ELEMENTARY SCHOOL HVAC UPGRADE & HIGH SCHOOL ROOFTOP UNIT PROJECT

PREPARED FOR

SCHUYLKILL VALLEY SCHOOL DISTRICT

BERKS COUNTY, PENNSYLVANIA

BY

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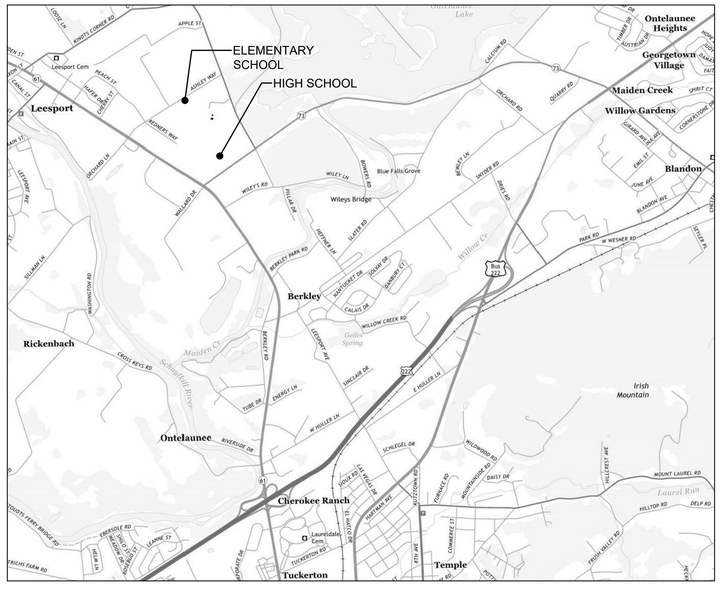
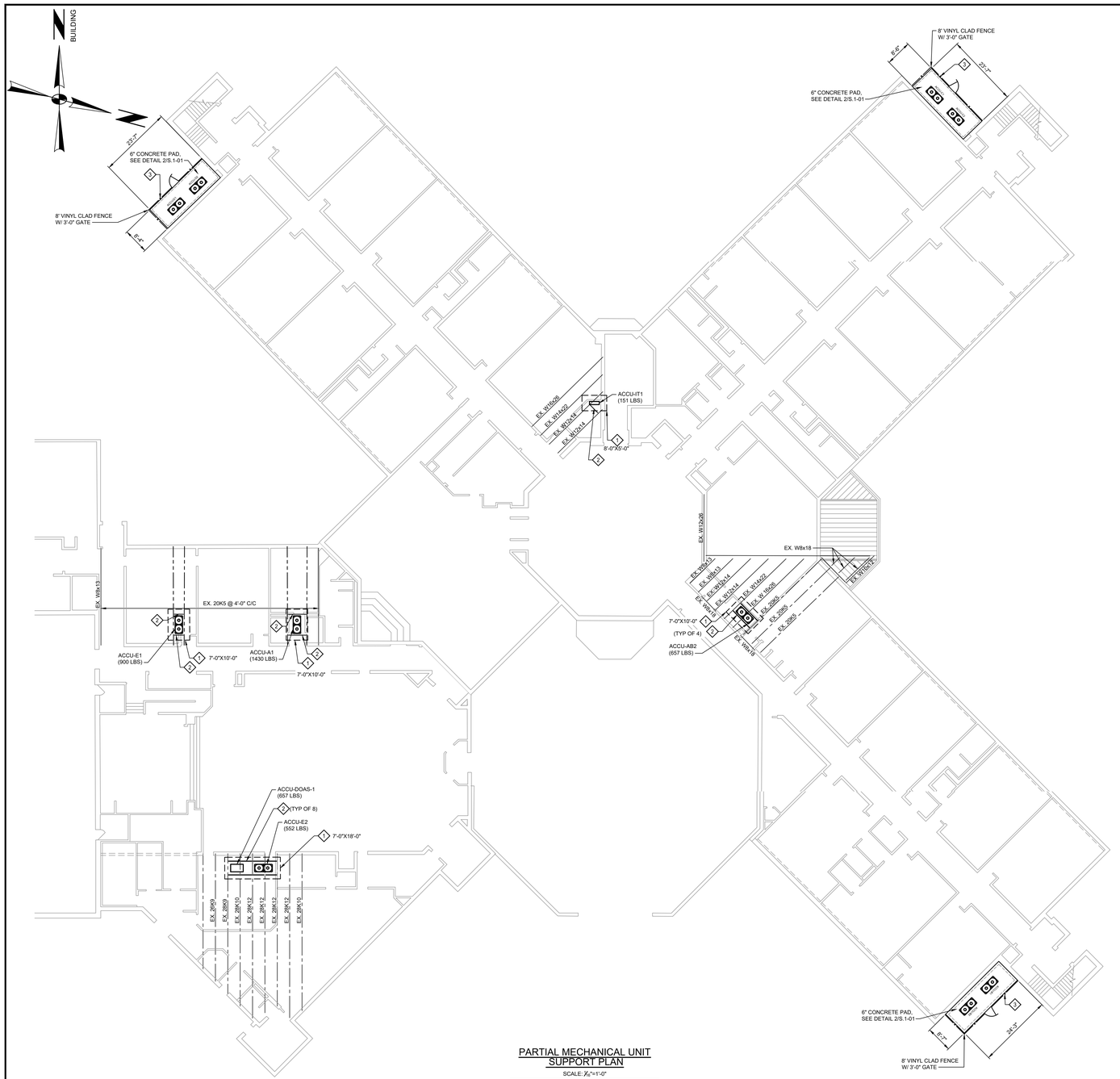
INDEX TO DRAWINGS

ELEMENTARY SCHOOL

LOCATION MAP



ISSUED FOR CONSTRUCTION
04/13/22



PARTIAL MECHANICAL UNIT SUPPORT PLAN

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

8' 0' 8' 16' 24' 32' 40'

NOTE:
STRUCTURAL ROOF BACKGROUND INFORMATION TAKEN FROM NEW ELEMENTARY SCHOOL DRAWINGS S-3 ROOF FRAMING PLAN SECTION 'A' AND S-8 ROOF FRAMING PLAN SECTION 'E' AS PREPARED BY BASCO ASSOCIATES - ARCHITECTS, ENGINEERS AND PLANNERS, DATED 11-26-93, ISSUED TO SCHUYLKILL VALLEY SCHOOL DISTRICT.

INSTALLATION NOTES

1. - ADVANCED SUPPORT PRODUCTS ASCP1112R NON-PENETRATING ROOF PLATFORM SUPPORTING ROOF-TOP EQUIPMENT PER MECHANICAL DRAWINGS. TOP OF PLATFORM 1'-6" ABOVE ROOF.
2. - PROVIDE L6X6X3/8" BETWEEN EXISTING JOISTS OR STEEL BEAMS AT NEW ROOFTOP EQUIPMENT. PROVIDE JOIST REINFORCING PER TYPICAL DETAIL, THIS SHEET AT JOISTS.
3. - PROVIDE MIN 4X4 P.T. POSTS AT 5FT MAX ON CENTER. POST ANCHORAGE BY FENCE SUPPLIER

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISC'S CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES' AND 'SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN', LATEST EDITION
2. STEEL MATERIALS
   - W-SHAPES, WT-SHAPES — ASTM A 992, Fy=50,000 psi
   - CHANNELS, ANGLES — ASTM A 36, Fy=36,000 psi
   - PLATE AND BAR — ASTM A 36, Fy=36,000 psi
   - HOLLOW STRUCTURAL SECTIONS — ASTM A500 GR C (RECTANGULAR - Fy=50,000 PSI / ROUND - Fy = 46,000 PSI)
   - S-SHAPES, ST-SHAPES — ASTM A 36, Fy=36,000 psi
   - CRANE RAILS — ASTM A759
   - STEEL PIPE — ASTM A 53, TYPE E OR TYPE S, GRADE B.
3. CONNECTOR MATERIALS:
   - BOLTS — COMPLY WITH ASTM F3125 FOR TENSION CONTROLLED HIGH STRENGTH BOLT-NUT-WASHER ASSEMBLY. BOLTS TO BE A325, TYPE 1, UNLESS NOTED OTHERWISE. PROVIDE GRADE F490 WHERE NOTED. PROVIDE WITH HEX HEADS AND SPLINED ENDS.
   - WELDING ELECTRODES — COMPLY WITH AWS D1.1 REQUIREMENT
   - UNHEADED ANCHOR RODS — ASTM F1554, GRADE 36, Fy=36,000 psi. PROVIDE WITH WITH ASTM A563 HEAVY-HEX CARBON STEEL NUTS AND ASTM F 436, TYPE 1, HARDENED CARBON STEEL WASHERS. HOT-DIPPED GALVANIZED FINISH.
   - SHEAR STUDS — AWS D1.1 CLAUSE 7.2.6, TYPE B
   - THREADED RODS — ASTM A36, Fy=36,000 psi
   - CLEVISES, TURNBUCKLES — COLD-FINISHED CARBON STEEL BARS, ASTM A 108, GRADE 1035.
4. BEAM-TO-BEAM AND BEAM-TO-COLUMN CONNECTIONS SHALL BE AISC STANDARD FULL DEPTH CONNECTIONS, UNLESS NOTED OTHERWISE. WHERE REACTIONS ARE INDICATED ON THE DRAWINGS, THE CONNECTION SHALL BE PROVIDED BY THE FABRICATOR. DETAILS AND CALCULATIONS, PREPARED BY A LICENSED ENGINEER, SHALL BE PART OF THE SHOP DRAWING SUBMISSION.
5. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT / ENGINEER FOR REVIEW, CHECKED SHOP DRAWINGS SHOWING ALL FABRICATION DETAILS, FIELD ASSEMBLY DETAILS, AND ERECTION DRAWINGS FOR STRUCTURAL STEEL.
6. ANY CONNECTION CONFIGURATIONS INDICATED ON THE PLANS, NOTES AND DETAILS REPRESENT THE DESIGN INTENT. ITEMS SPECIFICALLY INDICATED: WELDS, STIFFENERS, BRACES, ETC. MUST BE PROVIDED AT MINIMUM AS SHOWN. ADDITIONAL DESIGN AND DETAILING OF CONNECTIONS SHALL BE PROVIDED BY THE CONTRACTOR. FABRICATOR TO DESIGN CONNECTIONS NOT DETAILED.
7. ALL SHOP AND FIELD WELDING IS TO BE COMPLETED BY QUALIFIED WELDERS, AS DESCRIBED IN AWS D1.1 - AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE.
8. THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

CONCRETE NOTES:

1. REINFORCED CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ACI BUILDING CODE (ACI 318), ACI DETAILING MANUAL (ACI 315), SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301) AND ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES (ACI 350), AS APPLICABLE.
2. CONCRETE MIX REQUIREMENTS (ACI 301 4.1): MIX DESIGNS FOR ALL CONCRETE COMPONENTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW IN ACCORDANCE WITH ASTM C94 AND THE FOLLOWING:
   - A. EXTERIOR FLATWORK CONCRETE MIX: COMPRESSIVE STRENGTH 4000 psi. WATER CEMENT RATIO, 0.44 MAX. AIR ENTRAINED TO 5.5%, ±1% FOR 1-1/2" MAX AGGREGATE SIZE OR 6%, ±1% FOR 1" MAX AGGREGATE SIZE
   - B. FOUNDATION WALL CONCRETE MIX: COMPRESSIVE STRENGTH 4000 PSI. WATER CEMENT RATIO, 0.50 MAX. AIR ENTRAINED TO 5.5%, ±1% FOR 1-1/2" MAX AGGREGATE SIZE OR 6%, ±1% FOR 1" MAX AGGREGATE SIZE
   - C. SLUMP OF CONCRETE SHALL NOT EXCEED 4" UNLESS A HIGH RANGE WATER-REDUCING ADMIXTURE IS USED. THE SLUMP OF CONCRETE PRIOR TO ADDITION OF A HIGH RANGE WATER REDUCING ADMIXTURE SHALL NOT EXCEED 4". THE SLUMP OF CONCRETE CONTAINING HIGH RANGE WATER-REDUCING ADMIXTURE SHALL NOT EXCEED 10".
3. CONCRETE MATERIALS:
   - A. CEMENTITIOUS MATERIALS:
     - (1) PORTLAND CEMENT: ASTM C 150, TYPE I/II, GRAY.
     - (2) FLY ASH: ASTM C 618, CLASS F.
     - (3) SLAG CEMENT: ASTM C 989, GRADE 100 OR 120.
   - B. NORMAL-WEIGHT AGGREGATES: ASTM C 33, GRADED. PROVIDE AGGREGATES FROM A SINGLE SOURCE. SUBJECT TO ACI 301 SECTION 4.2.1.2.
   - C. WATER: ASTM C94, CLEAN, POTABLE AND NOT DETRIMENTAL TO CONCRETE
   - D. AIR-ENTRAINING ADMIXTURE: ASTM C 260.
   - E. CHEMICAL ADMIXTURES: CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER ADMIXTURES AND THAT DO NOT CONTRIBUTE WATER-SOLUBLE CHLORIDE IONS. DO NOT USE CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE. ADMIXTURES MUST BE COMPLIANT WITH ASTM C494 AND APPROVED BY THE ENGINEER.
4. REINFORCING MATERIALS:
   - A. REINFORCING BARS: ASTM A615, GRADE 60, DEFORMED
   - B. WELDED STEEL WIRE FABRIC: ASTM A1064, PLAIN TYPE, IN FLAT SHEETS.
5. LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. WHERE CLASSES ARE NOT CALLED OUT ON DRAWINGS, USE CLASS "B" SPLICES

LAP SPLICE SCHEDULE

BAR SIZE	TENSION SPLICES (INCHES)				COMPRESSION SPLICES (INCHES)
	TOP BARS		OTHER BARS		
	CLASS A	CLASS B	CLASS A	CLASS B	
#3	16	21	12	16	12
#4	21	28	16	21	15
#5	27	35	21	27	19
#6	35	46	27	35	23

6. CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT AS FOLLOWS:
   - CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH — 3" CLEAR
   - EXPOSED TO EARTH OR WEATHER — 2" CLEAR
   - ALL OTHER CONCRETE: — 3/4" CLEAR
     - #5 OR SMALLER — 1-1/2"
7. COLD-WEATHER PLACING SHALL COMPLY WITH THE PROVISIONS OF ACI-306R. THE USE OF CALCIUM CHLORIDE, SALT, AND OTHER MATERIALS CONTAINING ANTI FREEZE AGENTS OR CHEMICAL ACCELERATORS SHALL NOT BE PERMITTED UNLESS OTHERWISE ACCEPTED IN THE MIX DESIGN.
8. HOT-WEATHER PLACING SHALL COMPLY WITH THE PROVISIONS OF ACI-305.
9. JOINT FILLERS: ASTM D1751, ASPHALT IMPREGNATED CELLULOSIC FIBER, PREMOLDED EXPANSION JOINT FILLER.
10. JOINT SEALANT: THROUGHOUT WORK, SEAL & CAULK JOINTS TO PROVIDE A POSITIVE BARRIER AGAINST PASSAGE OF MOISTURE AND AIR.
13. CURE CONCRETE IN ACCORDANCE WITH ACI 301, SECTION 5.3.6. IF A CURING COMPOUND IS USED, IT MUST BE COMPATIBLE WITH SPECIFIED SURFACE FINISH MATERIALS.
14. CONTRACTOR SHALL PROVIDE ALL BOLSTERS, CHAIRS, SPACERS, AND OTHER DEVICES AS REQUIRED FOR SPACING, SUPPORTING, AND FASTENING REINFORCING BARS AND WELDED-WIRE REINFORCEMENT IN PLACE. MANUFACTURE SUPPORTS FROM STEEL, PLASTIC, OR PRECAST CONCRETE ACCORDING TO CRSI'S "MANUAL OF STANDARD PRACTICE."
15. UNLESS OTHERWISE SPECIFIED, A THIRD PARTY TESTING LABORATORY SHALL BE EMPLOYED BY THE CONTRACTOR FOR EVALUATION AND QUALITY CONTROL OF CONCRETE PLACED. FREQUENCY OF CONCRETE TESTING SHALL MEET THE REQUIREMENTS OF ACI 318 AT A MINIMUM UNLESS OTHERWISE REQUIRED BY THE LOCAL BUILDING CODE
16. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL SLEEVES, INSERTS, ANCHOR BOLTS AND OTHER EMBEDDED ITEMS AS REQUIRED BY OTHER TRADES.

LOADING NOTES:

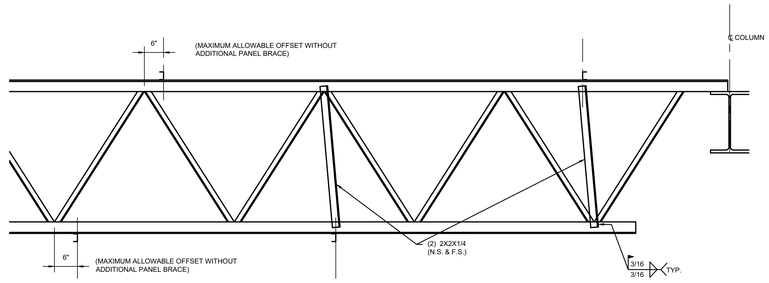
APPLICABLE CODE:	IBC 2015 EDITION ASCE 7-10
OCCUPANCY GROUP:	EDUCATION
RISK CATEGORY: II	II
ROOF LOADS	
ROOF LIVE LOAD	20 PSF (MIN)
ROOF SNOW LOAD	
GROUND SNOW LOAD - Pg:	3 PSF
FLAT ROOF SNOW LOAD - Pf:	30 PSF (DO NOT REDUCE) + DRIFT LOADS
SNOW EXPOSURE FACTOR - Ce:	1.0
SNOW LOAD IMPORTANCE FACTOR - Is:	1.0
THERMAL FACTOR - Ct:	1.0
WIND LOADS	
BASIC WIND SPEED - V (3-SEC. GUST):	115 PSF (ULT), 90 PSF (NOM)
WIND LOAD EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT (GCpi)	+/- 0.18 (ENCLOSED BUILDING
GUST FACTOR - G:	0.85
WIND DIRECTIONALITY FACTOR - Kd	0.85
TOPOGRAPHIC FACTOR - Kzt	1.00
LATERAL WIND DESIGN BASE PRESSURE	33.3 PSF (LRFD), 20.0 PSF (ASD)
SEISMIC LOAD	
SEISMIC DESIGN CATEGORY:	B
SPECTRAL RESPONSE COEFFICIENT - SDS:	0.202g
SPECTRAL RESPONSE COEFFICIENT - SD1:	0.096g
SITE CLASS:	D
BASIC SEISMIC FORCE RESISTING SYSTEM:	N/A
ANALYSIS PROCEDURE:	ANALYSIS NOT REQUIRED FOR MECHANICAL UNITS IN SDC B

SHOP DRAWINGS:

1. SUBMIT THREE (3) PRINTS OR DIGITAL (PDF) COPY OF EACH OF ALL SHOP DRAWINGS FOR REVIEW. SHOP DRAWINGS MUST BE CHECKED BY THE DETAILER PRIOR TO SUBMISSION; FAILURE TO DO SO WILL BE CAUSE FOR REJECTION.
2. SHOP DRAWINGS MUST BE SUBMITTED IN ORIGINAL SIZE. REPRODUCTIONS SHALL NOT BE REDUCED IN SIZE.
3. ALL REVISIONS TO SHOP DRAWINGS AFTER THE FIRST SUBMISSION MUST BE IDENTIFIED ON SUBSEQUENT SUBMISSIONS.
4. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF ANY CONTRACT REQUIREMENT, EVEN IF SUCH ITEMS ARE NOT SHOWN ON THE SHOP DRAWINGS.
5. ANY CHANGES PROPOSED BY THE DETAILER MUST BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS AND, UPON THE REQUEST OF THE ENGINEER, PROVIDE CALCULATIONS TO SUBSTANTIATE SUCH CHANGE.
6. CONTRACTORS SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE REQUIRED DATE FOR SUBMITTAL RETURN.
7. THE APPROVAL OF SHOP DRAWINGS WILL BE FOR ARRANGEMENT ONLY AND SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ERRORS, OMISSIONS OR THE ACCURACY OF HIS OWN DIMENSIONS.
8. CONTRACTOR SHALL FURNISH DIMENSIONED COORDINATED SHOP DRAWINGS AT ALL LEVELS FOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.
9. NO CONSTRUCTION SHALL COMMENCE PRIOR TO THE APPROVAL OF SHOP DRAWINGS.
10. SUBMIT PRODUCT DATA FOR PROPOSED SUBSTITUTIONS DEMONSTRATING EQUIVALENCE TO SPECIFIED PRODUCTS SHOWN ON DRAWINGS.

