BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

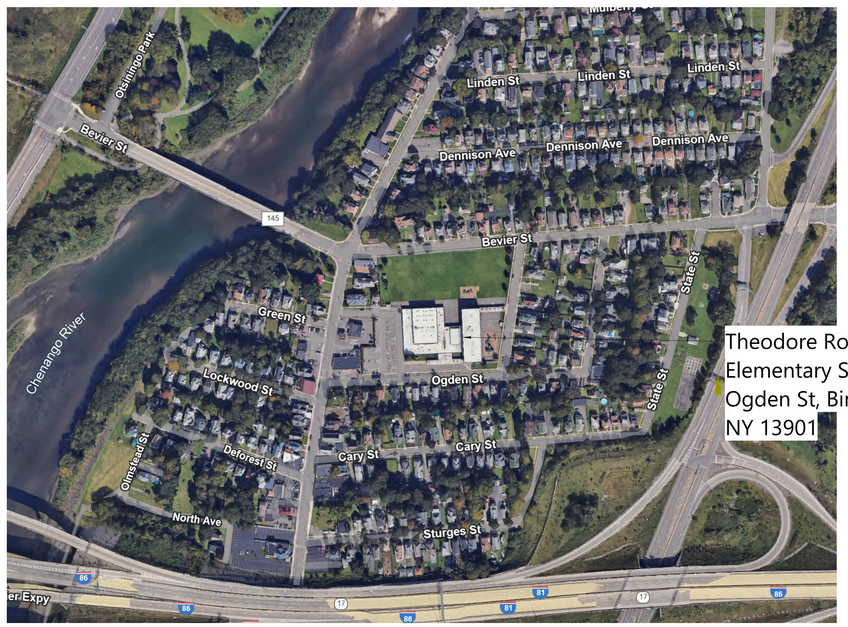
ISSUED FOR BID: 03/12/2026

CSARCH - ARCHITECTS & M.E.P. ENGINEERS
PASSERO ASSOCIATES - STRUCTURAL & CIVIL ENGINEERS
ATLANTIC TESTING LABORATORIES - ENVIRONMENTAL ENGINEERS
ENGINEERED SOLUTIONS - FIRE PROTECTION ENGINEERS

STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:
2024 CAPITAL PROJECT 03-02-00-01-0-010-014

THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

CSArch PROJECT NO. 215-2402



Theodore Roosevelt Elementary School, 9 Ogden St, Binghamton, NY 13901

VICINITY MAP NTS

DRAWING LIST - VOLUME 1

GENERAL DRAWINGS
G001 SYMBOLS, ABBREVIATIONS, AND MISC
G101 OVERALL BASEMENT FLOOR PLAN
G111 OVERALL FIRST FLOOR PLAN
G121 OVERALL SECOND FLOOR PLAN
G400 OVERALL ROOF PLAN

LIFE SAFETY DRAWINGS
LS101 BASEMENT LIFE SAFETY PLANS
LS111 FIRST FLOOR LIFE SAFETY PLANS
LS121 SECOND FLOOR LIFE SAFETY PLANS

HAZARDOUS MATERIALS DRAWINGS
HZ101 ABATEMENT NOTES AND SCHEDULES
HZ102 ABATEMENT PLAN - BASEMENT
HZ103 ABATEMENT PLAN- FIRST FLOOR
HZ104 ABATEMENT PLANS - SECOND AND THIRD FLOORS
HZ105 ABATEMENT PLAN - ROOF

SITE DRAWINGS
C102 NOTES
C120 DEMOLITION PLAN
C130 SITE PLAN
C140 UTILITY, EROSION AND SEDIMENT CONTROL & GRADING PLAN
C150 LIGHTING AND LANDSCAPING PLAN
C530 SITE DETAILS
C531 STORMWATER, EROSION AND SEDIMENT CONTROL DETAILS

STRUCTURAL GENERAL DRAWINGS
S001 GENERAL NOTES
S002 DESIGN CRITERIA AND SCHEDULES
S003 COLUMN SCHEDULE
S004 C&C DIAGRAMS
S005 C&C AND SNOW DRIFT DIAGRAMS
S006 SPECIAL INSPECTIONS

STRUCTURAL DEMOLITION DRAWINGS
SD100 STRUCTURAL DEMO PLANS

STRUCTURAL DRAWINGS
S100 OVERALL FOUNDATION PLAN
S101 FOUNDATION/ SLAB PLAN - AREA 1
S102 FOUNDATION/ SLAB PLAN - AREA 2
S103 FOUNDATION/ SLAB PLAN - AREA 3
S110 OVERALL 2ND FLOOR/LOW ROOF FRAMING PLAN
S111 2ND FLOOR/LOW ROOF FRAMING PLAN - AREA 1
S112 2ND FLOOR/LOW ROOF FRAMING PLAN - AREA 2
S113 2ND FLOOR/LOW ROOF FRAMING PLAN - AREA 3
S120 OVERALL HIGH ROOF FRAMING PLAN
S123 HIGH ROOF FRAMING PLAN - AREA 3
S201 PARTIAL PLANS AND DETAILS
S202 PARTIAL PLANS AND DETAILS
S301 FOUNDATION SECTIONS & DETAILS
S302 PIER AND PILASTER DETAILS
S303 FRAMING SECTIONS & DETAILS
S304 FRAMING SECTIONS & DETAILS
S305 FRAMING SECTIONS & DETAILS
S306 FRAMING SECTIONS & DETAILS
S307 FRAMING SECTIONS & DETAILS
S401 BRACED FRAME ELEVATIONS
S501 TYPICAL CONCRETE DETAILS
S502 TYPICAL CONCRETE DETAILS
S503 TYPICAL MASONRY DETAILS
S504 TYPICAL STEEL DETAILS
S505 TYPICAL STEEL DETAILS

ARCHITECTURAL DEMOLITION DRAWINGS
AD100 OVERALL BASEMENT FLOOR DEMOLITION PLAN
AD101 PARTIAL BASEMENT FLOOR DEMOLITION PLAN - AREA '1'
AD102 PARTIAL BASEMENT FLOOR DEMOLITION PLAN - AREA '2'
AD110 OVERALL FIRST FLOOR DEMOLITION PLAN
AD111 PARTIAL FIRST FLOOR DEMOLITION PLAN - AREA '1'
AD112 PARTIAL FIRST FLOOR DEMOLITION PLAN - AREA '2'
AD122 SECOND AND THIRD FLOOR DEMOLITION PLANS - AREA '2'
AD411 PARTIAL ROOF DEMOLITION PLAN - AREA '1'
AD412 PARTIAL ROOF DEMOLITION PLAN - AREA '2'
AD811 PARTIAL FIRST FLOOR DEMOLITION RCP - AREA '1'

DRAWING LIST - VOLUME 2

ARCHITECTURAL DRAWINGS
A101 PARTIAL BASEMENT FLOOR PLAN - AREA '1'
A111 PARTIAL FIRST FLOOR PLAN - AREA '1'
A112 PARTIAL FIRST FLOOR PLAN - AREA '2'
A113 PARTIAL FIRST FLOOR PLAN - AREA '3'
A114-A CANOPY ALTERNATE
A123 PARTIAL SECOND FLOOR PLAN - AREA '3'
A201 EXTERIOR ELEVATIONS
A202 EXTERIOR ELEVATIONS
A203 EXTERIOR ELEVATIONS
A204 EXTERIOR ELEVATIONS
A251 BUILDING SECTIONS
A252 BUILDING SECTIONS
A301 WALL SECTIONS
A302 WALL SECTIONS
A303 WALL SECTIONS
A304 WALL SECTIONS
A305 WALL SECTIONS
A351 SECTION DETAILS
A352 SECTION DETAILS & MARQUEE DETAILS
A353 SECTION DETAILS
A361 PLAN DETAILS
A362 PLAN DETAILS
A363 PLAN DETAILS
A411 PARTIAL ROOF PLAN - AREA '1'
A412 PARTIAL ROOF PLAN - AREA '2'
A413 PARTIAL ROOF PLAN - AREA '3'
A451 TYPICAL ROOF DETAILS - RECOAT
A452 TYPICAL ROOF DETAILS - NEW ROOF
A453 TYPICAL ROOF DETAILS
A454 TYPICAL ROOF DETAILS
A501 STAIR PLANS AND SECTIONS
A502 ELEVATOR PLANS, SECTIONS AND DETAILS
A551 STAIR DETAILS
A601 TYPICAL EQUIPMENT PLANS, ELEVATIONS AND DETAILS
A602 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '1'
A603 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '1'
A604 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '1'
A605-A INTERIOR ELEVATIONS - AREA '1' - ALTERNATE
A606-A INTERIOR ELEVATIONS - AREA '1' - ALTERNATE
A607 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '1'
A608 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '2'
A609 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '2'
A610 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '2'
A611 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '2'
A612 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '3'
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A614 ENLARGED FLOOR PLANS AND INTERIOR ELEVATIONS - AREA '3'
A651 CASEWORK DETAILS
A652 CASEWORK DETAILS
A653 CASEWORK DETAILS
A654 CASEWORK DETAILS
A701 PARTITION TYPES
A702 PARTITION TYPES
A811 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN - AREA '1'
A812 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN - AREA '2'
A813 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN - AREA '3'
A814 ENLARGED FIRST FLOOR REFLECTED CEILING PLAN - AREA '1'
A823 PARTIAL SECOND FLOOR REFLECTED CEILING PLAN - AREA '3'
A901 DOOR SCHEDULE
A902 DOOR ELEVATIONS AND DETAILS
A911 WINDOW ELEVATIONS AND DETAILS
A921 STOREFRONT ELEVATIONS AND DETAILS

ARCHITECTURAL FINISHES
AF001 MATERIAL SCHEDULE
AF002 ROOM FINISH SCHEDULE
AF003 FINISH MATERIAL DETAILS
AF004 FINISH MATERIAL DETAILS
AF005 FINISH MATERIAL DETAILS
AF111 FIRST FLOOR FINISH PLAN - AREA '1'
AF112 FIRST FLOOR FINISH PLAN - AREA '2'
AF113 FIRST FLOOR FINISH PLAN - AREA '3'
AF123 SECOND FLOOR FINISH PLAN - AREA '3'
AF201 SIGN TYPES
AF202 SIGN SCHEDULE

FURNITURE AND EQUIP. FLOOR PLANS
FE111 FIRST FLOOR FURNITURE PLAN - AREA '1'
FE112 FIRST FLOOR FURNITURE PLAN - AREA '2'
FE113 FIRST FLOOR FURNITURE PLAN - AREA '3'
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DRAWING LIST - VOLUME 3

FIRE PROTECTION GENERAL DRAWING
FP001 FIRE PROTECTION LEGEND, NOTES AND DETAILS

FIRE PROTECTION DRAWINGS
FP312 PARTIAL FIRST FLOOR FIRE PROTECTION PLAN - AREA 2
FP313 PARTIAL FIRST FLOOR FIRE PROTECTION PLAN - AREA 3
FP323 PARTIAL SECOND FLOOR FIRE PROTECTION PLAN - AREA 3

PIPING AND INSTRUMENTATION DIAGRAM GENERAL DRAWING
DJ000 GENERAL NOTES, LEGENDS AND ABBREVIATIONS

PIPING AND INSTRUMENTATION DIAGRAM DRAWINGS
DJ101 MECHANICAL PID
DJ201 PLUMBING PID

PLUMBING GENERAL DRAWING
PG000 GENERAL NOTES, LEGENDS AND ABBREVIATIONS

PLUMBING DEMOLITION DRAWINGS
PD101 BASEMENT DEMOLITION PLAN - AREA '1'
PD102 BASEMENT DEMOLITION PLAN - AREA '2'
PD111 FIRST FLOOR DEMOLITION PLAN - AREA '1'
PD112 DEMOLITION FLOOR PLANS - AREA '2'
PD401 ROOF DEMOLITION PLAN

PLUMBING DRAWINGS
P101 BASEMENT PLAN - AREA '1'
P102 UNDERSLAB PLAN - AREA '2'
P103 UNDERSLAB PLAN - AREA '3'
P111 FIRST FLOOR PLAN - AREA '1'
P112 FIRST FLOOR PLAN - AREA '2'
P113 FIRST FLOOR PLAN - AREA '3'
P123 SECOND FLOOR PLAN - AREA '3'
P401 ROOF PLAN
P501 DOMESTIC RISER DIAGRAMS
P502 SANITARY RISER DIAGRAMS
P601 DETAILS
P901 SCHEDULES

MECHANICAL GENERAL DRAWING
MG000 GENERAL NOTES, LEGENDS AND ABBREVIATIONS

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MD101 BASEMENT DEMOLITION PLAN - AREA '1'
MD111 FIRST & SECOND FL DEMOLITION PLANS - AREA '1'
MD401 ROOF DEMOLITION PLAN - AREA '1'

MECHANICAL DRAWINGS
M111 FIRST FLOOR PLAN - AREA '1'
M112 FIRST FLOOR PLAN - AREA '2'
M113 FIRST FLOOR PLAN - AREA '3'
M123 SECOND FLOOR PLAN - AREA '3'
M211 FIRST FLOOR PLAN - AREA '1'
M212 FIRST FLOOR PLAN - AREA '2'
M213 FIRST FLOOR PLAN - AREA '3'
M223 SECOND FLOOR PLAN - AREA '3'
M311 ENLARGED PLANS
M312 SECTIONS
M401 ROOF PLAN
M601 DETAILS
M901 VENTILATION SCHEDULE
M902 SCHEDULES
M903 SCHEDULES

DRAWING LIST - VOLUME 4

ELECTRICAL GENERAL DRAWING
EG000 GENERAL NOTES, LEGENDS AND ABBREVIATIONS

ELECTRICAL DEMOLITION DRAWINGS
ED101 OVERALL BASEMENT DEMOLITION PLAN
ED111 FIRST FLOOR DEMOLITION PLANS - AREA '1'
ED112 DEMOLITION PLANS - AREA '2'
ED301 ENLARGED DEMOLITION PLANS
ED401 ROOF DEMOLITION PLANS - AREA '1'

ELECTRICAL DRAWINGS
E001 ELECTRICAL SITE PLAN
E111 FIRST FLOOR POWER PLAN - AREA '1'
E112 FIRST FLOOR POWER PLAN - AREA '2'
E113 FIRST FLOOR POWER PLAN - AREA '3'
E123 SECOND FLOOR POWER PLAN - AREA '3'
E130 ROOF POWER PLAN
E211 FIRST FLOOR LIGHTING PLAN - AREA '1'
E212 FIRST FLOOR LIGHTING PLAN - AREA '2'
E213 FIRST FLOOR LIGHTING PLAN - AREA '3'
E221 SECOND FLOOR LIGHTING PLAN - AREA '3'
E301 ENLARGED POWER PLANS
E501 ELECTRICAL RISER DIAGRAMS & SCHEDULES
E901 SCHEDULES AND DETAILS
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TECHNOLOGY DRAWINGS
T111 FIRST FLOOR TECHNOLOGY PLAN - AREA '1'
T112 FIRST FLOOR TECHNOLOGY PLAN - AREA '2'
T113 FIRST FLOOR TECHNOLOGY PLAN - AREA '3'
T123 SECOND FLOOR TECHNOLOGY PLAN - AREA '3'
T301 TECHNOLOGY ENLARGED PLANS
T901 TECHNOLOGY DETAILS
T902 TECHNOLOGY DETAILS

FIRE ALARM GENERAL DRAWING
FA000 GENERAL NOTES, LEGENDS AND ABBREVIATIONS

FIRE ALARM DRAWINGS
FA101 OVERALL BASEMENT FIRE ALARM PLAN
FA111 FIRST FLOOR FIRE ALARM PLAN - AREA '1'
FA112 FIRST FLOOR FIRE ALARM PLAN - AREA '2'
FA113 FIRST FLOOR FIRE ALARM PLAN - AREA '3'
FA123 SECOND FLOOR FIRE ALARM PLAN - AREA '3'
FA130 ROOF FIRE ALARM PLAN
FA301 FIRE ALARM ENLARGED PLANS

VOLUME 3 OF 4

REGISTERED ARCHITECT
JOHN DOUGLAS PASSERO
No. 025853
STATE OF NEW YORK
EXPIRES: 1/31/2026

GENERAL NOTES - NEW INSTALLATION

1) SPRINKLER CLASSIFICATION FOR BUILDING SHALL BE LIGHT HAZARD UNLESS OTHERWISE REQUIRED BY CODE.

2) HYDRAULIC DESIGN DENSITIES FOR AREAS SHALL CORRESPOND TO THE HAZARD CLASSIFICATION.

3) ALL WATER SUPPLY VALVES ON THE FIRE PROTECTION SYSTEM TO BE ELECTRICALLY SUPERVISED. TYPE AND EXACT LOCATION OF FLOW, PRESSURE AND SUPERVISORY SWITCHES SHALL BE ACCOMPLISHED BETWEEN THE RESPONSIBLE TRADES.

4) LOCATION OF SPRINKLERS IN CEILING TILES:

   A) REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND ROOM FINISH SCHEDULES FOR CEILING TILE TYPES.

   B) IN STANDARD 2 BY 4 CEILING TILES, LOCATE SPRINKLERS IN THE CENTER OF TILES.

   C) IN STANDARD 2 BY 4 CEILING TILES WHICH SIMULATE 2 BY 2 CEILING TILES, LOCATE SPRINKLERS IN THE CENTER OF THE 2 BY 2 AREA.

5) ALL SPRINKLER WORK SHALL BE IN STRICT CONFORMANCE WITH 2019 NFPA-13 "STANDARD FOR INSTALLATION OF SPRINKLER SYSTEMS".

6) REFER TO ARCHITECTURAL DRAWINGS FOR HUNG CEILING HEIGHTS AND CONSTRUCTION. WHERE WORK BETWEEN THIS DRAWING AND ARCHITECTURAL PLANS ARE IN CONFLICT, ADVISE OWNERS REPRESENTATIVE PRIOR TO INSTALLATION OF PIPING.

7) WORK SHALL BE COORDINATED WITH ALL OTHER TRADES, NOTIFY OWNERS REPRESENTATIVE TO AVOID CONFLICTS.

8) SPRINKLER CONTRACTOR SHALL ADJUST AND/OR ADD SPRINKLERS AS REQUIRED UTILIZING ARCHITECT'S REFLECTED CEILING PLAN FOR LOCATION OF LIGHTS, DIFFUSERS, CABLE TRAYS, ETC.,

9) ALL EQUIPMENT SHALL BE APPROVED BY ENGINEER.

10) LAYOUT OF SPRINKLERS AND HYDRAULIC CALCULATIONS ARE FOR AUTHORITY HAVING JURISDICTION USE ONLY. SPRINKLER CONTRACTOR SHALL PREPARE FINAL SPRINKLER HEAD LAYOUT AND SHOP DRAWINGS INCLUDING HYDRAULIC CALCULATIONS AND OBTAIN ALL APPROVALS AS REQUIRED.

11) PROVIDE SPRINKLERS ABOVE AND BELOW EXPOSED DUCTWORK 4 FEET OR WIDER.

12) CONTRACTOR SHALL NOT INSTALL ANY SPRINKLER PIPING THAT WILL INTERFERE WITH THE MAINTENANCE/REMOVAL OF HVAC EQUIPMENT.

13) CONTRACTOR SHALL DETERMINE BEST LOCATION FOR ROUTING ALL ASSOCIATED SPRINKLER LINES. PIPE ROUTING SHOWN SHALL BE USED AND ANY ADDITIONAL OFFSETS OR FITTINGS REQUIRED FOR PROPER INSTALLATION. COORDINATION WITH OTHER TRADES, AND/OR TO MAINTAIN PROPER CLEARANCES SHALL BE PROVIDED. VERIFY EXISTING STRUCTURAL, MECHANICAL, ELECTRICAL INSTALLATIONS AND AVOID ANY/ALL OBSTRUCTIONS OR INTERFERENCES WITH FIRE PROTECTION PIPE ROUTING.

14) ALL SPRINKLERS MOUNTED IN CEILING SHALL BE LOCATED A MINIMUM OF 4" AWAY FROM ANY WALLS, CEILING HEIGHT CHANGES OR ANY OTHER VERTICAL INTERSECTING SURFACE.

15) PROVIDE HEAD GUARDS ON SPRINKLERS IN ALL STORAGE AREAS INCLUDING BUT NOT LIMITED TO CLOSETS, BULK STORAGE ROOMS AND IN ELECTRIC, SERVER, MECHANICAL, AND ELEVATOR EQUIPMENT ROOMS. GUARDS SHALL BE LOCATED AS TO COMPLY WITH NFPA 13 FOR "AREAS SUBJECT TO MECHANICAL INJURY".

16) CUTTING OF STRUCTURAL AND/OR ARCHITECTURAL MEMBERS TO BE DONE ONLY WITH THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

17) FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, FLOORS, ROOFS, ETC.

18) PROVIDE ACCESS PANELS TO ALL VALVES ABOVE NON-ACCESSIBLE CEILINGS AND CHASES.

19) ALL VALVES FOR FIRE SERVICE SHALL BE LISTED BY THE UNDERWRITER'S LABORATORIES, INC. AND THE FACTORY MUTUAL LABORATORIES. VALVES SHALL BE FACTORY MARKED "UL" AND "FM", 175 PSI WORKING PRESSURE.

20) ALL POWER WIRING SHALL BE ACCOMPLISHED UNDER THE ELECTRICAL DIVISION. ALL CONTROL AND INTERLOCK WIRING SHALL BE ACCOMPLISHED UNDER THIS SECTION OF THE SPECIFICATIONS IN ACCORDANCE WITH THE REQUIREMENTS IN THE ELECTRICAL DIVISION. COORDINATE ALL ELECTRICAL ITEMS WITH ELECTRICAL CONTRACTOR.

21) SPRINKLERS SHALL COVER THE ENTIRE AREA OF THE ROOM INCLUDING ALCOVES. SPRAY SHALL NOT BE BLOCKED BY WALLS OR PARTITIONS.

22) MAINTAIN A MINIMUM OF 18 INCHES FROM THE BOTTOM OF THE SPRINKLER DEFLECTOR TO THE TOP OF STORAGE/FILE STORAGE.

23) ALL FIRE PROTECTION SYSTEMS ARE SHOWN SCHEMATICALLY. IT IS NOT THE INTENT OF THESE PLANS TO SHOW ALL LISTED COMPONENTS, SUCH AS PIPING, FITTINGS, VALVES, ETC. CONTRACTOR IS RESPONSIBLE FOR INSTALLING SYSTEM PER APPLICABLE CODES.

24) PROVIDE A PERMANENTLY ATTACHED HYDRAULIC DESIGN INFORMATION SIGN STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.

25) INSPECTOR'S TEST VALVE SHALL NOT EXCEED 7 FEET ABOVE THE FINISHED FLOOR.

26) THE SPRINKLER PIPING LAYOUT AND PIPE SIZES SHOWN ON THE CONTRACT DOCUMENTS ARE TO DEFINE THE DESIGN INTENT FOR COMPETITIVE BIDDING AND FOR PRELIMINARY SUBMISSION TO THE AUTHORITIES HAVING JURISDICTION. THE WORK OF THE CONTRACT INCLUDES HYDRAULIC CALCULATIONS AND FABRICATION SHOP DRAWINGS FOR THE ACTUAL INSTALLATION CONDITIONS.

27) CONTRACTOR SHALL PROVIDE SPRINKLER COVERAGE IN ALL COMBUSTIBLE CONCEALED SPACES.

28) METHODS OF HANGING PIPES, HEADERS AND BRANCHES SHALL BE IN ACCORDANCE WITH NFPA-13.

29) CONTRACTOR SHALL CONDUCT A THOROUGH EXAMINATION OF THE PREMISES PRIOR TO PREPARING A PROPOSAL. ANY CHANGES TO THE DESIGN MADE NECESSARY BY FIELD CONDITIONS SHALL BE CONVEYED TO THE ENGINEER PRIOR TO PREPARATION OF A PROPOSAL. NO ADDITIONAL COSTS BEYOND THE PROPOSAL PRICE WILL BE ACCEPTED FOR FIELD CONDITIONS THAT COULD HAVE BEEN DETERMINED BY AN INSPECTION OF THE PREMISES.

30) THIS CONTRACTOR SHALL PROVIDE A HYDRANT FLOW TEST, AND UTILIZE THE FLOW DATA OBTAINED TO PERFORM HYDRAULIC CALCULATIONS TO PROPERLY SIZE THE PIPING SYSTEM.

31) THIS CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL OF THE HYDRAULICALLY CALCULATED SYSTEM. THESE SHOP DRAWINGS SHALL BEAR THE SEAL OF A NYS LICENSED PROFESSIONAL ENGINEER.

32) THROUGHOUT THE PROJECT AND WHENEVER THE SPRINKLER OR STANDPIPE SYSTEM IS NON OPERATIONAL, PROVIDE FOR A FIRE WATCH AS DIRECTED IN THE NYSBC (2020) §BC3314 AND NYSFC (2020) §FC901.7 SYSTEMS OUT OF SERVICE. COMPLY WITH NYSBC (2020) CHAPTER 33 AND REFERENCED STANDARD NFPA 241.

33) AT THE COMPLETION OF THE PROJECT THIS CONTRACTOR SHALL PROVIDE FOR TRAINING AND DOCUMENTATION OF NFPA 25 INSPECTION, MAINTENANCE AND REPAIR OF WET BASED FIRE SYSTEMS. THIS TRAINING SHALL INCLUDE REVIEW OF THE INSPECTION REQUIREMENTS OF THE NFPA 25 CODE AND A COPY OF THE CODE FOR THE OWNERS MAINTENANCE STAFF.

34) SPRINKLER PIPING SHALL BE RUN IN CONCEALED SPACES. NO SPRINKLER PIPING SHALL RUN EXPOSED. COORDINATE WITH ARCHITECTURAL DRAWING FOR REFLECTED CEILING PLANS AND SOFFIT LOCATIONS.

GENERAL SITE WORK NOTES

1. CONTRACTOR SHALL OBTAIN AND PAY ALL NECESSARY PERMITS, FEES AND RELATED CHARGES TO PERFORM THE WORK REQUIRED.
2. CALL "DIG SAFELY NEW YORK" PRIOR TO ANY WORK BEING PERFORMED.
3. VERIFY ALL EXISTING UNDERGROUND UTILITIES IN AREAS OF WORK.
4. ALL EXISTING UTILITIES MUST BE VERIFIED. CONTRACTOR SHALL CONFIRM ANY POTENTIAL CONFLICTS AND STRATEGIZE EXCAVATION PRIOR TO START OF WORK.
5. ALL EXCAVATIONS SHALL BE IN COMPLIANCE WITH EXCAVATION STANDARD 29 CFR PART 1926 SUBPART (P) OF THE CURRENT OSHA REQUIREMENTS.
6. CONTRACTOR SHALL PROVIDE FOR A MEANS OF EGRESS FROM THE EXCAVATION.
7. CONTRACTOR SHALL PROVIDE A PUMP FOR DEWATERING PURPOSES.
8. THE WATER DEPT STAFF SHALL INSPECT ALL WATER WORK PRIOR TO BACKFILLING THE EXCAVATION.
9. CURB BOXES TO BE LOCATED AT PREFERRED LOCATION WITH TOWN OF BETHLEHEM WATER DEPARTMENT.
10. CONTRACTOR SHALL SCHEDULE TIME AND DATE WITH THE BETHLEHEM WATER DEPARTMENT (TWO WEEKS MINIMUM IN ADVANCE) CALL THE SUPERVISOR AT 518-439-4955
11. CONTRACTOR SHALL PROVIDE TAPPINGS APPROVED BY THE TOWN OF BETHLEHEM'S WATER DEPARTMENT.
12. CONTRACTOR SHALL CLEAN THE WATER MAIN IN THE AREA TO BE TAPPED.
13. ALL WET SLEEVE AND VALVES SHALL BE PRESSURE TESTED AT 150 PSI THIS TEST SHALL BE WITNESSED BY THE TOWN OF BETHLEHEM'S WATER DEPARTMENT STAFF.
14. CONTRACTOR SHALL SUPPLY THE WATER TEST PUMP.
15. WHEN OUTSIDE AIR TEMPERATURES ARE BELOW 32 DEG FAHRENHEIT THIS CONTRACTOR SHALL SUPPLY AN APPROVED HEAT SOURCE TO PROTECT THE EQUIPMENT FROM FREEZING.

BACKFLOW PREVENTION NOTES

1. ALL ASSEMBLIES SHALL BE INSTALLED WITH A CENTERLINE HEIGHT FROM 30 INCHES TO 60 INCHES ABOVE THE FLOOR. ANY INSTALLATION AT A GREATER HEIGHT SHALL BE PROVIDED WITH A FIXED PLATFORM, A PORTABLE SCAFFOLD OR A LIFT MEETING OSHA STANDARDS.
2. ALL RPZ DEVICES MUST HAVE AN 18 INCH MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE RELIEF VALVE AND THE FLOOR TO PREVENT SUBMERSION AND PROVIDE ACCESS FOR SERVICING AND RELIEF VALVE.
3. A MINIMUM OF 12 INCHES OF CLEAR SPACE SHALL BE MAINTAINED ABOVE THE ASSEMBLY TO ALLOW FOR SERVICING CHECK VALVES AND FOR OPERATION OF SHUT-OFF VALVES.
4. A MINIMUM OF 30 INCHES OF CLEAR SPACE SHALL BE MAINTAINED BETWEEN THE FRONT SIDE OF THE DEVICE AND THE NEAREST WALL OR OBSTRUCTION.
5. AT LEAST 8 INCHES CLEARANCE SHOULD BE MAINTAINED FROM THE BACK SIDE OF THE DEVICE TO THE NEAREST WALL OR OBSTRUCTION. THIS CLEARANCE MAY NEED TO BE INCREASED FOR MODELS THAT HAVE SIDE MOUNTED TEST COCKS OR RELIEF VALVES THAT WOULD BE FACING THE BACK WALL.

FIRE WATER SERVICE NOTES

1. THIS CONTRACTOR SHALL INSPECT BUILDING TO DETERMINE THE EXTENT OF SERVICE ENTRANCE WORK REQUIRED, AS EACH BUILDING MAY VARY FOR BEST ARRANGEMENT OF NEW SERVICE ENTERING BASEMENT MECHANICAL ROOMS.
2. FOR ALL THE BUILDINGS THE MINIMUM WORK REQUIRED SHALL BE AS FOLLOWS, PROVIDE FIRE PROTECTION SERVICE DOUBLE CHECK VALVE ASSEMBLY, SUPERVISED ISOLATION VALVES, FLOW SWITCH, FIRE DEPT CONNECTION, AND PRESSURE GAGES AS SHOWN.
3. FOR ALL SERVICES PROVIDE WIRING TO THE EXISTING FIRE ALARM SYSTEM FOR THE FLOW SWITCH AND ALL SUPERVISED VALVES PROVIDED FOR.

DELEGATED DESIGN NOTES

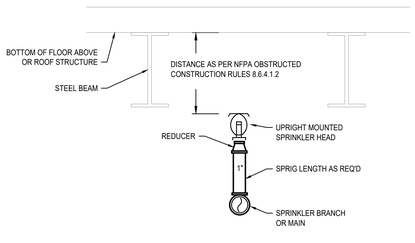
1. THIS IS A DELEGATED DEIGN OF AN NFPA 13 SYSTEM.
2. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A QUALIFIED FIRE PROTECTION INSTALLER AND TO PROVIDE DETAILED LAYOUT DRAWINGS BASED ON HYDRAULIC CALCULATIONS.
3. PRIOR TO THE START OF CONSTRUCTION, DETAILED LAYOUT DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEERS, BEARING THE SEAL OF A NEW YORK STATE PROFESSIONAL ENGINEER.
4. ANY DESIGN CHANGES ARE REQUIRED TO MEET NFPA 13 REQUIREMENTS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

FIRE PROTECTION

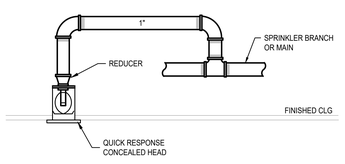
– – – – –	SPRINKLER PIPE TO BE REMOVED
—— SP ——	SPRINKLER LINE
—— F ——	FIRE STANDPIPE
	SPRINKLER HEAD TO BE REMOVED
	QUICK RESPONSE CONCEALED PENDANT SPRINKLER
	UPRIGHT SPRINKLER HEAD
	UPRIGHT SPRINKLER HEAD WITH GUARD
	DRY-BARREL PENDANT SPRINKLER
	CONCEALED SIDEWALL SPRINKLER
FS	FLOW SWITCH
TS	SUPERVISORY SWITCH
	PRESSURE GAUGE
	CAPPED PIPE END
	ELBOW DOWN
	ELBOW UP
	TEE DOWN
	CHECK VALVE
	OS & Y GATE VALVE
	BUTTERFLY / WAFER VALVE

ABBREVIATIONS

AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AP	ACCESS PANEL
BF	BELOW FLOOR
BFP	BACKFLOW PREVENTER
CA	COMPRESSED AIR
CLG	CEILING
CW	COLD WATER
CTE	CONNECT TO EXISTING
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EXR	EXISTING TO REMAIN
FD	FLOOR DRAIN
F	FIRE
FLR	FLOOR
FF	FINISH FLOOR
FFE	FINISHED FLOOR ELEVATION
GA	GAUGE
GC	GENERAL CONTRACTOR
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RE-CIRCULATION
INV EL	INVERT ELEVATION
IW	INDIRECT WASTE
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MFR	MANUFACTURER
MIN	MINIMUM
OS&Y	OUTSIDE SPINDLE & YOKE
PC	PLUMBING CONTRACTOR
PG	PRESSURE GAUGE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQ IN
PO	PLUGGED OUTLET
RPZ	REDUCED PRESSURE ZONE
SPR	SPRINKLER
TEMP	TEMPERATURE
TYP	TYPICAL
VIF	VERIFY IN FIELD

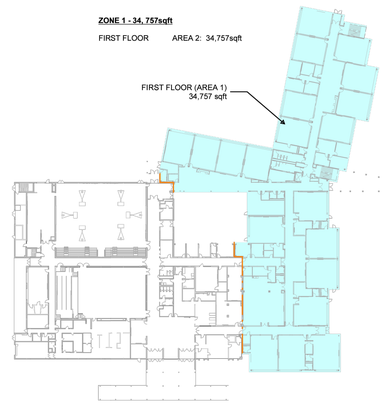


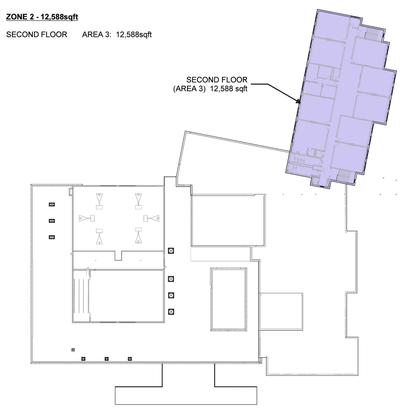
UPRIGHT SPRINKLER PIPING ARRANGEMENT



PENDANT SPRINKLER DETAIL

4 SPRINKLER DETAILS
FP001 NTS





5 SPRINKLER ZONES
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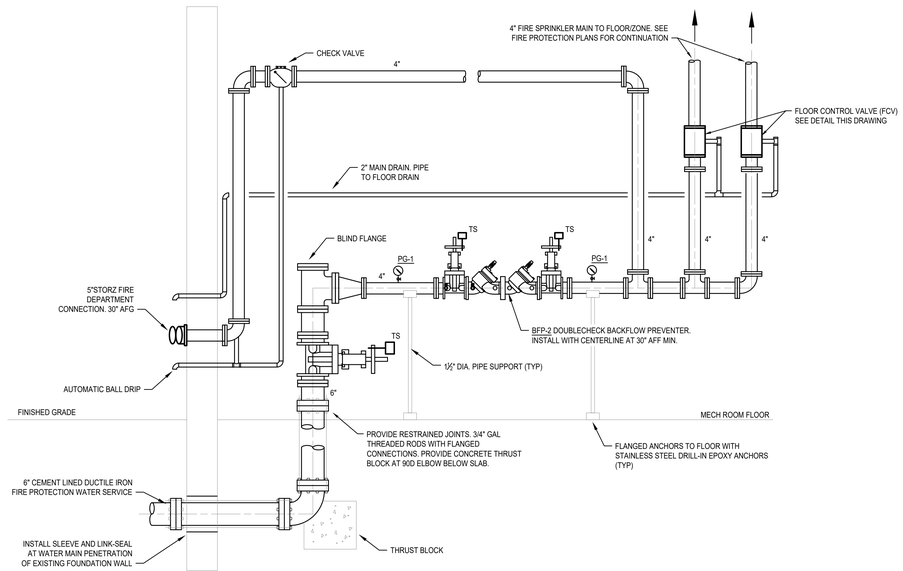
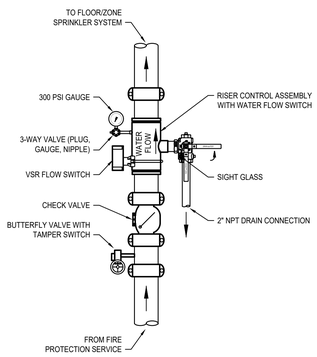
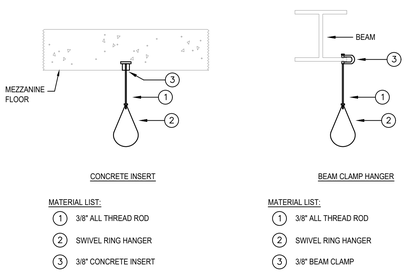


1 FIRE PROTECTION WATER SERVICE ENTRANCE DIAGRAM
FP001 NTS



2 FLOOR CONTROL VALVE (FCV) DETAIL
FP001 NTS



CONCRETE INSERT

MATERIAL LIST:
1. 3/8" ALL THREAD ROD
2. SWIVEL RING HANGER
3. 3/8" CONCRETE INSERT

BEAM CLAMP HANGER

MATERIAL LIST:
1. 3/8" ALL THREAD ROD
2. SWIVEL RING HANGER
3. 3/8" BEAM CLAMP

3 SPRINKLER PIPE HANGER DETAILS
FP001 NTS

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BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

STATE OF NEW YORK SCOTT C. SIMPSON 027892 PROFESSIONAL ENGINEER
Registered Through: 4/30/2027

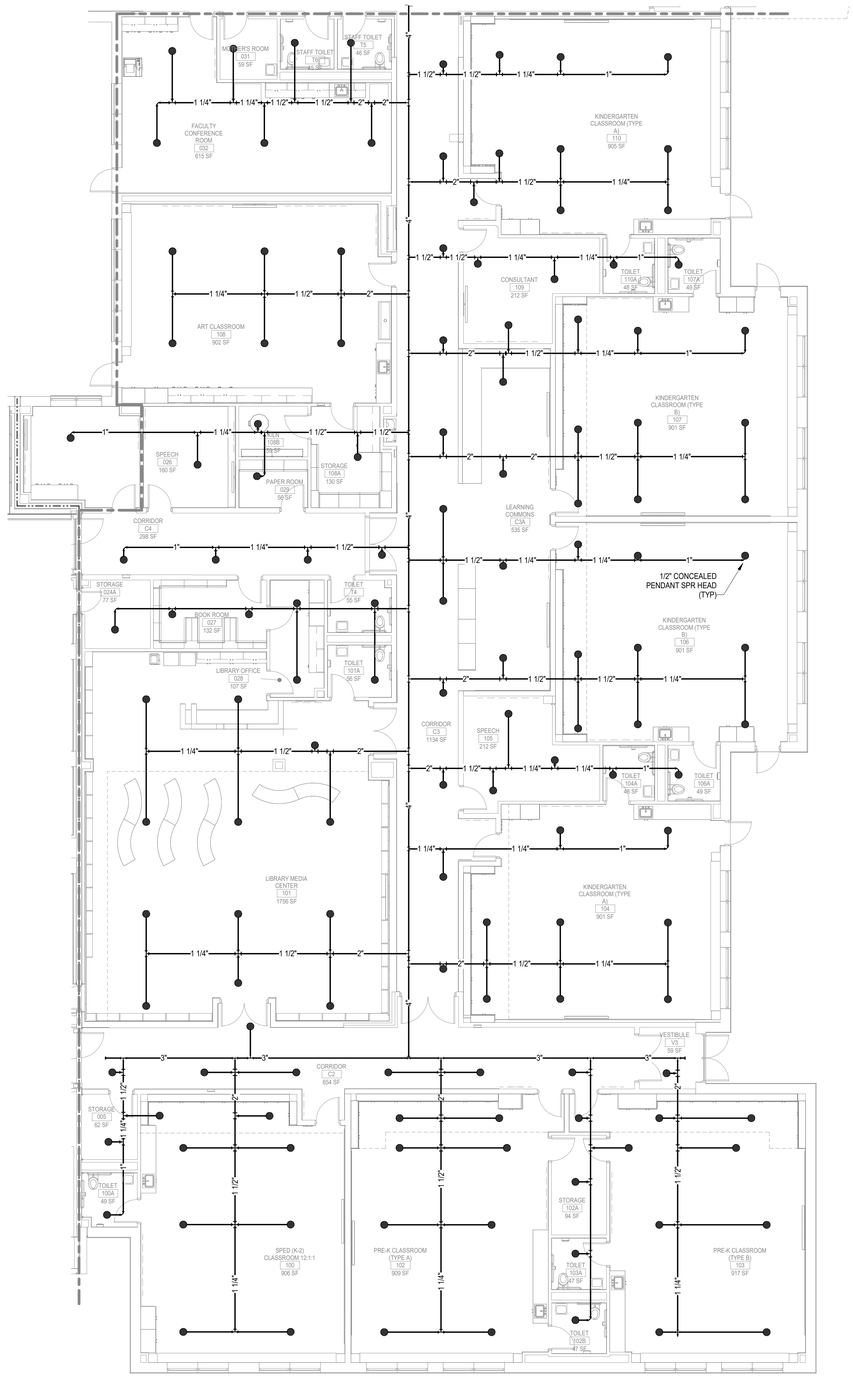
#	DATE	DESCRIPTION

Drawn By:	SS
Checked By:	SCS
Proj. #:	03-02-00-01-0-010-014
CSArch Proj. #:	215-2402
Construction Documents:	3/12/2026

Sheet Title
FIRE PROTECTION LEGEND, NOTES AND DETAILS

Sheet No.
TR
FP001

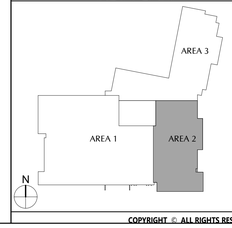
CONSTRUCTION DOCUMENTS



1 PARTIAL FIRST FLOOR FIRE PROTECTION PLAN - AREA 2

FP312 1/8" = 1'-0"

KEY PLAN



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THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

STATE OF NEW YORK SCOTT C. SWENSON 087892 LICENSED PROFESSIONAL ENGINEER

Registered Through: 4/30/2027

#	DATE	DESCRIPTION

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Checked By:	SS
Proj. #:	03-02-00-01-0-010-014
CSArch Proj. #:	215-2402
Construction Documents:	3/12/2026

Sheet Title

PARTIAL FIRST FLOOR FIRE PROTECTION PLAN - AREA 2

Sheet No.

