNTER FLOW TO AIR FLOW. INSTALL AND PIPE COIL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
2. THERMOMETER AND GAUGE RANGES SHALL BE TWO TIMES NORMAL OPERATING TEMPERATURES AND PRESSURES.
3. CIRCULATING PUMP SHALL RUN WHENEVER OAT IS BELOW 40 DEGREES F AND NO FLOW SENSED AT FLOW SWITCH. ATC CONTRACTOR SHALL PROVIDE OAT SENSOR OR REUSE EXISTING. ATC CONTRACTOR SHALL PROVIDE ALL CONTROLS, ACCESSORIES, AND WIRING.

ROOFTOP UNIT HEATING COIL PIPING FREEZE PROTECTION PUMP DETAIL/SEQUENCE OF OPERATION

NOT TO SCALE

CODE MINIMUM VENTILATION COMPLIANCE SCHEDULE

EQUIPMENT / TAG	AREA SERVED	CODE MINUMUM OA CFM	ACTUAL OA CFM	REMARKS
PDU-1	POOL ROOM	7482	10,100	
DU-1	POOL AREA BASEMENT	597	1,725	
RTU-TECH ED	TECHNOLOGY EDUCATION	688	800	
RTU-VEST	POOL VESTIBULE	39	265	
RTU-WEIGHT	WEIGHT ROOM	714	720	
RTU-1K (EXISTING UNIT)	KITCHEN OFFICES AND SUPPORT SPACES	172	1075	8
AHU-9-EX	SMALL AND LARGE CAFETERIAS	3197	11,300	1
MAU-1 (FORMERLY AHU-10-EX) RTU-1K	KITCHEN 102	521	4000	2
RTU-ADMIN	ADMINISTRATIVE OFFICES	488	540	
RTU-6-EX	CORRIDOR 146, DISPLAY AREA 139A	275	320	3
RTU-GUID	GUIDANCE OFFICES	304	300	
VAV-2-15	LIVING CENTER	609	1075	4
VAV-1HS, VAV-2HS, VAV-3HS, (AHU-2-EX)	HS MOTHERS, FACULTY OFFICES	51	173	5
VVR-42	BOYS LOCKER ROOM	656	1800	6
AH-5B-EX	STORAGE ROOMS	86	10,280	9
RTU-5-EX	GIRLS 2ND FLOOR LOCKER ROOM SPACES	15	5000	10

REMARKS:

1. AHU-9-EX IS 100% OA AT 11,300 CFM
2. MAU-1 (FORMERLY AHU-10-EX) IS 100% OA AT 4000 CFM
3. RTU-6 IS 14.3% OA WITH SA CFM = 2230 OA CFM = 320
4. AH-2-EX IS 44% OA
   LIVING CENTER IS SERVED BY
   VAV-2-15: 750 CFM SA, 330 CFM OA
   VAV-2-16: 400 CFM SA, 176 CFM OA
   VAV-2-17: 1195 CFM SA, 525 CFM OA
   TOTAL: 1031 CFM OA
5. AH-2-EX IS 44% OA
   VAV-1M: 195 CFM SA, 85 CFM OA
   VAV-2M: 125 CFM SA, 55 CFM OA
   VAV-3M: 75 CFM SA, 33 CFM OA
   TOTAL: 173 CFM OA
6. VVR-42 IS FED BY HIGH SCHOOL RTU-3-EX WHICH IS 100% OA SA CFM = OA CFM = 1800 CFM
7. K-8 RTU-3-EX IS 100% OA SA CFM = OA CFM = 6725 CFM
8. RTU-1K IS 17% OA: SA CFM = 6300 CFM OA CFM = 1075 CFM
9. AH-5B-EX IS 80% OA: SA CFM = 12,850 CFM OA CFM = 10,280 CFM
10. RTU-5-EX IS 100% OA: SA CFM = 5000 CFM OA CFM = 5000 CFM

EBB-1A, EBB-1B, EBB-1C,
COLOR = CHARCOAL GREY

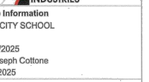
INDEECO

916* and 919 Series
Architectural Sill-Height Convection Heaters

*916 Series Features High Watt Density

1. Provide PEDESTAL MOUNTED model 916 Series Architectural Aluminum High Watt Density Draft Barrier

Installation, Operation & Maintenance Instructions



Dimensions

Type	Height	Width	Length
919	6"	3-5/8"	28" to 15'
	152mm	92mm	711mm to 4572mm
916	7"	5-3/8"	28" to 12'
	178mm	136mm	711mm to 3658mm

GENERAL

This heater is designed to provide years of efficient, trouble free operation as a primary or supplemental heat source for comfort heating in residential (919 Series only at 250 watts per linear foot) and commercial applications. Installation or use of this product in any manner not described within this manual will void the warranty and could result in injury, damage to property, or permanent damage to heater.

IMPORTANT INSTRUCTIONS

⚠ WARNING ⚠

WHEN USING ELECTRICAL APPLIANCES, BASIC PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, AND INJURY TO PERSONS, INCLUDING THE FOLLOWING:

1. Read all instructions before installing or using the heater.
2. A heater has hot and arcing or sparking parts inside. Do not use in areas where gasoline or flammable liquids are used or stored.
3. This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains away from heater.
4. To prevent a possible fire, do not block air intakes or exhaust in any manner.
5. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
6. Serious injury or death could result from electric shock. Make sure electrical power supply circuit coming to heater is disconnected at main disconnect or service panel before installing or servicing this heater.
7. 919 Series with 250 watt a linear foot or less, without wire mesh, are UL approved for residential use. 916 Series is not for residential or household use.

SAVE THESE INSTRUCTIONS

ECR 02997 — 01/24 — ENM-4054-00

Table A - 916 & 919 (one element)

Length "L"	Watts per ft.	Total Watts	Amperage 120V	208V	240V	277V	347V	600V
28" (711mm)	100	200	1.7	1.0	0.8	--	--	--
	125	250	2.1	1.2	1.0	0.9	--	--
	150	300	2.5	1.4	1.3	1.1	--	--
	188	376	3.1	1.8	1.6	1.4	--	--
	250	500	4.2	2.4	2.1	1.8	1.4	--
3' (914mm)	125	375	3.1	1.8	1.6	1.4	1.1	--
	150	450	3.8	2.2	1.9	1.6	1.3	--
	188	564	4.7	2.7	2.4	2.0	1.6	--
	250	750	6.3	3.6	3.1	2.7	2.2	--
4' (1219mm)	100	400	3.3	1.9	1.7	1.4	1.2	--
	125	500	4.2	2.4	2.1	1.8	1.4	--
	150	600	5.0	2.9	2.5	2.2	1.7	--
	188	752	6.3	3.6	3.1	2.7	2.2	1.3
	250	1000	8.3	4.8	4.2	3.6	2.9	1.7
5' (1524mm)	100	500	4.2	2.4	2.1	1.8	1.4	0.8
	125	625	5.2	3.0	2.6	2.3	1.8	1.0
	150	750	6.3	3.6	3.1	2.7	2.2	1.3
	188	940	7.8	4.5	3.9	3.4	2.7	1.6
	250	1250	10.4	6.0	5.2	4.5	3.6	2.1
6' (1829mm)	100	600	5.0	2.9	2.5	2.2	1.7	1.0
	125	750	6.3	3.6	3.1	2.7	2.2	1.3
	150	900	7.5	4.3	3.8	3.2	2.6	1.5
	188	1128	9.4	5.4	4.7	4.1	3.3	1.9
	250	1500	12.5	7.2	6.3	5.4	4.3	2.5
7' (2134mm)	100	700	--	3.4	2.9	2.5	2.0	1.2
	125	875	--	4.2	3.6	3.2	2.5	1.5
	150	1050	--	5.0	4.4	3.8	3.0	1.8
	188	1316	--	6.3	5.5	4.8	3.8	2.2
	250	1750	--	8.3	7.3	6.3	5.0	2.9
8' (2438mm)	100	800	--	3.8	3.3	2.9	2.3	1.3
	125	1000	--	4.8	4.2	3.6	2.9	1.7
	150	1200	--	5.8	5.0	4.3	3.5	2.0
	188	1504	--	7.2	6.3	5.4	4.3	2.5
	250	2000	--	9.6	8.3	7.2	5.8	3.3
9' (2743mm)	100	900	--	4.3	3.8	3.2	2.6	1.5
	125	1125	--	5.4	4.7	4.0	3.2	1.9
	150	1350	--	6.5	5.6	4.9	3.9	2.3
	188	1692	--	8.1	7.1	6.1	4.9	2.8
	250	2250	--	10.8	9.4	8.1	6.5	3.7
10' (3048mm)	100	1000	--	4.8	4.2	3.6	2.9	1.7
	125	1250	--	6.0	5.2	4.5	3.6	2.1
	150	1500	--	7.2	6.3	5.4	4.3	2.5
	188	1880	--	9.0	7.8	6.8	5.4	3.1
	250	2500	--	12.0	10.4	9.0	7.2	4.2

916 (two and three element)

Length "L"	Watts per ft.	Total Watts	Amperage 120V	208V 1 Ph	208V 3 Ph	240V 1 Ph	277V 1 Ph	347V 1 Ph	600V 1 Ph	600V 3 Ph
28" (711mm)	375	750	3.6	--	2.1	--	2.7	--	--	--
	500	1000	4.8	2.7	2.8	2.5	2.9	--	--	--
	600	1200	5.8	3.3	3.2	2.9	4.0	--	--	--
	750	1500	7.2	4.2	4.3	3.8	5.4	4.3	--	--
3' (914mm)	375	1125	5.4	--	3.2	--	4.1	--	--	--
	500	1500	7.2	--	4.3	--	5.5	4.3	--	--
	600	1800	8.7	5.0	5.0	4.3	6.5	5.1	--	--
	750	2250	10.8	6.3	6.3	5.4	8.1	6.5	--	--
4' (1219mm)	375	1500	7.2	--	4.3	--	5.4	4.3	--	--
	500	2000	9.6	--	5.7	--	7.3	5.7	3.3	--
	600	2400	11.5	6.7	6.7	5.8	8.7	6.8	3.9	--
	750	3000	14.4	8.3	8.3	7.2	10.8	8.6	5.0	2.9
5' (1524mm)	375	1875	9.0	--	5.4	--	6.8	5.4	--	--
	500	2500	12.0	--	7.2	--	9.1	7.2	4.2	--
	600	3000	14.4	8.3	8.3	7.2	10.8	8.6	5.0	2.9
	750	3750	18.0	10.4	10.4	9.0	13.5	10.8	6.3	3.6
6' (1829mm)	375	2250	10.8	--	6.4	--	8.1	6.5	3.8	--
	500	3000	14.4	--	8.6	--	10.8	8.6	5.0	--
	600	3600	17.3	10.0	10.0	8.7	13.0	10.4	6.0	3.5
	750	4500	21.6	12.5	12.5	10.8	16.2	13.0	7.5	4.3
7' (2134mm)	375	2625	12.6	--	7.5	--	9.5	7.6	4.4	--
	500	3500	16.8	--	10.0	--	12.6	10.1	5.8	--
	600	4200	20.2	11.7	11.7	10.1	15.2	12.1	7.0	4.0
	750	5250	25.2	14.6	14.6	12.6	18.9	15.1	8.8	5.1
8' (2438mm)	375	3000	14.4	--	8.6	--	10.8	8.6	5.0	--
	500	4000	19.2	--	11.5	--	14.4	11.5	6.7	--
	600	4800	23.1	13.3	13.3	11.6	17.3	13.8	8.0	4.6
	750	6000	28.8	16.7	16.7	14.5	21.7	17.3	10.0	5.8
9' (2743mm)	375	3375	16.2	--	9.7	--	12.2	9.7	5.6	--
	500	4500	21.6	--	12.9	--	16.2	13.0	7.5	--
	600	5400	26.0	15.0	15.0	13.0	19.5	15.6	9.0	5.2
	750	6750	32.5	18.8	18.8	16.2	24.4	19.5	11.3	6.5
10' (3048mm)	375	3750	18.0	--	10.8	--	13.5	10.8	6.3	--
	500	5000	24.0	--	14.4	--	18.1	14.4	8.5	--
	600	6000	28.9	16.7	16.7	14.5	21.7	17.3	10.0	5.8
	750	7500	36.1	20.8	20.8	18.1	27.1	21.6	12.5	7.2

Bottom inlet only

IMPORTANT NOTE: Certain fabrics and vinyl materials (such as vinyl blinds) may become damaged by the heated air from the heater and should not be installed above the heater.

Front of Heater to Full Length Drapes in Front of Heater:

- Minimum between bottom of drapes and floor – 2-1/2 inches (64 mm)
- Minimum between top of drapes and ceiling – 1/2 inch (13 mm)
- Minimum between front of heater and nearest fold of drape – 2 inches (51 mm)

Top of Heater to Bottom of Window Sill:

- Minimum 12 inches (305 mm)

Clearance Chart:

For safe and efficient operation, maintain at least the following minimum clearances at all times:

Bottom of Heater to Finished Floor:

- Front Inlet Models: (max 600 watts per foot)
- May be installed on floor. However, for best performance, install bottom of heater approximately 3 inches (76 mm) off floor.
- Bottom Inlet Models:
- 100-250 watts per foot – 1-3/4 inch (44 mm)
- 375-750 watts per foot – 3 inches (76 mm)

Top of Heater to Ceiling (all models):

- Minimum 36 inches (914 mm)

Top of Heater to Bottom of Drapes Above Heater:

- Minimum 12 inches (305 mm)

Table B. Sizing Field Installed Wiring

Copper wire size 90° C	Max. No. wire installed in wireway	Maximum Allowable Current: Up to 3 conductors	4 to 6 conductors	7 to 9 conductors
No. 12 AWG	9	11.5 Amps	9.3 Amps	8.1 Amps
No. 10 AWG	8	17.4 Amps	14.0 Amps	12.1 Amps
No. 8 AWG	4	24.0 Amps	21.0 Amps	--

Table C. Maximum Length of Heater Run

Watts/Ft of Heaters	Max. allowable length of heater run in feet (meters) 120V 1 Ph	208V 1 Ph	208V 3 Ph	240V 1 Ph	240V 3 Ph	277V 1 Ph	347V 1 Ph	600V 1 Ph	600V 3 Ph
100	54 (16)	93 (28)	-	108 (33)	-	124 (38)	156 (47)	270 (82)	467 (142)
125	43 (13)	74 (23)	-	86 (26)	-	99 (30)	125 (38)	216 (66)	373 (113)
150	36 (11)	62 (19)	-	72 (22)	-	83 (25)	104 (32)	180 (55)	311 (95)
188	28 (9)	49 (15)	-	57 (17)	-	66 (20)	83 (25)	146 (45)	248 (76)
250	21 (6)	37 (11)	-	43 (13)	-	49 (15)	62 (19)	108 (33)	186 (57)
375	-	34 (7)	-	28 (9)	-	33 (10)	42 (13)	72 (22)	125 (38)
500	-	18 (5)	-	21 (6)	-	24 (7)	31 (9)	54 (16)	93 (28)
600	-	15 (5)	27 (8)	18 (5)	31 (9)	20 (6)	26 (8)	45 (14)	78 (24)
750	-	12 (4)	21 (6)	14 (4)	24 (7)	16 (5)	21 (6)	36 (11)	62 (19)

EBB-2, COLOR = CHARCOAL GREY

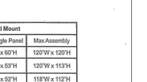
INDEECO

916* and 919 Series
Architectural Sill-Height Convection Heaters

*916 Series Features High Watt Density

1. Provide PEDESTAL MOUNTED model 916 Series Architectural Aluminum High Watt Density Draft Barrier

Installation, Operation & Maintenance Instructions



Dimensions

Type	Height	Width	Length
919	6"	3-5/8"	28" to 15'
	152mm	92mm	711mm to 4572mm
916	7"	5-3/8"	28" to 12'
	178mm	136mm	711mm to 3658mm

GENERAL

This heater is designed to provide years of efficient, trouble free operation as a primary or supplemental heat source for comfort heating in residential (919 Series only at 250 watts per linear foot) and commercial applications. Installation or use of this product in any manner not described within this manual will void the warranty and could result in injury, damage to property, or permanent damage to heater.

IMPORTANT INSTRUCTIONS

⚠ WARNING ⚠

WHEN USING ELECTRICAL APPLIANCES, BASIC PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, AND INJURY TO PERSONS, INCLUDING THE FOLLOWING:

1. Read all instructions before installing or using the heater.
2. A heater has hot and arcing or sparking parts inside. Do not use in areas where gasoline or flammable liquids are used or stored.
3. This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains away from heater.
4. To prevent a possible fire, do not block air intakes or exhaust in any manner.
5. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
6. Serious injury or death could result from electric shock. Make sure electrical power supply circuit coming to heater is disconnected at main disconnect or service panel before installing or servicing this heater.
7. 919 Series with 250 watt a linear foot or less, without wire mesh, are UL approved for residential use. 916 Series is not for residential or household use.

SAVE THESE INSTRUCTIONS

ECR 02997 — 01/24 — ENM-4054-00

Table A - 916 & 919 (one element)

Length "L"	Watts per ft.	Total Watts	Amperage 120V	208V	240V	277V	347V	600V
28" (711mm)	100	200	1.7	1.0	0.8	--	--	--
	125	250	2.1	1.2	1.0	0.9	--	--
	150	300	2.5	1.4	1.3	1.1	--	--
	188	376	3.1	1.8	1.6	1.4	--	--
	250	500	4.2	2.4	2.1	1.8	1.4	--
3' (914mm)	125	375	3.1	1.8	1.6	1.4	1.1	--
	150	450	3.8	2.2	1.9	1.6	1.3	--
	188	564	4.7	2.7	2.4	2.0	1.6	--
	250	750	6.3	3.6	3.1	2.7	2.2	--
4' (1219mm)	100	400	3.3	1.9	1.7	1.4	1.2	--
	125	500	4.2	2.4	2.1	1.8	1.4	--
	150	600	5.0	2.9	2.5	2.2	1.7	--
	188	752	6.3	3.6	3.1	2.7	2.2	1.3
	250	1000	8.3	4.8	4.2	3.6	2.9	1.7
5' (1524mm)	100	500	4.2	2.4	2.1	1.8	1.4	0.8
	125	625	5.2	3.0	2.6	2.3	1.8	1.0
	150	750	6.3	3.6	3.1	2.7	2.2	1.3
	188	940	7.8	4.5	3.9	3.4	2.7	1.6
	250	1250	10.4	6.0	5.2	4.5	3.6	2.1
6' (1829mm)	100	600	5.0	2.9	2.5	2.2	1.7	1.0
	125	750	6.3	3.6	3.1	2.7	2.2	1.3
	150	900	7.5	4.3	3.8	3.2	2.6	1.5
	188	1128	9.4	5.4	4.7	4.1	3.3	1.9
	250	1500	12.5	7.2	6.3	5.4	4.3	2.5
7' (2134mm)	100	700	--	3.4	2.9	2.5	2.0	1.2
	125	875	--	4.2	3.6	3.2	2.5	1.5
	150	1050	--	5.0	4.4	3.8	3.0	1.8
	188	1316	--	6.3	5.5	4.8	3.8	2.2
	250	1750	--	8.3	7.3	6.3	5.0	2.9
8' (2438mm)	100	800	--	3.8	3.3	2.9	2.3	1.3
	125	1000	--	4.8	4.2	3.6	2.9	1.7
	150	1200	--	5.8	5.0	4.3	3.5	2.0
	188	1504	--	7.2	6.3	5.4	4.3	2.5
	250	2000	--	9.6	8.3	7.2	5.8	3.3
9' (2743mm)	100	900	--	4.3	3.8	3.2	2.6	1.5
	125	1125	--	5.4	4.7	4.0	3.2	1.9
	150	1350	--	6.5	5.6	4.9	3.9	2.3
	188	1692	--	8.1

VAV BOX SCHEDULE (ELECTRIC REHEAT)

TAG	ZONE TYPE	MAKE	MODEL	INLET SIZE	COOLING CFM		MIN HTG CFM	EAT	LAT	ELECTRIC HEAT (KW)	TYPE OF CONTROL	VOLTAGE / PHASE	A.P.D. (IN W.C.)	AREA SERVED	REMARKS
					MAX	MIN									
VAV-1-HS	PERIMETER	TRANE	VCEF05--*M0SY95D**0*0F4W0D02015**00500000	5"	195	100	166	55.0	92.92	2.0	SCR EH	277V / 1Ø	0.010	MOTHERS ROOM 106C	1,2,3,7,8,9,10
VAV-2-HS	PERIMETER	TRANE	VCEF05--*M0SY95D**0*0F4W0D01515**00500000	5"	125	63	124	55.0	93.07	1.5	SCR EH	277V / 1Ø	0.010	FACULTY 107B	1,2,3,7,8,9,10
VAV-3-HS	INTERIOR	TRANE	VCEF04--*M0SY95D**0*0F4W0D01015**00500000	4"	75	38	83	55.0	92.92	1.0	SCR EH	277V / 1Ø	0.010	FACULTY 107A	1,2,3,7,8,9,10
VAV-1-AD	PERIMETER	TRANE	VCEF10--*M0SY95D**0*0F4W0D09015**00500000	10"	945	473	710	55.0	94.90	9.0	SCR EH	277V / 1Ø	0.030	RECEPTION / OFFICE 141B	1,2,3,7,8,9,10
VAV-2-AD	PERIMETER	TRANE	VCEF05--*M0SY95D**0*0F4W0D01515**00500000	5"	155	78	124	55.0	93.07	1.5	SCR EH	277V / 1Ø	0.010	SECURE VESTIBULE 141A	1,2,3,7,8,9,10
VAV-3-AD	INTERIOR	TRANE	VCEF08--*M0SY95D**0*0F4W0D04015**00500000	8"	750	375	375	55.0	88.57	4.0	SCR EH	277V / 1Ø	0.070	WAITING ROOM	1,2,3,7,8,9,10
VAV-4-AD	INTERIOR	TRANE	VCEF08--*M0SY95D**0*0F4W0D02515**00500000	8"	470	235	235	55.0	88.48	2.5	SCR EH	277V / 1Ø	0.030	FACULTY MAIL / PRINTERS 138 / GENERAL STORAGE 138C	1,2,3,7,8,9,10
VAV-5-AD	INTERIOR	TRANE	VCEF05--*M0SY95D**0*0F4W0D01015**00500000	5"	210	105	124	55.0	80.38	1.0	SCR EH	277V / 1Ø	0.010	LARGE CONF. ROOM 138E	1,2,3,7,8,9,10
VAV-6-AD	INTERIOR	TRANE	VCEF04--*M0SY95D**0*0F4W0D01015**00500000	4"	185	93	95	55.0	88.13	1.0	SCR EH	277V / 1Ø	0.010	SMALL CONF. ROOM 138F	1,2,3,7,8,9,10
VAV-7-AD	PERIMETER	TRANE	VCEF06--*M0SY95D**0*0F4W0D04015**00500000	6"	400	200	300	55.0	96.97	4.0	SCR EH	277V / 1Ø	0.140	OFFICE 141C	1,2,3,7,8,9,10
VAV-8-AD	PERIMETER	TRANE	VCEF06--*M0SY95D**0*0F4W0D04015**00500000	6"	400	200	300	55.0	96.97	4.0	SCR EH	277V / 1Ø	0.140	OFFICE 141D	1,2,3,7,8,9,10
VAV-9-AD	PERIMETER	TRANE	VCEF06--*M0SY95D**0*0F4W0D04015**00500000	6"	385	193	290	55.0	98.41	4.0	SCR EH	277V / 1Ø	0.130	OFFICE 141E	1,2,3,7,8,9,10
VAV-10-AD	PERIMETER	TRANE	VCEF06--	6"	400	200	300	55.0	96.97	4.0	SCR EH	277V / 1Ø	0.140	CONF RM 137	1,2,3,7,8,9,10
VAV-11-AD	PERIMETER	TRANE	VCEF05--	5"	255	130	195	55.0	95.35	2.5	SCR EH	277V / 1Ø	0.020	ATTEND OFFICE 139	1,2,3,7,8,9,10
VAV-1-GUID	PERIMETER	TRANE	VCEF06--*M0SY95D**0*0F4W0D03015**00500000	6"	275	138	210	55.0	99.96	3.0	SCR EH	277V / 1Ø	0.070	FILE STORAGE 146B	1,2,3,7,8,9,10
VAV-2-GUID	PERIMETER	TRANE	VCEF05--*M0SY95D**0*0F4W0D02015**00500000	5"	210	105	166	55.0	92.92	2.0	SCR EH	277V / 1Ø	0.010	OFFICE 146A	1,2,3,7,8,9,10
VAV-3-GUID	PERIMETER	TRANE	VCEF05--*M0SY95D**0*0F4W0D02015**00500000	5"	210	105	166	55.0	92.92	2.0	SCR EH	277V / 1Ø	0.010	OFFICE 146C	1,2,3,7,8,9,10
VAV-4-GUID	PERIMETER	TRANE	VCEF05--*M0SY95D**0*0F4W0D02015**00500000	5"	215	108	166	55.0	92.92	2.0	SCR EH	277V / 1Ø	0.010	OFFICE 148A	1,2,3,7,8,9,10
VAV-5-GUID	INTERIOR	TRANE	VCEF04--*M0SY95D**0*0F4W0D01015**00500000	4"	135	68	83	55.0	92.92	1.0	SCR EH	277V / 1Ø	0.010	OFFICE 148	1,2,3,7,8,9,10
VAV-6-GUID	INTERIOR	TRANE	VCEF04--*M0SY95D**0*0F4W0D01015**00500000	4"	135	68	83	55.0	92.92	1.0	SCR EH	277V / 1Ø	0.010	OFFICE 146D	1,2,3,7,8,9,10
VAV-7-GUID	INTERIOR	TRANE	VCEF10--*M0SY95D**0*0F4W0D04515**0050000	10"	850	425	425	55.0	88.33	4.5	SCR EH	277V / 1Ø	0.020	GUIDANCE OFFICE 146	1,2,3,7,8,9,10
VAV-8-GUID	INTERIOR	TRANE	VCEF08--*M0SY95D**0*0F4W0D02515**00500000	8"	505	250	255	55.0	85.86	2.5	SCR EH	277V / 1Ø	0.040	MENS TOILET 144 / WOMENS TOILET 145	1,2,3,7,8,9,10

NOTES:
1) UNITS TO BE TRANE MODEL, SIZE, AND CONFIGURATION AS INDICATED IN SCHEDULE AND ON DRAWINGS
2) PROVIDE WITH ZONE TEMPERATURE SENSOR
3) PROVIDE WITH FACTORY- WIRED DISCHARGE AIR TEMPERATURE SENSOR
4) PROVIDE WITH FACTORY-WIRED AND TAGGED HOT-WATER VALVE AND PIPING PACKAGE
5) PROVIDE WITH FACTORY-WIRED AND TAGGED HOT-WATER VALVE AND PIPING PACKAGE
6) PROVIDE UNIT-MOUNTED DISCONNECT
7) PROVIDE UNIT-MOUNTED CONTROL POWER TRANSFORMER AND DISCONNECT
8) ALL VFD'S SHALL HAVE MOTOR OVERLOAD PROTECTION.
9) VFD'S ARE CONFIGURED AS WALL OR REMOTE. BMS INTEGRATION IS REQUIRED FOR FULL FUNCTIONALITY.
10) TRANE SUPPLIED CONTROLS - SY210 BASIC (ELECTRIC HEAT-MOD SCR)

FREEZE PUMP SCHEDULE

TAG	SERVICE	LOCATION	UNIT SERVED	TYPE	COIL GPM	PUMP GPM	COIL HEAD (FT H20)	SYSTEM HEAD (FT)	RATED HEAD (FT)	MAX. NPSH (FT)	BHP	RPM	ELECTRICAL						BASIS OF DESIGN	REMARKS
													MIN. PUMP EFF.	VFD (Y/N)	H.P.	VOLTS	PH.	EMERGENCY POWER (Y/N)		
FPP-1	FREEZE PROTECTION	WEIGHT ROOM CEILING SPACE	RTU-WEIGHT ROOM	IN-LINE	8.69	8.69	0.1	15	15	-	-	2650	-%	N	1/12	115	1	Y	B&G / PL-30	HOT WATER COIL
FPP-2	FREEZE PROTECTION	TECH ED CEILING SPACE	RTU-TECH ED	IN-LINE	9.81	9.81	0.2	15	15	-	-	2650	-%	N	1/12	115	1	Y	B&G / PL-30	HOT WATER COIL

NOTES:
1. PROVIDE DISCONNECT SWITCH WITH PUMP IF PUMP HAS NO VFD.

TRANE

Job Name: Johnson City JCCSD
Prepared For:
Date: 10/20/25
Quantity: 1 ea

Heating Coil

Equipment Details

Coil utilization	Shipping coil

Coil Construction

Model Number	DSWB24036G0BA119BABA0AA**** ***
System type	Hot Water 5/8" Shipping Coil, General (SW)
Rows	2
Tube mat/wall thickness	.020 (0.508 mm) copper
Nominal fin spacing	119 fins per foot
Fin material	Aluminum
Fin type	Prima-Flo E
Actual coil face area	6.00
Nominal coil height	24" (610 mm)
Finned length	36" (914 mm)
Casing option	Galvanized
Turbulators	Yes
Rigging weight	69.0 lb
Installed weight	90.1 lb
Tube mat/wall thickness	.020 (0.508 mm) copper



Coil Performance

Capacity		Fluid	
Total capacity	247.27 MBh	**Standard fluid flow rate**	12.36 gpm
Air		**Entering fluid temp**	180.00 F
Coil type	5/8" Shipping Coil, General (SW)	**Leaving fluid temp**	140.00 F
Actual airflow	3800 cfm	**Fluid PD**	0.58 ft fluid
Entering dry bulb	25.00 F	**Fluid velocity**	0.85 ft/sec
Leaving dry bulb	85.00 F	**Fluid type**	Water
Pressure Drop	0.229 in H2O	**Volume**	2.54 gal
Pressure Drop (Standard air)	0.235 in H2O	**Fouling factor**	0.000025 hr-sq ft-deg F/Btu
Face velocity	633 ft/min	**Reynolds number**	10385.10 Each
		AHRI 410 Classification	
		AHRI 410 classification	AHRI ACHC certified
		Data generation date	7/10/2025
		Trane Select Assist update number	2960.00

Note: Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

AHRI CERTIFIED

2025/07/10 20:24:26 Page 1 of 3

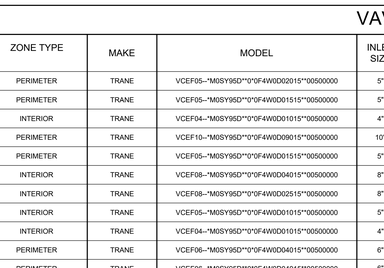
HC-1 DETAIL
N.T.S.

CABINET UNIT HEATER SUBMITTAL DATA

Ceiling Mounted Units (Non Recessed Only) - Models C

CBS-C-15R

PIPING AND MOUNTING CONNECTIONS SHOWN ARE TYPICAL FOR ALL AIR FLOW ARRANGEMENTS SEE OTHER SIDE.



CAT00202A

PROJECT:
LOCATION:
ARCHITECT:
ENGINEER:
CONTRACTOR:
PO NUMBER:
DATE:

MADE IN THE USA

STERLING COMMERCIAL HYDRONIC PRODUCTS
260 NORTH ELM STREET / WESTFIELD, MA 01085
TEL: (413) 568-9571 FAX: (413) 562-8437
www.sterlinghvac.com
A MESTEK COMPANY

CABINET UNIT HEATERS
RATINGS AND SPECIFICATIONS

CUH-1

ENTERING WATER - 200°F
ENTERING AIR - 60°F

TABLE I

UNIT SIZE		02	03	04	06	08	10	12	14
Heating Coils - Std Model	MBH	74.4	25.8	29.8	49.2	64.5	83.0	75.6	78.5
	GPM	7.45	2.58	2.98	4.92	6.45	8.30	7.56	7.85
High Cap. Coil - 2 Row Heating Coils - Model C	MBH	25.8	30.4	46.3	49.8	87.4	121.8	119.8	126.6
	GPM	2.58	3.04	4.63	4.98	8.74	12.18	11.98	12.66
Heating Coils - Steam (Standard)	MBH	87.4	31.4	41.0	60.1	76.1	85.4	104.1	106.8
	PSIG	5	5	5	5	5	5	5	5
Coil Coil	Cond Lb/HR	29.4	30.5	42.4	48.2	77.7	89.4	107.3	110
Coils									
	Tube/Cap Dia Per Inch	12	12	12	12	12	12	12	12
	Face Area Ft	1.5	1.5	1.5	1.5	2	2	2	2
	Coil Connections	1-1/4NPT	1-1/4NPT	1-1/4NPT	1-1/4NPT	1-1/4NPT	1-1/4NPT	1-1/4NPT	1-1/4NPT
Blowers									
	Number	1	1	1	1	1	1	1	1
Standard PSC Motor	HP	1/15	1/15	1/15	1/10	1/8	1/8	1/10	1/10
	RPM	1050	1050	1050	1050	1050	1050	1050	1050
	Watts	675	675	675	675	675	675	675	675
	Nominal Volts/Phase/Hertz	115/1/60	115/1/60	115/1/60	115/1/60	115/1/60	115/1/60	115/1/60	115/1/60
	Amps	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fan Speed Control	Standard MN	MN	MN	MN	MN	MN	MN	MN	MN
	CFM	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120
	Watts	280	280	280	280	280	280	280	280
Optional ECM Motor	HP	1/15	1/15	1/15	1/15	1/15	1/15	1/15	1/15
	RPM	1050	1050	1050	1050	1050	1050	1050	1050
	Volts/Phase/Hertz	230 / 1/60	230 / 1/60	230 / 1/60	230 / 1/60	230 / 1/60	230 / 1/60	230 / 1/60	230 / 1/60
	Amps	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fan Speed Control	Standard MN	3 SPEED	3 SPEED	3 SPEED	3 SPEED	3 SPEED	3 SPEED	3 SPEED	3 SPEED
	CFM	740	740	740	740	1,060	1,060	1,060	1,060
	Watts	280	280	280	280	280	280	280	280
Filter	Qty	1	1	1	1	1	1	1	1
	Size	REND	REND	REND	REND	REND	REND	REND	REND
	Length (in)	11.63	11.63	17.63	21.63	25.63	25.63	27.63	29.63
	Width (in)	8 1/16	8 1/16	8 1/16	8 1/16	8 1/16	8 1/16	8 1/16	8 1/16
	Thickness (in)	1	1	1	1	1	1	1	1
dB Level 10' From Unit									
	HP/MP (H)	50	50	53	56	55	55	56	56
	HP/MP (M)	45	45	48	51	50	50	51	51
	HP/MP (L)	39	39	42	45	44	44	45	45
	Depth (in)	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2

FILTER IDENTIFICATION AND DATA		
SIZE	PART NO.	FILTER SIZE
02	PC1297-2	15/32" x 8 11/16" x 19 3/4"
03	PC1297-3	15/32" x 8 11/16" x 27 3/4"
04	PC1297-4	15/32" x 8 11/16" x 31 3/4"
06	PC1297-6	15/32" x 8 11/16" x 43 3/4"
08	PC1297-8	15/32" x 8 11/16" x 45 3/4"
10	PC1297-10	15/32" x 8 11/16" x 50 3/4"
12	PC1297-12	15/32" x 8 11/16" x 57 3/4"
14	PC1297-14	15/32" x 8 11/16" x 69 3/4"

SIZE	DIM "L"	DIM "W"
02	35"	18 1/8"
03	43"	26 1/8"
04	47"	30 1/8"
06	59"	42 1/8"
08	61"	44 1/8"
10	66"	49 1/8"
12	73"	56 1/8"
14	85"	68 1/8"

CABINET UNIT HEATERS
SHIPPING WEIGHT
(LBS)

	SIZE							
STYLE	02	03	04	06	08	10	12	14
C	97	115	128	157	175	185	207	234

CEILING | C | |

C-1140 C-1150* C-1160 C-1170 C-1180

*Arrangement is specifically designed for Duct Flue. See Options 114 and 115.

CABINET UNIT HEATERS
HEATING CAPACITIES

TABLE III — STANDARD COIL

ENTERING WATER - 200°F
ENTERING AIR - 60°F

UNIT SIZE	GPM	WATER PD/FT	HIGH FAN SPEED				LOW FAN SPEED			
			CFM	MBH	WTD	FAT	CFM	MBH	WTD	FAT
02	.64	.09	325	14.5	34.0	117	180	13.9	35.6	109
	1.0	.09		16.1	35.2	120		13.8	27.6	129
	1.5	.09		17.3	30.3	130		14.6	25.4	140
	2.0	.21		17.4	21.8	130		15.1	19.1	140
	2.5	.34		18.8	19.6	136		17.3	18.8	146
03	.64	.09	335	19.8	46.5	109	270	19.0	48.7	101
	1.0	.14		22.0	39.4	122		19.8	39.4	109
	2.0	.34		23.7	22.7	122		20.1	20.1	109
	2.5	.52		25.7	20.5	126		21.1	18.5	122
	3.0	.69		23.8	15.8	126		21.1	14.1	122
04	.77	.07	430	21.8	45.4	109	345	19.0	38.0	111
	1.0	.09		24.6	39.5	122		20.1	32.5	109
	2.5	.41		29.0	25.2	122		21.4	22.6	109
	4.0	1.00		30.5	19.4	126		21.4	13.7	133
	5.0	.82		29.8	15.5	126		20.7	10.7	126
06	1.0	.10	630	40.2	45.4	122	505	36.1	32.7	122
	3.0	.63		44.8	29.8	126		39.8	26.6	133
	5.0	1.70		47.2	23.6	126		40.1	17.0	140
	6.0	1.93		46.2	19.9	126		40.4	14.0	140
	6.0	2.25		50.1	19.5	134		45.6	15.0	152
08	2.0	.31	890	62.1	47.1	122	685	49.0	40.0	111
	3.0	.64		62.2	34.8	115		46.5	31.0	122
	5.0	1.70		64.0	25.7	122		47.1	21.2	122
	6.0	2.25		64.0	19.4	120		49.1	15.4	126
	8.0	3.85		67.8	14.4	122		51.2	10.8	129
10	3.0	.64	1060	82.4	46.1	115	845	64.7	36.2	115
	4.0	1.15		82.4	35.2	112		63.0	26.8	115
	6.0	3.30		82.7	23.7	114		64.7	18.2	120
	8.0	5.50		85.0	18.2	117		66.2	13.8	126
	10.0	8.60		85.0	13.6	117		66.2	11.8	126
12	4.0	1.50	1230	77.5	39.5	113	980	65.1	32.2	131
	6.0	3.30		76.7	24.1	111		66.0	17.5	134
	8.0	4.20		76.7	19.1	117		68.6	13.5	134
	10.0	6.30		77.2	15.5	118		69.0	13.8	135
	12.0	9.60		77.2	13.2	118		69.0	11.8	135
14	5.0	2.60	1410	79.0	40.2	122	1130	66.1	32.0	113
	6.0	3.30		74.1	37.0	108		68.4	34.2	114
	8.0	4.70		77.6	29.0	111		69.1	23.3	111
	10.0	6.60		80.9	19.4	113		73.0	18.3	130
	12.0	9.60		81.7	15.6	113		73.0	14.2	130

CABINET UNIT HEATERS
HEATING CAPACITIES

TABLE III — HIGH CAPACITY – 2 ROW COIL

ENTERING WATER - 200°F
ENTERING AIR - 60°F

UNIT SIZE	GPM	WATER PD/FT	HIGH FAN SPEED				LOW FAN SPEED			
			CFM	MBH	WTD	FAT	CFM	MBH	WTD	FAT
02	1.68	.50	325	23.6	37.9	127	180	21.2	35.3	149
	2.0	.34		24.8	34.8	142		22.5	33.3	175
	2.5	.52		27.5	31.5	142		23.9	27.4	180
	3.0	.73		29.6	18.1	140		23.9	16.5	180
	3.5	.95		27.5	15.0	173		24.8	14.1	187
	4.0	1.20		28.0	13.1	173		25.0	12.2	187
03	2.0	.34	330	33.1	53.1	152	266	29.7	29.7	160
	2.5	.56		34.3	27.4	156		30.3	24.2	160
	3.0	.80		34.5	23.3	152		30.3	20.5	160
	4.0	.80		37.0	18.5	152		33.6	16.8	160
	1.68	.30	420	37.7	45.0	140	309	33.6	28.0	122
04	2.0	.40		39.0	39.5	147		35.6	33.8	166
	2.5	.47		40.4	33.7	143		37.8	30.2	164
	3.0	.80		42.4	29.9	140		37.8	25.2	164
	4.0	1.20		43.2	18.7	152		40.2	16.7	172
06	3.0	.95	645	57.9	57.8	140	495	52.7	52.7	158
	4.0	1.40		61.1	46.1	140		54.0	40.5	158
	5.0	1.40		60.0	33.0	158		54.7	29.9	171
	6.0	2.30		61.1	27.6	153		51.2	24.3	174
	8.0	4.20		62.1	20.7	153		54.7	19.3	171
08	3.0	.95	845	67.1	67.1	122	675	58.1	58.1	131
	4.0	1.40		70.8	50.5	140		68.2	45.3	153
	5.0	2.30		72.0	40.0	140		69.1	34.5	153
	6.0	3.30		62.6	27.5	150		73.4	24.5	160
	8.0	5.60		84.5	21.0	154		70.8	19.3	163
10	4.0	1.40	1040	84.5	49.5	140	830	71.2	42.8	160
	6.0	1.70		90.6	45.3	140		81.2	40.6	160
	6.0	3.50		94.6	31.5	144		84.0	28.0	153
	8.0	5.60		96.4	24.1	140		86.3	21.6	160
	10.0	8.80		96.4	19.3	140		86.3	17.3	160
12	6.0	3.50	1210	120.5	40.0	140	970	93.3	30.5	127
	8.0	5.60		111.6	37.2	140		100.4	33.5	155
	8.0	6.30		115.3	28.8	148		102.8	25.7	156
	10.0	8.80		117.8	23.6	148		104.7	21.0	161
	12.0	13.30		119.8	20.0	151		106.2	17.8	161
14	4.0	2.00	1385	126.8	54.9	133	1110	100.2	43.1	143
	6.0	3.30		118.3	39.4	130		104.4	34.8	141
	6.0	4.10		118.3	39.4	130		104.4	35.5	141
	10.0	10.40		126.8	25.2	144		111.4	22.3	152
	12.0	14.50		127.5	21.3	146		112.2	18.7	153

SPECIFICATIONS & WARRANTY*

***STANDARD CABINET UNIT ONLY**

The contractor shall furnish and install Sterling Cabinet Unit Heaters as selected to meet or exceed job requirements. The Cabinet Unit Heaters will conform to the items listed below and be certified under CSA guidelines.

CABINETS

All cabinets will be constructed with 18-gauge cold rolled steel, side panels and top. The front panel shall be furnished in 16-gauge cold rolled steel. It will have 1/2", 1-1/2 pound insulation with one side neoprene coated in front of coil. The internal cabinet shall be furnished in 18-gauge galvanized steel. Adequate work space for installation of control valves or electrical equipment shall be provided on both sides of the internal cabinet.

The cabinet shall be painted with a neutral eggshell baked enamel prime coat as standard. (Available if specified) Powder coated baked enamel, color selected from standard.

All cabinets shall be supplied with adjustable rear mounting brackets which will provide adjustment to correct alignment of the unit at installation to non square or out of true walls, joists, studs or surfaces. Adjustable leveling legs (two each base leg) are available when specified.

RECESSED UNITS

All recessed units shall be supplied with a "Wall Seal" assembly. This assembly shall provide protection to the wall or ceiling construction material. The "Wall Seal" shall be supplied in an eggshell baked enamel prime coat as standard. (When specified) Baked enamel colors may be selected from standard.

CEILING MOUNT OR RECESSED UNITS

All "C" and "RC" units shall be supplied with a hinged front panel. The multiple hinges shall provide full swing through 90°. A safety chain shall be provided as standard to prevent the face panel from swinging fully open accidentally. This chain must be easily detached to allow full access for servicing. Speed control switch will be shipped with wiring diagram for installation where desired.

FILTERS

All filters supplied as standard shall be reusable aluminum media with a 60% arrestance level. Filters shall be slide in type which are locked into position with a cotter pin.

FANS

Fan wheels shall be centrifugal, forward curved, double width. Fan housings shall be of formed galvanized sheet metal.

COILS

STANDARD ONE ROW - The durable mechanically bonded copper/aluminum coil presents the best of today's hydronic heating technology. All element assemblies are submersion tested at factory of 250 PSI and are rated at a working pressure of 300 PSI. All units are designed so that field modifications can be made to reverse the coil position if required.

HIGH CAPACITY COIL - This is a hot water coil designed to provide increased capacity when the required load exceeds that of the standard coil for a given size. Its construction is similar to the standard coil however, there are two rows of tubes. Element assemblies are submersion tested at 250 PSI and are rated at a working pressure of 300 PSI.

MOTORS

Standard PSC motors shall have integral thermal protection and start at 78% of rated voltage. Optional PSC High Static motors will be capable of operating in high static conditions up to 4 inches of water column. All motors shall be factory run-tested and assembled in unit prior to shipping. Optional ECM and high static motors will have a solid state control board and a 3 speed switch. All motors shall be factory run-tested and assembled in unit prior to shipping.

ELECTRICAL

All primary internal wiring shall be done at the factory and every unit shall be factory tested for reliability.

FRESH AIR DAMPERS ON DESIGNATED UNITS ONLY

When desired specify either of the following:

1. Where noted 25% Manual Outside Air Dampers shall be provided. A manually operated damper quadrant shall provide from 0% to 25% outside air through the use of a single blade damper.

2. Where noted 25% Motorized Outside Air Dampers shall be provided. A synchronous motor (115/60/1) interlocked with the blower shall automatically open the outside air damper when blower starts. The single blade damper shall be adjustable from 0% to 25% outside air. Control from the blower shall be provided so that if there is a loss of power, the damper shall return to the closed position. A damper override switch shall be provided to prevent damper operation when desired.

WARRANTY

The products in this catalog are warranted by Sterling, to be free from defects in material and workmanship for a period of one (1) year from the date of shipment from Sterling's plant. Sterling's liability under this warranty is limited to replacing or repairing at our option, F.O.B. our plant any defective component or assembly returned to our factory prepaid and with proper return authorization document. All repairs or replacements are made subject to factory inspection. In the interest of product improvement, Sterling reserves the right to make changes without notification.

STERLING COMMERCIAL HYDRONIC PRODUCTS
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TEL: (413) 568-9571 FAX: (413) 562-8437
www.sterlinghvac.com
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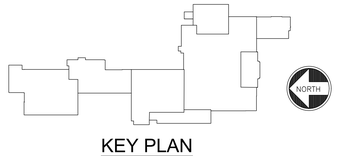
CUH-1 DETAIL
N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3

Air System Sizing Summary for RTU-ADMIN
Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule 02/19/2025
Prepared by: Highland Associates 03:04PM

Air System Information
Air System Name	**RTU-ADMIN**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**4325.0**	ft²
Air System Type	**SZCAV**		Location	**Binghamton, New York**	

Sizing Calculation Information
Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data
Total coil load	**9.9**	Tons	Load occurs at	**Jul 1400**	
Total coil load	**119.0**	MBH	OA DB / WB	**94.5 / 75.9**	°F
Sensible coil load	**93.2**	MBH	Entering DB / WB	**78.3 / 66.6**	°F
Coil CFM at Jul 1400	**4976**	CFM	Leaving DB / WB	**59.9 / 58.8**	°F
Max block CFM	**4976**	CFM	Coil ADP	**57.8**	°F
Sum of peak zone CFM	**4976**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.784**		Resulting RH	**57**	%
CFM/Ton	**501.9**		Design supply temp.	**58.0**	°F
ft²/Ton	**436.3**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**27.5**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data
Max coil load	**108.9**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**4976**	CFM	BTU/(hr·ft²)	**25.2**	
Max coil CFM	**4976**	CFM	Ent. DB / Lvg DB	**61.0 / 82.5**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data
Actual max CFM	**4976**	CFM	Fan motor BHP	**0.00**	BHP
Standard CFM	**4689**	CFM	Fan motor kW	**0.00**	kW
Actual max CFM/ft²	**1.15**	CFM/ft²	Fan static	**0.00**	in wg

Outdoor Ventilation Air Data
Design airflow CFM	**536**	CFM	CFM/person	**10.72**	CFM/person
CFM/ft²	**0.12**	CFM/ft²			

Hourly Analysis Program 5.10 Page 1 of 25

RTU-ADMIN LOAD CALC

N.T.S.

Air System Sizing Summary for RTU-GUIDANCE
Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule 02/19/2025
Prepared by: Highland Associates 03:35PM

Air System Information
Air System Name	**RTU-GUIDANCE**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**2531.0**	ft²
Air System Type	**SZCAV**		Location	**Binghamton, New York**	

Sizing Calculation Information
Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**User-Modified**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data
Total coil load	**7.7**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**91.9**	MBH	OA DB / WB	**95.0 / 76.0**	°F
Sensible coil load	**69.9**	MBH	Entering DB / WB	**75.1 / 62.4**	°F
Coil CFM at Jul 1500	**3000**	CFM	Leaving DB / WB	**52.3 / 51.1**	°F
Max block CFM	**3000**	CFM	Coil ADP	**49.7**	°F
Sum of peak zone CFM	**3000**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.760**		Resulting RH	**50**	%
CFM/Ton	**391.5**		Design supply temp.	**55.0**	°F
ft²/Ton	**330.3**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**36.3**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data
Max coil load	**52.1**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**3000**	CFM	BTU/(hr·ft²)	**20.6**	
Max coil CFM	**3000**	CFM	Ent. DB / Lvg DB	**59.5 / 76.6**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data
Actual max CFM	**3000**	CFM	Fan motor BHP	**0.00**	BHP
Standard CFM	**2827**	CFM	Fan motor kW	**0.00**	kW
Actual max CFM/ft²	**1.19**	CFM/ft²	Fan static	**0.00**	in wg

Outdoor Ventilation Air Data
Design airflow CFM	**300**	CFM	CFM/person	**7.32**	CFM/person
CFM/ft²	**0.12**	CFM/ft²			

Hourly Analysis Program 5.10 Page 1 of 15

RTU-GUIDANCE LOAD CALC

N.T.S.

Air System Sizing Summary for RTU-TECHNOLOGY EDUCATION
Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule 02/19/2025
Prepared by: Highland Associates 02:12PM

Air System Information
Air System Name	**RTU-TECHNOLOGY EDUCATION**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**2028.6**	ft²
Air System Type	**SZCAV**		Location	**Binghamton, New York**	

Sizing Calculation Information
Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**User-Modified**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data
Total coil load	**8.3**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**99.2**	MBH	OA DB / WB	**95.0 / 76.0**	°F
Sensible coil load	**66.8**	MBH	Entering DB / WB	**77.2 / 67.8**	°F
Coil CFM at Jul 1500	**4000**	CFM	Leaving DB / WB	**60.8 / 59.9**	°F
Max block CFM	**4000**	CFM	Coil ADP	**59.0**	°F
Sum of peak zone CFM	**4000**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.673**		Resulting RH	**69**	%
CFM/Ton	**484.1**		Design supply temp.	**55.0**	°F
ft²/Ton	**245.5**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**48.9**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data
Max coil load	**97.3**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**4000**	CFM	BTU/(hr·ft²)	**48.0**	
Max coil CFM	**4000**	CFM	Ent. DB / Lvg DB	**53.8 / 77.7**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data
Actual max CFM	**4000**	CFM	Fan motor BHP	**0.00**	BHP
Standard CFM	**3770**	CFM	Fan motor kW	**0.00**	kW
Actual max CFM/ft²	**1.97**	CFM/ft²	Fan static	**0.00**	in wg

Outdoor Ventilation Air Data
Design airflow CFM	**800**	CFM	CFM/person	**22.86**	CFM/person
CFM/ft²	**0.39**	CFM/ft²			

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RTU-TECHNOLOGY EDUCATION LOAD CALC

N.T.S.

Air System Sizing Summary for RTU-WEIGHT ROOM
Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule 02/19/2025
Prepared by: Highland Associates 01:43PM

Air System Information
Air System Name	**RTU-WEIGHT ROOM**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**1931.0**	ft²
Air System Type	**SZCAV**		Location	**Binghamton, New York**	

Sizing Calculation Information
Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**User-Modified**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data
Total coil load	**11.6**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**139.6**	MBH	OA DB / WB	**95.0 / 76.0**	°F
Sensible coil load	**83.2**	MBH	Entering DB / WB	**77.5 / 66.1**	°F
Coil CFM at Jul 1500	**3000**	CFM	Leaving DB / WB	**50.3 / 49.5**	°F
Max block CFM	**3000**	CFM	Coil ADP	**47.2**	°F
Sum of peak zone CFM	**3000**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.596**		Resulting RH	**60**	%
CFM/Ton	**258.0**		Design supply temp.	**55.0**	°F
ft²/Ton	**166.0**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**72.3**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data
Max coil load	**82.5**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**3000**	CFM	BTU/(hr·ft²)	**42.7**	
Max coil CFM	**3000**	CFM	Ent. DB / Lvg DB	**50.4 / 77.4**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data
Actual max CFM	**3000**	CFM	Fan motor BHP	**0.00**	BHP
Standard CFM	**2827**	CFM	Fan motor kW	**0.00**	kW
Actual max CFM/ft²	**1.55**	CFM/ft²	Fan static	**0.00**	in wg

Outdoor Ventilation Air Data
Design airflow CFM	**720**	CFM	CFM/person	**24.00**	CFM/person
CFM/ft²	**0.37**	CFM/ft²			

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RTU-WEIGHT ROOM LOAD CALC

N.T.S.

Air System Sizing Summary for RTU-VESTIBULE
Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule 02/19/2025
Prepared by: Highland Associates 03:54PM

Air System Information
Air System Name	**RTU-VESTIBULE**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**660.0**	ft²
Air System Type	**SZCAV**		Location	**Binghamton, New York**	

Sizing Calculation Information
Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**User-Modified**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data
Total coil load	**3.1**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**36.8**	MBH	OA DB / WB	**95.0 / 76.0**	°F
Sensible coil load	**26.9**	MBH	Entering DB / WB	**80.5 / 66.5**	°F
Coil CFM at Jul 1500	**1100**	CFM	Leaving DB / WB	**56.4 / 55.2**	°F
Max block CFM	**1100**	CFM	Coil ADP	**53.8**	°F
Sum of peak zone CFM	**1100**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.731**		Resulting RH	**50**	%
CFM/Ton	**358.5**		Design supply temp.	**55.0**	°F
ft²/Ton	**215.1**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**55.8**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data
Max coil load	**43.1**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**1100**	CFM	BTU/(hr·ft²)	**65.3**	
Max coil CFM	**1100**	CFM	Ent. DB / Lvg DB	**52.6 / 91.1**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data
Actual max CFM	**1100**	CFM	Fan motor BHP	**0.00**	BHP
Standard CFM	**1037**	CFM	Fan motor kW	**0.00**	kW
Actual max CFM/ft²	**1.67**	CFM/ft²	Fan static	**0.00**	in wg

Outdoor Ventilation Air Data
Design airflow CFM	**265**	CFM	CFM/person	**88.33**	CFM/person
CFM/ft²	**0.40**	CFM/ft²			

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RTU-VESTIBULE LOAD CALC

N.T.S.

Air System Sizing Summary for SC-1 CU-1
Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule 06/13/2025
Prepared by: Highland Associates 02:30PM

Air System Information
Air System Name	**SC-1 CU-1**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**67.0**	ft²
Air System Type	**SZCAV**		Location	**Binghamton, New York**	

Sizing Calculation Information
Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data
Total coil load	**0.4**	Tons	Load occurs at	**Jul 1600**	
Total coil load	**5.3**	MBH	OA DB / WB	**94.5 / 75.9**	°F
Sensible coil load	**5.2**	MBH	Entering DB / WB	**73.2 / 61.2**	°F
Coil CFM at Jul 1600	**291**	CFM	Leaving DB / WB	**55.8 / 54.6**	°F
Max block CFM	**291**	CFM	Coil ADP	**53.9**	°F
Sum of peak zone CFM	**291**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.977**		Resulting RH	**51**	%
CFM/Ton	**660.4**		Design supply temp.	**55.0**	°F
ft²/Ton	**152.1**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**78.9**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data
Max coil load	**0.3**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**291**	CFM	BTU/(hr·ft²)	**4.9**	
Max coil CFM	**291**	CFM	Ent. DB / Lvg DB	**68.9 / 70.0**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data
Actual max CFM	**291**	CFM	Fan motor BHP	**0.00**	BHP
Standard CFM	**274**	CFM	Fan motor kW	**0.00**	kW
Actual max CFM/ft²	**4.34**	CFM/ft²	Fan static	**0.00**	in wg

Outdoor Ventilation Air Data
Design airflow CFM	**4**	CFM	CFM/person	**0.00**	CFM/person
CFM/ft²	**0.06**	CFM/ft²			

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SC-1,CU-1 LOAD CALC

N.T.S.

Air System Sizing Summary for PDU-1N
Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule 07/08/2025
Prepared by: Highland Associates 08:44AM

Air System Information
Air System Name	**PDU-1N**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**9848.0**	ft²
Air System Type	**SZCAV**		Location	**Binghamton, New York**	

Sizing Calculation Information
Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**User-Modified**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data
Total coil load	**38.4**	Tons	Load occurs at	**Jul 1500**	
Total coil load	**460.9**	MBH	OA DB / WB	**95.0 / 76.0**	°F
Sensible coil load	**420.5**	MBH	Entering DB / WB	**89.2 / 75.7**	°F
Coil CFM at Jul 1500	**24000**	CFM	Leaving DB / WB	**72.0 / 70.7**	°F
Max block CFM	**24000**	CFM	Coil ADP	**70.1**	°F
Sum of peak zone CFM	**24000**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.912**		Resulting RH	**60**	%
CFM/Ton	**624.8**		Design supply temp.	**55.0**	°F
ft²/Ton	**256.4**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**46.8**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data
Max coil load	**881.3**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**24000**	CFM	BTU/(hr·ft²)	**89.5**	
Max coil CFM	**24000**	CFM	Ent. DB / Lvg DB	**58.4 / 94.5**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data
Actual max CFM	**24000**	CFM	Fan motor BHP	**0.00**	BHP
Standard CFM	**22619**	CFM	Fan motor kW	**0.00**	kW
Actual max CFM/ft²	**2.44**	CFM/ft²	Fan static	**0.00**	in wg

Outdoor Ventilation Air Data
Design airflow CFM	**6590**	CFM	CFM/person	**32.95**	CFM/person
CFM/ft²	**0.67**	CFM/ft²			

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PDU-1 LOAD CALC

N.T.S.

Air System Sizing Summary for DU-1 UNIT
Project Name: 2024-239 JCCSD Capital Project 2025 2026+Vestibule 06/13/2025
Prepared by: Highland Associates 02:35PM

Air System Information
Air System Name	**DU-1 UNIT**		Number of zones	**1**	
Equipment Class	**PKG ROOF**		Floor Area	**2842.0**	ft²
Air System Type	**SZCAV**		Location	**Binghamton, New York**	

Sizing Calculation Information
Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**User-Modified**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data
Total coil load	**7.2**	Tons	Load occurs at	**Aug 1400**	
Total coil load	**86.8**	MBH	OA DB / WB	**94.5 / 75.9**	°F
Sensible coil load	**64.9**	MBH	Entering DB / WB	**82.4 / 71.2**	°F
Coil CFM at Aug 1400	**3800**	CFM	Leaving DB / WB	**65.6 / 64.6**	°F
Max block CFM	**3800**	CFM	Coil ADP	**63.8**	°F
Sum of peak zone CFM	**3800**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.747**		Resulting RH	**76**	%
CFM/Ton	**525.1**		Design supply temp.	**55.0**	°F
ft²/Ton	**392.7**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**30.6**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data
Max coil load	**156.3**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**3800**	CFM	BTU/(hr·ft²)	**55.0**	
Max coil CFM	**3800**	CFM	Ent. DB / Lvg DB	**33.5 / 73.9**	°F
Water flow @ 20.0 °F drop	**15.64**	gpm			

Supply Fan Sizing Data
Actual max CFM	**3800**	CFM	Fan motor BHP	**0.00**	BHP
Standard CFM	**3581**	CFM	Fan motor kW	**0.00**	kW
Actual max CFM/ft²	**1.34**	CFM/ft²	Fan static	**0.00**	in wg

Outdoor Ventilation Air Data
Design airflow CFM	**1725**	CFM	CFM/person	**431.25**	CFM/person
CFM/ft²	**0.61**	CFM/ft²			

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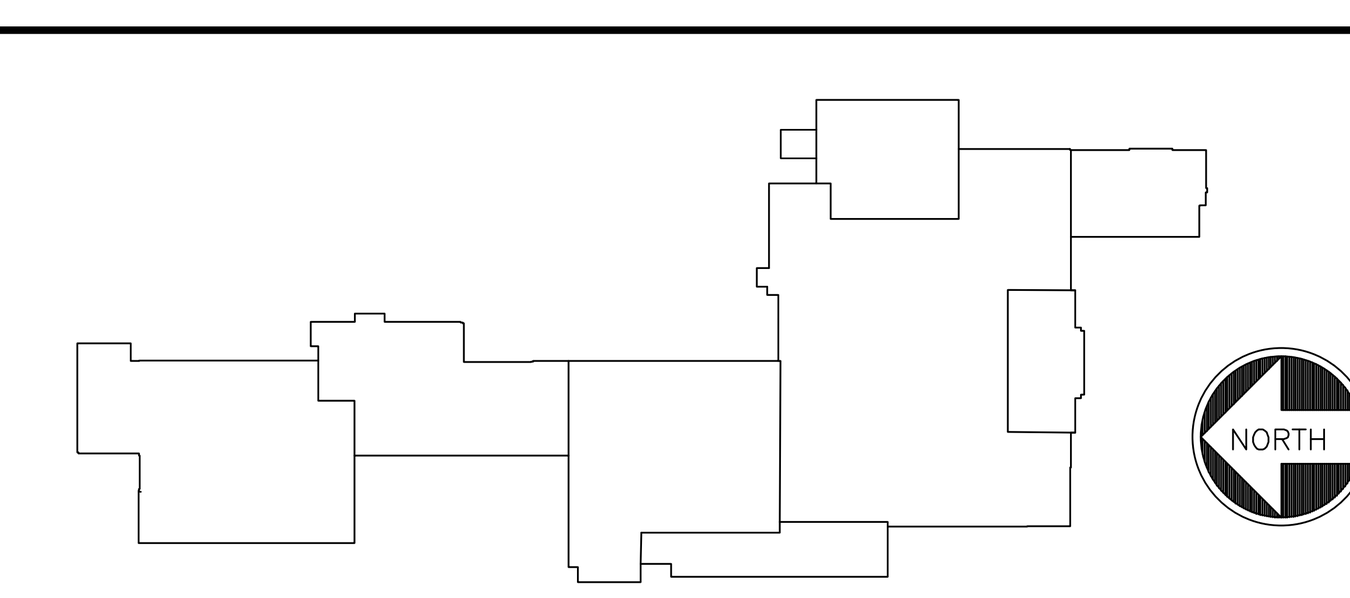
DU-1 LOAD CALC

N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL SCHEDULE

DRAWN BY:	PROJECT NO.:
F.G.	2024-239P
CHECKED BY: M.P.	BUILDING: HS / DRAWING NO.: M-304
DATE: 12-01-2025	

CAD FILE: 4239-HS-M-304.DWG
PLOT DATE: 11/25/2025

SUPPLY, RETURN, & EXHAUST AIR DIFFUSER SCHEDULE

TAG	NECK SIZE	CFM RANGE	PANEL SIZE	THROW (FEET)	MAX. N.C.	MAX. S.P.	DIFFUSER TYPE	MANUFACTURER & MODEL	REMARKS
S-1	24"x6"	0-500	24"x6"	18	<10	0.03" W.G.	-	ANEMOSTAT MODEL EJ-D	ALL ALUMINUM CONSTRUCTION, ALUMINUM OPPOSED BLADE VOLUME DAMPER MODEL OB-6, DUCT MOUNTED. PROVIDE OPTIONAL POLE OPERATOR, PROVIDE STAINLESS STEEL CABLE AND OPERATOR WITH OPERATOR AT BOTTOM OF DUCT. PROVIDE CABLE OPERATOR SECURED TO DUCTWORK. CABLE SHALL BE LONG ENOUGH TO EXTEND TO OPERATOR AT BOTTOM OF DUCT FOR ACCESS BY BALANCER..
S-2	6"Ø	0-85	24"X24"	2-3-5	<15	0.02" W.G.	SURFACE	ANEMOSTAT E1-D	18 GA ALUMINUM CONSTRUCTION, 2 WAY, SURFACE MOUNTED.
S-3	6"Ø	0-100	24"X24"	2-3-5	<15	0.03" W.G.	SURFACE	ANEMOSTAT E1-D	18 GA ALUMINUM CONSTRUCTION, 3 WAY, SURFACE MOUNTED.
S-4	8"Ø	0-125	24"X24"	2-3-7	<15	0.02" W.G.	SURFACE	ANEMOSTAT E1-D	18 GA ALUMINUM CONSTRUCTION, 2 WAY, SURFACE MOUNTED.
S-5	8"Ø	0-145	24"X24"	2-3-7	<15	0.02" W.G.	SURFACE	ANEMOSTAT E1-D	18 GA ALUMINUM CONSTRUCTION, 3 WAY, SURFACE MOUNTED.
S-6	8"Ø	0-140	24"X24"	2-3-5	<15	0.01" W.G.	SURFACE	ANEMOSTAT E1-D	18 GA ALUMINUM CONSTRUCTION, 2 WAY, SURFACE MOUNTED.
S-7	8"Ø	0-175	24"X24"	2-3-7	<15	0.02" W.G.	SURFACE	ANEMOSTAT E-1	18 GA ALUMINUM CONSTRUCTION, 4 WAY, SURFACE MOUNTED.
S-8	10"Ø	0-230	24"X24"	2-3-7	<15	0.02" W.G.	SURFACE	ANEMOSTAT E1-D	18 GA ALUMINUM CONSTRUCTION, 3 WAY, SURFACE MOUNTED.
S-9	12"X6"	0-200	14"X8"	-	<20	0.02" W.G.	SURFACE	ANEMOSTAT MODEL 25	ALL ALUMINUM CONSTRUCTION, OPPOSED BLADE DAMPER, COLOR ARCTIC WHITE (STANDARD).
S-10	10"Ø	0-275	24"X24"	3-5-9	<15	0.03" W.G.	SURFACE	ANEMOSTAT E-1	18 GA ALUMINUM CONSTRUCTION, 4 WAY, SURFACE MOUNTED.
S-11	12"Ø	0-395	24"X24"	4-6-11	<15	0.02" W.G.	SURFACE	ANEMOSTAT E-1	18 GA ALUMINUM CONSTRUCTION, 4 WAY, SURFACE MOUNTED.
S-12	14"Ø	0-535	24"X24"	5-7-14	<15	0.03" W.G.	SURFACE	ANEMOSTAT E-1	18 GA ALUMINUM CONSTRUCTION, 4 WAY, SURFACE MOUNTED.
S-13	15"Ø	0-615	24"X24"	5-7-15	<15	0.03" W.G.	SURFACE	ANEMOSTAT E-1	18 GA ALUMINUM CONSTRUCTION, 4 WAY, SURFACE MOUNTED.
S-14	15"Ø	0-735	24"X24"	6-9-18	19	0.04" W.G.	SURFACE	ANEMOSTAT E-1	18 GA ALUMINUM CONSTRUCTION, 4 WAY, SURFACE MOUNTED.
S-15	24"Ø	0-3140	44.5"Ø	53-64-91	41	0.15" W.G.	SURFACE	ANEMOSTAT C-27	STEEL DIFFUSER, FINISH SHALL BE ARCTIC WHITE,VERTICAL PROJECTION, 24" ROUND NECK.
S-16	6"Ø	0-80	24"X24"	1-2-4	<15	0.01" W.G.	LAY IN T BAR	ANEMOSTAT EPL	18 GA ALUMINUM CONSTRUCTION, 4 WAY, LAY IN T BAR MOUNTED.
S-17	8"Ø	0-140	24"X24"	2-3-5	<15	0.01" W.G.	LAY IN T BAR	ANEMOSTAT EPL	18 GA ALUMINUM CONSTRUCTION, 4 WAY, LAY IN T BAR MOUNTED.
S-18	8"Ø	0-175	24"X24"	2-3-7	<15	0.02" W.G.	LAY IN T BAR	ANEMOSTAT EPL	18 GA ALUMINUM CONSTRUCTION, 4 WAY, LAY IN T BAR MOUNTED.
S-19	10"Ø	0-215	24"X24"	2-4-7	<15	0.01" W.G.	LAY IN T BAR	ANEMOSTAT EPL	18 GA ALUMINUM CONSTRUCTION, 4 WAY, LAY IN T BAR MOUNTED.
S-20	10"Ø	0-275	24"X24"	3-5-9	<15	0.03" W.G.	LAY IN T BAR	ANEMOSTAT EPL	18 GA ALUMINUM CONSTRUCTION, 4 WAY, LAY IN T BAR MOUNTED.
S-21	12"Ø	0-315	24"X24"	3-5-9	<15	0.01" W.G.	LAY IN T BAR	ANEMOSTAT EPL	18 GA ALUMINUM CONSTRUCTION, 4 WAY, LAY IN T BAR MOUNTED.
S-22	12"Ø	0-470	24"X24"	5-7-14	16	0.03" W.G.	LAY IN T BAR	ANEMOSTAT EPL	18 GA ALUMINUM CONSTRUCTION, 4 WAY, LAY IN T BAR MOUNTED.
S-23	6"Ø	0-100	24"X24"	2-3-5	<15	0.03" W.G.	LAY IN T BAR	ANEMOSTAT EPL-D	18 GA ALUMINUM CONSTRUCTION, 3 WAY, LAY IN T BAR MOUNTED.
S-24	10"Ø	0-185	24"X24"	2-4-7	<15	0.01" W.G.	LAY IN T BAR	ANEMOSTAT EPL-D	18 GA ALUMINUM CONSTRUCTION, 3 WAY, LAY IN T BAR MOUNTED.
S-25	12"Ø	0-330	24"X24"	4-6-11	<15	0.03" W.G.	LAY IN T BAR	ANEMOSTAT EPL-D	18 GA ALUMINUM CONSTRUCTION, 3 WAY, LAY IN T BAR MOUNTED.
S-26	14"Ø	0-545	24"X24"	5-8-16	18	0.03" W.G.	LAY IN T BAR	ANEMOSTAT EPL-D	18 GA ALUMINUM CONSTRUCTION, 3 WAY, LAY IN T BAR MOUNTED.
S-27	10"Ø	0-275	48"X4"	-	-	-	LAY IN T BAR	-	SEE S-27 DETAIL ON M-109
S-28	10"Ø	0-360	6'x5.25"	10-18-28	16	0.04" W.G.	SURFACE	ANEMOSTAT SLAD-FS-75 3/4" SLOT	3-SLOT DIFFUSER
S-29	12"Ø	0-450	6'X7.5"	16-22-31	18	0.03" W.G.	LAY IN T BAR	ANEMOSTAT SLAD-FL-100 1" SLOT	3-SLOT DIFFUSER
S-30	15"Ø	0-615	24"X24"	5-7-15	<15	0.03" W.G.	LAY IN T BAR	ANEMOSTAT EPL	18 GA ALUMINUM CONSTRUCTION, 4 WAY, LAY IN T BAR MOUNTED.
R-1	106"X32"	0-17300	108"X32"	-	30	0.05" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-2	6"X6"	0-150	8"X8"	-	<20	0.05" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-3	12"X6"	0-200	14"X8"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-4	34"Hx22"W	0-1710	36"HX24"W	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-5	40"Hx22"W	0-2000	42"HX24"W	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-6	6"Hx6"W	0-70	8"HX8"W	-	<20	0.01" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-7	8"Hx8"W	0-120	10"HX10"W	-	<20	0.01" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-8	8"Hx8"W	0-180	10"HX10"W	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-9	8"Hx8"W	0-240	10"HX10"W	-	<20	0.05" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-10	12"Hx12"W	0-490	14"HX14"W	-	<20	0.05" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
R-11	22"Hx22"W	0-750	24"HX24"W	-	<20	0.01" W.G.	LAY IN T BAR	ANEMOSTAT GCD5LNS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, LAY IN T BAR MOUNTED, OBD DAMPER.
R-12	22"Hx22"W	0-1130	24"HX24"W	-	<20	0.03" W.G.	LAY IN T BAR	ANEMOSTAT GCD5LNS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, LAY IN T BAR MOUNTED, OBD DAMPER.
R-13	34"Hx22"W	0-1710	36"HX24"W	-	<20	0.03" W.G.	LAY IN T BAR	ANEMOSTAT GCD5LNS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, LAY IN T BAR MOUNTED, OBD DAMPER.
R-14	18"X18"	0-770	20"X20"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
E-1	6"X4"	0-50	8"X6"	-	<20	0.01" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
E-2	6"X6"	0-150	8"X8"	-	<20	0.05" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
E-3	10"X4"	0-160	12"X6"	-	<20	0.05" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
E-4	8"X8"	0-180	10"X10"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
E-5	10"X10"	0-260	12"X12"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
E-6	12"X12"	0-370	14"X14"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
E-7	20"X20"	0-940	22"X22"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
E-8	8"X8"	0-180	10"X10"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
T-1	6"X4"	0-50	8"X6"	-	<20	0.01" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
T-2	6"X6"	0-110	8"X8"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
T-3	8"X8"	0-180	10"X10"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
T-4	10"X10"	0-260	12"X12"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
T-5	18"X18"	0-770	20"X20"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.
T-6	20"X20"	0-940	22"X22"	-	<20	0.03" W.G.	SURFACE	ANEMOSTAT GC5NS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.

NOTES:
1. LOCKER/ SHOWER ROOM AREAS TO BE ALUMINUM. PROVIDE SHEETMETAL PLENUM BEHIND GRILLES FOR DUCT CONNECTION WHERE REQUIRED.
2. ALL EXPOSED DUCTWORK, GRILLES, AND ACCESSORIES SHALL BE PRIMED AT THE FACTORY FOR FIELD PAINTING.
3. COORDINATE ALL DRAWINGS AND MOUNTING TYPES WITH THE FINAL ARCHITECTURAL RCP, INCLUDING ALL ADDENDA AND BULLETINS.
4. PROVIDE ALL SUPPLY DIFFUSERS ON THIS PROJECT WITH THROW REDUCING VANES, TO PREVENT COLD AIR DUMPING.

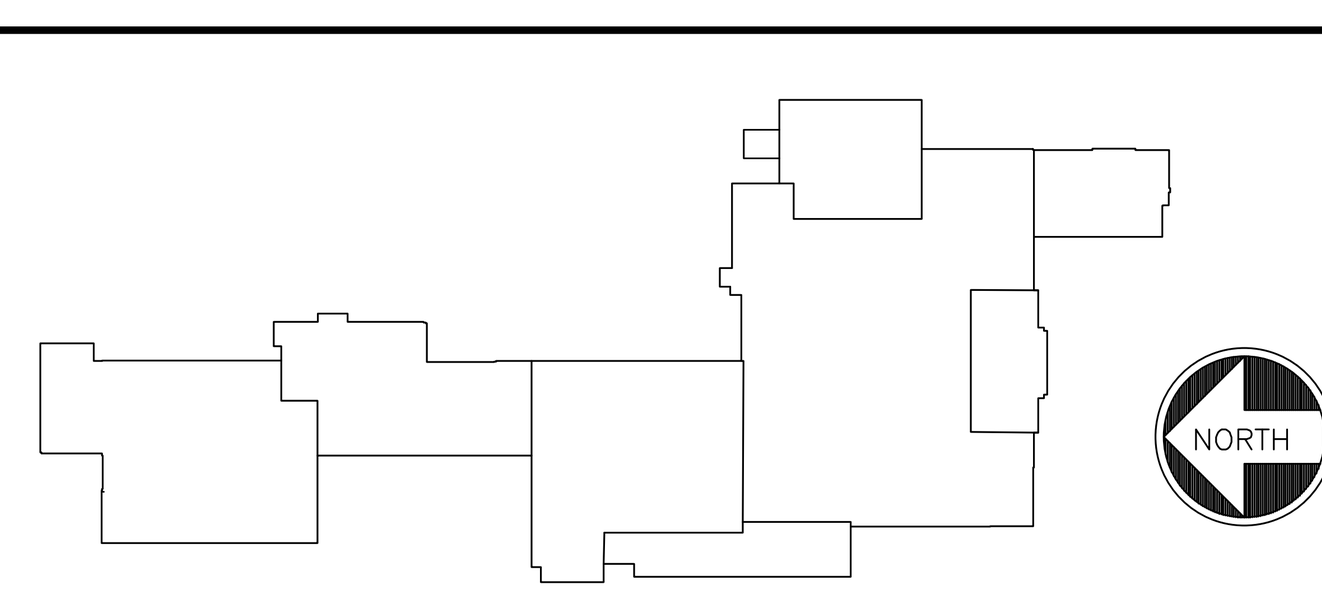
VVR

VARIABLE VOLUME REHEAT BOX SCHEDULE

TAG	CFM	MINIMUM COOLING CFM	MINIMUM HEATING CFM	INLET SIZE	BOX APD	HOT WATER REHEAT COIL								AREA SERVICED	RTU	NC	MANUFACTURER / MODEL	REMARKS
						AIR			WATER									
						MBH	E.A.T.	L.A.T.	W.P.D. MAX.	E.W.T.	LWT	GPM	ROWS					
VVR-42	1800	550	900	24	0.05	46.5	55	100	2	180	160	3.8	2	EXISTING BOY'S LOCKER 276	3	15	NAILOR/ D30RW	

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL SCHEDULES

DRAWN BY: B.H.
PROJECT NO.: 2024-239P
CHECKED BY: M.P.
BUILDING: HS
DRAWING NO.: M-305
DATE: 12-01-2025

CAD FILE: 4239-HS-M-305.DWG
PLOT DATE: 11/27/2025

DESERT AIRE *ExpertAire™ Series Dehumidifiers*

PRODUCT SCOPE

Quantity: 1
Model #: LV08RPNN4
Tag #: DU-1
Unit Weight: 1280 lbs

Capacities:
- Supply Air: 3800 CFM
- Outside Air: 1725 CFM Dehumidification
- EAT: 72.0 °F DB / 58.7 °F WB
- Total Cooling Capacity: 91 MBH
- Total Sensible Capacity: 70.25 MBH
- Moisture Removal Capacity: 19.2 lb/hr
- Total Heat of Rejection: 111 MBH

DX Refrigeration System:
- Refrigerant Type: R-454B
- Scroll Compressor(s), Nominal Tons: 08
- Hot Gas Reheat Condenser Coil
- Coil Coating: Coated
- Hot Gas Bypass: Included
- Receiver w/ Flooding Valve

Supply Airflow Configuration:
- Supply Discharge Location: Top
- Outdoor Intake Location: Horizontal
- Supply ESP: 1.5 in WC
- Supply TSP: 2.57 in WC

Air Filters:
- Standard Filters: MERV 8

Enclosure:
- Location: Indoor
- Separate Electrical Compartment
- Galvanneal with Powder Coat Finish

Condensate Drain Pan:
- 20-Gauge Stainless Steel, Sloped
- 1 in. Schedule 40 PVC Drain Connection

Unit Electrical:
- Main Power (V/Ph/Hz): 460/3/60
- MCA (Amps): 22
- MOPD (Amps): 30
- SCCR (kA): 65
  When protected by Class J, T, or RK1 fuses

Controls:
- Model CM3530
- Temp & RH Sensors: Inside Dehumidifier
- Occupancy Timer w/ BMS Override
- BMS Compatibility: BACnet MSTP

Water Condenser:
- Condenser: Pool

Air Cooled Condenser:
- Model #: RCDA4VPNN-18414PNNA
- # of Fans: 1
- Unit Weight: 397.4 lbs
- Voltage/Phase/Hz - 460-3-60
- MCA (Amps): 6.5
- MOPD (Amps): 10
- SCCR (Amps): 65kA
- Rated Ambient Condition - 100 °F
- Coil - Cu Tubing w/ Al Fins

Auxiliary Heat:
- None
- Capacity: N/A
- Control Signal: 0-10 VDC or Modulating

Warranties (Parts Only):
- Standard Warranty: 2 Years w/ Internet Connection to AireGuard™
- Compressor Warranty: 5 Years
- Air Side Coil Warranty: 5 Years

MCA/MOPD Calculation

0

Project Johnson City High School
Tag DU-1

Series LV08 3 phase
Aux Heat No Aux Heat Selected
Refrigerant R-454B

S/A Airflow	3800	cfm @	1.5	in ESP
S/A Blower Motor (ea)	5	HP		
S/A Blower Motor (qty)	1			
E/A Airflow	0	cfm @		
E/A Blower Motor (ea)	0.0	HP		
E/A Blower Motor (qty)	0			
Pkgd Cond Motor (ea)	0	HP		
Pkg Cond Motor (qty)	0			
Ext. Source Capture Mtr	0	HP		

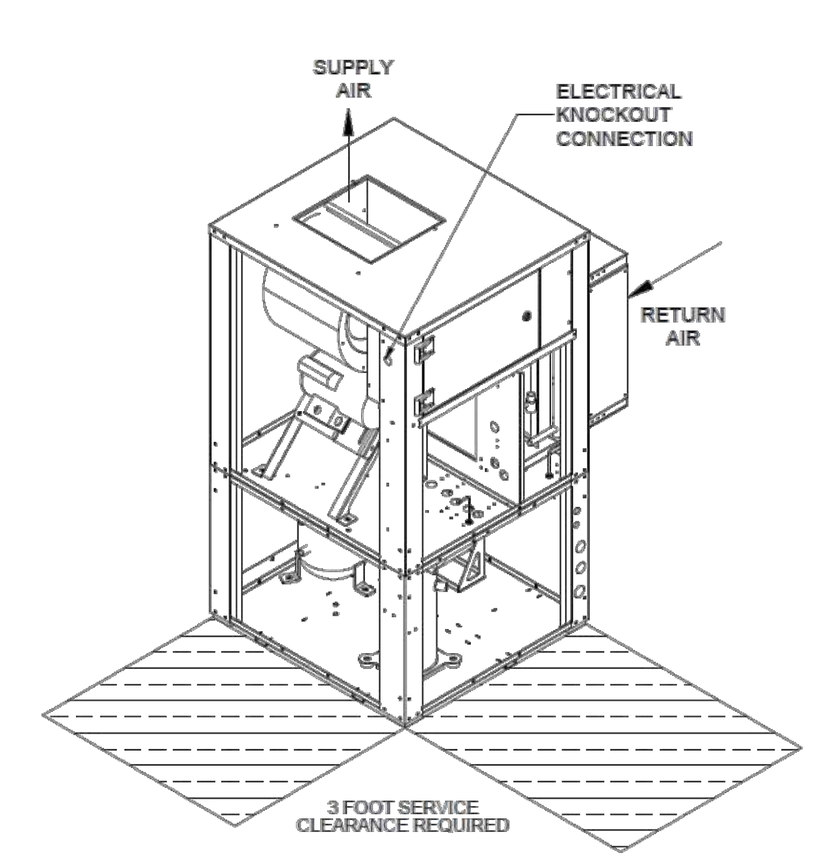
Voltage 460/3/60

	FLA
Compressor 1	12.4
Compressor 2	0.0
Compressor 3	0.0
Compressor 4	0.0
S/A Blwr Motor (ea)	6.4
E/A Blwr Motor (ea)	0.0
Pkgd Cond Motor (ea)	0
Ext. Source Capture Mtr	0
Electric Heater (single point)	N/A
Total Transformer (VA)	250

Unit MCA	22	Amps
Unit MOPD	30	Amps

DESERT AIRE *ExpertAire™ Series Dehumidifiers*

UNIT CONNECTIONS & CLEARANCES



Utility	Location
Remote Condenser Refrigerant Lines	Left
Water Piping Connection(s)	Left
Condensate Drain	Left
Supply Air Discharge	Top
Outdoor Intake	Horizontal

Notes
1. Electrical door clearance typically requires a minimum of 36" clearance on Utility side. Refer to local codes.
2. 36" clearance recommended at the left side and opposite the return air connection for fan maintenance and service.

DESERT AIRE *ExpertAire™ LV Series Dehumidifiers*

SEQUENCE OF OPERATION

Supply Blower
In default mode the supply blower is set to run continuously. The supply blower can also be set to *Automatic* mode at the controller. In *Automatic* mode the blower will run on a demand for cooling, dehumidification, or space heating. When set for Automatic operation, the supply fan stops when conditions are satisfied on the controller set points.

CIRCUIT HEAT SINK CONFIGURATION:
Compressor Starts On a Call for dehumidification and or cooling. The system has one configurable circuit as follows:
Circuit "A" Priority: Hot Gas Reheat / Water / Air Cooled Remote Condenser

Dehumidification
Unit starts and runs in respective order listed in the "Circuit Heat Sink Configuration Section".

Cooling
First Stage: The Unit will start and operate with the air reheat off and reject its heat to following condenser(s), in respective order, listed in the "Circuit Heat Sink Configuration Section".

Air Heating
First Stage: During a call for dehumidification, unit operates in the air reheat mode.

Second Stage: The auxiliary heater is activated by an analog or binary control signal from the dehumidifier.

Pool Water Heating
First Stage: On a call for pool/spa water heating and simultaneous air cooling, the pool water condenser will be activated.

Second Stage : An auxiliary pool/spa heater dry contactor will be closed to activate the pool heater by others.

Exhaust and Outside Air
Unoccupied Times:
The outside air intake damper is closed and the bypass damper opens to a position keeping the evaporator and supply airflow constant. An exhaust fan dry contact signals the external exhaust fan off.

Occupied Times:

Sequence of Operation (LV) 202111

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DESERT AIRE *ExpertAire™ LV Series Dehumidifiers*

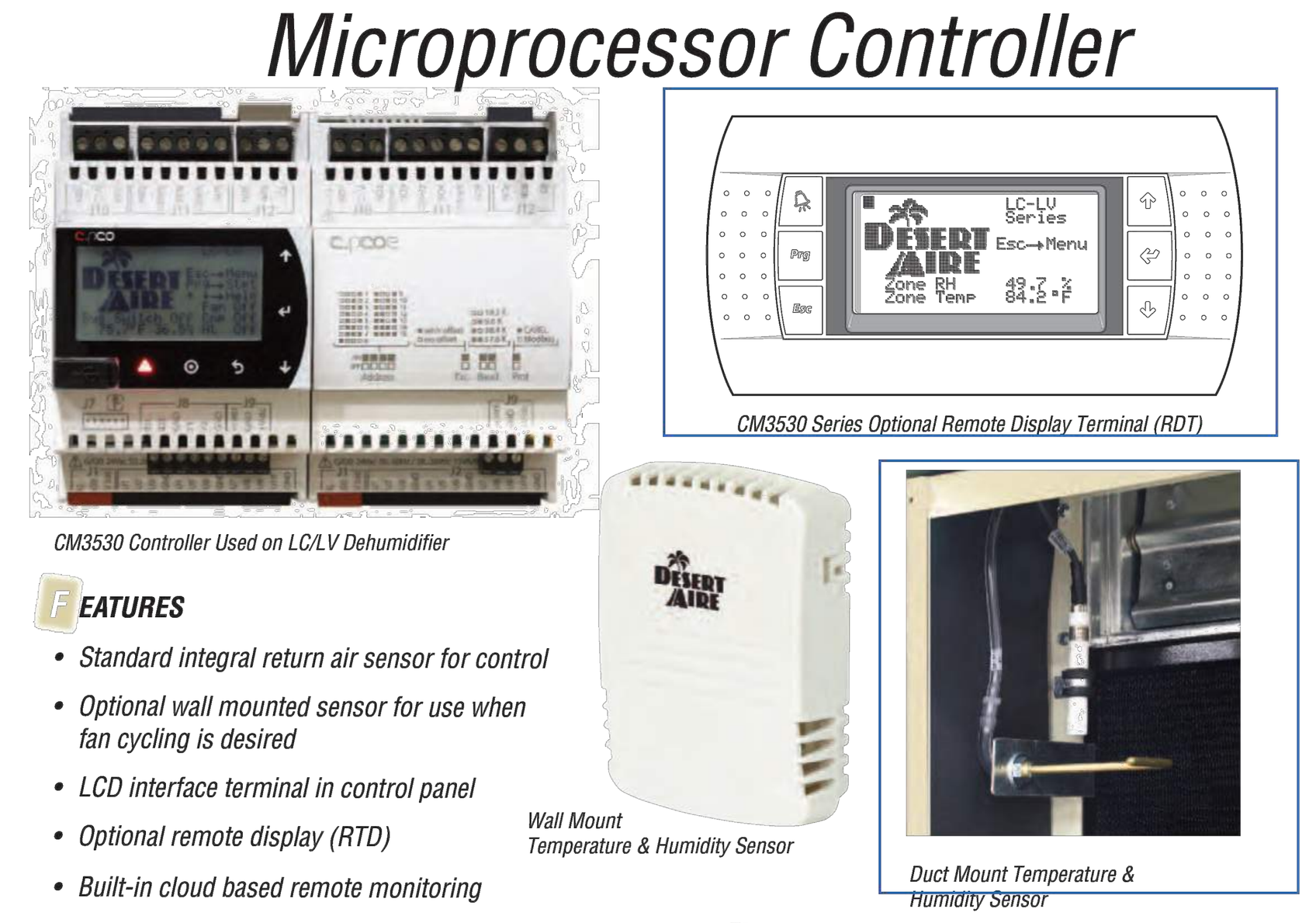
The outside air intake damper is opened and the bypass damper closes to a position keeping the evaporator and supply airflow constant. An exhaust fan dry contact closes to signal the start of exhaust fans by others.

EMERGENCY SYSTEM SHUTDOWN
Terminal points are available for a binary contact closure by others to control unit shut down by smoke detector or other similar device. An open contact in the 24 VAC circuit will deactivate motors, fans and compressors.

CM3530 Series Controller for LC/LV Dehumidifiers

ADVANCED COMMUNICATIONS CAPABILITIES · EASY INSTALLATION AND OPERATION · CONTINUOUS MONITORING

Advanced LC/LV Microprocessor Controller



CM3530 Controller Used on LC/LV Dehumidifier

CM3530 Series Optional Remote Display Terminal (RDT)

Wall Mount Temperature & Humidity Sensor

Duct Mount Temperature & Humidity Sensor

FEATURES
- *Standard integral return air sensor for control*
- *Optional wall mounted sensor for use when fan cycling is desired*
- *LCD interface terminal in control panel*
- *Optional remote display (RTD)*
- *Built-in cloud based remote monitoring*

DESCRIPTION

The CM3530 controllers are uniquely programmed for each Desert Aire application providing energy efficient moisture removal and precise temperature & humidity control.

The CM3530 controller offers an easy interface with building management systems (BMS) with on-board or pre-configured gateway modules. Modbus RTU TCP/IP are standard. BACnet® MS/TP and BACnet® Ethernet are onboard and can be activated with optional licences. A LonTalk gateway is available that can connect a LonWorks system to the controls.

A user interface to the CM3530 is supplied on each unit. This backlit LCD display provides easy to navigate screens for setpoint adjustment and unit monitoring. All Inputs and Outputs along with alarm history can be viewed from the user interface to aid in unit or system diagnostics. The optional remote display terminal can be connected to the controller and mounted at a more convenient location for user interface.

ORDERING CODE

Accessories
- ☐ CA3530-3-WALL - Optional Wall Mount Sensor
- ☐ CA3530-3-RDT - Optional Remote Mount Display

Optional Communication Modules
- ☐ CA3530-3-BAC - Optional Pre-Installed BACnet Ethernet Licence
- ☐ CA3530-3-LON - Optional LonTalk Gateway

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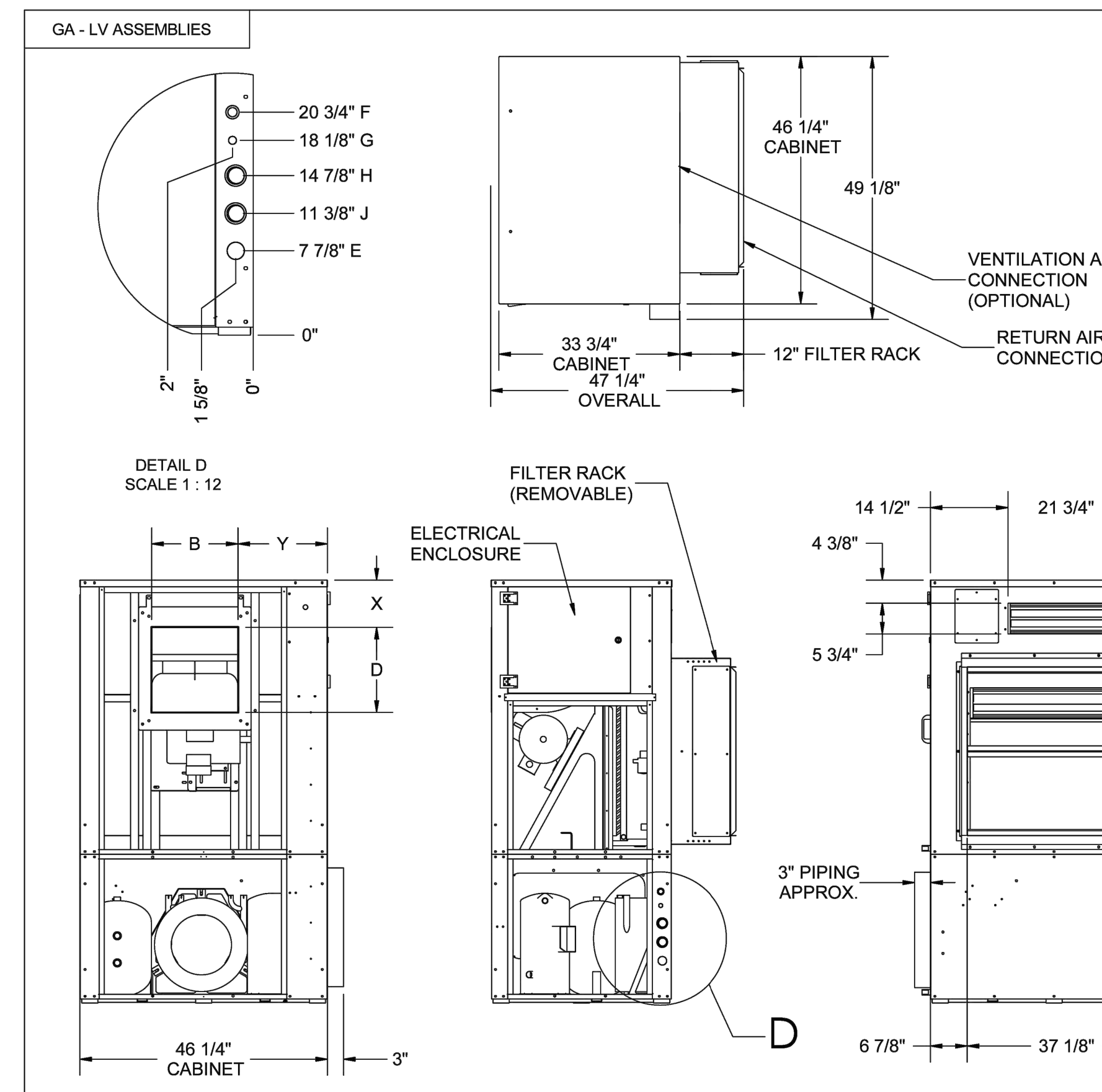

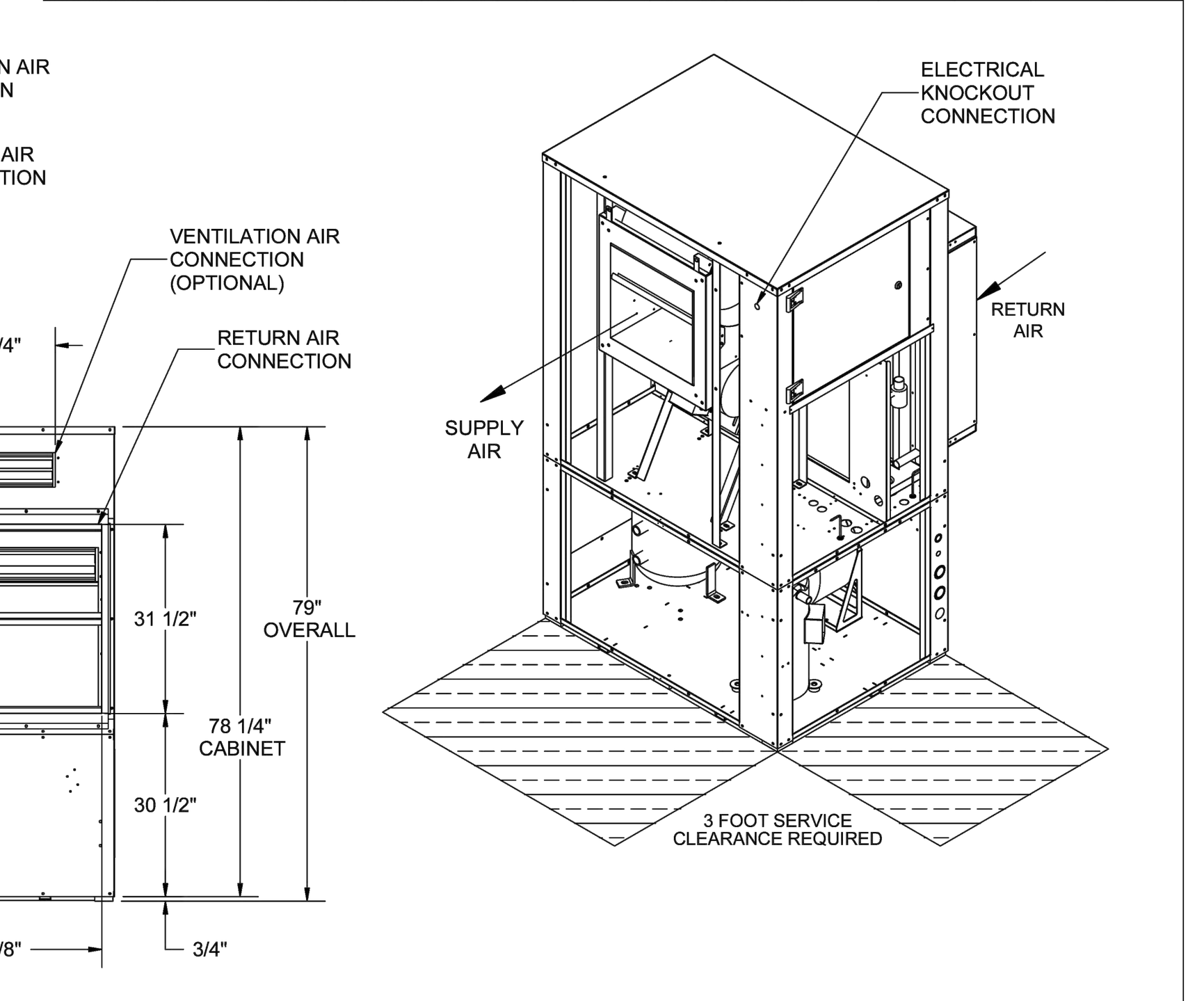

DUCT OPENING DIMENSIONS			TOP DIM A	OPENING WIDTH DIM B	TOP DIM C	OPENING HEIGHT DIM D	HORIZ DIM X	HORIZ DIM Y	FIELD PIPING DIMENSIONS: COND DRAIN DIM E	REFRIG OUTLET DIM F	REFRIG INLET DIM G	WATER OUTLET DIM H	WATER INLET DIM J
	ESP	BLOWER											
CAB 36: LV04	1/2", 1", 1-1/2"	110-10R	16 13/16	13 1/4	12 5/8	12 5/8	10 1/8	18 1/16	1	5/8	1/2	1	1
CAB 36: LV05	1/2", 1", 1-1/2"	120-12R	16 13/16	15 3/4	12	13 5/8	9 5/8	16 13/16		3/4			
CAB 36: LV06	1/2", 1", 1-1/2"										5/8	1 1/4	1 1/4
CAB 36: LV08	1", 1-1/2"												
CAB 36: LV08	1/2"	150-12R	16 9/16	16 1/4	10	16	8 7/16	16 7/16					

(1) WEIGHTS SHOWN REFLECT FULLY OPTIONED ESTIMATED UNIT WEIGHT

LV EXPERT AIRE FILTER INFORMATION						
CABINET	TONS	FILTER RACK	FILTER SIZE	QTY	4" FILTER	1" DEACTIVATOR
36	04, 05, 06 & 08	372-124-003	16x20	4	870-080	872-005

NOMINAL TONNAGE	WEIGHT (LBS) (1)
LV04	1130
LV05	1200
LV06	1275
LV08	1340

This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

All Dimensions in Inches. All Angles 90°. All Outside Corners 0.094" Radius Unless Otherwise Specified

Tolerance Unless Otherwise Specified: X.X ±.125; X.XX ±.060; X.XXX ±.030; Angles ±1°

Third Angle Projection

DESERT AIRE, N120 W18485 Freistadt Road, Germantown, WI 53022, Tel: (262) 946-7400, Fax: (262) 946-7401

Drawn	Date Released	Description
RP	4/17/2009	LV VERTICAL EXPERTAIRE
Sheet: 4 / 5		Page Title: LV 4-8 TON HORZ
Scale: 1:24	Rev.: 7	Drawing Number: GA - LV ASSEMBLIES

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LV Pool Dehumidifier	
UNIT TAG	DU-1
UNIT MANUFACTURE	DESERT AIRE
MODEL NO	LV08 3 phase
LOCATION	INDOOR
UNIT WEIGHT	1280 lbs.
FAN DATA	
SUPPLY AIR FLOW - CFM	3800
S/A FAN ESP (in. W.C)	1.5
TSP (in. W.C)	2.57
S/A FAN HP	5.00
OUTSIDE AIR FLOW - CFM	1725
PERFORMANCE	
EAT DB | WB (°F)	72.0 | 58.7
MOISTURE REMOVAL CAPACITY - LB/HR	19.2
TOTAL COOLING CAP BTUH	90,582
TOTAL SENSIBLE CAP BTUH	70,254
THR BTUH	111,173
UNIT ELECTRICAL	
VOLTAGE	460/3/60
MOPD	30
MCA	22
SHORT CIRCUIT CURRENT RATING (SCCR)	65
AUXILIARY HEATING	
TYPE	None
POOL WATER HEAT RECOVERY	
CIRCUIT A - WATER CONDENSER	**Pool (Full)**
WATER CONDENSER CAPACITY (MBH)	124.3
WATER INLET/OUTLET SIZE CPVC SCH 80 (INCHES)	1-1/4
WATER FLOW (GPM)	16
PRESSURE DROP (FT W.C.)	9
REMOTE CONDENSER DATA	
MODEL NUMBER	RCDA4VPNN-18414PNNA
AMBIENT TEMPERATURE (°F)	100.0
NO. OF FANS	1
WEIGHT	397.4
VOLTAGE	460/3/60
MCA	6.5
MOPD	10
SHORT CIRCUIT CURRENT RATING (SCCR)	65kA

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RCD SERIES

The RCD range of condensers is sized up to 14.6 MBH/°F of heat rejection. The EC fans are controlled using PID to maintain a condenser pressure set point. Control panels are rated for 65 kA SCCR when power is supplied with class J fuses.

STANDARD FEATURES
- Powder coated galvannealed steel cabinet
- Folding legs, for compact shipping and easy installation
- Terminal block for power connection

OPTIONAL FEATURES
- Coated coil
- Vertical orientation with horizontal airflow
- Non-fused or fused disconnect

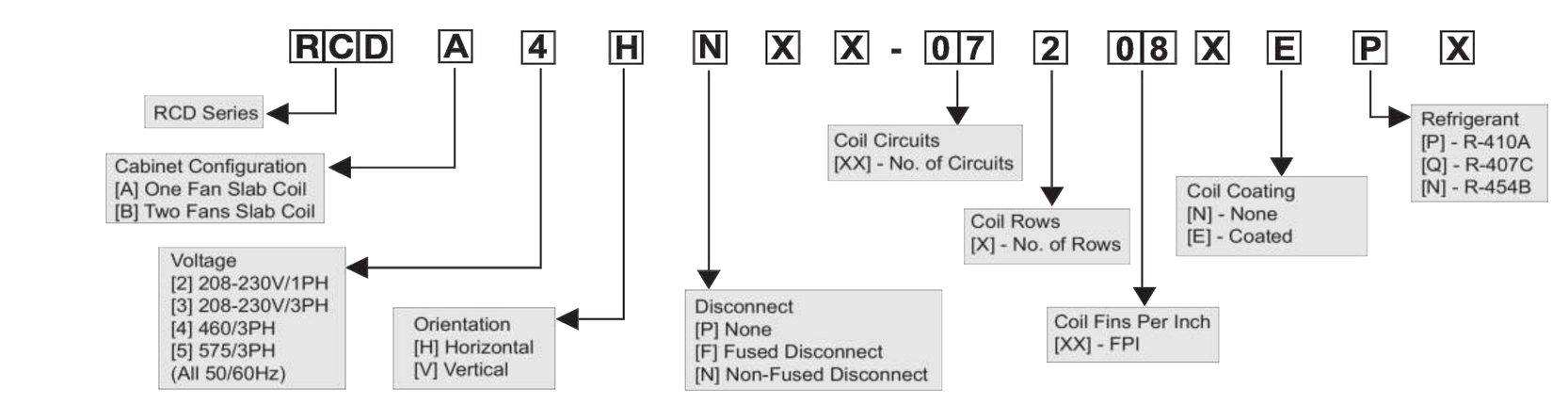
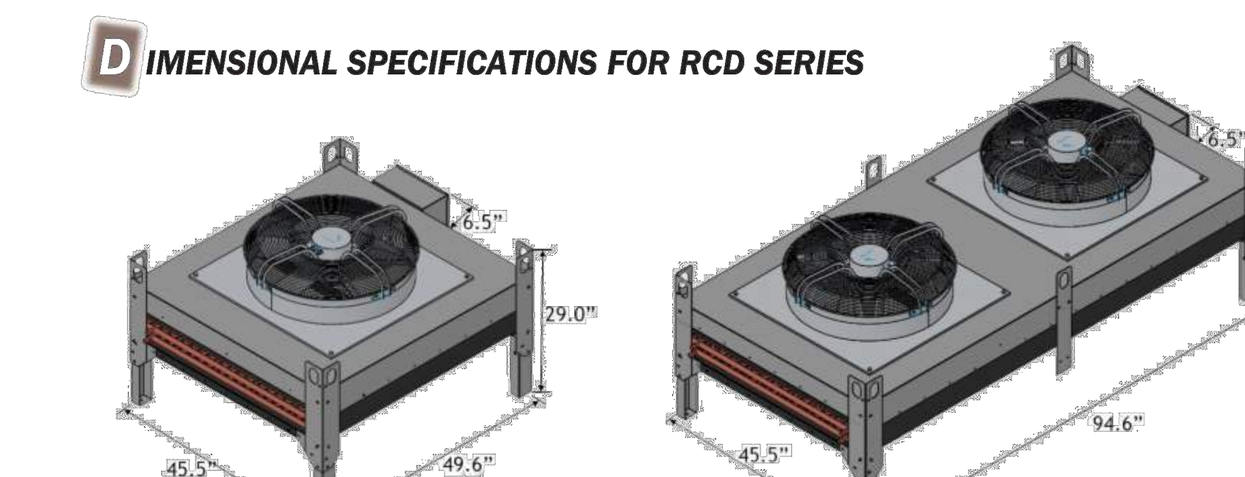


Figure 1 - RCD Model Matrix

DIMENSIONAL SPECIFICATIONS FOR RCD SERIES



DIMENSIONS		RCDA** NN03108***	RCDA** NN07208***	RCDA** NN18414***	RCDB** NN30414***
Connection Size (in)[1]	Discharge	7/8	7/8	7/8	7/8
	Liquid	7/8	7/8	7/8	7/8
Fan Layout		1x1	1x1	1x1	1x2
Mounting Holes (in)		42.9 x 46.1 (Φ3/8)	42.9 x 46.1 (Φ3/8)	42.9 x 46.1 (Φ3/8)	42.9 x 91.3 (Φ3/8)
Approximate Weight (lbs)[2]		377	384	397	684
dBA[3]		40-68	40-68	40-68	40-69

[1] Connection size does not indicate line size. Consult IO Manual.
[2] Add 49lbs for 575V applications.
[3] Listed dBA values are sound ratings for the maximum number of fans in operation per RC at 3m in accordance with AHRI standard 370-2001. Range indicates maximum and minimum sound intensities across each RC's application range.

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ELECTRICAL SPECIFICATIONS AND PERFORMANCE TABLE FOR RCD SERIES

ELECTRICAL		RCDA**NN03108***	RCDA**NN07208***	RCDA**NN18414***	RCDB**NN30414***
208-230V 1PH 60Hz	FLA	6.9	6.9	6.9	2 x 6.9
	MCA	8.6	8.6	8.6	15.5
	MOPD[1]	15.0	15.0	15.0	20.0
	Unit kW	0.75	0.75	0.75	1.5
208-230V 3PH 60Hz	FLA	3.3	3.3	3.3	2 x 3.3
	MCA	4.1	4.1	4.1	7.4
	MOPD[1]	7.0	7.0	7.0	10.0
	Unit kW	1.1	1.1	1.1	2.2
460V 3PH 60Hz	FLA	3.3	5.2	5.2	2 x 5.2
	MCA	4.1	6.5	6.5	11.7
	MOPD[1]	7.0	10.0	10.0	15.0
	Unit kW	1.1	3.2	3.2	6.4
575V 3PH 60Hz	FLA	5.2	5.2	5.2	2 x 5.2
	MCA	7.5	7.5	7.5	11.3
	MOPD[1]	12.0	12.0	12.0	20.0
	Unit kW	3.2	3.2	3.2	6.4

[1] MOPD - Maximum Overcurrent Protection Device.

NOMINAL PERFORMANCE (MBH/°F)		RCDA**NN03108***	RCDA**NN07208***	RCDA**NN18414***	RCDB**NN30414***
208-230V 1PH	R-410A	1.55	2.81	5.50	11.12
	R-407C	1.55	2.81	5.50	11.12
	R-454B	1.49	2.69	5.26	10.62
208-230V 3PH	R-410A	1.64	2.94	5.80	11.73
	R-407C	1.64	2.94	5.80	11.73
	R-454B	1.57	2.81	5.55	11.20
460 & 575V 3PH	R-410A	1.64	3.97	8.17	14.58
	R-407C	1.64	3.97	8.17	14.58
	R-454B	1.57	3.81	7.82	15.62

Submittal 18328 u72473 [20250120] [19.53].pdf

CU-DU-1 DETAILS

N.T.S.

NOTE: M.C. SHAL PROVIDE DESERTAIRE CONTROLLER AND CONTROLS. ATC CONTRACTOR SHALL PROVIDE ALARMS AND MONITORING FOR DU-1 AND CU-DU-1.

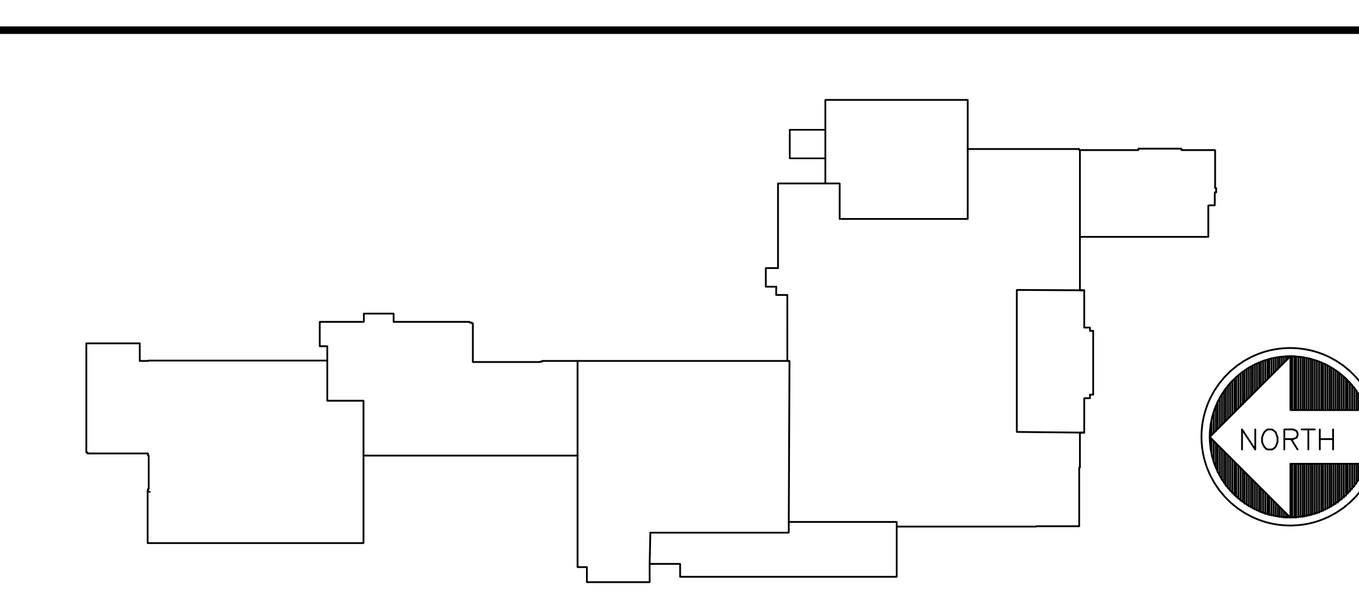
DU-1 DETAILS

N.T.S.

NOTE: M.C. SHAL PROVIDE DESERTAIRE CONTROLLER AND CONTROLS. ATC CONTRACTOR SHALL PROVIDE ALARMS AND MONITORING FOR DU-1 AND CU-DU-1.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York · Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:
F.G.	2024-239P
CHECKED BY: M.P.	BUILDING: HS / DRAWING NO.: M-306
DATE: 12-01-2025	

CAD FILE: 4239-HS-M-306.DWG
PLOT DATE: 11/25/2025

Sequence of Operation: RTU-1 WT CAV (CONSTANT AIR VOLUME)

Economizer:

The outdoor air temperature shall be less than 80 deg. F (adj.). The conditions for cooling mode shall be met. The dehumidification mode and the energy recovery wheel shall be disabled and the bypass dampers shall open to 100%.

OPERATION: When the economizer mode is enabled and the outdoor air temperature is 5 deg. F (adj.) below the discharge setpoint, the Free Cooling Mode shall be enabled. The outdoor air damper shall modulate to maintain the active discharge air temperature setpoint measured by the supply air sensor. During the free cooling mode the mechanical cooling and heat shall be disabled.

DOAU Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

DOAU Occupied:

The unit controller shall control the supply fan speed to maintain a constant volume (adj.). The unit controller shall control the supply fan speed to maintain the current supply duct static pressure setpoint (adj.).

DOAU Unoccupied:

Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. The outdoor air damper shall be commanded to close, and the return air damper shall open. If the unit is under Economizer conditions, the Outdoor Air Damper Position Command shall open to the Outdoor Air Damper Maximum Position Setpoint. Unoccupied Heating Mode shall be enabled when the Space Temperature falls below the Unoccupied Heating Enable Setpoint. During Unoccupied Heating Mode the unit shall run the heat to maintain 90ºF for the discharge air temperature. Unoccupied Heating Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Heating Setpoint. When there is no call for Unoccupied Heating Mode or Unoccupied Dehumid Mode, Unoccupied Cooling Mode shall be enabled when the Space Temperature rises above the Unoccupied Cooling Enable Setpoint. During Unoccupied Cooling Mode the unit shall run the cooling to maintain 50 deg. F for the discharge air temperature. Unoccupied Cooling Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Cooling Enable Setpoint.

DOAU Pre-Cool Mode:

During optimal start, if the average space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated.

DOAU Occupied Bypass:

The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensors. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).

DOAU Heat/Cool Mode:

COOLING: The unit controller shall use the _____ air temperature sensor and cooling setpoint to determine when to initiate requests for cooling.

HEATING: The unit controller shall use the ______ air temperature sensor and heating setpoint to determine when to initiate requests for heating.

DOAU Cooling:

Cooling Mode shall be enabled whenever the Outdoor Air Temperature rises above the Outdoor Air Cooling Enable Setpoint. The Outdoor Air Temperature shall be above the Outdoor Air Heating Enable Setpoint. During Cooling Mode, Cooling Capacity shall be adjusted to maintain Discharge Air Temperature Setpoint. When the Outdoor Air Temperature is above the Outdoor Air Heating Enable, but below the Outdoor Air Cooling Enable Setpoint, Cooling Mode shall be enabled when the Space Temperature is above the Space Temperature Setpoint plus the Space Temperature Offset. Dehumidification Mode shall take priority over Cooling Mode. On units without head pressure control, the compressors shall be locked out if the Outdoor Air Temperature falls below the Compressor Low Ambient Lockout Setpoint and there is a demand for cooling. When this occurs, the unit shall display Compressor Low Ambient Lockout Active as an informational diagnostic. Circuit 1 refrigeration pressure shall be monitored, and Cooling Capacity shall be limited to prevent the indoor coil from freezing. If the unit has digital scroll on the second circuit, then both circuits shall be monitored.

DOAU Primary Heating:

Heating Mode shall be enabled whenever the Outdoor Air Temperature is below the Outdoor Air Heating Enable Setpoint. During Heating Mode, Heat Capacity shall be adjusted to maintain the Discharge Air Temperature to Discharge Air Temperature Setpoint.

DOAU Pre-Heat:

Pre-Heat Enable shall be engaged whenever the Relief Leaving Temperature falls below 20 deg. F, with a deadband of 5 deg. F. The pre-heater shall be shut off if the PHeating Leaving Temperature rises above 90 deg. F.

DOAU Dehumidification:

Dehumidification Mode shall be enabled whenever the Outdoor Air Dewpoint rises above the Outdoor Air Dewpoint Enable Setpoint. The Outdoor Air Temperature Active must be above Outdoor Air Heating Enable Setpoint. During Dehumidification Mode, the hot water valve shall be energized. The heat capacity shall be adjusted to maintain Discharge Air Temperature Setpoint.

DOAU Economizer:

ENABLE (Comparative Enthalpy): Outside air (OA) enthalpy shall be compared with Return air (RA) enthalpy point. The economizer shall enable when OA enthalpy is less than RA enthalpy - 2.0 BTU/LB. The economizer shall disable when OA enthalpy is greater than RA enthalpy. The outdoor air temperature shall be less than 80 deg. F (adj.). The conditions for cooling mode shall be met. The dehumidification mode and the energy recovery wheel shall be disabled and the bypass dampers shall open to 100%.

OPERATION: When the economizer mode is enabled and the outdoor air temperature is 5 deg. F (adj.) below the discharge setpoint, the Free Cooling Mode shall be enabled. The outdoor air damper shall modulate to maintain the active discharge air temperature setpoint measured by the supply air sensor. During the free cooling mode the mechanical cooling and heat shall be disabled.

Free Cooling Mode shall be enabled when the unit is in Economizer Mode and the Outdoor Air Temperature Active is cooler than five degrees below the Discharge Air Temperature Setpoint. During Free Cooling Mode, mechanical cooling shall be locked out and the unit adjusts the outdoor air damper position to maintain the Discharge Air Temperature Setpoint.

DOAU Demand Control CO2 Ventilation:

The unit controller shall modulate the Outdoor Air Damper Position Command to maintain Return CO2 Concentration to Return Concentration Setpoint. The CO2 concentration can also be communicated to Return CO2 Concentration Setpoint.

DOAU Ventilation:

Ventilation Mode shall be enabled when the Outdoor Air Temperature is between the Outdoor Air Cooling Enable Setpoint and the Outdoor Air Heating Enable Setpoint. During Ventilation Mode, heating and cooling shall be locked out and the unit shall supply un-conditioned air. Ventilation Mode shall be locked out whenever the unit is in Dehumidification Mode.

DOAU Supply Fan Operation:

When the unit becomes occupied, the outdoor air damper and the return air damper shall adjust to the minimum outdoor air damper position. After the dampers have modulated the fan sequence can begin. When the fan start sequence has begun, the unit controller shall command the variable speed drive for the supply fan to 50%. A supply fan status switch shall prove fan status. If after 2 minutes (adj.) the fan does not have a proven signal, the Supply Fan Failure alarm shall be displayed and the unit shall shutdown requiring a manual reset. After the startup sequence, the unit controller shall control the speed of the supply fan to maintain a Supply Duct Static Pressure Setpoint. Supply and relief fans are interlocked via software; a failure of either shall disable both.

DOAU Static Pressure High Limit:

If for any reason the supply air pressure exceeds the supply air pressure high limit, the supply fan shall shut down. The unit shall be allowed to restart three times after a 15 minute off period. If the over-pressurization condition occurs on the fourth restart, the unit shall shut down and a manual reset diagnostic is displayed at the remote panel and/or the BAS system.

DOAU Relief Air and Building Pressure Control:

A differential pressure switch shall monitor the differential pressure across the relief air fan. If the switch is detected to be open for 40 consecutive seconds after a request for relief fan operation a fan failure alarm shall annunciate at the BAS and the relief fan shall stop. A manual reset shall be required.

DOAU Relief Fan Operation:

After completing the Supply Fan Starting Sequence, the Exhaust Fan Start Stop Command shall be enabled. The unit controller shall enable the variable speed drive for the relief fan. The speed of the relief fan shall vary to maintain a return duct static pressure setpoint. The unit controller shall enable the variable speed drive for the relief fan. The speed of the relief fan shall vary to maintain a building static pressure setpoint. If the return duct static pressure reaches 3.00 inches of W.C. (adj.), the high limit pressure switch shall shut down the unit, requiring a manual reset to re-start the unit.

DOAU Filter Status:

A differential pressure switch shall monitor the differential pressure across the filter(s) when the fan is running. If the switch closes during normal operation a dirty filter alarm shall annunciate at the BAS.

DOAU Smoke Detector Shutdown:

The unit shall shut down in response to a signal from the smoke detector indicating the presence of smoke. The smoke detector shall be interlocked to the unit through the dry contacts of the smoke detector. A manual reset of the smoke detector shall be required to restart the unit.

Refrigerant Mitigation Mode:

The unit controller shall monitor the leak detection system, when a leak is detected, an alarm shall promptly alert the BAS via BACnet Change-of-Value (COV) and mitigation shall be activated.

In occupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASHRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

In unoccupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASHRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

SEQUENCE OF OPERATIONS: RTU-1-WT

N.T.S.

Sequence of Operation: RTU-2 Tech CAV (CONSTANT AIR VOLUME)

Economizer:

The outdoor air temperature shall be less than 80 deg. F (adj.). The conditions for cooling mode shall be met. The dehumidification mode and the energy recovery wheel shall be disabled and the bypass dampers shall open to 100%.

OPERATION: When the economizer mode is enabled and the outdoor air temperature is 5 deg. F (adj.) below the discharge setpoint, the Free Cooling Mode shall be enabled. The outdoor air damper shall modulate to maintain the active discharge air temperature setpoint measured by the supply air sensor. During the free cooling mode the mechanical cooling and heat shall be disabled.

DOAU Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

DOAU Occupied:

The unit controller shall control the supply fan speed to maintain a constant volume (adj.). The unit controller shall control the supply fan speed to maintain the current supply duct static pressure setpoint (adj.).

DOAU Unoccupied:

Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. The outdoor air damper shall be commanded to close, and the return air damper shall open. If the unit is under Economizer conditions, the Outdoor Air Damper Position Command shall open to the Outdoor Air Damper Maximum Position Setpoint. Unoccupied Heating Mode shall be enabled when the Space Temperature falls below the Unoccupied Heating Enable Setpoint. During Unoccupied Heating Mode the unit shall run the heat to maintain 90ºF for the discharge air temperature. Unoccupied Heating Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Heating Setpoint. When there is no call for Unoccupied Heating Mode or Unoccupied Dehumid Mode, Unoccupied Cooling Mode shall be enabled when the Space Temperature rises above the Unoccupied Cooling Enable Setpoint. During Unoccupied Cooling Mode the unit shall run the cooling to maintain 50 deg. F for the discharge air temperature. Unoccupied Cooling Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Cooling Enable Setpoint.

DOAU Pre-Cool Mode:

During optimal start, if the average space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated.

DOAU Occupied Bypass:

The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensors. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).

DOAU Heat/Cool Mode:

COOLING: The unit controller shall use the _______ air temperature sensor and cooling setpoint to determine when to initiate requests for cooling.

HEATING: The unit controller shall use the ________ air temperature sensor and heating setpoint to determine when to initiate requests for heating.

DOAU Cooling:

Cooling Mode shall be enabled whenever the Outdoor Air Temperature rises above the Outdoor Air Cooling Enable Setpoint. The Outdoor Air Temperature shall be above the Outdoor Air Heating Enable Setpoint. During Cooling Mode, Cooling Capacity shall be adjusted to maintain Discharge Air Temperature Setpoint. When the Outdoor Air Temperature is above the Outdoor Air Heating Enable, but below the Outdoor Air Cooling Enable Setpoint, Cooling Mode shall be enabled when the Space Temperature is above the Space Temperature Setpoint plus the Space Temperature Offset. Dehumidification Mode shall take priority over Cooling Mode. On units without head pressure control, the compressors shall be locked out if the Outdoor Air Temperature falls below the Compressor Low Ambient Lockout Setpoint and there is a demand for cooling. When this occurs, the unit shall display Compressor Low Ambient Lockout Active as an informational diagnostic. Circuit 1 refrigeration pressure shall be monitored, and Cooling Capacity shall be limited to prevent the indoor coil from freezing. If the unit has digital scroll on the second circuit, then both circuits shall be monitored.

DOAU Primary Heating:

Heating Mode shall be enabled whenever the Outdoor Air Temperature is below the Outdoor Air Heating Enable Setpoint. During Heating Mode, Heat Capacity shall be adjusted to maintain the Discharge Air Temperature to Discharge Air Temperature Setpoint.

DOAU Pre-Heat:

Pre-Heat Enable shall be engaged whenever the Relief Leaving Temperature falls below 20 deg. F, with a deadband of 5 deg. F. The pre-heater shall be shut off if the PHeating Leaving Temperature rises above 90 deg. F.

DOAU Dehumidification:

Dehumidification Mode shall be enabled whenever the Outdoor Air Dewpoint rises above the Outdoor Air Dewpoint Enable Setpoint. The Outdoor Air Temperature Active must be above Outdoor Air Heating Enable Setpoint. During Dehumidification Mode, the hot water valve shall be energized. The heat capacity shall be adjusted to maintain Discharge Air Temperature Setpoint.

DOAU Economizer:

ENABLE (Comparative Enthalpy): Outside air (OA) enthalpy shall be compared with Return air (RA) enthalpy point. The economizer shall enable when OA enthalpy is less than RA enthalpy - 2.0 BTU/LB. The economizer shall disable when OA enthalpy is greater than RA enthalpy. The outdoor air temperature shall be less than 80 deg. F (adj.). The conditions for cooling mode shall be met. The dehumidification mode and the energy recovery wheel shall be disabled and the bypass dampers shall open to 100%.

OPERATION: When the economizer mode is enabled and the outdoor air temperature is 5 deg. F (adj.) below the discharge setpoint, the Free Cooling Mode shall be enabled. The outdoor air damper shall modulate to maintain the active discharge air temperature setpoint measured by the supply air sensor. During the free cooling mode the mechanical cooling and heat shall be disabled.

Free Cooling Mode shall be enabled when the unit is in Economizer Mode and the Outdoor Air Temperature Active is cooler than five degrees below the Discharge Air Temperature Setpoint. During Free Cooling Mode, mechanical cooling shall be locked out and the unit adjusts the outdoor air damper position to maintain the Discharge Air Temperature Setpoint.

DOAU Demand Control CO2 Ventilation:

The unit controller shall modulate the Outdoor Air Damper Position Command to maintain Return CO2 Concentration to Return Concentration Setpoint. The CO2 concentration can also be communicated to Return CO2 Concentration Setpoint.

DOAU Ventilation:

Ventilation Mode shall be enabled when the Outdoor Air Temperature is between the Outdoor Air Cooling Enable Setpoint and the Outdoor Air Heating Enable Setpoint. During Ventilation Mode, heating and cooling shall be locked out and the unit shall supply un-conditioned air. Ventilation Mode shall be locked out whenever the unit is in Dehumidification Mode.

DOAU Supply Fan Operation:

When the unit becomes occupied, the outdoor air damper and the return air damper shall adjust to the minimum outdoor air damper position. After the dampers have modulated the fan sequence can begin. When the fan start sequence has begun, the unit controller shall command the variable speed drive for the supply fan to 50%. A supply fan status switch shall prove fan status. If after 2 minutes (adj.) the fan does not have a proven signal, the Supply Fan Failure alarm shall be displayed and the unit shall shutdown requiring a manual reset. After the startup sequence, the unit controller shall control the speed of the supply fan to maintain a Supply Duct Static Pressure Setpoint. Supply and relief fans are interlocked via software; a failure of either shall disable both.

DOAU Static Pressure High Limit:

If for any reason the supply air pressure exceeds the supply air pressure high limit, the supply fan shall shut down. The unit shall be allowed to restart three times after a 15 minute off period. If the over-pressurization condition occurs on the fourth restart, the unit shall shut down and a manual reset diagnostic is displayed at the remote panel and/or the BAS system.

DOAU Relief Air and Building Pressure Control:

A differential pressure switch shall monitor the differential pressure across the relief air fan. If the switch is detected to be open for 40 consecutive seconds after a request for relief fan operation a fan failure alarm shall annunciate at the BAS and the relief fan shall stop. A manual reset shall be required.

DOAU Relief Fan Operation:

After completing the Supply Fan Starting Sequence, the Exhaust Fan Start Stop Command shall be enabled. The unit controller shall enable the variable speed drive for the relief fan. The speed of the relief fan shall vary to maintain a return duct static pressure setpoint. The unit controller shall enable the variable speed drive for the relief fan. The speed of the relief fan shall vary to maintain a building static pressure setpoint. If the return duct static pressure reaches 3.00 inches of W.C. (adj.), the high limit pressure switch shall shut down the unit, requiring a manual reset to re-start the unit.

DOAU Filter Status:

A differential pressure switch shall monitor the differential pressure across the filter(s) when the fan is running. If the switch closes during normal operation a dirty filter alarm shall annunciate at the BAS.

DOAU Smoke Detector Shutdown:

The unit shall shut down in response to a signal from the smoke detector indicating the presence of smoke. The smoke detector shall be interlocked to the unit through the dry contacts of the smoke detector. A manual reset of the smoke detector shall be required to restart the unit.

Refrigerant Mitigation Mode:

The unit controller shall monitor the leak detection system, when a leak is detected, an alarm shall promptly alert the BAS via BACnet Change-of-Value (COV) and mitigation shall be activated.

In occupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASHRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

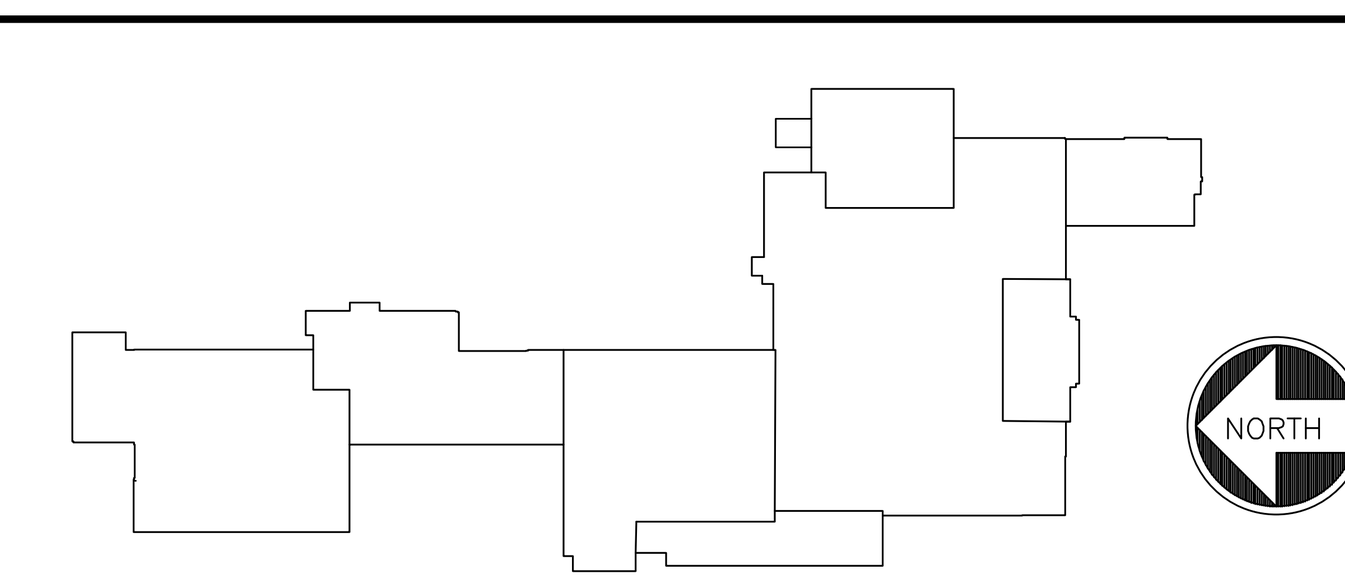
In unoccupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASHRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

SEQUENCE OF OPERATIONS: RTU-2-TECH

N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:	
B.H.	2024-239P	
CHECKED BY:	BUILDING	DRAWING NO.:
M.P.	HS	M-307
DATE: 12-01-2025		

CAD FILE: 4239-HS-M-307.DWG
PLOT DATE: 11/25/2025

Sequence of Operation: RTU-3 Admin

Economizer:

The outdoor air temperature shall be less than 80 deg. F (adj.). The conditions for cooling mode shall be met. The dehumidification mode and the energy recovery wheel shall be disabled and the bypass dampers shall open to 100%.

OPERATION: When the economizer mode is enabled and the outdoor air temperature is 5 deg. F (adj.) below the discharge setpoint, the Free Cooling Mode shall be enabled. The outdoor air damper shall modulate to maintain the active discharge air temperature setpoint measured by the supply air sensor. During the free cooling mode the mechanical cooling and heat shall be disabled.

DOAU Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

DOAU Occupied:

The DX cooling and the gas heat shall control to maintain the active discharge air temperature setpoint.

DOAU Unoccupied:

Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. The outdoor air damper shall be commanded to close, and the return air damper shall open. If the unit is under Economizer conditions, the Outdoor Air Damper Position Command shall open to the Outdoor Air Damper Maximum Position Setpoint. Unoccupied Heating Mode shall be enabled when the Space Temperature falls below the Unoccupied Heating Enable Setpoint. During Unoccupied Heating Mode the unit shall run the heat to maintain 90ºF for the discharge air temperature. Unoccupied Heating Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Heating Setpoint. When there is no call for Unoccupied Heating Mode or Unoccupied Dehumid Mode, Unoccupied Cooling Mode shall be enabled when the Space Temperature rises above the Unoccupied Cooling Enable Setpoint. During Unoccupied Cooling Mode the unit shall run the cooling to maintain 50 deg. F for the discharge air temperature. Unoccupied Cooling Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Cooling Enable Setpoint.

DOAU Pre-Cool Mode:

During optimal start, if the average space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated.

DOAU Occupied Bypass:

The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensors. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).

DOAU Heat/Cool Mode:

COOLING: The unit controller shall use the discharge air temperature sensor and discharge air temperature cooling setpoint to determine when to initiate requests for cooling. Discharge air setpoint shall be maintained by controlling the cooling as required.

HEATING: The unit controller shall use the discharge air temperature sensor and discharge air temperature heating setpoint to determine when to initiate requests for heating. Discharge air setpoint shall be maintained by controlling the heating as required. During Unoccupied Heating or Morning Warm-Up Mode, the unit heat request shall be communicated to the system VAVs prior to commencing heating operation to allow VAV units to open. The variable speed drive shall be commanded to 100% and the heat shall be staged on and off to satisfy the zone temperature setpoint.

DOAU Cooling:

Cooling Mode shall be enabled when the Discharge Air Temperature Setpoint, plus the deadband of 2 deg.F. During Cooling Mode, Cooling Capacity shall be adjusted to maintain Discharge Air Temperature Setpoint. When the Outdoor Air Temperature is above the Outdoor Air Heating Enable, but below the Outdoor Air Cooling Enable Setpoint, Cooling Mode shall be enabled when the Space Temperature is above the Space Temperature Setpoint plus the Space Temperature Offset. Dehumidification Mode shall take priority over Cooling Mode. On units without head pressure control, the compressors shall be locked out if the Outdoor Air Temperature falls below the Compressor Low Ambient Lockout Setpoint and there is a demand for cooling. When this occurs, the unit shall display Compressor Low Ambient Lockout Active as an informational diagnostic. Circuit 1 refrigeration pressure shall be monitored, and Cooling Capacity shall be limited to prevent the indoor coil from freezing. If the unit has digital scroll on the second circuit, then both circuits shall be monitored.

DOAU Primary Heating:

Heating Mode shall be enabled when the Discharge Air Temperature is below the Discharge Air Temperature Setpoint plus the deadband of 2 deg. F (adj.). Dehumidification Mode shall take priority over Heating Mode. During Heating Mode, Heat Capacity shall be adjusted to maintain the Discharge Air Temperature to Discharge Air Temperature Setpoint. The unit controller shall monitor the status of the heater using Heat On Off Status Local. In the event of ignition failure, the unit shall make three ignition attempts before displaying Diagnostic: Heat Failure. The unit shall shut down when a heat failure occurs and shall a reset four hours later to re-attempt ignition.

DOAU Pre-Heat:

Pre-Heat Enable shall be engaged whenever the Relief Leaving Temperature falls below 20 deg. F, with a deadband of 5 deg. F. The pre-heater shall be shut off if the PHeating Leaving Temperature rises above 90 deg. F.

DOAU Dehumidification:

Dehumidification Mode shall be enabled whenever the Outdoor Air Dewpoint rises above the Outdoor Air Dewpoint Enable Setpoint.

DOAU Economizer:

ENABLE (Comparative Enthalpy): Outside air (OA) enthalpy shall be compared with Return air (RA) enthalpy point. The economizer shall enable when OA enthalpy is less than RA enthalpy - 2.0 BTU/LB. The economizer shall disable when OA enthalpy is greater than RA enthalpy. The outdoor air temperature shall be less than 80 deg. F (adj.). The conditions for cooling mode shall be met. The dehumidification mode and the energy recovery wheel shall be disabled and the bypass dampers shall open to 100%.

OPERATION: When the economizer mode is enabled and the outdoor air temperature is 5 deg. F (adj.) below the discharge setpoint, the Free Cooling Mode shall be enabled. The outdoor air damper shall modulate to maintain the active discharge air temperature setpoint measured by the supply air sensor. During the free cooling mode the mechanical cooling and heat shall be disabled.

Free Cooling Mode shall be enabled when the unit is in Economizer Mode and the Outdoor Air Temperature Active is cooler than five degrees below the Discharge Air Temperature Setpoint. During Free Cooling Mode, mechanical cooling shall be locked out and the unit adjusts the outdoor air damper position to maintain the Discharge Air Temperature Setpoint.

DOAU Ventilation:

Ventilation Mode shall be enabled when the Outdoor Air Temperature is between the Outdoor Air Cooling Enable Setpoint and the Outdoor Air Heating Enable Setpoint. During Ventilation Mode, heating and cooling shall be locked out and the unit shall supply un-conditioned air. Ventilation Mode shall be locked out whenever the unit is in Dehumidification Mode.

DOAU Supply Fan Operation:

When the unit becomes occupied, the outdoor air damper and the return air damper shall adjust to the minimum outdoor air damper position. After the dampers have modulated the fan sequence can begin. When the fan start sequence has begun, the unit controller shall command the variable speed drive for the supply fan to 50%. A supply fan status switch shall prove fan status. If after 2 minutes (adj.) the fan does not have a proven signal, the Supply Fan Failure alarm shall be displayed and the unit shall shutdown requiring a manual reset.

DOAU Relief Air and Building Pressure Control:

A differential pressure switch shall monitor the differential pressure across the relief air fan. If the switch is detected to be open for 40 consecutive seconds after a request for relief fan operation a fan failure alarm shall annunciate at the BAS and the relief fan shall stop. A manual reset shall be required.

DOAU Relief Fan Operation:

After completing the Supply Fan Starting Sequence, the Exhaust Fan Start Stop Command shall be enabled. The unit controller shall enable the variable speed drive for the relief fan. The speed of the relief fan shall vary to maintain a return duct static pressure setpoint. The unit controller shall enable the variable speed drive for the relief fan. The speed of the relief fan shall vary to maintain a building static pressure setpoint. If the return duct static pressure reaches 3.00 inches of W.C. (adj.), the high limit pressure switch shall shut down the unit, requiring a manual reset to re-start the unit.

DOAU Filter Status:

A differential pressure switch shall monitor the differential pressure across the filter(s) when the fan is running. If the switch closes during normal operation a dirty filter alarm shall annunciate at the BAS.

DOAU Smoke Detector Shutdown:

The unit shall shut down in response to a signal from the smoke detector indicating the presence of smoke. The smoke detector shall be interlocked to the unit through the dry contacts of the smoke detector. A manual reset of the smoke detector shall be required to restart the unit.

Refrigerant Mitigation Mode:

The unit controller shall monitor the leak detection system, when a leak is detected, an alarm shall promptly alert the BAS via BACnet Change-of-Value (COV) and mitigation shall be activated.

In occupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASHRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

In unoccupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASHRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

SEQUENCE OF OPERATIONS: RTU-3-ADMIN

N.T.S.

Sequence of Operation: RTU-4 Guidance

Economizer:

The outdoor air temperature shall be less than 80 deg. F (adj.). The conditions for cooling mode shall be met. The dehumidification mode and the energy recovery wheel shall be disabled and the bypass dampers shall open to 100%.

OPERATION: When the economizer mode is enabled and the outdoor air temperature is 5 deg. F (adj.) below the discharge setpoint, the Free Cooling Mode shall be enabled. The outdoor air damper shall modulate to maintain the active discharge air temperature setpoint measured by the supply air sensor. During the free cooling mode the mechanical cooling and heat shall be disabled.

DOAU Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

DOAU Occupied:

The unit controller shall control the supply fan speed to maintain a constant volume (adj.). The unit controller shall control the supply fan speed to maintain the current supply duct static pressure setpoint (adj.). The DX cooling and the gas heat shall control to maintain the active discharge air temperature setpoint.

DOAU Unoccupied:

Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. Space conditions shall be communicated via BAS or a hardwire space/temperature humidity sensor. The outdoor air damper shall be commanded to close, and the return air damper shall open. If the unit is under Economizer conditions, the Outdoor Air Damper Position Command shall open to the Outdoor Air Damper Maximum Position Setpoint. Unoccupied Heating Mode shall be enabled when the Space Temperature falls below the Unoccupied Heating Enable Setpoint. During Unoccupied Heating Mode the unit shall run the heat to maintain 90ºF for the discharge air temperature. Unoccupied Heating Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Heating Setpoint. When there is no call for Unoccupied Heating Mode or Unoccupied Dehumid Mode, Unoccupied Cooling Mode shall be enabled when the Space Temperature rises above the Unoccupied Cooling Enable Setpoint. During Unoccupied Cooling Mode the unit shall run the cooling to maintain 50 deg. F for the discharge air temperature. Unoccupied Cooling Mode shall be disabled when the Space Temperature rises 2 deg. F above the Unoccupied Cooling Enable Setpoint.

DOAU Pre-Cool Mode:

During optimal start, if the average space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated.

DOAU Occupied Bypass:

The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensors. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).

DOAU Heat/Cool Mode:

COOLING: The unit controller shall use the discharge air temperature sensor and discharge air temperature cooling setpoint to determine when to initiate requests for cooling. Discharge air setpoint shall be maintained by controlling the cooling as required.

HEATING: The unit controller shall use the discharge air temperature sensor and discharge air temperature heating setpoint to determine when to initiate requests for heating. Discharge air setpoint shall be maintained by controlling the heating as required. During Unoccupied Heating or Morning Warm-Up Mode, the unit heat request shall be communicated to the system VAVs prior to commencing heating operation to allow VAV units to open. The variable speed drive shall be commanded to 100% and the heat shall be staged on and off to satisfy the zone temperature setpoint.

DOAU Cooling:

Cooling Mode shall be enabled when the Discharge Air Temperature Setpoint, plus the deadband of 2 deg.F. During Cooling Mode, Cooling Capacity shall be adjusted to maintain Discharge Air Temperature Setpoint. When the Outdoor Air Temperature is above the Outdoor Air Heating Enable, but below the Outdoor Air Cooling Enable Setpoint, Cooling Mode shall be enabled when the Space Temperature is above the Space Temperature Setpoint plus the Space Temperature Offset. Dehumidification Mode shall take priority over Cooling Mode. On units without head pressure control, the compressors shall be locked out if the Outdoor Air Temperature falls below the Compressor Low Ambient Lockout Setpoint and there is a demand for cooling. When this occurs, the unit shall display Compressor Low Ambient Lockout Active as an informational diagnostic. Circuit 1 refrigeration pressure shall be monitored, and Cooling Capacity shall be limited to prevent the indoor coil from freezing. If the unit has digital scroll on the second circuit, then both circuits shall be monitored.

DOAU Primary Heating:

Heating Mode shall be enabled when the Discharge Air Temperature is below the Discharge Air Temperature Setpoint plus the deadband of 2 deg. F (adj.). Dehumidification Mode shall take priority over Heating Mode. During Heating Mode, Heat Capacity shall be adjusted to maintain the Discharge Air Temperature to Discharge Air Temperature Setpoint. The unit controller shall monitor the status of the heater using Heat On Off Status Local. In the event of ignition failure, the unit shall make three ignition attempts before displaying Diagnostic: Heat Failure. The unit shall shut down when a heat failure occurs and shall a reset four hours later to re-attempt ignition.

DOAU Pre-Heat:

Pre-Heat Enable shall be engaged whenever the Relief Leaving Temperature falls below 20 deg. F, with a deadband of 5 deg. F. The pre-heater shall be shut off if the PHeating Leaving Temperature rises above 90 deg. F.

DOAU Dehumidification:

Dehumidification Mode shall be enabled whenever the Outdoor Air Dewpoint rises above the Outdoor Air Dewpoint Enable Setpoint.

DOAU Economizer:

ENABLE (Comparative Enthalpy): Outside air (OA) enthalpy shall be compared with Return air (RA) enthalpy point. The economizer shall enable when OA enthalpy is less than RA enthalpy - 2.0 BTU/LB. The economizer shall disable when OA enthalpy is greater than RA enthalpy. The outdoor air temperature shall be less than 80 deg. F (adj.). The conditions for cooling mode shall be met. The dehumidification mode and the energy recovery wheel shall be disabled and the bypass dampers shall open to 100%.

OPERATION: When the economizer mode is enabled and the outdoor air temperature is 5 deg. F (adj.) below the discharge setpoint, the Free Cooling Mode shall be enabled. The outdoor air damper shall modulate to maintain the active discharge air temperature setpoint measured by the supply air sensor. During the free cooling mode the mechanical cooling and heat shall be disabled.

Free Cooling Mode shall be enabled when the unit is in Economizer Mode and the Outdoor Air Temperature Active is cooler than five degrees below the Discharge Air Temperature Setpoint. During Free Cooling Mode, mechanical cooling shall be locked out and the unit adjusts the outdoor air damper position to maintain the Discharge Air Temperature Setpoint.

DOAU Ventilation:

Ventilation Mode shall be enabled when the Outdoor Air Temperature is between the Outdoor Air Cooling Enable Setpoint and the Outdoor Air Heating Enable Setpoint. During Ventilation Mode, heating and cooling shall be locked out and the unit shall supply un-conditioned air. Ventilation Mode shall be locked out whenever the unit is in Dehumidification Mode.

DOAU Supply Fan Operation:

When the unit becomes occupied, the outdoor air damper and the return air damper shall adjust to the minimum outdoor air damper position. After the dampers have modulated the fan sequence can begin. When the fan start sequence has begun, the unit controller shall command the variable speed drive for the supply fan to 50%. A supply fan status switch shall prove fan status. If after 2 minutes (adj.) the fan does not have a proven signal, the Supply Fan Failure alarm shall be displayed and the unit shall shutdown requiring a manual reset. After the startup sequence, the unit controller shall control the speed of the supply fan to maintain a Supply Duct Static Pressure Setpoint. Supply and relief fans are interlocked via software; a failure of either shall disable both.

DOAU Static Pressure High Limit:

If for any reason the supply air pressure exceeds the supply air pressure high limit, the supply fan shall shut down. The unit shall be allowed to restart three times after a 15 minute off period. If the over-pressurization condition occurs on the fourth restart, the unit shall shut down and a manual reset diagnostic is displayed at the remote panel and/or the BAS system.

DOAU Relief Air and Building Pressure Control:

A differential pressure switch shall monitor the differential pressure across the relief air fan. If the switch is detected to be open for 40 consecutive seconds after a request for relief fan operation a fan failure alarm shall annunciate at the BAS and the relief fan shall stop. A manual reset shall be required.

DOAU Relief Fan Operation:

After completing the Supply Fan Starting Sequence, the Exhaust Fan Start Stop Command shall be enabled. The unit controller shall enable the variable speed drive for the relief fan. The speed of the relief fan shall vary to maintain a return duct static pressure setpoint. The unit controller shall enable the variable speed drive for the relief fan. The speed of the relief fan shall vary to maintain a building static pressure setpoint. If the return duct static pressure reaches 3.00 inches of W.C. (adj.), the high limit pressure switch shall shut down the unit, requiring a manual reset to re-start the unit.

DOAU Filter Status:

A differential pressure switch shall monitor the differential pressure across the filter(s) when the fan is running. If the switch closes during normal operation a dirty filter alarm shall annunciate at the BAS.

DOAU Smoke Detector Shutdown:

The unit shall shut down in response to a signal from the smoke detector indicating the presence of smoke. The smoke detector shall be interlocked to the unit through the dry contacts of the smoke detector. A manual reset of the smoke detector shall be required to restart the unit.