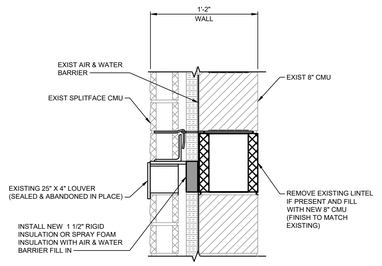
NON PENETRATING EQUIPMENT PLATFORMS:

1. SUPPORT BASE: 17" CIRCULAR BASE, INJECTED MOLDED POLYPROPYLENE.
2. PLATFORM: GALVANIZED STEEL ANGLE, ASTM 572, GRADE 50, COPED AND WELDED; GALVANIZED STEEL BAR GRATING 1" X 3/16" BAR GRATING, ENDS CAPPED WITH 1" X 1/4" STEEL FLAT BAR.
3. VERIFY THAT ROOF SURFACE IS SMOOTH AND CLEAN TO EXTENT NEEDED TO RECEIVE MATERIALS.
4. CLEAN SURFACES TO RECEIVE 17" CIRCULAR BASES REMOVING ANY LOOSE GRAVEL AND ANY FOREIGN MATTER BEFORE SETTING 17" CIRCULAR SUPPORT BASES.
5. ACCURATELY LOCATE BASE PLATFORM IN LOCATION SPECIFIED AS PER APPROVED SHOP DRAWINGS OR AS REQUIRED HEREIN AND BY SITE CONDITIONS. NO ISOLATION PADS ARE REQUIRED UNDER THE 17" DIAMETER BASES.
6. SHOULD THE ROOFING MANUFACTURER REQUIRE A SEPARATION SHEET BETWEEN THE ROOF AND THE SUPPORT SYSTEM, PLACE A SEPARATION SHEET OR PROTECTIVE PAD CONFORMING TO THE EXISTING ROOF MANUFACTURER'S SYSTEM UNDER 17" CIRCULAR BASES. DO NOT ADHERE TO THE ROOF SYSTEM OR 17" CIRCULAR BASES.
7. INSERT STEEL FRAME STRUCTURES INTO 17" CIRCULAR BASES AS PER MANUFACTURER REQUIREMENTS.
8. ADJUST HEIGHT OF EACH SUPPORT BASE FOR EQUAL WEIGHT DISBURSEMENT. CORRECT IF NECESSARY.



TYPICAL JOIST REINFORCING DETAIL @ CONCENTRATED LOAD

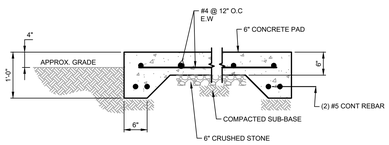
NO SCALE



1 TYPICAL WALL REPAIR DETAIL

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

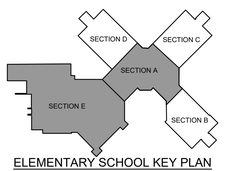
1/2' 0' 1/2' 1' 1 1/2'



2 TYPICAL EQUIPMENT PAD DETAIL

SCALE: 3/4"=1'-0"

1' 0' 1' 2' 3'



ELEMENTARY SCHOOL KEY PLAN

NO.	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAJ
0	10/29/21	ISSUED FOR BID	TMF	MMH	DAJ

RELEASED FOR: CONSTRUCTION

PROJECT MANAGER: MMH | DATE: 09/20/21
BASE BY: N/A | N.B.: N/A
DRAWN BY: TMF | DESIGNED BY: JMT | CHKD:

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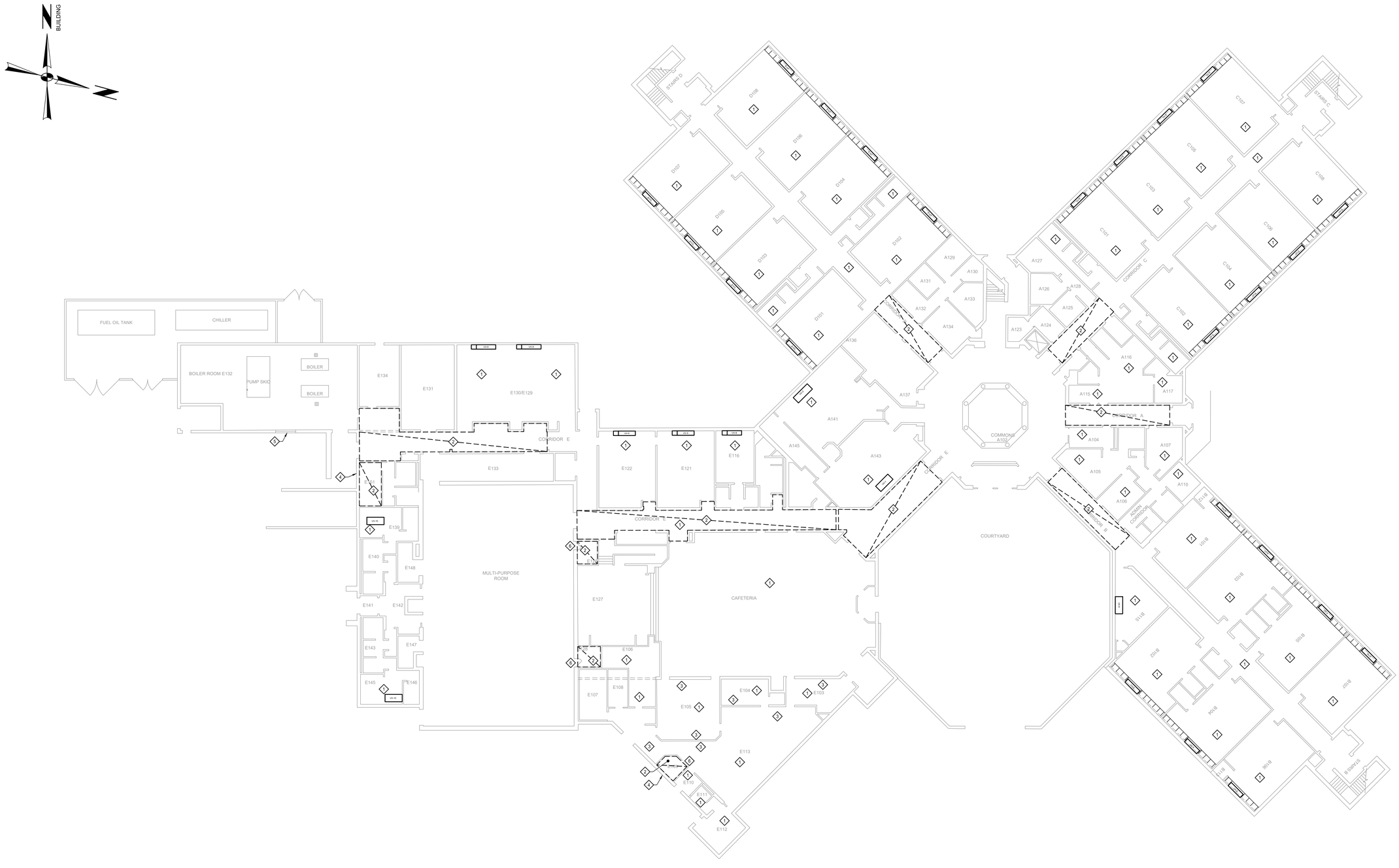
SCHUYLKILL VALLEY SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE
STRUCTURAL
ROOF PLAN AND DETAILS

DATE	DIGITAL FILENAME
10/29/21	103916.0008 S.1-01

WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: S.1-01



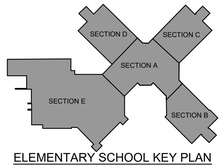
FIRST FLOOR PLAN

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

8' 0' 8' 16' 24' 32' 40'

INSTALLATION NOTES

1. REMOVE EXISTING CEILING GRID AND TILES AS NECESSARY FOR REMOVAL AND INSTALLATION OF HVAC AND ELECTRICAL WORK. TEMPORARILY SUPPORT LIGHTS AND CEILING MOUNTED DEVICES. REINSTALL CEILING GRID AND TILES WHEN WORK ABOVE CEILING IS COMPLETE. ANY ITEMS FOUND TO BE DAMAGED DURING WORK SHALL BE REPLACED TO MATCH EXISTING.
2. REMOVE EXISTING CEILING GRID AND CEILING TILES IN THIS AREA TO FACILITATE HVAC AND ELECTRICAL WORK. TEMPORARILY SUPPORT LIGHTS AND CEILING MOUNTED DEVICES. ONCE WORK IN THE AREA IS COMPLETE PROVIDE NEW CEILING GRID AND TILES TO MATCH EXISTING.
3. PROVIDE CEILING GRID AND CEILING TILE TO INFILL OPENING REMAINING FROM REMOVAL OF HVAC EQUIPMENT. NEW CEILING GRID AND TILES SHALL MATCH EXISTING.
4. INFILL EXISTING WALL LOUVER, SEE STRUCTURAL DRAWINGS FOR DETAILS.
5. REMOVE EXISTING LOUVER TO FACILITATE REMOVAL OF MECHANICAL EQUIPMENT. REINSTALL LOUVER ONCE MECHANICAL EQUIPMENT HAS BEEN REMOVED. COORDINATE WITH MECHANICAL CONTRACTOR.
6. PROVIDE 3/4" DOOR UNDERCUT FOR EXISTING DOOR.



ELEMENTARY SCHOOL KEY PLAN

NO.	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAJ
0	01/10/22	ISSUED FOR REVIEW	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH DATE: 09/20/21
BASE BY: N/A N.B.: N/A
DRAWN BY: TMF DESIGNED BY: MMH CHKD:

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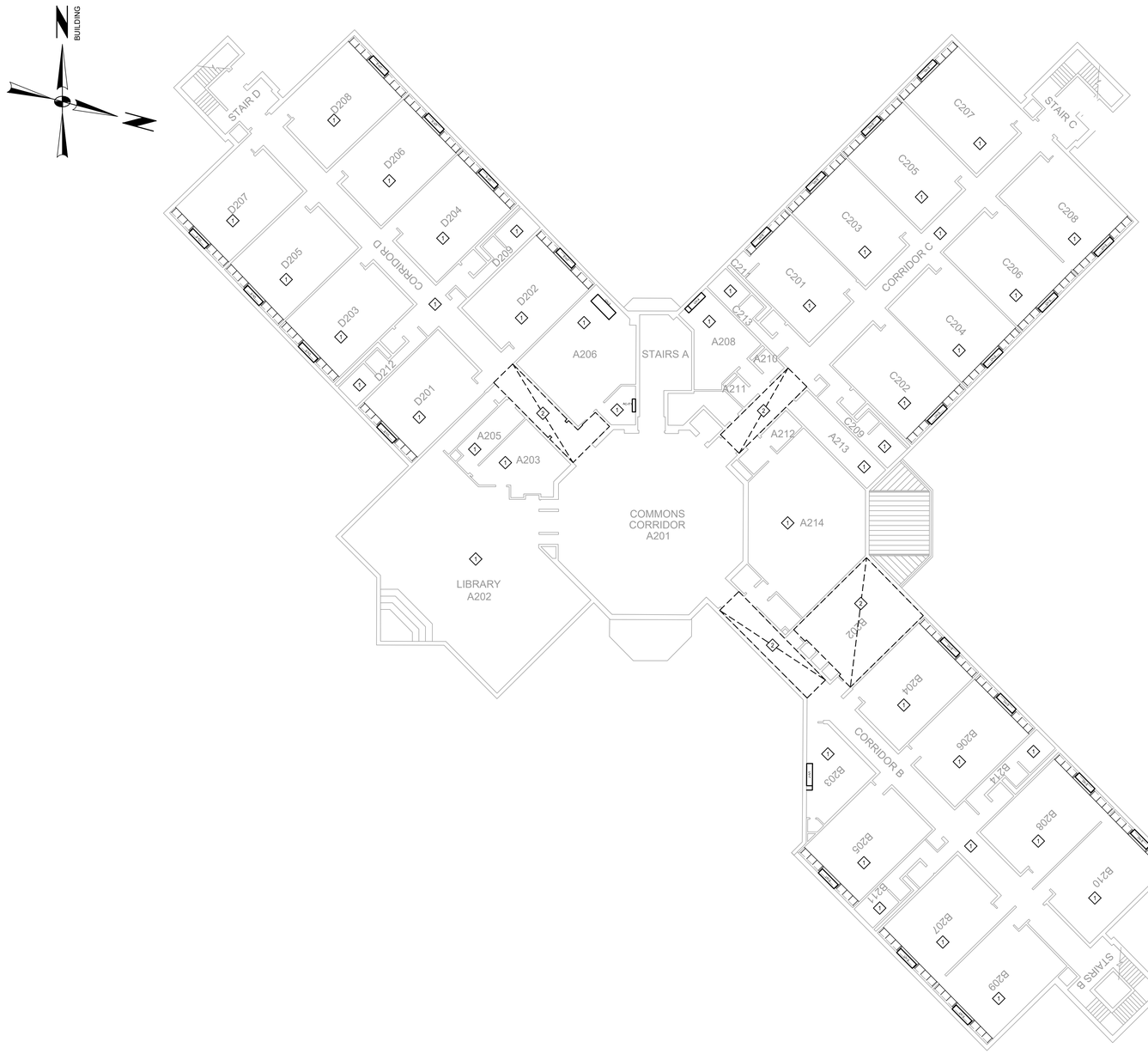
SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE
ARCHITECTURAL
FIRST FLOOR PLAN

DATE	DIGITAL FILENAME
10/29/21	103916.0008 A.1-01

WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: A.1-01



SECOND FLOOR PLAN

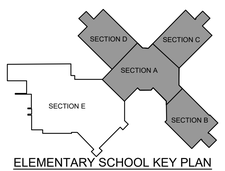
SCALE: 1/16"=1'-0"

8' 0' 8' 16' 24' 32' 40'

INSTALLATION NOTES

1. REMOVE EXISTING CEILING GRID AND TILES AS NECESSARY FOR REMOVAL AND INSTALLATION OF HVAC AND ELECTRICAL WORK. REINSTALL CEILING GRID AND TILES WHEN WORK ABOVE CEILING IS COMPLETE. ANY ITEMS FOUND TO BE DAMAGED DURING WORK SHALL BE REPLACED TO MATCH EXISTING.

2. REMOVE EXISTING CEILING GRID AND CEILING TILES IN THIS AREA TO FACILITATE HVAC AND ELECTRICAL WORK. TEMPORARILY SUPPORT LIGHTS AND CEILING MOUNTED DEVICES. ONCE WORK IN THE AREA IS COMPLETE PROVIDE NEW CEILING GRID AND TILES TO MATCH EXISTING.



ELEMENTARY SCHOOL KEY PLAN

NO.	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAL
0	07/15/22	ISSUED FOR BIDDING	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH DATE: 09/2021
BASE BY: N/A N.B.: N/A
DRAWN BY: TMF DESIGNED BY: MMH CHKD:

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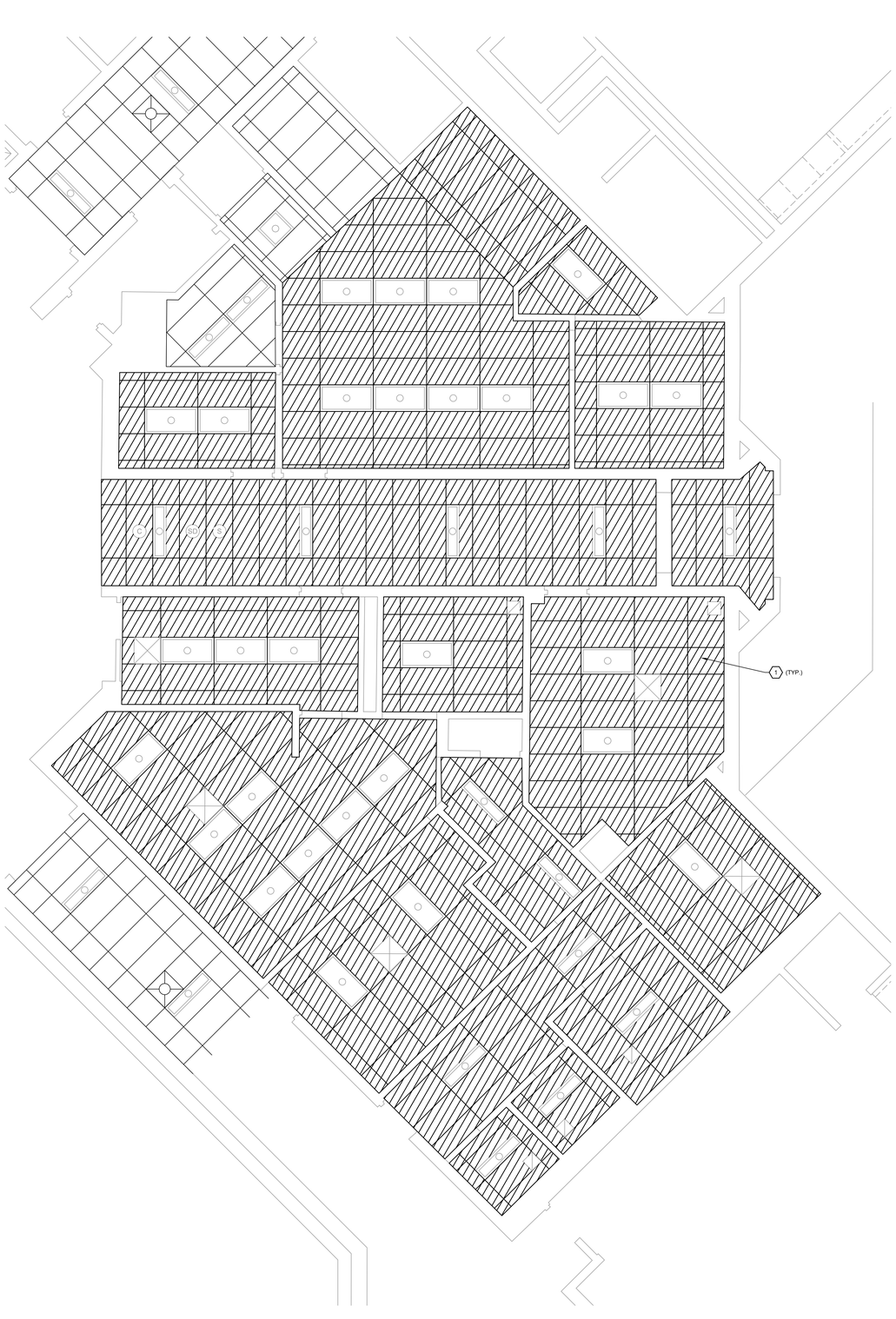
SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE
ARCHITECTURAL
SECOND FLOOR PLAN