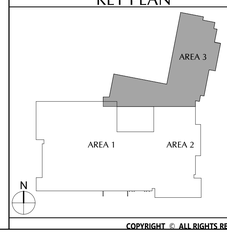
TR
FP312

CONSTRUCTION DOCUMENTS

1 PARTIAL FIRST FLOOR FIRE PROTECTION PLAN - AREA 3

FP313 1/8" = 1'-0"

KEY PLAN



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2024 CAPITAL PROJECT

STATE OF NEW YORK SCOTT C. PIERSON 027892 PROFESSIONAL ENGINEER

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Sheet Title

PARTIAL FIRST FLOOR FIRE PROTECTION PLAN - AREA 3

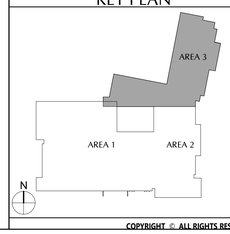
Sheet No.

TR
FP313

CONSTRUCTION DOCUMENTS

1 PARTIAL SECOND FLOOR FIRE PROTECTION PLAN - AREA 3
FP323 1/8" = 1'-0"

KEY PLAN



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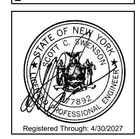
Project Title
BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT



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Construction Documents:	3/12/2026

Sheet Title
PARTIAL SECOND FLOOR FIRE PROTECTION PLAN - AREA 3

Sheet No.
TR
FP323

CONSTRUCTION DOCUMENTS

ABBREVIATIONS

HB	HOSE BIB
HC	HEATING COIL
HD	HEAD
HP	HORSEPOWER
HRWR	HEAT RECOVERY WATER RETURN
HV	HOSE VALVE
HVU	HEATING/VENTILATION UNIT
HW	HOT WATER
HWR	HEATING HOT WATER RETURN
ID	INSIDE DIAMETER
IMB	ICE MACHINE BOX
IN	INCH
INV	INVERT
IW	INDIRECT WASTE
IWC	INCHES OF WATER COLUMN
K	KETTLE
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS	POUNDS
LDR	LEADER
LF	LINEAR FOOT
LFT	LEAVING FLUID TEMPERATURE
LPG	LIQUEFIED PETROLEUM GAS
LRA	LOCKED ROTOR AMPERES
LVC	LABORATORY VACUUM
LWCO	LOW WATER CUT OFF
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MFS	MAXIMUM FUSE SIZE
MFW	MECHANICAL FEED WATER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MPS	MEDIUM PRESSURE STEAM (16-59 PSIG)
MSB	MOP SINK BASIN
NC	NORMALLY CLOSED; NEW CONNECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFGH	NON-FREEZE GROUND HYDRANT
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NFRH	NON-FREEZE ROOF HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE
O2	OXYGEN
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SPINDLE & YOKE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OVF	OVERFLOW
OWS	OIL WATER SEPARATOR
P	PUMP
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PDI	PLUMBING AND DRAINAGE INSTITUTE
PE	POLYETHYLENE
PEX	CROSS LINKED POLYETHYLENE
PFHX	PLATE & FRAME HEAT EXCHANGER
PG	PRESSURE GAUGE
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PPR	POLYPROPYLENE RANDOM
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH WATER GAUGE
PT	PRESSURE TANK
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RD	ROOF DRAIN
RECIRC	RECIRCULATION
RFM	RADIANT FLOOR MANIFOLD
RM	ROOM
RP	RADIANT PANEL
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE ASSEMBLY
RTU	ROOFTOP UNIT
RWH	RECESSED WALL HYDRANT
SA	SUPPLY AIR
SAN	SANITARY WASTE
SF	SQUARE FEET
SH	SHOWER
SK	SINK
SP	SUBMERSIBLE PUMP
SS	SAFETY SHOWER
ST	STORM
STHX	SHELL & TUBE HEAT EXCHANGER
TD	TRENCH DRAIN
THRU	THROUGH
TMS	THERMOSTATIC MIXING STATION
TMV	THERMOSTATIC MIXING VALVE
TS	TAMPER SWITCH
TW	TEPID WATER
TYP	TYPICAL
UD	UTILITY DISTRIBUTION
UG	UNDERGROUND
UH	UNIT HEATER
UR	URINAL
UV	UNIT VENTILATOR
V	VENT
VB	VACUUM BREAKER
VFD	VARIABLE FREQUENCY DRIVE
VLV	VALVE
VTR	VENT THRU ROOF
W	WASTE
WB	WET BULB TEMPERATURE
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WD	WASHER/DRYER
WF	WASH FOUNTAIN
WG	WATER GAUGE
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WMB	WASHER MACHINE BOX
WOG	WATER OIL GAS

ABBREVIATIONS

3BS	3 BAY SINK
AAV	AIR ADMITTANCE VALVE
ABS	ACRYLONITRILE BUTADIENE STYRENE
ABV	ABOVE
AC	AIR COMPRESSOR
ACU	AIR CONDITIONING UNIT
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
ADA	AMERICAN WITH DISABILITIES ACT
ADT	ACID DILUTION TANK
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGA	AMERICAN GAS ASSOCIATION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMP	AMPERE(S)
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ANT	ACID NEUTRALIZATION TANK
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
AS	AIR SEPARATOR
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPE	AMERICAN SOCIETY OF PLUMBING ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AT	AIR TERMINAL UNIT
AV	ACID VENT
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BCU	BLOWER COIL UNIT
BEL	BELOW
BF	BARRIER FREE
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BACK FLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BPHX	BRAISED PLATE HEAT EXCHANGER
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BWV	BACK WATER VALVE
CA	COMPRESSED AIR
CB	CATCH BASIN
CD	CONDENSATE
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CI	CAST IRON
CISPI	CAST IRON SOIL PIPE INSTITUTE
CLG	CEILING
CO	CLEAN OUT
CON	CONDENSATE
CONV	CONVECTOR
COP	CLEAN OUT PLUG
COV	COMBINATION OVEN
CPVC	CHLORINATED POLYVINYL CHLORIDE
CTW	COOLING TOWER
CTE	CONNECT TO EXISTING
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CWP	COLD WORKING PRESSURE
CWR	CONDENSER WATER RETURN
CWV	COMBINATION WASTE AND VENT
DB	DECIBELS
DDC	DIRECT DIGITAL CONTROLS
DCA	DOUBLE CHECK ASSEMBLY
DEG	DEGREE(S)
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT(S)
DHR	DOMESTIC HOT WATER RECIRCULATION
DIA	DIAMETER
DN	DOWN
DR	DISH RETURN
DRP	DOMESTIC RECIRCULATION PUMP
DRS	DISH RETURN WITH SINK
DS	DOWN SPOUT
DW	DISH WASHER
DWV	DRAINAGE, WASTE AND VENT
DWET	DOMESTIC WATER EXPANSION TANK
DWH	DOMESTIC WATER HEATER
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECM	ELECTRONICALLY COMMUTATED MOTOR
ELEV	ELEVATION
EF	EXHAUST FAN
EFT	ENTERING FLUID TEMPERATURE
ERU	ENERGY RECOVERY UNIT
ERV	ENERGY RECOVERY VENTILATOR
ERW	ENERGY RECOVERY WHEEL
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETMV	EMERGENCY THERMOSTATIC MIXING VALVE
EUH	ELECTRIC UNIT HEATER
EW	EYE WASH
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EXR	EXISTING TO REMAIN
F	FAN
FCO	FLOOR CLEAN OUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FGE	FINISHED GRADE ELEVATION
FLA	FULL LOAD AMPERES
FLR	FLOOR
FP	FIRE PROTECTION
FPD	FLUID PRESSURE DROP
FPM	FEET PER MINUTE
FRAC	FRACTIONAL
FS	FLOOR SINK
FT	FEET
FTH	FEET HEAD
FTR	FIN TUBE RADIATOR
GA	GAUGE
GAL	GALLON(S)
GALV	GALVANIZE(D)
GCO	GRADE CLEAN OUT
GEN	GENERATOR
GM	GAS METER
GPC	GALLONS PER CYCLE
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GT	GREASE TRAP
GV	GRAVITY VENTILATOR
GW	GREASE WASTE

GENERAL NOTES

1. THOROUGHLY COORDINATE ALL WORK ASSOCIATED WITH ALL DEVICES FURNISHED BY AND WORK EXECUTED BY "OTHER" CONTRACTORS.
2. BEFORE SUBMITTING SHOP DRAWINGS, VERIFY VOLTAGES AVAILABLE FOR MECHANICAL EQUIPMENT WITH ELECT. CONTRACTOR. VERIFY PROVISION OF ALL STARTERS & DISCONNECT SWITCHES.
3. BEFORE ROUGHING-IN WALLS, THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND ARCHITECT, THE LOCATIONS OF ALL THERMOSTATS AND SWITCHES.
4. BEFORE FABRICATING ANY DUCTWORK, COORDINATE LOCATION AND SIZE WITH PLUMBING PIPING, ELECTRICAL CONDUITS, RECESSED LIGHT FIXTURES, SPRINKLER PIPES, ETC. PLANS ARE SCHEMATIC AND ARE NOT SHOP DRAWINGS. ALSO SEE SPECIFICATIONS. VERIFY LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. VERIFY FINAL LOCATIONS WITH THE ARCHITECT.
5. ALL CONDUITS, PIPING & DUCTWORK SHALL BE CONCEALED ABOVE CEILINGS AND IN CHASES, UNLESS NOTED OTHERWISE. CONDUITS, PIPING AND DUCTWORK SHALL BE ROUTED THROUGH & BETWEEN BAR JOISTS & BETWEEN BEAMS (WITH OFFSETS AS NEEDED) WHERE REQUIRED BY SPACE RESTRICTIONS AND MATERIALS PROVIDED BY OTHER CONTRACTORS.
6. PROVIDE RADIUS ELBOWS AT ALL CHANGES IN DIRECTION IN SUPPLY, RETURN AND EXHAUST DUCTWORK WHERE POSSIBLE, AS PER THE SCHEMATIC DETAILS. WHERE CONDITIONS DO NOT PERMIT THE USE OF RADIUS ELBOWS, SQUARE ELBOWS SHALL BE USED WITH TURNING VANES. TURNING VANES SHALL BE AIRFOIL TYPE, ONLY, IN ACCORDANCE WITH SMACNA DETAILS.
7. PROVIDE MANUAL VOLUME DAMPER IN LOW PRESSURE BRANCH SUPPLY, RETURN OR EXHAUST DUCTS TO EACH GRILLE, DIFFUSER, REGISTER, ETC. UNLESS NOTED OTHERWISE (WHERE BRANCH DUCT IS LOCATED ABOVE HARD CEILING, PROVIDE O.B.D. IN AIR TERMINAL DEVICES.) DAMPER SHALL BE AS CLOSE TO MAIN DUCT AS POSSIBLE. PROVIDE MANUAL VOLUME DAMPERS AT OTHER LOCATIONS INDICATED ON PLANS AND AS DIRECTED BY SPECIFICATIONS. SEE SCHEMATIC DUCT DETAILS ON THE DRAWINGS. PROVIDE ACCESS TO ALL DAMPER QUADRANT LOCKS.
8. MECHANICAL CONTRACTOR SHALL CAREFULLY COORDINATE HIS WORK WITH THE DIMENSIONS OF THE CHASE WALLS, WITH OTHER CONTRACTORS, AND WITH THE GEN. CONTRACTOR. TO PROVIDE ADEQUATE CLEARANCES FOR ELBOWS, MITERED TEES, FIRE DAMPER SLEEVES, ETC., AS REQ'D. FOR FIRE PENETRATION SEALANTS OR DAMPERS.
9. INSTALL ALL DUCTS THRU ALL 1-HOUR, 2-HOUR, & 4-HOUR RATED WALLS AND ALL SMOKE PARTITIONS TO LEAVE A MINIMUM OF 2 INCHES ABOVE THE DUCTS, SUCH THAT THE GENERAL CONTRACTOR CAN SEAL THE WALL ABOVE THE DUCTS. DO NOT INSTALL FLEXIBLE DUCT THROUGH RATED WALLS OR SMOKE PARTITIONS.
10. ALL FIRE DAMPERS SHALL BE INSTALLED IN COMPLETE ACCORDANCE WITH THE MFR'S. & U.L. LISTING AND INSTALLATION INSTRUCTIONS. DAMPERS SHALL HAVE SPECIFIC U.L. LISTING FOR THE CONSTRUCTION IN WHICH THEY ARE INSTALLED. PROVIDE FIRE DAMPERS WITH BLADES OUT OF THE AIRSTREAM IN HIGH & MEDIUM PRESSURE DUCTS, AND ALL LOW PRESSURE DUCTS THAT ARE 10 INCHES, OR LESS, IN HEIGHT OR WIDTH. PROVIDE STATIC FIRE DAMPERS IN AIR SYSTEMS THAT SHUTDOWN ON SMOKE DETECTION. PROVIDE DYNAMIC FIRE DAMPERS IN AIR SYSTEMS THAT OPERATE FOR SMOKE REMOVAL.
11. PROVIDE HINGED ACCESS DOORS AT ALL MOTOR OPERATED DAMPERS, FIRE DAMPERS, UPSTREAM HEATING COILS, SMOKE DETECTORS, AND OTHER ITEMS REQUIRING MAINTENANCE. DUCT ACCESS DOORS MIN. 14"x14" OR 14"x DUCT SIZE -2". WHERE ACCESS DOOR IS ABOVE A HARD (INACCESSIBLE) CEILING, PROVIDE 24"x24" ACCESS DOOR IN CEILING (MILCOR STYLE DW, MOD. 3203-019 OR APPROVED EQUAL)
12. PIPE, CONDUIT AND DUCT OPENINGS THROUGH WALLS AND SLABS AROUND AND ABOVE MECHANICAL EQUIPMENT ROOMS SHALL BE PACKED WITH MINERAL WOOL AND SEALED.
13. ALL PIPING, CONDUIT AND DUCT OPENINGS IN RATED PARTITIONS AND FLOORS SHALL BE SEALED PER THE SPECIFICATIONS AND FIRE PENETRATION SYSTEM SCHEDULE.
14. PROVIDE ESCUTCHEON PLATES WHERE DUCTS OR PIPES PENETRATE CEILINGS OR WALLS IN FINISHED AREAS & WHERE EXPOSED TO VIEW. ESCUTCHEONS FOR DUCTS SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS DUCT. PIPE ESCUTCHEONS SHALL BE CHROME-PLATED BRASS.
15. ALL DUCT SIZES SHOWN REPRESENT THE FREE AREA OF THE DUCT.
16. PROVIDE ALL AUXILIARY STEEL REQUIRED FOR PIPING AND EQUIPMENT SUPPORT.
17. ROUND BRANCH DUCT CONNECTIONS TO TRUNK DUCTWORK SHALL BE BELLMOUTH CONFIGURATIONS, EXCEPT DUCTWORK DOWNSTREAM OF VARIABLE VOLUME TERMINAL UNITS MAY HAVE SPIN-IN TAPS WITH VOLUME DAMPERS.
18. MOUNT ALL THERMOSTATS, CO2 SENSORS AND SWITCHES AT 48" ABOVE FINISHED FLOOR TO THE CENTERLINE OF THE OPERABLE PART OF MECHANISM (NOT TO BOTTOM OF UNIT).
19. ALL CONCRETE EQUIPMENT PADS ARE TO BE 6" THICK AND EXTEND 6" BEYOND THE BASE OF THE UNIT/UNITS IT SERVES.

SYSTEM ABBREVIATIONS

—CD—	CONDENSATE
—CHWR—	CHILLED WATER RETURN
—CHWS—	CHILLED WATER SUPPLY
—CWR—	CONDENSER WATER RETURN
—CWS—	CONDENSER WATER SUPPLY
—DTR—	DUAL TEMPERATURE RETURN
—DTS—	DUAL TEMPERATURE SUPPLY
—E—	EXHAUST
—FOR—	FUEL OIL RETURN
—FOS—	FUEL OIL SUPPLY
—GCHR—	GLYCOL CHILLED WATER RETURN
—GCHS—	GLYCOL CHILLED WATER SUPPLY
—GHWR—	GLYCOL HOT WATER RETURN
—GHWS—	GLYCOL HOT WATER SUPPLY
—HWW—	MAKE-UP WATER
—HPS—	HIGH PRESSURE STEAM
—HRWR—	HEAT RECOVERY WATER RETURN
—HRWS—	HEAT RECOVERY WATER SUPPLY
—HWR—	HEATING HOT WATER RETURN
—HWS—	HEATING HOT WATER SUPPLY
—LPS—	LOW PRESSURE STEAM
—MPS—	MEDIUM PRESSURE STEAM
—RL—	REFRIGERANT LIQUID
—RS—	REFRIGERANT SUCTION
—RV—	REFRIGERANT RELIEF VENT
—SCD—	STEAM CONDENSATE
—DCW—	DOMESTIC COLD WATER
—DHW—	DOMESTIC HOT WATER
—DHR—	DOMESTIC HOT WATER RECIRC
—HW140—	DOMESTIC 140 HOT WATER
—HWR140—	DOMESTIC 140 HOT WATER RECIRC
—FP—	FIRE SUPPRESSION
—NG—	NATURAL GAS
—LPG—	PROPANE
—OIL—	OIL
—SAN—	SANITARY WASTE
—ST—	STORM
—V—	VENT
—TW—	TEMPERED WATER
—TWR—	TEMPERED WATER RECIRCULATION
—VAC—	VACUUM
—AV—	ACID VENT
—AW—	ACID WASTE
—LCA—	LABORATORY COMPRESSED AIR
—LVAC—	LABORATORY VACUUM
—LV—	LABORATORY VENT
—LW—	LABORATORY WASTE

SYMBOLS

	PROPOSED WORK (THICK LINE)
	EXISTING (HALFTONE, THIN LINE)
— — —	DEMOLITION WORK (DASHED, THICK LINE)
	POINT OF CONNECT/DISCONNECT
	CONTINUATION
OS	OCCUPANCY SENSOR
S	SWITCH
B	BOILER SHUT DOWN
G	EMERGENCY GAS SHUT DOWN
GS	GAS SENSOR
CO2	CARBON DIOXIDE SENSOR
CO	CARBON MONOXIDE SENSOR
PS	PRESSURE SENSOR
TS	TEMPERATURE SENSOR
T	THERMOSTAT
H	HUMIDISTAT
R	REFRIGERANT SENSOR
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	MANUAL BALANCING VALVE
	PIC VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	RELIEF VALVE
S	SOLENOID VALVE
	STRAINER
	STRAINER WITH BLOWDOWN BALL VALVE
	UNION
	MANUAL AIR VENT
	TRIPLE DUTY VALVE
	FLOW DIRECTION
	INLINE PUMP
	AUTOMATIC AIR VENT
	PRESSURE GAUGE
	THERMOMETER
	PETES PLUG
	PLUG VALVE
	THERMOSTATIC BALANCING VALVE
	THERMOSTATIC MIXING VALVE
M	WATER METER
	GATE VALVE
	HOSE END BALL VALVE
	OS&Y VALVE
	SUCTION DIFFUSER

SYMBOLS

	CONTROL WIRING - INTERCONNECTION
F	FLOW METER
FS	FLOW SWITCH
LWCO	LOW WATER CUTOFF
PS	PRESSURE SENSOR
	FLUID TEMPERATURE SENSOR
M	MOISTURE SENSOR
	AIR FLOW MEASURING STATION
	FREEZESTAT
H	HUMIDITY SENSOR
SD	SMOKE DETECTOR
	STATIC PRESSURE SENSOR
T	TEMPERATURE SENSOR
	FACE AND BYPASS DAMPER
	MOTORIZED DAMPER
M	MOTORIZED DAMPER - MIXED AIR
HW	COIL - HOT WATER
PHW	COIL - PUMPED HOT WATER
CW	COIL - CHILLED WATER
HW/CW	COIL - DUAL TEMP
DX	COIL - DX
RF M	FAN - RETURN
SF M	FAN - SUPPLY
EF M	FAN - EXHAUST
RF/EF M	FAN - RETURN/EXHAUST
FURNACE	FURNACE

POINTS

AI/AF	ANALOG IN - AIR FLOW
AI/AT	ANALOG IN - AIR TEMPERATURE
AI/DPS	ANALOG IN - DIFFERENTIAL PRESSURE SENSOR
AI/FM	ANALOG IN - FLOW METER
AI/FT	ANALOG IN - FLUID TEMPERATURE
AI/H	ANALOG IN - HUMIDITY
AI/FP	ANALOG IN - WATER PRESSURE
AI/ZSA	ANALOG IN - ZONE SETPOINT ADJUST
AO/D	ANALOG OUT - DAMPER
AO/FCV	ANALOG OUT - FLOW CONTROL VALVE
AO/GV	ANALOG OUT - GAS VALVE
AO/PI	ANALOG OUT - PRESSURE INDICATOR
AO/SP	ANALOG OUT - SPEED
AO/TCV	ANALOG OUT - TEMPERATURE CONTROL VALVE
BI/AC	BINARY IN - ALARM CONTACT
BI/CA	BINARY IN - COMMON ALARM
BI/DES	BINARY IN - DAMPER END SWITCH
BI/F	BINARY IN - FAULT
BI/FL	BINARY IN - FLOW
BI/FR	BINARY IN - FREEZSTAT
BI/LSH	BINARY IN - LEVEL SWITCH HIGH
BI/LSL	BINARY IN - LEVEL SWITCH LOW
BI/LWCO	BINARY IN - LOW WATER CUT OFF
BI/M	BINARY IN - MOISTURE SENSOR
BI/SD	BINARY IN - SMOKE DETECTOR
BI/ST	BINARY IN - STATUS
BO/D	BINARY OUT - DAMPER
BO/E	BINARY OUT - ENABLE
BO/MIV	BINARY OUT - MOTORIZED ISOLATION VALVE
BO/OC	BINARY OUT - OPEN/CLOSE COMMAND
BO/SS	BINARY OUT - START/STOP

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Project Title

BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

ZACHARY ROBERT WISNIEWSKI
097797
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW YORK

Expires : 06/30/2028

#	DATE	DESCRIPTION

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Sheet Title

GENERAL NOTES, LEGENDS AND ABBREVIATIONS

Sheet No.

TR DJ000

CONSTRUCTION DOCUMENTS

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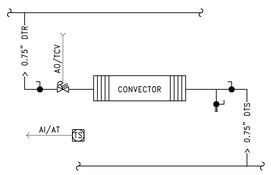
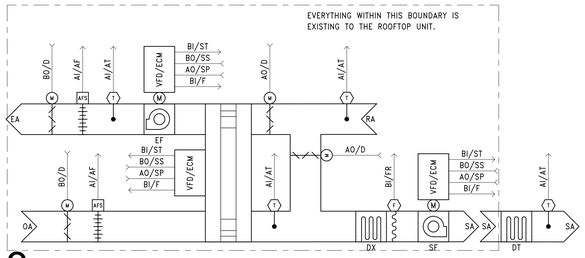


19 CONVECTOR
DJ101 NTS



18 ROOFTOP UNIT, RTU-A-101
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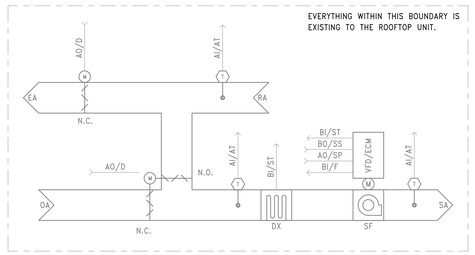

17 ROOFTOP UNIT, RTU-B-030
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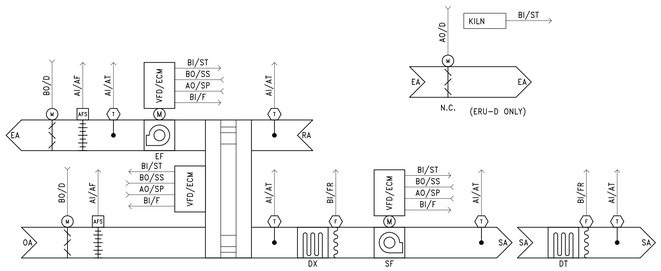
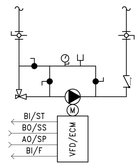


15 ENERGY RECOVERY UNIT
DJ101 NTS

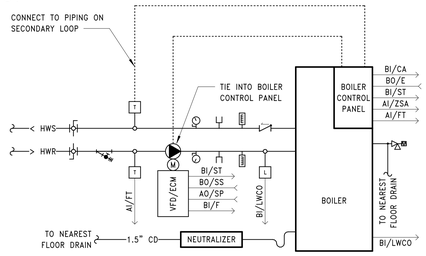
PROVIDE FACTORY THERMOSTAT BY DUCTLESS SPLIT MANUFACTURER. EITHER CONNECT THE SYSTEM TO THE BMS VIA BACNET OR PROVIDE A SEPARATE TEMPERATURE SENSOR FOR MONITORING.

14 DUCTLESS SPLIT
DJ101 NTS

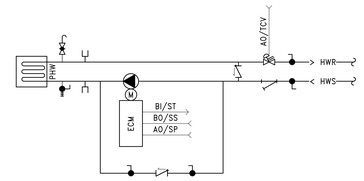
NOTE: IF PUMP IS MOUNTED ON VIBRATION ISOLATION PAD OR BASE, CONNECT PUMP VIA FLEXIBLE CONNECTORS



13 PUMP
DJ101 NTS



16 BOILER
DJ101 NTS



10 PUMPED HYDRONIC COIL
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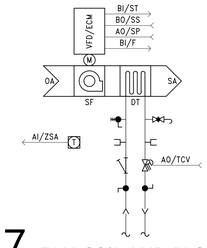
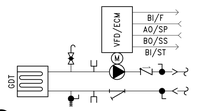
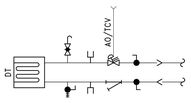


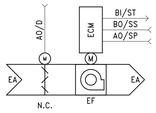
7 FAN COIL AND BLOWER COIL
DJ101 NTS



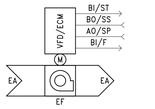
8 AHU/DUCTED COIL
DJ101 NTS



6 CHILLED BEAM
DJ101 NTS

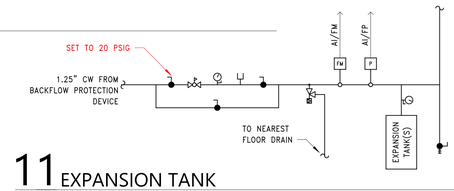


EXR DISHWASHER EXHAUST FAN

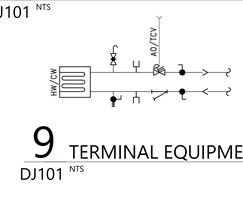


EXR KITCHEN HOOD FAN

12 KITCHEN
DJ101 NTS

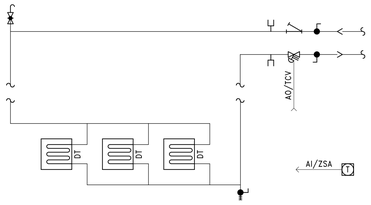


11 EXPANSION TANK
DJ101 NTS



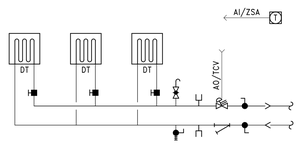
9 TERMINAL EQUIPMENT COIL
DJ101 NTS

NOTES:
1. PROVIDE ONE THERMOSTAT IN EACH ROOM.
2. PROVIDE ONE SET OF VALVES IN EACH ROOM LOCATED IN THE CEILING, AND CONNECT PIPING TO DISPLACEMENT UNITS WITHIN EACH ROOM (AS SHOWN).
3. COORDINATE NUMBER OF CHILLED BEAMS IN EACH ROOM WITH FLOOR PLANS.

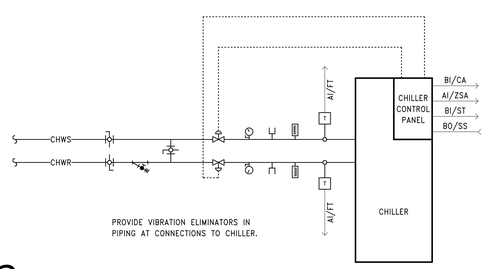


5 DISPLACEMENT VENTILATION
DJ101 NTS

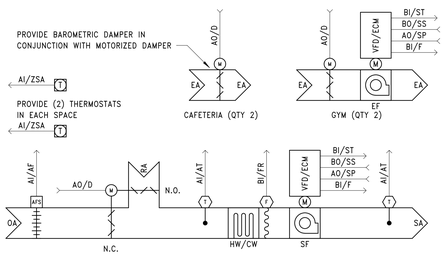
NOTES:
1. ROOMS:
   - A. PROVIDE ONE THERMOSTAT IN EACH ROOM
   - B. PROVIDE ONE SET OF VALVES, AND CONNECT PIPING TO ALL CHILLED BEAMS WITHIN EACH ROOM (AS SHOWN).
   - C. COORDINATE NUMBER OF CHILLED BEAMS IN EACH ROOM WITH FLOOR PLANS.
2. CORRIDORS:
   - A. PROVIDE ONE THERMOSTAT IN EACH CORRIDOR
   - B. PROVIDE ONE SET OF VALVES PER CHILLED BEAM AND CONNECT ALL CHILLED BEAMS LOCATED IN THE SAME HALLWAY BY ONE THERMOSTAT.



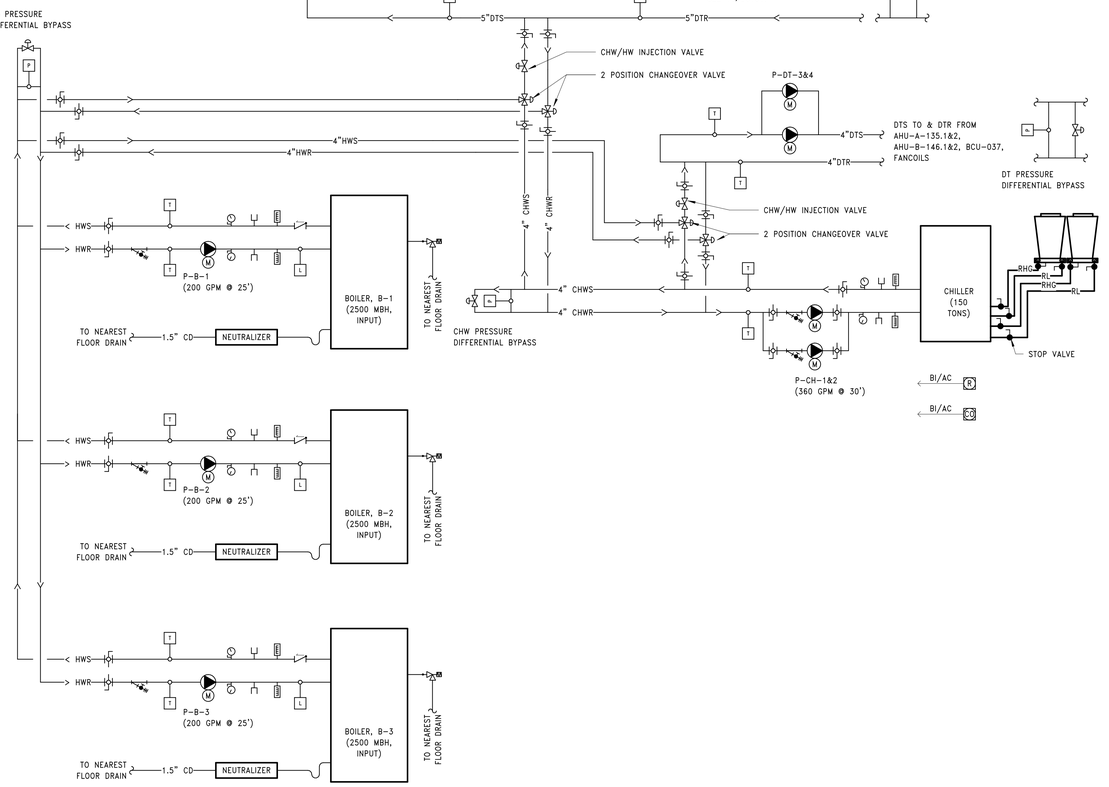
4 CHILLED BEAMS - MULTIPLE UNITS
DJ101 NTS



3 PACKAGED AIR COOLED CHILLER
DJ101 NTS



2 GYMNASIUM AND CAFETERIA AIR HANDLING UNITS
DJ101 NTS



1 HYDRONIC SYSTEMS SCHEMATIC
DJ101 12" = 1'-0"

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Project Title

BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

Expires : 06/30/2028

V.	DATE	DESCRIPTION

Drawn By:	DG
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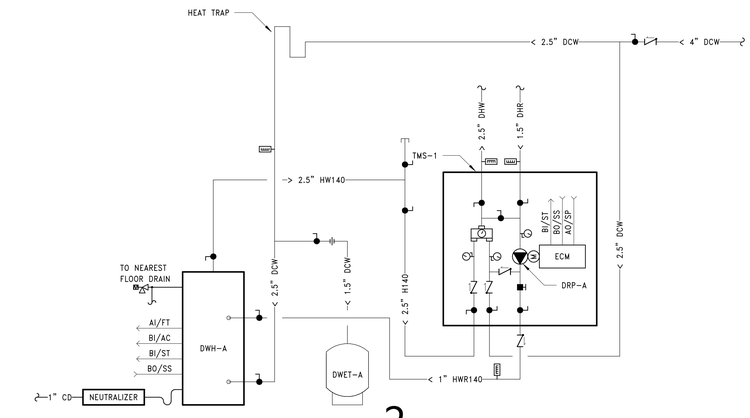
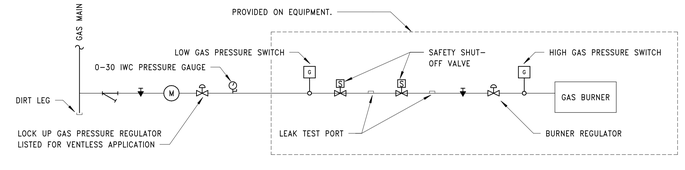


2 WATER HEATER SCHEMATIC

DJ201 NTS



1 GAS CONNECTION TO EQUIPMENT

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BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

Expires : 06/30/2028

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GENERAL NOTES

1. THOROUGHLY COORDINATE ALL WORK ASSOCIATED WITH ALL DEVICES FURNISHED BY AND WORK EXECUTED BY "OTHER" CONTRACTORS.
2. BEFORE SUBMITTING SHOP DRAWINGS, VERIFY VOLTAGES AVAILABLE FOR PLUMBING EQUIPMENT WITH ELECTRICAL CONTRACTOR. VERIFY PROVISION OF ALL STARTERS & DISCONNECT SWITCHES.
3. ALL PIPING SHALL BE CONCEALED ABOVE CEILINGS AND IN CHASES, UNLESS NOTED OTHERWISE. CONDUITS, PIPING AND DUCTWORK SHALL BE ROUTED THROUGH & BETWEEN BAR JOISTS & BETWEEN BEAMS (WITH OFFSETS AS NEEDED) WHERE REQUIRED BY SPACE RESTRICTIONS AND MATERIALS PROVIDED BY OTHER CONTRACTORS.
4. COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, SWITCHBOARDS, SWITCHGEAR, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES.
5. PIPE OPENINGS THROUGH WALLS AND SLABS AROUND AND ABOVE MECHANICAL EQUIPMENT ROOMS SHALL BE PACKED WITH MINERAL WOOL AND SEALED.
6. PROVIDE ESCUTCHEON PLATES WHERE PIPES PENETRATE CEILINGS OR WALLS IN FINISHED AREAS & WHERE EXPOSED TO VIEW. PIPE ESCUTCHEONS SHALL BE CHROME-PLATED BRASS.
7. PROVIDE WALL CLEANOUTS AT THE BASE OF EACH SANITARY AND STORM VERTICAL RISER.
8. PROVIDE WATER HAMMER ARRESTORS ON ALL DOMESTIC COLD AND HOT WATER PIPING IN ACCORDANCE WITH PDI WH-201.
9. PROVIDE ISOLATION VALVES ON ALL BRANCH PIPING PROVIDED AND AT ALL CONNECTIONS TO EQUIPMENT OR FIXTURES.
10. ISOLATION VALVES SERVING EMERGENCY PLUMBING FIXTURES MUST BE THE LOCKING TYPE.
11. PIPING AND DUCTWORK ELEVATIONS ARE APPROXIMATE. FIELD VERIFY AND MODIFY AS REQUIRED TO SUIT ACTUAL CONDITIONS.
12. PROVIDE ACCESS PANELS FOR ALL VALVES WITHIN CHASES OR ABOVE NON-ACCESSIBLE CEILINGS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
13. PROVIDE ALL AUXILIARY STEEL REQUIRED FOR PIPING, FLUE, AND EQUIPMENT SUPPORT.
14. ALL ITEMS THAT COME INTO CONTACT WITH POTABLE WATER SHALL CONFORM WITH ANSI/NSF 61 AND ANSI/NSF 372.