Refrigerant Mitigation Mode:

The unit controller shall monitor the leak detection system, when a leak is detected, an alarm shall promptly alert the BAS via BACnet Change-of-Value (COV) and mitigation shall be activated.

In occupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASHRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

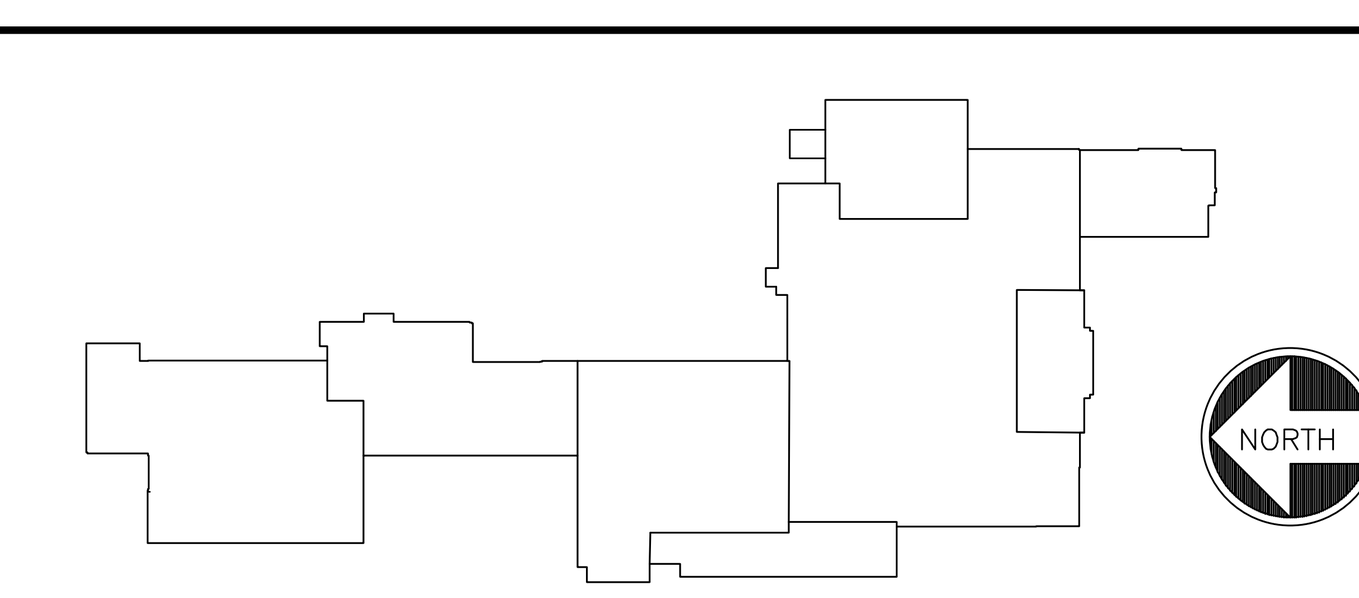
In unoccupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASHRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

SEQUENCE OF OPERATIONS: RTU-4-GUIDANCE

N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY: M.P.	BUILDING: HS / DRAWING NO.: M-308
DATE: 12-01-2025	

CAD FILE: 4239-HS-M-308.DWG
PLOT DATE: 11/25/2025

Sequence of Operation: RTU-Vestibule

Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

Occupied:

During occupied periods, the supply fan shall run continuously and the mixed air dampers shall open to maintain minimum ventilation requirements. Upon a call for DX cooling, the unit controller shall enable the variable speed compressor. If the variable speed compressor cannot satisfy the load conditions, the unit controller shall start a fixed speed compressor. The variable speed compressor shall modulate to maintain the active discharge air temperature setpoint. This process shall repeat until all of the fixed speed compressors have been started or until the load conditions can be satisfied. The gas heat shall be enabled and controlled to maintain the active discharge air temperature setpoint. If the discharge air temperature sensor fails, the DX cooling and the gas heat shall control to maintain the active space temperature setpoint and an alarm shall annunciate at the BAS. If the discharge air temperature sensor and the space temperature sensor fail, the DX cooling shall be disabled, the gas heat shall be disabled, and an alarm shall annunciate at the BAS.

Unoccupied:

When the space temperature is below the unoccupied heating setpoint of 60.0 deg. F (adj.) the supply fan shall be commanded on, the outside air damper shall remain closed and the gas heat shall be enabled. When the space temperature rises above the unoccupied heating setpoint of 60.0 deg. F (adj.) plus the unoccupied differential of 4.0 deg. F (adj.) the supply fan shall stop and the gas heat shall be disabled. When the space temperature is above the unoccupied cooling setpoint of 85.0 deg. F (adj.) the supply fan shall be commanded on, the outside air damper shall remain closed and the DX cooling shall be enabled. When the space temperature falls below the unoccupied cooling setpoint of 85.0 deg. F (adj.) minus the unoccupied differential of 4.0 deg. F (adj.) the supply fan shall stop, the DX cooling shall be disabled and the outside air damper shall remain closed.

Optimal Start:

The BAS shall monitor the scheduled occupied time, occupied space setpoints and space temperature to calculate when the optimal start occurs.

Optimal Stop:

The BAS shall monitor the scheduled unoccupied time, occupied setpoints and space temperature to calculate when the optimal stop occurs. When the optimal stop mode is active the unit controller shall maintain the space temperature to the space temperature offset setpoint. Outside air damper shall remain enabled to provide minimum ventilation.

Morning Warm-Up Mode:

During optimal start, if the space temperature is below the occupied heating setpoint a morning warm-up mode shall be activated. When morning warm-up is initiated the unit shall enable the heating and fan(s). The outside air damper shall remain closed. When the space temperature reaches the occupied heating setpoint (adj.), the unit shall transition to the occupied mode.

Pre-Cool Mode:

During optimal start, if the space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated. When pre-cool is initiated the unit shall enable the fan and cooling. The outside air damper shall remain closed. When the space temperature reaches occupied cooling setpoint (adj.), the unit shall transition to the occupied mode.

Occupied Bypass:

The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensor. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).

Heat/Cool Mode:

When the space temperature rises above the occupied cooling setpoint the mode shall transition to cooling. When the space temperature falls below the occupied heating setpoint the mode shall transition to heating. When the space temperature is above the occupied cooling setpoint or below the occupied heating setpoint the mode shall remain in its last state. If the space temperature sensor fails the mode shall remain in its last state and an alarm shall annunciate at the BAS. If the local and communicated setpoints fail the controller shall disable the supply fan and an alarm shall annunciate at the BAS.

Dehumidification:

The unit shall be in dehumidification mode if the return humidity is above the dehumidification setpoint. In the dehumidification mode, the supply air fan shall be enabled, the outside air damper shall be commanded to minimum position, and the unit controller shall energize mechanical cooling and the hot gas reheat coil shall modulate.

MULTI-CIRCUIT UNITS: During dehumidification mode the outside air temperature shall be monitored. If this temperature rises above the reheat capacity limit setpoint or falls below the reheat capacity limit setpoint – 3.0 deg. F (adj.), the unit shall stage down or stage up the compressors respectively to meet full or part load capacity requirements based on ambient temperature. Factory installed hot gas reheat shall allow application of dehumidification. Dehumidification shall be allowed only when the outside air temperature is above 40.0 deg. F and below 100.0 deg. F. The economizer outside air damper shall drive to minimum position during dehumidification.

MULTI-CIRCUIT UNITS: On a call for dehumidification, the hot gas reheat valve in circuit 1 shall energize and the compressor(s) shall enable. When the humidity control setpoint is satisfies, the valve shall be de-energized and the compressor(s) in circuit 1 shall be disabled. If there is a call for 1st stage cooling while in the dehumidification mode, no action shall take place. If there is a call for 2nd stage cooling, the hot gas reheat valve shall be de-energized, and the unit shall revert to the cooling mode. If 2nd stage cooling is satisfied and there is still a call for dehumidification, the hot gas reheat valve shall once again be energized.

Supply Fan:

The supply fan shall be enabled while in the occupied mode and cycled on during the unoccupied mode.

Filter Status:

A differential pressure switch shall monitor the differential pressure across the filter(s) when the fan is running. If the switch closes during normal operation a dirty filter alarm shall annunciate at the BAS.

Smoke Detector Shutdown:

The unit shall shut down in response to a signal from the smoke detector indicating the presence of smoke and an alarm shall annunciate at the BAS. The smoke detector shall be interlocked to the unit through the dry contacts of the smoke detector. A manual reset of the smoke detector shall be required to restart the unit.

Refrigerant Mitigation Mode:

The unit controller shall monitor the leak detection system, when a leak is detected, an alarm shall promptly alert the BAS via BACnet Change-of-Value (COV) and mitigation shall be activated.

In occupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

In unoccupied mode, the supply fan shall remain operational, and the compressor(s), electric heating, fuel-fired heating, electrostatic devices, and any other ignition device starters shall be disabled, and activate mechanical ventilation (if it's required by Section 7.6.4 of the ASRAE standard). for the duration of the mitigation process plus an additional 5 minutes.

SEQUENCE OF OPERATIONS: RTU-VESTIBULE

N.T.S.

Sequence of Operation: VAV TERMINAL UNIT [QTY: 20]

Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied, and Unoccupied commands. The BAS may also send a Heat/Cool mode, priority shutdown commands, space temperature and/or space temperature setpoint. If communication is lost with the BAS, the controller shall operate using its local setpoints.

Occupied:

The occupancy mode shall be communicated or hardwired to the controller via a binary input. When the unit is in the occupied mode the VAV shall maintain the space temperature at the active occupied heating or cooling setpoint. Applicable ventilation and airflow setpoints shall be enforced. The occupied mode shall be the default mode of the VAV. Applicable ventilation and airflow setpoints shall be enforced. The occupied mode shall be the default mode of the VAV.

Occupied Standby:

The occupancy mode shall be communicated or hardwired to the controller via a binary input, even though the BAS has scheduled the space as occupied. In the occupied standby mode, the active cooling and heating setpoints shall be relaxed (see cooling and heating mode) and both the ventilation airflow and minimum airflow setpoints shall be lowered (see VAV schedule).

Unoccupied:

Normal operating mode for unoccupied spaces or nighttime operation. When the unit is in unoccupied mode the VAV controller shall maintain the space temperature at the stored unoccupied heating or cooling setpoint regardless of the presence of a hardwired or communicated setpoint. When the space temperature drops below its Unoccupied Heating Setpoint, the controller shall modulate the air damper and the hot water valve until the zone temperature rises back to 2.0 deg. F above the Unoccupied Heating Setpoint. When the space temperature exceeds the active unoccupied setpoint the hot water valve shall the air damper and hot water valve shall modulate fully closed.

Occupied Bypass:

Mode used to temporarily place the unit into the occupied operation. Tenants shall be able to override the unoccupied mode from the space sensor. The override shall last for a maximum of 4 hours (adj.). The tenants shall be able to cancel the override from the space sensor at any time. During the override the unit shall operate in occupied mode.

Heat/Cool Mode:

The Heat/Cool mode shall be set by a communicated value or automatically by the VAV. In standalone or auto mode the VAV shall compare the primary air temperature with the configured auto changeover setpoint to determine if the air is "hot" or "cold". Heating mode implies the primary air temperature is hot. Cooling mode implies the primary air temperature is cold.

Cooling Mode:

When the unit is in cooling mode, the VAV controller shall maintain the space temperature at the active cooling setpoint by modulating the airflow between the active cooling minimum airflow setpoint to the maximum cooling airflow setpoint. The VAV shall use the measured space temperature and the active cooling setpoint to determine the requested cooling capacity of the unit. The outputs shall be controlled based on the unit configuration and the requested cooling capacity.

Based on the VAV controller occupancy mode, the active cooling setpoint shall be one of the following:

Setpoint	Default Value
Occupied Cooling Setpoint	74.0 deg. F
Unoccupied Cooling Setpoint	85.0 deg. F
Occupied Standby Cooling Setpoint	78.0 deg. F
Occupied Min Cooling Airflow Setpoint	See VAV Schedule
Occupied Max Cooling Airflow Setpoint	See VAV Schedule

Heat/Cool Setpoint:

The space temperature setpoint shall be determined either by a local (e.g., thumbwheel) setpoint, the VAV default setpoint or a communicated value. The VAV shall use the locally stored default setpoints when neither a local setpoint nor communicated setpoint is present. If both a local setpoint and communicated setpoint exist, the VAV shall use the communicated value.

Reheat Control Mode:

Reheat shall only be allowed when the supply air temperature is 5.0 deg. F below the configured reheat enable setpoint of 70.0 deg. F (adj.). The reheat shall be enabled when the space temperature drops below the active heating setpoint and the minimum airflow requirements are met. During reheat the VAV shall operate at its minimum heating airflow setpoint and energize the heat as follows:

Setpoint	Default Value
Occupied Heating Setpoint	71.0 deg. F
Unoccupied Heating Setpoint	60.0 deg. F
Occupied Standby Heating Setpoint	67.0 deg. F
Occupied Min Heating Airflow Setpoint	See VAV Schedule
Occupied Max Heating Airflow Setpoint	See VAV Schedule

Heating Mode:
When the unit is in heating mode, the VAV controller shall maintain the space temperature at the active heating setpoint by modulating the VAV damper (between the active heating minimum and maximum airflow setpoints). Based on the VAV controller occupancy mode, the active heating setpoint shall be one of the following:

Setpoint	Default Value
Occupied Heating Setpoint	71.0 deg. F
Unoccupied Heating Setpoint	60.0 deg. F
Occupied Standby Heating Setpoint	67.0 deg. F
Occupied Min Heating Airflow Setpoint	See VAV Schedule
Occupied Max Heating Airflow Setpoint	See VAV Schedule

Air Valve Control:

Ventilation Control (Occupancy): When the unit is in Unoccupied Mode, the ventilation air damper shall be closed, unless unoccupied cooling, heating, or dehumidification is needed (see above). When the unit is in occupied mode, the ventilation airflow setpoint shall equal the design outdoor airflow (see VAV schedule).

Local Reheat Control:

Reheat shall only be allowed when the primary air temperature is 5.0 deg. F below the configured reheat enable setpoint of 70.0 deg. F (adj.). The reheat shall be enabled when the space temperature drops below the active heating setpoint and the minimum airflow requirements are met. During reheat the VAV shall operate at its minimum heating airflow setpoint and energize the heat as follows:

Electric Silicon Controlled Rectifier Reheat (SCR):

If the space temperature is at the heating setpoint, the electric heater shall modulate as required to maintain space temperature at the active heating setpoint while the VAV operates at its minimum heating airflow setpoint. If the discharge air temperature reaches the design heating discharge air temperature setpoint (adj.), the VAV shall modulate airflow between the minimum heating airflow setpoint and the maximum heating airflow setpoint as required to maintain space temperature at the active heating setpoint, while the electric heater modulates to maintain discharge air temperature at the design heating discharge air temperature setpoint. If the airflow reaches the maximum heating airflow setpoint, the VAV shall modulate the electric heater as required to maintain space temperature at the active heating setpoint, while the VAV operates at its maximum heating airflow setpoint

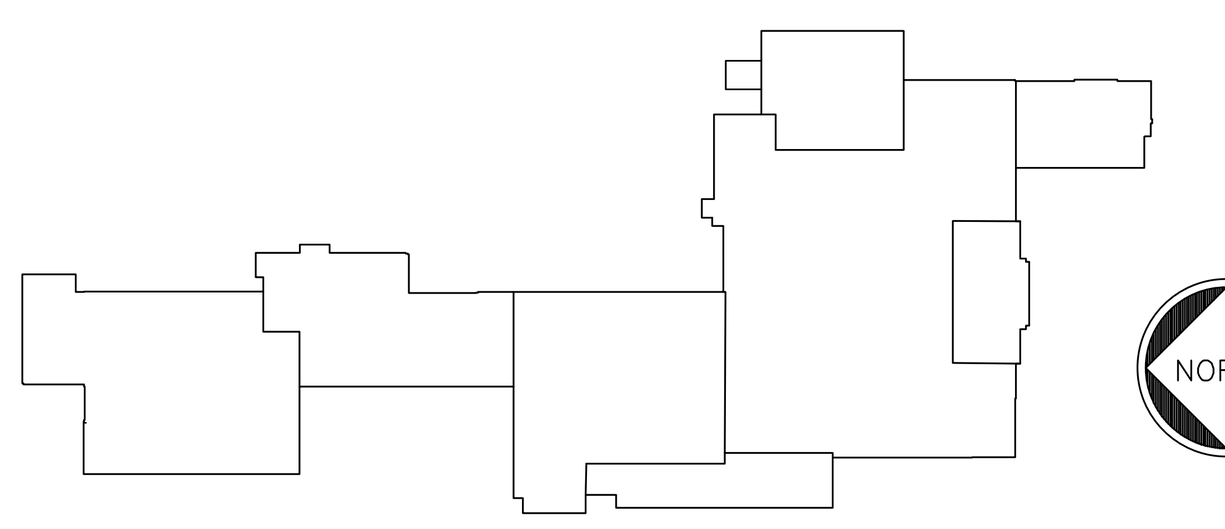
Space Sensor Failure:

If there is a fault with the operation of the zone sensor an alarm shall be annunciated at the BAS. Space sensor failure shall cause the VAV to drive the damper to minimum air flow if the VAV is in the occupied mode, or drive it closed if the VAV is in the unoccupied mode.

SEQUENCE OF OPERATIONS: VAV TERMINAL UNIT

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY: M.P.	BUILDING: HS / DRAWING NO.: M-309
DATE: 12-01-2025	

CAD FILE: 4239-HS-M-309.DWG
PLOT DATE: 11/25/2025

Sequence of Operation: VRF INDOOR UNIT [QTY: 2]

Building Automation System Interface:

The Building Automation System (BAS) shall allow the user to monitor the status of Variable Refrigerant Flow (VRF) terminal units, outdoor units, and secondary VRF equipment, and modify control parameters of terminal units and secondary VRF equipment as necessary to maintain the desired space conditions.

If communication between the VRF equipment and the BAS is lost, the VRF system shall continue to operate using the current control parameters stored within the equipment to maintain the desired space conditions.

External Control Device:

In this specification the term 'external control device' is used to denote one or more user interface control devices that may be present in the system. The control devices that may be present are a Local Control device, VRF System Control device, or a Building Automation System. When more than one external control device is present in the control system, the last command or configuration value received by the indoor unit governs indoor unit operation.

There may be other means to provide commands and configuration parameters to the VRF system, such as hardwired control inputs. However, these are not considered the typical system control use case and the specification does not address them as written.

Zone Temperature Setpoint Control:

Dual Setpoint. Two zone air temperature setpoints are present. When the terminal unit is in a cooling mode, it shall control the zone air temperature value to the Cooling Temperature Setpoint value. When the terminal unit is in a heating mode, it shall control the zone air temperature value to the Heating Temperature Setpoint value.

On/Off Mode:

The terminal unit has two modes that drive the overall operation of the unit, On and Off mode.

On. The internal algorithm shall control the unit to maintain the desired zone air temperature.

Off. The internal algorithm shall NOT control the unit to maintain the desire zone air temperature. The algorithm shall control components internal to the unit to minimize energy consumption and isolate it from VRF system refrigerant circuit. The zone air temperature sensor in use shall be monitored to allow the Zone Air Temperature Value to be displayed at an External Control Device(s).

Operation Mode:

Operation mode is the primary control parameter of the indoor unit when it is in the On state. The operation mode command provided to the indoor unit from an eternal control device shall determine the base HVAC control function the indoor unit is providing. Available modes of operation are Cool, Dry, Fan, Heat, Setback, and Auto.

Cool. When the terminal unit Operation Mode is the Cool state, liquid refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit. The algorithm calculates the temperature difference value between the measured zone air temperature value and the Cooling Temperature Setpoint value. When a large difference value exists, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature decreases the difference value becomes less. The algorithm shall respond and drive the LEV to more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal.

Dry. When the terminal unit Operation Mode is the Dry state, liquid refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The goal in Dry mode is to remove water vapor from the air, not control the zone air temperature value to a zone temperature setpoint. When the terminal unit is commanded to the Dry state, an algorithm internal to the terminal unit drives the LEV to an open position. It is assumed that the position of the valve allows a sufficient amount of refrigerant to enter the coil, to cause the surface temperature of the coil fins to fall below the dew point temperature. The result is condensation that removes water vapor from the air passing through the coil.

When the zone air temperature value is greater than or equal to the Cooling Temperature Setpoint, Dry state is beneficial from both a humidity and zone temperature perspective because water vapor is being removed from the air in the zone and the difference value between the zone air temperature value and the Cooling Temperature Setpoint value is reduced.

Continued dehumidification shall cause the zone air temperature value to become less than the Cooling Temperature Setpoint, which is undesirable. To combat the effect, the algorithm calculates the temperature difference value between the zone air temperature value and Cooling Temperature Setpoint. Based on the difference value, the algorithm uses a sliding time scale method to modulate the LEV between the open position and the fully closed position for a variable length of time. It is assumed that when the LEV is in the fully closed position latent heat within the zone shall cause the zone air temperature value to increase. The method allows some dehumidification to take place without significantly lowering the air temperature in the zone below the Cooling Temperature Setpoint.

Fan. When the terminal unit Operation Mode is the Fan state, the LEV is closed and the terminal unit does not attempt regulate the air temperature in the zone. The temperature of the air in the zone may change due to latent heat within the zone. With the use of an external user interface, the speed of the fan may be modulated between the discrete states supported by the terminal unit.

Heat. When the terminal unit Operation Mode is the Heat state, hot gas refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit. The algorithm calculates the temperature difference value between the measured zone air temperature value and the Heating Temperature Setpoint value. When a large difference value exists, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature increases the difference value becomes less. The algorithm shall respond and drive the LEV to more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal.

Setback. Some terminal units may not support the Setback state. When the terminal unit Operation Mode transitions to Setback state, the LEV is driven closed and the zone air temperature is allowed to drift. The amount of drift is bounded by the Setback Cooling Temperature Setpoint and the Setback Heating Temperature Setpoint.

Fan Control. When the indoor unit is in the Off state, the fan is controlled to the minimum speed required to measure zone air temperature at the return air temperature sensor. This allows zone air temperature to be accurately measured while the indoor unit is in the Off state.

Upon transition from the Off state to the On state, the RPM of the fan is governed to match a manufacture specified, RPM value assigned to the each discrete fan speed state available in the unit. The number of distinct fan speed states and the fan RPM value for each state varies by manufacture and model of indoor unit. The fan speed state is controlled by one of two methods, automatic fan speed control or manual fan speed control. The choice of control method is made by a user of the system.

Upon indoor unit transition from the On state to the Off state, the fan transitions to the state described when the indoor unit is in the Off state.

Manual Fan Speed Control. A user of the system selects a desired fan speed state. The fan speed RPM shall change to match the manufacture specified RPM value and maintain the RMP value until a different fan speed state is selected or a change is made to another control parameter of the indoor unit that causes the fan to change to a different state.

Automatic Fan Speed Control. When a user of the system selects the fan speed state Auto, an algorithm internal to the indoor unit controls the selection of the fan speed state. The algorithm calculates the temperature difference value between the measured zone air temperature value and the zone temperature setpoint value in use. When a large difference value exists, the fan state selected shall have a highest fan speed RPM value. As the difference value is reduced, the algorithm shall change the fan speed in use to a state with a smaller RPM value.

Vane Direction:

The terminal unit has movable air vanes to change the direction of air flow from the unit. Three air vane control modes are available: Auto, Swing, and Manual. The external user interface is used to select the air vane position in use.

Auto. When the Operation Mode is Cool state, the air vanes modulate to direct airflow parallel to the ceiling. When the Operation Mode is Heat state, the air vanes modulate to direct airflow perpendicular to the ceiling.

Swing. Regardless of Operation Mode state, the air vanes continuously modulate between parallel and perpendicular flow to the ceiling in a periodic manner.

Manual. Regardless of Operation Mode state, the air vanes are fixed at a position. The number of individual positions available varies by manufacturer and model type. Typically, two to five fixed positions are supported.

Condensate Overflow Monitoring:

The unit shall be equipped with a condensate drain pan level sensor to protect against drain pan overflow. If the sensor detects a high condensate level in the drain pan, the control shall shut down the indoor unit before an overflow can occur and a condensate alarm diagnostic shall annunciate at the BAS.

SEQUENCE OF OPERATIONS: VRF INDOOR UNIT

N.T.S.

DESERT AIRE ***SelectAire Plus™ Dehumidifiers***

SEQUENCE OF OPERATION

Supply Blower Runs Continuously.

CIRCUIT HEAT SINK CONFIGURATION:
Compressor Starts On a Call for dehumidification and or cooling. The system has two configurable circuits as follows:
Circuit "A" Priority: Air-Cooled Remote Condenser

Circuit "B" Priority: Air-Cooled Remote Condenser

Dehumidification
First Stage: Circuit "A" starts and runs in respective order listed in the "Circuit Heat Sink Configuration Section".

Second Stage: Circuit "B" starts and runs in respective order listed in the "Circuit Heat Sink Configuration Section".

Cooling
First Stage: The exhaust damper before the evaporator coils opens. Circuit "A" will start and operate with the air reheat off reject its heat to following condenser(s), in respective order, listed in the "Circuit Heat Sink Configuration Section".

Second Stage: Circuit "B" will start and operate with the air reheat off reject its heat to following condenser(s), in respective order, listed in the "Circuit Heat Sink Configuration Section".

Air Heating
Occupied Times:
First Stage: The cold air exhaust damper (damper after evaporator) will open to maximize heating capacity. Circuit "A" will start and operate in the air reheat mode.

Second Stage: The auxiliary heater is activated by a 0-10 VDC control signal from the dehumidifier.

Unoccupied Times:
First Stage: The auxiliary heater is controlled by a 0-10VDC control signal from the dehumidifier.

DESERT AIRE ***SelectAire Plus™ Dehumidifiers***

Pool Water Heating
Circuit A
If there is a call for pool/spa water heating and when heat recovery is available, the pool water condenser will be activated. Second Stage: An Auxiliary pool/spa heater dry contactor will be closed, to activate the pool heater by others.

Circuit B
If there is a call for pool/spa water heating and when heat recovery is available, the pool water condenser will be activated. Second Stage: An Auxiliary pool/spa heater dry contactor will be closed, to activate the pool heater by others.

Exhaust and Outside Air
The operation of the SelectAire Plus™ system's exhaust fan is to maintain the negative pressure of the poolroom by controlling the exhaust fan motor speed using inputs from the differential pressure transducer input signal.

The dehumidifier controls the flow rate of the outdoor air in each mode by measuring the pressure differential across the calibration plate in the intake section to vary the outside air damper. This provides a direct measure of outdoor air volume.

The system provides five individual settings for outdoor air flow rates that are field programmable:
- Unoccupied – Controlled via time clock
- Occupied – Controlled via time clock
- Event – Controlled via time clock
- Max OA – Controlled via VOC sensor set point
- Purge – Controlled via contact closure

EMERGENCY SYSTEM SHUTDOWN
Terminal points are available for a binary contact closure by others to control unit shutdown by smoke detector or other similar device. An open contact in the 24 VAC circuit will deactivate motors, fans and compressors.

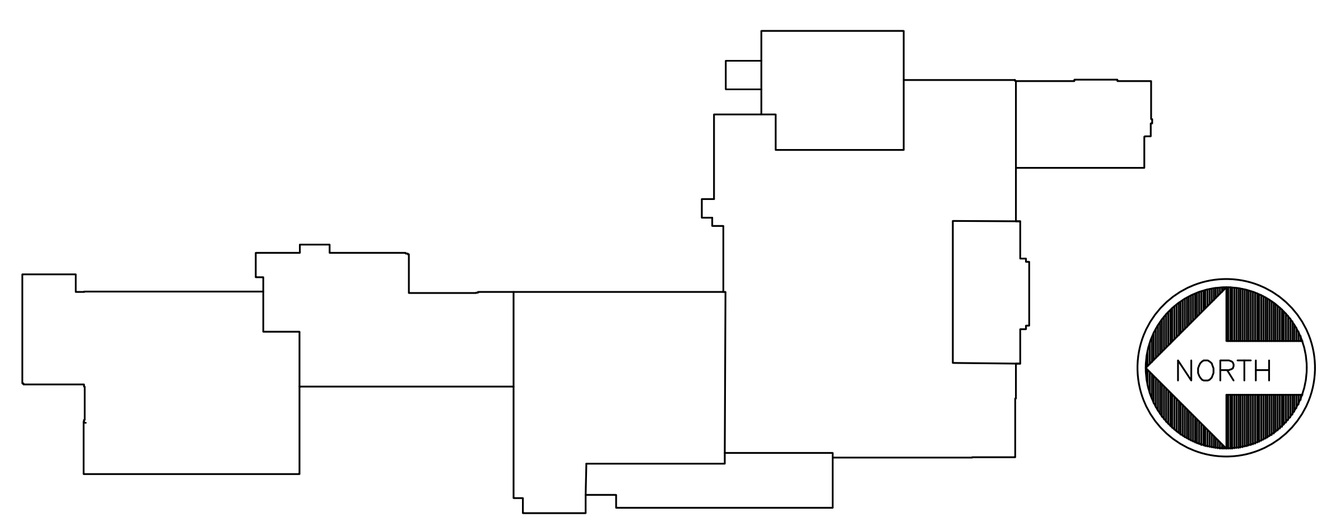
Submittal 18328 u71933 [20250120] [08.52].pdf

SEQUENCE OF OPERATIONS: PDU-1

N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MECHANICAL DETAILS

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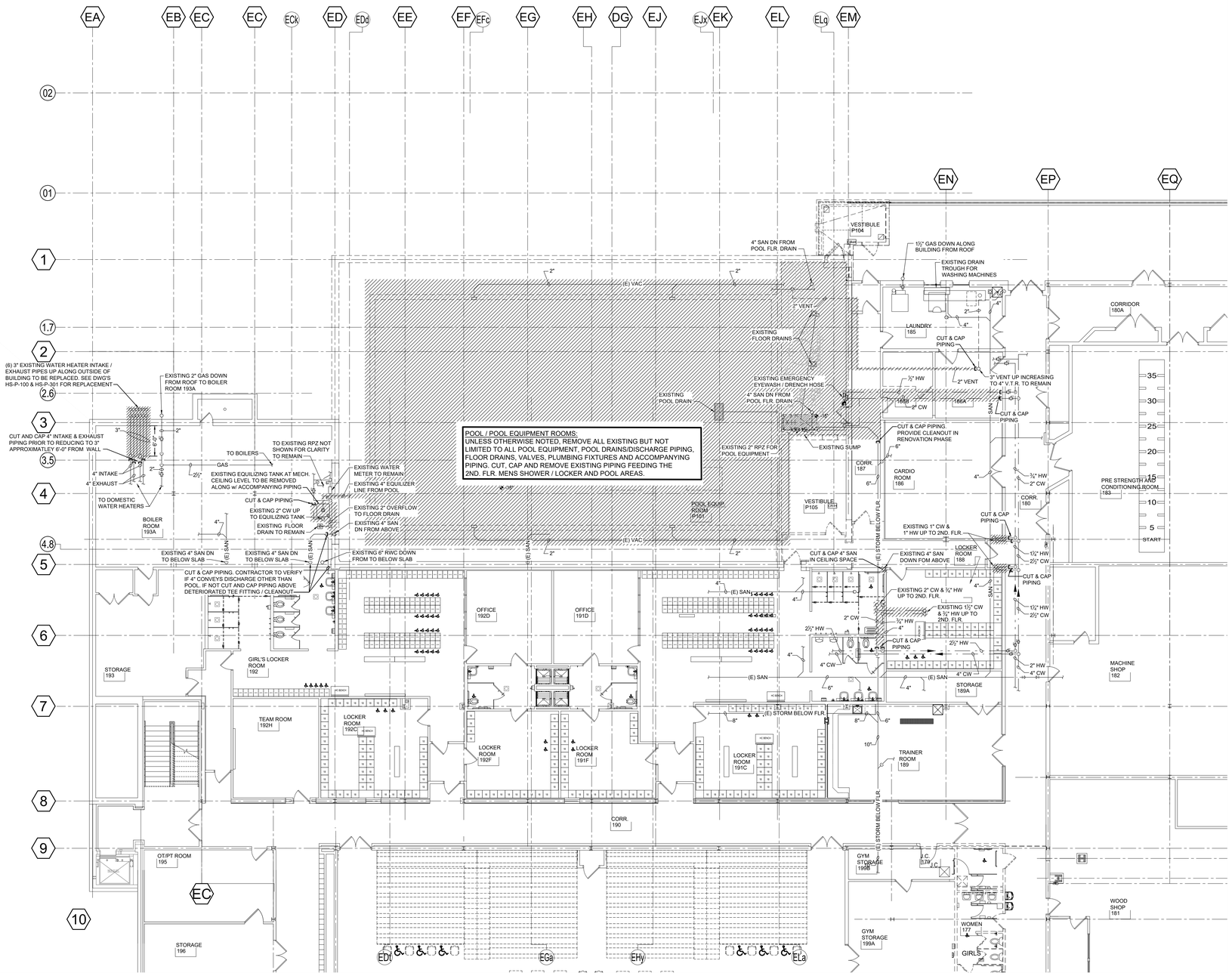
B.H.	2024-239P
CHECKED BY: M.P.	BUILDING: HS / DRAWING NO.: M-310
DATE: 12-01-2025	

CAD FILE: 4239-HS-M-310.DWG
PLOT DATE: 11/25/2025



PARTIAL FIRST FLOOR UNIT E - PLUMBING DEMOLITION

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

REVISIONS

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December 1, 2025

AREA OF WORK

NORTH

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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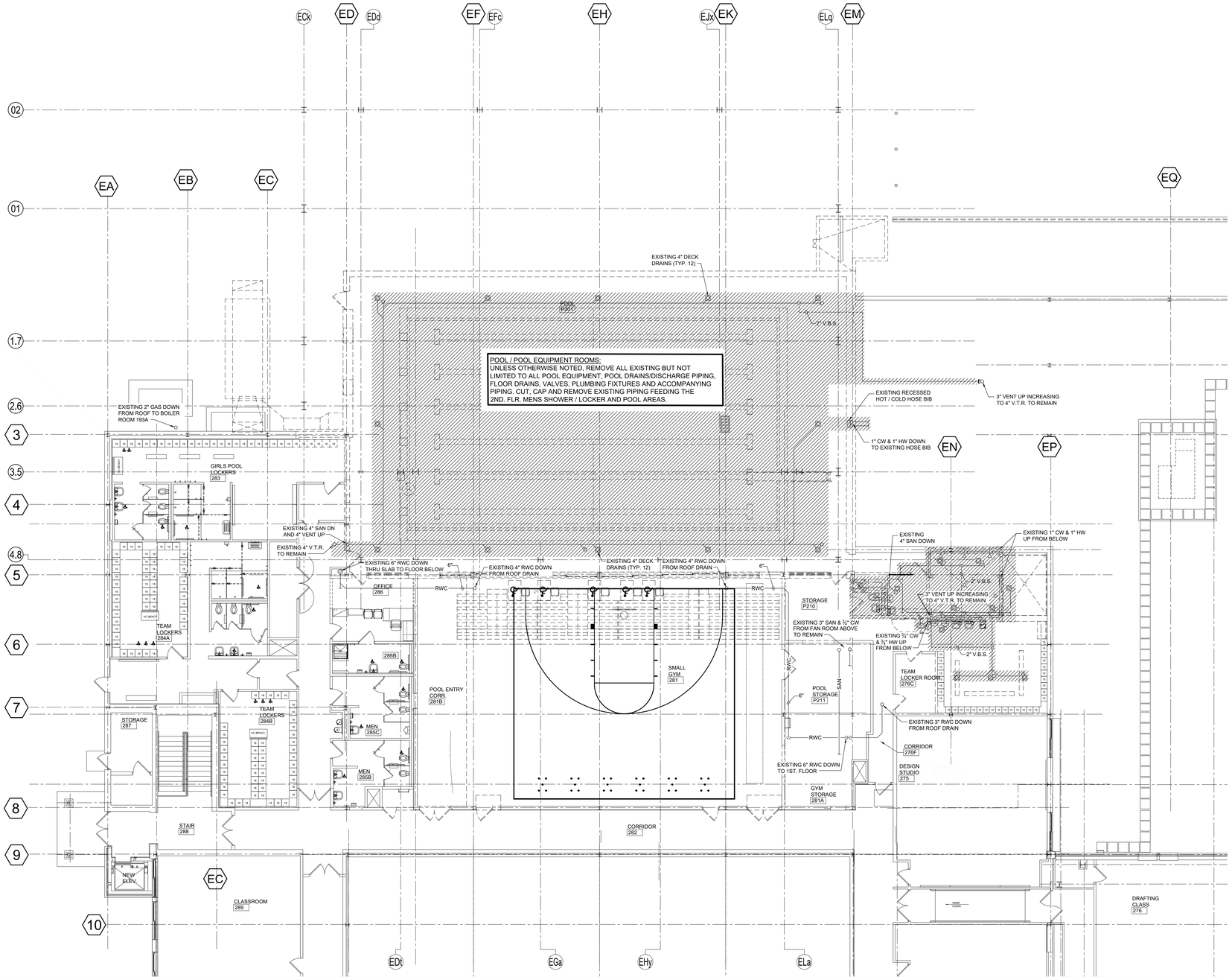
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL FIRST FLOOR UNIT E
PLUMBING DEMOLITION

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING: / DRAWING NO.:
A.J.L.	HS / PD-100
DATE: 12-01-2025	

CAD FILE: 2017-2.DWG
PLOT DATE: —



PARTIAL SECOND FLOOR UNIT E - PLUMBING DEMOLITION

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

REVISIONS

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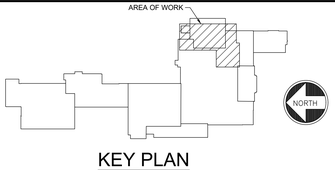

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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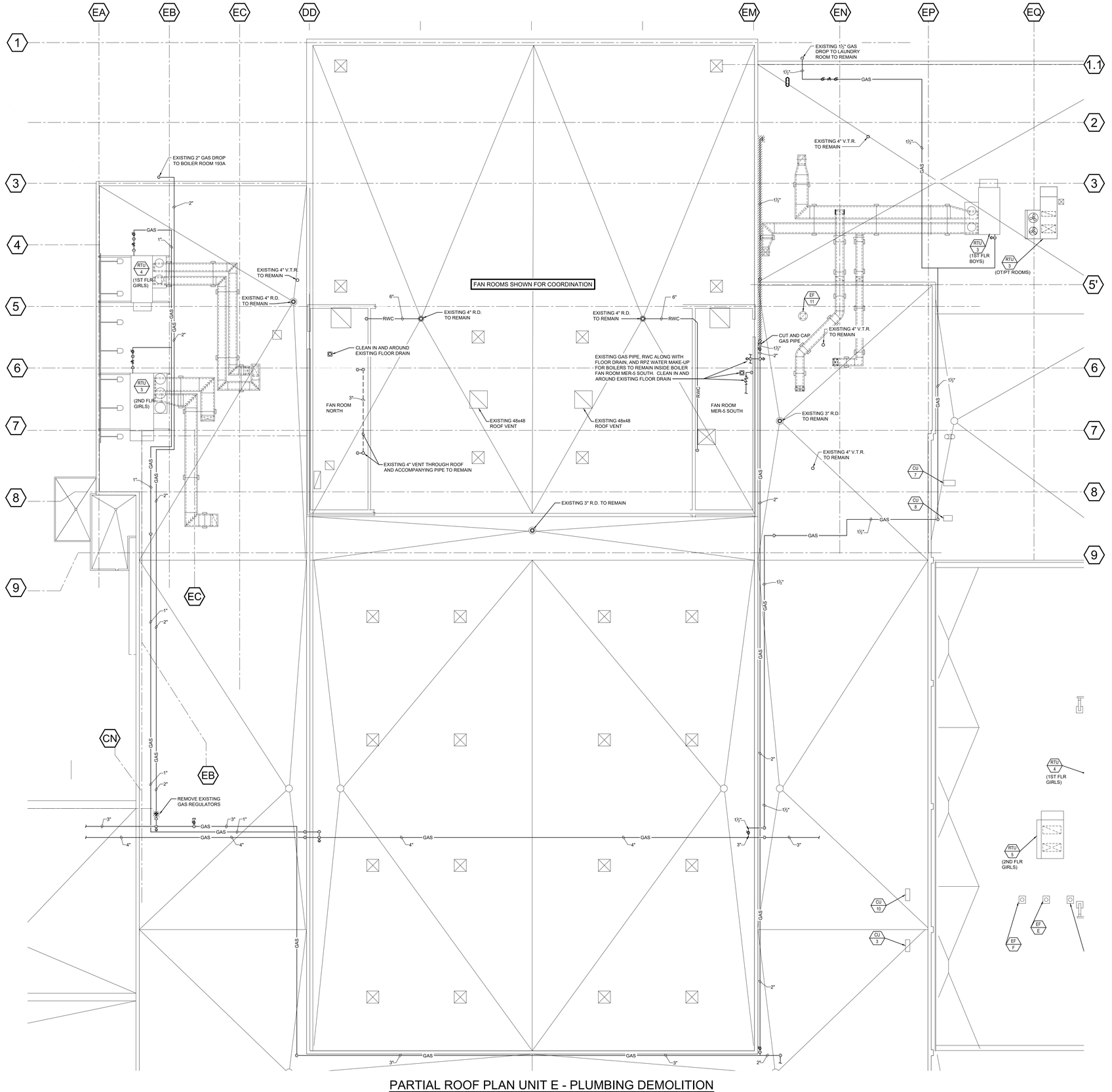
CP	2024-239P
CHECKED BY: A.J.L.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: PD-101



PARTIAL ROOF PLAN UNIT E - PLUMBING DEMOLITION

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

REVISIONS

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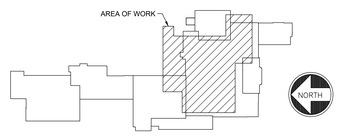

KEY PLAN

CAPITAL PROJECTS

PHASE 2
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K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
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Phase 2

DRAWING TITLE:
PARTIAL ROOF PLAN
UNIT E
PLUMBING DEMOLITION

DRAWN BY: CP	PROJECT NO.: 2024-239P
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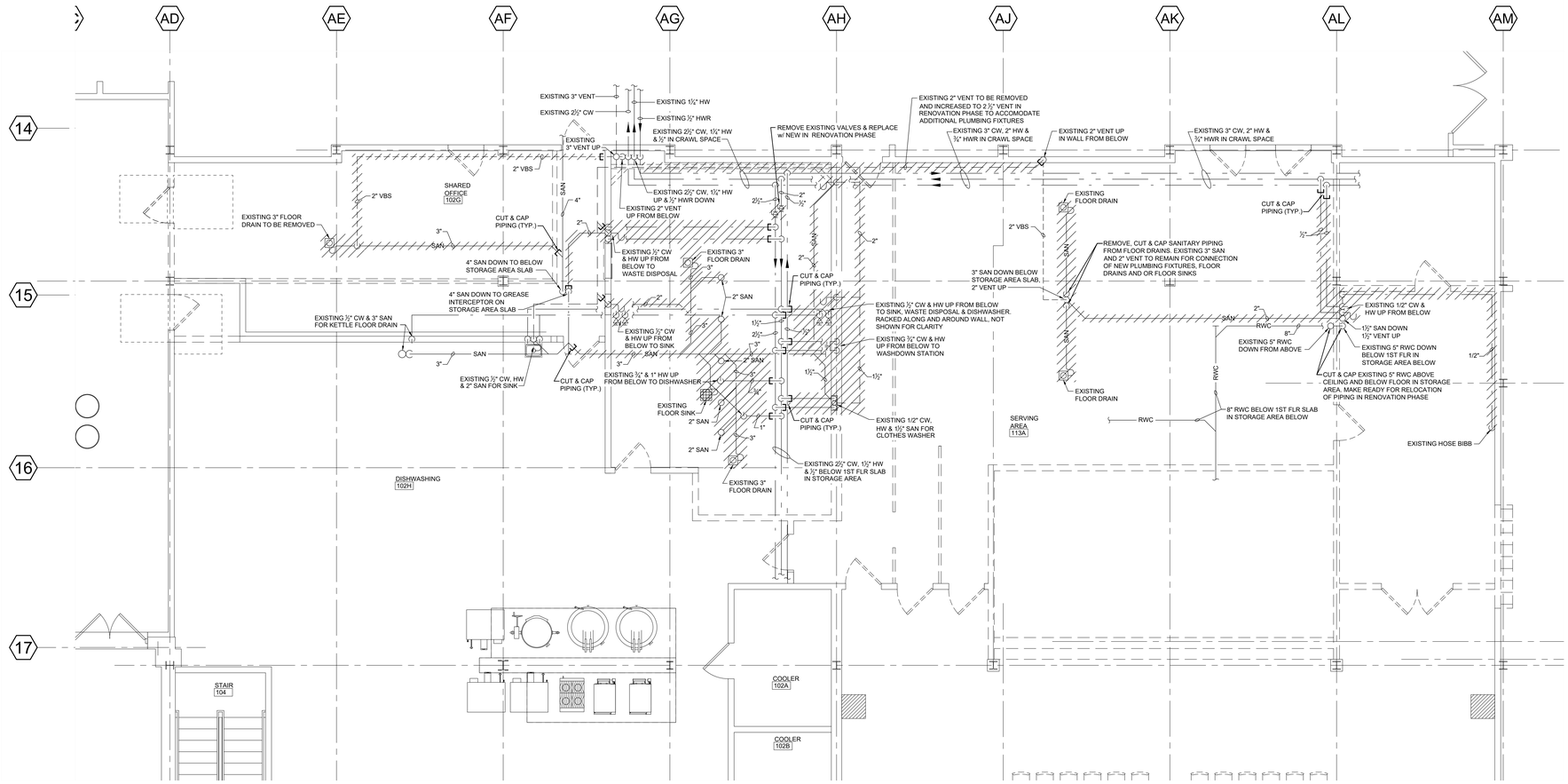
DATE: 12-01-2025	DRAWING NO.: PD-102



PARTIAL FIRST FLOOR KITCHEN & DIGITAL CAFE - PLUMBING DEMOLITION

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL FIRST FLOOR KITCHEN AND DIGITAL CAFE PLUMBING DEMOLITION

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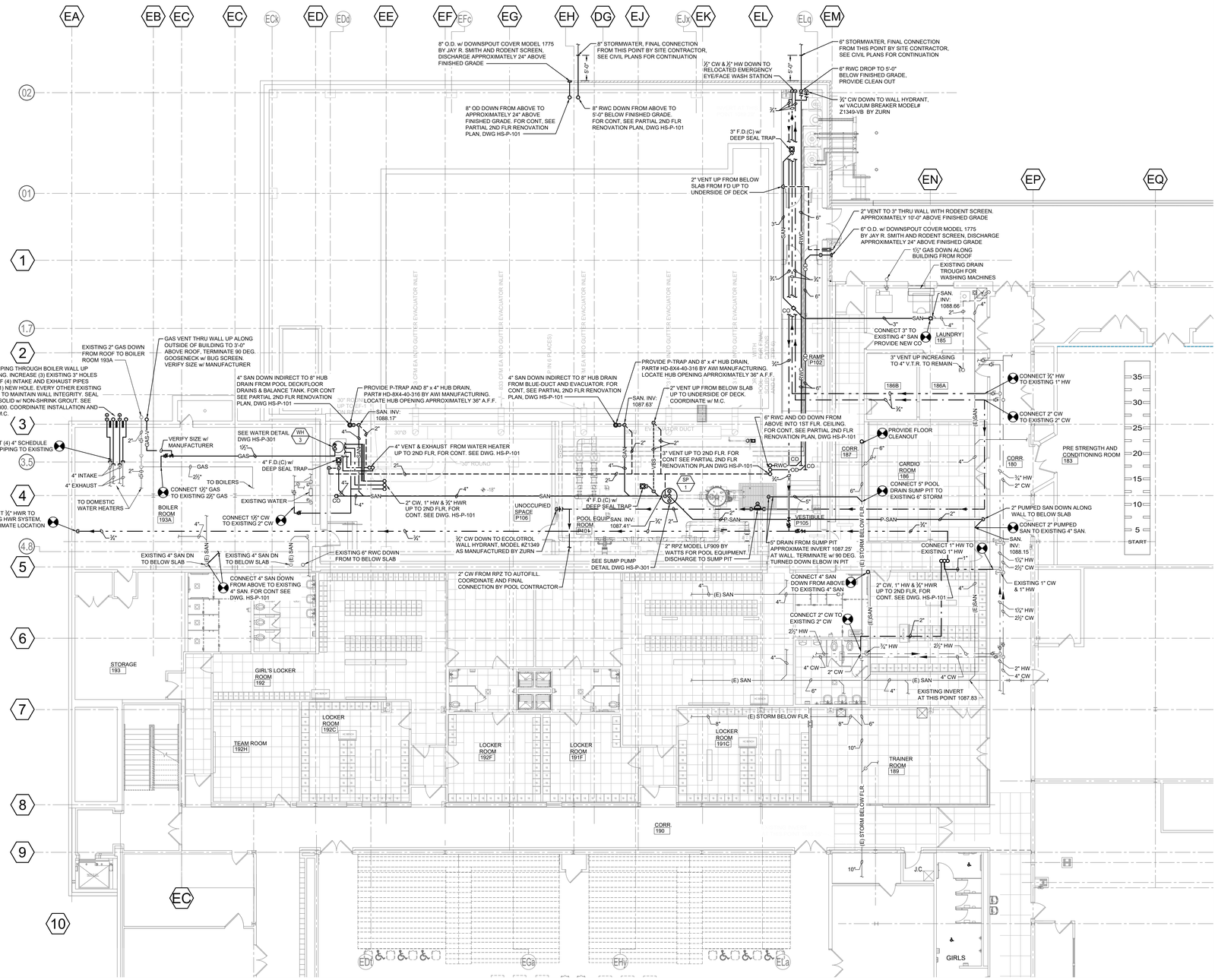
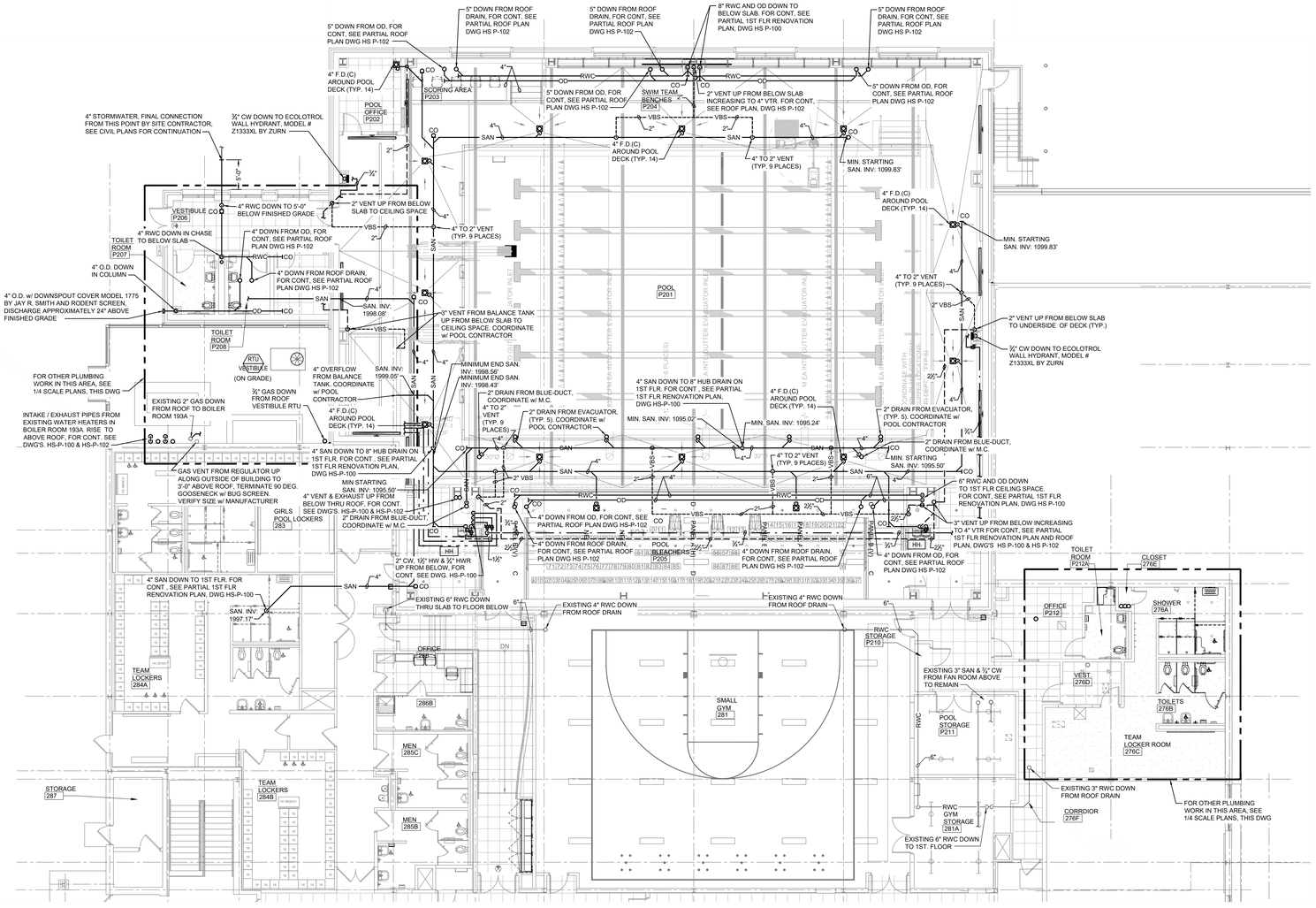
A.J.L.	HS PD-107
DATE: 12-01-2025	

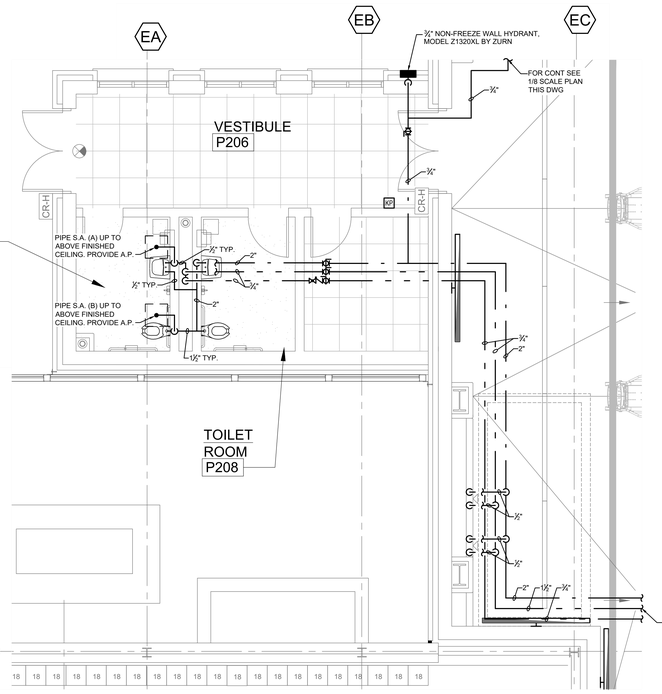
DATE: 08/7/2008
PLOT DATE: —


8" O.D. w/ DOWNSPOUT COVER MODEL 1775 BY JAY R. SMITH AND RODENT SCREEN, DISCHARGE APPROXIMATELY 24" ABOVE FINISHED GRADE
8" OD DOWN FROM ABOVE TO APPROXIMATELY 24" ABOVE FINISHED GRADE. FOR CONT, SEE PARTIAL 2ND FLR RENOVATION PLAN, DWG HS-P-101
8" STORMWATER, FINAL CONNECTION FROM THIS POINT BY SITE CONTRACTOR, SEE CIVIL PLANS FOR CONTINUATION
8" RWC DOWN FROM ABOVE TO 5'-0" BELOW FINISHED GRADE. FOR CONT, SEE PARTIAL 2ND FLR RENOVATION PLAN, DWG HS-P-101
½" CW & ½" HW DOWN TO RELOCATED EMERGENCY EYE/FACE WASH STATION
6" STORMWATER, FINAL CONNECTION FROM THIS POINT BY SITE CONTRACTOR, SEE CIVIL PLANS FOR CONTINUATION
6" RWC DROP TO 5'-0" BELOW FINISHED GRADE, PROVIDE CLEAN OUT
¾" CW DOWN TO WALL HYDRANT, w/ VACUUM BREAKER MODEL# Z1349-VB BY ZURN
3" F.D.(C) w/ DEEP SEAL TRAP
2" VENT UP FROM BELOW SLAB FROM FD UP TO UNDERSIDE OF DECK
2" VENT TO 3" THRU WALL WITH RODENT SCREEN. APPROXIMATELY 10'-0" ABOVE FINISHED GRADE
6" O.D. w/ DOWNSPOUT COVER MODEL 1775 BY JAY R. SMITH AND RODENT SCREEN, DISCHARGE APPROXIMATELY 24" ABOVE FINISHED GRADE
1½" GAS DOWN ALONG BUILDING FROM ROOF
EXISTING DRAIN TROUGH FOR WASHING MACHINES
SAN. INV: 1088.66
3" CONNECT 3" TO EXISTING 4" SAN. PROVIDE NEW CO
LAUNDRY 185
RAMP P102
3" VENT UP INCREASING TO 4" V.T.R. TO REMAIN
186B
186A
CONNECT ¾" HW TO EXISTING 1" HW
CONNECT 2" CW TO EXISTING 2" CW
PROVIDE FLOOR CLEANOUT
6" RWC AND OD DOWN FROM ABOVE INTO 1ST FLR. CEILING. FOR CONT, SEE PARTIAL 2ND FLR RENOVATION PLAN, DWG HS-P-101
CORR 187
CARDIO ROOM 186
CONNECT 5" POOL DRAIN SUMP PIT TO EXISTING 6" STORM
CORR 180
PRE STRENGTH AND CONDITIONING ROOM 183
¾" HW
2" CW
2" PUMPED SAN DOWN ALONG WALL TO BELOW SLAB
CONNECT 2" PUMPED SAN TO EXISTING 4" SAN.
SAN. INV: 1088.15
1½" HW
2½" CW
EXISTING 1" CW & 1" HW
1½" HW
2½" CW
2" HW
4" CW
CONNECT 1" HW TO EXISTING 1" HW
EXISTING INVERT AT THIS POINT 1087.83
(E) STORM BELOW FLR
TRAINER ROOM 189
J.C.
GIRLS
(E) STORM BELOW FLR
(E) SAN
(E) STORM BELOW FLR
4" SAN DOWN INDIRECT TO 8" HUB DRAIN FROM POOL DECK/FLOOR DRAINS & BALANCE TANK. FOR CONT SEE PARTIAL 2ND FLR RENOVATION PLAN, DWG HS-P-101
PROVIDE P-TRAP AND 8" x 4" HUB DRAIN, PART# HD-8X4-40-316 BY AWI MANUFACTURING. LOCATE HUB OPENING APPROXIMATELY 36" A.F.F.
SAN. INV: 1088.17'
4" SAN DOWN INDIRECT TO 8" HUB DRAIN FROM BLUE-DUCT AND EVACUATOR. FOR CONT, SEE PARTIAL 2ND FLR RENOVATION PLAN, DWG HS-P-101
PROVIDE P-TRAP AND 8" x 4" HUB DRAIN, PART# HD-8X4-40-316 BY AWI MANUFACTURING. LOCATE HUB OPENING APPROXIMATELY 36" A.F.F.
SAN. INV: 1087.63'
2" VENT UP FROM BELOW SLAB UP TO UNDERSIDE OF DECK. COORDINATE w/ M.C.
3" VENT UP TO 2ND FLR. FOR CONT SEE PARTIAL 2ND FLR RENOVATION PLAN DWG HS-P-101
4" VENT & EXHAUST FROM WATER HEATER UP TO 2ND FLR. FOR CONT. SEE DWG. HS-P-101
4" F.D.(C) w/ DEEP SEAL TRAP
2" CW, 1" HW & ¾" HWR UP TO 2ND FLR. FOR CONT. SEE DWG. HS-P-101
4" F.D.(C) w/ DEEP SEAL TRAP
POOL EQUIP. ROOM P105
SAN. INV: 1087.41
VESTIBULE P105
5" DRAIN FROM SUMP PIT APPROXIMATE INVERT 1087.25' AT WALL. TERMINATE w/ 90 DEG. TURNED DOWN ELBOW IN PIT
2" RPZ MODEL LF909 BY WATTS FOR POOL EQUIPMENT. DISCHARGE TO SUMP PIT
SEE SUMP PUMP DETAIL DWG HS-P-301
2" CW FROM RPZ TO AUTOFILL. COORDINATE AND FINAL CONNECTION BY POOL CONTRACTOR
UNOCCUPIED SPACE P106
½" CW DOWN TO ECOLOTROL WALL HYDRANT, MODEL #Z1349 AS MANUFACTURED BY ZURN
CONNECT 4" SAN DOWN FROM ABOVE TO EXISTING 4" SAN
2" CW, 1" HW & ¾" HWR UP TO 2ND FLR. FOR CONT. SEE DWG. HS-P-101
CONNECT 2" CW TO EXISTING 2" CW
2½" HW
¾" HW
4" CW
2" CW
(E) SAN
4" CW
EXISTING 4" SAN DN TO BELOW SLAB
EXISTING 4" SAN DN TO BELOW SLAB
CONNECT 4" SAN DOWN FROM ABOVE TO EXISTING 4" SAN. FOR CONT SEE DWG. HS-P-101
EXISTING 6" RWC DOWN FROM TO BELOW SLAB
(E) SAN
(E) SAN
(E) SAN



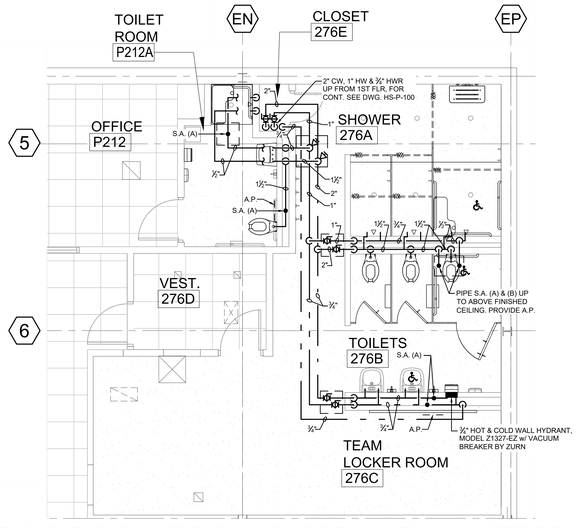
PARTIAL SECOND FLOOR UNIT E - PLUMBING RENOVATION

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



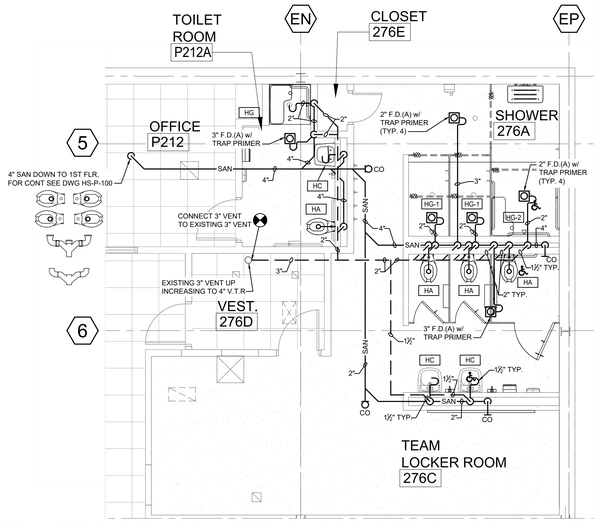
PARTIAL SECOND FLOOR UNIT E - PLUMBING RENOVATION - WATER PIPING

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



PARTIAL SECOND FLOOR UNIT E - PLUMBING RENOVATION - SANITARY PIPING

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

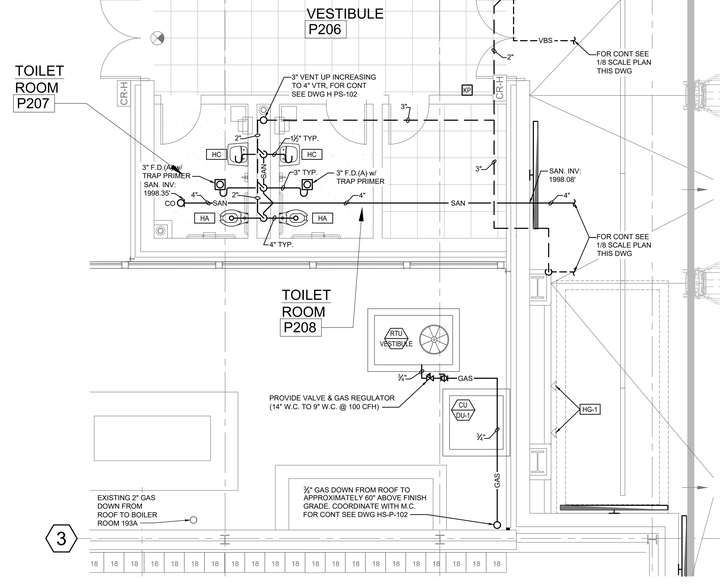


PARTIAL SECOND FLOOR UNIT E - PLUMBING RENOVATION - WATER PIPING

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

PARTIAL SECOND FLOOR UNIT E - PLUMBING RENOVATION - SANITARY PIPING

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

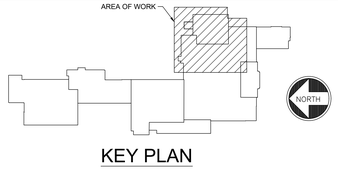


PARTIAL SECOND FLOOR UNIT E - PLUMBING RENOVATION - SANITARY PIPING

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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570-586-4334
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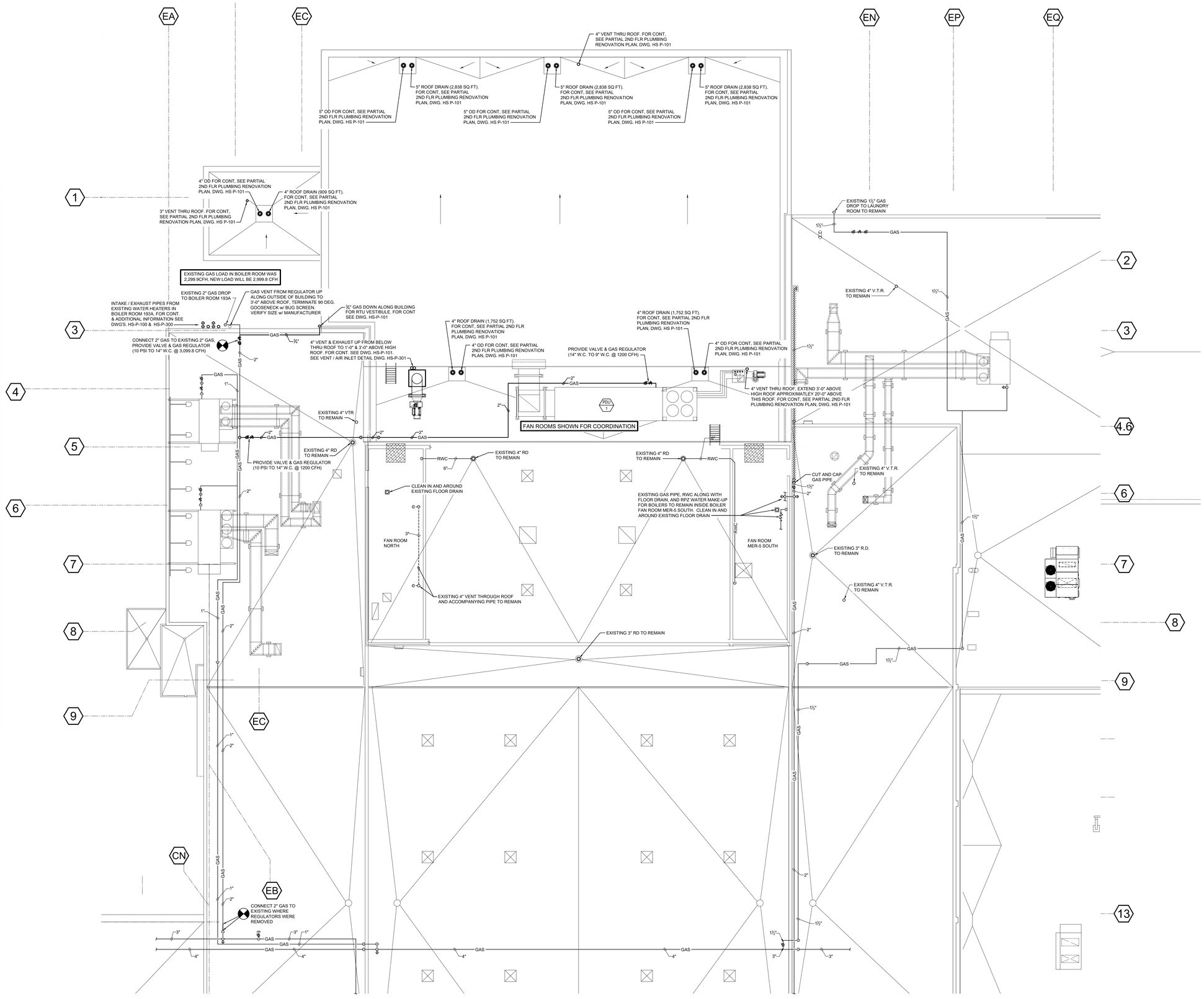
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL SECOND FLOOR UNIT E
PLUMBING RENOVATION

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
A.J.L.	HS / P-101
DATE:	
12-01-2025	

DATE: 08/7/2008
PLOT DATE: —

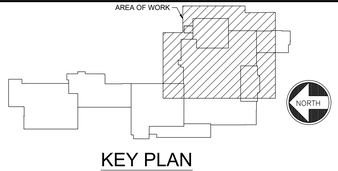


PARTIAL ROOF PLAN UNIT E - PLUMBING RENOVATION

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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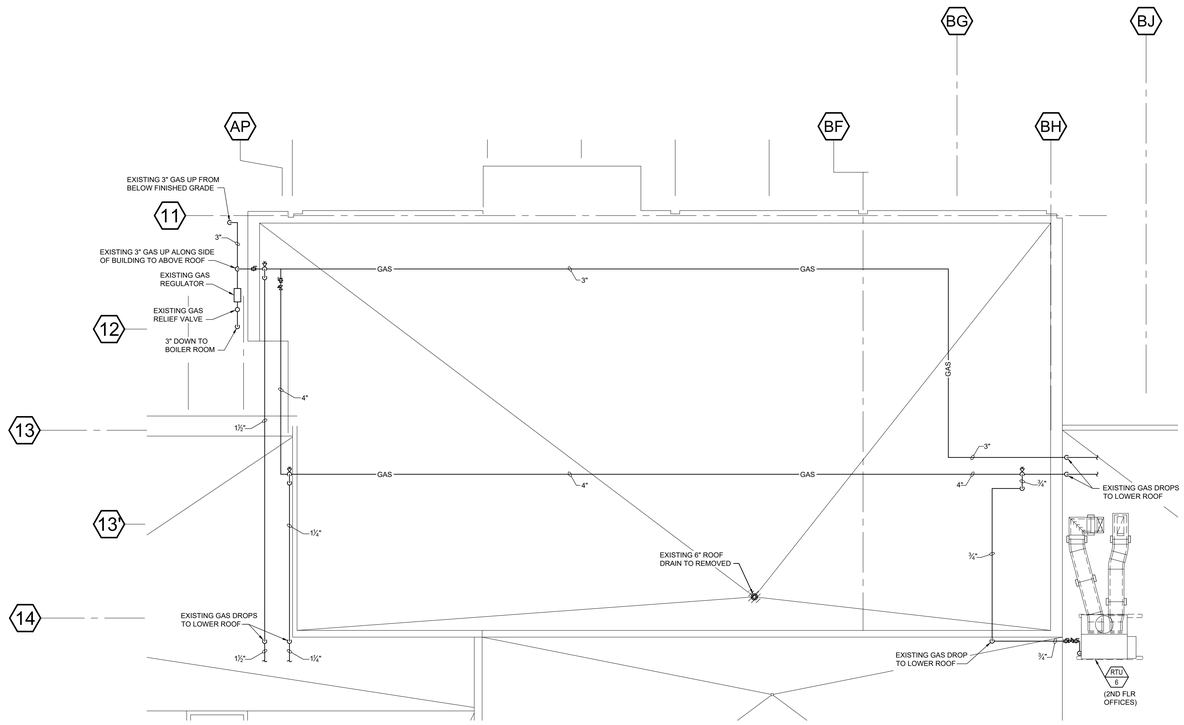
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL ROOF PLAN
UNIT E
PLUMBING RENOVATION

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
A.J.L.	HS / P-102
DATE:	
12-01-2025	

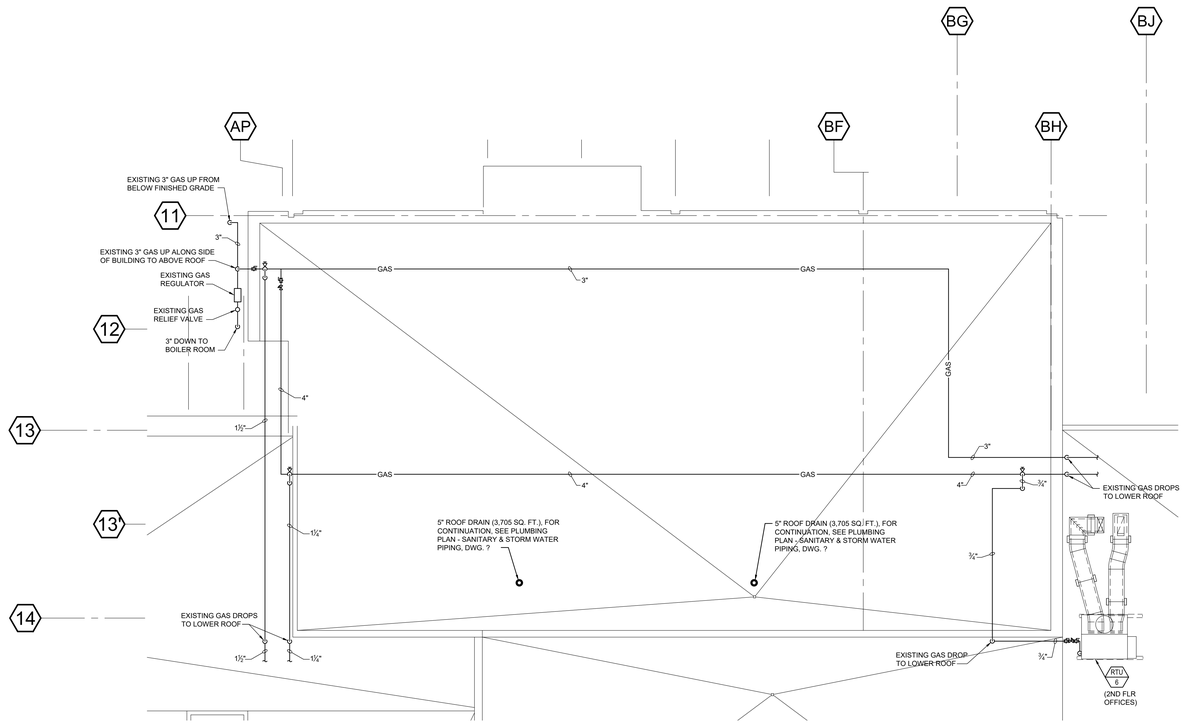
PRINT DATE: 12/1/2025



PARTIAL ROOF PLAN LIBRARY - PLUMBING DEMO

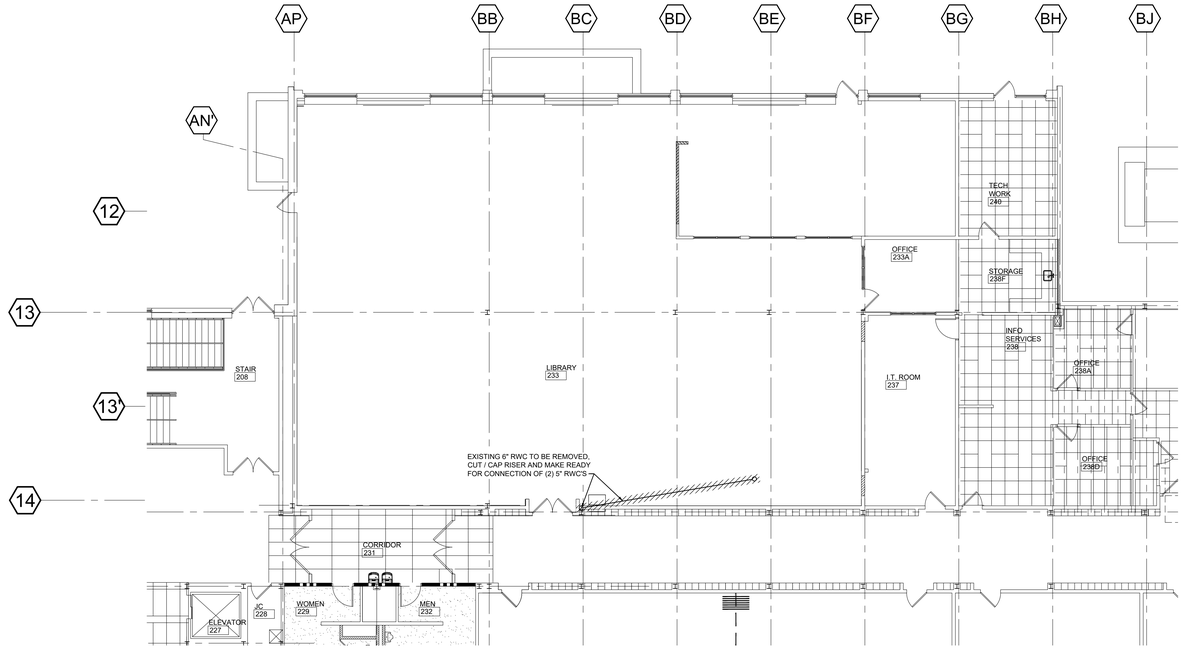
SCALE: 1/8" = 1'-0"

UNLESS OTHERWISE NOTED, REMOVE EXISTING ROOF DRAIN AND TEMPORARILY SUPPORT EXISTING GAS PIPING ON LIBRARY ROOF. MAKE READY FOR CONNECTION OF (2) NEW ROOF DRAINS ALONG WITH ACCOMPANYING PIPING. COORDINATE WITH ARCHITECTURAL ROOF PLAN FOR NEW BUILT INSULATION. PROVIDE NEW GAS PIPING SUPPORTS TO ACCOMMODATE NEW ROOF INSULATION THICKNESS



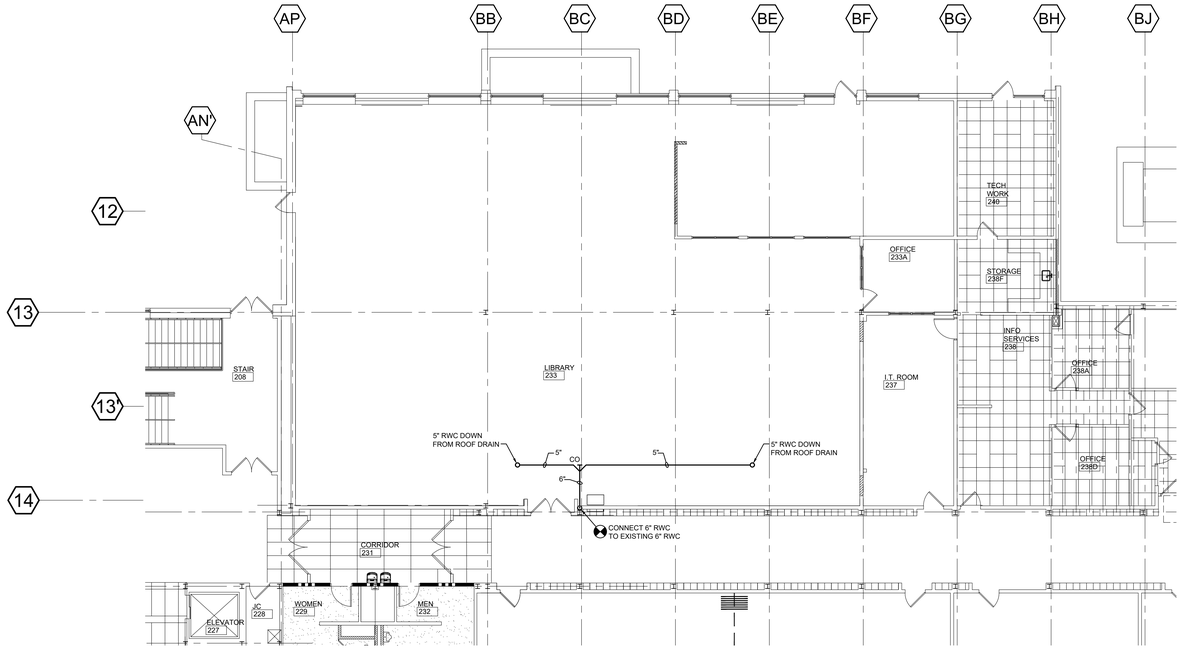
PARTIAL ROOF PLAN LIBRARY - PLUMBING RENOVATION

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



LIBRARY STORM WATER - PLUMBING DEMO

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

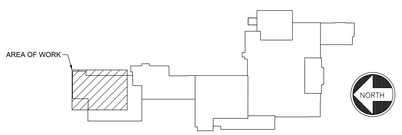


LIBRARY STORM WATER - PLUMBING RENOVATION

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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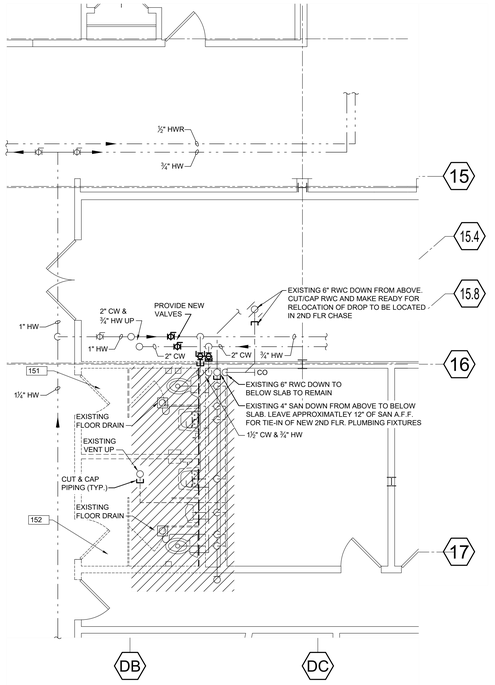
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL ROOF PLAN
LIBRARY PLUMBING
DEMO AND RENOVATION

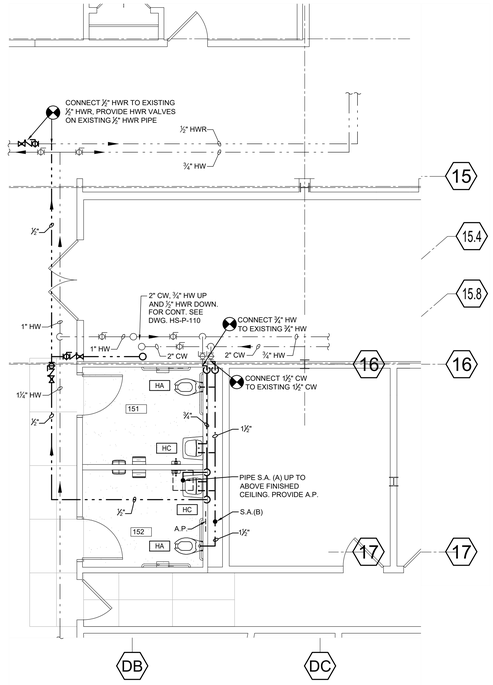
DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
AJL	HS / P-103
DATE:	
12-01-2025	

CAD FILE: P103.DWG
PLOT DATE: —

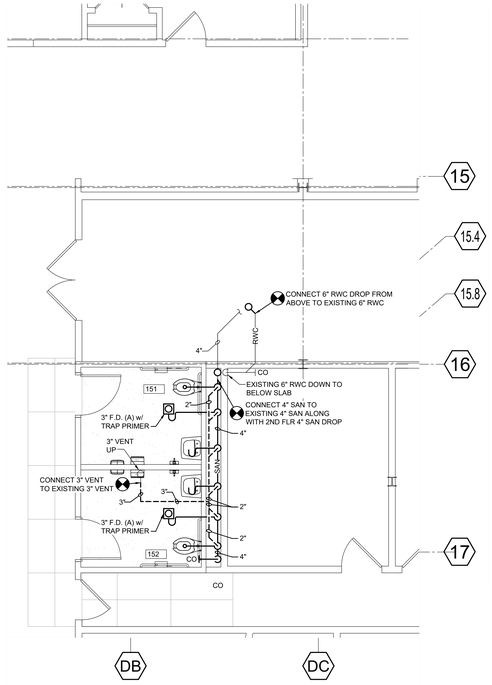
UNLESS OTHERWISE NOTED, REMOVE ALL EXISTING BUT NOT LIMITED TO PLUMBING FIXTURES AND ACCOMPANYING PIPING IN FIRST FLOOR RESTROOMS AS SHOWN IN HATCHED AREA. REFER TO DEMOLITION NOTES ON DRAWING HS-P-300



FIRST FLOOR TOILET ROOMS
151 / 152 - PLUMBING DEMOLITION
SCALE: 1/4" = 1'-0"



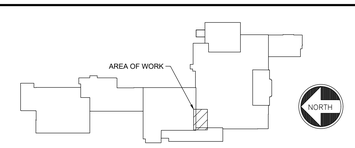
FIRST FLOOR TOILET ROOMS 151 / 152 -
PLUMBING RENOVATION - WATER PIPING
SCALE: 1/4" = 1'-0"



FIRST FLOOR TOILET ROOMS 151 / 152 -
PLUMBING RENOVATION - SANITARY PIPING
SCALE: 1/4" = 1'-0"

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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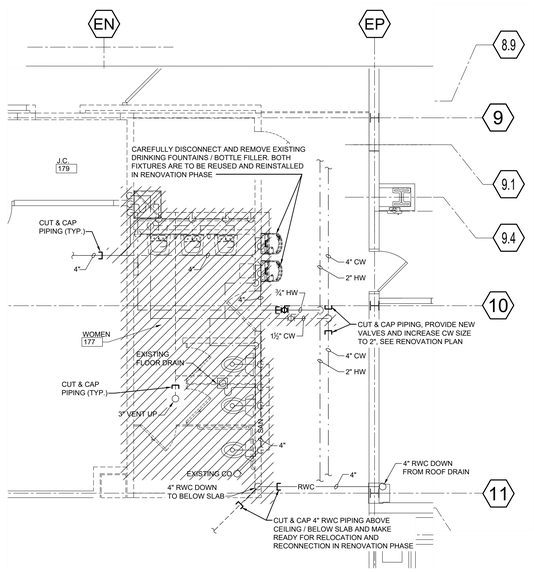
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR TOILET ROOM PLUMBING PLANS

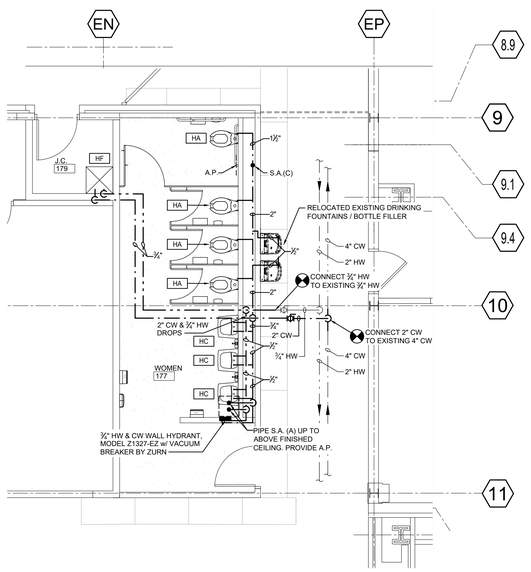
DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY: A.J.L.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: P-104

CAD FILE: 2025-239P
PLOT DATE: ---



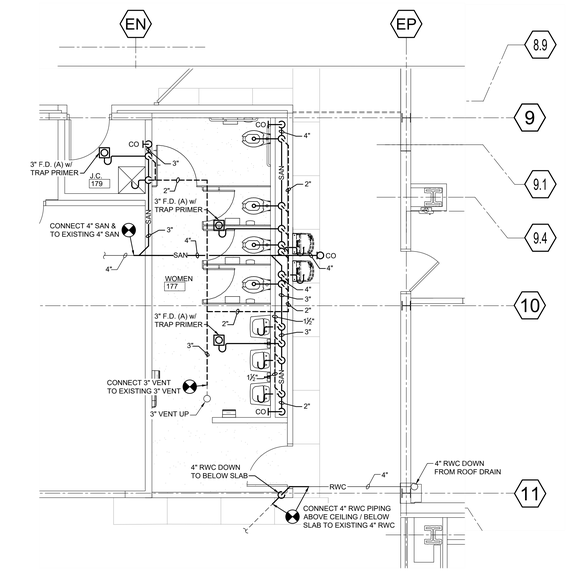
FIRST FLOOR GIRLS TOILET ROOM 177 AT SOUTH LOBBY - PLUMBING DEMOLITION

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



FIRST FLOOR GIRLS TOILET ROOM 177 AT SOUTH LOBBY - PLUMBING RENOVATION - WATER PIPING

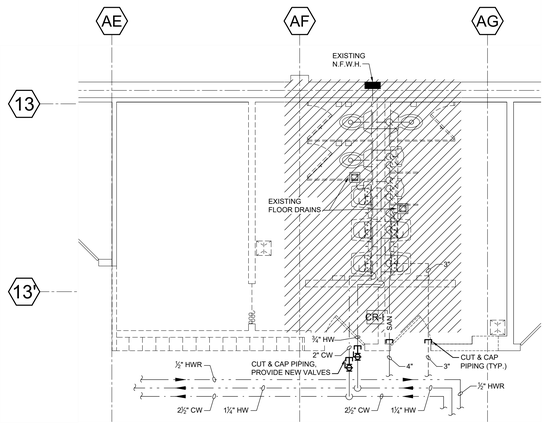
SCALE: 1/4" = 1'-0"



FIRST FLOOR GIRLS TOILET ROOM 177 AT SOUTH LOBBY - PLUMBING RENOVATION - SANITARY PIPING

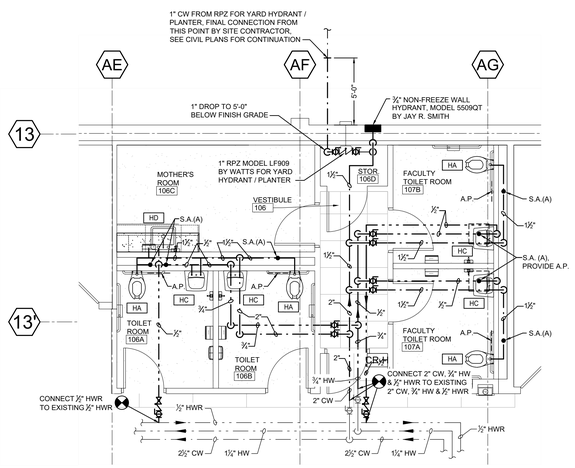
SCALE: 1/4" = 1'-0"

UNLESS OTHERWISE NOTED, REMOVE ALL EXISTING BUT NOT LIMITED TO PLUMBING FIXTURES AND ACCOMPANYING PIPING IN FIRST FLOOR RESTROOMS AS SHOWN IN HATCHED AREA. REFER TO DEMOLITION NOTES ON DRAWING HS-P-300



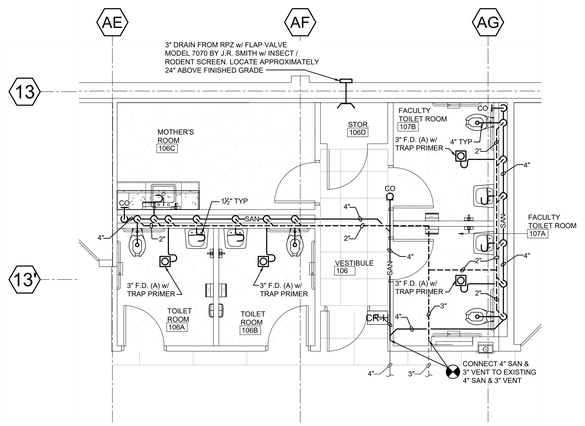
FIRST FLOOR TOILET ROOMS ACROSS FROM KITCHEN - PLUMBING DEMOLITION

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



FIRST FLOOR TOILET ROOMS ACROSS FROM KITCHEN - PLUMBING RENOVATION - WATER PIPING

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

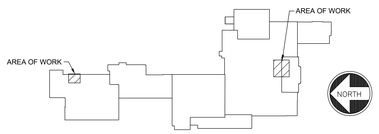


FIRST FLOOR TOILET ROOMS ACROSS FROM KITCHEN - PLUMBING RENOVATION - SANITARY PIPING

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR TOILET ROOM PLUMBING PLANS

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
A.J.L.	HS / P-105
DATE: 12-01-2025	

DWG FILE: PLOT DATE: REF.TEXA

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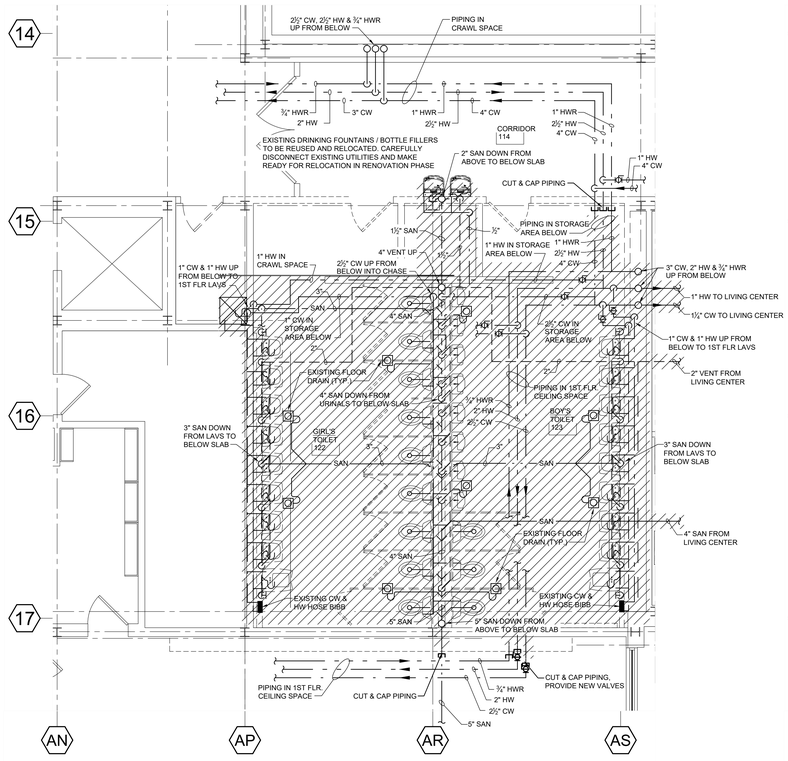
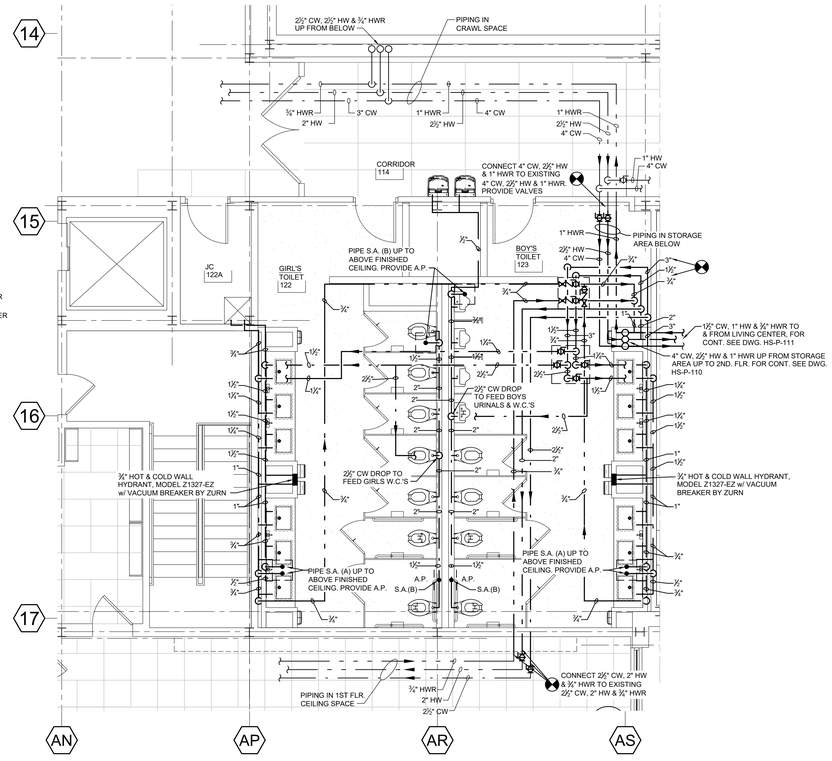


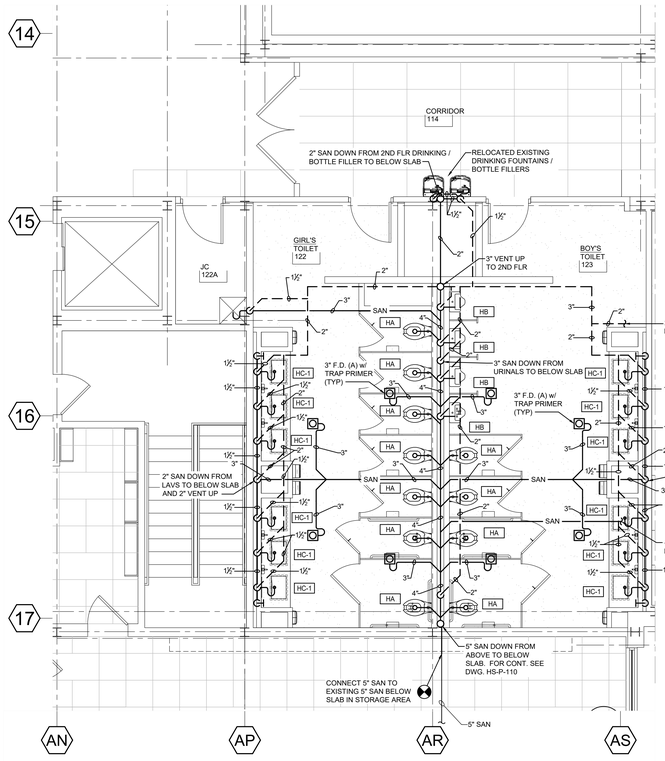
PARTIAL FIRST FLOOR TOILET ROOM 122 & 123 - PLUMBING DEMOLITION

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



PARTIAL FIRST FLOOR TOILET ROOM 122 & 123 - PLUMBING RENOVATION - WATER PIPING

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



PARTIAL FIRST FLOOR TOILET ROOM 122 & 123 - PLUMBING RENOVATION - SANITARY PIPING

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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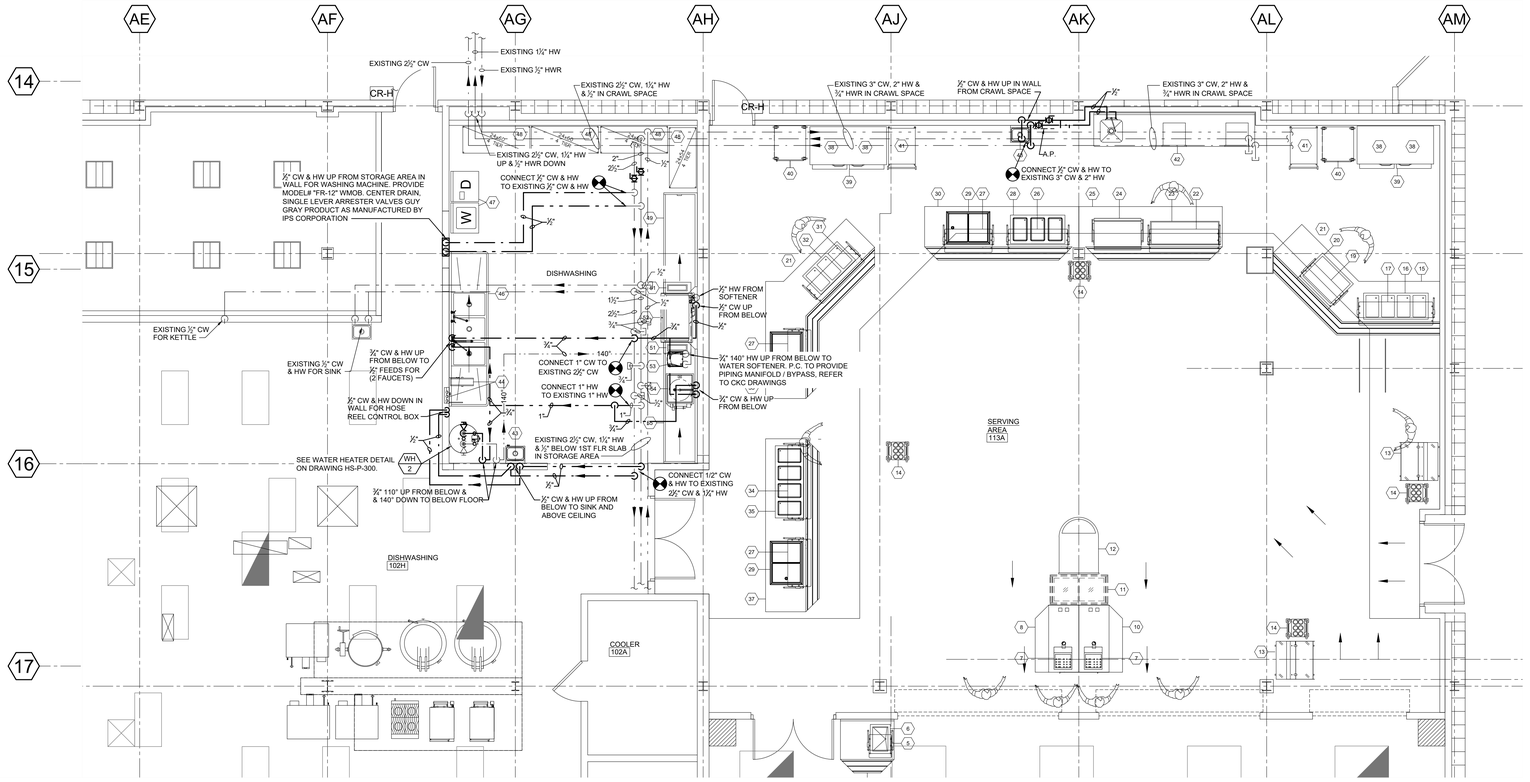
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR TOILET ROOM PLUMBING PLANS

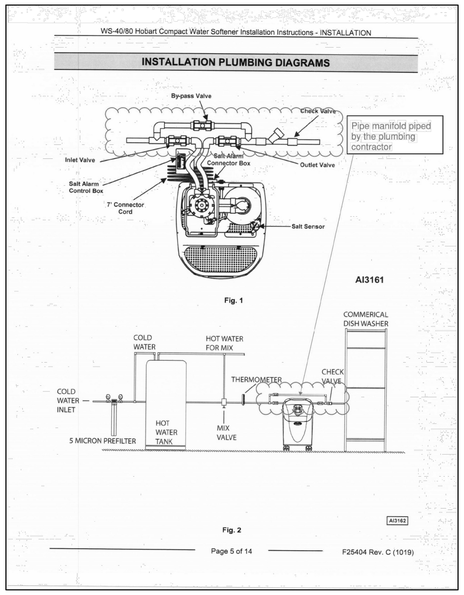
DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
AJL	HS / P-106
DATE:	
12-01-2025	

CAD FILE PLOT DATE: 12/1/2025



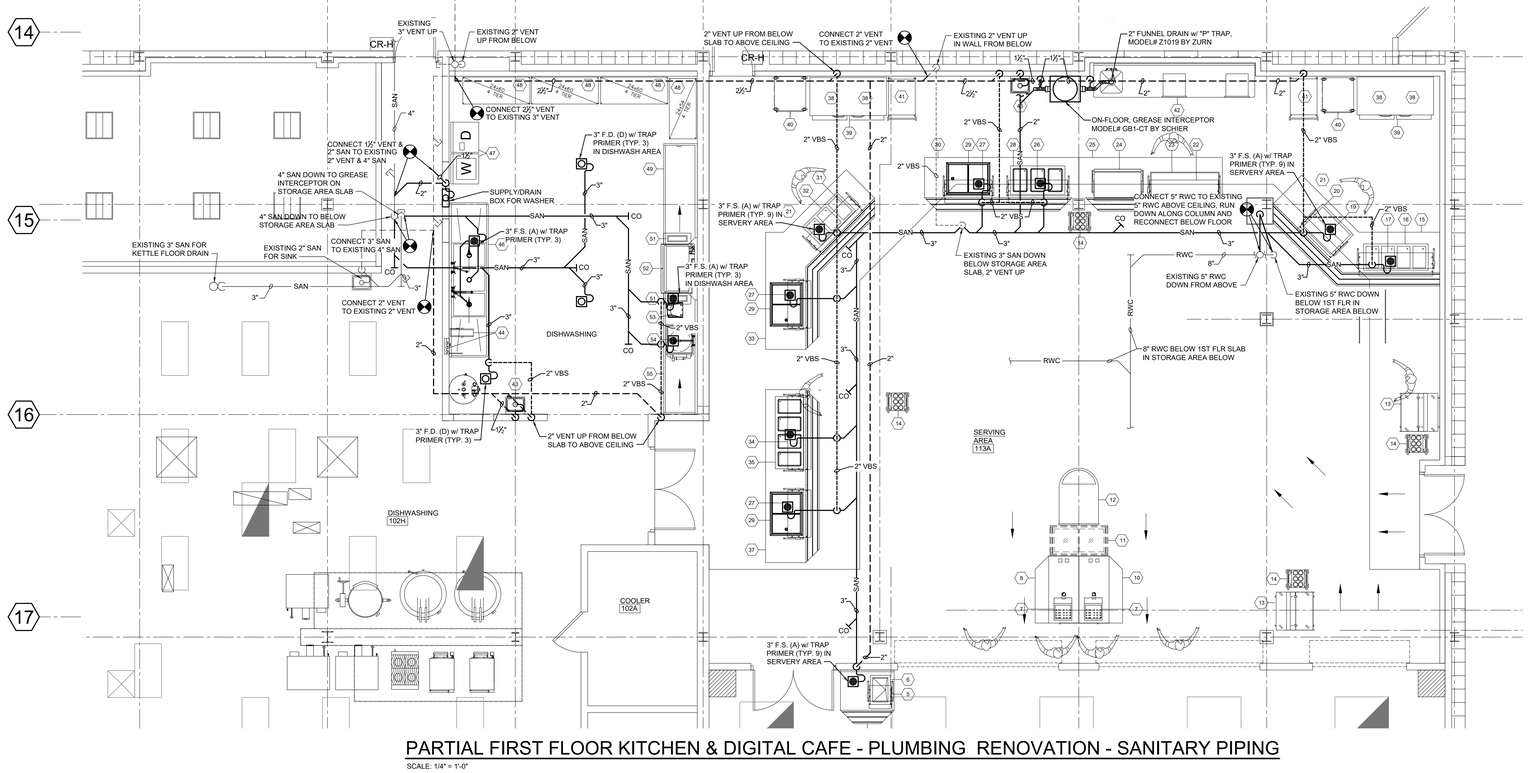
PARTIAL FIRST FLOOR KITCHEN & DIGITAL CAFE - PLUMBING RENOVATION - WATER PIPING

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



WATER SOFTENER ITEM# 53 PIPING DIAGRAM

SCALE: NTS



PARTIAL FIRST FLOOR KITCHEN & DIGITAL CAFE - PLUMBING RENOVATION - SANITARY PIPING

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

FOOD SERVICE EQUIPMENT LIST AND CONNECTION SCHEDULE (PLUMBING ONLY)

ITEM	QTY.	EQUIPMENT DESCRIPTION	COLD SIZE	HOT SIZE	COLD (AFF)	HOT (AFF)	DIRECT DRAIN SIZE	DIRECT DRAIN (AFF)	INDIRECT DRAIN (SIZE)	INDIRECT DRAIN (AFF)
6	1	SINGLE COLD WELL UNIT	-	-	-	-	-	-	1"	24"
16	1	4 WELL HOT FOOD UNIT	-	-	-	-	-	-	1"	24"
20	1	FROST TOP	-	-	-	-	-	-	1"	24"
28	1	3 WELL HOT/COLD UNIT	-	-	-	-	-	-	1"	24"
29	3	FROST TOP UNITS	-	-	-	-	-	-	1"	24"
30	1	3 WELL HOT FOOD UNIT	-	-	-	-	-	-	1"	24"
35	1	4 WELL HOT/COLD UNIT	-	-	-	-	-	-	1"	24"
42	1	WORKTABLE W/SINK	1/2"	1/2"	34"	34"	-	-	1-1/2" DISCHARGE TO GREASE INTERCEPTOR	24"
43	2	HAND SINKS	1/2"	1/2"	33-1/2"	33-1/2"	1-1/2"	28"	-	-
44	1	HOSE REEL W/CONTROL CABINET	1/2"	1/2"	48"	48"	-	-	-	-
49	1	3 COMPARTMENT SINK	1/2" (2)	1/2" (2)	40"	40"	-	-	2" (3) DISCHARGE TO GREASE INTERCEPTOR	20"
47	1	WASHER/DRYER (EXISTING TO BE RELOCATED)	1/2"	1/2"	-	-	-	-	-	-
53	1	DISHWASHER	1/2"	1/2"	12"	12"	-	-	2"	7"
51	1	WATER SOFTNER	-	-	-	-	-	-	-	-
54	1	SCRAPPER COLLECTOR W/PRE-RINSE UNIT	3/4"	3/4"	18"	18"	-	-	2" DISCHARGE TO GREASE INTERCEPTOR	7"
55	1	SOILED DISHTABLE	-	-	-	-	-	-	2" DISCHARGE TO GREASE INTERCEPTOR	30"

NOTES:
- FOOD SERVICE EQUIPMENT IS BY OTHERS & SHOWN HERE FOR REFERENCE
- FOR EXACT LOCATIONS OF FLOOR DRAINS / SINKS AND ALL OTHER KITCHEN EQUIPMENT INFORMATION REFER TO CFC DRAWINGS

FIRE STOP COORDINATION NOTE:

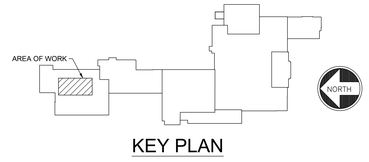
PROVIDE FIRESTOP SEAL AT ALL PIPE PENETRTATIONS THRU WALLS AND FLOORS AT THE BOILER ROOM.

COORDINATION NOTE:

P.C. TO COORDINATE WITH G.C. THE INSTALLATION OF FLOOR DRAINS,FLOOR SINKS, AND ALL PIPE PENETRATIONS

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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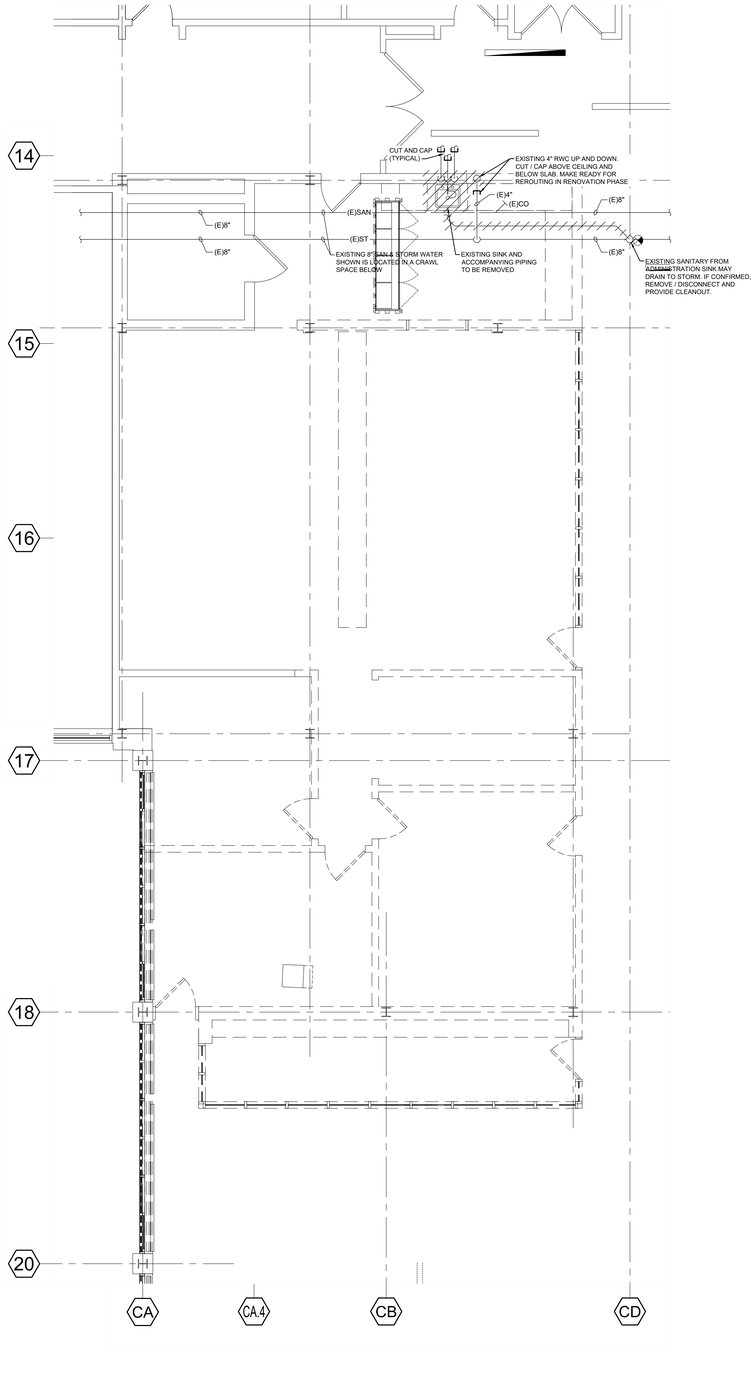
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL FIRST FLOOR KITCHEN AND DIGITAL CAFE PLUMBING RENOVATION

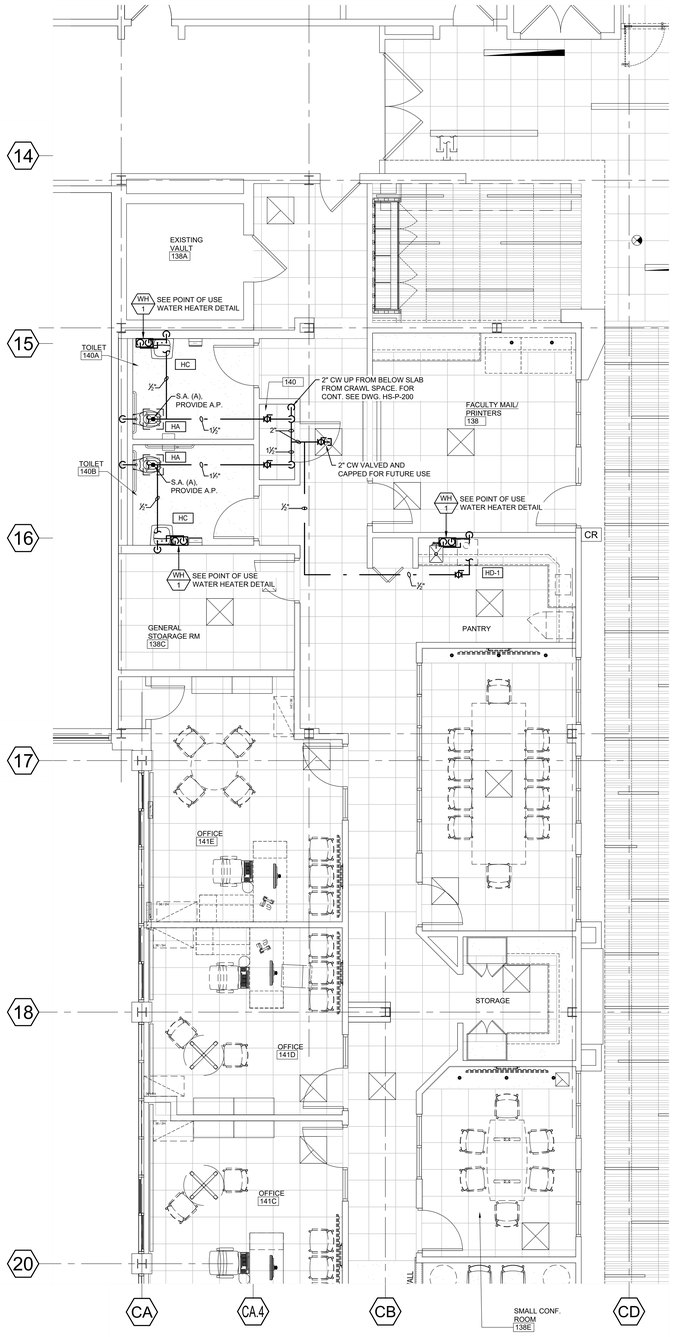
DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
A.J.L.	HS / P-107
DATE: 12-01-2025	

DATES: 08/17/2026
POST DATE: —



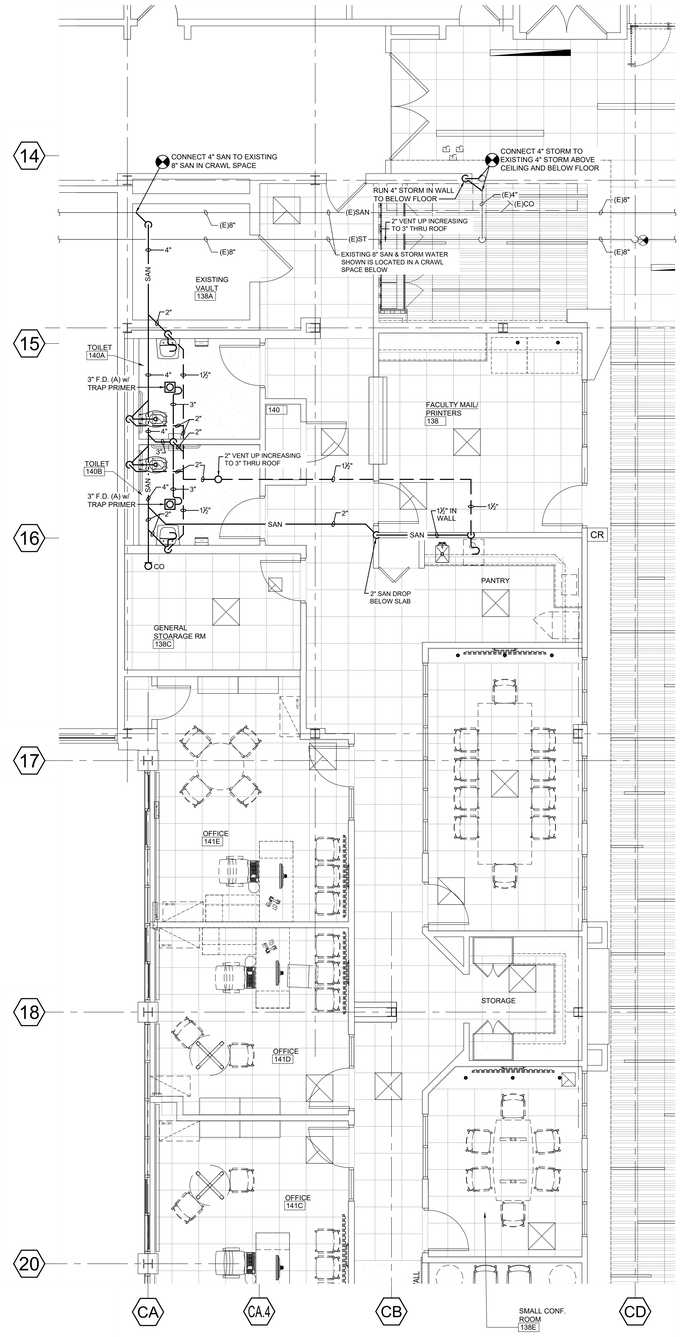
PARTIAL FIRST FLOOR ADMINISTRATION - PLUMBING DEMOLITION

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



PARTIAL FIRST FLOOR ADMINISTRATION - PLUMBING RENOVATION WATER PIPING

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

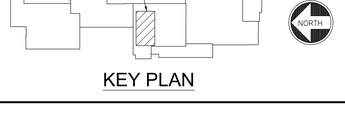


PARTIAL FIRST FLOOR ADMINISTRATION - PLUMBING RENOVATION SANITARY PIPING

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL FIRST FLOOR ADMINISTRATION PLUMBING PLANS

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY: A.J.L.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: P-108

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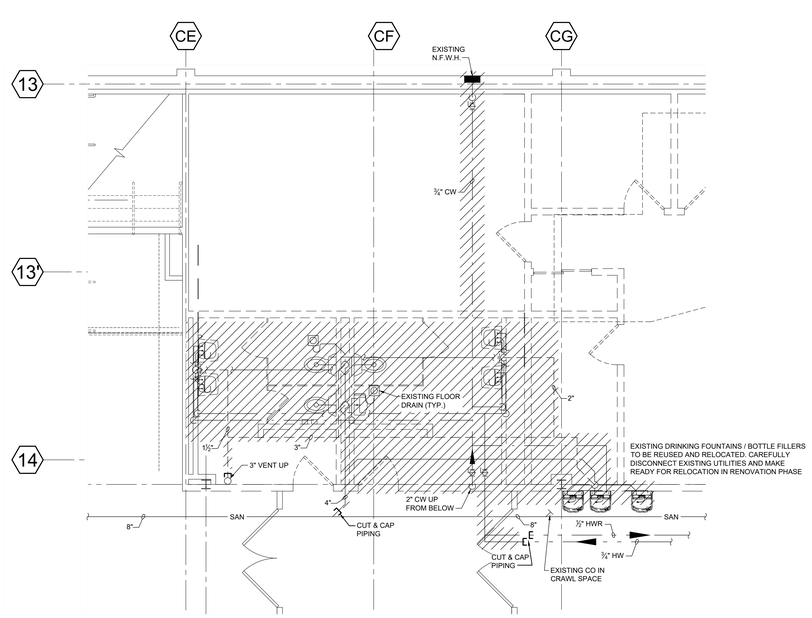
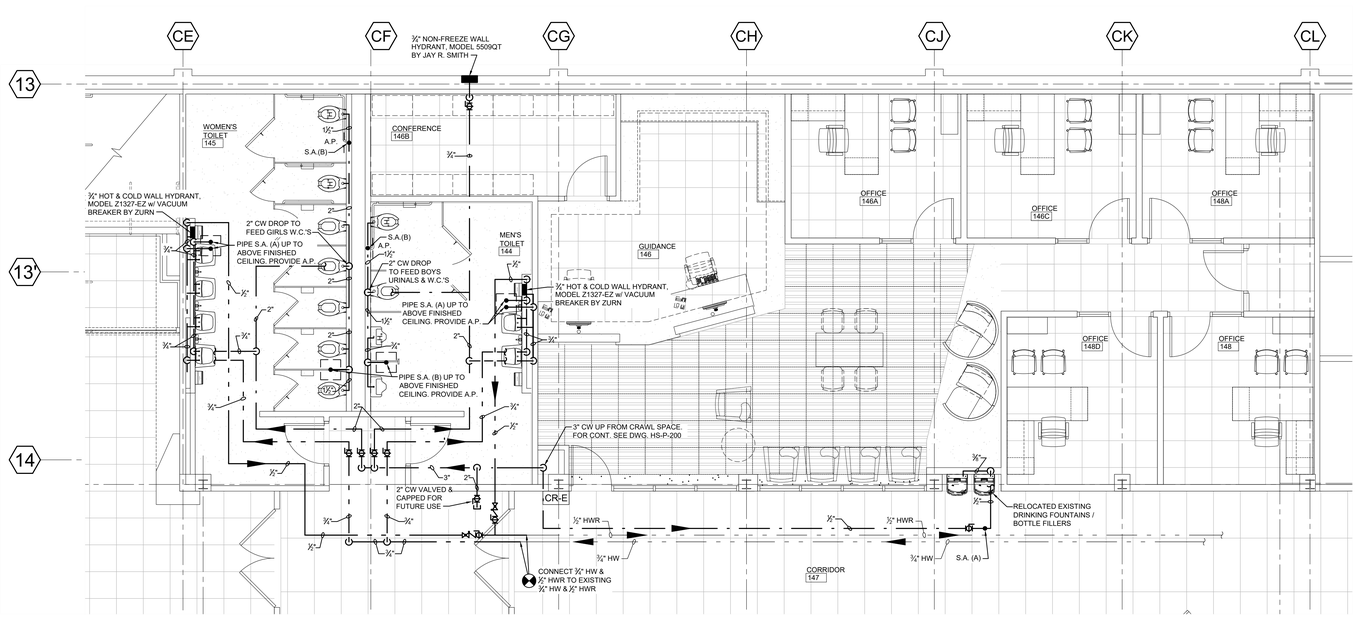


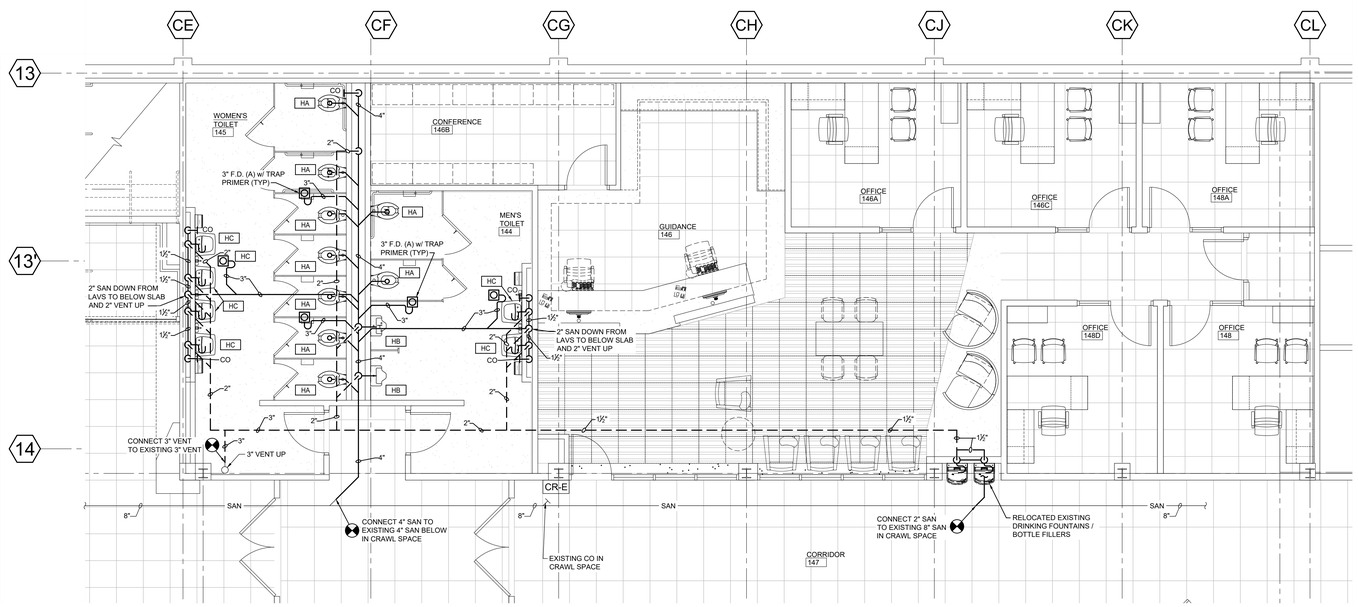
PARTIAL FIRST FLOOR GUIDANCE OFFICE - PLUMBING DEMOLITION

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



PARTIAL FIRST FLOOR GUIDANCE OFFICE - PLUMBING RENOVATION - WATER PIPING

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

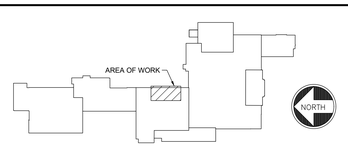


PARTIAL FIRST FLOOR GUIDANCE OFFICE - PLUMBING RENOVATION - SANITARY PIPING

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
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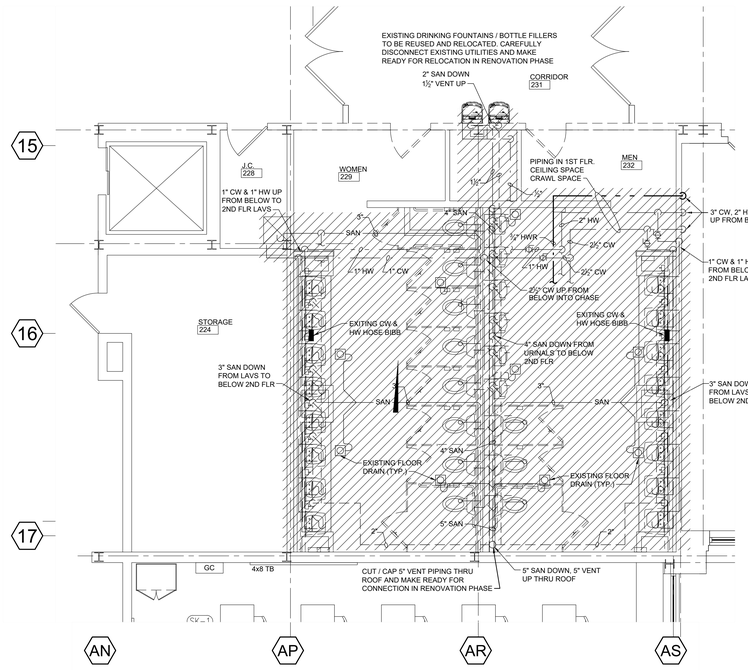
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL FIRST FLOOR GUIDANCE OFFICE PLUMBING PLANS

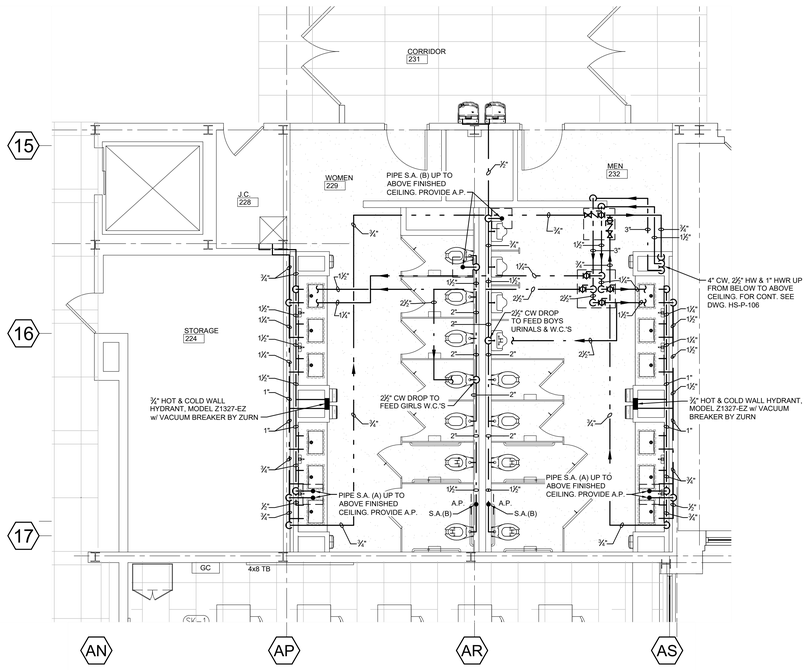
DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
A.J.L.	HS / P-109
DATE: 12-01-2025	

PRINTED: PLOT DATE: _



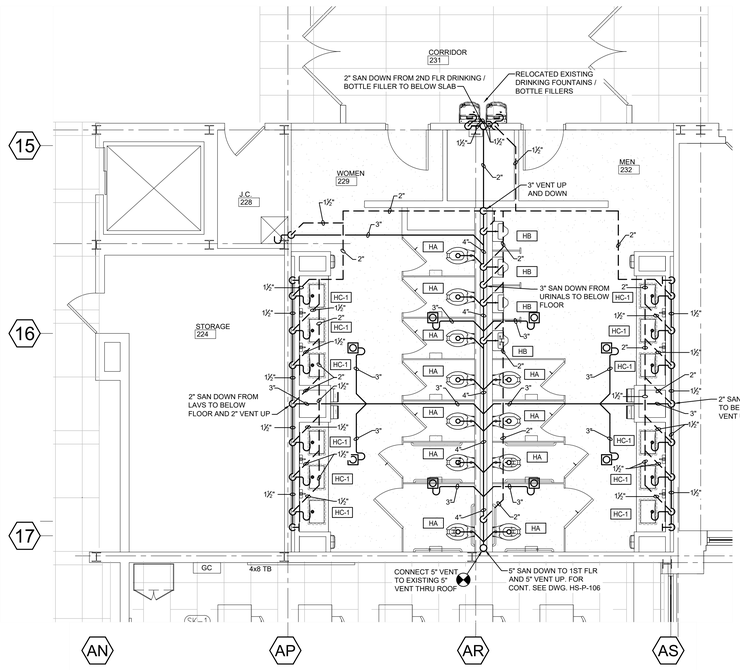
SECOND FLOOR TOILET ROOMS NEAR EXISTING RAMP & ACROSS FROM LIBRARY - PLUMBING DEMOLITION

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



SECOND FLOOR TOILET ROOMS NEAR EXISTING RAMP & ACROSS FROM LIBRARY - PLUMBING RENOVATION - WATER PIPING

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



SECOND FLOOR TOILET ROOMS NEAR EXISTING RAMP & ACROSS FROM LIBRARY - PLUMBING RENOVATION - SANITARY PIPING

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

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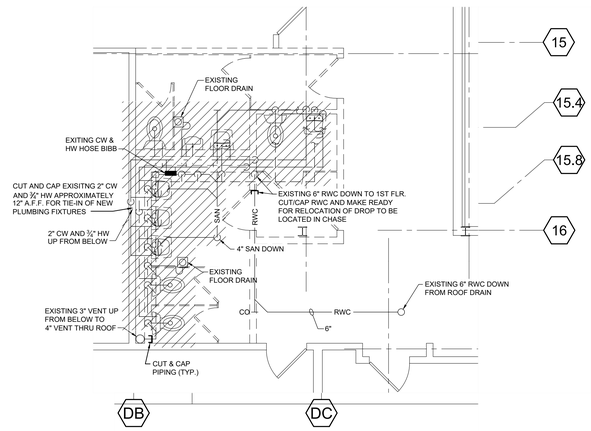
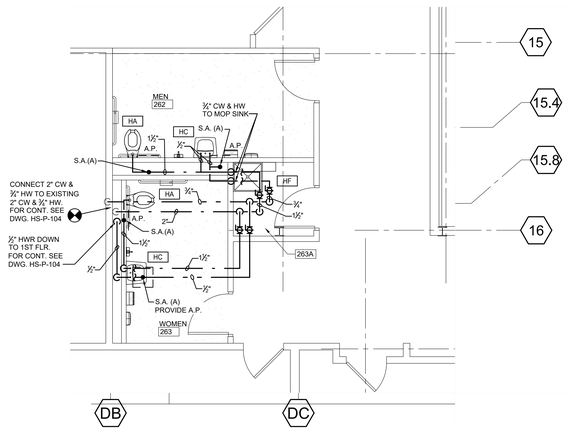


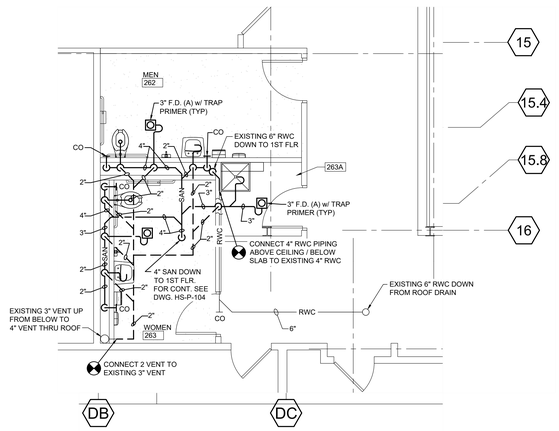
SECOND FLOOR TOILET ROOMS 262 / 263 PLUMBING DEMOLITION

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



SECOND FLOOR TOILET ROOMS 262 / 263 PLUMBING RENOVATION - WATER PIPING

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

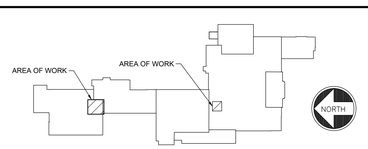


SECOND FLOOR TOILET ROOMS 262 / 263 PLUMBING RENOVATION - SANITARY PIPING

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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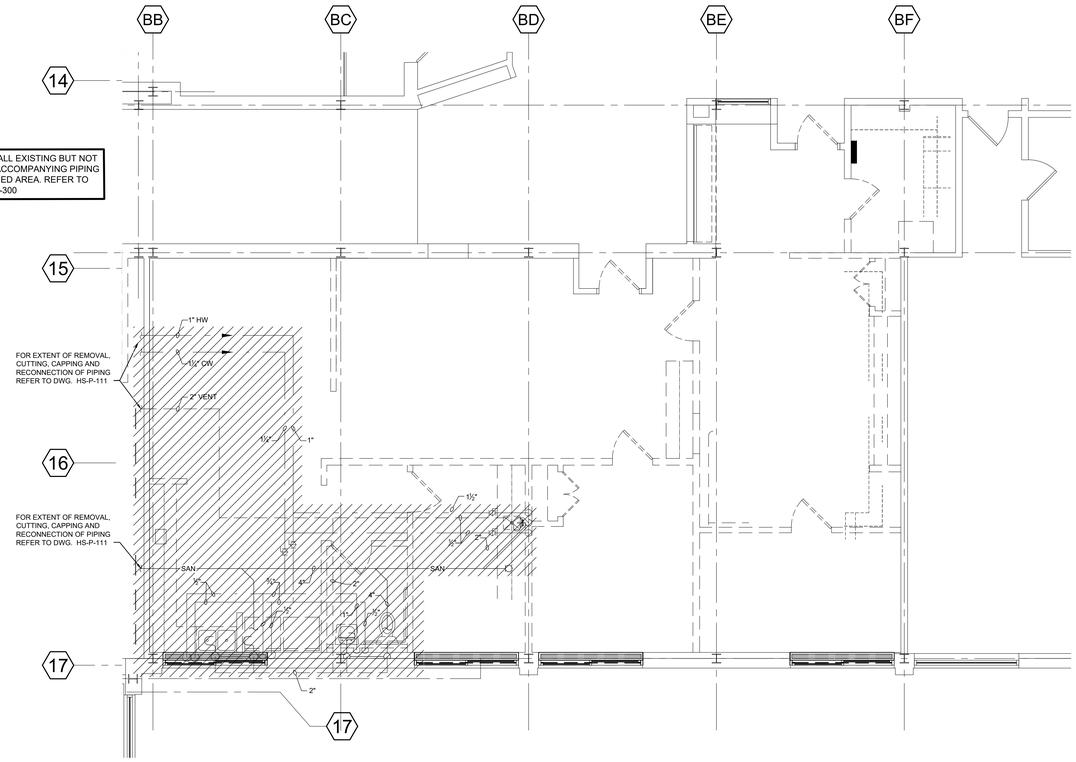
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR TOILET ROOM PLUMBING PLANS

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
A.J.L.	HS / P-110
DATE: 12-01-2025	

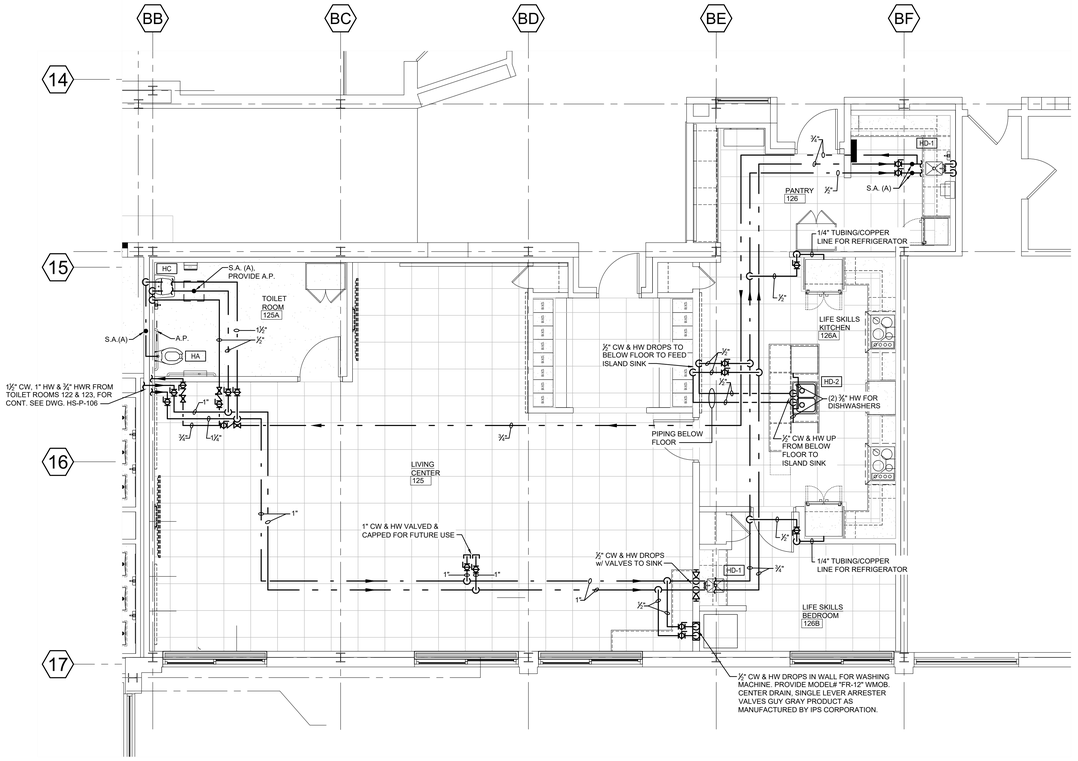
DWG DATE: 08/7/2025

UNLESS OTHERWISE NOTED, REMOVE ALL EXISTING BUT NOT LIMITED TO PLUMBING FIXTURES AND ACCOMPANYING PIPING IN LIVING CENTER AS SHOWN IN HATCHED AREA. REFER TO DEMOLITION NOTES ON DRAWING HS-P-300



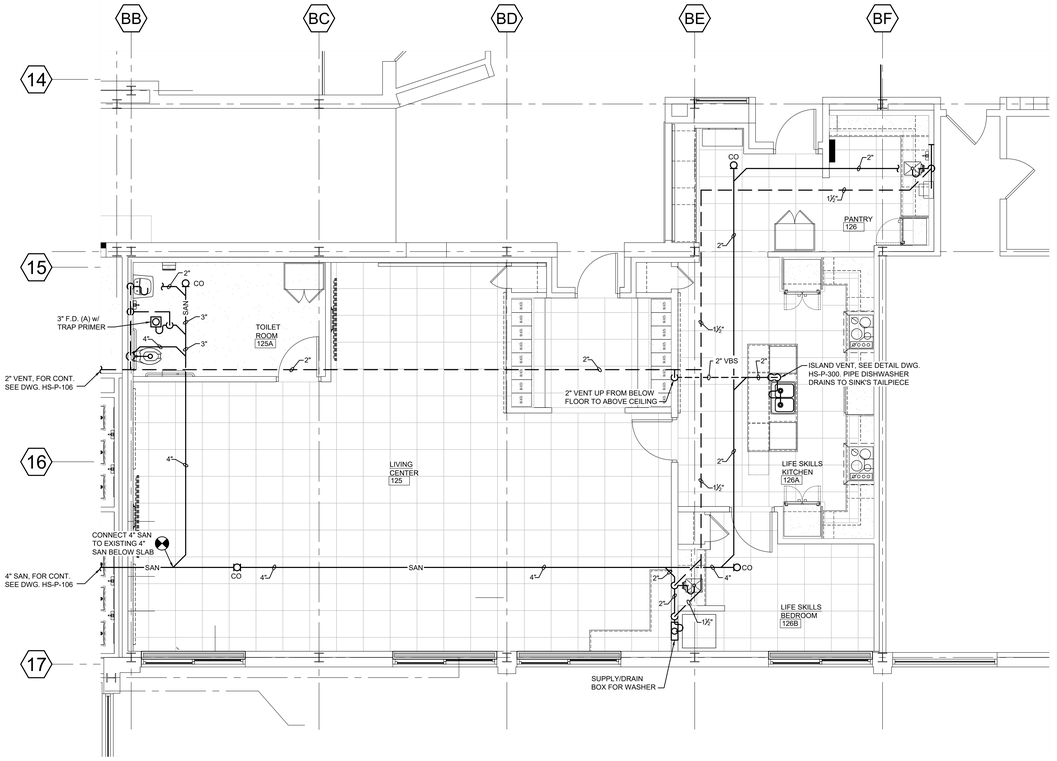
PARTIAL FIRST FLOOR LIVING CENTER - PLUMBING DEMOLITION

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



PARTIAL FIRST FLOOR LIVING CENTER - PLUMBING RENOVATION - WATER PIPING

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



PARTIAL FIRST FLOOR LIVING CENTER - PLUMBING RENOVATION - SANITARY PIPING

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

REVISIONS

Issued for Bidding
December 1, 2025

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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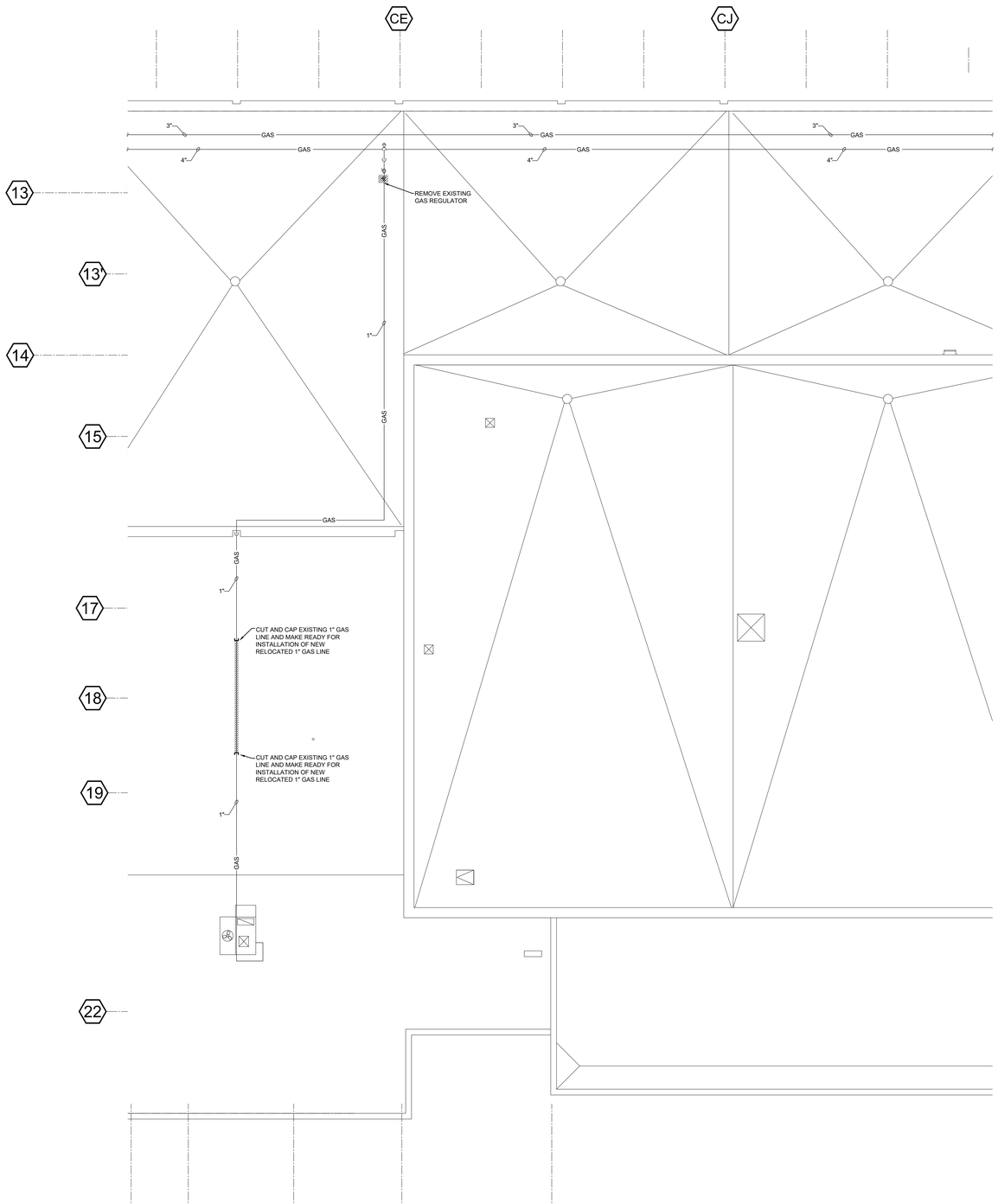
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL FIRST FLOOR LIVING CENTER PLUMBING PLANS

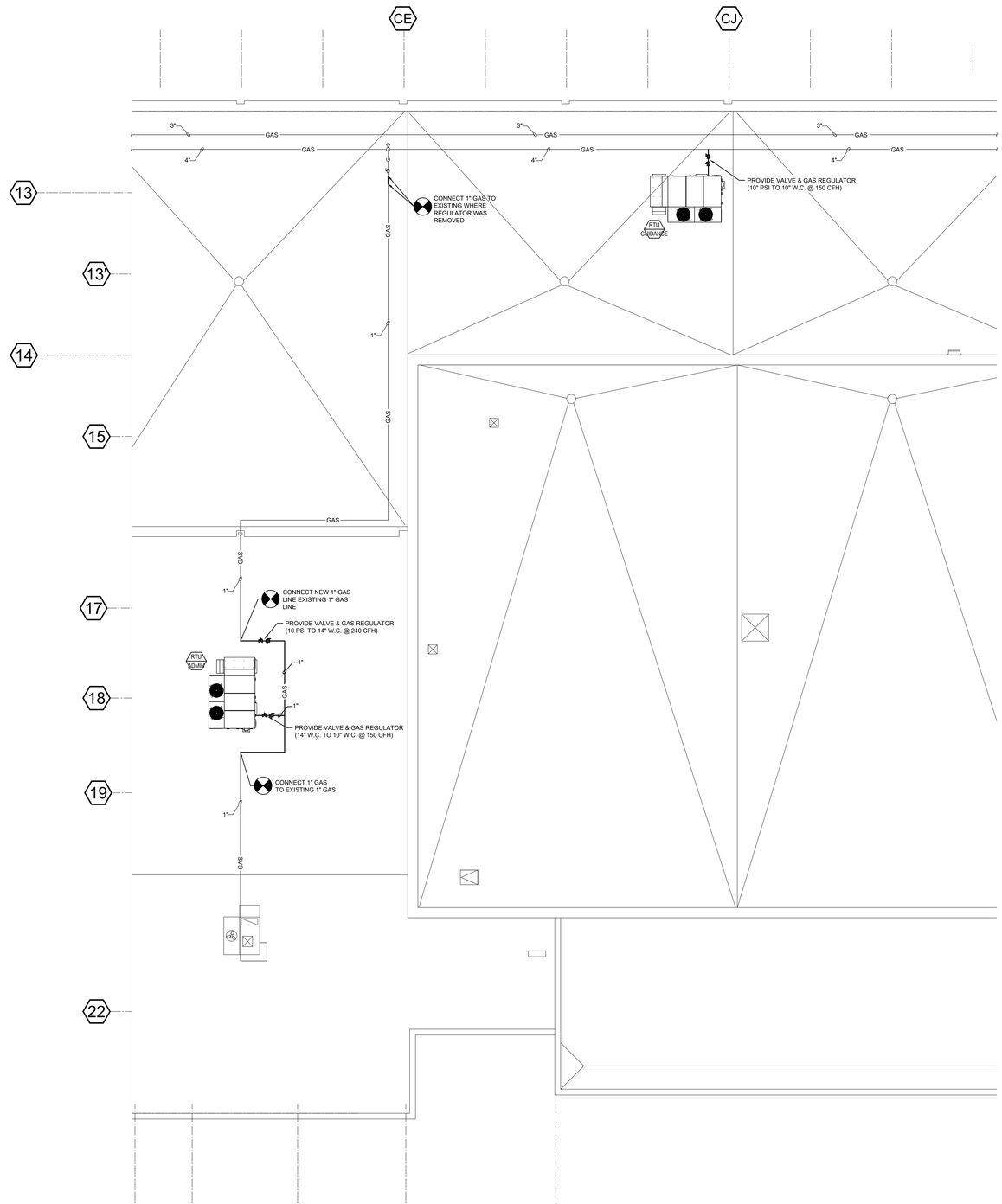
DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING: / DRAWING NO.:
A.J.L.	HS / P-111
DATE: 12-01-2025	

DRAFTING VERSION
FILE DATE: 08/7/2026



PARTIAL ROOF PLAN GUIDANCE/ADMIN - PLUMBING DEMOLITION

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

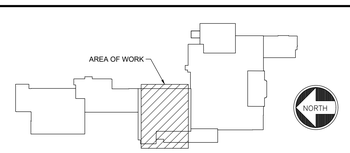


PARTIAL ROOF PLAN GUIDANCE/ADMIN - PLUMBING RENOVATION

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

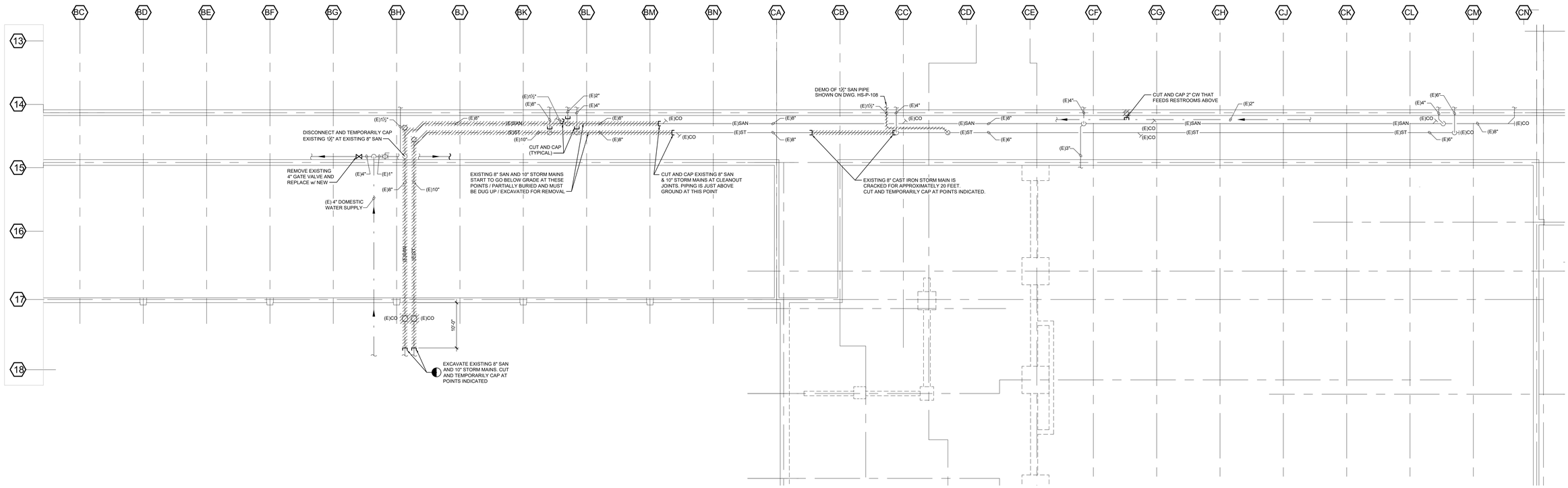
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

PARTIAL ROOF PLAN GUIDANCE AND ADMIN PLUMBING RENOVATION

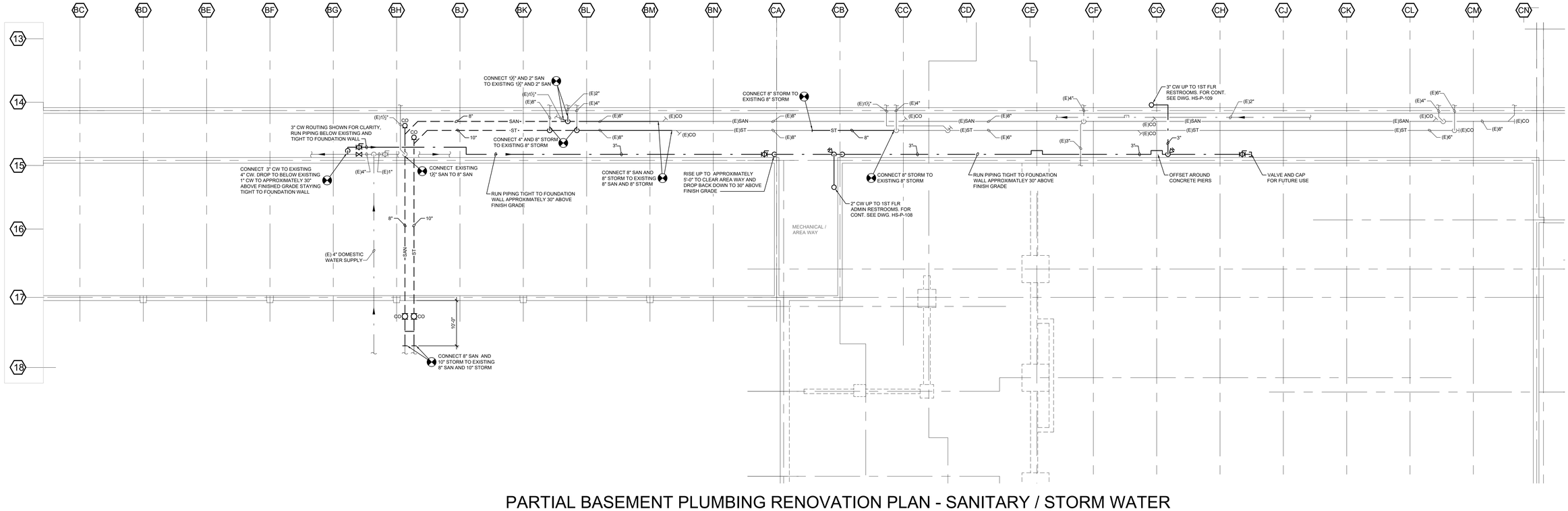
DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING: / DRAWING NO.:
A.J.L.	HS / P-112
DATE: 12-01-2025	

DWG FILE:
PLOT DATE:



PARTIAL BASEMENT PLUMBING DEMOLITION PLAN - SANITARY / STORM WATER MAIN REPLACEMENT AND WATER SUPPLY TIE-IN

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

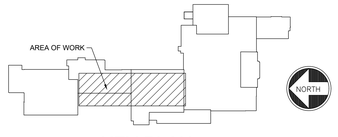


PARTIAL BASEMENT PLUMBING RENOVATION PLAN - SANITARY / STORM WATER MAIN REPLACEMENT AND DOMESTIC WATER SUPPLY TIE-IN

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
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BSN SED #3-15-02-06-4-015-006
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New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL BASEMENT SAN / STORM REPLACEMENT AND WATER TIE-IN

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
AJL	HS / P-200
DATE: 12-01-2025	

CAD FILE: P-200.DWG
PLOT DATE: 11/20/2025

DEMOLITION NOTES:

1. //////// INDICATES EXISTING PLUMBING FIXTURES, ROOF, OVERFLOW, FLOOR DRAINS AND/OR EQUIPMENT, PIPING ETC. TO BE REMOVED UNLESS OTHERWISE NOTED, INCLUDE ALL PIPING, VALVES AND ROUGHING (CARRIERS IF REQUIRED),CUT AND CAP LINES AT MAIN, IN WALLS, BELOW FLOORS AND/OR ABOVE CEILING AS REQUIRED AND OUT OF WAY OF NEW CONSTRUCTION.
2. BEFORE STARTING DEMOLITION OPERATIONS, PROVIDE THE NECESSARY PROTECTIVE DEVICES WHERE REQUIRED, AND IN STRICT ACCORDANCE WITH OSHA RULES AND REGULATIONS.
3. REPAIR AND/OR REPLACE EXISTING ITEMS WHICH BECOME DAMAGED DURING THE PROGRESS OF THE WORK. MAKE REPAIRS, REPLACEMENTS AND MODIFICATIONS TO RESTORE THE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION AT THE TIME OF DAMAGE, TO THE SATISFACTION OF AND AT NO ADDITIONAL COST TO THE OWNER.
4. PATCH AND REPAIR ALL SURFACES DISTURBED, CUT OR DAMAGED BY ALTERATIONS OR DEMOLITION WORK AND AS NECESSARY TO PREPARE SURFACES FOR NEW MATERIALS AND ARRANGEMENTS.
5. INFORMATION PERTAINING TO EXISTING STRUCTURES, FACILITIES, AND UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS PROVIDED BY FACILITIES DEPARTMENT OR WHEN POSSIBLE BY SURVEY. THEREFORE THE LOCATIONS SHOWN ARE CONSIDERED APPROXIMATE. FIELD VERIFICATION MUST BE DONE AND OTHER SUCH WORK MAY EXIST, DUE TO LOCATION, SIZE, ETC., NOT PRESENTLY KNOWN.
6. PRIOR TO THE DEMOLITION OF THOSE ITEMS WHICH HAVE UTILITY CONNECTIONS (ELECTRICITY, ETC) THE CONTRACTOR SHALL ARRANGE WITH THE OWNER TO LOCATE PANEL BOXES AND OTHER CONTROL ELEMENTS SO THAT DAMAGE AND OTHER POTENTIALLY INCONVENIENT OR DANGEROUS SITUATIONS ARE AVOIDED.
7. ALL ACTIVE PIPING, THAT CONTINUES TO OTHER AREAS NOT IN SCOPE OF WORK ARE TO REMAIN ACTIVE & IN PLACE, IF REQUIRED RELOCATE EXISTING VALVE, RUN NEW SUPPLY LINES IN NEW WALLS, ABOVE CEILINGS, BELOW FLOOR OR IN COLUMN CHASES.
8. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL WORK WITH THE OWNER DURING THE DEMOLITION AND PHASING PROCESS OF CONSTRUCTION. IF DEMOLITION OF PARTICULAR ITEMS WILL AFFECT THE OPERATION OF OTHERS PARTS OF THE FACILITY OUTSIDE THE CONSTRUCTION PHASE, TEMPORARY PROVISIONS SHALL BE MADE TO KEEP THOSE AREAS UP AND RUNNING.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS PRICING ADDITIONAL DEMO THAT IS NOT SHOWN ON THESE DRAWINGS DUE TO UNFORESEEN CIRCUMSTANCES.