DATE	DIGITAL FILENAME
10/29/21	103916.0008 A.1-02

WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: A.1-02



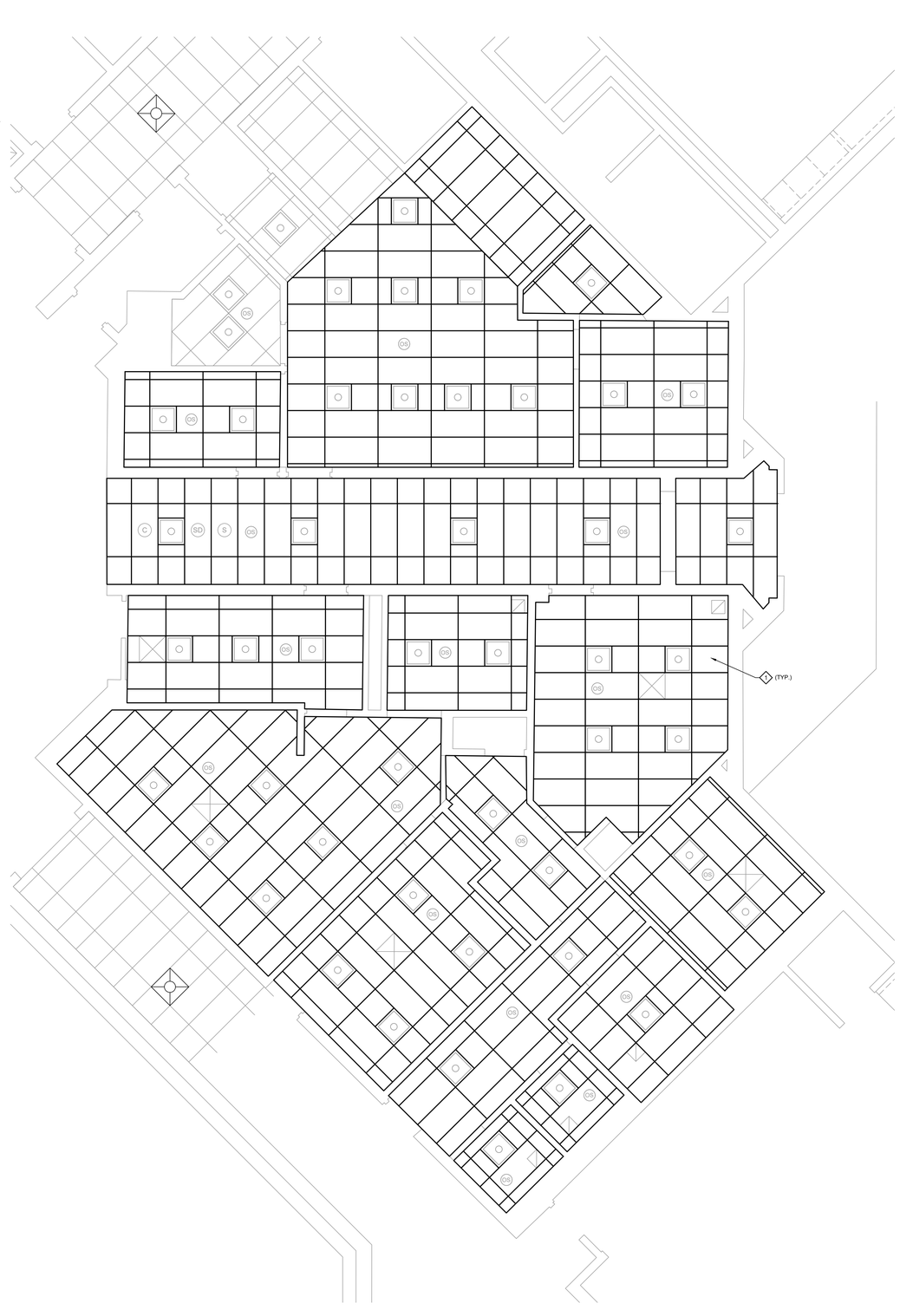
FIRST FLOOR
SECTION A PARTIAL PLAN - EXISTING

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

4' 0' 4' 8'

REMOVAL NOTES

1. THE CONTRACTOR SHALL REMOVE EXISTING SUSPENDED CEILING SYSTEM INCLUDING CEILING TILE AND ASSOCIATED CEILING GRID. EXISTING CEILING SUPPORT SYSTEM SHALL REMAIN FOR INSTALLATION OF NEW CEILING. COORDINATE REMOVAL OF CEILING GRID WITH MECHANICAL AND ELECTRICAL CONTRACTORS PRIOR TO CONSTRUCTION.



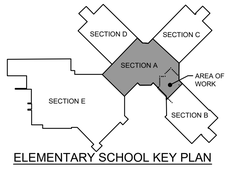
FIRST FLOOR
SECTION A PARTIAL PLAN - PROPOSED

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

4' 0' 4' 8'

INSTALLATION NOTES

1. THE CONTRACTOR SHALL PROVIDE NEW CEILING GRID SYSTEM AND TILES TO MATCH EXISTING CEILING SYSTEM REMOVED. CEILING SHALL BE INSTALLED IN SAME LOCATION OF REMOVED CEILING INCLUDING GRID LOCATION. REUSE EXISTING SUPPORT SYSTEM WHERE POSSIBLE AND PROVIDE ADDITION GRID SUPPORTS AS REQUIRED. CUT FIT CEILING TILE AND GRID. COORDINATE INSTALLATION OF CEILING WITH ELECTRICAL AND MECHANICAL CONTRACTORS PRIOR TO WORK.



ELEMENTARY SCHOOL KEY PLAN

NO	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DJU
0	01/10/22	ISSUED FOR BID/PERMIT	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH
BASE BY: N/A
DRAWN BY: TMF
DESIGNED BY: MMH
N.B.: N/A
CHKD:
DATE: 09/2021

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(610) 647-3000

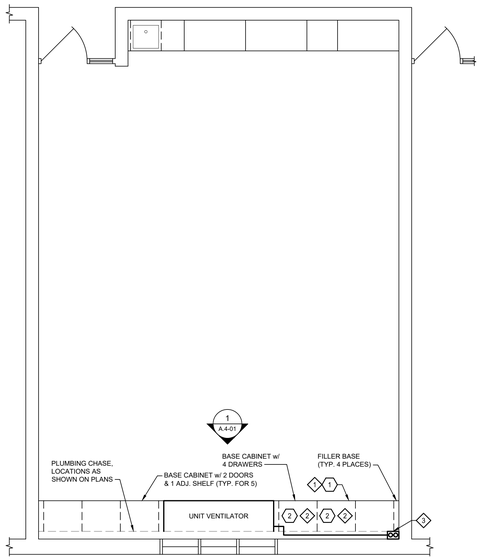
SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE

ARCHITECTURAL - REFLECTED CEILING PLANS
FIRST FLOOR SECTION A - EXISTING AND PROPOSED

DATE	DIGITAL FILENAME
10/29/21	103916.0008 A.1-03

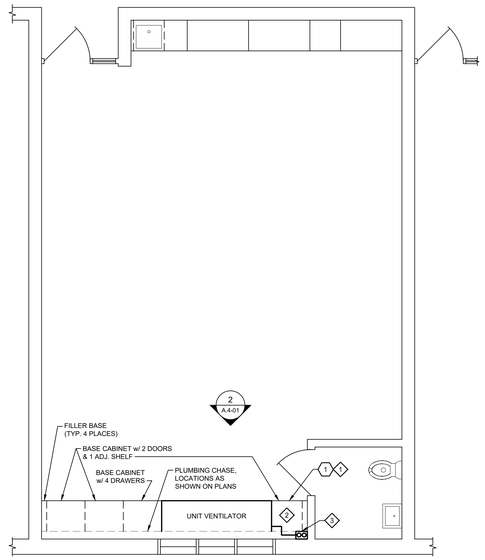
WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: A.1-03



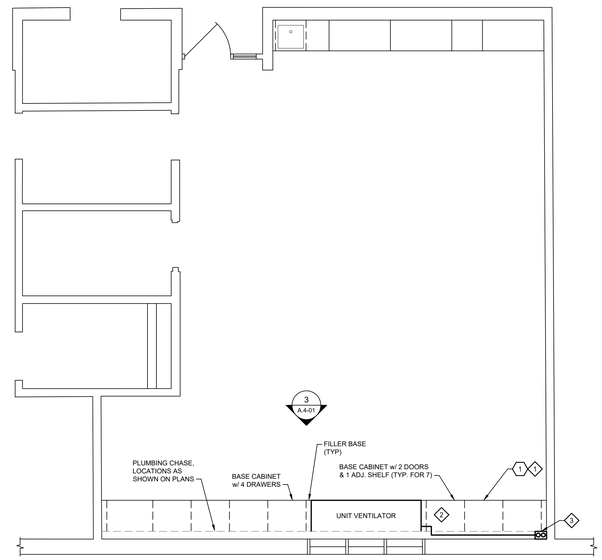
TYPICAL CLASSROOM LAYOUT

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



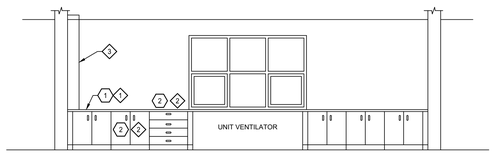
TYPICAL CLASSROOM LAYOUT - ALTERNATE

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



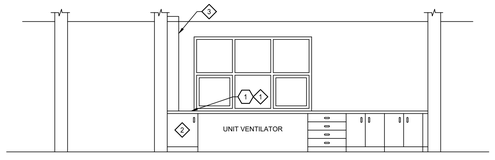
TYPICAL KINDERGARTEN CLASSROOM LAYOUT

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



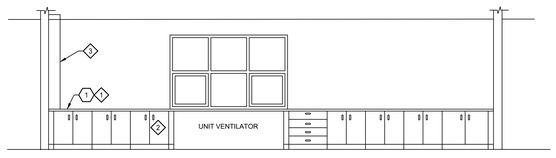
1 ELEVATION

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



2 ELEVATION

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



3 ELEVATION

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

REMOVAL NOTES

1. REMOVE THE EXISTING COUNTERTOP AND SAVE FOR REINSTALLATION.
2. REMOVE THE EXISTING BASE CABINET WITH 4 DRAWERS ON THE LEFT HAND SIDE OF THE UNIT VENTILATOR AND ONE EXISTING BASE CABINET WITH 2 DOORS. SAVE CABINETS FOR REINSTALLATION.

INSTALLATION NOTES

1. ONCE HVAC PIPING HAS BEEN INSTALLED AND THE EXISTING CABINETS HAVE BEEN MODIFIED REINSTALL THE EXISTING COUNTER TOP. COORDINATE WITH HVAC CONTRACTOR TO PROVIDE CUTOUT FOR HVAC PIPING TO ACCESS PIPE CHASE.
2. REINSTALL CABINETS ON THE LEFT HAND SIDE OF THE UNIT VENTILATOR WITH THE 2 DOOR CABINET DIRECTLY ADJACENT TO THE UNIT VENTILATOR. REMOVE ANY SHELVING FROM THE UNIT. COORDINATE WITH THE HVAC CONTRACTOR TO CREATE A PENETRATION ON THE SIDE OF THE 2 DOOR CABINET FOR THE INSTALLATION OF THE LEV KIT AND HVAC PIPING. PROVIDE A LOCK ON THE CABINET DOOR WITH KEY. KEY SHALL MATCH EXISTING MASTER KEY FOR THE FACILITY.
3. PROVIDE A VERTICAL PIPE ENCLOSURE. SEE DETAIL ON DRAWING A.4-02 AND COORDINATE WITH THE HVAC CONTRACTOR.

REMOVAL NOTES

1. REMOVE THE EXISTING COUNTERTOP AND SAVE FOR REINSTALLATION.

INSTALLATION NOTES

1. ONCE HVAC PIPING HAS BEEN INSTALLED AND THE EXISTING CABINET HAS BEEN MODIFIED REINSTALL THE EXISTING COUNTERTOP. COORDINATE WITH THE HVAC CONTRACTOR TO PROVIDE CUTOUT IN THE COUNTERTOP FOR HVAC PIPING TO ACCESS THE PIPE CHASE.
2. REMOVE ANY SHELVING FROM THE UNIT. COORDINATE WITH THE HVAC CONTRACTOR TO CREATE A PENETRATION ON THE SIDE OF THE 2 DOOR CABINET FOR THE INSTALLATION OF THE LEV KIT AND HVAC PIPING. PROVIDE A LOCK ON THE CABINET DOOR WITH KEY. KEY SHALL MATCH EXISTING MASTER KEY FOR THE FACILITY.
3. PROVIDE A VERTICAL PIPE ENCLOSURE. SEE DETAIL ON DRAWING A.4-02 AND COORDINATE WITH THE HVAC CONTRACTOR.

REMOVAL NOTES

1. REMOVE THE EXISTING COUNTERTOP AND SAVE FOR REINSTALLATION.

INSTALLATION NOTES

1. ONCE HVAC PIPING HAS BEEN INSTALLED AND THE EXISTING CABINET HAS BEEN MODIFIED REINSTALL THE EXISTING COUNTERTOP. COORDINATE WITH THE HVAC CONTRACTOR TO PROVIDE CUTOUT IN THE COUNTERTOP FOR HVAC PIPING TO ACCESS THE PIPE CHASE.
2. REMOVE ANY SHELVING FROM THE UNIT. COORDINATE WITH THE HVAC CONTRACTOR TO CREATE A PENETRATION ON THE SIDE OF THE 2 DOOR CABINET FOR THE INSTALLATION OF THE LEV KIT AND HVAC PIPING. PROVIDE A LOCK ON THE CABINET DOOR WITH KEY. KEY SHALL MATCH EXISTING MASTER KEY FOR THE FACILITY.
3. PROVIDE A VERTICAL PIPE ENCLOSURE. SEE DETAIL ON DRAWING A.4-02 AND COORDINATE WITH THE HVAC CONTRACTOR.

NO.	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAJ
0	10/15/21	ISSUED FOR BIDDING	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH
DATE: 09/20/21
BASE BY: N/A
N.B.: N/A
DRAWN BY: TMF
DESIGNED BY: MMH
CHKD:

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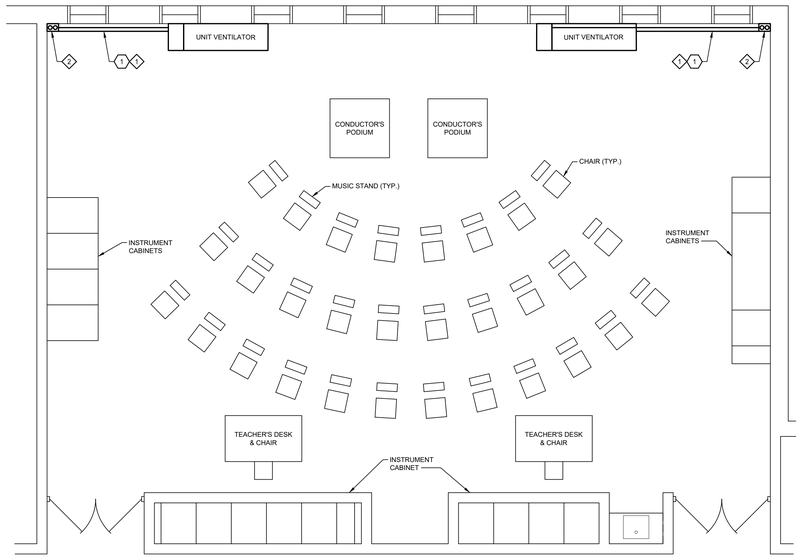
SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA

HVAC UPGRADE
ARCHITECTURAL
DETAILS

DATE	DIGITAL FILENAME
10/29/21	103916.0008 A.4-01

WORK ORDER NUMBER
103916.0008

DRAWING NUMBER
A.4-01



BAND ROOM (E130) AND INSTRUMENTAL STUDIO (E129) LAYOUT

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

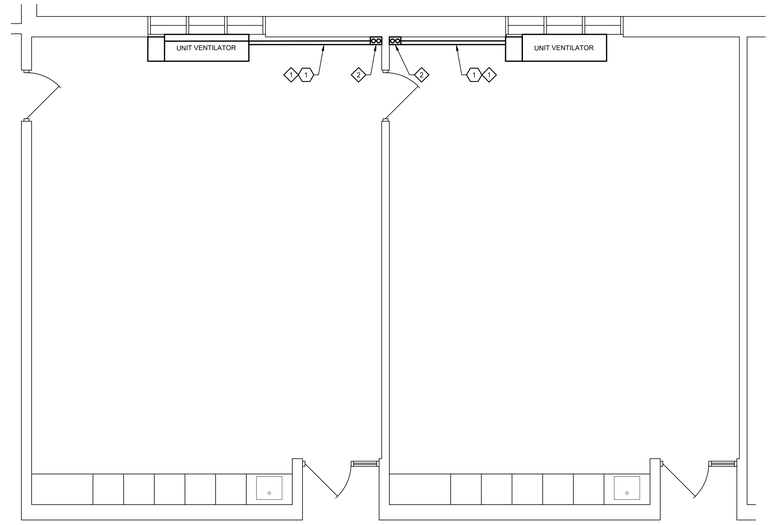
4' 0' 4' 8'

REMOVAL NOTES

1. REMOVE THE EXISTING PIPE ENCLOSURE AND SAVE FOR REINSTALLATION. IF THE EXISTING PIPE ENCLOSURE IS DAMAGED PROVIDE NEW PIPE ENCLOSURE TO MATCH EXISTING.

INSTALLATION NOTES

1. ONCE THE HVAC PIPING HAS BEEN INSTALLED COORDINATE WITH HVAC CONTRACTOR TO PROVIDE A CUTOUT IN THE EXISTING PIPE ENCLOSURE FOR THE HVAC PIPING. MODIFY THE PIPE ENCLOSURE LENGTH TO ACCOMODATE THE NEW UNIT VENTILATOR AND THE LEV KIT ENCLOSURE. REINSTALL THE PIPE ENCLOSURE. PREPARE AND PRIME THE PIPE ENCLOSURE. PAINT THE PIPE ENCLOSURE WITH MINIMUM TWO COATS OF PAINT, COLOR TO MATCH EXISTING.
2. PROVIDE A VERTICAL PIPE ENCLOSURE. SEE DETAIL ON DRAWING A.4-02 AND COORDINATE WITH THE HVAC CONTRACTOR.



GENERAL MUSIC ROOMS (E121 & E122) LAYOUT

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

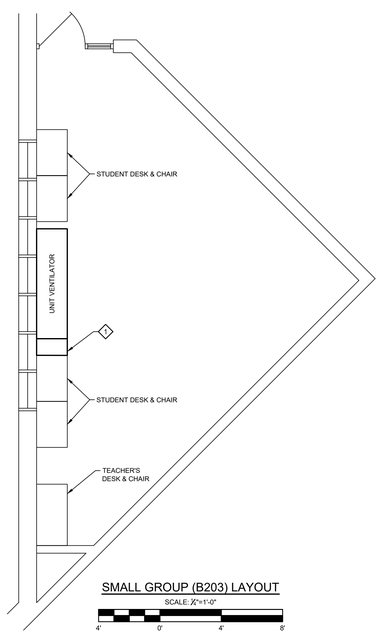
4' 0' 4' 8'

REMOVAL NOTES

1. REMOVE THE EXISTING PIPE ENCLOSURE AND SAVE FOR REINSTALLATION. IF THE EXISTING PIPE ENCLOSURE IS DAMAGED PROVIDE NEW PIPE ENCLOSURE TO MATCH EXISTING.