SYMBOLS

—CD—	CONDENSATE
—DCW—	DOMESTIC COLD WATER
—DHW—	DOMESTIC HOT WATER
—DHR—	DOMESTIC HOT WATER RECIRC
—HW140—	DOMESTIC 140 HOT WATER
—HWR140—	DOMESTIC 140 HOT WATER RECIRC
—FP—	FIRE SUPPRESSION
—NG—	NATURAL GAS
—LPG—	PROPANE
—OIL—	OIL
—SAN—	SANITARY WASTE
—ST—	STORM
—V—	VENT
—TW—	TEMPERED WATER
—TWR—	TEMPERED WATER RECIRCULATION
—VAC—	VACUUM
—E—	EXHAUST
—AV—	ACID VENT
—AW—	ACID WASTE
—LCA—	LABORATORY COMPRESSED AIR
—LVAC—	LABORATORY VACUUM
—LV—	LABORATORY VENT
—LW—	LABORATORY WASTE

SYMBOLS

	PROPOSED WORK (THICK LINE)
	EXISTING (HALFTONE, THIN LINE)
	DEMOLITION WORK (DASHED, THICK LINE)
	POINT OF DISCONNECT- RECONNECT
	CONTINUATION
	PIPE RISE
	PIPE DROP
	T UP
	T DOWN
	PLUMBING TRAP
	MANUAL BALANCING VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	RELIEF VALVE
	SOLENOID VALVE
	STRAINER
	STRAINER WITH BLOWDOWN BALL VALVE
	UNION
>	FLOW DIRECTION
	INLINE PUMP
	PRESSURE GAUGE
	THERMOMETER
	PETES PLUG
	CLEANOUT
	PLUG VALVE
	THERMOSTATIC BALANCING VALVE
	THERMOSTATIC MIXING VALVE
M	WATER METER
	GATE VALVE
	HOSE END BALL VALVE
	OS&Y VALVE

ABBREVIATIONS

3BS	3 BAY SINK
AAV	AIR ADMITTANCE VALVE
ABS	ACRYLONITRILE BUTADIENE STYRENE
ABV	ABOVE
AC	AIR COMPRESSOR
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
ADA	AMERICAN WITH DISABILITIES ACT
ADT	ACID DILUTION TANK
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGA	AMERICAN GAS ASSOCIATION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMP	AMPERE(S)
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ANT	ACID NEUTRALIZATION TANK
AP	ACCESS PANEL
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPE	AMERICAN SOCIETY OF PLUMBING ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BAS	BUILDING AUTOMATION SYSTEM
BEL	BELOW
BF	BARRIER FREE
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BACK FLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
BWV	BACK WATER VALVE
CA	COMPRESSED AIR
CB	CATCH BASIN
CD	CONDENSATE
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CISPI	CAST IRON SOIL PIPE INSTITUTE
CLG	CEILING
CO	CLEAN OUT
CON	CONDENSATE
CONV	CONVECTOR
COP	CLEAN OUT PLUG
COV	COMBINATION OVEN
CPVC	CHLORINATED POLYVINYL CHLORIDE
CTE	CONNECT TO EXISTING
CTW	COOLING TOWER
CWP	COLD WORKING PRESSURE
CWV	COMBINATION WASTE AND VENT
DB	DECIBELS
DDC	DIRECT DIGITAL CONTROLS
DCA	DOUBLE CHECK ASSEMBLY
DEG	DEGREE(S)
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT(S)
DHR	DOMESTIC HOT WATER RECIRCULATION
DIA	DIAMETER
DN	DOWN
DR	DISH RETURN
DRP	DOMESTIC RECIRCULATION PUMP
DRS	DISH RETURN WITH SINK
DS	DOWN SPOUT
DW	DISH WASHER
DWV	DRAINAGE, WASTE AND VENT
DWET	DOMESTIC WATER EXPANSION TANK
DWH	DOMESTIC WATER HEATER
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECM	ELECTRONICALLY COMMUTATED MOTOR
ELEV	ELEVATION
EF	EXHAUST FAN
EFT	ENTERING FLUID TEMPERATURE
ERU	ENERGY RECOVERY UNIT
ERV	ENERGY RECOVERY VENTILATOR
ERW	ENERGY RECOVERY WHEEL
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETMV	EMERGENCY THERMOSTATIC MIXING VALVE
EUH	ELECTRIC UNIT HEATER
EW	EYE WASH
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EXR	EXISTING TO REMAIN
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FGE	FINISHED GRADE ELEVATION
FLA	FULL LOAD AMPERES
FLR	FLOOR
FP	FIRE PROTECTION
FPD	FLUID PRESSURE DROP
FPM	FEET PER MINUTE
FRAC	FRACTIONAL
FS	FLOOR SINK
FT	FEET
FTH	FEET HEAD
GA	GAUGE
GAL	GALLON(S)
GALV	GALVANIZE(D)
GCO	GRADE CLEAN OUT
GEN	GENERATOR
GM	GAS METER
GPC	GALLONS PER CYCLE
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GT	GREASE TRAP
GW	GREASE WASTE
HB	HOSE BIB
HD	HEAD
HP	HORSEPOWER
HRWS	HEAT RECOVERY WATER RETURN
HV	HOSE VALVE
HW	HOT WATER

ABBREVIATIONS

ID	INSIDE DIAMETER
IMB	ICE MACHINE BOX
IN	INCH
INV	INVERT
IW	INDIRECT WASTE
IWC	INCHES OF WATER COLUMN
K	KETTLE
KW	KILOWATT
KWH	KILOWATT HOUR
LAV	LAVATORY
LBS	POUNDS
LDR	LEADER
LF	LINEAR FOOT
LFT	LEAVING FLUIF TEMPERATURE
LPG	LIQUEFIED PETROLEUM GAS
LRA	LOCKED ROTOR AMPERES
LVC	LABORATOY VACUUM
LWCO	LOW WATER CUT OFF
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MFS	MAX FUSE SIZE
MFW	MECHANICAL FEED WATER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MSB	MOP SINK BASIN
NC	NORMALLY CLOSED; NEW CONNECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFGH	NON-FREEZE GROUND HYDRANT
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NFRH	NON-FREEZE ROOF HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE
O2	OXYGEN
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SPINDLE & YOKE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OVF	OVERFLOW
OWS	OIL WATER SEPARATOR
P	PUMP
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PDI	PLUMBING AND DRAINAGE INSTITUTE
PE	POLYETHYLENE
PEX	CROSS LINKED POLYETHYLENE
PG	PRESSURE GAUGE
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PPR	POLYPROPYLENE RANDOM
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH WATER GUAGE
PT	PRESSURE TANK
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RD	ROOF DRAIN
RECIRC	RECIRCULATION
RM	ROOM
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE ASSEMBLY
RTU	ROOFTOP UNIT
RWH	RECESSED WALL HYDRANT
SA	SUPPLY AIR
SAN	SANITARY WASTE
SF	SQUARE FEET
SH	SHOWER
SK	SINK
SP	SUBMERSIBLE PUMP
SS	SAFETY SHOWER
ST	STORM
TD	TRENCH DRAIN
THRU	THROUGH
TMS	THERMOSTATIC MIXING STATION
TMV	THERMOSTATIC MIXING VALVE
TS	TAMPER SWITCH
TW	TEPID WATER
TYP	TYPICAL
UD	UTILITY DISTRIBUTION
UG	UNDERGROUND
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VFD	VARIABLE FREQUENCY DRIVE
VLV	VALVE
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WD	WASHER/DRYER
WF	WASH FOUNTAIN
WG	WATER GUAGE
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WMB	WASHER MACHINE BOX
WOG	WATER OIL GAS

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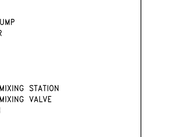
2024 CAPITAL PROJECT



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Sheet Title

GENERAL NOTES, LEGENDS AND ABBREVIATIONS

Sheet No.

TR PG000

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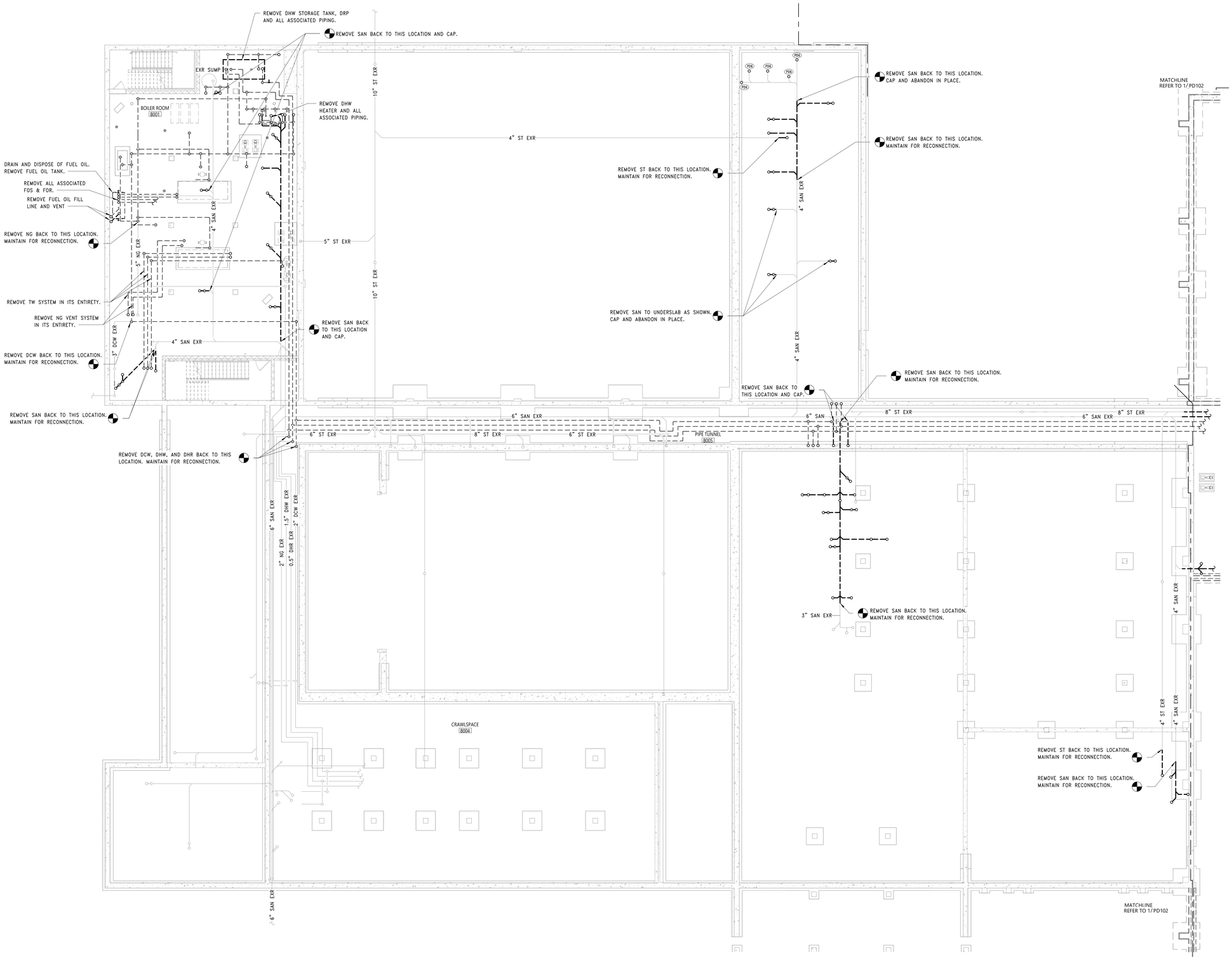
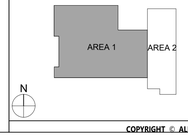


1 UNDERSLAB DEMOLITION PLAN - AREA '1'
PD101 1/8" = 1'-0"

KEY NOTES

PD6	REMOVE SAN TO UNDERSLAB AND CAP.

KEY PLAN



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Sheet Title

BASEMENT DEMOLITION PLAN - AREA '1'

Sheet No.

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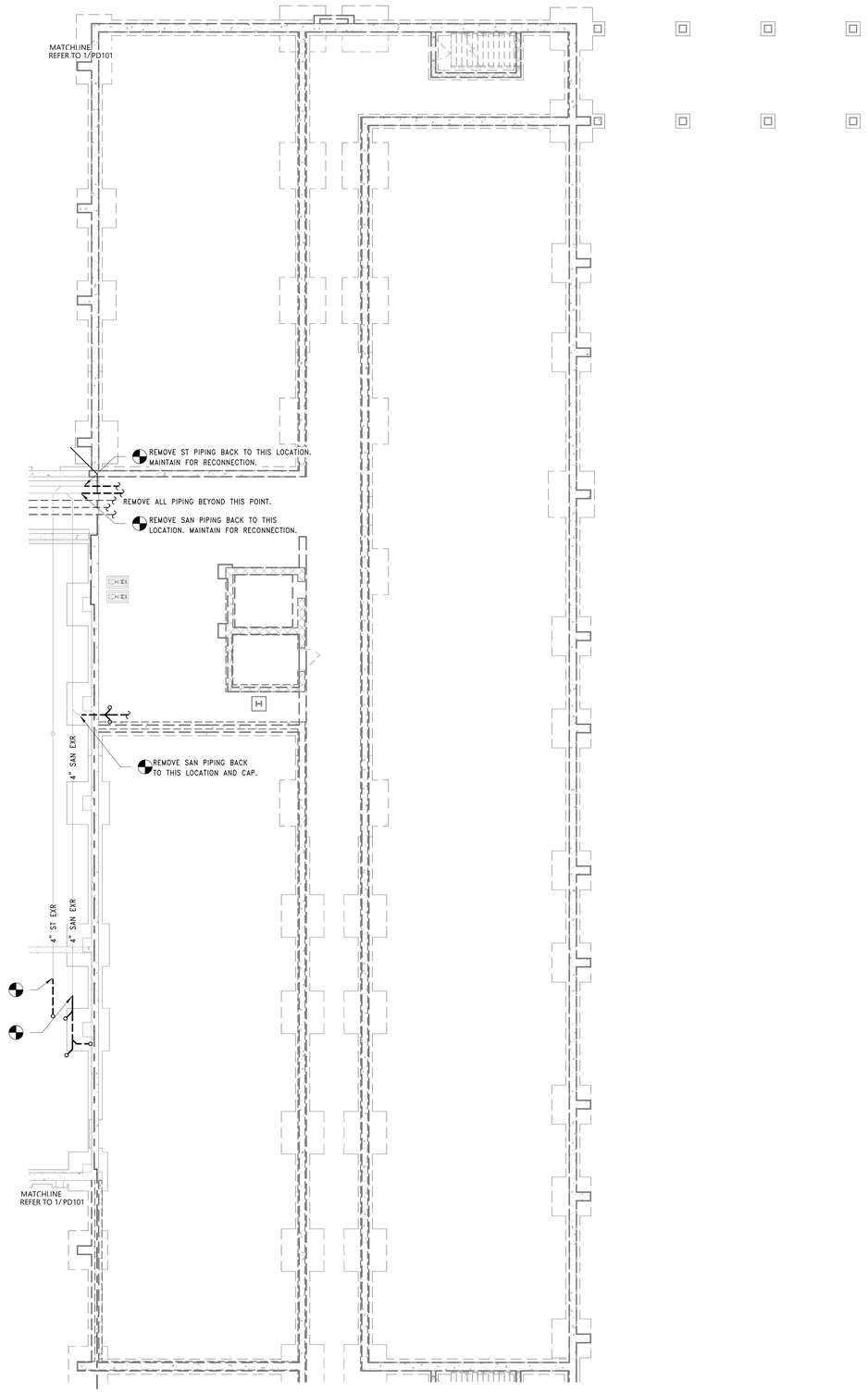

1 UNDERSLAB DEMOLITION PLAN - AREA '2'
PD102 1/8" = 1'-0"

SHEET NOTES

1. ALL PIPING AND FIXTURES IN AREA 2 ARE BEING REMOVED WITH THE DEMOLITION OF THE BUILDING.

KEY NOTES

KEY PLAN

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BASEMENT DEMOLITION PLAN - AREA '2'

Sheet No.

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PD102

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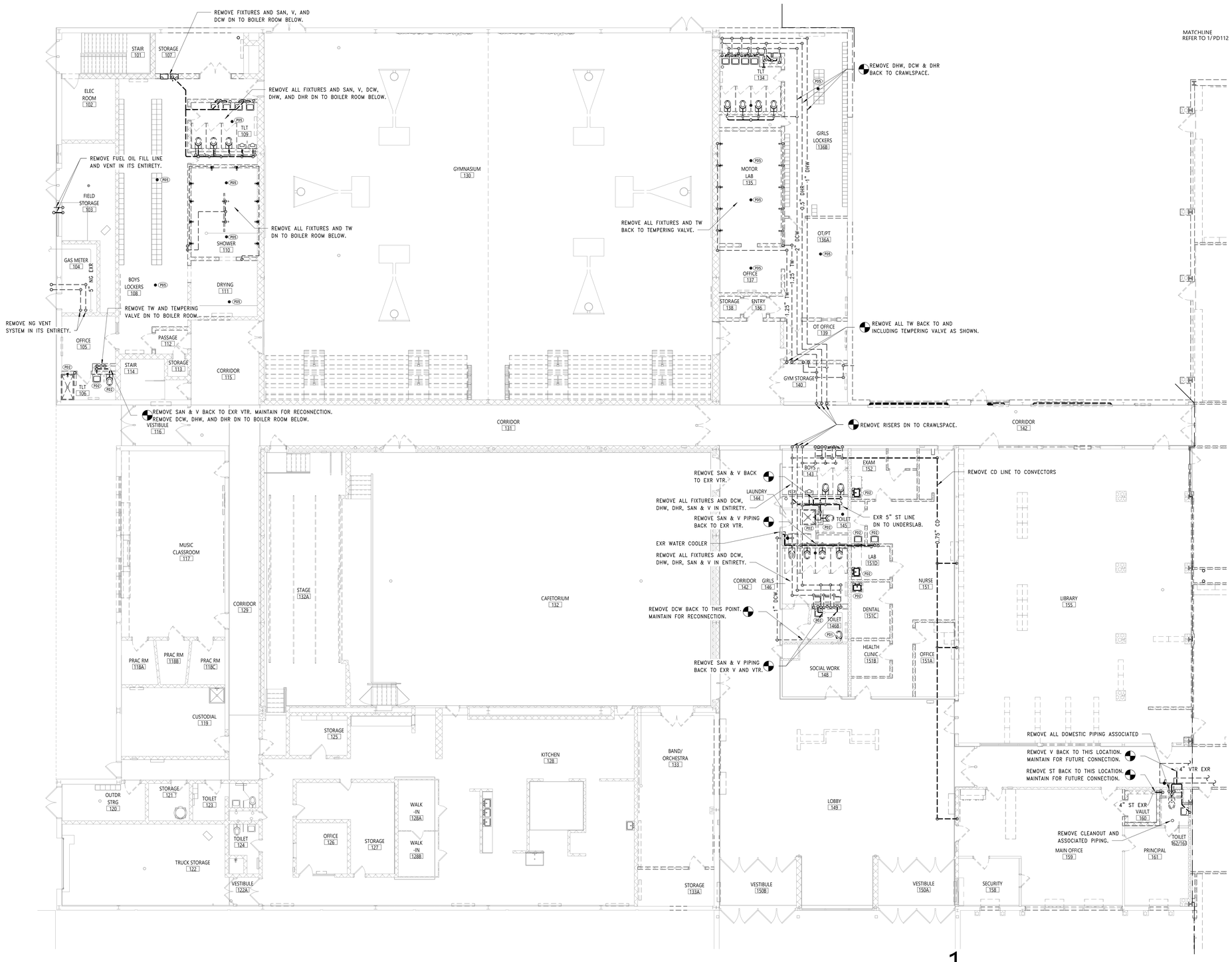
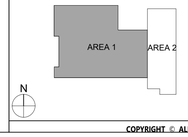


1 FIRST FLOOR DEMOLITION PLAN - AREA '1'
PD111 1/8" = 1'-0"

KEY NOTES

PD1	REMOVE FIXTURE AND MAINTAIN PIPING FOR RECONNECTION.
PD2	REMOVE FIXTURE AND ASSOCIATED PIPING.
PD5	REMOVE FLOOR DRAIN AND ASSOCIATED PIPING.

KEY PLAN



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Sheet Title
FIRST FLOOR DEMOLITION PLAN - AREA '1'

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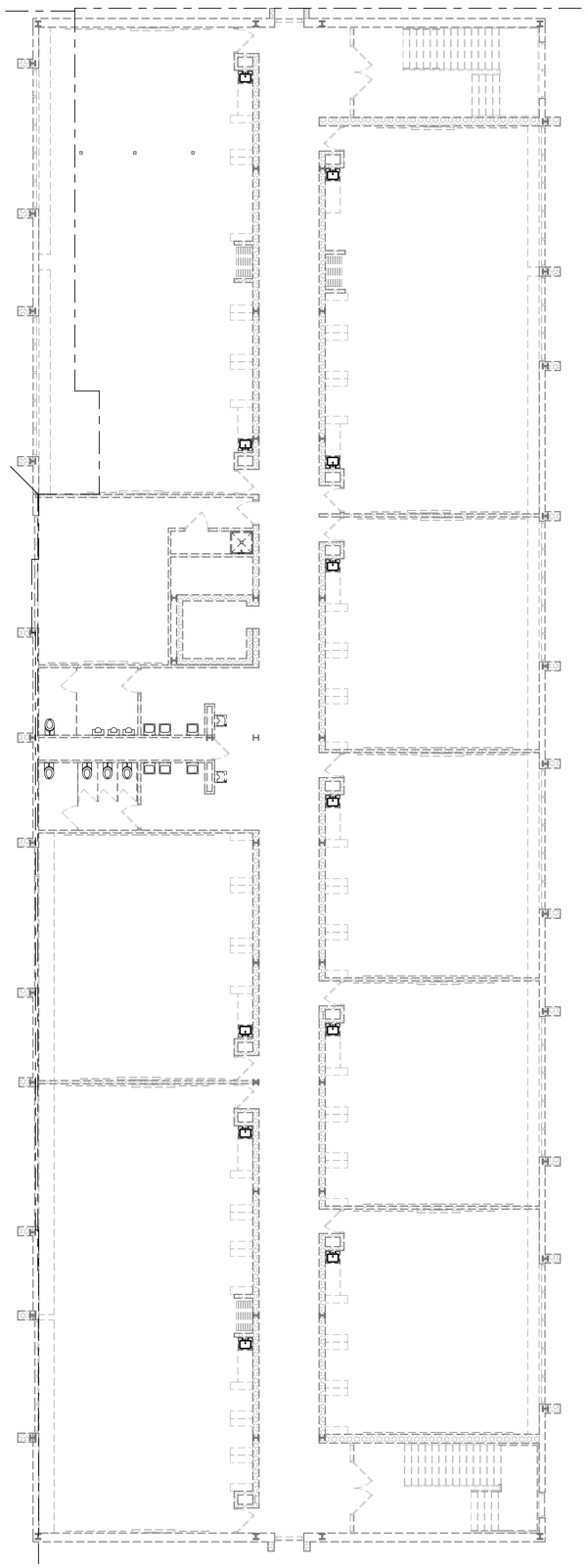
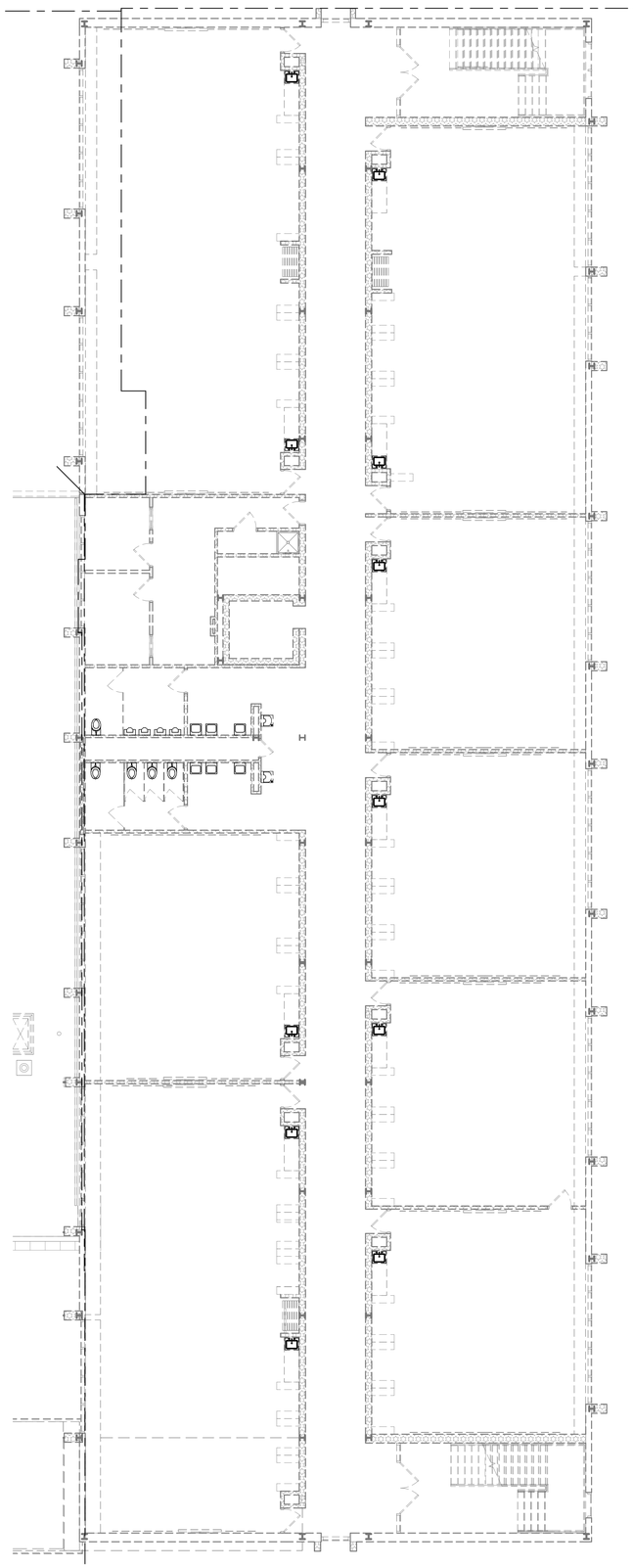
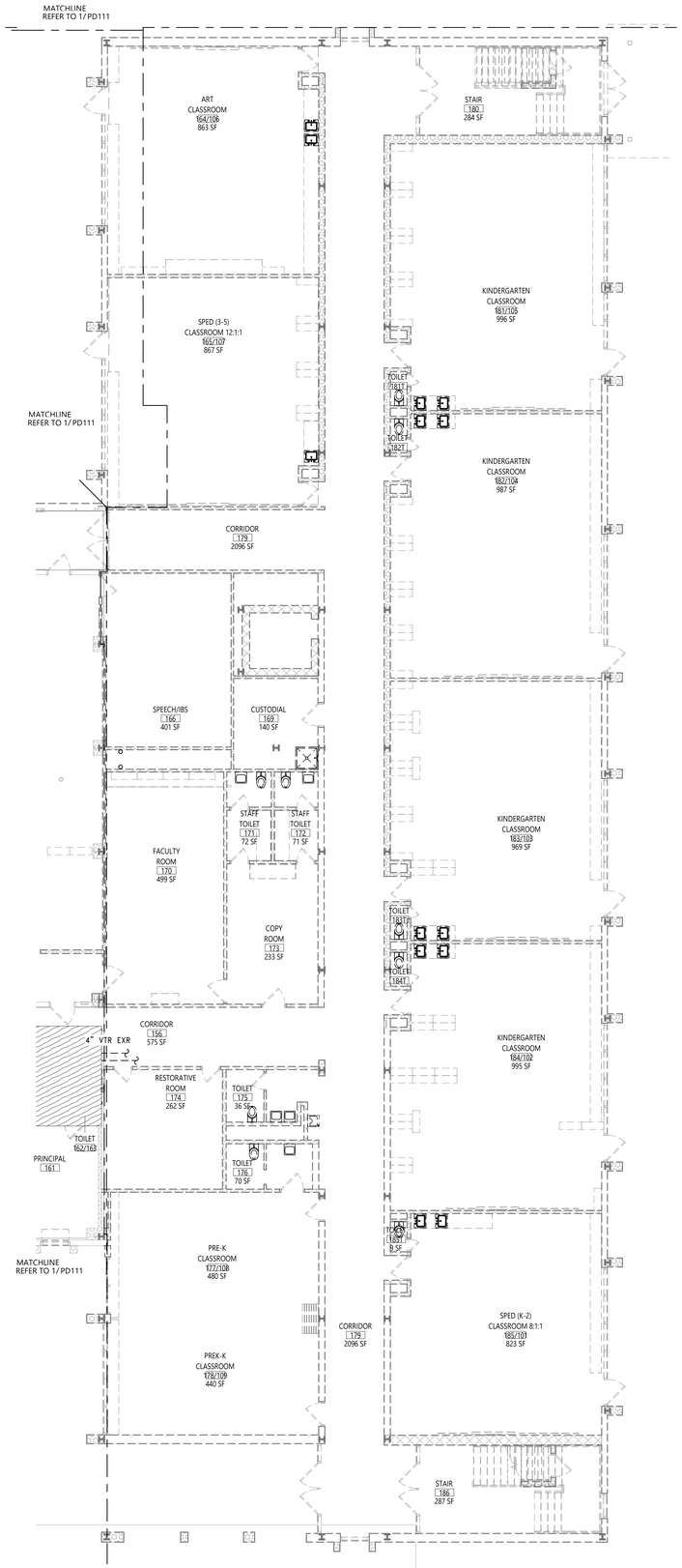


3 THIRD FLOOR DEMOLITION PLAN - AREA '2'
PD112 1/8" = 1'-0"



2 SECOND FLOOR DEMOLITION PLAN - AREA '2'
PD112 1/8" = 1'-0"



1 FIRST FLOOR DEMOLITION PLAN - AREA '2'
PD112 1/8" = 1'-0"

SHEET NOTES

1. ALL PIPING AND FIXTURES IN AREA 2 ARE BEING REMOVED WITH THE DEMOLITION OF THE BUILDING.

KEY NOTES

KEY PLAN

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DEMOLITION FLOOR PLANS - AREA '2'

Sheet No.

TR PD112

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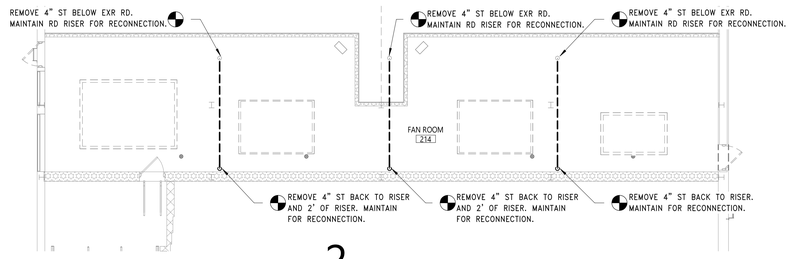
SHEET NOTES

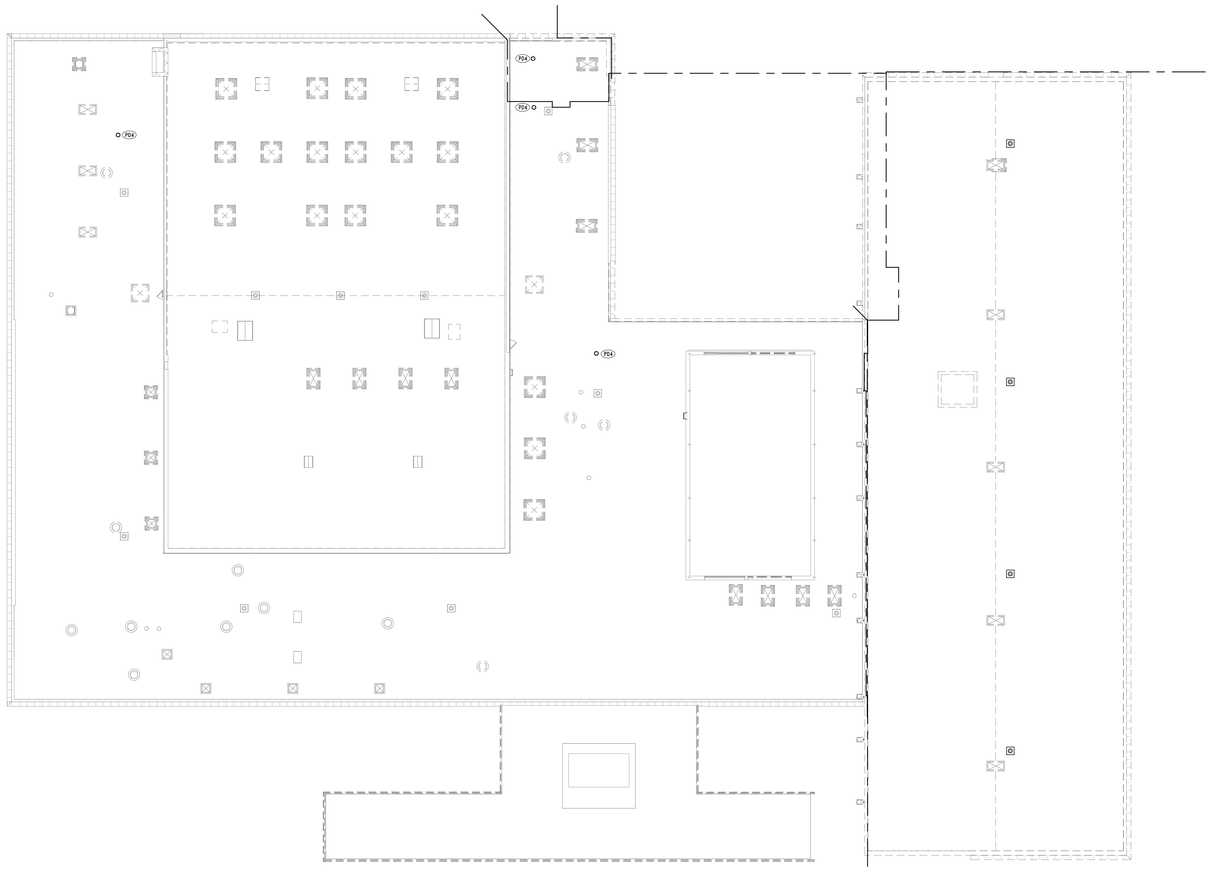
1. ALL PIPING AND FIXTURES IN AREA 2 ARE BEING REMOVED WITH THE DEMOLITION OF THE BUILDING.

KEY NOTES

PD4	REMOVE VTR IN ITS ENTIRETY.



2 FAN ROOM DEMOLITION PLAN
PD401 1/8" = 1'-0"



1 ROOF DEMOLITION PLAN
PD401 1/16" = 1'-0"

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ROOF DEMOLITION PLAN

Sheet No.

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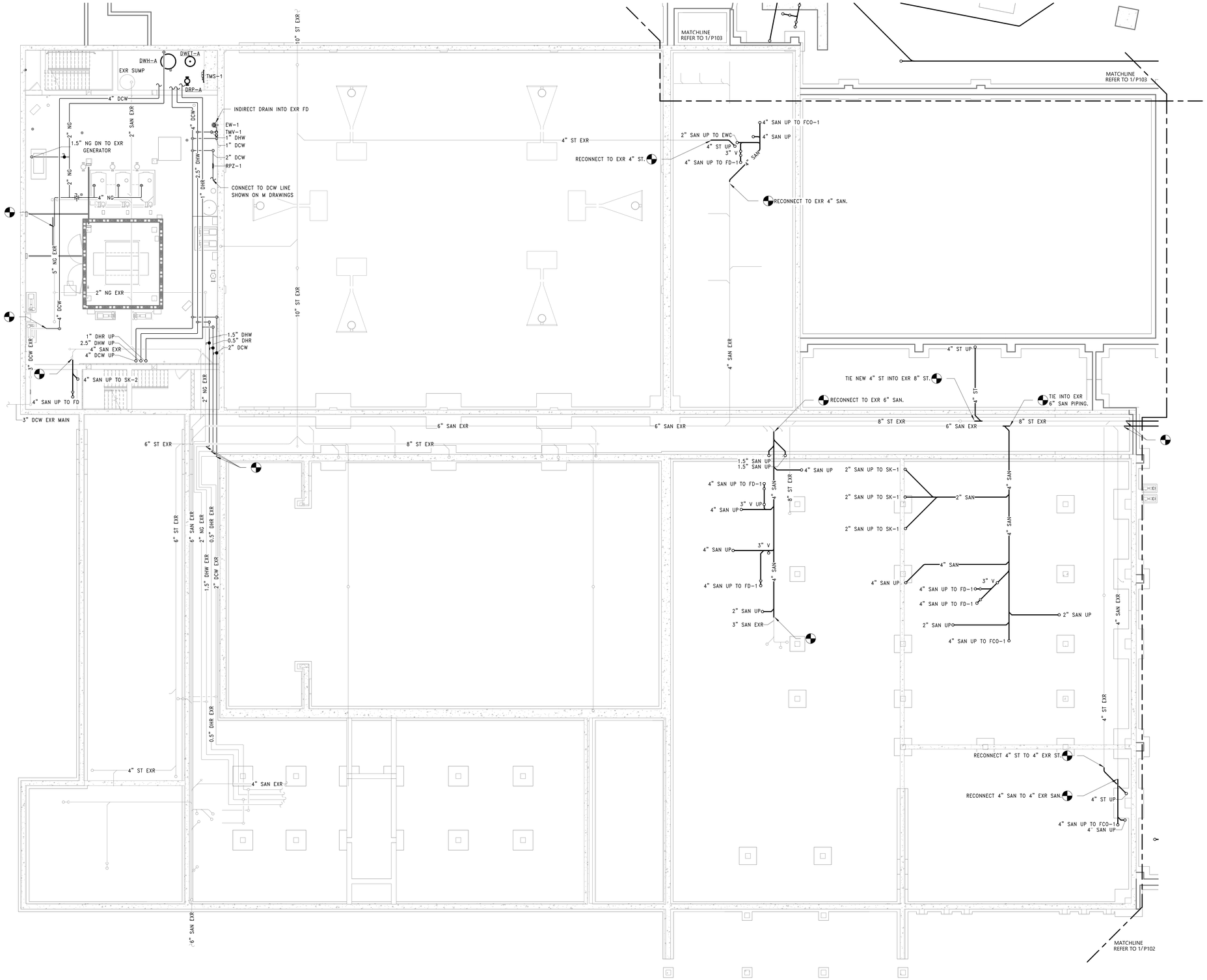

SHEET NOTES

KEY NOTES

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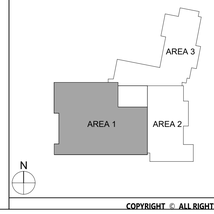

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BASEMENT PLAN - AREA '1'

Sheet No.