PLUMBING GENERAL NOTES:

1. ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH 2020 PLUMBING CODE OF NEW YORK STATE WITH INTERNATIONAL PLUMBING CODE 2018 WITH AMENDMENTS. THE 2020 BUILDING CODE OF NEW YORK STATE WITH INTERNATIONAL BUILDING CODE 2018 WITH AMENDMENTS, OSHA, THE OWNER'S INSURANCE UNDERWRITERS REQUIREMENTS AND ALL LOCAL CODES AND REGULATIONS.
2. ALL PLUMBING PIPING SHALL BE RUN TIGHT TO STEEL TRUSSES AND RACKED ALONG STEEL AND WALLS WITH A STANDARD PIPE HANGING / RACKING SYSTEM. PIPING SHALL BE RUN CLEAR OF ALL DOORS AND WINDOWS. COORDNATE LOCATIONS WITH OTHER TRADES. WHERE PIPING IS RUNNING PARALELL AND IN THE SAME VERTICAL PLANE AS ELECTRICAL CABLE TRAYS OR OTHER MAIN ELECTRICAL SYSTEMS, RUN PIPNG ON THE BOTTOM.
3. ALL SYSTEM SHUT-DOWNS AND DISRUPTIONS IN SERVICE SHALL BE COORDINATED WITH THE OWNER & DONE AT THE OWNERS CONVENIENCE.
4. ALL SANITARY, VENT AND STORMWATER DRAIN PIPING SHALL SLOPE AT A MINIMUM OF 1/8" PER FOOT UNLESS OTHERWISE NOTED. 2½" AND SMALLER SHALL BE PITCHED ¼" PER FOOT.
5. ALL RAINWATER CONDUCTORS AND SANITARY STACKS SHALL BE PROVIDED WITH CLEANOUTS AT THE STACK BASE UNLESS OTHERWISE NOTED. COORDINATE WITH GENERAL CONTRACTOR.
6. PROVIDE ALLOWANCE FOR OFFSETS WHERE SANITARY, STORM AND VENT RISERS INTERFERE WITH BUILDING STEEL.
7. PROVIDE ALLOWANCE FOR ALL PLUMBING PIPING FOR ADDITIONAL OFFSETS TO AVOID INTERFERENCES WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL EQUIPMENT AND SYSTEMS.
8. THESE DRAWINGS ARE DIAGRAMMATIC. PLUMBING CONTRACTOR SHALL COORDINATE ACTUAL LOCATIONS OF PIPING AND EQUIPMENT UNLESS DIMENSIONS ARE SPECIFICALLY CALLED OUT.
9. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE ACTUAL ROUTING OF HIS PIPING WITH THE ARCHITECTURAL CEILINGS, HVAC PIPING, DUCTWORK AND EQUIPMENT, ELECTRICAL LIGHTING, CONDUIT AND EQUIPMENT, AND FIRE PROTECTION PIPING AND VALVES.
10. THE PLUMBING CONTRACTOR IS RESPONSIBILE FOR ALL PENETRATIONS THRU FLOOR OR ROOF. VERIFY WITH ALL TRADES, EXISTING STRUCTURAL MEMBERS, AND WALLS ABOVE AND BELOW. ADJUST PENETRATIONS TO ELIMINATE INTERFERENCES AND TO ENSURE PROPER INSTALLATION.
11. COORDINATE WITH STRUCTURAL STEEL FABRICATOR/INSTALLER ALL FRAMED OPENINGS IN ROOF WITH SUCH AS, BUT NOT LIMITED TO, ROOF DRAINS, VENT STACKS, EXHAUST FANS ETC.
12. EXACT SIZES AND EXACT LOCATIONS OF ALL OPENINGS ARE TO BE VERIFIED WITH THE APPROVED SHOP DRAWINGS ISSUED FOR THE INSTALLATION. THE EXACT SIZES SHALL BE COORDINATED PRIOR TO ANY FABRICATION AND INSTALLATION BY ANY/ALL TRADES. (SIZES AND LOCATIONS INDICATED ON CONTRACT ARE DRAWINGS ARE DIAGRAMMATIC AND FOR INFORMATION ONLY.
13. ALL PIPE PENETRATION SEALING ON THE INTERIOR OF THE BUILDING SHALL BE FURNISHED AND INSTALLED AS PER PROJECT SPECIFICATIONS. ALL PIPE PENETRATIONS SHALL BE FURNISHED AND INSTALLED AS AN APPROVED UL ASSEMBLY.
14. IT SHALL BE THIS CONTRACTORS RESPONSIBILITY TO PATCH AND FIRE STOP ANY OPENING LEFT DURING THE REMOVAL OF ANY PIPING OR EQUIPMENT, BY HIM, DURING THE DEMOLITION PHASE OF THE PROJECT.
15. FOR PROPER TRENCHING, BEDDING AND BACKFILL REQUIREMENTS, THIS CONTRACTOR SHALL REFER TO STRUCTURAL CONTRACT DOCUMENTS AND CIVIL CONTRACT DOCUMENTS. THIS CONTRACTOR SHALL FURNISH AND INSTALL THIS WORK IN ACCORDANCE WITH THE ABOVE REFERENCED DOCUMENTS.
16. ALL PLUMBING FIXTURES, PIPING, VALVES ETC. USED FOR POTABLE WATER (DRINKING AND COOKING) SHALL COMPLY WITH "LEAD FREE" REQUIREMENTS AS PER NFS61/372.
17. PLUMBING CONTRACTOR SHALL TEST THE DOMESTIC WATER SYSTEM BOTH BEFORE AND AFTER PROVIDING PLUMBING FIXTURES, PIPING, VALVES ETC. AND SHALL BE IN COMPLIANCE WITH THE DEPARTMENT OF HEALTH LEAD IN WATER REGULATION (10 NYCRR 67-4). TEST RESULTS SHALL BE SUBMITTED TO SED PRIOR TO CUTTING INTO THE DOMESTIC WATER SYSTEM AND FINAL TEST RESULTS SHALL BE SUBMITTED ONCE ALL WORK IS COMPLETED.
18. ALL EXPOSED GAS PIPING SHALL BE PRIMED AND PAINTED YELLOW UNLESS OTHERWISE NOTED (REFER TO SPECIFICATIONS).

ALL PLUMBING FIXTURES, PIPING, VALVES ETC. USED FOR POTABLE WATER (DRINKING AND COOKING) SHALL COMPLY WITH "LEAD FREE" REQUIREMENTS AS PER NFS61/372.

PLUMBING CONTRACTOR SHALL TEST THE DOMESTIC WATER SYSTEM BOTH BEFORE AND AFTER PROVIDING PLUMBING FIXTURES, PIPING, VALVES ETC. AND SHALL BE IN COMPLIANCE WITH THE DEPARTMENT OF HEALTH LEAD IN WATER REGULATION (10 NYCRR 67-4). TEST RESULTS SHALL BE SUBMITTED TO SED PRIOR TO CUTTING INTO THE DOMESTIC WATER SYSTEM AND FINAL TEST RESULTS SHALL BE SUBMITTED ONCE ALL WORK IS COMPLETED.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
SAN	SOIL OR WASTE PIPE - SANITARY
P-SAN	PUMPED SOIL OR WASTE PIPE - SANITARY
	VENT PIPE
VBS	VBS - VENT BELOW SLAB
	COLD WATER SUPPLY
	HOT WATER SUPPLY
140°	140° HOT WATER SUPPLY
	HOT WATER RECIRC.
GAS	NATURAL GAS PIPING
	UNION
	GAS COCK
	GAS REGULATOR
	BALL VALVE
	BALL VALVE ON RISER
	CHECK VALVE
	FLOOR DRAIN
	CAPPED/ PLUGGED CONNECTION
CO	WALL CLEAN-OUT OR EXPOSED IN CEILING
CO	CLEAN-OUT (IN FLOOR)
OR	"P" TRAP
	SHOCK ABSORBER (S.A.)
	NEW CONNECTION
	CUT AND CAP PIPING TYP.
VTR	VENT THRU ROOF
(E)	EXISTING
OR	A.P. ACCESS PANEL / DOOR

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	DRAINAGE WASTE	DRAINAGE VENT	WATER CW	WATER HW	REMARKS
HA	WATER CLOSET	4"	2"	1½"	-----	FLOOR MOUNTED VITREOUS CHINA ADA COMPLIANT SENSOR OPERATED FLUSH VALVE AND MANUAL OVERRIDE
HB	URINAL (ADA COMPLIANT)	2"	1½"	¾"	-----	WALL HUNG - VITREOUS CHINA URINAL ADA COMPLIANT SENSOR OPERATED FLUSH VALVE AND MANUAL OVERRIDE
HC	LAVATORY (ADA COMPLIANT)	1½"	1½"	½"	½"	WALL HUNG - VITREOUS CHINA, SENSOR DECK-MOUNTED FAUCET
HC-1	LAVATORY (ADA COMPLIANT)	1½"	1½"	½"	½"	UNDERMOUNT - VITREOUS CHINA, SENSOR DECK-MOUNTED FAUCET
HD	SINK (S.S.)	1½"	1½"	½"	½"	22" x 19" x 6½" STAINLESS STEEL, DROP-IN / SELF-RIMMING SINK w/ ARC SPOUT AND 4" LEVER HANDLES (ADA COMPLIANT)
HD-1	SINK (S.S.)	1½"	1½"	½"	½"	13" x 16" x 6½" STAINLESS STEEL, DROP-IN / SELF-RIMMING SINK w/ ARC SPOUT AND 4" LEVER HANDLES (ADA COMPLIANT)
HD-2	SINK (S.S.) DOUBLE BOWL	1½"	1½"	½"	½"	29" x 22" x 6½" STAINLESS STEEL, DROP-IN / SELF-RIMMING SINK w/ L-TYPE SWING SPOUT, COLOR CODED HANDLES WITH SIDE SPRAY (ADA COMPLIANT)
HF	MOP RECEPTOR	3"	1½"	½"	½"	ONE PIECE CORNER 24" x 24" x 10" MOLDED STONE BASE w/ SERVICE FAUCET
HG	ADA SHOWER HEAD & VALVE ASSEMBLY, ENCLOSURE	2"	1½"	½"	½"	SHOWER ENCLOSURE / TRIM - ADA COMPLIANT, THERMOSTATIC VALVE WITH DELUXE METAL SHOWER HEAD, LEVER HANDLE AND HAND HELD SHOWER HEAD
HG-1	SHOWER	1½"	1½"	¾"	¾"	SHOWER TRIM, THERMOSTATIC VALVE w/ DELUXE METAL SHOWER HEAD, LEVER HANDLE
HG-2	SHOWER (ADA COMPLIANT)	1½"	1½"	¾"	¾"	SHOWER TRIM - ADA COMPLIANT, THERMOSTATIC VALVE w/ DELUXE METAL SHOWER HEAD, LEVER HANDLE AND HAND HELD SHOWER HEAD
HH	WATER COOLER / BOTTLE FILLER (ADA COMPLIANT)	1½"	1½"	½"	-----	WALL HUNG HANDS FREE - DUAL LEVEL WATER COOLER BARRIER-FREE WITH BOTTLE FILLER, ADA COMPLIANT
K8D	SINK (S.S.)	1½"	1½"	½"	½"	22" x 19" x 6½" STAINLESS STEEL, DROP-IN / SELF-RIMMING SINK w/ ARC SPOUT AND 4" LEVER HANDLES (ADA COMPLIANT)

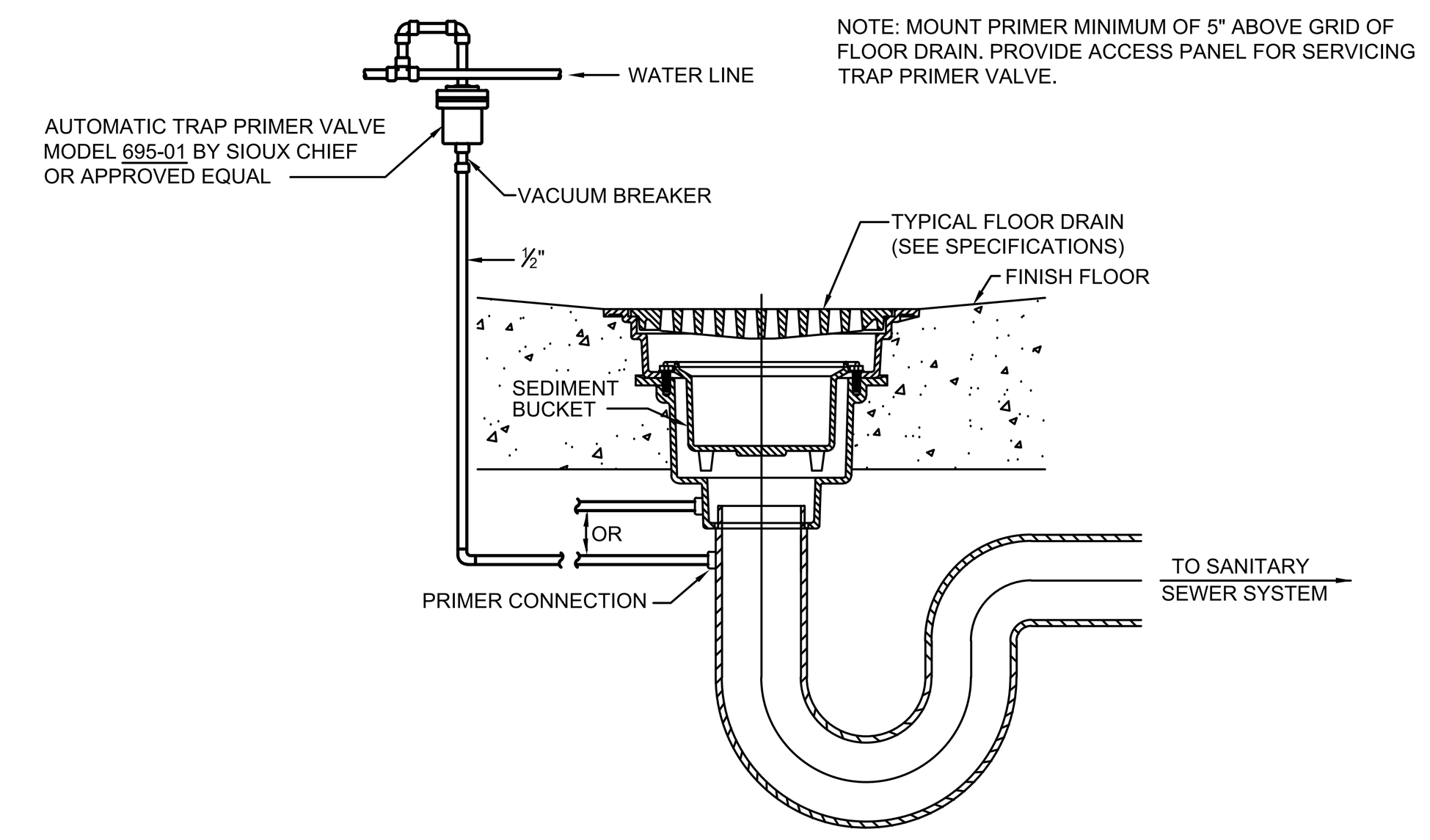
NOTES:

LAVATORIES / SINKS SHALL BE PROVIDED WITH WATER TEMPERATURE LIMITING DEVICES THAT WILL LIMIT THE WATER DISCHARGE TO A TEMPERATURE NO HIGHER THAN 110°F COMPLYING WITH ASSE 1070 (NSPC 2018, CHAPTER 10, SECTION 10.15.6). DEVICE SHALL BE MODEL LFUSG BY WATTS OR APPROVED EQUAL.

PROVIDE SUPPLY VALVES AT EACH FIXTURE.

SIZING CHART FOR SHOCK ABSORBERS (S.A.)

P.D.I. SYMBOLS	A	B	C	D	E	F
FIXTURE UNIT RATING	1 - 11	12 - 32	33 - 60	61 - 113	114 - 154	155 - 330



TRAP PRIMER DISTRIBUTOR SCHEDULE

MODEL No	DESCRIPTION	MANUFACTURE	REMARKS
695-Y52	WYE SPLITTER (2) 1/2" MIP BRANCHES	SIOUX CHIEF CO.	USE w/ TRAP PRIMER DISTRIBUTORS TO SERVICE UP TO 8 TRAPS FROM A SINGLE TRAP PRIMER
695-D20	DISTRIBUTOR (2) 1/4" MALE SWEAT BRANCHES	SIOUX CHIEF CO.	
695-D30	DISTRIBUTOR (3) 1/4" MALE SWEAT BRANCHES	SIOUX CHIEF CO.	
695-D40	DISTRIBUTOR (4) 1/4" MALE SWEAT CONNECTIONS	SIOUX CHIEF CO.	

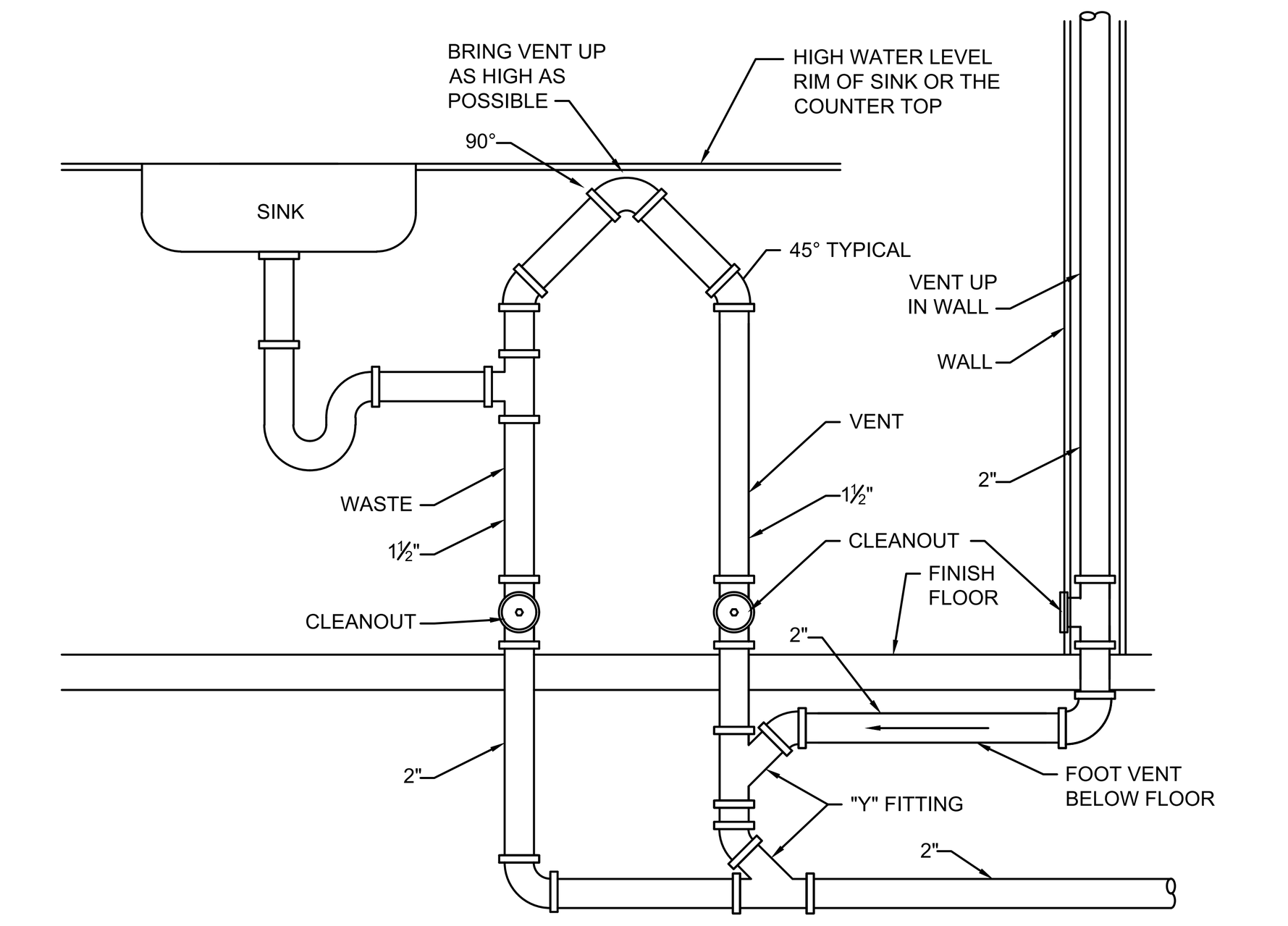
FLOOR DRAIN, PIPE & TRAP PRIMER CONNECTION DETAIL

NOT TO SCALE

TRAPS FOR ISLAND SINKS AND SIMILAR EQUIPMENT SHALL BE ROUGHED IN ABOVE THE FLOOR AND MAY BE COUNTER TOP VENTED BY EXTENDING THE VENT AS HIGH AS POSSIBLE, BUT NOT LESS THAN DRAIN BOARD HEIGHT. THE VENT IS THEN RETURNED DOWNWARD AND CONNECTED TO THE HORIZONTAL SINK DRAIN IMMEDIATELY DOWNSTREAM FROM THE VERTICAL FIXTURE DRAIN. THE DRAWING BELOW ILLUSTRATES THE CONSTRUCTION OF THE COMPLETED ISLAND VENTING SYSTEM.

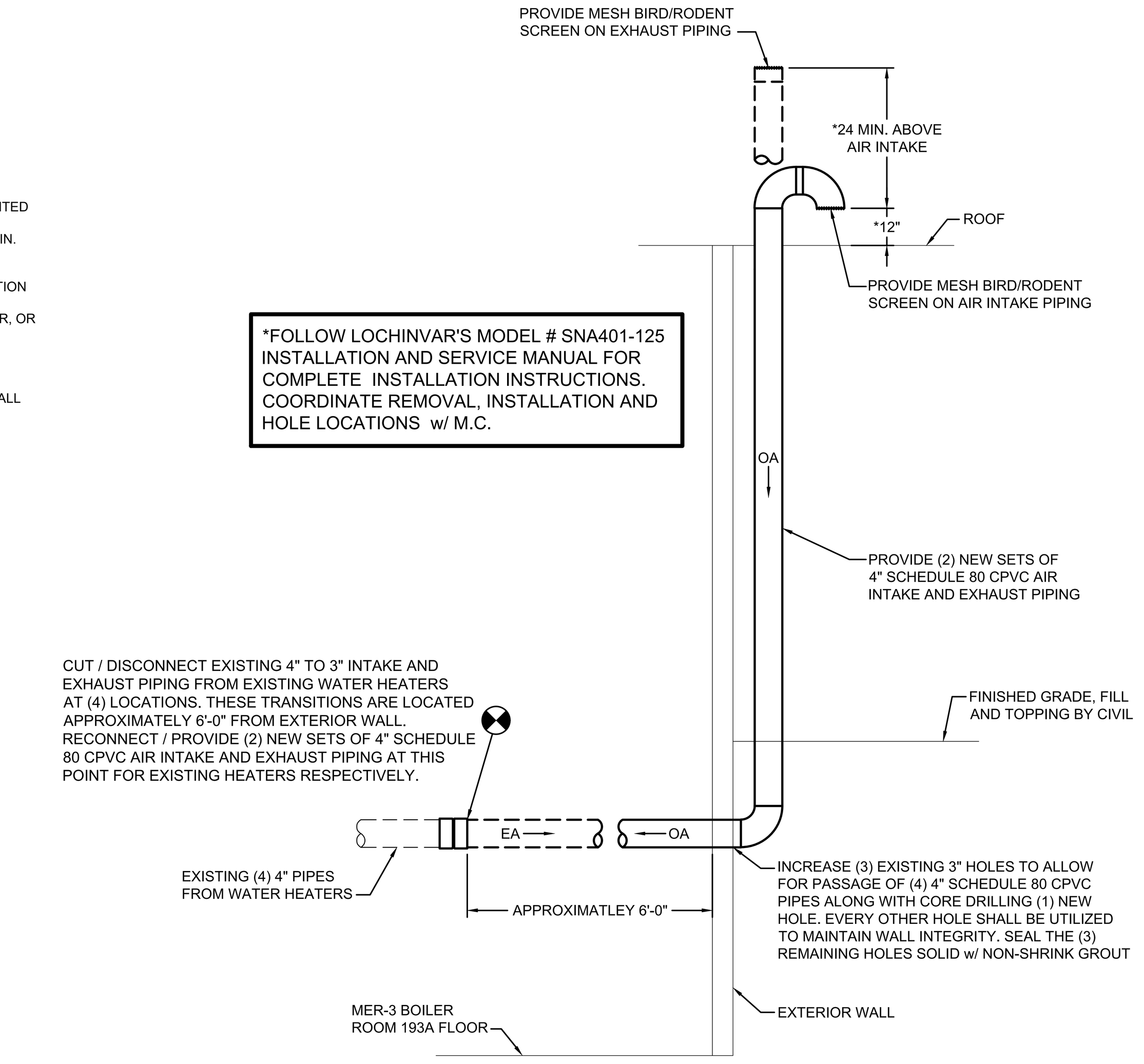
THE RETURNED VENT SHALL BE CONNECTED TO THE HORIZONTAL DRAIN THROUGH A WYE BRANCH FITTING AND SHALL IN ADDITION BE PROVIDED WITH A FOOT VENT TAKEN OFF THE VERTICAL FIXTURE VENT BY MEANS OF A WYE BRANCH FITTING IMMEDIATELY BELOW THE FLOOR. THIS FOOT VENT EXTENDS TO THE NEAREST PARTITION AND THENCE THROUGH THE ROOF TO THE OPEN AIR, OR MAY BE CONNECTED TO OTHER VENTS AT A POINT NOT LESS THAN (6) INCHED (152.4mm) ABOVE THE FLOOD LEVEL RIM OF THE FIXTURE SERVED.

DRAINAGE FIITINGS SHALL BE USED ON ALL PARTS OF THE VENT BELOW THE FLOOR LINE. THE FLOOR VENT SHALL MAINTAIN A MINIMUM SLOPE OF ONE-QUARTER INCH PER FOOT BACK TO THE DRAIN. THE RETURN BEND USED UNDER THE DRAINBOARD SHALL BE A ONE PIECE FITTING, OR AN ASSEMBLY OF A 45 DEGREE (0.79 radius), A 90 DEGREE (1.6 radius), AND A 45 DEGREE (0.79 radius) ELBOW IN THE ORDER NAMED, PIPE SIZING SHALL BE AS ELSEWHERE REQUIRD IN THE CODE. THE FIGURE BELOW SHOWS THE MINIMUM PIPE SIZES REQUIRED.



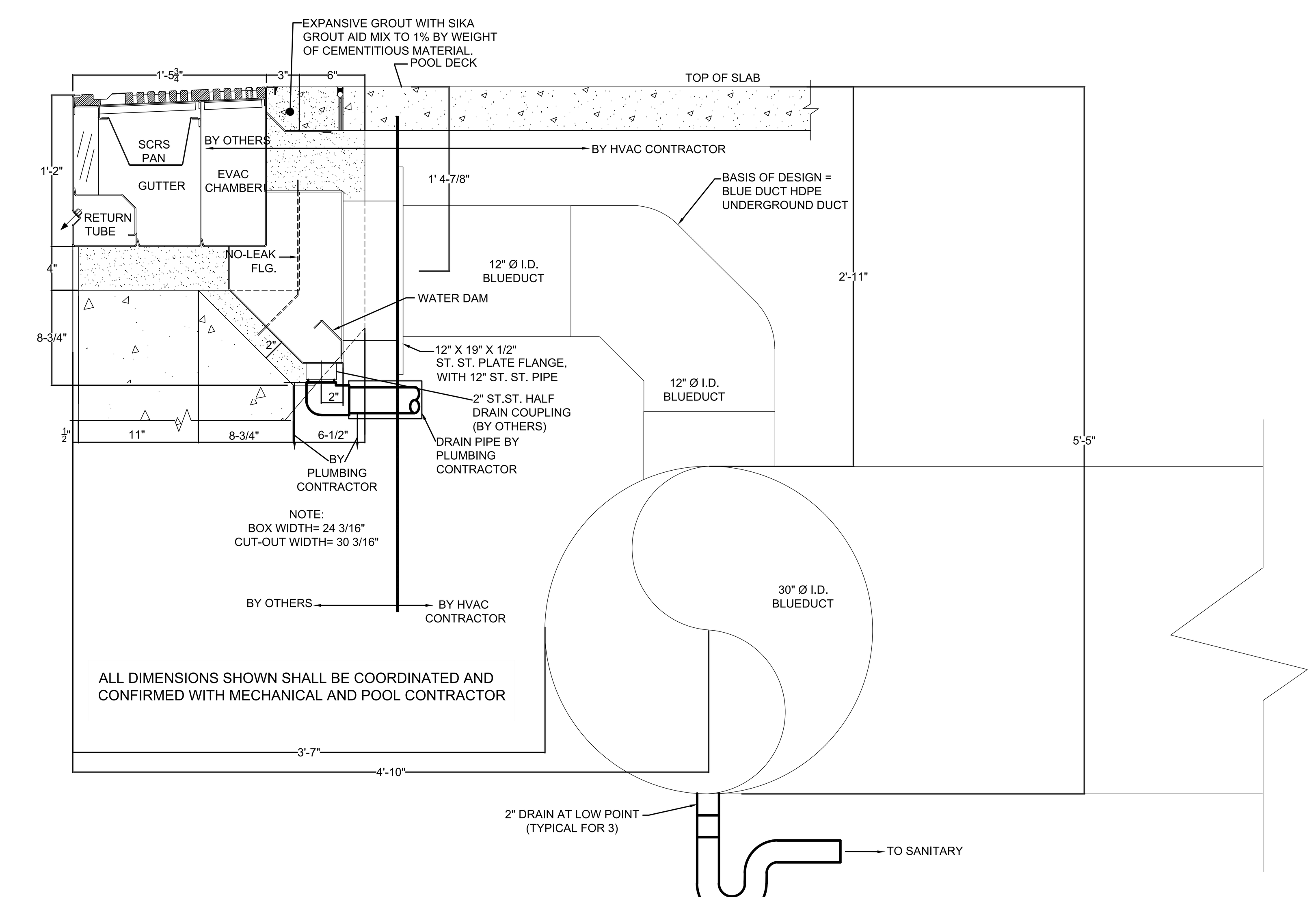
VENTING FOR ISLAND FIXTURES

NOT TO SCALE



EXISTING WATER HEATER INTAKE / EXHAUST PIPING REPLACEMENT DETAIL

NOT TO SCALE

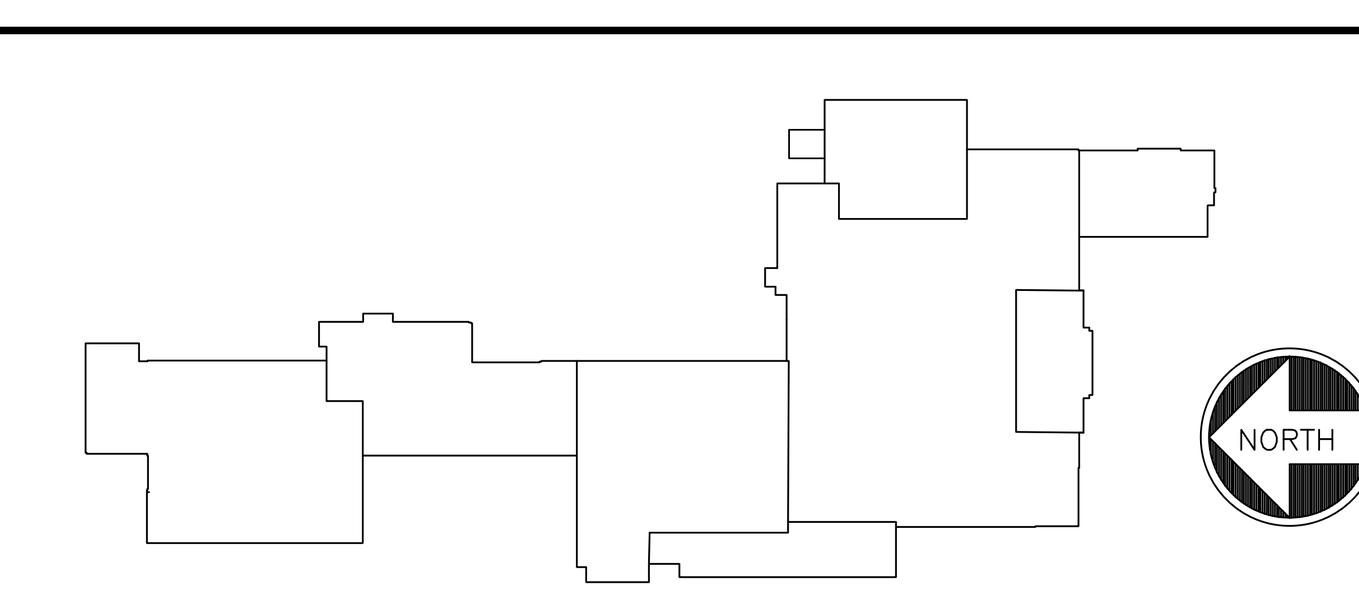


EVACUATOR CONVERTER SECTION AND BLUE DUCT DRAIN DETAIL

N.T.S.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
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K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
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New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PLUMBING
DETAILS & SCHEDULES

DRAWN BY: CP
PROJECT NO.: 2024-239P
CHECKED BY: A.J.L.
DATE: 12-01-2025
BUILDING: HS
DRAWING NO.: P-300

CAD FILE: 4239-HS-P-300.DWG
PLOT DATE: 11/25/2025

WATER HEATER SCHEDULE

TAG	MFGR / MODEL	INPUT GAS (CFH)	INPUT ELECTRICAL MIN. kW	INPUT ELECTRICAL MAX. kW	INPUT ELECTRICAL FLA	INPUT ELECTRICAL VOLTAGE	COLD WATER INLET	HOT WATER OUTLET	STORAGE CAPACITY (GAL / GPM)	REMARKS
WH 1	EeMAX SINGLE POINT ELECTRIC TANKLESS MODEL SP4208	-	4.1	4.1	-	208 / 1ϕ	½"	½"	0.5	56°F RISE AT 0.5 GPM. WALL MOUNTED NEXT TO FIXTURE
WH 2	BRADFORD WHITE ELECTRIFLEX LD LOW BOY MODEL LE250LN3-3	-	4.0	6.0	-	208 / 3ϕ	¾"	¾"	47	18 GPH RECOVERY AT 100°F LOCATED IN KITCHEN
WH 3	RHEEM MODEL GHE80SS-200(A) TRITON	199.9	120V CONTROL CIRCUITS				2"	2"	80	230 GPH RECOVERY AT 100°F, w/ AUTO SHUT-OFF VALVE AND BUILT-IN CONDENSATE NEUTRALIZER. LOCATED IN UNOCCUPIED SPACE P106

EXPANSION TANK SCHEDULE

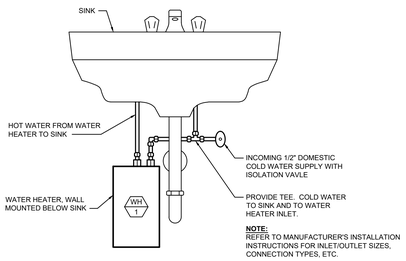
TAG	MANUFACTURER	TOTAL VOLUME (GAL)	MAXIMUM ACCEPTANCE (GAL)	DIMENSIONS	MODEL	SYSTEM CONNECTION	REMARKS
EX 1	AMTROL THERM-X-TROL	2.1	0.9	10" D x 10"H	ST-5C	3/4"	LOCATED IN KITCHEN FOR DISHWASHING SYSTEM
EX 2	AMTROL THERM-X-TROL	6.4	3.2	12" D x 14"H	ST-12C	3/4"	LOCATED IN UNOCCUPIED SPACE P106 FOR DIVER SHOWERS AND TOILET ROOMS P207 & P208

SIZING CHART FOR SHOCK ABSORBERS (S.A.)

P.D.I. SYMBOLS	A	B	C	D	E	F
FIXTURE UNIT RATING	1 - 11	12 - 32	33 - 60	61 - 113	114 - 154	155 - 330

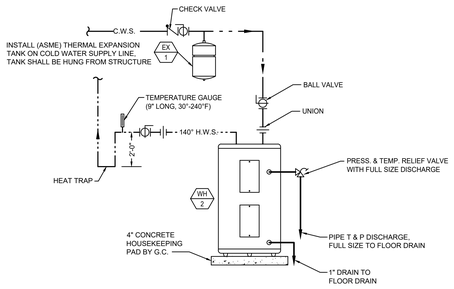
PUMP SCHEDULE

TAG	MANUFACTURER	MODEL	FLANGE SIZE	GPM	HEAD FT	HP	VOLTS/PHASE	REMARKS
CP 1	BELL & GOSSETT	PL-55B	3/4"	5	48	2/5	115V-1P	CIRCULATING PUMP FOR HWR. LEAD FREE - BRONZE. LOCATED IN UNOCCUPIED SPACE P106
SP 1	HCP PUMPS AMERICA SF-U SERIES	505A2.8A	2"	45	33	1	460V-3P	SUBMERSIBLE DUPLEX PUMP STATION LOCATED IN POOL EQUIP ROOM P101



POINT OF USE INSTANTANEOUS WATER HEATER DETAIL

NOT TO SCALE

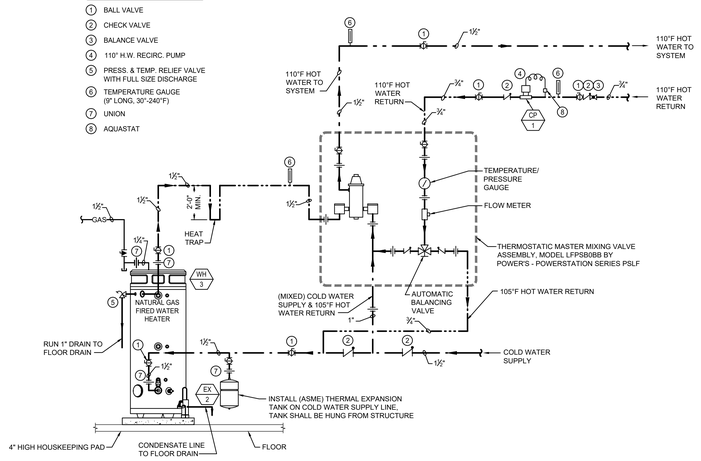


WATER HEATER DETAIL FOR KITCHEN DISHWASHING SYSTEM

NOT TO SCALE

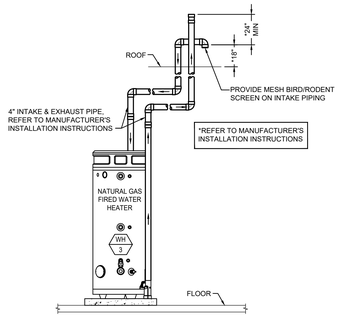
REFERENCE NOTES

1. BALL VALVE
2. CHECK VALVE
3. BALANCE VALVE
4. 110° H.W. RECIRC. PUMP
5. PRESS. & TEMP. RELIEF VALVE WITH FULL SIZE DISCHARGE
6. TEMPERATURE GAUGE (9" LONG, 30°-240°F)
7. UNION
8. AQUASTAT



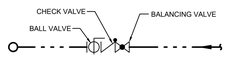
WATER HEATER DETAIL FOR DIVER SHOWERS AND TOILET ROOMS P207 & P208

NOT TO SCALE



VENT AND COMBUSTION AIR INLET VERTICAL TERMINATION DETAIL

NOT TO SCALE



NOTES:
1. TYPICAL FOR ALL LOCATIONS.
2. ASSEMBLY MUST BE INSTALLED AS DETAILED ABOVE.

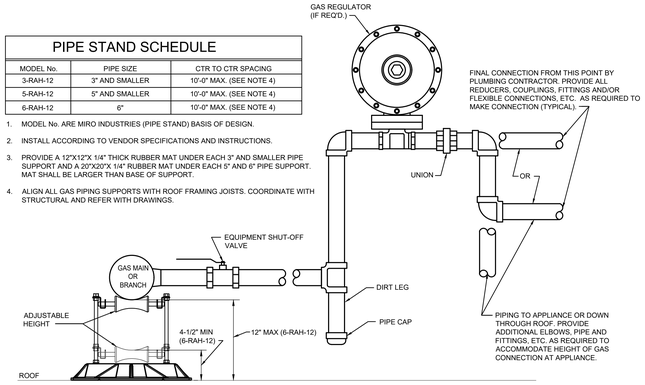
HOT WATER RETURN VALVING SCHEMATIC

NOT TO SCALE

PIPE STAND SCHEDULE

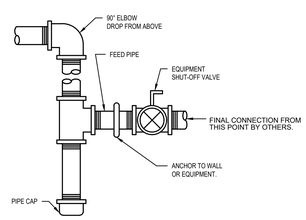
MODEL No.	PIPE SIZE	CTR TO CTR SPACING
3-RAH-12	3" AND SMALLER	10'-0" MAX. (SEE NOTE 4)
5-RAH-12	5" AND SMALLER	10'-0" MAX. (SEE NOTE 4)
6-RAH-12	6"	10'-0" MAX. (SEE NOTE 4)

1. MODEL No. ARE MIRO INDUSTRIES (PIPE STAND) BASIS OF DESIGN.
2. INSTALL ACCORDING TO VENDOR SPECIFICATIONS AND INSTRUCTIONS.
3. PROVIDE A 12"X12"X 1/4" THICK RUBBER MAT UNDER EACH 3" AND SMALLER PIPE SUPPORT AND A 20"X20"X 1/4" RUBBER MAT UNDER EACH 5" AND 6" PIPE SUPPORT. MAT SHALL BE LARGER THAN BASE OF SUPPORT.
4. ALIGN ALL GAS PIPING SUPPORTS WITH ROOF FRAMING JOISTS. COORDINATE WITH STRUCTURAL AND REFER WITH DRAWINGS.



TYPICAL NATURAL GAS DROP FOR ROOFTOP EQUIPMENT CONNECTIONS

NOT TO SCALE



TYPICAL NATURAL GAS DROP FOR EQUIPMENT OTHER THAN ROOFTOP CONNECTIONS

NOT TO SCALE

NATURAL GAS LOADS ROOM 193A & SPACE P106

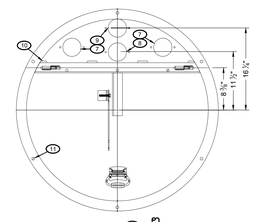
TAG	QTY	DESCRIPTION	TYPE	GAS PRESSURE	INPUT MBH	REMARKS
B 1	1	BOILER	NAT. GAS	7"-14" WC	500	EXISTING TO BE REMOVED - LOCATED IN BOILER ROOM 193A
B 2	1	BOILER	NAT. GAS	7"-14" WC	500	EXISTING TO BE REMOVED - LOCATED IN BOILER ROOM 193A
B 3	1	BOILER	NAT. GAS	7"-14" WC	500	EXISTING TO BE REMOVED - LOCATED IN BOILER ROOM 193A
B 1-3	1	BOILER	NAT. GAS	7"-14" WC	1250	EXISTING TO BE REMOVED - LOCATED IN BOILER ROOM 172
WH 3-1 / WH 3-2	2	WATER HEATER	NAT. GAS	3.5"-10.5" WC	399.9 EACH 799.8 TOTAL	EXISTING TO REMAIN - LOCATED IN BOILER ROOM 193A
TOTAL EXISTING GAS LOAD IN BOILER ROOM 193A					3,549.8	
B 1	1	BOILER	NAT. GAS	4"-14" WC	500	NEW - LOCATED IN BOILER ROOM 193A
B 2	1	BOILER	NAT. GAS	4"-14" WC	500	NEW - LOCATED IN BOILER ROOM 193A
B 3	1	BOILER	NAT. GAS	4"-14" WC	500	NEW - LOCATED IN BOILER ROOM 193A
B 4	1	BOILER	NAT. GAS	4"-14" WC	500	NEW - LOCATED IN BOILER ROOM 193A
B 1-3	1	BOILER	NAT. GAS	4"-14" WC	1250	NEW - LOCATED IN BOILER ROOM 172
WH 3-1 / WH 3-2	2	WATER HEATER	NAT. GAS	3.5"-10.5" WC	399.9 EACH 799.8 TOTAL	EXISTING TO REMAIN - LOCATED IN BOILER ROOM 193A
WH 3	1	WATER HEATER	NAT. GAS	3.5"-10.5" WC	199.9	NEW - LOCATED IN UNOCCUPIED SPACE P106
TOTAL NEW GAS LOAD IN BOILER ROOM 193A & UNOCCUPIED SPACE P106					5249.7	

NEW EQUIPMENT (ROOF) NATURAL GAS LOADS

TAG	QTY	DESCRIPTION	TYPE	GAS PRESSURE	INPUT MBH	REMARKS
RTU ADM	1	ROOFTOP UNIT	NAT. GAS	7"-14" WC	150	NEW - LOCATED ON ROOF ABOVE ADMINISTRATION AREA
RTU GUID	1	ROOFTOP UNIT	NAT. GAS	7"-14" WC	150	NEW - LOCATED ON ROOF ABOVE GUIDANCE AREA
POU 1	1	DEHUMIDIFIER	NAT. GAS	5"-14" WC	1200	NEW - LOCATED ON ROOF ABOVE POOL
		TOTAL NEW GAS LOAD			1500	

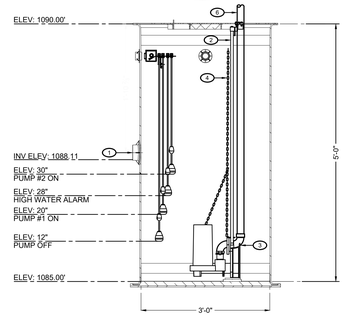
NOTES:

1. ALL REGULATORS SHALL BE FACTORY EQUIPPED WITH INTERNAL RELIEF FOR OVERPRESSURE PROTECTION AND SHALL COME WITH STAINLESS STEEL BUG SCREEN. INSTALL WITH VENT POINTED DOWN TO PREVENT WATER AND DUST FROM ENTERING AND CLOGGING THE PORT.
2. PROVIDE ALL REDUCERS, COUPLINGS AND ADAPTORS REQUIRED FOR CHANGING PIPE SIZES TO VALVES, PRV'S AND EQUIPMENT INLETS/OUTLETS.
3. WHERE THE PIPING IS TO RUN HORIZONTAL AND LEVEL 12" ABOVE THE ROOF, PROVIDE MIRO MODEL 5-SB-H FOR HEIGHTS UP TO 18" AND/OR MODEL 6-H SINGLE CLEVIS SUPPORT, WHICH CAN ACCOMMODATE UP TO 30". INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION DOCUMENTATION.
4. WHERE PIPING IS TO RUN PARALLEL TO THE ROOF PITCH, PROVIDE PIPING JOINTS TO ACCOUNT FOR CHANGES IN ROOF PITCH AT THE HIGH AND LOW POINTS. PROVIDE EITHER TWO-ELBOW "SWING TYPE" JOINT OF MITERED WELDED JOINT.
5. COORDINATE THE FINAL GAS CONNECTION POINT ON EACH PIECE OF EQUIPMENT WITH THE MECHANICAL CONTRACTOR BASED ON THE HIS APPROVED EQUIPMENT SHOP DRAWINGS. PROVIDE PIPING TO THE COORDINATED FINAL CONNECTION. ADJUST THE LOCATION OF THE BRANCH TAKE-OFF FROM THE MAIN AS NECESSARY TO ACCOMMODATE THE FINAL EQUIPMENT SELECTION.
6. IF EQUIPMENT BEING CONNECTED TO IS MOUNTED ON A SPRING ISOLATED CURB, ANY OTHER SPRING TYPE MOUNTING, OR ANY MOUNTING WHERE DEFLECTION CAN OCCUR, PROVIDE A FLEXIBLE CONNECTION AT THE UNIT.
7. FLEXIBLE CONNECTION SHALL BE UL LISTED AND FM GLOBAL APPROVED FOR NATURAL GAS SERVICE. INSTALL IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.
8. ALL GAS PIPING OVER 4" SHALL BE WELDED BY A CERTIFIED WELDER SHOWING DOCUMENTATION BY A.P.I. 1104 OR A.S.M.E. B.31.1., NEED PROOF OF WELDING QUALIFICATIONS AND CERTIFICATION CURRENT TO DATE.



KEYED COMPONENT NOTES

1. COMPOSITE INLET HUB
2. GUIDERAIL
3. HCP SS BASE ELBOW
4. 3/16" LIFTING CHAIN, 304 STAINLESS STEEL
5. 304 STAINLESS STEEL FLOAT BRACKET W/ CORD GRIPS
6. 2" SANITARY DISCHARGE PIPING. FOR CONTINUATION SEE DRAWING P-100.
7. 2" VENT PIPING
8. ELECTRICAL FITTING
9. VENT FITTING
10. NOTE: SKIP WELD 1"-2" LONG BEADS, 10"-15" APART
11. SIX(6) 3/16" HOLES

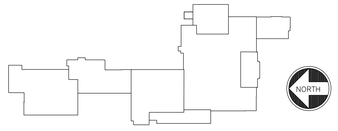


SUMP PUMP BASIN ASSEMBLY DETAIL

NOT TO SCALE

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

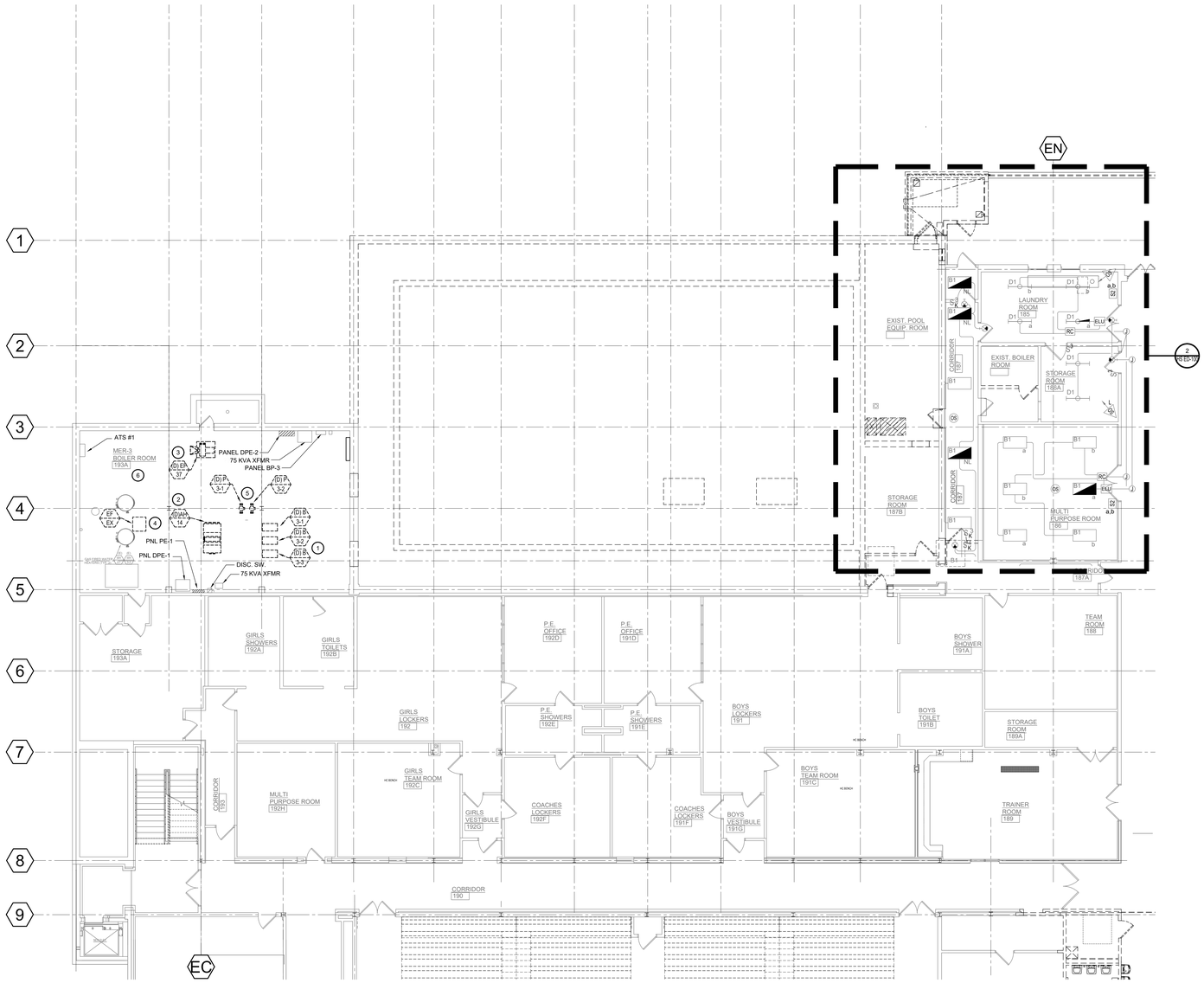
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

PLUMBING DETAILS & SCHEDULES

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
AJL	HS / P-301
DATE:	
12-01-2025	

CAD FILE:
PLOT DATE: 12/2025



NORTH
BUILDING NORTH

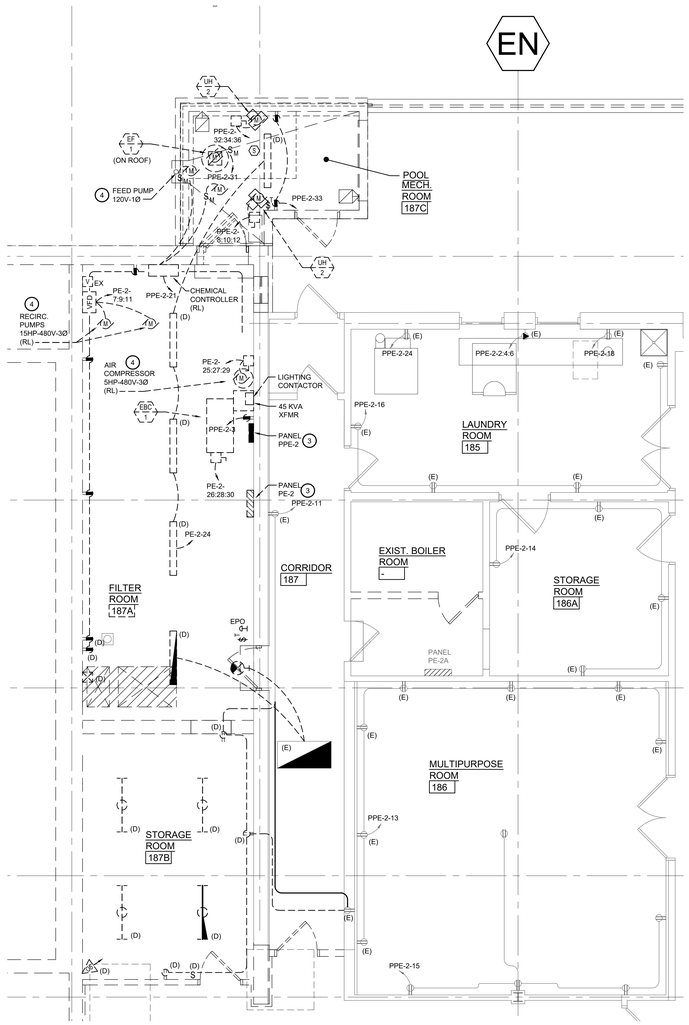
1 HS ED-100

FIRST FLOOR - UNIT E ELECTRICAL DEMOLITION PLAN

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

KEYED MER3 ELECTRICAL DEMOLITION NOTES

1. EXISTING BOILERS (3) TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING/CONDUIT BACK TO PANEL BP-3.
2. EXISTING AIR HANDLER AH-14 TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING/CONDUIT BACK TO PANEL PE-1.
3. EXISTING EXHAUST FAN EF-37 TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING/CONDUIT BACK TO PANEL PE-1.
4. EXISTING EXHAUST FAN TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING/CONDUIT BACK TO SOURCE.
5. EXISTING PUMPS TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING/CONDUIT BACK TO PANEL PE-1.
6. EXISTING SMOKE / CO DETECTORS WITHIN SPACE ARE EXISTING TO REMAIN. REFER TO RENOVATION PLAN.



2 HS ED-100

LARGE SCALE FILTER ROOM ELECTRICAL DEMOLITION PLAN

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

KEYED FILTER ROOM ELECTRICAL DEMOLITION NOTES

1. FILTER ROOM 187A AND STORAGE ROOM 187B TO BE DEMOLISHED. DISCONNECT POWER FROM ALL ELECTRICAL, MECHANICAL AND PLUMBING EQUIPMENT IN THESE ROOMS AND REMOVE WIRING BACK TO SOURCE (PE-2 (480V) AND PPE-2 (120/208V). ITEMS TO BE REMOVED ARE SHOWN DASHED ON PLAN TO PROVIDE AN OVERALL SCOPE OF WORK. REFER TO GENERAL DEMOLITION NOTES THIS DRAWING FOR ADDITIONAL INFORMATION.
2. RELOCATE REMAINING 277/480V LOADS IN PANEL PE-2 TO PANEL PE-2A IN BOILER ROOM. THESE LOADS INCLUDE LOADCENTER AT BASEBALL FIELD AND TENNIS/PARKING LOT LIGHTING. EXTEND CONDUIT AND WIRING TO PANEL PE-2A. REFER TO ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
3. REMOVE AND RELOCATE PANEL PPE-2 AND TRANSFORMER TO EXISTING BOILER ROOM. REFER TO ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION. RECIRCUIT ANY EXISTING LOADS TO REMAIN TO RELOCATED PANEL PPE-2A. REFER TO PPE-2A PANEL SCHEDULE ON DRAWING E-404.
4. DEVICE IS TO BE RELOCATED BY OTHERS. E.C. TO DISCONNECT DEVICE FROM SOURCE.

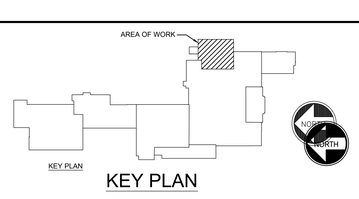
GENERAL DEMOLITION NOTES:

(APPLIES TO ALL DEMOLITION PLANS)

1. THE INTENT OF THIS DEMOLITION DRAWING IS TO GIVE THE E.C. AN OVERALL SCOPE OF WORK REQUIRED TO COMPLETE THIS PROJECT.
2. THE E.C. SHALL REMOVE ALL ITEMS SHOWN DASHED AND/OR AS NOTED. HOWEVER ALL CHANGES CANNOT BE DETAILED COMPLETELY ON THE DRAWINGS, SOME REMOVALS AND RELOCATIONS OF EXISTING ELECTRIC WORK WILL BE NECESSARY FOR SATISFACTORY PERFORMANCE OF THIS AND OTHER TRADES. EXISTING CONDITIONS SHALL BE FIELD-VERIFIED PRIOR TO SUBMITTING BID.
3. PROVIDE RECONNECTIONS AND TEMPORARY INSTALLATIONS AS REQUIRED; REMOVE AT JOB COMPLETION.
4. PRIOR TO THE START OF DEMOLITION, CHECK TO DETERMINE THAT POWER, COMMUNICATION SERVICES, ETC., SUCH AS ELECTRICITY AND TELEPHONE, HAVE BEEN DISCONNECTED AT THE SOURCE OF SUPPLY.
5. ANY AND ALL ABANDONED LOW VOLTAGE CABLING IN AREA OF DEMOLITION SHALL BE REMOVED IN ITS ENTIRETY BACK TO SOURCE. LOW VOLTAGE CABLING SHALL INCLUDE, BUT NOT BE LIMITED TO, TELEPHONE, DATA, FIRE ALARM, ETC.. COORDINATE THIS WORK WITH OWNER' S I.T. DEPARTMENT.
6. THE E.C. IS RESPONSIBLE, AT HIS OWN EXPENSE, TO REPAIR ANY SERVICES OR DAMAGES CAUSED BY HIS DEMOLITION WORK.
7. THE CONTRACTOR SHALL FURNISH AND ERECT BARRIERS, AND MAINTAIN APPROVED DANGER, WARNING, AND "KEEP OUT" SIGNS AT LOCATIONS WHERE THE PLACING OF SUCH SIGNS IS WARRANTED FOR SAFETY OF ALL PERSONNEL NOT WORKING IN THIS AREA.
8. DEMOLITION SHALL BE PERFORMED IN SUCH A MANNER AS TO AVOID HAZARDS TO PERSONS AND PROPERTY, INTERFERENCE WITH THE USE OF ADJACENT PROPERTIES, AND INTERRUPTION OF FREE PASSAGE TO AND FROM SUCH PROPERTY. WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL MUNICIPAL, STATE AND FEDERAL RULES, REGULATIONS, CODES, AND LAWS WHICH MAY GOVERN AND APPLY TO THIS WORK.
9. DURING THE DEMOLITION WORK IN THE EFFECTED AREAS, THE BUILDING NON-WORK AREAS MUST BE PROTECTED FROM DUST, DIRT AND POSSIBLE WATER DAMAGE, TO THE OWNER'S SATISFACTION.
10. ALL AREAS SHALL BE CLEANED AND FREE OF ALL DEBRIS RESULTING FROM THE DEMOLITION WORK ON A DAILY BASIS.
11. THE E.C. SHALL INCLUDE IN THEIR PRICE THE TEMPORARY POWER & LIGHTING REQUIRED FOR THE DEMOLITION PROCESS, INCLUDING ANY PREMIUM TIME ASSOCIATED WITH SCHEDULING & REQUIREMENTS FROM THE OWNER. COORDINATE WITH GENERAL CONTRACTOR ON EXACT REQUIREMENTS.
12. THE OWNER RESERVES THE RIGHT TO CLAIMING ANY MATERIALS AND EQUIPMENT REMOVED DURING DEMOLITION THAT WILL NOT BE REUSED. REMOVE WITHOUT DAMAGE ALL SUCH EQUIPMENT AND TURN OVER AND DELIVER TO OWNER AT LOCATION DESIGNATED BY THE OWNER. THE E.C. IS RESPONSIBLE TO REMOVE FROM SITE ANY ABANDONED MATERIALS AND EQUIPMENT NOT CLAIMED BY THE OWNER.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

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HS SED #03-15-02-06-0-011-027
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BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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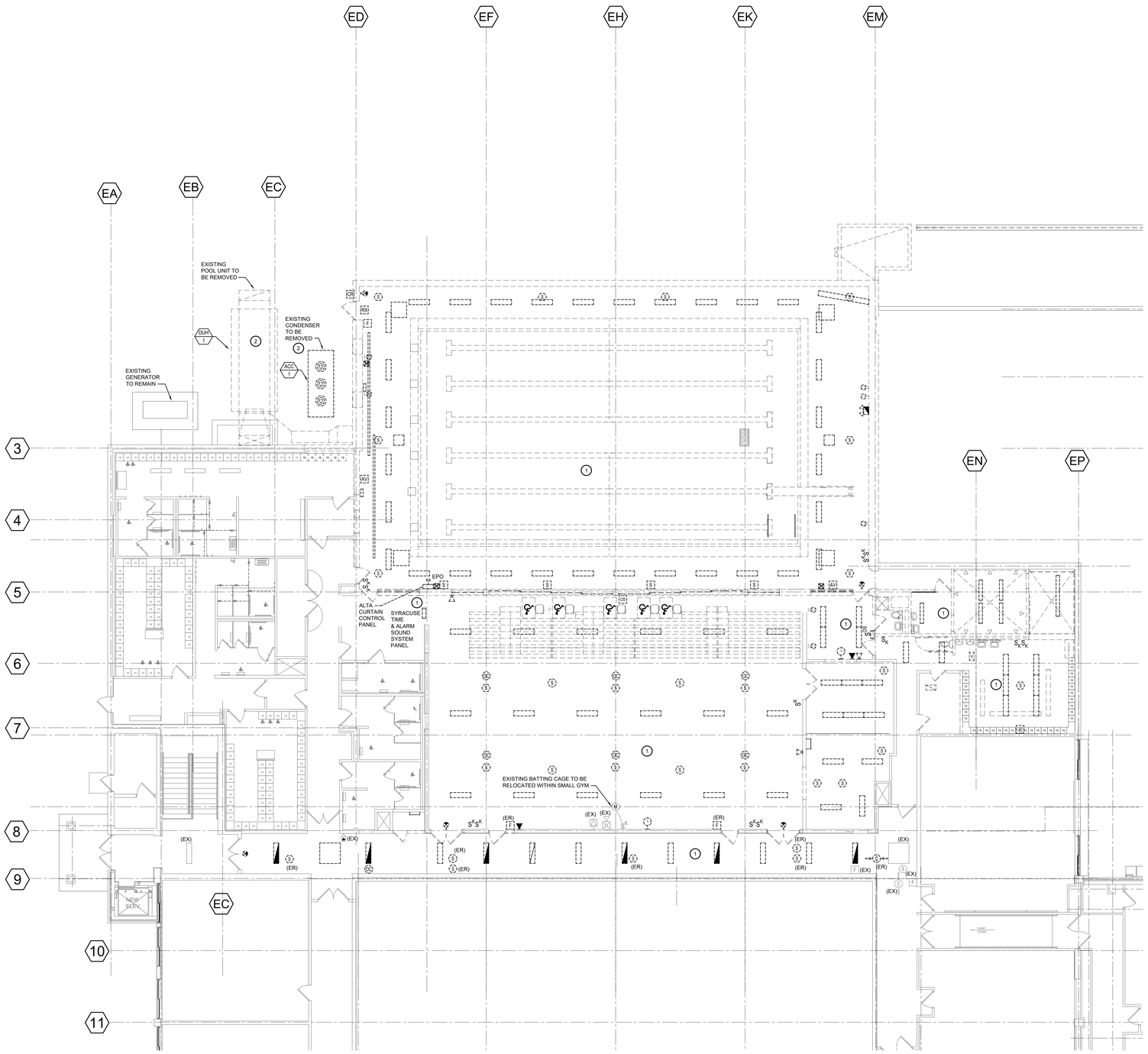
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - UNIT E ELECTRICAL DEMOLITION PLAN

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / ED-100
DATE: 12-01-2025	

DWG FILE: ED-100.DWG
PLOT DATE: 11/26/2025



NORTH

BUILDING NORTH

1
HS ED-101

SECOND FLOOR - UNIT E
ELECTRICAL DEMOLITION PLAN

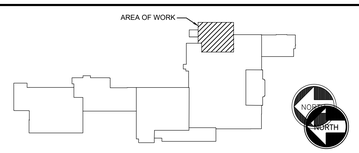
SCALE: 1/8"=1'-0"

ELECTRICAL DEMOLITION KEYNOTES

1. ALL ITEMS SHOWN DASHED IN POOL AND BOY'S LOCKER AREAS ARE TO BE REMOVED. DISCONNECT POWER FROM ALL ELECTRICAL, MECHANICAL AND PLUMBING EQUIPMENT IN THESE ROOMS AND REMOVE WIRING BACK TO SOURCE. ITEMS TO BE REMOVED ARE SHOWN DASHED ON PLAN TO PROVIDE AN OVERALL SCOPE OF WORK. EQUIPMENT LABELED 'ER' ARE TO BE RELOCATED IN NEW WORK. REFER TO GENERAL DEMOLITION NOTES ON DRAWING ED-100 FOR ADDITIONAL INFORMATION.
2. POOL UNIT DUH-1 AND CONDENSER ACC-1 TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE POWER BACK TO SOURCE, INCLUDING ALL CONDUIT AND WIRING BACK TO DPE-2 FOUND IN BOILER ROOM 3.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR - UNIT E
ELECTRICAL
DEMOLITION PLAN

DRAWN BY: R.F.C.	PROJECT NO.: 2024-239P
CHECKED BY: L.K.N.	BUILDING HS
DATE: 12-01-2025	DRAWING NO.: ED-101

CAD FILE: 4239-ED-101.DWG
PLOT DATE: 11/20/2025



NORTH

BUILDING NORTH

1

HS ED-102

KITCHEN & DIGITAL CAFE
ELECTRICAL DEMOLITION PLAN

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

ELECTRICAL DEMOLITION KEYNOTES

1. ALL ITEMS SHOWN IN AREA OF DEMOLITION (SERVING AND DISHWASHING AREAS) ARE TO BE REMOVED. DISCONNECT POWER FROM ALL ELECTRICAL, MECHANICAL AND PLUMBING EQUIPMENT IN THESE ROOMS AND REMOVE WIRING BACK TO SOURCE. ITEMS TO BE REMOVED ARE SHOWN DASHED ON PLAN TO PROVIDE AN OVERALL SCOPE OF WORK. REFER TO GENERAL DEMOLITION NOTES ON DRAWING ED-100 FOR ADDITIONAL INFORMATION.
2. EXISTING SOUND RACK TO BE REPLACED. E.C. TO DISCONNECT PREVIOUS CABLING BETWEEN SPEAKERS AND THE DEMOED RACK.

DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN

(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK

(D) INDICATES ITEM TO BE DEMOLISHED

(RL) INDICATES RELOCATED ITEM

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

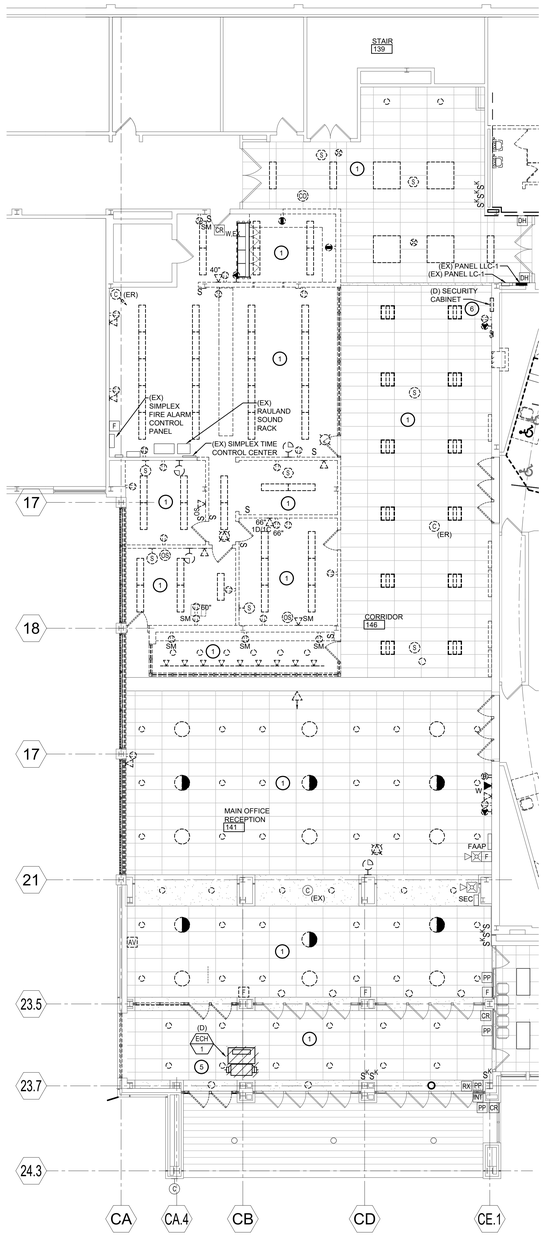
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

FIRST FLOOR - KITCHEN AND DIGITAL CAFE ELECT. RENOVATION PLANS

DRAWN BY: R.F.C.	PROJECT NO.: 2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: ED-102

DWG FILE: ED-HS-ED-102.DWG
PLOT DATE: 11/26/25



NORTH — BUILDING NORTH

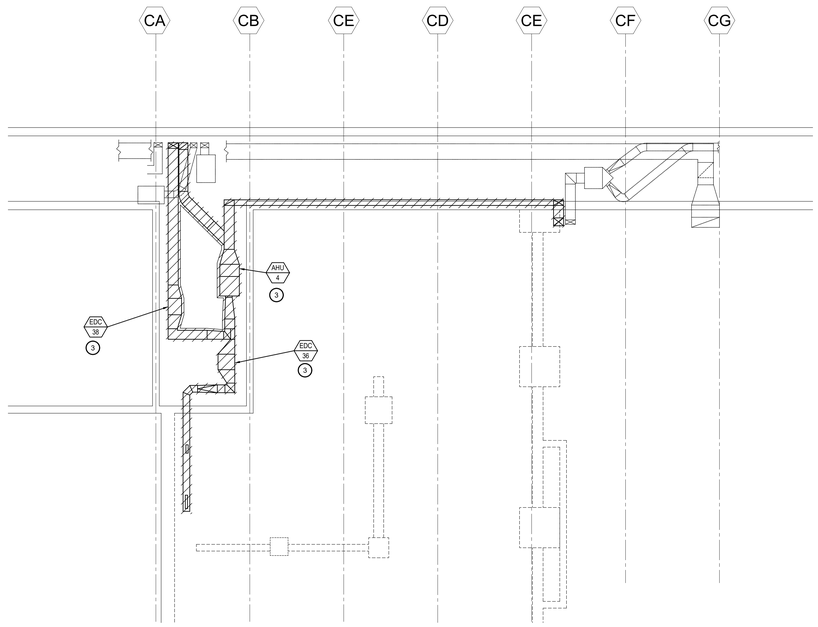
1 / HS ED-103

ADMINISTRATIVE ELECTRICAL DEMOLITION PLAN

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

ELECTRICAL DEMOLITION KEYNOTES

1. ALL ITEMS SHOWN DASHED IN ADMINISTRATIVE AND LOBBY AREAS ARE TO BE REMOVED. DISCONNECT POWER FROM ALL ELECTRICAL, MECHANICAL AND PLUMBING EQUIPMENT IN THESE ROOMS AND REMOVE WIRING BACK TO SOURCE (PE-2 (480V) AND PPE-2 (120/208V). ITEMS TO BE REMOVED ARE SHOWN DASHED ON PLAN TO PROVIDE AN OVERALL SCOPE OF WORK. REFER TO GENERAL DEMOLITION NOTES ON DRAWING ED-001 FOR ADDITIONAL INFORMATION.
2. SIMPLEX FIRE ALARM CONTROL PANEL INCLUDING ADDITIONAL CABINET AND EXTENDER PANEL, RAULAND SOUND RACK AND SIMPLEX TIME RECORDER TO REMAIN.
3. AIR HANDLING UNIT AHU-4 AND (2) ELECTRIC DUCT COILS IN CRAWL SPACE TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE CONDUIT AND WIRING BACK TO SOURCE (LC-1).
4. CONDENSING UNIT CU-4 ON ROOF TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE CONDUIT AND WIRING BACK TO SOURCE (PC-1).
5. ELECTRIC CEILING HEATER ECH-1 TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE CONDUIT AND WIRING BACK TO SOURCE.
6. REMOVE EXISTING SECURITY CABINET AND PROVIDE NEW CABINET ABOVE ACCESSIBLE CEILING. EXTEND ALL EXISTING SECURITY CONTROL WIRING TO NEW CABINET LOCATION. COORDINATE ALL WORK WITH DAY AUTOMATION.

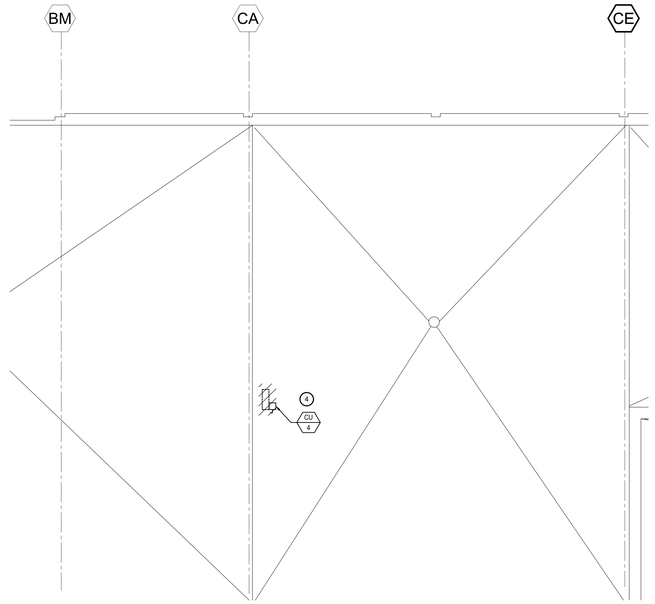


NORTH — BUILDING NORTH

2 / HS-ED108

ADMINISTRATIVE PARTIAL BASEMENT ELECTRICAL DEMOLITION PAN

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



NORTH — BUILDING NORTH

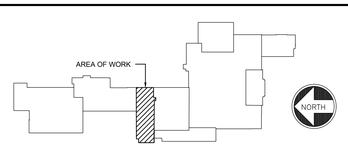
3 / HS ED-103

ADMINISTRATIVE PARTIAL ROOF ELECTRICAL DEMOLITION PLAN

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
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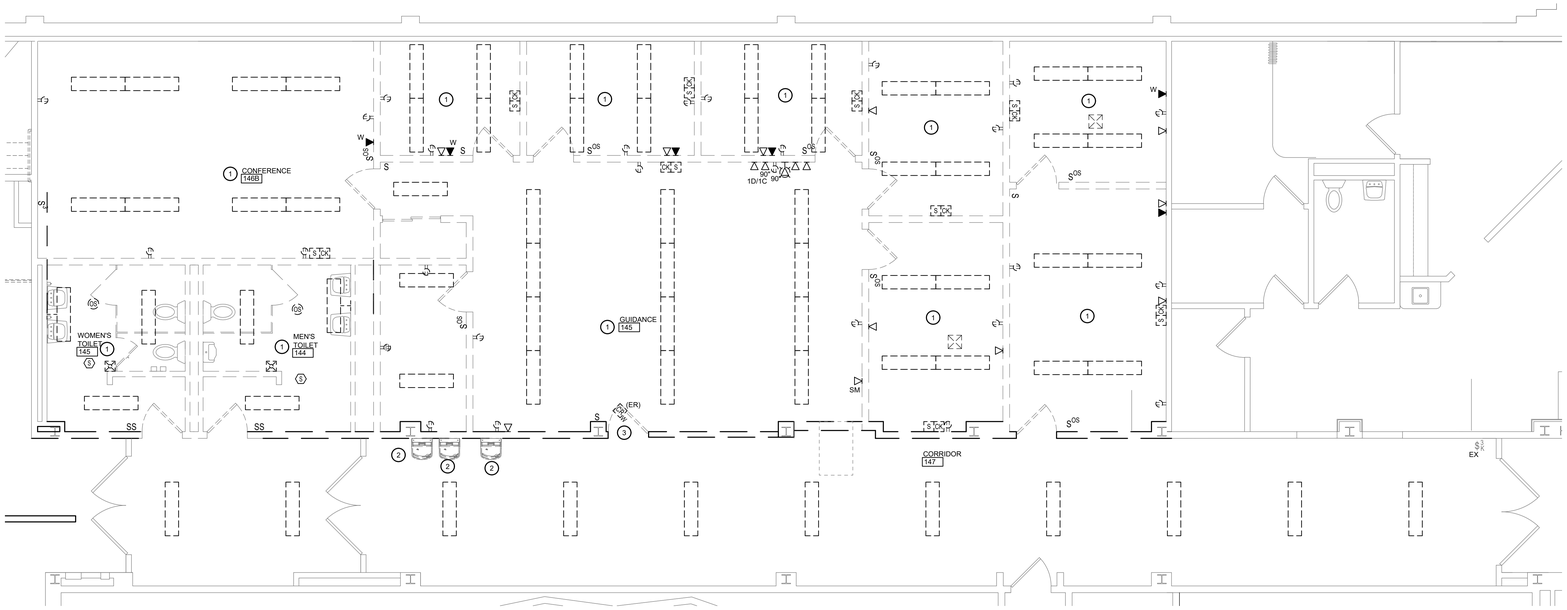
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - ADMINISTRATIVE & AUDITORIUM ENTRY PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / ED-103
DATE: 12-01-2025	

DWG FILE: ED-103.DWG
PLOT DATE: 11/26/2025



NORTH

BUILDING NORTH

1
HS E-104

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

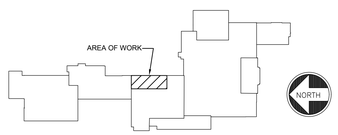
GUIDANCE OFFICE AND TOILET ROOMS 144/145
ELECTRICAL DEMOLITION PLAN

ELECTRICAL DEMOLITION KEYNOTES

1. ALL ITEMS SHOWN DASHED ARE TO BE REMOVED. DISCONNECT POWER FROM ALL ELECTRICAL, MECHANICAL AND PLUMBING EQUIPMENT IN THESE ROOMS AND REMOVE WIRING BACK TO SOURCE. ITEMS TO BE REMOVED ARE SHOWN DASHED ON PLAN TO PROVIDE AN OVERALL SCOPE OF WORK. REFER TO GENERAL DEMOLITION NOTES ON DRAWING ED-100 FOR ADDITIONAL INFORMATION.
2. ELECTRIC WATER COOLERS TO BE REMOVED AND RELOCATED BY PLUMBING CONTRACTOR. DISCONNECT POWER AND REMOVE RECEPTACLES. EXISTING 20A CIRCUITS TO REMAIN TO BE EXTENDED TO NEW ELECTRIC WATER COOLER LOCATIONS IN RENOVATION.
3. EXISTING WIRELESS CARD READER TO BE RELOCATED TO NEW GUIDANCE OFFICE DOOR IN RENOVATION.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
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PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FL. - GUIDANCE OFFICE ELECTRICAL DEMOLITION PLAN

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R.F.C.	2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: ED-104

CAD FILE PLOT DATE: 11/20/2025

ELECTRICAL SYMBOL LEGEND

LIGHTING

A1 / a — 2' x 4' RECESSED FLAT PANEL LED LIGHT FIXTURE
TYPICAL ALL FIXTURES:

- 'A' - UPPER CASE LETTER INDICATES FIXTURE TYPE
- 'a' - LOW CASE LETTER INDICATES SWITCH LEG
- 'NL' - INDICATED FIXTURE ON AN UNSWITCHED NIGHT LIGHTING CIRCUIT
- SHADING INDICATES FIXTURE TO BE ON EMERGENCY CIRCUIT

2'X2' RECESSED LED VOLUMETRIC LIGHT FIXTURE

2'X4' RECESSED LED VOLUMETRIC LIGHT FIXTURE

LINEAR RECESSED OR PENDANT LED LIGHT FIXTURE

INDUSTRIAL LED LIGHT FIXTURE

WALL MOUNTED LED LIGHT FIXTURE

RECESSED LED DOWNLIGHT

WALL MOUNTED LED LIGHT FIXTURE

CEILING MOUNTED LED EXIT SIGN. SHADED SIDE INDICATES FACE, PROVIDE ARROWS AS INDICATED.

WALL MOUNTED LED EXIT SIGN. SHADED SIDE INDICATES FACE, ARROWS AS INDICATED. MOUNT 8'-8" TO TOP, U.O.N.

- 'WG' - WIREGUARD

LIGHTING CONTROLS

$X — WALL MOUNTED LINE VOLTAGE LIGHT SWITCH MOUNT AT 44" A.F.F. TO CENTER, OR 6" ABOVE COUNTER BACKSPLASH TO CENTER WHEN MOUNTED ABOVE COUNTER, U.O.N.

- LOWERCASE LETTER INDICATES SWITCH LEG.
- 'D' - DIMMING
- 'OS' - INTEGRAL OCCUPANCY SENSOR
- 'VS' - INTEGRAL VACANCY SENSOR
- 'K' KEY SWITCH
- '3' INDICATES 3-WAY SWITCHING
- '4' INDICATES 4-WAY SWITCHING

WIRELESS WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR

WIRELESS CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR

WIRELESS CEILING MOUNTED DUAL TECHNOLOGY VACANCY SENSOR

ELM — EMERGENCY LIGHTING CONTROL UNIT, WATTSTOPPER ELCU-200, OR EQUAL
SEE WIRING DIAGRAM THIS SHEET

POWER

208/120V BRANCH CIRCUIT PANELBOARD-SURFACE MOUNTED

480/277V BRANCH CIRCUIT PANELBOARD-SURFACE MOUNTED

HOMERUN TO PANEL

NORMAL POWER OR LIGHTING CIRCUIT (SHOWN SOLID)

EMERGENCY LIGHTING CIRCUIT (SHOWN DASHED)

T — TRANSFORMER - SIZE AS INDICATED

WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE MOUNTED RECESSED 18" A.F.F. TO ℄ (TYP. ALL RECEPTACLES UNLESS OTHERWISE NOTED)

- 'GFCI' - GROUND FAULT CIRCUIT INTERRUPTER (G.F.C.I.) RECEPTACLE
- 'WP/GFCI' - G.F.C.I. RECEPTACLE WITH WEATHERPROOF "WHILE-IN-USE" COVER
- 'EWC' - RECEPTACLE FOR ELECTRIC WATER COOLER. CIRCUIT BREAKER TO BE GFCI. COORDINATE MOUNTING HEIGHT WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
- 'CLG' - CEILING MOUTED RECEPTACLE
- 'P' - PROJECTOR RECEPTACLE. COORDINATE MOUNTING HEIGHT WITH ARCHITECT.

WALL OUTLET BOX AND 20 AMP SINGLE RECEPTACLE - 18" AFF. TO ℄

TWO GANG WALL OUTLET BOX AND TWO 20 AMP DUPLEX RECEPTACLES - 18" AFF. TO ℄

WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE, MOUNTED 48" A.F.F. TO ℄, U.O.N.

QUAD OUTLET MOUNTED ABOVE COUNTER BACKSPLASH. NOTE SIMILAR TO DUPLEX.

CLG — WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE, MOUNTED ON CEILING

P — PROJECTOR RECEPTACLE

TV — TV RECEPTACLE

WALL OUTLET BOX AND 240V OR 208V SPECIAL PURPOSE RECEPTACLE
SIZED AS NOTED ON DRAWINGS.

FLUSH FLOOR BOX WITH (2) DUPLEX RECEPTACLES, DATA JACKS AS INDICATED, (1) 3/4" THREADED HUB FOR POWER, (1) 1-1/2" THREADED HUB FOR DATA CABLING, ALUMINUM COVER AND TILE FLANGE COVER.

SURFACE METAL RACEWAY - RACEWAY SHALL BE WIREMOLD V3000 SERIES, OR EQUAL WITH NUMBER OF SINGLE RECEPTACLES AS INDICATED ON PLAN, AND MOUNTED AT 18" A.F.F., U.O.N.

EPO — EMERGENCY POWER "OFF" BUTTON MOUNTED AT 42" A.F.F. TO ℄, U.O.N.

FLUSH WALL JUNCTION BOX OR JUNCTION BOX ABOVE CEILING

- 'S' INDICATES JUNCTION BOX TO BE USED FOR SECURITY POWER WIRING
- 'D' INDICATES JUNCTION BOX TO BE USED FOR CAT 6 CABLING
- 'DH' INDICATES DOOR HARDWARE 120V CONNECTION

MOTOR CONNECTION. NUMBER INDICATES HORSEPOWER

DISCONNECT SWITCH.

FUSED DISCONNECT SWITCH.

S_M — MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOADS (UNLESS OTHERWISE NOTED) - SIZED TO PROTECT EQUIPMENT SERVED

VFD — VARIABLE FREQUENCY DRIVE (BY M.C.)

XXX / YY — EQUIPMENT TAG

SYMBOLS LEGEND NOTES:

1. COORDINATE ALL I.T. WORK WITH SCHOOL DISTRICT I.T. DEPARTMENT.
2. COORDINATE MOUNTING HEIGHT(S) AND LOCATION(S) OF ALL DEVICES WITH ARCHITECTURAL ELEVATIONS PRIOR TO CONSTRUCTION.

SPECIAL SYSTEMS

2 — DATA WALL OUTLET BOX WITH MINIMUM 1" C. TO ABOVE ACCESSIBLE FINISHED CEILING (PROVIDE PULL CORD AND END BUSHING) FLUSH MOUNTED AT 18" A.F.F. TO ℄. E.C. SHALL PROVIDE BOX, CONDUIT, DATA JACK, FACEPLATE AND PLENUM RATED CAT6 DATA CABLE TO I.T. ROOM.

- NUMBER INDICATES CABLE QUANTITIES IF GREATER THAN ONE
- 'CLG' INDICATES CEILING MOUNTED
- 'P1' INDICATES PROJECTOR

WALL TELEPHONE OUTLET

CEILING MOUNTED WIRELESS ACCESS POINT - ARUBA NETWORKS PART # AP-315. E.C. SHALL PROVIDE ACCESS POINT WITH (2) DATA JACKS AND (2) PLENUM RATED CAT6 CABLES TO NEAREST I.T. CLOSET. LEAVE 25' OF SLACK IN CABLE AT DEVICE.

WALL MOUNTED WIRELESS ACCESS POINT - ARUBA NETWORKS PART # AP-315. E.C. SHALL PROVIDE ACCESS POINT WITH (2) DATA JACKS AND (2) PLENUM RATED CAT6 CABLES TO NEAREST I.T. CLOSET. LEAVE 25' OF SLACK IN CABLE AT DEVICE.

AV — 1-GANG BOX FOR AUDIO/VIDEO. PROVIDE RING AND STRING TO ACCESSIBLE CEILING. MOUNT 18" A.F.F. TO ℄, U.O.N.

TV — WALL MOUNTED TV, BRACKET, CATV OUTLET AND RG/6 CABLE TO CATV TERMINATION.

FACP — FIRE ALARM CONTROL PANEL (EXISTING)

F — WALL MOUNTED ADA COMPLIANT FLUSH MANUAL FIRE ALARM PULL STATION (MOUNT TOP @ 44" AFF)

WALL MOUNTED MULTI-TAP (15/30/75/110 CD) ADA COMPLIANT FIRE ALARM AUDIO/VISUAL UNIT (MOUNT 80" A.F.F. TO BOTTOM).
- RL INDICATES RELOCATION.

WALL MOUNTED MULTI-TAP (15/30/75/110 CD) ADA COMPLIANT FIRE ALARM VISUAL ONLY UNIT (MOUNT 80" A.F.F. TO BOTTOM).
-RL INDICATES RELOCATION.

S — CEILING MOUNTED SMOKE DETECTOR

H — CEILING MOUNTED HEAT DETECTOR

D — DUCT MOUNTED SMOKE DETECTOR - DETECTOR SHALL BE FURNISHED BY E.C. TO THE M.C. FOR INSTALLATION IN DUCT OR TO BE TURNED OVER TO EQUIPMENT MANUFACTURER FOR FACTORY INSTALLATION. DETECTORS SHALL BE WIRED BY E.C.. REFER TO MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR EQUIPMENT REQUIREMENTS. DUCT DETECTORS SHALL BE PHOTOELECTRIC TYPE WITH SAMPLING TUBE. PROVIDE REMOTE STATUS AND ALARM INDICATOR LIGHT/TEST STATION WHERE DEVICE IS INACCESSIBLE. COORDINATE EXACT LOCATIONS WITH MECHANICAL PLANS. DETECTOR LOCATION SHALL CONFORM TO NFPA.

CO — CEILING MOUNTED CARBON MONOXIDE DETECTOR. PROVIDE TEMPORAL CODE MODULE WITH SOUNDER BASE WHICH CAN PROVIDE TEMPORAL CODE 4 (TC4) FOR TOXIC CARBON MONOXIDE ALARMS. PROVIDE ADDITIONAL POWER WIRING TO SOUNDER BASE AS REQUIRED PER MANUFACTURER'S SPECIFICATIONS FOR A COMPLETE OPERABLE SYSTEM.

V — CEILING MOUNTED VAPE DETECTOR

CP — CONTROL PANEL WITH LOW VOLTAGE TRANSFORMER FOR VAV PROVIDED BY MECHANICAL CONTRACTOR. PROVIDE 120V EMERGENCY EQUIPMENT POWER AS INDICATED ON DRAWINGS

BATTERY OPERATED GPS CLOCK FURNISHED AND INSTALLED BY E.C., CLOCK SHALL BE MANUFACTURERED BY PRIMEX, TO MATCH EXISTING MODEL NUMBER #14155

CEILING MOUNTED PAGING SPEAKER FURNISHED AND INSTALLED BY E.C. PROVIDE NEW SPEAKERS, WHERE INDICATED, TO MATCH EXISTING. INSTALL NEW SPEAKER CABLES TO MEET MANUFACTURER'S RECOMMENDATIONS. TEST AND LABEL BOTH ENDS. (TYP. ALL SPEAKERS)

WALL MOUNTED PAGING SPEAKER FURNISHED AND INSTALLED BY E.C.

CEILING MOUNTED SOUND SYSTEM SPEAKER FURNISHED AND INSTALLED BY E.C.

WALL MOUNTED SOUND SYSTEM SPEAKER FURNISHED AND INSTALLED BY E.C.

M — MICROPHONE JACK FURNISHED AND INSTALLED BY E.C.

SPEAKER JACK FURNISHED AND INSTALLED BY E.C.

EL — ELECTRIC LATCH PROVIDED BY DOOR HARDWARE VENDOR.

DC — DOOR CONTACT PROVIDED BY DOOR HARDWARE VENDOR.

CR_H — HARDWIRED CARD READER TO INCLUDE REQUEST TO EXIT SENSOR, DOOR CONTACTS, CONTROLLER IF REQUIRED AND CABLING TO ACCESS CONTROL PANEL FURNISHED AND INSTALLED BY DAY AUTOMATION. ALL DOOR HARDWARE PROVIDED BY OTHERS.

CR_W — WIRELESS ELECTRONIC LOCK WITH CARD READER AND PIM MODULE IF REQUIRED FURNISHED AND INSTALLED BY DAY AUTOMATION. ALL DOOR HARDWARE PROVIDED BY OTHERS.

WALL MOUNTED CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION

CEILING MOUNTED 180° CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION

CEILING MOUNTED CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION

CEILING MOUNTED 360° CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION

RX — REQUEST TO EXIT SENSOR

IC — INTERCOM FURNISHED AND INSTALLED BY DAY AUTOMATION

ICA — INTERCOM CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION

DOOR RELEASE PUSHBUTTON FURNISHED AND INSTALLED BY DAY AUTOMATION

DH — DOOR HOLD OPEN DEVICE TO BE PROVIDED WITH DOOR HARDWARE. TIE TO NEAREST RECEPTACLE CIRCUIT. PROVIDE NEW SMOKE DETECTORS ON EACH SIDE OF DOOR AND A CONTROL RELAY SO DOOR SHALL RELEASE UPON ACTIVATION OF FIRE ALARM

LD — EMERGENCY LOCKDOWN ACTIVATION BUTTON, PROVIDED BY DAY AUTOMATION

BL — BLUE LOCKDOWN STROBE & HORN, PROVIDED BY DAY AUTOMATION

DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN
(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK
(D) INDICATES ITEM TO BE DEMOLISHED
(RL) INDICATES RELOCATED ITEM

COORDINATION NOTE:

COORDINATION - IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL, MECHANICAL, PLUMBING AND FIRE PROTECTION CONTRACTORS TO COORDINATE THEIR WORK. THE HVAC CONTRACTOR SHALL TAKE THE LEAD IN THE COORDINATION EFFORT AND PRODUCE THE COORDINATION DRAWINGS. COORDINATION DRAWINGS SHALL BE SUBMITTED FOR APPROVAL BY THE ARCHITECT PRIOR TO STARTING ANY WORK. THE PURPOSE OF THESE DRAWINGS IS TO COORDINATE THE LOCATIONS OF ALL PIPING, DUCTWORK, AND ELECTRICAL EQUIPMENT. SPECIAL ATTENTION IS CALLED TO ARTICLE 110-26 (F) OF THE NATIONAL ELECTRIC CODE. THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT AND EXTENDING FROM THE FLOOR TO A HEIGHT OF 6FT. ABOVE THE EQUIPMENT OR TO STRUCTURAL CEILING, WHICHEVER IS LOWER, SHALL BE DEDICATED TO THE ELECTRICAL INSTALLATION. NO PIPING, DUCTS, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE. THIS COORDINATION IS REQUIRED FOR ALL PHASES OF THIS PROJECT.

COORDINATION NOTE:

COORDINATION - IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO REVIEW ALL ARCHITECTURAL PLANS FOR FULL UNDERSTANDING OF THE SCOPE OF WORK. ELECTRICAL WORK NOTED ON ARCHITECTURAL DRAWINGS IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

ABBREVIATIONS

AMP./A.	AMPERE
AC.	ALTERNATING CURRENT
A/C.	AIR CONDITION
AFF.	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
A.I.C.	AMPERES INTERRUPTING CAPACITY
AL.	ALUMINUM
ARCH.	ARCHITECTURAL
A.T.S.	AUTOMATIC TRANSFER SWITCH
AUX.	AUXILIARY
BLDG.	BUILDING
BKR.	BREAKER
B.O.F.	BOTTOM OF FIXTURE
CLG.	CEILING
CKT.	CIRCUIT
CB	CIRCUIT BREAKER
COL.	COLUMN
CONC.	CONCRETE
C.	CONDUIT
CU.	COPPER
C.T.	CURRENT TRANSFORMER
DISC.	DISCONNECT SWITCH
DIV.	DIVISION
EA.	EACH
E.F.	EXHAUST FAN
ELEC. CL.	ELECTRICAL CLOSET
ELEC.	ELECTRICAL
E.C.	ELECTRICAL CONTRACTOR
E.M.T.	ELECTRICAL METALLIC TUBING
ENT.	ENTRANCE
ENCL.	ENCLOSURE
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXT.	EXTERNAL/EXTERIOR
F.A.	FIRE ALARM
FT.	FEET
FIN.	FINISH/FINISHED
FL.	FLOOR
FLA	FULL LOAD AMPERES
GA.	GAGE/GAUGE
G.C.	GENERAL CONTRACTOR
GND.	GROUND
G.F.I.	GROUND FAULT INTERRUPTER
HP.	HORSEPOWER
JB	JUNCTION BOX
KW	KILOWATT
KWH	KILOWATT HOUR
KVA	KILOVOLT-AMPERE
KV	KILOVOLT
LTG	LIGHTING
M.C.	MECHANICAL CONTRACTOR
MDP	MAIN DISTRIBUTION PANEL
MANUF.	MANUFACTURER
MAX.	MAXIMUM
MB	MAIN BREAKER
MECH.	MECHANICAL
MTD.	MOUNTED
MIN.	MINIMUM
M.L.O.	MAIN LUGS ONLY
N.	NEUTRAL
NC	NORMAL CLOSED
N.E.C.	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NO./#	NUMBER
P.V.C.	POLYVINYLCHLORIDE
PB	PULL BOX
PNL.	PANELBOARD
P.C.	PLUMBING CONTRACTOR
PRI.	PRIMARY
R.G.S.	RIGID GALVANIZED STEEL CONDUIT
RECEPT.	RECEPTACLE
REQ'D	REQUIRED
REV.	REVISE/REVISION
SECT.	SECTION
SEC.	SECONDARY
SERV.	SERVICE
SPECS.	SPECIFICATIONS
SQ.	SQUARE
S.F.	SQUARE FEET
SW.	SWITCH
SHT.	SHEET
SIG.	SIGNAL
SN	SOLID NEUTRAL
SURF.	SURFACE
THRU	THROUGH
TEL.	TELEPHONE
TRANSF./XFMR	TRANSFORMER
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VD	VOLTAGE DROP
V.	VOLTAGE/VOLTS
WG	WIREGUARD
WP	WEATHERPROOF
W/	WITH
W/O	WITHOUT

GENERAL ELECTRICAL NOTES

(APPLICABLE TO ALL DRAWINGS)

1. ALL ELECTRICAL WORK PERFORMED SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), CITY, COUNTY, STATE, AND LOCAL CODES AND ORDINANCES.
2. ALL WIRING, UNLESS OTHERWISE NOTED (U.O.N.) ON DRAWINGS, SHALL BE TYPE "THHN," MINIMUM #12 AWG. ALL WIRING SHALL BE COPPER CONDUCTORS; ALUMINUM AND ALUMINUM ALLOY CONDUCTORS WILL NOT BE ACCEPTED.
3. ALL BRANCH CIRCUIT WIRING SHALL UTILIZE AT A MINIMUM ¾" EMT CONDUIT.
4. ELECTRICAL CONTRACTOR SHALL IDENTIFY ALL JUNCTION AND PULL BOXES ABOVE CEILING WITH THE PANELBOARD AND BRANCH CIRCUIT NUMBER MARKED ON COVER PLATE. PROVIDE ENGRAVED BAKELITE NAMEPLATES (1-3/4" X 3-1/2" WITH 3/4" LETTERS) FOR PANELS, MOTOR SAFETY DISCONNECTS, AND CONTROL STATIONS. A NEW TYPEWRITTEN DIRECTORY SHALL BE PROVIDED FOR ALL PANELBOARDS AFFECTED BY THE WORK.
5. PROVIDE LABELING ON ALL OUTLETS THAT DESIGNATE THE CIRCUIT NUMBER AND PANEL. SEE SPECIFICATIONS FOR ADDITIONAL DETAILS.
6. ALL THE CIRCUITING SHOWN IS DIAGRAMMATICAL. CONTRACTOR SHALL PROVIDE JUNCTION AND PULL BOXES AS REQUIRED BY THE NEC. ALL CONDUITS SHALL BE SIZED IN ACCORDANCE WITH THE NEC UNLESS SHOWN LARGER ON DRAWINGS, HOWEVER, NO CONDUIT SHALL BE LESS THAN 1/2" FOR CONTROLS AND 3/4" FOR POWER.
7. ALL CONDUIT EXPOSED TO THE WEATHER SHALL BE STANDARD WALL RIGID GALVANIZED STEEL CONDUIT. U.O.N.
8. ELECTRICAL DRAWINGS ARE DIAGRAMMATICAL ONLY. REFER TO ARCHITECTURAL ELEVATION DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF DEVICES.
9. IT WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE FOR THE TEMPORARY POWER AND LIGHTING REQUIREMENTS.
10. A GROUNDING CONDUCTOR MUST BE PROVIDED IN EACH CONDUIT WHETHER OR NOT THE GROUNDING CONDUCTOR IS SHOWN ON THE DRAWINGS.
11. CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED DURING THE CONSTRUCTION OF HIS WORK.
12. IT IS THE INTENT OF THE ELECTRICAL DRAWINGS TO PROVIDE THE CONTRACTOR WITH SUFFICIENT INFORMATION IN ORDER TO PROVIDE AN INSTALLATION COMPLETE IN EVERY RESPECT. THE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND DO NOT SHOW EVERY CONNECTION OR INSTALLATION IN DETAIL OR ITS EXACT LOCATION. CONTRACTOR SHALL CAREFULLY INVESTIGATE, COORDINATE WITH OTHER TRADES, AND VERIFY ALL FIELD CONDITIONS AND ACTUAL LOCATIONS OF ALL ITEMS SHOWN ON DRAWINGS PRIOR TO COMMENCING ANY WORK. SHOULD THE DRAWINGS DISAGREE WITH ACTUAL CONDITIONS THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
13. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
14. ALL EXTERIOR BUILDING EQUIPMENT TO BE WEATHERPROOF NEMA 3R MINIMUM UNLESS OTHERWISE NOTED.
15. WHERE CONTRACTOR COMBINES MULTIPLE CIRCUITS IN ONE CONDUIT, HE SHALL INSTALL ALL HOMERUN BRANCH AND FEEDER WIRING IN ACCORDANCE WITH NEC 310 AND NEC CHAPTER 9, REGARDING DERATING OF CONDUCTOR AMPACITIES AND ALLOWABLE CONDUIT FILL.
16. EMPTY CONDUITS FOR COMMUNICATION, CABLE TV, ETC. SHALL HAVE A CONDUIT PULLING LINE. LINE SHALL BE RATED 130 LB. TENSILE STRENGTH.
17. RECEPTACLES SHALL BE MOUNTED VERTICALLY UNLESS OTHERWISE INDICATED. MOUNTING HEIGHT FOR RECEPTACLES SHALL BE AS INDICATED ON DRAWING.
18. DO NOT SCALE THE ELECTRICAL DRAWING; REFER TO ARCHITECTURAL PLANS AND ELEVATIONS. FOR EXACT LOCATION OF EQUIPMENT CONFIRM WITH OWNER'S REPRESENTATIVE.
19. DISCONNECT SWITCHES SHALL BE H.P. RATED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
20. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABORATORY (UL) LABELS WHERE APPLICABLE.
21. ALL FUSES, UNLESS NOTED ON DRAWING, SHALL BE CURRENT LIMITING FUSES (C.L.) RATED FOR 200,000 A.I.C.
22. CONNECTION TO MOTOR TERMINAL BOXES, SOLENOIDS, AND ANY OTHER DEVICES HAVING ADJUSTABLE MOUNTING FACILITIES OR WHICH ARE SUBJECT TO VIBRATION SHALL BE MADE IN LIQUID TIGHT FLEXIBLE METAL CONDUIT WHENEVER A FLEXIBLE CONDUIT IS EMPLOYED.
23. ALL RECEPTACLES LOCATED PER NEC SECTION 210.8 SHALL BE GFCI TYPE.
24. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING: ALL JUNCTION, METAL OR NON-METALLIC CONDUIT, WIRING AS REQUIRED; OUTLETS WITH COVERS, SWITCHES, CONNECTORS, CONTROLS AND OTHER ACCESSORIES AS REQUIRED TO MAKE FINAL CONNECTIONS TO ALL ELECTRICAL EQUIPMENT SHOWN FOR A COMPLETE AND FUNCTIONAL OPERATION MEETING ALL APPLICABLE CODES AND ORDINANCES.
25. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS, AND TESTING.
26. PROVIDE CONVENIENCE RECEPTACLES ON THE ROOF FOR ROOF MOUNTED MECHANICAL EQUIPMENT AND CONNECT TO PANEL INDICATED.
27. ALL ELECTRICAL PANELS SHALL BE PROVIDED WITH COPPER BUS AND GROUND BARS.
28. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, WITH OVERLOAD RELAYS IN EACH HOT LEG.
29. FURNISH AND INSTALL DISCONNECT SWITCHES AND WIRING FOR AIR CONDITIONING SYSTEM MOTORS PER MANUFACTURERS' RECOMMENDATIONS. CONTROLS ARE TO BE SUPPLIED BY AIR CONDITIONING CONTRACTOR AND CONNECTED BY ELECTRICAL CONTRACTOR.
30. THE CONTRACTOR SHALL BE EXPECTED TO COORDINATE FULLY WITH THE OWNER'S VENDORS AND INSTALLERS TO FACILITATE THE ORDERLY INSTALLATION OF THE OWNER'S EQUIPMENT AND FURNISHINGS.
31. THE LISTING OF PRODUCT MANUFACTURERS, MATERIALS AND METHODS ARE THE BASIS OF DESIGN AND ARE INTENDED TO ESTABLISH A STANDARD OF QUALITY. THE ENGINEER SHALL BE THE SOLE JUDGE OF QUALITY AND EQUIVALENCE OF EQUIPMENT, MATERIALS AND METHODS. WHERE SUBSTITUTED OR ALTERNATIVE EQUIPMENT IS PROPOSED ON THE PROJECT BEFORE BIDDING, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE EQUIPMENT WILL FIT THE SPACE AVAILABLE, INCLUDING ALL REQUIRED CODE AND MAINTENANCE CLEARANCES, AND TO COORDINATE ALL EQUIPMENT REQUIREMENTS WITH OTHER CONTRACTORS.

GENERAL DEMOLITION NOTES:

(APPLIES TO ALL ELECTRICAL DEMOLITION DRAWINGS)

1. THE INTENT OF THE DEMOLITION DRAWINGS IS TO GIVE THE E.C. AN OVERALL SCOPE OF WORK REQUIRED TO COMPLETE THIS PROJECT AND TO PROVIDE A COMPLETE CLEAN SPACE IN THE AREAS DESIGNATED FOR DEMOLITION PRIOR TO NEW CONSTRUCTION.
2. THE E.C. SHALL REMOVE ALL DEVICES, EQUIPMENT, LIGHTING FIXTURES, ETC. AS NOTED ON DEMOLITION DRAWINGS (LABELED 'D' OR IF TO BE RELOCATED LABELED 'RL'). REMOVALS SHALL INCLUDE ASSOCIATED EQUIPMENT NOT SHOWN (WIRING, CONDUIT, CABLING, HANGERS, TV MOUNTS, ETC.) UNLESS OTHERWISE NOTED. THE E.C. SHALL ALSO BE RESPONSIBLE FOR THE REMOVAL OF POWER WIRING/CONDUIT, STARTERS, DISCONNECTS, ETC. FROM EQUIPMENT BEING REMOVED BY OTHER CONTRACTORS.
3. THE E.C. SHALL REMOVE ALL ITEMS NOTED ABOVE, HOWEVER ALL CHANGES CANNOT BE DETAILED COMPLETELY ON THE DRAWINGS, SOME REMOVALS AND RELOCATIONS OF EXISTING ELECTRIC WORK WILL BE NECESSARY FOR SATISFACTORY PERFORMANCE OF THIS AND OTHER TRADES. EXISTING CONDITIONS SHALL BE FEILD-VERIFIED PRIOR TO SUBMITTING BID.
4. THE E.C. IS CAUTIONED THAT WHEN PERFORMING DEMOLITION WORK CIRCUITRY SERVING AREAS OF THE BUILDING OUTSIDE THE WORK AREA MUST REMAIN IN OPERATION.
5. PROVIDE RECONNECTIONS AND TEMPORARY INSTALLATIONS AS REQUIRED; REMOVE AT JOB COMPLETION.
6. PRIOR TO THE START OF DEMOLITION, CHECK TO DETERMINE THAT POWER, COMMUNICATION SERVICES, ETC., SUCH AS ELECTRICITY AND TELEPHONE, HAVE BEEN DISCONNECTED AT THE SOURCE OF SUPPLY.
7. WHERE SYSTEM SERVE AREAS NOT BEING DEMOLISHED, MAINTAIN CONTINUOUS SERVICE ON FEEDERS, CIRCUITS OR PARTIAL CIRCUITS, AND OUTLETS AFFECTED BY THIS WORK, EXCEPT WHERE ARCHITECT GIVES WRITTEN PERMISSION FOR OUTAGE FOR SPECIFIED TIME. ALL WORK REQUIRING SHUT DOWN OF EXISTING SYSTEMS SHALL BE PERFORMED ON OVERTIME AT HOURS AS APPROVED BY THE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER. SUBMIT SCHEDULE OF REQUIRED OUTAGES TO THE OWNER FOR APPROVAL. PERFORM WORK IN A MANNER TO MINIMIZE SHUTDOWN TIME.
8. WHEN DISCONNECTING EQUIPMENT FROM EXISTING CIRCUITS, IF EQUIPMENT IS CONNECTED TO THE CIRCUIT WHICH MUST REMAIN ACTIVE, THE CIRCUIT CONTINUITY SHALL BE MAINTAINED AS REQUIRED. WIRING FROM CIRCUITS BECOMING COMPLETELY INACTIVE SHALL BE REMOVED BACK TO THE SOURCE OF SUPPLY.
9. ANY AND ALL ABANDONED LOW VOLTAGE CABLING IN AREA OF DEMOLITION SHALL BE REMOVED IN ITS ENTIRETY BACK TO SOURCE. LOW VOLTAGE CABLING SHALL INCLUDE, BUT NOT BE LIMITED TO, TELEPHONE, DATA, FIRE ALARM, ETC. COORDINATE THIS WORK WITH OWNER'S I.T. DEPARTMENT.
10. ALL FIRE ALARM DEVICES IN AFFECTED AREA SHALL BE PROTECTED FOR ALL NEW WORK, BUT CONTRACTOR SHALL MAINTAIN THE CONTINUITY OF THE FIRE ALARM SYSTEM DEVICES INCLUDING EQUIPMENT NOT RELATED TO THIS SCOPE OF WORK.
11. THE E.C. IS RESPONSIBLE, AT HIS OWN EXPENSE, TO REPAIR ANY SERVICES OR DAMAGES CAUSED BY HIS DEMOLITION WORK.
12. THE CONTRACTOR SHALL FURNISH AND ERECT BARRIERS, AND MAINTAIN APPROVED DANGER, WARNING, AND 'KEEP OUT' SIGNS AT LOCATIONS WHERE THE PLACING OF SUCH SIGNS IS WARRANTED FOR SAFETY OF ALL PERSONNEL NOT WORKING IN THIS AREA.
13. DEMOLITION SHALL BE PERFORMED IN SUCH A MANNER AS TO AVOID HAZARDS TO PERSONS AND PROPERTY, INTERFERENCE WITH THE USE OF ADJACENT PROPERTIES, AND INTERRUPTION OF FREE PASSAGE TO AND FROM SUCH PROPERTY. WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL MUNICIPAL, STATE AND FEDERAL RULES, REGULATIONS, CODES, AND LAWS WHICH MAY GOVERN AND APPLY TO THIS WORK.
14. DURING THE DEMOLITION WORK IN THE EFFECTED AREAS, THE BUILDING NON-WORK AREAS MUST BE PROTECTED FROM DUST, DIRT AND POSSIBLE WATER DAMAGE, TO THE OWNER'S SATISFACTION.
15. ALL AREAS SHALL BE CLEANED AND FREE OF ALL DEBRIS RESULTING FROM THE DEMOLITION WORK ON A DAILY BASIS.
16. THE E.C. SHALL INCLUDE IN THEIR PRICE THE TEMPORARY POWER & LIGHTING REQUIRED FOR THE DEMOLITION PROCESS, INCLUDING ANY PREMIUM TIME ASSOCIATED WITH SCHEDULING & REQUIREMENTS FROM THE OWNER. COORDINATE WITH GENERAL CONTRACTOR ON EXACT REQUIREMENTS.
17. THE OWNER RESERVES THE RIGHT TO CLAIMING ANY MATERIALS AND EQUIPMENT REMOVED DURING DEMOLITION THAT WILL NOT BE REUSED. REMOVE WITHOUT DAMAGE ALL SUCH EQUIPMENT AND TURN OVER AND DELIVER TO OWNER AT LOCATION DESIGNATED BY THE OWNER. THE E.C. IS RESPONSIBLE TO REMOVE FROM SITE ANY ABANDONED MATERIALS AND EQUIPMENT NOT CLAIMED BY THE OWNER.

MECHANICAL / ELECTRICAL EQUIPMENT CONNECTIONS SCHEDULE

EQUIPMENT / TAG	DISCONNECT		STARTER		NOTES
	FURNISHED BY	INSTALLED BY	FURNISHED BY	INSTALLED BY	
PDU-1	M.C.	M.C.	M.C.	M.C.	1 2
CU-PDU-1	M.C.	M.C.	M.C.	M.C.	1 2
EF-1	M.C.	M.C.	M.C.	M.C.	1 2
VFD-EF-1	M.C.	M.C.	M.C.	M.C.	1 2
EF-2	M.C.	M.C.	M.C.	M.C.	1 2
VFD-EF-2	M.C.	M.C.	M.C.	M.C.	1 2
EF-3 (LIVING CENTER)	M.C.	M.C.	M.C.	M.C.	1 2
DU-1	M.C.	M.C.	M.C.	M.C.	1 2
CU-DU-1	M.C.	M.C.	M.C.	M.C.	1 2
CU-1, CU-2	E.C.	E.C.	N/A	N/A	1 2
ATC-1, ATC-2, ATC-3, ATC-4	M.C.	M.C.	M.C.	M.C.	1 2
B-1-3, B-3-1, B-3-2, B-3-3, B-3-4	M.C.	M.C.	M.C.	M.C.	1 2
P-1, P-2, P-3, P-1-3, P-4, P-5, P-6, P-7, P-8	M.C.	M.C.	M.C.	M.C.	1 2
SC-1, SC-2	E.C.	E.C.	N/A	N/A	1 2
RT

LIGHTING FIXTURE SCHEDULE

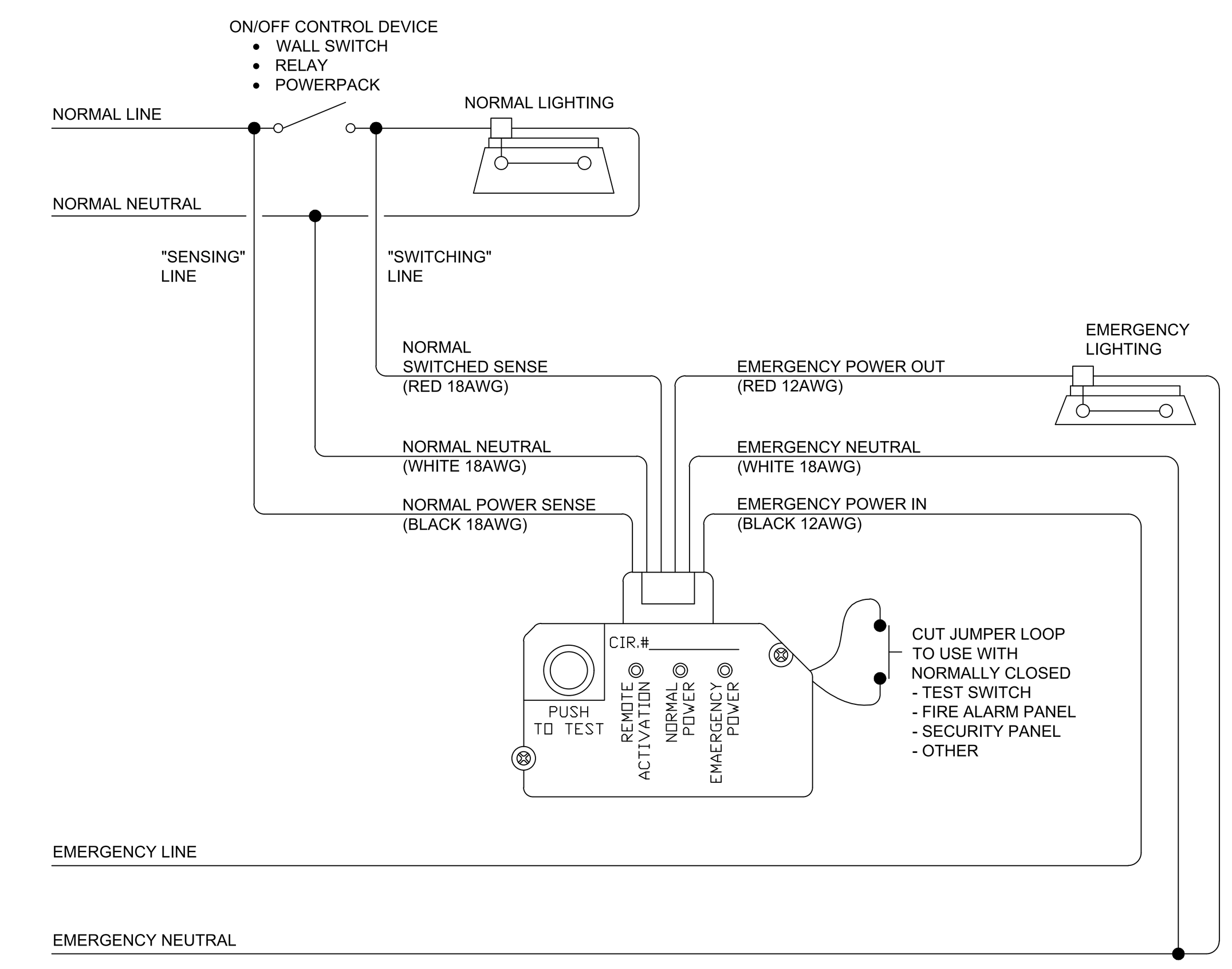
TYPE	MANUFACTURER	CATALOG NO.	LAMPS	VOLTS	DESCRIPTION
A1	KEYSTONE	KT-BPLED50PS-24-8CSA-VDIM/G2-FC1-PIR	40W LED 3600 LUMENS 3500K	UNIV.	2' x 4' LED RECESSED FLAT PANEL WITH 0-10V, 1% - 100% DIMMING DRIVER LOCKED DOWN TO 20W AND INTEGRAL PIR MOTION SENSOR. FIXTURE TO MATCH EXISTING CORRIDOR FIXTURES INSTALLED DURING RECENT ENERGY PERFORMANCE CONTRACT.
B1	METALUX	22EN-LD2-30-UNV-L835-CD1	24.9W LED 3000 LUMENS 3500K	UNIV.	2' x 2' LED RECESSED VOLUMETRIC LUMINAIRE WITH SYMMETRIC DISTRIBUTION, SMOOTH WHITE ACRYLIC LENSES, AND 0-10V, 1% - 100% DIMMING DRIVER.
B2	METALUX	22EN-LD2-34-UNV-L835-CD1	28.5W LED 3400 LUMENS 3500K	UNIV.	2' x 2' LED RECESSED VOLUMETRIC LUMINAIRE WITH SYMMETRIC DISTRIBUTION, SMOOTH WHITE ACRYLIC LENSES, AND 0-10V, 1% - 100% DIMMING DRIVER.
B3	METALUX	24EN-LD2-54-UNV-L835-CD1	43W LED 5410 LUMENS 3500K	UNIV.	2' x 4' LED RECESSED VOLUMETRIC LUMINAIRE WITH SYMMETRIC DISTRIBUTION, SMOOTH WHITE ACRYLIC LENSES, AND 0-10V, 1% - 100% DIMMING DRIVER.
C1	METALUX	2RGB6-SL1--EL7WSD-L8SCT3-DF-62W-U	M-16W LED M-750 LUMENS/FT 4000K	UNIV.	4" APERATURE, 6" WIDE x 2' LONG RECESSED SLOT WITH SCRATCH AND IMPACT RESISTANT DIFFUSER, FIELD SELECTABLE LUMEN AND CCT SETTINGS, 0-10V DIMMING TO 10% AND DRYWALL FLANGE KIT.
C2	METALUX	4RGB6-SL1-EL14WSD-L8SCT3-DF-62W-U	M-27.5W LED M-750 LUMENS/FT 4000K	UNIV.	4" APERATURE, 6" WIDE x 4' LONG RECESSED SLOT WITH SCRATCH AND IMPACT RESISTANT DIFFUSER, FIELD SELECTABLE LUMEN AND CCT SETTINGS, 0-10V DIMMING TO 10% AND DRYWALL FLANGE KIT.
D1	METALUX	4ILED-LD5-11-W-TBN-UNV-L835-CD2-AYC-CHAIN/SET/U-ILED-4-WG-PK	60W LED 11000 LUMENS 4000K	UNIV.	4' LINEAR HIGH BAY PENDANT LED LUMINAIRE WITH 11" WIDE STEEL HOUSING, THIN WHITE BAFFLE AND (2) 0-10V DIMMING DRIVERS. PROVIDE WITH WIREGUARD AND 36" CHAIN HANGERS.
F1	METALUX	4ILED-LD5-7-W TWBWG-UNV-L840-CD1-U	50.4W LED 7000 LUMENS 3000-4000K	UNIV.	4' LINEAR LED STRIPLIGHT WITH FLAT FROSTED DIFFUSE LENS, DL LENS, SELECTABLE COLOR TEMP, WHITE FINISH, 0-10V DIMMING DRIVER, 36" CHAIN HANGERS AND WIREGUARD
F2	METALUX	8ILED-LD5-10-W ASYWG-UNV-L840-CD1-U	67.0W LED 1000 LUMENS 3000-4000K	UNIV.	8' LINEAR LED STRIPLIGHT WITH FLAT FROSTED DIFFUSE LENS, DL LENS, SELECTABLE COLOR TEMP, WHITE FINISH, 0-10V DIMMING DRIVER, 36" CHAIN HANGERS AND WIREGUARD
G1	AXIS	EX4PDIPAT-R(79'x48'6")+OPR(4)-1500-1300-80-35-BW-BW-AP-UNV-DP-2+NL(1)-RS(X)+N	4792W LED 3500K	UNIV.	77' x 48' ENTEND4 PATTERN SERIES RECTANGULAR SHAPE PENDANT MOUNTED LED FIXTURE WITH LIT 90° CORNERS, NATATORIUM RATED ALUMINUM FINISH, BATWING SHIELDING, UNIVERSAL VOLTAGE AND 0-10V, 1% DIMMING DRIVER.
H1	AXIS	EX4PD-1200-80-35-BW-8'-AP-UNV-DP-1-SA(96)+N	98W LED 9601 LUMENS 3500K	UNIV.	8FT ENTEND4 SERIES PENDANT MOUNTED LED FIXTURE WITH NATATORIUM RATED ALUMINUM FINISH, BATWING SHIELDING DOWN, UNIVERSAL DIMMING DRIVER WITH 0-10V DIMMING.
H2	AXIS	EX4WD-600-80-35-GZ-8'-AP-UNV-DP-1-WB+N	486W LED 4801 LUMENS 3500K	UNIV.	8FT ENTEND4 SERIES WALL MOUNTED LED FIXTURE WITH NATATORIUM RATED ALUMINUM FINISH, GRAZE SHIELDING DOWN, UNIVERSAL DIMMING DRIVER WITH 0-10V DIMMING.
J1	KIRLIN	LRR-05110-2000L-35	20.3W LED 2000 LUMENS 3500K	UNIV.	5" ROUND SHOWERLIGHT WITH RUSTPROOF AND CORROSION RESISTANT HOUSING, ELECTRICALLY NON-CONDUCTING "DEAD FRONT", WHITE POLYCARBONATE TRIM WITH RADIAL CLEAR POLYCARBONATE LENS, 0-10V 1% DIMMING, WET LOCATION LISTING
K1	KIRLIN	LRC-04LDN-3000L-UNV-RND-40K-30T-NAT	11.2W LED 743 LUMENS 3500K	UNIV.	4" ROUND DOWNLIGHT WITH SHALLOW RUSTPROOF ALUMINUM HOUSING, WHITE SELF-FLANGESD REGRESSED TRIM WITH MICROPRISMATIC LENS, 0-10V 1% DIMMING, WET LOCATION LISTING
L1	HALO	ML204LSFL95FS1E-TIR1D25NFL TL2RDSLB-468LM-3500K	9W LED 200/400/550 LUMENS 3500K	UNIV.	2" DIA. ROUND CANLESS LED ADJUSTABLE DOWNLIGHT WITH MATTE WHITE TRIM, SELF-FLANGED, NARROW FLOOD (25 DEGREE) DISTRIBUTION, AND 0-10V DIMMING DRIVER
M1	BUZZISPACE	BUZZIDOME	29W LED 2545 LUMENS 3500K	UNIV.	31.5" ROUND PENDANT MOUNTED 5'6" A.F.F.
N1	PORTFOLIO	LD4C-02-90-35-2	3.5W LED 250 LUMENS 3500K	UNIV.	4" DIA. ROUND LED DOWNLIGHT WITH SELF-FLANGED, SEMI-SPECULAR CLEAR REFLECTOR, WIDE (80 DEGREE) DISTRIBUTION.
N2	PORTFOLIO	LD4C-08-90-35-2-DLV	48W LED 800 LUMENS 3500K	UNIV.	4" DIA. ROUND LED DOWNLIGHT WITH SELF-FLANGED, SEMI-SPECULAR CLEAR REFLECTOR, WIDE (80 DEGREE) DISTRIBUTION, AND 0-10V, 1% - 100% DIMMING DRIVER
N3	PORTFOLIO	LD4C-30-90-35-2-DLV	48W LED 3000 LUMENS 3500K	UNIV.	4" DIA. ROUND LED DOWNLIGHT WITH SELF-FLANGED, SEMI-SPECULAR CLEAR REFLECTOR, WIDE (80 DEGREE) DISTRIBUTION, AND 0-10V, 1% - 100% DIMMING DRIVER
P2	AXIS SLATE 1	SL1-2-SO-50-200-80-35	4.1W LED 200 LUMENS/FT 3500K	UNIV.	1" x 2' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P3	AXIS SLATE 1	SL1-3-SO-50-200-80-35	5.8W LED 200 LUMENS/FT 3500K	UNIV.	1" x 3' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P4	AXIS SLATE 1	SL1-4-SO-50-200-80-35	7.5W LED 200 LUMENS/FT 3500K	UNIV.	1" x 4' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P5	AXIS SLATE 1	SL1-5-SO-50-200-80-35	9.0W LED 200 LUMENS/FT 3500K	UNIV.	1" x 5' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P6	AXIS SLATE 1	SL1-6-SO-50-200-80-35	10.5W LED 200 LUMENS/FT 3500K	UNIV.	1" x 6' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P7	AXIS SLATE 1	SL1-7-SO-50-200-80-35	11.9W LED 200 LUMENS/FT 3500K	UNIV.	1" x 7' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P8	AXIS SLATE 1	SL1-8-SO-50-200-80-35	13.3W LED 200 LUMENS/FT 3500K	UNIV.	1" x 8' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.

LIGHTING FIXTURE SCHEDULE (CONT.)

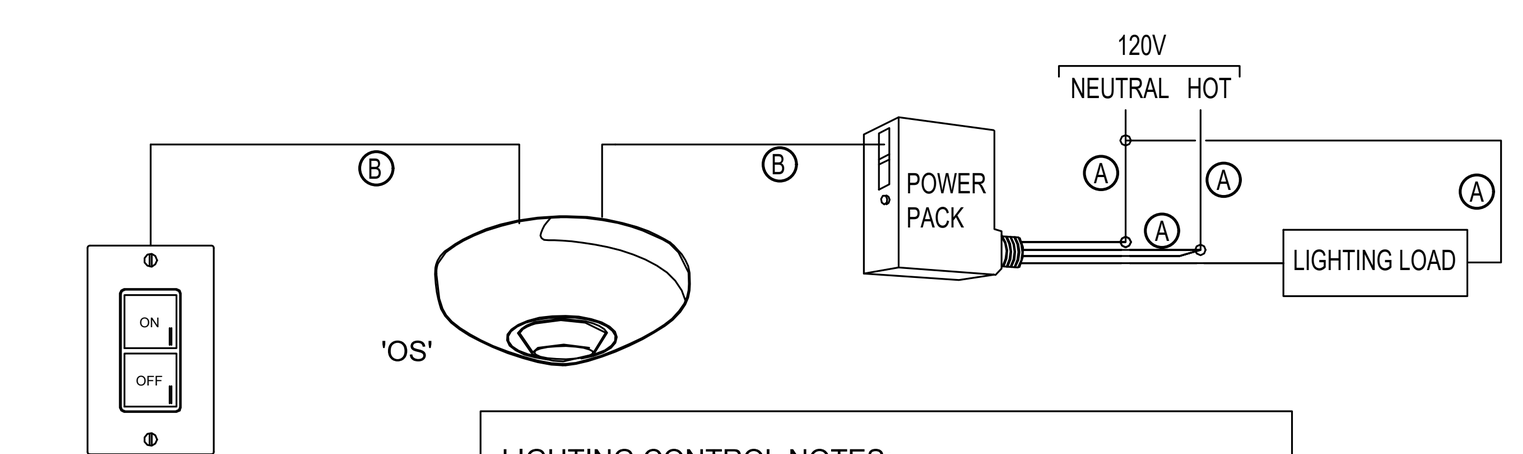
TYPE	MANUFACTURER	CATALOG NO.	LAMPS	VOLTS	DESCRIPTION
P2A	AXIS SLATE 1	SL1-2-SO-50-300-80-35	7.6W LED 300 LUMENS/FT 3500K	UNIV.	1" x 2' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P4A	AXIS SLATE 1	SL1-4-SO-50-300-80-35	13.6W LED 300 LUMENS/FT 3500K	UNIV.	1" x 4' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P6A	AXIS SLATE 1	SL1-6-SO-50-300-80-35	19.3W LED 300 LUMENS/FT 3500K	UNIV.	1" x 6' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P8A	AXIS SLATE 1	SL1-8-SO-50-300-80-35	25.8W LED 300 LUMENS/FT 3500K	UNIV.	1" x 8' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING.
P3B	AXIS SLATE 1	SL1-3-SO+AC-50-200-80-35	7.6W LED 2346 LUMENS 3500K	UNIV.	1" x 3' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING - WITH ACCENT LIGHTS. COMES WITH 1FT SO LENS (200LM/FT) + 6 ACCENT LIGHTS (2346).
P5B	AXIS SLATE 1	SL1-5-SO+AC-50-200-80-35	7.6W LED 2346 LUMENS 3500K	UNIV.	1" x 5' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING - WITH ACCENT LIGHTS. COMES WITH 2FT SO LENS (200LM/FT) + 6 ACCENT LIGHTS (2346).
P8B	AXIS SLATE 1	SL1-8-SO+AC-50-200-80-35	7.6W LED 2346 LUMENS 3500K	UNIV.	1" x 8' LINEAR FIXTURE TO REPLACE ONE BLADE IN ARCHITECTURAL TURF GRILLE CEILING - WITH ACCENT LIGHTS. COMES WITH 4FT SO LENS (200LM/FT) + 6 ACCENT LIGHTS (2346).
Q	BUZZI GLOBE	BUZZI SOLO WITH GLOBE	19W LED 1500 LUMENS 3500K	UNIV.	5.91" ROUND PENDANT MOUNTED 5'-6" A.F.F.
R	AXIS CLICK	CLKLED-400-80-35-SO-4-W-UNV-DP-1	32W LED 400 LUMENS/FT 3500K	UNIV.	3.5" x 8' RECESSED MOUNTED LINEAR FIXTURE.
S1	HESS AMERICA	SE3200GW-40K-DIM-UNV-BL-TVSS20	28W LED 3400 LUMENS 4000K	UNIV.	EXTERIOR WALL MOUNTED COLUMN LIGHT WITH MATTE ACRYLIC CYLINDRICAL LENS, WHITE LIGHT, ALUMINUM HOUSING, BLACK FINISH AND DIMMING DRIVER.
T1	LITHONIA	WSQLED-P2-50K-SR2-MVOLT-PE-DBLXD	29W LED 2943 LUMENS 5000K	UNIV.	EXTERIOR WALL SCONCE WITH TYPE II DISTRIBUTION, INTEGRAL PHOTOCELL AND BLACK FINISH.
U	COOPER IO LED	CS-SL-9SCT-120-ID UNV-W-SA-STD-1F	3.5W LED 369 LUMENS 3500K	UNIV.	INTERIOR WALL WASH FIXTURE. FIELD SELECTABLE CCT AND LUMENS. 1F LENGTH, 150FT PER RUN. RAN IN ARCHITECTURAL CREVICE, FLOOR TO CEILING (~8FT).
V1	FAILSAFE	FSP-24-38HE-35-CA125	28.5W LED 3800 LUMENS 3500K	UNIV.	2' x 4' LED RECESSED FIXTURE WITH WITH 0-10V, 10% DIMMING, INNER FROSTED SMOOTH ACRYLIC LENS AND OUTER CLEAR ACRYLIC GASKETED LENS. NSF LISTED FOR USE IN FOOD SERVICE APPLICATIONS
W1	AXIS STELLA	TDST55-SB-MB-FIX-90 35-W-AXT-DP	18W LED 900 LUMENS 3500K	UNIV.	2.125" DIA SPOTLIGHT. 90 CRI, 35 DEGREE BEAM ANGLE AND SHALLOW BAFFLE. E.C. IS TO PROVIDE 16' AXIS LINEAR STENCIL TRACK FOR FIXTURE TO MOUNT TO.
X	T-BAR FLEX JLC-TECH	TBFL-MW-LO-64-15-D-A-B UNV-IP	4.2W/FT LED 354 LUMENS/FT 3500K	UNIV.	64.37" L x 9/16" W FIXTURE REPLACES 1 PIECE OF CEILING GRID FRAME. 3500K COLOR TEMPERATURE, 82 CRI, 60K HOUR RATING, IP65 RATED.
	LITHONIA	EDGR-W-1/2-RMR	3W LED	UNIV.	CEILING MOUNTED QUANTUM SERIES RECESSED LED EDGE-LIT EXIT SIGN WITH WHITE CANOPY, RED LETTERING, MIRRORED PANEL BACKGROUND (SINGLE OR DOUBLE FACE), CHEVRONS AS REQUIRED.
	LITHONIA	EDG-W-1-RMR	3W LED	UNIV.	WALL MOUNTED QUANTUM SERIES RECESSED LED EDGE-LIT EXIT SIGN WITH WHITE CANOPY, RED LETTERING, MIRRORED PANEL BACKGROUND (SINGLE FACE), CHEVRONS AS REQUIRED.
W	LITHONIA	WLTE-W-1-R-SD	3W LED	UNIV.	WALL MOUNTED INDURA SERIES WET LOCATION LED EXIT SIGN WITH WHITE IMPACT RESISTANT AND CORROSION RESISTANT THERMOPLASTIC HOUSING, RED LETTERING AND CHEVRONS AS REQUIRED.

LIGHTING FIXTURE SCHEDULE NOTES:

1. ALL FIXTURES SHALL MATCH COLOR TEMPERATURE OF EXISTING LIGHTING IN WORK SPACE.
2. COORDINATE FIXTURE TYPES, COLORS, AND FINISHES WITH ARCHITECT AND OWNER PRIOR TO ORDERING.
3. EXIT SIGNS SHALL BE CIRCUITED AHEAD OF ANY SWITCHING. PROVIDE CHEVRONS FOR EXIT SIGNS AS INDICATED ON THE DRAWINGS.
4. PROVIDE PROPER MOUNTING AND SUPPORTS FOR CEILING TYPE.