INSTALLATION NOTES

1. ONCE THE HVAC PIPING HAS BEEN INSTALLED COORDINATE WITH HVAC CONTRACTOR TO PROVIDE A CUTOUT IN THE EXISTING PIPE ENCLOSURE FOR THE HVAC PIPING. MODIFY THE PIPE ENCLOSURE LENGTH TO ACCOMODATE THE NEW UNIT VENTILATOR AND THE LEV KIT ENCLOSURE. REINSTALL THE PIPE ENCLOSURE. PREPARE AND PRIME THE PIPE ENCLOSURE. PAINT THE PIPE ENCLOSURE WITH MINIMUM TWO COATS OF PAINT, COLOR TO MATCH EXISTING.
2. PROVIDE A VERTICAL PIPE ENCLOSURE. SEE DETAIL ON DRAWING A.4-02 AND COORDINATE WITH THE HVAC CONTRACTOR.



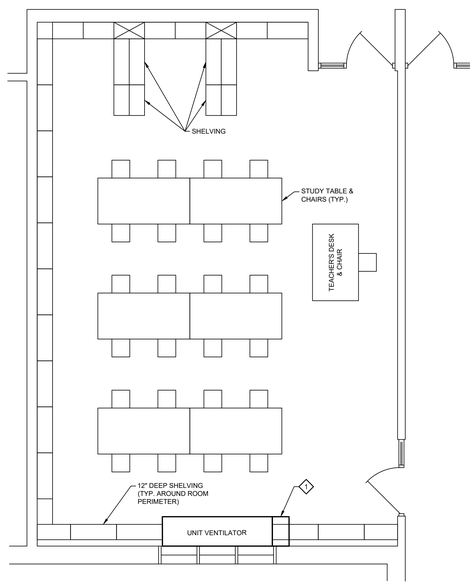
SMALL GROUP (B203) LAYOUT

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

4' 0' 4' 8'

INSTALLATION NOTES

1. RELOCATE EXISTING DESK TO ACCOMMODATE 2FT WIDE ENCLOSURE FOR LEV KIT PROVIDED BY EQUIPMENT MANUFACTURER.



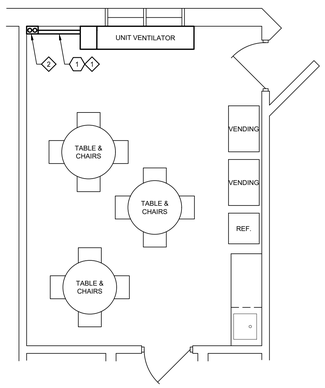
LIBRARY CLASSROOM (D201) LAYOUT

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

4' 0' 4' 8'

INSTALLATION NOTES

1. MODIFY EXISTING SHELVING TO ACCOMMODATE 2FT WIDE ENCLOSURE FOR LEV KIT PROVIDED BY EQUIPMENT MANUFACTURER.



FACULTY DINING (E116) LAYOUT

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

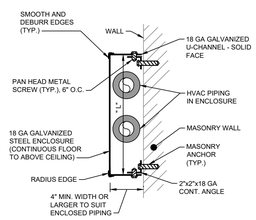
4' 0' 4' 8'

REMOVAL NOTES

1. REMOVE THE EXISTING PIPE ENCLOSURE AND SAVE FOR REINSTALLATION. IF THE EXISTING PIPE ENCLOSURE IS DAMAGED PROVIDE NEW PIPE ENCLOSURE TO MATCH EXISTING.

INSTALLATION NOTES

1. ONCE THE HVAC PIPING HAS BEEN INSTALLED COORDINATE WITH HVAC CONTRACTOR TO PROVIDE A CUTOUT IN THE EXISTING PIPE ENCLOSURE FOR THE HVAC PIPING. MODIFY THE PIPE ENCLOSURE LENGTH TO ACCOMODATE THE NEW UNIT VENTILATOR AND THE LEV KIT ENCLOSURE. REINSTALL THE PIPE ENCLOSURE. PREPARE AND PRIME THE PIPE ENCLOSURE. PAINT THE PIPE ENCLOSURE WITH MINIMUM TWO COATS OF PAINT, COLOR TO MATCH EXISTING.
2. PROVIDE A VERTICAL PIPE ENCLOSURE. SEE DETAIL ON DRAWING A.4-02 AND COORDINATE WITH THE HVAC CONTRACTOR.



NOTES:
1. MINIMUM "L" DIM. SHALL BE 8" OR TO SUIT INSULATED PIPING.
2. PREPARE AND PRIME ALL METAL SURFACES. PAINT WITH MINIMUM TWO COATS OF PAINT, COLOR TO MATCH EXISTING.

VERTICAL PIPE ENCLOSURE DETAIL

NO SCALE

NO.	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAL
0	01/10/22	ISSUED FOR BIDDING	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH DATE: 09/20/21
BASE BY: N/A N.B.: N/A
DRAWN BY: TMF DESIGNED BY: MMH CHKD:

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SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA

HVAC UPGRADE
ARCHITECTURAL
DETAILS

DATE	DIGITAL FILENAME
10/29/21	103916.0008 A.4-02

WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: A.4-02

DOCUMENTS

STUDY THE ENTIRE BID SET OF DOCUMENTS TO DETERMINE THE FULL SCOPE OF WORK. NO CLAIMS FOR EXTRA COSTS WILL BE CONSIDERED AS A RESULT OF CONTRACTORS FAILURE TO STUDY THE ENTIRE BID SET OF DOCUMENTS.

PROVIDE INCIDENTAL WORK AND MATERIALS REQUIRED TO FULFILL THE INTENT OF THE BID DOCUMENTS. INCLUDE LABOR, MATERIALS, DEVICES, CONTROLS, SUPPORTS, ANCHORS AND METHODS PECULIAR TO THE MACHINERY, EQUIPMENT, APPARATUS OR SYSTEMS.

PROVIDE IS DEFINED AS: FURNISH AND INSTALL ITEM COMPLETE, WITH REQUIRED FEATURES, OPTIONS, APPURTENANCES, VALVES, DUCTS, AND CONTROLS IN ACCORDANCE DRAWINGS, SPECS, MANUFACTURER'S RECOMMENDATIONS, APPLICABLE CODES, STANDARDS AND REGULATIONS.

BID DOCUMENTS ARE FOR THE PURPOSE OF ILLUSTRATING THE GENERAL CHARACTER AND SCOPE OF WORK TO PREPARE A BID PROPOSAL. THE PLANS ARE NOT SHOP DRAWINGS AND DO NOT DISMISS THE REQUIREMENTS TO PREPARE FABRICATION AND INSTALLATION SHOP DRAWINGS, NOR DO THEY RELIEVE THE RESPONSIBILITY TO COORDINATE WORK WITH OTHER TRADES AND THE BUILDING STRUCTURE. USE FABRICATION AND INSTALLATION SHOP DRAWINGS ALONG WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS TO CONSTRUCT THE WORK OF THIS CONTRACT.

DO NOT SCALE DRAWINGS. FIELD MEASURE AND VERIFY EXISTING STRUCTURES, FACILITIES AND EQUIPMENT. LAY OUT THE SYSTEMS IN CAREFUL COORDINATION WITH THE DRAWINGS AND OTHER TRADES, DETERMINE THE PROPER ELEVATIONS FOR COMPONENTS AND PROVIDE COORDINATION WHERE OTHER WORK MAY INTERFERE. LAY OUT PIPES, DUCTS AND CONDUIT TO FALL WITHIN PARTITIONS, WALLS OR ROOF CAVITIES IN FINISHED AREAS, AND AS SHOWN ON THE DRAWINGS IN UNFINISHED AREAS.

INSTALL PIPING, DUCTS AND CONDUITS IN AN ORDERLY MANNER, PLUMB, LEVEL, PARALLEL TO THE BUILDING STRUCTURE, TO CONSERVE BUILDING SPACE AND NOT TO INTERFERE WITH THE USE OF THE SPACE OR OTHER WORK. INSTALL EQUIPMENT, APPURTENANCES, DEVICES, PRODUCTS AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. INSTALL EQUIPMENT, FIXTURES, PANELS AND DEVICES LEVEL AND PLUMB. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED. PROVIDE DIELECTRIC COUPLINGS WHEREVER JOINING DISSIMILAR METALS. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS OR CONNECTED EQUIPMENT.

OPTIONAL EQUIPMENT, PRODUCTS OR MATERIALS

SUBMIT BID BASED ON THE USE OF THE SPECIFIED EQUIPMENT, PRODUCTS OR MATERIALS, LISTED AS BASIS OF DESIGN. HOWEVER, WHEN OPTIONAL MANUFACTURERS ARE SHOWN OR SPECIFIED, THE CONTRACTOR HAS THE OPTION OF WHICH TO USE, PROVIDED THE FOLLOWING CRITERIA IS MET:

1. THE OPTIONAL EQUIPMENT, PRODUCT OR MATERIAL MEETS OR EXCEEDS THE DESIGN AND PERFORMANCE CRITERIA OF THE ITEM LISTED AS THE BASIS OF DESIGN.
2. THE OPTIONAL EQUIPMENT, PRODUCT OR MATERIAL INCLUDES ALL FEATURES AND OPTIONS OF THE ITEM LISTED AS THE BASIS OF DESIGN.
3. CONTRACTOR HAS INVESTIGATED DIMENSIONS, ARRANGEMENTS AND CONFIGURATIONS OF THE OPTIONAL EQUIPMENT, PRODUCT OR MATERIAL AND HAS INCLUDED, IN BID PRICE, COSTS FOR PROPER FITTING AND INSTALLATION.
4. CONTRACTOR HAS INCLUDED, IN BID PRICE, COSTS OF OTHER TRADES TO ACCOMMODATE THE OPTIONAL EQUIPMENT, PRODUCTS OR MATERIAL.

SUBSTITUTIONS

SUBSTITUTIONS OF EQUIPMENT, PRODUCTS OR MATERIALS OTHER THAN THOSE LISTED IN THE SPECIFICATIONS, MUST BE MADE WITH A REQUEST IN WRITING THAT INCLUDES THE FOLLOWING ITEMS:
1. MANUFACTURER'S LITERATURE.
2. SPECIFICATIONS.
3. CERTIFIED PERFORMANCE DATA.
4. DEVIATIONS FROM THE ITEM SPECIFIED AS BASIS OF DESIGN, IDENTIFIED AND MARKED IN RED.
5. THE AMOUNT OF COST DIFFERENCE BETWEEN THE ITEM SPECIFIED AS BASIS OF DESIGN, AND THE PROPOSED SUBSTITUTION WHICH SHALL BECOME A CREDIT CHANGE ORDER TO THE OWNER.
6. A DETAILED BREAKDOWN OF ITEMS AND COSTS ADDED TO OR DELETED FROM OTHER CONTRACTS AS A RESULT OF THE PROPOSED SUBSTITUTION.

WHEN PROVIDING EQUIPMENT, PRODUCTS OR MATERIAL OTHER THAN THE BASIS OF DESIGN, CONTRACTOR AGREES TO THE FOLLOWING:
1. CONTRACTOR GUARANTEES THAT THE ITEM MEETS OR EXCEEDS THE DESIGN AND PERFORMANCE CRITERIA OF THE ITEM LISTED AS THE BASIS OF DESIGN.
2. CONTRACTOR GUARANTEES THAT THE ITEM HAS ALL FEATURES AND OPTIONS OF THE ITEM LISTED AS THE BASIS OF DESIGN.
3. CONTRACTOR HAS INVESTIGATED DIMENSIONS, ARRANGEMENTS, CONFIGURATIONS, ELECTRIC REQUIREMENTS, CONTROLS AND APPURTENANCES AND HAS INCLUDED ALL COSTS FOR PROPER FITTING AND INSTALLATION.
4. CONTRACTOR HAS INCLUDED IN BID, COSTS OF OTHER TRADES TO ACCOMMODATE THE ITEM.
5. CONTRACTOR AGREES TO ACCEPT SOLE RESPONSIBILITY FOR THE QUALITY, DURABILITY, APPEARANCE, STRENGTH, PERFORMANCE, CAPACITY, AND DESIGN CHARACTERISTICS OF THE ITEM.

SCHEDULE OF VALUES

CORRELATE LINE ITEMS IN THE SCHEDULE OF VALUES WITH THE APPLICATION FOR PAYMENT FORM AND CONTINUATION SHEET. PROVIDE SEPARATE LINES FOR EACH ITEM OF WORK. PROVIDE A SEPARATE LINE FOR MATERIAL AND A SEPARATE LINE FOR LABOR. IN ADDITION, PROVIDE A SEPARATE LINE FOR THE FOLLOWING ITEMS: COMPLETION OF SUBSTANTIAL PUNCH LIST ITEMS, COMPLETION OF FINAL PUNCH LIST ITEMS, FINAL CLEANING, TESTING & BALANCING, RECORD DOCUMENTS, RECORD DRAWINGS, SYSTEM IDENTIFICATION, OWNER INSTRUCTION, O&M MANUALS AND SPARE PARTS. PROVIDE A SEPARATE COLUMN THAT IDENTIFIES UNITS FOR EACH LINE ITEM.

SITE VISIT

CONTACT THE OWNER AND ARRANGE A DATE AND TIME TO VISIT THE SITE. EXAMINE THE EXISTING CONDITIONS IN DETAIL. INCLUDE IN THE BID PRICE COSTS FOR EQUIPMENT, MATERIAL AND LABOR TO PERFORM WORK REQUIRED, INCLUDING: MODIFICATIONS, ALTERATIONS, ADDITIONS, CUTTING, PATCHING, REPAIRING, FINISHING, RELOCATING, AND SUPPORTING TO ACCOMMODATE THE WORK OF THE BID DOCUMENTS. NO CLAIMS WILL BE CONSIDERED AS A RESULT OF CONTRACTOR FAILURE TO INVESTIGATE THE SITE IN A DETAILED AND COMPLETE MANNER.

CODES AND STANDARDS

EQUIPMENT, SYSTEMS, MATERIALS, PRODUCTS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH PLANS, SPECIFICATIONS, ADDENDA AND APPLICABLE REQUIREMENTS OF THE LATEST VERSIONS OF THE FOLLOWING:

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS (ASHRAE)
AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)
BUILDING OFFICIALS AND CODE ADMINISTRATORS; BASIC NATIONAL MECHANICAL CODE (BOCA)
DEPARTMENT OF ENERGY (DOE)
DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
DEPARTMENT OF LABOR & INDUSTRY (L&I)
ENVIRONMENTAL PROTECTION AGENCY (EPA)
INTERNATIONAL MECHANICAL CODE (IMC)
NATIONAL ELECTRIC CODE (NEC)
NATIONAL FIRE PROTECTION ASSOCIATION; NATIONAL FIRE CODES (NFC)
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
PENNSYLVANIA ACT 172 - ONE CALL SYSTEM (800-242-1776)
UNDERWRITERS LABORATORIES (UL)
LOCAL CODES AND ORDINANCES
LOCAL MUNICIPALITIES
LOCAL UTILITY COMPANIES
SAFETY CODE FOR MECHANICAL REFRIGERATION

BY THE ACT OF SUBMITTING A BID CONTRACTOR WARRANTS THAT THE BID PRICE INCLUDES ALL LABOR, MATERIAL, PRODUCTS, EQUIPMENT, APPURTENANCES, DEVICES, ACCESSORIES, OPTIONS, SUPPORTS, AND METHODS TO PROVIDE A COMPLETE SYSTEM THAT COMPLIES WITH PERTINENT CODES, ORDINANCES, LAWS AND REGULATIONS MENTIONED ABOVE.

PERMITS

OBTAIN PERMITS, PAY FEES & ISSUE NOTICES, REQUIRED BY STATE AND LOCAL CODES, MUNICIPALITIES AND AUTHORITIES HAVING JURISDICTION. COMPLY TO PENNSYLVANIA ACT 172. PROVIDE DRAWINGS, CALCULATIONS AND TESTS REQUIRED. INCLUDE COSTS IN THE BID PRICE. PROVIDE COPIES OF PERMITS, CERTIFICATES AND TEST REPORTS TO THE ENGINEER.

UTILITIES

PRIOR TO SUBMITTING THE BID PRICE, COORDINATE WITH UTILITIES. PROVIDE CONNECTIONS, MANHOLES, CONCRETE WORK, PITS, EQUIPMENT, APPURTENANCES, PIPING, METERS, DEVICES, VALVES, PRESSURE REGULATORS, PRESSURE RELIEF VALVES, BLOW-OFFS, MATERIALS, PRODUCTS AND LABOR. PERFORM WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITIES. INCLUDE IN YOUR BID PRICE WORK REQUIRED BY THE UTILITIES, WHETHER SHOWN ON THE BID DOCUMENTS OR NOT.

BIDDERS WARRANTY

BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, CONTRACTOR WARRANTS THAT CONTRACTOR HAS CAREFULLY AND THOROUGHLY EXAMINED THE BID DOCUMENTS AND HAS FOUND THEM TO BE COMPLETE AND FREE FROM AMBIGUITIES AND SUFFICIENT FOR BIDDING PURPOSES; FURTHER THAT, CONTRACTOR HAS CAREFULLY EXAMINED THE SITE OF THE WORK AND THAT FROM CONTRACTOR'S OWN INVESTIGATIONS IS SATISFIED AS TO THE NATURE AND LOCATION OF THE WORK AND THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS AND DIFFICULTY TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND OTHER FACILITIES NEEDED FOR THE PERFORMANCE OF THE WORK, THE GENERAL AND LOCAL CONDITIONS AND OTHER PERFORMANCE, AND THAT, CONTRACTOR'S BID FIGURE INCLUDES, ALL LABOR, MATERIAL, PRODUCTS, EQUIPMENT, APPURTENANCES, DEVICES, ACCESSORIES, OPTIONS, SUPPORTS, AND METHODS REQUIRED TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS IN ACCORDANCE WITH THE BID DOCUMENTS, AND PERTINENT CODES, REGULATIONS AND STANDARDS.

COORDINATION

COORDINATE WORK TO ASSURE EFFICIENT AND ORDERLY SEQUENCE OF INSTALLATION AND CONSTRUCTION. VERIFY THAT CHARACTERISTICS AND ELEMENTS OF INTERRELATED EQUIPMENT ARE COMPATIBLE PRIOR TO ORDERING EQUIPMENT. VERIFY THAT ELECTRICAL CHARACTERISTICS OF EQUIPMENT ARE COMPATIBLE TO BUILDING ELECTRICAL SYSTEM PRIOR TO ORDERING EQUIPMENT. COORDINATE WORK WITH SUBCONTRACTORS AS WELL AS WITH OTHER PRIME CONTRACTORS. COORDINATE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, APPURTENANCES, PANELS, CONDUIT AND CONTROL WIRING WITH SUBCONTRACTORS AS WELL AS WITH OTHER PRIME CONTRACTORS BEFORE INSTALLATION TO AVOID CONFLICTS. IF CONTRACTOR INSTALLS WORK WITHOUT COORDINATING WITH OTHER TRADES, AND A CONFLICT OCCURS, CONTRACTOR IS REQUIRED TO REMOVE HIS WORK AND REINSTALL IT WITHOUT ADDITIONAL COSTS OR EXTENSIONS OF TIME. NO CLAIMS WILL BE CONSIDERED AS A RESULT OF FAILURE TO COORDINATE.

COORDINATE TESTS AND INSPECTIONS WITH AUTHORITIES HAVING JURISDICTION, SUBCONTRACTORS, OTHER PRIME CONTRACTORS AND THE OWNER.

COORDINATE WORK WITH THE OWNER. VERIFY THAT INSTALLATION DOES NOT INTERFERE WITH THE OWNER'S OPERATIONS. COORDINATE WITH THE OWNER, 2 WEEKS IN ADVANCE, BEFORE DISCONNECTING THE OWNER'S UTILITIES, CLOSING STREETS AND CLOSING WALKWAYS.