TR P101

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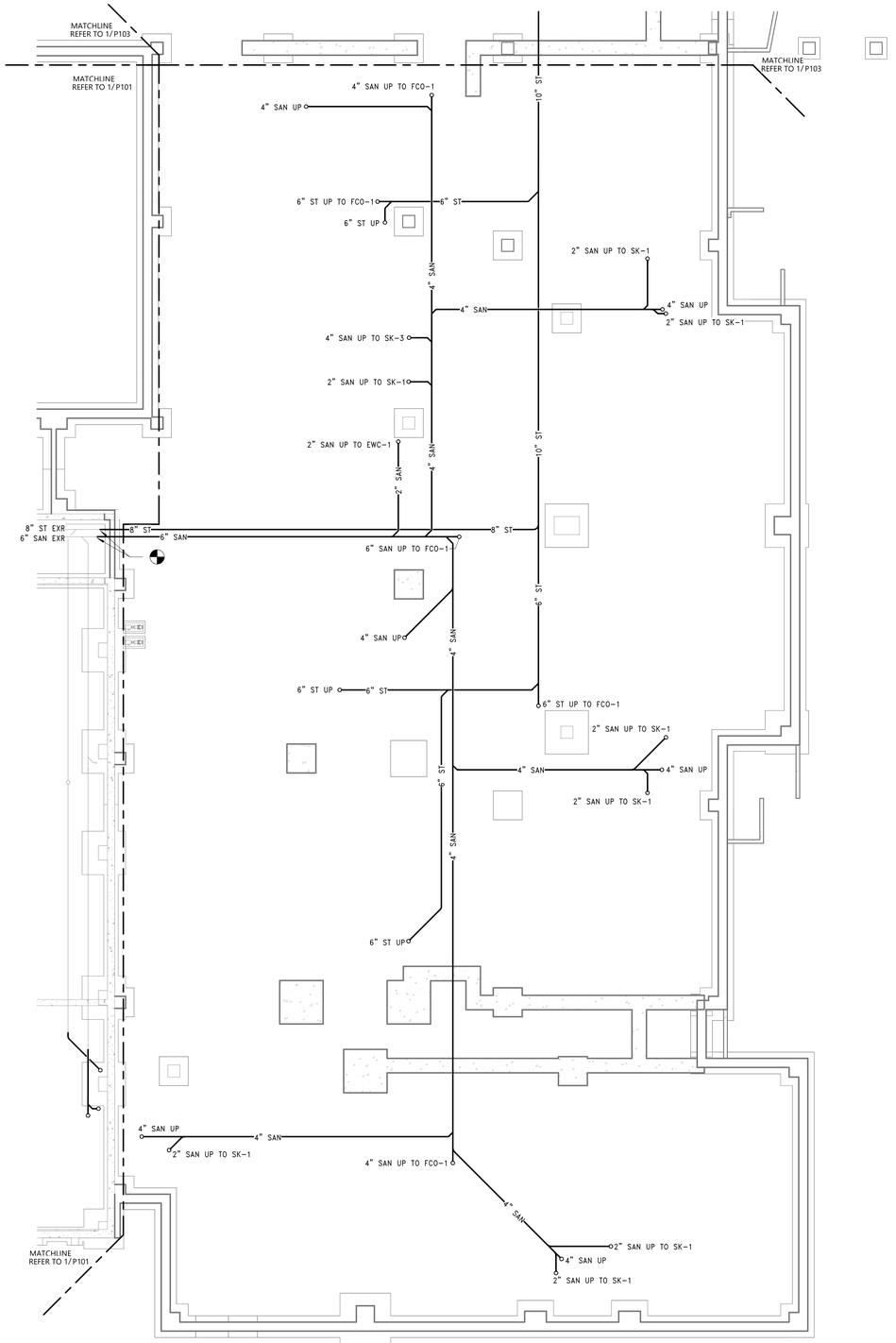
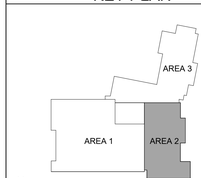


1 UNDERSLAB PLAN - AREA '2'
P102 1/8" = 1'-0"

KEY NOTES

KEY PLAN



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Sheet Title

UNDERSLAB PLAN - AREA '2'

Sheet No.

TR
P102

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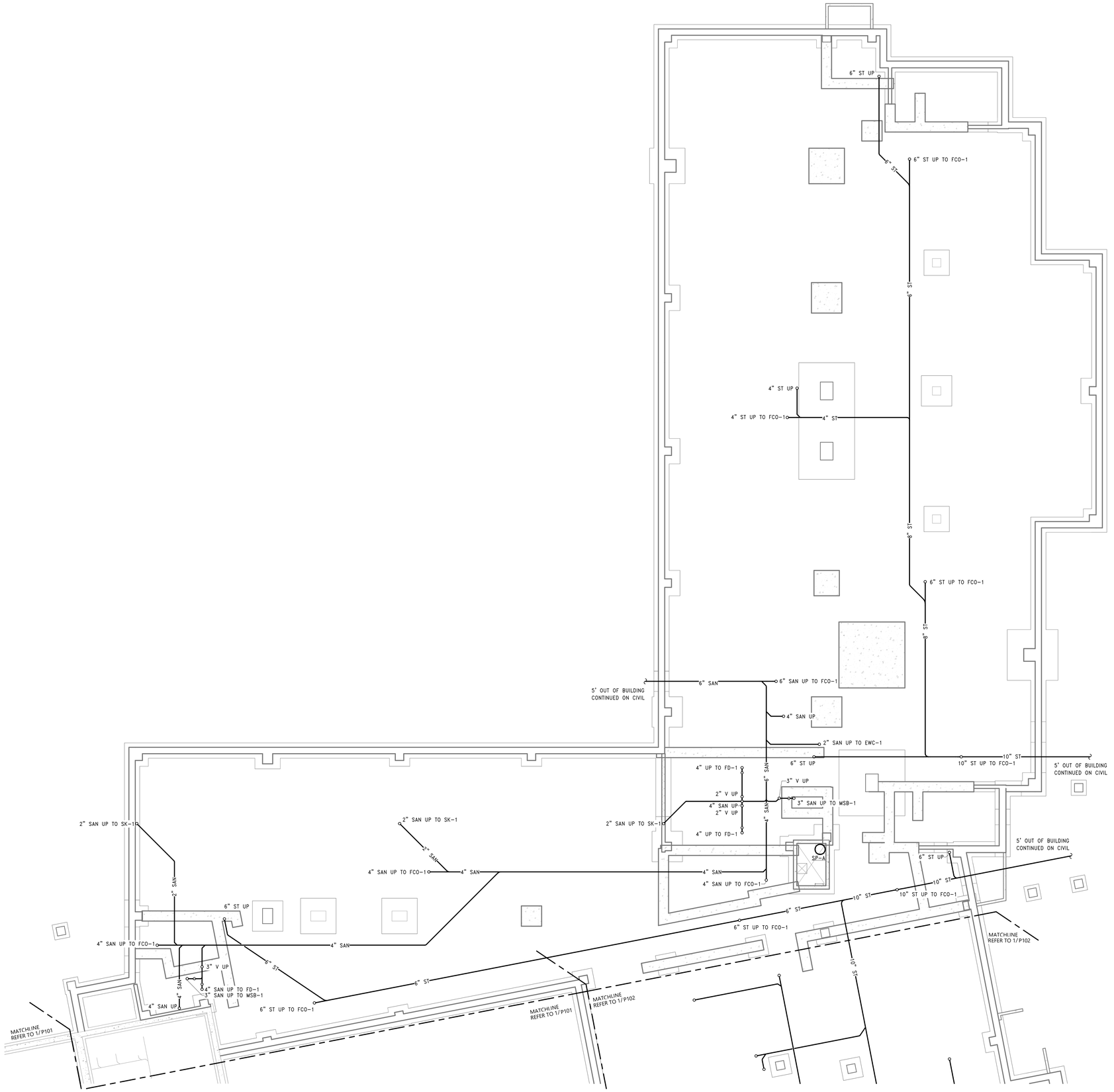
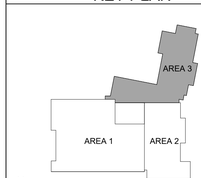


1 UNDERSLAB PLAN - AREA '3'
P103 1/8" = 1'-0"

SHEET NOTES

KEY NOTES

KEY PLAN



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UNDERSLAB PLAN - AREA '3'

Sheet No.

TR
P103

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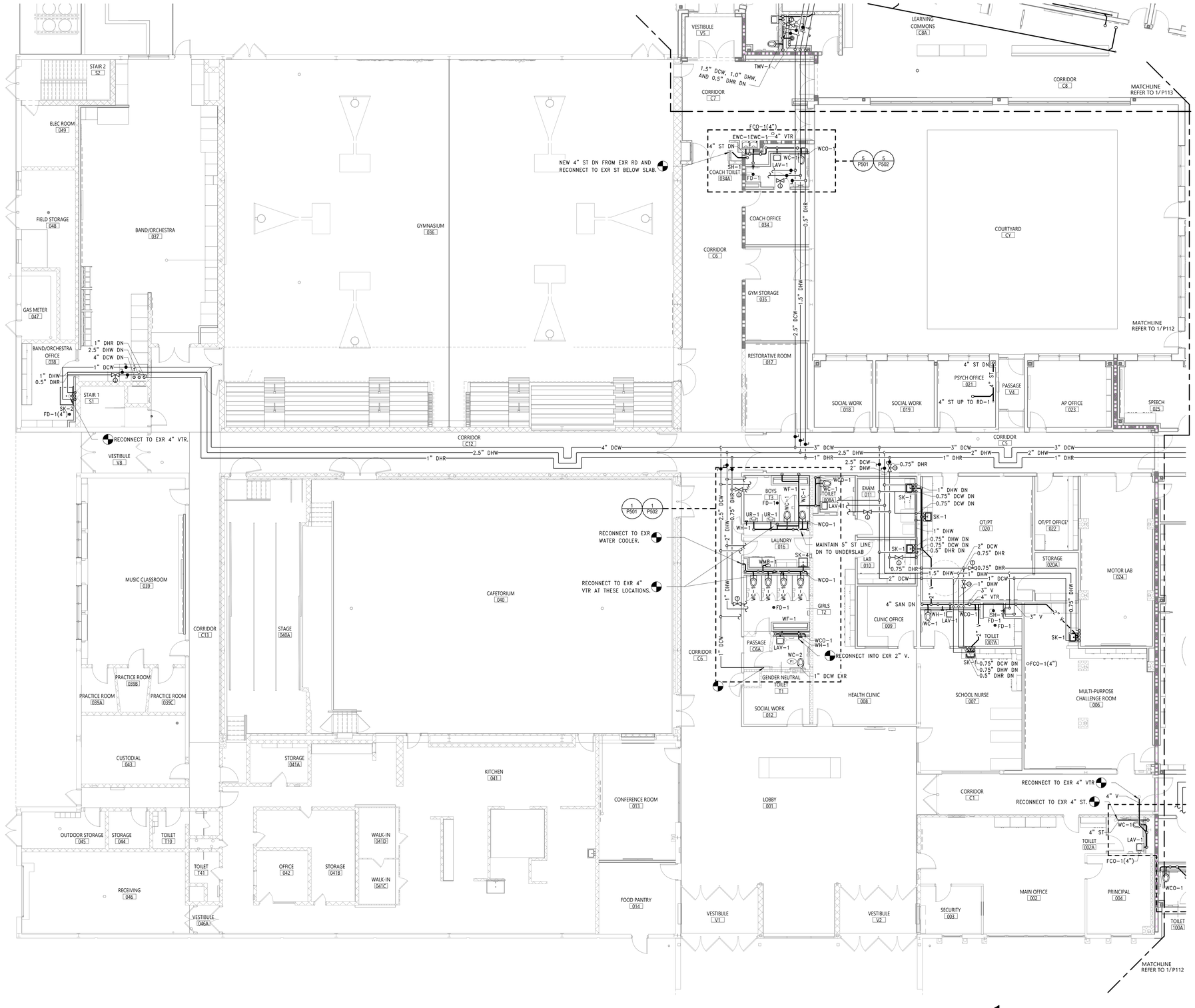
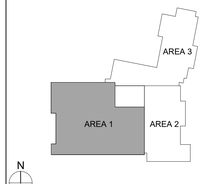
KEY NOTES

P1	RECONNECT TO EXR PIPING. VERIFY CONNECTION SIZE IN FIELD. MATCH EXISTING SIZE.



1 FIRST FLOOR PLAN - AREA '1'
P111 1/8" = 1'-0"

KEY PLAN



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Project Title

BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

ZACHARY ROBERT KALISH
097797
LICENSED PROFESSIONAL ENGINEER
Expires : 06/30/2028

#	DATE	DESCRIPTION

Drawn By:	RA
Checked By:	ZRM
Proj. #:	03-02-00-01-0-010-014
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Issued for Bid:	03/12/2026

Sheet Title

FIRST FLOOR PLAN - AREA '1'

Sheet No.

TR
P111

CONSTRUCTION DOCUMENTS

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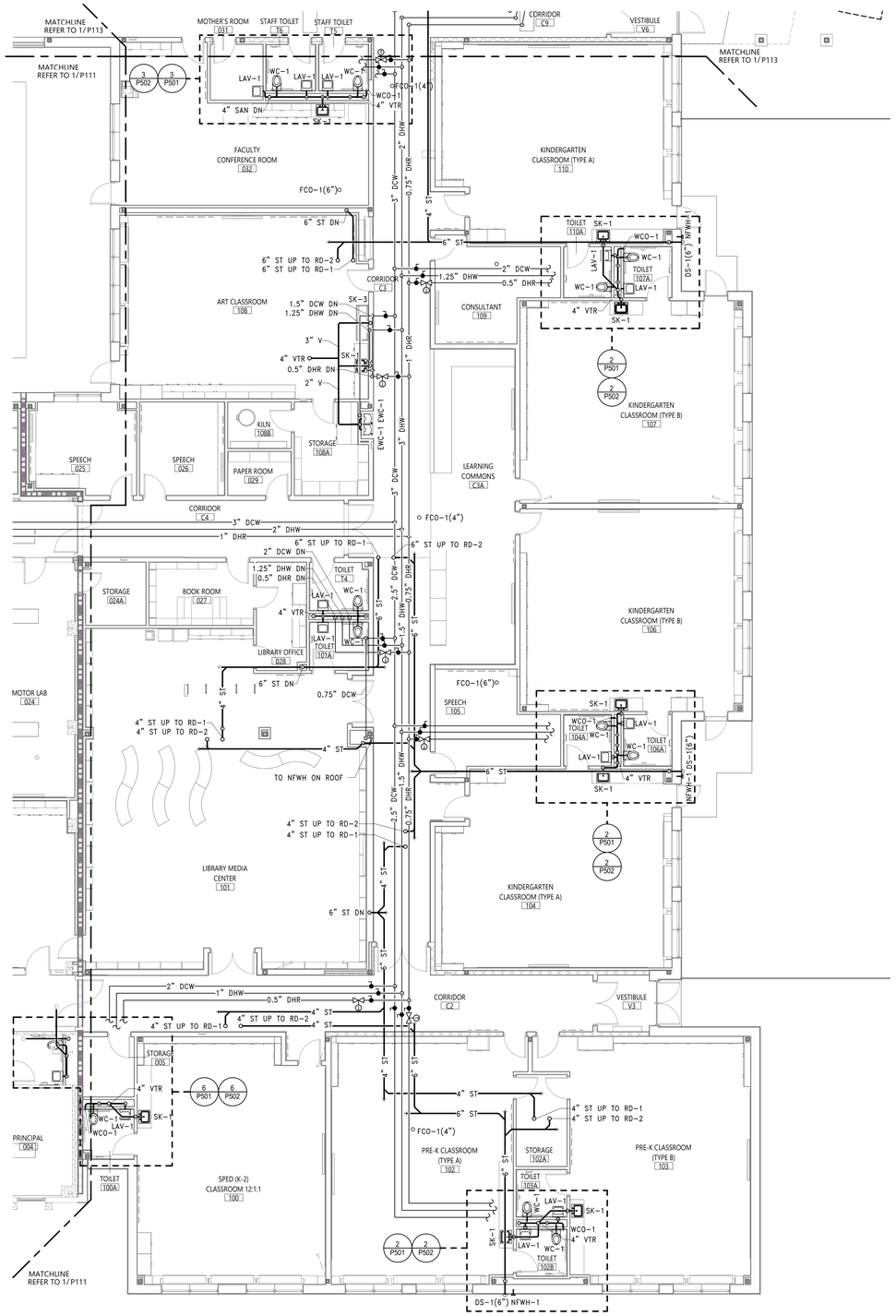
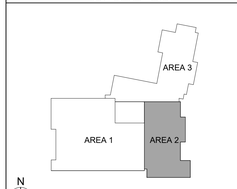


1 FIRST FLOOR PLAN - AREA '2'
P112 1/8" = 1'-0"

SHEET NOTES

KEY NOTES

KEY PLAN



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Sheet Title

FIRST FLOOR PLAN - AREA '2'

Sheet No.

TR
P112

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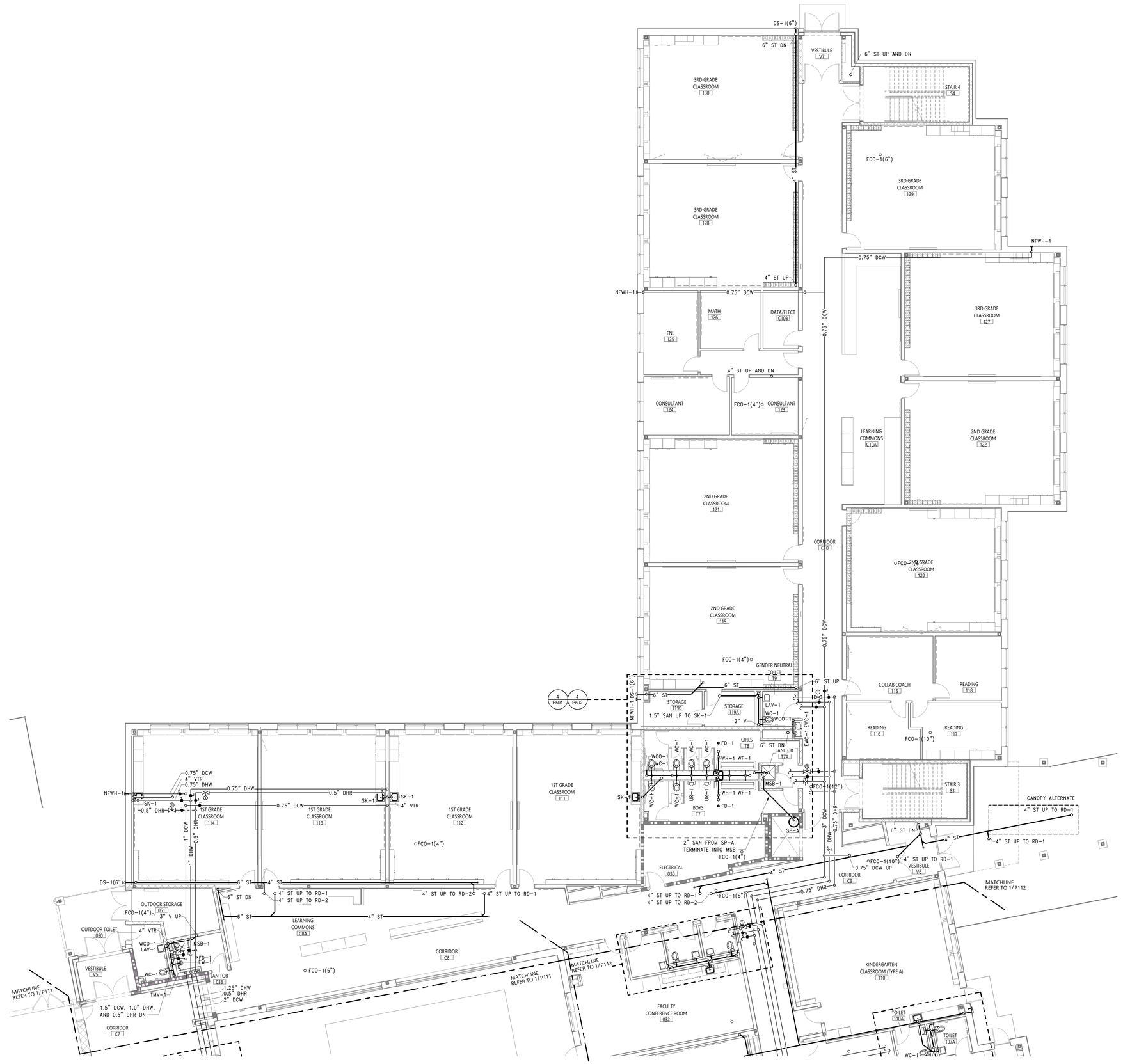
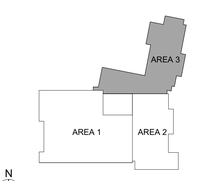
KEY NOTES



1 FIRST FLOOR PLAN - AREA '3'
P113 1/8" = 1'-0"

KEY PLAN



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THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

LICENSED PROFESSIONAL ENGINEER
ZACHARY ROBERT WILSON
097797
STATE OF NEW YORK
Expires : 06/30/2028

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Sheet Title
FIRST FLOOR PLAN - AREA '3'

Sheet No.
TR
P113

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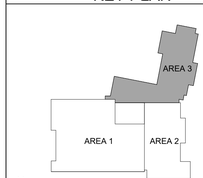
1 SECOND FLOOR PLAN - AREA '3'
P123 1/8" = 1'-0"

KEY NOTES

KEY PLAN



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Sheet Title

SECOND FLOOR PLAN - AREA '3'

Sheet No.

TR
P123

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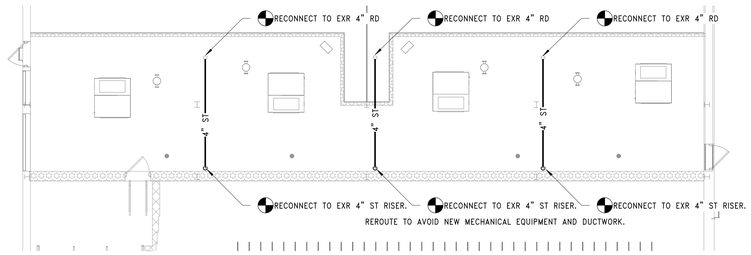
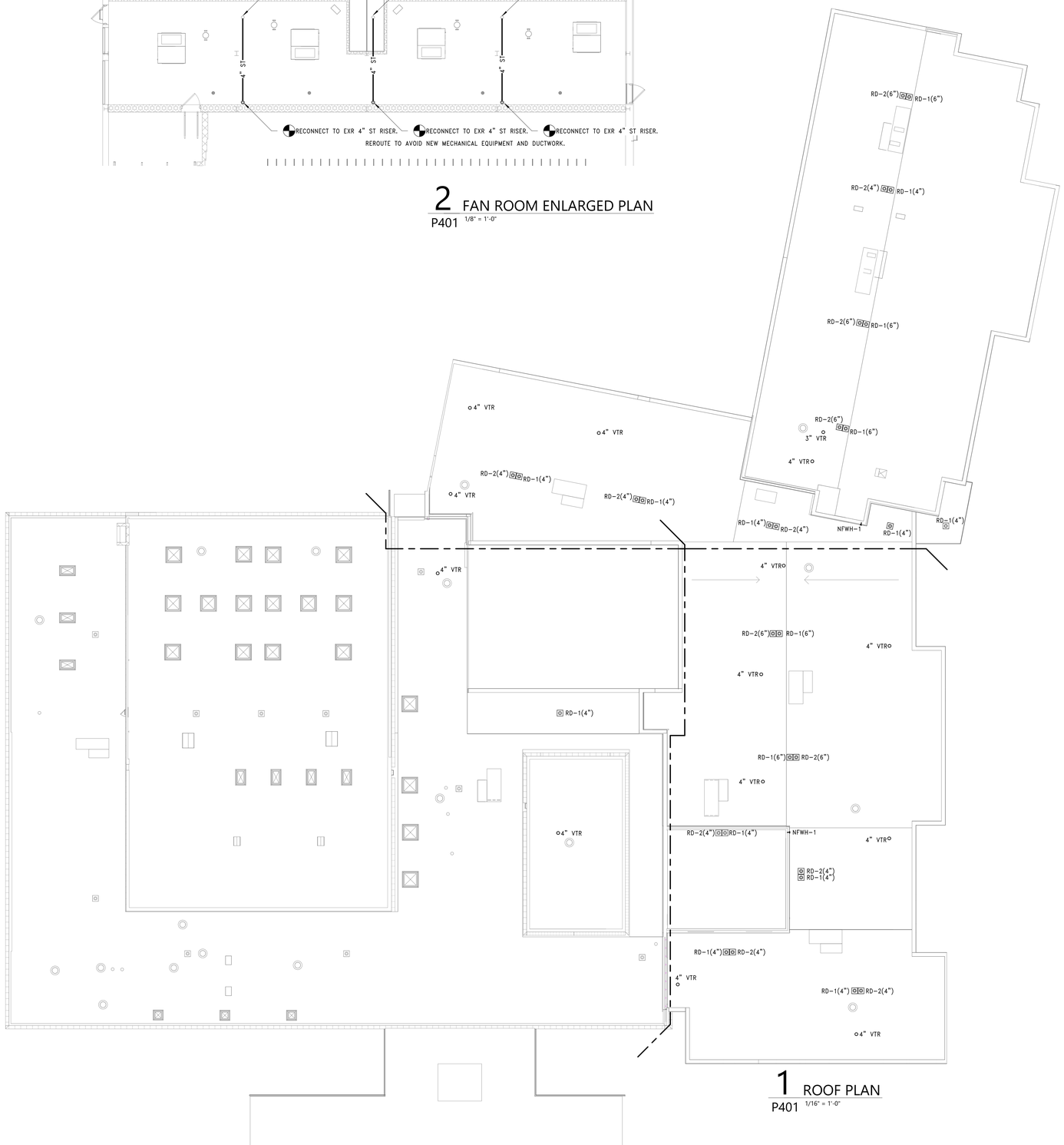


2 FAN ROOM ENLARGED PLAN
P401 1/8" = 1'-0"

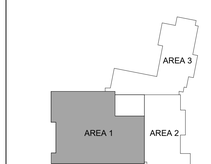


1 ROOF PLAN
P401 1/16" = 1'-0"

SHEET NOTES

KEY NOTES

KEY PLAN



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STATE OF NEW YORK
ZACHARY ROBERT ANDERSON
097797
LICENSED PROFESSIONAL ENGINEER
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Sheet Title
ROOF PLAN

Sheet No.
TR
P401

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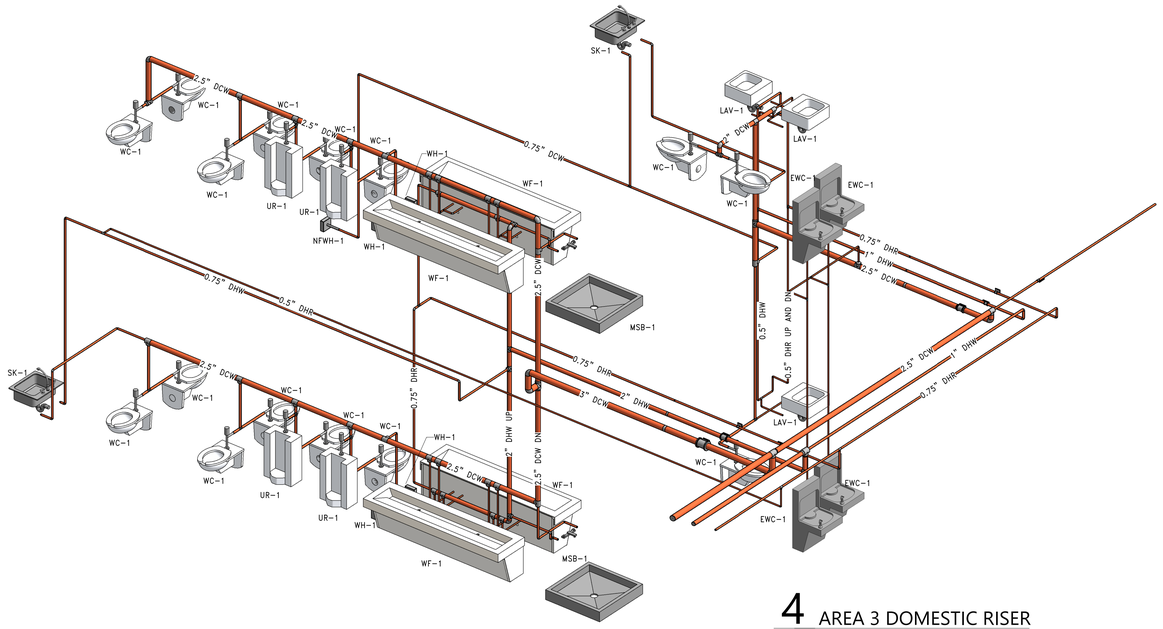
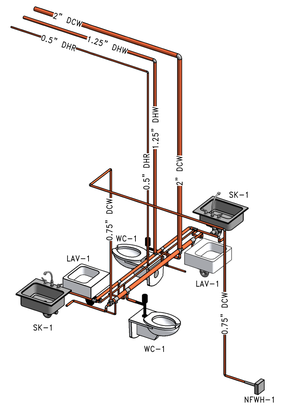
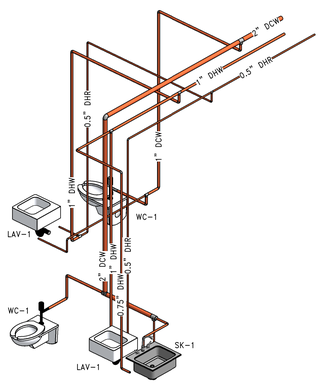


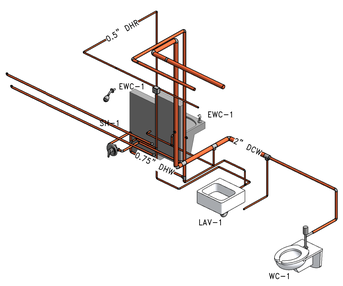
4 AREA 3 DOMESTIC RISER
P501



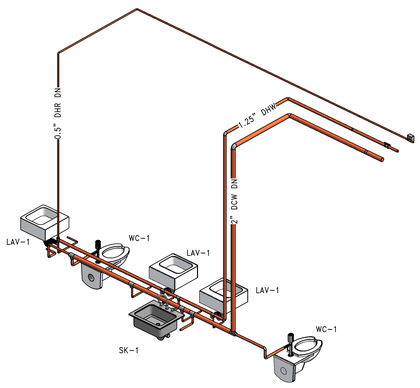
2 SINGLE USER TOILETS
P501



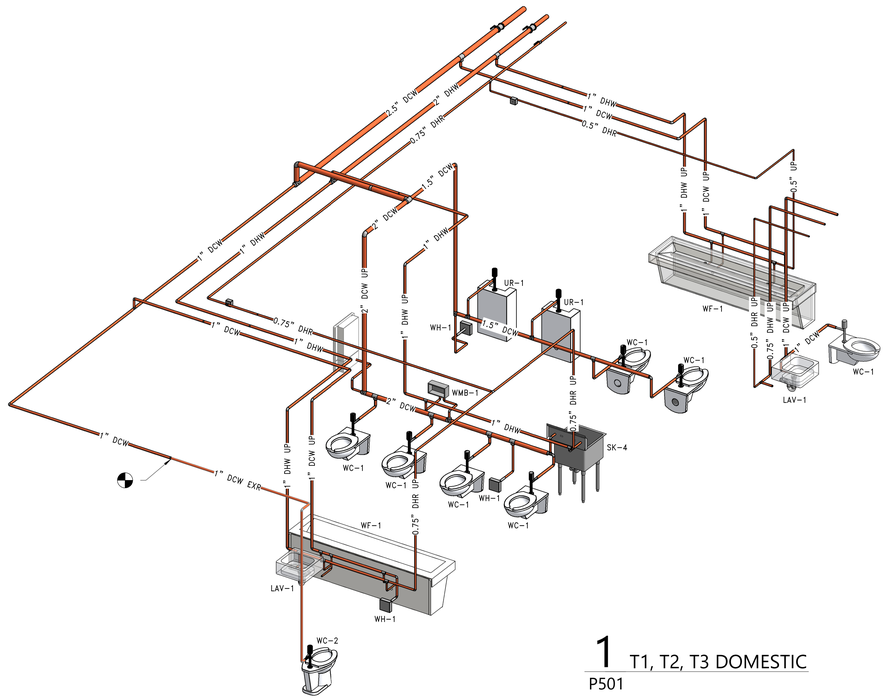
6 MAIN OFFICE DOMESTIC
P501



5 COACH DOMESTIC
P501



3 STAFF TOILET ROOMS DOMESTIC
P501



1 T1, T2, T3 DOMESTIC
P501

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2024 CAPITAL PROJECT

ZACHARY ROBERT CARLSON
LICENSED PROFESSIONAL ENGINEER
097797
Expires : 06/30/2028

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Sheet Title
DOMESTIC RISER DIAGRAMS

Sheet No.
TR P501

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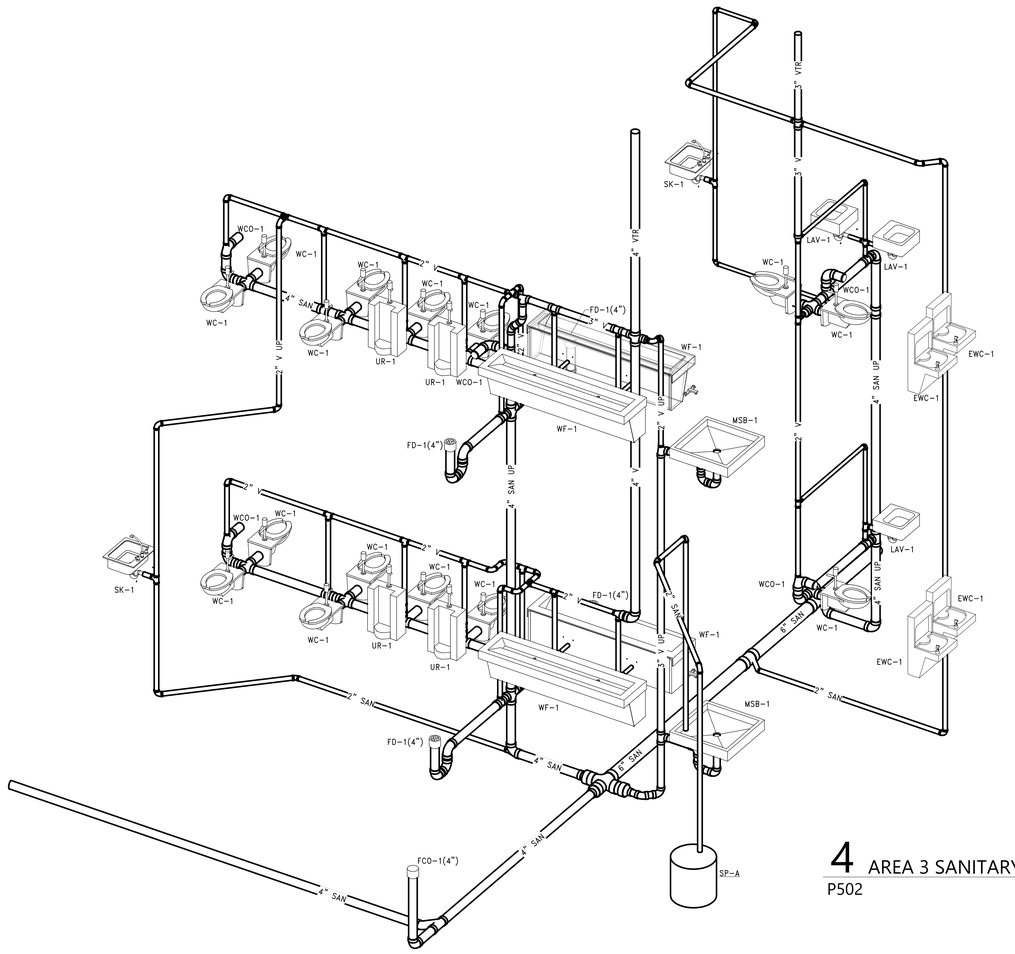
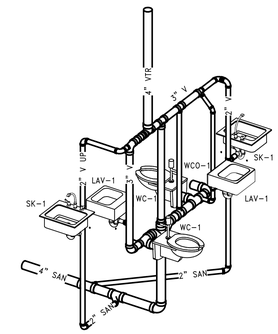
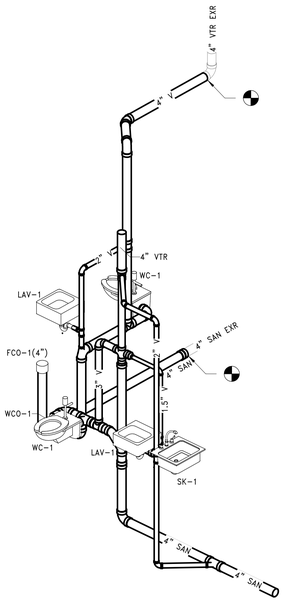


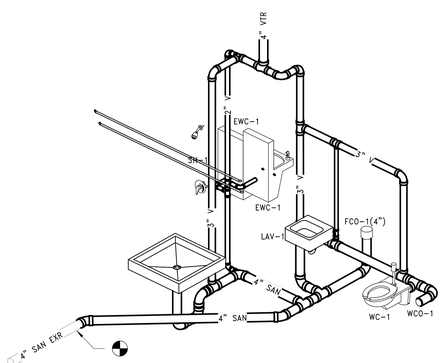
4 AREA 3 SANITARY RISER
P502



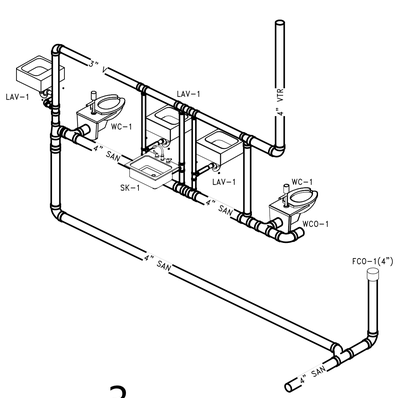
2 SINGLE USER TOILETS
P502



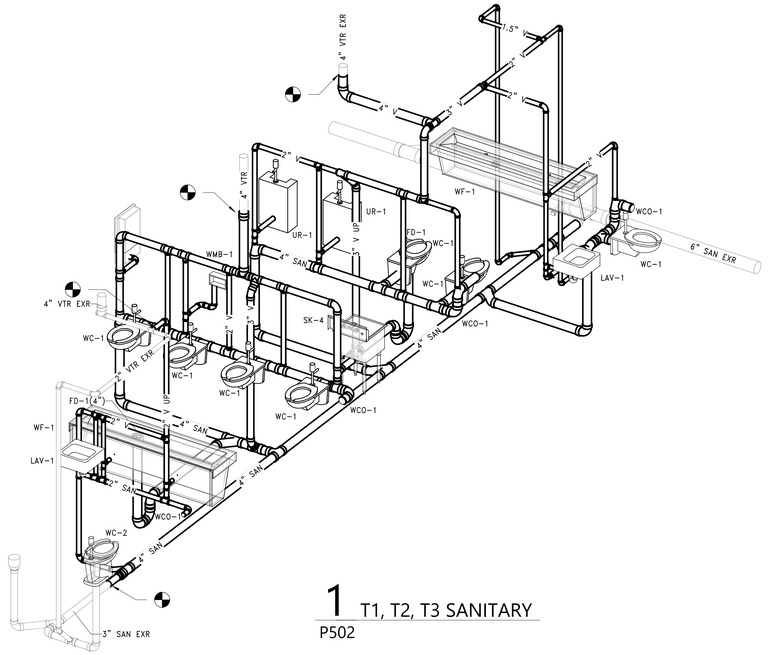
6 MAIN OFFICE SANITARY
P502



5 COACH SANITARY
P502



3 STAFF TOILET ROOMS SANITARY
P502



1 T1, T2, T3 SANITARY
P502

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THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

STATE OF NEW YORK · ZACHARY ROBERT WILSON · 097797 · LICENSED PROFESSIONAL ENGINEER
Expires : 06/30/2028

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Sheet Title

SANITARY RISER DIAGRAMS

Sheet No.