1 / E-002 — EMERGENCY LIGHTING CONTROL UNIT ELCU-200 TYPICAL WIRING
SCALE: NONE



(A) #12 AWG THHN
(B) CATEGORY 6 CABLE

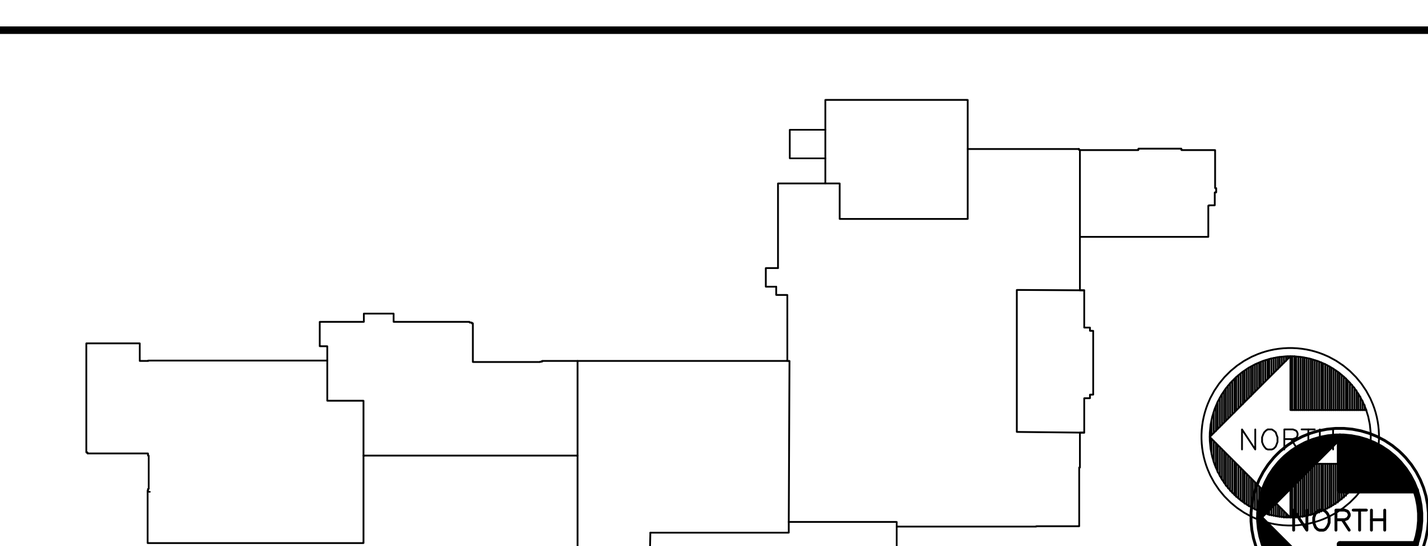
LIGHTING CONTROL NOTES:

1. LIGHTING SHALL BE MANUALLY TURNED ON AND AUTOMATICALLY TURNED OFF.
2. OCCUPANCY SENSORS SHALL BE SET TO TURN OFF LIGHTING 20 MINUTES AFTER ROOM IS VACATED.

2 / E-002 — LIGHTING CONTROL DETAIL
SCALE: NONE

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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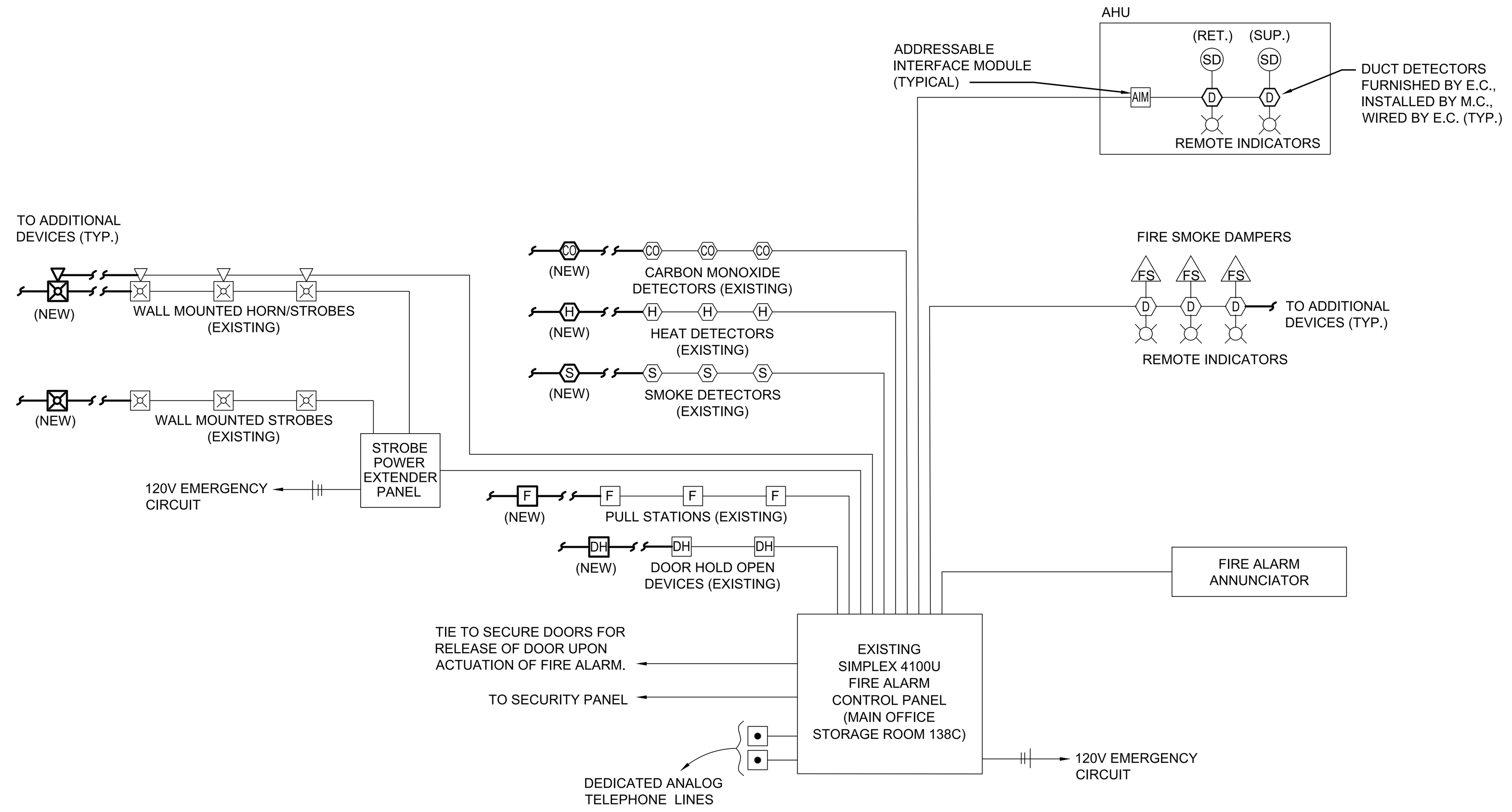
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
LIGHTING FIXTURE SCHEDULE AND DETAILS

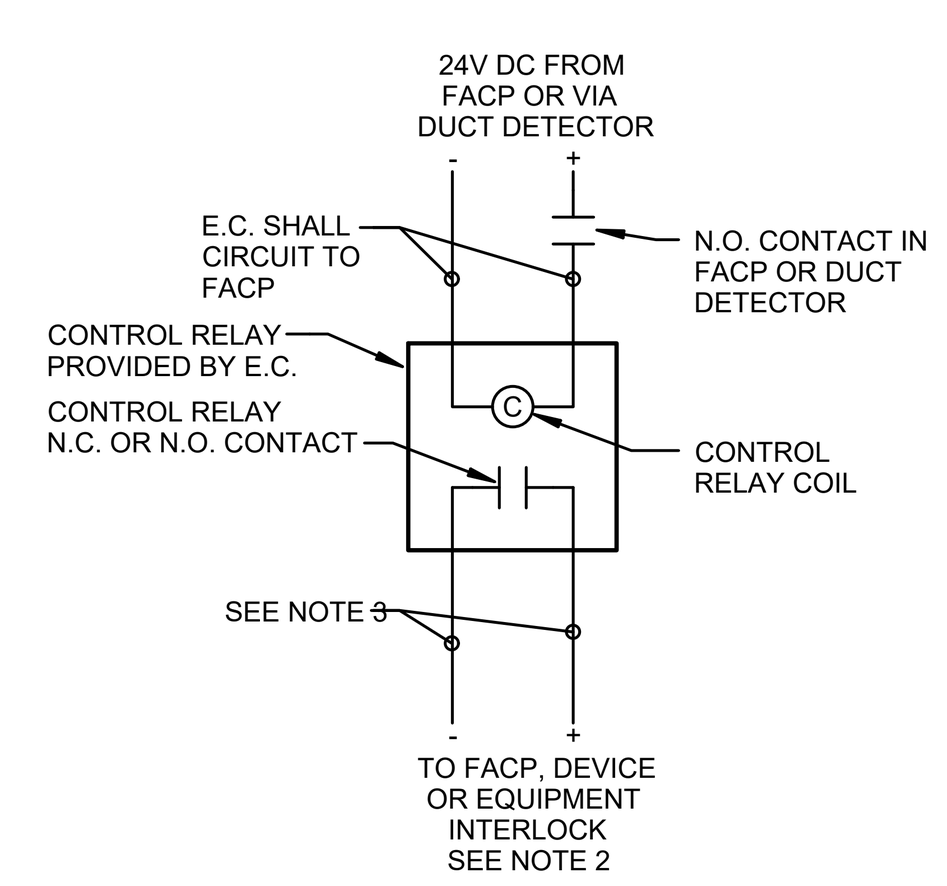
DRAWN BY: R.F.C.
PROJECT NO.: 2024-239P
CHECKED BY: L.K.N.
DATE: 12-01-2025
BUILDING: HS
DRAWING NO.: E-002

CAD FILE: 4239-HS-E-002.DWG
PLOT DATE: 11/25/2025



FIRE ALARM RISER DIAGRAM

SCALE: NTS



FIRE ALARM CONTROL RELAY WIRING DIAGRAM

SCALE: NONE

NOTES:

1. WIRING DIAGRAM DEPICTS TYPICAL CONDITIONS AND IS SHOWN FOR REFERENCE ONLY. EXACT DIAGRAMS AND DETAILS SHALL BE PROVIDED BY FIRE ALARM VENDOR, IN CONJUNCTION WITH CONTROLS VENDOR AND CORRESPONDING EQUIPMENT VENDOR.
2. FIRE CONTROL RELAYS SHALL BE PROVIDED FOR EACH DETECTOR FOR ALARM SIGNAL, TROUBLE SIGNAL, ALARM SIGNAL TO ATC PANEL, UNIT SHUTDOWN AND SMOKE DAMPER OPERATION. SHALL BE MECHANICAL CONTRACTORS RESPONSIBILITY
3. CONTRACTOR SHALL WIRE INPUT OF ALL CONTROL RELAYS TO FACP. CONTRACTOR SHALL WIRE THROUGH OUTPUT OF CONTROL RELAY(S) FOR ATC PANEL AND UNIT SHUTDOWN. THE CONTRACTOR SHALL WIRE THROUGH THE OUTPUT OF CONTROL RELAY(S) FOR ALARM SIGNAL, TROUBLE SIGNAL, AND SMOKE DAMPER OPERATION.

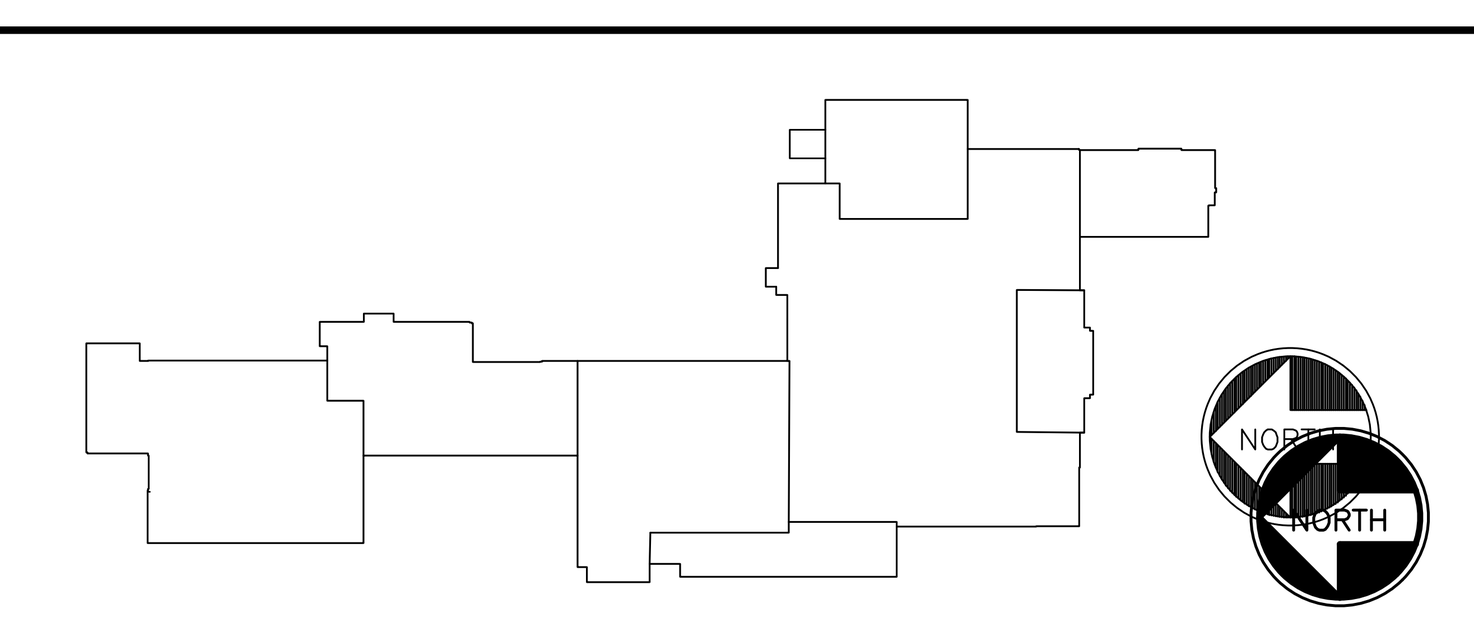
FIRE ALARM SYSTEM RISER NOTES:

1. THE EXISTING FIRE ALARM SYSTEM MANUFACTURER IS SIMPLEX. THE FIRE ALARM RISERS PROVIDED ARE DIAGRAMMATIC REPRESENTATIONS OF GENERAL SYSTEM CONFIGURATION AND PERFORMANCE REQUIREMENTS, TYPES OF INITIATING DEVICES AND NOTIFICATION APPLIANCES, AND SYSTEM CIRCUIT REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN A POINT-TO-POINT WIRING DIAGRAM FROM THE FIRE ALARM MANUFACTURER AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.
2. EXISTING DEVICES SHALL BE RELOCATED AND NEW DEVICES ADDED WHERE REQUIRED. PROVIDE ALL REQUIRED ADDITIONAL HARDWARE, SOFTWARE, PROGRAMMING, EQUIPMENT, CABLE, BOXES, RACEWAY, ETC. TO FURNISH A COMPLETE AND FULLY OPERATIONAL SYSTEM.
3. INSTALL ALL FIRE ALARM DEVICES IN ACCORDANCE WITH THE NFPA 72, NEC, ADA GUIDELINES, MANUFACTURER'S INSTRUCTIONS AS WELL AS THE REQUIREMENTS OF LOCAL FIRE DEPARTMENT, FIRE MARSHALL AND AUTHORITY HAVING JURISDICTION.
4. ALL WORK SHALL BE COORDINATED WITH OWNER AND FIRE ALARM VENDOR/MANUFACTURER PRIOR TO INSTALLATION.
5. THE SYSTEM MANUFACTURER SHALL INCLUDE WITH SHOP DRAWING SUBMITTAL A COMPLETE WIRING DIAGRAM SHOWING ALL DEVICES AND ALL REQUIRED WIRING. THIS WIRING DIAGRAM SHALL BE SPECIFIC FOR THIS PROJECT. TYPICAL WIRING DIAGRAMS WILL NOT BE ACCEPTED. INCLUDE BATTERY CALCULATIONS AND VOLTAGE DROP CALCULATIONS.
6. PROVIDE MANUAL PULL STATIONS, AUDIO/VISUAL INDICATING APPLIANCES, VISUAL INDICATING APPLIANCES, SMOKE DETECTORS, AND ALL OTHER FIRE ALARM DEVICES AS INDICATED ON THE PLANS. ALL DEVICES SHALL BE ADDRESSABLE AND FULLY COMPATIBLE WITH FIRE ALARM CONTROL PANEL(S), AND ANNUNCIATOR PANEL(S). FIRE ALARM SYSTEM SHALL BE CIRCUITED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND WIRING DIAGRAMS.
7. INSTALLATION SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY NICET AS FIRE ALARM LEVEL IV.
8. ALL QUANTITY AND LOCATION OF FIRE ALARM DEVICES SHALL BE INDICATED ON THE FLOOR PLANS.
9. REPLACE OR PROVIDE ADDITIONAL NAC EXPANDER PANEL(S) AS NECESSARY TO SUPPLY POWER TO THE NOTIFICATION APPLIANCES.
10. FIRE ALARM WIRING SHALL BE CLASS B SIGNAL LINE CIRCUIT.
11. FIRE ALARM CABLING SHALL BE PLENUM RATED. CABLING SHALL BE INSTALLED IN 3/4"C. MINIMUM WHERE EXPOSED, INSTALLED ABOVE INACCESSIBLE CEILINGS, FOR RISERS IN WALLS TO ABOVE ACCESSIBLE CEILING, AND WHERE SUSCEPTIBLE TO DAMAGE.
12. ALL THROUGH PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE FIRESTOPPED.
13. ALL JUNCTION BOXES SHALL BE ACCESSIBLE AND CLEARLY MARKED FOR SERVICE. PROVIDE ANY REQUIRED ACCESS PANELS.
14. ALL CABLE RUNS SHALL BE NEATLY BUNDLED. WRAPPED TIGHTLY AND PROPERLY SECURED. MARK BOTH ENDS OF ALL CABLES (AND ANY INTERMEDIATE SPLICES) AND PROVIDE A WIRE LEGEND.
15. ALL CABLING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AND NOT FROM THE CEILING GRID, TILES, OR SUPPORT WIRES. EXPOSED CABLING SHALL BE SUPPORTED AT NOT MORE THAN FIVE (5) FOOT INTERVALS.
16. ALL DEVICES SHALL BE MOUNTED AS PER ADA SPECIFICATIONS. MANUAL PULL STATIONS SHALL BE MOUNTED AT 42" A.F.F. TO CENTER. ALARM INDICATING APPLIANCES (STROBES, SPEAKERS, COMBINATION UNITS, ETC.) SHALL BE MOUNTED SUCH THAT THE ENTIRE STROBE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR. ALL STROBES SHALL BE IN SYNCH.
17. ALL DEVICES SHALL BE INSTALLED IN A MANNER THAT PROVIDE ACCESSIBILITY FOR PERIODIC MAINTENANCE PER NFPA 72.
18. TAG ALL FIRE ALARM CABLES AT THE FACP, JUNCTION BOXES AND AT ALL SPLICE POINTS.
19. INSTALL CEILING SMOKE DETECTORS AT LEAST (3) FEET FROM AIR DIFFUSERS.
20. DUCT DETECTORS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR (E.C.) AND INSTALLED BY THE MECHANICAL CONTRACTOR (M.C.). NORMALLY CLOSED CONTACTS IN THE DETECTOR BASE SHALL BE PROVIDED BY THE E.C. FOR SMOKE DAMPER OPERATION. THE M.C. SHALL WIRE THROUGH A CONTACT CLOSURE IN FACP/EXTENDER PANEL FOR SUPPLY FAN SHUT-DOWN. THE E.C. SHALL WIRE THROUGH AN AUXILIARY CONTACT OF THE DETECTOR FOR SMOKE DAMPER OPERATION. THE E.C. SHALL WIRE THE DETECTORS TO THE FIRE ALARM CONTROL PANEL. COORDINATE ALL WORK WITH M.C.
21. ALL FIRE ALARM DAMPERS SHALL BE TIED INTO THE FIRE ALARM SYSTEM VIA RELAY INDIVIDUAL ADDRESSABLE MODULES (IAMS). UPON ACTIVATION OF FIRE ALARM SYSTEM, FIRE DAMPER SHALL CLOSE AND NOTIFY SUPPLY FAN TO SHUT DOWN
22. THE SYSTEM MANUFACTURER SHALL INCLUDE WITH THE SHOP DRAWING SUBMITTAL, A COMPLETE WIRING DIAGRAM SHOWING ALL DEVICES AND ALL REQUIRED WIRING. THIS WIRING DIAGRAM SHALL BE SPECIFIC FOR THIS PROJECT. TYPICAL WIRING DIAGRAMS WILL NOT BE ACCEPTED. INCLUDE BATTERY CALCULATIONS AND VOLTAGE DROP CALCULATIONS. DEVICES SHALL BE CIRCUITED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND WIRING DIAGRAM(S).
23. AFTER INSTALLATION, TEST ALL DEVICES AS WELL AS AN OVER ALL SYSTEMS TEST. SYSTEM SHALL BE TESTED BY AUTHORIZED PERSONNEL, ONLY, IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS PRIOR TO OCCUPANCY. ALL CONDUCTORS (INCLUDING SHIELDS) MUST TEST FREE OF OPENS, SHORTS, AND GROUNDS BEFORE WIRING CONNECTIONS TO FIRE ALARM EQUIPMENT CAN BE MADE. VERIFY ALL COMPONENTS OF THE SYSTEM OPERATE PROPERLY. VERIFY ALL RESPONSIBILITIES WITH EQUIPMENT VENDOR PRIOR TO TESTING.
24. FIRE ALARM SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES:
    - MANUAL PULL STATIONS.
    - HEAT DETECTORS.
    - SMOKE DETECTORS.
    - DUCT SMOKE DETECTORS, IF CONSTANTLY ATTENDED LOCATION IS NOT AVAILABLE FOR SUPERVISORY SIGNAL INITIATION.
    - VERIFIED AUTOMATIC ALARM OPERATION OF SMOKE DETECTORS.
    - FIRE EXTINGUISHING SYSTEM OPERATION.
25. FIRE ALARM SIGNAL SHALL INITIATE THE FOLLOWING ACTIONS:
    - ALARM NOTIFICATION APPLIANCES SHALL OPERATE CONTINUOUSLY.
    - IDENTIFY ALARM AT THE FIRE ALARM CONTROL PANEL (FACP) AND REMOTE ANNUNCIATOR PANEL(S).
    - DE-ENERGIZE ELECTROMAGNETIC DOOR HOLDERS.
    - TRANSMIT AN ALARM SIGNAL TO THE REMOTE ALARM RECEIVING STATION.
    - UNLOCK ELECTRIC DOOR LOCKS IN DESIGNATED EGRESS PATHS.
    - RELEASE FIRE AND SMOKE DOORS HELD OPEN BY ELECTROMAGNETIC DOOR HOLDERS.
    - PROVIDE CONTACT CLOSURE IN FACP FOR EACH DUCT DETECTOR ZONE TO DE-ENERGIZE HEATING, VENTILATING, AND AIR CONDITIONING UNITS. INTERFACE WIRING FURNISHED AND INSTALLED BY M.C.
    - ELEVATOR RECALL SEQUENCE.
    - CLOSE SMOKE DAMPERS VIA AUXILIARY CONTACTS IN LOCAL SMOKE DETECTORS IN AIR DUCTS OF SYSTEM SERVING ZONE IN WHICH ALARM WAS INITIATED. WIRING FURNISHED AND INSTALLED BY E.C.
    - RECORD EVENTS IN SYSTEM MEMORY.
    - RECORD EVENTS BY SYSTEM PRINTER.
26. SUPERVISORY SIGNAL INITIATION AT A CONSTANTLY ATTENDED LOCATION SHALL BE BY ONE FOR MORE OF THE FOLLOWING DEVICES OR ACTIONS:
    - OPERATION OF FIRE PROTECTION SYSTEM VALVE TAMPER SWITCH.
    - DUCT SMOKE DETECTORS
    - IF A CONSTANTLY ATTENDED LOCATION IS NOT AVAILABLE, THESE DEVICES OR ACTIONS SHALL INITIATE AN ALARM SIGNAL AT THE FIRE ALARM CONTROL PANEL.
27. SYSTEM TROUBLE SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES OR ACTIONS:
    - OPEN CIRCUITS, SHORTS, AND GROUNDS OF WIRING FOR INITIATION DEVICE, SIGNALING LINE, AND NOTIFICATION APPLIANCE CIRCUITS.
    - OPENING, TAMPERING, OR REMOVAL OF ALARM-INITIATING AND SUPERVISORY SIGNAL INITIATING DEVICES.
    - LOSS OF PRIMARY POWER AT FACP.
    - GROUND OR SINGLE BREAK IN FACP INTERNAL CIRCUITS.
    - ABNORMAL AC VOLTAGE AT THE FACP.
    - A BREAK IN STANDBY BATTERY CIRCUITRY.
    - FAILURE OF BATTERY CHARGING SYSTEM.
    - ABNORMAL POSITION OF ANY SWITCH AT THE FACP OR ANNUNCIATOR PANEL.
28. SYSTEM TROUBLE AND SUPERVISORY SIGNAL ACTIONS:
    - RING TROUBLE BELL AND ANNUNCIATE AT THE FACP AND REMOTE INDICATORS.
    - RECORD THE EVENT ON SYSTEM PRINTER.
29. SUBMITTALS HALL BE PROVIDED WITH PRODUCT DATA (FOR EACH TYPE OF PRODUCT SHOWN ON THE DRAWINGS) FOR SHOP DRAWINGS. SHOP DRAWINGS SHALL BE PREPARED BY INDIVIDUALS TRAINED AND CERTIFIED BY THE MANUFACTURER IN FIRE ALARM DESIGN AS WELL AS FIRE ALARM CERTIFIED LEVEL IV BY NICET.

SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING AND SHALL ALSO BE SUBMITTED TO THE LOCAL FIRE OFFICIAL:
- SYSTEM OPERATION DESCRIPTION: DETAILED DESCRIPTION FOR THIS PROJECT, INCLUDING METHOD OF OPERATION AND SUPERVISION OF EACH TYPE OF CIRCUIT AND SEQUENCE OF OPERATION FOR MANUALLY AND AUTOMATICALLY INITIATED SYSTEM INPUTS AND OUTPUTS. MANUFACTURER'S STANDARD DESCRIPTIONS FOR GENERIC SYSTEMS ARE NOT ACCEPTABLE.
- DEVICE ADDRESS LIST: COORDINATE WITH FINAL SYSTEM PROGRAMMING.
- WIRING DIAGRAMS: POWER, SIGNAL, AND CONTROL WIRING: INCLUDE DIAGRAMS FOR EQUIPMENT AND FOR OVERALL SYSTEM WITH ALL TERMINALS AND INTERCONNECTIONS IDENTIFIED. INDICATE WIRING COLOR CODE.
- DUCT SMOKE DETECTORS: PERFORMANCE PARAMETERS AND INSTALLATION DETAILS FOR EACH DETECTOR, VERIFYING THAT EACH DETECTOR IS LISTED FOR THE COMPLETE RANGE OF AIR VELOCITY, TEMPERATURE, AND HUMIDITY POSSIBLE WHEN AIR HANDLING SYSTEM IS OPERATING.
- DUCTWORK COORDINATION DRAWINGS: PLANS, SECTIONS, AND ELEVATIONS OF DUCTS, DRAWING TO SCALE AND COORDINATING THE INSTALLATION OF DUCT SMOKE DETECTORS AND ACCESS TO THEM. SHOW CRITICAL DIMENSIONS THAT RELATE TO PLACEMENT AND SUPPORT OF SAMPLING TUBES, THE DETECTOR HOUSING, AND REMOTE STATUS AND ALARM INDICATORS. LOCATE THE DETECTORS ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
- FLOOR PLANS: INDICATE FINAL OUTLET LOCATIONS INDICATING ADDRESS OF EACH ADDRESSABLE DEVICE. SHOW SIZE AND ROUTE OF CABLE AND CONDUITS.
- VOLTAGE DROP: PROVIDE CALCULATIONS.
- PROVIDE MODEL NUMBERS AND LISTING INFORMATION FOR EQUIPMENT, DEVICES, AND MATERIALS.
- BATTERIES: PROVIDE SIZE CALCULATIONS.
- SYSTEM RISER DIAGRAM WITH DEVICE ADDRESSES, CONDUIT SIZES, AND CABLE AND WIRE TYPES AND SIZES.
- SHOP DRAWINGS SHALL BE PROVIDED IN ACCORDANCE WITH IBC 2018 REQUIREMENTS AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
    - A FLOOR PLAN WHICH INDICATES THE USE OF ALL ROOMS.
    - LOCATIONS OF ALARM-INITIATING AND NOTIFICATION APPLIANCES.
    - ALARM CONTROL AND TROUBLE SIGNALING EQUIPMENT.
    - ANNUNCIATION.
    - POWER CONNECTION.
    - BATTERY CALCULATIONS.
    - CONDUCTOR TYPE AND SIZES.
    - VOLTAGE DROP CALCULATIONS.
    - MANUFACTURERS, MODEL NUMBERS, AND LISTING INFORMATION FOR EQUIPMENT, DEVICES, AND MATERIALS.
    - DETAILS OF CEILING HEIGHT AND CONSTRUCTION.
    - THE INTERFACE OF FIRE SAFETY CONTROL FUNCTIONS.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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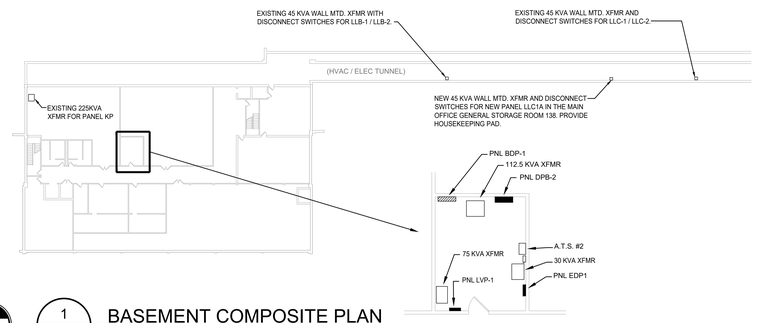
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRE ALARM RISER DIAGRAM AND NOTES

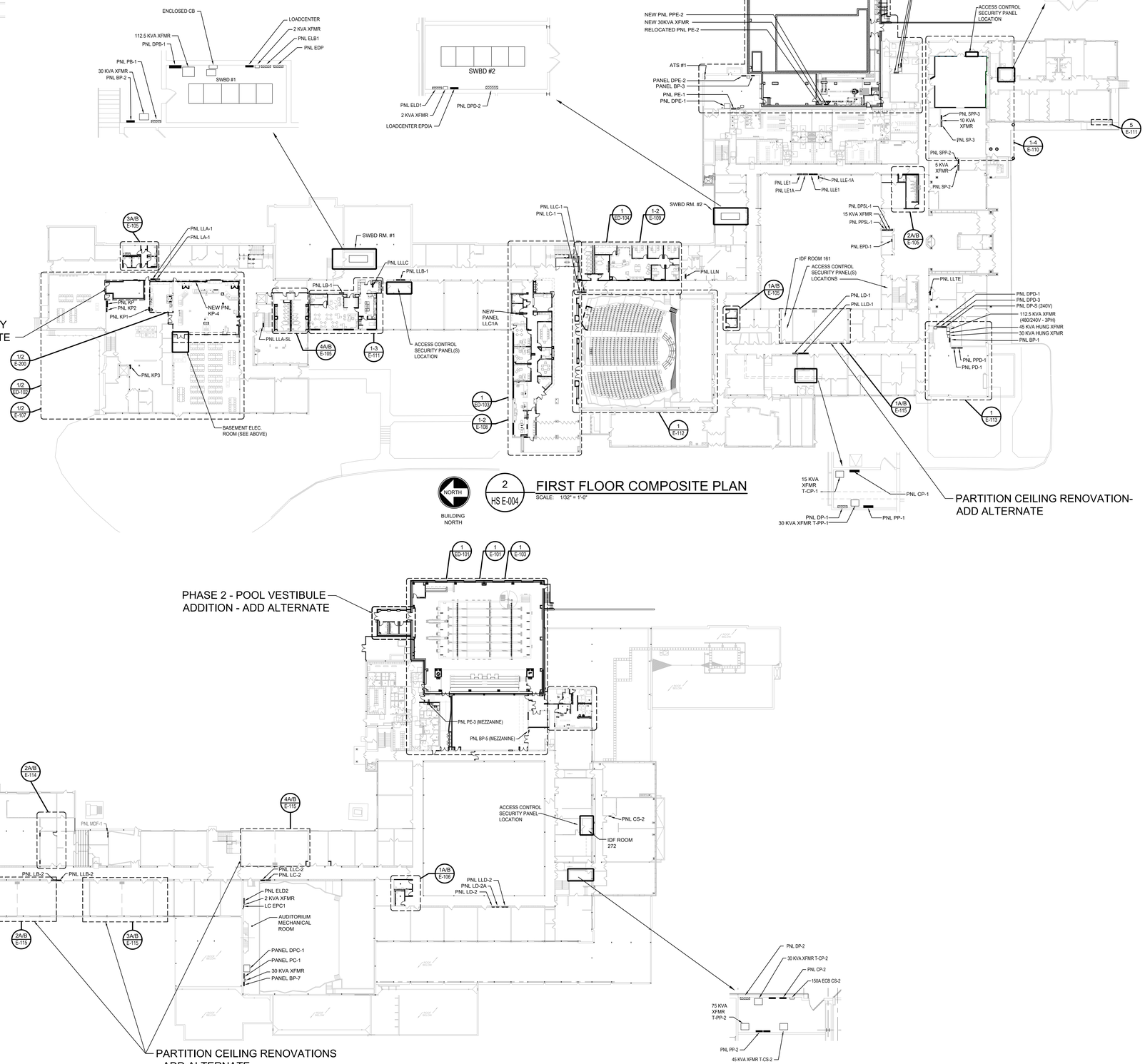
DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: E-003

CAD FILE: 4239-HS-E-003.DWG
PLOT DATE: 11/25/2025



NORTH
BUILDING NORTH

1 HS E-004 **BASEMENT COMPOSITE PLAN**
SCALE: 1/32" = 1'-0"



NORTH
BUILDING NORTH

2 HS E-004 **FIRST FLOOR COMPOSITE PLAN**
SCALE: 1/32" = 1'-0"

NORTH
BUILDING NORTH

3 HS E-004 **SECOND FLOOR COMPOSITE PLAN**
SCALE: 1/32" = 1'-0"

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

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New York • Pennsylvania

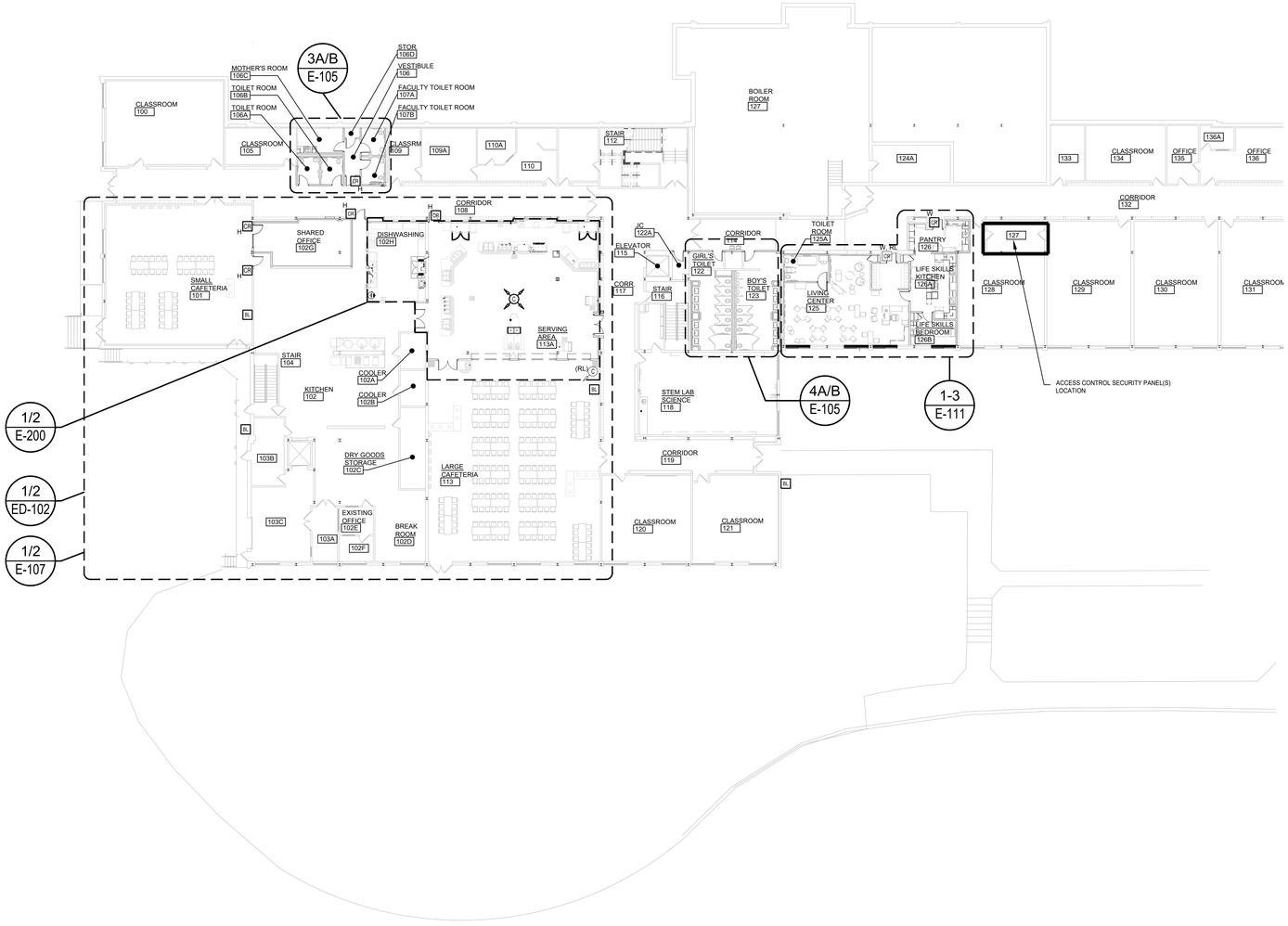
19/2024

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
ELECTRICAL COMPOSITE PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING: / DRAWING NO.:
L.K.N.	HS / E-004
DATE: 12-01-2025	

DWG FILE: E004-ELEC.DWG
PLOT DATE: 11/26/25



KEY:

EL	ELECTRIC LATCH
DC	DOOR CONTACT
DR$_H$	HARDWIRED CARD READER TO INCLUDE REQUEST TO EXIT SENSOR, DOOR CONTACTS, CONTROLLER IF REQURIED AND CABLING TO ACCESS CONTROL PANEL FURNISHED AND INSTALLED BY DAY AUTOMATION. ALL DOOR HARDWARE PROVIDED BY OTHERS.
DR$_W$	WIRELESS ELECTRONIC LOCK WITH CARD READER AND PIM MODULE IF REQUIRED FURNISHED AND INSTALLED BY DAY AUTOMATION. ALL DOOR HARDWARE PROVIDED BY OTHERS.
	WALL MOUNTED CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION
	CEILING MOUNTED CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION
RX	REQUEST TO EXIT SENSOR
IC	INTERCOM FURNISHED AND INSTALLED BY DAY AUTOMATION
VC	INTERCOM CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION
	DOOR RELEASE PUSHBUTTON FURNISHED AND INSTALLED BY DAY AUTOMATION
DH	DOOR HOLD OPEN DEVICE
LD	EMERGENCY LOCKDOWN ACTIVATION BUTTON, PROVIDED BY DAY AUTOMATION
BL	BLUE LOCKDOWN STROBE & HORN, PROVIDED BY DAY AUTOMATION

PROJECT SUMMARY:

(DAY AUTOMATION EST # DAY-023087)

DAY AUTOMATION SHALL PROVIDE THE FOLLOWING NEW WORK TO THE HIGH SCHOOL AND TRANSPORTATION BUILDING WHERE INDICATED ON FLOOR PLANS, INCLUDING ALL PARTS, INSTALLATION, PROGRAMMING AND LICENSES.

SEE DRAWINGS HS-E-005A-D FOR HIGH SCHOOL DEVICES TO BE ADDED AND DRAWINGS BG-E-101 AND BG-E-102 FOR TRANSPORTATION BUILDING DEVICES TO BE ADDED.

NEW WORK PROVIDED BY DAY AUTOMATION SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

- WIRELESS ACCESS CONTROL CARD READERS
- HARDWIRED ACCESS CONTROL CARD READERS
- REQUEST TO EXIT SENSORS
- DOOR CONTACTS
- CAMERAS - RELOCATIONS AND NEW
- VIDEO INTERCOM STATION
- INTERCOM MASTER STATION
- DOOR RELEASE BUTTONS

RESPONSIBILITIES CLARIFICATIONS AND EXCLUSIONS:

- THE ELECTRICAL CONTRACTOR, AS A SUBCONTRACTOR OF DAY AUTOMATION, SHALL MOUNT THE WIRELESS LOCKSETS AND ANY REQUIERD PIM MODULES.
- THE ELECTRICAL CONTRACTOR SHALL ALSO, AS A SUBCONTRACTOR OF DAY AUTOMATION, FURNISH AND INSTALL PLENUM RATED CAT 6 CABLE FROM EACH NEW PIM LOCATION, IF REQUIRED, TO I.T. CLOSET. CABLE SHALL COMPLY WITH TIA/EIA-568. (CLOSET LOCATION AND CABLE JACKET COLOR AS DIRECTED BY DISTRICT'S I.T. DEPARTMENT).
- HARDWIRED ACCESS CONTROLS, INCLUDING CARD READER, REQUEST TO EXIT SENSOR AND DOOR CONTACTS, SHALL BE PROVIDED BY DAY AUTOMATION.
- ALL NEW CONTROLLERS REQURED FOR ACCESS CONTROL DOORS SHALL BE PROVIDED BY DAY AUTOMATION.
- DOOR HARDWARE AND LOCKSET CYLINDERS WILL BE FURNISHED AND INSTALLED BY THE DISTRICT.
- ALL REQUIRED LICENSES PROVIDED BY DAY AUTOMATION.
- ALL REQUIRED PROGRAMMING, TESTING AND SYSTEM COMMISSIONING PERFORMED BY DAY AUTOMATION.
- ALL NETWORK SWITCHE(S) FURNISHED AND INSTALLED BY DISTRICT.
- MANAGEMENT OF NETWORK SWITCHES SHALL BE BY THE DISTRICT.
- ALL NETWORK CONNECTIVITY AND STATIC IP ADDRESSES WILL BE PROVIDED BY THE DISTRICT.
- ALL WORK TO BE PERFORMED DURING REGULAR BUSINESS HOURS (7:00AM TO 3:30PM, MONDAY – FRIDAY, EXCLUDING HOLIDAYS).
- DAY AUTOMATION TECHNICIANS ASSUME EITHER FREE ACCESS OR ESCORTED ACCESS TO ALL REQUIRED AREAS OF THE FACILITY DURING THE INSTALLATION.
- DAY AUTOMATION SHALL INCLUDE A 1 YEAR WARRANTY. WARRANTY DOES NOT APPLY TO EXISTING EQUIPMENT/CABLE.

- SYSTEM ENGINEERING PROVIDED BY DAY AUTOMATION TO INCLUDE THE FOLLOWING:

- SUBMITTALS TO INCLUDE SITE SPECIFIC RISER DIAGRAMS, TERMINATION DETAILS, FLOOR PLANS SHOWING DEVICE LOCATIONS AND SPEC SHEETS.
- AS-BUILT DRAWINGS.
- WARRANTY, CLOSE-OUT DOCUMENTATION.
- OPERATION & MAINTENANCE MANUALS

- PROJECT MANAGEMENT / FIELD IMPLEMENTATION TO BE PROVIDED BY DAY AUTOMATION:

- COORDINATE THE IMPLEMENTATION OF THE PROJECT WITH THE DISTRICT.
- COORDINATE THE IMPLEMENTATION OF THE PROJECT WITH ELECTRICAL CONTRACTOR.
- PROGRAMMING.
- FIELD TESTING.
- (1) 4-HOUR USER TRAINING SESSION.

GENERAL NOTES

(APPLIES TO ALL DRAWINGS):

1. REFER TO PROJECT SUMMARY ON THIS SHEET DESCRIBING WORK TO BE PROVIDED.
2. ALL LOCKSETS SUPPLIED / INSTALLED UNDER THIS CONTRACT ARE FREE EGRESS AND WILL NOT HAVE ANY ADDITIONAL REQUIREMENTS OR DEADBOLTS TO EGRESS THE PROTECTED SPACE.
3. E.C. SHALL PROVIDE ALL REQUIRED 120V ELECTRICAL CIRCUITS AT NEW AND EXISTING ACCESS DOORS AS REQUIRED FOR THIS WORK.
4. INSTALLATION SHALL COMPLY WITH THE LATEST RULES AND REGULATIONS OF THE NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL SAFETY CODE, ALL NFPA CODES, AND ALL OTHER NATIONAL, STATE OR MUNICIPAL CODES APPLICABLE TO THIS PROJECT.

NORTH
BUILDING NORTH

1
HS E-005A

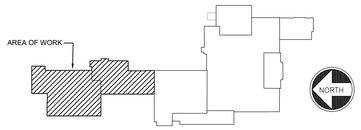
FIRST FLOOR NORTH DAY AUTOMATION COMPOSITE PLAN

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

Day Automation
Rochester Syracuse Elmira Albany New Paltz
1-800-836-0969 Facsimile 1-585-924-4698

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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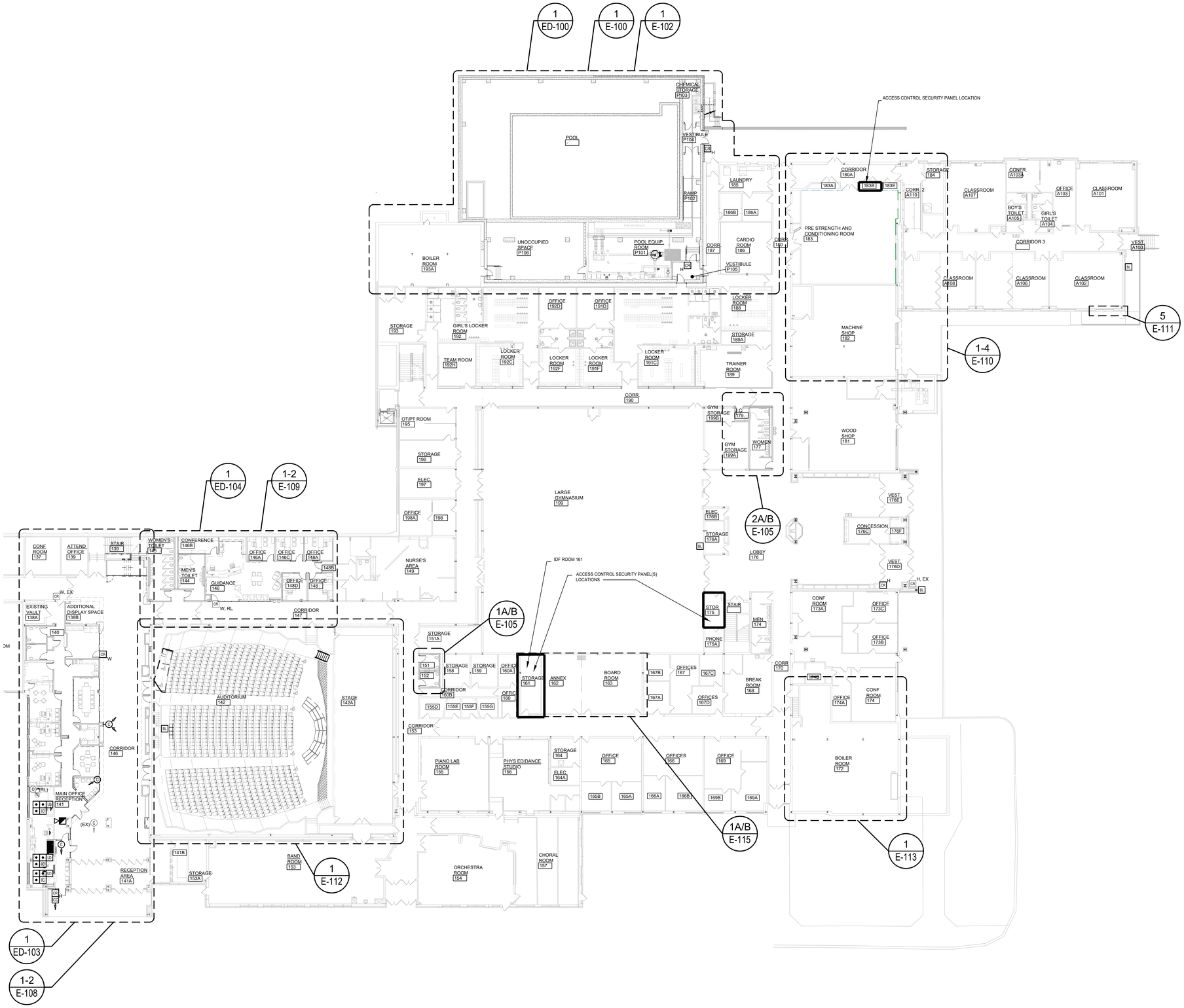
19/2024

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
DAY AUTOMATION COMPOSITE PLANS
FIRST FLOOR NORTH

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-005A
DATE: 12-01-2025	

DWG FILE: 10x36-E-005A.DWG
PLOT DATE: 11/20/2025



NORTH

BUILDING NORTH

1 HS E-005B

FIRST FLOOR SOUTH DAY AUTOMATION COMPOSITE PLAN

SCALE: 1/32" = 1'-0"

REVISIONS

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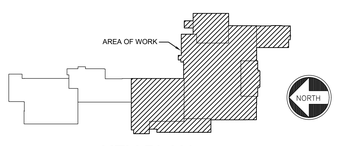

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
DAY AUTOMATION COMPOSITE PLANS
FIRST FLOOR SOUTH

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
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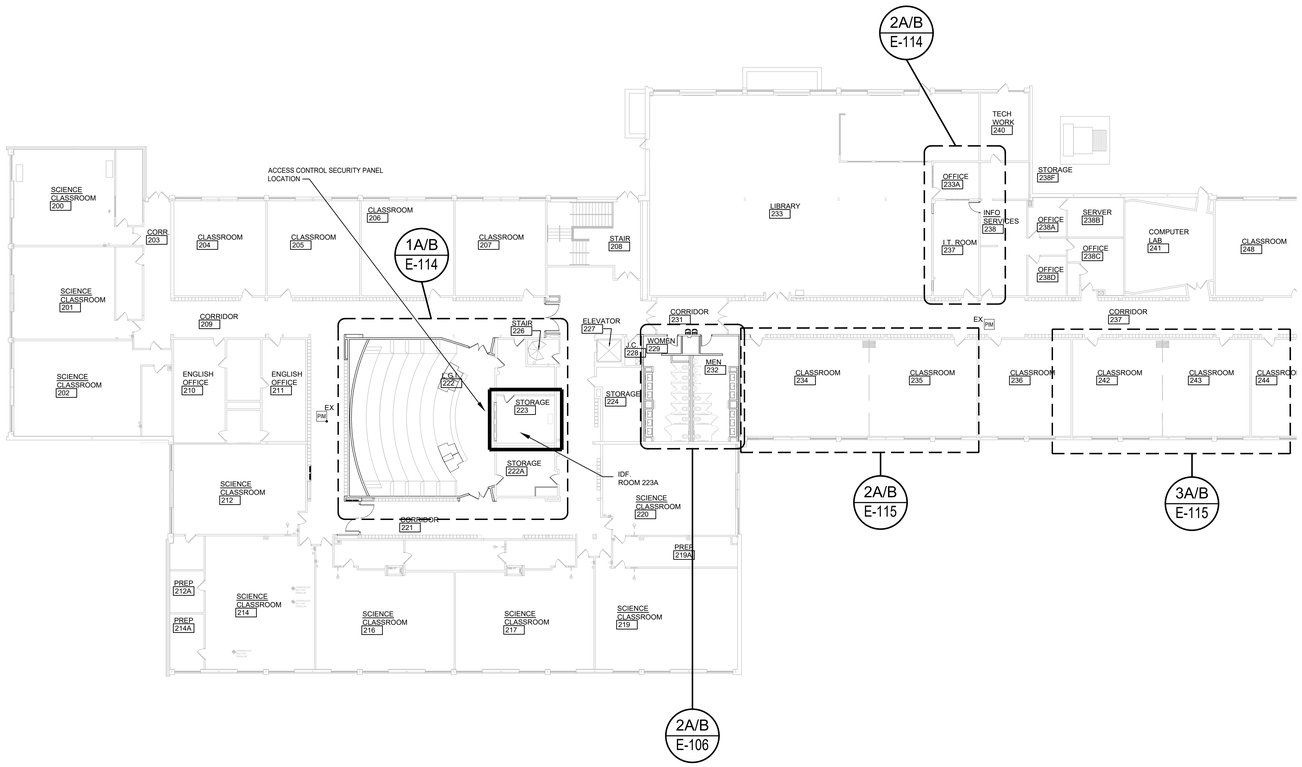
L.K.N.	HS / E-005B
DATE: 12-01-2025	

DATE/TIME PLOTTED: 12/19/2024 11:53:03 AM



NORTH

BUILDING NORTH

1 HS E-005C

SECOND FLOOR NORTH DAY AUTOMATION COMPOSITE PLAN

SCALE: 1/32" = 1'-0"

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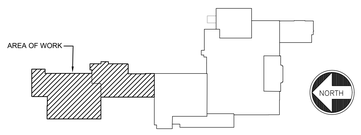

KEY PLAN

CAPITAL PROJECTS

PHASE 2
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K-8 SED #3-15-02-06-0-020-017
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PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:

DAY AUTOMATION COMPOSITE PLANS
SECOND FLOOR NORTH

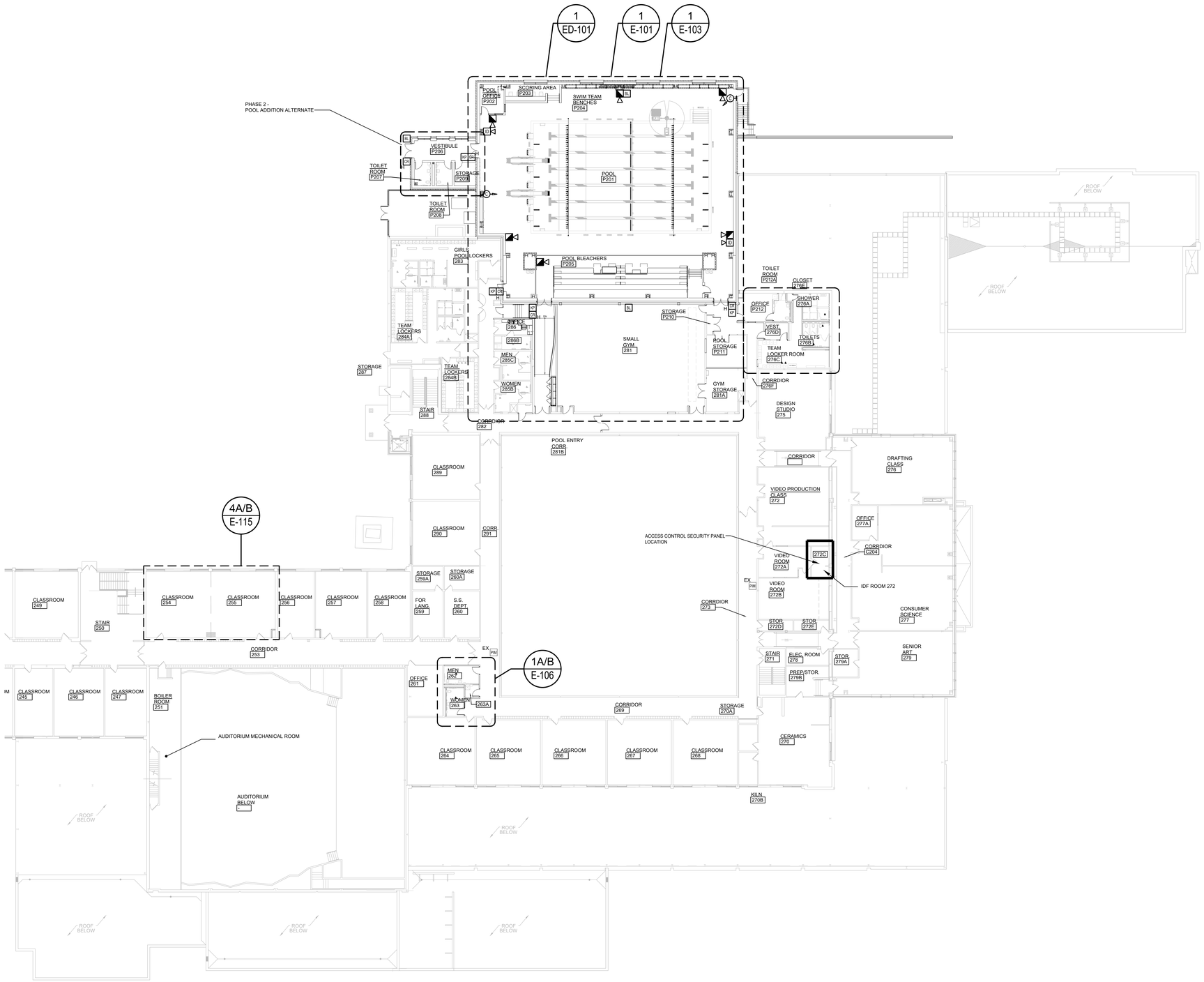
DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-005C
DATE: 12-01-2025	

DWG FILE:
PLOT DATE: 12/20/25

POOL INTRUSION DETECTION LEGEND

- MOTION DETECTOR - LONG RANGE (200'x15') 90° FIELD, MOUNT 6'-0" ABOVE FLOOR. DUAL TECHNOLOGY.
- KP — POOL INTRUSION SYSTEM ARM/DISARM KEYPAD. MOUNTED 48" A.F.F.
- ID — POOL INTRUSION SYSTEM AUDIBLE/VISUAL DEVICE. MOUNTED 80" A.F.F.

SEE DRAWING HS-E103 FOR FURTHER INFORMATION.



NORTH
BUILDING NORTH

1 / HS E-005D — SECOND FLOOR SOUTH DAY AUTOMATION COMPOSITE PLAN

SCALE: 1/32" = 1'-0"

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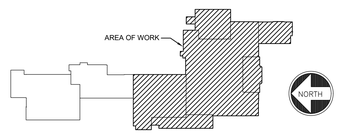

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
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Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
DAY AUTOMATION COMPOSITE PLANS SECOND FLOOR SOUTH

DRAWN BY:	PROJECT NO.:
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L.K.N.	HS / E-005D
DATE: 12-01-2025	

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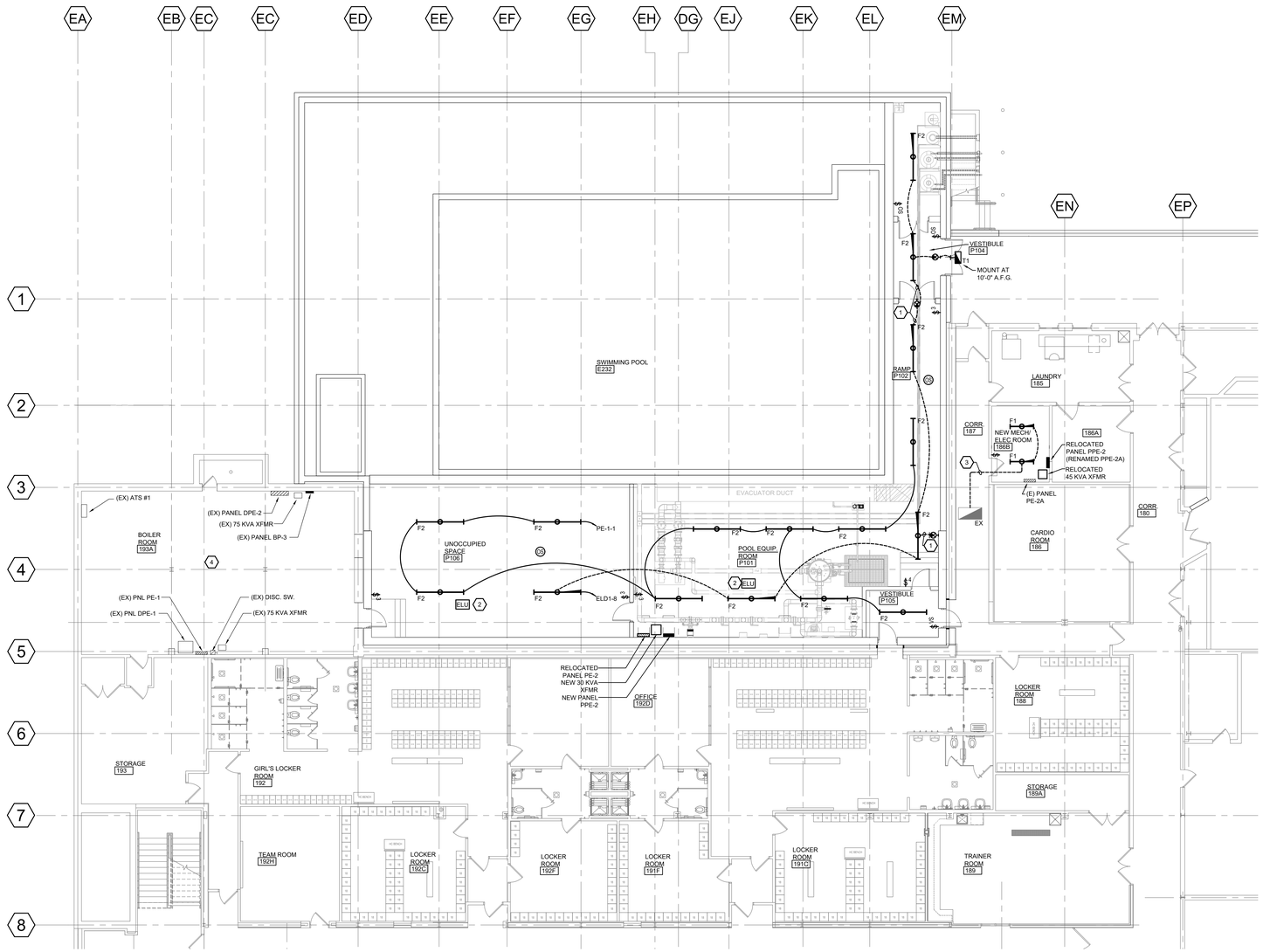

FIRST FLOOR - UNIT E
LIGHTING RENOVATION PLAN

1 / HS E-100

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

LIGHTING RENOVATION KEYNOTES

1. TIE NEW LIGHTING TO EXISTING CORRIDOR NORMAL-EMERGENCY LIGHTING CIRCUIT USING 2/12,#12G IN 3/4"C AHEAD OF ALL SWITCHING.
2. RUN EMERGENCY LIGHTING FIXTURES (SHOWN HALF-SHADED) THROUGH AN EMERGENCY LIGHTING CONTROL UNIT ALLOWING THE FIXTURE TO BE SWITCHED WITH ROOM LIGHTING SWITCH AND STILL ILLUMINATE TO FULL BRIGHTNESS DURING A POWER OUTAGE REGARDLESS OF ROOM SWITCH POSITION.
3. TIE CIRCUIT TO NEAREST CORRIDOR EMERGENCY LIGHTING CIRCUIT USING 2#12, #12G IN 3/4"C.
4. ALL DISTRIBUTION EQUIPMENT IN THIS ROOM TO REMAIN, EQUIPMENT IS SHOWN FOR REFERENCE.
5. ALL WORK SHOWN DARK SHALL BE NEW.

DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN
(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK
(D) INDICATES ITEM TO BE DEMOLISHED
(RL) INDICATES RELOCATED ITEM

REVISIONS

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December 1, 2025

AREA OF WORK

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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PROJECT TITLE:
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Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - UNIT E
LIGHTING
RENOVATION PLAN

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
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DATE: 12-01-2025	

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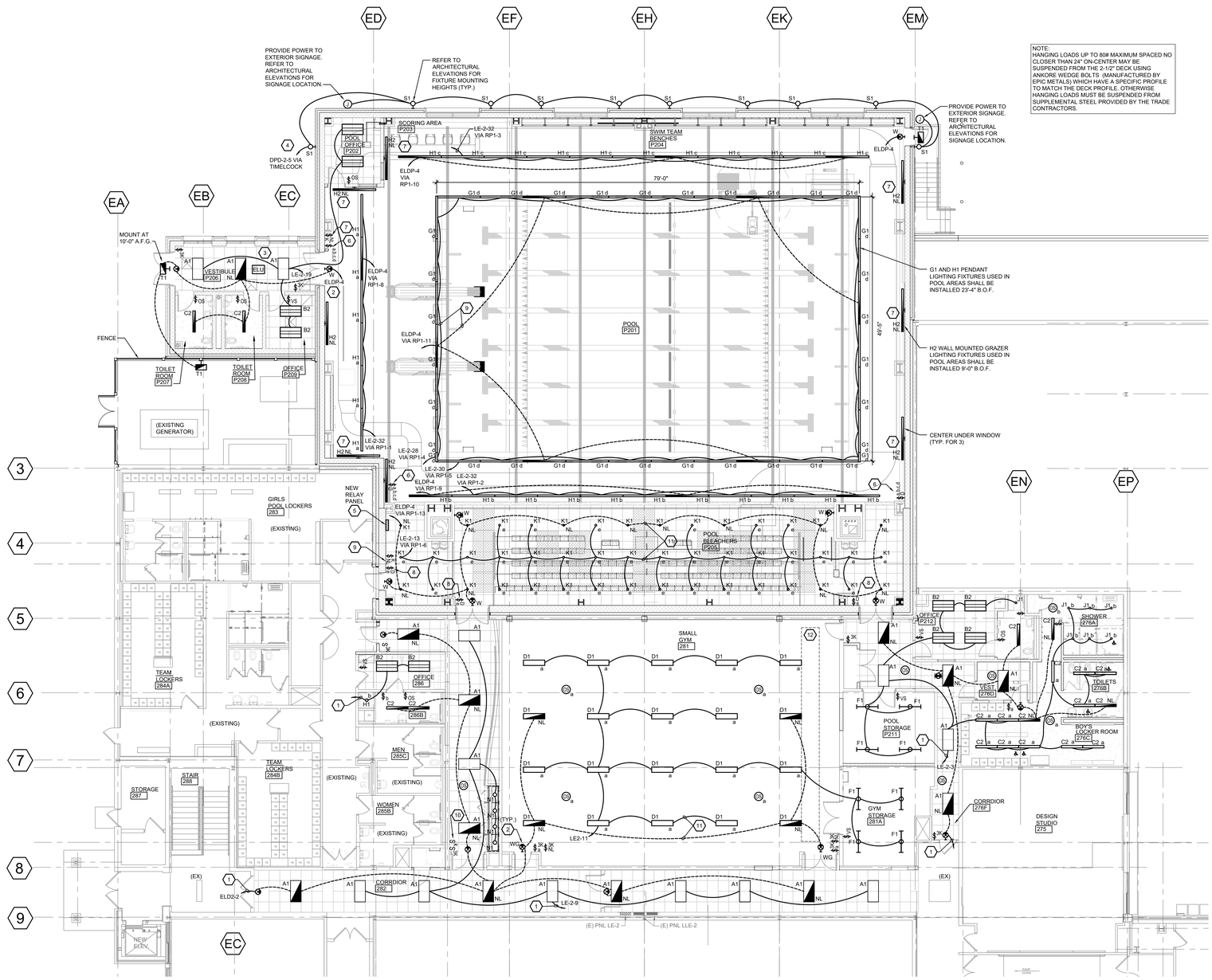


NOTE:
HANGING LOADS UP TO 80# MAXIMUM SPACED NO CLOSER THAN 24" ON-CENTER MAY BE SUSPENDED FROM THE 2-1/2" DECK USING ANKORE WEDGE BOLTS (MANUFACTURED BY EPIC METALS) WHICH HAVE A SPECIFIC PROFILE TO MATCH THE DECK PROFILE. OTHERWISE HANGING LOADS MUST BE SUSPENDED FROM SUPPLEMENTAL STEEL PROVIDED BY THE TRADE CONTRACTORS.

NORTH

BUILDING NORTH

1 HS E-101

SECOND FLOOR - UNIT E
LIGHTING RENOVATION PLAN

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

ALL WORK FOR THE CONSTRUCTION OF POOL VESTIBULE ROOMS P206, P207, P208 AND P209 SHALL BE AN ALTERNATE

DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN
(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK
(D) INDICATES ITEM TO BE DEMOLISHED
(RL) INDICATES RELOCATED ITEM

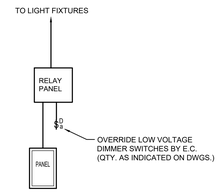
LIGHTING RENOVATION KEYNOTES

1. REUSE EXISTING NORMAL AND UNSWITCHED NORMAL-EMERGENCY LIGHTING CIRCUITS THAT SERVES SPACE FOR NEW LIGHTING FIXTURES.
2. TIE NEW EXIT LIGHTING TO EXISTING CORRIDOR NORMAL-EMERGENCY LIGHTING CIRCUIT USING 2/12,#12G IN 3/4"C AHEAD OF ALL SWITCHING.
3. RUN EMERGENCY LIGHTING FIXTURES (SHOWN HALF-SHADED) THROUGH AN EMERGENCY LIGHTING CONTROL UNIT ALLOWING THE FIXTURE TO BE SWITCHED WITH ROOM LIGHTING SWITCH AND STILL ILLUMINATE TO FULL BRIGHTMESS DURING A POWER OUTAGE REGARDLESS OF ROOM SWITCH POSITION.
4. CIRCUIT NEW BUILDING FACADE LIGHTING TO EXISTING PANEL DPD-2 IN SWITCHBOARD ROOM USING 2#10, #10G, 3/4"C. PROVIDE 20A/1P CIRCUIT BREAKER IN PANEL. PROVIDE NEW 24 HOUR TIME CLOCK (INTERMATIC, 20A/480V RATED, P/N/ T1975E, OR EQUAL) MOUNTED NEXT TO PANEL AND RUN CIRCUIT THROUGH TIME CLOCK. REFER TO ELECTRICAL SITE PLAN ON DRAWING ES-100 FOR PANEL / TIME CLOCK LOCATION AND PANEL SCHEDULE.
5. PROVIDE NEW RELAY PANEL, INTELLIGENT LIGHTING CONTROLS (ILC) LIGHTLEEDER, MODEL LL-14-EM, FOR POOL AREA LIGHTING CONTROL. CIRCUIT PANEL TO EMERGENCY CIRCUIT ELDP-4. CIRCUIT FIXTURES INDICATED THROUGH PANEL. REFER TO RELAY SCHEDULE THIS SHEET. PANEL CONTAINS A UL924 AUTOMATIC LOAD BYPASS RELAY WHICH ALLOWS EMERGENCY LIGHTING TO BE CONTROLLED WITH NORMAL LIGHTING WHILE ENSURING THAT THE EMERGENCY LIGHTING WILL BE FORCED ON TO FULL BRIGHTNESS UPON LOSS OF NORMAL POWER.
6. AT POOL ENTRANCES, PROVIDE 4-ZONE ON/OFF WALLSTATION WITH MULTI-ZONE DIMMING FOR FIXTURES TYPE G1, H1, AND H2, INTELLIGENT LIGHTING CONTROLS, LIGHTSYNC MODEL LSG3-WH-4-MZD, OR EQUAL WITH CAT5 CABLE TO RELAY PANEL.
7. AT POOL MAIN ENTRANCE, PROVIDE A 1-ZONE ON/OFF KEY SWITCH STATION FOR FIXTURES TYPE H2, INTELLIGENT LIGHTING CONTROLS, LIGHTSYNC MODEL LSKS-SS-MOM, OR EQUAL WITH CAT5 CABLE TO RELAY PANEL. CIRCUIT ALL H2 WALL GRAZERS TO EMERGENCY PANEL ELDP, CKT 4, VIA RELAY PANEL USING 2#10, #10G IN 3/4"C.
8. AT EACH SPECTATOR AREA ENTRANCE, PROVIDE 1-ZONE ON/OFF WALLSTATION WITH DIMMING FOR FIXTURES TYPE K1, INTELLIGENT LIGHTING CONTROLS, LIGHTSYNC MODEL LSKS-SS-MOM, OR EQUAL WITH CAT5 CABLE TO RELAY PANEL.
9. AT SPECTATOR ENTRANCE, PROVIDE A 1-ZONE ON/OFF KEY SWITCH STATION FOR FIXTURES TYPE K1 ON NIGHT LIGHTING, INTELLIGENT LIGHTING CONTROLS, LIGHTSYNC MODEL LSKS-SS-MOM, OR EQUAL WITH CAT5 CABLE TO RELAY PANEL. CIRCUIT FIXTURES TO EMERGENCY PANEL ELDP, CKT 4, VIA RELAY PANEL USING 2#10, #10G IN 3/4"C
10. KEYED SWITCH CONTROLS TROPHY CASE 'N1' LIGHTING. LIGHTING TO BE TIED IN WITH OCCUPANCY SENSOR FOR CORRIDOR.
11. DASHED LINE INDICATES EMERGENCY CIRCUIT, SOLID LINE INDICATES NORMAL CIRCUIT.
12. MAT CEILING SUSPENSION SYSTEM, SEE DRAWING E-103 FOR MORE INFORMATION.

DESIGNATION: RP1 (5)

RELAY PANEL SCHEDULE

RELAY NO.	AMP	POLE	SERVING	CIRCUIT NUMBER	SWITCH
1	20	1	POOL DECK LIGHTING WEST - TYPE H1 (NORM)	LE-2-32	a
2	20	1	POOL DECK LIGHTING SOUTH - TYPE H1 (NORM)	LE-2-32	b
3	20	1	POOL DECK LIGHTING NORTH - TYPE H1 (NORM)	LE-2-32	c
4	20	1	POOL LIGHTING N/W - TYPE G1 (NORM)	LE-2-28	d
5	20	1	POOL LIGHTING S/E - TYPE G1 (NORM)	LE-2-30	d
6	20	1	POOL SPECTATOR LIGHTING - TYPE K1 (NORM)	LE-2-13	e
7	20	1	SPACE	-	-
8	20	1	POOL DECK LIGHTING WEST - TYPE H1 (EMERG)	ELDP-4	a
9	20	1	POOL DECK LIGHTING SOUTH - TYPE H1 (EMERG)	ELDP-4	b
10	20	1	POOL DECK LIGHTING NORTH - TYPE H1 (EMERG)	ELDP-4	c
11	20	1	POOL LIGHTING - TYPE G1 (EMERG)	ELDP-4	d
12	20	1	POOL WALL GRAZER - TYPE N2 (EMERG)	ELDP-4	NL
13	20	1	POOL SPECTATOR LIGHTING - TYPE K1 (EMERG)	ELDP-4	NL
14	20	1	SPACE	-	-



TYPICAL RELAY PANEL WIRING DIAGRAM

NO SCALE

NOTE:
ALL LOW VOLTAGE WIRING SHALL BE RUN ABOVE ACCESSIBLE CEILINGS, DROPS TO PANELS OR SWITCHES SHALL BE IN CONDUIT.

REVISIONS

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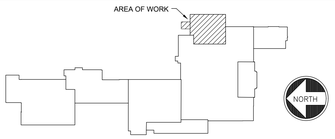
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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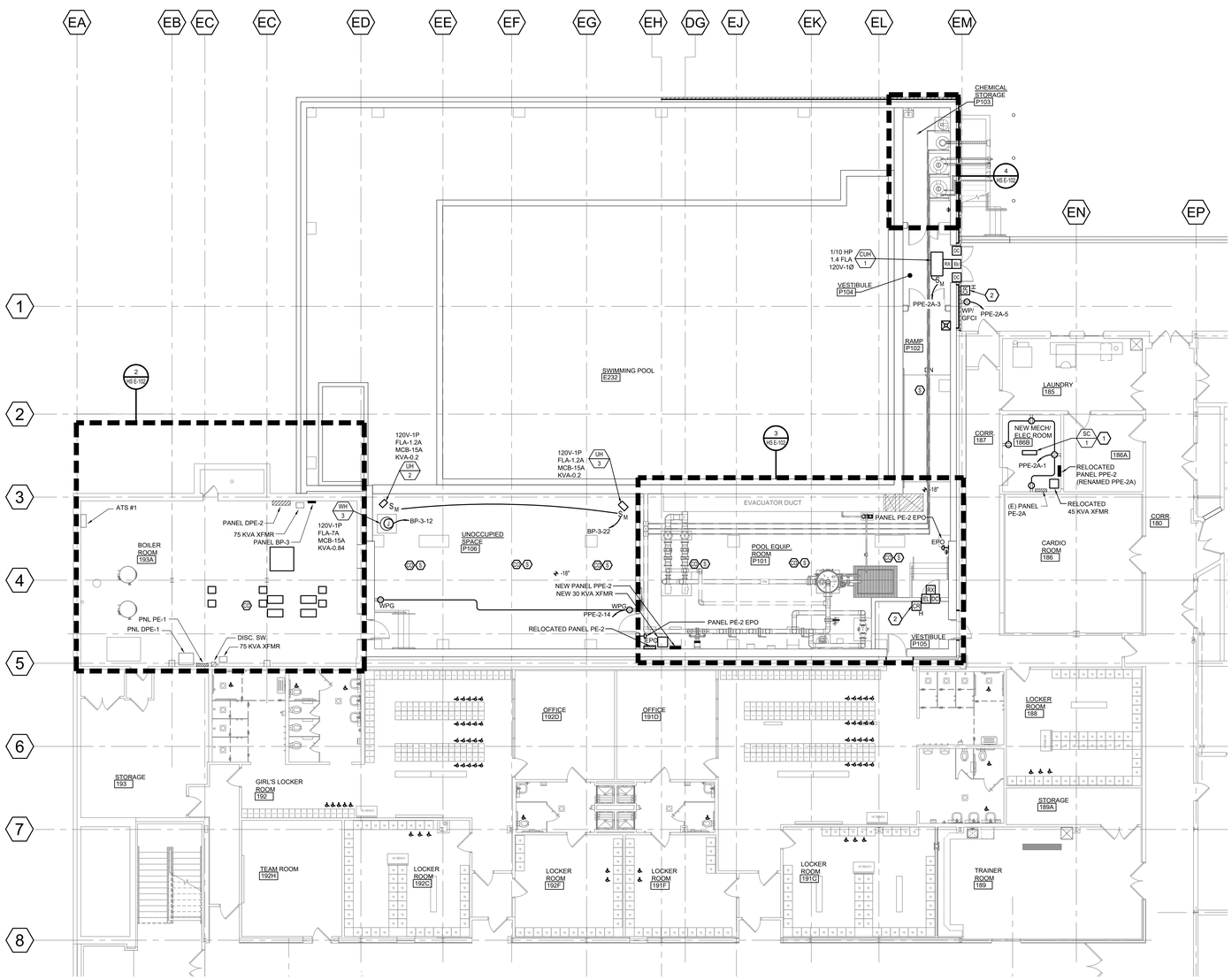
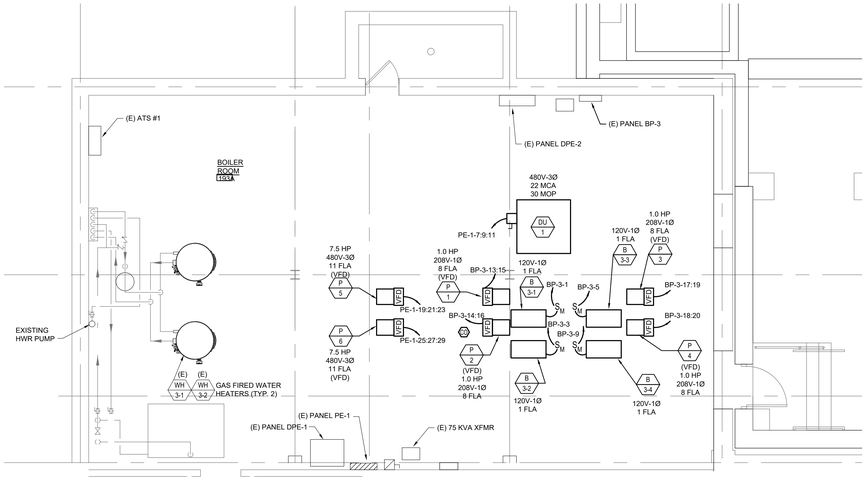
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR - UNIT E
LIGHTING RENOVATION PLAN

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-101
DATE: 12-01-2025	

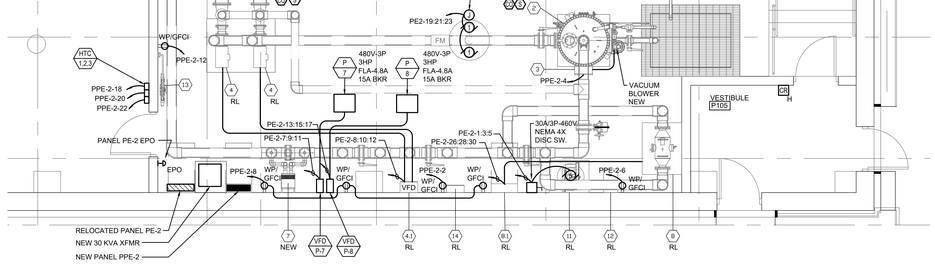
DWG FILE: PLOT DATE: 11/25/2025





LARGE SCALE BOILER ROOM #3 ELECTRICAL RENOVATION PLAN

2 / HS E-102 — SCALE: 1/4"=1'-0"



LARGE SCALE POOL EQUIP. ROOM ELECTRICAL RENOVATION PLAN

3 / HS E-102 — SCALE: 1/4"=1'-0"

FIRST FLOOR - UNIT E POWER AND SYSTEMS RENOVATION PLAN

1 / HS E-102 — SCALE: 1/8"=1'-0"

NORTH — BUILDING NORTH

POWER AND SYSTEM RENOVATION KEYNOTES

1. INDOOR UNIT IS POWERED FROM THE OUTDOOR UNIT. PROVIDE 2#16 IN 3/4"C FROM OUTDOOR UNIT CU-1 TO INDOOR UNIT SC-1. SEAL ALL ROOF PENETRATIONS WATERTIGHT. REFER TO DRAWING E-104.
2. E.C. TO PROVIDE A 120V CONNECTION TO DOOR CONTROLLER BOX, POWER TO BE PROVIDED FROM PANEL PPE-2A-21. E.C. TO COORDINATE CONNECTION LOCATION WITH DAY AUTOMATION.

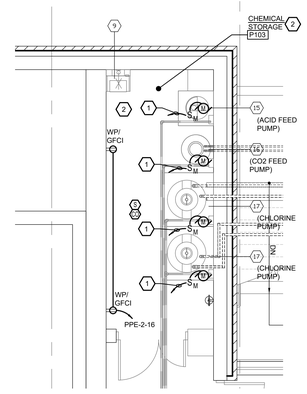
JOHNSON CITY HIGH SCHOOL POOL EQUIPMENT AND ELECTRICAL REQUIREMENTS

ITEM NO	QTY	NEW / RL	DESCRIPTION	AMPS	KW	HP	VOLTS	PHASE	CYCLE	DIRECT	PLUG	NEMA	A.F.F.	PANEL	REMARKS
1	-	-	SPARE NO.	-	-	-	-	-	-	-	-	-	-	-	-
2	1	NEW	POOL FILTER	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
3	1	NEW	FILTER CONTROL PANEL (ON POOL FILTER)	15.0	1.8	-	120	1	60	X	-	-	-	20A CB, #12AWG	RUN 2#12, #12G IN 3/4" TO VACUUM BLOWER
4	2	RL	POOL FILTER PUMP	31.0	21.0	15	480	3	60	X	-	-	-	40A/3P CB, #8AWG	CIRCUIT PUMPS THROUGH A/B SELECTOR SWITCH TO VFD - SEE 4.1
4.1	1	RL	POOL FILTER PUMP VFD	-	-	-	-	-	-	-	-	-	-	-	SEE 4 - POOL FILTER PUMP FOR ELECTRICAL REQUIREMENTS
5	1	RL	PUMP STRAINER	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
6	1	NEW	DRAIN DOWN PUMP	2.1	1.7	1	480	3	60	X	-	-	-	15A CB, #12AWG	DISCONNECT
7	1	NEW	HEAT EXCHANGER	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
8	1	RL	UV SYSTEM	18.0	15.0	-	480	3	60	X	-	-	-	30A/3P CB, #10AWG	CONTROL PANEL - SEE 8.1
8.1	1	RL	UV SYSTEM CONTROL PANEL	-	-	-	-	-	-	-	-	-	-	-	SEE 8 - UV SYSTEM FOR ELECTRICAL REQUIREMENTS
9	1	RL	EYE WASH STATION	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
10			NOT USED	-	-	-	-	-	-	-	-	-	-	-	-
11	1	RL	AIR COMPRESSOR	7.6	6.3	5	480	3	60	X	-	-	-	15A/3P CB, #12AWG	DISCONNECT
12	1	RL	AIR DRYER	1.9	0.2	-	120	1	60	X	X	5-15P	-	20A CB, #12AWG	PLUG AND CORD, GFCI
13	1	RL	AUTOFILL CONTROLLER	15.0	1.8	-	120	1	60	-	X	5-15P	-	20A CB, #12AWG	PLUG AND CORD, GFCI
14	1	RL	CHEMICAL CONTROLLER (BECSYS5)	15.0	1.8	-	120	1	60	-	X	5-15P	-	20A CB, #12AWG	PLUG AND CORD, GFCI
15	1	RL	ACID FEEDER PUMP	5.0	0.6	-	120	1	60	X	-	-	-	-	RUN 2#12, #12G IN 3/4" TO CHEMICAL CONTROLLER (13)
16	1	RL	CO2 FEEDER PUMP	5.0	0.6	-	120	1	60	X	-	-	-	-	RUN 2#12, #12G IN 3/4" TO CHEMICAL CONTROLLER (13)
17	2	RL	CHLORINE PUMP	5.0	0.6	-	120	1	60	X	-	-	-	-	RUN 2#12, #12G IN 3/4" TO CHEMICAL CONTROLLER (13)

GENERAL NOTES:
A. THE CONTRACTOR SHALL VERIFY ALL INFORMATION ON THIS DRAWING, INCLUDING NEMA OUTLET CONFIGURATION AND CONNECTIONS, PRIOR TO INSTALLATION.

LARGE SCALE PLAN RENOVATION KEYNOTES

1. E.C. TO RUN 2#12, #12G IN 3/4"C BETWEEN PUMP AND CHEMICAL CONTROLLER (14) IN PUMP EQUIPMENT ROOM. REFER TO AQUATICS DRAWINGS FOR ADDITIONAL ELECTRICAL CONTRACTOR WIRING REQUIREMENTS.
2. ALL ELECTRICAL EQUIPMENT WITHIN POOL EQUIPMENT ROOM AND CHEMICAL ROOM IS TO BE 'NEMA 4X - CORROSIVE ENVIRONMENT' LABELED EQUIPMENT. THIS APPLIES FOR ALL DISCONNECTS, J-BOXES, WIRING, ETC.
3. EQUIPMENT HAS A VFD. E.C. TO COORDINATE VFD LOCATION WITH M.C.

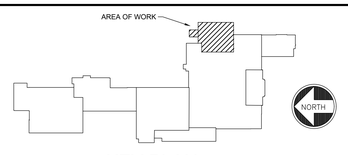


LARGE SCALE POOL CHEMICAL ROOM ELECTRICAL RENOVATION PLAN

4 / HS E-102 — SCALE: 1/4"=1'-0"

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

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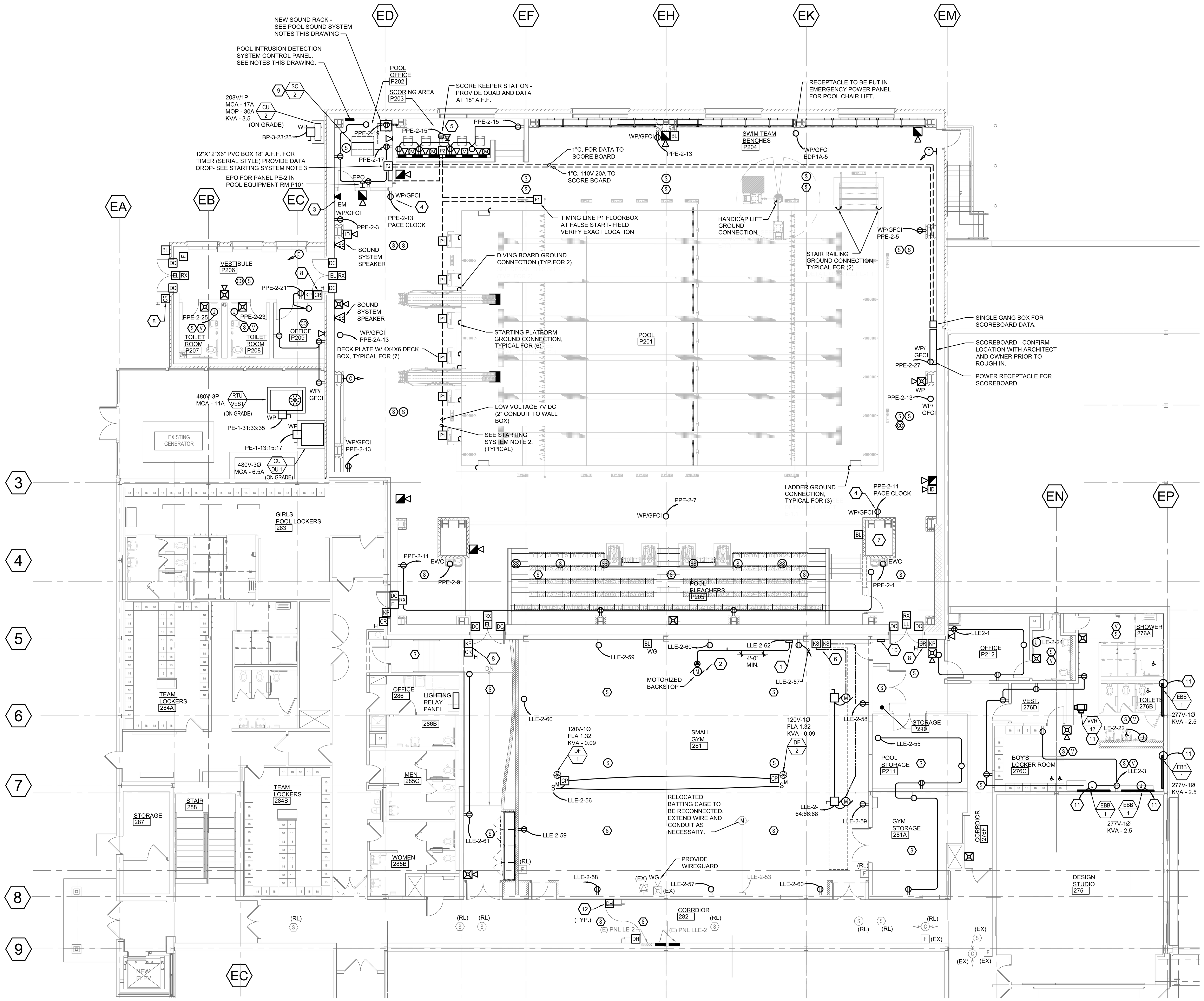
19/2024

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR - UNIT E POWER & SYSTEMS RENOVATION PLAN

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-102
DATE: 12-01-2025	

DWG FILE: PLOT DATE: 12/2025



SECOND FLOOR - UNIT E
POOL AREA POWER & SYSTEMS RENOVATION PLAN

1 HS E-103 — SCALE: 1/8"=1'-0"

BUILDING NORTH

GENERAL NOTES:

1. ALL ELECTRICAL INSTALLATIONS SHALL COMPLY WITH NEC 680 FOR GROUND FAULT AND GROUNDING. REFER TO AQUATICS DRAWING AQ-170 - EQUIPOTENTIAL BONDING PLAN FOR ADDITIONAL BONDING REQUIREMENTS.
2. ALL GENERAL RECEPTACLES WITHIN THE POOL AREA SHALL BE MOUNTED AT 18" .A.F.F. ALL RECEPTACLES LOCATED WITHIN WET AREA SHALL BE GFCI TYPE WITH IN-USE COVERS.
3. ALL ELECTRICAL CONNECTIONS WITHIN THE POOL AND AJACENT SPACES ARE TO BE NEMA 4X RATED.

ALL WORK FOR THE CONSTRUCTION OF POOL VESTIBULE ROOMS P206, P207, P208 AND P209 SHALL BE AN ALTERNATE

ELECTRICAL RENOVATION KEYNOTES

1. PROVIDE (2) 30A/120V POWER CIRCUITS TO PORTER POWR-TOUCH 2.5 (P/N12555-200) BACKSTOP CONTROL PANEL. COORDINATE EXACT LOCATION OF CONTROL PANELS WITH DISTRICT.
2. PROVIDE 4" SQUARE x 2-1/2 D JUNCTION BOX WITHIN 3'-0" OF WINCH WITH 3#12,1#12G FROM CONTROL PANEL (UP (BLACK), NEUTRAL (WHITE), DOWN (RED) AND (GROUND (GREEN)). 4-POLE TWIST LOCK L14-20 RECEPTACLE MOUNTED IN BOX PROVIDED BY PORTER.
3. PROVIDE EMERGENCY PHONE, ORATH PART NO. 6902SYPOOLVOIP, AS INDICATED. PHONE SHALL BE IN NEMA 4X WATERTIGHT ENCLOSURE, POWERED BY POE AND SHALL AUTO DIAL 911 (OR BE PROGRAMMED WITH DISTRICT PREFERRED NUMBER).
4. RECEPTACLE SHALL BE MOUNTED AT 8' A.F.F. FOR EACH PACE CLOCK WITHIN POOL AREA.
5. PROVIDE 12" X 12" X 6" PVC BOX BELOW COUNTER W/ DEDICATED QUAD RECEPTACLE, MOUNT 18" ABOVE FINISH FLOOR. REFER TO DETAIL ON THIS SHEET.
6. WRESTLING MAT STORAGE SYSTEM, SECURELIFT, OR EQUAL, SHALL BE PROVIDED BY GENERAL CONTRACTOR. STORAGE SYSTEM INSTALLER SHALL INSTALL WINCHES AND LOAD BAR. ELECTRICAL CONTRACTOR SHALL RUN POWER WIRING TO WINCHES, RUN 24VDC CAT6 ETHERNET CABLE FROM EACH WINCH TO KEYSWITCH. KEYSWITCH MUST BE INSTALLED WITHIN SIGHT OF HOISTS AND GREATER THAN 4 FEET FROM THE END OF THE SUSPENDED MATS. MOUNT PROVIDED SAFETY PLACARD NEAR KEYSWITCH INDICATING "THIS EQUIPMENT IS TO BE OPERATED BY AUTHORIZED PERSONNEL ONLY" AND "TO MAKE SURE AREA IMMEDIATELY SURROUNDING HOIST IS CLEAR OF PEOPLE AND OBSTRUCTIONS BEFORE OPERATING HOIST".
7. ELECTRICAL CONDUIT TO BE RAN BETWEEN FLOORS VIA CHASE.
8. E.C. TO PROVIDE A 120V CONNECTION TO DOOR CONTROLLER BOX, POWER TO BE PROVIDED FROM PANEL PPE-2A-21. E.C. TO COORDINATE CONNECTION LOCATION WITH DAY AUTOMATION.
9. INDOOR UNIT IS POWERED FROM THE OUTDOOR UNIT. PROVIDE 2#16 IN 3/4"C FROM OUTDOOR UNIT CU-2 TO INDOOR UNIT SC-2. SEAL ALL PENETRATIONS WATERTIGHT.
10. MECHANICAL ATC, E.C. TO PROVIDE A 120V CONNECTION & DATA DROP.
11. MECHANICAL DEVICE TO BE REPLACED IN KIND, E.C. TO CLEAN, TEST AND INSPECT WIRE IN PREPARATION FOR RECONNECTION.
12. PROVIDE POWER TO DOOR HOLD OPEN DEVICE TO BE PROVIDED WITH DOOR HARDWARE. TIE TO NEAREST RECEPTACLE CIRCUIT. PROVIDE NEW SMOKE DETECTORS ON EACH SIDE OF DOOR AND A CONTROL RELAY SO DOOR SHALL RELEASE UPON ACTIVATION OF FIRE ALARM

SWIMMING POOL ELECTRICAL CODE REQUIREMENT NOTES:

1. NO RECEPTACLES SHALL BE MOUNTED WITHIN 6'-0" OF INSIDE WALL OF POOL AND MOUNTED A MINIMUM OF 72" AFF.
2. A SINGLE GENERAL PURPOSE RECEPTACLE (GFCI) SHALL BE MOUNTED WITHIN 6'-0" BUT NOT MORE THAN 20'-0" FROM INSIDE WALL OF POOL AND NOT MORE THAN 6'-6" ABOVE THE FLOOR.
3. ANY VOLTAGE ABOVE 15 VOLTS AC OR 30 VOLTS DC SHALL REQUIRE GFCI PROTECTION.
4. ALL RACEWAYS FOR POOL AREA SHALL BE SCHEDULE 80 PVC AND ALL BOXES SHALL BE NON-METALLIC.
5. ANY CORD AND PLUG EQUIPMENT CORD SETS SHALL NOT EXCEED 36" IN LENGTH.
6. ALL DEVICES SUCH AS TELEPHONE, FIRE ALARM DEVICES, SPEAKERS, ETC. SHALL BE LOCATED NO CLOSER THAN 10'-0" FROM INSIDE WALL OF POOL.

SWIMMING POOL ELECTRICAL GROUNDING REQUIREMENT NOTES:

1. ALL ELECTRICAL INSTALLATIONS SHALL COMPLY WITH NEC 680 FOR GROUND FAULT AND GROUNDING. REFER TO AQUATICS DRAWING AQ-170 - EQUIPOTENTIAL BONDING PLAN FOR ADDITIONAL BONDING REQUIREMENTS.
2. LADDER AND DIVING BOARD METALLIC COMPONENTS SHALL BE EXOTHERMICALLY BONDED TO POOL STRUCTURAL GROUNDING BARS.
3. ALL GROUNDING FITTINGS (WHERE UTILIZED) SHALL BE COPPER OR STAINLESS STEEL.
4. ALL GROUNDING CONDUCTORS SHALL BE COPPER.
5. ALL METALLIC PIPING/FITTINGS ASSOCIATED WITH RETICULATING SYSTEM SHALL GROUNDED TO FORM AN EQUIPOTENTIAL GROUND PLANE.
6. REFERENCE: REFER TO NEC ARTICLE 680 FOR MORE PRECISE REQUIREMENTS.

STARTING SYSTEM NOTES:

1. CONTRACTOR/VENDOR/SUBCONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL BOXES.
2. THE ELECTRICAL CONTRACTOR SHALL FIELD VERIFY THE ROUTING OF ALL CONDUIT SHOWN FOR TIMING/SCORING WITH THE POOL SYSTEM VENDOR/CONTRACTOR PRIOR TO ANY ROUGH IN.
3. SEE LEGEND FOR WALL PLATE CONNECTIONS FOR 12"X12"X6" PVC BOX IN POOL OFFICE.
4. CONDUIT TO BE BURIED IN GRAVEL BELOW SLAB. CONCRETE SLAB GETS THICKER AT THE DIVING PLATFORMS. REFER TO DETAIL ON THIS DRAWING FOR CONDUIT CONNECTIO DETAIL AT THE P1 BOXES.

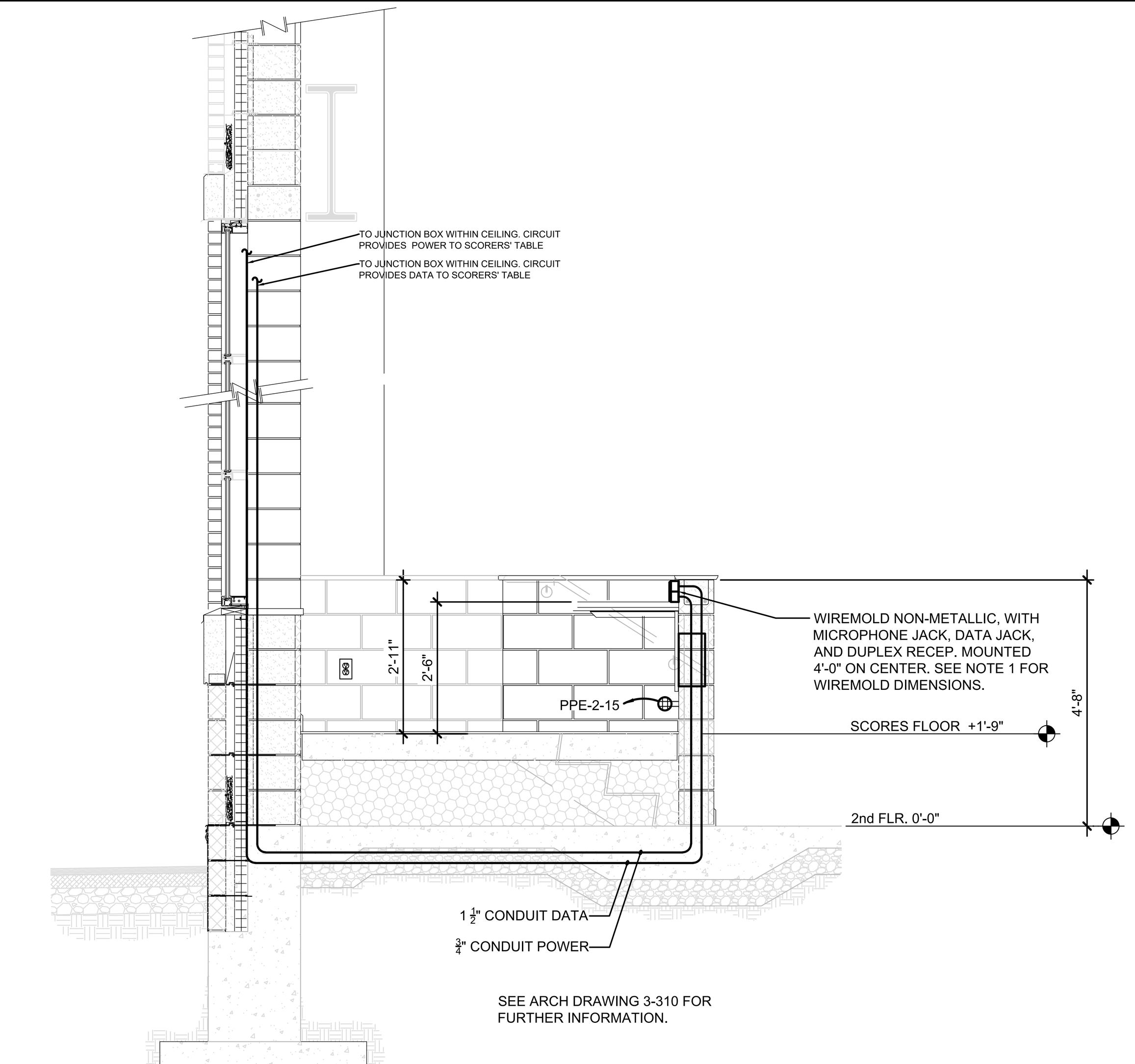
STARTING SYSTEM LEGEND

STARTING SYSTEM SHALL BE CARLON 989 OR SIMILAR

- P1 — 4"x4"x6" DECK FLUSH BOX
- P2 — 12"x12"x6" SURFACE BOX
- – – – — 2" SCHEDULE 80 PVC CONDUIT MINIMUM 10" BELOW POOL DECK, UNLESS OTHERWISE NOTED

NOTE 3 REFERENCE.

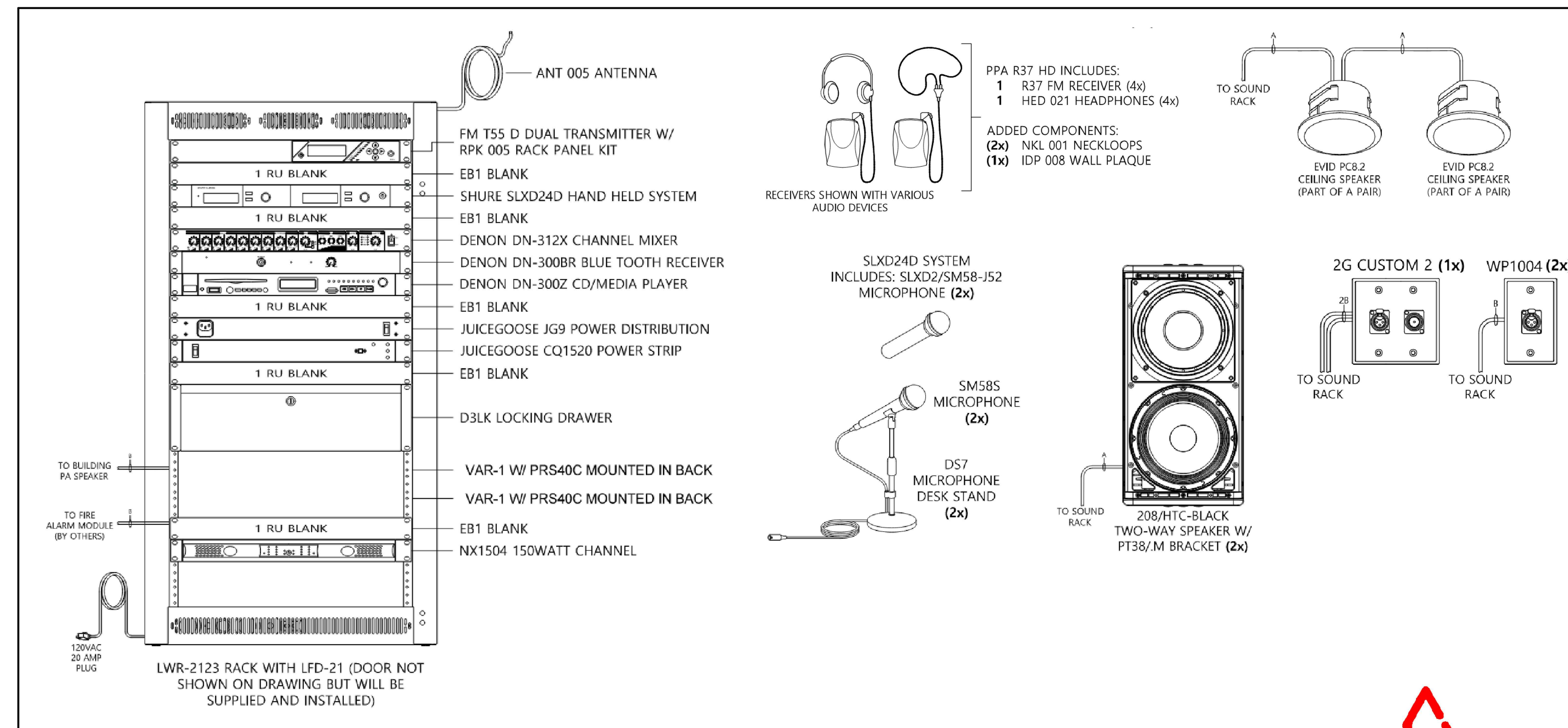
L	L- WALL PLATE LEGACY CONNECTION	1 COUNT
485	485- WALL PLATE RS-485 CONNECTION	2 COUNT
5	5- WALL PLATE SCOREBOARD NODE	1 COUNT
1	1- WALL PLATE TIMER NODE	2 COUNT



SCORER'S TABLE ELECTRIC DETAIL SECTION

2 HS E-103 — SCALE: 1/2" = 1' - 0"

NOTES:
1. G4000 WIREMOLD DIMENSIONS, 4 3/4" X 1 3/4" W/ CENTER DIVIDER. CKT LLE-2-X



CABLE LEGEND

Type	Cable Description	Model No.	Usage
A	2 Conductor, 14 AWG	West Penn 226	Amplified Speaker
B	1 Shielded Twisted Pair, 22 AWG	West Penn 290	Line Level

NOTE: The number preceding the designated cable type indicates the quantity of that type of cable to be used. If no preceding number is indicated then one (1) of the noted type of cable is to be used.

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POOL SOUND SYSTEM DETAILS

3 HS E-103 — SCALE: NONE

POOL INTRUSION DETECTION NOTES:

1. LOCATION OF THE INTRUSION DETECTION SYSTEM CONTROL PANEL IS IN POOL OFFICE P202. PANEL SHALL OPERATE AT 24V FROM A 120V SOURCE. PROVIDE BATTERY BACKUP FOR 15 HOURS.
2. PROVIDE AUTOMATIC TELEPHONE DIALER TO A PAID MONITORING SERVICE. PROVIDE A DEDICATED "POTS" LINE FROM DATA ROOM FOR AUTO-DIALER CONNECTION. SCHOOL DISTRICT WILL PROVIDE THE APPROPRIATE CONTACTS TO BE NOTIFIED.
3. PROVIDE A TROUBLE SIGNAL TIED TO EXISTING BUILDING SECURITY SYSTEM.
4. PROVIDE A KEYPAD AT EACH POOL ENTRY DOOR TO ARM AND DISARM THE SYSTEM.
5. PROVIDE MOTION SENSORS INSIDE THE POOL AREA COVERING THE DECK AND SPECTATOR SEATING.
6. PROVIDE AUDIBLE/VISUAL ALARMS IN POOL AREA AND A REMOTE AUDIBLE/VISUAL ALARM IN MAIN OFFICE AREA OF SCHOOL.
7. THE POOL ALARM WILL SOUND A LOCAL ALARM AND DIAL OUT TO THE PAID MONITORING SERVICE WHERE IT WILL BE CAPTIONED AS A "POOL ALARM". THE PAID SERVICE WILL THEN CONTACT THE APPROPRIATE DISTRICT PERSONNEL AND EMERGENCY SERVICES. DURING SCHOOL HOURS, FROM 6:30AM TO 4:00PM ON SCHOOL DAYS, THE ALARM WILL ALSO NOTIFY THE DISTRICT SECURITY OFFICE.
8. ALL EQUIPMENT UTILIZED WITH THIS SYSTEM SHALL BE SUITABLE FOR A DAMP LOCATION (AS WELL AS CORROSIVE ATMOSPHERE.) ALL BOXES SHALL BE PVC INCLUDING CONDUITS (SCHEDULE 80).

POOL INTRUSION DETECTION LEGEND

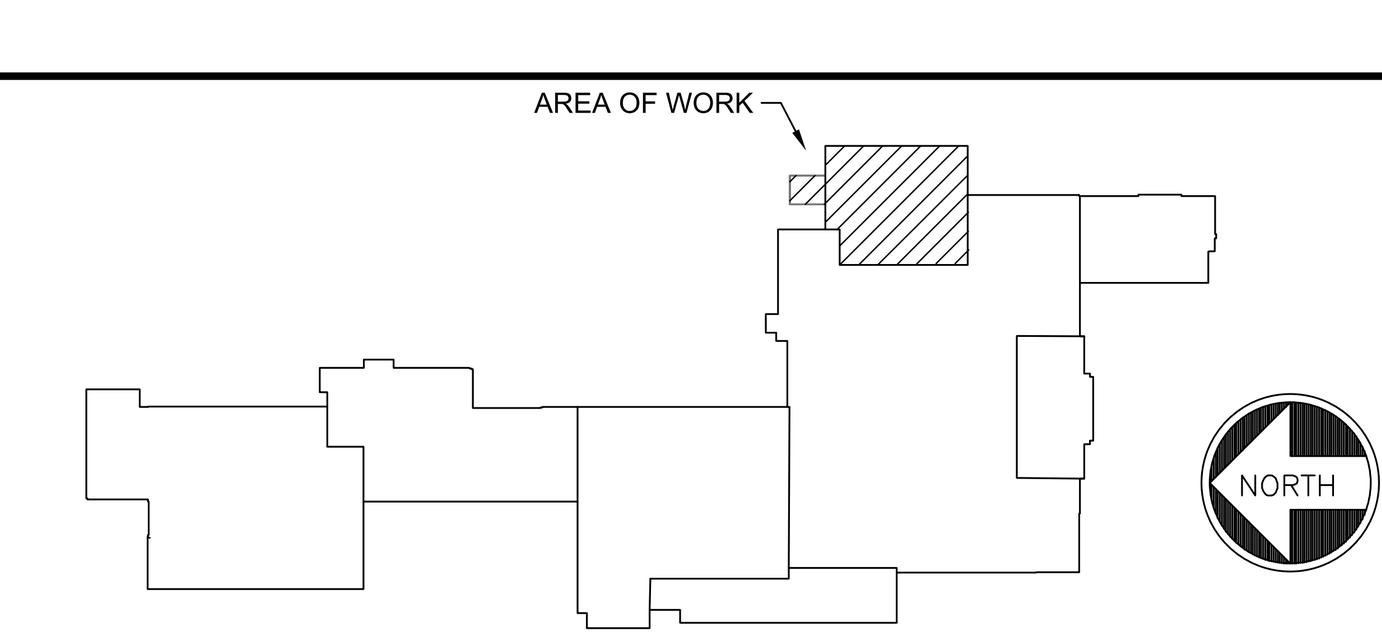
- MOTION DETECTOR - LONG RANGE (200'x15') 90° FIELD, MOUNT 6'-0" ABOVE FLOOR. DUAL TECHNOLOGY.
- KP — POOL INTRUSION SYSTEM ARM/DISARM KEYPAD. MOUNTED 48" A.F.F.
- ID — POOL INTRUSION SYSTEM AUDIBLE/VISUAL DEVICE. MOUNTED 80" A.F.F.

POOL SOUND SYSTEM NOTES:

1. PROVIDE LOCAL SOUND SYSTEM HEADEND, INCLUDING RACK, HEADEND, AMPLIFIER, AND ALL MISC. COMPONENTS REQUIRED FOR A FULLY FUNCTIONAL INSTALLATION. REFER TO POOL SOUND SYSTEM DETAILS ON THIS DRAWING AND SPECIFICATION SECTION 27 26 18 - NATATORIUM SOUND REINFORCEMENT SYSTEM FOR BASIS OF DESIGN. COORDINATE EXACT RACK LOCATION IN FIELD.
2. PROVIDE INTERFACE COMPONENTS AND CONNECTION TO EXISTING PAGING SYSTEM IN ORDER TO SILENCE LOCAL SYSTEM DURING MASTER PAGING ANNOUNCEMENTS.
3. ALL WIRING SHALL BE INSTALLED IN SCHEDULE 80 PVC WHERE EXPOSED IN POOL AREA AND EMT WHERE HARD CEILINGS OCCUR.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

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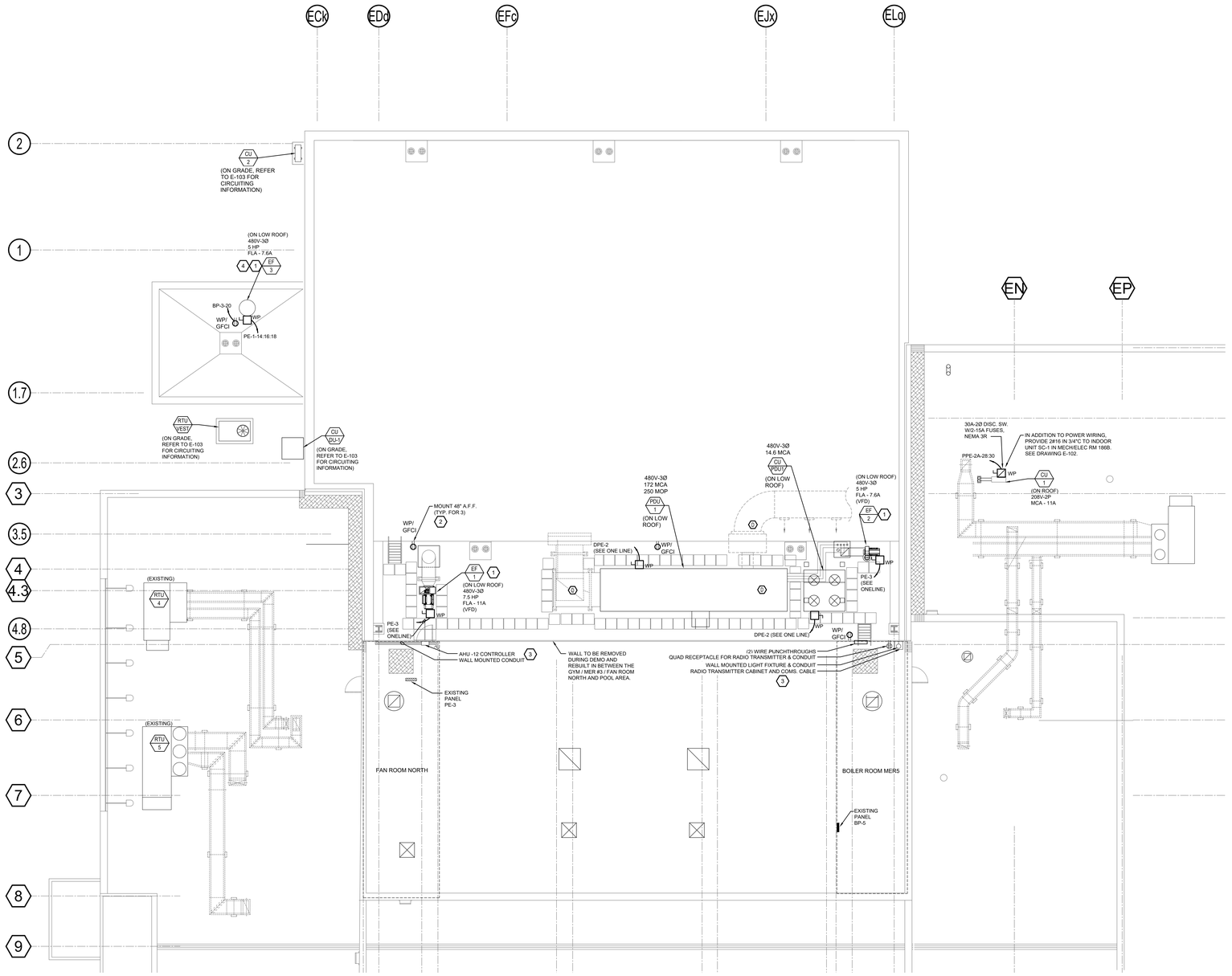
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR - UNIT E POWER & SYSTEMS RENOVATION PLAN

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: E-103

CAD FILE: 4239-HS-E-103.DWG
PLOT DATE: 11/25/2025



POOL AREA ROOF ELECTRICAL RENOVATION PLAN

1 HS E-104

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

POWER & SYSTEMS RENOVATION KEYNOTES

1. REPLACEMENT FAN IS ABOVE 1000CFM, FAN IS REQUIRED BY NYSED TO HAVE SHUTDOWN RELAY INSTALLED TO ACTIVATE SHUTDOWN UPON FIRE ALARM ACTIVATION.
2. CIRCUIT (3) ROOF RECEPTACLES TO NEW 20A/1P CIRCUIT BREAKER IN EXISTING PANEL BP-5, CKT. #11 IN BOILER ROOM MERS USING 2#12,#12G IN 3/4"C.
3. WALL BETWEEN POOL AND MER #5 / FAN ROOM TO BE REMOVED. E.C. TO TEMPORARILY SUPPORT ALL ELECTRICAL DEVICES MOUNTED TO WALL. DEVICES TO BE REINSTALLED AFTER NEW WALL IS BUILT.
4. ALL ASSOCIATED WORK FOR EF-3 IS PART OF THE ADD ALTERNATE FOR POOL VESTIBULE.

REVISIONS

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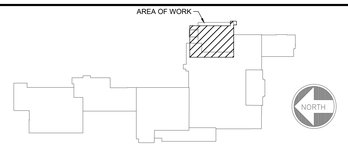

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PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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570-586-4334
www.highlandassociates.com
New York • Pennsylvania

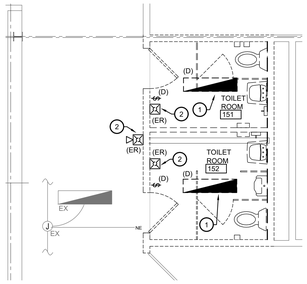
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
POOL AREA ROOF ELECTRICAL RENOVATION PLAN

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: E-104

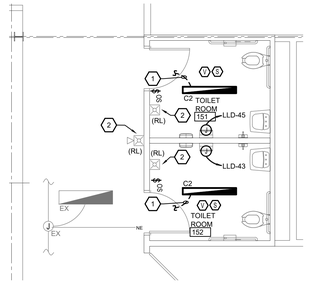
CAD FILE: 4239-HS-E-104.DWG
PLOT DATE: 11/26/2025



1A HS E-105

TOILET ROOMS 151/152
ELECTRICAL DEMOLITION PLAN

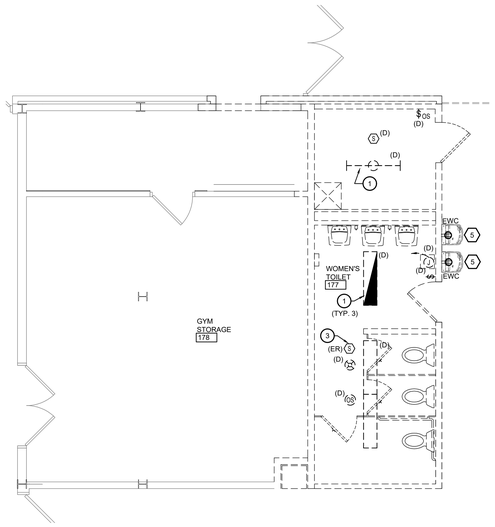
SCALE: 1/4" = 1'-0"



1B HS E105

TOILET ROOMS 151/152
ELECTRICAL RENOVATION PLAN

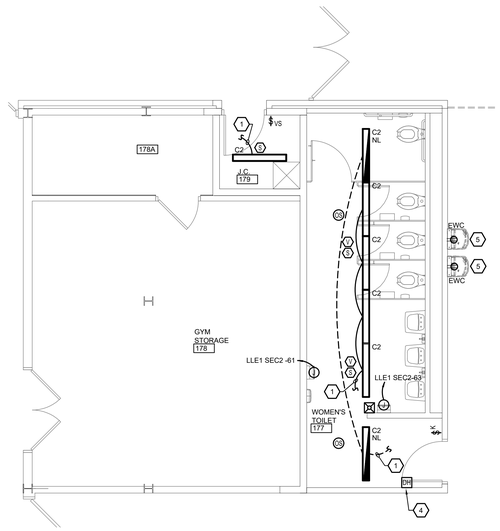
SCALE: 1/4" = 1'-0"



2A HA E-105

GIRLS TOILET ROOMS 177 @ SOUTH LOBBY
ELECTRICAL DEMOLITION PLAN

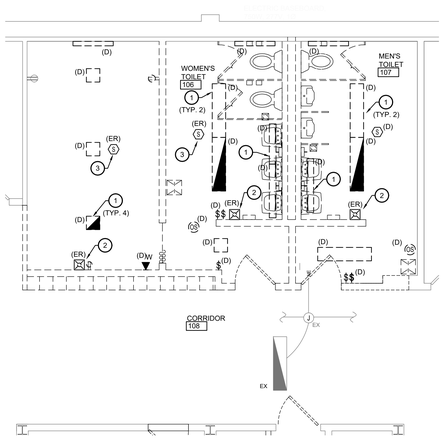
SCALE: 1/4" = 1'-0"



2B HS E-105

GIRLS TOILET ROOMS 177 @ SOUTH LOBBY
ELECTRICAL RENOVATION PLAN

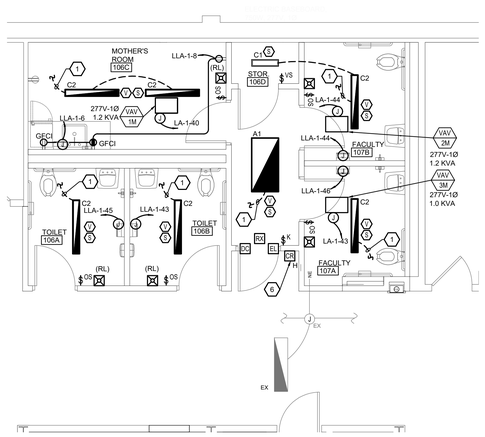
SCALE: 1/4" = 1'-0"



3A HS E-105

TOILET ROOMS ACROSS FROM KITCHEN
ELECTRICAL DEMOLITION PLAN

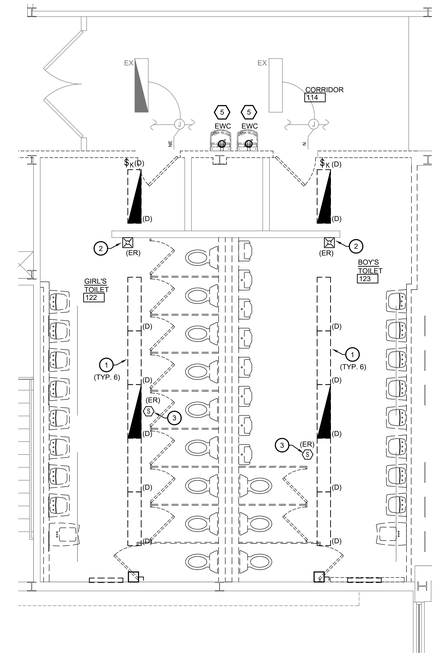
SCALE: 1/4" = 1'-0"



3B HS E-105

TOILET ROOMS ACROSS FROM KITCHEN
ELECTRICAL RENOVATION PLAN

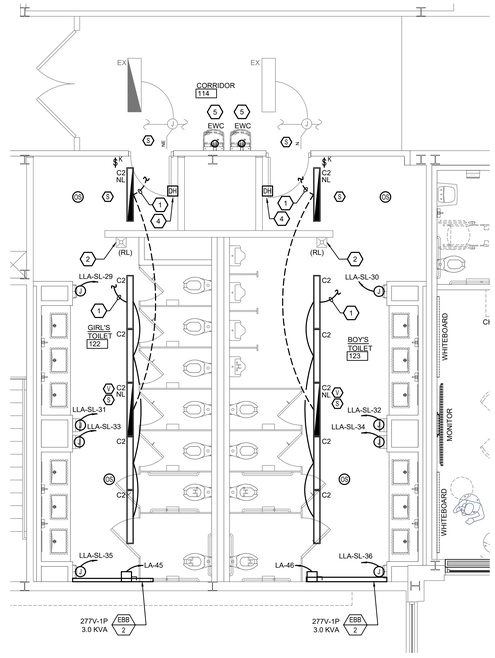
SCALE: 1/4" = 1'-0"



4A HS E-105

TOILET ROOMS 122/123
ELECTRICAL DEMOLITION PLAN

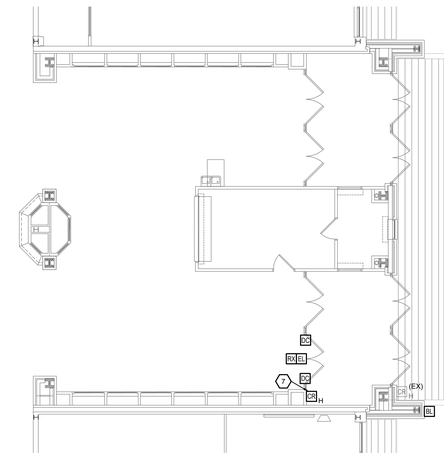
SCALE: 1/4" = 1'-0"



4B HS E-105

TOILET ROOMS 122/123
ELECTRICAL RENOVATION PLAN

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



5 HS E-105

SOUTH ENTRANCE
ELECTRICAL RENOVATION PLAN

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

ELECTRICAL DEMOLITION KEYNOTES

1. DISCONNECT AND REMOVE LIGHT FIXTURES AND SWITCHING. CIRCUIT TO REMAIN TO BE UTILIZED IN NEW WORK.
2. REMOVE FIRE ALARM STROBE AND STORE FOR REINSTALLATION IN NEW WORK. EXISTING FIRE ALARM WIRING TO REMAIN.
3. REMOVE FIRE ALARM SMOKE DETECTOR AND STORE FOR REINSTALLATION IN NEW WORK. EXISTING FIRE ALARM WIRING TO REMAIN.

ELECTRICAL RENOVATION KEYNOTES

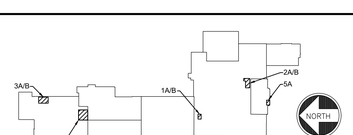
1. CONNECT NEW LIGHT FIXTURES TO EXISTING CORRIDOR NORMAL LIGHTING CIRCUIT USING 2#12, #12G IN 3/4"C. FIXTURE TO BE CONTROLLED BY KEYSWITCH & OCCUPANCY SENSOR. FIXTURES SHOWN SHADED SHALL BE CONNECTED TO THE EXISTING CORRIDOR NORMAL/EMERGENCY LIGHTING CIRCUIT AND ALWAYS BE ON (NIGHTLIGHT).
2. REINSTALL EXISTING FIRE ALARM STROBE EXTENDING EXISTING FIRE ALARM WIRING AND CONDUIT AS REQUIRED.
3. CIRCUIT NEW HAND DRYER STATION TO 20A/1P CIRCUIT BREAKER IN PANEL INDICATED USING 2#12, #12G IN 3/4"C .
4. DOOR HOLD OPEN DEVICE IS TO BE PROVIDED WITH DOOR HARDWARE. TIE TO NEAREST RECEPTACLE CIRCUIT. PROVIDE NEW SMOKE DETECTORS ON EACH SIDE OF DOOR AND A CONTROL RELAY SO DOOR SHALL RELEASE UPON ACTIVATION OF FIRE ALARM.
5. ELECTRIC WATER COOLERS RELOCATED BY PLUMBING CONTRACTOR. PROVIDE NEW RECEPTACLES AS INDICATED AND EXTEND EXISTING 20A ELECTRIC WATER COOLER CIRCUITS TO NEW LOCATIONS.
6. E.C. TO PROVIDE A 120V CONNECTION TO DOOR CONTROLLER BOX, POWER TO BE PROVIDED FROM PANEL KP-1-14. E.C. TO COORDINATE CONNECTION LOCATION WITH DAY AUTOMATION.
7. E.C. TO PROVIDE A 120V CONNECTION TO DOOR CONTROLLER BOX, POWER TO BE PROVIDED FROM PANEL EPD-1. E.C. TO COORDINATE CONNECTION LOCATION WITH DAY AUTOMATION.

DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN
(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK
(D) INDICATES ITEM TO BE DEMOLISHED
(RL) INDICATES RELOCATED ITEM

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
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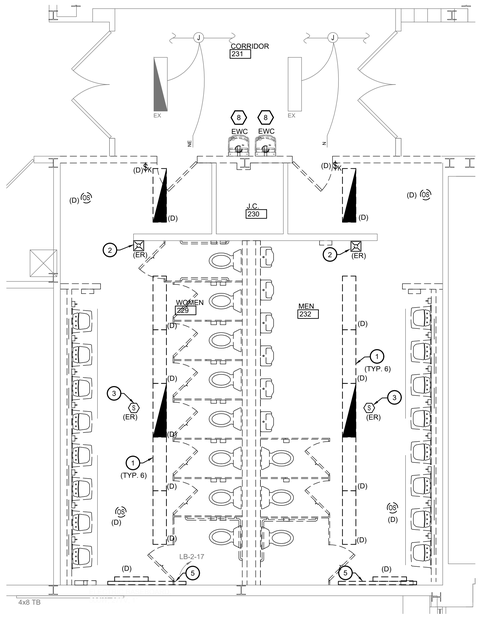
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
FIRST FLOOR
TOILET ROOM ELECTRICAL RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-105
DATE: 12-01-2025	

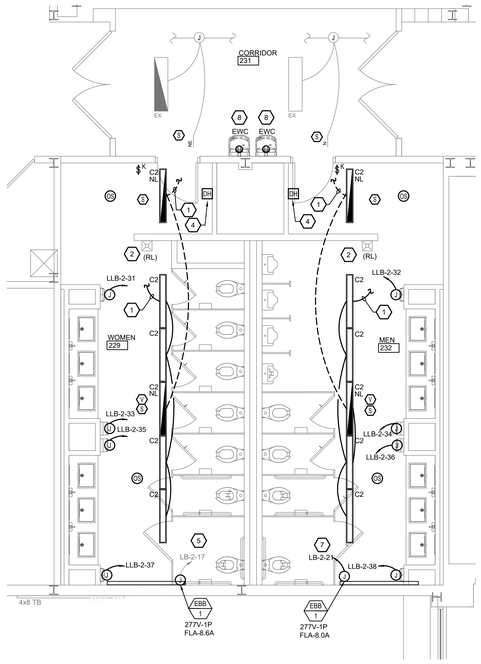
DRAWING STATUS: FOR BIDDING 11/26/2025



TOILET ROOMS 229/232 ACROSS FROM LIBRARY
ELECTRICAL DEMOLITION PLAN

1A HS-E-106

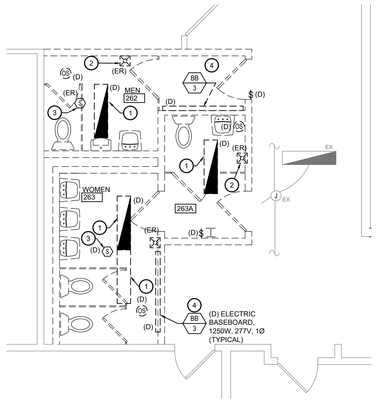
SCALE: 1/4" = 1'-0"



TOILET ROOMS 229/232 ACROSS FROM LIBRARY
ELECTRICAL RENOVATION PLAN

1B HS-E-106

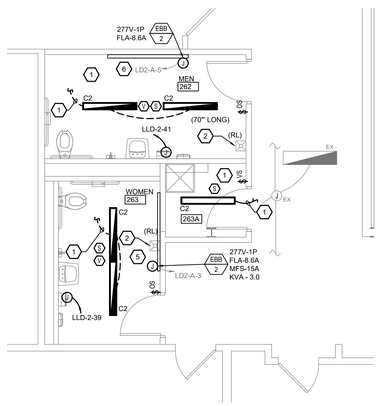
SCALE: 1/4" = 1'-0"



TOILET ROOMS 262/263
ELECTRICAL DEMOLITION PLAN

2A HS E-106

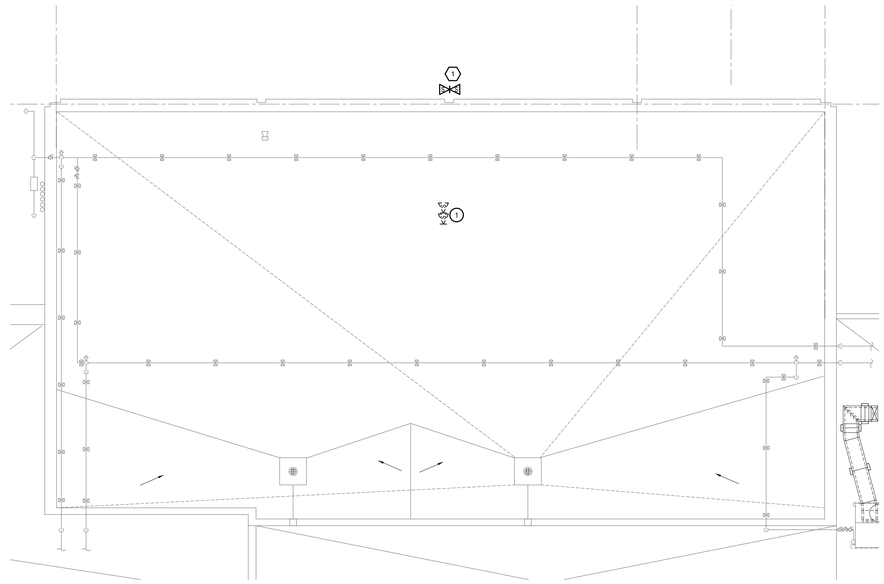
SCALE: 1/4" = 1'-0"



TOILET ROOMS 262/263
ELECTRICAL RENOVATION PLAN

2B HS E106

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



LIBRARY ROOF
ELECTRICAL RENOVATION PLAN

3A HS E106

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

ELECTRICAL DEMOLITION KEYNOTES

1. DISCONNECT AND REMOVE LIGHT FIXTURES AND SWITCHING. CIRCUIT TO REMAIN TO BE UTILIZED IN NEW WORK.
2. REMOVE FIRE ALARM STROBE AND STORE FOR REINSTALLATION IN NEW WORK. EXISTING FIRE ALARM WIRING TO REMAIN.
3. REMOVE FIRE ALARM SMOKE DETECTOR AND STORE FOR REINSTALLATION IN NEW WORK. EXISTING FIRE ALARM WIRING TO REMAIN.
4. BASEBOARD HEATER TO BE REMOVED BY M.C. E.C. SHALL DISCONNECT WIRING, CLEAN AND INSPECT FOR CONNECTION TO NEW BASEBOARD HEATERS IN RENOVATION.
5. REMOVE EXISTING BASEBOARD FROM CURRENT CIRCUIT AND CLEAN AND INSPECT WIRING TO REPLACEMENT BASEBOARD.

ELECTRICAL RENOVATION KEYNOTES

1. CONNECT NEW LIGHT FIXTURES TO EXISTING CORRIDOR NORMAL LIGHTING CIRCUIT USING 2#12, #12G IN 3/4"C. FIXTURE TO BE CONTROLLED BY KEYSWITCH & OCCUPANCY SENSOR. FIXTURES SHOWN SHADED SHALL BE CONNECTED TO THE EXISTING CORRIDOR NORMAL/EMERGENCY LIGHTING CIRCUIT AND ALWAYS BE ON (NIGHTLIGHT).
2. REINSTALL EXISTING FIRE ALARM STROBE EXTENDING EXISTING FIRE ALARM WIRING AND CONDUIT AS REQUIRED.
3. CIRCUIT NEW HAND DRYER STATION TO 20A/1P CIRCUIT BREAKER IN PANEL INDICATED USING 2#12, #12G IN 3/4"C.
4. DOOR HOLD OPEN DEVICE IS TO BE PROVIDED WITH DOOR HARDWARE. TIE TO NEAREST RECEPTACLE CIRCUIT. PROVIDE NEW SMOKE DETECTORS ON EACH SIDE OF DOOR AND A CONTROL RELAY SO DOOR SHALL RELEASE UPON ACTIVATION OF FIRE ALARM.
5. RECONNECT BASEBOARD HEATER TO EXISTING 277V-1ø CIRCUIT IN SAME LOCATION.
6. RECONNECT BASEBOARD HEATER TO EXISTING 277V-1ø CIRCUIT, EXTEND WIRING/CONDUIT AS REQUIRED TO NEW BASEBOARD LOCATION.
7. PROVIDE NEW CIRCUIT FOR BASEBOARD FROM PANEL INDICATED.
8. ELECTRIC WATER COOLERS RELOCATED BY PLUMBING CONTRACTOR. PROVIDE NEW RECEPTACLES AS INDICATED AND EXTEND EXISTING 20A ELECTRIC WATER COOLER CIRCUITS TO NEW LOCATIONS.

DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN

(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK

(D) INDICATES ITEM TO BE DEMOLISHED

(RL) INDICATES RELOCATED ITEM

ELECTRICAL DEMOLITION KEYNOTES

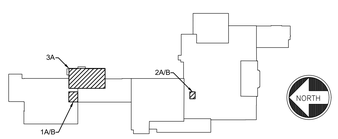
1. DISCONNECT AND REMOVE EXISTING ROOF MOUNTED SPEAKERS. EXISTING WIRING SHALL REMAIN TO BE EXTENDED TO NEW LOCATION.

ELECTRICAL RENOVATION KEYNOTES

1. PROVIDE NEW BI-DIRECTIONAL PAGING SPEAKER, RAULAND MODEL 3604, OR EQUAL, MOUNTED ON BUILDING. EXTEND EXISTING SPEAKER WIRING/CONDUIT TO NEW LOCATION. SPEAKERS SHALL BE PROVIDED WITH TWO ALUMINUM HORNS, HIGH EFFICIENT BI-DIRECTIONAL AUDIO COVERAGE, FULLY WEATHERPROOF CONSTRUCTION, BUILT-IN 30 WATT DRIVER AND LINE MATCHING TRANSFORMER, ADJUSTABLE WATTAGE TAPS, UNIVERSAL MOUNTING BRACKET AND GRAY ENAMEL FINISH. SPEAKERS TO BE MOUNTED 1FT BELOW ROOFLINE.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:

SECOND FLOOR
TOILET ROOM ELECTRICAL
RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-106
DATE: 12-01-2025	

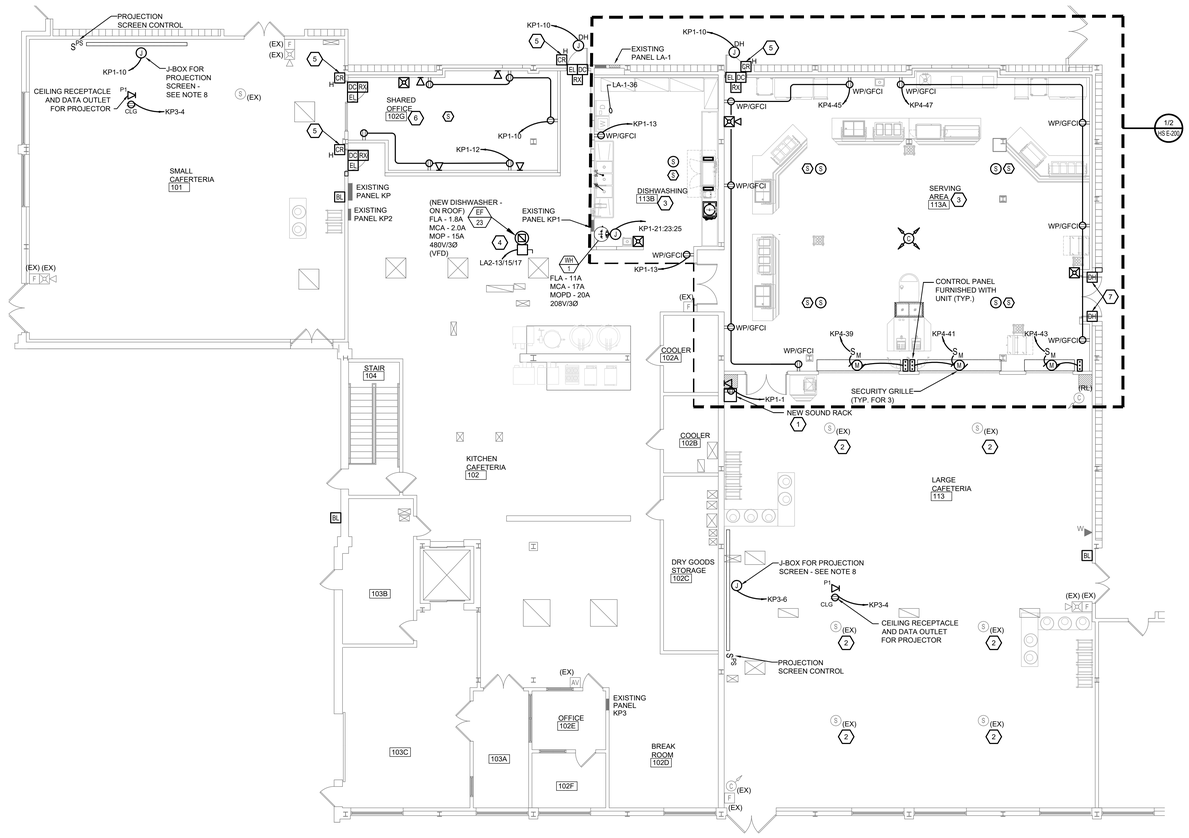
DRAWING STATUS
PLOT DATE: 12/8/2025



KITCHEN & DIGITAL CAFE
LIGHTING RENOVATION PLAN

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

BUILDING NORTH



KITCHEN & DIGITAL CAFE
POWER & SYSTEMS RENOVATION PLAN

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

BUILDING NORTH

LIGHTING RENOVATION KEYNOTES:

1. RELOCATE LIGHT SWITCH TO NEW DOOR LOCATION AS INDICATED. PROVIDE NEW DEVICES AND EXTEND WIRING/CONDUIT AS REQUIRED.
2. TIE NEW EMERGENCY LIGHTING TO ORIGINAL LIGHTING CIRCUIT SERVED FROM PANEL ELB1.
3. TIE NEW EXIT LIGHTING TO EXISTING CORRIDOR NORMAL-EMERGENCY LIGHTING CIRCUIT USING 2/12,#12G IN 3/4"C AHEAD OF ALL SWITCHING.
4. RUN EMERGENCY LIGHTING FIXTURES (SHOWN HALF-SHADED) THROUGH AN EMERGENCY LIGHTING CONTROL UNIT ALLOWING THE FIXTURE TO BE SWITCHED WITH ROOM LIGHTING SWITCH AND STILL ILLUMINATE TO FULL BRIGHTNESS DURING A POWER OUTAGE REGARDLESS OF ROOM SWITCH POSITION.
5. WORK WITHIN SHARED OFFICE 102G SHALL BE AN ALTERNATE.

ALL WORK TO SHARED OFFICE 102G SHALL BE AN ALTERNATE

POWER & SYSTEMS RENOVATION KEYNOTES:

1. E.C TO COORDINATE FIELD CONNECTIONS FOR NEW SOUND RACK WITH EQUIPMENT SUPPLIER. E.C. TO COORDINATE FINAL LOCATION FOR SOUND RACK AND RECEPTACLE WITH OWNER PRIOR TO ROUGH-IN.
2. EXISTING CEILING MOUNTED SPEAKER TO BE TIED INTO CAFETERIA SOUND RACK. SPEAKER TO HAVE PA OVERRIDE RELAY. SEE SOUND SYSTEM SPECIFICATIONS BELOW.
3. REFER TO DRAWING E-200 FOR KITCHEN SERVERY AND DISHWASHING ROOM EQUIPMENT ELECTRICAL PLAN.
4. E.F TO BE REPLACED IN KIND. E.C. TO TEST AND INSPECT FOR ADEQUACY OF EXISTING CIRCUIT IN PREPARATION FOR RECONNECTION. EXTEND WIRE AND CONDUIT AS NEEDED. EXISTING FAN STARTER AND DISCONNECT ARE FOUND IN SCIENCE CLASSROOM CLOSET 212 ABOVE. FAN INSTALLATION TO INCLUDE VFD WITHIN SCIENCE CLASSROOM CLOSET. FAN SHUT OFF TO BE INTERWIRED TO DISHWASHER SWITCH, SEE DRAWING E-200 FOR FURTHER INFORMATION.
5. E.C. TO PROVIDE A 120V CONNECTION TO DOOR CONTROLLER BOX. POWER TO BE PROVIDED FROM PANEL KP-1-14. E.C. TO COORDINATE CONNECTION LOCATION WITH DAY AUTOMATION.
6. WORK WITHIN SHARED OFFICE 102G SHALL BE AN ALTERNATE.
7. PROVIDE POWER TO DOOR HOLD OPEN DEVICE TO BE PROVIDED WITH DOOR HARDWARE. TIE TO NEAREST RECEPTACLE CIRCUIT. PROVIDE NEW SMOKE DETECTORS ON EACH SIDE OF DOOR AND A CONTROL RELAY SO DOOR SHALL RELEASE UPON ACTIVATION OF FIRE ALARM.