COORDINATE STAGING OF WORK WITH THE OWNER, OTHER CONTRACTORS, SUBCONTRACTORS AND SUPPLIERS.

COORDINATE START-UP OPERATIONS WITH OTHER CONTRACTORS. ASSURE THAT OTHER CONTRACTORS, SUBCONTRACTORS, AND REQUIRED SUPPLIERS ARE PRESENT FOR THE START-UP OPERATIONS. EQUIPMENT START-UP SHALL BE PERFORMED AS FOLLOWS:
1. MANUFACTURER'S FIELD REPRESENTATIVES, HVAC CONTRACTOR, PLUMBING CONTRACTOR, ELECTRICAL CONTRACTOR, AND ATC CONTRACTOR SHALL BE PRESENT AT THE JOB-SITE, AT THE SAME TIME, DURING EQUIPMENT START-UP.
2. CONTRACTORS AND SUBCONTRACTORS SHALL COOPERATE TO START-UP EQUIPMENT.
3. AFTER EQUIPMENT IS OPERATIONAL, CONTRACTORS SHALL PERFORM TESTING AND ADJUSTING OF THEIR ASSOCIATED EQUIPMENT AND COMPONENTS.
4. THE EQUIPMENT OPERATION SHALL BE TESTED THROUGH IT'S VARIOUS CYCLES OF OPERATION.
5. BEFORE LEAVING THE JOB-SITE, THE EQUIPMENT OPERATION SHALL BE VERIFIED.

EQUIPMENT

EQUIPMENT SHALL BEAR THE STAMPS AND LABELS INDICATING THAT THE EQUIPMENT COMPLIES TO THE PERTINENT CODES AND STANDARDS. PROVIDE EQUIPMENT WITH ELECTRICAL COMPONENTS, DEVICES AND ACCESSORIES THAT ARE LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100.

PROVIDE EQUIPMENT THAT MEETS THE REQUIREMENTS OF THE PROJECT CONDITIONS INCLUDING, BUT NOT LIMITED TO: FEATURES, OPTIONS, SIZE, ACCESS, SERVICE, ELECTRICAL CHARACTERISTICS AND INSTALLATION. COORDINATE EQUIPMENT SIZE, DETAILS, ELECTRIC CHARACTERISTICS, ELECTRIC LOAD, CONTROL AND INSTALLATION WITH EQUIPMENT SUPPLIER, CONTROL CONTRACTOR AND ELECTRICAL CONTRACTOR AND OTHER TRADES THAT MAY AFFECT THE BID PRICE, PRIOR TO SUBMITTING BID AND PRIOR TO ORDERING EQUIPMENT. NO ADDITIONAL COSTS WILL BE CONSIDERED AS A RESULT OF FAILURE TO COORDINATE.

EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL OBTAIN DETAILED INSTALLATION INSTRUCTIONS FROM THE MANUFACTURER PRIOR TO INSTALLING THE EQUIPMENT. THIS SHALL INCLUDE WIRING DIAGRAMS FOR THE SPECIFIC INSTALLATION WHICH SHALL BE COORDINATED WITH THE ATC SUBCONTRACTOR, ELECTRICAL CONTRACTOR AND OTHER CONTRACTORS AFFECTED BY THE INSTALLATION OF THE EQUIPMENT. INSTALLATION INSTRUCTIONS AND WIRING DIAGRAMS SHALL BECOME PART OF THE OPERATIONS AND MAINTENANCE MANUALS.

EQUIPMENT AND APPURTENANCES SHALL OPERATE PROPERLY WITHOUT OBJECTIONABLE NOISE, VIBRATION OR MOVEMENT AS DETERMINED BY THE ENGINEER. CORRECTIONS TO THE INSTALLATION SHALL BE MADE BY THE CONTRACTOR, AS REQUIRED BY THE ENGINEER, WITHOUT ADDITIONAL COST OR TIME EXTENSION. DAMAGED OR DEFECTIVE EQUIPMENT SHALL BE REPLACED BY CONTRACTOR WITHOUT ADDITIONAL COST OR EXTENSION OF TIME.

WELDING

WELDING PROCESSES AND OPERATORS SHALL BE IN ACCORDANCE WITH THE ASME BOILER AND PRESSURE VESSEL CODES.

WORKMANSHIP

CONTRACTOR IS SOLELY RESPONSIBLE FOR QUALITY CONTROL OVER SUPPLIERS, MANUFACTURERS, PRODUCTS, SERVICES, SUBCONTRACTORS, SITE CONDITIONS AND WORKMANSHIP. INSTALLERS SHALL BE SKILLED MECHANICS WITH A MINIMUM OF 5 YEARS EXPERIENCE, WHO HAVE ALSO SUCCESSFULLY COMPLETED AN APPRENTICESHIP PROGRAM OR OTHER CRAFT TRAINING PROGRAM CERTIFIED BY THE U.S. DEPARTMENT OF LABOR, BUREAU OF APPRENTICESHIP AND TRAINING. INSTALLERS SHALL BE SUPERVISED BY SUPERVISORS WHO ARE QUALIFIED AND HAVE AT LEAST 20 YEARS EXPERIENCE IN THE AREA OF WORK THEY ARE SUPERVISING. INSTALLATION SHALL COMPLY WITH INDUSTRY STANDARDS EXCEPT WHERE MORE STRINGENT STANDARDS AND METHODS ARE REQUIRED BY CODES OR REGULATIONS.

SAFETY

CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN ACCORDANCE WITH OSHA AND ALL AUTHORITIES AND AGENCIES HAVING JURISDICTION.

PROTECTION OF FACILITIES AND SERVICES

PROTECT EXISTING FACILITIES AND SERVICES. AT CONTRACTOR'S EXPENSE, REPAIR OR REPLACE DAMAGED FACILITIES AND SERVICES TO THE SATISFACTION OF THE ENGINEER. PROTECT THE WORK, EQUIPMENT AND MATERIALS FROM DAMAGE, DUST, DIRT, DEBRIS, MOISTURE, CHEMICALS AND WATER. PLUG, CAP OR COVER DUCTWORK, PIPE AND CONDUIT OPENINGS DURING CONSTRUCTION. PROTECT THE WORK OF OTHER TRADES. AT CONTRACTOR'S EXPENSE, REPAIR OR REPLACE, WORK DAMAGED BY CONTRACTOR, TO THE SATISFACTION OF THE ENGINEER.

EXCAVATION, TRENCHING AND BACKFILL

PROVIDE EXCAVATION, TRENCHING AND BACKFILL ASSOCIATED WITH WORK, AS REQUIRED, AND IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF OSHA, STATE AND LOCAL AUTHORITIES, MUNICIPALITIES, AND UTILITIES. COORDINATE WITH UTILITIES, MUNICIPALITIES AND THE OWNER TO LOCATE UNDERGROUND SERVICES BEFORE BEGINNING ANY WORK. NOTIFY THE OWNER TWO WEEKS PRIOR TO BEGINNING EXCAVATION OR TRENCHING. PROTECT UNDERGROUND UTILITIES AND FACILITIES. PLAN WORK TO MINIMIZE TIME THAT EXCAVATIONS AND TRENCHING ARE OPEN. DO NOT LEAVE EXCAVATIONS AND TRENCHING OPEN OVER WEEKEND. PROVIDE STEEL COVER PLATES, BARRIERS WITH FLASHING LIGHTS, DANGER SIGNS, AND CAUTION TAPE. PROVIDE "WORK AHEAD" SIGNS 50 FEET BEFORE EXCAVATIONS AND TRENCHES. KEEP TRENCHES AND EXCAVATIONS DRY. COMPACT BACKFILL TO 95% DRY. DISPOSE OF SURPLUS MATERIALS IN A LEGAL MANNER OFF-SITE.

RESTORATION

RESURFACE DISTURBED CONCRETE AND MACADAM AREAS AND REPAIR CURBS TO MATCH EXISTING SURFACES, IN ACCORDANCE WITH STATE AND LOCAL AUTHORITIES, MUNICIPALITIES AND UTILITIES.

DEMOLITION

ITEMS DESIGNATED IN BID DOCUMENTS TO BE DEMOLISHED, SHALL BE REMOVED AND DISPOSED OF OFF-SITE IN A LEGAL MANNER. IN ADDITION TO THE ITEMS DESIGNATED TO BE DEMOLISHED, DEMOLITION SHALL INCLUDE THE FOLLOWING RELATED APPLICABLE ITEMS AS LISTED BELOW:
1. APPURTENANCES
2. SUPPORTS, FRAMING, LINTELS, HANGERS AND ANCHORS
3. ROOF CURBS, BLOCKING AND ROOFING
4. CONCRETE PADS
5. LOUVERS, DAMPERS & BIRDGUARD
6. DUCTWORK, GRILLES, REGISTERS & DIFFUSERS
7. CABINETS & CASINGS
8. FIRE DAMPERS, SMOKE DAMPERS & ACCESS DOORS
9. DUCT DETECTORS AND WIRING BACK TO ITS SOURCE, TERMINATE PER NEC
10. PIPING BACK TO ITS SOURCE AND CAP.
11. VALVES, TRAPS, SPECIALTIES AND DEVICES
12. PNEUMATIC CONTROLS, THERMOSTATS AND DEVICES
13. PNEUMATIC TUBING BACK TO ITS SOURCE AND CAP
14. ELECTRIC, ELECTRONIC AND DIGITAL CONTROLS, THERMOSTATS, SENSORS AND DEVICES
15. CONTROL WIRING, TRANSFORMERS, DEVICES, CABLE AND CONDUIT BACK TO ITS SOURCE, TERMINATE PER NEC
16. POWER WIRING FOR CONTROL, UP TO AND INCLUDING 120 VOLTS AND CONDUIT BACK TO ITS SOURCE, TERMINATE PER NEC

PROVIDE DUST CONTROL IN ACCORDANCE WITH APPLICABLE CODES AND TO PREVENT DUST FROM MIGRATING TO OTHER AREAS. PATCH AND FINISH AREAS DISTURBED BY DEMOLITION. USE MATERIALS THAT ARE COMPATIBLE WITH EXISTING MATERIALS. FINISH SURFACES TO MATCH EXISTING ADJACENT AREAS. COORDINATE DEMOLITION WITH OWNER. NOTIFY THE OWNER TWO WEEKS PRIOR TO BEGINNING DEMOLITION.

CUTTING AND PATCHING

PROVIDE CUTTING AND PATCHING AS REQUIRED BY THE WORK OF THE CONTRACT. PROVIDE OPENINGS FOR PENETRATION OF MECHANICAL WORK. PROVIDE STEEL LINTELS AND SLEEVES. LINTELS SHALL BE SIZED BY STRUCTURAL ENGINEER, REGISTERED IN THE STATE OF PENNSYLVANIA. CONTRACTOR SHALL INCLUDE COSTS IN BID PRICE. PROVIDE TEMPORARY SUPPORTS AS NEEDED AND FOR PROTECTION FOR ADJACENT WORK. COORDINATE CUTTING, PATCHING, SUPPORTING & ANCHORING OPERATIONS WITH THE GENERAL CONTRACTOR. DO NOT DRILL OR CUT METAL, WOOD OR CONCRETE BEAMS, COLUMNS, OR OTHER STRUCTURAL MEMBERS. WHEN PATCHING USE MATERIALS THAT MATCH ADJACENT MATERIALS. REFINISH SURFACES TO MATCH ADJACENT SURFACES. FOR CONTINUOUS SURFACES, REFINISH TO NEAREST INTERSECTION OR NATURAL BREAK. CONTRACTOR IS RESPONSIBLE FOR COSTS ASSOCIATED WITH FAILURE TO COORDINATE OPENINGS WITH THE GENERAL CONTRACTOR IN A TIMELY FASHION AND IN ACCORDANCE WITH THE CONSTRUCTION PROGRESS. WHERE CONTRACTOR CAUSES UNSIGHTLY CONDITIONS, CONTRACTOR IS REQUIRED AT CONTRACTOR'S EXPENSE, TO ENGAGE THE GENERAL CONTRACTOR TO CORRECT THE DAMAGED AREAS. WORK SHALL BE APPROVED BY THE ENGINEER.

FIRE DAMPERS, SMOKE DAMPERS AND FIRESTOPPING

PROVIDE UL CLASSIFIED, CURTAIN TYPE, HIGH HAT, FIRE DAMPERS AT FIRE-RATED ASSEMBLIES. FIRE DAMPERS SHALL HAVE RATING EQUAL TO THAT OF THE ASSEMBLY PENETRATED. PROVIDE UL CLASSIFIED,SMOKE DAMPERS WITH SIDE PLATE MTD. ACUATORS AT SMOKE PARTITIONS AND BARRIERS. FIRE DAMPERS AND SMOKE DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA. PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRESTOPPED. THE ANNULAR SPACE BETWEEN THE SLEEVE, PIPE OR DUCT SHALL BE SEALED WITH A FIRESTOPPING MATERIAL WITH A UL RATING OF 3 HOURS.

CONCRETE WORK

PROVIDE CONCRETE WORK AND PADS ASSOCIATED WITH WORK, AS REQUIRED AND IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF OSHA, STATE AND LOCAL CODES, MUNICIPALITIES AND UTILITIES. EQUIPMENT PADS WITH CHAMFER EDGES, AND FOUNDATIONS SHALL BE DOWELED TO THE FLOOR SLABS. CONCRETE SHALL BE A MINIMUM OF 3000 PSI COMPRESSION STRENGTH AND SHALL HAVE A SMOOTH TROWEL FINISH. ANCHOR BOLTS SHALL BE SET IN PLACE WHEN POURING PADS. USE EQUIPMENT TEMPLATES FOR LOCATING ANCHOR BOLTS.

EQUIPMENT SUPPORTS

PROVIDE STRUCTURAL STEEL SUPPORTS, GRATING, BEAMS, CHANNELS, PIPE STRUCTURES, STEEL LINTELS AND MISCELLANEOUS STEEL FOR SUPPORTING, AND BRACING OF EQUIPMENT.

VIBRATION ISOLATORS

PROVIDE VIBRATION ISOLATORS IN ACCORDANCE WITH ASHRAE AND EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. UNLESS OTHERWISE NOTED, PROVIDE SPRING MOUNT VIBRATION ISOLATORS ON MOTOR DRIVEN EQUIPMENT.

ANCHORS

PROVIDE WROUGHT IRON OR STEEL ANCHORS ON PIPING FOR THE PROPER CONTROL OF STRESS IN PIPING DUE TO EXPANSION. ANCHORS MUST BE MADE OF CROSS SECTIONS SECURELY FASTENED TO THE BUILDING STRUCTURE BY ANCHOR BOLTS SET IN CONCRETE OR ATTACHED TO THE STEEL FRAMING OF THE BUILDING. ANCHORS AND THEIR METHOD FOR SECURING SHALL BE APPROVED BY A REGISTERED ENGINEER IN THE STATE OF PENNSYLVANIA. INCLUDE COSTS IN THE BID PRICE.

REMOVE WASTE

MAINTAIN AREA FREE OF WASTE, DEBRIS AND DIRT. REMOVE CARTONS, PALLETS, CONTAINERS, PACKAGING AND WASTE AS A RESULT OF WORK. REMOVE WASTE DAILY AND SWEEP CLEAN.

TRANSPORTATION AND HANDLING

PROVIDE VEHICLES, CRANES, EQUIPMENT, LIFTS AND PERSONNEL FOR TRANSPORTATION AND HANDLING OF EQUIPMENT, MATERIALS AND PRODUCTS. TRANSPORT AND HANDLE EQUIPMENT, MATERIALS, AND PRODUCTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. STORE AND PROTECT EQUIPMENT, MATERIALS AND PRODUCTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

EQUIPMENT CONNECTIONS

AS A MINIMUM, PROVIDE SHUT-OFF VALVES, BALANCING VALVES, VENTS, DRAINS, FITTINGS, UNIONS, FLEXIBLE CONNECTORS, AND FINAL CONNECTIONS OF PIPING TO ALL EQUIPMENT AND DEVICES.

CONTROL SYSTEM

HVAC CONTRACTOR SHALL PROVIDE COMPLETE HVAC DDC CONTROL SYSTEM INCLUDING HARDWARE, SOFTWARE, CONTROLLERS, LOCAL AREA NETWORK (LAN), INTERFACE EQUIPMENT, APPARATUS, TRANSFORMERS, PANELS, DEVICES, SENSORS, ACTUATORS, DAMPERS, VALVES, CONTROL WIRING, AND CONDUIT, EXCEPT AS INDICATED OTHERWISE. POWER WIRING, CONDUIT, TRANSFORMERS AND DEVICES FROM ELECTRICAL PANELS OR LOAD CENTERS, FOR CONTROLS SYSTEMS AND DEVICES UP TO AND INCLUDING 120 VOLTS, SHALL BE PROVIDED UNDER THE HVAC CONTRACT. CONTROL SYSTEM POWER AND CONTROL WIRING SHALL BE INSTALLED IN CONDUIT IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

MOTOR STARTERS

MOTOR STARTERS, WHERE NOT AN INTEGRAL PART OF THE MECHANICAL EQUIPMENT OR WHERE NOT IN A MOTOR CONTROL CENTER, SHALL BE FURNISHED BY THE CONTRACTOR WHO PROVIDES THE EQUIPMENT AND SHALL BE INSTALLED UNDER THE ELECTRICAL CONTRACT. MOTOR STARTERS FOR MOTOR CONTROL CENTERS SHALL BE FURNISHED AND INSTALLED UNDER THE ELECTRICAL CONTRACT. MANUAL STARTERS FOR FRACTIONAL HORSEPOWER MOTORS SHALL BE FURNISHED AND INSTALLED UNDER THE ELECTRICAL CONTRACT. CONNECTIONS TO ELECTRICAL PANELS OR LOAD CENTERS BY THE MECHANICAL CONTRACTOR SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR. WIRING CONNECTIONS BETWEEN SPECIALTY ITEMS PROVIDED UNDER THE HVAC CONTRACT (I.E. WATER FLOW SWITCHES, SMOKE DAMPERS) AND SPECIAL SYSTEMS PROVIDED BY ELECTRICAL (I.E. FIRE ALARM) WILL BE PROVIDED UNDER THE ELECTRICAL SPECIFICATIONS.

STARTERS SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED. STARTERS SHALL HAVE HAND-OFF-AUTO SWITCH, PILOT LIGHT, CONTROL POWER TRANSFORMER, AND A MINIMUM OF (3)NORMALLY OPEN AND (3) NORMALLY CLOSED AUXILIARY CONTACTS. COORDINATE STARTER REQUIREMENTS WITH CONTROL SUBCONTRACTOR, EQUIPMENT SUPPLIER AND ELECTRICAL CONTRACTOR PRIOR TO SUBMITTING YOUR BID PRICE AND PROVIDE STARTERS THAT MEET REQUIREMENTS.

PAINTING

TOUCH UP SCRATCHES AND ABRASIONS ON EQUIPMENT. PAINT SURFACES BEHIND MATERIALS AND EQUIPMENT REMOVED TO MATCH ADJACENT SURFACES. PAINT THE INSIDE OF AIR INLETS/OUTLETS AND DUCTWORK VISIBLE THROUGH AIR INLETS/OUTLETS WITH ONE COAT OF FLAT BLACK PAINT OR PROVIDE ITEMS FACTORY PRE PAINTED. PAINT FACTORY PRIMED IRON AND STEEL SURFACES WITH TWO COATS OIL ALKYD ENAMEL. PAINT EXPOSED HANGERS, DUCTWORK, UNINSULATED PIPING, CONDUIT, SUPPORTS AND OTHER FERROUS METAL WORK, INSULATION AND UNPAINTED EQUIPMENT IN FINISHED SPACES WITH TWO COATS OIL ALKYD ENAMEL. PAINT IRON AND STEEL ITEMS LOCATED OUTDOORS WHICH ARE NOT GALVANIZED WITH ONE COAT COMPATIBLE PRIMER AND TWO COATS OIL ALKYD ENAMEL. COLORS SHALL BE AS SELECTED BY THE ARCHITECT. AFTER INSTALLING UNITS REMOVE PAINT SPLATTERS, SPOTS, DIRT AND DEBRIS. REPAIR DAMAGED CABINETS AND FINISHES TO MATCH ORIGINAL. TOUCH-UP SCRATCHES. CLEAN UNITS INTERNALLY AND INSTALL NEW FILTERS.