TR
P502

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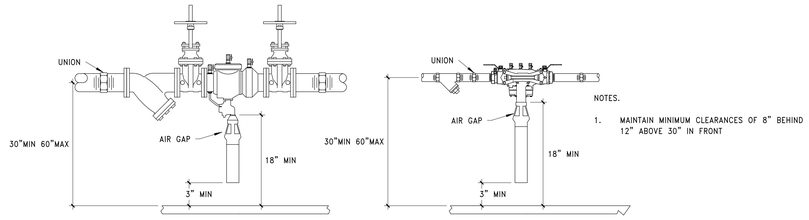
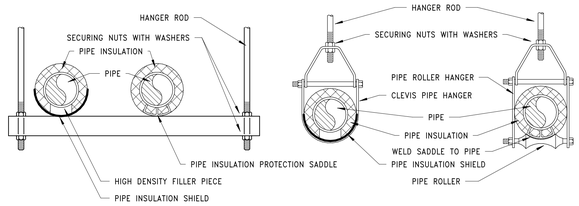
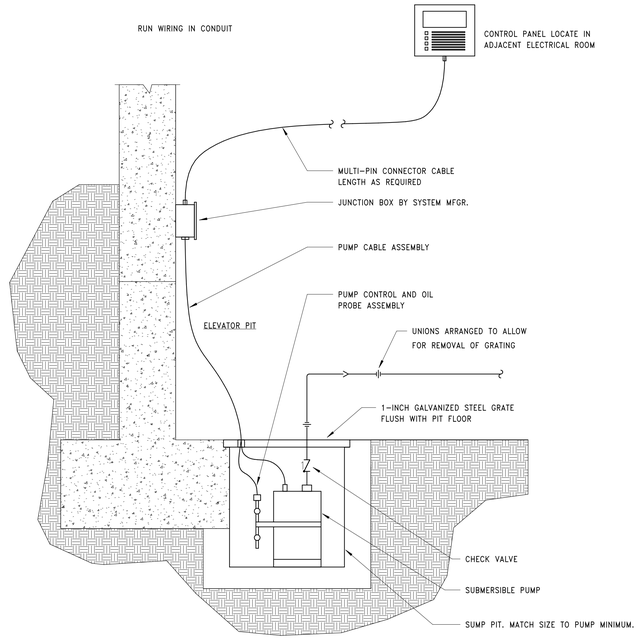


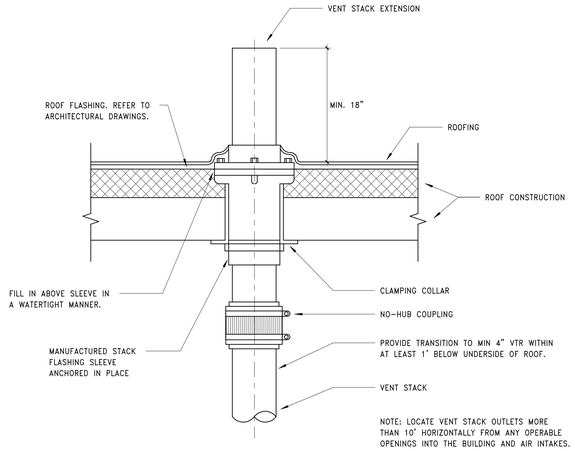
10 RPZ DRAIN PIPING
P601 NTS



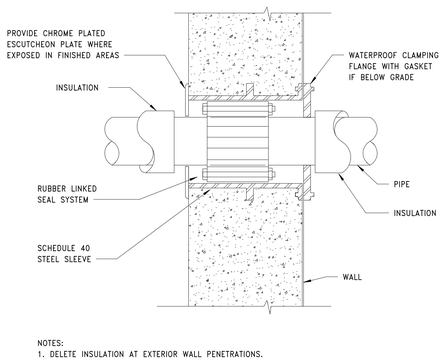
9 PIPE HANGERS
P601 NTS



6 ELEVATOR SUMP
P601 NTS

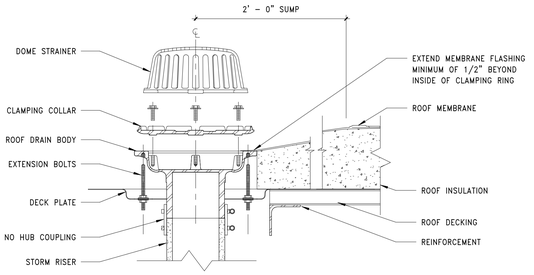


3 VENT THRU ROOF
P601 NTS

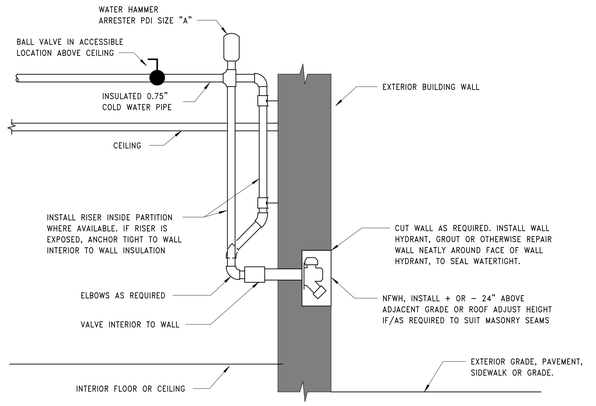


NOTES:
1. DELETE INSULATION AT EXTERIOR WALL PENETRATIONS.

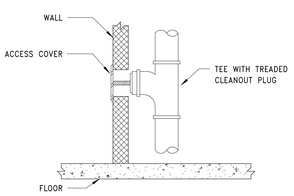
8 FOUNDATION SLEEVE
P601 NTS



5 ROOF DRAIN
P601 NTS

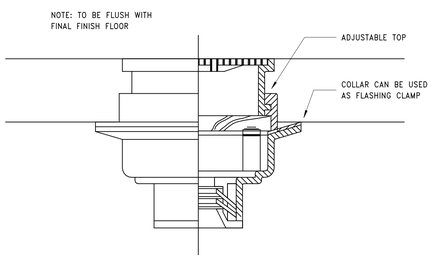


2 NON-FREEZE WALL HYDRANT PIPING
P601 NTS

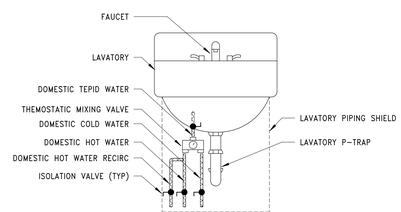


NOTES:
PROVIDE WALL CLEANOUT AT THE BASE OF EACH RISER.

7 WALL CLEANOUT
P601 NTS



4 FLOOR DRAIN WITH ADJUSTABLE TOP
P601 NTS



1 LAVATORY PIPING SCHEMATIC
P601 NTS

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2024 CAPITAL PROJECT

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Sheet Title

DETAILS

Sheet No.

TR
P601

CONSTRUCTION DOCUMENTS

SUMP PUMP SCHEDULE

TAG	SERVICE	TYPE	GPM	PRESSURE (FT)	RPM	BHP	HP	MOTOR CONTROLLER	ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
									VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
SP-A	ELEVATOR	ELEVATOR PIT SUMP PUMP	100	50	3450	–	1	FLOAT	120	1	12			PLUG	STANCOR	SE-100	

DOMESTIC RECIRCULATION PUMP SCHEDULE

TAG	SERVICE	TYPE	PUMP DATA				ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
			GPM	PRESSURE (FT)	RPM	MOTOR CONTROLLER	VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
DRP-A	120F	CIRCULATOR	6	15	1760	INTEGRAL ECM, 0-10	120	1	1.1			FIELD	GRUNDFOS	MAGNA3 32-60 GF N	

DOMESTIC WATER HEATER SCHEDULE

TAG	TYPE	FUEL	INPUT MBH	GPH HEAT RECOVERY	STORAGE (GAL)	TEMP (F)	ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
							VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
DWH-A	ASME CONDENSING	NAT	500	588	130	140	120	1	11			FIELD	PVI	50L130A	

DOMESTIC WATER EXPANSION TANK SCHEDULE

TAG	TYPE	ACCEPTANCE (GAL)	VOLUME (GAL)	DIAMETER / HEIGHT	SYSTEM RELIEF VALVE SETTING	MANUFACTURER	Model
DWET-A	ASME BLADDER	80	80	24"/59"	75	AMTROL	ST448C

THERMOSTATIC MIXING STATION SCHEDULE

TAG	GPM	FPD (PSI)	TEMPERATURE SET POINT (F)	RECIRCULATION PUMP	MANUFACTURER	MODEL
TMS-1	44.0	15	120	DRP-A	BRADLEY	NRS-8

THERMOSTATIC MIXING VALVE SCHEDULE

TAG	TYPE	GPM	FPD (PSI)	MANUFACTURER	MODEL	NOTES
TMV-1	EMERGENCY	3	1	GUARDIAN	G6022	

PLUMBING SPECIALTIES SCHEDULE

TAG	DESCRIPTION	MATERIAL	MANUFACTURER	MODEL
DS-1	DOWN SPOUT	ALUMINUM BODY	ZURN	ZF199
FCO-1	FLOOR CLEAN OUT	CAST IRON BODY STAINLESS STEEL TOP	ZURN	Z1400
FD-1	FLOOR DRAIN	CAST IRON BODY STAINLESS STEEL TOP	ZURN	ZS415BS
NFWH-1	NON-FREEZE WALL HYDRANT	CAST IRON HEAD LEAD FREE INTERIOR COMPONENTS	ZURN	Z1320XL
RD-1	ROOF DRAIN	CAST IRON BODY AND DOME	ZURN	Z100-EB
RD-2	ROOF DRAIN - OVERFLOW	CAST IRON BODY AND DOME, INTERNAL WATER DAM	ZURN	Z100-EB-W3
RPZ-1	LEAD FREE RPZ	LEAD FREE BRASS COMPONENTS STAINLESS STEEL HOUSING	ZURN	375XL
WCO-1	WALL CLEAN OUT	CAST IRON BODY SQUARE STAINLESS STEEL TOP	ZURN	Z1441
WH-1	WALL HYDRANT	LEAD FREE BRASS COMPONENTS STAINLESS STEEL HOUSING	ZURN	Z1330XL
WMB-1	WASHER MACHINE BOX	METAL BOX WITH BRASS VALVES, AND HAMMER ARRESTORS	OATEY	38995

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MATERIAL	MOUNTING	FAUCET / FLUSHOMETER	GPM/GPF	ROUGH-IN SIZES				MANUFACTURER	MODEL
						COLD WATER	HOT WATER	WASTE	VENT		
EW-1	EYE FACE WASH	Stainless Steel	WALL	N/A	3	1"	1"	2"	2"	GUARDIAN	GBF1724
EWC-1	WATER COOLER WITH BOTTLE FILLING STATION	Stainless Steel, Polished	WALL	N/A	1	0.5"		1.5"	1.5"	ELKAY	LZS8WSSP
LAV-1	LAVATORY	Vitreous China	WALL	BATTERY - FAUCET	0.5	0.5"	0.5"	1.5"	1.5"	ZURN	Z5340
MSB-1	MOP SINK BASIN	Terrazzo	FLOOR	SERVICE	2.5	0.75"	0.75"	3"	2"	FLORESTONE	MODEL 92
SH-1	SHOWER	Stainless Steel, Polished	WALL	N/A	2.5	0.75"	0.75"			ZURN	Z7301-SS-MT-DV2P-HW
SK-1	SINK - 22"x19.5x6"	Stainless Steel, Polished	COUNTER TOP	MANUAL	2	0.75"	0.75"	2"	2"	ELKAY	LRAD2219
SK-2	TUBA SINK	Stainless Steel, Polished	FREE STANDING	MANUAL	2.5	1"	1"	3"	2"	GRIFFIN	JS_423
SK-3	Wash-Up Lavatory Sinks	Stainless Steel, Polished	WALL	BATTERY - FAUCET	2.5	0.5"	0.5"	3"	2"	ELKAY	EWMA60203
SK-4	SERVICE SINK	Stainless Steel, Polished	FREE STANDING	SERVICE	1	0.5"	0.5"	3"	2"	ELKAY	S1C24X24-0X
UR-1	URINAL	Vitreous China	WALL	BATTERY	0.13	0.75"		2"	2"	ZURN	Z5755
WC-1	WATER CLOSET	Vitreous China	WALL	BATTERY - FLUSH VALVE	1.28	1"		4"	2"	ZURN	Z5615
WC-2	WATER CLOSET	Vitreous China	FLOOR	BATTERY FLUSH VALVE	1.28	1"		4"	2"	ZURN	Z5635
WF-1	LINEAR WASH FOUNTAIN	Solid Surface	WALL	BATTERY - FAUCET	0.5	0.75"	0.75"	1.5"	1.5"	Sloan Valve	DSG-83000

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BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

STATE OF NEW YORK
ZAGHARY ROBERT HUSSEIN
097797
LICENSED PROFESSIONAL ENGINEER
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SCHEDULES

Sheet No.
TR
P901

CONSTRUCTION DOCUMENTS

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GENERAL NOTES

1. THOROUGHLY COORDINATE ALL WORK ASSOCIATED WITH ALL DEVICES FURNISHED BY AND WORK EXECUTED BY "OTHER" CONTRACTORS.

2. BEFORE SUBMITTING SHOP DRAWINGS, VERIFY VOLTAGES AVAILABLE FOR MECHANICAL EQUIPMENT WITH ELECT. CONTRACTOR. VERIFY PROVISION OF ALL STARTERS & DISCONNECT SWITCHES.

3. BEFORE ROUGHING-IN WALLS, THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND ARCHITECT, THE LOCATIONS OF ALL THERMOSTATS AND SWITCHES.

4. BEFORE FABRICATING ANY DUCTWORK, COORDINATE LOCATION AND SIZE WITH PLUMBING PIPING, ELECTRICAL CONDUITS, RECESSED LIGHT FIXTURES, SPRINKLER PIPES, ETC. PLANS ARE SCHEMATIC AND ARE NOT SHOP DRAWINGS. ALSO SEE SPECIFICATIONS. VERIFY LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. VERIFY FINAL LOCATIONS WITH THE ARCHITECT.

5. ALL CONDUITS, PIPING & DUCTWORK SHALL BE CONCEALED ABOVE CEILINGS AND IN CHASES, UNLESS NOTED OTHERWISE. CONDUITS, PIPING AND DUCTWORK SHALL BE ROUTED THROUGH & BETWEEN BAR JOISTS & BETWEEN BEAMS (WITH OFFSETS AS NEEDED) WHERE REQUIRED BY SPACE RESTRICTIONS AND MATERIALS PROVIDED BY OTHER CONTRACTORS.

6. PROVIDE RADIUS AT ELBOWS AT ALL CHANGES IN DIRECTION IN SUPPLY, RETURN AND EXHAUST DUCTWORK WHERE POSSIBLE, AS PER THE SCHEMATIC DETAILS. WHERE CONDITIONS DO NOT PERMIT THE USE OF RADIUS ELBOWS, SQUARE ELBOWS SHALL BE USED WITH TURNING VANES. TURNING VANES SHALL BE AIRFOIL TYPE, ONLY, IN ACCORDANCE WITH SMACNA DETAILS.

7. PROVIDE MANUAL VOLUME DAMPER IN LOW PRESSURE BRANCH SUPPLY, RETURN OR EXHAUST DUCTS TO EACH GRILLE, DIFFUSER, REGISTER, ETC. UNLESS NOTED OTHERWISE (WHERE BRANCH DUCT IS LOCATED ABOVE HARD CEILING, PROVIDE O.B.D. IN AIR TERMINAL DEVICES.) DAMPER SHALL BE AS CLOSE TO MAIN DUCT AS POSSIBLE. PROVIDE MANUAL VOLUME DAMPERS AT OTHER LOCATIONS INDICATED ON PLANS AND AS DIRECTED BY SPECIFICATIONS. SEE SCHEMATIC DUCT DETAILS ON THE DRAWINGS. PROVIDE ACCESS TO ALL DAMPER QUADRANT LOCKS.

8. MECHANICAL CONTRACTOR SHALL CAREFULLY COORDINATE HIS WORK WITH THE DIMENSIONS OF THE CHASE WALLS, WITH OTHER CONTRACTORS, AND WITH THE GEN. CONTRACTOR. TO PROVIDE ADEQUATE CLEARANCES FOR ELBOWS, MITERED TEES, FIRE DAMPER SLEEVES, ETC., AS REQ'D. FOR FIRE PENETRATION SEALANTS OR DAMPERS.

9. INSTALL ALL DUCTS THRU ALL 1-HOUR, 2-HOUR, & 4-HOUR RATED WALLS AND ALL SMOKE PARTITIONS TO LEAVE A MINIMUM OF 2 INCHES ABOVE THE DUCTS, SUCH THAT THE GENERAL CONTRACTOR CAN SEAL THE WALL ABOVE THE DUCTS. DO NOT INSTALL FLEXIBLE DUCT THROUGH RATED WALLS OR SMOKE PARTITIONS.

10. ALL FIRE DAMPERS SHALL BE INSTALLED IN COMPLETE ACCORDANCE WITH THE MFR'S. & U.L. LISTING AND INSTALLATION INSTRUCTIONS. DAMPERS SHALL HAVE SPECIFIC U.L. LISTING FOR THE CONSTRUCTION IN WHICH THEY ARE INSTALLED. PROVIDE FIRE DAMPERS WITH BLADES OUT OF THE AIRSTREAM IN HIGH & MEDIUM PRESSURE DUCTS, AND ALL LOW PRESSURE DUCTS THAT ARE 10 INCHES, OR LESS, IN HEIGHT OR WIDTH. PROVIDE STATIC FIRE DAMPERS IN AIR SYSTEMS THAT SHUTDOWN ON SMOKE DETECTION. PROVIDE DYNAMIC FIRE DAMPERS IN AIR SYSTEMS THAT OPERATE FOR SMOKE REMOVAL.

11. PROVIDE HINGED ACCESS DOORS AT ALL MOTOR OPERATED DAMPERS, FIRE DAMPERS, UPSTREAM HEATING COILS, SMOKE DETECTORS, AND OTHER ITEMS REQUIRING MAINTENANCE. WHERE ACCESS DOOR IS ABOVE A HARD (INACCESSIBLE) CEILING, PROVIDE 24"x24" ACCESS DOOR IN CEILING (MILCOR STYLE DW, MOD. 3203-019 OR APPROVED EQUAL)

12. PIPE, CONDUIT AND DUCT OPENINGS THROUGH WALLS AND SLABS AROUND AND ABOVE MECHANICAL EQUIPMENT ROOMS SHALL BE PACKED WITH MINERAL WOOL AND SEALED.

13. ALL PIPING, CONDUIT AND DUCT OPENINGS IN RATED PARTITIONS AND FLOORS SHALL BE SEALED PER THE SPECIFICATIONS AND FIRE PENETRATION SYSTEM SCHEDULE.

14. PROVIDE ESCUTCHEON PLATES WHERE DUCTS OR PIPES PENETRATE CEILINGS OR WALLS IN FINISHED AREAS & WHERE EXPOSED TO VIEW. ESCUTCHEONS FOR DUCTS SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS DUCT. PIPE ESCUTCHEONS SHALL BE CHROME-PLATED BRASS.

15. ALL DUCT SIZES SHOWN REPRESENT THE FREE AREA OF THE DUCT.

16. PROVIDE ALL AUXILIARY STEEL REQUIRED FOR PIPING AND EQUIPMENT SUPPORT.

17. ROUND BRANCH DUCT CONNECTIONS TO TRUNK DUCTWORK SHALL BE BELLMOUTH CONFIGURATIONS, EXCEPT DUCTWORK DOWNSTREAM OF VARIABLE VOLUME TERMINAL UNITS MAY HAVE SPIN-IN TAPS WITH VOLUME DAMPERS.

18. MOUNT ALL THERMOSTATS, CO2 SENSORS AND SWITCHES AT 48" ABOVE FINISHED FLOOR TO THE CENTERLINE OF THE OPERABLE PART OF MECHANISM (NOT TO BOTTOM OF UNIT).

19. ALL CONCRETE EQUIPMENT PADS ARE TO BE 6" THICK AND EXTEND 6" BEYOND THE BASE OF THE UNIT/UNITS IT SERVES.

20. THE ANNULAR SPACE AROUND PENETRATING DUCT IS PROTECTED WITH AN APPROVED NONCOMBUSTIBLE MATERIAL THAT RESISTS THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION.

21. PIPING RUNOUTS TO TERMINAL DEVICES SHALL BE 0.75" UNLESS NOTED OTHERWISE.

SYMBOLS

———	PROPOSED WORK (THICK LINE)
·····	EXISTING (HALFTONE, THIN LINE)
— — —	DEMOLITION WORK (DASHED, THICK LINE)
	POINT OF CONNECT/DISCONNECT
	CONTINUATION
	SUPPLY DUCT RISE
	RETURN DUCT RISE
	EXHAUST DUCT RISE
	DUCT WORK
	LINED DUCTS
	FLEX DUCT
	RISE UP
	DROP DOWN
	T UP
	T DOWN
S	SWITCH
R	CHILLER SHUT DOWN
	REFRIGERANT ALARM HORN/STROBE
B	BOILER SHUT DOWN
G	EMERGENCY GAS SHUT DOWN
GS	GAS SENSOR
CO2	CARBON DIOXIDE SENSOR
CO	CARBON MONOXIDE SENSOR
PS	PRESSURE SENSOR
TS	TEMPERATURE SENSOR
T	THERMOSTAT
H	HUMIDISTAT
R	REFRIGERANT SENSOR
	FIRE DAMPER
	FIRE/SMOKE DAMPER
	SMOKE DAMPER
	DUCT SMOKE DETECTOR
	MOTORIZED DAMPER
	VOLUME DAMPER
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	MANUAL BALANCING VALVE
	PIC VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	RELIEF VALVE
S	SOLENOID VALVE
	STRAINER
	STRAINER WITH BLOWDOWN BALL VALVE
	UNION
	MANUAL AIR VENT
	TRIPLE DUTY VALVE
>	FLOW DIRECTION
S	INLINE PUMP
	AUTOMATIC AIR VENT
	PRESSURE GAUGE
	THERMOMETER
	PETES PLUG

FIRE SEPARATION LEGEND

	1 HOUR RATED FIRE PARTITION
	1 HOUR RATED FIRE BARRIER
	2 HOUR RATED FIRE BARRIER
	2 HOUR RATED FIRE WALL

SYSTEM ABBREVIATIONS

—CD—	CONDENSATE
—CHWR—	CHILLED WATER RETURN
—CHWS—	CHILLED WATER SUPPLY
—CWR—	CONDENSER WATER RETURN
—CWS—	CONDENSER WATER SUPPLY
—DTR—	DUAL TEMPERATURE RETURN
—DTS—	DUAL TEMPERATURE SUPPLY
—E—	EXHAUST
—FOR—	FUEL OIL RETURN
—FOS—	FUEL OIL SUPPLY
—GCHR—	GLYCOL CHILLED WATER RETURN
—GCHS—	GLYCOL CHILLED WATER SUPPLY
—GHWR—	GLYCOL HOT WATER RETURN
—GHWS—	GLYCOL HOT WATER SUPPLY
—HMW—	MAKE-UP WATER
—HPS—	HIGH PRESSURE STEAM
—HRWR—	HEAT RECOVERY WATER RETURN
—HRWS—	HEAT RECOVERY WATER SUPPLY
—HWR—	HEATING HOT WATER RETURN
—HWS—	HEATING HOT WATER SUPPLY
—LPS—	LOW PRESSURE STEAM
—MPS—	MEDIUM PRESSURE STEAM
—RL/RS—	REFRIGERANT LINESET
—RL—	REFRIGERANT LIQUID
—RS—	REFRIGERANT SUCTION
—RV—	REFRIGERANT RELIEF VENT
—SCD—	STEAM CONDENSATE

ABBREVIATIONS

ACU	AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
ARCH	ARCHITECT / ARCHITECTURAL
AS	AIR SEPARATOR
AT	AIR TERMINAL UNIT
BAS	BUILDING AUTOMATION SYSTEM
BCC	BRANCH CIRCUIT CONTROLLER
BCU	BLOWER COIL
B	BOILER
BHP	BRAKE HORSEPOWER
BPHX	BRAISED PLATE HEAT EXCHANGER
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CON	CONDENSATE
CONV	CONVECTOR
CTW	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
DB	DECIBELS
DDC	DIRECT DIGITAL CONTROLS
DS	DUCT SILENCER
DWET	DOMESTIC WATER EXPANSION TANK
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EFT	ENTERING FLUID TEMPERATURE
ERU	ENERGY RECOVERY UNIT
ERV	ENERGY RECOVERY VENTILATOR
ERW	ENERGY RECOVERY WHEEL
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EXR	EXISTING TO REMAIN
F	FAN
FCU	FAN COIL UNIT
FLA	FULL LOAD AMPERES
FOB	FLAT ON BOTTOM
FPD	FLUID PRESSURE DROP
FPM	FEET PER MINUTE
FTR	FIN TUBE RADIATOR
GPM	GALLONS PER MINUTE
GV	GRAVITY VENTILATOR
HC	HEATING COIL
HP	HORSEPOWER
HVU	HEATING/VENTILATION UNIT
IN	INCH
ISU	INDOOR SPLIT UNIT
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LFT	LEAVING FLUID TEMPERATURE
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MD	MOTORIZED DAMPER
MFS	MAX FUSE SIZE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MPS	MEDIUM PRESSURE STEAM (16-59 PSIG)
NOM	NOMINAL
OA	OUTSIDE AIR
ODP	OXYGEN DEPLETION SENSOR
P	PUMP
PD	PRESSURE DROP
PFHX	PLATE & FRAME HEAT EXCHANGER
PSIG	POUNDS PER SQUARE INCH WATER GAUGE
PTAC	PACKAGED TERMINAL AIR CONDITIONER
RA	RETURN AIR
RFM	RADIANT FLOOR MANIFOLD
RP	RADIANT PANEL
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SP	STATIC PRESSURE
STHX	SHELL & TUBE HEAT EXCHANGER
UH	UNIT HEATER
UV	UNIT VENTILATOR
VAV	VARIABLE AIR VOLUME UNIT
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB TEMPERATURE
WG	WATER GAUGE
*CFM	VOLUME DAMPER AIR BALANCE CFM

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Project Title

BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

Expires : 06/30/2028

V.	DATE	DESCRIPTION

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GENERAL NOTES, LEGENDS AND ABBREVIATIONS

Sheet No.

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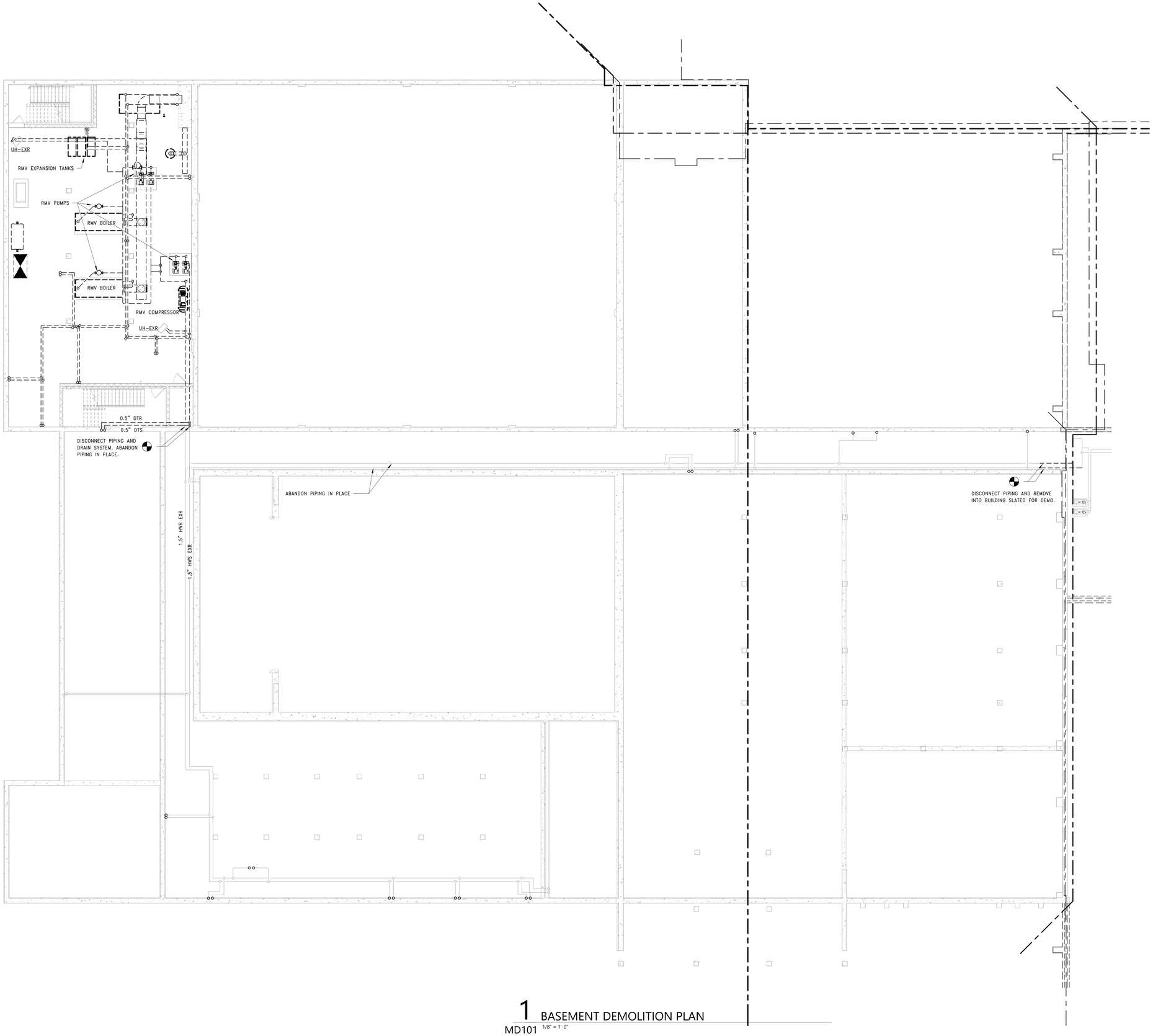
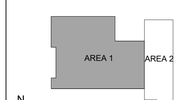


1 BASEMENT DEMOLITION PLAN
MD101 1/8" = 1'-0"

KEY NOTES

KEY PLAN



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STATE OF NEW YORK
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BASEMENT DEMOLITION PLAN - AREA '1'

Sheet No.
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MD101

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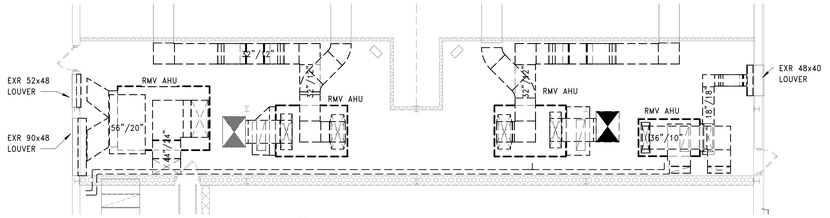
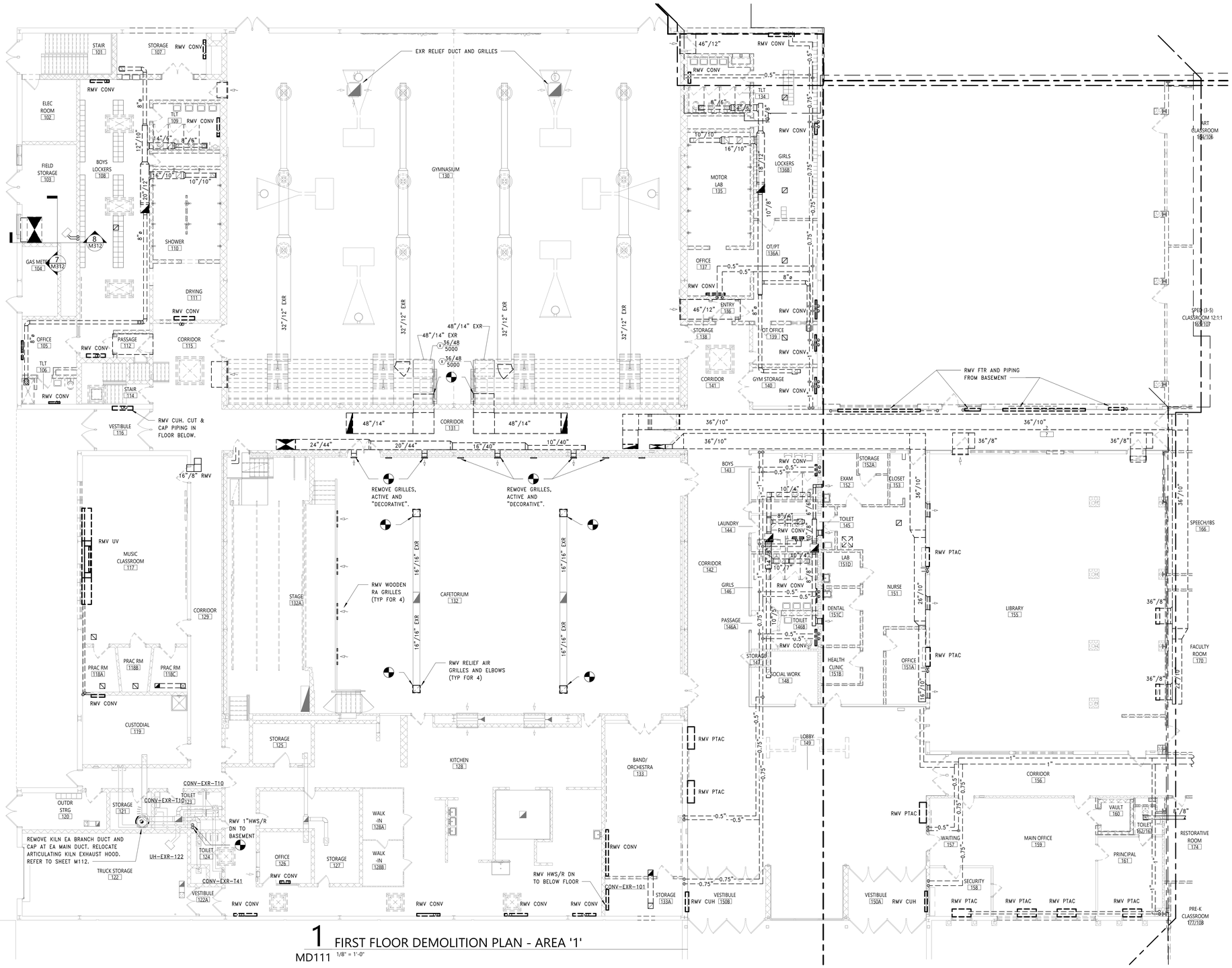


2 SECOND FL FAN ROOM DEMOLITION PLAN

MD111 1/8" = 1'-0"

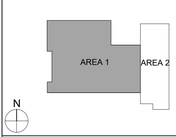


1 FIRST FLOOR DEMOLITION PLAN - AREA '1'

MD111 1/8" = 1'-0"

KEY NOTES

KEY PLAN



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FIRST & SECOND FL DEMOLITION PLANS - AREA '1'

Sheet No.

TR MD111

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RMV GV & CURB

RMV GV & CURB

RMV FAN, CURB AND DUCTWORK

RMV CONDENSING UNIT

EXR GV

RMV CONDENSING UNIT

EXR GV

RMV FAN, CURB AND DUCTWORK

RMV FAN, CURB AND DUCTWORK

RMV FAN, CURB AND DUCTWORK

EXR GV

EXR GV

RMV FAN, CURB AND DUCTWORK

EXR FAN

EXR FAN

EXR FAN

EXR FAN

EXR KITCHEN REFRIGERATION CONDENSER

EXR FAN

EXR FAN

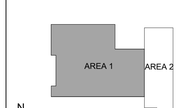
EXR KITCHEN REFRIGERATION CONDENSER

RMV FAN, CURB AND DUCTWORK

1 ROOF DEMOLITION PLAN
MD401 1/8" = 1'-0"

KEY NOTES

KEY PLAN



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ROOF DEMOLITION PLAN - AREA '1'

Sheet No.

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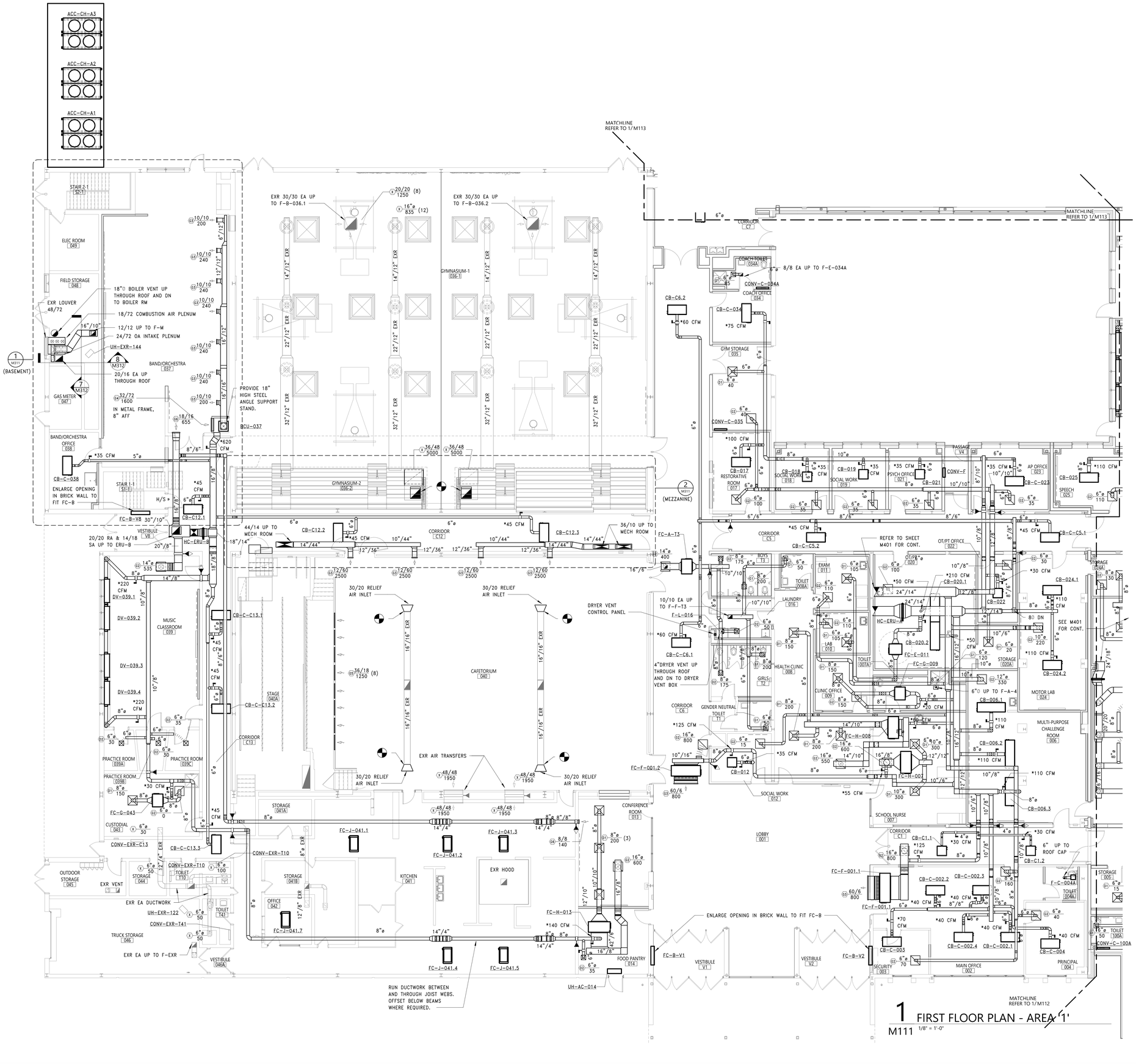
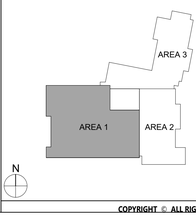


KEY NOTES

KEY PLAN



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BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

STATE OF NEW YORK ZAGHARY ROBERT GLASSEN 097797 LICENSED PROFESSIONAL ENGINEER
Expires : 06/30/2028

#	DATE	DESCRIPTION

Drawn By:	DG
Checked By:	ZRM
Proj. #:	03-02-00-01-0-010-014
CSArch Proj. #:	215-2402
Issued for Bid:	03/12/2026

Sheet Title

FIRST FLOOR PLAN - AREA '1'

Sheet No.