CAFETERIA SOUND SYSTEM NOTES

1. PROVIDE LOCAL SOUND SYSTEM HEADEND, INCLUDING RACK, HEADEND, AMPLIFIER, AND ALL MISC. COMPONENTS REQUIRED FOR A FULLY FUNCTIONAL INSTALLATION. COORDINATE EXACT RACK LOCATION IN FIELD.
2. PROVIDE INTERFACE COMPONENTS AND CONNECTION TO EXISTING PAGING SYSTEM IN ORDER TO SILENCE LOCAL SYSTEM DURING MASTER PAGING ANNOUNCEMENTS.
3. BASIS OF DESIGN BELOW IS AS FOLLOWS:

EQUIPMENT NUMBER:	DEVICE	EXTRA NOTES:
CD-200BT	CD PLAYER	
RX-BT10	BLUE TOOTH RECEIVER	
RM89	MIXER	
AX60G	POWER AMPLIFIER	
M8X2	POWER SWITCH	
ATW-1423L	DUAL WIRELESS MICROPHONE SYSTEM	ONE HAND HELD, ONE LAVALIER
LWSR-1222	WALL RACK	
LFD-12	SOLID FRONT DOOR	
VAR-1 PA	OVER RIDE RELAY	

DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN

(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK

(D) INDICATES ITEM TO BE DEMOLISHED

(RL) INDICATES RELOCATED ITEM

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

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New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

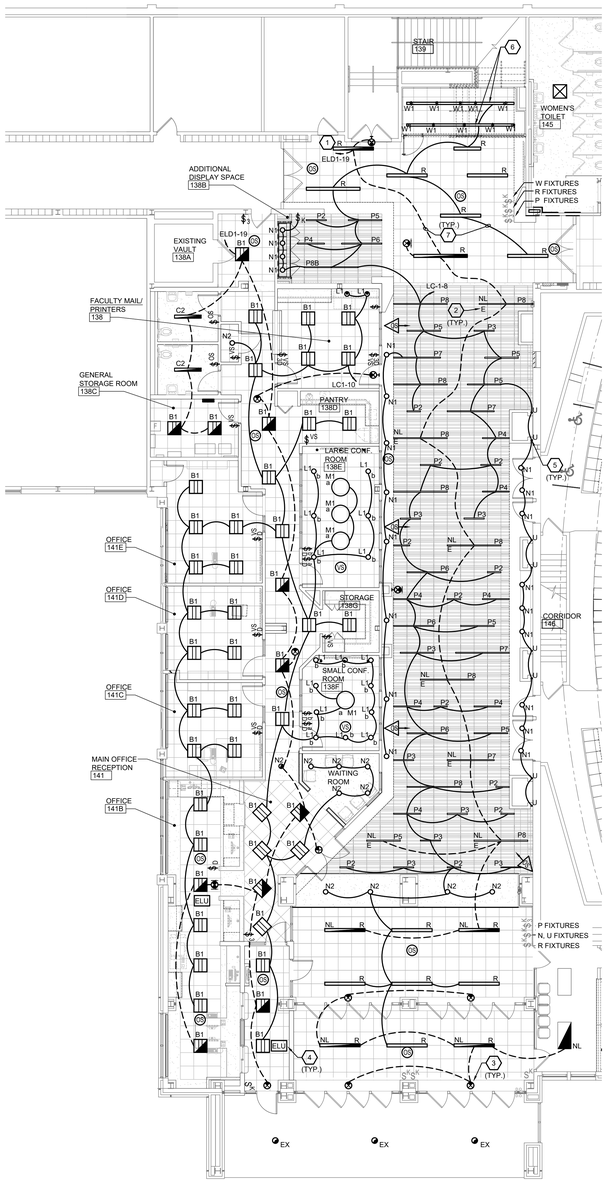
Capital Project 2025 2026
Phase 2

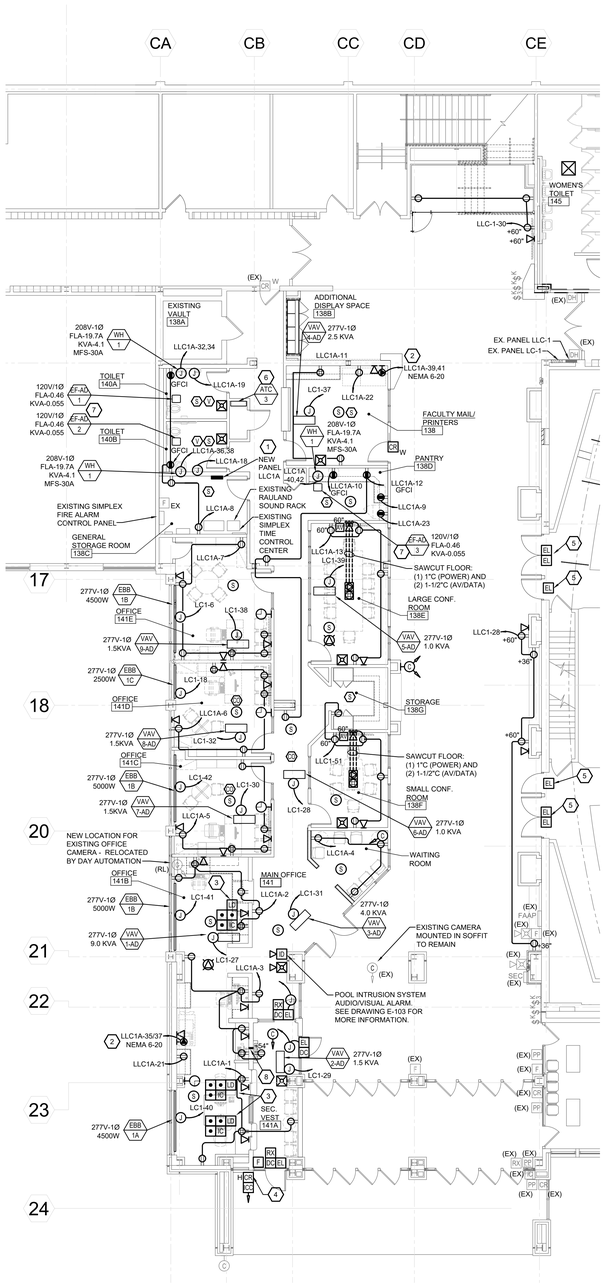
DRAWING TITLE:

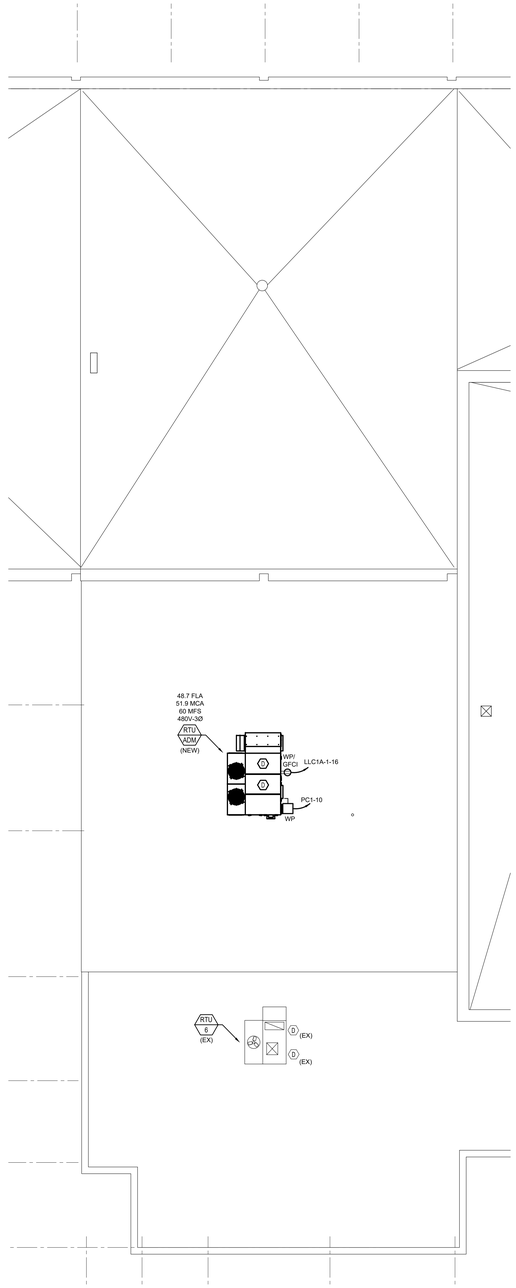
FIRST FLOOR - KITCHEN AND DIGITAL CAFE ELECT. RENOVATION PLANS

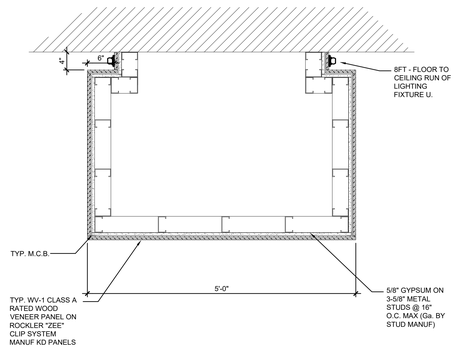
DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-107
DATE: 12-01-2025	

DWG FILE: E200-ELEC.DWG
PLOT DATE: 11/26/25









ADMINISTRATIVE LIGHTING RENOVATION PLAN

1 / HS-E-108

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

BUILDING NORTH

ADMINISTRATIVE POWER & SYSTEMS RENOVATION PLAN

2 / HS-E-108

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

BUILDING NORTH

ADMINISTRATIVE PARTIAL ROOF POWER & SYSTEMS RENOVATION PLAN

3 / HS-E-108

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

BUILDING NORTH

AUDITORIUM ARCHITECTURAL CREVICE LIGHTING DETAIL

4 / HS-E-108

SCALE: 1"=1'0"

LIGHTING RENOVATION KEYNOTES

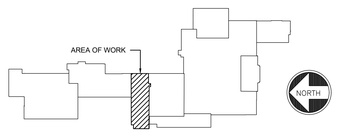
1. CONNECT LIGHTING TO CIRCUIT THAT SERVES EXISTING SPACE.
2. 'E' DENOTES FIXTURE IS ON EMERGENCY CIRCUIT.
3. TIE NEW EXIT LIGHTING TO EXISTING CORRIDOR NORMAL-EMERGENCY LIGHTING CIRCUIT USING 2/12,#12G IN 3/4"C AHEAD OF ALL SWITCHING.
4. RUN EMERGENCY LIGHTING FIXTURES (SHOWN HALF-SHADED) THROUGH AN EMERGENCY LIGHTING CONTROL UNIT ALLOWING THE FIXTURE TO BE SWITCHED WITH ROOM LIGHTING SWITCH AND STILL ILLUMINATE TO FULL BRIGHTNESS DURING A POWER OUTAGE REGARDLESS OF ROOM SWITCH POSITION.
5. TYPE 'U' FIXTURE IS RAN IN ARCHITECTURAL CREVICE. FIXTURE TO RUN FLOOR TO CEILING AND BE FULLY HIDDEN IN CREVICE. SEE DETAIL ON THIS SHEET AND ARCHITECTURAL ELEVATIONS ON SHEET A-500 FOR FURTHER INFORMATION.
6. TRACK LIGHTING SYSTEM. TRACK IS SHOWN AS 16' FOOT LONG. FIXTURE IS SHOWN AS TYPE W1 TO BE USED WITH AXIS STENCIL FLEX LINEAR TRACK LIGHTING SYSTEM.
7. EMERGENCY LIGHTING CIRCUIT IS SHOWN AS A DASHED LINE, NORMAL POWER IS SOLID LINE.

POWER & SYSTEMS RENOVATION KEYNOTES

1. PROVIDE NEW PANEL LLC1A IN GENERAL STORAGE ROOM 138C. FEED PANEL FROM NEW TRANSFORMER LOCATED IN BASEMENT HVAC/ELEC TUNNEL BELOW. REFER TO BASEMENT ELECTRICAL COMPOSITE PLAN ON E-004 AND ONE LINE DIAGRAM ON E-300 FOR ADDITIONAL INFORMATION.
2. VERIFY NEMA PLUG CONFIGURATION OF COPIER WITH OWNER PRIOR TO ROUGH-IN.
3. E.C. TO COORDINATE FINAL LOCATION OF EMERGENCY LOCKDOWN BUTTON WITH DISTRICT. BUTTON TO BE LOCATED AT WORKSTATION.
4. E.C. TO PROVIDE A 120V CONNECTION TO DOOR CONTROLLER BOX. POWER TO BE PROVIDED FROM PANEL LLC1A-24. E.C. TO COORDINATE CONNECTION LOCATION WITH DAY AUTOMATION.
5. ELECTRIFIED DOOR HARDWARE TO INCLUDE A DOOR POWER SUPPLY, DOOR POWER TRANSFER. SEE ARCHITECT DOOR HARDWARE SCHEDULE FOR FURTHER INFORMATION. EACH BOX TO BE CONNECTED TO PANEL LLC1A-24.
6. MECHANICAL ATC, E.C. TO PROVIDE A 120V CONNECTION & DATA DROP.
7. E.F. TO BE CONNECTED TO PANEL LLC1A-25 USING 2/12, #12G, 3/4" CONDUIT.
8. ID SCANNER MONITOR - PROVIDE A MOUNT AND A 2" CONDUIT SLEEVE AT 54" A.F.F. THROUGH WALL FOR CABLING TO USB HUB TO BE LOCATED ON THE INSIDE OF THE OFFICE AREA. COORDINATE AL WORK WITH DISTRICT I.T. DEPT.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

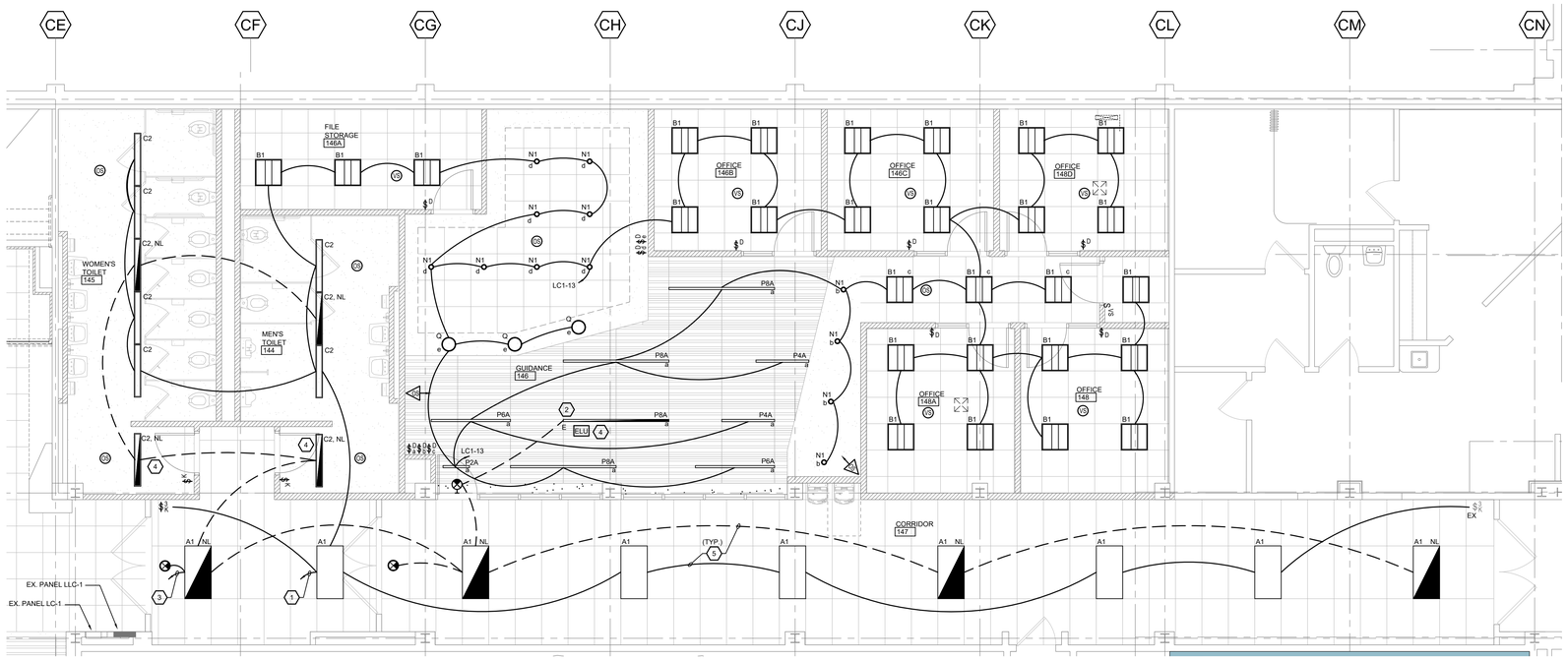
Capital Project 2025 2026
Phase 2

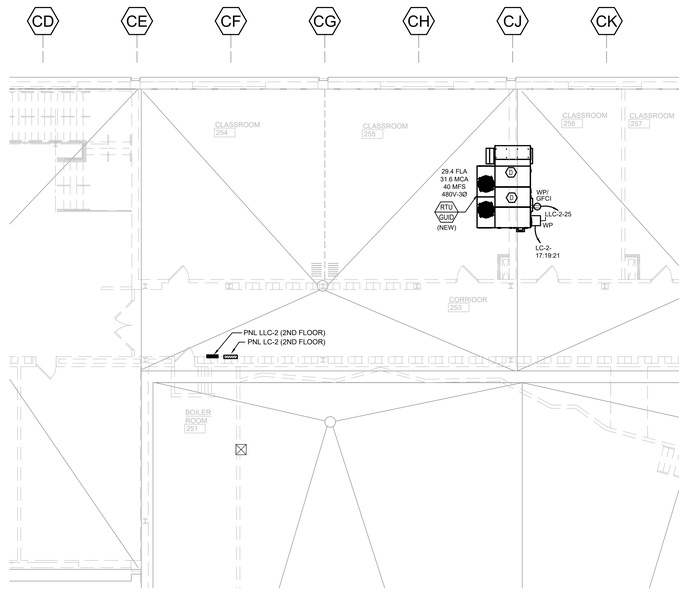
DRAWING TITLE:

ADMINISTRATIVE ELECTRICAL RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-108
DATE: 12-01-2025	

DWG FILE: HS-E108.DWG
PLOT DATE: 11/20/2025





NORTH
BUILDING NORTH

3
HS E-109

GUIDANCE OFFICE
PARTIAL ROOF POWER RENOVATION PLAN

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

NORTH
BUILDING NORTH

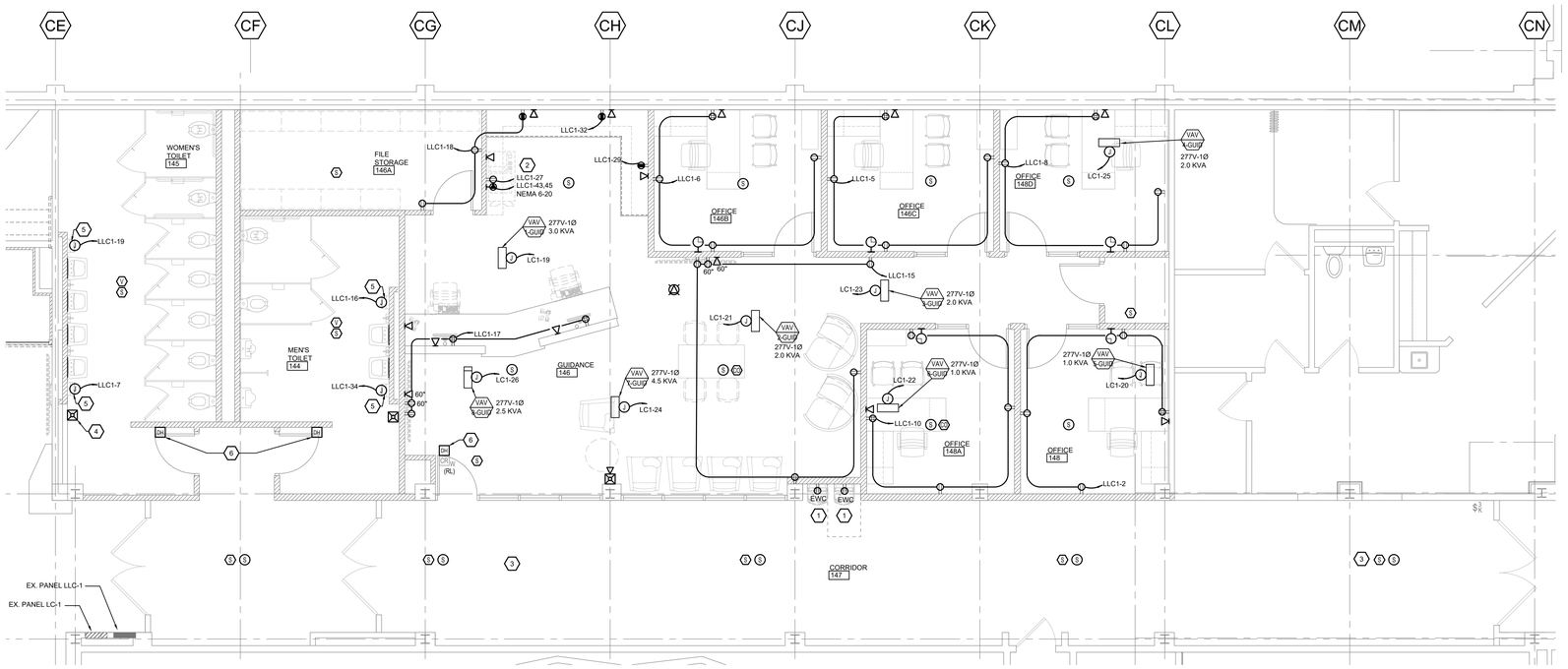
1
HS E-109

GUIDANCE OFFICE AND TOILET ROOMS 144/145
LIGHTING RENOVATION PLAN

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

LIGHTING RENOVATION KEYNOTES

1. TIE NEW CORRIDOR NORMAL LIGHTING FIXTURES TO EXISTING CORRIDOR NORMAL LIGHTING CIRCUIT USING 2/12,#12G IN 3/4"C.
2. 'E' DENOTES FIXTURE IS ON EMERGENCY CIRCUIT.
3. TIE NEW EMERGENCY LIGHTING TO EXISTING CORRIDOR NORMAL-EMERGENCY LIGHTING CIRCUIT USING 2/12,#12G IN 3/4"C. EXIT LIGHTING SHALL BE CIRCUITED AHEAD OF ALL SWITCHING.
4. CONNECT NEW LIGHT FIXTURES TO EXISTING CORRIDOR NORMAL LIGHTING CIRCUIT USING 2#12, #12G IN 3/4"C. FIXTURE TO BE CONTROLLED BY KEYSWITCH & OCCUPANCY SENSOR. FIXTURES SHOWN SHADED SHALL BE CONNECTED TO THE EXISTING CORRIDOR NORMAL/EMERGENCY LIGHTING CIRCUIT AND BE ALWAYS ON (NIGHT LIGHT).
5. EMERGENCY LIGHTING CIRCUIT IS SHOWN AS A DASHED LINE. NORMAL POWER IS SOLID LINE.



POWER/SYSTEMS RENOVATION KEYNOTES

1. ELECTRIC WATER COOLERS RELOCATED BY PLUMBING CONTRACTOR. PROVIDE NEW RECEPTACLES AS INDICATED AND EXTEND EXISTING 20A ELECTRIC WATER COOLER CIRCUITS TO NEW LOCATIONS.
2. VERIFY NEMA PLUG CONFIGURATION OF COPIER WITH OWNER PRIOR TO ROUGH-IN.
3. ALL EXISTING FIRE ALARM DEVICES ARE TO REMAIN.
4. REINSTALL EXISTING FIRE ALARM STROBE EXTENDING FIRE ALARM WIRING AND CONDUIT AS REQUIRED.
5. CIRCUIT NEW HAND DRYER STATION TO 20A/1P CIRCUIT BREAKER IN PANEL INDICATED USING 2#12, #12G IN 3/4"C.
6. DOOR HOLD OPEN DEVICE IS TO BE PROVIDED WITH DOOR HARDWARE. TIE TO NEAREST RECEPTACLE CIRCUIT. PROVIDE NEW SMOKE DETECTORS ON EACH SIDE OF DOOR AND A CONTROL RELAY SO DOOR SHALL RELEASE UPON ACTIVATION OF FIRE ALARM.

NORTH
BUILDING NORTH

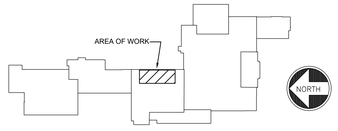
2
HS E-109

GUIDANCE OFFICE AND TOILET ROOMS 144/145
POWER & SYSTEMS RENOVATION PLAN

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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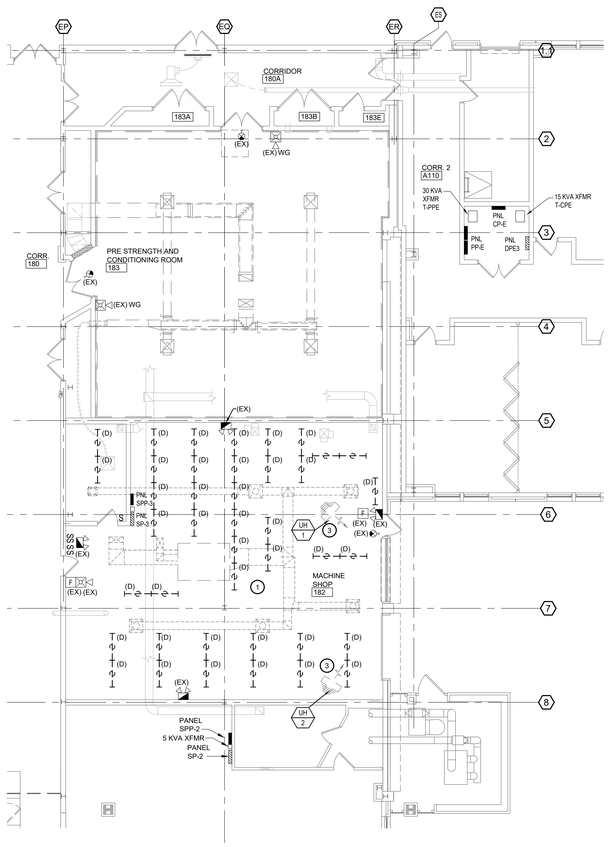
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
GUIDANCE OFFICE AND TOILET ROOMS 144/145 ELEC. RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-109
DATE: 12-01-2025	

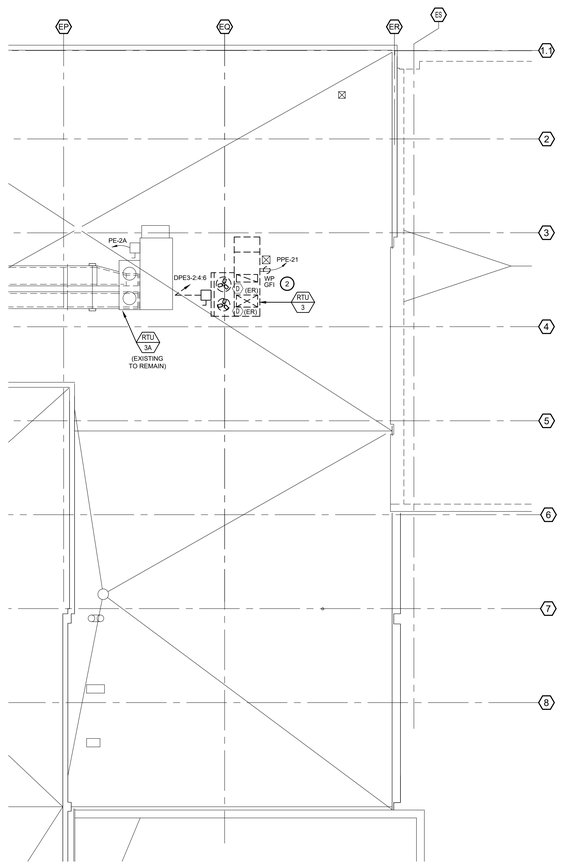
DRAFTS: 2024-02-19(PM)
PLOT DATE: 11/24/2025



1 E-110

WEIGHT ROOM & METAL SHOP ELECTRICAL DEMOLITION PLAN

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



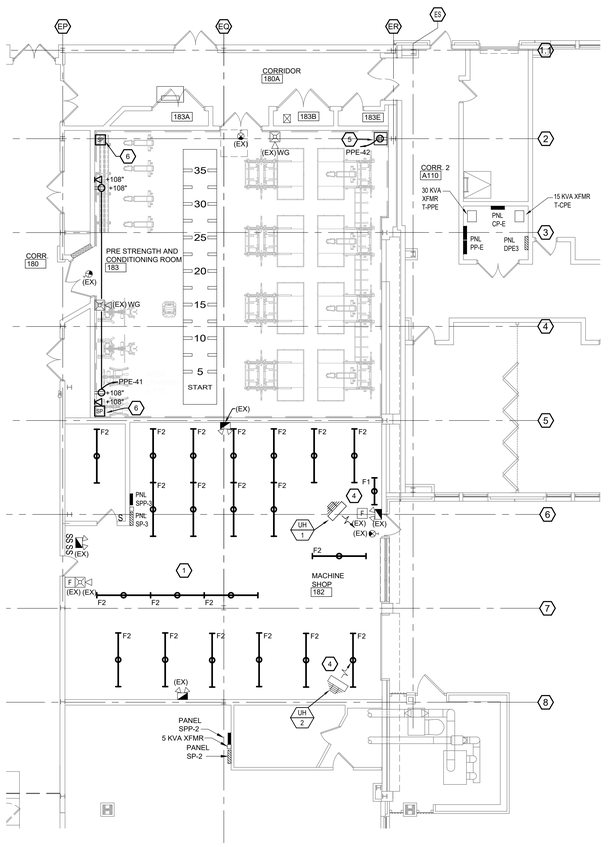
2 E-110

WEIGHT ROOM & METAL SHOP ROOF ELECTRICAL DEMOLITION PLAN

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

NORTH

BUILDING NORTH



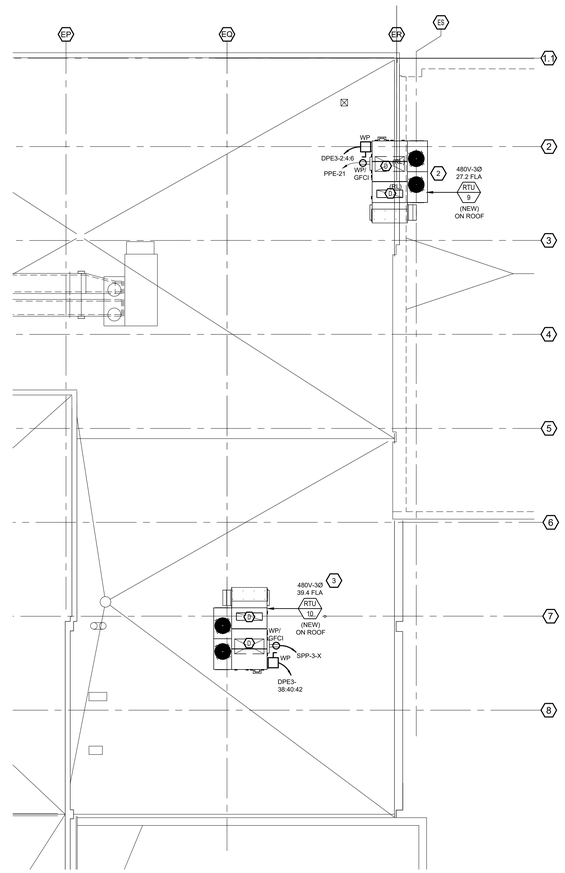
3 E-110

WEIGHT ROOM & METAL SHOP ELECTRICAL RENOVATION PLAN

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

NORTH

BUILDING NORTH



4 E-110

WEIGHT ROOM & METAL SHOP ROOF ELECTRICAL RENOVATION PLAN

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

ELECTRICAL DEMOLITION KEYNOTES

1. DISCONNECT AND REMOVE ALL LIGHTING FIXTURES IN METAL SHOP. EXISTING 277V NORMAL LIGHTING CIRCUIT SHALL REMAIN TO BE REUSED IN LIGHTING RENOVATION WORK.
2. DISCONNECT RTU-3 ON ROOF ABOVE WEIGHT ROOM. EXISTING POWER CIRCUIT FROM DPE-3, RECEPTACLE CIRCUIT FROM PE-E AND DUCT DETECTORS SHALL REMAIN TO BE REUSED IN RENOVATION.
3. UNIT HEATER TO BE REMOVED AND REPLACED BY MECHANICAL CONTRACTOR. DISCONNECT POWER AT UNIT AND LEAVE CIRCUIT WIRING/CONDUIT TO BE UTILIZED FOR REPLACEMENT UNIT HEATERS IN RENOVATION.

ELECTRICAL RENOVATION KEYNOTES

1. REPLACE LIGHTING FIXTURES WITH NEW AS INDICATED. NEW FIXTURES SHALL BE PROVIDED WITH A METAL CAGE. TIE TO EXISTING 277V LIGHTING CIRCUIT, EXTENDING WIRING AND CONDUIT AS REQUIRED.
2. PROVIDE POWER TO REPLACEMENT RTU-3 AS INDICATED. UTILIZE EXISTING CIRCUIT FROM DPE-3, EXTENDING CONDUIT AND WIRING AS REQUIRED. REINSTALL DUCT DETECTORS IN SUPPLY AND RETURN DUCTS, EXTENDING FIRE ALARM WIRING AS REQUIRED. PROVIDE NEW ROOF GFCI RECEPTACLE IN WHILE-IN-USE WEATHERPROOF COVER, EXTENDING EXISTING CONDUIT AND WIRING AS REQUIRED.
3. PROVIDE POWER TO NEW METAL SHOP RTU AS INDICATED. PROVIDE NEW CIRCUIT FROM DPE-3. PROVIDE NEW DUCT DETECTORS IN SUPPLY AND RETURN DUCTS WITH WIRING TO FIRE ALARM CONTROL PANEL. PROVIDE NEW ROOF GFCI RECEPTACLE IN WHILE-IN-USE WEATHERPROOF COVER.
4. RECONNECT POWER TO REPLACEMENT UNIT HEATER. EXTEND EXISTING WIRE AND CONDUIT AS REQUIRED.
5. E.C TO COORDINATE FIELD CONNECTIONS FOR NEW SOUND RACK WITH EQUIPMENT SUPPLIER. E.C. TO COORDINATE FINAL LOCATION FOR SOUND RACK AND RECEPTACLE WITH OWNER PRIOR TO ROUGH-IN.
6. MOUNT NEW SOUND SYSTEM SPEAKERS 120" A.F.F.. COORDINATE FINAL LOCATION FOR WALL MOUNTED SPEAKER WITH OWNER PRIOR TO ROUGH IN. SPEAKERS TO HAVE PA SYSTEM OVERRIDE.

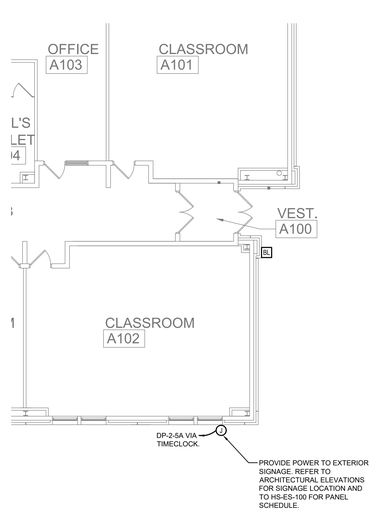
DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN

(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK

(D) INDICATES ITEM TO BE DEMOLISHED

(RL) INDICATES RELOCATED ITEM



5 E-110

WEST PATHWAYS SIGNAGE LOCATION

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

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	LAMPS	VOLTS	DESCRIPTION
F1	METALUX	4SNX-48SL-FDL-UNV-CC83-CD1-AYC-CHAIN/SET-U-WG-SNX/SN-4FT-B	32.1W LED 4416 LUMENS 3000-4000K	UNIV.	4' LINEAR LED STRIPLIGHT WITH FLAT FROSTED DIFFUSE LENS, DL LENS, SELECTABLE COLOR TEMP, WHITE FINISH, 0-10V DIMMING DRIVER, 36" CHAIN HANGERS AND WIREGUARD. TO BE MOUNTED 9' A.F.F.
F2	METALUX	8SNX-96SL-FDL-UNV-CC83-CD1-AYC-CHAIN/SET-U-(2) WG-SNX/SN-4FT-B	64.2W LED 8831 LUMENS 3000-4000K	UNIV.	8' LINEAR LED STRIPLIGHT WITH FLAT FROSTED DIFFUSE LENS, DL LENS, SELECTABLE COLOR TEMP, WHITE FINISH, 0-10V DIMMING DRIVER, 36" CHAIN HANGERS AND WIREGUARD TO BE MOUNTED 9' A.F.F.

SOUND SYSTEM FOR WEIGHT ROOM

EQUIPMENT NUMBER:	DEVICE	EXTRA NOTES:
RX-BT10	BLUE TOOTH RECEIVER	
GTC60C	MIXER AMPLIFIER	
M8X2	POWER SWITCH	
LWSR-1022	WALL RACK	
LFD-10	SOLID FRONT DOOR	
SM52-EZ	SPEAKERS	
ACC1101	BACK BOX	
ACC1104	TILE SUPPORT	
VAR-1	PA OVER RIDE RELAY	

REVISIONS

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December 1, 2025



KEY PLAN

CAPITAL PROJECTS

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HS SED #03-15-02-06-0-011-027
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PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

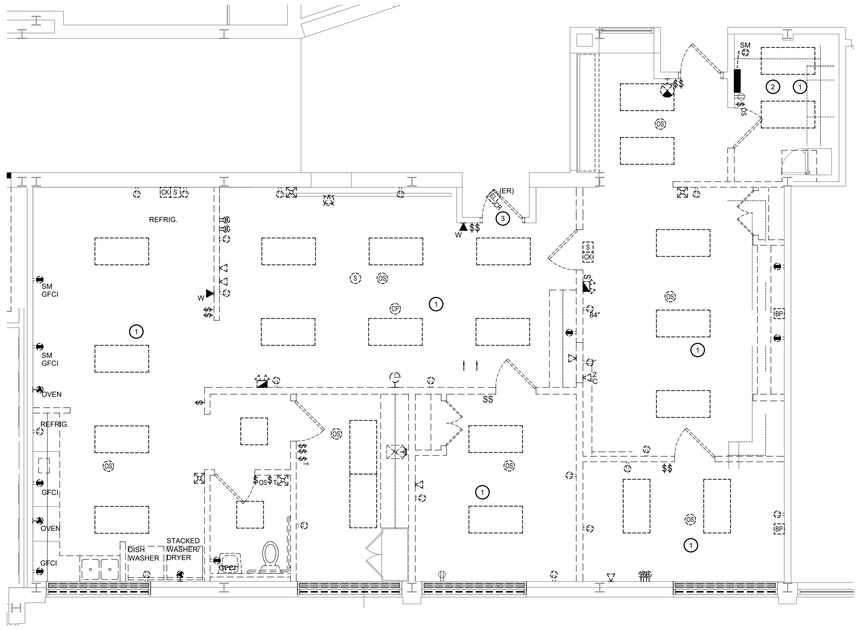
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

WEIGHT ROOM & METAL SHOP ELECTRICAL DEMOLITION & RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-110
DATE:	
12-01-2025	

CAD FILE: E110-E-110.DWG
PLOT DATE: 1/2/2025



NORTH

BUILDING NORTH

1 HS-E-111

LIVING CENTER
ELECTRICAL DEMOLITION PLAN

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

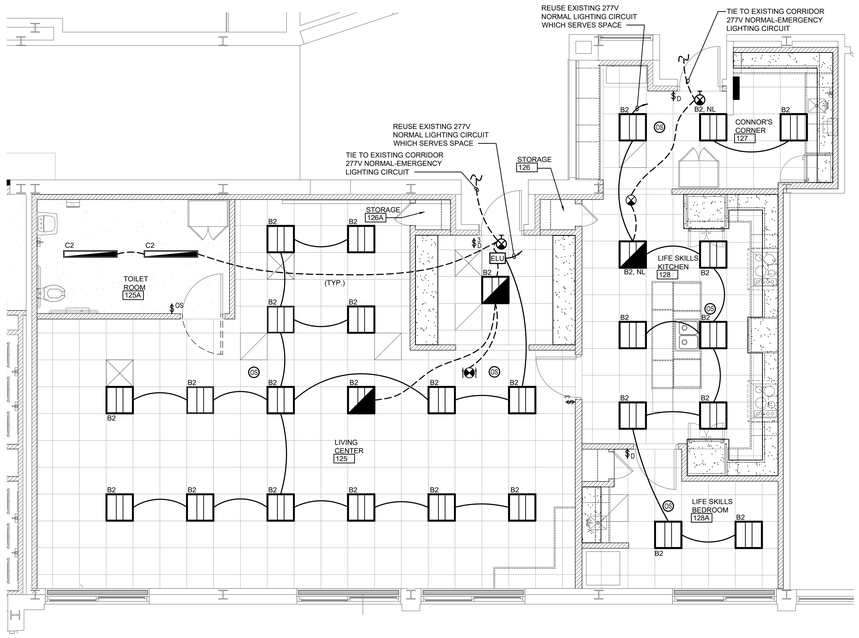
ELECTRICAL DEMOLITION KEYNOTES

1. ALL ITEMS SHOWN DASHED IN LIVING CENTER AREAS ARE TO BE REMOVED. DISCONNECT POWER FROM ALL ELECTRICAL, MECHANICAL AND PLUMBING EQUIPMENT IN THESE ROOMS AND REMOVE WIRING BACK TO SOURCE. LIGHTING CIRCUIT SHALL REMAIN TO BE REUSED IN RENOVATION. ITEMS TO BE REMOVED ARE SHOWN DASHED ON PLAN TO PROVIDE AN OVERALL SCOPE OF WORK. REFER TO GENERAL DEMOLITION NOTES ON DRAWING E-001 FOR ADDITIONAL INFORMATION.
2. RELOCATE ALL EXISTING NON-LIVING CENTER LOADS FROM PANEL LLLC-1 TO CORRIDOR PANEL LLB1. REFER TO LLB-1 PANEL SCHEDULE ON DRAWING E-401 FOR ADDITIONAL INFORMATION. ONCE LOADS RELOCATED, REMOVE PANEL LLLC AND FEEDER BACK TO BASEMENT PANEL DPB-2. PANEL TO BE REPLACED AND UPSIZED IN RENOVATION. REFER TO ONE LINE DIAGRAM ON DRAWING E-300 AND COMPOSITE PLAN E-004 FOR PANEL LOCATIONS.
3. EXISTING WIRELESS CARD READER TO BE RELOCATED TO NEW LIVING CENTER CORRIDOR DOOR IN RENOVATION.

JOHNSON CITY HIGH SCHOOL LIVING CENTER / LIFE SKILLS EQUIPMENT SCHEDULE & ELECTRICAL REQUIREMENTS

ITEM NO	QTY	NEW / EX	DESCRIPTION	AMPS	KW	HP	VOLTS	PHASE	CYCLE	DIRECT	PLUG	NEMA	A.F.F.	PANEL	REMARKS
1	1	NEW	9.4 CU SMART DOUBLE WALL OVEN W/CONVECTION, AIR FRY	42.5	10.2	-	208/240	1	60	X	-	-	47"	50A CB, #6AWG	JUNCTION BOX
2	2	NEW	30 IN. RADIANT SMOOTH SURFACE ELECTRIC COOKTOP	27.9	5.8	-	208/240	1	60	X	-	-	12"	40A CB, #8AWG	JUNCTION BOX
3	2	NEW	24 IN. TOP CONTROL SMART DISHWASHER	15.0	1.2	-	120	1	60	X	-	-	-	20A CB, #12AWG	JUNCTION BOX
4	2	NEW	33 IN. 21 CU FRENCH DOOR REFRIGERATOR	15.0	1.2	-	120	1	60	-	X	5-15P	-	20A CB, #12AWG	
5	2	NEW	36 IN. WAL MOUNT RANGE HOOD	4.0	0.5	-	120	1	60	X	-	-	-	20A CB, #12AWG	JUNCTION BOX
6	1	NEW	7.4 CU FT VENTED STACKABLE ELECTRIC DRYER	26.0	6.3	-	208/240	1	60	X	-	-	-	30A CB, #10AWG	JUNCTION BOX
7	1	NEW	4.5 CU FT STACKABLE FRONT LOAD WASHER	10.0	1.2	-	120	1	60	X	-	-	-	20A CB, #12AWG	JUNCTION BOX
8	1	NEW	ARTISAN 5 QT. SILVER STAND MIXER	2.7	0.325	-	120	1	60	-	X	5-15P	-	20A CB, #12AWG	
9	2	NEW	2.0 CU. FT. 1200 WATT MICROWAVE IN STAINLESS STEEL	14.0	1.2	-	120	1	60	-	X	5-15P	-	20A CB, #12AWG	

GENERAL NOTES:
A. THE CONTRACTOR SHALL VERIFY ALL INFORMATION ON THIS DRAWING, INCLUDING NEMA OUTLET CONFIGURATION AND CONNECTIONS, PRIOR TO INSTALLATION.



NORTH

BUILDING NORTH

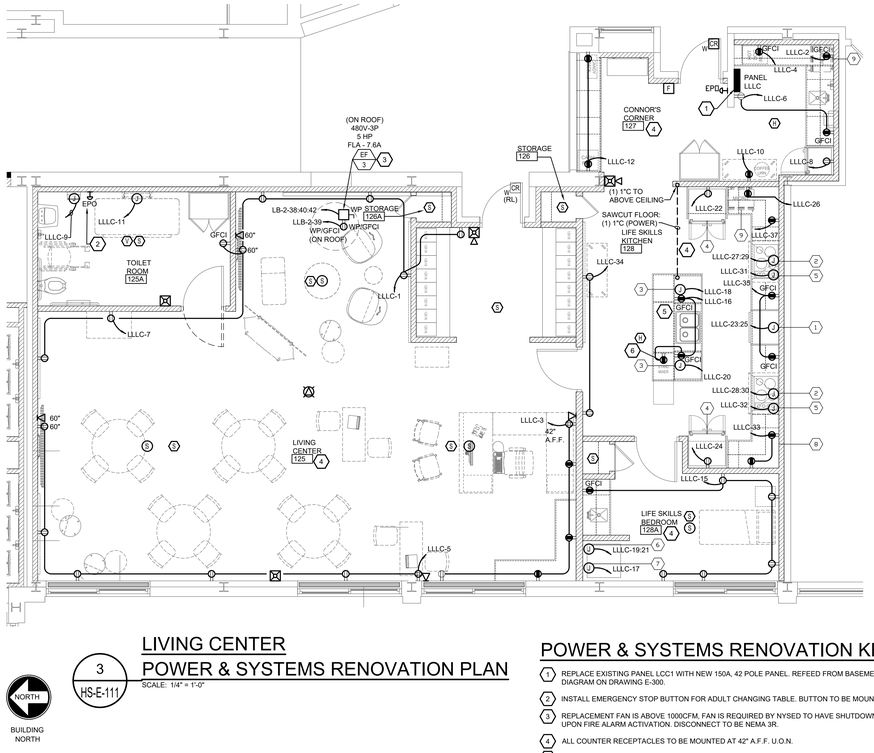
2 HS-E-111

LIVING CENTER
LIGHTING RENOVATION PLAN

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

LIGHTING RENOVATION KEYNOTES

1. TIE NEW EXIT LIGHTING TO EXISTING CORRIDOR NORMAL-EMERGENCY LIGHTING CIRCUIT USING 2/12,#12G IN 3/4"C AHEAD OF ALL SWITCHING.
2. RUN EMERGENCY LIGHTING FIXTURES (SHOWN HALF-SHADED) THROUGH AN EMERGENCY LIGHTING CONTROL UNIT ALLOWING THE FIXTURE TO BE SWITCHED WITH ROOM LIGHTING SWITCH AND STILL ILLUMINATE DURING A POWER OUTAGE REGARDLESS OF ROOM SWITCH POSITION.
3. EMERGENCY LIGHTING CIRCUIT IS SHOWN AS A DASHED LINE, NORMAL POWER IS SOLID LINE.



NORTH

BUILDING NORTH

3 HS-E-111

LIVING CENTER
POWER & SYSTEMS RENOVATION PLAN

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

POWER & SYSTEMS RENOVATION KEYNOTES

1. REPLACE EXISTING PANEL LCC1 WITH NEW 150A, 42 POLE PANEL. REFEED FROM BASEMENT PANEL DPB-2. REFER TO ONELINE DIAGRAM ON DRAWING E-300.
2. INSTALL EMERGENCY STOP BUTTON FOR ADULT CHANGING TABLE. BUTTON TO BE MOUNTED BETWEEN 31-1/2" AND 39-3/8" A.F.F.
3. REPLACEMENT FAN IS ABOVE 1000CFM. FAN IS REQUIRED BY NYSED TO HAVE SHUTDOWN RELAY INSTALLED TO ACTIVATE SHUTDOWN UPON FIRE ALARM ACTIVATION. DISCONNECT TO BE NEMA 3R.
4. ALL COUNTER RECEPTACLES TO BE MOUNTED AT 42" A.F.F. U.O.N.
5. ISLAND COUNTER RECEPTACLES TO BE A DUAL SIDED, FLUSH MOUNTED POP UP RECEPTACLE, HUBBELL WIRING DEVICE-KELLEMS RCT221BK OR EQUIVALENT. PROVIDE GFCI BREAKER IN PANEL.
6. RECEPTACLE TO BE MOUNTED IN COUNTER FOR STAND MIXER LIFT.

REVISIONS

Issued for Bidding
December 1, 2025

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

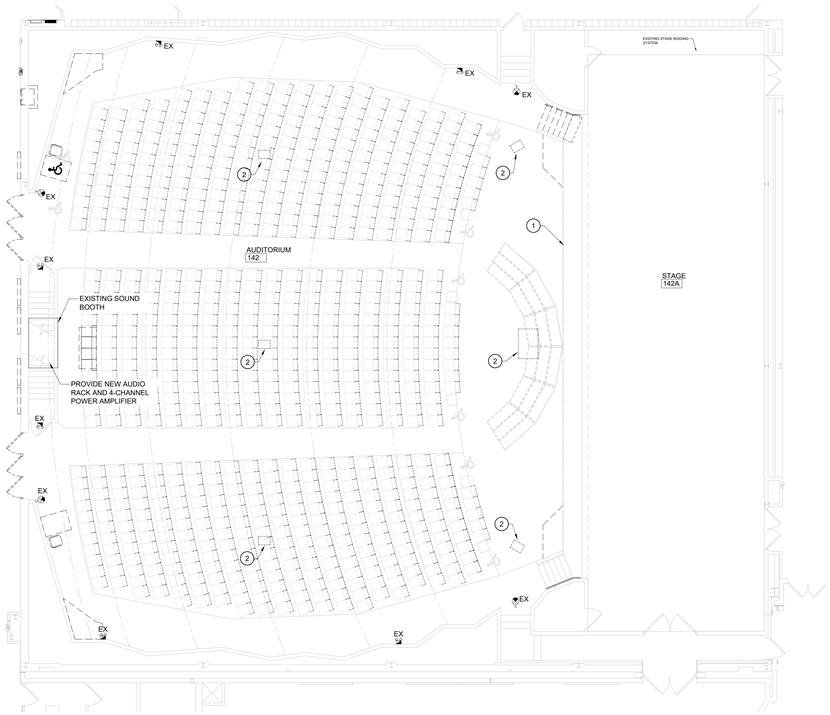
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

FIRST FLOOR -LIVING CENTER ELECTRICAL DEMO & RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: E-111

CAD FILE PLOT DATE: 11/20/2025

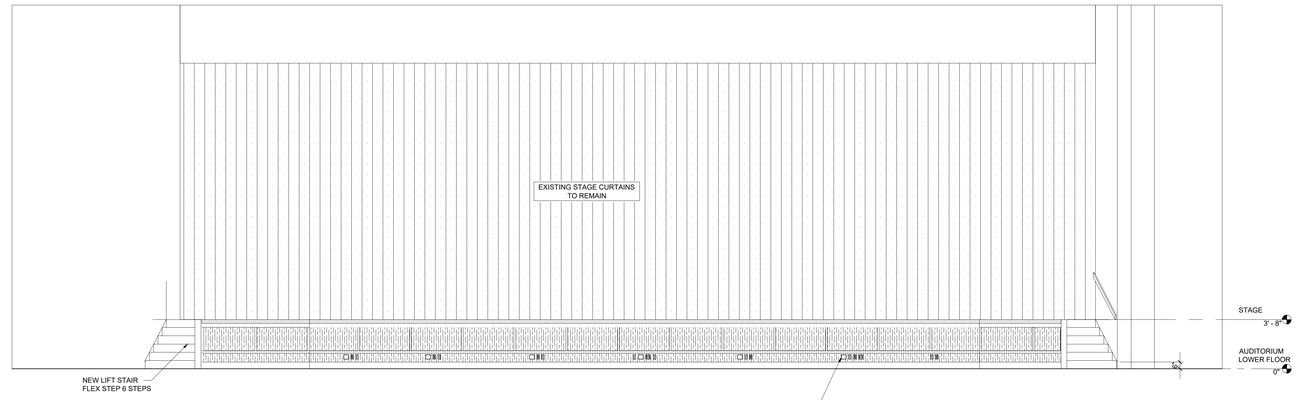


AUDITORIUM
ELECTRICAL DEMOLITION PLAN

NORTH — BUILDING NORTH

1 / E-112

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



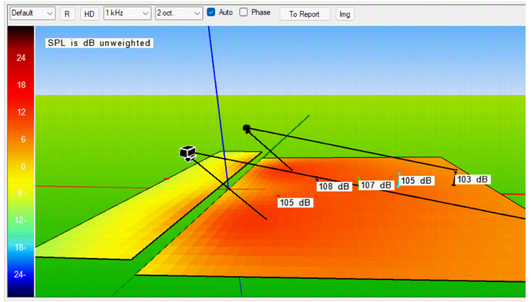
AUDITORIUM STAGE ELEVATION

3 / E-112

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

ELECTRICAL DEMOLITION KEYNOTES

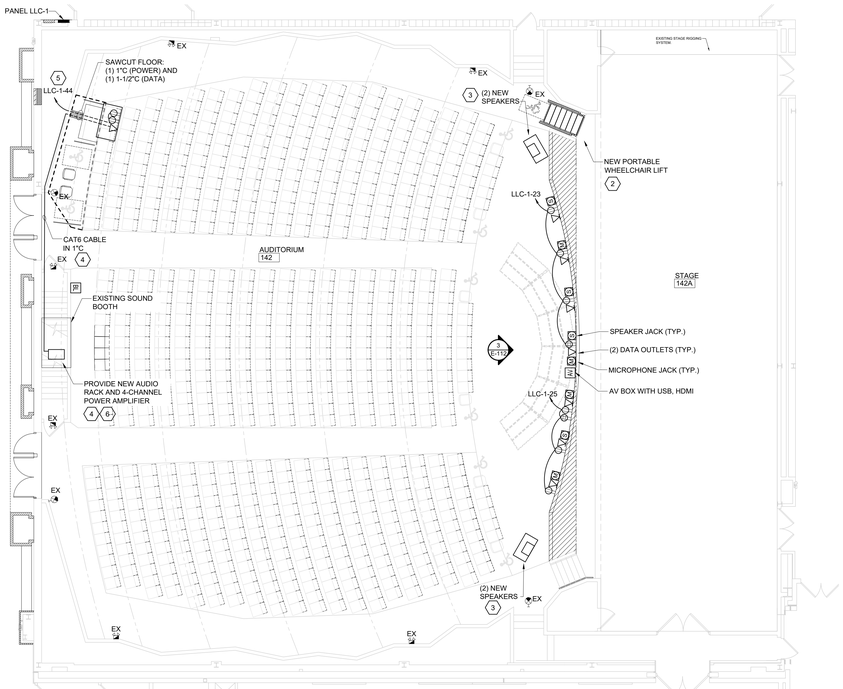
1. DISCONNECT AND REMOVE POWER AND COMMUNICATION DEVICES FROM STAGE FRONT.
2. REMOVE ALL EXISTING SPEAKERS AND WIRE. ALL REMOVED EQUIPMENT SHALL BE TURNED OVER TO DISTRICT.



AUDITORIUM SPEAKER SOUND LEVEL PLOT

4 / E-112

SCALE: NONE



AUDITORIUM
ELECTRICAL RENOVATION PLAN

NORTH — BUILDING NORTH

2 / E-112

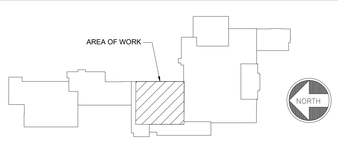
SCALE: 1/8" = 1'-0"

ELECTRICAL RENOVATION KEYNOTES

1. STAGE FRONT SHALL BE RENOVATED IN ITS ENTIRETY. PROVIDE NEW RECEPTACLES, DATA PORTS, USB, DMI, & MICROPHONE JACKS AT FRONT FACE OF STAGE. RECONNECT TO EXISTING CIRCUITS.
2. PROVIDE POWER TO NEW FLEXSTEP 6 STEP WHEELCHAIR SYSTEM.
3. PROVIDE NEW RIGHT AND LEFT SPEAKERS LOCATED AS SHOWN. EXACT LOCATION TO BE VERIFIED BY SPEAKERS MANUFACTURER'S REPRESENTATIVE. NEW SPEAKERS SHALL BE DANLEY SOUND LABS MODELS SH96-1-W AND SM96-1-W, OR EQUALS. THE SM-96-1-W SPEAKER SHALL BE MOUNTED UNDER THE SH-96-1-W.
4. PROVIDE A NEW AUDIO RACK, ALLEN & HEATH MODEL AR2412, IN THE EXISTING SOUND BOOTH RACK. RUN A CAT6 DATA CABLE IN 1"C FROM THE EXISTING SOUND BOOTH TO NEW SOUND BOOTH ON FLOOR. RUN CABLING IN SPACE BEHIND WALL AND TRENCH FLOOR AS REQUIRED TO RUN CONDUIT WITH DATA CABLE TO NEW SOUND BOOTH.
5. PROVIDE (2) DUPLEX RECEPTACLES IN NEW SOUND BOOTH. PROVIDE 2#12, #12G IN 3/4"C TO NEW 20A/1P CIRCUIT BREAKER IN PANEL LLC-1. TRENCH FLOOR AS REQUIRED TO RUN CONDUIT WITH POWER WIRING TO NEW SOUND BOOTH.
6. WIRE ALL EXISTING MICROPHONE AND MONITOR SPEAKER JACKS TO EXISTING SOUND BOOTH. ALL MICROPHONE AND MONITOR JACKS CABLE TO BE TERMINATED WITH XLR CONNECTORS. INSTALL NEW 4 CHANNEL POWER AMPLIFIER, DANLEY SOUND LABS MODEL DNA PRO SERIES 20K4, IN EXISTING SOUND BOOTH. WIRE EACH SPEAKER ARRAY WITH 2#12 TWISTED STRANDED PAIR CABLE.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

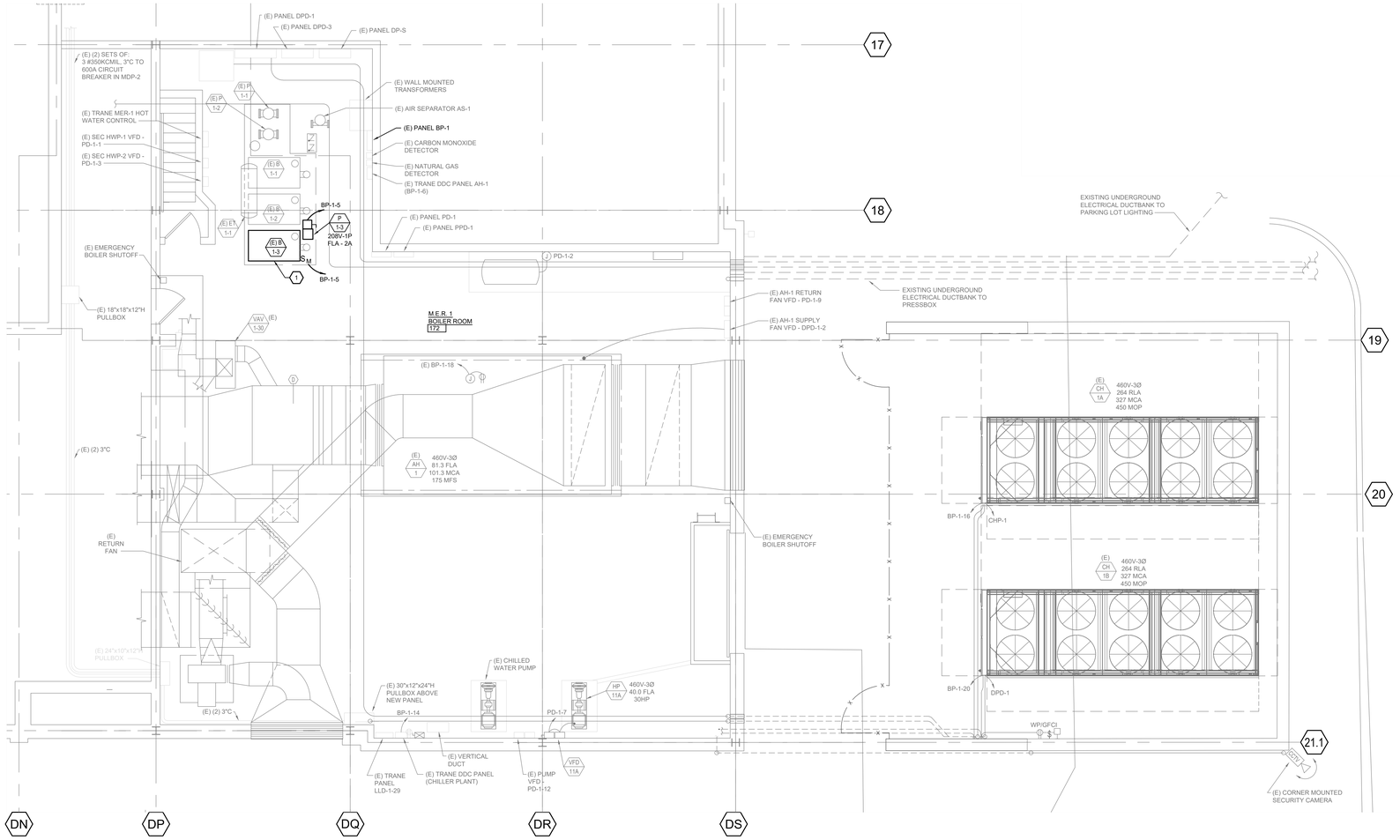
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

AUDITORIUM ELECTRICAL RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-112
DATE: 12-01-2025	

CAD FILE: FA E201.DATE: 11/20/2025



NORTH

BUILDING NORTH

1 / E-113

M.E.R.1 - BOILER ROOM 172 ELECTRICAL RENOVATION PLAN

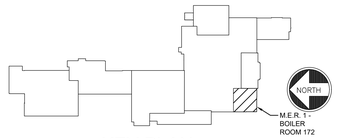
SCALE: 1/8" = 1'-0"

ELECTRICAL RENOVATION KEYNOTES

1. EXISTING BOILER TO BE REPLACED BY MECHANICAL CONTRACTOR. DISCONNECT POWER FROM PANEL BP-1 AND RECONNECT NEW BOILER TO EXISTING CIRCUIT, EXTENDING CONDUIT AND WIRING AS REQUIRED. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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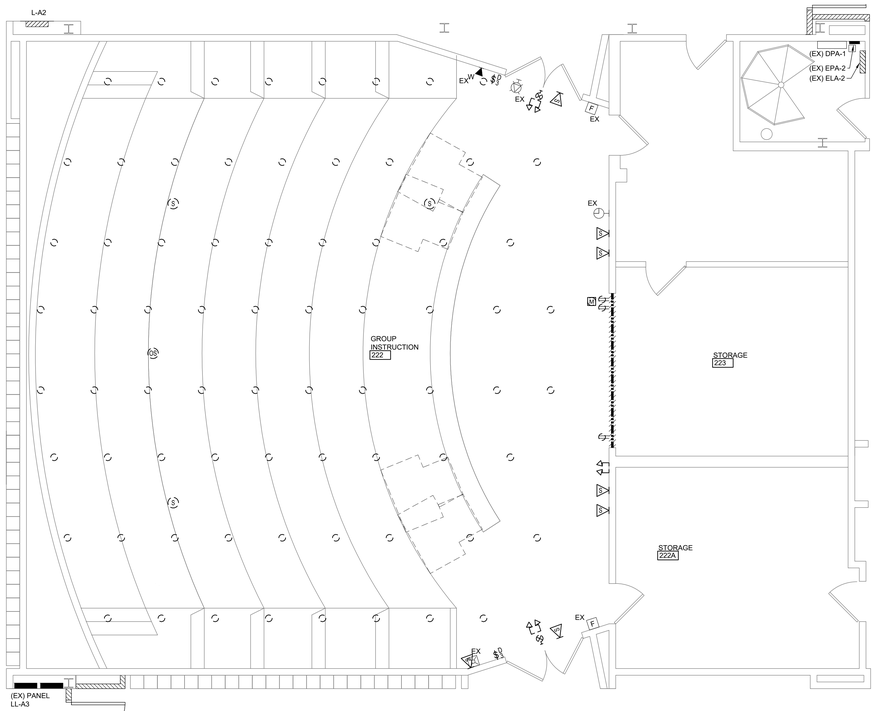
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
M.E.R. 1 - BOILER ROOM 172 ELECTRICAL RENOVATION PLAN

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: E-113

CAD FILE: 4239-E-113.DWG
PLOT DATE: 11/26/2025



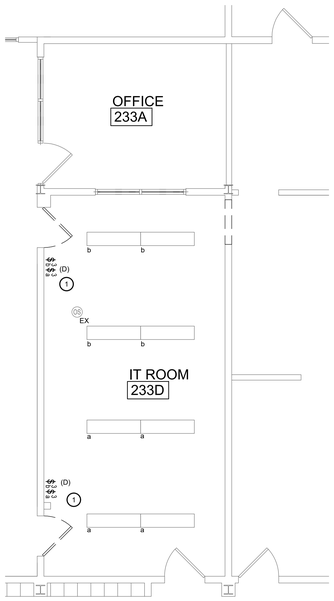
NORTH — BUILDING NORTH

1A / HS-E-114 — ROOM 222 DEMOLITION PLAN

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

ELECTRICAL DEMOLITION KEYNOTES

1. DISCONNECT AND REMOVE ALL LIGHTING FIXTURES IN ROOM 222. EXISTING 277V NORMAL LIGHTING CIRCUIT SHALL REMAIN TO BE REUSED IN LIGHTING RENOVATION WORK.



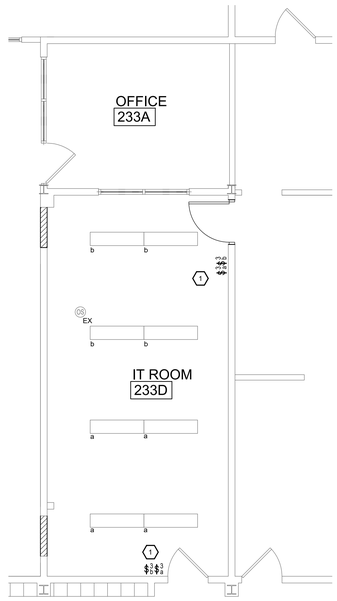
NORTH — BUILDING NORTH

2A / HA E-114 — IT ROOM 233D ELECTRICAL DEMOLITION PLAN

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

ELECTRICAL DEMOLITION KEYNOTES

1. DISCONNECT AND REMOVE LIGHT SWITCHES.



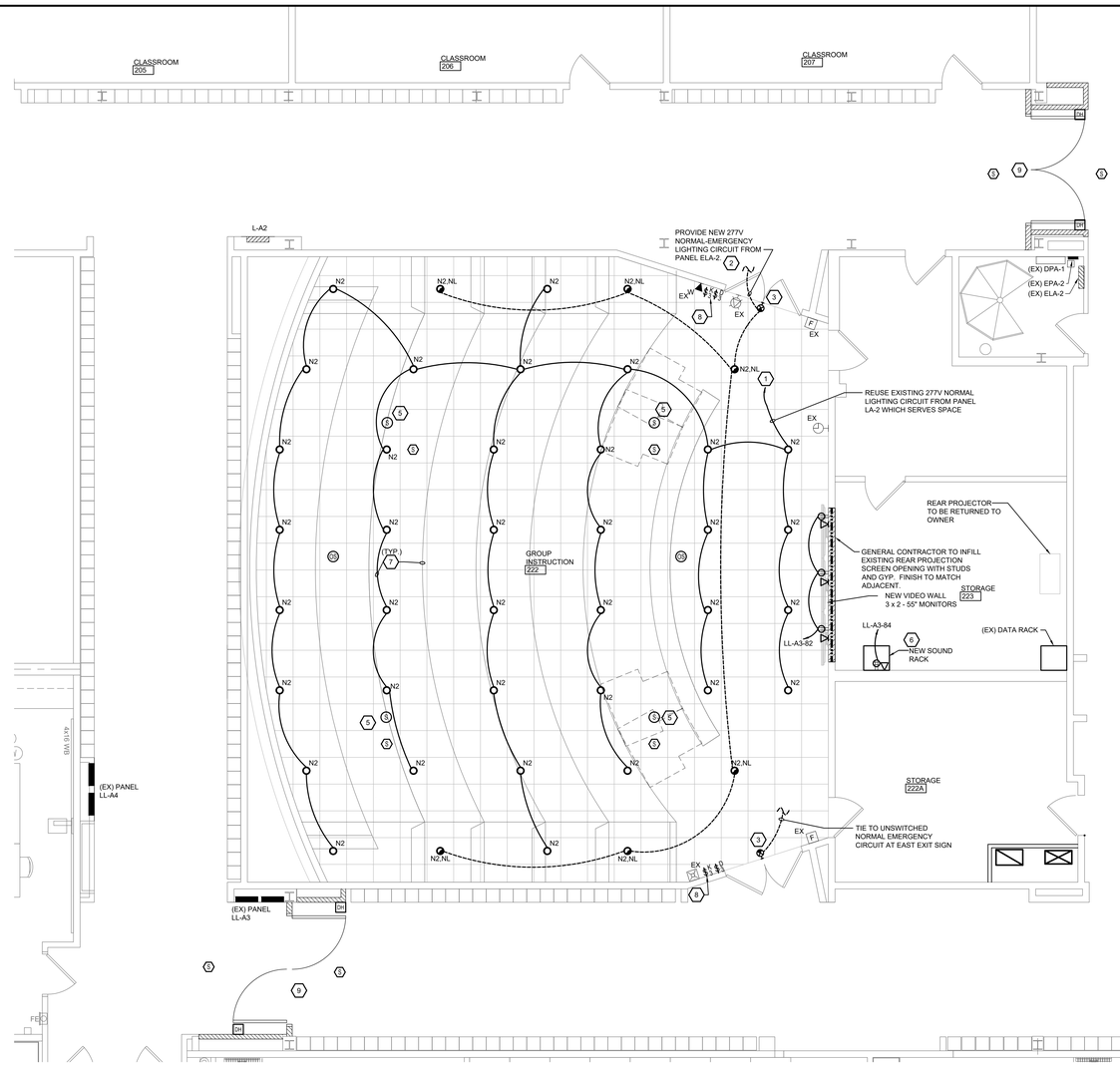
NORTH — BUILDING NORTH

2B / HA E-114 — IT ROOM 233D ELECTRICAL RENOVATION PLAN

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

ELECTRICAL DEMOLITION KEYNOTES

1. PROVIDE NEW 3-WAY LIGHT SWITCHES AT DOORS INDICATED. EXTEND EXISTING SWITCH LEGS TO NEW SWITCH LOCATIONS USING 2#12, #12G IN 3/4"C.



NORTH — BUILDING NORTH

1B / HS-E-114 — ROOM 222 RENOVATION PLAN

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

ELECTRICAL RENOVATION KEYNOTES

1. REPLACE LIGHTING FIXTURES WITH NEW AS INDICATED. TIE TO EXISTING 277V NORMAL ROOM LIGHTING CIRCUIT, EXTENDING WIRING AND CONDUIT AS REQUIRED.
2. WHERE FIXTURES ARE SHOWN HALF-SHADED, PROVIDE A NEW 277V NORMAL-EMERGENCY LIGHTING CIRCUIT FROM EMERGENCY PANEL ELA-2. UTILIZE EXISTING 20A/1P SPARE CIRCUIT BREAKER AT POLE 5 AND RUN 2#12, #12G IN 3/4"C TO ROOM. EXTEND WIRING AND CONDUIT AS REQUIRED. RUN EMERGENCY LIGHTING FIXTURES THROUGH A KEY SWITCH FOR ROOM NIGHT LIGHTS.
3. TIE NEW EXIT LIGHTING TO EXISTING CORRIDOR NORMAL-EMERGENCY LIGHTING CIRCUIT USING 2/12,#12G IN 3/4"C AHEAD OF ALL SWITCHING.
4. PROVIDE POWER TO NEW MONITORS FROM EXISTING PANEL LL-3A. RUN 2#12, #12G IN 3/4"C TO A SPARE 20A/1P CIRCUIT BREAKER AT POLE 82.
5. PROVIDE NEW CEILING SPEAKERS CEILING MOUNTED SPEAKER TIED INTO RM 222 SOUND RACK. SPEAKER TO HAVE PA OVERRIDE RELAY. SEE SOUND SYSTEM SPECIFICATIONS BELOW.
6. E.C TO COORDINATE FIELD CONNECTIONS FOR NEW SOUND RACK WITH EQUIPMENT SUPPLIER. E.C. TO COORDINATE FINAL LOCATION FOR SOUND RACK AND RECEPTACLE WITH OWNER PRIOR TO ROUGH-IN. SEE EQUIPMENT TABLE ON THIS SHEET FOR DEVICE INFORMATION.
7. EMERGENCY LIGHTING CIRCUIT IS SHOWN AS A DASHED LINE, NORMAL POWER IS SOLID LINE.
8. KEY SWITCH FOR NIGHT LIGHTS.
9. NEW SMOKE ZONE DOORS. E.C. PROVIDE POWER TO DOOR HOLD OPEN DEVICE PROVIDED WITH DOOR HARDWARE. TIE TO NEAREST RECEPTACLE CIRCUIT. PROVIDE NEW SMOKE DETECTORS ON EACH SIDE OF DOOR AND A CONTROL RELAY SO DOOR SHALL RELEASE UPON ACTIVATION OF FIRE ALARM.

ALL WORK TO ROOM 222 SHALL BE AN ALTERNATE

DEMOLITION / RENOVATION KEY

(EX)	INDICATES EXISTING ITEM TO REMAIN
(ER)	INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK
(D)	INDICATES ITEM TO BE DEMOLISHED
(RL)	INDICATES RELOCATED ITEM

SOUND SYSTEM FOR ROOM 222

1. PROVIDE LOCAL SOUND SYSTEM HEADEND, INCLUDING RACK, HEADEND, AMPLIFIER, AND ALL MISC. COMPONENTS REQUIRED FOR A FULLY FUNCTIONAL INSTALLATION. COORDINATE EXACT RACK LOCATION IN FIELD.
2. PROVIDE INTERFACE COMPONENTS AND CONNECTION TO EXISTING PAGING SYSTEM IN ORDER TO SILENCE LOCAL SYSTEM DURING MASTER PAGING ANNOUNCEMENTS.
3. BASIS OF DESIGN BELOW IS AS FOLLOWS:

EQUIPMENT NUMBER:	DEVICE	EXTRA NOTES:
CD-200BT	CD PLAYER	
RX-BT10	BLUE TOOTH RECEIVER	
RM89	MIXER	
AX 2 BY 60G	POWER AMPLIFIER	
M8X2	POWER SWITCH	
ATW-1423L	DUAL WIRELESS MICROPHONE SYSTEM.	ONE HAND HELD MICROPHONE, ONE LAVALIER MICROPHONE
LWSR-1222	WALL RACK	
LFD-12	SOLID FRONT DOOR	
VAR-1 PA	OVER RIDE RELAY	
CM62-BGM-II-WH	CEILING SPEAKER ASSEMBLY	

REVISIONS

Issued for Bidding
December 1, 2025

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
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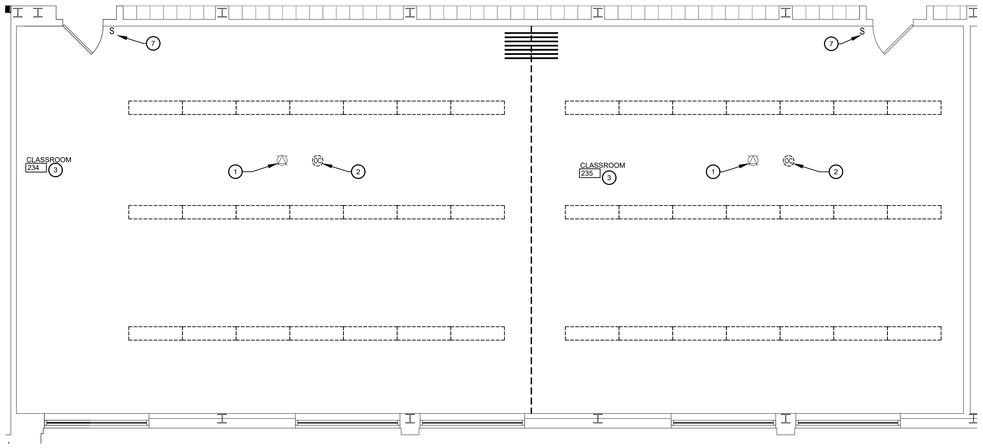
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR
ROOM 222 & IT ROOM 233D
ELECTRICAL RENO PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / E-114
DATE: 12-01-2025	

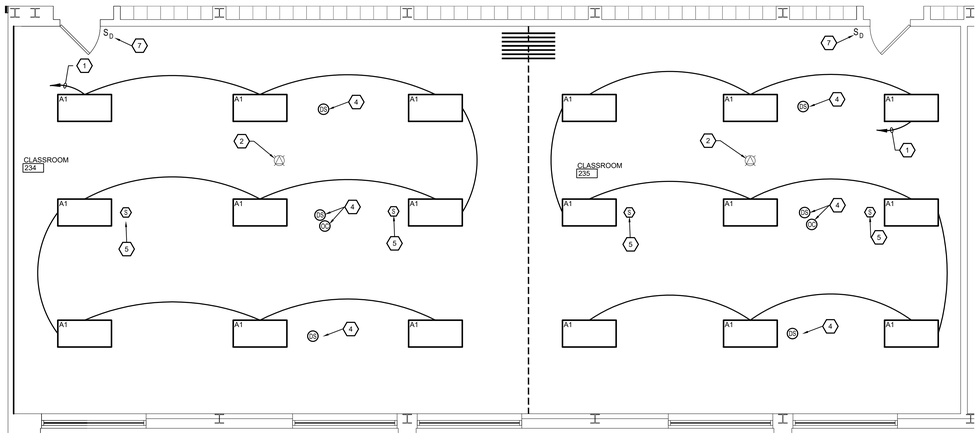
CAD FILE: E-114.DWG
PLOT DATE: 11/25/2025



CLASSROOM 234 / CLASSROOM 235
ELECTRICAL DEMOLITION PLAN

2A / HA E-115

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



CLASSROOM 234 / CLASSROOM 235
ELECTRICAL RENOVATION PLAN

2B / HS E-115

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

ELECTRICAL DEMOLITION KEYNOTES

1. E.C TO DISCONNECT WAP AND STORE FOR RECONNECTION IN NEW WORK.
2. E.C. TO REMOVE LIGHTING AND SENSORS WITHIN CLASSROOM.
3. ADHESIVE TILE CEILINGS TO BE REMOVED WITHIN SPACE AND BE REPLACED WITH T-GRID CEILINGS.
4. LIGHT FIXTURE EXTENDS THROUGH THE WALL, E.C. TO REMOVE FIXTURES, G.C. TO PATCH HOLE IN WALL.
5. E.C. TO DISCONNECT EXISTING CEILING POWER/DATA RECEPTACLES AND STORE FOR RECONNECTION.
6. E.C. TO DISCONNECT EXISTING SMOKE DETECTOR, CLEAN, TEST AND STORE FOR RECONNECTION IN NEW WORK.
7. E.C. TO REMOVE EXISTING SWITCH, AND LEAVE WIRING AND CONDUIT IN PLACE FOR REPLACEMENT IN NEW WORK.

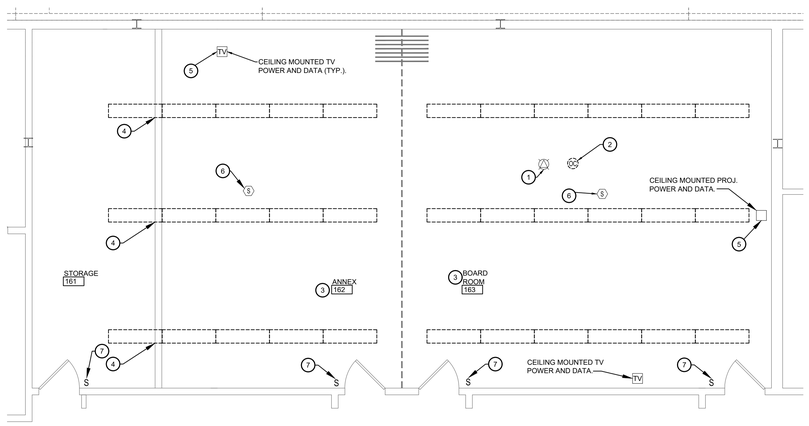
ELECTRICAL RENOVATION KEYNOTES

1. CONNECT NEW LIGHT FIXTURES TO EXISTING ROOM LIGHTING CIRCUIT USING 2#12, #12G IN 3/4"C.
2. REINSTALL EXISTING WAP EXTENDING EXISTING WIRING AND CONDUIT AS REQUIRED.
3. REINSTALL EXISTING DATA PORTS/POWER DEVICE CONNECTIONS, EXTENDING WIRING AND CONDUIT AS REQUIRED.
4. E.C. TO INSTALL OCCUPANCY & DAYLIGHT SENSORS INTO SPACE.
5. E.C. TO INSTALL SMOKE DETECTORS WITHIN ROOM.
6. E.C. TO REINSTALL EXISTING SMOKE DETECTORS, EXTENDING WIRING AND CONDUIT AS REQUIRED.
7. E.C. TO REPLACE EXISTING SWITCH WITH A DIMMABLE SWITCH.

DEMOLITION / RENOVATION KEY

(EX)	INDICATES EXISTING ITEM TO REMAIN
(ER)	INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK
(D)	INDICATES ITEM TO BE DEMOLISHED
(RL)	INDICATES RELOCATED ITEM

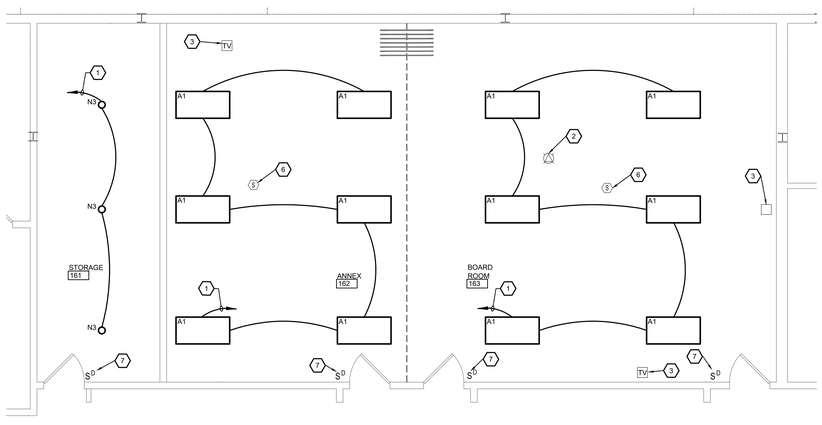
ALL WORK TO PARTITION ROOMS ON THIS DRAWING SHALL BE AN ALTERNATE



BOARD ROOM 163 / ANNEX 162 / STORAGE 161
ELECTRICAL DEMOLITION PLAN

1A / HA E-115

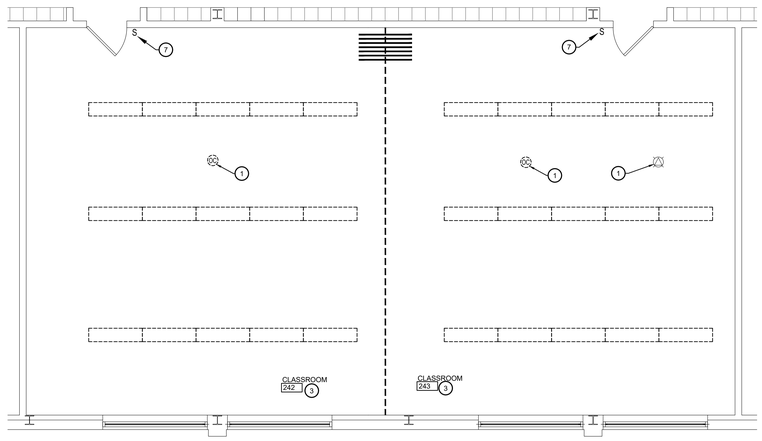
SCALE: 1/4" = 1'-0"



BOARD ROOM 163 / ANNEX 162 / STORAGE 161
ELECTRICAL RENOVATION PLAN

1B / HS E-115

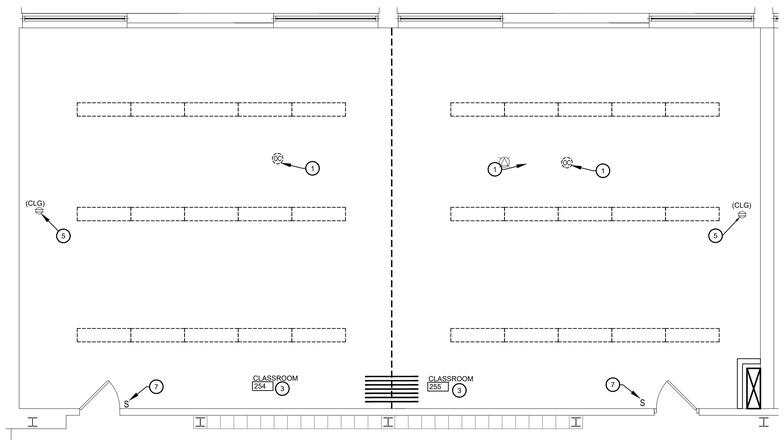
SCALE: 1/4" = 1'-0"



CLASSROOM 242 / CLASSROOM 243
ELECTRICAL DEMOLITION PLAN

3A / HA E-115

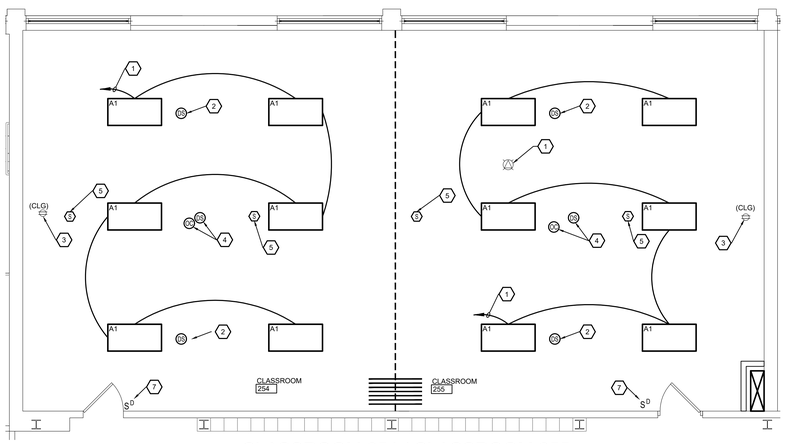
SCALE: 1/4" = 1'-0"



CLASSROOM 254 / CLASSROOM 255
ELECTRICAL DEMOLITION PLAN

4A / HA E-115

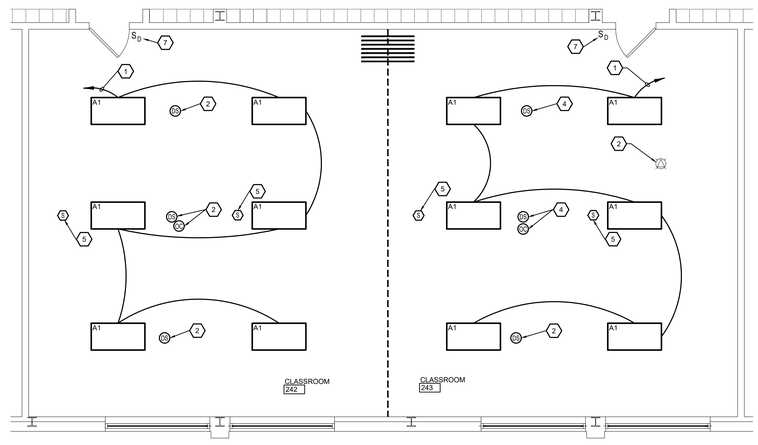
SCALE: 1/4" = 1'-0"



CLASSROOM 254 / CLASSROOM 255
ELECTRICAL RENOVATION PLAN

4B / HS E-115

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



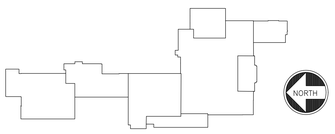
CLASSROOM 242 / CLASSROOM 243
ELECTRICAL RENOVATION PLAN

3B / HS E-115

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

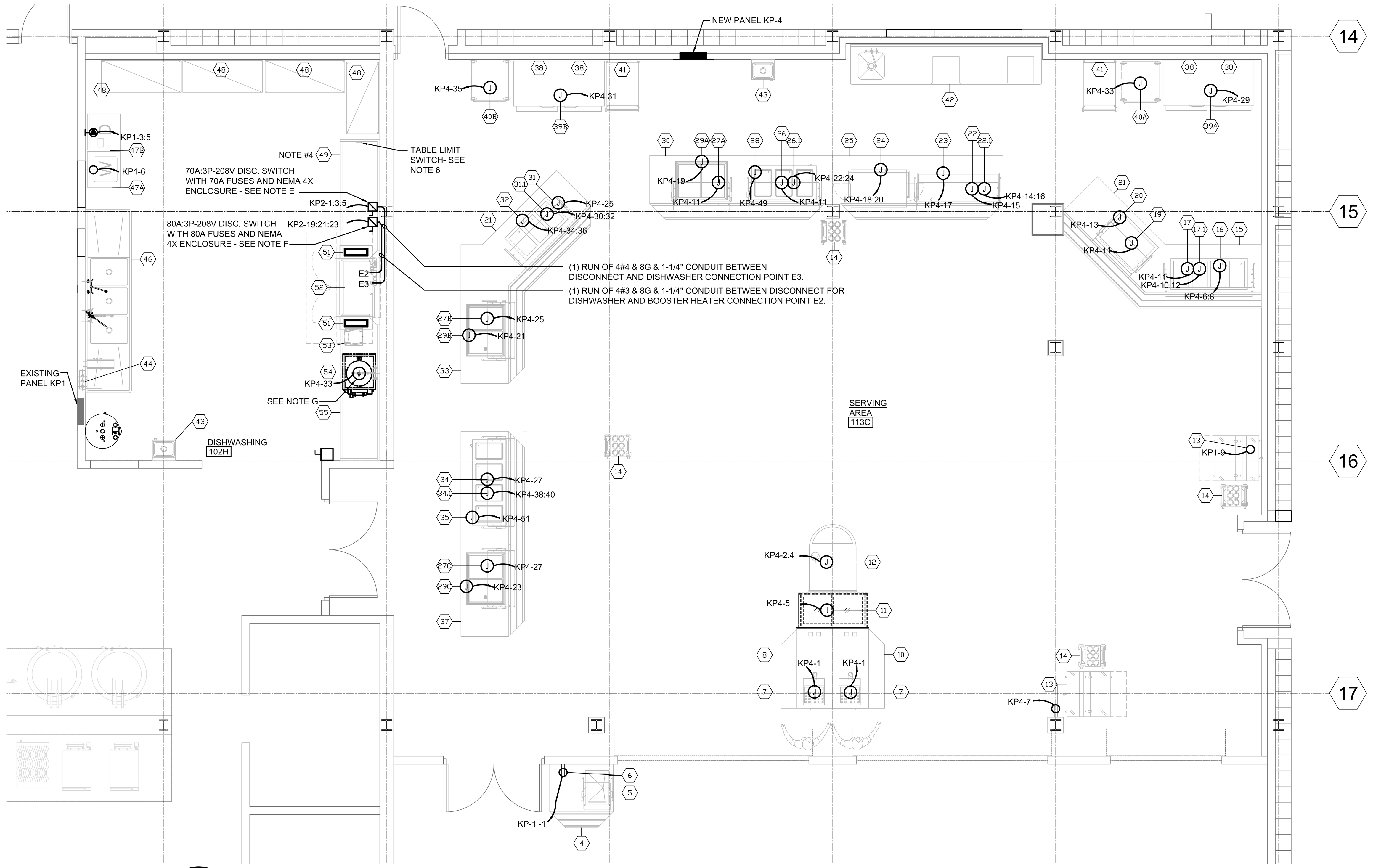
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

CLASSROOM PARTITION CEILING RENOVATION ELECTRICAL PLANS

DRAWN BY: R.F.C.	PROJECT NO.: 2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: E-115

DATE/TIME PLOTTED: 11/25/2025 1:13:09 PM



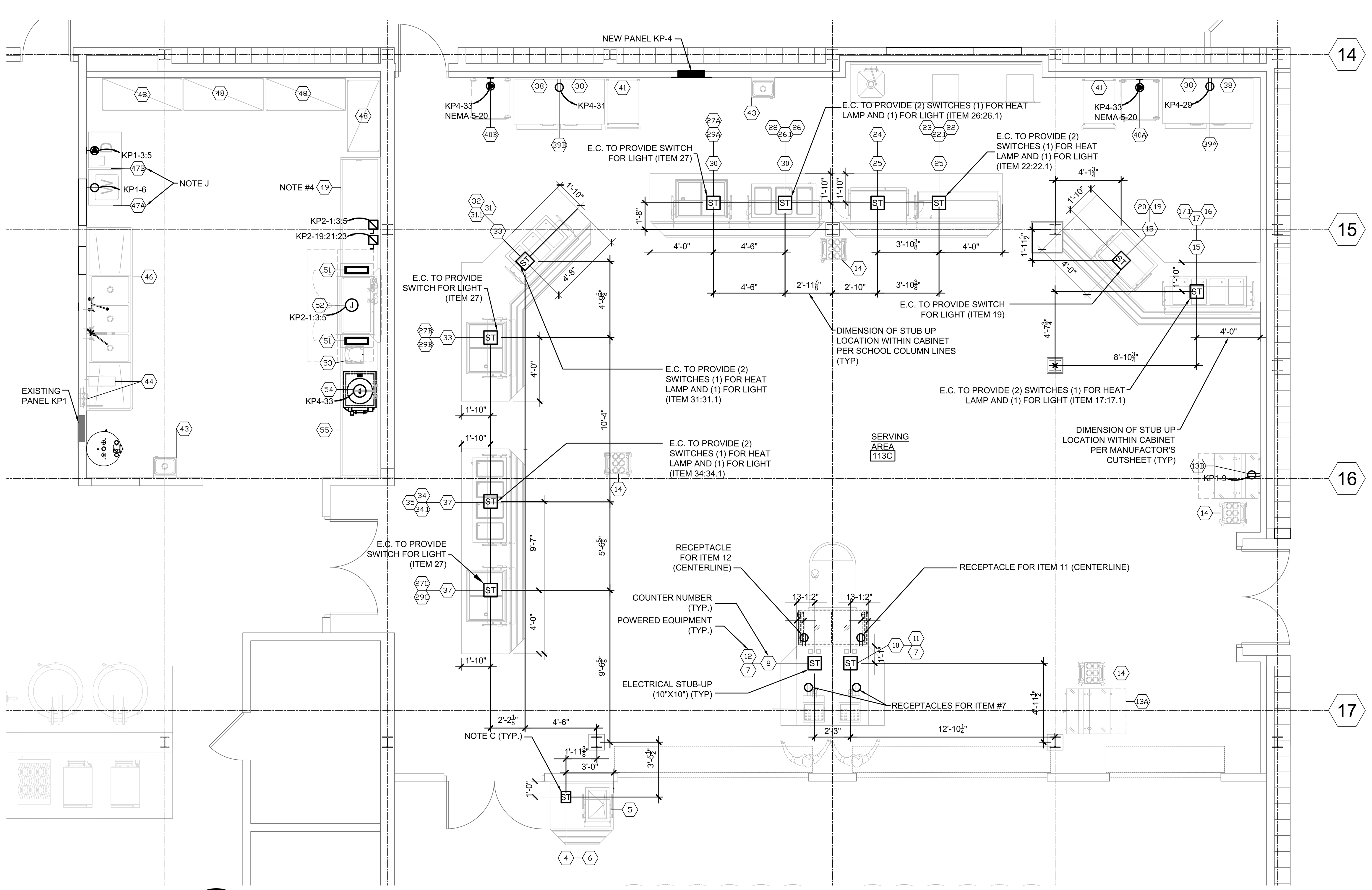
1 HS E-200 LARGE SCALE ELECTRICAL RENOVATION POWER PLAN - SERVERY AND DISHWASHING

NORTH

BUILDING NORTH

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

1/4"=1'-0" 0 1' 2' 4' 8' 12'



1 HS E-200 LARGE SCALE ELECTRICAL RENOVATION PLAN - SERVERY AND DISHWASHING STUB-UP LOCATIONS

NORTH

BUILDING NORTH

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

1/4"=1'-0" 0 1' 2' 4' 8' 12'

JOHNSON CITY HIGH SCHOOL FOOD SERVICE EQUIPMENT SCHEDULE & ELECTRICAL REQUIREMENTS

ITEM NO	QTY	NEW / EX	DESCRIPTION	AMPS	KW	HP	VOLTS	PHASE	BKR AMPS	DIRECT	PLUG	NEMA	A.F.F.	PANEL	REMARKS
1	1	EX	SOILED DISH CARTS	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
2	4	EX	SOILED BREAK DOWN TABLES	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
3	1	EX	GARBAGE CANS	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
4	1	NEW	MOBILE CONDIMENT STATION	15.0	1.8	-	120	1	20	-	X	5-15P	-	KP1-1	CORD AND PLUG
5	1	NEW	BREATH PROTECTOR	-	-	-	-	-	-	-	-	-	-	-	INSTALLED IN ITEM 4, NO ELECTRIC
6	1	NEW	SINGLE COLD WELL UNIT	1.24	0.15	1/5	120	1	20	-	X	5-15P	-	KP1-1	INSTALLED IN ITEM 4
7	2	EX	CASH REGISTERS (POS)	15.0	1.8	-	120	1	20	-	X	5-15P	-	-	FIELD VERIFY CURRENT CONDITIONS, INSTALLED ON ITEMS 8 & 10
8	1	NEW	CASHIER STATION	(2)15.0	1.8	-	120	1	20	-	X	-	-	KP4-1	REC FOR ITEM #7
8.1	-	-		14.32	4.21	-	208/240	1	20	-	X	6-20P	-	KP4-2/4	REC FOR ITEM #12
9	-	-	SPARE NO.	-	-	-	-	-	-	-	-	-	-	-	-
10	1	NEW	CASHIER STATION	(2)15.0	1.8	-	120	1	20	X	-	-	-	KP4-1	REC FOR ITEM 7
10.1	-	-		15.0	1.8	-	120	1	20	X	-	-	-	KP4-2	REC FOR ITEM 11
11	1	EX	ICE CREAM MERCHANDISER	8.0	0.96	-	120	1	20	-	X	5-15P	-	KP4-5	PLUGS INTO ITEM #10
12	1	NEW	REFRIGERATED MERCHANDISER	14.32	2.79	-	208/240	1	20	-	X	6-20P	-	KP4-2/4	PLUGS INTO ITEM#8 SHALL BE INSTALLED WITH A GFCI BREAKER NOT RECEPTACLE.
13A	2	NEW	8 CRATE MILK COOLER	5.7	0.68	-	120	1	20	-	X	5-15P	-	KP4-7	CORD AND PLUG
13B	-	-	8 CRATE MILK COOLER	-	-	-	-	-	-	-	-	-	-	KP4-9	CORD AND PLUG
14	3	NEW	MOBILE FLATWARE & TRAY CART	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
15	1	NEW	HOT ENTREE COUNTER	-	-	-	-	-	-	-	-	-	-	-	REFER TO ITEMS # 16, 17, 19 & 20.
16	1	NEW	(4) WELL HOT FOOD UNIT	23.1	6.7	-	208	1	40	X	-	-	-	KP4-6/8	FACTORY INSTALLED IN JBOX ON ITEM 15
17	1	NEW	BREATH PROTECTOR (LED)	0.15	0.02	-	120	1	20	X	-	-	-	KP4-11	INSTALLED IN ITEM 15, NOTE #1,5
17.1	-	-	BREATH PROTECTOR (HEAT LAMP)	7.22	2.1	-	208	1	20	X	-	-	-	KP4-10/12	INSTALLED IN ITEM 15, NOTE #1,4
18	-	-	SPARE NO.	-	-	-	-	-	-	-	-	-	-	-	-
19	1	NEW	BREATH PROTECTOR (WITH LED)	0.12	0.01	-	120	1	20	X	-	-	-	KP4-11	INSTALLED IN ITEM 15, NOTE #1,4
20	1	NEW	FROST TOP	5.2	0.6	-	120	1	20	-	X	5-15P	-	KP4-13	PLUGS INTO IN ITEM 15
21	1	NEW	MOBILE TRAY LOWERATORS	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
22	1	NEW	BREATH PROTECTOR (LED)	0.15	0.02	-	120	1	20	X	-	-	-	KP4-11	INSTALLED IN ITEM 23, NOTE #1,5
22.1	-	-	BREATH PROTECTOR (HEAT LAMP)	7.22	2.1	-	208	1	20	X	-	-	-	KP4-14/16	INSTALLED IN ITEM 23, NOTE #1,4
23	1	NEW	PIZZA WARMING SHELF	10.2	1.22	-	120	1	20	-	X	5-15P	-	KP4-17	PLUGGED INTO ITEM #25
24	1	NEW	36" HEATED SANDWICH SLIDE	9.2	2.4	-	120/208	1	20	-	X	L14-20P	-	KP4-18/20	PLUGGED INTO ITEM #25
25	1	NEW	HOT SELF SERVICE STATION	-	-	-	-	-	-	X	-	-	-	-	SEE ITEMS 22 & 23 FOR ELECTRICAL REQUIREMENTS
26	1	NEW	BREATH PROTECTOR (LED)	0.12	0.01	-	120	1	20	X	-	-	-	KP4-15	INSTALLED ON ITEM 30, NOTE #1,5
26.1	-	-	BREATH PROTECTOR (HEAT LAMP)	9.79	2.9	-	208	1	20	X	-	-	-	KP4-22/24	INSTALLED ON ITEM 30, NOTE #1,4
27A	3	NEW	BREATH PROTECTOR (LED)	0.12	0.01	-	120	1	20	X	-	-	-	KP4-15	INSTALLED ON ITEM 30, NOTE #1,5
27B	-	-	BREATH PROTECTOR (LED)	-	-	-	-	-	-	-	-	-	-	KP4-25	INSTALLED ON ITEM 33, NOTE #1,5
27C	-	-	BREATH PROTECTOR (LED)	-	-	-	-	-	-	-	-	-	-	KP4-27	INSTALLED ON ITEM 37, NOTE #1,5
28	1	NEW	(3) WELL HOT/COLD UNIT	18.4	2.16	-	120	1	30	-	X	L5-30	-	KP4-49	INSTALLED IN ITEM 30, NOTE #1
29A	3	NEW	FROST TOP UNIT	5.2	1.1	-	120	1	20	-	X	5-15P	-	KP4-19	CORD AND PLUG, INSTALLED ON ITEM 30
29B	-	-	FROST TOP UNIT	-	-	-	-	-	-	-	-	-	-	KP4-21	CORD AND PLUG, INSTALLED ON ITEM 33
29C	-	-	FROST TOP UNIT	-	-	-	-	-	-	-	-	-	-	KP4-23	CORD AND PLUG, INSTALLED ON ITEM 37
30	1	NEW	HOT/COLD SELF SERVICE STATION	-	-	-	-	-	-	X	-	-	-	-	(3) JUNCTION BOX - SEE ITEMS 26,26.1,27,28, & 29 FOR ELECTRICAL REQUIREMENTS
31	1	NEW	BREATH PROTECTOR (LED)	0.12	0.01	-	120	1	20	X	-	-	-	KP4-25	INSTALLED ON ITEM 33, NOTE #1,5
31.1	-	-	BREATH PROTECTOR (HEAT LAMP)	9.79	2.1	-	208	1	20	X	-	-	-	KP4-30/32	INSTALLED ON ITEM 33, NOTE #1,5
32	1	NEW	(3) WELL HOT FOOD WELL	17.3	3.6	-	208	1	30	X	-	-	-	KP4-34/36	PRE-INSTALLED AND WIRED WITHIN JBOX IN ITEM 33
33	1	NEW	HOT/COLD SELF SERVICE STATION	-	-	-	-	-	-	X	-	-	-	-	(3) JUNCTION BOX - SEE ITEMS 31, 31.1 & 32 FOR ELECTRICAL REQUIREMENTS
34	1	NEW	BREATH PROTECTOR (LED)	0.15	0.02	-	120	1	20	X	-	-	-	KP4-27	INSTALLED ON X. NOTE #1,5
34.1	-	-	BREATH PROTECTOR (HEAT LAMP)	7.22	1.56	-	208	1	20	X	-	-	-	KP4-30/32	INSTALLED ON X. NOTE #1,4
35	1	NEW	HOT/COLD FOOD WELL UNIT, DROP-IN, ELECTRIC	18.4	3.9	-	120	1	30	-	X	L5-30P	-	KP4-42/44	PLUGS INTO ITEM 37.
36	-	-	SPARE NO.	-	-	-	-	-	-	-	-	-	-	-	-
37	1	NEW	HOT/COLD SELF SERVE STATION	-	-	-	-	-	-	X	-	-	-	-	OUTLETS FOR ITEMS 29 & 35
38	4	NEW	REFRIGERATOR/FREEZER RACK, ROLL-IN	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
39A	2	NEW	(2) DOOR ROLL-IN REFRIGERATOR	9.4	2.03	-	115	1	20	-	X	5-15P	-	KP4-29	PLUG AND CORD
39B	-	NEW	(2) DOOR ROLL-IN REFRIGERATOR	-	-	-	-	-	-	-	-	-	-	KP4-31	PLUG AND CORD
40A	2	NEW	MOBILE WARMING CABINET	16.7	2.0	-	120	1	20	-	X	5-20P	48"	KP4-33	PLUG AND CORD
40B	-	NEW	MOBILE WARMING CABINET	-	-	-	-	-	-	-	-	-	-	KP4-35	PLUG AND CORD
41	2	NEW	UTILITY CART											-	NO ELECTRIC
42	1	NEW	WORK TABLE WITH SINK	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
43	2	NEW	HAND SINKS	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
44	1	NEW	HOSE REEL W/ CONTROL CABINET	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
45	-	-	SPARE NO.	-	-	-	-	-	-	-	-	-	-	-	-
46	1	NEW	3-COMPARTMENT SINK	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
47A	1	EX	WASHER	8.16	1.2	-	120	1	20	-	-	-	-	KP1-6	FEILD VERIFY CURRENT CONDITIONS
47B	1	EX	DRYER	17.68	5.2	-	208	1	40	-	-	-	-	KP1-3/5	FEILD VERIFY CURRENT CONDITIONS
48	40	NEW	POT/PAN DRYING RACKS	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
49	1	NEW	*CLEAN DISH TABLE	-	-	-	-	-	-	-	-	-	-	-	E.C. SHALL INTER WIRE TABLE LIMIT SWITCH WITH DISHWASHER.
50	1	NEW	TRAY DRYER	4.33	0.5	-	120	1	20	-	X	5-15P	-	KP2-X	PLUG AND CORD, WALL MOUNTED
51	1	NEW	VENT DUCT RISERS	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
51.1	1	NEW	VENT DUCT RISERS	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
52	1	NEW	DISHWASHER	51.0	10.6	1/6	208	3	70	X	-	-	62"	KP2-1/3/5	NOTE #2, 3
52.1	-	-	BUILT-IN BOOSTER HEATER	58.5	18.0	-	208	3	80	X	-	-	65"	KP2-7/9/11	-
53	1	NEW	WATER SOFTENER	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
54	1	NEW	SCRAPPER COLLECTOR W/ PRE-RINSE UNIT	3.2	0.7	1/4	208	3	20	X	-	-	17"	KP1-43/45/47	INSTALLED IN ITEM 55
55	1	NEW	SOILED DISH TABLE	-	-	-	-	-	-	-	-	-	-	-	SEE ITEM 54 FOR ELECTRICAL REQUIREMENTS
56	1	NEW	SOILED DISH CARTS	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
57	1	NEW	SOILED BREAKDOWN TABLE	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC
58	1	NEW	GARBAGE CANS	-	-	-	-	-	-	-	-	-	-	-	NO ELECTRIC

EQUIPMENT SCHEDULE NOTES:

1. ELECTRICAL CONTRACTOR TO INTERWIRE ALL CONTROLLERS AND/OR DRIVERS FOR THIS DEVICE AND PROVIDE A SWITCH FOR HEAT (IF EQUIPPED)
2. ELECTRICAL CONTRACTOR SHALL INTERWIRE EXHAUST FAN WITH DISHWASHER.
3. ELECTRICAL CONTRACTOR SHALL INTERWIRE TABLE LIMIT SWITCH WITH DISHWASHER.
4. E.C. TO PROVIDE SWITCH FOR HEAT LAMP ON BREATH PROTECTOR SEE DIAGRAMS 1 & 2 ON DRAWING E-201 FOR FURTHER INFORMATION.
5. E.C. TO PROVIDE AND WIRE SWITCH FOR LED LIGHT ON BREATH PROTECTOR SEE DIAGRAMS 1 & 3 ON DRAWING E-201 FOR FURTHER INFORMATION.

GENERAL NOTES:

A. THE CONTRACTOR SHALL VERIFY ALL INFORMATION ON THE KITCHEN EQUIPMENT SCHEDULE INCLUDING NEMA OUTLET CONFIGURATION AND CONNECTIONS, PRIOR TO ORDERING BY SUBMITTING CATALOG CUTS. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH MECHANICAL, PLUMBING AND ELECTRICAL CONSTRUCTION DRAWINGS.

B. CONTRACTORS SHALL VERIFY MEP REQUIREMENTS FOR ALL EXISTING EQUIPMENT.

C. ELECTRICAL CONTRACTOR TO RUN UNDERGROUND CONDUIT AND WIRING FROM PANEL TO SPECIFIED LOCATION ON DRAWING. MILLWORK HAS EXISTING STUB-UP LOCATIONS FOR ELECTRICAL AND PLUMBING CONNECTIONS, ALL EQUIPMENT IS PREWIRED TO JBOX WITHIN MILLWORK BY PIPER FOR FIELD CONNECTION BY E.C. U.O.N.

D. E.C. TO PROVIDE OUTLET AND INTERWIRE TO ACCESSIBLE SWITCH.

E. PROVIDE A NEW DISCONNECT SWITCH FOR DISHWASHER MOTORS AND TANK HEATER (CONNECTION POINT (E2)). E.C. TO CONNECT TO DISHWASHER AT 62" A.F.F. SHALL BE PROVIDED WITH GFCI PROTECTION.

F. PROVIDE A NEW DISCONNECT SWITCH FOR DISHWASHER CONTROLS AND BOOSTER HEATER (CONNECTION POINT (E3)). E.C. TO CONNECT TO DISHWASHER AT 62" A.F.F. SHALL BE PROVIDED WITH GFCI PROTECTION.

G. SCRAPPER COMES PRE-INSTALLED WITH MANUAL MOTOR STARTER AND NEMA DISCONNECT.

H. EC SHALL INTERWIRE BETWEEN THE DISHWASHER ITEM# 52 VENT FAN CONTROL AND THE ROOFTOP EXHAUST FAN.

I. ELECTRICAL DISCONNECTS OF ALL EXISTING EQUIPMENT ARE BY EC.

J. E.C. TO FEILD VERIFY EXISTING CONDITIONS OF EXISTING WASHER AND DRYER - E.C. TO MATCH EXISTING CONDITIONS.

REVISIONS

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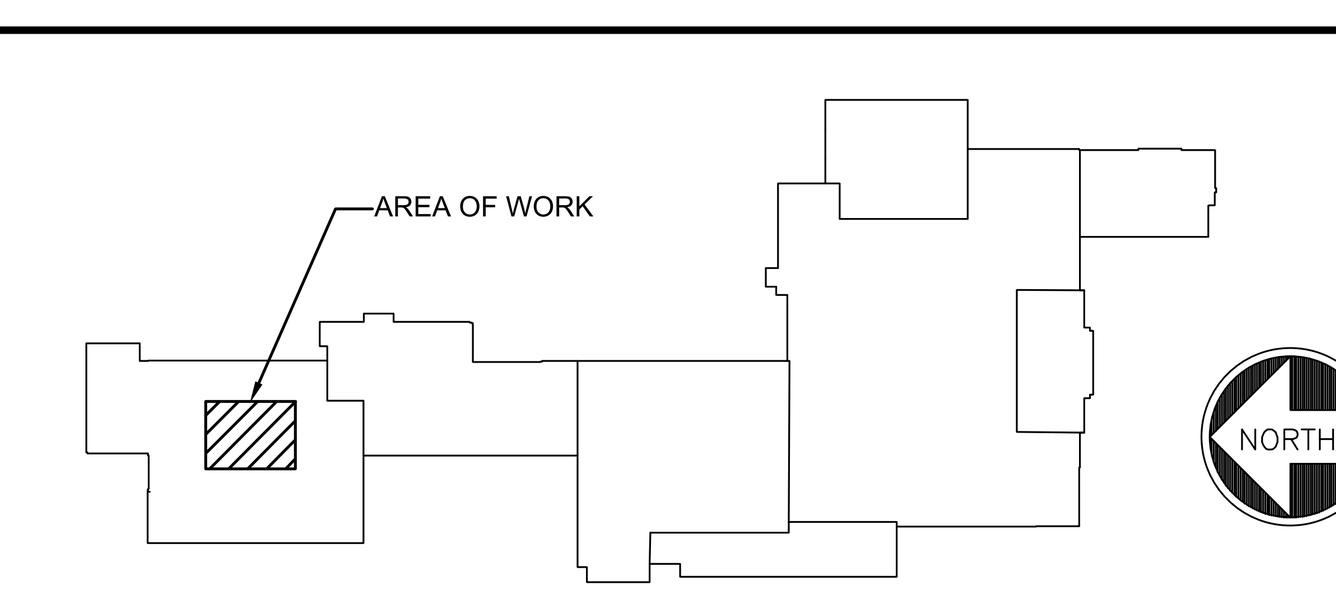
December 1, 2025



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BSN SED #3-15-02-06-4-015-006
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Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

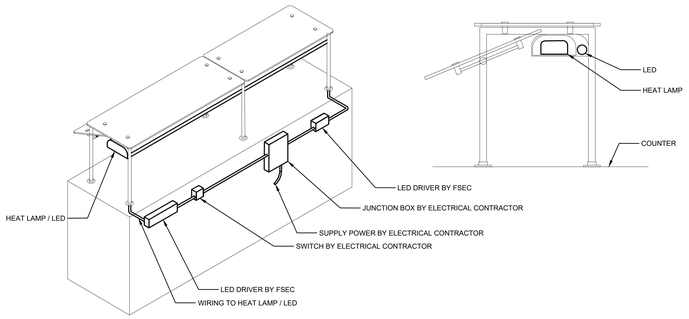
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

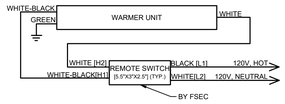
DRAWING TITLE:
LARGE SCALE SERVERY AND DISHWASH ELECT. RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: E-200

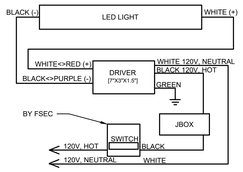
CAD FILE: 4239-HS-E-200.DWG
PLOT DATE: 11/25/2025



1 HS E-201 SERVERY BREATH PROTECTOR WIRING CONNECTION SCHEDULE
SCALE: N.T.S.



2 HS E-201 SERVERY BREATH PROTECTOR WARMER UNIT WIRING DIAGRAM
SCALE: N.T.S.



3 HS E-201 SERVERY BREATH PROTECTOR WARMER UNIT WIRING DIAGRAM
SCALE: N.T.S.

REVISIONS

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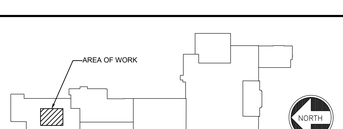

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Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

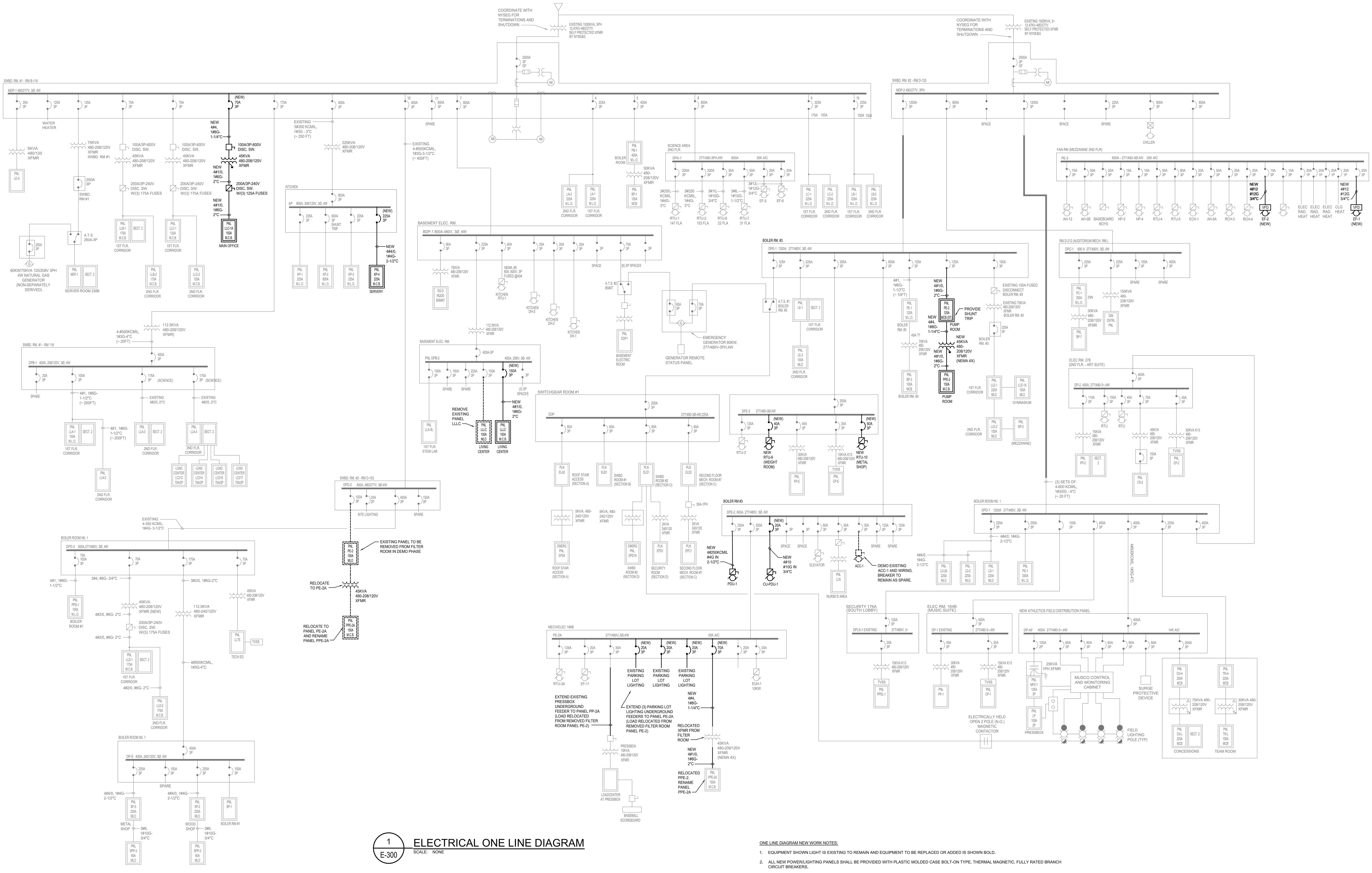
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SERVERY AND DISHWASH EQUIPMENT DETAILS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: E-201

CAD FILE: 4239-HS-E-201.DWG
PLOT DATE: 12/02/2025



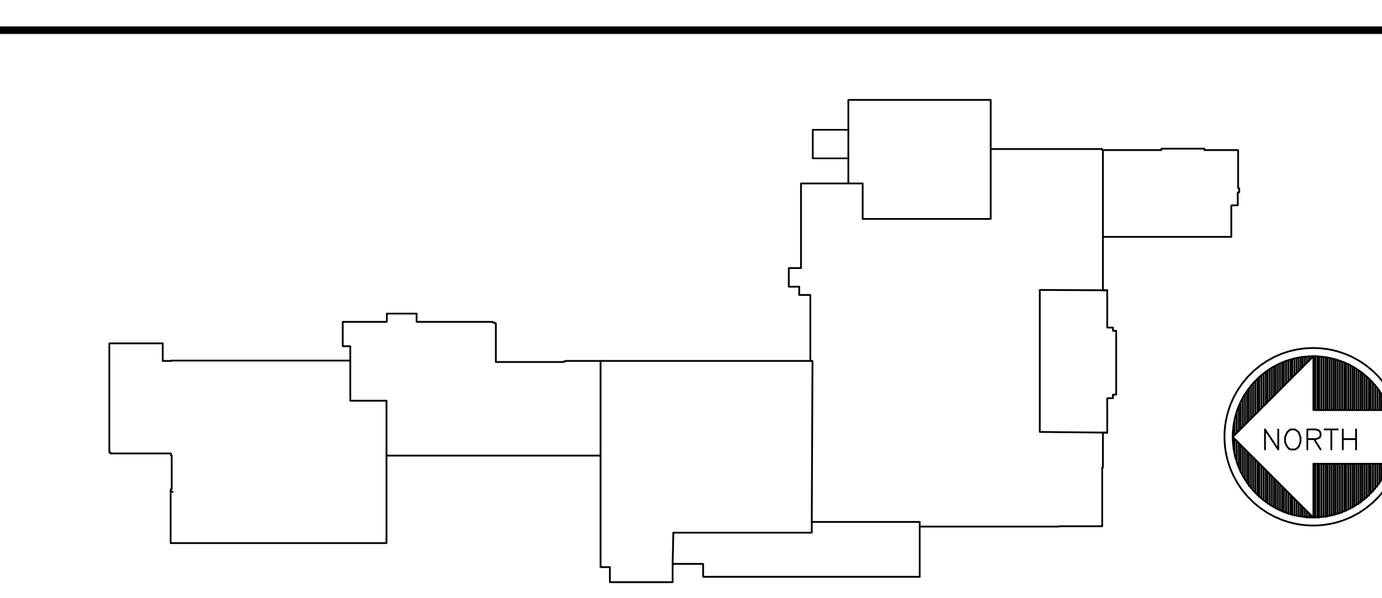
1 E-300 ELECTRICAL ONE LINE DIAGRAM
SCALE: NONE

ONE LINE DIAGRAM NEW WORK NOTES:

1. EQUIPMENT SHOWN LIGHT IS EXISTING TO REMAIN AND EQUIPMENT TO BE REPLACED OR ADDED IS SHOWN BOLD.
2. ALL NEW POWER/LIGHTING PANELS SHALL BE PROVIDED WITH PLASTIC MOLDED CASE BOLT-ON TYPE, THERMAL MAGNETIC, FULLY RATED BRANCH CIRCUIT BREAKERS.
3. REFER TO PANEL SCHEDULE DRAWINGS FOR CIRCUIT BREAKER SIZES AND QUANTITIES.
4. COORDINATE ALL WORK AND REQUIRED SHUTDOWNS AND ANY EQUIPMENT / PANELS WHICH MUST REMAIN ACTIVE DURING RENOVATION WORK WITH OWNER. PROVIDE TEMPORARY POWER TO THIS EQUIPMENT / PANELS WHILE ALL WORK IS BEING COMPLETED. OBTAIN WRITTEN APPROVALS FOR ALL SHUTDOWNS (2) WEEKS PRIOR.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
ELECTRICAL ONE LINE DIAGRAM

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY: L.K.N.	BUILDING: HS
DATE: 12-01-2025	DRAWING NO.: E-300

CAD FILE: 4239-HS-E-300.DWG
PLOT DATE: 11/25/2025

PANELBOARD SCHEDULE NOTES (APPLIES TO ALL PANELBOARD SCHEDULE DRAWINGS):

1. ALL LOADS SHOWN LIGHT ARE EXISTING TO REMAIN AND LOADS SHOWN BOLD ARE NEW. KILOVOLT-AMPS SHOWN FOR EXISTING LOADS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE ONLY.
2. WHERE SCHEDULES ARE LABELED "REPLACEMENT PANELBOARD SCHEDULES", REPLACE EXISTING PANELBOARDS WITH NEW IN SAME LOCATION. PROVIDE NEW CIRCUIT BREAKERS TO MATCH CHARACTERISTICS OF EXISTING CIRCUIT BREAKERS BEING REPLACED OR ADDED IN RESPECTIVE PANELS. RECONNECT EXISTING LOADS TO NEW BREAKER, EXTENDING CONDUIT AND WIRING IF REQUIRED.
3. TRACE CIRCUITS TO VERIFY LOADS INDICATED ON EXISTING PANEL SCHEDULE ARE ACCURATE PRIOR TO ANY WORK ON PANEL
4. PROVIDE NEW UPDATED PANEL SCHEDULES IN ALL NEW PANELS.

EXISTING PANELBOARD SCHEDULE

DESIGNATION: BP-1 | MAINS: 100A, TYPE: -, O.C. DEVICE: MLO | VOLTAGE: 120/208V-3Ø-4W, MINIMUM O.C. DEVICE INTERRUPTING RATING: 22K AIC | LOCATION: BOILER RM, FED BY: DP-S, MOUNTING: SURFACE | SINGLE PANEL, DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20	-	-	-	BOILER B1-1	0.5	0.2	—	TRANE CONTROL PANEL BOILERS	-	-	-	20	1	2
3	1	20	-	-	-	BOILER B1-2	—	—	0.5	0.1	BOILER EMERGENCY OFF	-	-	-	20	1	4
★ 5	1	20	2#12	#12	3/4"	**BOILER B1-3**	—	—	—	**0.5**	0.2	TRANE CONTROL AH-1	-	-	-	20	1	6
7	1	20	-	-	-	REFRIGERANT MONITOR	0.1	0.2	—	—	—	RECEPTACLE UNDER PANEL	-	-	-	20	1	8
9	1	20	2#12	#12	3/4"	VAV BOX XFMR - CRAWL SPACE	—	—	0.4	0.3	—	VAV BOX XFMR - 1ST FLOOR	3/4"	#12	2#12	20	1	10
11	1	20	2#12	#12	3/4"	VAV BOX XFMR - CRAWL SPACE	—	—	—	0.6	0.4	VAV BOX XFMR - 1ST FLOOR	3/4"	#12	2#12	20	1	12
13	1	20	2#12	#12	3/4"	VAV BOX XFMR - CRAWL SPACE	0.3	0.1	—	—	—	NEW TRANE DDC PANEL (CHILLER)	3/4"	#12	2#12	20	1	14
15	1	20	2#12	#12	3/4"	VAV BOX XFMR - CRAWL SPACE	—	—	0.6	1.2	—	CHILLER CH-1A 120V POWER	3/4"	#12	2#12	20	1	16
17	1	20	-	-	-	TOWER CAMERA	—	—	—	—	0.5	0.2	RECEPTACLE BY AH-1	-	-	-	20	1	18
19	1	**20**	**2#12**	**#12**	**3/4"**	**P 1-3**	**0.4**	1.2	—	—	—	—	CHILLER CH-1B 120V POWER	3/4"	#12	2#12	20	1	20
21	/						—	—	**0.4**	-	—	—	SPACE	-	-	-	-	1	22
23	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	24
25	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	26
27	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	28
29	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	30
						CONNECTED KVA PER PHASE	3.0		3.5		2.4								

★ UTILIZE EXISTING CIRCUIT BREAKER.

TOTAL CONNECTED KVA: 5.9
TOTAL DEMAND KVA (70%): 4.13
TOTAL DEMAND AMPERES: 11.46

EXISTING PANELBOARD SCHEDULE

DESIGNATION: BP-3 | MAINS: 100A, TYPE: -, O.C. DEVICE: MLO | VOLTAGE: 120/208V-3Ø-4W, MINIMUM O.C. DEVICE INTERRUPTING RATING: 22K AIC | LOCATION: BOILER RM MER 3, FED BY: PE-1, MOUNTING: SURFACE | SINGLE PANEL, DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20	2#12	#12	3/4"	**BOILER B3-1**	**0.2**	0.2	—	—	TRANE CONTROL PANELS	-	-	-	20	1	2
3	1	20	2#12	#12	3/4"	**BOILER B3-2**	—	—	**0.2**	0.1	BOILER EMERGENCY OFF	-	-	-	20	1	4
5	1	20	2#12	#12	3/4"	**BOILER B3-3**	—	—	—	**0.2**	0.1	CARBON MONOXIDE & GAS DETECTORS	-	-	-	20	1	6
7	1	20	2#12	#12	3/4"	RECEPTACLE UNDER PANEL	0.2	0.2	—	—	—	TRANE CONTROL PANELS	-	-	-	20	1	8
9	1	20	2#12	#12	3/4"	**BOILER B3-4**	—	—	**0.2**	**0.2**	—	—	**ROOF RECEPTACLE**	**3/4"**	**#12**	**2#12**	20	1	10
11	1	20	2#12	#12	3/4"	VAV BOX XFMR- FIRST FLOOR	—	—	—	—	0.2	**0.8**	**WATER HEATER P106 CNTL CKT**	**3/4"**	**#12**	**2#12**	20	1	12
13	**2**	**15**	**3#12**	**#12**	**3/4"**	**PUMP P-1**	**1.0**	**1.0**	—	—	—	—	**PUMP P-2**	**3/4"**	**#12**	**3#12**	**15**	2	14
15							—	—	**1.0**	**1.0**	—	—							16
17	**2**	**15**	**3#12**	**#12**	**3/4"**	**PUMP P-3**	—	—	—	—	**1.0**	**1.0**	**PUMP P-4**	**3/4"**	**#12**	**3#12**	**15**	2	18
19							**1.0**	**1.0**	—	—	—	—							20
21	1	**20**	-	-	-	**SPARE**	—	—	-	-	—	—	UH-2 / UH-3 -> POOL UNOCUPIED SPACE	3/4"	#12	2#12	15	1	22
23	2	**30**	**3#12**	**#12**	**3/4"**	**CU-2 / SC-2 - POOL OFFICE**	—	—	—	**1.8**	-	—	SPACE	-	-	-	-	1	24
25							**1.8**	-	—	—	—	—	SPACE	-	-	-	-	1	26
27	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	28
29	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	30
						CONNECTED KVA PER PHASE	6.5		2.7		5.1								

TOTAL CONNECTED KVA: 10.8
TOTAL DEMAND KVA (70%): 7.56
TOTAL DEMAND AMPERES: 20.98

EXISTING PANELBOARD SCHEDULE

DESIGNATION: BP-5 | MAINS: 100A, TYPE: -, O.C. DEVICE: MLO | VOLTAGE: 120/208V-3Ø-4W, MINIMUM O.C. DEVICE INTERRUPTING RATING: 22K AIC | LOCATION: BOILER RM MER 5, FED BY: LLE-2, MOUNTING: SURFACE | SINGLE PANEL, DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20	-	-	-	BOILER 5-1	0.2	0.2	—	—	TRANE CONTROL PANEL TRANE	-	-	-	20	1	2
3	1	20	-	-	-	BOILER 5-2	—	—	0.2	0.1	BOILER EMERGENCY OFF	-	-	-	20	1	4
5	1	20	-	-	-	BOILER 5-3	—	—	—	0.2	0.1	TRANE CNTL PNL (AHU-5)	-	-	-	20	1	6
7	1	20	-	-	-	BOILER 5-4	0.2	0.2	—	—	—	TRANE UPCM	-	-	-	20	1	8
9	1	20	-	-	-	BOILER 5-5	—	—	0.2	-	—	SPARE	-	-	-	20	1	10
11	1	20	**2#12**	**#12**	**3/4"**	**PDU-1 WEATHERPROOF RECS**	—	—	—	**0.5**	-	SPARE	-	-	-	20	1	12
13	1	20	-	-	-	SPARE	-	0.0	—	—	—	**SPARE**	-	-	-	20	1	14
15	1	20	-	-	-	SPACE	—	—	0.0	-	—	**SPARE**	-	-	-	20	1	16
17	1	20	-	-	-	SPACE	—	—	—	—	-	SPACE	-	-	-	-	1	18
19	1	20	-	-	-	SPACE	-	-	—	—	—	SPACE	-	-	-	-	1	20
21	1	20	-	-	-	SPACE	—	—	-	-	—	SPACE	-	-	-	-	1	22
23	1	20	-	-	-	SPACE	—	—	—	—	-	SPACE	-	-	-	-	1	24
25	1	-	-	-	-	SPACE	-	-	—	—	—	SPACE	-	-	-	-	1	26
27	1	-	-	-	-	SPACE	—	—	-	-	—	SPACE	-	-	-	-	1	28
29	1	-	-	-	-	SPACE	—	—	—	—	-	SPACE	-	-	-	-	1	30
						CONNECTED KVA PER PHASE	0.6		0.5		0.8								

★ BREAKER MADE SPARE BY DEMO, REMOVE WIRE AND CONDUIT BACK TO SOURCE

TOTAL CONNECTED KVA: 1.2
TOTAL DEMAND KVA (70%): 0.96
TOTAL DEMAND AMPERES: 2.67

EXISTING PANELBOARD SCHEDULE

DESIGNATION: DPE-3 | MAINS: 400 AMP, TYPE: DISTRIBUTION, O.C. DEVICE: 300A M.C.B. | VOLTAGE: 277/480V-3Ø-4W+G, MINIMUM O.C. DEVICE INTERRUPTING RATING: 35KAIC | LOCATION: ELECT. A110, FED BY: DPE-1, MOUNTING: SURFACE | SINGLE PANEL, DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	/						20.2	**7.5**	—	—					/	2
3	3	125	3#2	6	1½"	RTU-2	—	—	20.2	**7.5**	**RTU-9 - WEIGHT ROOM**	3/4"	10	3#8	40	3	4
5	/						—	—	—	20.2	**7.5**					/	6
7	/						2.2	2.5	—	—	—					/	8
9	3	15	3#12	12	3/4"	CABINET HEATER E. CH-2	—	—	2.2	2.5	—	ELEC. UNIT HTR. EUH-2 WOOD STORAGE	3/4"	12	3#12	15	3	10
11	/						—	—	—	—	2.2	2.5					/	12
13	/						3.5	4.0	—	—	—	—					/	14
15	3	20	3#12	12	3/4"	CABINET HEATER E. CH-1 CORRIDOR	—	—	3.5	4.0	—	WATER HEATER WH-1	3/4"	10	3#10	30	3	16
17	/						—	—	—	—	3.5	4.0					/	18
19	/						9.3	3.5	—	—	—	—					/	20
21	3	45	3#6	#10	1	PANEL PP-E	—	—	9.3	3.5	—	PANEL CP-E	3/4"	#10	3#10	25	3	22
23	/						—	—	—	—	9.3	3.5					/	24
25	1	20	2#12	#12	3/4"	LIGHTING CLASSROOM	2.0	2.3	—	—	—	—	LIGHTING OP/PT	3/4"	#12	2#12	20	1	26
27	1	20	2#12	#12	3/4"	LIGHTING CLASSROOM	—	—	2.0	2.3	—	—	LIGHTING OP/PT	3/4"	#12	2#12	20	1	28
29	1	20	2#12	#12	3/4"	LIGHTING CORRIDOR	—	—	—	—	1.7	2.1	SITE LIGHTING	1	#10	2#10	20	1	30
31	1	20	-	-	-	SPARE	-	1.8	—	—	—	—	SITE LIGHTING	1	#10	2#10	20	1	32
33	1	-	-	-	-	SPACE AND PROVISIONS	—	—	-	-	—	—	SPARE	-	-	-	-	1	34
35	1	-	-	-	-	SPACE AND PROVISIONS	—	—	—	—	-	-	SPARE	-	-	-	-	1	36
37	1	-	-	-	-	SPACE AND PROVISIONS	-	**10.5**	—	—	—	—					/		38
39	1	-	-	-	-	SPACE AND PROVISIONS	—	—	-	**10.5**	—	—	**RTU-10 - METAL SHOP**	**1***	**10**	**3#6**	**50**	3	40
41	1	-	-	-	-	SPACE AND PROVISIONS	—	—	—	—	-	**10.5**					/		42
						CONNECTED KVA PER PHASE	69.3		67.5		67.0								

TOTAL CONNECTED KVA: 203.8
TOTAL DEMAND KVA (70%): 142.6
TOTAL DEMAND AMPERES: 171.6

EXISTING PANELBOARD SCHEDULE

DESIGNATION: KP | MAINS: 800A, TYPE: DISTRIBUTION PANEL, O.C. DEVICE: 800A M.C.B. | VOLTAGE: 277/480V-3Ø-4W, MINIMUM O.C. DEVICE INTERRUPTING RATING: EXISTING | LOCATION: KITCHEN, FED BY: SWBD #1 VIA XFMR, MOUNTING: SURFACE | SINGLE PANEL, DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO
	/						-	-	—	—					/	
1	3	225	-	-	-	KP-1	—	—	-	-	—	—	KP-2 (SHUNT TRIP)	-	-	-	600 S.T.	3	2
	/						—	—	—	—	-	-						/	
	/						9.9	-	—	—	—	—						/	
3	3	225	-	-	-	KP-3	—	—	9.9	-	—	—	**KP-4**	-	-	-	225	3	4
	/						—	—	—	—	13.4	-						/	
	/						-	-	—	—	—	—						/	
4	3	-				SPACE	—	—	-	-	—	—	SPACE				-	3	6
	/						—	—	—	—	-	-						/	
	/						-	-	—	—	—	—						/	
7	3	-				SPACE	—	—	-	-	—	—	SPACE				-	3	8
	/						—	—	—	—	-	-						/	
	/						-	-	—	—	—	—						/	
9	3	-				SPACE	—	—	-	-	—	—	SPACE				-	3	10
	/						—	—	—	—	-	-						/	
						CONNECTED KVA PER PHASE	-		-		-								

TOTAL CONNECTED KVA: -
TOTAL DEMAND KVA: -
TOTAL DEMAND AMPERES: -

EXISTING PANELBOARD SCHEDULE

DESIGNATION: KP-1 | MAINS: 225A, TYPE: -, O.C. DEVICE: MAIN LUG ONLY | VOLTAGE: 120/208V-3Ø-4W, MINIMUM O.C. DEVICE INTERRUPTING RATING: EXISTING | LOCATION: KITCHEN, FED BY: DIST. PANEL KDP, MOUNTING: RECESSED | SINGLE PANEL, DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	1	20	2#12	#12	3/4"	LARGE CAFE SOUND RACK QUAD	**0.3**	**1.0**	—	—	LARGE CAFE SOUND RACK	-	-	-	X	**2**	2	
**** 3	2	40	2#8	#10	3/4"	**DRYER**	—	—	**2.6**	**1.0**	—	—				/	4	
5	/						—	—	—	—	**2.6**	**1.2**	**WASHER**	**3/4"**	**#12**	**2#12**	20	1	6	****
7	1	20	-	-	-	SPARE	0.0	0.5	—	—	—	—	SOAP DISPENSER	-	-	-	20	1	8	
9	1	20	-	-	-	MEXER, FLOOR PLUGS, COFFEE URN	—	—	1.2	**1.0**	—	—	**KITCHEN OFFICE EAST RECS**	**3/4"**	**#12**	**2#12**	**20**	**1**	10	***
11	1	20	-	-	-	CONTROL CIRCUIT KP-2	—	—	—	—	0.2	**1.2**	**KITCHEN OFFICE WEST RECS**	**3/4"**	**#12**	**2#12**	**20**	**1**	12	***
** 13	1	**20**	**2#12**	**#12**	**3/4"**	**RECS - GENERAL DISHWASHING**	**0.0**	**1.3**	—	—	—	—	**DOOR CNTL PNLS-KITCHEN /STAFF TOILET**	-	-	-	**20**	**1**	14	**
15	2	20	-	-	-	MILK SHAKE MACHINE	—	—	1.0	1.2	—	—	PLUG FOR FRENCH FRYER	-	-	-	20	1	16	
17	/						—	—	—	—	1.0	0.9						/		
19	1	40	-	-	-	SMALL SERVING AREA	2.8	0.9	—	—	—	—	MIXER	-	-	-	15	3	20	
★ 21	/	/					—	—	**1.3**	0.9	—	—						/		
★ 23	3	**20**	**3#12**	**#12**	**3/4"**	**WATER HEATER DISHWASHING - 113B**	—	—	—	**1.3**	1.0	—	MILKSHAKE MACHINE	-	-	-	20	2	22	
★ 25	/	/					**1.3**	1.0	—	—	—	—						/		
** 27	1	**20**	-	-	-	**SPARE**	—	—	**0.0**	**0.0**	—	—	**SPARE**	-	-	-	**30**	**2**	24	**
** 29	2	**30**				**SPARE**	—	—	—	—	**0.0**	**0.0**						/		
31	/						**0.0**	**1.2**	—	—	—	—	DISPOSAL	-	-	-	20	3	32	
** 33	2	**30**				**SPARE**	—	—	**0.0**	1.2	—	—						/	34	
35	/						—	—	—	—	**0.0**	1.2						/	36	
37	/						1.2	**0.0**	—	—	—	—	**SPARE**	-	-	-	**40**	**2**	38	**
39	3	20	-	-	-	DISPOSAL	—	—	1.2	**0.0**	—	—						/	40	
41	/						—	—	—	1.2	**0.0**		**SPARE**	-	-	-	20	**1**	42	**
43	-	-	-	-	-	SPACE	0.0	0.0	—	—	—	—	SPACE	-	-	-	-	-	44	
45	-	-	-	-	-	SPACE	—	—	0.0	0.0	—	—	SPACE	-	-	-	-	-	46	
47	-	-	-	-	-	SPACE	—	—	—	—	0.0	0.0	SPACE	-	-	-	-	-	48	
49	-	-	-	-	-	SPACE	0.0	0.0	—	—	—	—	SPACE	-	-	-	-	-	50	
51	-	-	-	-	-	SPACE	—	—	0.0	0.0	—	—	SPACE	-	-	-	-	-	52	
53	-	-	-	-	-	SPACE	—	—	—	—	0.0	0.0	SPACE	-	-	-	-	-	54	
						CONNECTED KVA PER PHASE	17.2		18.6		16.7									

★ REPLACE (3) 20A-1P BREAKERS WITH (1) 20A-3P BREAKER
** BREAKER MADE SPARE BY DEMOLITION, REMOVE WIRING
*** REUSE EXISTING BREAKER FOR NEW LOAD
**** RELOCATED WASHER AND DRYER - EXTEND WIRING AND CONDUIT TO NEW LOCATIONS AS REQUIRED.

TOTAL CONNECTED KVA: 52.5
TOTAL DEMAND KVA: 31.5
TOTAL DEMAND AMPERES: 88

EXISTING PANELBOARD SCHEDULE

DESIGNATION: KP-2 | MAINS: 600A W/SHUNT TRIP, TYPE: KITCHEN EQUIPMENT, O.C. DEVICE: MAIN LUG ONLY | VOLTAGE: 120/208V-3Ø-4W, MINIMUM O.C. DEVICE INTERRUPTING RATING: EXISTING | LOCATION: KITCHEN, FED BY: KITCHEN PANEL, MOUNTING: RECESSED | SINGLE PANEL, DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA ~ A	KVA ~ B	KVA ~ C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	/						**6.1**	8.5	—	—	—	—	CONVECTION OVEN	-	-	-	-	/	2	
★ 3	**3**	**70**	**4#4**	**#8**	**1-1/4"**	**DISHWASHER (MOTORS & TANK HEATER - E2)**	—	—	**6.1**	8.5	—	—						/	4	
5	/						—	—	—	—	**6.1**	8.5						/	6	
7	/						0.0	8.5	—	—	—	—	CONVECTION OVEN	-	-	-	-	/	8	
9	3	70	-	-	-	SPARE	—	—	0.0	8.5	—	—		-	-	-	100	3	10	
11	/						—	—	—	—	0.0	8.5						/	12	
*** 13	1	20				**SPARE**	**0.0**	0.9	—	—	—	—	CONVENTION OVEN (UPPER DECK)	3/4"	#12	2#12	20	1	14	
15	1	20	2#12	#12	3/4"	STEAMER (TOP)	—	—	0.2	0.0	—	—	SPACE	3/4"	#12	2#12	20	1	16	
17	1	20	2#12	#12	3/4"	STEAMER (BOTTOM)	—	—	—	—	0.2	0.9	CONVENTION OVEN (UPPER DECK)	3/4"	#12	2#12	20	1	18	
19	/						**7.0**	0.9	—	—	—	—	CONVENTION OVEN (LOWER DECK)	3/4"	#12	2#12	20	1	20	
** 21	**3**	**80**	**4#3**	**#8**	**1-1/4"**	**DISHWASHER (CONTROLS & BOOSTER HEATER - E3)**	—	—	**7.0**	0.9	—	—	CONVENTION OVEN (UPPER DECK)	3/4"	#12	2#12	20	1	22	
23	/						—	—	—	—	**7.0**	0.9	CONVENTION OVEN (LOWER DECK)	3/4"	#12	2#12	20	1	24	
25	/		-	-	-		0.0	0.9	—	—	—	—		-	-	-		/	26	
27	3	70	-	-	-	SPARE	—	—	0.0	0.9	—	—	MIXER	-	-	-	15	3	28	
29	/		-	-	-		—	—	—	—	0.0	0.9		-	-	-		/	30	
31	1	20	-	-	-	CART LOADING TABLE	1.0	0.2	—	—	—	—	STEAMER (TOP)	-	-	-	20	1	32	
33	1	20	-	-	-	CART LOADING TABLE	—	—	1.0	0.2	—	—	STEAMER (BOTTOM)	3/4"	#12	2#12	20	1	34	
35	1	20	-	-	-	CART LOADING TABLE	—	—	—	—	1.0	**0.0**	**SPARE**	-	-	-	20	1	36	***
37	1	20	-	-	-	COOK TABLE	1.0	**0.0**	—	—	—	—	**SPARE**	-	-	-	20	1	38	***
39	1	20	-	-	-	RECEPT. NORTH WALL	—	—	0.5	**0.0**	—	—	**SPARE**	-	-	-	20	2	40	***
41	1	20	-	-	-	EXISTING LOAD	—	—	—	—	1.0	**0.0**						/	42	
						CONNECTED KVA PER PHASE	35.0		33.8		35.9									

★ REPLACE (1) 100A-3P BREAKERS WITH (1) 70A-3P GFCI BREAKER FOR NEW DISHWASHER CONNECTION E2.
** REPLACE (1) 80A-3P BREAKERS WITH (1) 80A-3P GFCI BREAKER FOR NEW DISHWASHER CONNECTION E3.
*** BREAKER MADE SPARE BY DEMOLITION, REMOVE WIRING.

TOTAL CONNECTED KVA: 104.7
TOTAL DEMAND KVA: 73.5
TOTAL DEMAND AMPERES: 203.5

EXISTING PANELBOARD SCHEDULE

DESIGNATION: KP-3 | MAINS: 225A, TYPE: -, O.C. DEVICE: MAIN LUG ONLY | VOLTAGE: 120/208V-3Ø-4W, MINIMUM O.C. DEVICE INTERRUPTING RATING: EXISTING | LOCATION: KITCHEN, FED BY: DIST. PANEL KDP, MOUNTING: RECESSED | SINGLE PANEL, DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	/						1.2	-	—	—	—	—	-	-	-	-	20	1	2
3	3	20	-	-	-	CLOTHES WASHER	—	—	1.2	1.2	—	—	EXISTING LOAD	-	-	-	20	1	4
5	/						—	—	—	—	1.2	**1.2**	PROJ. SCREEN - BIG CAFE	**3/4"**	**#12**	**2#12**	**20**	**1**	6
7	2	30	-	-	-	-	-	**1.2**	—	—	—	—	PROJ. - BIG CAFE	**3/4"**	**#12**	**2#12**	**20**	**1**	8
9	/						-	-	—	**1.2**	—	—	SOUND RACK - BIG CAFE	**3/4"**	**#12**	**2#12**	**20**	**1**	10
11	2	50	-	-	-	RANGE RECEPTACLE ROOM 100	—	—	—	—	4.5	-							12
13	/						4.5	-	—	—	—	—	#2 FREEZER (NO WIRE)	-	-	-	40	2	14
15	2	50	-	-	-	RANGE RECEPTACLE ROOM 100	—	—	4.5	-	—	—						/	16
17	/						—	—	—	—	4.5	-	KEEP OFF	-	-	-	20	1	18
19	2	20	-	-	-	-	-	-	—	—	—	—	-	-	-	-	20	2	20
21	/						-	-	—	—	—	—		-	-	-	20	/	22
23	1	30	-	-	-	-	—	—	-	-	—	—	-	-	-	-	20	1	24
25	1	20	-	-	-	SLICER	1.0	1.0	—	—	—	—	FOOD CARTS PLUGMOLD	-	-	-	20	1	26
27	1	20	-	-	-	-	—	—	-	1.0	—	—	FOOD CARTS	-	-	-	20	1	28
29	1	20	-	-	-	-	—	—	—	—	-	1.0	FOOD CARTS	-	-	-	20	1	30
31	1	20	-	-	-	FOOD CARTS	1.0	-	—	—	—	—	-	-	-	-	20	1	32
33	1	20	-	-	-	CUTTING BENCH	—	—	1.0	-	—	—	-	-	-	-	20	1	34
35	1	20	-	-	-	OFFICE RECEPT 2 FREEZERS - DOCK	—	—	—	—	1.0	-	-	-	-	-	20	1	36
37	1	15	-	-	-	-	-	-	—	—	—	—	-	-	-	-	20	1	38
39	1	20	-	-	-	RECEPTS - DOCK INSIDE & OUTSIDE	—	—	1.0	-	—	—	-	-	-	-	20	1	40
41	1	-	-	-	-	-	—	—	—	—	-	-	-	-	-	-	20	1	42
						CONNECTED KVA PER PHASE	9.9		11.1		13.4								

TOTAL CONNECTED KVA: 34.4
TOTAL DEMAND KVA: 24.08
TOTAL DEMAND AMPERES: 66.84

NEW PANELBOARD SCHEDULE

DESIGNATION: KP-4 | MAINS: 225A, TYPE: APPLIANCE, O.C. DEVICE: MCB | VOLTAGE: 120/208V-3Ø-4W, INTERRUPTING RATING: | LOCATION: SERVERY, FED BY: DIST. PANEL KDP, MOUNTING: RECESSED | SINGLE PANEL, DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20	2#12	#12	3/4"	CASHIER STATION NORTH	1.8	1.4	—	—	—	—	REFRIGERATED MERCHANDISER	3/4"	#12	2#12	20	2	2
3	1	20	2#12	#12	3/4"	CASHIER STATION SOUTH	—	—	1.8	1.4	—	—						/	4
5	1	20	2#12	#12	3/4"	ICE CREAM MERCHANDISER (GFCI BKR)	—	—	—	—	1.8	1.2	(4) WELL HOT FOOD UNIT JBOX S. ISLAND	3/4"	#10	2#8	40	2	6
7	1	20	2#12	#12	3/4"	MILK COOLER (W.) (GFCI BKR)	0.6	0.5	—	—	—	—						/	8
9	1	20	2#12	#12	3/4"	MILK COOLER (S.) (GFCI BKR)	—	—	0.6	1.1	—	—	BREATH PROTECTOR HEAT LAMP S. ISLAND	3/4"	#12	2#12	20	2	10
11	1	20	2#12	#12	3/4"	DISPLAY LIGHTS - (S. WALL ISLAND)	—	—	—	—	0.1	1.1						/	12
13	1	20	2#12	#12	3/4"	FROST TOP (S. ISLAND)	0.6	1.1	—	—	—	—	BREATH PROTECTOR HEAT LAMP SOUTHEAST - E. ISLAND	3/4"	#12	2#12	20	2	14
15	1	20	2#12	#12	3/4"	DISPLAY LIGHTS - (E. WALL ISLAND)	—	—	0.1	1.1	—	—						/	16

PANELBOARD SCHEDULE NOTES (APPLIES TO ALL PANELBOARD SCHEDULE DRAWINGS):

1. ALL LOADS SHOWN LIGHT ARE EXISTING TO REMAIN AND LOADS SHOWN BOLD ARE NEW. KILOVOLT-AMPS SHOWN FOR EXISTING LOADS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE ONLY.
2. WHERE SCHEDULES ARE LABELED "REPLACEMENT PANELBOARD SCHEDULES", REPLACE EXISTING PANELBOARDS WITH NEW IN SAME LOCATION. PROVIDE NEW CIRCUIT BREAKERS TO MATCH CHARACTERISTICS OF EXISTING CIRCUIT BREAKERS BEING REPLACED OR ADDED IN RESPECTIVE PANELS. RECONNECT EXISTING LOADS TO NEW BREAKER, EXTENDING CONDUIT AND WIRING IF REQUIRED.
3. TRACE CIRCUITS TO VERIFY LOADS INDICATED ON EXISTING PANEL SCHEDULE ARE ACCURATE PRIOR TO ANY WORK ON PANEL
4. PROVIDE NEW UPDATED PANEL SCHEDULES IN ALL NEW PANELS.