SUBSTANTIAL COMPLETION

BEFORE REQUESTING INSPECTION COMPLETE THE FOLLOWING:
1. PREPARE A LIST OF ITEMS TO BE COMPLETED AND CORRECTED (PUNCH LIST), INCLUDE THE VALUE OF EACH ITEM ON THE LIST, AND REASONS WHY THE WORK IS NOT COMPLETE.
2. SUBMIT SPECIFIC WARRANTIES, WORKMANSHIP BONDS, MAINTENANCE SERVICE AGREEMENTS, FINAL CERTIFICATIONS, AND SIMILAR DOCUMENTS.
3. PREPARE AND SUBMIT PROJECT RECORD DOCUMENTS, RECORD DRAWINGS, OPERATION AND MAINTENANCE MANUALS.
4. DELIVER TOOLS, SPARE PARTS, EXTRA MATERIALS, AND SIMILAR ITEMS TO LOCATION DESIGNATED BY OWNER. LABEL WITH MANUFACTURER'S NAME AND MODEL NUMBER WHERE APPLICABLE.
5. COMPLETE STARTUP AND TESTING OF SYSTEMS.
6. SUBMIT TEST/ADJUST/BALANCE RECORDS.
7. TERMINATE AND REMOVE TEMPORARY FACILITIES FROM PROJECT SITE, ALONG WITH CONSTRUCTION TOOLS, AND SIMILAR ELEMENTS.
8. ADVISE OWNER OF CHANGEOVER IN HEAT AND OTHER UTILITIES.
9. COMPLETE FINAL CLEANING REQUIREMENTS, INCLUDING TOUCHUP PAINTING.
10. TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES TO ELIMINATE VISUAL DEFECTS.

FINAL COMPLETION

BEFORE REQUESTING INSPECTION COMPLETE THE FOLLOWING:
1. SUBMIT A FINAL APPLICATION FOR PAYMENT
2. SUBMIT COPY OF ENGINEER'S SUBSTANTIAL COMPLETION INSPECTION LIST AND CERTIFY THAT EACH ITEM HAS BEEN COMPLETED OR OTHERWISE RESOLVED FOR ACCEPTANCE.
3. SUBMIT EVIDENCE OF FINAL, CONTINUING INSURANCE COVERAGE COMPLYING WITH INSURANCE REQUIREMENTS.
4. INSTRUCT OWNER'S PERSONNEL IN OPERATION, ADJUSTMENT, AND MAINTENANCE OF PRODUCTS, EQUIPMENT, AND SYSTEMS. SUBMIT DEMONSTRATION AND TRAINING VIDEOTAPES.

RECORD DRAWINGS

PREPARE RECORD DRAWINGS USING CONTRACTOR'S RECORD SET OF PRINTS THAT RECORD CHANGES FROM THE CONTRACT DRAWINGS. RECORD DRAWINGS SHALL BE COMPLETE WITH ALL NOTATIONS, CHANGES AND MODIFICATIONS. DRAWINGS MUST BE PROFESSIONAL QUALITY USING AUTO-CAD.

OPERATION AND MAINTENANCE

SUBMIT TWO (2) SETS OF OPERATION AND MAINTENANCE DATA BOUND IN 8-1/2 X 11 INCH RING BINDERS WITH DURABLE PLASTIC COVERS. SUBDIVIDE THE BINDER CONTENTS WITH PERMANENT PAGE DIVIDERS, AND TABS CLEARLY TITLING THE SECTION CONTENTS. PREPARE A TABLE OF CONTENTS FOR EACH VOLUME, WITH EACH PRODUCT OR SYSTEM DESCRIPTION IDENTIFIED.

PART 1: DIRECTORY, LISTING NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF ENGINEER, CONTRACTOR, SUBCONTRACTORS AND EQUIPMENT SUPPLIERS FOR OPERATIONAL PROBLEMS AND REPAIRS.

PART 2: OPERATION AND MAINTENANCE INSTRUCTIONS, ARRANGED BY SYSTEMS AND SUBDIVIDED BY EQUIPMENT. DATA MUST BE OPERATION AND MAINTENANCE INFORMATION FROM THE MANUFACTURER. CATALOG CUTS AND SALES BROCHURES ARE UNACCEPTABLE. IDENTIFY THE FOLLOWING:
1. LIST OF EQUIPMENT.
2. PARTS LIST FOR EACH COMPONENT.
3. OPERATING INSTRUCTIONS FOR EQUIPMENT AND SYSTEMS.
4. MAINTENANCE INSTRUCTIONS FOR EQUIPMENT AND SYSTEMS.
5. INSTALLATION INSTRUCTIONS AND WIRING DIAGRAMS FOR EQUIPMENT.

PART 3: PROJECT DOCUMENTS AND CERTIFICATES, INCLUDING THE FOLLOWING:
1. APPROVED SHOP DRAWINGS AND SUBMITTALS.
2. AIR AND WATER BALANCE REPORTS.
3. CERTIFICATES.
4. COPIES OF WARRANTIES AND BONDS.
5. COPIES OF TEST REPORTS.

OWNER INSTRUCTIONS

PROVIDE (40) HOURS OF DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS, TO THE OWNER'S PERSONNEL, FOR EQUIPMENT AND SYSTEMS. VIDEO-TAPE TRAINING AND INSTRUCTIONS. SUBMIT (3) COPIES TO OWNER, FOR EVERY MAJOR SYSTEM, PROVIDE DETAILED SYSTEM OPERATING INSTRUCTIONS, CLEARLY TYPED AND FRAMED, WITH CLEAR PLASTIC COVER. INSTALL AT LOCATION DIRECTED BY THE ENGINEER

WARRANTY

UNLESS OTHERWISE NOTED, PROVIDE A ONE YEAR WARRANTY, FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER, ON LABOR, EQUIPMENT, MATERIALS, PRODUCTS AND INSTALLATION.

EXTRA MATERIALS

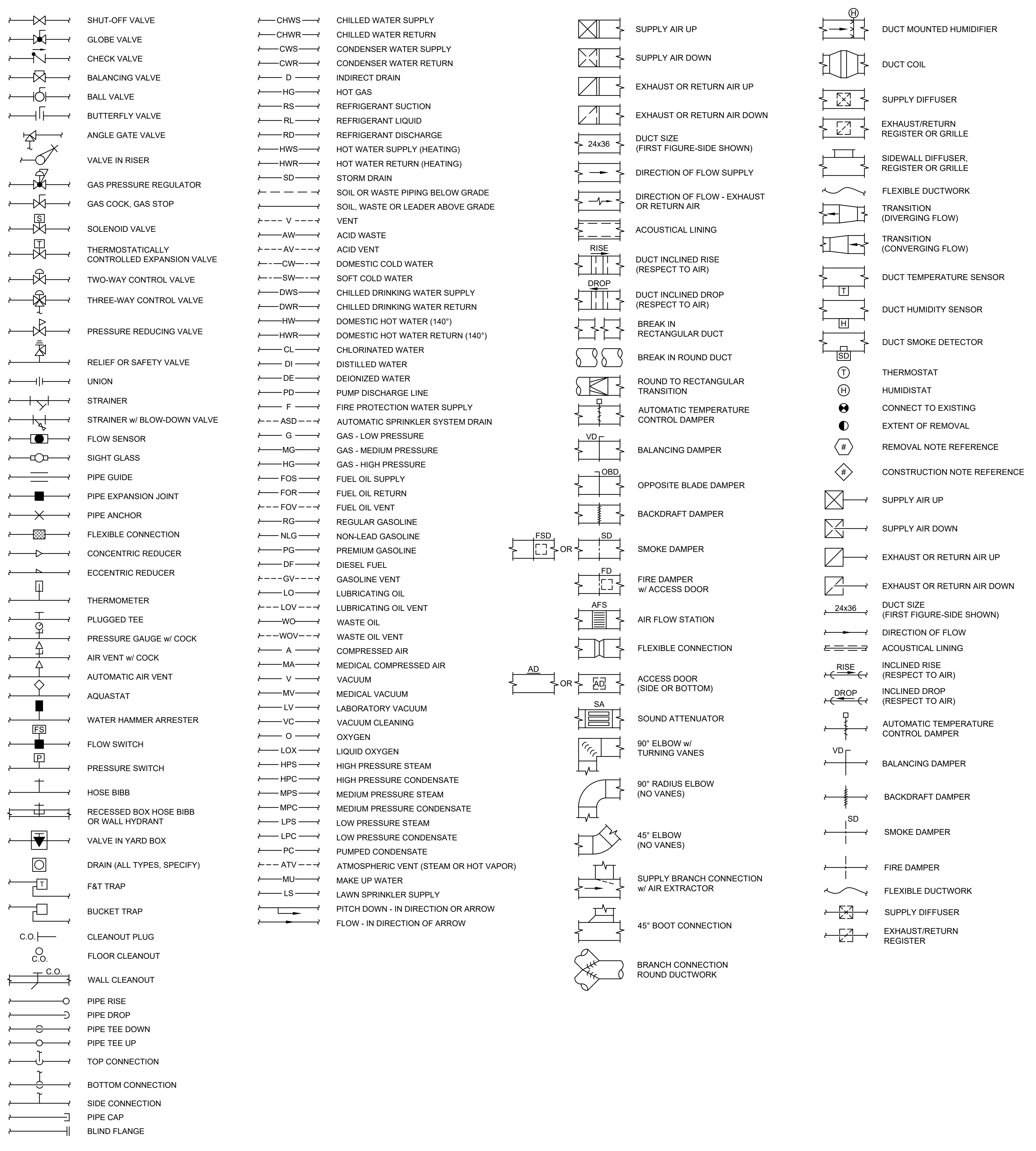
AT SUBSTANTIAL COMPLETION, REPLACE AIR FILTERS IN UNITS. PROVIDE THE FOLLOWING PERTINENT EXTRA MATERIALS:

1. ONE SPARE SET OF FILTERS FOR EACH PIECE OF EQUIPMENT WITH FILTERS.
2. ONE FAN BELT FOR EACH SIZE OF BELT FOR EQUIPMENT WITH FANS.
3. FOR EACH TYPE OF SPRINKLER ON THE PROJECT, PROVIDE FINISHED, WALL-MOUNTING, STEEL CABINET WITH HINGED COVER WITH SPACE FOR A MINIMUM OF 6 SPARE SPRINKLERS PLUS SPRINKLER WRENCH.

ABBREVIATIONS

A.D.	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
AV	AUTOMATIC AIR VENT
BDD	BACKDRAFT DAMPER
CFM	CUBIC FEET PER MINUTE
CO	CLEAN OUT
CD	CONDENSATE DRAIN
DB	DRY BULB
DN	DOWN
DWG	DRAWING
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EWT	ENTERING WATER TEMPERATURE
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FLEX	FLEXIBLE DUCTWORK
FLR	FLOOR
FOB	FLAT ON BOTTOM TRANSITION
FOT	FLAT ON TOP TRANSITION
FS	FLOW SWITCH
FSD	COMBINATION FIRE & SMOKE DAMPER
GC	GAS COCK
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HP	HEAT PUMP
HSTAT	HUMIDISTAT
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE-UP AIR UNIT
MA	MIXED AIR
MAT	MIXED AIR TEMPERATURE
MBH	THOUSAND BRITISH THERMAL UNITS
MC	MECHANICAL CONTRATOR
MD	MOTORIZED DAMPER
MV	MANUAL AIR VENT
MVD/VD	MANUAL VOLUME DAMPER
(N)	NEW
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OA, OSA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
PC	PLUMBING CONTRACTOR
PG	PRESSURE GAUGE w/ GAUGE COCK
P.O.C.	POINT OF CONNECTION OF NEW TO EXISTING
P.O.D.	POINT OF DISCONNECT
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
RA	RETURN AIR
%PH	PERCENT RELATIVE HUMIDITY
SA	SUPPLY AIR
SD	SMOKE DAMPER
SP	STATIC PRESSURE
TA	TRANSFER AIR
T&P	T&P RELIEF VALVE
TP	TEMPERATURE & PRESSURE TEST PLUG
TSTAT	THERMOSTAT
TYP	TYPICAL
U	UNION
UC	DOOR UNDERCUT w/ HEIGHT
WB	WET BULB

MECHANICAL LEGEND



NO.	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAJ
0	02/15/22	ISSUED FOR BIDDING	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH DATE: 09/2021
BASE BY: N/A N.B.: N/A
DRAWN BY: TMF DESIGNED BY: GLB CHKD:

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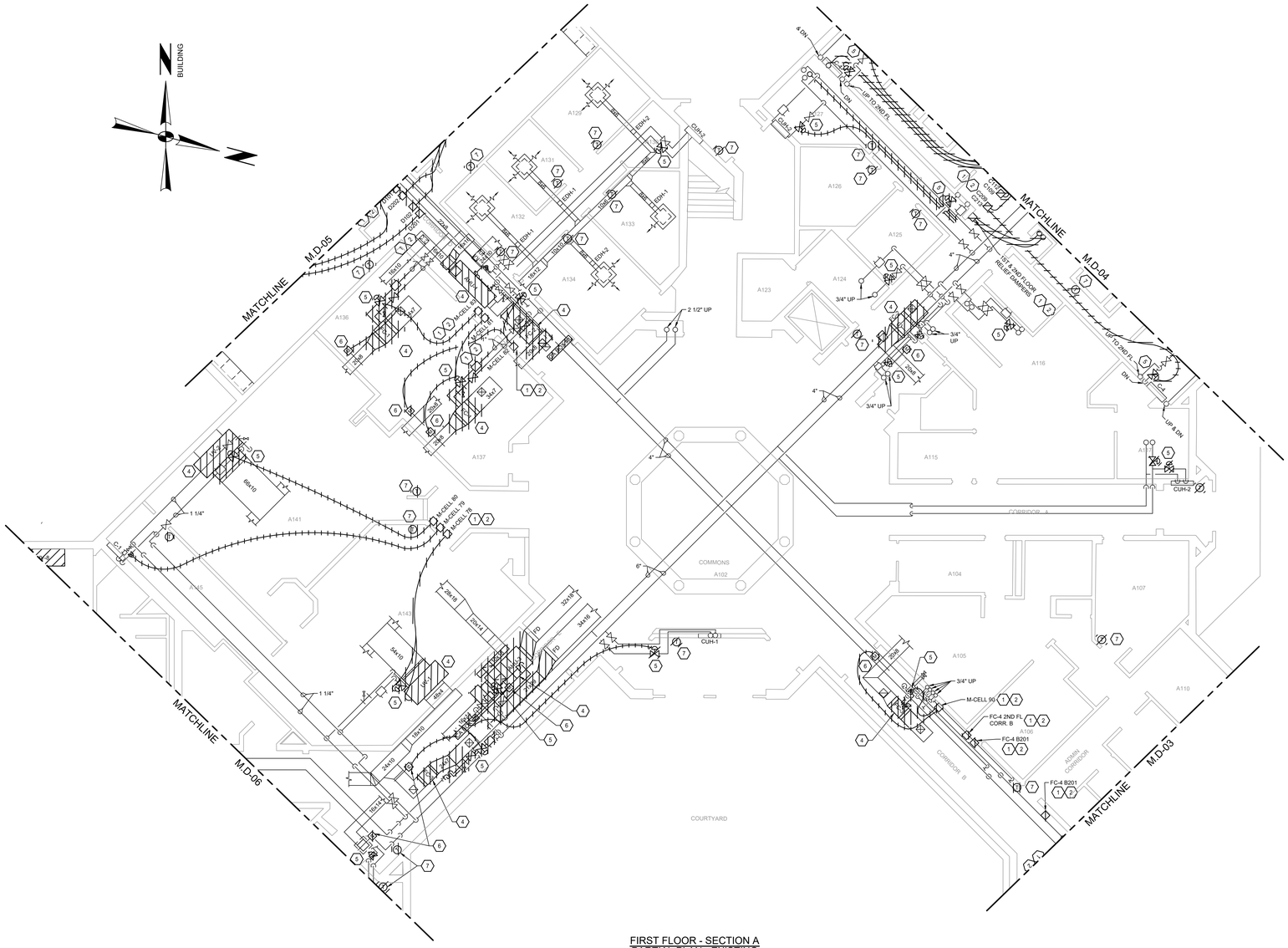
LEHIGH VALLEY
Roma Corporate Center, Suite 106
1605 N Cedar Crest Blvd
Allentown, PA 18104
610.849.9700
WEST CHESTER
101 East Evans Street
West Chester, PA 19380
610.621.2000

SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE
MECHANICAL
GENERAL NOTES AND LEGEND

10/29/21	103916.0008 M.0-01
DATE	DIGITAL FILENAME

103916.0008
WORK ORDER NUMBER

M.0-01
DRAWING NUMBER



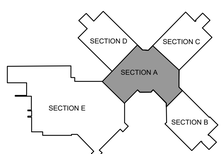
FIRST FLOOR - SECTION A
PARTIAL PLAN - EXISTING

SCALE: 3/32"=1'-0"

4' 0' 4' 8' 12' 16' 20'

REMOVAL NOTES

1. DISCONNECT AND REMOVE EXISTING PNEUMATIC CONTROL BOX. RETURN PNEUMATIC CONTROL BOX TO OWNER. REMOVE ALL EXISTING ASSOCIATED CONTROL TUBING.
2. REMOVE ALL EXISTING PNEUMATIC CONTROL TUBING BACK TO THE MAIN PNEUMATIC CONTROLLER IN THE MECHANICAL ROOM.
3. DISCONNECT AND REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR. DISCONNECT PIPING TO REMAIN FOR CONNECTION TO NEW UNIT.
4. DISCONNECT AND REMOVE EXISTING FAN COIL UNIT, AIR HANDLING UNIT, OR HORIZONTAL UNIT VENTILATOR AND PORTION OF SUPPLY AND RETURN AIR DUCTWORK AS NEEDED FOR INSTALLATION OF NEW UNIT.
5. REMOVE EXISTING PNEUMATIC CONTROL VALVE, CONTROL TUBING, AND ANY PIPING NECESSARY TO INSTALL NEW UNIT.
6. REMOVE EXISTING PNEUMATIC DAMPER ACTUATOR AND CONTROL TUBING.
7. REMOVE EXISTING THERMOSTAT.