TR M111

CONSTRUCTION DOCUMENTS

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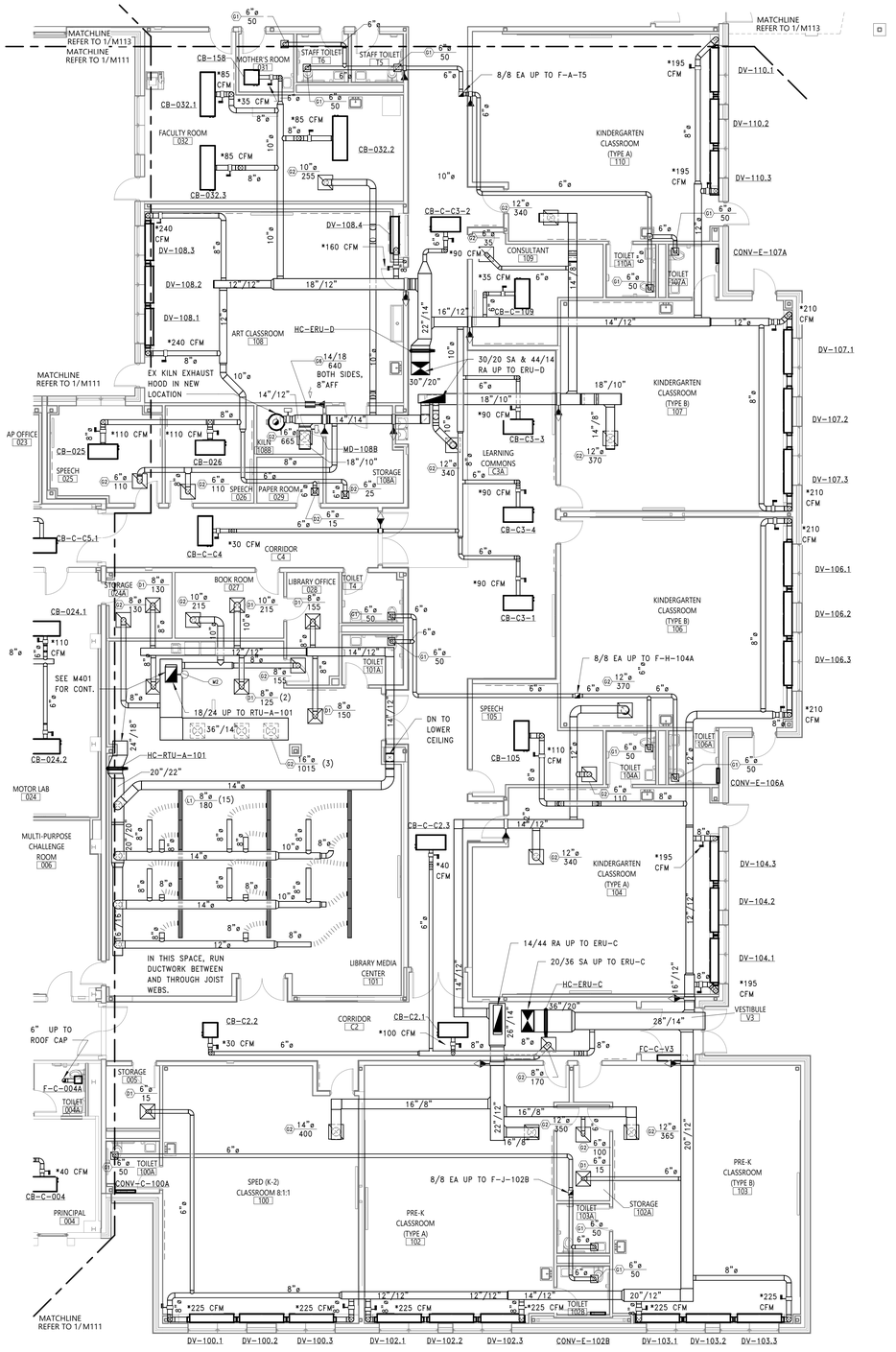
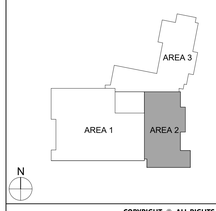
KEY NOTES

M2	DUCT MOUNTED SMOKE DETECTOR IN RISE



1 FIRST FLOOR PLAN - AREA '2'
M112 1/8" = 1'-0"

KEY PLAN



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THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

ZACHARY ROBERT WILSON
LICENSED PROFESSIONAL ENGINEER
097797
Expires : 06/30/2028

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Issued for Bid:	03/12/2026

Sheet Title

FIRST FLOOR PLAN - AREA '2'

Sheet No.

TR M112

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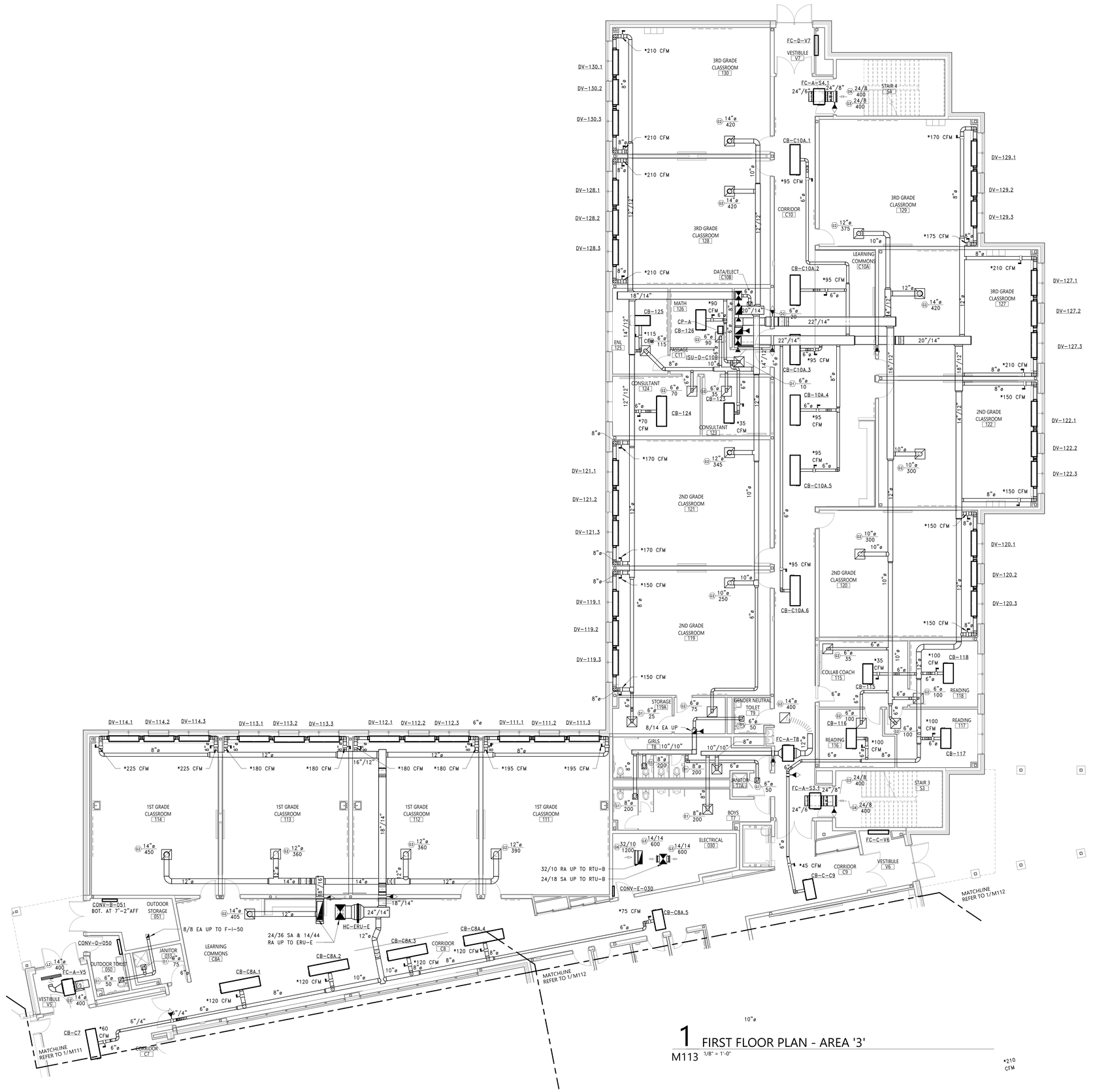
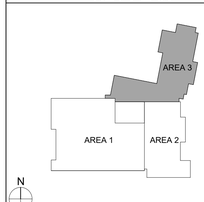


1 FIRST FLOOR PLAN - AREA '3'
M113 1/8" = 1'-0"

SHEET NOTES

KEY NOTES

KEY PLAN



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THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

ZACHARY ROBERT CSISZAR — STATE OF NEW YORK — 097797 — LICENSED PROFESSIONAL ENGINEER
Expires : 06/30/2028

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Sheet Title
FIRST FLOOR PLAN - AREA '3'

Sheet No.
TR
M113

CONSTRUCTION DOCUMENTS

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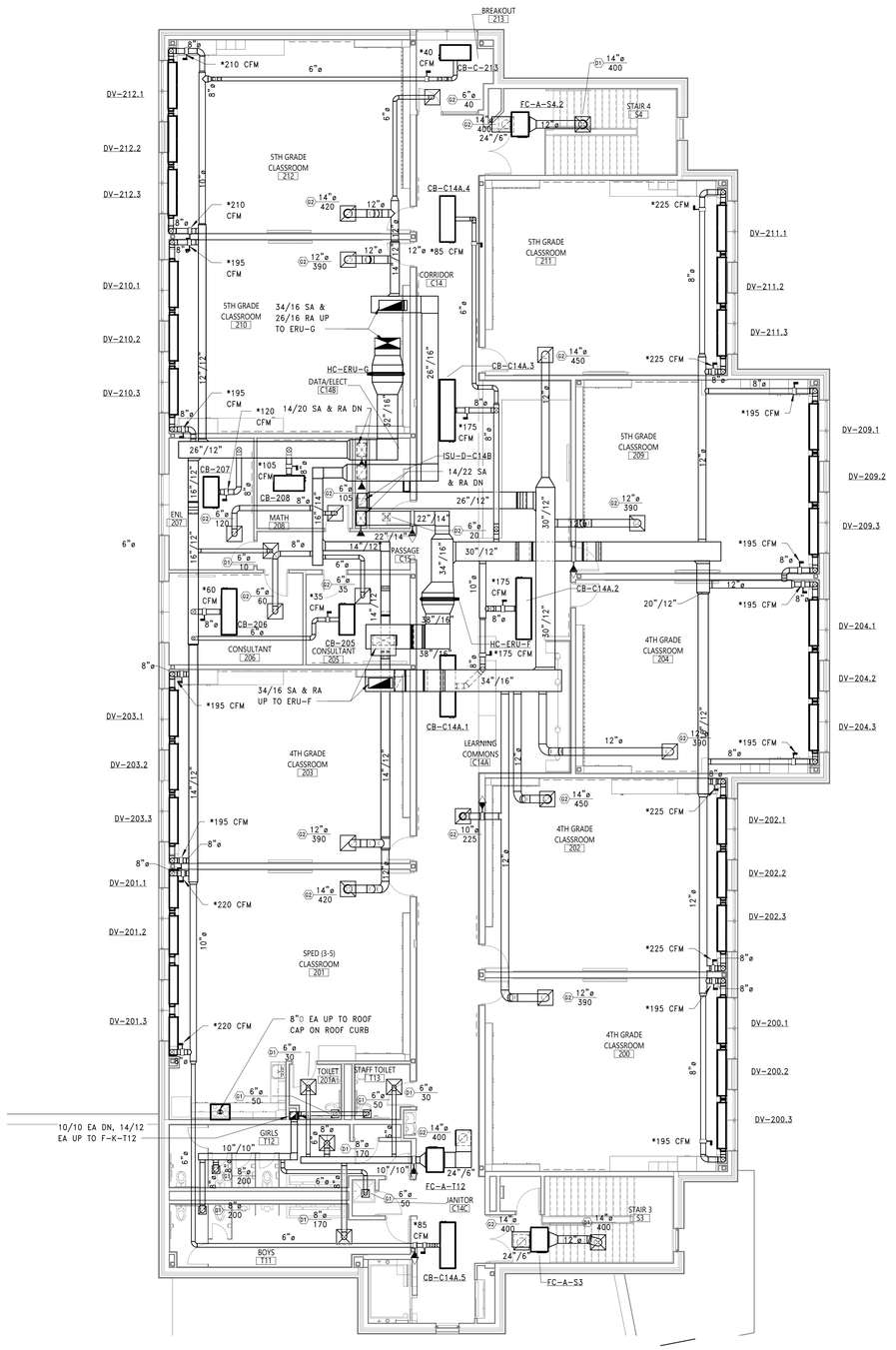
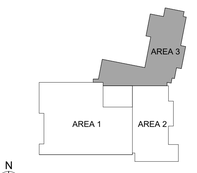


1 SECOND FLOOR - AREA '3'
M123 1/8" = 1'-0"

KEY NOTES

KEY PLAN



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2024 CAPITAL PROJECT

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SECOND FLOOR PLAN - AREA '3'

Sheet No.

TR
M123

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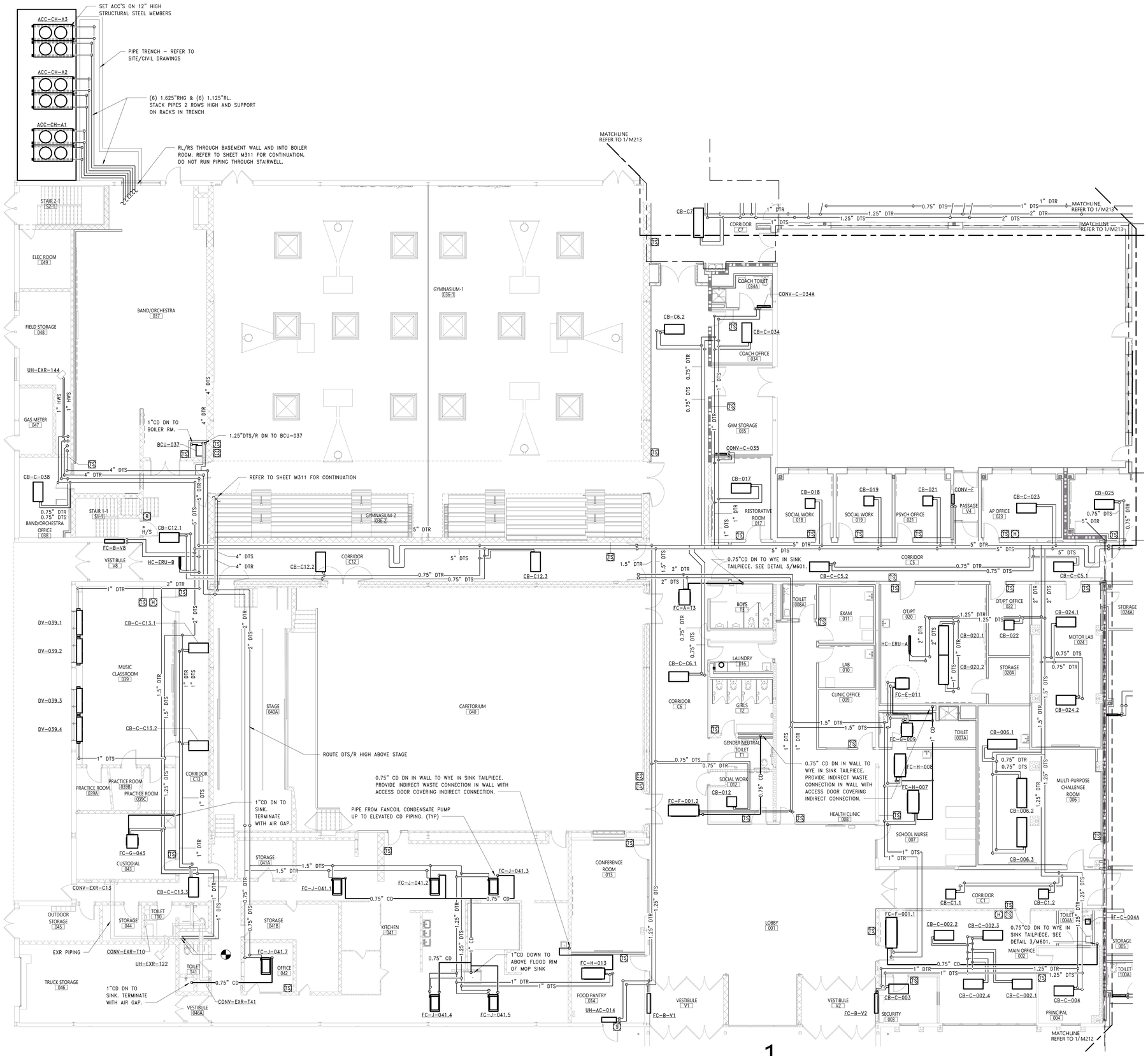

1 FIRST FLOOR PLAN - AREA '1'
M211 1/8" = 1'-0"

KEY NOTES

KEY PLAN

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2024 CAPITAL PROJECT

ZACHARY ROBERT WILSON
097797
LICENSED PROFESSIONAL ENGINEER
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Sheet Title

FIRST FLOOR PLAN - AREA '1'

Sheet No.

TR M211

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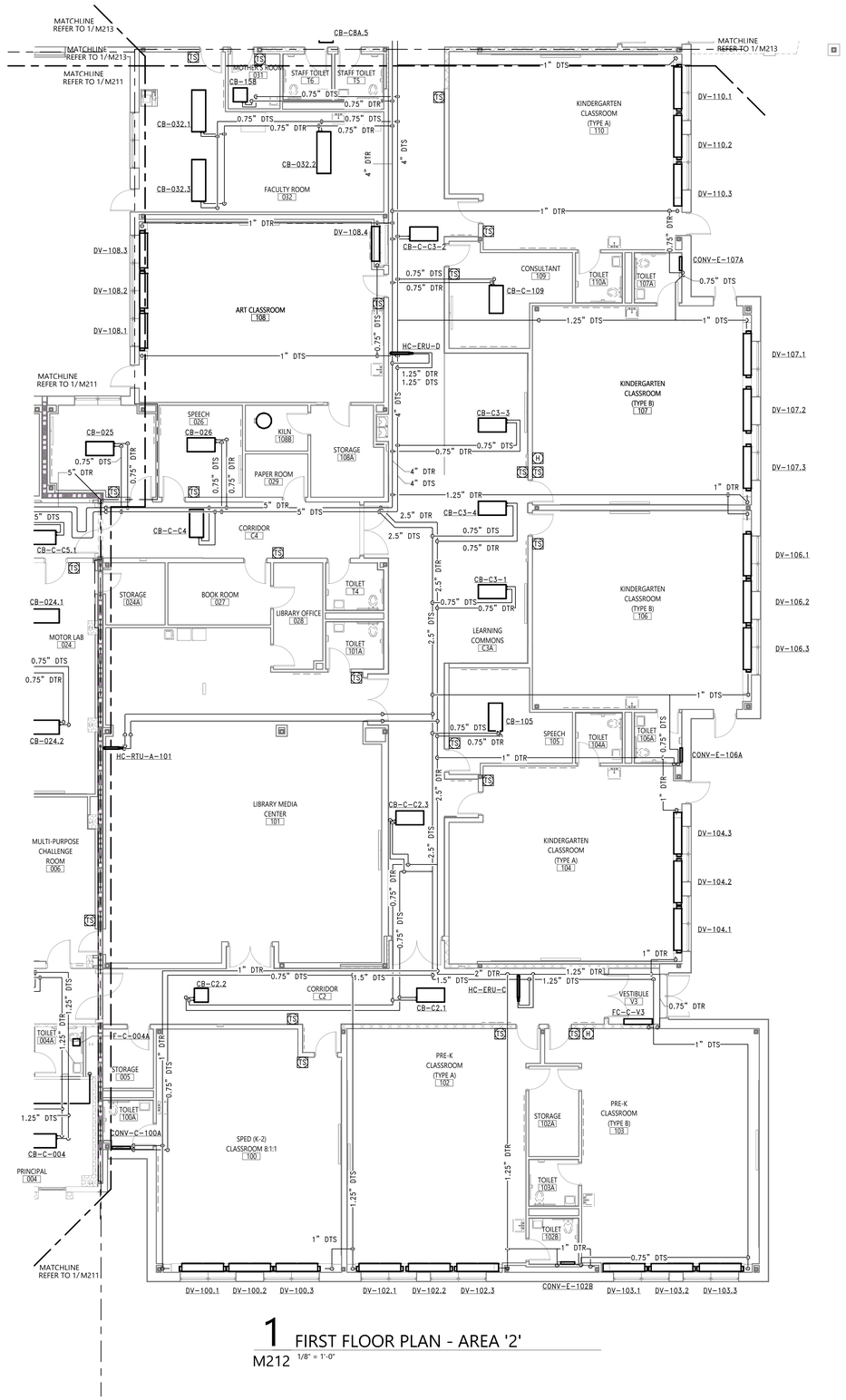
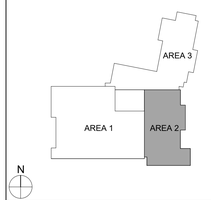


1 FIRST FLOOR PLAN - AREA '2'
M212 1/8" = 1'-0"

KEY NOTES

KEY PLAN



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2024 CAPITAL PROJECT

STATE OF NEW YORK · TAGAMAY ROBERT [illegible] · 097797 · LICENSED PROFESSIONAL ARCHITECT
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Sheet Title
FIRST FLOOR PLAN - AREA '2'

Sheet No.
TR
M212

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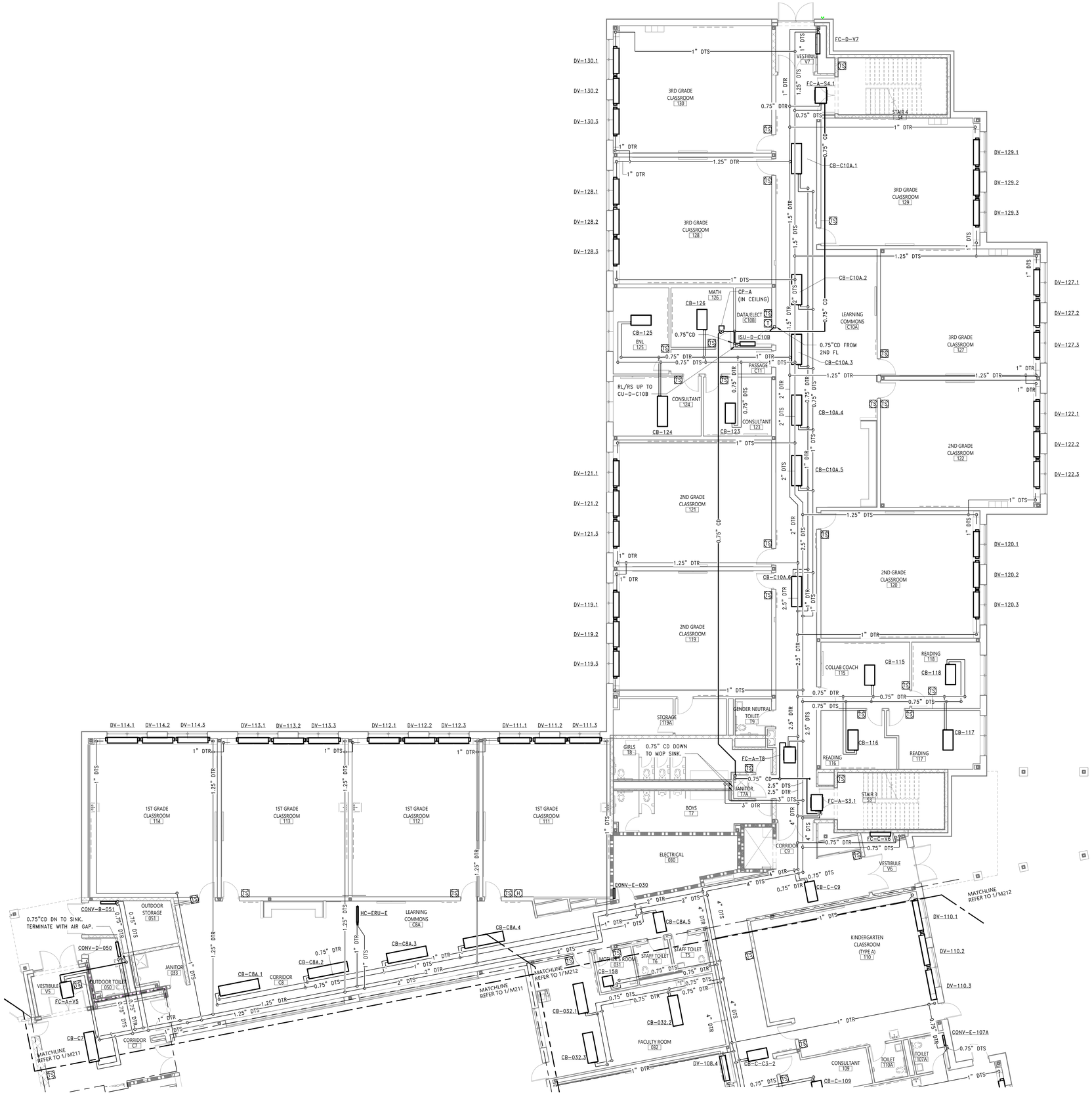
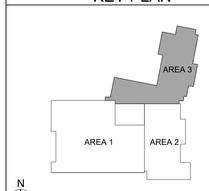


1 FIRST FLOOR PLAN - AREA '3'
M213 1/8" = 1'-0"

KEY NOTES

KEY PLAN



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2024 CAPITAL PROJECT

STATE OF NEW YORK ★ ZACHARY ROBERT MILLER ★ 097797 LICENSED PROFESSIONAL ENGINEER
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Sheet Title
FIRST FLOOR PLAN - AREA '3'

Sheet No.
TR M213

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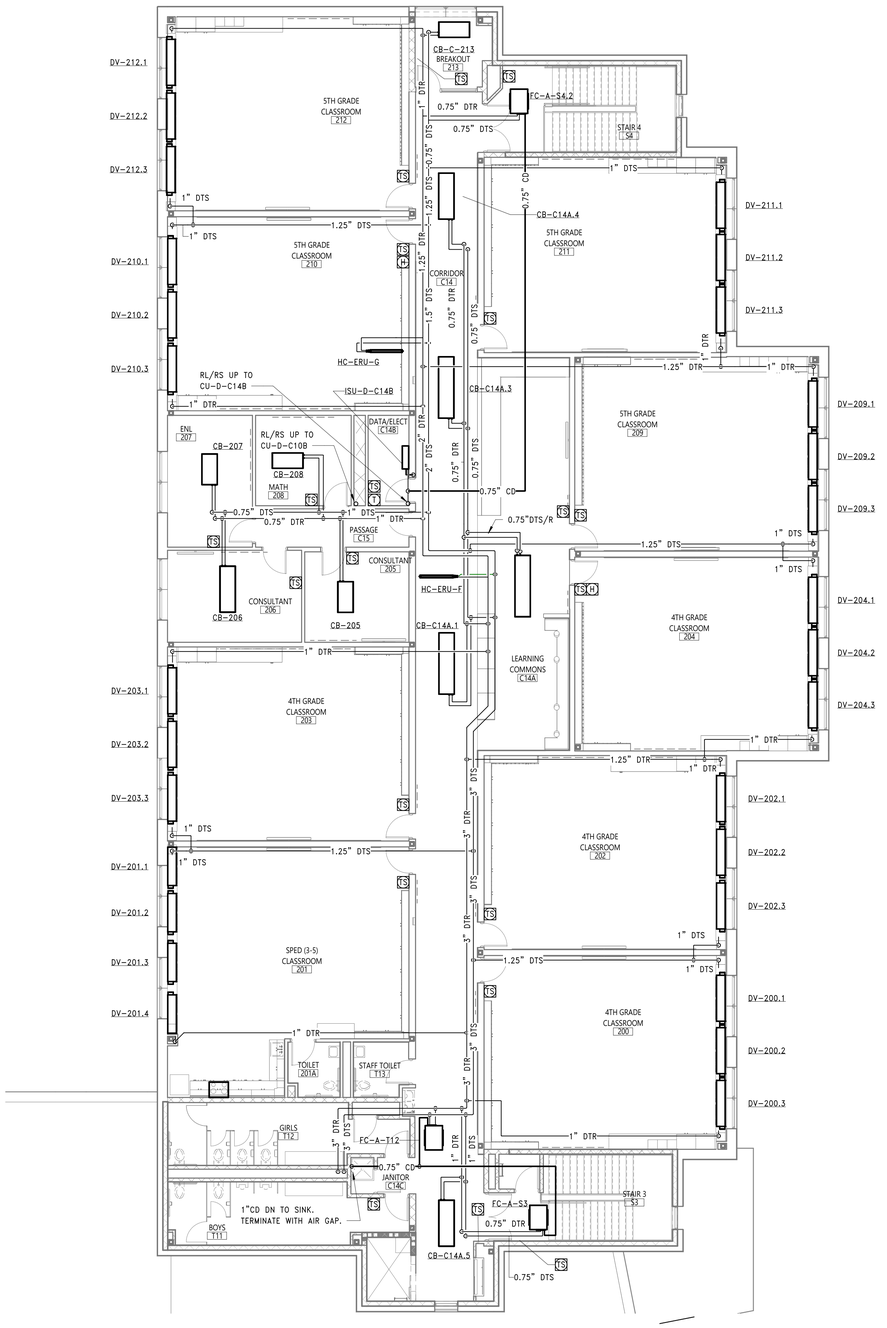
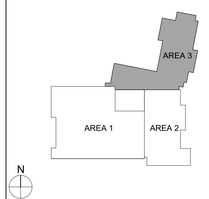


1 SECOND FLOOR - AREA '3'
M223 1/8" = 1'-0"

KEY NOTES

KEY PLAN



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2024 CAPITAL PROJECT

ZACHARY ROBERT WILSON
STATE OF NEW YORK
097797
LICENSED PROFESSIONAL ENGINEER
Expires : 06/30/2028

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Sheet Title

SECOND FLOOR PLAN - AREA '3'

Sheet No.

TR
M223

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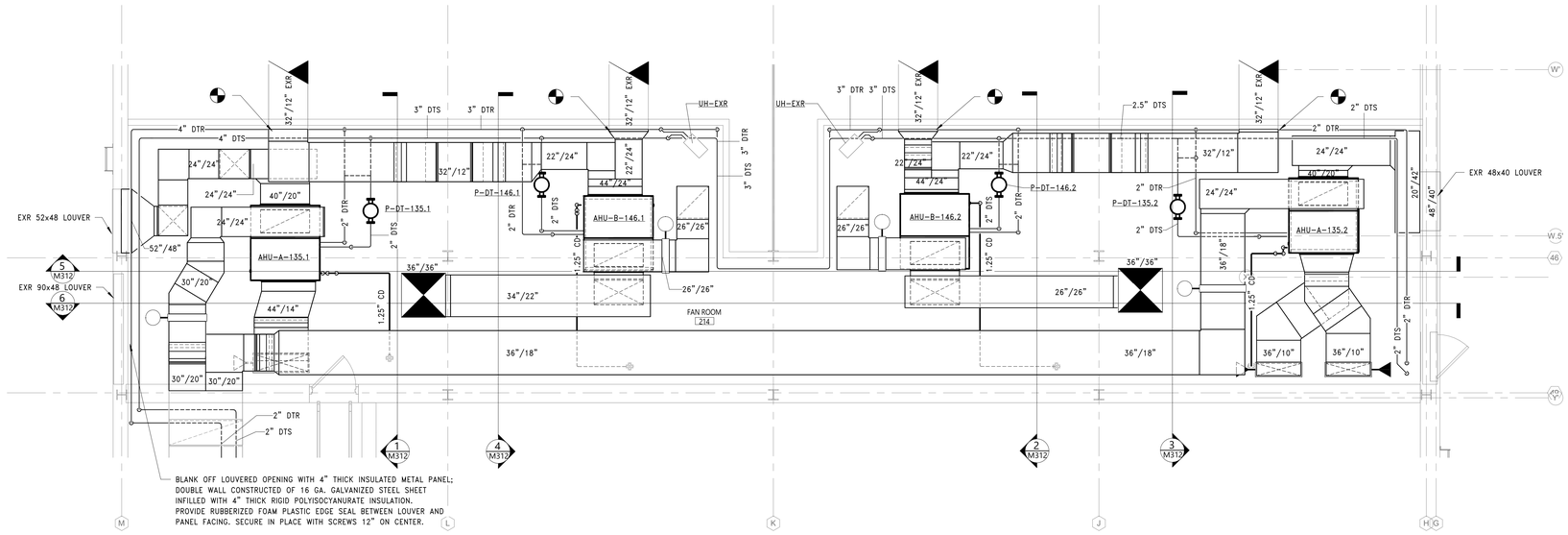
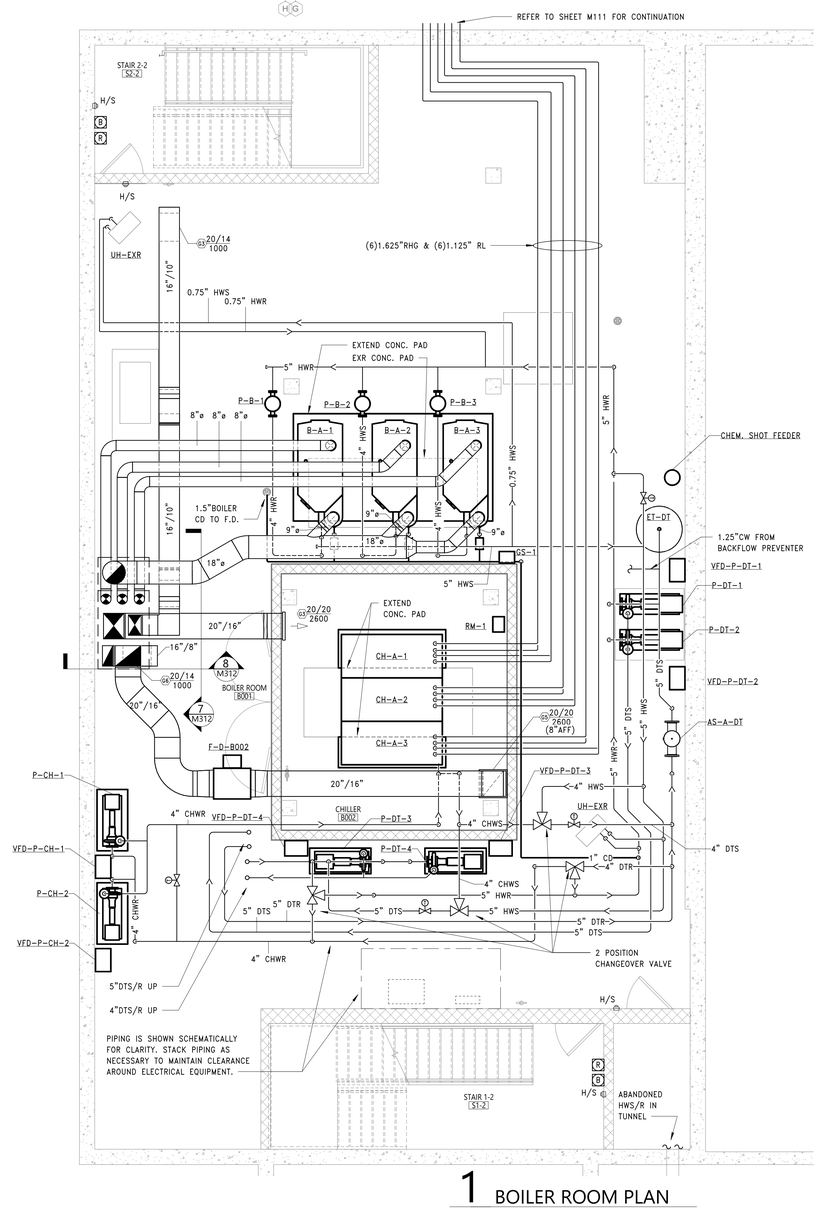


BLANK OFF LOUVERED OPENING WITH 4" THICK INSULATED METAL PANEL; DOUBLE WALL CONSTRUCTED OF 16 GA. GALVANIZED STEEL SHEET INFILLED WITH 4" THICK RIGID POLYISOCYANURATE INSULATION. PROVIDE RUBBERIZED FOAM PLASTIC EDGE SEAL BETWEEN LOUVER AND PANEL FACING. SECURE IN PLACE WITH SCREWS 12" ON CENTER.

2 MEZZANINE PLAN
M311 1/4" = 1'-0"



1 BOILER ROOM PLAN
M311 1/4" = 1'-0"

KEY NOTES

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Sheet Title

ENLARGED PLANS

Sheet No.