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LA-1 | MAINS: 225A | TYPE: - | O.C. DEVICE: MAIN LUG ONLY | VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: EXISTING | LOCATION: CORRIDOR | FED BY: SWBD #1 | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	/						1.0	1.0	——	——					/	2	
3	3	20	-	-	-	UH #1 DOCK	——	——	1.0	1.0	——	——		20	3	4	
5	/						——	——	——	——	1.0	1.0			/	6	
7	/						1.0	1.0	——	——					/	8	
9	3	20	-	-	-	UH #2 REFUSE SERVICE	——	——	1.0	1.0	——	——		20	3	10	
11	/						——	——	——	——	1.0	1.0			/	12	
13	/						1.0	1.0	——	——					/	14	
15	3	15	-	-	-	RCH #2	——	——	1.0	1.0	——	——		20	3	16	
17	/						——	——	——	——	1.0	1.0			/	18	
19	/						1.0	1.0	——	——					/	20	
21	3	20				EXISTING LOAD	——	——	1.0	1.0	——	——		20	3	22	
23	/						——	——	——	——	1.0	1.0			/	24	
25	1	20	-	-	-	LIGHTS - CORRIDOR	1.0	1.0	——	——					/	26	
27	1	20	-	-	-	LIGHTS - KITCHEN	——	——	1.0	1.0	——	——			/	28	
29	1	20	-	-	-	LIGHTS - KITCHEN	——	——	——	——	1.0	1.0			/	30	
31	1	20	-	-	-	LIGHTS - KITCHEN	1.0	**0.0**	——	——	——	——			/	32	★
33	1	20	-	-	-	LIGHTS - BASEMENT STOR., MECH& CORR	——	——	1.0	1.0	——	——			/	34	
35	1	20	-	-	-	LIGHTS - BASEMENT STORAGE RMS	——	——	——	——	1.0	**2.2**			/	36	★★
37	1	20	-	-	-	LIGHTS - BASEMENT LOCKERS & DINING	1.0	1.0	——	——					/	38	
39	1	20	-	-	-	BASEBOARD HEAT - BASEBOARD NORTH	——	——	1.0	**1.2**	——	——			/	40	
41	1	20	-	-	-	BASEBOARD HEAT - BASEBOARD SOUTH	——	——	——	——	1.0	1.0			/	42	
43	1	**20**	**2#12**	**#12**	**3/4"**	**VAV-3-HS TOILET RM 107A**	**1.2**	**1.2**	——	——	——	——			/	44	
45	1	**20**	**2#12**	**#12**	**3/4"**	**BASEBOARD 122 TOILETS**	——	——	**3.0**	**3.0**	——	——			/	46	
47	1					SPACE	——	——	——	——	-	-				48	
49	1					SPACE	-	-	——	——	——	——				50	
51	1					SPACE	——	——	-	-	——	——				52	
53	1					SPACE	——	——	——	——	-	-				54	
						CONNECTED KVA PER PHASE	15.4		20.2		15.2						

★ REMOVE WIRING AND RELABEL BREAKER AS SPARE
★★ UTILIZE EXISTING BREAKER FOR NEW LIGHTING CIRCUIT

TOTAL CONNECTED KVA: 50.8 — TOTAL DEMAND KVA: 35.56 — TOTAL DEMAND AMPERES: 42.77

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LA-2 | MAINS: 225A | TYPE: - | O.C. DEVICE: MAIN LUG ONLY | VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: EXISTING | LOCATION: CORRIDOR | FED BY: SWBD #1 | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	/						1.0	1.0	——	——					/	2	
3	3	20	-	-	-	RCH #1 EAST CORRIDOR	——	——	1.0	1.0	——	——		20	3	4	
5	/						——	——	——	——	1.0	1.0			/	6	
7	/						0.0	0.0	——	——					/	8	
9	3	20	-	-	-	SPARE	——	——	0.0	0.0	——	——		20	3	10	
11	/						——	——	——	——	0.0	0.0			/	12	
13	/						**0.5**	0.8	——	——	——	——			/	14	
15	3	15	3#12	#12	3/4"	**E.F. #23 (KITCHEN)**	——	——	**0.5**	0.8	——	——			/	16	★★
17	/						——	——	——	——	**0.5**	1.0				18	
19	1	20	-	-	-	LIGHTS - CORRIDOR	1.0	1.0	——	——						20	
21	1	20	-	-	-	SPARE	——	——	0.0	1.0	——	——				22	
23	1	20	-	-	-	SPARE	——	——	——	——	0.0	1.0				24	
25	1	20	-	-	-	LIGHTS - CORRIDOR	1.0	0.0	——	——						26	
27	1	20	-	-	-	LIGHTS - KITCHEN	——	——	1.0	0.0	——	——				28	
29	1	20	-	-	-	LIGHTS - KITCHEN	——	——	——	——	1.0	0.0				30	
31	1	20	-	-	-	LIGHTS - KITCHEN	1.0	0.0	——	——	——	——				32	
33	1	20	-	-	-	LIGHTS - BASEMENT STOR., MECH& CORR	——	——	1.0	1.0	——	——				34	
35	1	20	-	-	-	LIGHTS - BASEMENT STORAGE RMS	——	——	——	——	1.0	**1.7**				36	★★
37	1	20	-	-	-	LIGHTS - BASEMENT LOCKERS & DINING	1.0	1.0	——	——						38	
39	1	20	-	-	-	BASEBOARD HEAT - BASEBOARD NORTH	——	——	1.0	1.0	——	——				40	
41	1	20	-	-	-	BASEBOARD HEAT - BASEBOARD SOUTH	——	——	——	——	1.0	1.0				42	
						CONNECTED KVA PER PHASE	9.3		9.3		10.2						

★ REUSE EXISTING BREAKER FOR REPLACEMENT EF-23.
★★ EXTEND WIRING/CONDUIT AS REQUIRED.
REUSE EXISTING BREAKER FOR REPLACEMENT
LIGHTING. EXTEND WIRING/CONDUIT AS REQUIRED.

TOTAL CONNECTED KVA: 19.5 — TOTAL DEMAND KVA: 13.65 — TOTAL DEMAND AMPERES: 16.42

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLA-SL | MAINS: 100A | TYPE: NORMAL POWER | O.C. DEVICE: MLO | VOLTAGE: 120/208V-3~4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 10 KAIC | LOCATION: STEM LAB | FED BY: DPB-2 | MOUNTING: SURFACE | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA ~ A	KVA ~ B	KVA ~ C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	1	20	2#12	#12	3/4"	3D PRINTER - RM 118	1.0	1.0	——	——					/	2	
3	1	20	2#12	#12	3/4"	TEACHER'S COMP - RM 118	——	——	0.7	1.0	——	——			/	4	
5	1	20	2#12	#12	3/4"	PLUGMOLD - RM 118	——	——	——	——	0.7	1.0			/	6	
7	1	20	2#12	#12	3/4"	RECEPTS - RM 118	0.5	1.0	——	——	——	——			/	8	
9	1	20	2#12	#12	3/4"	CORD REEL RECEPTS - RM 118	——	——	1.0	1.0	——	——			/	10	
11	1	20	2#12	#12	3/4"	CORD REEL RECEPTS - RM 118	——	——	——	——	1.0	1.0			/	12	
13	1	20	2#12	#12	3/4"	CORD REEL RECEPTS - RM 118	1.0	0.7	——	——	——	——			/	14	
15	1	20	2#12	#12	3/4"	CORD REEL RECEPT - RM 118	——	——	0.5	0.7	——	——			/	16	
17	1	20				SPARE	——	——	——	——	-	0.1				18	GFCI
19	1	20	2#12	#12	3/4"	DATA CABINET RECEPT.	1.2	-	——	——	——	——				20	
21	1	20				SPARE	——	——	-	-	——	——				22	
23	1	20				SPARE	——	——	——	——	-	-				24	
25	1	20				SPARE	-	-	——	——	——	——				26	
27	1	20				SPARE	——	——	-	-	——	——				28	
29	1	**20**	**2#12**	**#12**	**3/4"**	**HAND DRYER BOY'S TOILET 122**	——	——	——	——	**1.7**	**1.7**				30	
31	1	**20**	**2#12**	**#12**	**3/4"**	**HAND DRYER GIRL'S TOILET 122**	**1.7**	**1.7**	——	——	——	——				32	
33	1	**20**	**2#12**	**#12**	**3/4"**	**HAND DRYER GIRL'S TOILET 122**	——	——	**1.7**	**1.7**	——	——				34	
35	1	**20**	**2#12**	**#12**	**3/4"**	**HAND DRYER GIRL'S TOILET 122**	——	——	——	——	**1.7**	**1.7**				36	
37	1					SPACE AND PROVISIONS	-	-	——	——	——	——				38	
39	1					SPACE AND PROVISIONS	——	——	-	-	——	——				40	
41	1					SPACE AND PROVISIONS	——	——	——	——	-	-				42	
						CONNECTED KVA PER PHASE	9.8		8.3		7.2						

TOTAL CONNECTED KVA: 25.3 — TOTAL DEMAND KVA (70%): 17.7 — TOTAL DEMAND AMPERES: 49.2

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLA-1 | MAINS: 100A | TYPE: APPLIANCE | O.C. DEVICE: MAIN LUG ONLY | VOLTAGE: 120/208V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: EXISTING | LOCATION: CORRIDOR | FED BY: SWBD #1 | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	1	20	-	-	-	RECS BASEMENT & WATER SOFTENER	0.7	0.7	——	——					/	2	
3	1	20	-	-	-	ELEVATOR LIGHTS	——	——	0.7	0.7	——	——			/	4	
5	1	20	-	-	-	BASEMENT COOLER LIGHTS & DOOR HTR	——	——	——	——	0.7	**1.7**			/	6	★
7	1	20	-	-	-	BASEMENT COOLER LIGHTS & DOOR HTR	0.7	**0.8**	——	——	——	——			/	8	★★
9	1	20	-	-	-	SNACK BAR RECS	——	——	0.7	**0.0**	——	——			/	10	★★
11	1	20	-	-	-	LIGHTS - W. FACULTY REST AREA	——	——	——	——	0.7	0.7			/	12	
13	1	20	-	-	-	RECS A105/107	0.7	0.7	——	——	——	——			/	14	
15	1	20	-	-	-	SNACKBAR RECS	——	——	0.7	0.7	——	——			/	16	
17	1	20	-	-	-	LITES - REFUSE, WALKIN REFRIDGE	——	——	——	——	0.7	0.7			/	18	
19	1	20	-	-	-	RECS - KITCH. OFFICE	0.7	0.7	——	——	——	——			/	20	
21	1	20	-	-	-	EXISITNG LOAD	——	——	1.0	1.0	——	——			/	22	
23	1	20	-	-	-	EXISTING LOAD	——	——	——	——	1.0	1.0			/	24	
25	1	20	-	-	-	SNACK BAR RECS	1.0	1.0	——	——	——	——			/	26	
27	2	20	-	-	-	CORRIDOR RECS - SERVING	——	——	1.0	1.0	——	——			/	28	
29	/						——	——	——	——	1.0	1.0			/	30	
31	2	20	-	-	-	CORRIDOR RECS - CAFE #1 WALL	1.0	0.0	——	——	——	——			/	32	
33	/						——	——	1.0	1.0	——	——			/	34	
35	2	20	-	-	-	RECS - KITCHEN (COMB 110V/208V)	——	——	——	——	1.0	1.0			/	36	
37	/						1.0	1.0	——	——	——	——			/	38	
39	2	20	-	-	-	WEST WALL REC (SINGLE) KITCHEN	——	——	1.0	0.7	——	——			/	40	
41	/						——	——	——	——	1.0	0.7			/	42	
43	1	20	2#12	#12	3/4"	TOLET 106B HAND DRYER	1.7	1.7	——	——	——	——			/	44	★★
45	1	20	2#12	#12	3/4"	TOLIET 106A HAND DRYER	——	——	1.7	1.7	——	——			/	46	★★
47	1	20				SPARE	——	——	——	-	-					48	
49	1	20				SPARE	-	-	——	——	——					50	
51	1	20				SPARE	——	——	-	-	——					52	
53	1	20				SPARE	——	——	——	-	-					54	
						CONNECTED KVA PER PHASE	14.1		12.6		12.9						

★ REMOVE WIRING AND RE-LABEL BREAKER AS SPARE
★★ UTILIZE EXISTING BREAKER FOR NEW CIRCUIT

TOTAL CONNECTED KVA: 39.6 — TOTAL DEMAND KVA: 76.94 — TOTAL DEMAND AMPERES: 28.69

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLB-1 | MAINS: 175A | TYPE: APPLIANCE | O.C. DEVICE: 175A MCB | VOLTAGE: 208/120V-3Ø-4W | MINIMUM O.C. DEVICE: EXISTING | INTERRUPTING RATING: EXISTING | LOCATION: IT RM 133 HALLWAY | FED BY: MDP-1 VIA XFMR | MOUNTING: FLUSH | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	1	20	-	-	-	TELEPHONE BOARD & SW. RM. LIGHTS	-	-	——	——				15	1	2	
3	1	20	-	-	-	LIGHTS - MECH RM	——	——	-	-	——	——		20	1	4	
5	1	20	-	-	-	LIGHTS - MECH RM	——	——	——	——	-	-		20	1	6	
7	1	20	-	-	-	LIGHTS - MECH RM	-	-	——	——	——	——		20	1	8	
9	1	20	-	-	-	RM 118 WIREMOLD	——	——	-	-	——	——		20	1	10	
11	1	20	-	-	-	CONTROL CKT HONEYWELL CONSOLE	——	——	——	——	-	-		20	1	12	
13	1	20	-	-	-	RECS - A117-121	-	-	——	——	——	——		20	1	14	
15	1	20	-	-	-	RECS- A127	——	——	-	-	——	——		20	1	16	
17	1	20	-	-	-	RECS SMALL RM BEWEEN 116&118	——	——	——	——	-	-		20	1	18	
19	1	20	-	-	-	RECS - SOUTHEAST WALL	-	-	——	——	——	——		20	1	20	
21	1	20	-	-	-	RECS - A116-118 & MACHINE LAB	——	——	-	-	——	——		20	1	22	
23	1	20	-	-	-	RECS - A118-122 PLUGMOLD	——	——	——	——	-	-		20	1	24	
25	1	20	-	-	-	HOT WATER PUMP & WATER SOFTENER	-	-	——	——	——	——		20	1	26	
27	1	20	-	-	-	EM LIGHTING MONITOR CKT #1	——	——	-	-	——	——		20	1	28	
29	1	20	-	-	-	EM LIGHTING MONITOR CKT #2	——	——	——	——	-	-		20	1	30	
31	1	20	-	-	-	EM LIGHTING MONITOR CKT #3	-	-	——	——	——	——		20	1	32	
33	1	20	2#12	#12	3/4"	**ISS COMPUTERS**	——	——	-	-	——	——		20	1	34	★
35	2	20	-	-	-	SPARE	——	——	——	-	-			20	1	36	
37							-	-	——	——	——	——				38	
39	2	20	-	-	-	RECS - CORRIDOR	——	——	-	-	——	——				40	
41							——	——	——	——	-	-				42	
43	1	20	2#12	#12	3/4"	**WIREMOLD - RM 111**	-	-	——	——	——	——		20	1	44	★
45	1	20	2#12	#12	3/4"	**BACKWALL**	——	——	-	-	——	——		20	1	46	★
47	1	20	2#12	#12	3/4"	**PLUGMOLD ROOM 120**	——	——	——	-	-			20	1	48	★
49	1	20	2#12	#12	3/4"	**PLUGMOLD ROOM 120**	-	-	——	——	——	——		20	1	50	★
51	1	20	2#12	#12	3/4"	**PROJECTORS - ROOM 118, 120**	——	——	-	-	——	——		20	1	52	★
53	1	20	2#12	#12	3/4"	**PROJECTORS - ROOM 128. 129, 130, 131**	——	——	——	——	-	-		20	1	54	★
						CONNECTED KVA PER PHASE	-		-		-						

★ LOAD RELOCATED FROM PANEL LLLC. EXTEND WIRE AND CONDUIT AS REQUIRED.

TOTAL CONNECTED KVA: - — TOTAL DEMAND KVA: - — TOTAL DEMAND AMPERES: -

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LB-2 | MAINS: 150A | TYPE: NORMAL POWER | O.C. DEVICE: MLO | VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 35K AIC | LOCATION: 2ND FLR. CORR. | FED BY: DPE-1 | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	/	/					3.0	1.0	——	——					/	/	2	
3	3	20	-	-	-	RCH STAIRWELL	——	——	3.0	1.0	——	——		EXHAUST FAN #19			4	
5	/	/					——	——	——	——	3.0	1.0				/	6	
7	1	20	-	-	-	LIGHTS - LIBRARY	1.0	2.4	——	——	——	——		LIGHTS - C221	-	-	8	
9	1	20	-	-	-	LIGHTS - LIBRARY	——	——	-	2.2	——	——		LIGHTS - C220	-	-	10	
11	1	20	-	-	-	LIGHTS - LIBRARY	——	——	——	——	-	2.2		LIGHTS - C224	-	-	12	
13	1	20	-	-	-	LIGHTS - C223 & C225	1.0	1.0	——	——	——	——		LIGHTS - C226	-	-	14	
15	1	20	-	-	-	LIGHTS - LIBRARY OFFICE & WORK RMS	——	——	1.0	1.0	——	——		LIGHTS - C228	-	-	16	
17	1	20	**2#12**	**#12**	**3/4"**	**BASEBOARD HEAT - WOMENS TOILETS**	——	——	——	**3.0**	1.0			LIGHTS - C230	-	-	18	
19	1	20	-	-	-	LIGHTS - 2ND FLOOR CORR.	1.0	1.0	——	——	——	——		EXISTING LOAD	-	-	20	
21	1	20	**2#12**	**#12**	**3/4"**	**BASEBOARD HEAT - MENS TOILETS**	——	——	**3.0**	1.0	——	——		SPARE	-	-	22	
23	1	20	-	-	-	SPARE	——	——	——	——	0.0	0.0		SPARE	-	-	24	
25	1	20	-	-	-	SPARE	0.0	0.0	——	——	——	——		SPACE	-	-	26	
27	1	-	-	-	-	SPACE	——	——	0.0	0.0	——	——		SPACE	-	-	28	
29	1	-	-	-	-	SPACE	——	——	——	——	0.0	0.0		SPACE	-	-	30	
31	1	-	-	-	-	SPACE	0.0	0.0	——	——	——	——		SPACE	-	-	32	
33	1	-	-	-	-	SPACE	——	——	0.0	0.0	——	——		SPACE	-	-	34	
35	1	-	-	-	-	SPACE	——	——	——	——	0.0	0.0		SPACE	-	-	36	
37	1	-	-	-	-	SPACE	0.0	2.1	——	——	——	——				/	38	
39	1	-	-	-	-	SPACE	——	——	0.0	2.1	——	——		E.F. - 3	3/4"	#12 3#12 15 3 /	40	
41	1	-	-	-	-	SPACE	——	——	——	——	0.0	2.1		(ABOVE RM 234)			42	
						CONNECTED KVA PER PHASE	13.5		12.8		10.8						

TOTAL CONNECTED KVA: 37.1 — TOTAL DEMAND KVA (70%): 26.0 — TOTAL DEMAND AMPERES: 31.3

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLB-2 | MAINS: 175A | TYPE: NORMAL POWER | O.C. DEVICE: MCB | VOLTAGE: 277/480V-3~4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 35K AIC | LOCATION: 2ND FLR. CORR. | FED BY: DPE-1 | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA ~ A	KVA ~ B	KVA ~ C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	1	-				LIGHTS - GROUP INSTR. RM	1.0	1.0	——	——				/	/	2	
3	1	-				LIGHTS - GROUP INSTR. RM	——	——	1.0	1.0	——	——		20	3	4	
5	1	-				LIGHTS - GROUP INSTR. RM	——	——	——	——	1.0	1.0		/	/	6	
7	1	20				LIGHTS - GROUP INSTR. RM	1.0	1.0	——	——	——	——		20	1	8	
9	1	20				CNTL CKT - GROUP RM	——	——	1.0	1.0	——	——		20	1	10	
11	1	20				REC - TEMP	——	——	——	——	1.0	1.0		20	1	12	
13	1	20				EXISTING LOAD	1.0	1.0	——	——	——	——		20	1	14	
15	1	20				EXISTING LOAD	——	——	1.0	1.0	——	——		20	1	16	
17	1	20				EXISTING LOAD	——	——	——	——	1.0	1.0		20	1	18	
19	1	20				ZEROX MACHINE IN LIBRARY	1.0	1.0	——	——	——	——		20	1	20	
21	1	20				PROJ. - 234,235,236, 255, 257	——	——	1.0	1.0	——	——		20	1	22	
23	1	20				COMPUTER AREA LIBRARY	——	——	——	——	1.0	1.0		20	1	24	
25	1	20				COMPUTER AREA LIBRARY	1.0	1.0	——	——	——	——		20	1	26	
27	1	20				COMPUTER AREA LIBRARY	——	——	1.0	1.0	——	——		20	1	28	
29	1	20				COMPUTER AREA LIBRARY	——	——	——	——	1.0	1.0		20	1	30	
31	1	**20**	**2#12**	**#12**	**3/4"**	**HAND DRYER GIRLS TOILET SINGLE E.**	**1.7**	**1.7**	——	——	——	——		**HAND DRYER BOYS TOILET SINGLE E.**	**3/4"**	**#12 2#12**	**20**	**1**	**32**
33	1	**20**	**2#12**	**#12**	**3/4"**	**HAND DRYER GIRLS TOILET CENTER E.**	——	——	**1.7**	**1.7**	——	——		**HAND DRYER BOYS TOILET CENTER E.**	**3/4"**	**#12 2#12**	**20**	**1**	**34**
35	1	**20**	**2#12**	**#12**	**3/4"**	**HAND DRYER GIRLS TOILET CENTER W.**	——	——	——	——	**1.7**	**1.7**		**HAND DRYER BOYS TOILET CENTER W.**	**3/4"**	**#12 2#12**	**20**	**1**	**36**
37	1	**20**	**2#12**	**#12**	**3/4"**	**HAND DRYER GIRLS TOILET SINGLE W.**	**1.7**	**1.7**	——	——	——	——		**HAND DRYER BOYS TOILET SINGLE W.**	**3/4"**	**#12 2#12**	**20**	**1**	**38**
39	1	**20**	**2#12**	**#12**	**3/4"**	**EF-3 MAINT. REC (ROOF)**	——	——	**0.2**	-	——	——		SPACE			1	40	
40	1					SPACE	——	——	——	-	-			SPACE			1	42	
						CONNECTED KVA PER PHASE	16.8		13.6		13.4								

TOTAL CONNECTED KVA: 43.8 — TOTAL DEMAND KVA (70%): 30.66 — TOTAL DEMAND AMPERES: 85.1

EXISTING PANELBOARD SCHEDULE

DESIGNATION: EDP1A | MAINS: 50A | TYPE: EMERGENCY POWER | O.C. DEVICE: MLO | VOLTAGE: 240/120V-2Ø-3W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: - | LOCATION: SWBD #2 ROOM | FED BY: ELD1 VIA XFMR | MOUNTING: SURFACE | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	1	20	-	-	-	SMOKE DAMPERS	0.2	1.0	SERVER RACK 161	-	-	-	20	1	2	
3	1	20	-	-	-	NAC PANEL	——	——	SERVER RACK 161	-	-	-	20	1	4	
5	1	**20**	**2#12**	**#12**	**3/4"**	**POOL CHAIR LIFT**	**1.0**	0.0	SPACE	-	-	-	-	-	6	★
7	1	20	-	-	-	TIME CLOCK REC	——	——	SPACE	-	-	-	-	-	8	
9	-	-	-	-	-	SPACE	0.0	0.0	SPACE	-	-	-	-	-	10	
11	-	-	-	-	-	SPACE	——	——	SPACE	-	-	-	-	-	12	
						CONNECTED KVA PER PHASE	2.2	2.2								

★ REUSE EXISTING SPARE BREAKER FOR POOL CHAIR LIFT RECEPTACLE.

TOTAL CONNECTED KVA: 4.4 — TOTAL DEMAND KVA (70%): 3.1 — TOTAL DEMAND AMPERES: 12.8

REVISIONS

Issued for Bidding
December 1, 2025

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS S

PANELBOARD SCHEDULE NOTES (APPLIES TO ALL PANELBOARD SCHEDULE DRAWINGS):

1. ALL LOADS SHOWN LIGHT ARE EXISTING TO REMAIN AND LOADS SHOWN BOLD ARE NEW. KILOVOLT-AMPS SHOWN FOR EXISTING LOADS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE ONLY.
2. WHERE SCHEDULES ARE LABELED "REPLACEMENT PANELBOARD SCHEDULES", REPLACE EXISTING PANELBOARDS WITH NEW IN SAME LOCATION. PROVIDE NEW CIRCUIT BREAKERS TO MATCH CHARACTERISTICS OF EXISTING CIRCUIT BREAKERS BEING REPLACED OR ADDED IN RESPECTIVE PANELS. RECONNECT EXISTING LOADS TO NEW BREAKER, EXTENDING CONDUIT AND WIRING IF REQUIRED.
3. TRACE CIRCUITS TO VERIFY LOADS INDICATED ON EXISTING PANEL SCHEDULE ARE ACCURATE PRIOR TO ANY WORK ON PANEL
4. PROVIDE NEW UPDATED PANEL SCHEDULES IN ALL NEW PANELS.

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LC-1 | MAINS: 225A | TYPE: - | O.C. DEVICE: MAIN LUG ONLY | VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: EXISTING | LOCATION: CORRIDOR | FED BY: SWBD MDP-1 | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL ☐ | COMMON COVER ☐

	CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
**	1	/						4.2	0.0	—	—	—	—	SPARE	-	-	-	20	1	2	
**	3	3	70	-	-	-	CABINET HEATER LOBBY	—	—	4.2	5.0	—	—	EBB-1B MIDDLE OFFICE 141E	3/4"	#10	2#10	30	1	4	
**	5	/						—	—	—	—	4.2	0.0	SPARE	-	-	-	20	1	6	
	7	1	20	-	-	-	CORRIDOR LIGHTS	1.0	1.1	—	—	—	—	LIGHTS - MAIN LOBBY	-	-	-	20	1	8	**
	9	1	20	-	-	-	CORRIDOR LIGHTS	—	—	1.0	1.5	—	—	LIGHTS - MAIN OFFICE / ADMIN	-	-	-	20	1	10	
**	11	1	20	-	-	-	LIGHTS - B-128	—	—	—	—	1.0	1.0	LIGHTS - A-122	-	-	-	20	1	12	
*	13	1	20	-	-	-	LIGHTS -GUIDANCE OFFICE & TOILETS	1.2	1.0	—	—	—	—	LIGHTS - A-119-121, & STAIRWELL	-	-	-	20	1	14	
	15	1	20	-	-	-	LIGHTS - B-130- 133 & CONF.	—	—	1.0	1.0	—	—	LIGHTS - AUDITORIUM EXIT	-	-	-	20	1	16	
	17	1	20	-	-	-	LIGHTS - PROJECTION RM LOBBY	—	—	—	—	1.0	2.5	EBB-1 OFFICE 141C	3/4"	#12	2#12	20	1	18	
	19	1	15	2#12	#12	3/4"	VAV 1 - GUD	3.8	1.2	—	—	—	—	VAV 5 - GUD	3/4"	#12	2#12	15	1	20	
	21	1	15	2#12	#12	3/4"	VAV 2 - GUD	—	—	2.5	1.2	—	—	VAV 6 - GUD	3/4"	#12	2#12	15	1	22	
	23	1	15	2#12	#12	3/4"	VAV 3 - GUD	—	—	—	—	2.5	5.6	VAV 7 - GUD	3/4"	#12	2#12	25	1	24	
	25	1	15	2#12	#12	3/4"	VAV 4 - GUD	2.5	3.1	—	—	—	—	VAV 8 - GUD	3/4"	#12	2#12	15	1	26	
	27	1	45	2#6	#8	1"	VAV 1 - ADMIN	—	—	9.0	1.0	—	—	VAV 6 - ADMIN	3/4"	#12	2#12	15	1	28	
	29	1	15	2#12	#12	3/4"	VAV 2 - ADMIN	—	—	—	—	1.5	4.0	VAV 7 - ADMIN	3/4"	#12	2#12	20	1	30	
	31	1	20	2#12	#12	3/4"	VAV 3 - ADMIN	4.0	4.0	—	—	—	—	VAV 8 - ADMIN	3/4"	#12	2#12	20	1	32	
	33	1	20	-	-	-	EXISTING LOAD	—	—	1.0	1.0	—	—	EXISTNG LOAD	-	-	-	20	1	34	
	35	1	20	-	-	-	EXISTING LOAD	—	—	—	—	1.0	1.0	EXISTING LOAD	-	-	-	20	1	36	
	37	1	15	2#12	#12	3/4"	VAV 4 - ADMIN	2.5	4.0	—	—	—	—	VAV 9 - ADMIN	3/4"	#12	2#12	20	1	38	
	39	1	15	2#12	#12	3/4"	VAV 5 - ADMIN	—	—	1.0	4.5	—	—	EBB-1A W. OFFICE 141B	3/4"	#10	2#10	30	1	40	
	41	1	30	2#10	#10	3/4"	EBB-1B E. OFFICE 141B	—	—	—	—	5.0	5.0	EBB-1B MIDDLE OFFICE 141C	3/4"	#10	2#10	30	1	42	
							CONNECTED KVA PER PHASE	33.6		30.9		35.3									

* REUSE EXISTING CIRCUIT FOR NEW LIGHTING.
** REMOVE PART OF CIRCUIT AND KEEP CONTINUITY TO OTHER PART OF CIRCUIT.

TOTAL CONNECTED KVA: 99.8
TOTAL DEMAND KVA: 69.8
TOTAL DEMAND AMPERES: 84.1

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLC-1 | MAINS: 125A | TYPE: - | O.C. DEVICE: 125A M.C.B. | VOLTAGE: 120/208V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: EXISTING | LOCATION: CORRIDOR | FED BY: SWBD MDP-1 VIA XFMR | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL ☐ | COMMON COVER ☐

	CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
	1	1	20	-	-	-	LIGHTS- CRAWL SPACE	1.0	0.9	—	—	—	—	GUIDANCE OFFICE 148 RECS	3/4"	#12	2#12	20	1	2	*
	3	1	20	-	-	-	RECEPTS - CRAWL SPACE	—	—	1.0	1.0	—	—	RECEPTS - 137 & 139	-	-	-	20	1	4	
*	5	1	20	2#12	#12	3/4"	GUIDANCE OFFICE 146C RECS	—	—	—	—	0.9	0.9	GUIDANCE OFFICE 146B RECS	3/4"	#12	2#12	20	1	6	*
	7	1	20	2#12	#12	3/4"	WOMENS TOILET 145 EAST HANDDRYER	1.7	0.9	—	—	—	—	GUIDANCE OFFICE 148D RECS	3/4"	#12	2#12	20	1	8	*
	9	1	20	-	-	-	RECEPT - NURSE OFFICE	—	—	1.0	0.9	—	—	GUIDANCE OFFICE 148A RECS	3/4"	#12	2#12	20	1	10	*
	11	1	20	-	-	-	RECEPTS - B-130	—	—	—	—	1.0	1.0	VENDING MACHINE	-	-	-	20	1	12	
	13	1	20	-	-	-	RECEPTS - STORAGE & REST AREA	1.0	1.0	—	—	—	—	VENDING MACHINE	-	-	-	20	1	14	
*	15	1	20	2#12	#12	3/4"	GUIDANCE STUDENT SEATING RECS	—	—	0.9	1.7	—	—	MENS TOILET 144 EAST HANDDRYER	-	-	-	20	1	16	
*	17	1	20	2#12	#12	3/4"	GUIDANCE DESK RECS	—	—	—	—	1.1	0.5	GUIDANCE FILE & COUNTER	3/4"	#12	2#12	20	1	18	*
**	19	1	20	2#12	#12	3/4"	WOMENS TOILET 145 WEST HANDDRYER	1.7	1.0	—	—	—	—	LIGHTS - LOBBY CONTACTOR COIL	-	-	-	20	1	20	
	21	1	20	-	-	-	SIMPLEX 2001 ALARM/SECURITY	—	—	1.0	1.0	—	—	LIGHTS - STAGE WORK	-	-	-	20	1	22	
	23	1	20	2#12	#12	3/4"	AUDITORUM STAGE FRONT RECEPTS E.	—	—	—	—	1.0	1.0	LIGHTS - STAGE WORK	-	-	-	20	1	24	
	25	1	20	2#12	#12	3/4"	AUDITORUM STAGE FRONT RECEPTS W.	1.0	1.0	—	—	—	—	SOUND CONSOLE (DO NOT TURN OFF)	-	-	-	20	1	26	
**	27	1	20	2#12	#12	3/4"	GUIDANCE PRINTER STAPLER (DED.)	—	—	1.0	0.7	—	—	AUD. ENTERANCE TV & BENCH RECS	3/4"	#12	2#12	20	1	28	*
*	29	1	20	2#12	#12	3/4"	GUIDANCE COFFEE	—	—	—	—	1.2	1.0	RECS - SHOWCASE MONITOR	3/4"	#12	2#12	20	1	30	*
	31	2	20	-	-	-	EXISTING LOAD	1.0	1.2	—	—	—	—	GUIDANCE MICROWAVE	3/4"	#12	2#12	20	1	32	*
	33	/						—	—	1.0	1.7	—	—	MENS TOILET 144 WEST HANDDRYER	3/4"	#12	2#12	20	1	34	
	35	2	20	-	-	-	RECEPTS - STAGE WALL	—	—	—	—	1.0	1.0	RECEPTS - LOBBY & AUD. EAST	-	-	-	20	2	36	
	37	/						1.0	1.0	—	—	—	—						/	38	
	39	2	20	-	-	-	RECEPTS - CORRIDOR	—	—	1.0	1.0	—	—	RECEPTS - LOBBY & AUD. WEST & EXT.	-	-	-	20	2	40	
	41	/						—	—	—	—	1.0	1.0						/	42	
**	43	2	20	3#12	#12	3/4"	REC - GUIDANCE PRINTER	1.8	1.0	—	—	—	—	AUDITORUM SOUND BOOTH	3/4"	#12	2#12	20	1	44	
	45	/						—	—	1.8	-	—	—	-	-	-	-	-	-	46	
	47	-	-	-	-	-	-	—	—	—	—	-	-	-	-	-	-	-	-	48	
	49	-	-	-	-	-	-	-	-	—	—	—	—	-	-	-	-	-	-	50	
	51	-	-	-	-	-	-	—	—	-	-	—	—	-	-	-	-	-	-	52	
	53	-	-	-	-	-	-	—	—	—	—	-	-	-	-	-	-	-	-	54	
							CONNECTED KVA PER PHASE	17.2		16.7		13.6									

* REUSE BREAKERS MADE SPARE BY DEMO.
** E.C. TO FIELD VERIFY PRINTER SIZE AND PROVIDE A DEDICATED CIRCUIT.

TOTAL CONNECTED KVA: 47.5
TOTAL DEMAND KVA: 33.25
TOTAL DEMAND AMPERES: 92.29

NEW PANELBOARD SCHEDULE

DESIGNATION: LLC1A | MAINS: 150A | TYPE: APPLIANCE | O.C. DEVICE: MCB | VOLTAGE: 120/208V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 22K AIC | LOCATION: MAIN OFFICE | FED BY: XFMR (SWBD #1) | MOUNTING: SURFACE | SINGLE PANEL ■ | DOUBLE PANEL ☐ | COMMON COVER ☐

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20	2#12	#12	3/4"	RECS - SECURITY WINDOW STAFF	0.9	1.2	—	—	—	—	RECS - OFFICE 141 & VESTIBULE	3/4"	#12	2#12	20	1	2
3	1	20	2#12	#12	3/4"	RECS - OFFICE 141 DESKS	—	—	1.1	1.1	—	—	RECS - OFFICE 141 & WAITING RM	3/4"	#12	2#12	20	1	4
5	1	20	2#12	#12	3/4"	RECS - OFFICE 141C	—	—	—	—	1.3	1.3	RECS - OFFICE 141D	3/4"	#12	2#12	20	1	6
7	1	20	2#12	#12	3/4"	RECS - OFFICE 141E	1.3	0.7	—	—	—	—	RECS - STOR. RM 138 & TOILETS	3/4"	#12	2#12	20	1	8
9	1	20	2#12	#12	3/4"	PANTRY MICROWAVE DEDICATED REC	—	—	1.2	1.2	—	—	PANTRY COFFEE DEDICATED REC	3/4"	#12	2#12	20	1	10
11	1	20	2#12	#12	3/4"	RECS - FACULTY MAIL RM	—	—	—	—	0.5	0.5	REC - PANTRY & CORRIDOR	3/4"	#12	2#12	20	1	12
13	1	20	2#12	#12	3/4"	RECS - CONFERENCE RM 139	1.1	0.9	—	—	—	—	RECS - CONFERENCE 139A	3/4"	#12	2#12	20	1	14
15	1	20	2#12	#12	3/4"	MASTER CLOCK (DO NOT TURN OFF)	—	—	1.0	1.0	—	—	MAIN OFFICE PRINTER (DEDICATED)	3/4"	#12	2#12	20	1	16
17	1	20	2#12	#12	3/4"	FACULTY MAIL RM PRINTER (DEDICATED)	—	—	—	—	1.0	1.7	140B OFFICE TOILET HAND DRYER	3/4"	#12	2#12	20	1	18
19	1	20	2#12	#12	3/4"	140A OFFICE TOILET HAND DRYER	1.7	0.5	—	—	—	—	OFFICE RTU ADM LIGHT / REC	3/4"	#12	2#12	20	1	20
21	1	20	2#12	#12	3/4"	REC - 141B PRINTER STAPLE (DED)	—	—	1.8	1.8	—	—	REC - 138 PRINTER STAPLE (DED)	3/4"	#12	2#12	20	1	22
23	1	20	2#12	#12	3/4"	REC - OFFICE FRIDGE	—	—	—	—	-	-	DOOR CNTL BOXES - OFFICE/AUD	3/4"	#12	2#12	20	1	24
25	1	20	-	-	-	SPARE	-	-	—	—	—	—	SPARE	-	-	-	-	-	26
27	-	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	-	28
29	-	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	-	30
31	-	-	-	-	-	SPACE	-	2.1	—	—	—	—	WATER HEATER 140A	3/4"	#10	2#10	30	2	32
33	-	-	-	-	-	SPACE	—	—	-	2.1	—	—						/	34
35	2	20	3#12	#12	3/4"	REC - 141B PRINTER	—	—	—	—	1.8	2.1	WATER HEATER 140B	3/4"	#10	2#10	30	2	36
37	/						1.8	2.1	—	—	—	—						/	38
39	2	20	3#12	#12	3/4"	REC - 138 PRINTER	—	—	1.8	2.1	—	—	WATER HEATER PANTRY	3/4"	#10	2#10	30	2	40
41	/						—	—	—	—	1.8	2.1						/	42
						CONNECTED KVA PER PHASE	14.3		16.2		14.1								

TOTAL CONNECTED KVA: 44.6
TOTAL DEMAND KVA (70%): 31.2
TOTAL DEMAND AMPERES: 86.7

REPLACEMENT PANELBOARD SCHEDULE

DESIGNATION: LLLC | MAINS: 150A | TYPE: NORMAL POWER | O.C. DEVICE: MLO | VOLTAGE: 120/208V 3Ø 4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 10 KAIC | LOCATION: LIVING CENTER | FED BY: DPB-2 | MOUNTING: SURFACE | SINGLE PANEL ■ | DOUBLE PANEL ☐ | COMMON COVER ☐

CKT NO	POLE	TRIP	WIRE	GND	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	GND	WIRE	TRIP	POLE	CKT NO	
1	1	20	2#12	#12	3/4"	RECEPTS- LIVING CENTER 125	1.2	1.2	—	—	—	—	CONNORS CORNER MICROWAVE	3/4"	#12	2#12	20	1	2	
3	1	20	2#12	#12	3/4"	RECEPTS- LIVING CENTER 125	—	—	1.1	1.4	—	—	CONNORS CORNER HOT DOG	3/4"	#12	2#12	20	1	4	
5	1	20	2#12	#12	3/4"	RECEPTS- LIVING CENTER 125	—	—	—	—	1.2	0.4	GEN RECS - CONNER'S CORNER	3/4"	#12	2#12	20	1	6	
7	1	20	2#12	#12	3/4"	REC - CHROMEBOOK CART	1.0	0.9	—	—	—	—	REC- CONNORS CORNER FRIDGE	3/4"	#12	2#12	20	1	8	
9	1	20	2#12	#12	3/4"	TOILET RM 125A HAND DRYER	—	—	1.7	1.2	—	—	CONNORS CORNER COFFEE POT	3/4"	#12	2#12	20	1	10	
11	1	20	2#12	#12	3/4"	TOILET RM 125A CHANGING TABLE	—	—	—	—	1.0	0.4	CONNORS CORNER COUNTER	3/4"	#12	2#12	20	1	12	
13	1					(SHUNT TRIP POLE)	-	-	—	—	—	—	SPARE	-	-	-	20	1	14	
15	1	20	2#12	#12	3/4"	RECS - LIFE SKILLS BEDROOM	—	—	1.1	0.4	—	—	ISLAND RECEPTACLES	3/4"	#12	2#12	20	1	16	*
17	1	20	2#12	#12	3/4"	WASHER - LIFE SKILLS BEDROOM	—	—	—	—	1.2	1.2	EAST LIFE SKILLS DISHWASHER	3/4"	#12	2#12	20	1	18	
19	2	30	2#10	#10	3/4"	DRYER - LIFE SKILLS BEDROOM	3.2	1.2	—	—	—	—	WEST LIFE SKILLS DISHWASHER	3/4"	#12	2#12	20	1	20	
21	/	/					—	—	3.2	1.2	—	—	REC- EAST LIFE SKILLS FRIDGE	3/4"	#12	2#12	20	1	22	
23	2	50	2#6	#10	3/4"	DOUBLE WALL OVEN	—	—	—	—	5.1	1.2	REC- WEST LIFE SKILLS FRIDGE	3/4"	#12	2#12	20	1	24	
25	/	/					5.1	1.2	—	—	—	—	LIFE SKILLS MICROWAVE	3/4"	#12	2#12	20	1	26	
27	2	40	2#8	#10	3/4"	EAST LIFE SKILLS COOKTOP	—	—	2.9	2.9	—	—	WEST LIFE SKILLS COOKTOP	3/4"	#10	2#8	40	2	28	
29	/	/					—	—	—	—	2.9	2.9					/	/	30	
31	1	20	2#12	#12	3/4"	RANGE HOOD	0.5	0.5	—	—	—	—	RANGE HOOD	3/4"	#12	2#12	20	1	32	
33	1	20	2#12	#12	3/4"	COUNTER RECEPTACLES - LIFE SKILLS	—	—	0.4	0.4	—	—	GEN. RECEPTACLES - LIFE SKILLS	3/4"	#12	2#12	20	1	34	
35	1	20	2#12	#12	3/4"	COUNTER RECEPTACLES - LIFE SKILLS	—	—	—	—	0.4	-	SPARE	-	-	-	20	1	36	
37	1	20	2#12	#12	3/4"	COUNTER RECEPTACLES - LIFE SKILLS	0.2	-	—	—	—	—	SPARE	-	-	-	20	1	38	
39	1	20				SPARE	—	—	-	-	—	—	SPACE					1	40	
41	1	20				SPARE	—	—	—	—	-	-	SPACE					1	42	
						CONNECTED KVA PER PHASE	16.2		17.9		17.9									

* PROVIDE GFCI BREAKER

TOTAL CONNECTED KVA: 52.0
TOTAL DEMAND KVA (70%): 36.4
TOTAL DEMAND AMPERES: 101.1

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LC-2 | MAINS: 225A | TYPE: - | O.C. DEVICE: MAIN LUG ONLY | VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: EXISTING | LOCATION: CORRIDOR | FED BY: SWBD #1 | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL ☐ | COMMON COVER ☐

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	/						-	-	—	—	—	—						/	2
3	3	30	-	-	-	RCH #11 - STAIRWELL	—	—	-	-	—	—	EXHAUST FAN #36 - MECH RM	-	-	-	15	3	4
5	/						—	—	—	—	-	-						/	6
7	1	20	-	-	-	LIGHTS - C233	-	-	—	—	—	—	EXISTING LOAD	-	-	-	20	1	8
9	1	20	-	-	-	LIGHTS - C236	—	—	-	-	—	—	LIGHTS - C234	-	-	-	20	1	10
11	1	20	-	-	-	-	—	—	—	—	-	-	LIGHTS - C232-236	-	-	-	20	1	12
13	1	20	-	-	-	LIGHTS - CORRIDOR	-	-	—	—	—	—	LIGHTS - D-235	-	-	-	20	1	14
15	1	20	-	-	-	SPARE	—	—	-	-	—	—	LIGHTS - D-237-238	-	-	-	20	1	16
17	1	20	-	-	-	SPARE	—	—	—	—	-	-	LIGHTS - D-239-240	-	-	-	20	1	18
19	1	20	-	-	-	SPARE	-	-	—	—	—	—	SPARE	-	-	-	20	1	20
21	/						—	—	8.1	-	—	—	SPARE	-	-	-	20	1	22
23	3	40	3#8	#10	3/4"	RTU - GUIDANCE	—	—	—	—	8.1	-	SPACE	-	-	-	-	1	24
25	/						8.1	-	—	—	—	—	SPACE	-	-	-	-	1	26
27	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	28
29	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	30
31	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	32
33	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	34
35	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	36
37	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	38
39	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	40
41	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	42
						CONNECTED KVA PER PHASE	-		-		-								

TOTAL CONNECTED KVA: -
TOTAL DEMAND KVA: -
TOTAL DEMAND AMPERES: -

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLC-2 | MAINS: 125A | TYPE: - | O.C. DEVICE: 125A M.C.B. | VOLTAGE: 120/208V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: | LOCATION: CORRIDOR | FED BY: SWBD #1 VIA XFMR | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL ☐ | COMMON COVER ☐

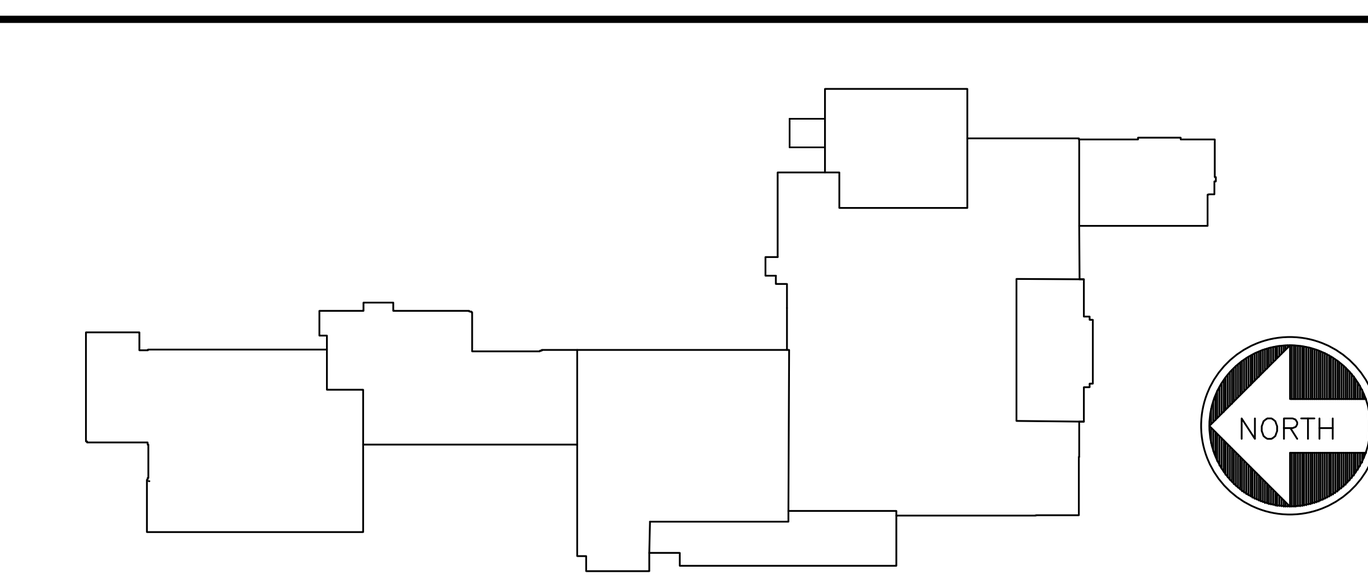
	CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
	1	1	20	-	-	-	RECEPTS - C231-233	-	-	—	—	—	—	CONTROL CKT HONEYWELL & EM LTS	-	-	-	15	1	2
	3	1	20	-	-	-	RECEPTS - C235-237-238	—	—	-	-	—	—	RECEPTS - C232-234-236	-	-	-	20	1	4
	5	1	20	-	-	-	RECEPTS - C238-239-240	—	—	—	—	-	-	STAGE SPOT LIGHTS	-	-	-	20	1	6
	7	1	20	-	-	-	LIGHTS - CATWALK	-	-	—	—	—	—	STAGE SPOT LIGHTS	-	-	-	20	1	8
	9	1	20	-	-	-	LIGHTS - CATWALK	—	—	-	-	—	—	LIGHTS & RECEPTS - MECH RM	-	-	-	20	1	10
	11	1	20	-	-	-	LIGHTS - CATWALK	—	—	—	—	-	-	PROJECTOR 246, 247.,254	-	-	-	20	1	12
	13	1	20	-	-	-	LIGHTS - CATWALK	-	-	—	—	—	—	-	-	-	-	15	1	14
	15	1	15	-	-	-	EXHAUST FAN #15 MECH RM	—	—	-	-	—	—	GAS BOILER CONTROL CIRCUIT	-	-	-	20	1	16
	17	1	15	-	-	-	RM 245 WIREMOLD RECEPT	—	—	—	—	-	-		-	-	-	20	1	18
	19	1	30	-	-	-	RM 245 WIREMOLD RECEPT	-	-	—	—	—	—	LIBRARY COMPUTERS	-	-	-	20	1	20
	21	1	20	-	-	-		—	—	-	-	—	—		-	-	-	30	1	22
	23	1	20	-	-	-	PROJECTOR RECEPTACLE	—	—	—	—	-	-		-	-	-	20	1	24
*	25	1	20	2#12	#12	3/4"	ROOF RECEPTACLE	0.2	-	—	—	—	—	LIBRARY PROJECTOR & 4000 WM RECEPT	-	-	-	20	1	26
	27	1	20	-	-	-	SPARE	—	—	-	-	—	—		-	-	-	20	1	28
	29	1	20	-	-	-	SPARE	—	—	—	—	-	-	-	-	-	-	20	1	30
	31	1	20	-	-	-	SPARE	-	-	—	—	—	—	LIBRARY CONV & 4000 WM RECEPT	-	-	-	20	1	32
	33	2	20	-	-	-	SPARE	—	—	-	-	—	—	-	-	-	-	20	2	34
	35	/						—	—	—	—	-	-						/	36
	37	1						-	-	—	—	—	—						1	
	39	1						—	—	-	-	—	—						1	
	41	1						—	—	—	—	-	-						1	
							CONNECTED KVA PER PHASE	-		-		-								

* UTILIZE EXISTING CIRCUIT BREAKER.

TOTAL CONNECTED KVA: -
TOTAL DEMAND KVA: -
TOTAL DEMAND AMPERES: -

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
ELECTRICAL PANEL SCHEDULES

DRAWN BY: R.F.C.
PROJECT NO.: 2024-239P
CHECKED BY: L.K.N.
BUILDING: HS
DRAWING NO.: E-402
DATE: 12-01-2025

CAD FILE: 4239-HS-E-400-E404.DWG
PLOT DATE: 11/25/2025

PANELBOARD SCHEDULE NOTES (APPLIES TO ALL PANELBOARD SCHEDULE DRAWINGS):

1. ALL LOADS SHOWN LIGHT ARE EXISTING TO REMAIN AND LOADS SHOWN BOLD ARE NEW. KILOVOLT-AMPS SHOWN FOR EXISTING LOADS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE ONLY.
2. WHERE SCHEDULES ARE LABELED "REPLACEMENT PANELBOARD SCHEDULES", REPLACE EXISTING PANELBOARDS WITH NEW IN SAME LOCATION. PROVIDE NEW CIRCUIT BREAKERS TO MATCH CHARACTERISTICS OF EXISTING CIRCUIT BREAKERS BEING REPLACED OR ADDED IN RESPECTIVE PANELS. RECONNECT EXISTING LOADS TO NEW BREAKER, EXTENDING CONDUIT AND WIRING IF REQUIRED.
3. TRACE CIRCUITS TO VERIFY LOADS INDICATED ON EXISTING PANEL SCHEDULE ARE ACCURATE PRIOR TO ANY WORK ON PANEL
4. PROVIDE NEW UPDATED PANEL SCHEDULES IN ALL NEW PANELS.

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLD-1 | MAINS: 175A | TYPE: APPLIANCE | O.C. DEVICE: 175A MCB | VOLTAGE: 208/120V-3Ø-4W | MINIMUM O.C. DEVICE: EXISTING | INTERRUPTING RATING: EXISTING | LOCATION: RM 164 HALLWAY | FED BY: DIST. PNL DPD-3 | MOUNTING: FLUSH | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20	-	-	-	RECS - CORRIDOR	-	-	—	—	—	—	RECS - GYM N.	-	-	-	15	1	2
3							—	—	-	-	—	—							4
5	1	20	-	-	-	RECS - CORRIDOR	—	—	—	—	-	-	RECS - GYM S.	-	-	-	20	1	6
7							-	-	—	—	—	—							8
9	1	20	-	-	-	RECS - CORRIDOR	—	—	-	-	—	—	RECS - B152 / MUSIC OFFICE	-	-	-	20	1	10
11							—	—	—	—	-	-	RECS - B152	-	-	-	20	1	12
13	1	20	-	-	-	RECS B-158-160, 162	-	-	—	—	—	—	RECS - B150, 153, 154, 155, 157	-	-	-	20	1	14
15	1	20	-	-	-	RECS - B162	—	—	-	-	—	—	SOUND RACK STAGE LEFT	-	-	-	20	1	16
17	1	20	-	-	-	RECS - B158A/B & INSTR. STOR.	—	—	—	—	-	-	RECS - B135, 136 & S.W. GEAR RM	-	-	-	20	1	18
19	1	20	-	-	-	RECS - B163	-	-	—	—	—	—	RECS- TEACHERS OFFICE	-	-	-	20	1	20
21	1	20	-	-	-	RECS - B161	—	—	-	-	—	—	RECS - B148-155 & DRESSING RM	-	-	-	20	1	22
23	1	20	-	-	-	RECS - B163	—	—	—	—	-	-	RECS- GYM E. WALL	-	-	-	20	1	24
25	1	20	-	-	-	CHEMICAL MIXER (MECH RM)	-	-	—	—	—	—	SCOREBOARDS	-	-	-	20	1	26
27	1	20	-	-	-	RANGE	—	—	-	-	—	—	CNTL CKT HONEYWELL (MECH RM)	-	-	-	20	1	28
29							—	—	—	—	-	-	LIGHTS - MECH RM	-	-	-	20	1	30
31	1	20	-	-	-	ARCH. PROCESSOR FOR DIMMING RACK	-	-	—	—	—	—	LIGHTS - MECH RM	-	-	-	20	1	32
33	1	20	-	-	-	RECS - B160 (EM MONITOR #1)	—	—	-	-	—	—	RECS - BOILER RM	-	-	-	20	1	34
35	1	20	-	-	-	RECS - B161 (EM MONITOR #2)	—	—	—	—	-	-	CNTL CKT FOR CHILLER	-	-	-	20	1	36
37	1	20	-	-	-	RECS - B163 (EM MONITOR #3)	-	-	—	—	—	—	CONTROL (AIR DRYER & TIME CLK. EX LTG)	-	-	-	20	2	38
39	1	20	-	-	-	RECS - TELEPHONE EQUIP.	—	—	-	-	—	—	COPY MACHINE	-	-	-	20	1	40
41	1	20	-	-	-	RECS - TEACHERS OFFICE	—	—	—	—	-	-							42
43	1	20	-	-	-	SPARE	-	-	—	—	—	—	SPARE	-	-	-	20	1	44
45	1	20	-	-	-	SPARE	—	—	-	-	—	—	SPARE	-	-	-	20	1	46
47	1	20	-	-	-	SPARE	—	—	—	—	-	-	SPARE	-	-	-	20	1	48
49	1	20	-	-	-	SPARE	-	-	—	—	—	—	SPARE	-	-	-	20	1	50
51	1	20	-	-	-	SPARE	—	—	-	-	—	—	SPARE	-	-	-	20	1	52
53	1	20	-	-	-	SPARE	—	—	—	—	-	-	SPARE	-	-	-	-	-	54
						CONNECTED KVA PER PHASE	-		-		-								

TOTAL CONNECTED KVA: -
TOTAL DEMAND KVA: -
TOTAL DEMAND AMPERES: -

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLD-2 | MAINS: 175A | TYPE: NORMAL POWER | O.C. DEVICE: MCB | VOLTAGE: 208/120V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 35K AIC | LOCATION: 2ND FLR. CORR. | FED BY: DPD-3 VIA XFMR | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	50	-	-	-	KILN - 255	3.0	1.0	—	—	—	—	RECS - HALL / GYM CLOCK				20	2	2
3	/	/	-	-	-		—	—	3.0	1.0	—	—					/	/	4
5	1	20	-	-	-	E.F. - 225	—	—	—	—	3.0	1.0	PROJ - 3 ROOMS				20	1	6
7	/	/	-	-	-		1.0	2.4	—	—	—	—	RECS - B252, B253, B254				20	1	8
9	1	20	-	-	-	E.F. - RM 255 (KILN)	—	—	-	2.2	—	—	LIGHTS - SPOTS 256				20	1	10
11	1	20	-	-	-	RECS - D255	—	—	—	—	-	2.2	LIGHTS - D255 (SPOTS/INFERRED)				20	1	12
13	1	20	-	-	-	RECS - 272 COUNTER	1.0	1.0	—	—	—	—	KILNS - WORK RM				20	1	14
15	1	20	-	-	-	RECS - D256	—	—	1.0	1.0	—	—	KILNS - WORK RM				20	1	16
17	1	20	-	-	-	LIGHTS - SHOWCASE 256	—	—	—	—	1.0	1.0	KILNS - WORK RM				20	1	18
19	1	20	-	-	-	LIGHTS - SPOTS D256	1.0	1.0	—	—	—	—	WORK RRM JBOX				20	1	20
21	1	20	-	-	-	LIGHTS - D256 TRACK	—	—	1.0	1.0	—	—	E.F. - D256				20	1	22
23	1	20	-	-	-	RECS D250, D251, D252, D252	—	—	—	—	1.0	1.0	E.F. - D256				20	1	24
25	1	20	-	-	-	WATER COOLER	1.0	1.0	—	—	—	—	PROJECTOR RM - 214				20	1	26
27	1	20	-	-	-	SPARE	—	—	1.0	1.0	—	—	WIREMOLD COMPUTER RM 264				20	1	28
29	1	20	-	-	-	SPARE	—	—	—	—	1.0	1.0	WIREMOLD COMPUTER RM 250				20	1	30
31	1	20	-	-	-	BLEACHERS S.W.	1.0	-	—	—	—	—	WIREMOLD COMPUTER R264				20	1	32
33	1	20	-	-	-	EXISTING LOAD	—	—	-	-	—	—	SPARE				20	1	34
35	1	20	-	-	-	SPARE	—	—	—	—	-	-	SPARE				20	1	36
37	1	20	-	-	-	SPARE	-	-	—	—	—	—	SPACE					1	38
39	1	20	2#12	#12	3/4"	**HAND DRYER WOMENS TOILET 263**	—	—	**1.5**	-	—	—	SPACE					1	40
41	1	20	2#12	#12	3/4"	**HAND DRYER MENS TOILET 262**	—	—	—	—	**1.5**	-	SPACE					1	42
						CONNECTED KVA PER PHASE	14.4		13.7		13.7								

TOTAL CONNECTED KVA: 41.8
TOTAL DEMAND KVA (70%): 29.26
TOTAL DEMAND AMPERES: 81.21

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LD-2A | MAINS: 100A | TYPE: NORMAL POWER | O.C. DEVICE: MLO | VOLTAGE: 277/480V 3Ø 4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: EXISTING | LOCATION: COOR. BY RM 267 | FED BY: DPD-1 | MOUNTING: SURFACE | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	GND	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	GND	WIRE	TRIP	POLE	CKT NO
1	1	20	-	-	-	BASEBOARD - STORAGE RM	1.0	-	—	—	—	—	SPARE	-	-	-	20	1	2
* 3	1	20	2#12	#12	3/4"	**BASEBOARD - WOMENS TOILET**	—	—	**3.0**	0.0	—	—	SPARE	-	-	-	20	1	4
* 5	1	20	2#12	#12	3/4"	**BASEBOARD - MENS TOILET**	—	—	—	—	**3.0**	0.0	SPARE	-	-	-	20	1	6
7	2	20	-	-	-	SPARE	0.0	-	—	—	—	—	SPACE	-	-	-	-	1	8
9	/	/					—	—	0.0	-	—	—	SPACE	-	-	-	-	1	10
11	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	12
13	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	14
15	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	16
17	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	18
19	1	-	-	-	-	SPACE	-	-	—	—	—	—						/	20
21	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPARE	-	-	-	20	3	22
23	1	-	-	-	-	SPACE	—	—	—	—	-	-						/	24
25	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	26
27	1	-				SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	28
29	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	30
						CONNECTED KVA PER PHASE	1.0		3.0		3.0								

* UTLIZE EXISTING SPARE CIRCUIT BREAKER

TOTAL CONNECTED KVA: 7.0
TOTAL DEMAND KVA: 4.9
TOTAL DEMAND AMPERES: 4.07

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLE-1 SEC 1 | MAINS: 225A | TYPE: - | O.C. DEVICE: MLO | VOLTAGE: 120/208V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: MATCH EXISTING | LOCATION: CORRIDOR | FED BY: SWBD MDP-1 VIA XFMR | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	/	/	-	-	-		15.1	0.9	—	—	—	—	ELT MAG (1Ø20A)	-	-	-	20	1	2
3	3	100	-	-	-	PANEL LLE-2 2ND FLOOR	—	—	13.6	1.0	—	—	RECS	-	-	-	20	1	4
5	/	/	-	-	-		—	—	—	—	12.8	0.9	RECS MULTI-ROOM	-	-	-	20	1	6
7	1	20	-	-	-	REC PE OFFICE 192D COMP.	0.9	0.9	—	—	—	—	RECS MULTI-ROOM	-	-	-	20	1	8
9	1	20	-	-	-	REC PE OFFICE 192D COMP	—	—	1.0	0.0	—	—	SPARES IN 12X12	-	-	-	20	1	10
11	1	20	-	-	-	LIGHTS CLOSET BY DUMBWAITER (1Ø20A)	—	—	—	—	1.0	0.0	SPARES IN 12X12	-	-	-	20	1	12
13	1	20	-	-	-	RECS - TOILET	1.0	0.0	—	—	—	—	SPARES IN 12X12	-	-	-	20	1	14
15	1	20	-	-	-	RECS - TRAINERS RM COMP.	—	—	0.9	0.5	—	—	CORIDOOR RECS (TWISTLOCK)	-	-	-	20	2	16
17	1	20	-	-	-	RECS - TRAINERS RM	—	—	—	—	1.1	0.5		-	-	-	/	/	18
19	1	20	-	-	-	DRINKING FOUNTAIN (1Ø 20A)	0.0	1.0	—	—	—	—	RECS - GIRLS TOILET & LOCKER	-	-	-	20	1	20
21	1	20	-	-	-	ELE. BASKET MONITOR	—	—	1.0	1.0	—	—	RECS - TEAM & COACH LOCKER RM	-	-	-	20	1	22
23	1	20	-	-	-	REC SOR&TEAM RM 188	—	—	—	—	1.0	1.0	RECS - TEAM & COACH LOCKER SHOWER	-	-	-	20	1	24
25	/	/	-	-	-		1.0	1.0	—	—	—	—	REC - MECH RM (1Ø20A)	-	-	-	20	1	26
27	3	20	-	-	-	I ELE. (3Ø 20A)	—	—	1.0	0.0	—	—	REC - BOYS LOCKER RM	-	-	-	20	1	28
29	/	/	-	-	-		—	—	—	—	1.2	1.2	ELT MAG HOTWATER HEATER (2Ø20A)	-	-	-	20	2	30
31	1	20	-	-	-	DOORBELL GYM STORAGE	1.0	1.2	—	—	—	—		-	-	-	/	/	32
33	1	20	-	-	-	GYM AMPLIFIER STOR. ROOM (1Ø20A)	—	—	1.0	1.0	—	—	RECS - PE OFFICE 192D COMPUTER	-	-	-	20	1	34
35	1	20	-	-	-	LIGHTS MECH RM (1Ø20A)	—	—	—	—	0.5	1.0	RECS - PE OFFICE 192D COMPUTER	-	-	-	20	2	36
37	1	20	-	-	-	LIGHTS MECH RM (1Ø20A)	0.5	3.6	—	—	—	—		-	-	-	/	/	38
39	1	20	-	-	-	SPARE	—	—	1.0	3.6	—	—	LLE-1A NEW GYM PANEL (3Ø 60A)	-	-	-	60	3	40
41	1	-	-	-	-	GEN. BATTERY CHARGER/BLOCK HEATER	—	—	—	—	1.0	3.6		-	-	-	/	/	42

DESIGNATION: LLE-1 SEC 2

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
43	1	20	-	-	-	SHOWER LIGHTS 191E/192E	0.5	0.9	—	—	—	—	ICE MACHINE (TRAINER'S RM)	-	-	-	20	2	44
45	1	20	-	-	-	REC - ABOVE COUNTER RM 189	—	—	1.0	1.0	—	—		-	-	-	/	/	46
47	1	20	-	-	-	REC - ABOVE COUNTER RM 189	—	—	—	—	1.0	0.9	ICE MACHINE (TRAINERS RM)	-	-	-	20	1	48
49	1	20	-	-	-	REC - ABOVE COUNTER RM 189	0.9	0.9	—	—	—	—		-	-	-	/	/	50
51	1	20	-	-	-	REC - ABOVE COUNTER RM 189	—	—	1.0	0.9	—	—	DISHWASHER (DISHWASHER)	-	-	-	20	1	52
53	1	20	-	-	-	RM 195 OT/PT	—	—	—	—	1.0	1.0	VAV TRANSFORMER	-	-	-	20	1	54
55	1	20	-	-	-	U.H. 3 & 4 (B-144)	1.0	**0.0**	—	—	—	—	**SPARE**	-	-	-	20	1	56 *
57	1	20	-	-	-	WOOD SHOP CNTL CIRCUT	—	—	0.9	**0.0**	—	—	**SPARE**	-	-	-	20	1	58 *
59	1	20	-	-	-	E.F. 12	—	—	—	—	1.1	**0.0**	**SPARE**	-	-	-	20	2	60 *
** 61	1	20	2#12	#12	3/4"	**HAND DRYER - WOMEN'S TOILET 177**	**1.7**	**0.0**	—	—	—	—						/	62 *
** 63	1	20	2#12	#12	3/4"	**HAND DRYER - WOMENS TOILET 177**	—	—	**1.7**	**0.0**	—	—	**SPARE**	-	-	-	20	2	64 *
65	1	20	-	-	-	SPARE	—	—	—	—	0.0	**0.0**						/	66 *
67	1	20	-	-	-	SPARE	0.0	0.0	—	—	—	—	SPARE	-	-	-	20	1	68
69	1	-	-	-	-	SPARE	—	—	0.0	0.0	—	—	SPARE	-	-	-	20	1	70
71	1	-	-	-	-	SPARE	—	—	—	—	0.0	0.0	SPARE	-	-	-	20	2	72
73	1	-	-	-	-	SPARE	0.0	0.0	—	—	—	—	SPARE	-	-	-	20	/	74
75	1	-	-	-	-	SPARE	—	—	0.0	0.0	—	—		-	-	-	-	/	76
77	1	-	-	-	-	SPARE	—	—	—	—	0.0	0.0	SPARE	-	-	-	20	3	78
79	1	-	-	-	-	SPARE	0.0	0.0	—	—	—	—		-	-	-	-	/	80
81	1	-	-	-	-	SPARE	—	—	0.0	0.0	—	—	SPARE	-	-	-	20	3	82
83	1	-	-	-	-	SPARE	—	—	—	—	0.0	0.0	SPARE	-	-	-	20	/	84
						CONNECTED KVA PER PHASE	34.0		33.1		31.8								

* REMOVE WIRING AND RELABEL BREAKER AS SPARE
** UTILIZE EXISTING SPARE BREAKER FOR NEW CIRCUIT

TOTAL CONNECTED KVA: 98.9
TOTAL DEMAND KVA: 59.34
TOTAL DEMAND AMPERES: 164.71

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LE-2 | MAINS: 150A | TYPE: NORMAL POWER | O.C. DEVICE: MLO | VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 35K AIC | LOCATION: 2ND FLR. CORR. | FED BY: DPE-1 | MOUNTING: RECESSED | SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
	/	/					3.0	1.0	—	—	—	—					/	/	
1	3	30	-	-	-	EXHAUST FAN #6 POOL OFFICE	—	—	3.0	1.0	—	—	EXISTING LOAD	-	-	-	20	3	2
	/	/					—	—	—	—	3.0	1.0					/	/	
3	1	20	-	-	-	LIGHTS-D-249 (BOY'S LOCKER RM)	1.0	2.4	—	—	—	—	LIGHTS - TOIL. & GIRL'S LOCKER AREA	3/4"	#12	2#12	20	1	4
5	1	20	-	-	-	LIGHTS - D-258	—	—	-	2.2	—	—	HAIR DRYERS - SHOWERS 283B	3/4"	#12	2#12	20	1	6
7	1	20	-	-	-	LIGHTS - D-257	—	—	—	—	-	2.2	HAIR DRYERS - SHOWERS 284C	3/4"	#12	2#12	20	1	8
9	1	20	-	-	-	LIGHTS - CORRIDOR	1.0	1.0	—	—	—	—	ELEVATOR HEAT	-	-	-	20	1	10
11	1	20	2#12	#12	3/4"	**LIGHTS - SMALL GYM**	—	—	**1.2**	1.0	—	—	EXISTING LOAD	-	-	-	20	1	12
13	1	20	2#12	#12	3/4"	**POOL SPECTATOR LIGHTING**	—	—	—	—	**1.3**	1.0	LIGHTS - D-245	-	-	-	20	1	14
15	1	20	-	-	-	EXISTING LOAD	1.0	1.0	—	—	—	—	LIGHTS - D-244	-	-	-	20	1	16
17	1	20	-	-	-	EXISTING LOAD	—	—	1.0	1.0	—	—	LIGHTS - D-241-243 & CONF. RMS.	-	-	-	20	1	18
19	1	20	2#12	#12	3/4"	**POOL VEST, OFFICE LIGHTING**	—	—	—	—	-	-	**SPARE**	-	-	-	20	1	20
21	1	20	-	-	-	**SPARE**	-	1.0	—	—	—	—	**HAND DRYER 276 - BOYS LOCKER**	-	-	-	20	1	22
23	1	20	-	-	-	**SPARE**	—	—	-	1.0	—	—	**HAND DRYER P212 - COACH OFFICE**	-	-	-	20	1	24
25	1	20	-	-	-	EXISTING LOAD	—	—	—	—	1.0	1.0	EXISTING LOAD	-	-	-	20	1	26
27	1	20	-	-	-	EXISTING LOAD	1.0	**2.2**	—	—	—	—	**POOL PERIMETER PENDANT LIGHTS N/W**	3/4"	#12	2#12	20	1	28
29	1	20	2#12	#12	3/4"	HANDRYER - TOL. 286C	—	—	3.0	**2.1**	—	—	**POOL PERIMETER PENDANT LIGHTS S**	3/4"	#12	2#12	20	1	30
31	1	20	2#12	#12	3/4"	HANDRYER - TOL. 286B	—	—	—	—	3.0	**2.1**	**POOL DECK PENDANT LIGHTS**	3/4"	#12	2#12	20	1	32
33	1	20	2#12	#12	3/4"	HANDRYER - TOL. 283A	1.5	-	—	—	—	—	**SPARE**	3/4"	#12	2#12	20	1	34
35	1	20	2#12	#12	3/4"	HANDRYER - TOL. 284D	—	—	1.5	-	—	—	SPARE	-	-	-	20	1	36
37	1	20	-	-	-	-	—	—	—	—	-	-	SPARE	-	-	-	20	1	38
						CONNECTED KVA PER PHASE	15.9		16.7		15.2								

TOTAL CONNECTED KVA: 47.8
TOTAL DEMAND KVA (70%): 33.5
TOTAL DEMAND AMPERES: 40.3

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LLE-2 SEC 1 | MAINS: 100A | TYPE: NORMAL POWER | O.C. DEVICE: MCB | VOLTAGE: 120/208V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 10K AIC | LOCATION: 2ND FLR. CORR. | FED BY: PANEL LLE-1 | MOUNTING: RECESSED | SINGLE PANEL □ | DOUBLE PANEL ■ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
** 1	1	20	2#12	#12	3/4"	**RECEPTS. - POOL OFFICE**	**1.0**	0.2	—	—	—	—	CONTROL CIRCUIT - HONEYWELL	-	-	-	20	1	2
** 3	1	20	2#12	#12	3/4"	**RECEPTS. - BOY'S LOCKER ROOM**	—	—	**0.9**	0.7	—	—	EXHAUST FAN #12 (SOUTH FAN RM.)	-	-	-	15	1	4
5	1	20	-	-	-	LIGHTS - NORTH FAN ROOM	—	—	—	—	0.5	0.5	LIGHTS - SOUTH FAN ROOM	-	-	-	20	1	6
7	1	20	-	-	-	PROJECTORS	1.0	0.7	—	—	—	—	RECEPTS. - SOUTH FAN ROOM	-	-	-	20	1	8
9	1	20	-	-	-	EXHAUST FAN #11 (NORTH FAN RM.)	—	—	1.0	**0.7**	—	—	**SMALL GYM RECEPTS. & CLOCK**	3/4"	#12	2#12	20	1	10
11	1	20	-	-	-	RECEPTS. - POOL	—	—	—	—	0.7	0.5	EXISTING LOAD	-	-	-	20	1	12
13	1	20	-	-	-	CONTROL - GAS BOILERS RM #5	0.2	**0.0**	—	—	—	—	**SPARE**	-	-	-	20	1	14 *
15	1	20	-	-	-	CONTROL RM #5 BOILER	—	—	0.2	1.1	—	—	RECEPTS. - GIRL'S LOCKER ROOM	-	-	-	20	1	16
17	1	20	-	-	-	EXHAUST FAN	—	—	—	—	0.7	1.0	EXISTING LOAD	-	-	-	20	1	18
19	1	20	-	-	-	EXISTING LOAD	1.0	0.7	—	—	—	—	EXISTING LOAD	-	-	-	20	1	20
21	1	20	-	-	-	RECEPTS. -	—	—	0.7	0.7	—	—	RECEPTS.	-	-	-	20	1	22
23	1	20	-	-	-	EXISTING LOAD	—	—	—	—	1.0	0.2	CABINET UNIT HEATER	-	-	-	20	1	24
25	1	20	-	-	-	EXISTING LOAD	1.0	0.5	—	—	—	—	RECEPTS - CORR. 285	-	-	-	30	1	26
27	1	20	-	-	-	WATER COOLER - CORR. 285	—	—	1.0	0.5	—	—	RECEPTS - CORR. 286	-	-	-	30	1	28
29	1	20	-	-	-	RECEPTS. - CORRIDOR	—	—	—	—	0.5	0.6	EXISTING LOAD	-	-	-	30	2	30
31	1	20	-	-	-	EXISTING LOAD	1.0	0.6	—	—	—	—		-	-	-	/	/	32
33	1	20	-	-	-	EXISTING LOAD	—	—	1.0	0.5	—	—		-	-	-	/	/	34
35	1	20	-	-	-	VVR CONTROL PANEL	—	—	—	—	0.4	0.8	PANEL BP-5	-	-	-	50	3	36
37	1	20	-	-	-	VVR CONTROL PANEL	0.8	0.6	—	—	—	—		-	-	-	/	/	38
39	2	20	-	-	-	EXISTING LOAD	—	—	0.6	0.6	—	—	EXISTING LOAD	-	-	-	20	2	40
41	/	/					—	—	—	—	0.6	0.6		-	-	-	/	/	42

* REMOVE WIRING AND RELABEL BREAKER AS SPARE
** REUSE EXISTING BREAKER THAT SERVED SPACE BEFORE.

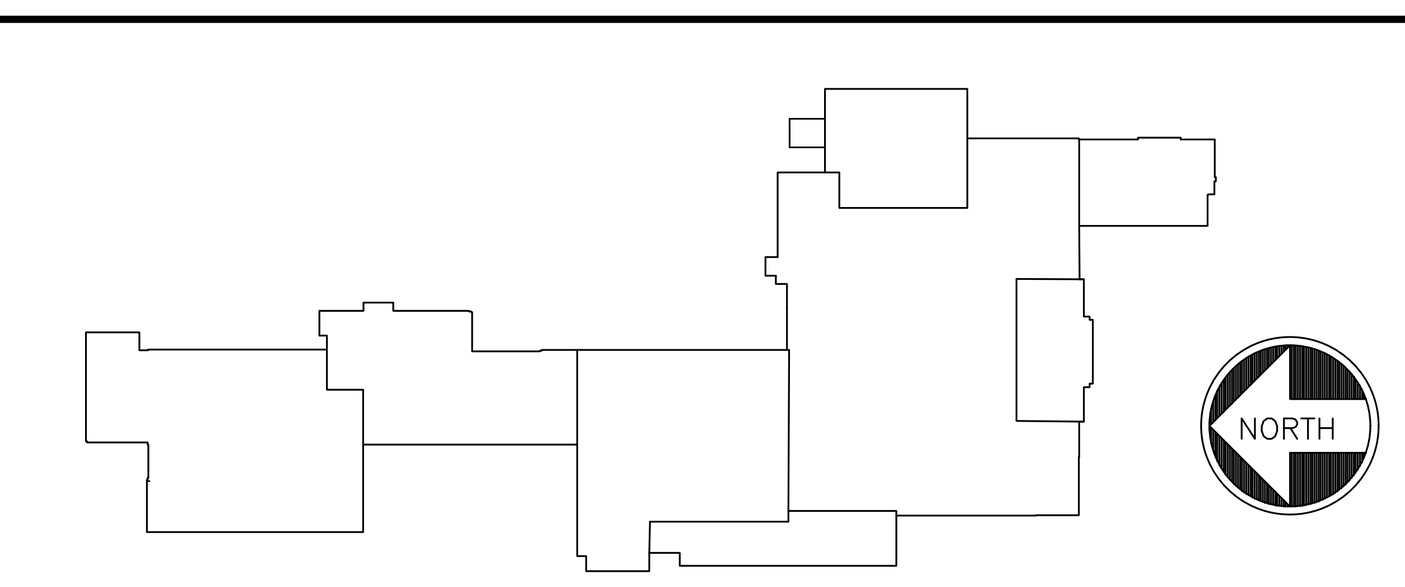
DESIGNATION: LLE-2 SEC 2

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
43	1	20	-	-	-	RECEPTS-284A&B, TEAM AREA, & TOL. RM	1.1	0.7	—	—	—	—	RTU RECEPTS	-	-	-	20	1	44
45	1	20	-	-	-	WATER COOLER - CORR. 285	—	—	1.0	0.4	—	—	RTU RECEPTS	-	-	-	20	1	46
47	1	20	-	-	-	RECEPTS - OFFICE 286	—	—	—	—	0.7	0.5	EXISTING LOAD	-	-	-	20	2	48
49	1	20	-	-	-	VVR CONTROL PANEL	0.2	-	—	—	—	—	SPARE	-	-	-	20	1	50
51	1	20	-	-	-	SPARE	—	—	-	-	—	—	SPARE	-	-	-	20	1	52
53	1	20	-	-	-	BATTING CAGE	—	—	—	—	1.0	-	SPARE	-	-	-	20	1	54
55	1	20	2#12	#12	3/4"	**RECS - STOR. P211 & 281A**	**0.9**	0.2	—	—	—	—	**DESTRATIFICATION FANS - SMALL GYM**	3/4"	#12	3#12	20	1	56
57	1	20	2#12	#12	3/4"	**RECS - SMALL GYM CKT A**	—	—	**0.9**	-	—	—	**RECS - SMALL GYM CKT B**	3/4"	#12	3#12	20	1	58
59	1	20	2#12	#12	3/4"	**RECS - SMALL GYM CKT C**	—	—	—	—	**0.9**	-	**RECS - SMALL GYM CKT D**	3/4"	#12	3#12	20	1	60
61	1	20	2#12	#12	3/4"	**RECS - POOL HALLWAY**	**0.4**	**1.2**	—	—	—	—	**SMALL GYM BACKBOARD MOTOR**	3/4"	#12	3#12	20	1	62
63	1	20	-	-	-	SPACE AND PROVISIONS	—	—	-	**1.1**	—	—						/	64
65	1	20	-	-	-	SPACE AND PROVISIONS	—	—	—	—	-	**1.1**	**WRESTLING MAT STORAGE SYSTEM**	3/4"	#12	3#12	15	3	66
67	1	20	-	-	-	SPACE AND PROVISIONS	-	**1.1**	—	—	—	—						/	68
69	1	20	-	-	-	SPACE AND PROVISIONS	—	—	-	-	—	—	SPACE AND PROVISIONS	-	-	-	20	1	70
71	1	20	-	-	-	SPACE AND PROVISIONS	—	—	—	—	-	-	SPACE AND PROVISIONS	-	-	-	20	1	72
73	1	20	-	-	-	SPACE AND PROVISIONS	-	-	—	—	—	—	SPACE AND PROVISIONS	-	-	-	20	1	74
75	1	20	-	-	-	SPACE AND PROVISIONS	—	—	-	-	—	—	SPACE AND PROVISIONS	-	-	-	20	1	76
77	1	20	-	-	-	SPACE AND PROVISIONS	—	—	—	—	-	-	SPACE AND PROVISIONS	-	-	-	20	1	78
79	1	20	-	-	-	SPACE AND PROVISIONS	-	-	—	—	—	—	SPACE AND PROVISIONS	-	-	-	20	1	80
81	1	20	-	-	-	SPACE AND PROVISIONS	—	—	-	-	—	—	SPACE AND PROVISIONS	-	-	-	20	1	82
83	1	20	-	-	-	SPACE AND PROVISIONS	—	—	—	—	-	-	SPACE AND PROVISIONS	-	-	-	20	1	84
						CONNECTED KVA PER PHASE	15.1		13.6		12.8								

TOTAL CONNECTED KVA: 41.5
TOTAL DEMAND KVA (60%): 24.9
TOTAL DEMAND AMPERES: 69.1

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
ELECTRICAL PANEL SCHEDULES

DRAWN BY: R.F.C. | PROJECT NO.: 2024-239P
CHECKED BY: L.K.N. | BUILDING: HS | DRAWING NO.: E-403
DATE: 12-01-2025

CAD FILE: 4239-HS-E-400-E404.DWG
PLOT DATE: 11/25/2025

PANELBOARD SCHEDULE NOTES (APPLIES TO ALL PANELBOARD SCHEDULE DRAWINGS):

1. ALL LOADS SHOWN LIGHT ARE EXISTING TO REMAIN AND LOADS SHOWN BOLD ARE NEW. KILOVOLT-AMPS SHOWN FOR EXISTING LOADS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE ONLY.
2. WHERE SCHEDULES ARE LABELED "REPLACEMENT PANELBOARD SCHEDULES", REPLACE EXISTING PANELBOARDS WITH NEW IN SAME LOCATION. PROVIDE NEW CIRCUIT BREAKERS TO MATCH CHARACTERISTICS OF EXISTING CIRCUIT BREAKERS BEING REPLACED OR ADDED IN RESPECTIVE PANELS. RECONNECT EXISTING LOADS TO NEW BREAKER, EXTENDING CONDUIT AND WIRING IF REQUIRED.
3. TRACE CIRCUITS TO VERIFY LOADS INDICATED ON EXISTING PANEL SCHEDULE ARE ACCURATE PRIOR TO ANY WORK ON PANEL
4. PROVIDE NEW UPDATED PANEL SCHEDULES IN ALL NEW PANELS.

NEW PANELBOARD SCHEDULE

DESIGNATION: **PE-1**
MAINS: 125A | TYPE: - | O.C. DEVICE: MAIN LUG ONLY
VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING:
LOCATION: BOILER ROOM #3 | FED BY: DIST. PANEL DPE-1 | MOUNTING: SURFACE
SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20				POOL BASEMENT LITES	0.3	-	—	—	—	—	SPARE				20	1	2
3	1	20				SPARE	—	—	-	-	—	—	SPARE				20	1	4
5	1	20				SPARE	—	—	—	—	-	-	SPARE				20	1	6
7	/						5.8	-	—	—	—	—						/	8
9	3	30	3#10	#10	3/4"	DEHUMIDIFICATION UNIT DU-1	—	—	5.8	-	—	—	SPARE				20	3	10
11	/						—	—	—	—	5.8	-						/	12
13	/						1.7	2.0	—	—	—	—						/	14
15	3	15	3#12	#12	3/4"	CONDENSING UNIT CU-3	—	—	1.7	2.0	—	—	EF-3 (OFFICE P109)	3/4"	#12	3#12	15	3	16
17	/						—	—	—	—	1.7	2.0						/	18
19	/						3.0	2.0	—	—	—	—						/	20
21	3	15	3#12	#12	3/4"	PUMP P-5	—	—	3.0	2.0	—	—	DOMESTIC HW CIRC PUMP				15	3	22
23	/						—	—	—	—	3.0	2.0						/	24
25	/						3.0	1.4	—	—	—	—						/	26
27	3	15	3#12	#12	3/4"	PUMP P-6	—	—	3.0	0.9	—	—	XFMR - PANEL BP-3				30	3	28
29	/						—	—	—	—	3.0	0.8						/	30
31	/						2.4	-	—	—	—	—	SPACE & PROVISIONS					1	32
33	3	15	3#12	#12	3/4"	RTU - POOL VESTIBULE	—	—	2.4	-	—	—	SPACE & PROVISIONS					1	34
35	/						—	—	—	—	2.4	-	SPACE & PROVISIONS					1	36
37	1					SPACE & PROVISIONS	-	-	—	—	—	—	SPACE & PROVISIONS					1	38
39	1					SPACE & PROVISIONS	—	—	-	-	—	—	SPACE & PROVISIONS					1	40
41	1					SPACE & PROVISIONS	—	—	—	—	-	-	SPACE & PROVISIONS					1	42
						CONNECTED KVA PER PHASE	21.6		20.8		20.7								

TOTAL CONNECTED KVA: 63.1
TOTAL DEMAND KVA: 44.2
TOTAL DEMAND AMPERES: 53.1

EXISTING PANELBOARD SCHEDULE

DESIGNATION: **PP-E**
MAINS: 100 AMP | TYPE: POWER | O.C. DEVICE: 100A M.C.B.
VOLTAGE: 120/208V-3~-4W+G | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 10KAIC
LOCATION: ELECT. A110 | FED BY: DPE-1 | MOUNTING: SURFACE
SINGLE PANEL □ | DOUBLE PANEL □ | COMMON COVER ■

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA ~ A		KVA ~ B		KVA ~ C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20	2#12	12	3/4"	RECEPTS. CLASSROOM	0.8	0.8	—	—	—	—	RECEPT. OFFICE	3/4"	12	2#12	20	1	2
3	1	20	2#12	12	3/4"	RECEPTS. CLASSROOM	—	—	1.0	1.2	—	—	RECEPT. REFRIG.	3/4"	12	2#12	20	1	4
5	1	20	2#12	12	3/4"	RECEPTS. CLASSROOM	—	—	—	—	0.6	1.2	COUNTER RECEPTS. OFFICE	3/4"	12	2#12	20	1	6
7	1	20	2#12	12	3/4"	RECEPTS. CLASSROOM	0.8	1.2	—	—	—	—	COUNTER RECEPTS. OFFICE	3/4"	12	2#12	20	1	8
9	1	20	2#12	12	3/4"	RECEPTS. CLASSROOM	—	—	0.8	1.2	—	—	COUNTER RECEPTS. OFFICE	3/4"	12	2#12	20	1	10
11	1	20	2#12	12	3/4"	RECEPTS. CLASSROOM	—	—	—	—	0.6	1.2	COUNTER RECEPTS. OFFICE	3/4"	12	2#12	20	1	12
13	1	20	2#12	12	3/4"	RECEPTS. CLASSROOM	0.8	1.2	—	—	—	—	COUNTER RECEPTS. OFFICE	3/4"	12	2#12	20	1	14
15	1	20	2#12	12	3/4"	RECEPTS. CLASSROOM	—	—	0.8	0.8	—	—	RECEPTS. CONFERENCE	3/4"	12	2#12	20	1	16
17	1	20	2#12	12	3/4"	RECEPT. OP/PT	—	—	—	—	0.6	0.8	RECEPTS. CLASSROOM	3/4"	12	2#12	20	1	18
19	1	20	2#12	12	3/4"	RECEPT. CORRIDOR	0.6	0.8	—	—	—	—	RECEPTS. CLASSROOM	3/4"	12	2#12	20	1	20
21	1	20	2#12	12	3/4"	ROOFTOP MAINT. RECEPT.	—	—	0.4	0.8	—	—	RECEPTS. CORRIDOR/OUTSIDE	3/4"	12	2#12	20	1	22
23	1	15	2#12	12	3/4"	CABINET HEATER CH-1	—	—	—	—	0.5	0.6	RECEPTS. CORRIDOR/OUTSIDE	3/4"	12	2#12	20	1	24
25	2	20	2#12	12	3/4"	ROOFTOP CU-2 & AC-2	0.5	1.0	—	—	—	—	WATER COOLER	3/4"	12	2#12	20	1	26
27							—	—	0.5	0.1	—	—	EXHAUST FAN EF-3 DATA CLOSET	3/4"	12	2#12	15	1	28
29	2	20	2#12	12	3/4"	ROOFTOP CU-1 & AC-1	—	—	—	—	0.6	0.5	RECIRC. PUMP	3/4"	12	2#12	20	1	30
31							0.6	0.5	—	—	—	—	FREEZE PROTECTION PUMP IP2 , IP3	3/4"	12	2#12	20	1	32
33	1	20	2#12	12	3/4"	VAV BOXES	—	—	0.6	.5	—	—	DOOR OPENERS	3/4"	12	2#12	20	1	34
35	1	20	2#12	12	3/4"	VAV BOXES	—	—	—	—	0.6	0.5	ATC PANEL	3/4"	12	2#12	20	1	36
37	2	20	2#12	12	3/4"	ROOFTOP CU-3	0.9	0.7	—	—	—	—	TOILET EXHAUST EF-1	3/4"	12	2#12	20	1	38
39							—	—	0.9	-	—	—	FIRE SMOKE DAMPER	3/4"	12	2#12	20	1	40
41	1	20	2#12	12	3/4"	WEIGHT RM MONITORS	—	—	—	—	1.0	1.0	WEIGHT RM SOUND RACK	3/4"	12	2#12	20	1	42
43	1	20	2#12	12	3/4"	EXTERIOR JC SIGN (RM 102)	1.0	-	—	—	—	—	SPARE	-	-	-	20	1	44
45	1	20	-	-	-	SPARE	—	—	-	-	—	—	SPARE	-	-	-	20	1	46
47	1	20	-	-	-	SPARE	—	—	—	—	-	-	SPARE	-	-	-	20	1	48
49	1	20	-	-	-	SPARE	-	-	—	—	—	—	SPARE	-	-	-	20	1	50
51	1	20	-	-	-	SPARE	—	—	-	-	—	—	SPARE	-	-	-	20	1	52
53	1	20	-	-	-	SPARE	—	—	—	—	-	-	SPARE	-	-	-	20	1	54
55	1	20	-	-	-	SPARE	-	-	—	—	—	—	SPARE	-	-	-	20	1	56
57	1	20	-	-	-	SPARE	—	—	-	-	—	—	SPARE	-	-	-	20	1	58
59	1	20	-	-	-	SPARE	—	—	—	—	-	-	SPARE	-	-	-	20	1	60
						CONNECTED KVA PER PHASE	11.2		9.6		7.8								

TOTAL CONNECTED KVA: 28.6
TOTAL DEMAND KVA: 20.0
TOTAL DEMAND AMPERES: 55.6

EXISTING PANELBOARD SCHEDULE

DESIGNATION: **PC-1**
MAINS: 225A | TYPE: | O.C. DEVICE: MAIN LUG ONLY
VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING:
LOCATION: AUDITORUM MECH RM | FED BY: DPC-1 | MOUNTING: SURFACE
SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
	/						6.7	0.0	—	—	—	—						/	
1	3	40	-	-	-	SUPPLY FAN AHU-3	—	—	6.7	0.0	—	—	SPARE	-	-	-	30	3	2 *
	/						—	—	—	—	6.7	0.0						/	
	/						5.0	0.0	—	—	—	—						/	
3	3	30	-	-	-	RETURN FAN AHU-3	—	—	5.0	0.0	—	—	SPARE	-	-	-	15	3	4
	/						—	—	—	—	5.0	0.0						/	
	/						8.3	2.5	—	—	—	—						/	
4	3	50	-	-	-	PANEL BP-7	—	—	8.3	2.5	—	—	VFD HW CIRC PUMP 7-1	-	-	-	15	3	6
	/						—	—	—	—	8.3	2.5						/	
	/						-	2.5	—	—	—	—						/	
7	3	15				SPARE	—	—	-	2.5	—	—	HW CIRC PUMP 7-2	-	-	-	15	3	8
	/						—	—	—	—	-	2.5						/	
	/						-	19.5	—	—	—	—						/	
9	3	15				SPARE	—	—	-	19.5	—	—	RTU-ADMIN	1"	#10	4#6	60	3	10 **
	/						—	—	—	—	-	19.5						/	
	/	-					-	-	—	—	—	—						/	
11	3	-				SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	3	12
	/	-					—	—	—	—	-	-						/	
	/	-					-	-	—	—	—	—						/	
13	3	-				SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	3	14
	/	-					—	—	—	—	-	-						/	
						CONNECTED KVA PER PHASE	44.5		44.5		44.5								

* REMOVE WIRING TO DEVICE, RELABEL BREAKER AS SPARE.
** ADD A 60A-3P BREAKER TO EXISTING SPACE FOR NEW RTU.

TOTAL CONNECTED KVA: 133.5
TOTAL DEMAND KVA (70%): 93.45
TOTAL DEMAND AMPERES: 112.40

NEW PANELBOARD SCHEDULE

DESIGNATION: **PE-2**
MAINS: 150A | TYPE: NORMAL POWER | O.C. DEVICE: 150A CB WITH SHUNT TRIP
VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: MATCH DPD-2
LOCATION: POOL EQUIP. RM P101 | FED BY: DPE-1 | MOUNTING: SURFACE
SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	/						2.1	8.0	—	—	—	—						/	2
3	3	15	3#12	#12	3/4"	AIR COMPRESSOR	—	—	2.1	7.4	—	—	45KVA XFMR PPE-2	-	-	-	70	3	4
5	/						—	—	—	—	2.1	5.4						/	6
7	/						1.3	5.8	—	—	—	—						/	8
9	3	15	3#12	#12	3/4"	PUMP P-7 VFD	—	—	1.3	5.8	—	—	15HP FILTER PUMP VFD	3/4"	#10	3#8	40	3	10
11	/						—	—	—	—	1.3	5.8						/	12
13	/						1.3	-	—	—	—	—						/	14
15	3	15	3#12	#12	3/4"	PUMP P-8 VFD	—	—	1.3	-	—	—	SPARE				40	3	16
17	/						—	—	—	—	1.3	-						/	18
19	/						0.6	0.6	—	—	—	—						/	20
21	3	15	3#12	#12	3/4"	DUPLEX SUMP PUMP	—	—	0.6	0.6	—	—	1HP DRAIN DOWN PUMP	3/4"	#12	3#12	15	3	22
23	/						—	—	—	—	0.6	0.6						/	24
25	/						-	5.0	—	—	—	—						/	26
27	3	15				SPARE	—	—	-	5.0	—	—	UV CONTROLLER	3/4"	#10	3#10	30	3	28
29	/						—	—	—	—	-	5.0						/	30
31	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	32
33	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	34
35	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	36
37	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	38
39	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	40
41	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	42
						CONNECTED KVA PER PHASE	24.7		24.1		22.1								

TOTAL CONNECTED KVA: 70.9
TOTAL DEMAND KVA (70%): 49.6
TOTAL DEMAND AMPERES: 59.7

NEW PANELBOARD SCHEDULE

DESIGNATION: **PPE-2**
MAINS: 150A | TYPE: APPLIANCE | O.C. DEVICE: 150 MCB
VOLTAGE: 208/120V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING: 10K AIC
LOCATION: PUMP ROOM | FED BY: PE-2 VIA XFMR | MOUNTING: SURFACE
SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20	2#12	#12	3/4"	REC - POOL WATER FOUNT. (DEDICATED)	1.0	1.8	—	—	—	—	CHEMICAL CONTROLLER	3/4"	#12	2#12	20	1	2
3	1	20	2#12	#12	3/4"	REC - N. POOL VAC. (DEDICATED)	—	—	0.8	1.4	—	—	FILTER CONTROL PANEL	3/4"	#12	2#12	20	1	4
5	1	20	2#12	#12	3/4"	REC - S. POOL VAC. (DEDICATED)	—	—	—	—	0.8	0.2	AIR DRYER	3/4"	#12	2#12	20	1	6
7	1	20	2#12	#12	3/4"	REC - W. POOL VAC. (DEDICATED)	0.8	0.9	—	—	—	—	GENERAL RECEPTACLES - PUMP ROOM	3/4"	#12	2#12	20	1	8
9	1	20	2#12	#12	3/4"	REC - POOL WATER FOUNT. (DEDICATED)	—	—	1.0	0.7	—	—	GENERAL RECEPTACLES - PUMP ROOM	3/4"	#12	2#12	20	1	10
11	1	20	2#12	#12	3/4"	RECS - POOL BLEACHERS / W. PACE CLK	—	—	—	—	0.9	1.1	REC - AUTOFILL CNTL (GFCI)	3/4"	#12	2#12	20	1	12
13	1	20	2#12	#12	3/4"	RECS - POOL NON-DED. / E. PACE CLK	0.9	0.4	—	—	—	—	RECS - CRAWLSPACE	3/4"	#12	2#12	20	1	14
15	1	20	2#12	#12	3/4"	RECS - POOL SCORING TABLE	—	—	1.3	0.4	—	—	GENERAL RECEPTS - CHEMICAL ROOM	3/4"	#12	2#12	20	1	16
17	1	20	2#12	#12	3/4"	RECS - POOL OFFICE P202	—	—	—	—	0.7	1.2	HEAT TRACE PANEL HTC-1	3/4"	#12	2#12	20	1	18
19	1	20	2#12	#12	3/4"	REC - SOUND SYSTEM RACK	0.5	1.2	—	—	—	—	HEAT TRACE PANEL HTC-2	3/4"	#12	2#12	20	1	20
21	1	20	2#12	#12	3/4"	RECS - POOL OFFICE P209	—	—	0.8	1.2	—	—	HEAT TRACE PANEL HTC-3	3/4"	#12	2#12	20	1	22
23	1	20	2#12	#12	3/4"	HAND DRYER - P208	—	—	—	—	1.7	-	SPARE	-	-	-	20	1	24
25	1	20	2#12	#12	3/4"	HAND DRYER - P207	1.7	-	—	—	—	—	SPARE	-	-	-	20	1	26
27	1	20	2#12	#12	3/4"	REC - SCOREBOARDS	—	—	1.0	-	—	—	SPARE	-	-	-	20	1	28
29	1	20	-	-	-	SPARE	—	—	—	—	-	-	SPARE	-	-	-	20	1	30
31	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	32
33	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	34
35	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	36
37	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	38
39	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	40
41	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	42
						CONNECTED KVA PER PHASE	9.2		8.6		6.6								

TOTAL CONNECTED KVA: 24.4
TOTAL DEMAND KVA (70%): 17.1
TOTAL DEMAND AMPERES: 47.4

EXISTING PANELBOARD SCHEDULE

DESIGNATION: **PE-2A**
MAINS: 250A MLO | TYPE: - | O.C. DEVICE: -
VOLTAGE: 277/480V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING:
LOCATION: MECH/ELEC RM 186B | FED BY: DIST. PANEL DPE-2 | MOUNTING: SURFACE
SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	/						21.3	3.0	—	—	—	—						/	2
3	3	125	-	-	-	RTU-3	—	—	21.3	3.0	—	—	EF-11	-	-	-	20	3	4
5	/						—	—	—	—	21.3	3.0						/	6
7	/						-	3.3	—	—	—	—						/	8
9	3	20	-	-	-	SPARE	—	—	-	3.3	—	—	EUH-1 - LAUNDRY ROOM 185	-	-	-	20	3	10
11	/						—	—	—	—	-	3.3						/	12
13	/						-	3.5	—	—	—	—						/	14
15	3	20	-	-	-	SPARE	—	—	-	4.1	—	—	45KVA XFMR PPE-2A	1"	#8	3#4	70	3	16
17	/						—	—	—	—	-	5.1						/	18
19	/						1.5	-	—	—	—	—	SPACE	-	-	-	-	1	20
* 21	3	30	3#6	#6	2"	15 KVA XFMR - BASEBALL PRESSBOX	—	—	1.5	-	—	—	SPACE	-	-	-	-	1	22
23	/						—	—	—	—	1.5	-	SPACE	-	-	-	-	1	24
* 25	1	20	2#10	#10	1"	PARKING LOT/TENNIS LIGHTING	1.0	-	—	—	—	—	SPACE	-	-	-	-	1	26
* 27	1	20	2#10	#10	1"	PARKING LOT LIGHTING	—	—	1.0	-	—	—	SPACE	-	-	-	-	1	28
* 29	1	20	2#10	#10	1"	PARKING LOT LIGHTING	—	—	—	—	1.0	-	SPACE	-	-	-	-	1	30
31	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	32
33	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	34
35	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	36
37	1	-	-	-	-	SPACE	-	-	—	—	—	—	SPACE	-	-	-	-	1	38
39	1	-	-	-	-	SPACE	—	—	-	-	—	—	SPACE	-	-	-	-	1	40
41	1	-	-	-	-	SPACE	—	—	—	—	-	-	SPACE	-	-	-	-	1	42
						CONNECTED KVA PER PHASE	33.6		34.2		35.2								

* EXTEND EXISTING LOADS TO NEW PANEL

TOTAL CONNECTED KVA: 103.0
TOTAL DEMAND KVA (70%): 72.1
TOTAL DEMAND AMPERES: 86.72

(RENAMED) RELOCATED PANELBOARD SCHEDULE

DESIGNATION: **PPE-2A**
MAINS: 150A | TYPE: - | O.C. DEVICE: 150A MCB
VOLTAGE: 120/208V-3Ø-4W | MINIMUM O.C. DEVICE | INTERRUPTING RATING:
LOCATION: MECH/ELEC RM 186B | FED BY: PE-2A VIA XFMR | MOUNTING: SURFACE
SINGLE PANEL ■ | DOUBLE PANEL □ | COMMON COVER □

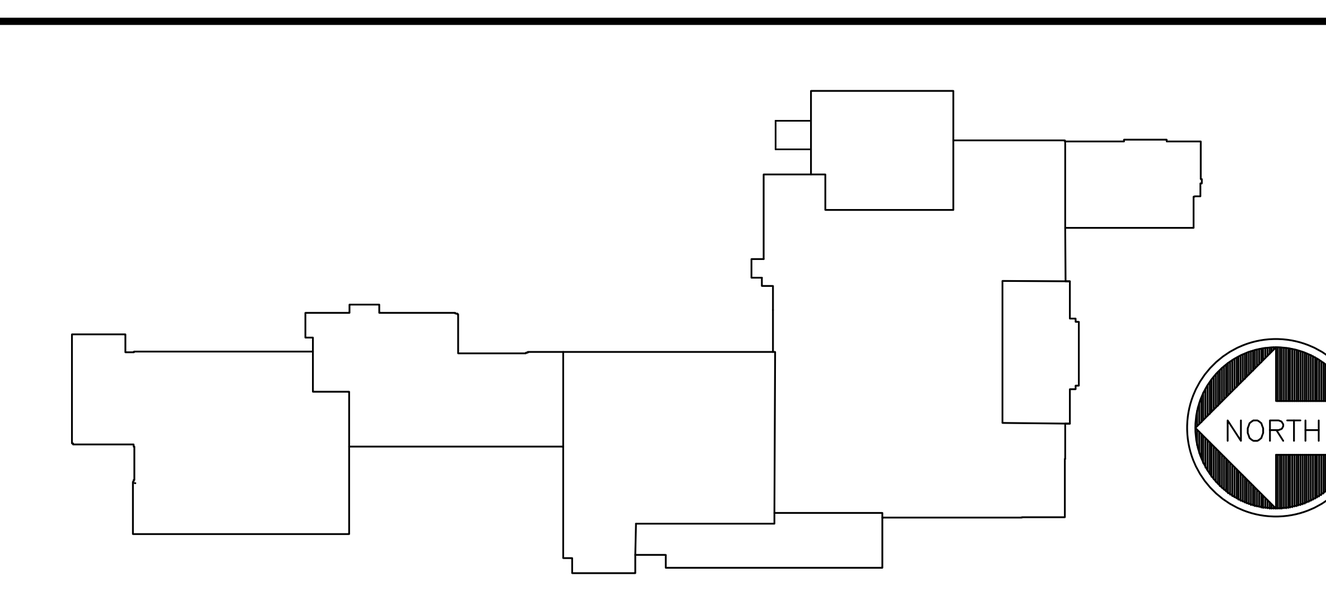
CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	1	20	2#12	#12	3/4"	RECEPTS - MECH/ELEC RM 186B	0.7	0.7	—	—	—	—						/	2
3	1	20	2#12	#12	3/4"	CUH-1 - VESTIBULE P104	—	—	0.2	0.7	—	—	WASHER - LAUNDRY RM	-	-	-	20	3	4 *
5	1	20	2#12	#12	3/4"	EXTERIOR RECEPTACLE	—	—	—	—	0.2	0.7						/	6
* 7	2	20	-	-	-	TENNIS COURT DISCONNECT	-	-	—	—	—	—						/	8
9	/						—	—	-	-	—	—	SPARE				20	3	10
* 11	1	20	-	-	-	RECEPTS - STOR., CORR & EQUIP RM	—	—	—	—	1.1	-						/	12
* 13	1	20	-	-	-	RECEPTS - MULTI-PURPOSE RM	0.9	0.7	—	—	—	—	RECEPTS - STOR 186A	-	-	-	20	1	14 *
* 15	1	20	-	-	-	RECEPTS - MULTI-PURPOSE RM	—	—	1.1	0.7	—	—	RECEPTS - LAUNDRY RM 185	-	-	-	20	1	16 *
* 17	2	60	-	-	-	TENNIS COURT DISCONNECT FOR BAND LIGHTS	—	—	—	—	-	1.0	ICE MACHINE	-	-	-	20	1	18 *
19	/						-	0.5	—	—	—	—	SPARE	-	-	-	20	1	20
21	1	20	-	-	-	DOOR ACCESS CNTL PANELS - POOL	—	—	-	0.08	—	—	SPARE	-	-	-	20	1	22
23	1	30	-	-	-	SPARE	—	—	—	—	-	1.2	GAS DRYER	-	-	-	20	1	24 *
25	1	20	-	-	-	SPARE	-	-	—	—	—	—	SPARE	-	-	-	20	1	26
27	1	20	-	-	-	SPARE	—	—	-	1.1	—	—	CU-1	3/4"	#12	3#12	15	1	28 **
29	1	20	-	-	-	SPARE	—	—	—	—	-	1.1	(OVER RM 186B)					/	30
31	1	20	-	-	-	SPARE	-	-	—	—	—	—						/	32
33	1	20	-	-	-	SPARE	—	—	-	-	—	—	SPARE				20	3	34
35	1	20	-	-	-	SPARE	—	—	—	—	-	-						/	36
37	/						-	-	—	—	—	—	SPARE	-	-	-	-	1	38
39	3	125	-	-	-	SPARE	—	—	-	-	—	—	SPARE	-	-	-	-	1	40
41	/						—	—	—	—	-	-	SPARE	-	-	-	-	1	42
						CONNECTED KVA PER PHASE	3.5		4.3		5.3								

* EXTEND EXISTING LOADS TO NEW PANEL LOCATION.
** REMOVE (2) 20A-1P BREAKERS FOR NEW 15A-2POLE BREAKER.

TOTAL CONNECTED KVA: 13.1
TOTAL DEMAND KVA (70%): 9.2
TOTAL DEMAND AMPERES: 25.5

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
ELECTRICAL PANEL SCHEDULES

DRAWN BY: R.F.C. | PROJECT NO.: 2024-239P
CHECKED BY: L.K.N. | BUILDING: HS | DRAWING NO.: E-404
DATE: 12-01-2025

CAD FILE: 4239-HS-E-400-E404.DWG
PLOT DATE: 11/25/2025

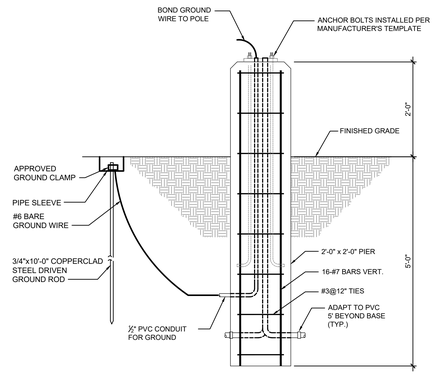


1 HS ES-100 — ELECTRICAL SITE RENOVATION PLAN
SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

RENOVATION KEY

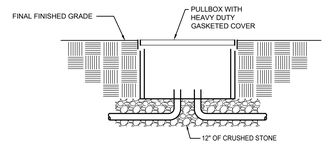
EX - EXISTING TO REMAIN
RL - EXISTING TO BE RELOCATED



2 HS ES-100 — PARKING AREA POLE BASE DETAIL
SCALE: NONE

NOTES:

1. CONCRETE SHALL DEVELOP A STRENGTH OF 4000 PSI AT 28 DAYS (U.O.N.)
2. ALL UNDERGROUND CONDUITS SHALL BE RUN 24" MINIMUM BELOW FINISHED GRADE. INSTALL IN CONCRETE ENCASEMENT WHERE INSTALLED BELOW ROADWAY.



3 HS ES-100 — HANDHOLE DETAIL
SCALE: NONE

NOTE:

1. PROVIDE 11"x18"x18"D STACKABLE PULL BOX, WITH COVER AT LOCATION SHOWN. COVER SHALL BE MARKED "POWER", OR "COMM." AS REQUIRED. BOX SHALL BE OPEN BOTTOM AND BE CONSTRUCTED OF POLYMER CONCRETE AND REINFORCED BY A HEAVY WEAVE FIBERGLASS. PULL BOX SHALL BE QUAZITE, PART NO. PG1118BG18, OR APPROVED EQUAL. PROVIDE 12" OF GRAVEL AT BOTTOM OF BOX FOR DRAINAGE.

SITE LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	LAMPS	VOLTS	DESCRIPTION
AA1	BARRON TRACE-LITE	RxA-150-3-HVS-4K-BR-A-TL-SCE - TLPRH	150 W LED 20,800 LUMENS	480V	RxA SERIES AREA LIGHT WITH TYPE III DISTRIBUTION, BRONZE FINISH, PHOTOCELL & MOTION SENSOR OPTIONS. PROVIDE 25' HIGH SQUARE STRAIGHT ALUMINUM POLE TO MATCH EXISTING.
AA2	BARRON TRACE-LITE	RxA-150-4-HVS-4K-BR-A-TL-SCE - TLPRH	150 W LED 20,800 LUMENS	480V	RxA SERIES AREA LIGHT WITH TYPE IV DISTRIBUTION, BRONZE FINISH, PHOTOCELL & MOTION SENSOR OPTIONS. PROVIDE 25' HIGH SQUARE STRAIGHT ALUMINUM POLE TO MATCH EXISTING.
EX / RL	BARRON TRACE-LITE	RxA-150-3-HVS-4K-BR-A-TL-SCE - TLPRH	150 W LED 20,800 LUMENS	480V	RxA SERIES AREA LIGHT WITH TYPE III DISTRIBUTION, BRONZE FINISH, PHOTOCELL & MOTION SENSOR OPTIONS, MOUNTED ON EXISTING 25' HIGH SQUARE STRAIGHT ALUMINUM POLE AND BASE.

EXISTING PANELBOARD SCHEDULE

DESIGNATION: DPD-2
MAINS: 400A
TYPE: DISTRIBUTION PANEL
O.C. DEVICE: MAIN LUG ONLY
VOLTAGE: 277/480V-3Ø-4W
MINIMUM O.C. DEVICE
INTERRUPTING RATING:
LOCATION: SWBD ROOM #2
FED BY: SWBD MDP-1
MOUNTING: SURFACE
SINGLE PANEL
DOUBLE PANEL
COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO
1	3	100	-	-	-	PANEL PE2 IN FILTER ROOM	-	-		SPARE	-	-	-	100	3	2
3	2	20	3#8	#8	1"	SITE LIGHTING - REAR	0.6	-		SPACE	-	-	-	-	3	4
5	1	20	2#10	#10	3/4"	BUILDING LIGHTING - POOL		0.6	-		-	-	-	-	3	6
5A	1	20	2#12	12	3/4"	EXTERIOR JC SIGN (RM A102)	0.3	-		SPACE	-	-	-	-	3	8
7	2	-				SPACE			0.3		-	-	-	150	3	10
9	3	-				SPACE	-	-		SPACE	-	-	-	-	3	12
11	3	300	-	-	-	DPD-3 - BOILER RM #1			-	SPARE	-	-	-	-	3	14
						CONNECTED KVA PER PHASE	-	-	-							

TOTAL CONNECTED KVA: -
TOTAL DEMAND KVA: -
TOTAL DEMAND AMPERES: -

SITE RENOVATION PLAN NOTES:

1. PROVIDE NEW OR RELOCATE LED AREA LIGHTS, POLES, POLE BASES AND WIRING / CONDUIT AS INDICATED (SHOWN DARK). ALL NEW AREA LIGHTS / POLES SHALL MATCH EXISTING. REFER TO SITE LIGHTING FIXTURE SCHEDULE THIS SHEET.
2. PROVIDE HANDHOLES WITH COVER FOR SITE LIGHTING CIRCUITING AT LOCATIONS SHOWN. COVER SHALL BE MARKED "ELECTRIC" . REFER TO HANDHOLE DETAIL ON THIS DRAWING.
3. CONDUITS ENTERING OR LEAVING BUILDING, POLES OR HANDHOLES SHALL BE GALVANIZED RIGID STEEL FOR THE FIRST 5 FT. BEYOND THESE ITEMS. ADAPT TO SCHEDULE 40 PVC AT THIS POINT. WHERE USED FOR SITE LIGHTING SCHEDULE 40 PVC CONDUIT SHALL ONLY BE REQUIRED TO BE ENCASED IN CONCRETE WHERE IT IS INSTALLED UNDER ROADWAYS. IT SHALL ALSO BE PERMITTED TO USE GALVANIZED RIGID STEEL WHERE INSTALLED UNDER ROADWAYS AND 5 FT. BEYOND.
4. RESTORE ALL GRASS, LANDSCAPING, WALKS, PAVES, CONC., ETC. DISTURBED BY THIS WORK TO ITS ORIGINAL STATE.
5. PROVIDE NEW 24 HOUR TIME CLOCK (INTERMATIC, 20A/480V RATED, P/N/ T1975E, OR EQUAL) IN ELECTRICAL ROOM AND RUN NEW CIRCUIT THROUGH TIME CLOCK TO PANEL DPD-2 USING 2#10, #10G, 3/4"C.

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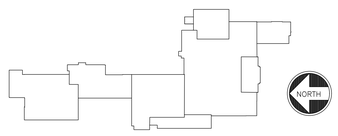
REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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570-586-4334
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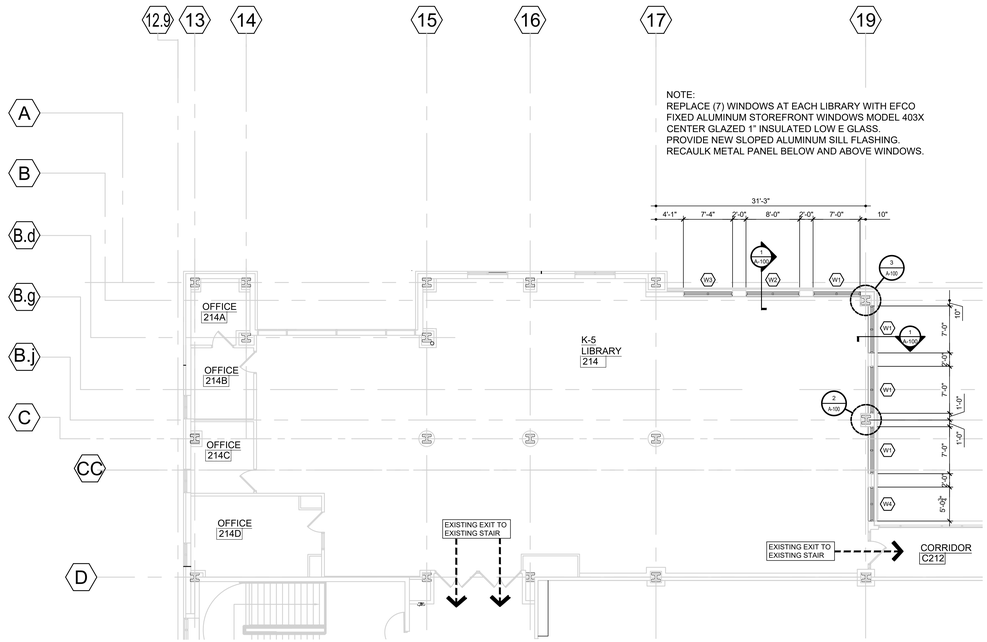
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
HIGH SCHOOL ELECTRICAL SITE RENOVATON PLAN

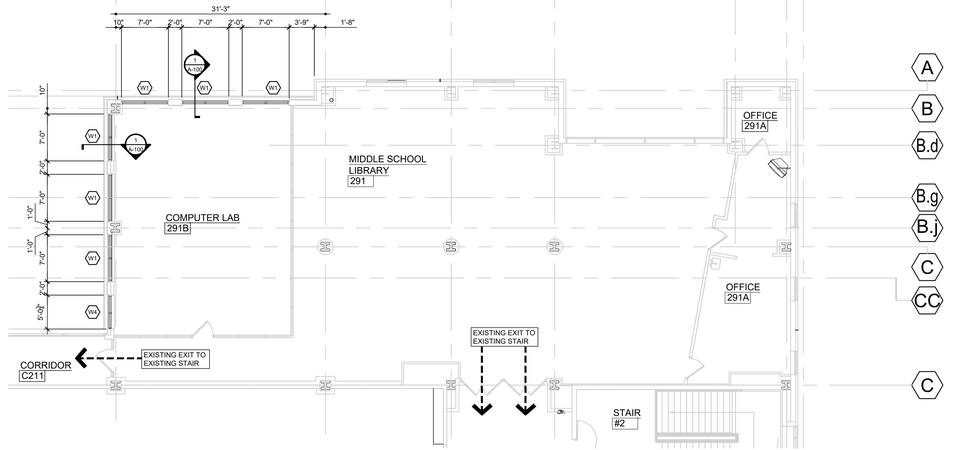
DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	HS / ES-100
DATE: 12-01-2025	

DWG FILE: ES-100.DWG
PLOT DATE: 11/20/25



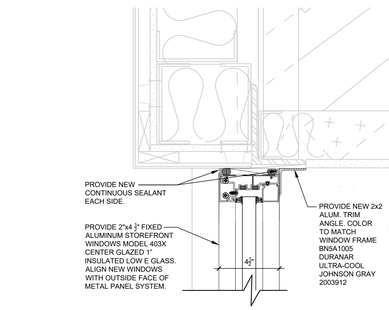
SECOND FLOOR PLAN @ K-8 LIBRARY WINDOWS

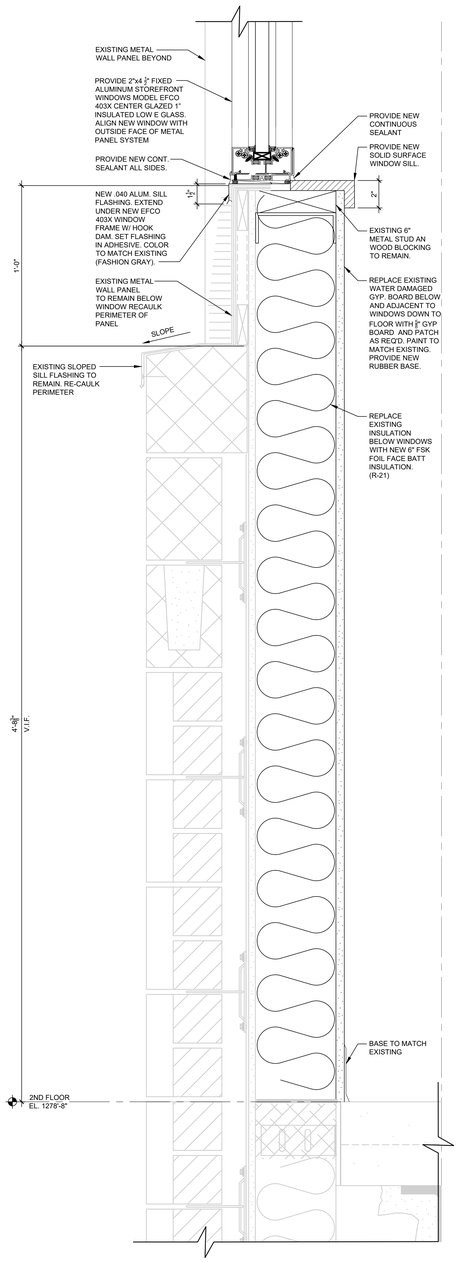
SCALE: 1/8" = 1'-0"



SECOND FLOOR PLAN @ MIDDLE SCHOOL LIBRARY WINDOWS

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



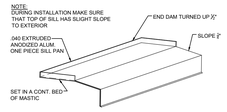


PARTIAL WALL SECTION @ LIBRARY WINDOW

1 / A-100 — SCALE: 3"=1'-0"

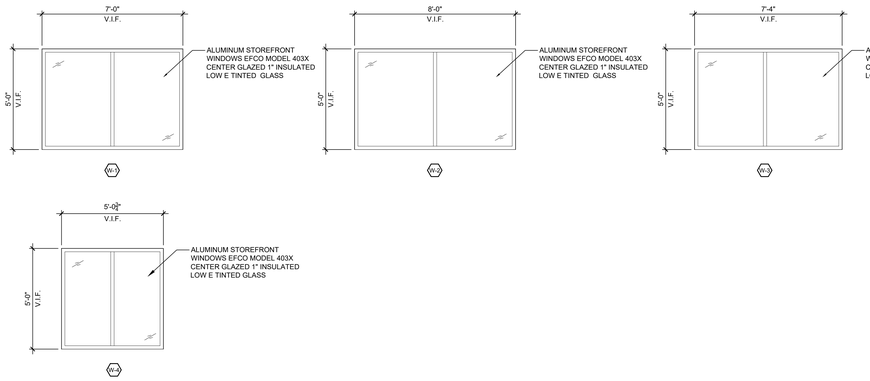
LEGEND

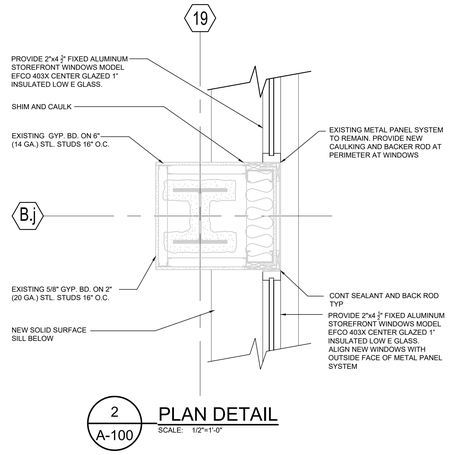
- "R" — INDICATES EXISTING RESCUE WINDOW TO REMAIN
- R1 R2 R3 — INDICATES NEW RESCUE WINDOW. SEE A-3.2 FOR DETAILS
- W# — INDICATES NEW VENTING CASEMENT WINDOW.
- EXISTING DOOR TO REMAIN
- EXISTING WALL TO REMAIN
- XX — EXISTING COLUMN CENTERLINE



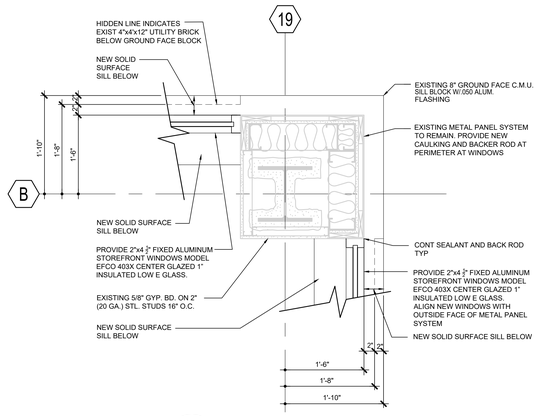
TYPICAL SILL PAN ISO- METRIC DETAIL @ WINDOWS

SCALE : N.T.S.





2 / A-100 — PLAN DETAIL — SCALE: 1/2"=1'-0"



3 / A-100 — PLAN DETAIL — SCALE: 1/2"=1'-0"



K-5 LIBRARY

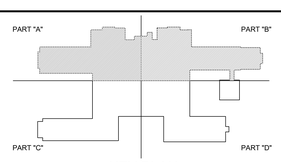


MIDDLE SCHOOL LIBRARY



REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SECOND FLOOR LIBRARY WINDOW REPLACEMENT PLANS

DRAWN BY:	PROJECT NO.:
S.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
R.S.	K-8 / A-100
DATE:	
12-01-2025	

J:\2024-239 JCCSD Capital Project 2025 and 2026 Phases 1 and 2__CAD__K-8\arch\4239-K8-A-100.dwg, 11/25/2025 4:08:03 PM, _DWG To PDF.pc3

DOOR SCHEDULE

	DOOR NO.	DOOR TYPE	DOOR MAT'L	DOOR NOMINAL SIZE WIDTH	DOOR NOMINAL SIZE HEIGHT	DOOR NOMINAL SIZE THKNS	GLASS TYPE	FRAME TYPE	FRAME MAT'L	JAMB TYPE	JAMB MAT'L	HEAD TYPE	HEAD MAT'L	THRESHOLD TYPE	THRESHOLD MAT'L	HARDWARE SET	FIRE RATING	CARD READER	REMARKS
X-8	148A	A	WD	3'-0"	7'-0"	1 3/4"	-	F-1	H.M.	J-1	H.M.	H-1	H.M.			06	45		

DOOR SCHEDULE LEGEND

MATERIALS

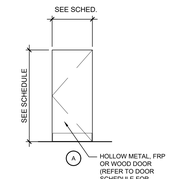
ALUM	-	ALUMINUM	STL.	-	STEEL
VIN.	-	VINYL	MARB.	-	MARBLE
GL.	-	GLASS	TEMP.	-	TEMPERED
H.M.	-	HOLLOW METAL	RUB.	-	RUBBER
WD	-	WOOD	S.S.	-	STAINLESS STEEL

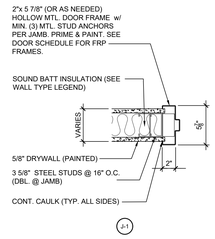
GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL DOOR / FRAME SIZES, DIMENSIONS, DOOR SWINGS, DOOR / FRAME MATERIALS, DOOR / FRAME TYPES, FRAME WIDTH AND DEPTH, THROAT DEPTH AND FRAME HEAD HEIGHT.
2. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DOOR HARDWARE REQUIREMENTS FOR ALL FRAMES INDICATED. ALL SUBMITTALS ISSUED TO THE ARCHITECT SHALL REFLECT THIS FIELD VERIFIED COORDINATION.
3. ALL WOOD DOORS ARE TO HAVE SOLID CORE. PROVIDE MINERAL CORE AT ALL FIRE RATED WOOD DOORS.
4. ALL FRAMES SHALL BE SHIMMED / CAULKED IN ACCORDANCE WITH ACCEPTED PRACTICES
5. SEE SPECIFICATIONS FOR HARDWARE SETS FOR ALL DOORS
6. REFER TO FINISH SCHEDULE FOR FINISHES
7. REFER TO PLANS FOR PROPER DOOR SWINGS
8. ALL WOOD DOOR EDGES SHALL BE FACTORY FINISHED AND SHALL MATCH DOOR FACE VENEER AND FINISH
9. ALL HOLLOW METAL FRAMES SHALL BE WELDED, NO KNOCK-DOWN FRAMES WILL BE ACCEPTED
10. THE USE OF THRU-BOLTING FOR ANY DOOR HARDWARE WILL NOT BE ACCEPTED

DOOR TYPES

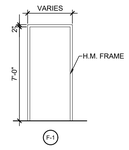
SCALE: 1/4" = 1'-0"

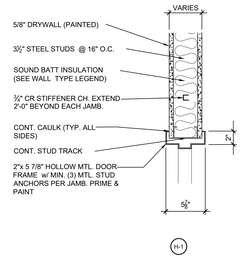


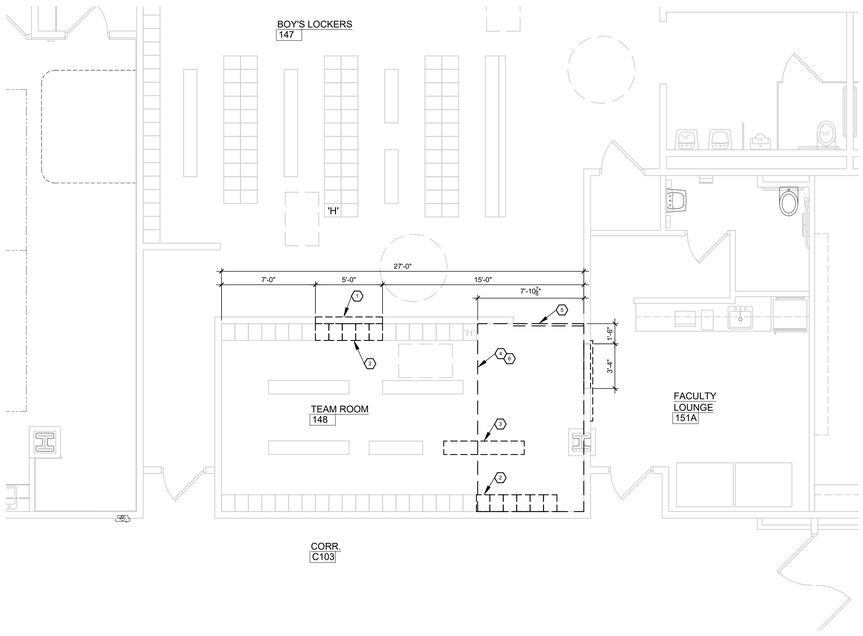


FRAME TYPES

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



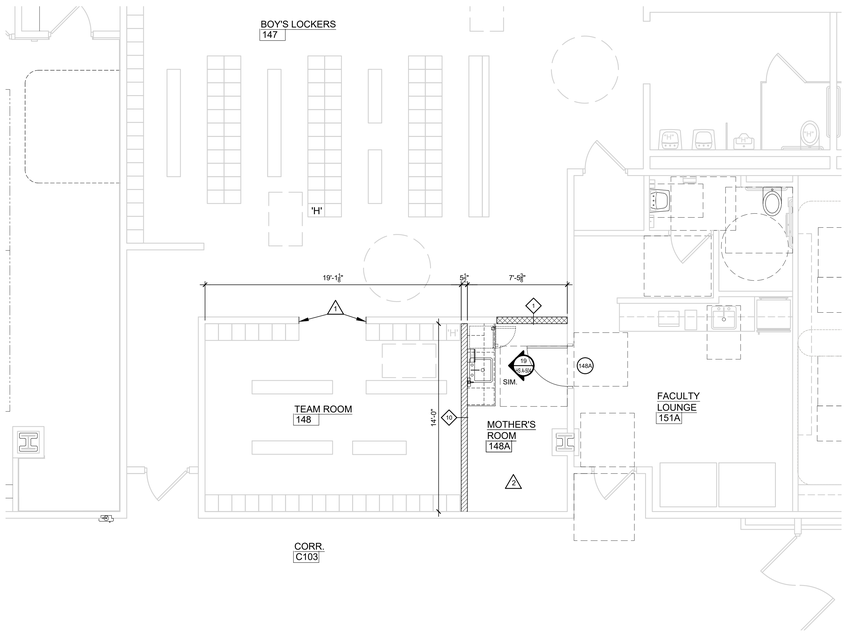




MOTHER'S ROOM DEMOLITION PLAN

1 / A-101

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



MOTHER'S ROOM CONSTRUCTION PLAN

2 / A-101

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

DEMOLITION KEY NOTES:

1. INDICATES PORTION OF EXISTING CMU PARTITION TO BE REMOVED. ALL WALL MOUNTED ITEMS TO BE DISPOSED
2. INDICATES EXISTING LOCKERS TO BE REMOVED.
3. INDICATES EXISTING BENCH TO BE REMOVED.
4. INDICATES EXTENTS OF EXISTING CERAMIC TILE TO BE REMOVED. CLEAN, PATCH/REPAIR AND PREP SUBFLOOR TO RECEIVE NEW FINISHES
5. INDICATES EXISTING CURB TO BE REMOVED IN ITS ENTIRETY
6. PORTION OF EXISTING CEILING TO BE REMOVED TO ACCOMMODATE NEW MOTHER'S ROOM.

LEGEND

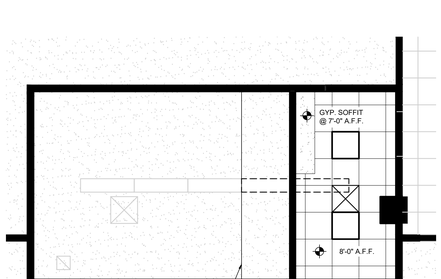
- ALL ITEMS SHOWN DASHED ARE TO BE REMOVED
- EXISTING WALL CONSTRUCTION TO BE DEMOLISHED IN ITS ENTIRETY
- EXISTING WALL CONSTRUCTION TO REMAIN
- NEW GYP. BD. WALL CONSTRUCTION, SEE PARTITION LEGEND ON GN-102
- NEW DOOR
- EXISTING DOOR, FRAME, THRESHOLD AND ALL HARDWARE TO REMAIN
- PARTITION TAG SEE DRAWING HS-GN-102 FOR PARTITION TYPES

CONSTRUCTION NOTES:

1. AT ALL STEEL STUD PARTITIONS PROVIDE HORIZONTAL COLD ROLLED CHANNEL BRACING AT 4'-0" O.C. VERTICALLY (TYP.)
2. PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT TOILET ROOM
3. PATCH AND REPAIR ALL HOLES IN WALLS AND FLOOR SLAB WHERE PIPING, DUCTS, CONDUITS, LOUVERS, CABINETS, SHELVING, ETC. HAVE BEEN REMOVED. PATCH TO MATCH EXISTING CONSTRUCTION. FIELD VERIFY ALL LOCATIONS AND QUANTITIES.
4. PATCH CONCRETE FLOOR WHERE EXISTING WALLS ARE REMOVED.
5. PATCH AND REPAIR WALL TO A SMOOTH FINISH WHERE EXISTING INTERSECTION WALL WAS REMOVED AND WHERE PANELING AND OTHER FINISH MATERIALS HAVE BEEN REMOVED OR DEMOLISHED.

CONSTRUCTION KEY NOTES:

1. PATCHWORK AT END OF PARTITION.
2. FLOOR TO RECEIVE LUXURY VINYL TILE. SEE ROOM FINISH SCHEDULE FOR DETAILS.



MOTHER'S ROOM REFLECTED CEILING PLAN

3 / A-101

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

CEILING LEGEND

- EXISTING 2' X 2' ACOUSTICAL TILE CEILING
- NEW 2' X 2' ACOUSTICAL TILE CEILING
- NEW GYPSUM SOFFIT PATCH PRIME AND PAINT. REFER TO FINISH SCHEDULE FOR COLOR.
- EXISTING GYPSUM SOFFIT (PAINTED) TO REMAIN
- NEW 2' x 2' LIGHT FIXTURE
- EXISTING' LIGHT FIXTURE TO REMAIN
- EXISTING' LIGHT FIXTURE TO BE REMOVED
- EXISTING MECHANICAL DIFFUSER
- NEW MECHANICAL DIFFUSER
- EXISTING MECHANICAL RETURN

REVISIONS

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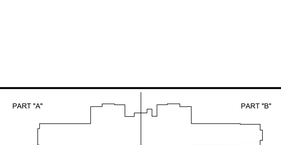
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
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BSN SED #3-15-02-06-4-015-006
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Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MOTHER'S ROOM FLOOR PLANS

DRAWN BY:	PROJECT NO.:
S.C.	2024-239P
CHECKED BY:	BUILDING: / DRAWING NO.:
R.S.	K-8 / A-101
DATE: 12-01-2025	

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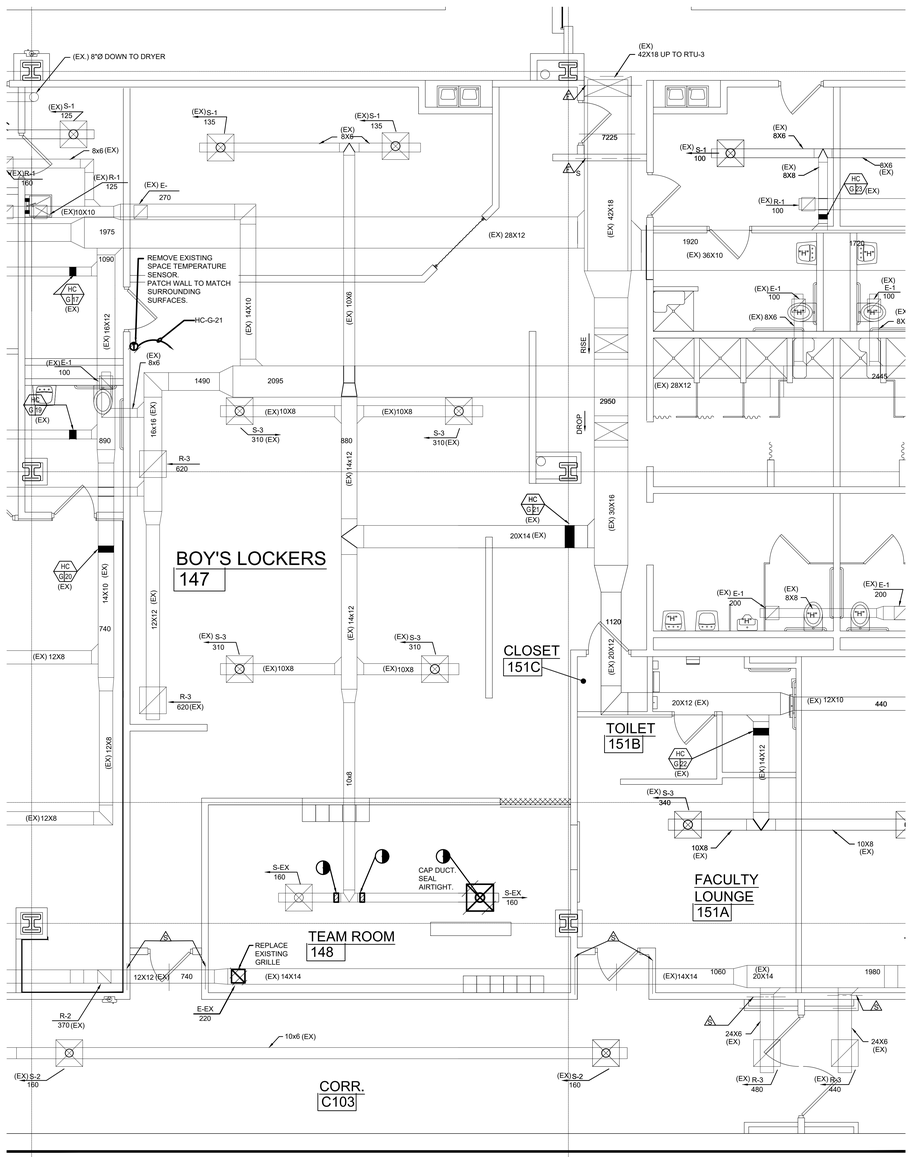

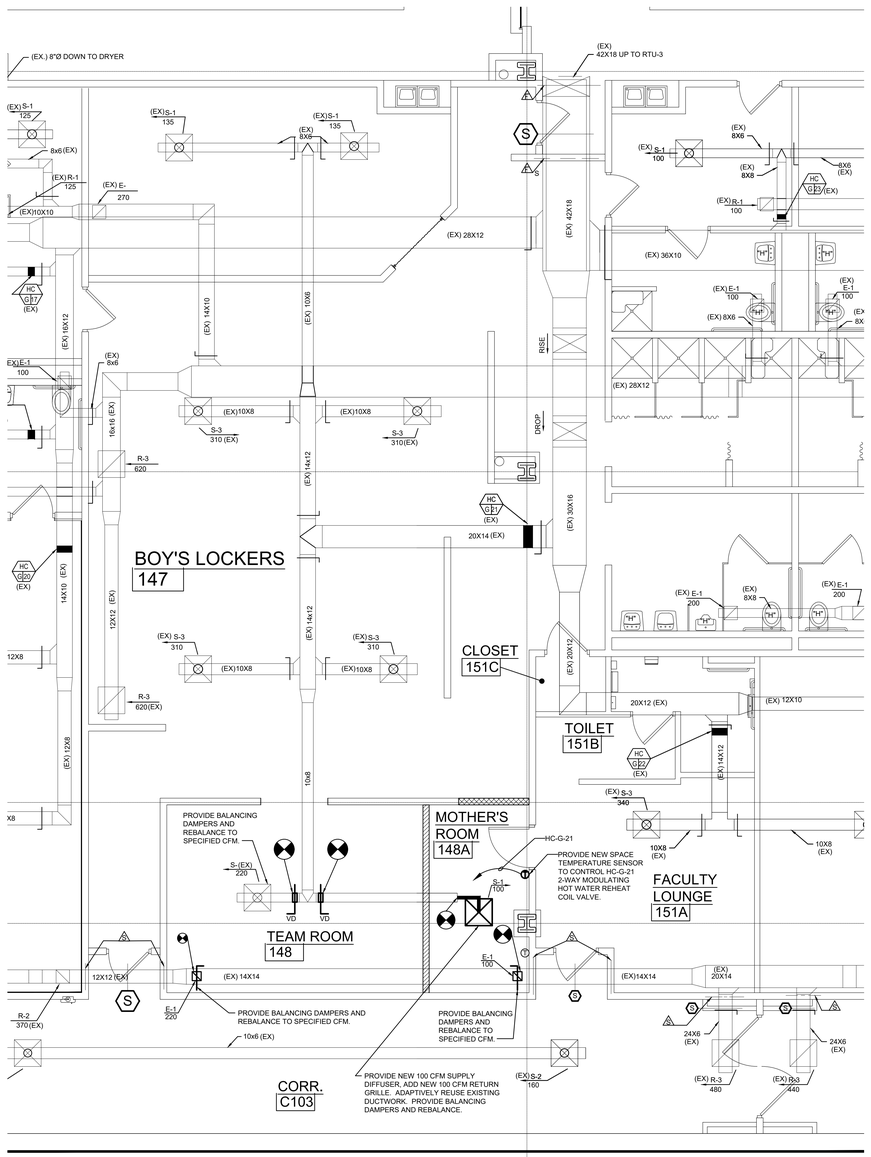

FIRST FLOOR MOTHER'S ROOM DEMOLITION PLAN

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

FIRST FLOOR MOTHER'S ROOM RENOVATION PLAN

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

GENERAL NOTES:

1. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
2. CEILINGS THAT NEED TO BE TEMPORARILY REMOVED TO ALLOW FOR THE INSTALLATION OF DUCTWORK, PIPING OR EQUIPMENT, AND ARE NOT SCHEDULED TO BE REMOVED ON THE ARCHITECTURAL DRAWINGS, SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR. COORDINATE THE REMOVAL AND THE REPLACEMENT WITH THE ELECTRICAL CONTRACTOR AND THE FIRE PROTECTION CONTRACTOR.
3. MECHANICAL CONTRACTOR SHALL REPLACE (IN-KIND) ALL CEILING TILES AND CEILING GRID SEGMENTS THAT GET DAMAGED DURING DEMOLITION OR CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. M.C. SHALL PROVIDE COORDINATION SHOP DRAWINGS OF HVAC DUCTWORK AND PIPING COORDINATED WITH LIGHTING, PLUMBING, AND FIRE PROTECTION. FIELD VERIFY ALL DIMENSIONS AND UNFORESEEN CONDITIONS WITH AT LEAST 1 SITE SURVEY.

SUPPLY, RETURN, & EXHAUST AIR DIFFUSER SCHEDULE

TAG	NECK SIZE	CFM RANGE	PANEL SIZE	THROW (FEET)	MAX. N.C.	MAX. S.P.	DIFFUSER TYPE	MANUFACTURER & MODEL	REMARKS
S-1	6"Ø	0-100	24"X24"	1-2-4	<15	0.02" W.G.	SURFACE	ANEMOSTAT E-1	18 GA ALUMINUM CONSTRUCTION, 4 WAY, SURFACE MOUNTED.
E-1	6"X6"	0-150	8"X8"	-	<20	0.05" W.G.	SURFACE	ANEMOSTAT GCSNS-O	ALL ALUMINUM CONSTRUCTION, 1/2" SPACING, 45° DEFLECTION, SURFACE MOUNTED, OBD DAMPER.

NOTES:
1. LOCKER/ SHOWER ROOM AREAS TO BE ALUMINUM. PROVIDE SHEETMETAL PLENUM BEHIND GRILLES FOR DUCT CONNECTION WHERE REQUIRED.
2. ALL EXPOSED DUCTWORK, GRILLES, AND ACCESSORIES SHALL BE PRIMED AT THE FACTORY FOR FIELD PAINTING.
3. COORDINATE ALL DRAWINGS AND MOUNTING TYPES WITH THE FINAL ARCHITECTURAL RCP, INCLUDING ALL ADDENDA AND BULLETINS.

JOHNSON CITY SCHOOL DISTRICT VENTILATION RATE TABLE (PHASE 2)

Zone Identification			Standard Case: 2020 Mechanical Code of New York State Verification Rate Procedure											Design Case - Cooling		Design Case - Heating		Design Exhaust
Room or Zone	Occupancy Category	Area (sf)	People Outdoor Air Rate Rp (cfm/per)	Area Outdoor Air Rate Ra (cfm/sf)	Occupant Density (#/1000 sf)	Occupancy (# people) Pz	People OA CFM Vpeo	Area OA CFM - Varea	Breathing Zone Outdoor Air Flow Vbz (cfm)	Zone Air Distribution Effectiveness Ez	Zone Outdoor Air Flow Voz (cfm)	Code Required Exhaust Airflow Rate (cfm/sf) or (cfm/fixture)	Total Exhaust Required (cfm)	Zone Primary Air Flow Vpz (cfm)	Primary Outdoor Air Fraction Zp = Voz/Vpz	Zone Primary Air Flow Vpz (cfm)	Primary Outdoor Air Fraction Zp = Voz/Vpz	Total Exhaust Provided
RTU-3-EX (Mother's Room Suite - K-8)																		
Mother's Room 148A	Office Buildings - Office space	117	5	0.06	5	2	10.0	7.0	17	0.8	21	0.71	83	100	0.21	100	0.21	220
Team Room 148	General - Conference/meeting	285	5	0.06	50	26	130.0	17.1	147	0.8	184	0.71	202	220	0.84	220	0.84	100
										RTU-3-EX (Mother's Room Suite - K-8) MIN OA	**205**			320		320		

CODE MINIMUM VENTILATION COMPLIANCE SCHEDULE

EQUIPMENT / TAG	AREA SERVED	CODE MINUMUM OA CFM	ACTUAL OA CFM	REMARKS
RTU-3-(EX)	MOTHERS ROOM SUITE (K-8)	21	100	1
RTU-3-(EX)	TEAM ROOM 148 (K-8)	184	220	2

REMARKS:

1. RTU-3-EX IS 100% OA
   MOTHERS ROOM SUITE (K-8): 100 CFM SA, 21 CFM OA CODE MIN.
2. TEAM ROOM (EXISTING) (K-8): 220 CFM SA, 184 CFM OA CODE MIN.
   K-8 RTU-3-EX IS 100% OA SA CFM = OA CFM = 6725 CFM.