ELEMENTARY SCHOOL KEY PLAN

NO.	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAJ
0	01/10/22	ISSUED FOR BID	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH
BASE BY: N/A
DRAWN BY: TMF
DATE: 09/20/21
N.B.: N/A
DESIGNED BY: MMH
CHKD:

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Engineers and Consultants
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1047 North Park Road
P.O. Box 12677
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Lancaster, PA 17605-2486
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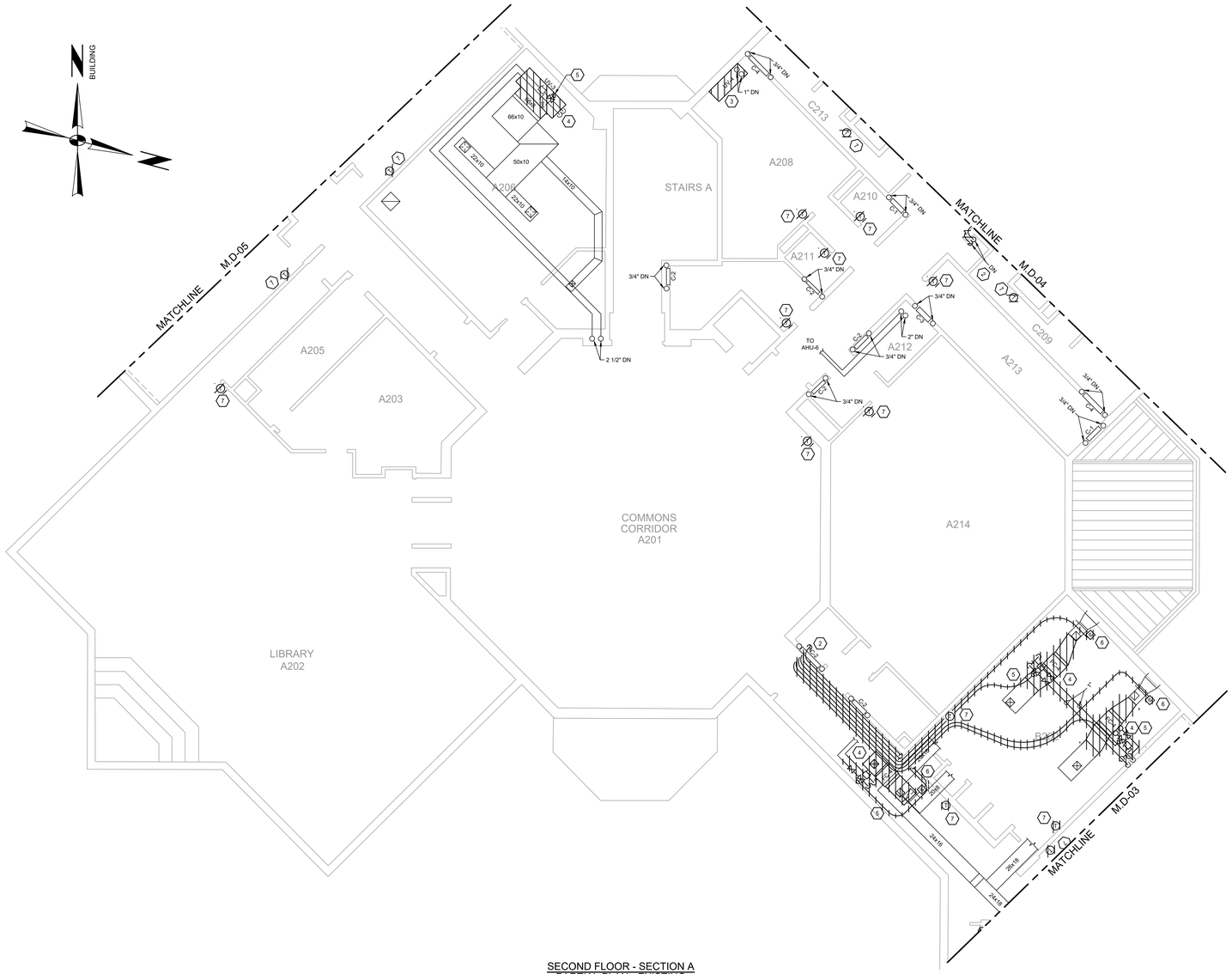
2052 Lucon Road, Building 3
Wyomissing, PA 19610
610.921.6658
WEST CHESTER
1436 Lancaster Ave.
Paoli, PA 19301
610.912.2000

SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE
MECHANICAL
FIRST FLOOR - SECTION A - EXISTING

DATE	DIGITAL FILENAME
10/29/21	103916.0008 M.D-01

WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: M.D-01



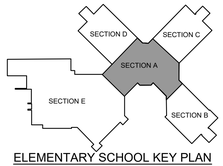
SECOND FLOOR - SECTION A
PARTIAL PLAN - EXISTING

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

4' 0' 4' 8' 12' 16' 20'

REMOVAL NOTES

1. DISCONNECT AND REMOVE EXISTING PNEUMATIC CONTROL BOX. RETURN PNEUMATIC CONTROL BOX TO OWNER. REMOVE ALL EXISTING ASSOCIATED CONTROL TUBING.
2. REMOVE ALL EXISTING PNEUMATIC CONTROL TUBING BACK TO THE MAIN PNEUMATIC CONTROLLER IN THE MECHANICAL ROOM.
3. DISCONNECT AND REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR. DISCONNECT PIPING TO REMAIN FOR CONNECTION TO NEW UNIT.
4. DISCONNECT AND REMOVE EXISTING FAN COIL UNIT, AIR HANDLING UNIT, OR HORIZONTAL UNIT VENTILATOR AND PORTION OF SUPPLY AND RETURN AIR DUCTWORK AS NEEDED FOR INSTALLATION OF NEW UNIT.
5. REMOVE EXISTING PNEUMATIC CONTROL VALVE, CONTROL TUBING, AND ANY PIPING NECESSARY TO INSTALL NEW UNIT.
6. REMOVE EXISTING PNEUMATIC DAMPER ACTUATOR AND CONTROL TUBING.
7. REMOVE EXISTING THERMOSTAT.



ELEMENTARY SCHOOL KEY PLAN

NO	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAJ
0	01/10/22	ISSUED FOR REVIEW	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH
DATE: 09/20/21
BASE BY: N/A
N.B.: N/A
DRAWN BY: TMF
DESIGNED BY: MMH
CHKD:

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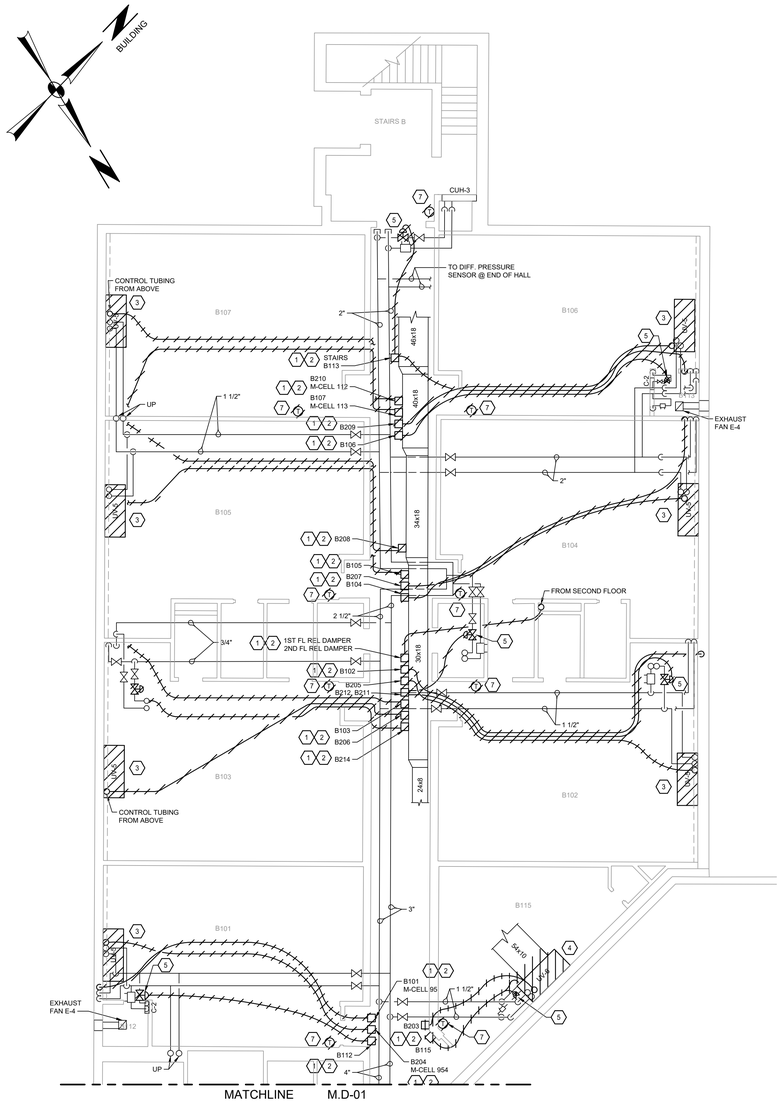
SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE
MECHANICAL
SECOND FLOOR - SECTION A - EXISTING

DATE	DIGITAL FILENAME
10/29/21	103916.0008 M.D-02

WORK ORDER NUMBER: 103916.0008

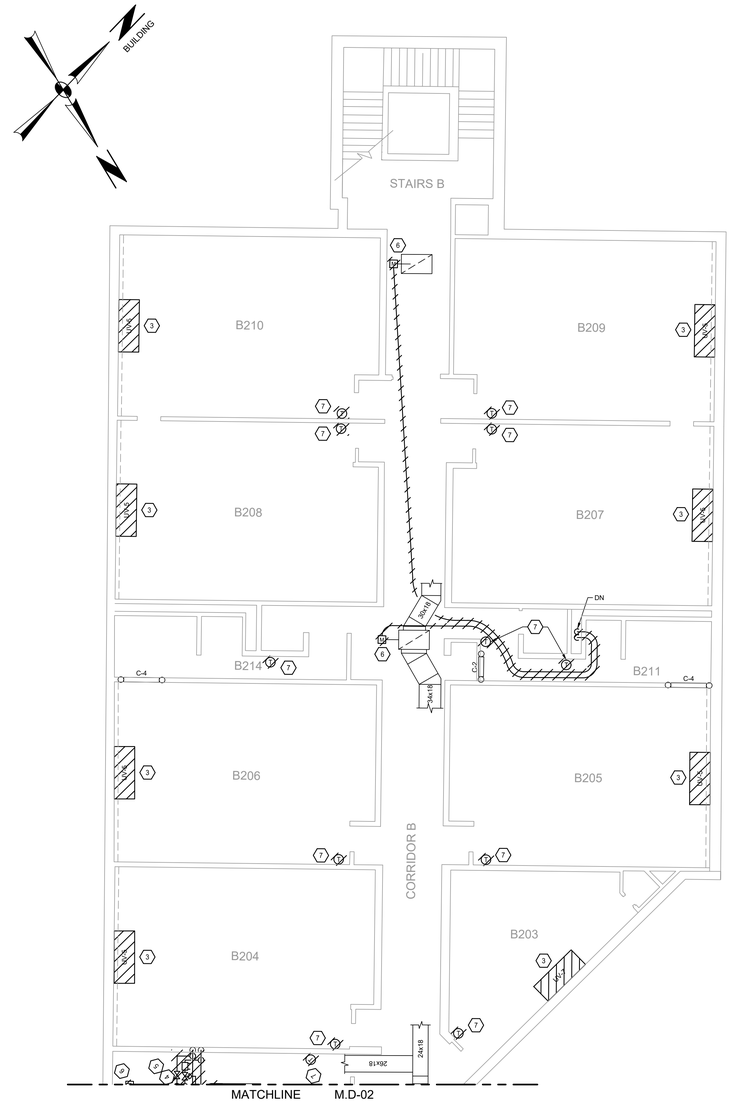
DRAWING NUMBER: M.D-02



FIRST FLOOR - SECTION B
PARTIAL PLAN - EXISTING

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

4' 0' 4' 8' 12' 16' 20'



SECOND FLOOR - SECTION B
PARTIAL PLAN - EXISTING

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

4' 0' 4' 8' 12' 16' 20'

REMOVAL NOTES

1. DISCONNECT AND REMOVE EXISTING PNEUMATIC CONTROL BOX. RETURN PNEUMATIC CONTROL BOX TO OWNER. REMOVE ALL EXISTING ASSOCIATED CONTROL TUBING.
2. REMOVE ALL EXISTING PNEUMATIC CONTROL TUBING BACK TO THE MAIN PNEUMATIC CONTROLLER IN THE MECHANICAL ROOM.
3. DISCONNECT AND REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR. DISCONNECT PIPING TO REMAIN FOR CONNECTION TO NEW UNIT.
4. DISCONNECT AND REMOVE EXISTING FAN COIL UNIT, AIR HANDLING UNIT, OR HORIZONTAL UNIT VENTILATOR AND PORTION OF SUPPLY AND RETURN AIR DUCTWORK AS NEEDED FOR INSTALLATION OF NEW UNIT.
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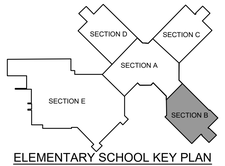
6. REMOVE EXISTING PNEUMATIC DAMPER ACTUATOR AND CONTROL TUBING.
7. REMOVE EXISTING THERMOSTAT.



ELEMENTARY SCHOOL KEY PLAN

NO.	DATE	ISSUED FOR CONSTRUCTION	TMF	MMH	DAJ
1	04/13/22	ISSUED FOR BID	TMF	MMH	MMH
0	01/10/22	ISSUED FOR REVIEW	MADE	CHKD	APVD
		DESCRIPTION			

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH DATE: 09/20/21
BASE BY: N/A N.B.: N/A
DRAWN BY: TMF DESIGNED BY: MMH CHKD:

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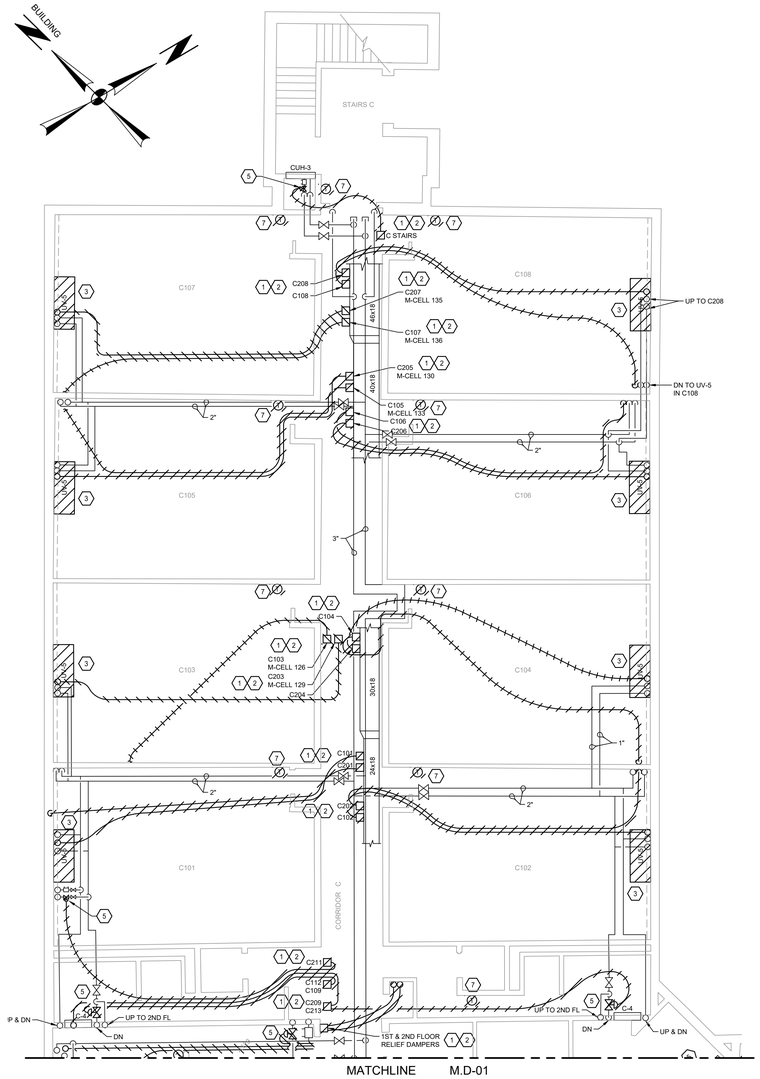
SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE
MECHANICAL
FIRST AND SECOND FLOORS - SECTION B - EXISTING

DATE	DIGITAL FILENAME
10/29/21	103916.0008 M.D-03

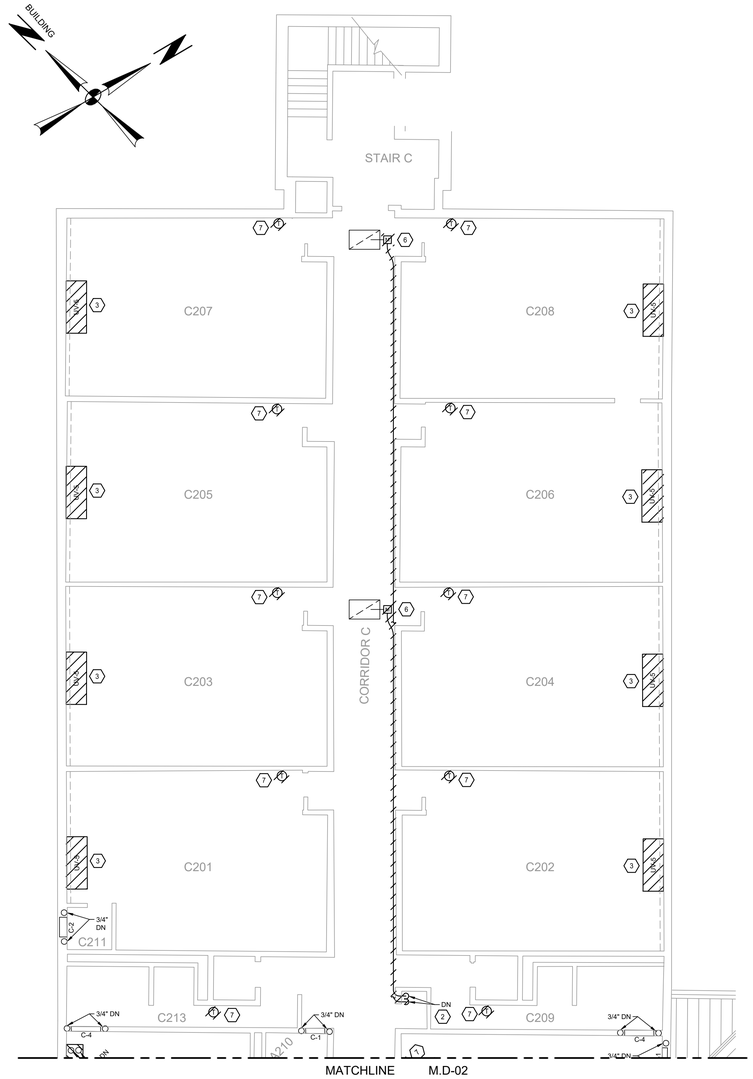
WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: M.D-03



FIRST FLOOR - SECTION C
PARTIAL PLAN - EXISTING

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



SECOND FLOOR - SECTION C
PARTIAL PLAN - EXISTING

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

REMOVAL NOTES

1. DISCONNECT AND REMOVE EXISTING PNEUMATIC CONTROL BOX. RETURN PNEUMATIC CONTROL BOX TO OWNER. REMOVE ALL EXISTING ASSOCIATED CONTROL TUBING.
2. REMOVE ALL EXISTING PNEUMATIC CONTROL TUBING BACK TO THE MAIN PNEUMATIC CONTROLLER IN THE MECHANICAL ROOM.
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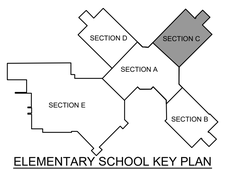
6. REMOVE EXISTING PNEUMATIC DAMPER ACTUATOR AND CONTROL TUBING.
7. REMOVE EXISTING THERMOSTAT.