TR
M311

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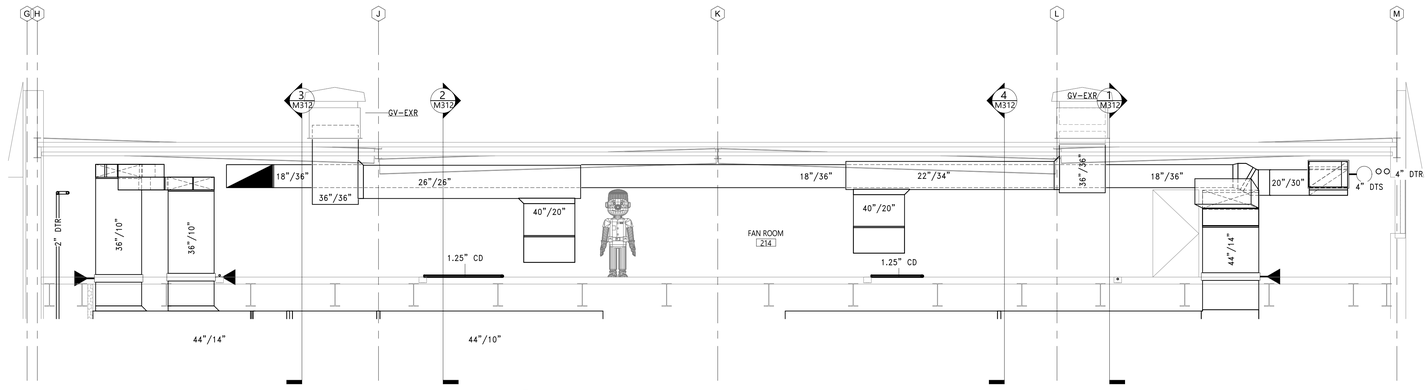
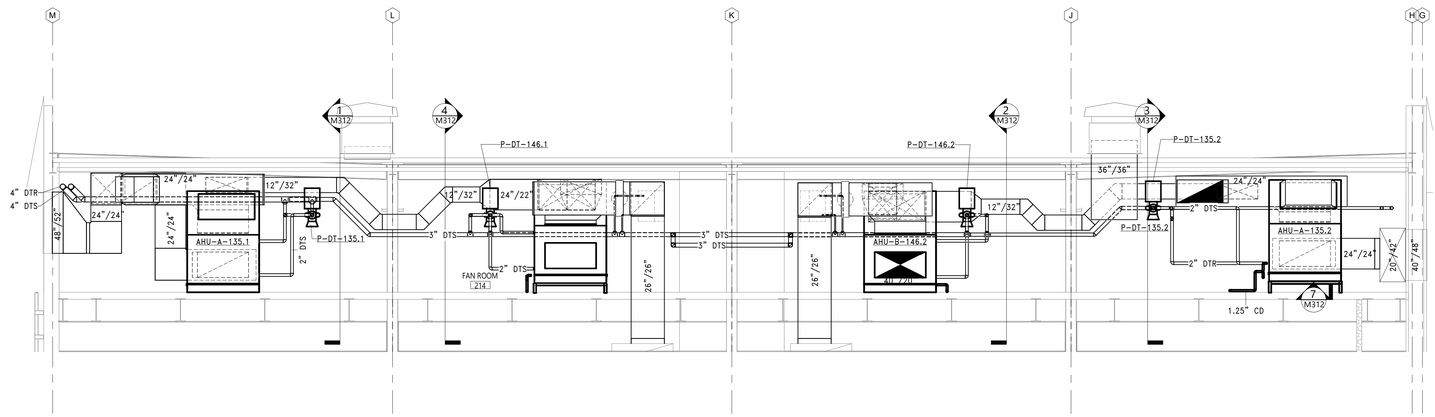
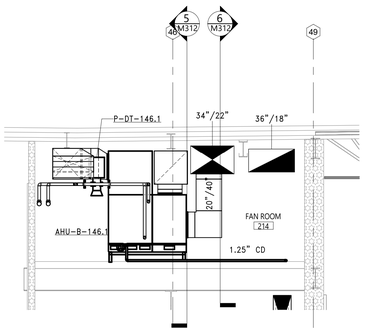


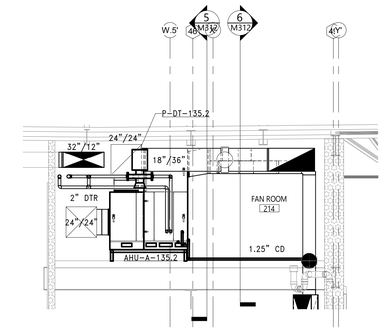
6 SECTION THROUGH MECHANICAL MEZZANINE
M312 1/4" = 1'-0"



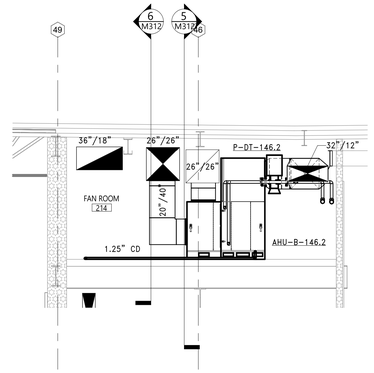
5 SECTION THROUGH MECHANICAL MEZZANINE
M312 1/4" = 1'-0"



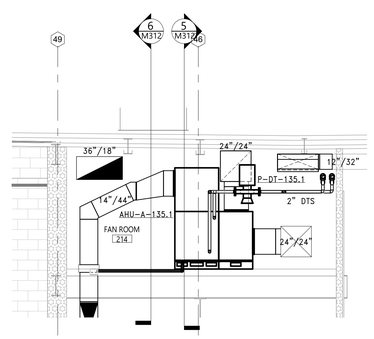
4 SECTION THROUGH MECHANICAL MEZZANINE
M312 1/4" = 1'-0"



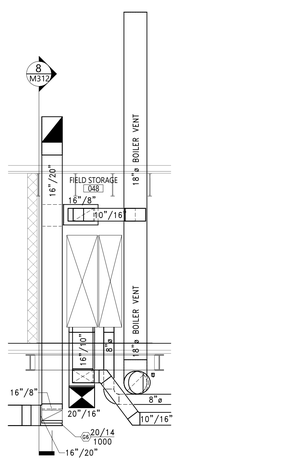
3 SECTION THROUGH MECHANICAL MEZZANINE
M312 1/4" = 1'-0"



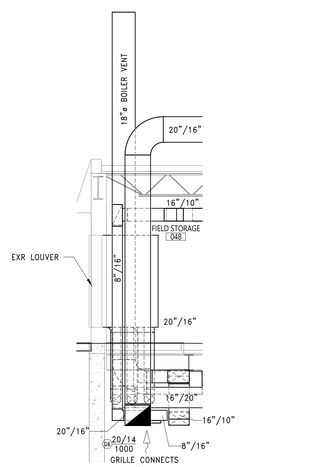
2 SECTION THROUGH MECHANICAL MEZZANINE
M312 1/4" = 1'-0"



1 SECTION THROUGH MECHANICAL MEZZANINE
M312 1/4" = 1'-0"



7 SECTION AT DUCT RISERS
M312 1/4" = 1'-0"



8 SECTION AT DUCT RISERS
M312 1/4" = 1'-0"

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2024 CAPITAL PROJECT

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Sheet Title
SECTIONS

Sheet No.
TR
M312

CONSTRUCTION DOCUMENTS

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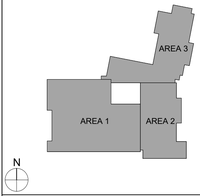
1 ROOF PLAN - AREA '1'
M401 1/16" = 1'-0"

KEY PLAN



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STATE OF NEW YORK
ZACHARY ROBERT MISSIAN
097797
LICENSED PROFESSIONAL ENGINEER
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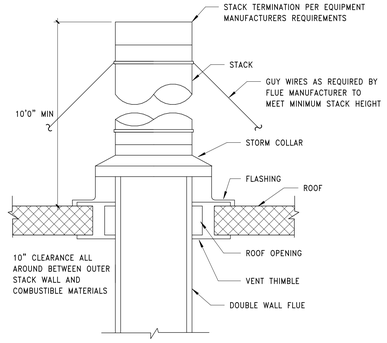
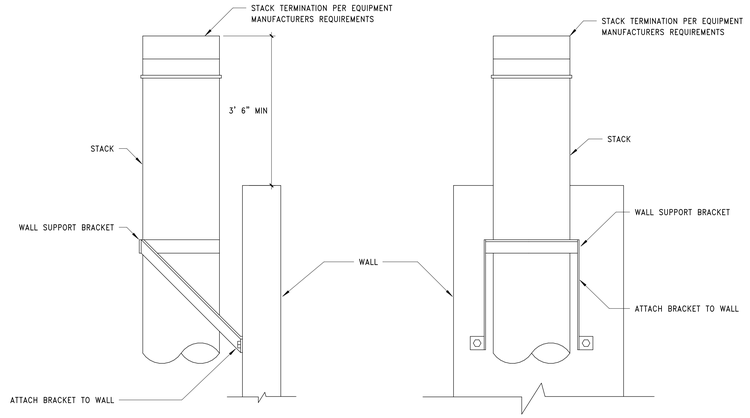
Sheet Title
ROOF PLAN

Sheet No.
TR
M401

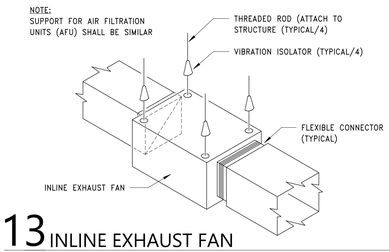
CONSTRUCTION DOCUMENTS

Autodesk Docs://215-2402 Binghamton 2024 Capital Project/Theodore Roosevelt ES MEP.rvt

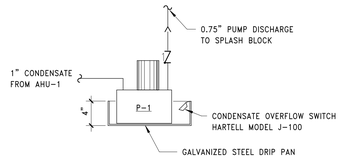




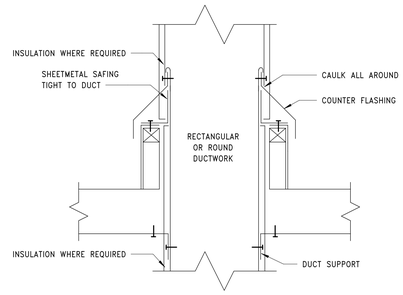
14 FLUE STACK
M601 NTS



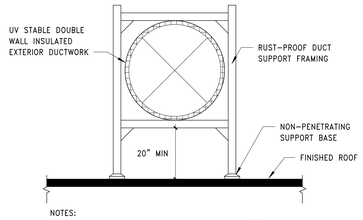
13 INLINE EXHAUST FAN
M601 1/4" = 1'-0"



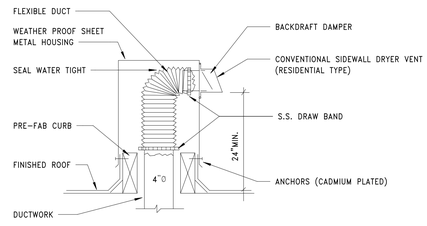
12 CONDENSATE PUMP
M601 1/4" = 1'-0"

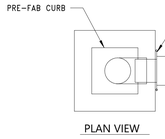


11 DUCT PENETRATION THROUGH ROOF
M601 NTS

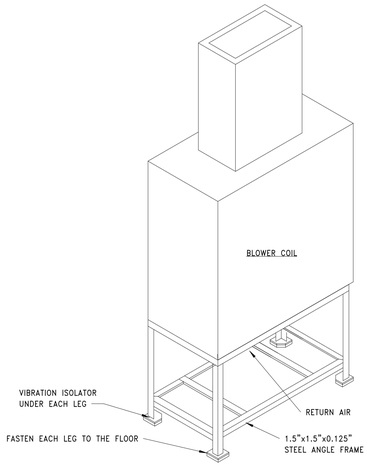


10 ROOFTOP DUCT SUPPORT DETAIL
M601 NTS

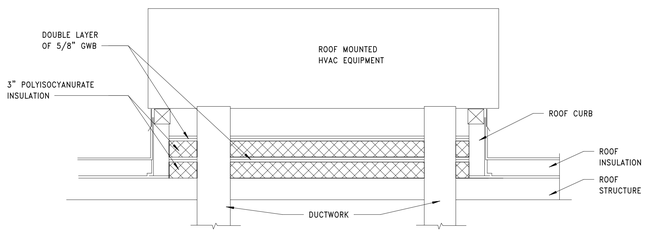




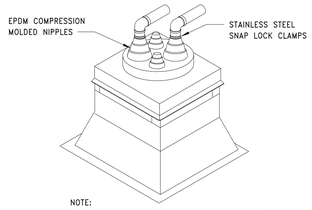
9 DRYER EXHAUST VENT DETAIL
M601 1/8" = 1'-0"



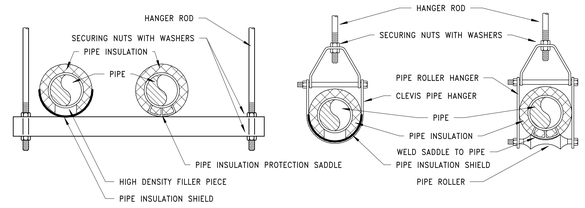
8 BCU STAND
M601 12" = 1'-0"



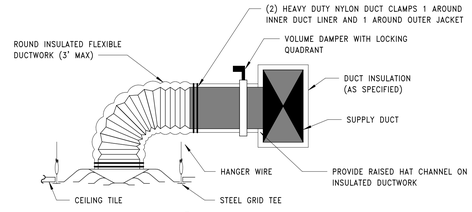
7 SOUND ATTENUATING ROOF CURB INFILL
M601 NTS



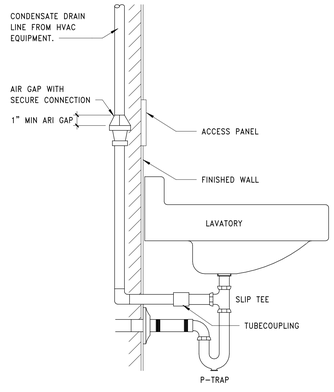
6 PIPE PORTAL
M601 NTS



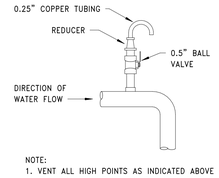
5 PIPE HANGERS
M601 6" = 1'-0"



4 DIFFUSER CONNECTION
M601 NTS



3 CONDENSATE CONNECTION AT P-TRAP
M601 NTS

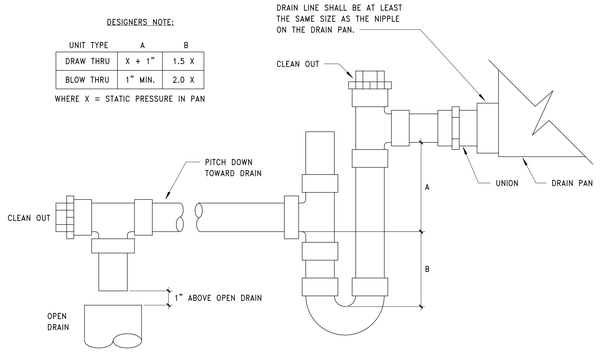


2 AIR VENT
M601 NTS

DESIGNERS NOTE:

UNIT TYPE	A	B
DRAW THRU	X + 1"	1.5 X
BLOW THRU	1" MIN.	2.0 X

WHERE X = STATIC PRESSURE IN PAN



1 AHU CONDENSATE PIPING
M601 NTS

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Project Title
BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

ZACHARY ROBERT WISEMAN
097797
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW YORK
Expires : 06/30/2028

V.	DATE	DESCRIPTION

Drawn By:	DG
Checked By:	ZRW
Proj. #:	03-02-00-01-0-010-014
CSArch Proj. #:	215-2402
Issued for Bid:	03/12/2026

Sheet Title
DETAILS

Sheet No.
TR
M601

CONSTRUCTION DOCUMENTS

Autodesk Docs://215-2402 Binghamton 2024 Capital Project/Theodore Roosevelt ES MEP.rvt

VENTILATION SCHEDULE

ZONE	ROOM #	ROOM NAME	Space Type	AREA (Az)	PEOPLE PER 1000SF	OCCUPANCY (Pz)	OUTDOOR AIR PER PERSON (Rp)	OUTDOOR AIR PER AREA (Ra)	OUTDOOR AIRFLOW (Vbz)	EFFECTIVENESS (Ez)	ZONE OUTDOOR AIR (Voz)	EA FROM FIXTURES	EA/SF	EA	NOTES
ERU-F	122	2ND GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	804	25	20	10	0.12 CFM/SF	297	1	298				
ERU-F	129	3RD GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	802	25	20	10	0.12 CFM/SF	297	1	297				
ERU-F	117	READING	Education – Classroom (Ages 5 – 8)	199	25	5	10	0.12 CFM/SF	74	0.8	93				
ERU-F	116	READING	Education – Classroom (Ages 5 – 8)	163	25	4	10	0.12 CFM/SF	60	0.8	76				
ERU-F	211	5TH GRADE CLASSROOM	Education – Classroom (Age 9 Plus)	805	35	28	10	0.12 CFM/SF	378	1	379				
ERU-F	209	5TH GRADE CLASSROOM	Education – Classroom (Age 9 Plus)	804	35	28	10	0.12 CFM/SF	378	1	378				
ERU-F	204	4TH GRADE CLASSROOM	Education – Classroom (Age 9 Plus)	802	35	28	10	0.12 CFM/SF	377	1	378				
ERU-F	202	4TH GRADE CLASSROOM	Education – Classroom (Age 9 Plus)	801	35	28	10	0.12 CFM/SF	376	1	377				
ERU-F	200	4TH GRADE CLASSROOM	Education – Classroom (Age 9 Plus)	799	35	28	10	0.12 CFM/SF	375	1	376				
ERU-F	C14A	LEARNING COMMONS	Education – Classroom (Age 9 Plus)	614	35	21	10	0.12 CFM/SF	289	0.8	361				
ERU-F															
ERU-G	123	CONSULTANT	Offices – Office Spaces	159	5	1	5	0.06 CFM/SF	14	0.8	17				
ERU-G	130	3RD GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	796	25	20	10	0.12 CFM/SF	294	1	295				
ERU-G	128	3RD GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	794	25	20	10	0.12 CFM/SF	294	1	294				
ERU-G	119A	STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	83		0	0	0.12 CFM/SF	10	0.8	13				
ERU-G	119	2ND GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	786	25	20	10	0.12 CFM/SF	291	1	291				
ERU-G	121	2ND GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	794	25	20	10	0.12 CFM/SF	294	1	294				
ERU-G	124	CONSULTANT	Offices – Office Spaces	208	5	1	5	0.06 CFM/SF	18	0.8	23				
ERU-G	C10	CORRIDOR	Public Spaces – Corridor	Not Placed		0	0	0.06 CFM/SF	Not Computed	0.8					
ERU-G	212	5TH GRADE CLASSROOM	Education – Classroom (Age 9 Plus)	796	35	28	10	0.12 CFM/SF	374	1	375				
ERU-G	126	MATH	Education – Classroom (Age 9 Plus)	147	35	5	10	0.12 CFM/SF	69	0.8	87				
ERU-G	125	ENL	Education – Classroom (Age 9 Plus)	190	35	7	10	0.12 CFM/SF	89	0.8	112				
ERU-G	C11	PASSAGE	Public Spaces – Corridor	98		0	0	0.06 CFM/SF	6	0.8	8				
ERU-G	C10B	DATA/ELECT	Workrooms – Computer (Without Printing)	85	4	0	5	0.06 CFM/SF	7	0.8	9				
ERU-G	210	5TH GRADE CLASSROOM	Education – Classroom (Age 9 Plus)	797	35	28	10	0.12 CFM/SF	375	1	375				
ERU-G	C14	CORRIDOR	Public Spaces – Corridor	1,333		0	0	0.06 CFM/SF	80	0.8	100				
ERU-G	207	ENL	Education – Classroom (Age 9 Plus)	190	35	7	10	0.12 CFM/SF	90	0.8	112				
ERU-G	208	MATH	Education – Classroom (Age 9 Plus)	147	35	5	10	0.12 CFM/SF	69	0.8	87				
ERU-G	C14B	DATA/ELECT	Workrooms – Computer (Without Printing)	63	4	0	5	0.06 CFM/SF	5	0.8	7				
ERU-G	C15	PASSAGE	Public Spaces – Corridor	100		0	0	0.06 CFM/SF	6	0.8	8				
ERU-G	206	CONSULTANT	Offices – Office Spaces	210	5	1	5	0.06 CFM/SF	18	0.8	23				
ERU-G	205	CONSULTANT	Offices – Office Spaces	160	5	1	5	0.06 CFM/SF	14	0.8	18				
ERU-G	203	4TH GRADE CLASSROOM	Education – Classroom (Age 9 Plus)	797	35	28	10	0.12 CFM/SF	375	1	375				
ERU-G	201	SPED (3-5) CLASSROOM	Education – Classroom (Age 9 Plus)	903	35	32	10	0.12 CFM/SF	424	1	425				
ERU-G	213	BREAKOUT	Offices – Office Spaces	85	5	0	5	0.06 CFM/SF	7	0.8	10				
ERU-G															
EX TO REMAIN	041B	STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	233		0	0	0.12 CFM/SF	28	0.8	35				
EX TO REMAIN	042	OFFICE	Offices – Office Spaces	100	5	1	5	0.06 CFM/SF	9	0.8	11				
EX TO REMAIN	041A	STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	88		0	0	0.12 CFM/SF	11	0.8	14				
EX TO REMAIN	041	KITCHEN	Food and Beverage Service – Kitchens (cooking)	1,983	20	40	8	0.12 CFM/SF	535	0.8	670				
EX TO REMAIN															
ZONE 1.2	036-1	GYMNASIUM-1	Sports – Gym/Stadium/Arena	5,623	7	39	20	0.18 CFM/SF	1799	0.8	2250				
ZONE 1.2	036-2	GYMNASIUM-2	Sports – Spectator Areas	713	150	107	8	0.06 CFM/SF	844	0.8	1056				
ZONE 1.2															
Grand total															

VENTILATION SCHEDULE

ZONE	ROOM #	ROOM NAME	Space Type	AREA (Az)	PEOPLE PER 1000SF	OCCUPANCY (Pz)	OUTDOOR AIR PER PERSON (Rp)	OUTDOOR AIR PER AREA (Ra)	OUTDOOR AIRFLOW (Vbz)	EFFECTIVENESS (Ez)	ZONE OUTDOOR AIR (Voz)	EA FROM FIXTURES	EA/SF	EA	NOTES
AHU-A-135	040A	STAGE	Theaters – Stages, Studios	1,091	70	76	10	0.06 CFM/SF	829	1	830				
AHU-A-135	040	CAFETORIUM	Food and Beverage Service – Cafeteria, fast food	3,327	100	333	8	0.18 CFM/SF	3094	1	3095				
AHU-A-135															
ERU-A	017	RESTORATIVE ROOM	Education – Classroom (Ages 5 – 8)	205	25	5	10	0.12 CFM/SF	76	0.8	95				
ERU-A	034	COACH OFFICE	Offices – Office Spaces	136	5	1	5	0.06 CFM/SF	12	0.8	15				
ERU-A	009	CLINIC OFFICE	Offices – Office Spaces	138	5	1	5	0.06 CFM/SF	12	0.8	15				
ERU-A	006	MULTI-PURPOSE CHALLENGE ROOM	Education – Classroom (Ages 5 – 8)	679	25	17	10	0.12 CFM/SF	251	0.8	314				
ERU-A	010	LAB	Workrooms – Pharmacy (prep-area)	99	10	1	5	0.18 CFM/SF	23	0.8	29				
ERU-A	011	EXAM	Offices – Office Spaces	131	5	1	5	0.06 CFM/SF	11	0.8	14				
ERU-A	024	MOTOR LAB	Education – Classroom (Ages 5 – 8)	463	25	12	10	0.12 CFM/SF	171	0.8	214				
ERU-A	022	OT/PT OFFICE	Offices – Office Spaces	123	5	1	5	0.06 CFM/SF	10	0.8	14				
ERU-A	020A	STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	81		0	0	0.12 CFM/SF	10	0.8	13				
ERU-A	004	PRINCIPAL	Offices – Office Spaces	190	5	1	5	0.06 CFM/SF	16	0.8	21				
ERU-A	007	SCHOOL NURSE	Offices – Office Spaces	476	5	2	5	0.06 CFM/SF	40	0.8	51				
ERU-A	001	LOBBY	Offices – Main Entry Lobbies	1,596	10	16	5	0.06 CFM/SF	176	0.8	220				
ERU-A	008	HEALTH CLINIC	Offices – Office Spaces	520	5	3	5	0.06 CFM/SF	44	0.8	56				
ERU-A	003	SECURITY	Offices – Office Spaces	112	5	1	5	0.06 CFM/SF	10	0.8	12				
ERU-A	002	MAIN OFFICE	Offices – Office Spaces	648	5	3	5	0.06 CFM/SF	55	0.8	69				
ERU-A	012	SOCIAL WORK	Offices – Office Spaces	122	5	1	5	0.06 CFM/SF	10	0.8	13				
ERU-A	C6	CORRIDOR	Public Spaces – Corridor	1,371		0	0	0.06 CFM/SF	82	0.8	103				
ERU-A	C5	CORRIDOR	Public Spaces – Corridor	620		0	0	0.06 CFM/SF	37	0.8	47				
ERU-A	020	OT/PT	Offices – Office Spaces	528	5	3	5	0.06 CFM/SF	45	0.8	57				
ERU-A	035	GYM STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	230		0	0	0.12 CFM/SF	28	0.8	35				
ERU-A	C1	CORRIDOR	Public Spaces – Corridor	338		0	0	0.06 CFM/SF	20	0.8	26				
ERU-A	019	SOCIAL WORK	Offices – Office Spaces	149	5	1	5	0.06 CFM/SF	13	0.8	16				
ERU-A	018	SOCIAL WORK	Offices – Office Spaces	148	5	1	5	0.06 CFM/SF	13	0.8	16				
ERU-A	021	PSYCH OFFICE	Offices – Office Spaces	147	5	1	5	0.06 CFM/SF	13	0.8	16				
ERU-A	023	AP OFFICE	Offices – Office Spaces	212	5	1	5	0.06 CFM/SF	18	0.8	23				
ERU-A															
ERU-B	039C	PRACTICE ROOM	Education – Music/Theater/Dance	60	35	2	10	0.06 CFM/SF	25	0.8	31				
ERU-B	039B	PRACTICE ROOM	Education – Music/Theater/Dance	50	35	2	10	0.06 CFM/SF	20	0.8	26				
ERU-B	039A	PRACTICE ROOM	Education – Music/Theater/Dance	58	35	2	10	0.06 CFM/SF	24	0.8	30				
ERU-B	044	STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	59		0	0	0.12 CFM/SF	7	0.8	9				
ERU-B	039	MUSIC CLASSROOM	Education – Music/Theater/Dance	735	35	26	10	0.06 CFM/SF	301	1	302				
ERU-B	014	FOOD PANTRY	Retail Stores, Sales Floor and Showroom Floors – Storage	211		0	0	0.12 CFM/SF	25	0.8	32				
ERU-B	013	CONFERENCE ROOM	Offices – Conference Rooms	343	50	17	5	0.06 CFM/SF	106	0.8	133				
ERU-B	043	CUSTODIAL	Offices – Office Spaces	273	5	1	5	0.06 CFM/SF	23	0.8	30				
ERU-B	C13	CORRIDOR	Public Spaces – Corridor	478		0	0	0.06 CFM/SF	29	0.8	36				
ERU-B	C12	CORRIDOR	Public Spaces – Corridor	1,015		0	0	0.06 CFM/SF	61	0.8	77				
ERU-B	038	BAND/ORCHESTRA OFFICE	Offices – Office Spaces	168	5	1	5	0.06 CFM/SF	14	0.8	18				
ERU-B	037	BAND/ORCHESTRA	Education – Music/Theater/Dance	1,483	35	52	10	0.06 CFM/SF	608	1	609				
ERU-B															
ERU-C	103	PRE-K CLASSROOM (TYPE B)	Education – Classroom (Ages 5 – 8)	917	25	23	10	0.12 CFM/SF	339	1	340				
ERU-C	102	PRE-K CLASSROOM (TYPE A)	Education – Classroom (Ages 5 – 8)	909	25	23	10	0.12 CFM/SF	336	1	337				
ERU-C	105	SPEECH	Education – Classroom (Ages 5 – 8)	212	25	5	10	0.12 CFM/SF	78	0.8	98				
ERU-C	100	SPED (K-2) CLASSROOM 8:1:1	Education – Classroom (Ages 5 – 8)	906	25	23	10	0.12 CFM/SF	335	1	336				
ERU-C	106	KINDERGARTEN CLASSROOM (TYPE B)	Education – Classroom (Ages 5 – 8)	901	25	23	10	0.12 CFM/SF	333	1	334				
ERU-C	104	KINDERGARTEN CLASSROOM (TYPE A)	Education – Classroom (Ages 5 – 8)	901	25	23	10	0.12 CFM/SF	333	1	334				
ERU-C	C3-1	CORRIDOR-1	Public Spaces – Corridor	483		0	0	0.06 CFM/SF	29	0.8	37				
ERU-C	005	STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	62		0	0	0.12 CFM/SF	7	0.8	10				
ERU-C	C2	CORRIDOR	Public Spaces – Corridor	654		0	0	0.06 CFM/SF	39	0.8	50				
ERU-C	102A	STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	94		0	0	0.12 CFM/SF	11	0.8	15				
ERU-C															
ERU-D	108B	KILN	Workrooms – Copy, printing rooms	59	4	0	5	0.06 CFM/SF	5	0.8	6				
ERU-D	108A	STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	130		0	0	0.12 CFM/SF	16	0.8	20				
ERU-D	108	ART CLASSROOM	Education – Art Classroom	902	20	18	10	0.18 CFM/SF	343	1	343				
ERU-D	026	SPEECH	Education – Classroom (Ages 5 – 8)	160	25	4	10	0.12 CFM/SF	59	0.8	74				
ERU-D	029	PAPER ROOM	Retail Stores, Sales Floor and Showroom Floors – Storage	56		0	0	0.12 CFM/SF	7	0.8	9				
ERU-D	C3A	LEARNING COMMONS	Education – Classroom (Ages 5 – 8)	534	25	13	10	0.12 CFM/SF	198	0.8	247				
ERU-D	109	CONSULTANT	Offices – Office Spaces	212	5	1	5	0.06 CFM/SF	18	0.8	23				
ERU-D	107	KINDERGARTEN CLASSROOM (TYPE B)	Education – Classroom (Ages 5 – 8)	901	25	23	10	0.12 CFM/SF	333	1	334				
ERU-D	110	KINDERGARTEN CLASSROOM (TYPE A)	Education – Classroom (Ages 5 – 8)	905	25	23	10	0.12 CFM/SF	335	1	335				
ERU-D	032	FACULTY ROOM	Offices – Conference Rooms	615	50	31	5	0.06 CFM/SF	191	0.8	239				
ERU-D	031	MOTHER'S ROOM	Education – Day Care (Through Age 4)	59	25	1	10	0.18 CFM/SF	25	0.8	32				
ERU-D	C4	CORRIDOR	Public Spaces – Corridor	298		0	0	0.06 CFM/SF	18	0.8	23				
ERU-D	C3-2	CORRIDOR-2	Public Spaces – Corridor	651		0	0	0.06 CFM/SF	39	0.8	49				
ERU-D	025	SPEECH	<Building>	190	23	4	10	0.12 CFM/SF	67						
ERU-D															
ERU-E	C7	CORRIDOR	Public Spaces – Corridor	421		0	0	0.06 CFM/SF	25	0.8	32				
ERU-E	C8A	LEARNING COMMONS	Education – Classroom (Ages 5 – 8)	715	25	18	10	0.12 CFM/SF	265	0.8	331				
ERU-E	113	1ST GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	795	25	20	10	0.12 CFM/SF	294	1	294				
ERU-E	112	1ST GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	794	25	20	10	0.12 CFM/SF	294	1	294				
ERU-E	111	1ST GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	798	25	20	10	0.12 CFM/SF	295	1	296				
ERU-E	114	1ST GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	801	25	20	10	0.12 CFM/SF	297	1	297				
ERU-E	C8	CORRIDOR	Public Spaces – Corridor	877		0	0	0.06 CFM/SF	53	0.8	66				
ERU-E															
ERU-F	115	COLLAB COACH	Offices – Office Spaces	233	5	1	5	0.06 CFM/SF	20	0.8	25				
ERU-F	127	3RD GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	804	25	20	10	0.12 CFM/SF	297	1	298				
ERU-F	C10A	LEARNING COMMONS	Education – Classroom (Age 9 Plus)	615	35	22	10	0.12 CFM/SF	289	0.8	362				
ERU-F	C9	CORRIDOR	Public Spaces – Corridor	392		0	0	0.06 CFM/SF	24	0.8	30				
ERU-F	120	2ND GRADE CLASSROOM	Education – Classroom (Ages 5 – 8)	802	25	20	10	0.12 CFM/SF	297	1	297				
ERU-F	118	READING	Education – Classroom (Ages 5 – 8)	179	25	4	10	0.12 CFM/SF	66	0.8	83				

VENTILATION SCHEDULE - MZ

ZONE	ROOM #	ROOM NAME	Space Type	AREA (Az)	Area per Person	PEOPLE PER 1000SF	OCCUPANCY (Pz)	OUTDOOR AIR PER PERSON (Rp)	OUTDOOR AIR PER AREA (Ra)	OUTDOOR AIRFLOW (Vbz)	EFFECTIVENESS (Ez)	ZONE OUTDOOR AIR (Voz)	PRIMARY AIRFLOW (Vpz)	OUTDOOR AIR FRACTION (Zp)	SYSTEM VENTILATION EFFICIENCY (Ev)	UNCORRECTED OUTDOOR AIR (Vou)	OUTDOOR AIR INTAKE (Vot)	NOTES
RTU-A-108	024A	STORAGE	Retail Stores, Sales Floor and Showroom Floors – Storage	77	0 SF		0	0	0.12 CFM/SF	9	0.8	12	130	0.092308	1	9	9	
RTU-A-108	027	BOOK ROOM	Retail Stores, Sales Floor and Showroom Floors – Storage	132	0 SF		0	0	0.12 CFM/SF	16	0.8	20	215	0.093023	1	16	16	
RTU-A-108	028	LIBRARY OFFICE	Offices – Office Spaces	107	200 SF	5	1	5	0.06 CFM/SF	9	0.8	12	155	0.077419	1	9	9	
RTU-A-108	101	LIBRARY MEDIA CENTER	Education – Media Center	1,756	40 SF	25	44	10	0.12 CFM/SF	650	0.8	813	2800	0.290357	0.8	650	812	
108													3300				846	
RTU-A-108													3300				846	
Grand total													3300				846	

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Project Title

BINGHAMTON CITY SCHOOL DISTRICT
THEODORE ROOSEVELT ELEMENTARY SCHOOL
2024 CAPITAL PROJECT

ZACHARY ROBERT KISSELSTEIN
097797
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW YORK
Expires : 06/30/2028

#	DATE	DESCRIPTION

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Sheet Title

VENTILATION SCHEDULE

Sheet No.

TR M901

CONSTRUCTION DOCUMENTS

Autodesk Docs://215-2402 Binghamton 2024 Capital Project/Theodore Roosevelt ES MEP.rvt

DUCTED HOT WATER COIL SCHEDULE

TAG	CFM	APD (in. WC)	EAT (F)	LAT (F)	EFT (F)	LFT (F)	GPM	MBH	FPD (FT)	WIDTH (IN)	HEIGHT (IN)	MANUFACTURER	MODEL	NOTES
HC-ERU-B	1700	0.3	35	76	135	105	5	75.2	9	20	22	CAPITAL COIL	W8-2022-11B-2CA-R	
HC-ERU-A	2100	0.3	35	76	135	105	6.2	100	9	36	18	CAPITAL COIL	W8-3618-10B-3CA-R	
HC-RTU-A-101	3600	0.3	65	90	135	105	6.5	97.2	9	24	36	CAPITAL COIL	W8-2436-11B-2CA-R	
HC-ERU-C	2500	0.3	35	76	135	105	7.4	110.7	9	36	20	CAPITAL COIL	W2-3620-11B-QCA-R	
HC-ERU-D	2500	0.3	35	76	135	105	7.4	110.7	9	30	20	CAPITAL COIL	W8-3020-10B-3CA-R	
HC-ERU-E	2300	0.3	35	76	135	105	6.8	101.8	9	36	16	CAPITAL COIL	W8-3616-11B-2CA-R	
HC-ERU-F	5000	0.3	35	78	135	105	15.5	232.2	9	50	26	CAPITAL COIL	W8-5026-10B-5CA-R	
HC-ERU-G	3900	0.3	35	77	135	105	11.8	176.9	9	48	22	CAPITAL COIL	W8-4822-11B-5CA-R	

AIR AND DIRT SEPARATOR SCHEDULE

TAG	SERVICE	FLOW	FPD (FT.)	MANUFACTURER	MODEL	NOTES
AS-A-DT	DUAL TEMP	550	2	Xylem, Inc.	CRSN-6F	

FANCOIL UNIT SCHEDULE

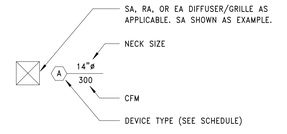
TAG	FAN DATA CFM	ESP (In. Wg)	WATTS	MOTOR CONTROLLER	COOLING COIL DATA EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	EFT (F)	LFT (F)	GPM	SENS. MBH	TOT. MBH	FPD (FT)	HEATING COIL DATA EAT (F)	LAT (F)	EFT (F)	LFT (F)	GPM	MBH	FPD (FT)	ELECTRICAL DATA VOLTAGE	Phase	RLA	MCA	MOCP	DISCONNECT SWITCH	MANUFACTURER	MODEL	NOTES
FC-A	400	0.15	79	CONTROLS CONTACTOR	0	0	0	0	0	0	0	0	0	0	70	118	140	117	2.8	21	6	277	1	0.29		15	FIELD	AIRTHERM	CPFR-04	
FC-B	200	0	80	CONTROLS CONTACTOR	0	0			0	0	0				70	137	140	116	1.8	14.5	3	277	1	0.29		15	FIELD	AIRTHERM	WSFF-03	
FC-C	400	0	79	CONTROLS CONTACTOR	0	0			0	0	0				70	118	140	117	2.8	21	6	277	1	0.29		15	FIELD	AIRTHERM	FETF-04	
FC-D	400	0	79	CONTROLS CONTACTOR	0	0			0	0	0				70	120	140	120	3.5	21.8	7	277	1	0.29		15	FIELD	AIRTHERM	WSFF-04	
FC-E	300	0.2	80	CONTROLS CONTACTOR	75	63	53	52	45	55	2	5	6.5	5	70	107	140	104	1.1	12	2	277	1	0.29		15	FIELD	AIRTHERM	CPFR-03	
FC-F	800	0.2	172	CONTROLS CONTACTOR	75	63	55	54	45	55	4.5	14.7	20.2	11	70	102	140	96	0.5	27.4	3	277	1	0.65		15	FIELD	AIRTHERM	CPFR-10	
FC-G	150	0.2	71	CONTROLS CONTACTOR	75	63	53	52	45	55	1	2.4	3.1	2	70	127	140	111	1.5	9.2	2	277	1	0.26		15	FIELD	AIRTHERM	CPFR-02	
FC-H	600	0.2	157	CONTROLS CONTACTOR	75	63	53	52	45	55	3.9	11	15.2	11	70	107	140	102	0.5	24.2	2	277	1	0.58		15	FIELD	AIRTHERM	CPFR-08	
FC-J	579	0	115	CONTROLS CONTACTOR	80	67	60	58	45	57	2.8	12.7	16.5	8	70	98.3	140	93	0.8	17.7	1.0	208	1		0.63	1	FACTORY PROVIDED	Toshiba Carrier Corporation	MMU-AP0071MH2UL	1

FAN SCHEDULE NOTES:
1. PROVIDE MULTIAQUA CV MINI CONDENSATE PUMP. POWER FROM FANCOIL AUX DRAIN PUMP CONNECTION.

FAN SCHEDULE

TAG	SERVICE	TYPE	FAN DATA CFM	ESP (In. Wg)	RPM	BHP	HP	MOTOR CONTROLLER	ELECTRICAL DATA VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH	MANUFACTURER	MODEL	NOTES
F-A-T5	EXHAUST	ROOF VTLTR	235	0.7	1634	0.1	1/6	0-10 V POTENTIOMETER	115	1	2.8	3.5	15	FIELD	GREENHECK	G-95-VG	
F-B-036.1	EXHAUST	ROOF VTLTR	5000	0.5	716	0.99	2	VARI-GREEN DRIVE	208	1	12.5	15.6	25	FIELD	GREENHECK	G-240-VG	
F-B-036.2	EXHAUST	ROOF VTLTR	5000	0.5	716	0.99	2	VARI-GREEN DRIVE	208	1	12.5	15.6	25	FIELD	GREENHECK	G-240-VG	
F-C-004A	EXHAUST	INLINE	75	0.5	803	0.03	48 WATTS	SPEED CONTROLLER	115	1	1.15	4.1	15	FIELD	GREENHECK	SP-B110	
F-D-B002	EXHAUST	MIXED FLOW	2600	1.2	1493	0.82	1.5	VFD FIELD FURNISHED, FIELD INSTALLED	460	3	3	3.8	15	FIELD	GREENHECK	QEI-15	SPARK 'B' RESISTANCE
F-E-034A	EXHAUST	ROOF VTLTR	85	0.5	1111	0.03	1/4	0-10 V POTENTIOMETER	115	1	3.8	4.8	15	FIELD	GREENHECK	G-097-VG	
F-F-T3	EXHAUST	ROOF VTLTR	500	0.6	1246	0.09	1/4	0-10 V POTENTIOMETER	115	1	3.8	4.8	15	FIELD	GREENHECK	G-100-VG	
F-G-007A	EXHAUST	ROOF VTLTR	120	0.6	1261	0.04	1/4	0-10 V POTENTIOMETER	115	1	3.8	4.8	15	FIELD	GREENHECK	G-097-VG	
F-H-104A	EXHAUST	ROOF VTLTR	200	0.6	9761	0.07	1/10	0-10 V POTENTIOMETER	115	1	1.5	1.9	15	FIELD	GREENHECK	G-080-VG	
F-I-050	EXHAUST	ROOF VTLTR	125	0.5	1187	0.04	1/4	0-10 V POTENTIOMETER	115	1	3.8	4.8	15	FIELD	GREENHECK	G-097-VG	
F-J-102B	EXHAUST	ROOF VTLTR	150	0.6	1331	0.06	1/4	0-10 V POTENTIOMETER	115	1	3.8	4.8	15	FIELD	GREENHECK	G-097-VG	
F-K-T12	EXHAUST	ROOF VTLTR	1050	1.2	1552	0.33	1/2	0-10 V POTENTIOMETER	115	1	6.6	8.2	15	FIELD	GREENHECK	G-120-VG	
F-L-016	DRYER	DEDPV	140	0.3	2600		78 WATTS	MOTOR STARTER – FACTORY FURNISHED, CONTRACTOR INSTALLED	120	1	0.58		15	FIELD	FANTECH	DEDPV-705	1
F-M	EXHAUST	ROOF VTLTR	1000	0.7	1115	0.25	1/4	0-10 V POTENTIOMETER	115	1	3.8	8.2	15	FIELD	GREENHECK	G-140-VG	

FAN SCHEDULE NOTES:
1. PROVIDE MODEL DBLT 4W LINT TRAP FOR FIELD INSTALLATION IN WALL. PROVIDE MODEL DBF 4XLT PRESSURE SWITCH, POWER CORD, INDICATOR PANEL FOR FIELD INSTALLATION.