REVISIONS

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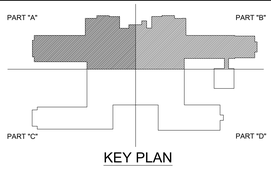

KEY PLAN

CAPITAL PROJECTS

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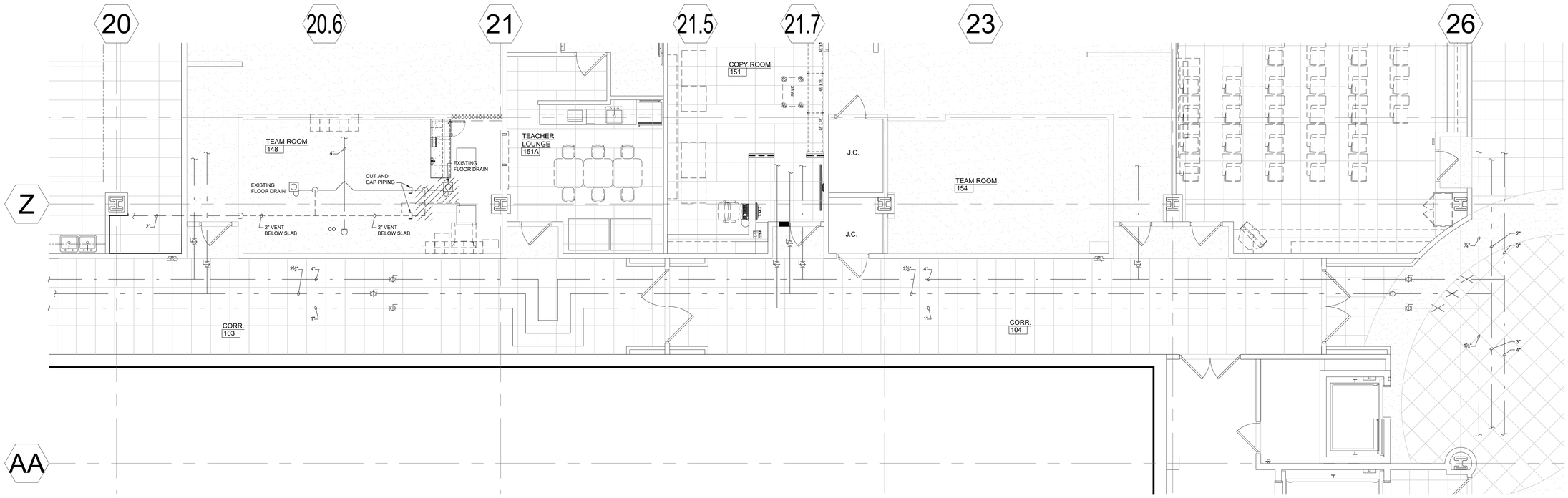
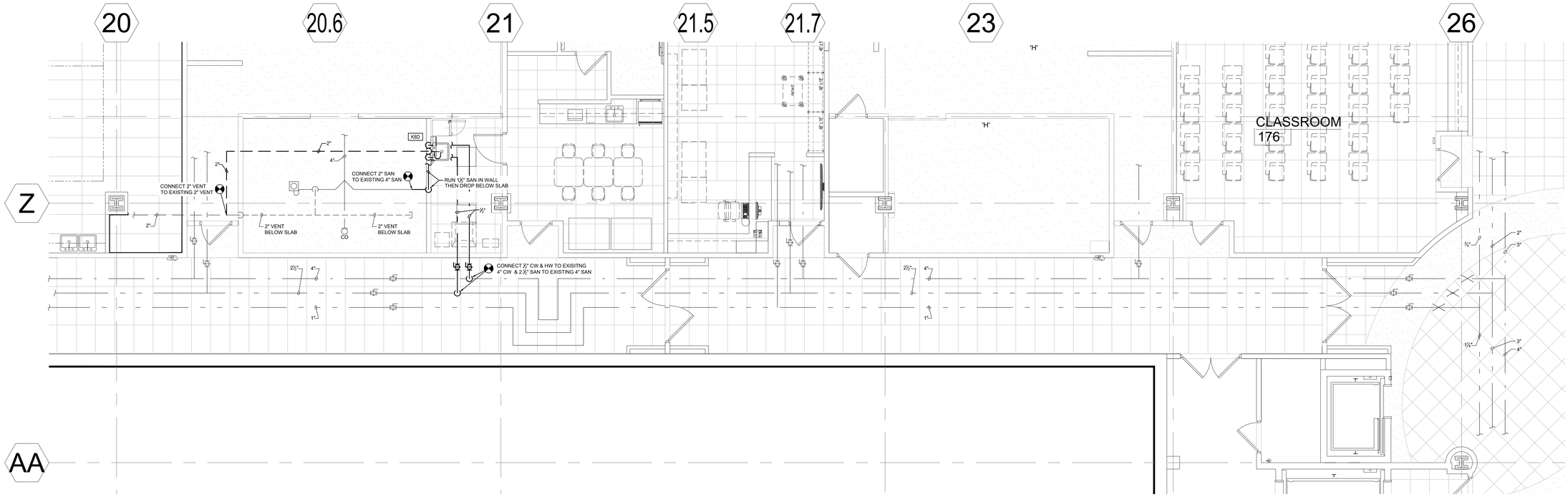
DRAWING TITLE:
SECOND FLOOR MOTHER'S ROOM DEMO AND RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY: M.P.	BUILDING: K-8
DATE: 12-01-2025	DRAWING NO.: M-100



PARTIAL 1ST. FLR - MOTHER'S ROOM - PLUMBING DEMOLITION

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

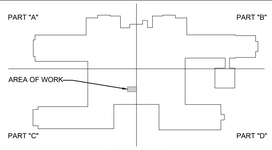


PARTIAL 1ST. FLR - MOTHER'S ROOM - PLUMBING RENOVATION

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

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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New York • Pennsylvania

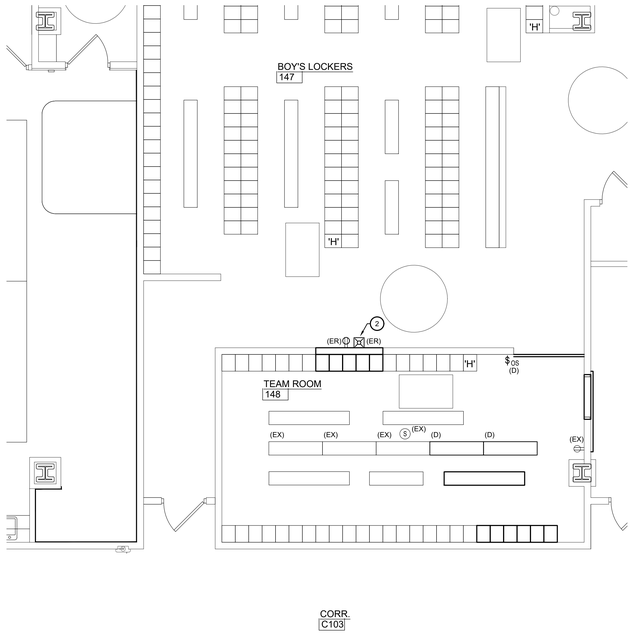
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

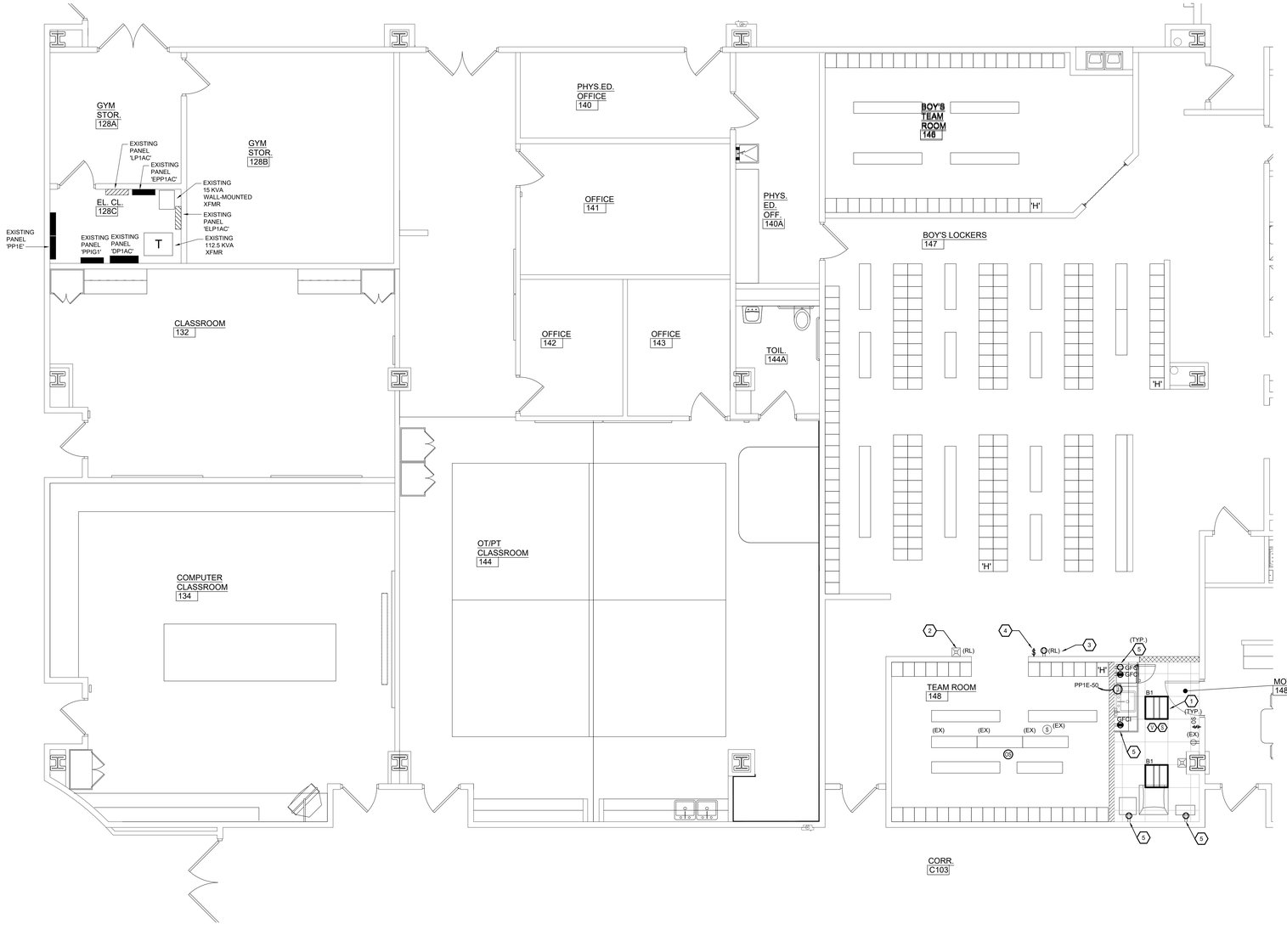
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PARTIAL 1ST. FLR. MOTHER'S ROOM - PLUMBING DEMO & RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
B.M.	2024-239P
CHECKED BY: X.X.	BUILDING K-8
DATE: 12-01-2025	DRAWING NO.: P-100

CAD FILE: PLOT DATE: FRIDAY,NOV 12,2025





MOTHER'S ROOM ELECTRICAL DEMOLITION PLAN

1 / K-8 E-100

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

ELECTRICAL DEMOLITION KEYNOTES

1. DISCONNECT AND REMOVE ALL ITEMS SHOWN DASHED IN LOCKER ROOM. POWER AND LIGHTING CIRCUITS ARE TO REMAIN TO BE UTILIZED IN NEW WORK.
2. REMOVE FIRE ALARM STROBE AND STORE FOR REINSTALLATION IN NEW WORK. EXISTING FIRE ALARM WIRING TO REMAIN.
3. REMOVE RECEPTACLE. EXISTING WIRING TO REMAIN TO BE REUSED IN RENOVATION.

DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN

(D) INDICATES ITEM TO BE DEMOLISHED

(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK

(RL) INDICATES RELOCATED ITEM

PANELBOARD SCHEDULE

DESIGNATION: PP1E

MAINS: 150A
TYPE: NQOD
O.C. DEVICE: M.C.B.

VOLTAGE: 120/208V-3Ø-4W
MINIMUM O.C. DEVICE
INTERRUPTING RATING: 10,000 A.I.C.

LOCATION: ELEC. CLOSET 127A
FED BY: DIST. PANEL DP1AC
MOUNTING: SURFACE

SINGLE PANEL
DOUBLE PANEL
COMMON COVER

CKT NO.	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO.
1	1	20	2#12	#12	3/4"	RECEPTACLES-RES. RM. 137	1.4	.9	——	——	——	PLUGMOLD-COMPUTER LAB 134	3/4"	#12	2#12	20	1	2
3	1	20	2#12	#12	3/4"	RECEPT-RES. RM 152A/SP. ED. 135	——	——	1.1	.9	——	PLUGMOLD-COMPUTER LAB 134	3/4"	#12	2#12	20	1	4
5	1	20	2#12	#12	3/4"	REFRIGERATOR-SP. ED. 135	——	——	——	1.0	1.2	PLUGMOLD-COMPUTER LAB 134	3/4"	#12	2#12	20	1	6
7	1	20	2#12	#12	3/4"	RECEPTACLES-SP. ED. 133/135	1.1	1.2	——	——	——	PLUGMOLD-COMPUTER LAB 134	3/4"	#12	2#12	20	1	8
9	1	20	2#12	#12	3/4"	RECEPT-SP. ED. 133/135	——	——	1.0	1.2	——	PLUGMOLD-COMPUTER LAB 134	3/4"	#12	2#12	20	1	10
11	1	20	2#12	#12	3/4"	U.C. REFRIGERATOR-SP. ED. 133	——	——	——	1.0	1.4	FLOORBOX-COMPUTER LAB 134	3/4"	#12	2#12	20	1	12
13	1	20	2#12	#12	3/4"	RECEPTACLES-SPEC. ED. 133	1.1	1.2	——	——	——	FLOORBOX-COMPUTER LAB 134	3/4"	#12	2#12	20	1	14
15	1	20	2#12	#12	3/4"	RECEPTACLES-SPEC. ED. 133	——	——	1.1	.8	——	RECEPTACLES-ESL 132	3/4"	#12	2#12	20	1	16
17	1	20	2#12	#12	3/4"	RECEPTACLES-AISLE 144A	——	——	——	——	1.2	.9	RECEPTACLES-ESL 132	3/4"	#12	2#12	20	1	18
19	1	20	2#12	#12	3/4"	RECEPTACLES-OCC./PHY THER 144	.9	.9	——	——	——	——	RECEPTACLES-GYM. EQUIP. 128A	3/4"	#12	2#12	20	1	20
21	1	20	2#12	#12	3/4"	GFI RECEPTS-OCC./PHY THER 144	——	——	.5	.6	——	——					/	22
23	1	20	2#12	#12	3/4"	GFI RECEPTS-OCC./PHY THER 144	——	——	——	——	.5	.6	WASHER/EXTRACTOR-LAUNDRY 145	3/4"	#12	3#12	20	3	24
25	1	20	2#12	#12	3/4"	RECEPTACLES-TREATMENT 143	.8	.6	——	——	——	——					/	26
27	1	20	2#12	#12	3/4"	RECEPTACLES-TREATMENT 142	——	——	1.0	.1	——	——	CH-5	3/4"	#12	2#12	20	1	28
29	1	20	2#12	#12	3/4"	RECEPTACLES-OFFICE 141	——	——	——	——	1.0	1.2	DRYER LAUNDRY 145	3/4"	#12	2#12	20	1	30
31	1	20	2#12	#12	3/4"	RECEPTACLES-OFFICE 140	1.0	-	——	——	——	——	SPARE	3/4"	#12	2#12	20	1	32
33	1	20	2#12	#12	3/4"	RECEPTACLES-BOY'S LOCKER 147	——	——	1.3	.4	——	——	PROJECTOR 133	3/4"	#12	2#12	20	1	34
35	1	20	2#12	#12	3/4"	HANDDRYERS	——	——	——	——	1.0	-	SPARE				20	1	36
37	1	20				SPARE	-	-	——	——	——	——	SPARE				20	1	38
39	1	20				SPARE	——	——	-	-	——	——	SPARE				20	1	40
41	1	20				SPARE	——	——	——	——	-	-	SPARE				20	1	42

DESIGNATION: PP1E

CKT NO.	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO.	
43	1	20				RECEPTACLES-EXAM 131D	.8	1.0	——	——	——	——	RECEPTACLE-ELEC. WATER COOLER				20	1	44	
45	1	20				RECEPTACLES-EXAM 131C	——	——	1.2	.4	——	——	ELEC. DOOR STRIKES				20	1	46	
47	1	20				RECEPTACLE-U.C. REFRIGERATOR	——	——	——	——	1.0	0.8	RECS - MOTHERS ROOM	3/4"	#12	2#12	20	1	48	★
49	1	20				RECEPTACLES-NURSE STATION 131	1.2	1.7	——	——	——	——	HANDDRYER - MOTHER'S RM	3/4"	#12	2#12	20	1	50	★
51	1	20				GFI RECEPTACLES-TUBE FEED 131G	——	——	1.2	-	——	——	SPARE				20	1	52	
53	1	20				GFI RECEPTACLES-TUBE FEED 131G	——	——	——	——	1.2	-	SPARE				20	1	54	
55	1	20				RECEPTACLES-CORR. 152/TOILET RMS	.5	-	——	——	——	-	SPARE				20	1	56	
57	1	20				SPARE	——	——	-	-	——	——	SPARE				20	1	58	
59	1	20				SPARE	——	——	——	——	-	-	SPARE				20	1	60	
61	1	20				SPARE	-	-	——	——	——	——	SPARE				20	1	62	
63	1	20				SPARE	——	——	-	-	——	——	SPACE					1	64	
65	1	20				WASHER - LAUNDRY 131A	——	——	——	——	.6	-	SPACE					1	66	
67	2	30				ELECTRIC DRYER -LAUNDRY 131A	1.5	-	——	——	——	——	SPACE					1	68	
69	/						——	——	1.5	-	——	——	SPACE					1	70	
71	1					SPACE	——	——	——	——	-	-	SPACE					1	72	
73	1					SPACE	-	-	——	——	——	——	SPACE					1	74	
75	1					SPACE	——	——	-	-	——	——	SPACE					1	76	
77	1					SPACE	——	——	——	——	-	-	SPACE					1	78	
79	1					SPACE	-	-	——	——	——	——	SPACE					1	80	
81	1					SPACE	——	——	-	-	——	——	SPACE					1	82	
83	1					SPACE	——	——	——	——	-	-	SPACE					1	84	
						CONNECTED KVA PER PHASE	17.8	14.3	15.1											

★ UTILIZE EXISTING SPARE CIRCUIT BREAKER

TOTAL CONNECTED KVA 47.2

TOTAL DEMAND KVA 33.04

91.71 TOTAL DEMAND AMPERES

ELECTRICAL SYMBOL LEGEND

- 2' x 2' RECESSED LED LIGHT FIXTURE TYPICAL ALL FIXTURES:
  - 'A' - UPPER CASE LETTER INDICATES FIXTURE TYPE
- SURFACE MOUNTED LIGHT FIXTURE
- $X — WALL MOUNTED LINE VOLTAGE LIGHT SWITCH MOUNT AT 44" A.F.F. TO CENTER, OR 6" ABOVE COUNTER BACKSPLASH TO CENTER WHEN MOUNTED ABOVE COUNTER. U.O.N.
  - 'OS' - INTEGRAL OCCUPANCY SENSOR
- OS — WIRELESS CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR
- 208/120V BRANCH CIRCUIT PANELBOARD-SURFACE MOUNTED
- 480/277V BRANCH CIRCUIT PANELBOARD-SURFACE MOUNTED
- HOMERUN TO PANEL
- WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE MOUNTED RECESSED 18" A.F.F. TO ↿ (TYP. ALL RECEPTACLES UNLESS OTHERWISE NOTED)
  - 'GFCI' - GROUND FAULT CIRCUIT INTERRUPTER (G.F.C.I.) RECEPTACLE
- WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE, MOUNTED 48" A.F.F. TO ↿, U.O.N.
- J — JUNCTION BOX
- WALL MOUNTED MULTI-TAP (15/30/75/110 CD) ADA COMPLIANT FIRE ALARM VISUAL ONLY UNIT (MOUNT 80" A.F.F. TO BOTTOM).
- S — CEILING MOUNTED SMOKE DETECTOR
- V — CEILING MOUNTED VAPE DETECTOR
- S — CEILING MOUNTED PAGING SPEAKER

MOTHER'S ROOM ELECTRICAL RENOVATION PLAN

2 / K-8 E-100

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

ELECTRICAL RENOVATION KEYNOTES

1. CONNECT NEW LIGHT FIXTURES TO EXISTING LIGHTING CIRCUIT USING 2#12, #12G IN 3/4"C. PROVIDE A NEW LIGHT SWITCH WITH INTEGRAL OCCUPANCY SENSOR.
2. REINSTALL EXISTING FIRE ALARM STROBE EXTENDING EXISTING FIRE ALARM WIRING AND CONDUIT AS REQUIRED.
3. RELOCATE RECEPTACLE, PROVIDING NEW DEVICE. CONNECT TO EXISTING CIRCUIT EXTENDING CONDUIT AND WIRING AS REQUIRED.
4. PROVIDE NEW LIGHT SWITCH FOR TEAM ROOM 148.
5. ALL RECEPTACLES WITHIN MOTHERS ROOM ARE TO BE WIRED TO PANEL PP1E-48.

REVISIONS

Issued for Bidding
December 1, 2025

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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BSN SED #3-15-02-06-4-015-006
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New York • Pennsylvania

PROJECT TITLE:

Johnson City Central School District
Johnson City, NY

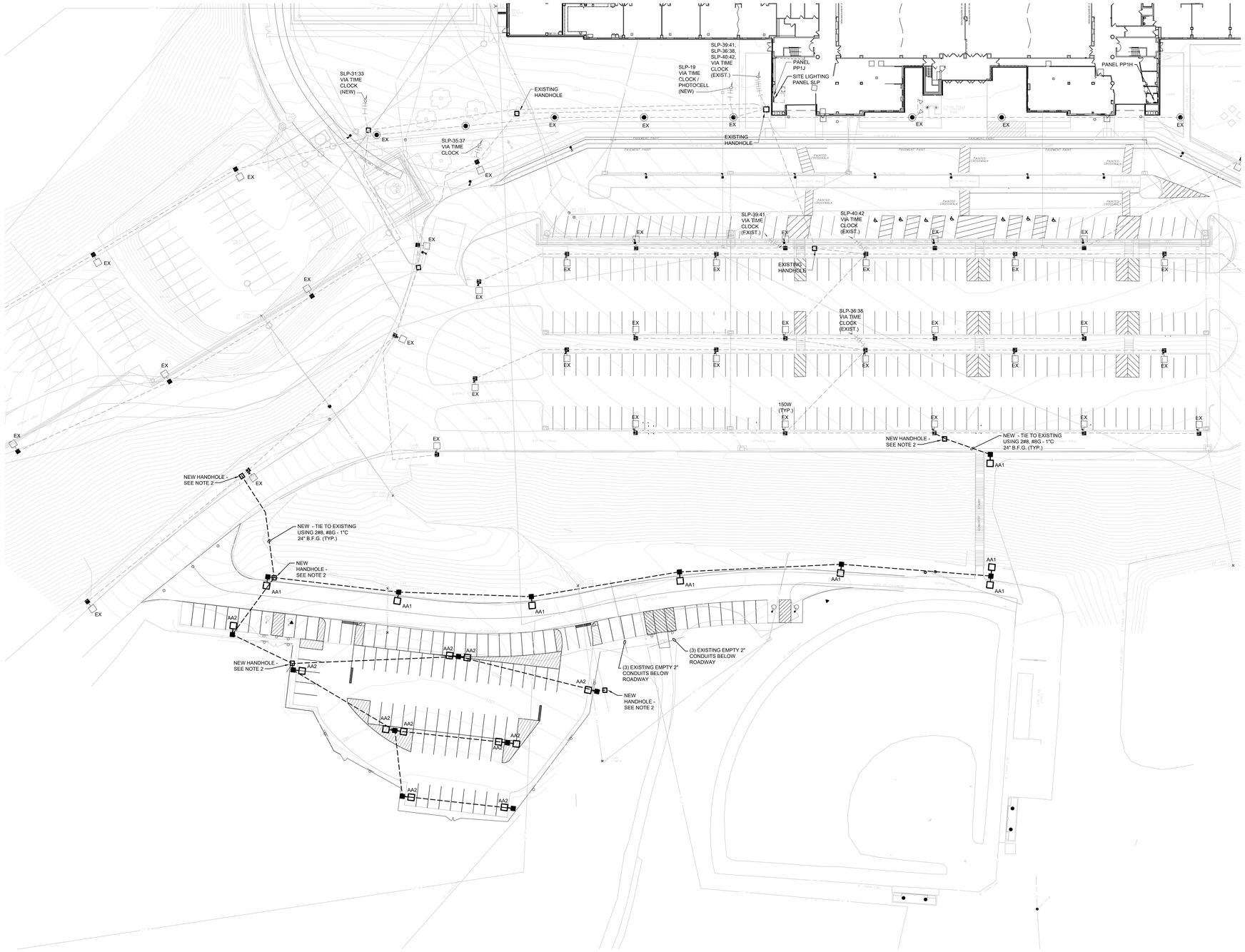
Capital Project 2025 2026
Phase 2

DRAWING TITLE:

MOTHER'S ROOM ELECTRICAL RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	K-8 / E-100
DATE: 12-01-2025	

CAD FILE PLOT DATE: 11/26/2025



1 K8 ES-100

ELECTRICAL SITE RENOVATION PLAN

SCALE: 1" = 30'

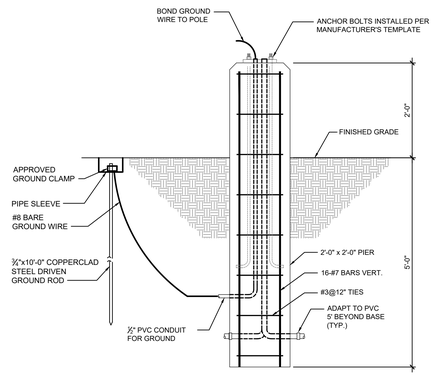
ALL NEW SITE LIGHTING SHALL BE AN ALTERNATE

SITE RENOVATION PLAN NOTES:

1. PROVIDE NEW LED AREA LIGHTS, POLES, POLE BASES AND WIRING / CONDUIT AS INDICATED (SHOWN DARK). ALL NEW AREA LIGHTS / POLES SHALL MATCH EXISTING. REFER TO SITE LIGHTING FIXTURE SCHEDULE THIS SHEET.
2. PROVIDE HANDHOLES WITH COVER FOR SITE LIGHTING CIRCUITING AT LOCATIONS SHOWN. COVER SHALL BE MARKED "ELECTRIC". REFER TO HANDHOLE DETAIL ON DRAWING ES-100.
3. CONDUITS ENTERING OR LEAVING BUILDING, POLES OR HANDHOLES SHALL BE GALVANIZED RIGID STEEL FOR THE FIRST 5 FT. BEYOND THESE ITEMS. ADAPT TO SCHEDULE 40 PVC AT THIS POINT. WHERE USED FOR SITE LIGHTING SCHEDULE 40 PVC CONDUIT SHALL ONLY BE REQUIRED TO BE ENCASED IN CONCRETE WHERE IT IS INSTALLED UNDER ROADWAYS. IT SHALL ALSO BE PERMITTED TO USE GALVANIZED RIGID STEEL WHERE INSTALLED UNDER ROADWAYS AND 5 FT. BEYOND.
4. RESTORE ALL GRASS, LANDSCAPING, WALKS, PAVES, CONC., ETC. DISTURBED BY THIS WORK TO ITS ORIGINAL STATE.

RENOVATION KEY

EX - EXISTING TO REMAIN



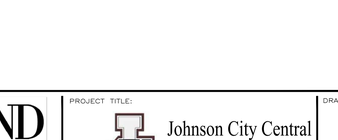
2 K8 ES-100

PARKING AREA POLE BASE DETAIL

SCALE: NONE

NOTES:

1. CONCRETE SHALL DEVELOP A STRENGTH OF 4000 PSI AT 28 DAYS (U.O.N.)
2. ALL UNDERGROUND CONDUITS SHALL BE RUN 24" MINIMUM BELOW FINISHED GRADE. INSTALL IN CONCRETE ENCASEMENT WHERE INSTALLED BELOW ROADWAY.



3 K8 ES-100

HANDHOLE DETAIL

SCALE: NONE

NOTE:

1. PROVIDE 11"x18"x18"D STACKABLE PULL BOX. WITH COVER AT LOCATION SHOWN. COVER SHALL BE MARKED "POWER", OR "COMM." AS REQUIRED. BOX SHALL BE OPEN BOTTOM AND BE CONSTRUCTED OF POLYMER CONCRETE AND REINFORCED BY A HEAVY WEAVE FIBERGLASS. PULL BOX SHALL BE QUAZITE, PART NO. PG1118BG18, OR APPROVED EQUAL. PROVIDE 12" OF GRAVEL AT BOTTOM OF BOX FOR DRAINAGE.

SITE LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	LAMPS	VOLTS	DESCRIPTION
AA1	BARRON TRACE-LITE	RxA-150-3-HVS-4K-BR-A-TL-SCE - TLPRH	150 W LED 20,800 LUMENS	480V	RxA SERIES AREA LIGHT WITH TYPE III DISTRIBUTION, BRONZE FINISH, PHOTOCELL & MOTION SENSOR OPTIONS. PROVIDE 25' HIGH SQUARE STRAIGHT ALUMINUM POLE TO MATCH EXISTING.
AA2	BARRON TRACE-LITE	RxA-150-4-HVS-4K-BR-A-TL-SCE - TLPRH	150 W LED 20,800 LUMENS	480V	RxA SERIES AREA LIGHT WITH TYPE IV DISTRIBUTION, BRONZE FINISH, PHOTOCELL & MOTION SENSOR OPTIONS. PROVIDE 25' HIGH SQUARE STRAIGHT ALUMINUM POLE TO MATCH EXISTING.
EX / RL	BARRON TRACE-LITE	RxA-150-3-HVS-4K-BR-A-TL-SCE - TLPRH	150 W LED 20,800 LUMENS	480V	RxA SERIES AREA LIGHT WITH TYPE III DISTRIBUTION, BRONZE FINISH, PHOTOCELL & MOTION SENSOR OPTIONS. MOUNTED ON EXISTING 25' HIGH SQUARE STRAIGHT ALUMINUM POLE AND BASE.

SITE LIGHTING PANEL — EXISTING PANELBOARD SCHEDULE

DESIGNATION: SLP
MAINS: 100A
TYPE: NQOD
O.C. DEVICE: M.L.O.
VOLTAGE: 480/277V-3Ø-4W
MINIMUM O.C. DEVICE INTERRUPTING RATING: 14,000 AIC
LOCATION: CLOSET 169B
FED BY: SWBD.
MOUNTING: SURFACE
SINGLE PANEL
DOUBLE PANEL
COMMON COVER

	CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
★	1	1	20	2#10	#10	3/4"	LIGHTING - EXT VISITOR ENR SOUTH	1.5	0.4	——	——	——				/	/	2
★	3	1	20	2#10	#10	3/4"	LIGHTING - EXT "A" ENTRANCE CANOPY	——	——	1.1	0.4	——				15	3	4
★	5	1	20	2#10	#10	3/4"	LIGHTING - EXT VISITORS ENT & FLAGPOLE	——	——	——	2.1	0.4				/	/	6
★	7	1	20	2#10	#10	3/4"	LIGHTING - EXT "B" ENTRANCE CANOPY	1.1	1.0	——	——	——	BUILDING LIGHTING	3/4"	#10	2#10	20	1	8	★
★	9	1	20	2#10	#10	3/4"	LIGHTING - EXT. "B" CLASSROOM WING	——	——	0.9	-	——					/	/	10	
★	11	1	20	2#10	#10	3/4"	LIGHTING - EXT. "A" CLASSROOM WING "UP"	——	——	——	1.3	-	BC-1 - CLOSET 153B				15	3	12	
	13	1	20	2#12	#12	3/4"	TIME CLOCK FOR SITE LTG.	0.50	-	——	——	——					/	/	14	
★	15	1	20	2#8	#8	3/4"	ELEMENTARY SCHOOL SIGNAGE	——	——	0.8	-	——	SPARE				20	1	16	
★	17	1	20	2#10	#10	3/4"	MIDDLE SCHOOL SIGNAGE	——	——	——	0.8	-	SPARE				20	1	18	
★	19	1	20	2#10	#10	3/4"	SIDEWALK LIGHTING	0.6	-	——	——	——	SPARE				20	1	20	
	21	1	20				SPARE	——	——	-	-	——	SPARE				20	1	22	
	23	1	20				SPARE	——	——	——	-	-	SPARE				20	1	24	
	25	1					SPACE	-	-	——	——	——	SPACE					1	26	
	27	1					SPACE	——	——	-	-	——	SPACE					1	28	
	29	1					SPACE	——	——	——	-	-	SPACE					1	30	
★★	31	2	20	3#8	#8	1"	PARKING AREA LTG	0.6	-	——	——	——	SPACE					1	32	
	33	/						——	——	0.6	-	——	SPACE					1	34	
★★	35	2	20	3#8	#8	1"	ACCESS ROAD., SOFTBALL PARKING LTG.	——	——	——	2.4	0.8	PARKING LOT LTG.	1"	#10	3#10	20	2	36	★★
	37	/						2.4	0.8	——	——	——						/	38	
★★	39	2	20	3#10	#8	1"	PARKING LOT LTG.	——	——	0.3	0.6	——	PARKING LOT LTG.	1"	#10	3#10	20	2	40	★★
	41	/						——	——	——	0.3	0.6						/	42	
							CONNECTED KVA PER PHASE			8.9		4.7						8.7		

★ PHOTOCELL / TIME CLOCK CONTROLLED CIRCUITS.

★★ TIME CLOCK CONTROLLED CIRCUITS (FIXTURES PROVIDED WITH INTEGRAL PHOTOCELL)

TOTAL CONNECTED KVA: 22.3
TOTAL DEMAND KVA: 22.3
26.8 TOTAL DEMAND AMPERES

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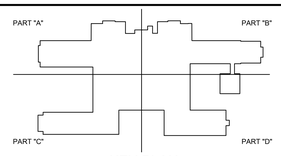
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

REVISIONS

Issued for Bidding
December 1, 2025



KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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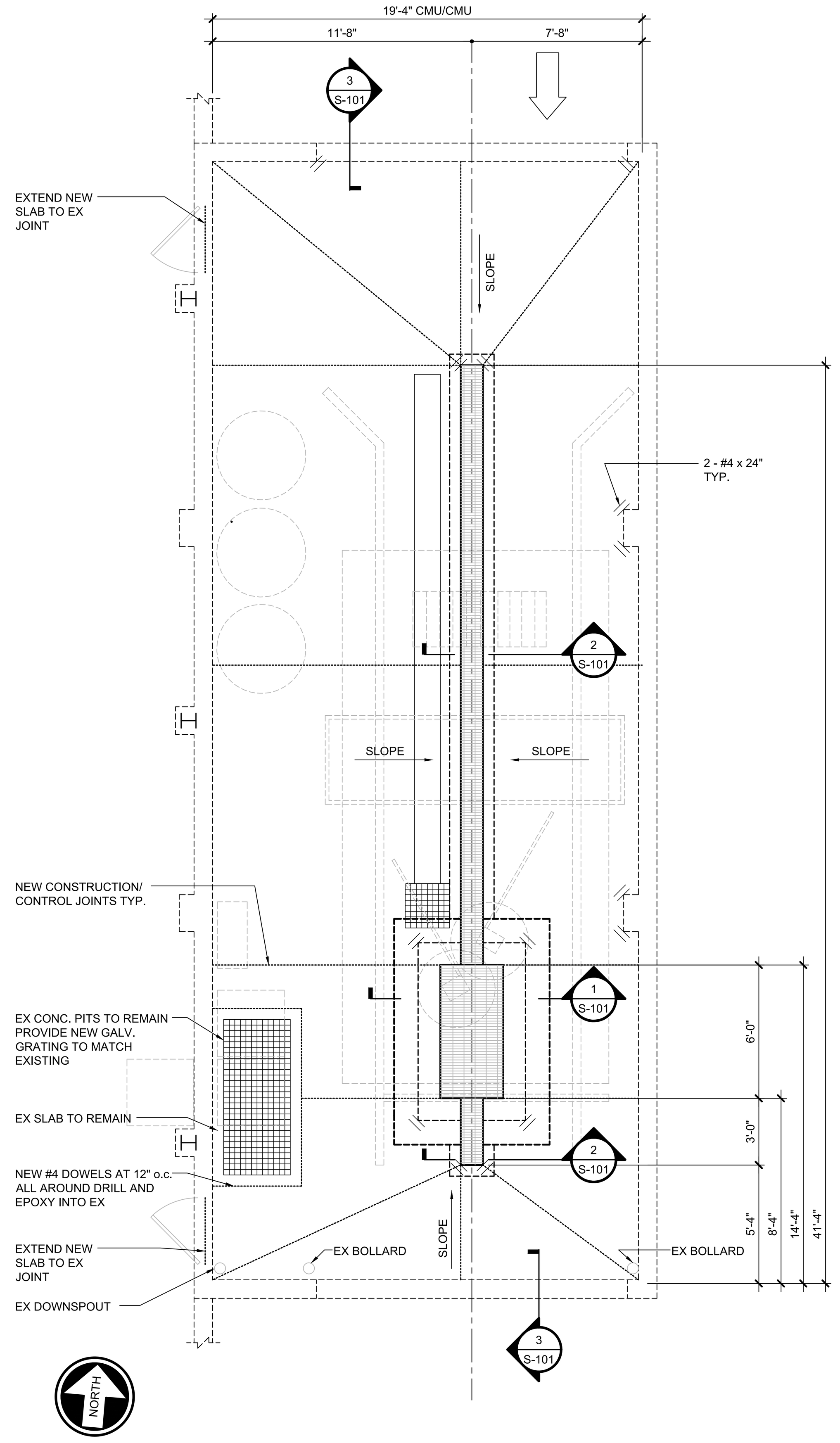
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
SOFTBALL FIELD
ELECTRICAL
SITE RENOVATON PLAN

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
L.K.N.	K-8 / ES-100
DATE: 12-01-2025	

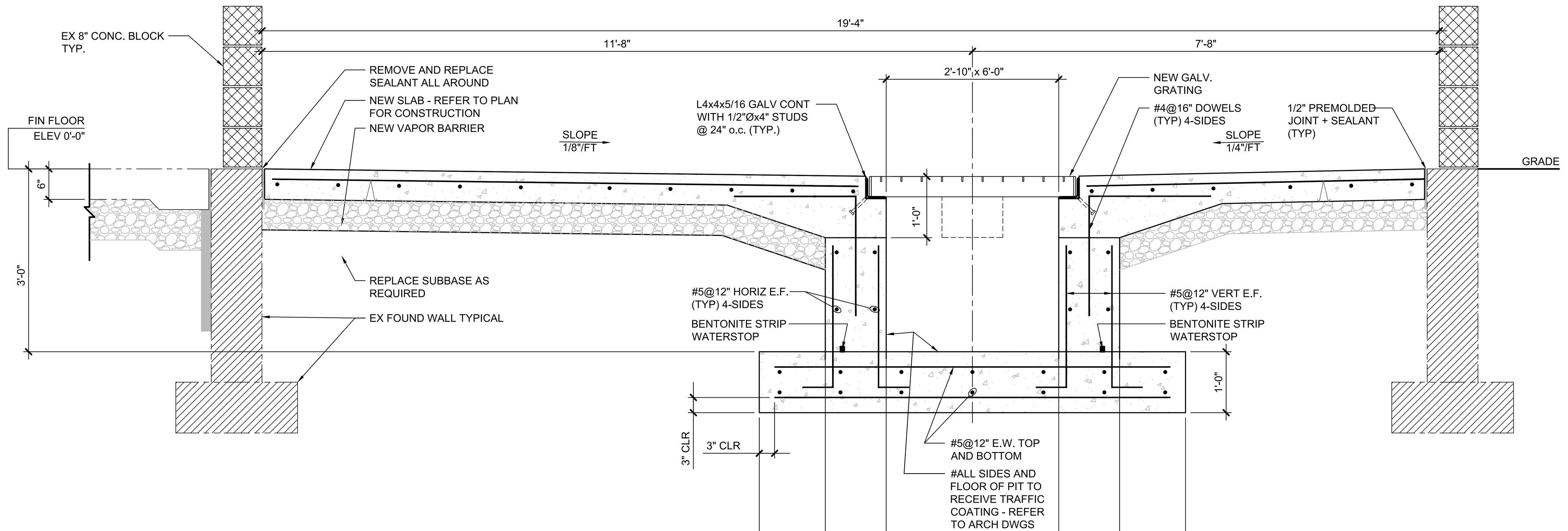
CAPITAL PROJECTS FILE DATE: 11/24/2025



FOUNDATION PLAN

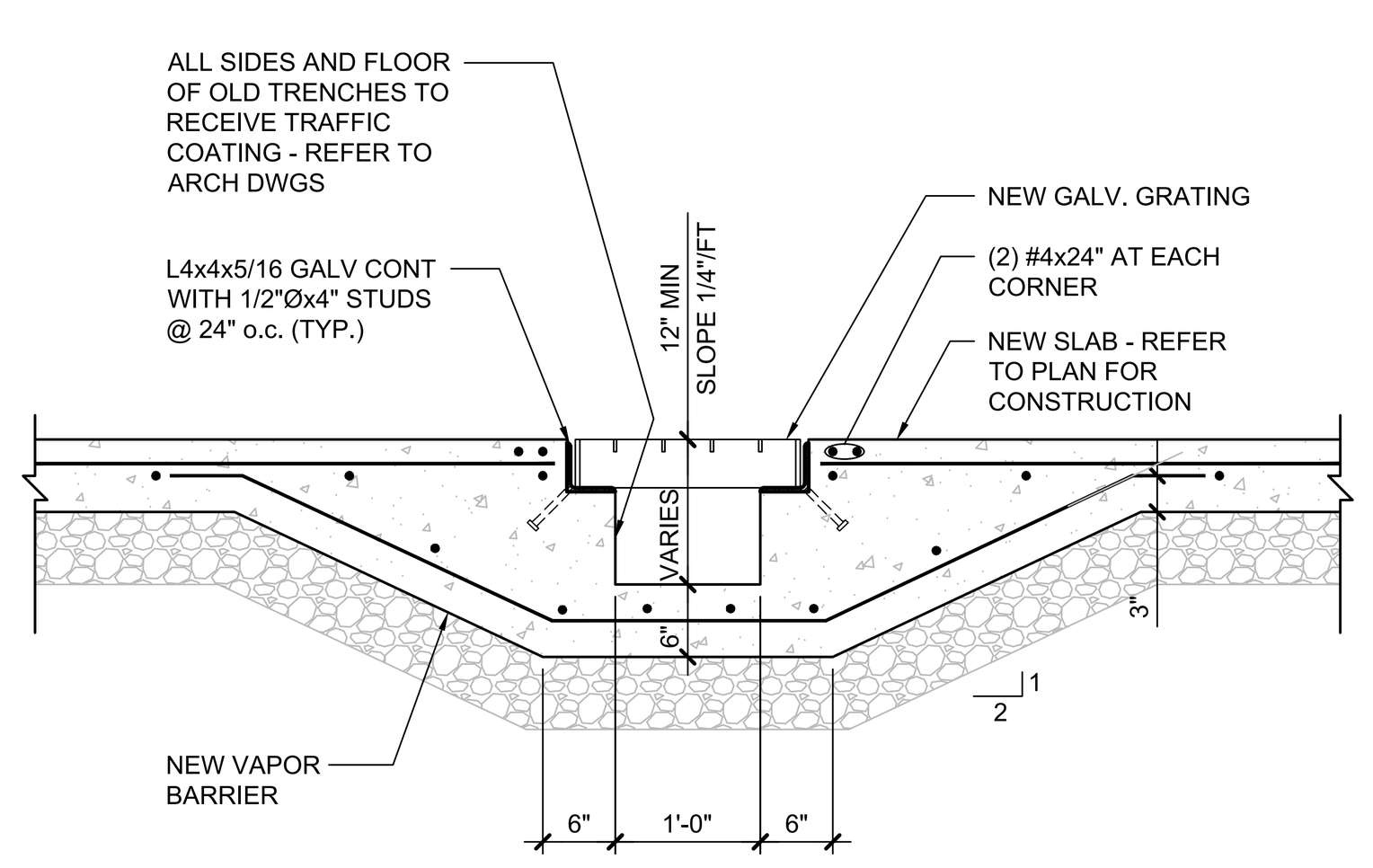
SCALE: 1/4"=1'-0"

- REFER TO ARCH DWGS FOR DEMOLITION
- NEW SLAB CONSTRUCTION:
  - 6" CONCRETE SLAB-ON-GRADE OF 4500PSI @ 28 DAYS NORMAL WEIGHT CONCRETE WITH 6% AIR
  - REINFORCED WITH #4@16 ON-CENTER EACH WAY, 2" FROM TOP OF SLAB, ON CHAIRS @ 48" ON-CENTER AND FIBERMESH
  - ON 15 MIL REINFORCED VAPOR BARRIER
  - ON 6" AASHTO #57 SUBBASE
  - DOWEL NEW SLAB TO EXISTING SLAB USING #4 BARS @ 16" o.c. EPOXY 6" INTO EXISTING SLAB
- ALL NEW REINFORCEMENT SHALL BE HOT-DIPPED GALVANIZED
- VERIFY ALL NEW SUB-SLAB UTILITIES WITH APPROVED MANUFACTURER SHOP DRAWINGS
- TOP OF ALL NEW UTILITIES SHALL BE MINIMUM OF 2" BELOW BOTTOM OF SLAB
- ALL DISUSED UTILITIES SHALL BE COMPLETELY REMOVED AND BACKFILLED WITH #57 STONE
- ALL NEW WORK SHALL BE INSPECTED AND TESTED
- BACKFILL SHALL BE BROUGHT UP IN 6" LIFTS AND COMPACTED TO 95% MAX MODIFIED DENSITY
- THICKEN SLAB AS REQUIRED FOR ANY EMBEDDED ITEMS OR ANCHORS REQUIRED BY EQUIPMENT MANUFACTURER
- NEW GRATING SHALL BE:
  - HOP-DIPPED GALVANIZED, WELDED
  - 4"x3/8" BEARING BARS AT 1-3/8" ON-CENTER AND CROSS BARS AT 4" ON-CENTER (22-W-4)
  - TOP SURFACE SHALL BE SMOOTH
  - FURNISHED GRATING IN REMOVABLE SECTIONS (LESS THAN 200#)
  - SHIM GRATING AS REQUIRED TO LEVEL (WITH GALV. SHIMS)
  - FASTEN AT 48" ON-CENTER MAX
- SLAB TO RECEIVE TRAFFIC COATING - REFER TO SPEC



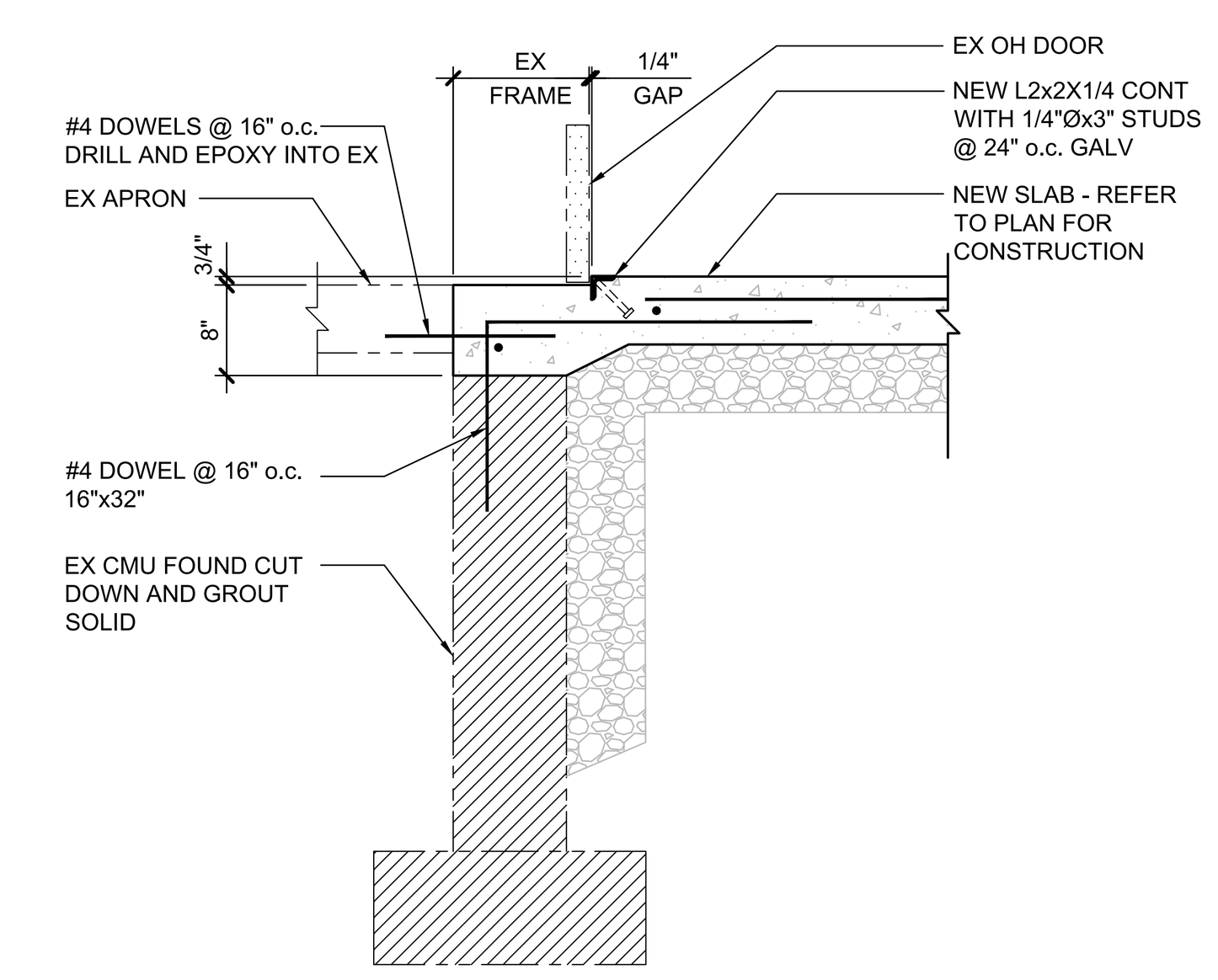
1 / S-101 — FOUNDATION SECTION AT PIT

SCALE: 3/4"=1'-0"



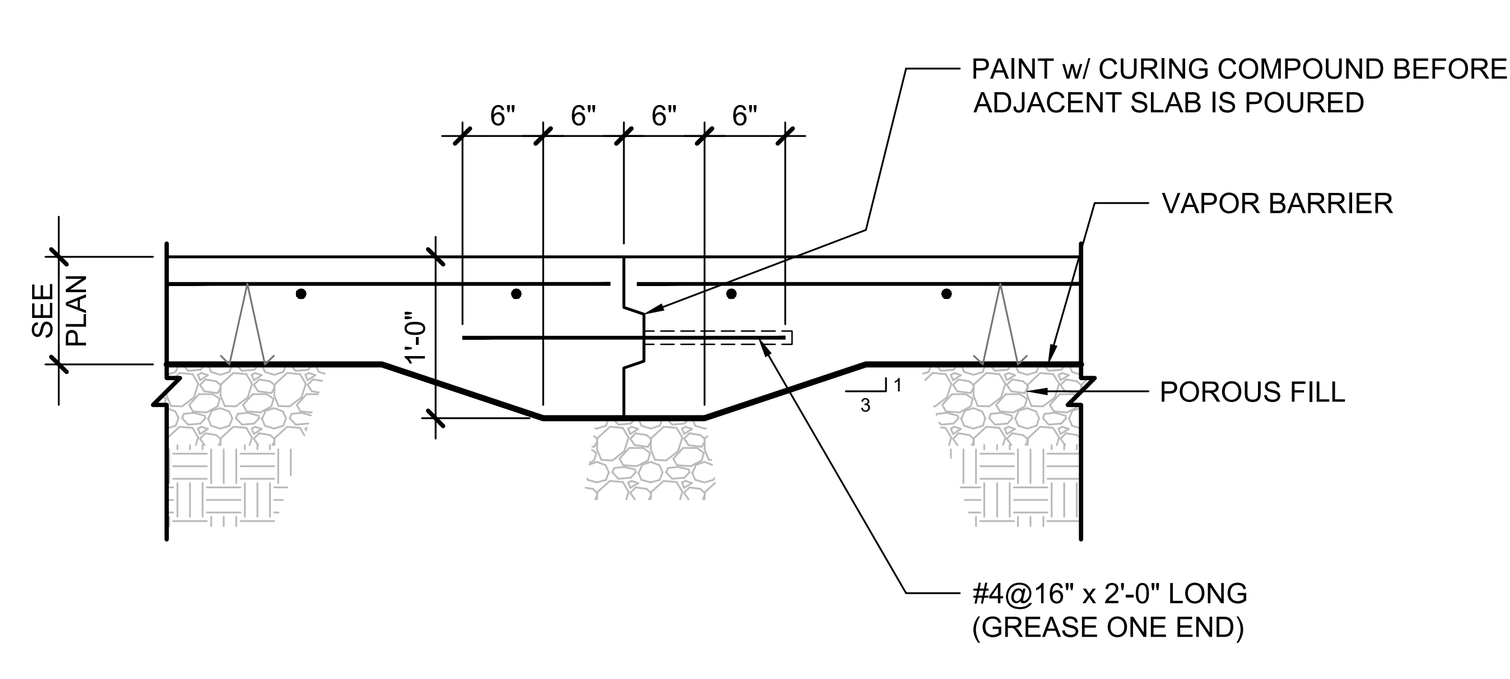
2 / S-101 — SECTION: TRENCH DRAIN

SCALE: 3/4"=1'-0"



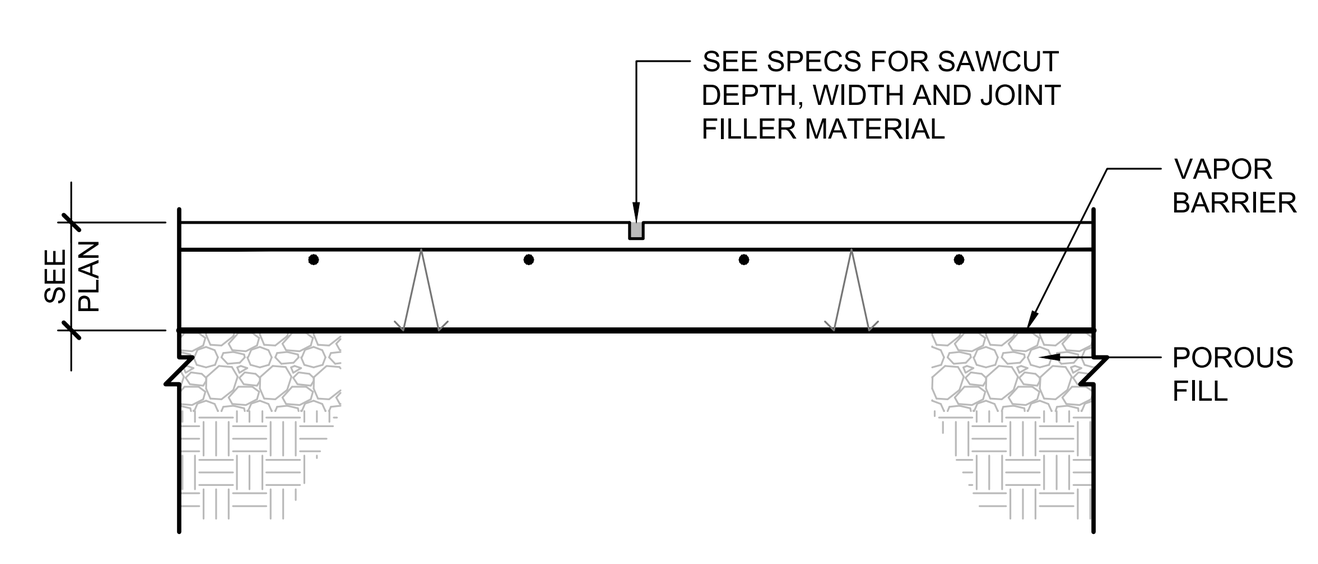
3 / S-101 — SECTION: OVERHEAD DOOR

SCALE: 3/4"=1'-0"



TYPICAL CONSTRUCTION JOINT DETAIL

NOT TO SCALE



TYPICAL CONTRACTION JOINT DETAIL

NOT TO SCALE

REQUIRED SPECIAL INSPECTIONS

OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO OBSERVE THE CONSTRUCTION OF THE FOLLOWING ITEMS FOR CONFORMANCE TO CONTRACT DOCUMENTS AND CODE REQUIREMENTS:

FOR ADDITIONAL INFORMATION REFER TO:
2018 INTERNATIONAL BUILDING CODE CHAPTER 17
2020 BUILDING CODE OF NEW YORK STATE
2016 AMERICAN SOCIETY OF CIVIL ENGINEERS 7
2014 AMERICAN CONCRETE INSTITUTE SECTION 26.13

ALL COORDINATION AND SCHEDULING OF TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR.

SPECIAL INSPECTION AGENCY MUST OBTAIN APPROVAL IN WRITING FROM ENGINEER TO ALTER PROCEDURES OR INSPECTIONS OR WAIVE REQUIREMENTS.

CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL REQUIRED MUNICIPAL INSPECTIONS AND ALL SPECIAL INSPECTIONS WITH AUTHORITY HAVING JURISDICTION (AHJ).

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHARGES DUE TO ANY SPECIAL INSPECTIONS WHICH ARE CANCELED.

INSPECTION AGENCY SHALL REPORT TO THE OWNER, CONSTRUCTION MANAGER, CONTRACTOR AND ENGINEER WITHIN 24 HOURS AFTER COMPLETION OF TESTING THAT TESTING HAS TAKEN PLACE AND NO NEGATIVE RESULTS WERE FOUND. IF NEGATIVE RESULTS ARE FOUND, THEY SHALL BE REPORTED IMMEDIATELY TO ALL PARTIES FOR CORRECTIVE ACTION.

ITEMS FOR OBSERVATION AND TESTING (ALL TEST SPECIMENS SHALL BE PREPARED BY TESTING AGENCY, NOT CONTRACTOR):

C1. PERIODIC OBSERVATION OF SLAB FORMWORK PRIOR TO PLACEMENT OF CONCRETE (FREE OF DEBRIS, LEVEL, DRY, USE OF BAR SUPPORTS / CHAIRS).

C2. PERIODIC OBSERVATION OF THE POSITION OF REINFORCING, PRIOR TO PLACING CONCRETE (PLUMB AND LEVEL; PROPERLY TIED; AT CORRECT SPACING; CORRECT SIZE; CORRECTLY SUPPORTED; CORRECT CLEARANCE).

C3. PERIODIC OBSERVATION OF LENGTH AND LOCATIONS OF REINFORCING LAPS.

C4. CONTINUOUS OBSERVATION OF CONCRETE PLACEMENT PROCEDURE (CHUTE, TREMIE, PUMPING AND VIBRATION TECHNIQUES).

C5. PERIODIC VERIFICATION THAT APPROVED CONCRETE MIX DESIGN IS IN USE.

C6. PERIODIC VERIFICATION THAT SPECIFIED CURING TEMPERATURES AND TECHNIQUES ARE IN USE AND BEING MAINTAINED.

C7. PERIODIC OBSERVATION THAT COLD AND/OR HOT WEATHER PROCEDURES ARE IN USE AND BEING MAINTAINED.

C8. PERIODIC CONCRETE TESTING FOR COMPRESSIVE STRENGTH, AIR CONTENT, TEMPERATURE, WEIGHT, AND SLUMP; DATE AND TIME OF SAMPLES; SIX CYLINDERS PER 25 CUBIC YARDS FOR ALL STRUCTURAL AND NON-STRUCTURAL CONCRETE, TWO TESTED AT 7 DAYS, TWO TESTED AT 28 DAYS, AND TWO RESERVED FOR 56 DAYS. TESTING AGENCY SHALL PREPARE CYLINDERS AND SAMPLE AT THE POINT OF PLACEMENT AFTER THE FIRST YARD HAS DISCHARGED.

C9. PERIODIC OBSERVATION OF COLUMN ANCHOR RODS THE CORRECT SIZE , SPACING, ELEVATION, AND EMBEDMENT PRIOR TO CONCRETING.

GENERAL NOTES:

UNLESS OTHERWISE NOTED OR SHOWN ON PLAN, THE FOLLOWING NOTES SHALL APPLY:

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE ACI 318 (LATEST EDITION).
2. ALL POURED-IN-PLACE STONE CONCRETE SHALL DEVELOP A STRENGTH OF 4500 PSI AT 28 DAYS (U.O.N.).
3. ALL REINFORCEMENT SHALL BE DEFORMED BARS ASTM DESIGNATION A615, GRADE 60.
4. CONCRETE PROTECTION FOR REINFORCEMENT SHALL CONFORM TO LATEST A.C.I. SPECIFICATION.
5. ALL TEMPERATURE REINFORCING SHALL BE SUFFICIENTLY EMBEDDED TO DEVELOP FULL STRENGTH IN ALL CONCRETE WALLS AND SLABS.
6. PROVIDE ADEQUATE TIES FOR ALL REINFORCEMENT IN SLABS, BEAMS, PIERS AND WALLS. REINFORCEMENT TO BE HELD AT CORRECT DISTANCE FROM FORMS, EARTH AND METAL DECK BY STEEL CHAIRS OR TIES.
7. FOLLOW C.R.S.I. RULES FOR PLACING OF ALL REINFORCING STEEL AND ACCESSORIES.
8. NO CONCRETE SHALL BE POURED UNTIL THE PRELIMINARY TESTS REQUIRED HAVE BEEN MADE, REPORTS THEREOF FILED WITH THE ENGINEER, AND APPROVED. THE CONTROLLED CONCRETE TO BE USED SHALL CONFORM TO THE APPROVED DESIGN MIX OBTAINED AS A RESULT OF THE PRELIMINARY TESTS. THE USE OF ANY ADDITIVES NOT PRESENT IN THE PRELIMINARY TEST MIX IS PROHIBITED.
9. REPRESENTATIVE TEST CYLINDERS WILL BE TAKEN FROM THE CONCRETE PLACED EACH DAY IN ACCORDANCE WITH CONCRETE SPECIFICATIONS.
10. WELDED WIRE FABRIC SHALL HAVE A MINIMUM ULTIMATE STRENGTH OF 70,000 PSI AND SHALL CONFORM TO ASTM A185 AND A497.
11. ALL MESH SHALL BE SPLICED SO THAT THE OVERLAP BETWEEN OUTERMOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES.
12. THIS CONTRACTOR SHALL COOPERATE WITH OTHER TRADES AND WHERE REQUIRED INSTALL ALL BUILT-IN WORK, SLEEVES, INSERTS, ETC. AS REQUIRED FOR A COMPLETE JOB.
13. STRUCTURAL SLABS ON GRADE SHALL BE OF A THICKNESS AND REINFORCED AS INDICATED ON THE DRAWINGS.
14. ALL SLABS ON GRADE SHALL HAVE THICKENINGS, DEPRESSIONS, OPENINGS, ETC. AS REQUIRED OR AS SHOWN HEREIN OR ON THE ARCHITECTURAL DRAWINGS.
15. TOP ELEVATION OF SLABS SHALL VARY ACCORDING TO FINISH FLOOR MATERIAL. SEE ARCHITECTURAL DRAWINGS.
16. FOR SLAB ON GRADE, CONTRACTOR IS PERMITTED TO CAST AS MUCH CONCRETE AS CAN BE PLACED AND FINISHED IN ONE OPERATION SO THAT COLD JOINTS ARE NOT PRODUCED. MAXIMUM SPACING OF CONTRACTION JOINTS SHALL BE 12'-0" O.C.
17. ALL EXCAVATIONS SHALL BE KEPT DRY BY PUMPING UNTIL ALL UNDERGROUND CONSTRUCTION IS COMPLETE.
18. LOOSENED BEARING SOILS SHALL BE RECOMPACTED WITH A SMALL VIBRATORY PLATE COMPACTOR PRIOR TO PLACEMENT OF REINFORCING BARS.
19. ALL BACKFILL SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF FOUNDATION WALLS UNTIL THE FINAL ELEVATION IS ACHIEVED. VARIATIONS SHALL NOT EXCEED 2'-0" BETWEEN BACKFILL ELEVATIONS ON EITHER SIDE WITHOUT ENGINEER'S APPROVAL.
20. PROVIDE TWO #5 BARS 24" LONG AT EACH CORNER OF ALL OPENINGS IN FLOOR SLAB (SUPPORTED AND ON GRADE), INCLUDING IF SLAB IS POURED AROUND WALLS.
21. ATTACHMENT OF ANY EQUIPMENT TO THE STRUCTURE IS THE RESPONSIBILITY OF THE EQUIPMENT MANUFACTURER

SHOP DRAWING REQUIREMENTS

1. STRUCTURAL SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW OF ALL STRUCTURAL ITEMS IN A TIMELY MANNER.
2. INCOMPLETE SHOP DRAWINGS AND SHOP DRAWINGS NOT CHECKED BY THE DETAILER AND THE CONTRACTOR SHALL BE REJECTED. MISSING MEMBERS AND DIMENSIONS, AND LACK OF COORDINATION SHALL BE CONSIDERED EVIDENCE OF INCOMPLETENESS.
3. CONTRACTOR SHALL REVIEW DRAWINGS FOR COMPLETENESS AND CONFORMANCE TO THE DESIGN DOCUMENTS PRIOR TO SUBMISSION TO THE ENGINEER.
4. THE STRUCTURAL ENGINEER SHALL HAVE A MINIMUM OF TEN WORKING DAYS TO PROCESS SHOP DRAWINGS.
5. RESUBMITTED SHOP DRAWINGS SHALL HAVE ALL REVISIONS CLOUDED
6. AT PROJECT CLOSE-OUT, PROVIDE RECORD COPY OF COMPLETE SET OF SHOP DRAWINGS WITH ALL CORRECTIONS MADE - IF REQUESTED.
7. DRAWINGS SHALL NOT BE RESUBMITTED UNLESS MARKED FOR RESUBMISSION.
8. CONTRACTOR SHALL ENSURE CORRECTIONS MARKED IN SHOP DRAWINGS ARE BEING IMPLEMENTED.
9. ALL ITEMS MARKED VERIFY, VERIFY IN FIELD, VIF, ETC SHALL BE VERIFIED BY THE GENERAL CONTRACTOR OR THE CONSTRUCTION MANAGER
10. SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER FOR CONFORMANCE WITH DESIGN INTENT AND RETURNED MARKED ON THE SHOP DRAWING STAMP WITH ONE OF THE FOLLOWING:

    NO EXCEPTIONS TAKEN - PRODUCTION / FABRICATION MAY PROCEED WITHOUT RESUBMITTAL OF DOCUMENTS.

    MAKE CORRECTIONS NOTED - PRODUCTION / FABRICATION MAY PROCEED AFTER THE COMMENTS AND CORRECTIONS HAVE BEEN MADE WITHOUT RESUBMITTAL OF DOCUMENTS.

    RESUBMIT - ITEMS SPECIFICALLY MARKED AS RESUBMIT SHALL NOT BE PRODUCED / MANUFACTURED BUT SHALL BE CORRECTED AND RESUBMITTED TO THE ENGINEER FOR REVIEW WITH CORRECTIONS CLOUDED.

    REVIEWED - ITEMS WHICH HAVE BEEN DESIGNED, SIGNED, AND SEALED BY ANOTHER ENGINEER SHALL BE MARKED REVIEWED AND WILL BE REVIEWED FOR CONFORMANCE WITH DESIGN INTENT ONLY.
11. STRUCTURAL ENGINEER SHALL HAVE THE OPTION TO REJECT A PORTION OF A SUBMISSION AS REQUIRED. THE FABRICATOR SHALL NOT CAUSE A DELAY BY WAITING FOR ALL DRAWINGS TO BE APPROVED

STRUCTURAL ABBREVIATIONS

℄	CENTERLINE
Ø	DIAMETER
ADD'N	ADDITIONAL
ADJ	ADJACENT
AHJ	AUTHORITY HAVING JURISDICTION
BOTT	BOTTOM
B/S	BOTH SIDES
CL	CENTERLINE
CLR	CLEAR
C/C	CENTER TO CENTER
COL	COLUMN
CONT	CONTINUOUS
CONX	CONNECTION
D	DEEP
EF	EACH FACE
EOJ	EDGE OF JOIST
EOS	EDGE OF SLAB
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
FLG	FLANGE
FTG	FOOTING
FS	FAR SIDE
GA	GAUGE
H	HIGH
HEF	HORIZONTAL EACH FACE
HIF	HORIZONTAL INSIDE FACE
HOF	HORIZONTAL OUTSIDE FACE
IF	INSIDE FACE
JT	JOINT
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
MC	MOMENT CONNECTION
MO	MASONRY OPENING
NS	NEAR SIDE
oc	ON CENTER
OF	OUTSIDE FACE
PAF	POWDER ACTUATED FASTENER
Pc	PIECE
PROV'D	PROVIDE
PTD	PAINTED
REQ'D	REQUIRED
SCH'D	SCHEDULE
SUP'T	SUPPORTED
TF	TOP OF FOOTING
TOS	TOP OF STEEL
TP	TOP OF PIER
UON	UNLESS OTHERWISE NOTED
VIF	VERTICAL INSIDE FACE
VOF	VERTICAL OUTSIDE FACE
VWM	VERIFY WITH MANUFACTURER
W	WIDE
WP	WORK POINT
WWF	WELDED WIRE FABRIC

STRUCTURAL SYMBOLS

⟵⟶	SPAN DIRECTION
(X)	NEW COLUMN CENTERLINE
⟨X⟩	EXISTING COLUMN CENTERLINE
⟨(X)⟩	NEW & EXISTING COLUMN CENTERLINE
MC	MOMENT CONNECTION
⊣⊢	BEAM SHEAR SPLICE

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ALTERNATE

REVISIONS

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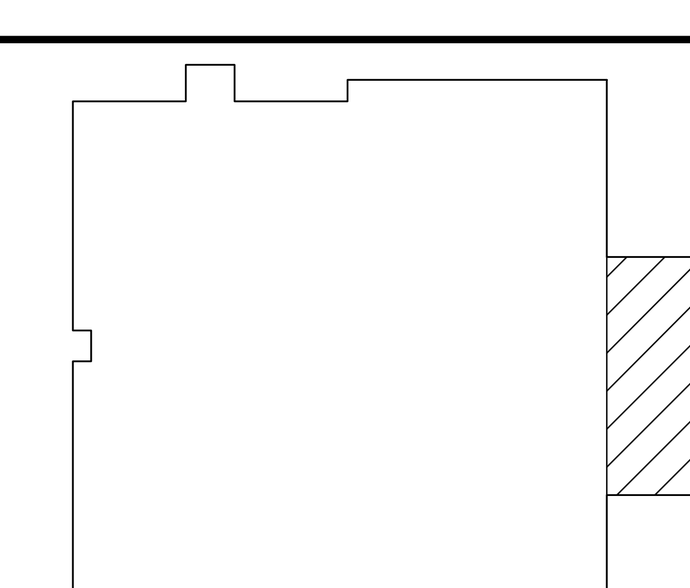

KEY PLAN

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
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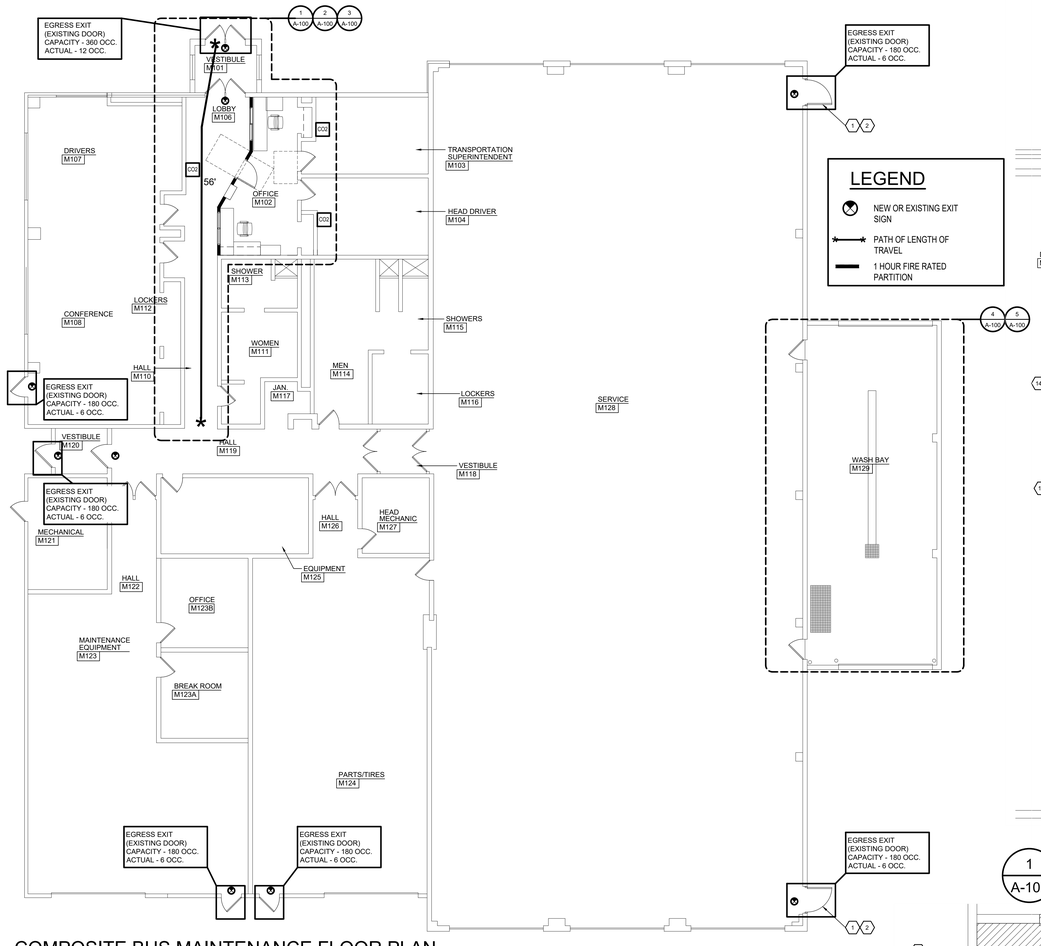
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
BUS GARAGE FOUNDATION PLAN

DRAWN BY:	PROJECT NO.:
NAC	2024-239P
CHECKED BY: EDM	BUILDING: BG
DATE: 12-01-2025	DRAWING NO.: S-101

CAD FILE: 4239BG-S101.DWG
PLOT DATE: 11/26/2025



COMPOSITE BUS MAINTENANCE FLOOR PLAN

SCALE: $\frac{1}{8}$" = 1'-0"

NOTE: ALL EQUIPMENT AND FURNITURE SHOWN WILL BE BY OWNER.
SEE DRAWING EX-2.0 FOR DOOR SCHEDULE.

CODE REPORT:
JOHNSON CITY CSD CAPITAL PROJECT - PHASE 1
HA PN: 2024-239P

SCOPES OF WORK
THE PROPOSED SCOPES OF WORK INCLUDE REPAIR TYPES OF WORK AND ALTERATIONS LEVEL 2 AT BUS MAINTENANCE FACILITY AND BUS STORAGE FACILITIES. THE JOHNSON CITY CSD IS IN NEED OF ALTERATIONS AND REPAIRS AT THE EXISTING BUS MAINTENANCE AND BUS STORAGE FACILITIES. AT THE EXISTING BUS MAINTENANCE FACILITY WORK TO INCLUDE UPDATING THE MAIN ENTRANCE ADMINISTATIVE SPACE. ALSO, REPLACING EQUIPMENT IN EXISTING BUS WASH AREA. ALSO THERE AREAS IN NEED OF REPAIR AS INDICATED AT THE BUS STORAGE FACIITIES THE WORK TO INCLUDE DOOR REPLACEMENT. ALSO, THE EXISTING OVERHEAD DOORS IN BOTH BUILDINGS ARE IN NEED FOR HARDWARE UPGRADES AS INDICATED. THERE WILL BE ASSOCIATED ELECTRICAL, MECHANICAL AND PLUMBING WORK. EXISTING BUS MAINTENANCE FACILITY IS A MIXED USE (STORAGE S-1 AND ADMINISTRATIVE "B") THE EXISTING BUS STORAGE FACILITIES ARE "S-1" STORAGE TYPE USE BOTH FACILITIES, 1 STORY, NONCOMBUSTIBLE TYPES OF CONSTRUCTION (TYPE IIB). ALL EXISTING FACILITIES WERE CONSTRUCTED IN 1989 AND IN COMPLIANCE WITH THE APPLICABLE CODES OF THE TIME.

CODE REVIEW:
Capital Project - Phase 2 Bus Maintenance and Storage Facilities

APPLICABLE CODES:
2020 Building Code of New York State (IBC 2018)
2020 Existing Building Code of New York State (IEBC 2018)
2018 Fire Code of New York State (IFC 2018)
2010 ADA Americans with Disabilities Act
2009 ICC/ANSI A117.1
2020 Energy Conservation Code of New York State (IECC 2018)
2020 Plumbing Code of New York State (IPC 2018)
2020 Mechanical Code of New York State (IMC 2018)
2017 National Electrical Code of New York State (NFPA 70 2017)
ASCE 7-16
2022 NYSED Manual of Planning Standards

BUILDING USE GROUP (EXISTING):
Bus Maintenance BLDG. - S-1 / B (Bus Maintenance / Storage)
Bus Storage Bldg - North - S-1 (Bus Storage)
Bus Storage Bldg - South - S-1 (Bus Storage)

CONSTRUCTION TYPE EXISTING:
Type 2B Non-Combustible (All 3 Buildings)

AUTOMATIC SPRINKLER SYSTEM:
The existing buildings do not have an automatic sprinkler system.

903.2.9.1 GROUP S-1
An automatic sprinkler system is required for Use Group S-1 where the fire area exceeds 12,000 s.f. **(The 3 existing facilities exceed 12,000 s.f.)**

Per Section 803.2.2 Exception #2 of the Existing Building Code, the Work Area is not required to be sprinklered when the work area is less than 50% of the floor area.

BUILDING HEIGHT & AREA:
EXISTING FACILITIES:
BUS MAINTENANCE FACILITY - 15,670 S.F.
BUS STORAGE FACILITY NORTH - 12,434 S.F.
BUS STORAGE FACILITY SOUTH - 23,558 S.F.

ALL EXISTING BUILDING ALLOWABLE AREAS AND HEIGHTS ARE IN COMPLIANCE WITH APPLICABLE CODES OF THE TIMES. PROPOSED ALTERATIONS AND REPAIRS WILL NOT MAKE EXISTING BUILDINGS LESS CONFORMING THAN IT WAS PRIOR TO PROPOSED REPAIRS AND ALTERATIONS.

EXISTING MEANS OF EGRESS:
AS CALCULATED EXISTING MEANS OF EGRESS, OCCUPANT LOADS PER SPACE AND PER USE ARE IN COMPLIANCE. EVERY STORY UTILIZED FOR HUMAN OCCUPANCY ON WHICH THERE IS A PROPOSED WORK OR REPAIR THAT INCLUDES EXITS OR CORRIDORS IS PROVIDED WITH MINIMUM NUMBER OF EXITS BASED ON THE OCCUPANCY OR USE OF THE SPACE AND OCCUPANT LOAD CALCULATIONS AS INDICATED.
BUS MAINTENANCE FACILITY:
13,319 S.F. (STORAGE) @ 500 S.F. PER OCCUPANT = 27 OCCUPANTS
2,351 S.F. (ADMINISTRATIVE) @ 150 S.F. PER OCCUPANT = 16 OCCUPANTS
43 TOTAL OCCUPANTS @ 2" PER OCCUPANT (EXIT DOOR) = 9" OF EXIT REQUIRED - 288" OF EXIT PROVIDED.
BUS STORAGE FACILITY - NORTH:
12,434 S.F. (STORAGE) @ 500 S.F. PER OCCUPANT = 25 OCCUPANTS
25 OCCUPANTS @ 2" PER OCCUPANT (EXIT DOOR) = 5" OF EXIT REQUIRED - 72" OF EXIT PROVIDED.
BUS STORAGE FACILITY - SOUTH:
23,558 S.F. (STORAGE) @ 500 S.F. PER OCCUPANT = 47 OCCUPANTS
47 OCCUPANTS @ 2" PER OCCUPANT (EXIT DOOR) = 10" OF EXIT REQUIRED - 144" OF EXIT PROVIDED.

EXISTING LENGTHS OF TRAVEL ARE MORE THAN ADEQUATE AND DO NOT EXCEED 200'.

EXISTING BUILDING CODE:(ALL 3 FACILITIES)
Repairs andAlteration Level 2 - Work Area is less than 50% of the Existing Building Area.

FIRE RESISTANCE RATING (TABLE 601):
Type IIB Non-Combustibe Construction - 3 Facilities

BUILDING ELEMENT	FIRE RESISTANCE RATING	U.L. DESIGN
Primary Structural Frame	0	
Bearing Walls - Exterior	0	
Bearing Walls - Interior	1 Hr.	U905 (EXISTING)
Floor Construction and Secondary Members	0	
Roof Construction and	0 Hr.	
Exit Access Corridors	1 Hr. (w/out sprinklers)	U905 (EXISTING)
Boiler / Mechanical Room	2 Hr.	U905 (EXISTING)
Electrical Room	1 Hr.	U905 (EXISTING)

TABLE 1006.2.1 COMMON PATH OF EGRESS TRAVEL DISTANCE
S-1 AND B Occupancy - 75 ft. without sprinklers.

805.6 DEAD END CORRIDOR (EXISTING BUILDING CODE)
Dead End Corridor in any work area shall not exceed 35 ft.

DEAD END CORRIDOR (NYSED MPS-MOST RESTRICTIVE)
§1021.1, C CORRIDORS:
Corridor pockets and dead end corridors shall be restricted to a depth of 1 and 1/2 times the width of the pocket, or to 1 and 1/2 times the width of the corridor, whichever is less.

PLUMBING FIXTURE CALCULATION (EXISTING ALL 3 FACILITIES)

PLUMBING FIXTURE CALCULATION - REPAIRS & ALTERATION LEVEL 2

809.1 Minimum Fixtures: The Occupant Load for the Renovated Work Areas (All 3 Facilities)has not increased the existing occupant load and is less than 20% of the story. (No Additional plumbing fixtures are required).

2020 ENERGY CONSERVATION CODE
Johnson City, New York
Broome County - Climate Zone 6A

SEISMIC DESIGN:

Building Exposure Category:	C
Seismic Design Category:	B
Seismic Importance Factor:	1.25
Wind Design (Basic Wind Speed):	120 MPH
Risk Category:	III

GENERAL REQUIREMENTS:
ALL EXISTING FIRE PROTECTION ELEMENTS ARE IN COMPLIANCE.

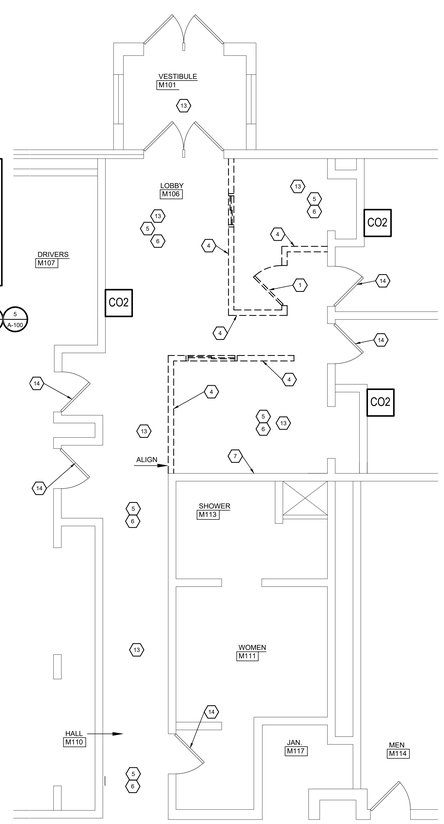
ACCESSIBILITY ELEMENTS HAVE BEEN PROVIDED AT PROPOSED ALTERATION AND REPAIR AREAS. EXISTING FACILITY HAS EXISTING ACCESSIBLE ROUTES.

EXISTING STRUCTURAL ELEMENTS WILL NOT BE ALTERED OR ADDITIONAL LOADS APPLIED. NON-STRUCTURAL ELEMENTS WILL BE IN COMPLIANCE.

ALL NEWLY INSTALLED ELECTRICAL EQUIPMENT AT PROPOSED REPAIR AREA WILL BE IN COMPLIANCE.

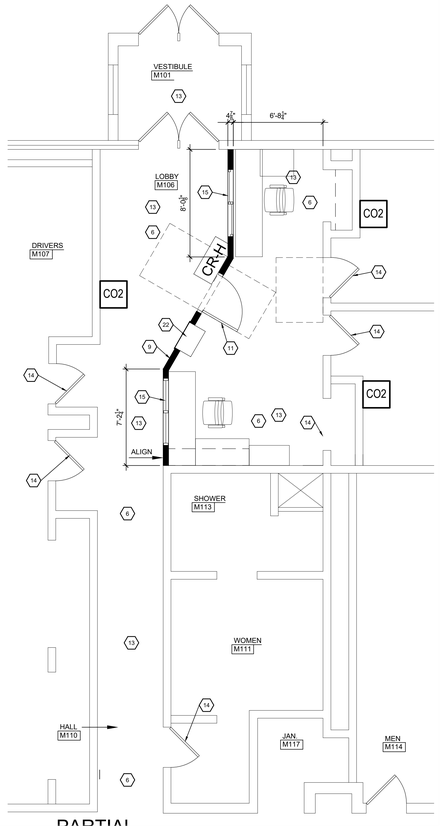
ALL PROPOSED PLUMBING ELEMENTS IN PROPOSED ALTERATION AND REPAIR AREA ARE IN COMPLIANCE. THE PROPOSED AREAS OF ALTERATION AND REPAIR WILL NOT INCREASE THE EXISTING OCCUPANT LOAD BY MORE THAN 20%.

PROPOSED ALTERATIONS AND WORK WILL NOT AFFECT EXISTING FACILITY BUILDING ENVELOPE ENERGY REQUIREMENTS.



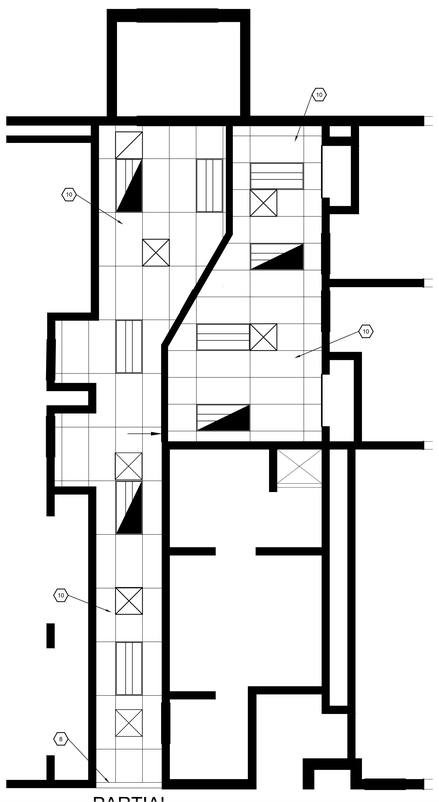
1 A-100 PARTIAL DEMOLITION PLAN

SCALE: 1/4"=1'-0"
NOTE:
REFER TO TRADE DRAWINGS FOR ADDITIONAL SCOPES OF WORK.



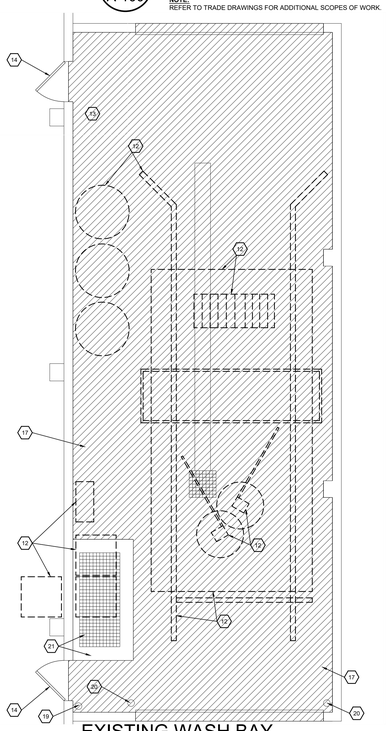
2 A-100 PARTIAL DEMOLITION PLAN

SCALE: 1/4"=1'-0"
NOTE:
REFER TO TRADE DRAWINGS FOR ADDITIONAL SCOPES OF WORK.



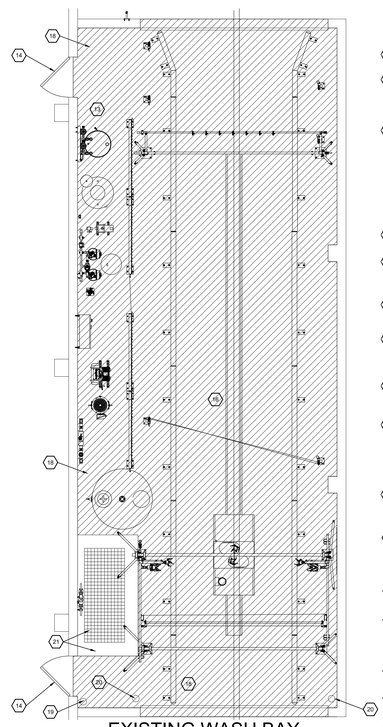
3 A-100 PARTIAL DEMOLITION PLAN

SCALE: 1/4"=1'-0"
NOTE:
REFER TO TRADE DRAWINGS FOR ADDITIONAL SCOPES OF WORK.



4 A-100 EXISTING WASH BAY DEMOLITION PLAN

SCALE: 1/4"=1'-0"
NOTE:
REFER TO TRADE DRAWINGS FOR ADDITIONAL SCOPES OF WORK.



5 A-100 EXISTING WASH BAY PROPOSED FLOOR PLAN

SCALE: 1/4"=1'-0"
NOTE:
REFER TO TRADE DRAWINGS FOR ADDITIONAL SCOPES OF WORK.

DEMOLITION/CONSTRUCTION KEY NOTES:

1. CONTRACTOR TO REMOVE EXISTING DOOR, FRAMES AND HARDWARE IN ITS ENTIRETY INCLUDING ANY ELECTRICAL CONTROLS. SHORE AND RE SUPPORT AS REQUIRED.
2. CONTRACTOR TO PROVIDE AND INSTALL NEW 3'-8"x7'-0"x1 3/4" (V.I.F.)INSUL. EXTERIOR FRP DOOR AND FRAME ASSEMBLY (COLOR TO BE DETERMINED) ON 2"x5 3/4" (16 GA.) FRP FRAMES W/ WELDED MITERED CORNERS. MATCH EXIST. FRAME HEAD DIMENSIONS (4"). PROVIDE ACCESSIBLE LEVERED BUILDING STANDARD HARDWARE (BEST LOCKS) COORDINATE WITH OWNER. (SEE DOOR SCHEDULE ON DRAWING BS A-100)
3. CONTRACTOR TO REMOVE AND REPLACE EXISTING OPENERS, SAFETY MECHANISMS, AND CONTROLS ON SELECT EXISTING DOOR ASSEMBLIES. PROVIDE AND INSTALL "RAYNOR COMMERCIAL DOOR OPENER" MODEL: CONTROL HOIST STANDARD (30 CYCLES PER HOUR) TYPE: TROLLEY DOOR HEIGHT - 12'
MOTOR- ½HP VOLTAGE - 230V/SINGLE PHASE
CONTROLS: 24V - 3 BUTTON WALL STATION (OPE/CLOSE/STOP)
REVERSING DEVICE: PHOTO EYE
ALL HIGH VOLTAGE CONNECTION TO BE DETERMINED.
CONTRACTOR TO REMOVE AND REPLACE TORSION SPRINGS ON SELECT EXISTING RAYNOR DOOR ASSEMBLIES. ALSO, PATCH, REPAIR AND REPLACE ANY DAMAGED OR BROKEN VISION PANEL KITS TO MATCH.
4. DASHED LINES INDICATE EXISTING WALL CONSTRUCTION TO BE REMOVED IN ITS ENTIRETY FULL HEIGHT. INCLUDE ANY EXIST. MISC. WINDOWS, ETC.
5. CONTRACTOR TO REMOVE EXISTING FLOORING SYSTEM IN ITS ENTIRETY INCLUDING ANY ADHESIVES, UNDERLAYMENTS AND OR SETTING BEDS DOWN TO EXISTING SUB FLOOR. CLEAN, PATCH, REPAIR, LEVEL, AND PREPARE EXISTING SUB FLOOR FOR NEW FINISHES. PROVIDE NEW FLOORING TRANSITIONS AND THRESHOLDS INCLUDING AT EXISTING DOOR OPENINGS IN SCOPES OF WORK AREA.
6. CONTRACTOR TO REMOVE EXISTING CEILING SYSTEMS ABOVE IN ITS ENTIRETY INCLUDING ANY HANGER SUPPORT SYSTEMS. REFER TO TRADE TRAWINGS FOR ADDITIONAL DEMOLITION.
7. CONTRACTOR TO REMOVE PORTION OF EXISTING WALL CONSTRUCTION AS REQUIRED TO INSTALL NEW WOOD BLOCKING SUPPORTS FOR NEW CABINET OR EQUIPMENT TO BE MOUNTED TO WALLS. PATCH, REPAIR AND REFINISH AS REQUIRED. COORD. EXTENTS WITH EQUIPMENT AND CABINETS. TYPICAL. ADD WOOD BLOCKING IN NEW PARTITIONS ALSO. COORD. LOCATIONS WITH NEW EQUIPMENT AND CASEWORK OR MILLWORK.
8. INDICATES NEW DRYWALL AND METAL STUD BULKHEAD. NEW BULKHEAD TO BE CONSTRUCTED OF ⅝" GYP. BOARD ON EA. SIDE 3 ⅝" (20 GA.) MTL. STUDS AT 16" O.C.. NEW BULKHEAD TO RUN FROM 2" BELOW FIN. CLG. SYSTEM TO STRUCTURE ABOVE. PROVIDE DIAG. BRACING AS REQUIRED. TAPE, SPACKLE AND FINISH AS REQUIRED.
9. SHADED WALL INDICATES NEW WALL CONSTRUCTION. NEW WALL CONSTRUCTION TO CONSIST OF ⅝" F.R. IMPACT RESISTANT GYPSUM SHEATHING ON EA. SIDE OF 3 ⅝" (20 GA.) MTL. STUDS AT 16" O.C. WITH FRICT. FIT INSULATION (SOUND BATTS) FULL HGT. OF WALL. NEW WALL TO MATCH HEIGHT OF EXISTING ADJACENT WALLS. PROVIDE SUPPORT AND SEISMIC BRACING TO TOP OF WALL. PREPARE NEW WALL TO FINISH AND MATCH ADJACENT WALLS. PROVIDE VINYL BASE BOTH SIDES TO MATCH. (SEE TYP. DETAIL ON DWG. GN-1)
10. CONTRACTOR TO PROVIDE AND INSTALL NEW 2X4 SUSPENDED ACOUSTICAL TILE CEILING SYSTEM HUNG FROM EXIST. STRUCTURE ABOVE WITH SEISMIC HANGER SYSTEM TO MATCH EXISTING ADJACENT HEIGHT AT 9'-0" A.F.F.. NEW SUSPENDED CEILING SYSTEM AS MFGR. BY ARMSTRONG OR EQUAL.
11. NEW 3'-0"X7'-0"x1 3/4" INSUL. FRP DOORS 45 MIN.(COLOR AS SELECTED) ON 2"x5 7/8" (16 GA. - PAINTED).HM. WELDED FRAMES W/ WELDED MITERED CORNERS. MATCH EXIST. FRAME HEAD DIMENSIONS. PROVIDE ACCESSIBLE LEVERED BUILDING STANDARD HARDWARE (BEST LOCKS - SEE FIN. NOTES ABV.) COORDINATE WITH OWNER. TYP. UNDERCUT ⅜" PROVIDE "ADA" THRESHOLDS AND TRANSITIONS. (SEE DRAWING BS A-100 FOR DOOR SCHEDULE)
12. DASHED LINES INDICATE EXISTING BUS WASH EQUIPMENT TO BE REMOVED IN ITS ENTIRETY. DISCONNECT AND CAP UTILITIES BACK TO SOURCE. INCLUDE REMOVAL OF EXISTING PIPE BOLLARDS AND SUPPORT AT EXISTING OVERHEAD DOORS.(TYP.)
13. CONTRACTOR TO CLEAN, PATCH, REPAIR AND PREPARE EXISTING WALLS AND CEILINGS FULL HEIGHT AS REQUIRED FOR NEW FINISHES. PROVIDE HIGH PERFORMANCE COATINGS. CMU WALLS USE 1 COAT KEM-CATI HS COAT EPOXY FILLER / SEALER, 2 COAT MACROPOXY 646 FAST CURE EPOXY, 1 COAT ACROLON 218 HS POLYURETHANE. PRECAST CEILINGS USE 2 COATS MACROPOXY 646 FAST CURE EPOXY, 1 COAT ACROLON 218 HS POLYURETHANE. (SEE SPECIFICATION)
14. CONTRACTOR TO CLEAN, PATCH, REPAIR AND PREPARE EXISTING DOORS AND FRAMES (BOTH SIDES) AS REQUIRED FOR NEW FINISHES. PROVIDE AND INSTALL NEW FLOOR TRANSITIONS AND THRESHOLDS TO MATCH.
15. CONTRACTOR TO PROVIDE AND INSTALL NEW 4'-0" X 4'-0" 2"-10" TO SILL ANODIZED ALUMINUM SECURITY FIRE RATED TRANSACTION SLIDING WINDOW SYSTEM. NEW WINDOW ASSEMBLY AS MFGR. BY "ARMORTEX" .
16. CONTRACTOR TO PROVIDE AND INSTALL NEW COMPLETE BUS WASH SYSTEM. NEW SYSTEM AS BASIS OF DESIGN WILL BE A CONTINUOUS WASH SYSTEM RETROFIT INTO EXISTING SPACE. NEW SYSTEM AS MFGR. BY "INTERCLEAN EQUIPMENT" OR EQUAL. NEW SYSTEM TO INCLUDE ALL ASSOCIATED EQUIPMENT AND ACCESSORIES INCLUDING UTILITY CONNECTIONS.
17. HATCHED AREA INDICATES EXISTING CONCRETE FLOOR SLAB TO BE REMOVED IN ITS ENTIRETY INCLUDING EXISTING BUSH WASH PITS AND GRATING DOWN TO EXISTING POROUS FILL. CONTRACTOR TO REFER TO TRADE DRAWINGS FOR ADDITIONAL DEMOLITION AND DISCONNECT AND CAPPING OF EXISTING BUS WASH UTILITIES. CONTRACTOR TO PREPARE EXISTING DISTURBED SURFACES FOR NEW REINF. CONCRETE SLABS AND BUS WAS EQUIPMENT PITS, GRATINGS AND UTILITIES. PROVIDE POLYCRETE PAINT TO CAR WASH FLOORS AND EXISTING FLOOR PITS TO REMAIN. REFER AND COORDINATE WITH SPECIFICATIONS, STRUCTURAL AND BUS WASH EQUIPMENT DRAWINGS.
18. HATCHED AREA INDICATES NEW REINFORCED CONCRETE FLOOR SLAB ON EXISTING LEVELED OUT POROUS FILL. COORDINATE NEW BUS WASH EQUIPMENT LAYOUTS, NEW PITS AND GRATING, NEW UTILITY CONNECTIONS, ON TRADE DRAWINGS, STRUCTURAL DRAWINGS AND SPECIFICATIONS.
19. CONTRACTOR TO REMOVE PORTION OF EXISTING RWC 20" ABOVE FLOOR SLAB TO EXISTING ROOF DRAIN ABOVE. CONTRACTOR TO TIE-IN NEW CPVC PIPING BACK TO DRAIN. PROVIDE ALL NECESSARY CONNECTIONS AND HANGERS. REFER TO PLUMBING DRAWINGS.
20. CONTRACTOR TO REMOVE EXISTING PIPE BOLLARDS IN THEIR ENTIRETY. PROVIDE AND INSTALL NEW CONCRETE ENCASED FLOOR ANCHORED PIPE BOLLARDS AT EXISTING O.H. DOOR CORNERS. (SAFETY YELLOW) NEW BOLLARDS TO BE 4" DIA. CONCRETE ENCASED X 36" H. PIPE BOLLARD ON 8" X 8" X ¼" BASE PLATE ANCHOR WITH (4)-½" DIA ANCHOR BOLTS EMBED A MINIMUM 4". NEW BOLLARDS AS MFGR. BY "IDEALSHIELD" OR EQUAL.
21. CONTRACTOR TO REMOVE EXISTING PIT GRATING IN ITS ENTRETY. PATCH, REPAIR EXISTING RECESSED GRATING TRACK FOR NEW GALV. PIT GRATE. (SIZE TO MATCH, SEE STRUCTURAL DRAWINGS) CONTRACTOR TO TO SAW CUT A MIN. 12" W. PERIMETER AS NECESSARY FOR EXISTING PIT TO REMAIN. PROVIDE DRILL IN DOWELS AT PERIMETER OF EXISTING PIT TO PREVENT UPLIFT AT NEW SLAB TIE-IN. (SEE STRUCT. DRAWINGS) COORDINATE ALL BELOW SLAB UTILITY TIE-INS WITH MEP TRADE DRAWINGS.
22. CONTRACTOR TO PROVIDE AND INSTALL NEW MTL. 59 MAILBOX, 21 ½" W. X 16" D. X 66" H. 6" AT SILL ABV. FLOOR, RECESSED COMMERCIAL MAILBOX. FRAME PERIMETER OF OPENING WITH DOUBLE MTL. STUD SUPPORTS. NEW MAILBOX AS MFGR. BY "USPOST COMPANY" OR EQUAL. MODEL 1600ASA. COLOR TBD.

SYMBOL LEGEND

- INDICATES EXISTING WALL CONSTRUCTION TO REMAIN (SEE PLANS)
- INDICATES NEW WALL CONSTRUCTION AS INDICATED (SEE PLANS)
- DASHED LINES INDICATE EXISTING WALL CONSTRUCTION TO BE REMOVED (SEE PLANS)
- NEW WALL TYPE TAG (SEE DWG. GN-1)
- DEMOLITION / CONSTRUCTION KEY NOTE TAG
- NEW DOOR
- EXISTING DOOR TO REMAIN OR NEW TOILET STALL DOOR
- EXISTING DOOR TO BE DEMOLISHED
- BUILDING ELEVATION TAG
- BUILDING SECTION TAG

CEILING LEGEND

- INDICATES NEW 2'x4' A.C.T. CEILING SYSTEM SEE FINISH DRAWING FOR TYPES AND MFGR. HEIGHTS TO MATCH
- INDICATES NEW LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS
- INDICATES NEW EMERGENCY LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS
- INDICATES NEW RETURN AIR GRILLE. SEE MECHANICAL DRAWINGS
- INDICATES NEW SUPPLY AIR DIFUSER. SEE MECHANICAL DRAWINGS

REVISIONS

Issued for Bidding
December 1, 2025

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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SEALS:

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Clarks Summit, PA 18411
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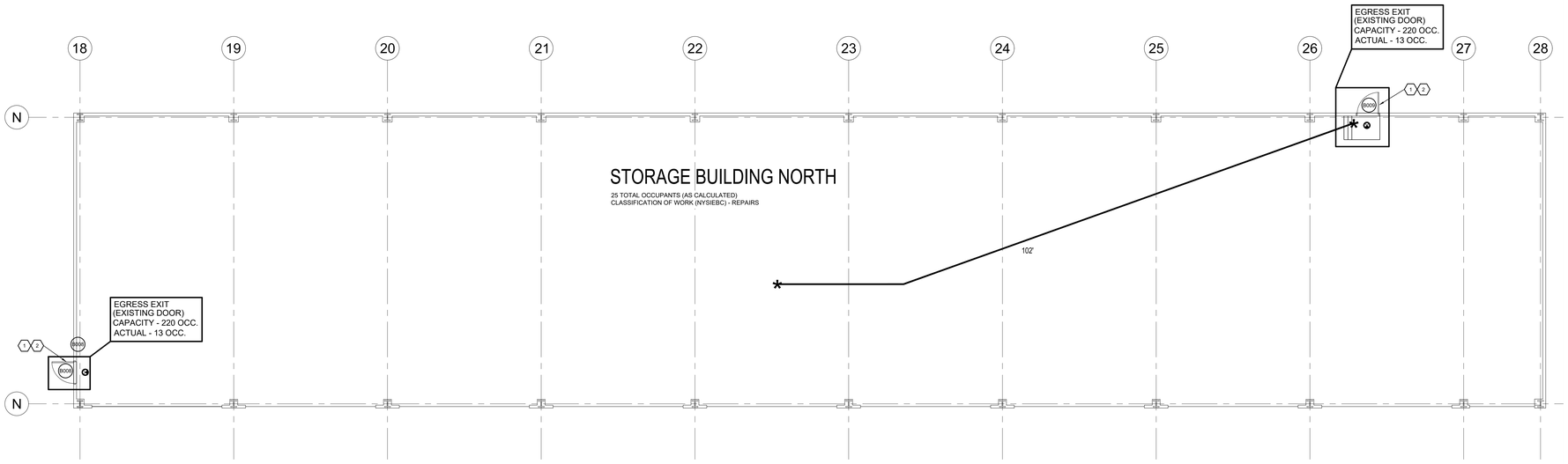
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
MAINT. BUILDING CODE, ENLARGED SCALE PLANS AND CODE REPORT

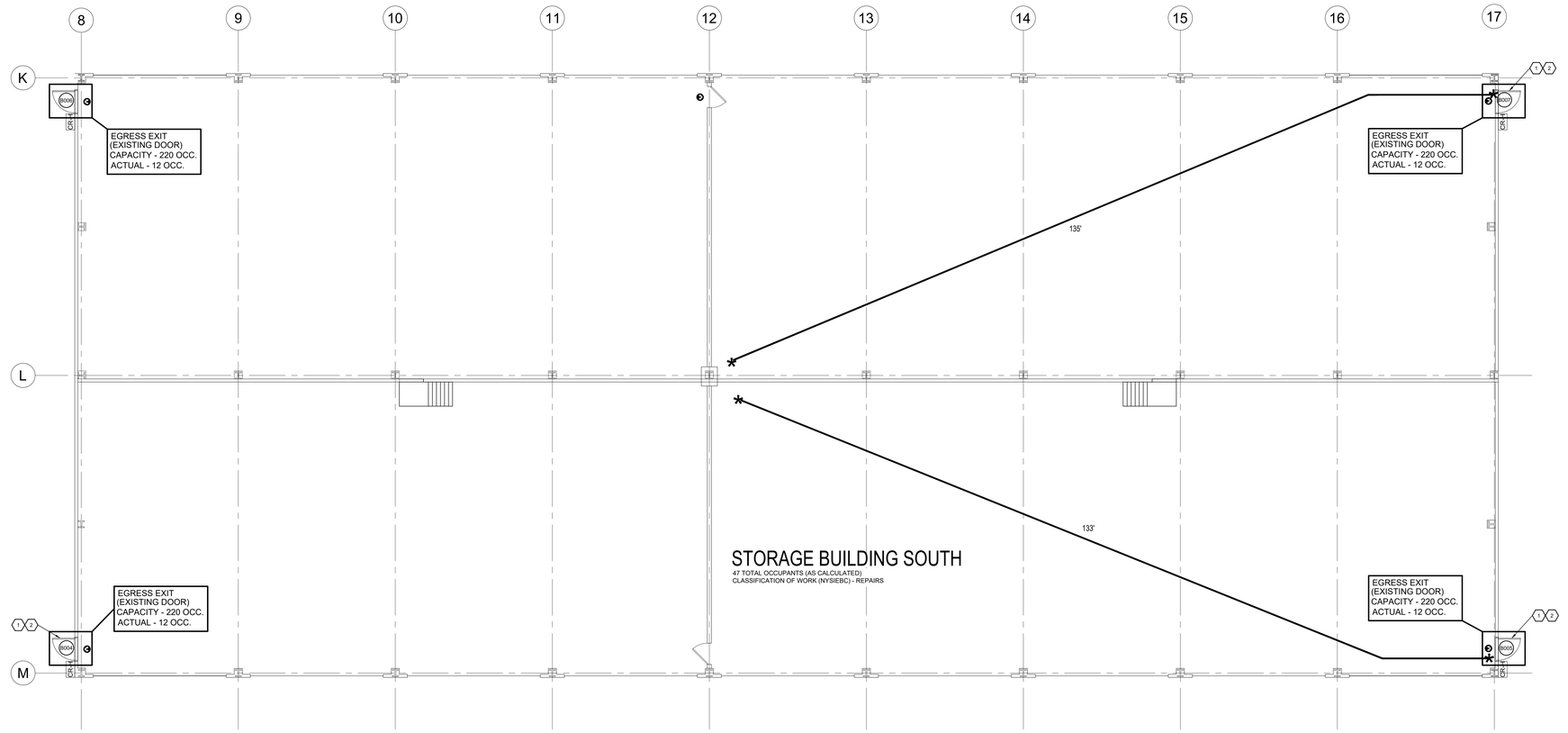
DRAWN BY:	PROJECT NO.:
A.B.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
R.S.	BG / A-100
DATE: 12-01-2025	

CAD FILE: PLOT DATE:



COMPOSITE BUS STORAGE BUILDING PLAN - NORTH

SCALE: $\frac{1}{8}$" = 1'-0"
NOTE: REFER TO DRAWING BG A-100 FOR CODE REPORT. REFER
TO TRADE DRAWINS FOR ADDITIONAL SCOPES OF WORK.



COMPOSITE BUS STORAGE BUILDING PLAN - SOUTH

SCALE: $\frac{1}{8}$" = 1'-0"

NOTE: REFER TO DRAWING BG A-100 FOR CODE REPORT. REFER
TO TRADE DRAWINS FOR ADDITIONAL SCOPES OF WORK.

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   TYPE: TROLLEY DOOR HEIGHT - 12'
   MOTOR ½ HP VOLTAGE - 230V/SINGLE PHASE
   CONTROLS: 24V - 3 BUTTON WALL STATION (OPE/CLOSE/STOP)
   REVERSING DEVICE: PHOTO EYE
   ALL HIGH VOLTAGE CONNECTION TO BE DETERMINED.
   CONTRACTOR TO REMOVE AND REPLACE TORSION SPRINGS ON ALL EXISTING RAYNOR DOOR ASSEMBLIES. ALSO, PATCH, REPAIR AND REPLACE ANY DAMAGED OR BROKEN VISION PANEL KITS TO MATCH.

SYMBOL LEGEND

- INDICATES EXISTING WALL CONSTRUCTION TO REMAIN (SEE PLANS)
- INDICATES NEW WALL CONSTRUCTION AS INDICATED (SEE PLANS)
- DASHED LINES INDICATE EXISTING WALL CONSTRUCTION TO BE REMOVED (SEE PLANS)
- NEW WALL TYPE TAG (SEE DWG. GN-1)
- DEMOLITION / CONSTRUCTION KEY NOTE TAG
- NEW DOOR
- EXISTING DOOR TO REMAIN OR NEW TOILET STALL DOOR
- EXISTING DOOR TO BE DEMOLISHED
- BUILDING ELEVATION TAG
- BUILDING SECTION TAG

LEGEND

- NEW OR EXISTING EXIT SIGN
- PATH OF LENGTH OF TRAVEL

DOOR SCHEDULE

	DOOR NO.	DOOR TYPE	DOOR MAT'L	DOOR NOMINAL SIZE WIDTH	DOOR NOMINAL SIZE HEIGHT	DOOR NOMINAL SIZE THKNS	GLASS TYPE	FRAME TYPE	FRAME MAT'L	JAMB TYPE	JAMB MAT'L	HEAD TYPE	HEAD MAT'L	THRESHOLD TYPE	THRESHOLD MAT'L	HARDWARE SET	FIRE RATING	CARD READER	REMARKS
BUS MAINTENANCE / STORAGE FACILITIES	B001	B	FRP	3'-0"	7'-0"	1¾"	TSG	F-1	H.M.							26	45 MIN	CR-H	DOOR RELEASE
	B002	B	FRP	3'-8"	7'-0"	1¾"	ISG	F-2	H.M.							25	-		INSULATED DOOR & FRAME
	B003	B	FRP	3'-8"	7'-0"	1¾"	ISG	F-2	H.M.							25	-		INSULATED DOOR & FRAME
	B004	A	FRP	3'-8"	7'-0"	1¾"	-	F-2	H.M.							23	-	CR-H	INSULATED DOOR & FRAME
	B005	A	FRP	3'-8"	7'-0"	1¾"	-	F-2	H.M.							23	-	CR-H	INSULATED DOOR & FRAME
	B006	A	FRP	3'-8"	7'-0"	1¾"	-	F-2	H.M.							23	-	CR-H	INSULATED DOOR & FRAME
	B007	A	FRP	3'-8"	7'-0"	1¾"	-	F-2	H.M.							23	-	CR-H	INSULATED DOOR & FRAME
	B008	A	FRP	3'-8"	7'-0"	1¾"	-	F-2	H.M.							25	-		INSULATED DOOR & FRAME
	B009	A	FRP	3'-8"	7'-0"	1¾"	-	F-2	H.M.							25	-		INSULATED DOOR & FRAME

DOOR SCHEDULE LEGEND

MATERIALS

ALUM	-	ALUMINUM	STL.	-	STEEL
VIN.	-	VINYL	MARB.	-	MARBLE
GL.	-	GLASS	TEMP.	-	TEMPERED
H.M.	-	HOLLOW METAL	RUB.	-	RUBBER
WD	-	WOOD	S.S.	-	STAINLESS STEEL

ABBREVIAIONS

CR-W- CARD READER WIRELESS
CR-H- CARD READER HARDWIRED

GLASS TYPES

ISG - 1" INSULATED SAFETY GLASS
FRSG - FIRE RATED SAFETY GLASS
TSG - 1/4" TEMPERED SAFETY GLASS

GENERAL NOTES

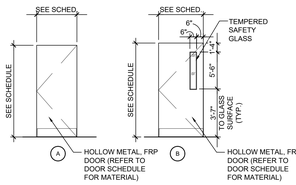
1. CONTRACTOR SHALL VERIFY ALL DOOR / FRAME SIZES, DIMENSIONS, DOOR SWINGS, DOOR / FRAME MATERIALS, DOOR / FRAME TYPES, FRAME WIDTH AND DEPTH, THROAT DEPTH AND FRAME HEAD HEIGHT.
2. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DOOR HARDWARE REQUIREMENTS FOR ALL FRAMES INDICATED. ALL SUBMITTALS ISSUED TO THE ARCHITECT SHALL REFLECT THIS FIELD VERIFIED COORDINATION.
3. ALL EXTERIOR HOLLOW METAL DOORS / FRAMES INDICATED SHALL BE GALVANIZED STEEL AND ALL EXTERIOR DOORS AND FRAMES SHALL BE INSULATED
4. NOT USED.
5. ALL FRAMES SHALL BE SHIMMED / CAULKED IN ACCORDANCE WITH ACCEPTED PRACTICES
6. SEE SPECIFICATIONS FOR HARDWARE SETS FOR ALL DOORS
7. REFER TO FINISH SCHEDULE FOR FINISHES
8. REFER TO PLANS FOR PROPER DOOR SWINGS
9. NOT USED.
10. ALL HOLLOW METAL FRAMES SHALL BE WELDED, NO KNOCK-DOWN FRAMES WILL BE ACCEPTED
11. ALL UNDER CUT DOORS ARE TO BE ABOVE FINISH FLOOR MATERIAL.
12. THE USE OF THRU-BOLTING FOR ANY DOOR HARDWARE WILL NOT BE ACCEPTED
13. ALL EXTERIOR DOORS ARE TO HAVE PERIMETER WEATHER-STRIPPING
14. CONTRACTOR SHALL COORDINATE WHERE DOORS / FRAMES REQUIRE CONDUITS OR WIRING INSTALLED DURING FRAME INSTALLATION FOR FUTURE ELECTRICAL CONNECTIONS FOR LOCKS, STRIKE.
15. NOT USED.
16. ALL EXTERIOR DOOR FRAMES TO RECEIVE INSULATED FRAME INSERTS.

DOOR TYPES

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

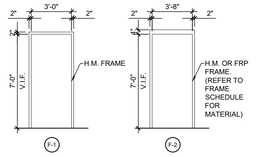
NOTE: PROVIDE 4" HEAD AT MASONRY LOCATIONS WHERE DOOR SCHEDULED TO BE 7'-0" TO ALIGN w/ COURSING.
SEE FLOOR PLAN AND PARTITION TYPES FOR FINAL COORDINATION.

NOTE: SEE SCHEDULE FOR GLASS TYPE.



FRAME TYPES

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



REVISIONS

Issued for Bidding
December 1, 2025

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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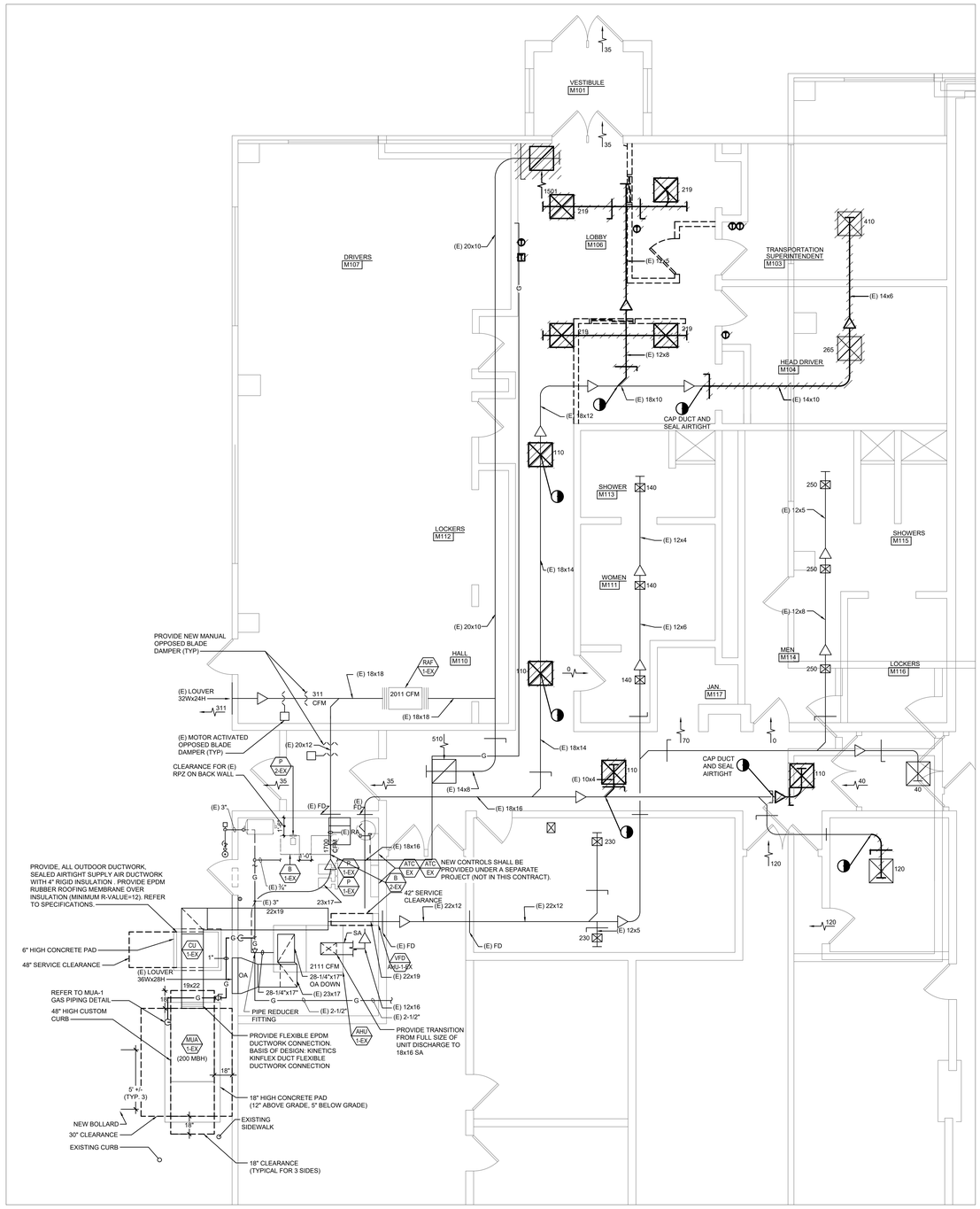
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
BUS STORAGE BUILDING FLOOR PLANS

DRAWN BY:	PROJECT NO.:
A.B.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
R.S.	BS / A-100
DATE:	
12-01-2025	

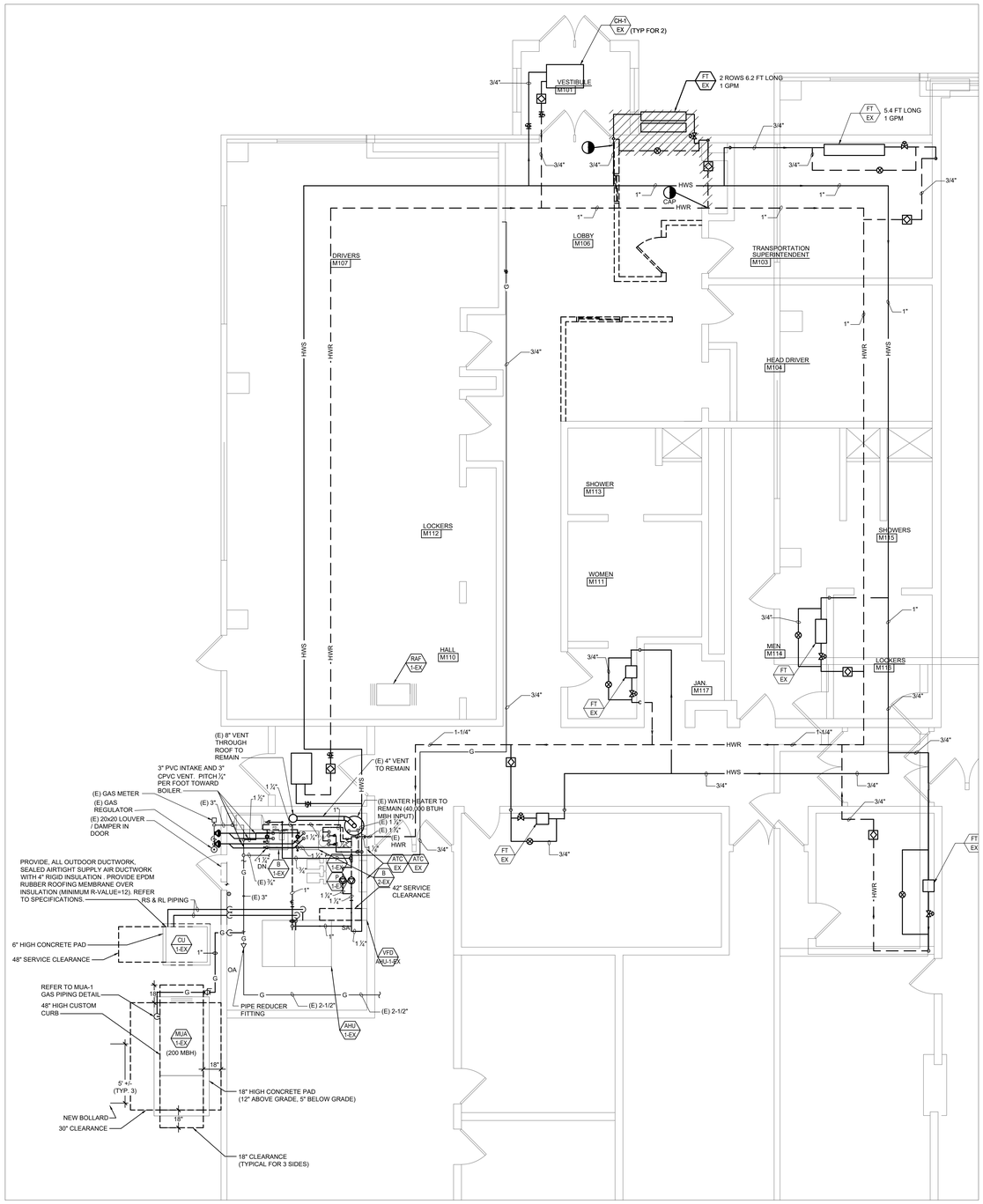
DATE/TIME PLOTTED



1 BG-MD-100

BUS GARAGE LOBBY
MECHANICAL DEMOLITION PLAN - DUCTWORK

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



2 BG-MD-100

BUS GARAGE LOBBY
MECHANICAL DEMOLITION PLAN - PIPING

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

REVISIONS

Issued for Bidding
December 1, 2025

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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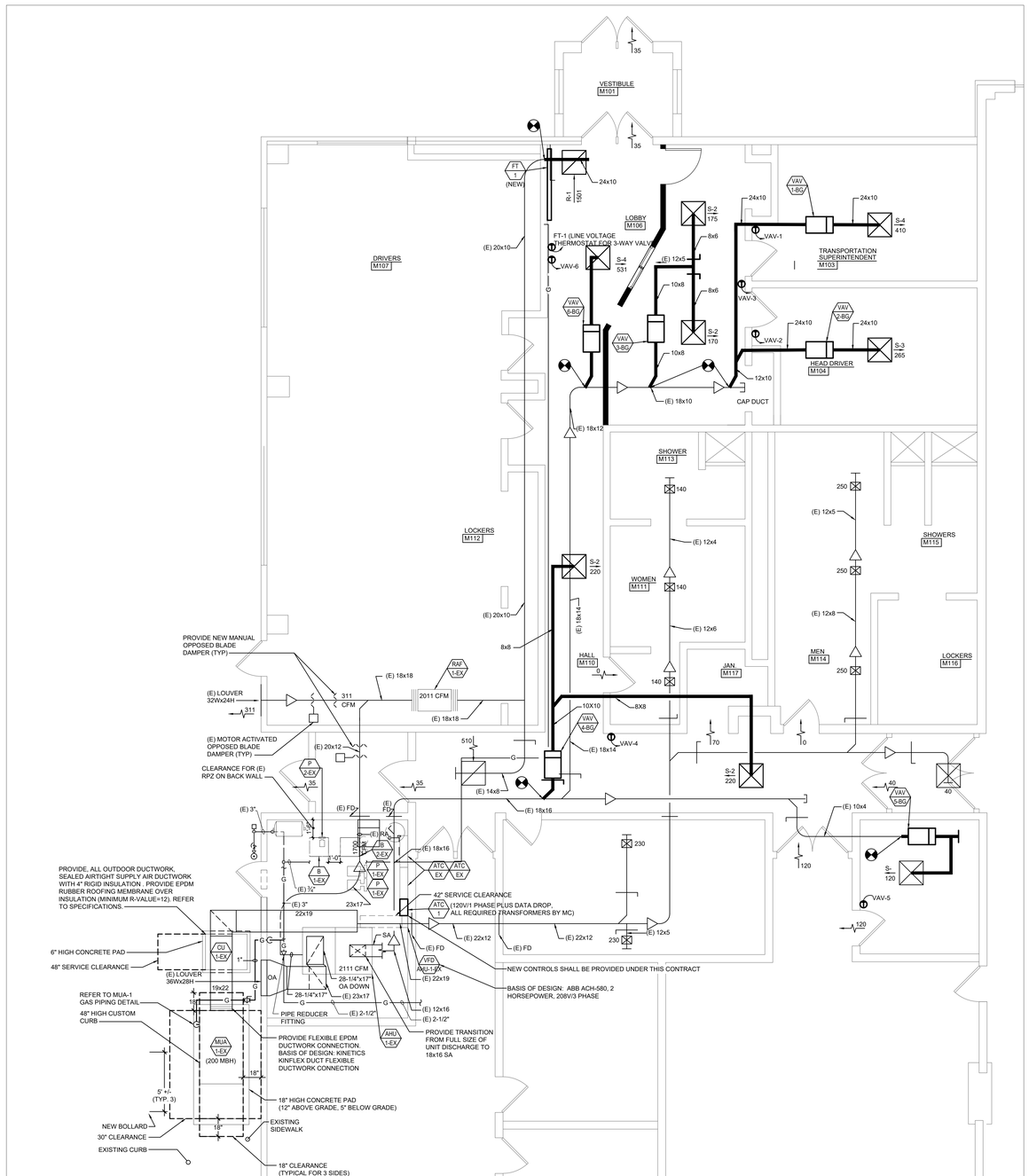
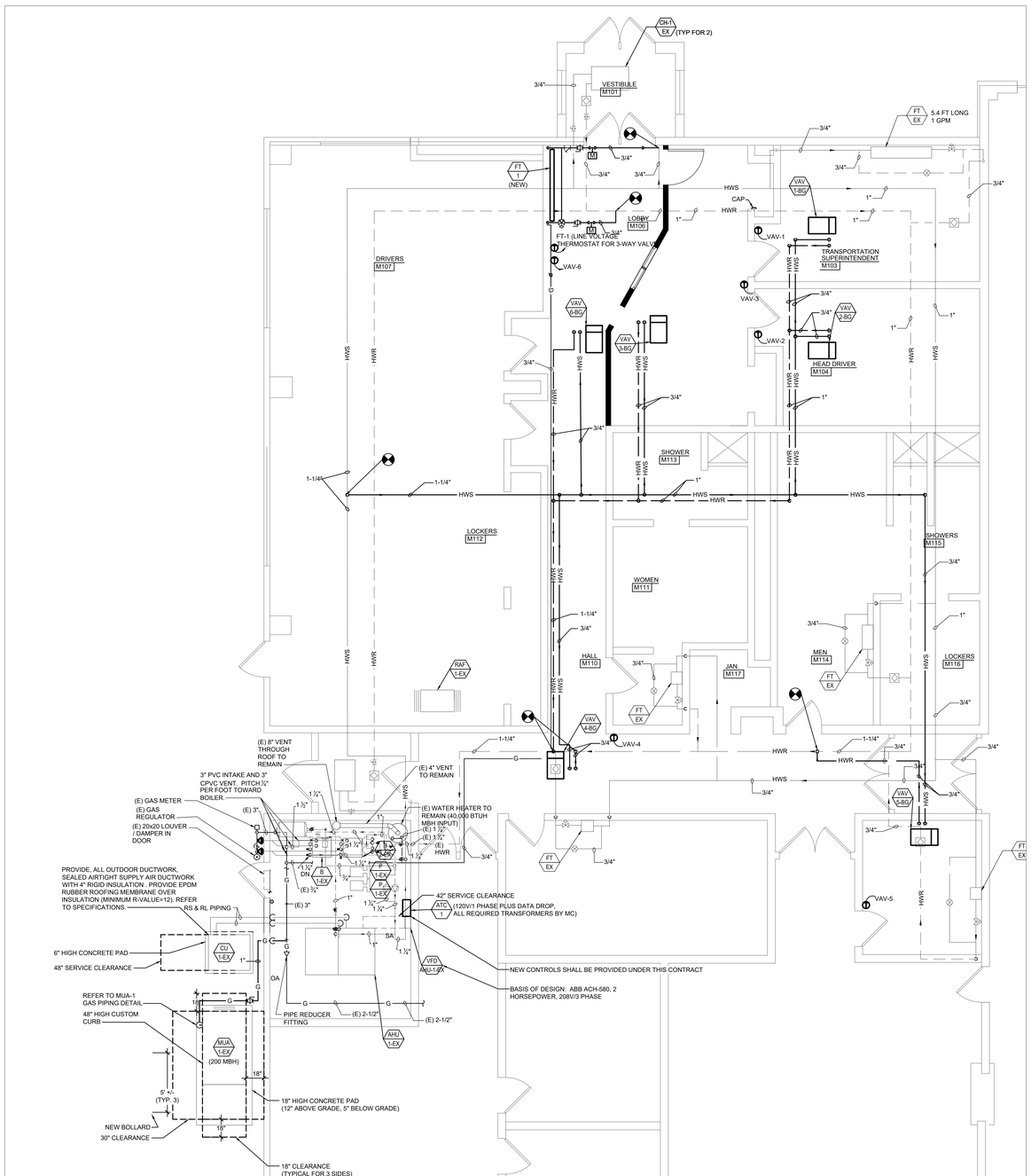
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
BUS GARAGE MECHANICAL DEMOLITION PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	BG / MD-100
DATE: 12-01-2025	

CAD FILE: M100-MD-00.DWG
PLOT DATE: 12/2/2025





2 BG-M-100 — BUS GARAGE MECHANICAL RENOVATION PLAN-DUCTWORK

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

4 BG-M-100 — BUS GARAGE MECHANICAL RENOVATION PLAN-PIPING

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

Zone Identification			Standard Case: 2020 Mechanical Code of New York State Verification Rate Procedure											Design Case - Cooling		Design Case - Heating		Design Exhaust
Room or Zone	Occupancy Category	Area (sf)	People Outdoor Air Rate Rp (cfm/per)	Area Outdoor Air Rate Ra (cfm/sf)	Occupant Density (#/1000 sf)	Occupancy (# people) Pz	People OA CFM Vpeo	Area OA CFM - Varea	Breathing Zone Outdoor Air Flow Vbz (cfm)	Zone Air Distribution Effectiveness Ez	Zone Outdoor Air Flow Voz (cfm)	Code Required Exhaust Airflow Rate (cfm/sf) or (cfm/fixture)	Total Exhaust Required (cfm)	Zone Primary Air Flow Vpz (cfm)	Primary Outdoor Air Fraction Zp = Voz/Vpz	Zone Primary Air Flow Vpz (cfm)	Primary Outdoor Air Fraction Zp = Voz/Vpz	Total Exhaust Provided
AHU-1-EX Bus garage Office Space																		
Head Driver M104	Office Buildings - Office space	221	5	0.06	5	2	10.0	13.2	23	0.8	29	0	0	265	0.11	265	0.11	0
Transportation Superintendent M103	Office Buildings - Office space	223	5	0.06	5	2	10.0	13.4	23	0.8	29	0	0	410	0.07	410	0.07	0
Lobby M106	Public Assembly Spaces - Lobbies	173	5	0.06	150	7	35.0	10.4	45	0.8	57	0	0	531	0.11	531	0.11	0
Check-in Office	Office Buildings - Office space	261	5	0.06	5	2	10.0	15.7	26	0.8	32	0	0	345	0.09	345	0.09	0
										AHU-1-EX Bus garage Office Space MIN OA	**147**			1,551		1,551		

GENERAL NOTES:

1. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO HIS WORK. PATCHES SHALL MATCH SURROUNDING WALL SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
2. CEILINGS THAT NEED TO BE TEMPORARILY REMOVED TO ALLOW FOR THE INSTALLATION OF DUCTWORK, PIPING OR EQUIPMENT, AND ARE NOT SCHEDULED TO BE REMOVED ON THE ARCHITECTURAL DRAWINGS, SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR. COORDINATE THE REMOVAL AND THE REPLACEMENT WITH THE ELECTRICAL CONTRACTOR AND THE FIRE PROTECTION CONTRACTOR.
3. MECHANICAL CONTRACTOR SHALL REPLACE (IN-KIND) ALL CEILING TILES AND CEILING GRID SEGMENTS THAT GET DAMAGED DURING DEMOLITION OR CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. M.C. SHALL PROVIDE COORDINATION SHOP DRAWINGS OF HVAC DUCTWORK AND PIPING COORDINATED WITH LIGHTING, PLUMBING, AND FIRE PROTECTION. FIELD VERIFY ALL DIMENSIONS AND UNFORESEEN CONDITIONS WITH AT LEAST 1 SITE SURVEY.

REVISIONS

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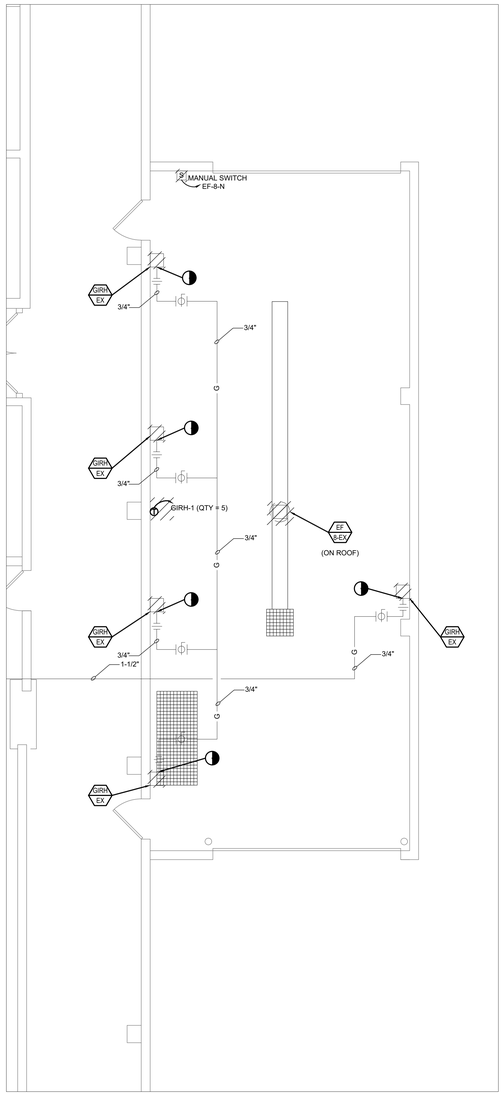
BUS GARAGE MECHANICAL RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.P.	BG / M-100
DATE: 12-01-2025	

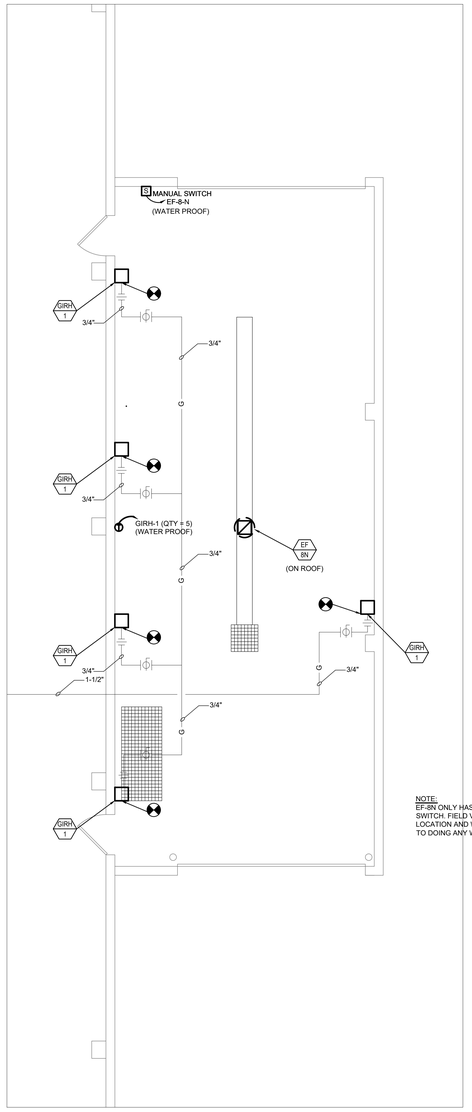
CAD FILE: H:\2024\2024-239P\Drawings\Mechanical\BG-M-100.dwg
PLOT DATE: 11/26/2025



5 BG-MD-100

BUS GARAGE WASH BAY MECHANICAL DEMOLITION PLAN

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



6 BG-M-100

BUS GARAGE WASH BAY MECHANICAL RENOVATION PLAN

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

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DR SERIES HIGH INTENSITY

SUBMITTAL DATA GAS-FIRED INFRARED SPACE HEATERS

SUBMITTED BY: DATE:

JOB TITLE: CONTRACTOR:

ADDRESS: PHONE #:

CITY: ADDRESS:

STATE: ZIP: CITY:

STATE: ZIP:

ENGINEER:

LOCAL REPRESENTATIVE:

NOTES: GIRH-1 (RE-VERBER-RAY DR30 NFS-2 120V)
PROVIDE (1) 120V/1 PHASE WATERPROOF AND CORROSIONPROOF THERMOSTAT TO CONTROL (5) GIRH-1's AND ALL ASSOCIATED 120V CONTROL WIRING (IN WATERPROOF AND CORROSIONPROOF CONDUIT).

QTY.		MODEL #	TAG	INPUT BTU/h (Indicate Gas Type) NATURAL GAS	PROPANE GAS	CERAMIC OPERATING TEMP.	SQ. IN. of RADIATING SURFACE	TYP. OR RCMD. MOUNTING HEIGHTS (Standard Reflector)	NET WEIGHT	CONTROL VOLTAGE (See Page 2) 120V	24V	Millivolt
		DR 30		30,000	30,000	1780° F	85	12' to 14'	18 lbs.	X		
		DR 30(S)		30,000	30,000	1780° F	85	12' to 14'	18 lbs.			
		DR 45		45,000	45,000	1660° F	170	12' to 14'	27 lbs.			
		DR 50		50,000	50,000	1690° F	170	12' to 14'	27 lbs.			
		DR 55		55,000	55,000	1740° F	170	13' to 15'	27 lbs.			
		DR 60		60,000	60,000	1780° F	170	14' to 16'	27 lbs.			
		DR 75		75,000	75,000	1690° F	255	15' to 17'	36 lbs.			
		DR 80		80,000	80,000	1720° F	255	15' to 17'	36 lbs.			
		DR 85		85,000	85,000	1750° F	255	16' to 18'	36 lbs.			
		DR 90		90,000	90,000	1780° F	255	16' to 18'	36 lbs.			
		DR 95		95,000	N/A	1800° F	255	17' to 20'	36 lbs.			
		DR 100		100,000	N/A	1810° F	255	17' to 20'	36 lbs.			
		DR 130		130,000	120,000	1810° F	340	21' to 24'	45 lbs.			
		DR 160		160,000	145,000	1810° F	425	24' to 28'	54 lbs.			

DETROIT RADIANT PRODUCTS CO

21400 Hoover Rd.
Warren, MI 48089-3162

Phone: (586) 756-0950
Toll Free: (800) 222-1100
Fax: (586) 756-2626
Email: sales@drp-co.com
Website: www.detroitradiant.com

VISIT OUR WEBSITE FOR:

- Product Specs
- Parts Support
- Dealer Locator
- Applications
- CAD/Revit Library
- Design Guidelines
- Theory of Infrared
- and More!

LSDR-Sc-1218(CDS)

DR SPECIFICATIONS



NOMINAL MANIFOLD PRESSURE
- Natural Gas - 6.0 in. W.C.
- Propane Gas - 10.0 in. W.C.

MINIMUM HEATER INLET PRESSURE
- Natural Gas - 7.0 in. W.C.
- Propane Gas - 11.0 in. W.C.

MAXIMUM INLET PRESSURE
- 1/2 lb. or 14.0 in. W.C.

VA DRAW
- 24V - 12.0
- 120V - 12.0

MOUNTING
- 20° to 35° from horizontal.
- Optional - Horizontal parabolic reflector (specify size) to emulate 0-15° angle.

INLET PIPE SIZE
- 1/2" NPT

MOUNTING HOLE DIAMETER
- 5/16"

AMP DRAW
- 24V - 0.48
- 120V - 0.10

⚠ WARNING

Read and understand the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment. Only trained, qualified gas installation and service personnel may install or service this equipment.

This heater is **NOT** for home or recreational use. **DO NOT USE** in the home, living quarters, attached garages, mobile homes, RVs, campers, tents, etc.

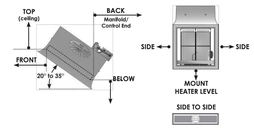
CONTROL Nat.	CONTROL Prop.	CONTROL VOLTAGE	CONTROL DESCRIPTION
NMV-2	PMV-2	Millivolt	Manual Ignition, Constant Pilot. 100% Shutoff, Self-energizing wire & thermostat.
NFS-2	PFS-2	120V or 25V	Direct Spark Ignition, 100% Shutoff.

All spark models include potted circuitry for use in high moisture applications.

CLEARANCES TO COMBUSTIBLES (IN INCHES)

MODEL NO.	SIDES	BACK	TOP	BELOW/ FRONT
DR 30	30	18	28	72
DR 30(S)	30	18	28	72
DR 45	30	18	28	72
DR 50	30	18	34	72
DR 55	32	18	40	72[1]
DR 60	32	18	40	72[1]
DR 75	48	30	42	98
DR 80	48	30	42	98
DR 85	48	30	42	98
DR 90	48	30	42	98
DR 95	48	30	52	120
DR 100	48	30	52	120
DR 130	48	30	52	120
DR 160	50	32	60	132

[1] Clearance is 80 in. when heater is fitted with a parabolic reflector.
NOTE: If the heater is mounted beneath a non-combustible surface, a 24 in. minimum top clearance must be maintained from the top of the heater to prevent overheating the controls



⚠ WARNING

Failure to comply with the stated clearances to combustibles could result in personal injury, death, and/or property damage.

If vehicles are parked below the heater or lifts are present, ensure that all clearances will be maintained from the highest raised vehicle.

⚠ WARNING

Read and understand the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment. Only trained, qualified gas installation and service personnel may install or service this equipment.

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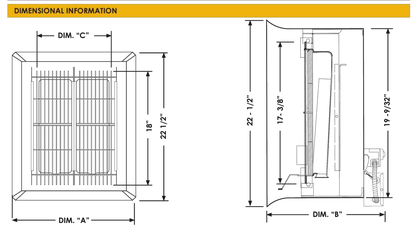
FIELD DATA

DIMENSIONAL INFORMATION



MODEL NO.	HEATER WIDTH DIM "A"	HEATER DEPTH DIM "B"	CENTER OF MTG. HOLES & RAYHEAD WIDTH DIM "C"
DR 30	12 ¾"	15 ¼"	5 ¼"
DR 30 (S)	12 ¾"	15 ¼"	5 ¼"
DR 45, 50, 55, 60	19 ⅜"	15 ¼"	11 ½"
DR 75, 80, 85, 90, 95, 100	26 ⅝"	15 ¼"	18"
DR 130	32"	15 ¼"	21"
DR 160	38 ½"	15 ¼"	27 ½"

OPTIONAL ACCESSORIES

QTY.	PART NO.	DESCRIPTION	NOTES
	DRCS	Chain mounting set	5' chain set with 4 "S" hooks. Preset mounting angle of 30°.
	DR#HPR	Horizontal parabolic reflector	Directs rays directly downward. Can be used for matching horizontal mounting specifications.
	DR#PR	Full parabolic reflector	Directs rays in a more focused pattern. Typically used in high mounting applications.
	DR#PRSC	Full parabolic reflector with screen	Directs rays in a more focused pattern. Outer screen protects ceramic grids from objects striking the heater.
	DR#SC	DR heater screen	Screen slips on the outside of the reflectors and protects the ceramic grids.
	PLQ	Warning plaque	Hung below heater, restates the clearance to combustible warning.

= Specify Number : 1 = DR 30; 2 = DR 45-60; 3 = DR 75-100; 4 = DR 130; 5 = DR 160

WRITTEN SPECIFICATIONS

HEATER PARAMETER/SPECIFICATIONS

- High Intensity Infrared Heaters shall be **Re-Verber-Ray® DR SERIES**, as manufactured by Detroit Radiant Products Company, Warren, MI 48089.
- High Intensity Infrared Heaters shall be Designed Certified by CSA.
- The manufacturer shall provide a published warranty covering the heater's ceramic burner for a period of five (5) years and all components utilized in the heater control assembly for a period of one (1) year.
- High Intensity Infrared Heaters shall be designed to operate when burning natural gas having a heat value of 1025 BTU per cubic foot with a specific gravity of 0.62, or when burning propane gas having a heat value of 2500 BTU per cubic foot with a specific gravity of 1.53.
- The ceramic burner face shall operate at a temperature range of 1660 degrees F to 1810 degrees F and shall incorporate a secondary re-radiating surface of stainless steel rods to obtain optimum operating temperature and radiant output.
- The manufacturer shall have a minimum of 30 years of manufacturing experience producing high intensity infrared heaters.

HIGH INTENSITY INFRARED HEATER BURNER CONTROLS

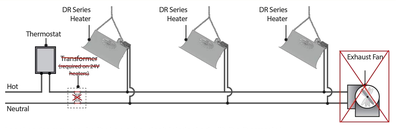
- Heaters shall be equipped with one of the following control systems:
  - ☐ Standing Manual Pilot System with 100% safety shut-off of pilot and main burner in case of pilot outage, operating with no external electrical connection but on milli-voltage generated by the pilot flame (NMV-2 or PMV-2).
  - ☐ Direct Spark Ignition System with direct spark ignition of the main burner through a solid state ignition module operating a spark electrode. Loss of power causes 100% safety shut-off of main burner(s). System operates on 120 or 24 volts (NFS-2 or PFS-2).

HIGH INTENSITY INFRARED HEATER CONSTRUCTION

- The heater reflector housing shall be constructed of one-side bright polished aluminum. The emitter shall be composed of a perforated ceramic tile on which combustion takes place on the surface. The burner plenum shall be constructed of aluminized steel of one-piece drawn construction. The heater shall be of a modular design employing multiple burners to achieve the specified input.
- The venturi is constructed of stainless or aluminized steel.
- The secondary re-radiating rods shall be constructed of high temperature stainless steel alloy placed in close proximity of the ceramic burner face.
- Parabolic reflectors shall be used when units are installed in high mounting applications or when focusing of the infrared heating pattern is desirable.
- Protective screens shall be used in facilities where debris may damage the heater.

(1) LINE VOLTAGE THERMOSTAT SHALL CONTROL (5) GIRH-1'S IN (1) ELECTRICAL CIRCUIT.

TYPICAL WIRING DIAGRAMS



NOTE: Local codes may require that an exhauster is interlocked with the thermostat.

GIRH-1 DETAIL

N.T.S.

REVISIONS

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DRAWN BY:	PROJECT NO.:
B.H.	2024-239P
CHECKED BY:	BUILDING:
M.P.	BG
DATE: 12-01-2025	DRAWING NO.: M-101

DWG FILE: 2239-BG-M-101.DWG
PLOT DATE: 11/20/2025

VAV BOX SCHEDULE (HOT WATER REHEAT)

TAG	ZONE TYPE	COOLING MAX CFM	COOLING MIN CFM	HEATING CFM	INLET SIZE	DUCT INLET RUNOUT	MAXIMIM APD	HOT WATER REHEAT COIL MBH	GPM	EWT	LWT	WPD	EAT	LAT	ROWS	FLUID	VOLTAGE/PHASE	MFR / MODEL	AREA SERVED	REMARKS/ACCESSORIES
VAV-1-BG	PERIMETER	410	205	310	8"	-	0.21	16.81	0.92	180	143.43	0.08	55.0	105	2	WATER	120V-1Ø	TRANE / VCWF (HOT WATER HEATING)	TRANSPORTATION SUPERINTENDENT M103	1-11
VAV-2-BG	INTERIOR	265	135	135	5"	-	0.09	7.32	0.63	180	156.65	0.73	55.0	105	1	WATER	120V-1Ø	TRANE / VCWF (HOT WATER HEATING)	HEAD DRIVER M104	1-11
VAV-3-BG	PERIMETER	345	170	260	6"	-	0.33	14.1	0.58	180	131.73	0.23	55.0	105	2	WATER	120V-1Ø	TRANE / VCWF (HOT WATER HEATING)	NEW OFFICE	1-11
VAV-4-BG	INTERIOR	220	110	165	5"	-	0.13	11.03	0.5	180	135.88	0.17	55.0	116.65	2	WATER	120V-1Ø	TRANE / VCWF (HOT WATER HEATING)	HALL M110	1-11
VAV-5-BG	INTERIOR	120	60	90	4"	-	0.030	4.87	0.5	180	156.53	0.49	55.0	115.17	1	WATER	120V-1Ø	TRANE / VCWF (HOT WATER HEATING)	HEAD MECHANIC M127	1-11
VAV-6-BG	PERIMETER	531	265	400	8"	-	0.31	21.69	1.35	180	147.79	0.15	55.0	105	2	WATER	120V-1Ø	TRANE / VCWF (HOT WATER HEATING)	LOBBY M106	1-11

REMARKS/ACCESSORIES:

1) UNITS TO BE TRANE MODEL, SIZE, AND CONFIGURATION AS INDICATED IN SCHEDULE AND ON DRAWINGS
2) PROVIDE WITH ZONE TEMPERATURE SENSOR
3) PROVIDE WITH FACTORY-WIRED DISCHARGE AIR TEMPERATURE SENSOR
4) PROVIDE WITH FACTORY-WIRED AND TAGGED HOT-WATER VALVE
5) PROVIDE WITH FACTORY-WIRED AND TAGGER HOT-WATER AND PIPING PACKAGE
6) PROVIDE UNIT-MOUNTED THERMOSTAT
7) PROVIDE UNIT-MOUNTED CONTROL POWER TRANSFORMER AND DISCONNECT
8) TRANE SUPPLIED CONTROLS - SY210 DDC-BASIC (WATER HEAT-MODULATING)
9) PROVIDE EACH VAV BOX WITH A 120V/24V CONTROL TRANSFORMER
10) E.C. TO PROVIDE 120V POWER TO EACH BOX. COORDINATE WITH ELECTRICAL CONTRACTOR.
11) PROVIDE VAV BOX REHEAT COIL WITH A THREE-WAY MODULATING ELECTRONIC CONTROL VALVE.

SUPPLY, RETURN, & EXHAUST AIR DIFFUSER SCHEDULE

TAG	NECK SIZE	CFM RANGE	PANEL SIZE	THROW (FEET)	MAX. N.C.	MAX. S.P.	MANUFACTURER & MODEL	REMARKS
S-1	6"Ø	50-140	24"X24"	3-6	30	.10	TITUS TMSA	LAY-IN, LOCKER/ SHOWER ROOM AREAS TO BE ALUMINUM
S-2	8"Ø	145-250	24"X24"	4-8	30	.10	TITUS TMSA	LAY-IN, LOCKER/ SHOWER ROOM AREAS TO BE ALUMINUM
S-3	10"Ø	255-400	24"X24"	6-10	30	.10	TITUS TMSA	LAY-IN, LOCKER/ SHOWER ROOM AREAS TO BE ALUMINUM
S-4	12"Ø	405-550	24"X24"	6-12	30	.10	TITUS TMSA	LAY-IN, LOCKER/ SHOWER ROOM AREAS TO BE ALUMINUM
S-5	14"Ø	555-800	24"X24"	8-15	30	.10	TITUS TMSA	LAY-IN, LOCKER/ SHOWER ROOM AREAS TO BE ALUMINUM
R-1	22"X22"	505-1500	24"X24"	-	30	.10	TITUS 50F	LAY-IN

NOTES: 1. COORDINATE ALL DRG'S AND MOUNTING TYPES WITH THE FINAL ARCHITECTURAL RCP, INCLUDING ALL ADDENDA AND BULLETINS.

EXISTING AIR HANDLING UNIT SCHEDULE

TAG	SERVICE	SUPPLY CFM	O/A CFM (MIN)	SUPPLY FAN TYPE	RPM	ESP	TSP	HP	VOLTAGE	FLA
AHU-1	OFFICES, ETC.	2330	490		1467	2.0	3.38	1.9	208V/3ϕ	

TAG	HOT WATER PREHEAT COIL EAT(°F)	LAT(°F)	APD (IN. H_2O)	EWT(°F)	LWT(°F)	WPD (IN. H_2O)	GPM	TOTAL MBH	ROWS	FINS/IN.	FACE AREA FT^2
AHU-1	50.00	95.00	0.22	140.00	114.45	0.38	8.92	113.71	2	14	-

TAG	DX COOLING COILS EAT(°F) DB	EAT(°F) WB	LAT(°F) DB	LAT(°F) WB	APD (IN. H_2O)	AMB. (°F)	TOTAL MBH	SENS MBH	ROWS	FINS/IN.	FACE AREA FT^2
AHU-1	80.00	67.00	58.42	56.87	0.40	-	74.67	55.26	4	9	-

TAG	FILTER BANK TYPE	TOTAL AREA SQ. FT.	AIR P.D. IN. H_2O	UNIT ELECTRICAL DATA FLA	MFS	MCA	VOLTAGE	MFGR / MODEL	REMARKS
AHU-1	2" PLEATED, MERV 8	9	0.770	7.30	15.00	9.00	200-208/60/3ϕ	TRANE/ UCCAF06A0F0RFU33	1 THROUGH 31

REMARKS/ ACCESSORIES:

1. PERFORMANCE CLIMATE CHANGER (UCCA) - INDOOR UNIT
2. VERTICAL HOUSED FAN WITH TOP BACK DISCHARGE
3. UNIT SIZE 6 SQUARE FEET OF COIL
4. 200-208/60/3
5. POLYMER DRAINPAN, RH COIL & DRAIN CONN. / RH MOTOR & DRIVE LOCATION
   - UNIT'S LEFT AND RIGHT DETERMINED BY LOOKING AT UNIT WITH SUPPLY AIR BLOWING IN YOUR FACE
6. 2 ROW PREHEAT HYDRONIC COIL WITH 14 FINS PER INCH.
7. 4 ROW DX COIL WITH 9 FINS PER INCH.
8. ALUMINUM FINS, GALVANIZED COIL CASING, 3/8" COILS
9. NO TURBULATORS
10. UC600 CONTROLLER PLUS STARTER OR DISCONNECT.
11. 2 HORSEPOWER (1.492 kW) MOTOR PER FAN (SUPPLY).
12. FC FAN W/ VFD
13. 1500 RPM FIXED/ 1450 - 1550 VARIABLE
14. 2" ANGLE FILTER MIXING SECTION MERV 8
15. LOW LIMIT SW, CONDENSATE OVERFLOW SW, DIRTY FILTER SW, AND FAN STATUS SW
16. DISCHARGE AIR SENSOR
17. OUTSIDE AIR TEMPERATURE AND DUCT STATIC PRESS SENSOR, FACT-PROVIDED, SHIPS LOOSE (FLD)
18. 1ST YEAR LABOR WARR. WHOLE UNIT
19. 6" BASERAIL
20. AHRI ACHC CERTIFIED
21. GALVANIZED STEEL COIL CASING
22. UNIT IS 70-1/8" IN LENGTH WITH FIELD-REMOVAL / REMOTE MOUNTING OF FACTORY VFD REQUIRED AS APPROPRIATE.
23. AIRFOIL BLADES ON THE CENTRIFUGAL FAN OF THIS UNIT ARE NOT AN AVAILABLE OPTION. - FC BLADES ONLY OPTION
24. FANS ARE INTERNALLY ISOLATED
25. THE COIL TUBES ARE NOT EQUIPPED WITH TURBULATORS.
26. HOT WATER IS 2 ROW, 4 FPI TO PROVIDE 95°F LAT WITH 140°F EWT/ 8.92 GPM.
27. AHU-1 IS CONFIGURED WITH COIL PIPING, FAN DRIVE, AND ACCESS DOORS ON RIGHT HAND UNIT-SIDE WITH UNIT'S RIGHT AND LEFT DETERMINED AS YOU FACE THE UNIT WITH SUPPLY AIR BLOWING IN YOUR FACE PROVIDED ACCESS DOORS ON FAN, COIL, AND FILTER/MIXING SECTION.
28. AHU-1 SHIPS WITH VFD FACTORY INSTALLED. VFD SHALL BE REMOVED AND REMOTE MOUNTED TO MEET NEC CLEARANCES AS REQUIRED.
29. AHU-1 SHALL BE CONFIGURED WITH A 4 ROW, 9 FINS PER INCH DX COIL DELIVERING 74.67 MBH COOLING CAPACITY(80°F DB/ 67°F WB MIXED ENTERING AIR DOWN TO 58.42°F DB/ 56.87°F WB), MATED TO A NOMINAL 6 TON AIR-COOLED CONDENSING UNIT.
30. AHU-1 IS CURRENTLY CONFIGURED WITH TOP AND BACK MIXED AIR DAMPERSAND TOP-BACK SUPPLY AIR DISCHARGE.
31. AHU-1 IS CONFIGURED TO SHIP IN 2 SECTIONS.

NOTE: EXISTING SCHEDULE FOR REFERENCE ONLY

CODE MINIMUM VENTILATION COMPLIANCE SCHEDULE

EQUIPMENT / TAG	AREA SERVED	CODE MINUMUM OA CFM	ACTUAL OA CFM	REMARKS
AHU-1-EX	OFFICE SPACES	162	490	1

REMARKS:

1 AHU-1-EX IS 21% OA
SA CFM = 2330
OA CFM = 490

HOT WATER BASEBOARD RADIATION SCHEDULE

TAG	ELEMENT LENGTH	TUBE	FINS/FT	FINS	TIERS	BTU/HR /FT.	AWT	LWT	GPM	BTU/HR	SIZE	MFGR. / MODEL	REMARKS
FT-1	6' - 0"	3/4"	60	2-1/2" x 2-3/4"	2	1140	180	140	1.0	6840	3-9/16" W x 14" H	STERLING / JVK-S14	16 GA STAINLESS STEEL COVER, COLOR BY ARCHITECT

REMARKS: LINE-VOLTAGE THERMOSTAT SHALL CONTROL 3-WAY VALVE FOR FT-1. M.C. SHALL COORDINATE WITH E.C..

EXHAUST FAN SCHEDULE

TAG	TYPE	CFM	ESP IN. H_20	FAN RPM	FAN DIA.	MOTOR RPM	HP	ENCLOSURE	V/PH/HZ	DRIVE	FAN MATERIAL	DISCHARGE STACK DIA./OUTLET	SERVICE	MFGR / MODEL	REMARKS
EF-8N	DOWNBLAST	1100	0.5	966	-	1200	1/2	ODP	115/1/60	DIRECT	ALUMINUM	-	BUS WASH	G-140-VG	1-12

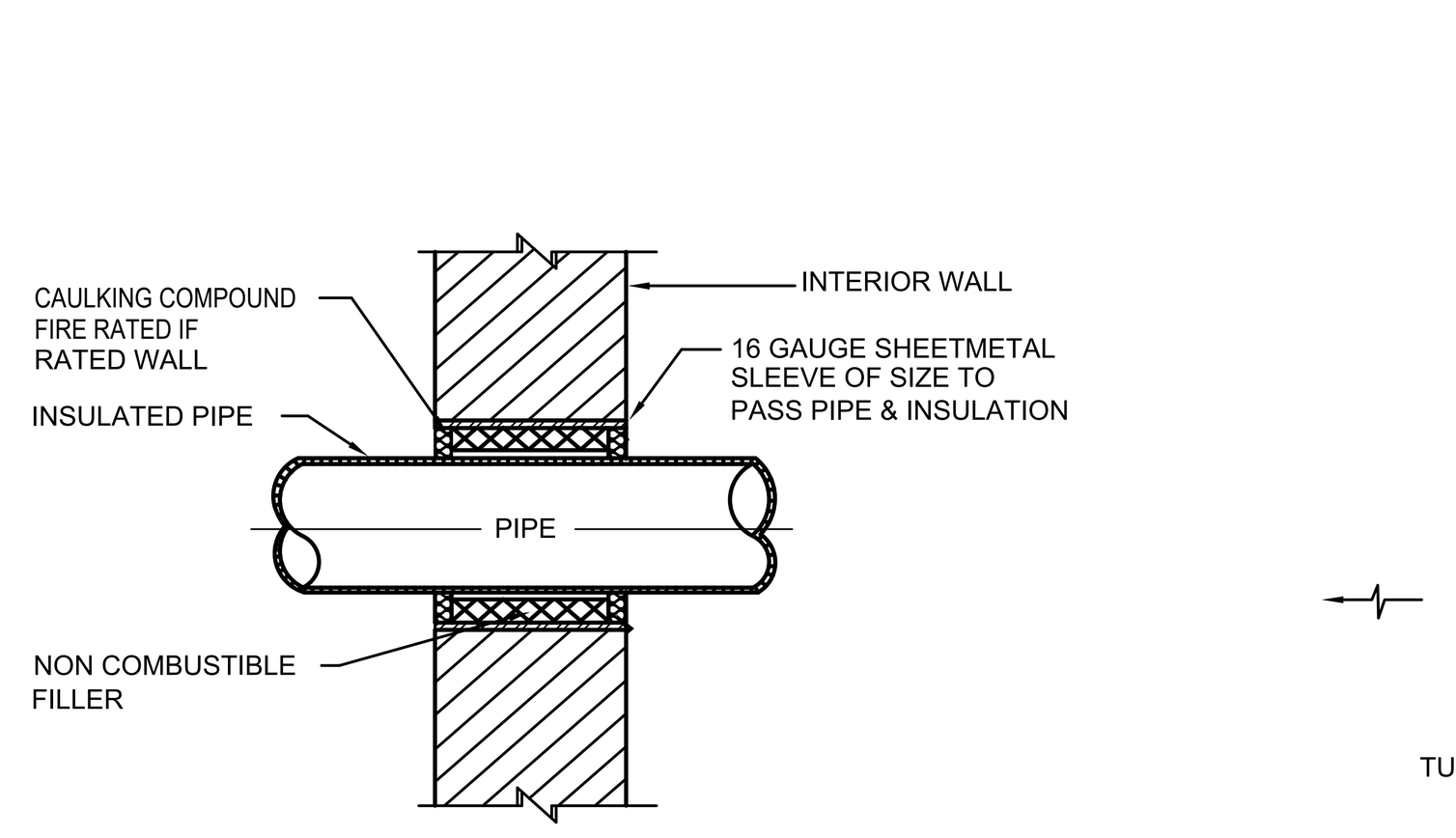
REMARKS:
1. Motor - Vari-Green EC motor
2. Control - Dial for balancing
3. Standard Curb Cap Size - 22 Square
4. UL/cUL 705 Listed - "Power Ventilators"
5. Switch, NEMA-1, Toggle
6. Junction Box Mounted & Wired in weather-protected motor compartment
7. Coated with Hi-Pro Polyester, Concrete Gray-RAL 7023, Fan And Attached Acc
8. Birdscreen: Aluminum, nom. 86% Free Area
9. Aluminum Wheel Material
10. Conduit Chase Qty 1
11. Damper Shipped Loose, BD-100-PB-16x16, Gravity Operated, Not Coated, Nominal Size
12. High Wind Rated

MECHANICAL / ELECTRICAL EQUIPMENT CONNECTIONS SCHEDULE

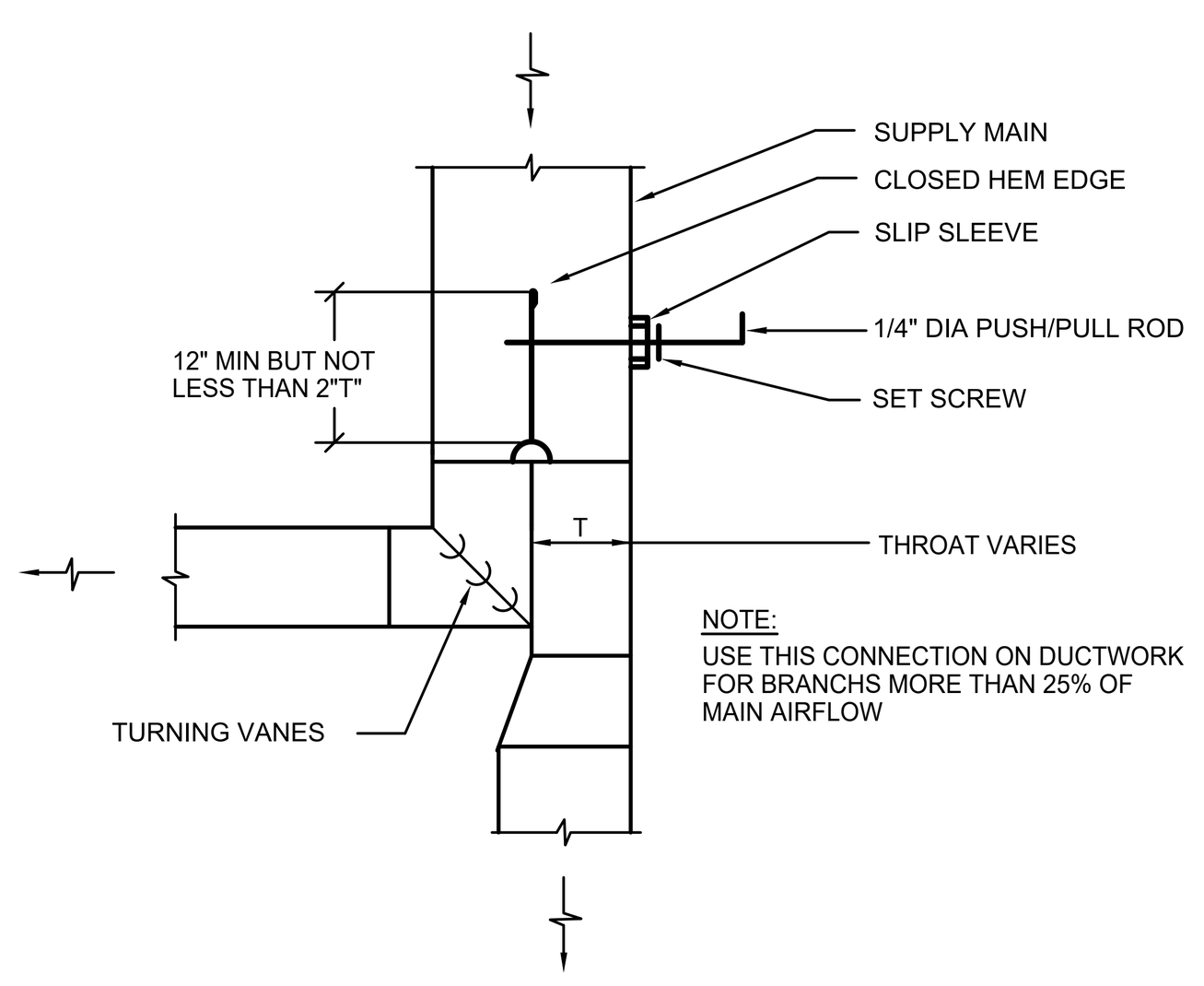
EQUIPMENT / TAG	DISCONNECT FURNISHED BY	DISCONNECT INSTALLED BY	STARTER FURNISHED BY	STARTER INSTALLED BY	NOTES
GIRH-1	M.C.	M.C.	M.C.	M.C.	① ②
VAV BOXES (HOT WATER REHEAT)	M.C.	M.C.	M.C.	M.C.	① ②

M/E EQUIPMENT CONNECTIONS SCHEDULE NOTES:

1. THE MECHANICAL/ELECTRICAL EQUIPMENT CONNECTIONS SCHEDULE AND ACCOMPANYING NOTES ARE INTENDED TO CLEARLY DEFINE WHICH CONTRACTOR FURNISHES AND INSTALLS STARTERS AND DISCONNECTS AND SHALL BECOME PART OF THE SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER WIRING AND FINAL POWER CONNECTIONS. ALL CONTROL WIRING SHALL BE FURNISHED, INSTALLED AND FINAL CONNECTION BY THE TRADE SUPPLYING THE EQUIPMENT.
2. E.C. - ELECTRICAL CONTRACTOR
   M.C. - MECHANICAL CONTRACTOR (HVAC)
   P.C. - PLUMBING CONTRACTOR
   MFR - MANUFACTURER

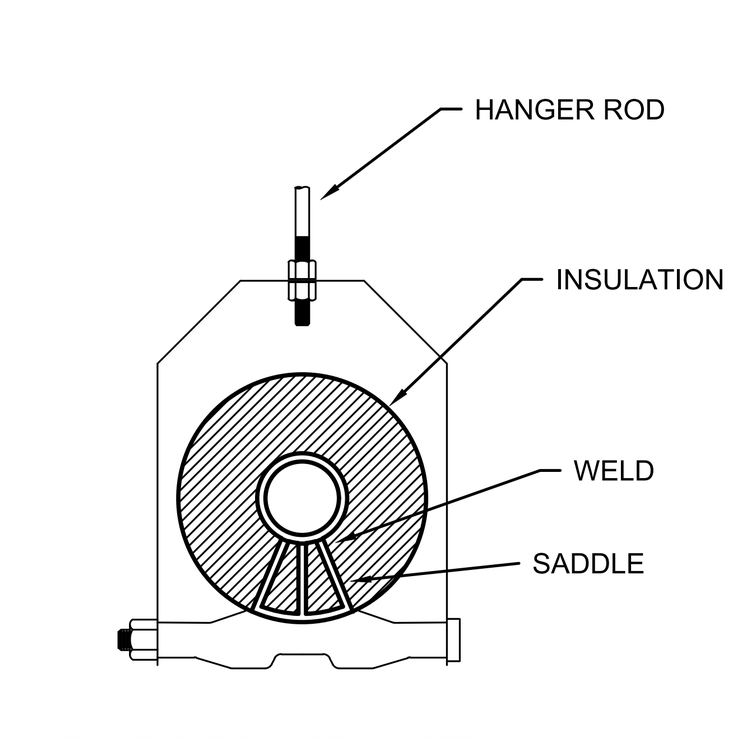


PIPE PENETRATION DETAIL
NOT TO SCALE

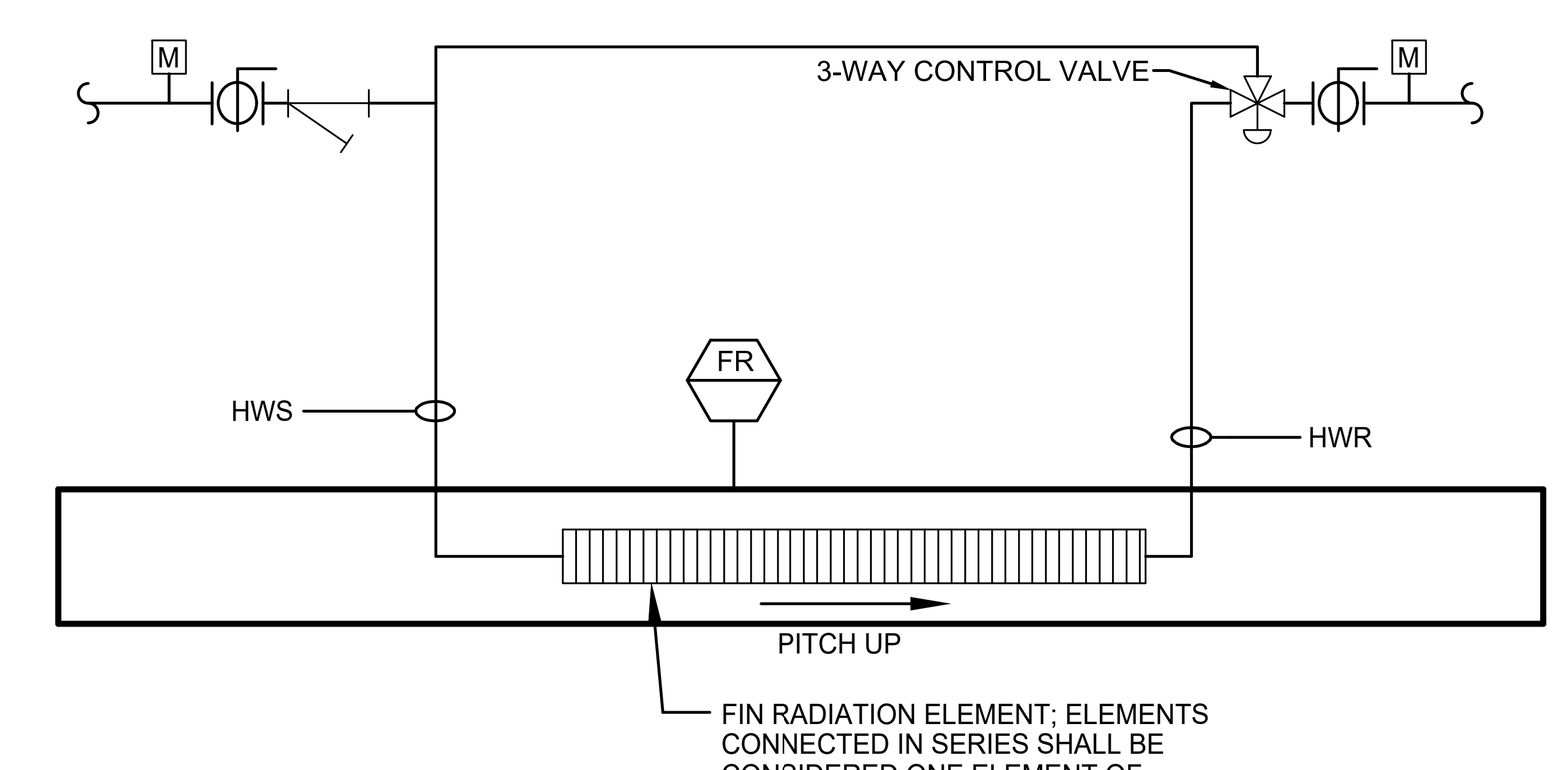


NOTE:
USE THIS CONNECTION ON DUCTWORK FOR BRANCHS MORE THAN 25% OF MAIN AIRFLOW

DUCT DIVISION DETAIL
NOT TO SCALE

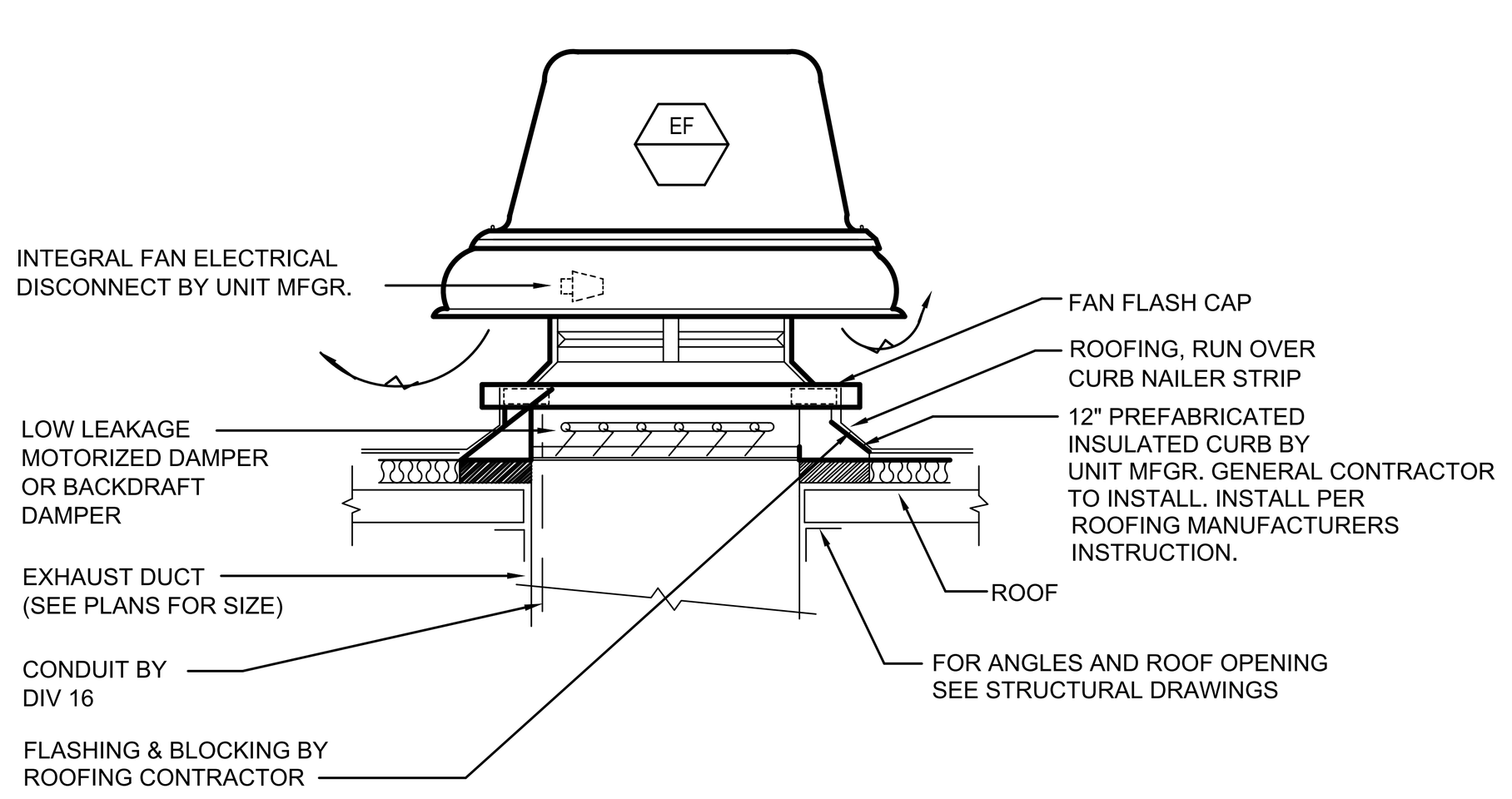


TYPICAL PIPE HANGER
NO SCALE

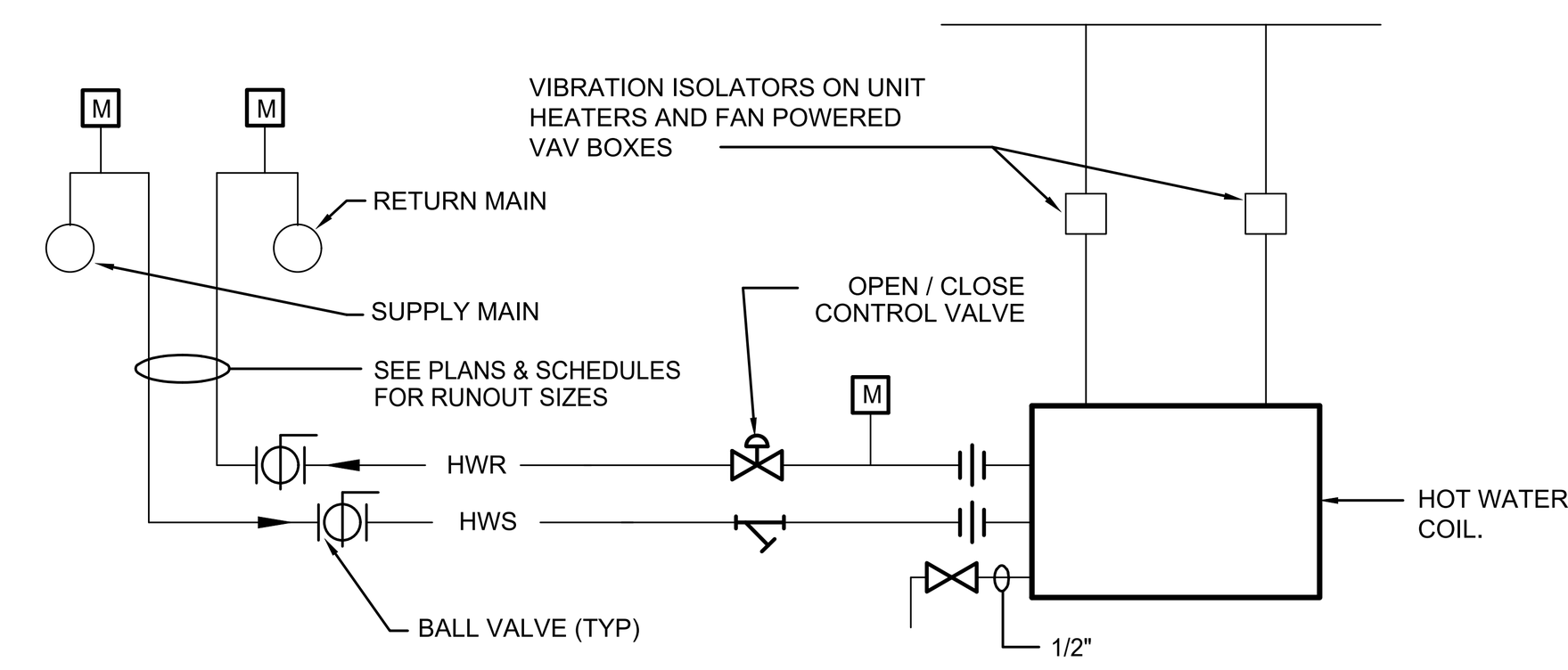


NOTE:
HWR PIPING SHALL RUN BACK BELOW FIN TUBE WHERE INDICATED ON FLOOR PLANS.

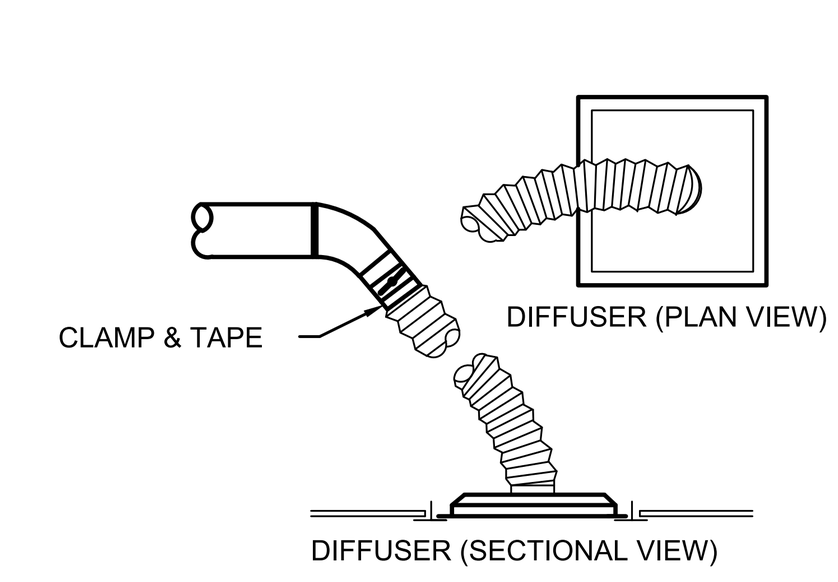
FIN RADIATION DETAIL
NOT TO SCALE



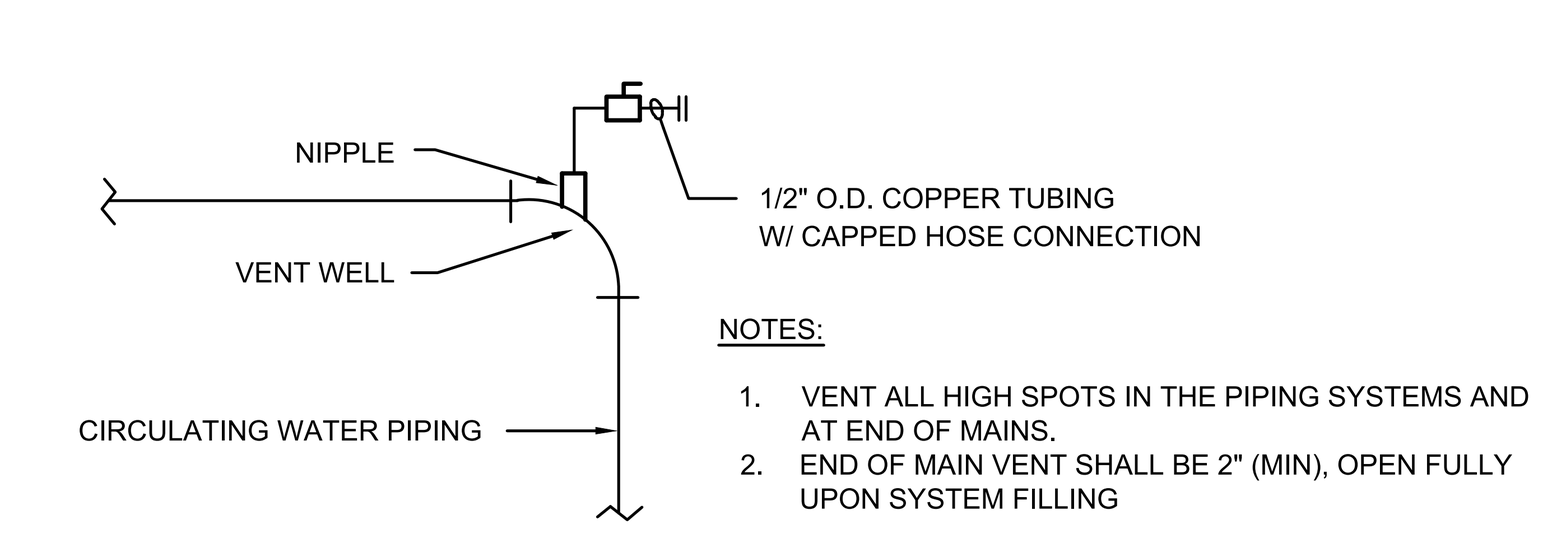
ROOF EXHAUST FAN DETAIL
NOT TO SCALE



HEAT COIL PIPING AT VAV BOX,
NOT TO SCALE

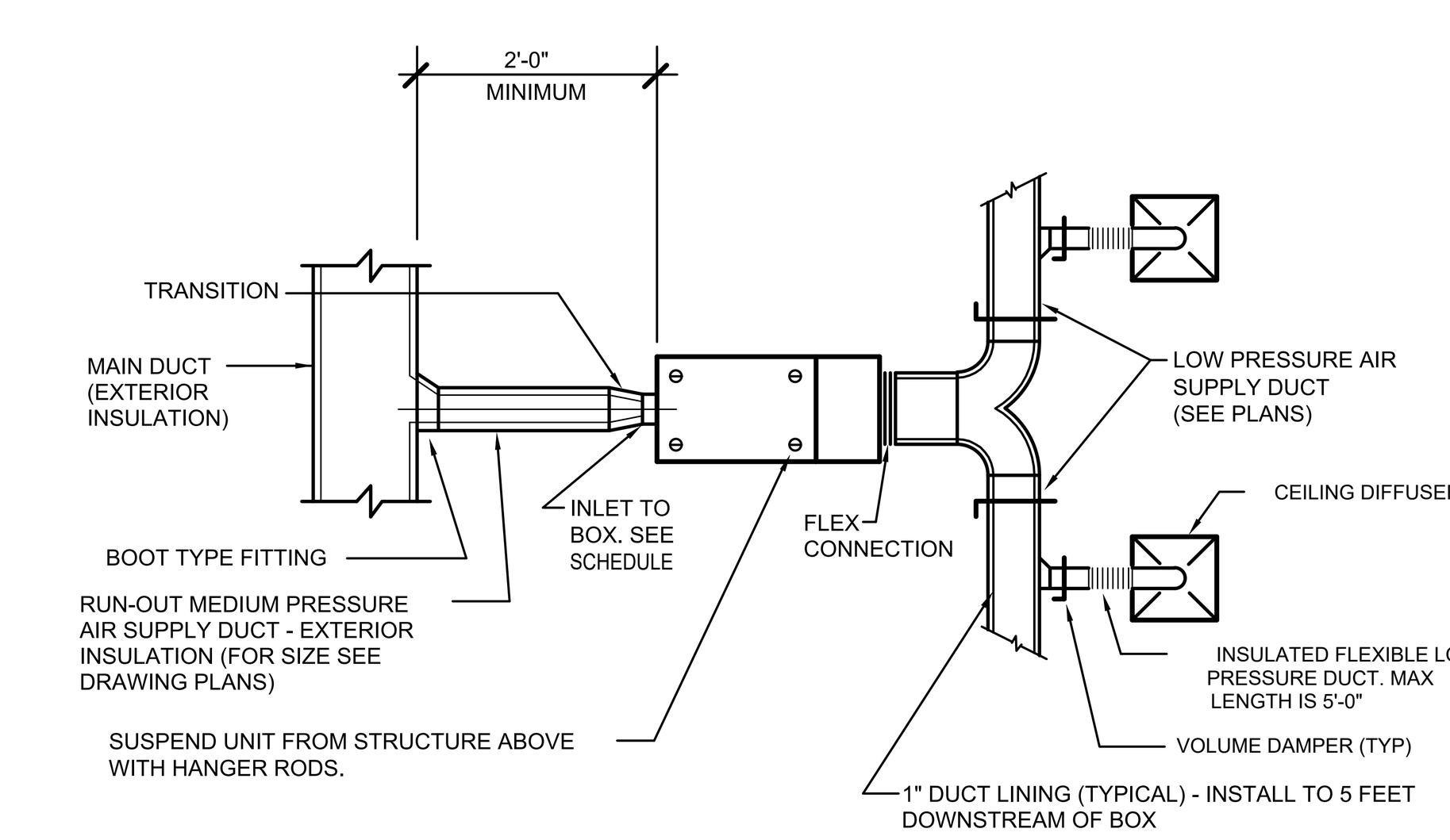


DUCTWORK & DIFFUSER TAPS
NOT TO SCALE

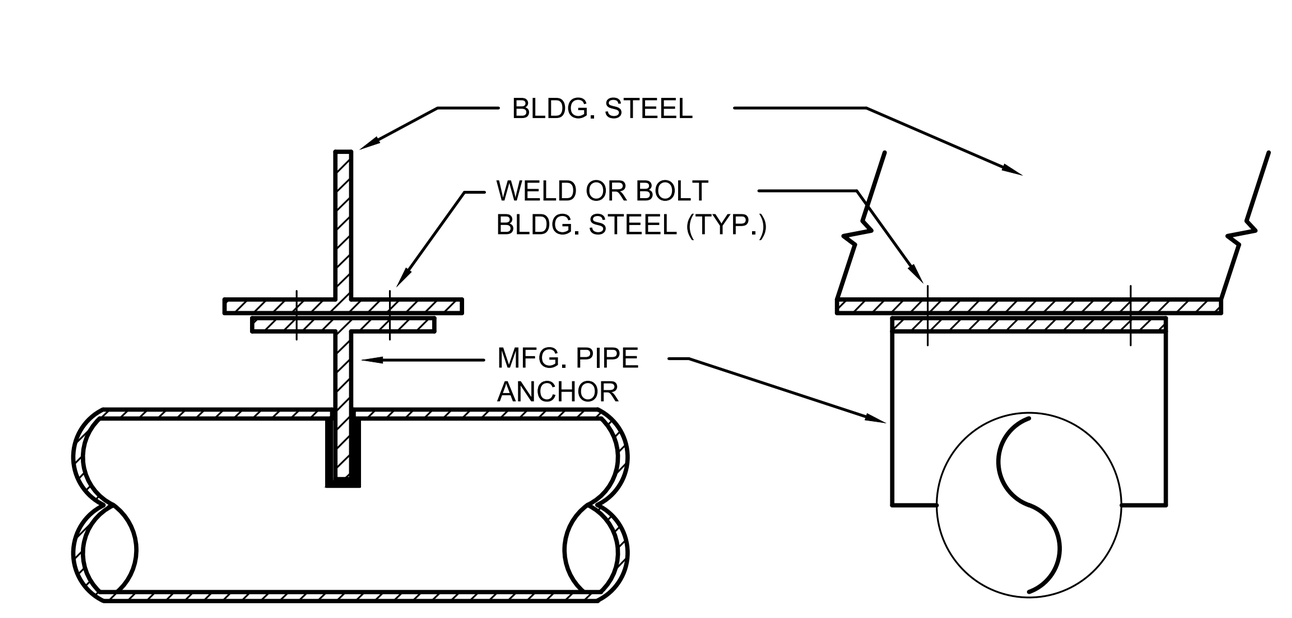


NOTES:
1. VENT ALL HIGH SPOTS IN THE PIPING SYSTEMS AND AT END OF MAINS.
2. END OF MAIN VENT SHALL BE 2" (MIN), OPEN FULLY UPON SYSTEM FILLING

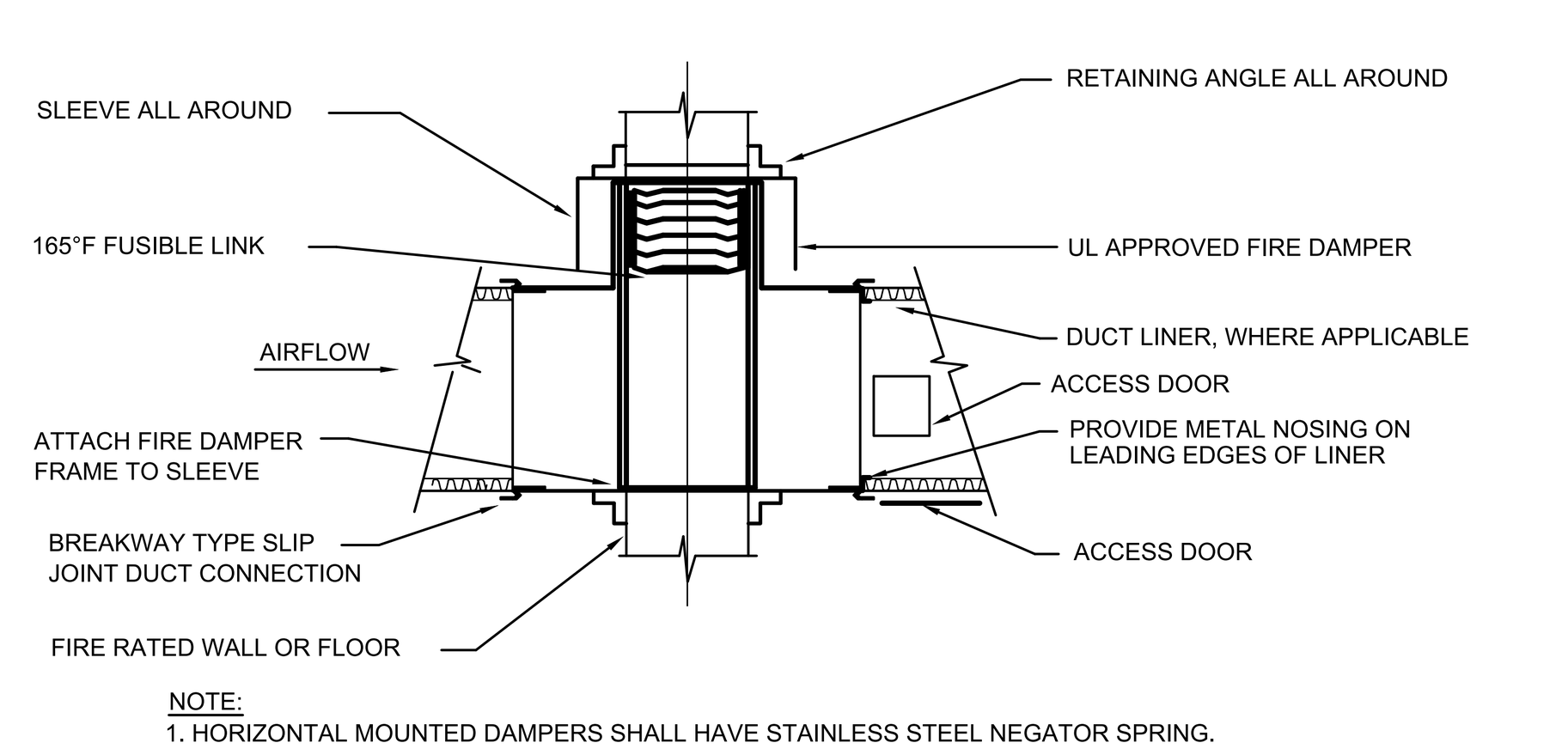
TYPICAL MANUAL AIR VENT DETAIL(HYDRONIC)
NOT TO SCALE



TYPICAL VAV RUNOUT DETAIL
NOT TO SCALE

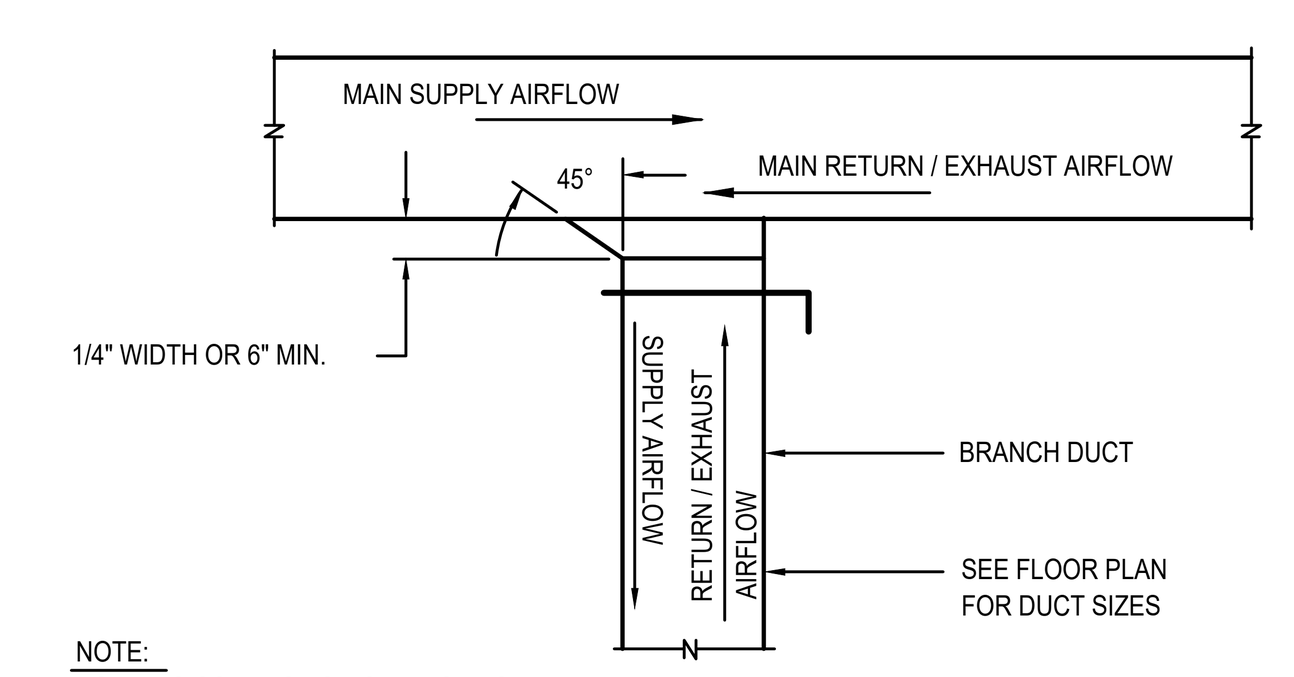


INTERIOR PIPE ANCHOR DETAIL
NO SCALE



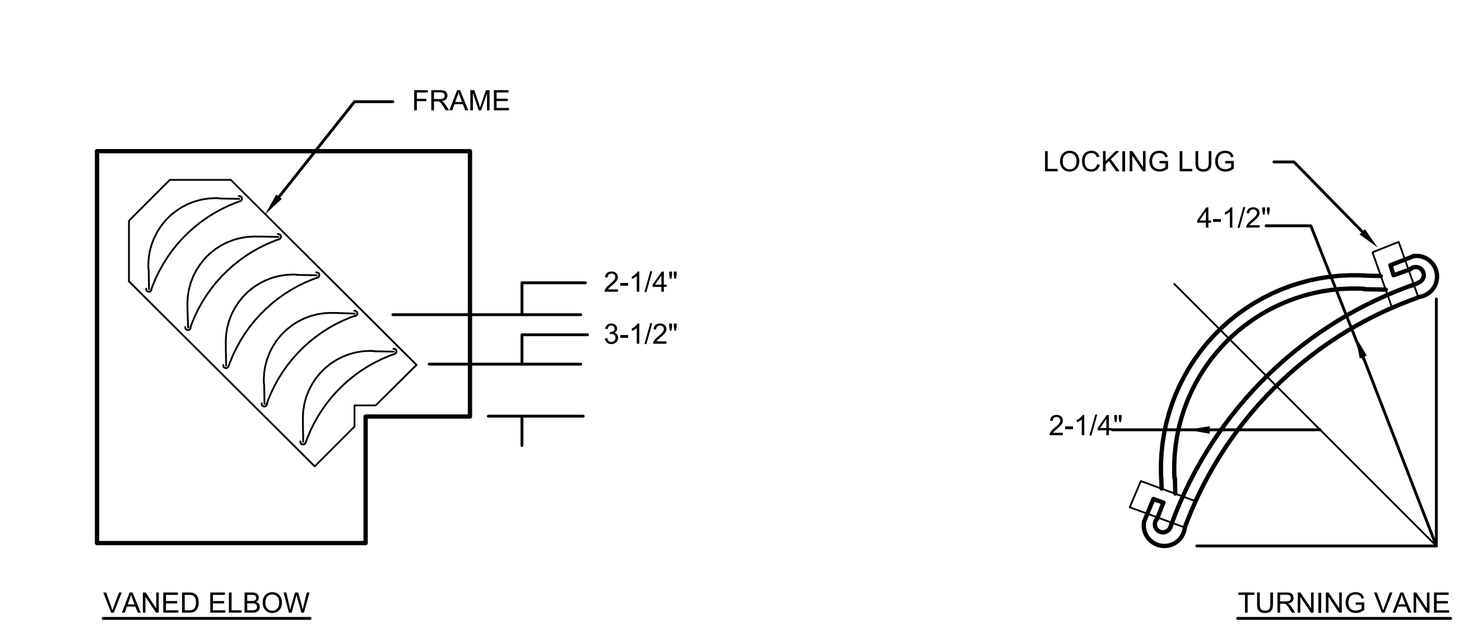
NOTE:
1. HORIZONTAL MOUNTED DAMPERS SHALL HAVE STAINLESS STEEL NEGATOR SPRING.
2. DAMPERS SHALL BE INSTALLED AS PER MANUFACTURERS INSTRUCTIONS.

TYPE B FIRE DAMPER DETAIL
NOT TO SCALE



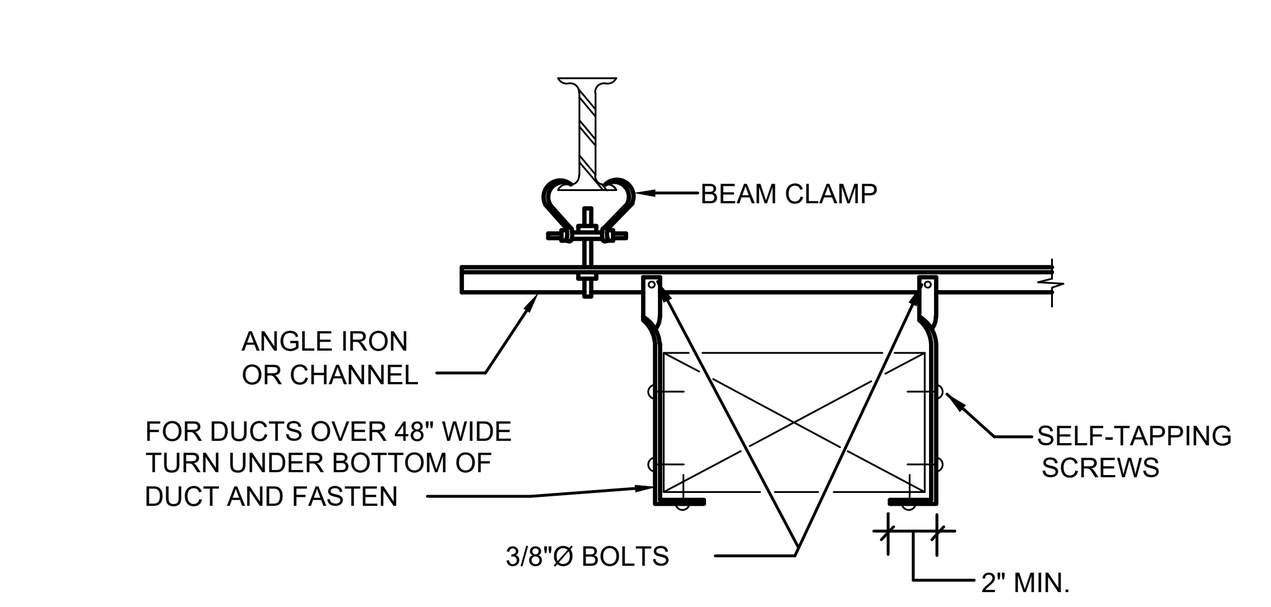
NOTE:
USE THIS CONNECTION ON DUCTWORK SHOWN AS FOR BRANCHES LESS THAN 25% OF MAIN AIRFLOW

BRANCH DUCT TAKE OFF DETAIL
NOT TO SCALE



NOTES:
1. LOCKING LUGS INTEGRAL W/VANE.
2. MAXIMUM UNSUPPORTED VANE LENGTH 48"
3. FRAMES-BOLTED OR RIVETED TO ELBOW.
4. VANES & FRAMES-SAME GAUGE AS ELBOW.

DOUBLE THICKNESS TURNING VANES FOR SQUARE ELBOW
NOT TO SCALE



DUCT SIZE	HANGER SIZE	MAX. SPACING
UP THRU 2 SQ. FT.	1" X 1/16"	8' - 0"
2 THRU 4 SQ. FT.	1" X 1/8"	8' - 0"
4 THRU 10 SQ. FT.	1" X 1/8"	6' - 0"
OVER 10 SQ. FT.	1" X 1/8"	4' - 0"

DUCT HANGING DETAIL AND SCHEDULE OF SUPPORTS
NOT TO SCALE

REVISIONS

Issued for Bidding
December 1, 2025

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
BUS GARAGE MECHANICAL SCHEDULES AND DETAILS

DRAWN BY:	PROJECT NO.:
F.R.G.	2024-239P
CHECKED BY: M.P.	BUILDING: BG
DATE: 12-01-2025	DRAWING NO.: M-300

CAD FILE: 4239-BG-M-300.DWG
PLOT DATE: 11/25/2025

Sequence of Operation: MAU-1 (E)

Building Automation System Interface:

The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

Occupied:

During occupied periods, the supply fan shall run continuously. The unit controller shall control the supply fan speed to maintain the current supply duct static pressure setpoint (adj.).

Optimal Start:

The BAS shall monitor the scheduled occupied time, occupied space setpoints and space temperature to calculate when the optimal start occurs.

Optimal Stop:

The BAS shall monitor the scheduled unoccupied time, occupied setpoints and space temperature to calculate when the optimal stop occurs. When the optimal stop mode is active the unit controller shall maintain the space temperature to the space temperature offset setpoint.

Occupied Bypass:

The BAS shall monitor the status of the ON and CANCEL buttons of the space temperature sensors. When an occupied bypass request is received from a space sensor, the unit shall transition from its current occupancy mode to occupied bypass mode and the unit shall maintain the space temperature to the occupied setpoints (adj.).

Supply Fan:

The supply fan shall be enabled while in the occupied mode and cycled on during the unoccupied mode.

Static Pressure High Limit:

If for any reason the supply air pressure exceeds the fixed supply air pressure limit of 3.5 inches of W.C. the supply fan shall shut down. The unit shall be allowed to restart three times. If the over pressurization condition occurs on the fourth restart, the unit shall shut down and a manual reset diagnostic is displayed at the remote panel and/or the BAS system.

SEQUENCE OF OPERATION :MAU-1

NOT TO SCALE

Sequence of Operation: UCCA Bus Garage (E)

Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied Bypass, Morning Warm-up/Pre-Cool, Occupied/Unoccupied and Heat/Cool modes. The BAS shall also send the discharge air temperature setpoint and the duct static pressure setpoint. If a BAS is not present, or communication is lost with the BAS the controller shall operate using default modes and setpoints.

Occupied:

During occupied periods, the supply fan shall run continuously and the mixed air dampers shall open to maintain minimum ventilation requirements.

In the cooling mode the DX coil should stage the compressors

In the heating mode the hot water valve shall modulate

the heating valve should close, the outdoor air should close, and an alarm should annunciate at the BAS

Unoccupied:

During the unoccupied periods, the supply fan shall be disabled, the outside air damper shall close, the mechanical cooling shall be disabled, the mechanical heating shall be disabled, to conserve energy.

the outdoor damper shall modulate if economizing is enabled and remain closed if not economizing,

Optimal Stop:

Outside air damper shall remain enabled to provide minimum ventilation.

Morning Warm-Up Mode:

During optimal start, if the average space temperature is below the occupied heating setpoint a morning warm-up mode shall be activated. The outside air damper shall remain closed.

Daytime Warm-Up Control:

During Occupied periods, when the space temperature is below the Daytime Warm-up Initiate setpoint, a daytime warm-up sequence shall be activated. The outside air damper shall modulate to maintain minimum ventilation requirements, and the heating shall enable to maintain the discharge air temperature heating setpoint. Daytime Warm-up shall terminate when the average space temperature reaches the Occupied heating setpoint.

Pre-Cool Mode:

During optimal start, if the average space temperature is above the occupied cooling setpoint, pre-cool mode shall be activated. When pre-cool is initiated the unit shall enable the fan and cooling or economizer. The outside air damper shall remain closed, unless economizing. When the space temperature reaches occupied cooling setpoint (adj.), the unit shall transition to the occupied mode.

Economizer Mode:

The outside air (OA) enthalpy shall be compared with Return air (RA) enthalpy point. The economizer shall enable when OA enthalpy is less than RA enthalpy - 2.0 BTU/LB. The economizer shall disable when OA enthalpy is greater than RA enthalpy.

Occupied Humidity Control:

If the return air relative humidity is greater than 50% (adj.), the DX cooling shall control to maintain relative humidity setpoint of 50% (adj.) and the hot water reheat valve shall modulate to maintain the discharge air temperature setpoint. Mode shall terminate when the space relative humidity falls below the relative humidity setpoint of 50% (adj.) minus 3% (adj.). If the return air relative humidity sensor fails the dehumidification sequence shall be terminated and an alarm shall annunciate at the BAS.

Discharge Air Temperature Control:

Also, the BAS shall override this reset function whenever outdoor dew point is higher than 60.0 deg. F (adj.) or indoor humidity (measured at the source of control) is higher than 60% RH (adj.).

Supply Fan:

The supply fan shall be off in the unoccupied mode. The supply fan shall be on if the control is heating or cooling in the unoccupied mode. When the controller is in the occupied mode, the supply fan shall operate continuously. The supply fan speed shall be modulated to maintain the duct static pressure setpoint. The duct static pressure setpoint shall be sent by the BAS and is reset between the minimum and maximum static pressure limits to maintain the critical zone VAV air damper in a position between 65% and 75% open.

If the supply fan fails to prove status for 30 seconds (adj.), the fan shall be commanded off, the outside air damper shall close, cooling shall be disabled, all heating shall be disabled, and an alarm shall annunciate at the BAS. A manual reset shall be required to restart the fan.

A hardwired, high static pressure cut-off switch shall be electrically interlocked with the variable speed drive. If the high static pressure cut-off switch is tripped the fan shall be commanded off, heating shall be disabled, cooling should be disabled, the outside air damper shall close, and an alarm shall annunciate at the BAS. A manual reset of the high static pressure cut-off switch shall be required to restart the fan.

Refrigerant Mitigation Mode

The unit controller shall monitor the leak detection system, when a leak is detected, an alarm shall promptly alert the BAS via BACnet Change-of-Value (COV) and mitigation shall be activated. The unit controller shall monitor the leak detection system every 5 seconds, when a leak is detected, mitigation shall be activated. In occupied mode, the supply fan shall remain operational, and the compressor(s) shall be disabled for the duration of the mitigation process plus an additional 5 minutes.

In unoccupied mode, the supply fan shall activate within 15 seconds while the compressor(s) shall be disabled for the duration of the mitigation process plus an additional 5 minutes.

Mixed Air Low Limit:

The initial damper opening rate shall be limited to 2% per minute (adj.) until the damper has reached its minimum ventilation position. The outside air damper shall modulate to a position less than the minimum damper position if the mixed air temperature drops below 50.0 deg. F (adj.). If the mixed air temperature sensor fails an alarm shall annunciate at the BAS and the outside air damper shall return to the minimum position.

Freeze Protection:

A hardwired, low limit temperature switch shall be electrically interlocked with the variable speed drive. If the low limit temperature switch is tripped 38.0 deg. F (adj.), the fan shall be commanded off and the outside air damper shall close. All valves shall be commanded open to 100% open (adjust per climate). The DX cooling shall be disabled. An alarm shall annunciate at the BAS and manual reset of the low limit temperature switch shall be required to restart the fan.

Condensate Overflow Monitoring:

If the condensate level reaches the trip point, a condensate overflow diagnostic shall annunciate at the BAS. To prevent the condensate drain pan from overflowing and causing water damage to the building the fan shall be disabled and the DX cooling shall be disabled.

Filter Status:

A differential pressure switch shall monitor the differential pressure across the filter(s) when the fan is running. If the switch closes during normal operation a dirty filter alarm shall annunciate at the BAS.

SEQUENCE OF OPERATION :UCCA BUS GARAGE

NOT TO SCALE

Sequence of Operation: VAV TERMINAL UNIT [QTY: 6]

Building Automation System Interface:

The Building Automation System (BAS) shall send the controller Occupied, and Unoccupied commands. The BAS may also send a Heat/Cool mode, priority shutdown commands, space temperature and/or space temperature setpoint. If communication is lost with the BAS, the controller shall operate using its local setpoints.

Occupied:

The occupancy mode shall be communicated or hardwired to the controller via a binary input. When the unit is in the occupied mode the VAV shall maintain the space temperature at the active occupied heating or cooling setpoint. Applicable ventilation and airflow setpoints shall be enforced. The occupied mode shall be the default mode of the VAV. Applicable ventilation and airflow setpoints shall be enforced. The occupied mode shall be the default mode of the VAV.

Occupied Standby:

The occupancy mode shall be communicated or hardwired to the controller via a binary input, even though the BAS has scheduled the space as occupied. In the occupied standby mode, the active cooling and heating setpoints shall be relaxed (see cooling and heating mode) and both the ventilation airflow and minimum airflow setpoints shall be lowered (see VAV schedule).

Occupied Bypass:

Mode used to temporarily place the unit into the occupied operation. Tenants shall be able to override the unoccupied mode from the space sensor. The override shall last for a maximum of 4 hours (adj.). The tenants shall be able to cancel the override from the space sensor at any time. During the override the unit shall operate in occupied mode.

Heat/Cool Mode:

The Heat/Cool mode shall be set by a communicated value or automatically by the VAV. In standalone or auto mode the VAV shall compare the primary air temperature with the configured auto changeover setpoint to determine if the air is "hot" or "cold". Heating mode implies the primary air temperature is hot. Cooling mode implies the primary air temperature is cold.

Cooling Mode:

When the unit is in cooling mode, the VAV controller shall maintain the space temperature at the active cooling setpoint by modulating the airflow between the active cooling minimum airflow setpoint to the maximum cooling airflow setpoint. The VAV shall use the measured space temperature and the active cooling setpoint to determine the requested cooling capacity of the unit. The outputs shall be controlled based on the unit configuration and the requested cooling capacity.

Based on the VAV controller occupancy mode, the active cooling setpoint shall be one of the following:

Setpoint	Default Value
Occupied Cooling Setpoint	74.0 deg. F
Unoccupied Cooling Setpoint	85.0 deg. F
Occupied Standby Cooling Setpoint	78.0 deg. F
Occupied Min Cooling Airflow Setpoint	See VAV Schedule
Occupied Max Cooling Airflow Setpoint	See VAV Schedule

Heat/Cool Setpoint:

The space temperature setpoint shall be determined either by a local (e.g., thumbwheel) setpoint, the VAV default setpoint or a communicated value. The VAV shall use the locally stored default setpoints when neither a local setpoint nor communicated setpoint is present. If both a local setpoint and communicated setpoint exist, the VAV shall use the communicated value.

Reheat Control Mode:

Reheat shall only be allowed when the supply air temperature is 5.0 deg. F below the configured reheat enable setpoint of 70.0 deg. F (adj.). The reheat shall be enabled when the space temperature drops below the active heating setpoint and the minimum airflow requirements are met. During reheat the VAV shall operate at its minimum heating airflow setpoint and energize the heat as follows:

Setpoint	Default Value
Occupied Heating Setpoint	71.0 deg. F
Unoccupied Heating Setpoint	60.0 deg. F
Occupied Standby Heating Setpoint	67.0 deg. F
Occupied Min Heating Airflow Setpoint	See VAV Schedule
Occupied Max Heating Airflow Setpoint	See VAV Schedule

Reheat shall only be allowed when the supply air temperature is 5.0 deg. F below the configured reheat enable setpoint of 70.0 deg. F (adj.). Reheat Control:
In heat mode, reheat shall be enabled when:

- Primary air temperature is 5.0 deg. F below the configured reheat enable setpoint of 70.0 deg. F (adj.).
- Space temperature drops below the active heating setpoint and the minimum airflow requirements are met.
- Supply air temperature is below the configured reheat enable setpoint.

When reheat enabled, the VAV shall operate at its minimum heating airflow setpoint and control the heat as follows:

Modulating Hot Water Reheat:

If the space temperature is below the heating setpoint the hot water reheat valve shall modulate as required to maintain space temperature at the active heating setpoint while the VAV operates at its minimum heating airflow setpoint. If the discharge air temperature reaches the design heating discharge air temperature setpoint (adj.), the VAV shall modulate airflow between the minimum heating airflow setpoint and the maximum heating airflow setpoint as required to maintain space temperature at the active heating setpoint, while the hot water reheat valve modulates to maintain discharge air temperature at the design heating discharge air temperature setpoint. If the airflow reaches the maximum heating airflow setpoint, the VAV shall modulate the hot water reheat valve as required to maintain space temperature at the active heating setpoint, while the VAV operates at its maximum heating airflow setpoint.

Heating Mode:
When the unit is in heating mode, the VAV controller shall maintain the space temperature at the active heating setpoint by modulating the VAV damper (between the active heating minimum and maximum airflow setpoints). Based on the VAV controller occupancy mode, the active heating setpoint shall be one of the following:

Setpoint	Default Value
Occupied Heating Setpoint	71.0 deg. F
Unoccupied Heating Setpoint	60.0 deg. F
Occupied Standby Heating Setpoint	67.0 deg. F
Occupied Min Heating Airflow Setpoint	See VAV Schedule
Occupied Max Heating Airflow Setpoint	See VAV Schedule

Local Reheat Control:

Reheat shall only be allowed when the primary air temperature is 5.0 deg. F below the configured reheat enable setpoint of 70.0 deg. F (adj.). The reheat shall be enabled when the space temperature drops below the active heating setpoint and the minimum airflow requirements are met. During reheat the VAV shall operate at its minimum heating airflow setpoint and energize the heat as follows:

Proportional Hot Water Reheat:

If the space temperature is below the heating setpoint the hot water reheat valve shall control as required to maintain the active heating setpoint.

Demand Control Ventilation:

When the unit is in unoccupied mode, the ventilation airflow setpoint shall be zero.

CO2 SENSOR: When the unit is in occupied mode, the ventilation airflow setpoint shall be continuously calculated using the measured CO2 concentration in the space.

The current ventilation airflow setpoint shall be communicated to the BAS for control of the system outdoor-air intake.

Space Sensor Failure:

If there is a fault with the operation of the zone sensor an alarm shall be annunciated at the BAS. Space sensor failure shall cause the VAV to drive the damper to minimum air flow if the VAV is in the occupied mode, or drive it closed if the VAV is in the unoccupied mode.

SEQUENCE OF OPERATION :VAV TERMINAL UNIT

NOT TO SCALE

REVISIONS

Issued for Bidding
December 1, 2025

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-5-010-011
BSN SED #3-15-02-06-4-015-006
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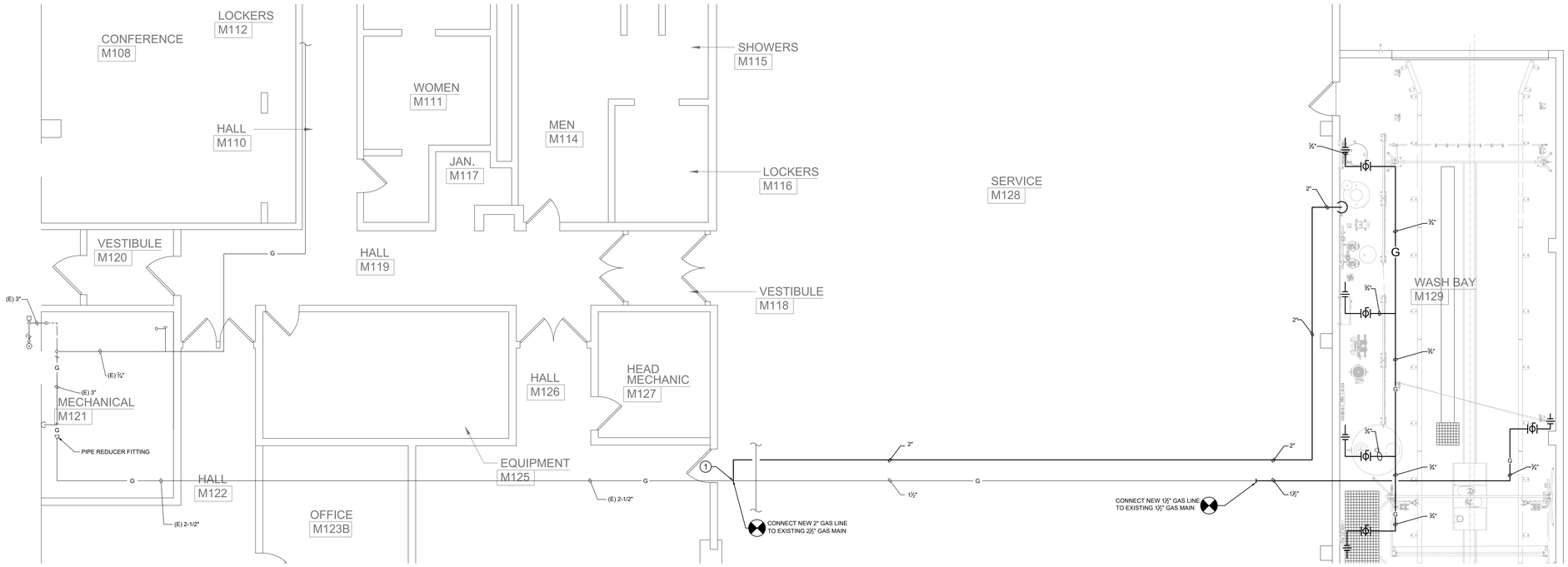
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
BUS GARAGE MECHANICAL DETAILS

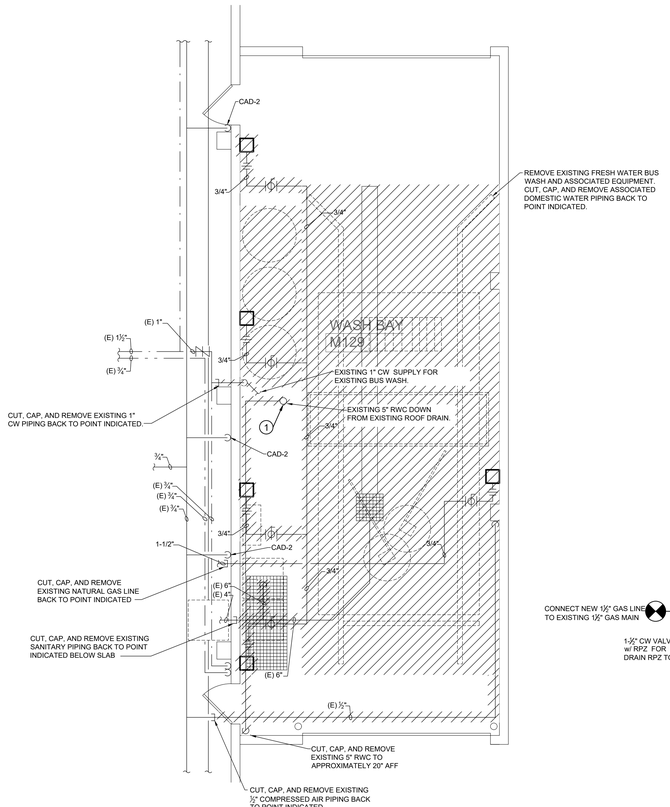
DRAWN BY: F.R.G.
PROJECT NO.: 2024-239P
CHECKED BY: M.P.
DATE: 12-01-2025
BUILDING: BG
DRAWING NO.: M-301

CAD FILE: 4239-BGM-301.DWG
PLOT DATE: 11/25/2025



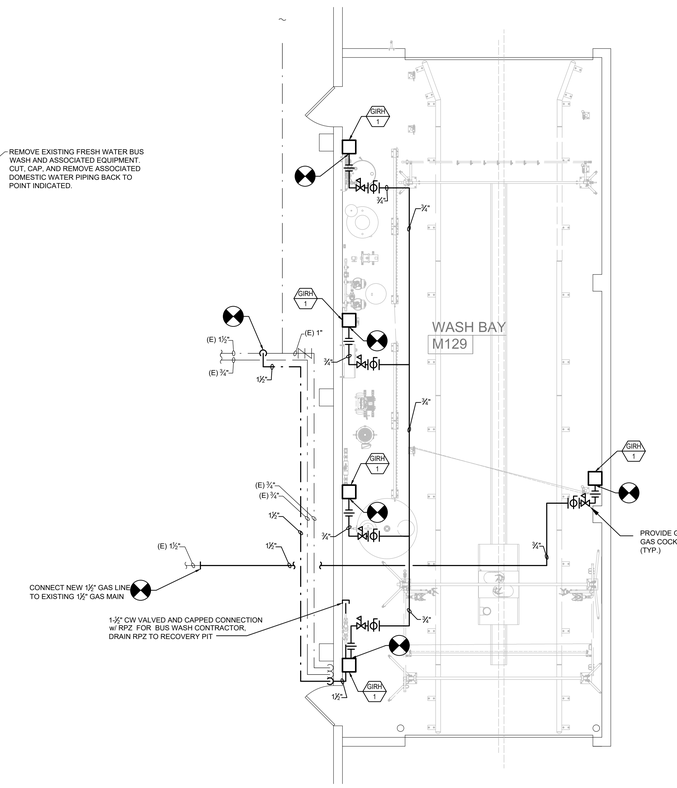
BUS GARAGE WASH BAY GAS RENOVATION PLAN

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



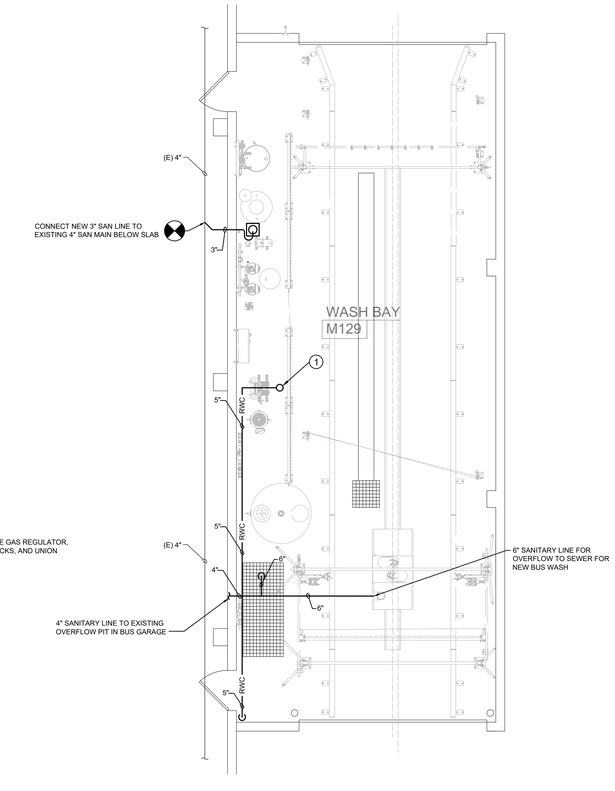
BUS GARAGE WASH BAY DEMOLITION PLAN

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



BUS GARAGE WASH BAY DOMESTIC WATER AND GAS RENOVATION PLAN

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



BUS GARAGE WASH BAY SANITARY AND STORM RENOVATION PLAN

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

KEYED NOTES:

1. REMOVE EXISTING ROOF DRAIN AND REPLACE WITH NEW, MODEL 1010 BY J.R. SMITH.
2. CONNECT NEW 2" GAS LINE TO EXISTING 2" MAIN FOR NEW BUS WASH WATER HEATER

GAS PIPING AND ADDITIONAL STEEL SUBSTRATE NOTE:

INTERIOR PAINT ON STEEL SUBSTRATES WITHIN THE WASH BAY, SHALL BE AS FOLLOWS:

A. LOW-ODOR/VOC EPOXY SYSTEM:
- A.1. PRIMER: PRO-INDUSTRIAL PRO-CRYL
- A.2. 1ST COAT: PRO INDUSTRIAL WATERBASED CATALYZED EPOXY
  - A.2.1. EGGSHELL OR GLOSS
- A.3. 2ND COAT:PRO INDUSTRIAL WATERBASED CATALYZED EPOXY
  - A.3.1. EGGSHELL OR GLOSS
- A.4. FINISH:PRO INDUSTRIAL WATERBASED CATALYZED EPOXY
  - A.4.1. EGGSHELL OR GLOSS

REVISIONS

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December 1, 2025

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
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BSN SED #3-15-02-06-4-015-006
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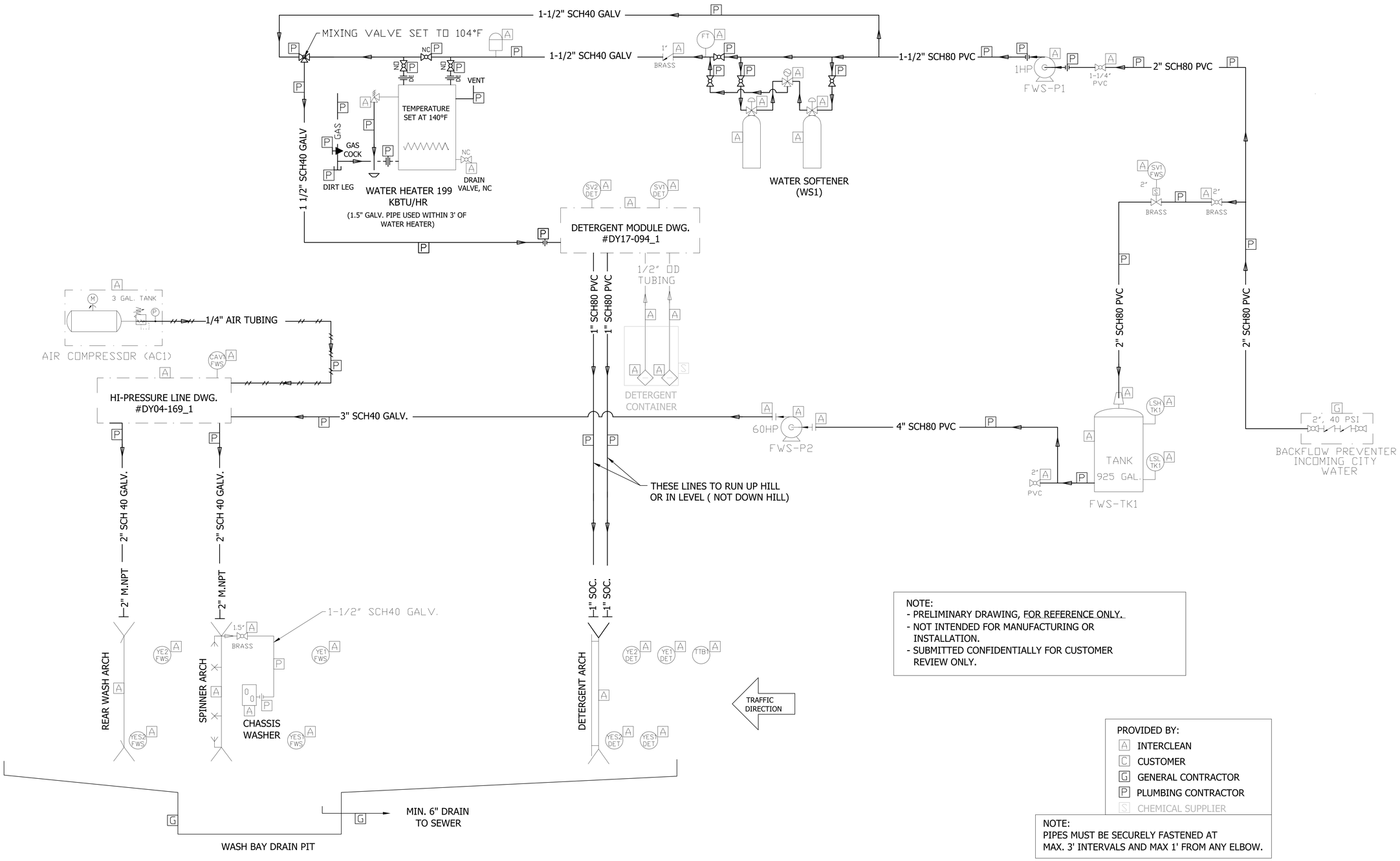
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
BUS GARAGE PLUMBING DEMOLITION AND RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
AJL	BG / P-100
DATE: 12-01-2025	

DWG FILE:
PLOT DATE: 11/26/25



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PROVIDED BY:
- A INTERCLEAN
- C CUSTOMER
- G GENERAL CONTRACTOR
- P PLUMBING CONTRACTOR
- S CHEMICAL SUPPLIER

NOTE:
PIPES MUST BE SECURELY FASTENED AT MAX. 3' INTERVALS AND MAX 1' FROM ANY ELBOW.

PUBLIC WORKS, ONE STEP WASH TRUCK WAS, FRESH WATER SYSTEM PLUMBING SCHEMATIC

SCALE: NOT TO SCALE

REVISIONS

Issued for Bidding
December 1, 2025

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
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New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PUBLIC WORKS, ONE STEP WASH TRUCK WASH, FRESH WATER SYSTEM, PLUMBING SCHEMATIC

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY: A.J.L.	BUILDING: BG
DATE: 12-01-2025	DRAWING NO.: P-200

DEMOLITION NOTES:

1. ////////// INDICATES EXISTING PLUMBING FIXTURES, ROOF, OVERFLOW, FLOOR DRAINS AND/OR EQUIPMENT, PIPING ETC. TO BE REMOVED UNLESS OTHERWISE NOTED, INCLUDE ALL PIPING, VALVES AND ROUGHING (CARRIERS IF REQUIRED),CUT AND CAP LINES AT MAIN, IN WALLS, BELOW FLOORS AND/OR ABOVE CEILING AS REQUIRED AND OUT OF WAY OF NEW CONSTRUCTION.
2. BEFORE STARTING DEMOLITION OPERATIONS, PROVIDE THE NECESSARY PROTECTIVE DEVICES WHERE REQUIRED, AND IN STRICT ACCORDANCE WITH OSHA RULES AND REGULATIONS.
3. REPAIR AND/OR REPLACE EXISTING ITEMS WHICH BECOME DAMAGED DURING THE PROGRESS OF THE WORK. MAKE REPAIRS, REPLACEMENTS AND MODIFICATIONS TO RESTORE THE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION AT THE TIME OF DAMAGE, TO THE SATISFACTION OF AND AT NO ADDITIONAL COST TO THE OWNER.
4. PATCH AND REPAIR ALL SURFACES DISTURBED, CUT OR DAMAGED BY ALTERATIONS OR DEMOLITION WORK AND AS NECESSARY TO PREPARE SURFACES FOR NEW MATERIALS AND ARRANGEMENTS.
5. INFORMATION PERTAINING TO EXISTING STRUCTURES, FACILITIES, AND UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS PROVIDED BY FACILITIES DEPARTMENT OR WHEN POSSIBLE BY SURVEY. THEREFORE THE LOCATIONS SHOWN ARE CONSIDERED APPROXIMATE. FIELD VERIFICATION MUST BE DONE AND OTHER SUCH WORK MAY EXIST, DUE TO LOCATION, SIZE, ETC., NOT PRESENTLY KNOWN.
6. PRIOR TO THE DEMOLITION OF THOSE ITEMS WHICH HAVE UTILITY CONNECTIONS (ELECTRICITY, ETC) THE CONTRACTOR SHALL ARRANGE WITH THE OWNER TO LOCATE PANEL BOXES AND OTHER CONTROL ELEMENTS SO THAT DAMAGE AND OTHER POTENTIALLY INCONVENIENT OR DANGEROUS SITUATIONS ARE AVOIDED.
7. ALL ACTIVE PIPING, THAT CONTINUES TO OTHER AREAS NOT IN SCOPE OF WORK ARE TO REMAIN ACTIVE & IN PLACE, IF REQUIRED RELOCATE EXISTING VALVE, RUN NEW SUPPLY LINES IN NEW WALLS, ABOVE CEILINGS, BELOW FLOOR OR IN COLUMN CHASES.
8. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL WORK WITH THE OWNER DURING THE DEMOLITION AND PHASING PROCESS OF CONSTRUCTION. IF DEMOLITION OF PARTICULAR ITEMS WILL AFFECT THE OPERATION OF OTHERS PARTS OF THE FACILITY OUTSIDE THE CONSTRUCTION PHASE, TEMPORARY PROVISIONS SHALL BE MADE TO KEEP THOSE AREAS UP AND RUNNING.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS PRICING ADDITIONAL DEMO THAT IS NOT SHOWN ON THESE DRAWINGS DUE TO UNFORESEEN CIRCUMSTANCES.

PLUMBING GENERAL NOTES:

1. ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH 2020 PLUMBING CODE OF NEW YORK STATE WITH INTERNATIONAL PLUMBING CODE 2018 WITH AMENDMENTS. THE 2020 BUILDING CODE OF NEW YORK STATE WITH INTERNATIONAL BUILDING CODE 2018 WITH AMENDMENTS, OSHA, THE OWNER'S INSURANCE UNDERWRITERS REQUIREMENTS AND ALL LOCAL CODES AND REGULATIONS.
2. ALL PLUMBING PIPING SHALL BE RUN TIGHT TO STEEL TRUSSES AND RACKED ALONG STEEL AND WALLS WITH A STANDARD PIPE HANGING / RACKING SYSTEM. PIPING SHALL BE RUN CLEAR OF ALL DOORS AND WINDOWS. COORDNATE LOCATIONS WITH OTHER TRADES. WHERE PIPING IS RUNNING PARALELL AND IN THE SAME VERTICAL PLANE AS ELECTRICAL CABLE TRAYS OR OTHER MAIN ELECTRICAL SYSTEMS, RUN PIPING ON THE BOTTOM.
3. ALL SYSTEM SHUT-DOWNS AND DISRUPTIONS IN SERVICE SHALL BE COORDINATED WITH THE OWNER & DONE AT THE OWNERS CONVENIENCE.
4. ALL SANITARY, VENT AND STORMWATER DRAIN PIPING SHALL SLOPE AT A MINIMUM OF 1/8" PER FOOT UNLESS OTHERWISE NOTED. 2½" AND SMALLER SHALL BE PITCHED ¼" PER FOOT.
5. ALL RAINWATER CONDUCTORS AND SANITARY STACKS SHALL BE PROVIDED WITH CLEANOUTS AT THE STACK BASE UNLESS OTHERWISE NOTED. COORDINATE WITH GENERAL CONTRACTOR.
6. PROVIDE ALLOWANCE FOR OFFSETS WHERE SANITARY, STORM AND VENT RISERS INTERFERE WITH BUILDING STEEL.
7. PROVIDE ALLOWANCE FOR ALL PLUMBING PIPING FOR ADDITIONAL OFFSETS TO AVOID INTERFERENCES WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL EQUIPMENT AND SYSTEMS.
8. THESE DRAWINGS ARE DIAGRAMMATIC. PLUMBING CONTRACTOR SHALL COORDINATE ACTUAL LOCATIONS OF PIPING AND EQUIPMENT UNLESS DIMENSIONS ARE SPECIFICALLY CALLED OUT.
9. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE ACTUAL ROUTING OF HIS PIPING WITH THE ARCHITECTURAL CEILINGS, HVAC PIPING, DUCTWORK AND EQUIPMENT, ELECTRICAL LIGHTING, CONDUIT AND EQUIPMENT, AND FIRE PROTECTION PIPING AND VALVES.
10. THE PLUMBING CONTRACTOR IS RESPONSIBILE FOR ALL PENETRATIONS THRU FLOOR OR ROOF. VERIFY WITH ALL TRADES, EXISTING STRUCTURAL MEMBERS, AND WALLS ABOVE AND BELOW. ADJUST PENETRATIONS TO ELIMINATE INTERFERENCES AND TO ENSURE PROPER INSTALLATION.
11. COORDINATE WITH STRUCTURAL STEEL FABRICATOR/INSTALLER ALL FRAMED OPENINGS IN ROOF WITH SUCH AS, BUT NOT LIMITED TO, ROOF DRAINS, VENT STACKS, EXHAUST FANS ETC.
12. EXACT SIZES AND EXACT LOCATIONS OF ALL OPENINGS ARE TO BE VERIFIED WITH THE APPROVED SHOP DRAWINGS ISSUED FOR THE INSTALLATION. THE EXACT SIZES SHALL BE COORDINATED PRIOR TO ANY FABRICATION AND INSTALLATION BY ANY/ALL TRADES. (SIZES AND LOCATIONS INDICATED ON CONTRACT ARE DRAWINGS ARE DIAGRAMMATIC AND FOR INFORMATION ONLY.
13. ALL PIPE PENETRATION SEALING ON THE INTERIOR OF THE BUILDING SHALL BE FURNISHED AND INSTALLED AS PER PROJECT SPECIFICATIONS. ALL PIPE PENETRATIONS SHALL BE FURNISHED AND INSTALLED AS AN APPROVED UL ASSEMBLY.
14. IT SHALL BE THIS CONTRACTORS RESPONSIBILITY TO PATCH AND FIRE STOP ANY OPENING LEFT DURING THE REMOVAL OF ANY PIPING OR EQUIPMENT, BY HIM, DURING THE DEMOLITION PHASE OF THE PROJECT.
15. FOR PROPER TRENCHING, BEDDING AND BACKFILL REQUIREMENTS, THIS CONTRACTOR SHALL REFER TO STRUCTURAL CONTRACT DOCUMENTS AND CIVIL CONTRACT DOCUMENTS. THIS CONTRACTOR SHALL FURNISH AND INSTALL THIS WORK IN ACCORDANCE WITH THE ABOVE REFERENCED DOCUMENTS.
16. ALL PLUMBING FIXTURES, PIPING, VALVES ETC. USED FOR POTABLE WATER (DRINKING AND COOKING) SHALL COMPLY WITH "LEAD FREE" REQUIREMENTS AS PER NFS61/372.
17. PLUMBING CONTRACTOR SHALL TEST THE DOMESTIC WATER SYSTEM BOTH BEFORE AND AFTER PROVIDING PLUMBING FIXTURES, PIPING, VALVES ETC. AND SHALL BE IN COMPLIANCE WITH THE DEPARTMENT OF HEALTH LEAD IN WATER REGULATION (10 NYCRR 67-4). TEST RESULTS SHALL BE SUBMITTED TO SED PRIOR TO CUTTING INTO THE DOMESTIC WATER SYSTEM AND FINAL TEST RESULTS SHALL BE SUBMITTED ONCE ALL WORK IS COMPLETED.
18. ALL EXPOSED GAS PIPING SHALL BE PRIMED AND PAINTED YELLOW UNLESS OTHERWISE NOTED (REFER TO SPECIFICATIONS).

PLUMBING LEGEND

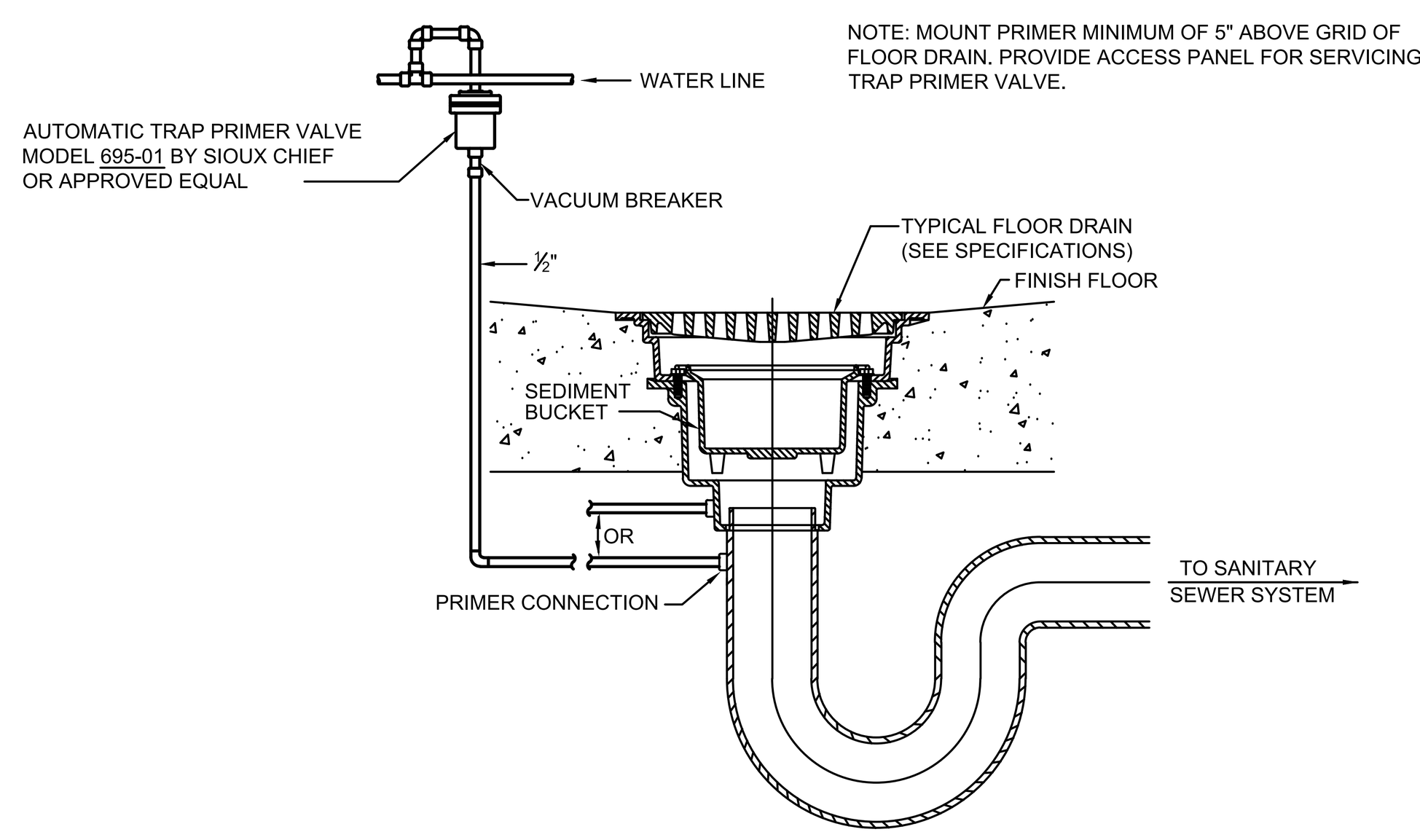
SYMBOL	DESCRIPTION
SAN	SOIL OR WASTE PIPE - SANITARY
	VENT PIPE
VBS	VBS - VENT BELOW SLAB
	COLD WATER SUPPLY
	HOT WATER SUPPLY
140°	140° HOT WATER SUPPLY
	HOT WATER RECIRC.
GAS	NATURAL GAS PIPING
	UNION
	GAS COCK
	GAS REGULATOR
	BALL VALVE
	BALL VALVE ON RISER
	CHECK VALVE
	FLOOR DRAIN
	CAPPED/ PLUGGED CONNECTION
CO	WALL CLEAN-OUT OR EXPOSED IN CEILING
CO	CLEAN-OUT (IN FLOOR)
OR	"P" TRAP
	SHOCK ABSORBER (S.A.)
	NEW CONNECTION
	CUT AND CAP PIPING TYP.
VTR	VENT THRU ROOF
(E)	EXISTING
	A.P. ACCESS PANEL / DOOR

NATURAL GAS LOADS

XXX

TAG	QTY	DESCRIPTION	TYPE	INPUT MBH	GAS PRESSURE	REMARKS
MAU 1	1	MAKE-UP AIR UNIT	NAT. GAS	200	X"-X" WC	NEW - LOCATED ON EXTERIOR OF BUILDING
GIRH 1	5	UNIT HEATER	NAT. GAS	150	7"-14" WC	NEW - LOCATED IN BUS WASH (30 MBH EA.)
WH 1	1	WATER HEATER	NAT. GAS	199	7"-14" WC	NEW - LOCATED IN BUS WASH
TOTAL NEW GAS LOAD				549		
GIRH EX	5	UNIT HEATER	NAT. GAS	150	7"-14" WC	EXISTING TO BE REMOVED- LOCATED IN BUS WASH (30 MBH EA.)
TOTAL EXISTING GAS LOAD TAKEN OFF SYSTEM				150		

NOTE: MOUNT PRIMER MINIMUM OF 5" ABOVE GRID OF FLOOR DRAIN. PROVIDE ACCESS PANEL FOR SERVICING TRAP PRIMER VALVE.

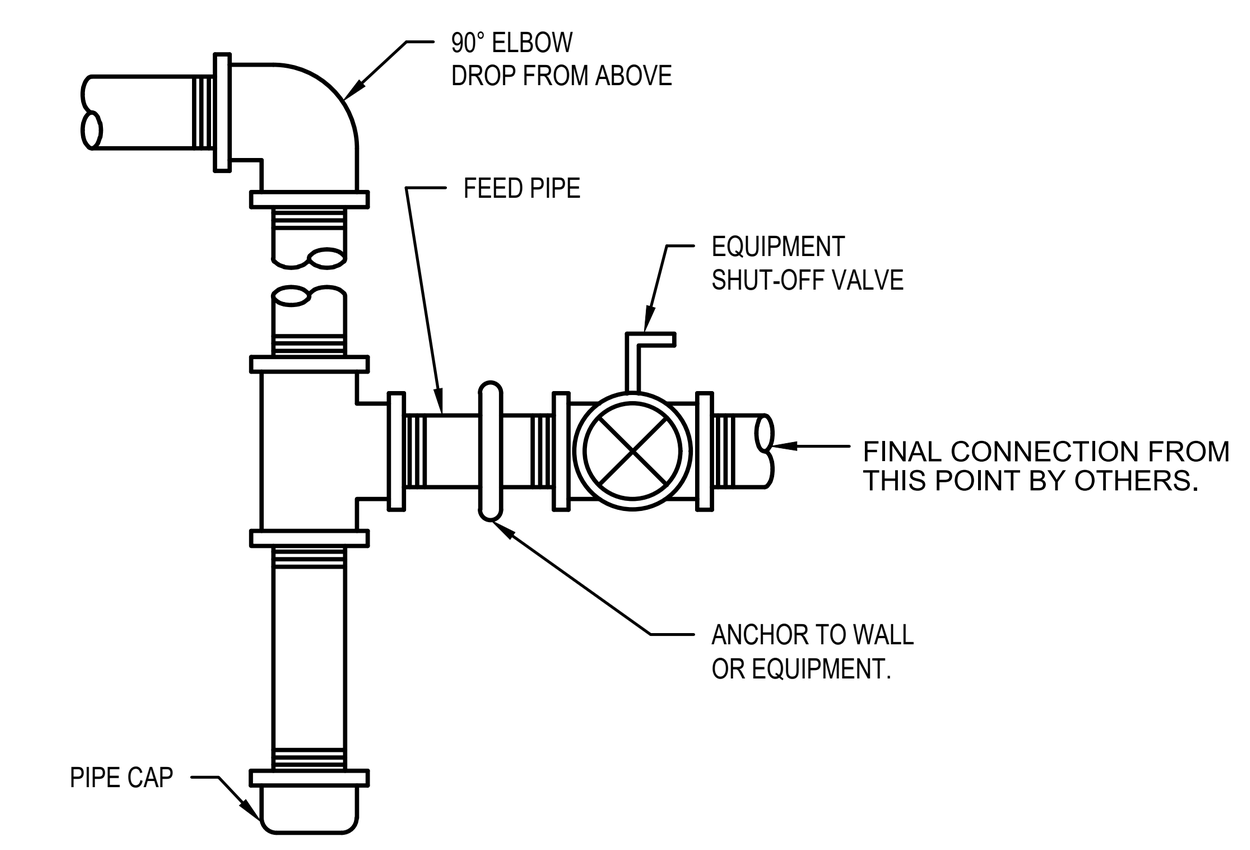


TRAP PRIMER DISTRIBUTOR SCHEDULE

MODEL No	DESCRIPTION	MANUFACTURE	REMARKS
695-Y52	WYE SPLITTER (2) 1/2" MIP BRANCHES	SIOUX CHIEF CO.	USE w/ TRAP PRIMER DISTRIBUTORS TO SERVICE UP TO 8 TRAPS FROM A SINGLE TRAP PRIMER
695-D20	DISTRIBUTOR (2) 1/4" MALE SWEAT BRANCHES	SIOUX CHIEF CO.	
695-D30	DISTRIBUTOR (3) 1/4" MALE SWEAT BRANCHES	SIOUX CHIEF CO.	
695-D40	DISTRIBUTOR (4) 1/4" MALE SWEAT CONNECTIONS	SIOUX CHIEF CO.	

FLOOR DRAIN, PIPE & TRAP PRIMER CONNECTION DETAIL

NOT TO SCALE



TYPICAL NATURAL GAS DROP FOR EQUIPMENT OTHER THAN ROOFTOP CONNECTIONS

NOT TO SCALE

REVISIONS

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PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
PLUMBING DETAILS & SCHEDULES

DRAWN BY:	PROJECT NO.:
CP	2024-239P
CHECKED BY: A.J.L.	BUILDING: BG
DATE: 12-01-2025	DRAWING NO.: P-300

CAD FILE: 4239-BG-P-300.DWG
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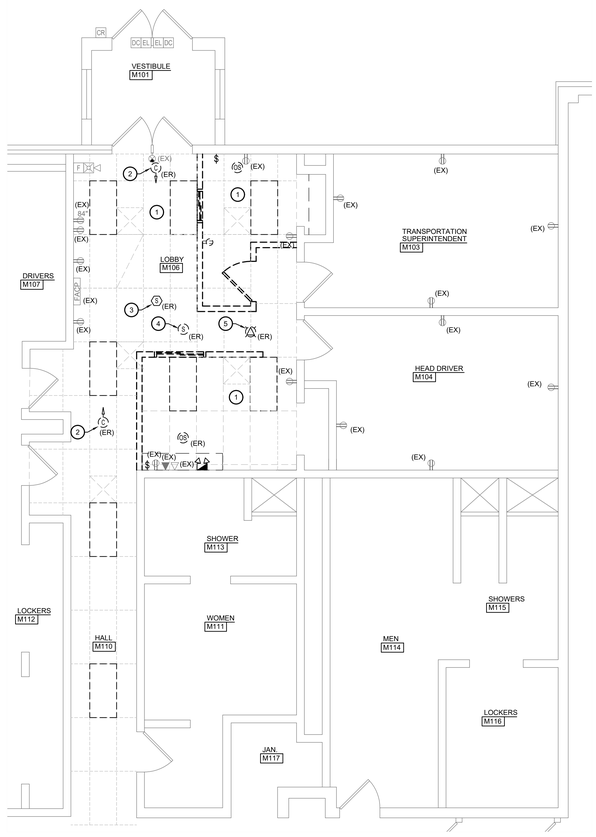


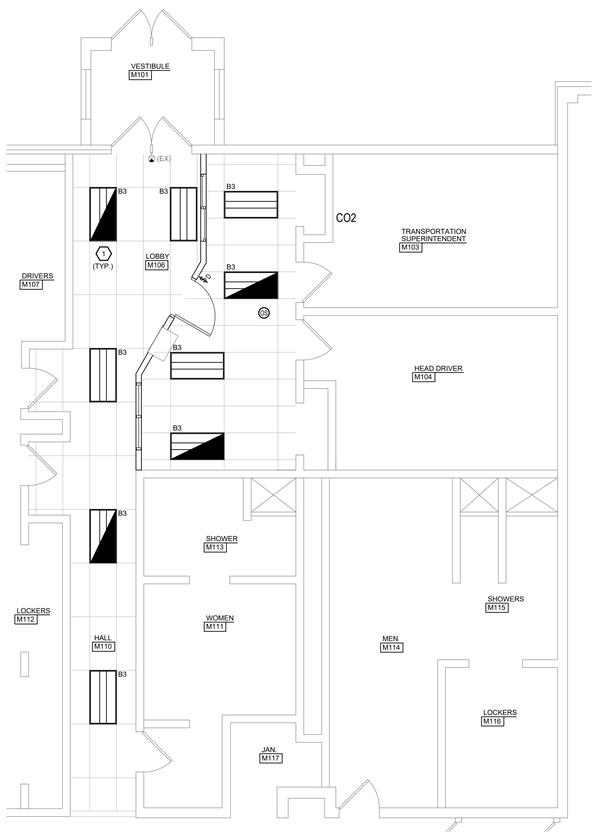
1 BG-E-100

BUS GARAGE LOBBY ELECTRICAL DEMOLITION PLAN

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

ELECTRICAL DEMOLITION KEYNOTES

1. DISCONNECT AND REMOVE ALL ITEMS SHOWN DASHED IN LOBBY AND OFFICE AREAS. POWER AND LIGHTING CIRCUITS ARE TO REMAIN TO BE UTILIZED IN NEW WORK.
2. REMOVE CAMERAS AND STORE FOR REINSTALLATION IN SAME LOCATION IN NEW WORK. EXISTING SECURITY WIRING TO REMAIN.
3. REMOVE FIRE ALARM SMOKE DETECTOR AND STORE FOR REINSTALLATION IN NEW WORK. EXISTING FIRE ALARM WIRING TO REMAIN.
4. REMOVE SPEAKER AND STORE FOR REINSTALLATION IN NEW WORK. EXISTING SPEAKER WIRING TO REMAIN.
5. REMOVE WIRELESS ACCESS POINT AND STORE FOR REINSTALLATION IN NEW WORK. EXISTING CABLING TO REMAIN. COORDINATE WORK WITH DISTRICT I.T. DEPT.



2 BG-E-100

BUS GARAGE LOBBY LIGHTING RENOVATION PLAN

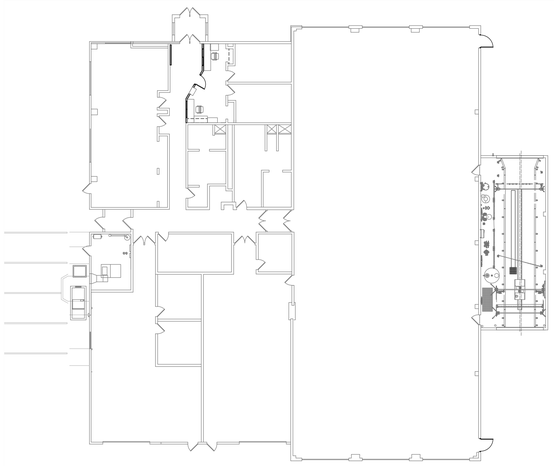
SCALE: 1/4" = 1'-0"

LIGHTING RENOVATION KEYNOTES

1. CONNECT NEW LIGHT FIXTURES TO EXISTING LIGHTING CIRCUIT USING 2#12, #12G IN 3/4"C.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	LAMPS	VOLTS	DESCRIPTION
B3	METALUX	24EN-LD2-54-UNV-L835-CD1	43.0W LED 5410 LUMENS 3500K	UNIV	2'x4' LED RECESSED VOLUMETRIC LUMINAIRE WITH SYMMETRIC DISTRIBUTION, SMOOTH WHITE ACRYLIC LENSES, AND 0-10V, 1% - 100% DIMMING DRIVER. WHERE HALF-SHADED, PROVIDE EL14WSD BATTERY PACK OPTION WITH SELF-DIAGNOSTICS.
Z1	METALUX	8APVTLD-SL3C3	78W LED 10483 LUMENS 3500K	UNIV	8' LED WALL MOUNTED INDUSTRIAL VAPORTITE LUMINAIRE WITH SELECTABLE LUMENS, HIGH IMPACT POLYCARBONATE LENS 0-10V DIMMING DRIVER AND WET LOCATION LISTING.



4 BG-E-100

BUS GARAGE COMPOSITE PLAN

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

ELECTRICAL SYMBOL LEGEND

LIGHTING

- A1 / B — 2' x 4' RECESSED LIGHT FIXTURE TYPICAL ALL FIXTURES:
  - 'A' - UPPER CASE LETTER INDICATES FIXTURE TYPE
  - SHADING INDICATES FIXTURE TO BE PROVIDED WITH EMERGENCY BATTERY
- 2'X4' RECESSED LED LIGHT FIXTURE
- 8' WALL MOUNTED LED LIGHT FIXTURE
- WALL MOUNTED LED EXIT SIGN. SHADED SIDE INDICATES FACE, ARROWS AS INDICATED. MOUNT 8'-8" TO TOP, U.O.N.

LIGHTING CONTROLS

- $X — WALL MOUNTED LINE VOLTAGE LIGHT SWITCH MOUNTED AT 44" A.F.F. TO CENTER, U.O.N.
  - 'D' - DIMMING
- OS — WIRELESS CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR

POWER

- 208/120V BRANCH CIRCUIT PANELBOARD-SURFACE MOUNTED
- WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE MOUNTED RECESSED 18" A.F.F. TO ℄ (TYP. ALL RECEPTACLES UNLESS OTHERWISE NOTED)
- FLUSH WALL JUNCTION BOX OR JUNCTION BOX ABOVE CEILING
- (V) — MOTOR CONNECTION. NUMBER INDICATES HORSEPOWER
- S_M — MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOADS (UNLESS OTHERWISE NOTED) - SIZED TO PROTECT EQUIPMENT SERVED
- XX/XX — EQUIPMENT TAG

SPECIAL SYSTEMS

- D_2 — DATA WALL OUTLET BOX WITH MINIMUM 1" C. TO ABOVE ACCESSIBLE FINISHED CEILING (PROVIDE PULL CORD AND END BUSHING) FLUSH MOUNTED AT 18" A.F.F. TO ℄. E.C. SHALL PROVIDE BOX,, CONDUIT, DATA JACK, FACEPLATE AND PLENUM RATED CAT6 DATA CABLE TO I.T. ROOM.
  - NUMBER INDICATES CABLE QUANTITIES IF GREATER THAN ONE
- TELEPHONE OUTLET
- WIRELESS ACCESS POINT - ARUBA NETWORKS PART # AP-315, E.C. SHALL PROVIDE ACCESS POINT WITH (2) DATA JACKS AND (2) PLENUM RATED CAT6 CABLES TO NEAREST I.T. CLOSET. LEAVE 25' OF SLACK IN CABLE AT DEVICE.
- FACP — FIRE ALARM CONTROL PANEL (EXISTING)
- F — WALL MOUNTED ADA COMPLIANT FLUSH MANUAL FIRE ALARM PULL STATION
- WALL MOUNTED MULTI-TAP (15/30/75/110 CD) ADA COMPLIANT FIRE ALARM AUDIO/VISUAL UNIT (MOUNT 80" A.F.F. TO BOTTOM).
- (D) — CEILING MOUNTED SMOKE DETECTOR
- (S) — CEILING MOUNTED PAGING SPEAKER FURNISHED AND INSTALLED BY E.C. PROVIDE NEW SPEAKERS, WHERE INDICATED, TO MATCH EXISTING. INSTALL NEW SPEAKER CABLES TO MEET MANUFACTURER'S RECOMMENDATIONS. TEST AND LABEL BOTH ENDS. (TYP. ALL SPEAKERS)
- EL — ELECTRIC LATCH
- DC — DOOR CONTACT
- CR — HARDWIRED CARD READER TO INCLUDE REQUEST TO EXIT SENSOR, DOOR CONTACTS, CONTROLLER IF REQUIRED AND CABLING TO ACCESS CONTROL PANEL FURNISHED AND INSTALLED BY DAY AUTOMATION. ALL DOOR HARDWARE PROVIDED BY OTHERS.
- C — CEILING MOUNTED CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION
- DOOR RELEASE PUSHBUTTON FURNISHED AND INSTALLED BY DAY AUTOMATION
- IC — INTERCOM FURNISHED AND INSTALLED BY DAY AUTOMATION
- IC — INTERCOM CAMERA FURNISHED AND INSTALLED BY DAY AUTOMATION



3 BG-E-100

BUS GARAGE LOBBY POWER & SYSTEMS RENOVATION PLAN

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

POWER RENOVATION KEYNOTES

1. EXISTING CAMERA TO BE RELOCATED BY DAY AUTOMATION. EXISTING SECURITY WIRING AND CONDUIT TO BE EXTENDED TO NEW LOCATION AS REQUIRED.
2. REINSTALL EXISTING FIRE ALARM SMOKE DETECTOR EXTENDING EXISTING FIRE ALARM WIRING AND CONDUIT AS REQUIRED.
3. REINSTALL EXISTING SPEAKER EXTENDING EXISTING SPEAKER WIRING AND CONDUIT AS REQUIRED.
4. REINSTALL EXISTING WIRELESS ACCESS POINT. COORDINATE WORK WITH DISTRICT I.T. DEPT.
5. NEW INTERCOM AND DOOR RELEASE BUTTONS AND WIRING TO DOOR HARDWARE TO BE PROVIDED BY DAY AUTOMATION.

DEMOLITION / RENOVATION KEY

- (EX) INDICATES EXISTING ITEM TO REMAIN
- (D) INDICATES ITEM TO BE DEMOLISHED
- (RL) INDICATES RELOCATED ITEM
- (ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK

REVISIONS

Issued for Bidding
December 1, 2025

CAPITAL PROJECTS

PHASE 2
HS SED #03-15-02-06-0-011-027
K-8 SED #3-15-02-06-0-020-017
BG SED #3-15-02-06-S-010-011
BSN SED #3-15-02-06-4-015-006
BSS SED #3-15-02-06-4-014-006

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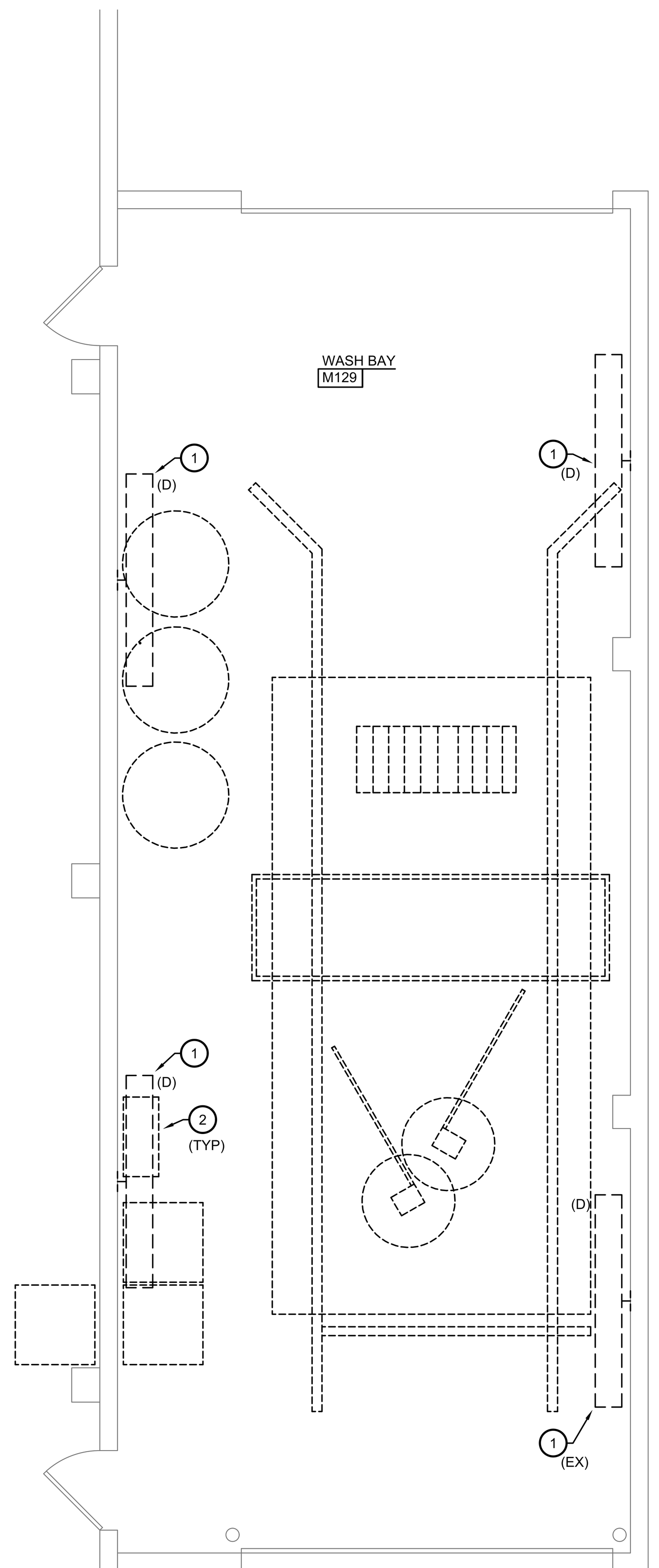
PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
BUS GARAGE ELECTRICAL DEMOLITION AND RENOVATION PLANS

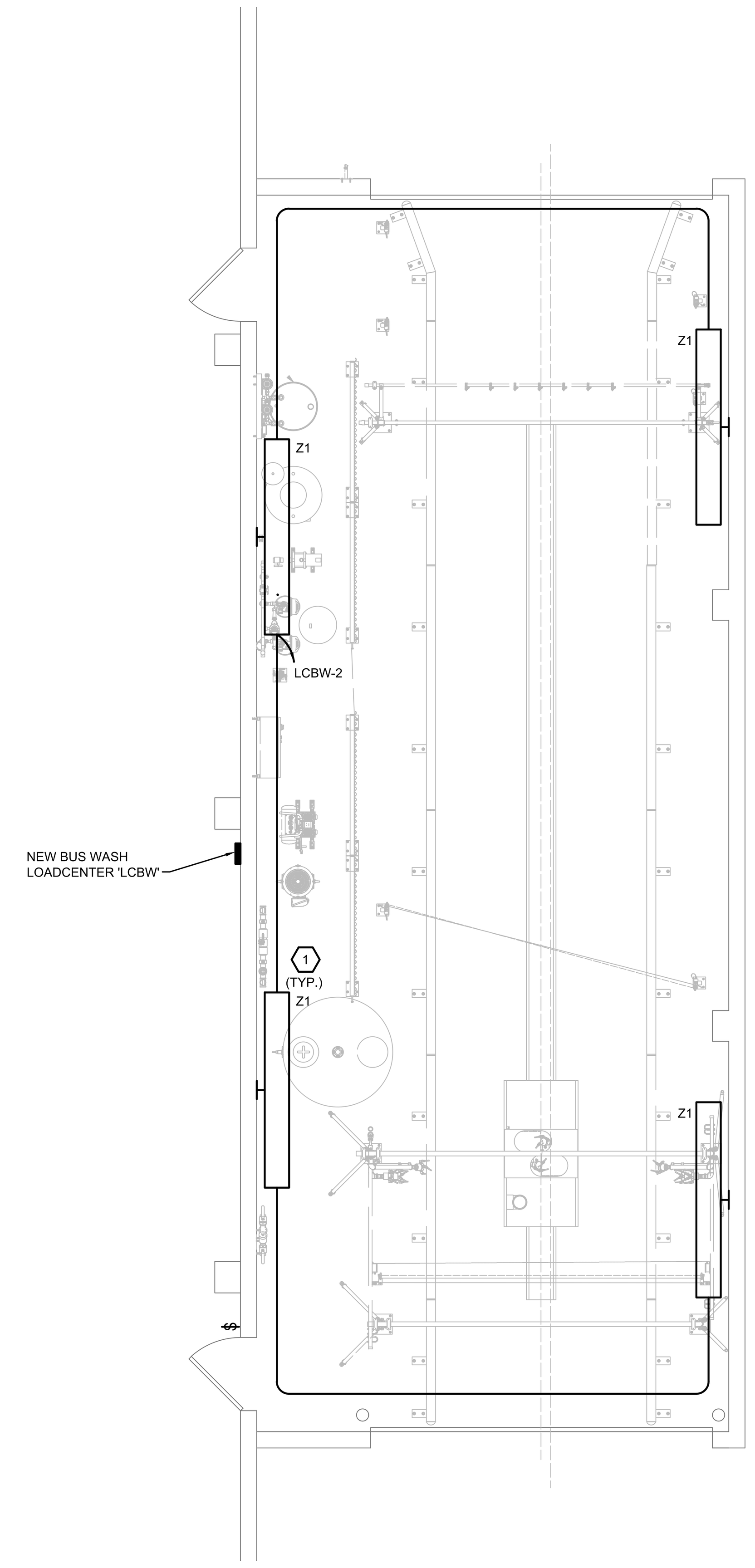
DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY:	BUILDING / DRAWING NO.:
M.H.G.	BG / E-100
DATE: 12-01-2025	

DWG FILE: H2439-S1BIM2
PLOT DATE: 11/24/2025



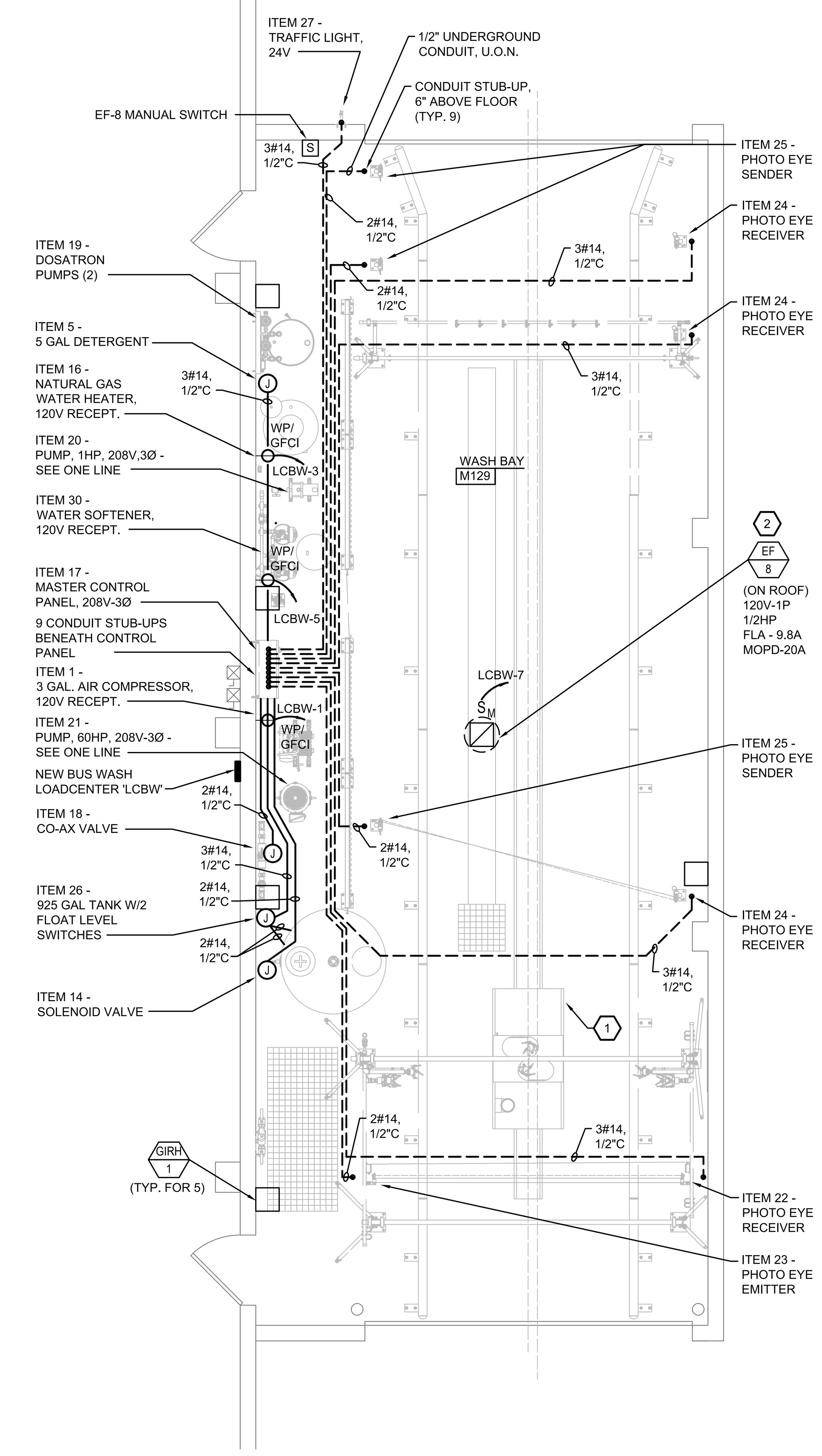
1 BG-E-101 BUS GARAGE WASH BAY ELECTRICAL DEMOLITION PLAN

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



2 BG-E-101 BUS GARAGE WASH BAY LIGHTING RENOVATION PLAN

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



3 BG-E-101 BUS GARAGE WASH BAY POWER RENOVATION PLAN

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

ALL WORK FOR THE REPLACEMENT BUS WASH SHALL BE AN ALTERNATE

ELECTRICAL DEMOLITION KEYNOTES

1. REMOVE EXISTING LIGHTING FIXTURES.
2. DASHED LINES INDICATE EXISTING BUS WASH EQUIPMENT TO BE REMOVED IN ITS ENTIRETY. DISCONNECT AND REMOVE POWER WIRING BACK TO SOURCE.

LIGHTING RENOVATION KEYNOTES

1. CONNECT NEW LIGHT FIXTURES TO NEW LIGHTING CIRCUIT USING 2#12, #12G IN 3/4"C. PROVIDE NEW LIGHT SWITCH. ALL CONDUIT AND FITTINGS USED IN BUS WASH AREA SHALL BE STAINLESS STEEL.

POWER RENOVATION KEYNOTES

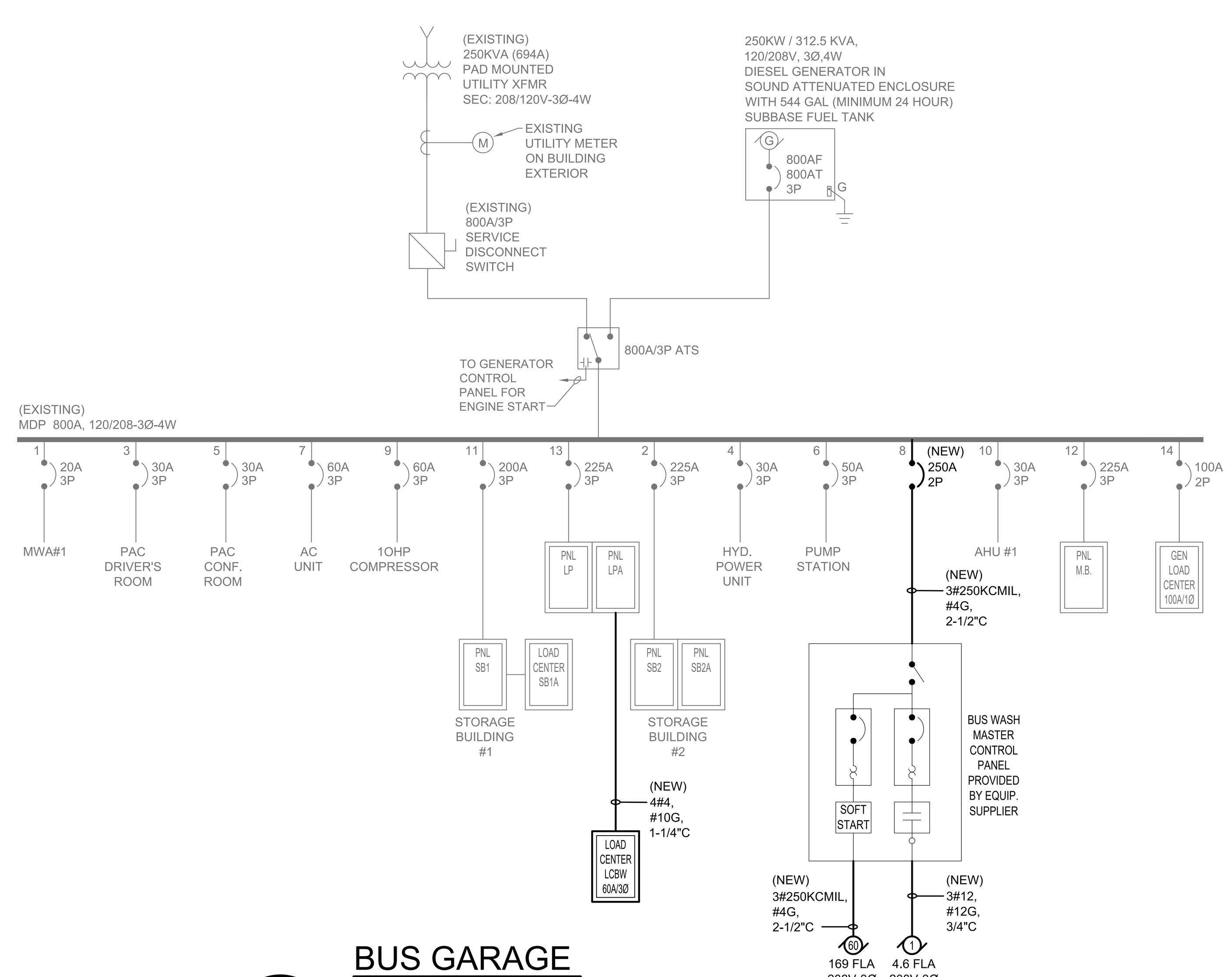
1. NEW BUS WASH SYSTEM TO BE PROVIDED AND INSTALLED BY OTHERS. NEW SYSTEM AS BASIS OF DESIGN WILL BE A COMPLETE BUS WASH SYSTEM RETROFIT INTO EXISTING SPACE. NEW SYSTEM AS MANUFACTURE SHALL BE "INTERCLEAN EQUIPMENT" OR EQUAL. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL UNDERGROUND CONDUIT, POWER AND CONTROL WIRING, ETC. AS INDICATED ON THESE DRAWINGS AND MANUFACTURER INSTALLATION DRAWINGS . ALL CONDUIT AND FITTINGS USED IN BUS WASH AREA SHALL BE STAINLESS STEEL. VERIFY ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGH IN AND PROVIDE ANY ADDITIONAL FIELD WIRING REQUIRED FOR A COMPLETE INSTALLATION.
2. REPLACEMENT FAN IS ABOVE 1000CFM, FAN IS REQUIRED BY NYSED TO HAVE SHUTDOWN RELAY INSTALLED TO ACTIVATE SHUTDOWN UPON FIRE ALARM ACTIVATION.
3. ALL 120V CONTROL WIRING TO (5) GIRH HEATERS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND RUN TO 20A/1P CIRCUIT BREAKER ON LOADCENTER LCBW.

MECHANICAL / ELECTRICAL EQUIPMENT CONNECTIONS SCHEDULE

EQUIPMENT / TAG	DISCONNECT		STARTER		NOTES
	FURNISHED BY	INSTALLED BY	FURNISHED BY	INSTALLED BY	
GIRH-1	M.C.	M.C.	M.C.	M.C.	1 2
VAV BOXES (HOT WATER REHEAT)	M.C.	M.C.	M.C.	M.C.	1 2

M/E EQUIPMENT CONNECTIONS SCHEDULE NOTES:

1. THE MECHANICAL/ELECTRICAL EQUIPMENT CONNECTIONS SCHEDULE AND ACCOMPANYING NOTES ARE INTENDED TO CLEARLY DEFINE WHICH CONTRACTOR FURNISHES AND INSTALLS STARTERS AND DISCONNECTS AND SHALL BECOME PART OF THE SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER WIRING AND FINAL POWER CONNECTIONS. ALL CONTROL WIRING SHALL BE FURNISHED, INSTALLED AND FINAL CONNECTION BY THE TRADE SUPPLYING THE EQUIPMENT.
2. E.C. - ELECTRICAL CONTRACTOR
M.C. - MECHANICAL CONTRACTOR (HVAC)
P.C. - PLUMBING CONTRACTOR
MFR - MANUFACTURER



4 BG-E-101 BUS GARAGE ONE LINE DIAGRAM

SCALE: NONE

NOTE:

UNLESS INDICATED OTHERWISE ALL DISTRIBUTION EQUIPMENT AND FEEDERS ARE EXISTING TO REMAIN.

EXISTING PANELBOARD SCHEDULE

DESIGNATION: LPA | MAINS: 225A, TYPE: APPLIANCE, O.C. DEVICE: - | VOLTAGE: 120/208V-3Ø-4W, MINIMUM O.C. DEVICE, INTERRUPTING RATING: - | LOCATION: M123, FED BY: MDP, MOUNTING: SURFACE | SINGLE PANEL (X), DOUBLE PANEL, COMMON COVER

CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
1	1	20	-	-	-	TOWER LIGHT	-	-	—	—	—	—	BATTERY CHARGER	-	-	-	20	1	2	
3	1	20	-	-	-	GROUND MAINT OFFICE LIGHTS	—	—	-	-	—	—	OUTLET BY WELDER	-	-	-	20	1	4	
5	1	20	-	-	-	MAINT OFFICE LIGHTS	—	—	—	—	-	-	HEAT WEST SERVICE BAY	-	-	-	20	1	6	
7	1	20	-	-	-	RECEPT - SOUTHWALL	-	-	—	—	—	—	RECEPT	-	-	-	20	1	8	
9	1	20	-	-	-	RADIAL ARM SAW	—	—	-	-	—	—	HEAT EAST BAY SERVICE	-	-	-	20	1	10	
11	1	20	-	-	-	-	—	—	—	—	-	-	HEAT MAINT. EQUIP & PARTS ROOM	-	-	-	20	1	12	
13	1	20	-	-	-	EXIT & EMERG. LIGHTS	-	0.5	—	—	—	—	ATC-1	3/4"	#12	2#12	20	1	14	**
15	1	20	-	-	-	NIGHT LIGHTS	—	—	-	0.5	—	—	FT-1	3/4"	#12	2#12	20	1	16	**
17	1	20	-	-	-	MAIN ENTRANCE MAGNET, CAMERAS	—	—	—	—	-	-	SPARE	-	-	-	20	1	18	*
19	1	20	-	-	-	DROP LIGHTS & WALL LIGHTS	-	-	—	—	—	—	RECEPT.	-	-	-	20	1	20	
21	1	20	-	-	-	DROP CORDS	—	—	-	-	—	—	RECEPT - NORTH SERVICE	-	-	-	20	1	22	
23	1	20	-	-	-	PARTS RM - COFFEE POT & MICROWAVE	—	—	—	—	-	-	RECEPT - NORTH SERVICE	-	-	-	20	1	24	
25	1	20	-	-	-	PARTS RM - LIGHTS	-	-	—	—	—	—	RECEPT - NORTH SERVICE	-	-	-	20	1	26	
27	1	20	-	-	-	CLOCK RECEPT, RECEPT BECKY RM	—	—	-	-	—	—	RECEPT - NORTH SERVICE	-	-	-	20	1	28	
29	1	20	-	-	-	RECEPT - COMPUTER BLACK BOX	—	—	—	—	-	3.4	LOADCENTER LCBW				/	/	30	
31	1	20	-	-	-	-	-	1.2	—	—	—	—		4#6	#10	1"	60	3	32	
33	1	20	-	-	-	-	—	—	-	1.0	—	—					/	/	34	
35	1	20	-	-	-	-	—	—	—	—	-	-	TABLE SAW & RADIAL ARM SAW	-	-	-	20	2	36	
37	1	20	-	-	-	-	-	-	—	—	—	—					/	/	38	
39	1	20	-	-	-	-	—	—	-	-	—	—	ROTARY LIFT	-	-		20	2	40	
41	1	20	2#12	#12	3/4"	VAV'S	—	—	—	—	0.6	-					/	/	42	
						CONNECTED KVA PER PHASE	-		-		-									

* RELOCATE LOAD TO NEW LOADCENTER LCBW. BREAKER TO REMAIN AS SPARE

** RELOCATE EXISTING LOAD TO NEW LOADCENTER LCBW. BREAKER TO BE REUSED FOR NEW LOAD.

TOTAL CONNECTED KVA: -

TOTAL DEMAND KVA: -

TOTAL DEMAND AMPERES: -

NEW LOADCENTER SCHEDULE

DESIGNATION: LCBW | MAINS: 60A, TYPE: -, O.C. DEVICE: 60A M.C.B. | VOLTAGE: 120/208V-3Ø-4W, MINIMUM O.C. DEVICE, INTERRUPTING RATING: 10K AIC | LOCATION: SERVICE BAY, FED BY: LPA, MOUNTING: SURFACE | SINGLE PANEL (X), DOUBLE PANEL, COMMON COVER

	CKT NO	POLE	TRIP	WIRE	G	C	LOAD	KVA ~ A		KVA ~ B		KVA ~ C		LOAD	C	G	WIRE	TRIP	POLE	CKT NO	
GFCI	1	1	20	2#12	#12	3/4"	BUS WASH RECEPT. - AIR COMPRESSOR	1.2	1.0	—	—	—	—	LIGHTS WASH BAY	3/4"	#12	2#12	20	1	2	*
GFCI	3	1	20	2#12	#12	3/4"	BUS WASH RECEPT. - WATER HEATER	—	—	1.0	0.2	—	—	OUTSIDE WASH BAY RECEPT.	3/4"	#12	2#12	20	1	4	*
GFCI	5	1	20	2#12	#12	3/4"	BUS WASH RECEPT. - WATER SOFTENER	—	—	—	—	0.5	0.5	WASH BAY HEATER CONTROL WIRING	3/4"	#12	2#12	20	1	6	*
	7	1	20	2#12	#12	3/4"	BUS WASH - EF- 8	1.2	-	—	—	—	—	SPARE	-	-	-	20	1	8	
	9	1	20	-	-	-	SPARE	—	—	-	-	—	—	SPARE	-	-	-	20	1	10	
	11	1	20	-	-	-	SPARE	—	—	—	—	-	-	SPARE	-	-	-	20	1	12	
							CONNECTED KVA PER PHASE	3.4		1.2		1.0									

* RELOCATED LOADS

TOTAL CONNECTED KVA: 5.6

TOTAL DEMAND KVA: 5.6

TOTAL DEMAND AMPERES: 15.5

DEMOLITION / RENOVATION KEY

(EX) INDICATES EXISTING ITEM TO REMAIN

(D) INDICATES ITEM TO BE DEMOLISHED

(RL) INDICATES RELOCATED ITEM

(ER) INDICATES EXISTING ITEM TO BE RELOCATED IN NEW WORK

REVISIONS

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December 1, 2025

CAPITAL PROJECTS

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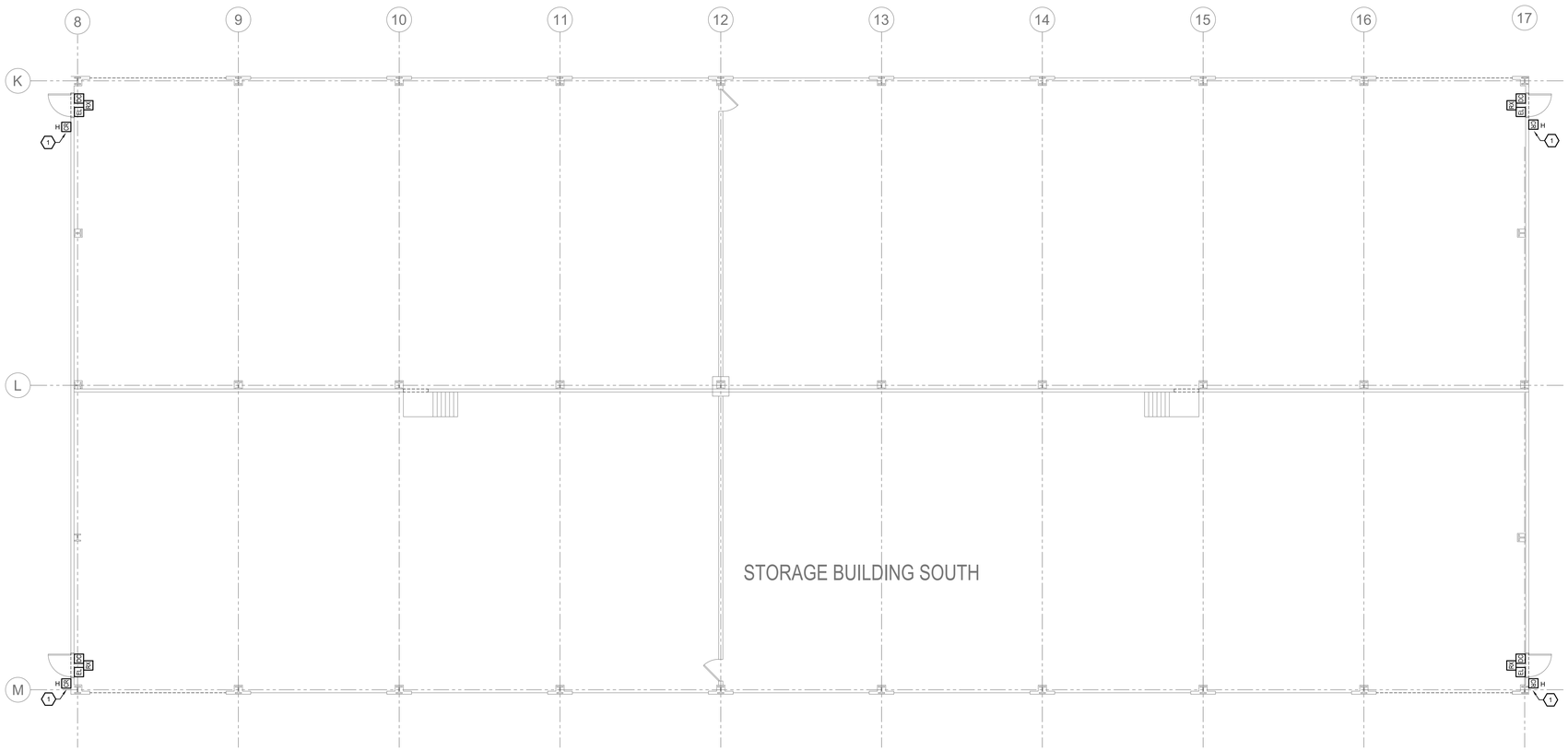
New York • Pennsylvania

PROJECT TITLE:
Johnson City Central School District
Johnson City, NY
Capital Project 2025 2026
Phase 2

DRAWING TITLE:
BUS GARAGE BUS WASH DEMOLITION AND RENOVATION PLANS

DRAWN BY:	PROJECT NO.:
R.F.C.	2024-239P
CHECKED BY: M.H.G.	BUILDING: BG / DRAWING NO.: E-101
DATE: 12-01-2025	

CAD FILE: 4239-BG-E-101.DWG
PLOT DATE: 11/24/2025



1
BG-E-101

BUS STORAGE BUILDING - SOUTH
ELECTRICAL RENOVATION PLAN
SCALE: 1/8" = 1'-0"

ELECTRICAL RENOVATION KEYNOTES

1. NEW HARDWIRED ACCESS CONTROL PROVIDED ON DOOR BY DAY AUTOMATION. ACCESS CONTROL TO INCLUDE CARD READER, REQUEST TO EXIT SENSOR AND DOOR CONTACTS. REFER TO HIGH SCHOOL DRAWING E-005A FOR GENERAL NOTES AND ADDITIONAL INFORMATION, INCLUDING RESPONSIBILITIES, CLARIFICATIONS AND EXCLUSIONS REGARDING ACCESS CONTROL.

REVISIONS

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CAPITAL PROJECTS

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PROJECT TITLE:
Johnson City Central School District
Johnson City, NY

Capital Project 2025 2026
Phase 2

DRAWING TITLE:
BUS STORAGE BUILDING
ELECTRICAL
RENOVATION PLAN

DRAWN BY: R.F.C.	PROJECT NO.: 2024-239P
CHECKED BY: M.H.G.	BUILDING: BS
DATE: 12-01-2025	DRAWING NO.: E-102

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