NOTES:
1. ALL INTERNAL PARTS WHICH MAY BE EXPOSED TO VIEW SHALL HAVE A FLAT BLACK FINISH.
2. DELETE OPPOSED-BLADE DAMPERS AT DEVICES MOUNTED AT FIRE DAMPERS.
3. TRANSITION FROM DUCT SIZE TO NECK SIZE AS REQUIRED.
4. ALL DIFFUSERS, REGISTERS AND GRILLES ARE POWDER COATED WHITE UNLESS OTHERWISE SPECIFIED.
5. PROVIDE BALANCING DAMPERS IN DUCT AT ALL DIFFUSERS/GRILLES REQUIRING BALANCED CFM VALUE. WHERE SPECIFIED AS SUCH, INTEGRAL DIFFUSER/GRILLE DAMPERS SHALL BE PROVIDED.

LINEAR DIFFUSER SCHEDULE

TAG	SYSTEM TYPE	MATERIAL	FINISH	MOUNTING	# OF SLOTS	SLOT WIDTH (IN)	ACCESSORIES	MANUFACTURER	MODEL	NOTES
L1	SUPPLY	STEEL	WHITE POWDER COAT	CEILING	2	0.75	CONCEALED PLASTER FRAME, YOUNG'S REGULATOR	PRICE	SDS	
L2	SUPPLY	STEEL	WHITE POWDER COAT	CEILING	3	1		PRICE	SDS	

DIFFUSER & GRILLE SCHEDULE

TAG	SYSTEM TYPE	SHAPE	NOMINAL SIZE	MATERIAL	FINISH	MOUNTING	ACCESSORIES	MANUFACTURER	MODEL	NOTES
D1	SUPPLY DIFFUSER	SQUARE	24"x24"	STEEL	WHITE POWDER COAT	CEILING	OBD	PRICE	SPD	
D2	SUPPLY DIFFUSER	SQUARE	12"x12"	STEEL	WHITE POWDER COAT	CEILING	OBD, PLASTER FRAME	PRICE	SPD	<varies>
G1	RETURN GRILLE	SQUARE	12"x12"	STEEL	WHITE POWDER COAT	SURFACE		PRICE	PDDR	<varies>
G2	RETURN GRILLE	SQUARE	24"x24"	STEEL	WHITE POWDER COAT	CEILING	INTEGRATED PLENUM	PRICE	80SR	<varies>
G3	SUPPLY GRILLE	RECTANGULAR	AS NOTED	STEEL	WHITE POWDER COAT	SURFACE	OBD	PRICE	520	
G4	RETURN GRILLE	RECTANGULAR	AS NOTED	STEEL	WHITE POWDER COAT	SURFACE	PLASTER MOUNTING FRAME	PRICE	520-RAS-LP	PROVIDE MOD. 520 GRILLE WITH MOD. RAS-LP SILENCER ATTACHED, HOUSED IN HINGED FRAME.
G5	RETURN GRILLE	RECTANGULAR	AS NOTED	STEEL	REFER TO ARCH DWGS	SURFACE		REFER TO ARCH DWGS	--	
G6	RETURN GRILLE	RECTANGULAR	NECK SIZE + 2"	STEEL	WHITE POWDER COAT	SURFACE	OBD	PRICE	535	<varies>

PACKAGED ENERGY RECOVERY UNIT SCHEDULE

TAG	SUPPLY FAN DATA TYPE	CFM	OA CFM	ESP (In. Wg)	RPM	BHP	HP	EXHAUST FAN DATA TYPE	CFM	ESP (In. Wg)	RPM	BHP	HP	DX COIL DATA REFRIGERANT	APD (in. WC)	EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	SENS. MBH	TOT. MBH	HOT GAS REHEAT CAPACITY MBH	ENERGY RECOVERY SECTION DATA WINTER OA TEMP DB (F)	WINTER RA TEMP DB (F)	WINTER LAT DB (F)	SUMMER OA TEMP DB (F)	SUMMER OA TEMP WB (F)	SUMMER RA TEMP DB (F)	SUMMER RA TEMP WB (F)	SUMMER LAT DB (F)	SUMMER LAT WB (F)	ELECTRICAL DATA VOLTAGE	Phase	FLA	MCA	MOCP	DISCONNECT SWITCH	MOTOR CONTROLLER	WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
ERU-A	DIRECT DRIVE BKWD CURVED	2375	2461	2.2	2085	2.46	5	DIRECT DRIVE BKWD CURVE	1635	1.0	1269	0.77	2	R-454B	0.10	80.8	69.3	51.3	51.3	74.8	127.4	59.8	-8	70	32.4	88	71	75	62	80.8	69.3	460	3	29	31	35	FACTORY PROVIDED	INTEGRAL TO UNIT	2340	AAON	RNA-011-B-A-3-GAB0A	
ERU-B	DIRECT DRIVE BKWD CURVED	1700	1846	1.7	1837	1.67	3	DIRECT DRIVE BKWD CURVE	1300	0.9	1871	0.67	2	R-454B	0.2	80.3	66.0	49.8	49.7	55.4	78.2	45.7	-8	70	35.7	88	71	75	62	80.3	66.0	460	3	21	24	30	FACTORY PROVIDED	INTEGRAL TO UNIT	1530	AAON	RNA-007-A-A-3-GAB0A	
ERU-C	DIRECT DRIVE BKWD CURVED	2500	2235	1.8	2072	2.38	5	DIRECT DRIVE BKWD CURVE	2100	0.7	1369	1.04	2	R-454B	0.13	79.8	65.7	48.4	48.3	83.4	119.6	70.5	-8	70	38.6	88	71	75	62	79.5	65.5	460	3	30	32	35	FACTORY PROVIDED	INTEGRAL TO UNIT	2351	AAON	RNA-011-B-A-3-GAB0B	
ERU-D	DIRECT DRIVE BKWD CURVED	2500	2500	1.9	2089	2.44	5	DIRECT DRIVE BKWD CURVE	2225	0.7	1364	1.03	2	R-454B	0.13	79.8	65.7	48.5	48.5	83.6	120	70.5	-8	70	38.1	88	71	75	62	79.8	65.7	460	3	30	32	35	FACTORY PROVIDED	INTEGRAL TO UNIT	2351	AAON	RNA-011-B-A-3-GAB0B	
ERU-E	DIRECT DRIVE BKWD CURVED	2250	2458	2.0	2020	2.24	5	DIRECT DRIVE BKWD CURVE	1965	0.75	1266	0.81	2	R-454B	0.12	79.4	65.4	46.6	46.6	78.9	115.9	68.0	-8	70	38.4	88	71	75	62	79.7	65.7	460	3	30	32	35	FACTORY PROVIDED	INTEGRAL TO UNIT	2351	AAON	RNA-011-B-A3-GAB0B	
ERU-F	DIRECT DRIVE BKWD CURVED	5030	5030	2.5	1485	5.86	7.5	DIRECT DRIVE BKWD CURVE	4290	1.0	1575	2.32	3	R-454B	0.25	79.6	65.6	48.3	48.1	168.9	243.8	142.3	-8	70	38.1	88	71	75	62	79.7	65.6	460	3	54	58	70	FACTORY PROVIDED	INTEGRAL TO UNIT	3702	AAON	RNA-020-C-A-3-GAB0C	
ERU-G	DIRECT DRIVE BKWD CURVED	5070	5070	2.5	1488	5.91	7.5	DIRECT DRIVE BKWD CURVE	3945	1.0	1477	1.94	3	R-454B	0.17	78.5	64.8	50.8	50.7	159.1	220.4	125.9	-8	70	36.5	88	71	75	62	80.2	65.9	460	3	50	53	60	FACTORY PROVIDED	INTEGRAL TO UNIT	3653	AAON	RNA-018-C-A-3-GAB0A	

AIR HANDLING UNIT SCHEDULE

TAG	SERVICE	SUPPLY FAN DATA TYPE	CFM	OA CFM	ESP (In. Wg)	RPM	BHP	HP	HEATING COIL DATA APD (in.WC)	EAT (F)	LAT (F)	EFT (F)	LFT (F)	GPM	MBH	FPD (FT)	COOLING COIL COOLING DATA APD (in. WC)	EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	EFT (F)	LFT (F)	GPM	ELECTRICAL DATA VOLTAGE	CS Phase	FLA	MCA	MOCP	DISCONNECT SWITCH	MOTOR CONTROLLER	WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
AHU-A-135.1	CAFETERIA	DIRECT DRIVE BKWD CURVED	5000	2000	2.5	2176	2 X 2.79	2 X 5	0.2	39	93.8	140	122	35.0	316.8	8	0.8	74	61	53	53	45	55	24.0	460	3	10	12	15	FACTORY PROVIDED	VFD FACTORY FURNISHED, FIELD INSTALLED	1217	AAON	V3-DRB-3-0-26FC-12H	
AHU-A-135.2	CAFETERIA	DIRECT DRIVE BKWD CURVED	5000	2000	2.5	2176	2 X 2.79	2 X 5	0.2	39	93.8	140	122	35.0	316.8	8	0.8	74	61	53	53	45	55	24.0	460	3	10	12	15	FACTORY PROVIDED	VFD FACTORY FURNISHED, FIELD INSTALLED	1217	AAON	V3-DRB-3-0-26FC-12H	
AHU-B-146.1	GYM	DIRECT DRIVE BKWD CURVED	5000	1700	1.5	2011	2 X 2.16	2 X 3	0.18	44	90.3	140	125	35.0	267.5	8	0.86	76	64	54	54	45	56	28.0	460	3	7	8	15	FACTORY PROVIDED	VFD FACTORY FURNISHED, FIELD INSTALLED	1217	AAON	V3-DRB-3-0-26FC-12P	
AHU-B-146.2	GYM	DIRECT DRIVE BKWD CURVED	5000	1700	1.5	2011	2 X 2.16	2 X 3	0.18	44	90.3	140	125	35.0	267.5	8	0.86	76	64	54	54	45	56	28.0	460	3	7	8	15	FACTORY PROVIDED	VFD FACTORY FURNISHED, FIELD INSTALLED	1217	AAON	V3-DRB-3-0-26FC-12P	

ROOFTOP UNIT SCHEDULE

TAG	SUPPLY FAN DATA TYPE	CFM	OA CFM	ESP (In. Wg)	RPM	BHP	HP	EXHAUST FAN DATA TYPE	CFM	ESP (In. Wg)	RPM	BHP	HP	DX COIL DATA REFRIGERANT	APD (in. WC)	EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	SENS. MBH	TOT. MBH	HOT GAS REHEAT CAPACITY MBH	ENERGY RECOVERY SECTION DATA WINTER OA TEMP DB (F)	WINTER RA TEMP DB (F)	WINTER LAT DB (F)	SUMMER OA TEMP DB (F)	SUMMER OA TEMP WB (F)	SUMMER RA TEMP DB (F)	SUMMER RA TEMP WB (F)	SUMMER LAT DB (F)	SUMMER LAT WB (F)	ELECTRICAL DATA VOLTAGE	Phase	FLA	MCA	MOCP	DISCONNECT SWITCH	MOTOR CONTROLLER	WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
RTU-A-101	DIRECT DRIVE BKWD CURVED	3600	1000	1.9	1474	2.29	5	DIRECT DRIVE BKWD CURVE	3600	0.7	1299	1.26	2	R-454B	0.19	76.5	63.5	53.1	52.9	91.0	107.1	62.3	-8	70	65	88	71	75	62	76.5	63.5	460	3	29	31	35	FACTORY PROVIDED	INTEGRAL TO UNIT	2327	AAON	RNA-009-B-A-3-GAB0C	
RTU-B-030	DIRECT DRIVE BKWD CURVED	1200	40	0.6	1230	0.52	1	NONE						R-454B	0.08	75.6	62.4	54.5	52.4	27.3	33.8	NONE	–	–	–	–	–	–	–	–	–	460	3	10	11	15	FACTORY PROVIDED	INTEGRAL TO UNIT	813	AAON	RQA-003-A-A-3-FAA02	

AIR CURTAIN SCHEDULE

TAG	FAN DATA CFM	ESP (In. Wg)	HP	MOTOR CONTROLLER	HEATING COIL DATA EAT (F)	LAT (F)	EFT (F)	LFT (F)	GPM	MBH	FPD (FT)	ELECTRICAL DATA VOLTAGE	PH	FLA	MCA	MOCP	DISCONNECT SWITCH	MFR	MODEL	NOTES
UH-AC	900	0	1/6	DOOR LIMIT SWITCH	70	80	140	137	7	10	01	115	1	2.4	3	15	FIELD	MARS	LPV236-1VA-0B	

PUMP SCHEDULE

TAG	SERVICE	TYPE	GPM	PRESSURE (FT)	RPM	BHP	HP	MOTOR CONTROLLER	ELECTRICAL DATA VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH	MANUFACTURER	MODEL	NOTES
P-B-1	BOILER	INLINE	200	50	1800	4.3	5	VFD FIELD FURNISHED, FIELD INSTALLED	460	3				FIELD	Bell & Gossett	e-80-2.5x2.5x9.5C	
P-B-2	BOILER	INLINE	200	50	1800	4.3	5	VFD FIELD FURNISHED, FIELD INSTALLED	460	3				FIELD	Bell & Gossett	e-80-2.5x2.5x9.5C	
P-B-3	BOILER	INLINE	200	50	1800	4.3	5	VFD FIELD FURNISHED, FIELD INSTALLED	460	3				FIELD	Bell & Gossett	e-80-2.5x2.5x9.5C	
P-CH-2	CHILLER	BASE MOUNTED END SUCTION	360	55	1800	6.4	7.5	VFD FIELD FURNISHED, FIELD INSTALLED	480	3				FIELD	Bell & Gossett	3 BD	
P-CH-1	CHILLER	BASE MOUNTED END SUCTION	360	55	1800	6.4	7.5	VFD FIELD FURNISHED, FIELD INSTALLED	480	3				FIELD	Bell & Gossett	3 BD	
P-DT-135.1	AHU COIL	INLINE	35	32	1800	0.6	1	INTEGRAL ECM, 0-10	208	1				FIELD	Bell & Gossett	ECOCIRC XL 65-130	
P-DT-135.2	AHU COIL	INLINE	35	32	1800	0.6	1	INTEGRAL ECM, 0-10	208	1				FIELD	Bell & Gossett	ECOCIRC XL 65-130	
P-DT-146.1	AHU COIL	INLINE	35	32	1800	0.6	1	INTEGRAL ECM, 0-10	208	1				FIELD	Bell & Gossett	ECOCIRC XL 65-130	
P-DT-146.2	AHU COIL	INLINE	35	32	1800	0.6	1	INTEGRAL ECM, 0-10	208	1				FIELD	Bell & Gossett	ECOCIRC XL 65-130	
P-DT-3	DUAL TEMP	BASE MOUNTED END SUCTION	190	95	1800	6.2	10	VFD FIELD FURNISHED, FIELD INSTALLED	480	3				FIELD	Bell & Gossett	2 EB	
P-DT-4	DUAL TEMP	BASE MOUNTED END SUCTION	190	95	1800	6.2	10	VFD FIELD FURNISHED, FIELD INSTALLED	480	3				FIELD	Bell & Gossett	2 EB	
P-DT-1	DUAL TEMP	BASE MOUNTED END SUCTION	350	105	1800	12.1	20	VFD FIELD FURNISHED, FIELD INSTALLED	480	3				FIELD	Bell & Gossett	3 EB	
P-DT-2	DUAL TEMP	BASE MOUNTED END SUCTION	350	105	1800	12.1	20	VFD FIELD FURNISHED, FIELD INSTALLED	480	3				FIELD	Bell & Gossett	3 EB	

CONVECTOR SCHEDULE

TAG	EAT (F)	GPM	HOT WATER COIL EFT (F)	HOT WATER COIL MBH	LENGTH (IN)	ENCLOSURE DEPTH (IN)	ENCLOSURE HEIGHT (IN)	ENCLOSURE DESCRIPTION	MANUFACTURER	MODEL	NOTES
CONV-B	65	1.1	140	4.5	36	6	32	BOTTOM INLET, SLOPE TOP	AIRTHERM	SW-A	
CONV-C	65	0.4	140	1.7	32	4	24	OPEN INLET, FRONT OUTLET	AIRTHERM	FS-A	
CONV-D	65	1.1	140	4.5	36	6	32	OPEN INLET, FRONT OUTLET	AIRTHERM	FS-A	
CONV-E	65	0.4	140	1.4	24	4	24	OPEN INLET, FRONT OUTLET	AIRTHERM	FS-A	
CONV-F	65	0.2	140	1.8	24	6	30	FLAT TOP, SEMI-RECESSED	AIRTHERM	SR-A	

HYDRONIC EXPANSION TANK SCHEDULE

BUILDING	TAG	TYPE	ACCEPTANCE (GAL)	VOLUME (GAL)	DIAMETER / HEIGHT	SYSTEM FILL (PSIG)	RELIEF VALVE (PSIG)	MANUFACTURER	MODEL	NOTES
TR	ET-DT	BLADDER	106	106	30/49	20	50	BELL GOSSETT	B400	

AIR COOLED CONDENSER SCHEDULE

BUILDING	TAG	NOMINAL TONS	REFRIGERANT	AMBIENT TEMPERATURE (F)	ELECTRICAL DATA VOLTAGE	PHASE	RLA	MCA	MOCP	DISCONNECT SWITCH	MANUFACTURER	MODEL	NOTES
TR	ACC-CH-A3	60	R-454B	95	460	3	16	18	30	FACTORY PROVIDED	CHILLMASTER	RMC460D	
TR	ACC-CH-A2	60	R-454B	95	460	3	16	18	30	FACTORY PROVIDED	CHILLMASTER	RMC460D	
TR	ACC-CH-A1	60	R-454B	95	460	3	16	18	30	FACTORY PROVIDED	CHILLMASTER	RMC460D	

BOILER SCHEDULE

BUILDING	TAG	INPUT MBH	OUTPUT MBH	FUEL	GPM	TURN DOWN RATIO	EFT (F)	LFT (F)	RELIEF VALVE (PSIG)	AFUE (%)	VENT DIAMETER (IN)	INTAKE DIAMETER (IN)	FPD (FT)	ELECTRICAL DATA VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH	MANUFACTURER	MODEL	NOTES
TR	B-A-1	2500	2400	NAT	160	20:1	110	140	50	96.1	9	8	6.2	208	3	4.5	5.6	15	FACTORY PROVIDED	LOCHINVAR	FBN2501	
TR	B-A-2	2500	2400	NAT	160	20:1	110	140	50	96.1	9	8	6.2	208	3	4.5	5.6	15	FACTORY PROVIDED	LOCHINVAR	FBN2501	
TR	B-A-3	2500	2400	NAT	160	20:1	110	140	50	96.1	9	8	6.2	208	3	4.5	5.6	15	FACTORY PROVIDED	LOCHINVAR	FBN2501	

CHILLER SCHEDULE

UNIT	TAG	DESCRIPTION	NOMINAL TONS	REFRIGERANT	KW/TON	AMBIENT TEMPERATURE	GPM	EFT (F)	LFT (F)	FPD (FT)	ELECTRICAL DATA VOLTAGE	Phase	FLA	MCA	MOCP	DISCONNECT SWITCH	MANUFACTURER	MODEL	NOTES
CH	A	MODULAR CHILLER	150	R-454B	0.89	95	322.6	54	44	15	460	3	--	104.2	149.6	FIELD	CHILLMASTER	CMMC5504NWBMPSA	

DISPLACEMENT VENTILATION UNIT SCHEDULE

TAG	UNIT SIZE / INLET (IN)	CFM	OA CFM	DUAL TEMPERATURE COIL													MANUFACTURER	MODEL
					HEATING DATA							COOLING DATA						
				APD (In.WC)	EAT (F)	EFT (F)	LFT (F)	GPM	MBH	FPD (FT)	EFT (F)	LFT (F)	GPM	SENS. MBH	FPD (FT)			
DV-039.1	5/8	330	110	0.37	70	140	131.5	1.5	5.8	1.1	57	59.6	1.5	4.7	1.1		Carson Solutions	QLCI-SC-2-2R
DV-039.2	5/8	330	110	0.37	70	140	131.5	1.5	5.8	1.1	57	59.6	1.5	4.7	1.1		Carson Solutions	QLCI-SC-2-2R
DV-039.3	5/8	330	110	0.37	70	140	131.5	1.5	5.8	1.1	57	59.6	1.5	4.7	1.1		Carson Solutions	QLCI-SC-2-2R
DV-039.4	5/8	330	110	0.37	70	140	131.5	1.5	5.8	1.1	57	59.6	1.5	4.7	1.1		Carson Solutions	QLCI-SC-2-2R
DV-100.1	6/8	450	150	0.44	70	140	131.4	2	7.8	1.2	57	60.4	1.5	6.3	1.2		Carson Solutions	QLCI-SC-2-2R
DV-100.2	6/8	450	150	0.44	70	140	131.4	2	7.8	1.2	57	60.4	1.5	6.3	1.2		Carson Solutions	QLCI-SC-2-2R
DV-100.3	6/8	450	150	0.44	70	140	131.4	2	7.8	1.2	57	60.4	1.5	6.3	1.2		Carson Solutions	QLCI-SC-2-2R
DV-102.1	6/8	450	150	0.44	70	140	131.4	2	7.8	1.2	57	60.4	1.5	6.3	1.2		Carson Solutions	QLCI-SC-2-2R
DV-102.2	6/8	450	150	0.44	70	140	131.4	2	7.8	1.2	57	60.4	1.5	6.3	1.2		Carson Solutions	QLCI-SC-2-2R
DV-102.3	6/8	450	150	0.44	70	140	131.4	2	7.8	1.2	57	60.4	1.5	6.3	1.2		Carson Solutions	QLCI-SC-2-2R
DV-103.1	6/8	405	135	0.35	70	140	132.0	2	7.2	1.2	57	60.2	1.5	5.8	1.2		Carson Solutions	QLCI-SC-2-2R
DV-103.2	6/8	405	135	0.35	70	140	132.0	1.5	7.2	1.2	57	60.2	1.5	5.8	1.2		Carson Solutions	QLCI-SC-2-2R
DV-103.3	6/8	405	135	0.35	70	140	132.0	1.5	7.2	1.2	57	60.2	1.5	5.8	1.2		Carson Solutions	QLCI-SC-2-2R
DV-104.1	6/8	390	130	0.33	70	140	129.9	1.5	7.3	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-104.2	6/8	390	130	0.33	70	140	129.9	1.5	7.3	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-104.3	6/8	390	130	0.33	70	140	129.9	1.5	7.3	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-106.1	6/8	420	140	0.38	70	140	129.3	1.5	7.3	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-106.2	6/8	420	140	0.38	70	140	129.3	1.5	7.3	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-106.3	6/8	420	140	0.38	70	140	129.3	1.5	7.3	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-107.1	6/8	420	140	0.38	70	140	131.8	2	7.4	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-107.2	6/8	420	140	0.38	70	140	131.8	2	7.4	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-107.3	6/8	420	140	0.38	70	140	131.8	2	7.4	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-108.1	6/8	480	160	0.54	70	140	131	2	8.1	1.2	57	60.6	1.5	6.7	1.2		Carson Solutions	QLCI-SC-2-2R
DV-108.2	6/8	480	160	0.54	70	140	131	1.5	8.1	1.2	57	60.6	1.5	6.7	1.2		Carson Solutions	QLCI-SC-2-2R
DV-108.3	6/8	480	160	0.54	70	140	131	1.5	8.1	1.2	57	60.6	1.5	6.7	1.2		Carson Solutions	QLCI-SC-2-2R
DV-108.4	6/8	480	160	0.54	70	140	131	1.5	8.1	1.2	57	60.6	1.5	6.7	1.2		Carson Solutions	QLCI-SC-2-2R
DV-110.1	6/8	390	130	0.33	70	140	132.3	2	7.0	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-110.2	6/8	390	130	0.33	70	140	132.3	1.5	7.0	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-110.3	6/8	390	130	0.33	70	140	132.3	1.5	7.0	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-111.1	6/8	390	130	0.33	70	140	129.9	1.5	6.9	0.6	57	61.3	1	5.4	0.6		Carson Solutions	QLCI-SC-2-2R
DV-111.2	6/8	390	130	0.33	70	140	129.9	1.5	6.9	0.6	57	61.3	1	5.4	0.6		Carson Solutions	QLCI-SC-2-2R
DV-111.3	6/8	390	130	0.33	70	140	129.9	1.5	6.9	0.6	57	61.3	1	5.4	0.6		Carson Solutions	QLCI-SC-2-2R
DV-112.1	6/8	360	120	0.28	70	140	130.5	1.5	6.5	0.6	57	61	1	5.0	0.6		Carson Solutions	QLCI-SC-2-2R
DV-112.2	6/8	360	120	0.28	70	140	130.5	1.5	6.5	0.6	57	61	1	5.0	0.6		Carson Solutions	QLCI-SC-2-2R
DV-112.3	6/8	360	120	0.28	70	140	130.5	1.5	6.5	0.6	57	61	1	5.0	0.6		Carson Solutions	QLCI-SC-2-2R
DV-113.1	6/8	360	120	0.28	70	140	130.5	1.5	6.5	0.6	57	61	1	5.0	0.6		Carson Solutions	QLCI-SC-2-2R
DV-113.2	6/8	360	120	0.28	70	140	130.5	1.5	6.5	0.6	57	61	1	5.0	0.6		Carson Solutions	QLCI-SC-2-2R
DV-113.3	6/8	360	120	0.28	70	140	130.5	1.5	6.5	0.6	57	61	1	5.0	0.6		Carson Solutions	QLCI-SC-2-2R
DV-114.1	6/8	450	150	0.44	70	140	131.4	2	7.8	0.6	57	61.7	1	6.1	0.6		Carson Solutions	QLCI-SC-2-2R
DV-114.2	6/8	450	150	0.44	70	140	131.4	2	7.8	0.6	57	61.7	1	6.1	0.6		Carson Solutions	QLCI-SC-2-2R
DV-114.3	6/8	450	150	0.44	70	140	131.4	2	7.8	0.6	57	61.7	1	6.1	0.6		Carson Solutions	QLCI-SC-2-2R
DV-119.1	5/8	300	100	0.29	70	140	132.1	1.5	5.4	1.1	57	59.4	1.5	4.3	1.1		Carson Solutions	QLCI-SC-2-2R
DV-119.2	5/8	300	100	0.29	70	140	132.1	1.5	5.4	1.1	57	59.4	1.5	4.3	1.1		Carson Solutions	QLCI-SC-2-2R
DV-119.3	5/8	300	100	0.29	70	140	132.1	1.5	5.4	1.1	57	59.4	1.5	4.3	1.1		Carson Solutions	QLCI-SC-2-2R
DV-120.1	5/8	300	100	0.29	70	140	132.1	1.5	5.4	1.1	57	59.4	1.5	4.3	1.1		Carson Solutions	QLCI-SC-2-2R
DV-120.2	5/8	300	100	0.29	70	140	132.1	1.5	5.4	1.1	57	59.4	1.5	4.3	1.1		Carson Solutions	QLCI-SC-2-2R
DV-120.3	5/8	300	100	0.29	70	140	132.1	1.5	5.4	1.1	57	59.4	1.5	4.3	1.1		Carson Solutions	QLCI-SC-2-2R
DV-121.1	5/8	345	115	0.38	70	140	131.2	1.5	6.0	1.1	57	59.7	1.5	4.9	1.1		Carson Solutions	QLCI-SC-2-2R
DV-121.2	5/8	345	115	0.38	70	140	131.2	1.5	6.0	1.1	57	59.7	1.5	4.9	1.1		Carson Solutions	QLCI-SC-2-2R
DV-121.3	5/8	345	115	0.38	70	140	131.2	1.5	6.0	1.1	57	59.7	1.5	4.9	1.1		Carson Solutions	QLCI-SC-2-2R
DV-122.1	5/8	300	100	0.29	70	140	132.1	1.5	5.4	1.1	57	59.4	1.5	4.3	1.1		Carson Solutions	QLCI-SC-2-2R
DV-122.2	5/8	300	100	0.29	70	140	132.1	1.5	5.4	1.1	57	59.4	1.5	4.3	1.1		Carson Solutions	QLCI-SC-2-2R
DV-122.3	5/8	300	100	0.29	70	140	132.1	1.5	5.4	1.1	57	59.4	1.5	4.3	1.1		Carson Solutions	QLCI-SC-2-2R
DV-127.1	6/8	420	140	0.38	70	140	129.3	1.5	7.3	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-127.2	6/8	420	140	0.38	70	140	129.3	1.5	7.3	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-127.3	6/8	420	140	0.38	70	140	129.3	1.5	7.3	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-128.1	6/8	420	140	0.38	70	140	129.3	1.5	7.3	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-128.2	6/8	420	140	0.38	70	140	129.3	1.5	7.3	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-128.3	6/8	420	140	0.38	70	140	129.3	1.5	7.3	1.2	57	60.3	1.5	6.0	1.2		Carson Solutions	QLCI-SC-2-2R
DV-129.1	5/8	375	125	0.45	70	140	130.6	1.5	6.4	0.5	57	61	1	5.1	0.5		Carson Solutions	QLCI-SC-2-2R
DV-129.2	5/8	375	125	0.45	70	140	130.6	1.5	6.4	0.5	57	61	1	5.1	0.5		Carson Solutions	QLCI-SC-2-2R
DV-129.3	5/8	375	125	0.45	70	140	130.6	1.5	6.4	0.5	57	61	1	5.1	0.5		Carson Solutions	QLCI-SC-2-2R
DV-130.1	6/8	420	140	0.38	70	140	129.3	1.5	7.3	0.6	57	61.5	1	5.8	0.6		Carson Solutions	QLCI-SC-2-2R
DV-130.2	6/8	420	140	0.38	70	140	129.3	1.5	7.3	0.6	57	61.5	1	5.8	0.6		Carson Solutions	QLCI-SC-2-2R
DV-130.3	6/8	420	140	0.38	70	140	129.3	1.5	7.3	0.6	57	61.5	1	5.8	0.6		Carson Solutions	QLCI-SC-2-2R
DV-200.1	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-200.2	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-200.3	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-201.1	5/8	330	110	0.37	70	140	131.5	1.5	5.8	1.1	57	59.6	1.5	4.7	1.1		Carson Solutions	QLCI-SC-2-2R
DV-201.2	5/8	330	110	0.37	70	140	131.5	1.5	5.8	1.1	57	59.6	1.5	4.7	1.1		Carson Solutions	QLCI-SC-2-2R
DV-201.3	5/8	330	110	0.37	70	140	131.5	1.5	5.8	1.1	57	59.6	1.5	4.7	1.1		Carson Solutions	QLCI-SC-2-2R
DV-201.4	5/8	330	110	0.37	70	140	131.5	1.5	5.8	1.1	57	59.6	1.5	4.7	1.1		Carson Solutions	QLCI-SC-2-2R
DV-202.1	6/8	450	150	0.44	70	140	128.8	1.5	7.6	1.2	57	60.4	1.5	6.3	1.2		Carson Solutions	QLCI-SC-2-2R
DV-202.2	6/8	450	150	0.44	70	140	128.8	1.5	7.6	1.2	57	60.4	1.5	6.3	1.2		Carson Solutions	QLCI-SC-2-2R
DV-202.3	6/8	450	150	0.44	70	140	128.8	1.5	7.6	1.2	57	60.4	1.5	6.3	1.2		Carson Solutions	QLCI-SC-2-2R
DV-203.1	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-203.2	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-203.3	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-204.1	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-204.2	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-204.3	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-209.1	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-209.2	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-209.3	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-210.1	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-210.2	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-210.3	6/8	390	130	0.33	70	140	129.9	1.5	6.9	1.2	57	60.1	1.5	5.6	1.2		Carson Solutions	QLCI-SC-2-2R
DV-211.1	6/8	450	150	0.44	70	140	131.4	2	7.8	0.6	57	61.7	1	6.1	0.6		Carson Solutions	QLCI-SC-2-2R
DV-211.2	6/8	450	150	0.44	70	140	131.4	2	7.8	0.6	57	61.7	1	6.1	0.6		Carson Solutions	QLCI-SC-2-2R
DV-211.3	6/8	450	150	0.44	70	140	131.4	2	7.8	0.6	57	61.7	1	6.1	0.6		Carson Solutions	QLCI-SC-2-2R
DV-212.1	6/8	420	140	0.38	70	140	131.8	2	7.4	0.6	57	61.5	1	5.8	0.6		Carson Solutions	QLCI-SC-2-2R
DV-212.2	6/8	420	140	0.38	70	140	131.8	2	7.4	0.6	57	61.5	1	5.8	0.6		Carson Solutions	QLCI-SC-2-2R
DV-212.3	6/8	420	140	0.38	70	140	131.8	2	7.4	0.6	57	61.5	1	5.8	0.6		Carson Solutions	QLCI-SC-2-2R

NOTES:
1. OA CFM AND CFM ARE UNIT RATING AIRFLOWS. REFER TO PLANS FOR ACTUAL OA CFM.

CHILLED BEAM SCHEDULE

TAG	LENGTH (FT)	CFM	OA CFM	DUAL TEMPERATURE COIL													MANUFACTURER	MODEL
				APD (In.WC)	HEATING DATA						COOLING DATA							
					EAT (F)	EFT (F)	LFT (F)	GPM	MBH	FPD (FT)	EFT (F)	LFT (F)	GPM	SENS. MBH	FPD (FT)			
CB-C-004	4	200	40	0.46	70	140	106.6	0.5	8.1	1.0	57	60.9	1.5	3.9	9.4		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-C-002.2	4	200	40	0.46	70	140	106.6	0.5	8.1	1.0	57	62.5	1	3.8	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-C-002.3	4	200	40	0.46	70	140	106.6	0.5	8.1	1.0	57	62.5	1	3.8	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-C2.2	2	120	30	0.41	70	140	125.3	0.5	3.5	0.7	57	58.7	1.5	2.1	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-126	4	280	70	0.49	70	140	104.3	0.5	8.6	1.0	57	63	1	4.7	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-125	4	345	115	0.42	70	140	102.8	0.5	8.7	1.0	57	60.5	2	6.4	2.1		CARSON SOLUTIONS	CB-H24-2way-DC-2-4R
CB-123	4	175	35	0.35	70	140	109.3	0.5	7.5	1.0	57	60.6	1.5	3.6	9.4		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-117	4	300	100	0.32	70	140	104.9	0.5	8.2	1.0	57	62.8	1	5.4	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-116	4	300	100	0.32	70	140	104.9	0.5	8.2	1.0	57	66.4	0.5	4.9	1.0		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-207	4	360	120	0.45	70	140	102.2	0.5	8.8	1.0	57	63.3	1	6.2	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-208	4	315	105	0.35	70	140	104.2	0.5	8.4	1.0	57	63	1	5.6	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-206	6	300	60	0.44	70	140	95.3	0.5	10.9	0.2	57	62.6	1.5	5.7	1.7		CARSON SOLUTIONS	CB-H24-2way-DC-2-4R
CB-C8A.1	8	480	120	0.37	70	140	86.9	0.5	12.6	0.2	57	63.9	1.5	8.2	2.2		CARSON SOLUTIONS	CB-H24-2way-DC-2-3R
CB-C-C9	4	225	45	0.58	70	140	104.4	0.5	8.7	1.0	57	62.9	1	4.1	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-C-213	4	200	40	0.46	70	140	106.6	0.5	8.1	1.0	57	65.9	0.5	3.2	1.0		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-C-109	4	175	35	0.35	70	140	109.3	0.5	7.5	1.0	57	60.6	1.5	3.6	9.5		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-026	4	330	110	0.38	70	140	103.5	0.5	8.6	1.0	57	66.8	0.5	5.2	1.0		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-025	4	330	110	0.38	70	140	103.5	0.5	8.6	1.0	57	66.8	0.5	5.2	1.0		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-C2.1	4	300	100	0.32	70	140	104.9	0.5	8.3	1.0	57	62.8	1	5.4	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-105	4	330	110	0.38	70	140	103.5	0.5	8.6	1.0	57	66.8	0.5	5.2	1.0		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-032.1	6	340	85	0.32	70	140	97.4	0.5	10.2	1.5	57	64.3	1	5.8	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-032.2	6	340	85	0.32	70	140	97.4	0.5	10.2	1.5	57	64.3	1	5.8	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-C-034	4	280	70	0.49	70	140	104.3	0.5	8.6	0.1	57	60.3	2	5.1	2.1		CARSON SOLUTIONS	CB-H24-2way-DC-2-3R
CB-C6.2	4	240	60	0.36	70	140	107.2	0.5	7.9	1.0	57	62.4	1	4.2	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-C-C6.1	4	240	60	0.36	70	140	107.2	0.5	7.9	1.0	57	62.4	1	4.2	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-C-C5.1	4	225	45	0.58	70	140	104.4	0.5	8.7	1.0	57	62.9	1	4.1	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-017	4	300	100	0.32	70	140	104.9	0.5	8.3	1.0	57	66.4	0.5	4.9	1.0		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-018	2	140	35	0.55	70	140	133.8	1.8	5.2	8.0	57	58.9	1.5	2.3	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-019	2	140	35	0.55	70	140	133.8	1.8	5.2	8	57	58.9	1.5	2.3	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-021	2	140	35	0.55	70	140	132.9	1.5	5.2	5.9	57	58.9	1.5	2.3	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-C-023	4	175	35	0.35	70	140	109.3	0.5	7.5	1.0	57	62	1	3.4	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-020.1	6	250	50	0.31	70	140	99.7	0.5	9.8	0.2	57	60.8	2	5.1	2.9		CARSON SOLUTIONS	CB-H24-2way-DC-2-4R
CB-012	2	140	35	0.55	70	140	133.8	1.8	5.2	8	57	58.9	1.5	2.3	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-024.1	4	330	110	0.38	70	140	103.5	0.5	8.6	1.0	57	66	0.5	5.2	1.0		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-022	2	120	30	0.41	70	140	125.3	0.5	3.5	0.7	57	58.7	1.5	2.1	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-C12.3	4	225	45	0.58	70	140	104.4	0.5	8.7	1.0	57	62.9	1	4.1	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-C-C13.1	4	225	45	0.58	70	140	104.4	0.5	8.7	0.1	57	60.3	2	4.4	2.1		CARSON SOLUTIONS	CB-H24-2way-DC-2-4R
CB-158	2	140	35	0.55	70	140	123.9	0.5	3.8	0.7	57	61.3	0.5	2.0	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-006.3	6	440	110	0.54	70	140	91.4	0.5	11.6	1.5	57	65.5	1	7.0	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-006.1	6	440	110	0.54	70	140	91.4	0.5	11.6	1.5	57	65.5	1	7.0	5.9		CARSON SOLUTIONS	CB-H24-2way-SC-2-3R
CB-024.2	4	330	110	0.38	70	140	103.5	0.5	8.6	1.0	57	66	0.5	5.2	1.0		CARSON SOLUTIONS	CB-H24-2way-SC-2-2R
CB-C-C4	4	150	30	0.26	70	140	112.5	0.5	6.7	1.0	57	61.5	1	3.0	4.2		CARSON SOLUTIONS	CB-H24-2way-SC-2-4R
CB-C7	6	300	60	0.44	70	140	95.3	0.5	10.9	0.2	57	62.6	1.5	5.7	1.7		CARSON SOLUTIONS	CB-H24-2way-DC-2-4R
CB-115	4	175	35	0.35	70	140	109.3	0.5	7.5	1.0	57	65.2	0.5	3.0