ELEMENTARY SCHOOL KEY PLAN

NO.	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAL
0	01/10/22	ISSUED FOR BIDDING	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH DATE: 09/20/21
N.B.: N/A
BASE BY: N/A
DRAWN BY: TMF DESIGNED BY: MMH CHKD:

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Engineers and Consultants
ssmgroup.com

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Allentown, PA 18104
610.966.2220
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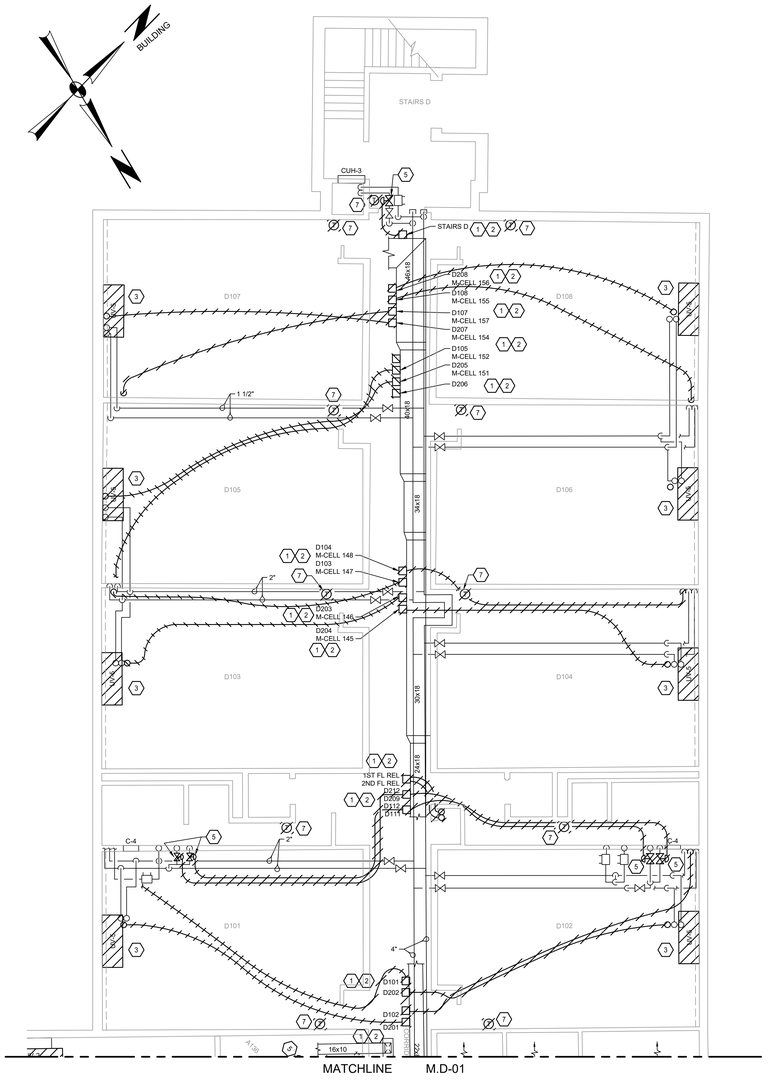
SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE
MECHANICAL
FIRST AND SECOND FLOORS - SECTION C - EXISTING

DATE	DIGITAL FILENAME
10/29/21	103916.0008 M.D-04

WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: M.D-04

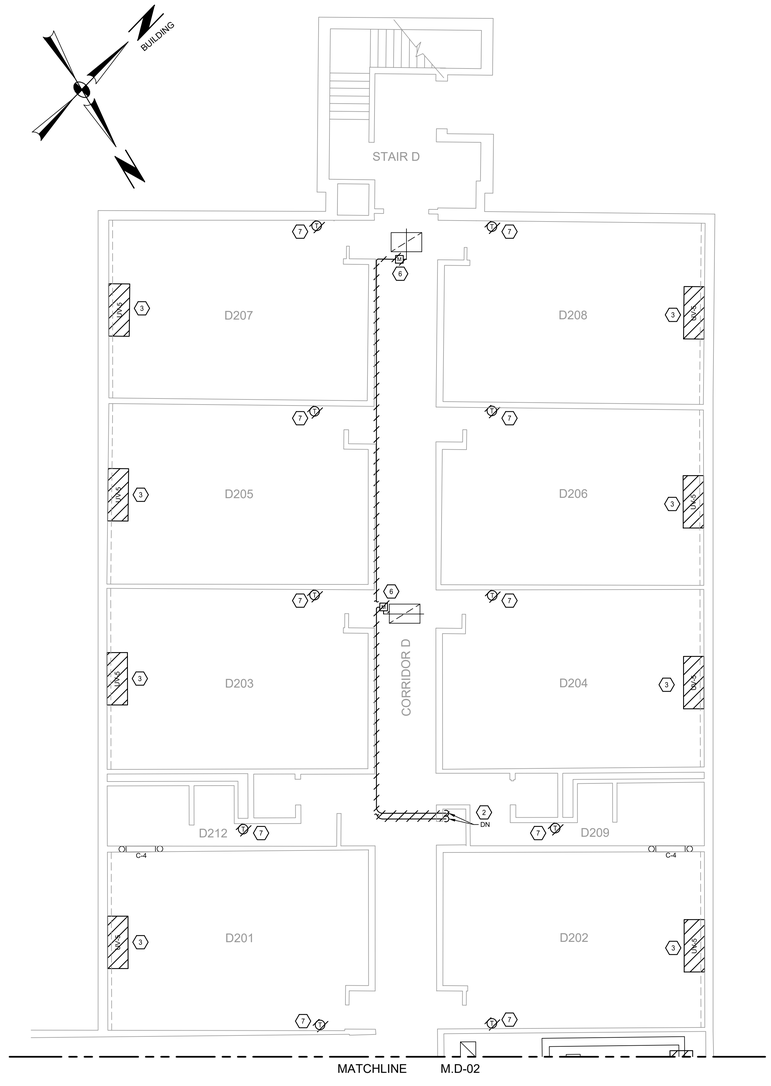


MATCHLINE M.D-01

FIRST FLOOR - SECTION D
PARTIAL PLAN - EXISTING

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

4' 0' 4' 8' 12' 16' 20'



MATCHLINE M.D-02

SECOND FLOOR - SECTION D
PARTIAL PLAN - EXISTING

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

4' 0' 4' 8' 12' 16' 20'

REMOVAL NOTES

1. DISCONNECT AND REMOVE EXISTING PNEUMATIC CONTROL BOX. RETURN PNEUMATIC CONTROL BOX TO OWNER. REMOVE ALL EXISTING ASSOCIATED CONTROL TUBING.
2. REMOVE ALL EXISTING PNEUMATIC CONTROL TUBING BACK TO THE MAIN PNEUMATIC CONTROLLER IN THE MECHANICAL ROOM.
3. DISCONNECT AND REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR. DISCONNECT PIPING TO REMAIN FOR CONNECTION TO NEW UNIT.
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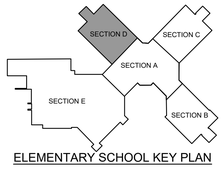
6. REMOVE EXISTING PNEUMATIC DAMPER ACTUATOR AND CONTROL TUBING.
7. REMOVE EXISTING THERMOSTAT.



ELEMENTARY SCHOOL KEY PLAN

NO.	DATE	DESCRIPTION	MADE	CHKD	APVD
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAL
0	01/10/22	ISSUED FOR REVIEW	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH
DATE: 09/02/21
BASE BY: N/A
N.B.: N/A
DRAWN BY: TMF
DESIGNED BY: MMH
CHKD:

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Berks Corporate Center
2145 Commerce Drive, Suite 106
Allentown, PA 18104
610-395-8845
WEST CHESTER
1436 Lancaster Ave.
Paoli, PA 19301
610-627-3000

SCHUYLKILL VALLEY
SCHOOL DISTRICT

BERKS COUNTY, PENNSYLVANIA

HVAC UPGRADE

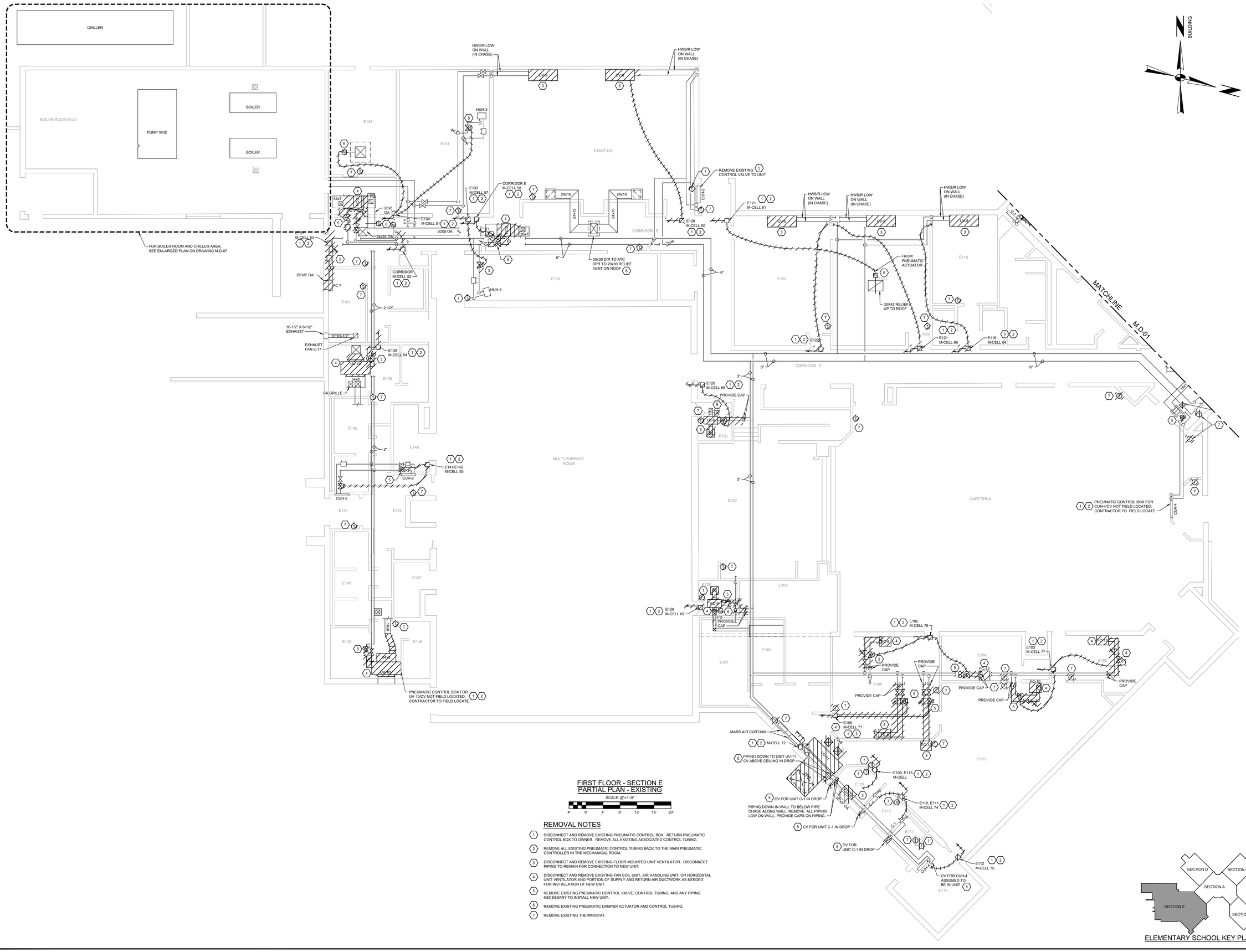
MECHANICAL

FIRST AND SECOND FLOORS - SECTION D - EXISTING

DATE	DIGITAL FILENAME
10/29/21	103916.0008 M.D-05

WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: M.D-05



FIRST FLOOR - SECTION E
PARTIAL PLAN - EXISTING

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

4' 0' 4' 8' 12' 16' 20'

REMOVAL NOTES

1. DISCONNECT AND REMOVE EXISTING PNEUMATIC CONTROL BOX. RETURN PNEUMATIC CONTROL BOX TO OWNER. REMOVE ALL EXISTING ASSOCIATED CONTROL TUBING.
2. REMOVE ALL EXISTING PNEUMATIC CONTROL TUBING BACK TO THE MAIN PNEUMATIC CONTROLLER IN THE MECHANICAL ROOM.
3. DISCONNECT AND REMOVE EXISTING FLOOR MOUNTED UNIT VENTILATOR. DISCONNECT PIPING TO REMAIN FOR CONNECTION TO NEW UNIT.
4. DISCONNECT AND REMOVE EXISTING FAN COIL UNIT, AIR HANDLING UNIT, OR HORIZONTAL UNIT VENTILATOR AND PORTION OF SUPPLY AND RETURN AIR DUCTWORK AS NEEDED FOR INSTALLATION OF NEW UNIT.
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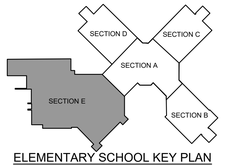
6. REMOVE EXISTING PNEUMATIC DAMPER ACTUATOR AND CONTROL TUBING.
7. REMOVE EXISTING THERMOSTAT.



ELEMENTARY SCHOOL KEY PLAN

NO.	DATE	DESCRIPTION	MADE	CHKD	APV'D
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAJ
0	01/10/22	ISSUED FOR REVIEW	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH | DATE: 09/20/21
BASE BY: N/A | N.B.: N/A
DRAWN BY: TMF | DESIGNED BY: MMH | CHKD:

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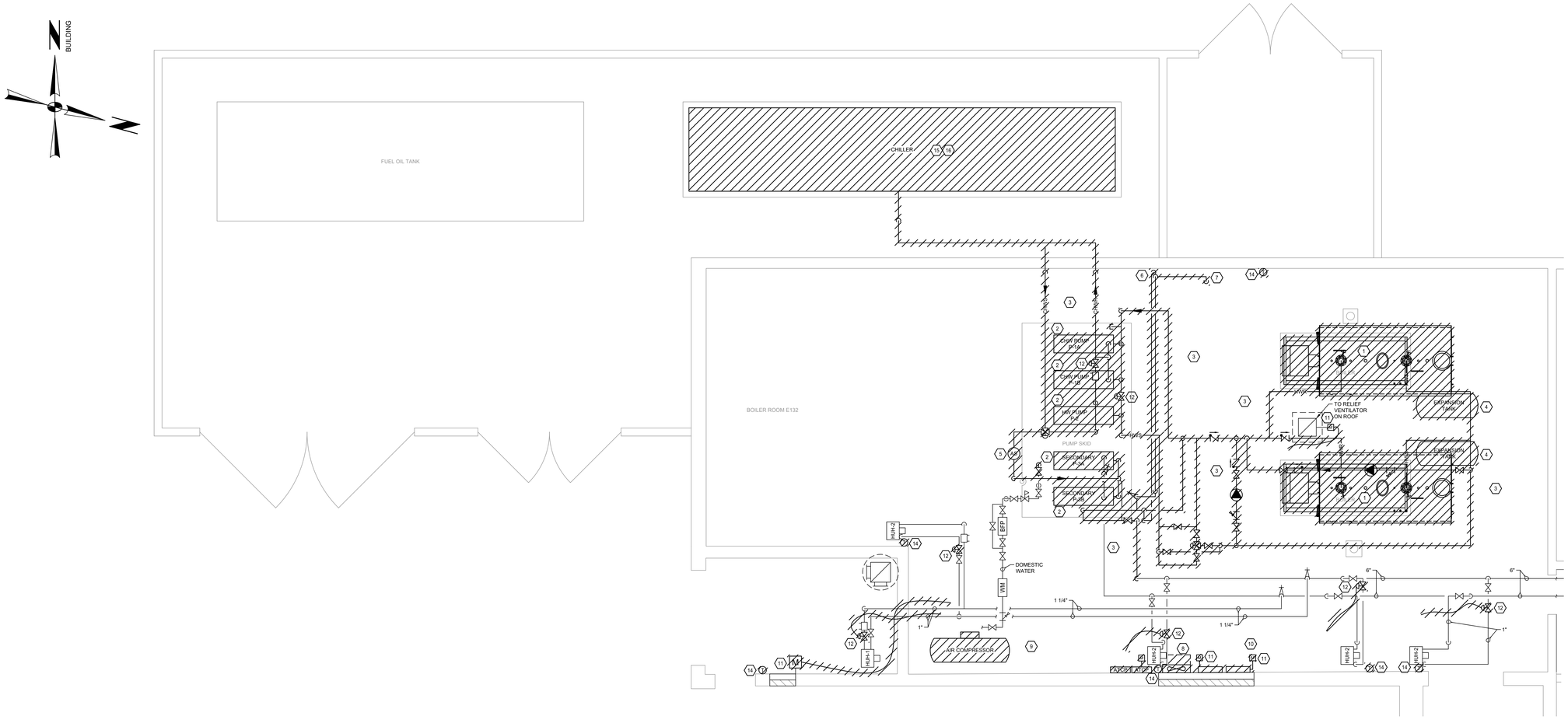
West Chester, PA 19380
610.627.3000

SCHUYLKILL VALLEY SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA
HVAC UPGRADE
MECHANICAL
FIRST FLOOR - SECTION E - EXISTING

DATE	DIGITAL FILENAME
10/29/21	103916.0008 M.D-06

WORK ORDER NUMBER: 103916.0008

DRAWING NUMBER: M.D-06



ENLARGED PLAN

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

4' 0' 4' 8'

REMOVAL NOTES

1. REMOVE EXISTING BOILER. BOILER CAN BE REMOVED FROM THE BOILER ROOM THROUGH THE EXISTING LOUVER OPENING.
2. REMOVED EXISTING PUMPS AND INERTIA BASE. EXISTING CONCRETE PAD SHALL REMAIN.
3. REMOVE EXISTING PIPING, HANGERS, AND SUPPORTS AS REQUIRED.
4. REMOVE EXISTING EXPANSION TANK AND SUPPORTS.
5. REMOVE EXISTING AIR SEPARATOR.
6. REMOVE EXISTING CHEMICAL FEEDER.
7. REMOVE EXISTING FILTER.
8. REMOVE EXISTING SUPPLY AIR FAN.
9. REMOVE EXISTING AIR COMPRESSOR, AIR DRYER, AND ALL ASSOCIATED APPURTENANCES. RETURN TO OWNER AND COORDINATE RELOCATION OF EQUIPMENT WITH OWNER.
10. TEMPORARILY REMOVE EXISTING DAMPERS AND DUCTWORK TO FACILITATE REMOVAL OF THE EXISTING BOILERS.
11. REMOVE EXISTING PNEUMATIC DAMPER ACTUATOR AND CONTROL TUBING BACK TO SOURCE.
12. REMOVE EXISTING PNEUMATIC CONTROL VALVE AND CONTROL TUBING BACK TO SOURCE.
13. REMOVE EXISTING ATC CONTROL PANELS.
14. REMOVE EXISTING THERMOSTAT.
15. OBTAIN THE SERVICES OF A QUALIFIED REFRIGERANT RECOVERY TECHNICIAN CERTIFIED BY THE EPA APPROVED CERTIFICATION PROGRAM. RECOVER REFRIGERANT FROM THE EXISTING CHILLER. REFRIGERANT RECOVERY TECHNICIAN SHALL PROVIDE A SIGNED STATEMENT OF REFRIGERANT RECOVERY STATING THAT ALL REFRIGERANT THAT WAS PRESENT WAS RECOVERED AND THAT RECOVERY WAS PERFORMED TO EPA REGULATIONS. STATEMENT SHALL INCLUDE NAME, ADDRESS OF TECHNICIAN, AND DATE REFRIGERANT WAS RECOVERED.
16. DISCONNECT AND REMOVE EXISTING CHILLER AND ALL ASSOCIATED APPURTENANCES. REMOVE EXISTING CHILLED WATER PIPING AND ASSOCIATED HEAT TRACINGS.
17. REMOVE EXISTING INLINE BOILER CIRC. PUMP.

NO.	DATE	DESCRIPTION	MADE	CHKD	APV'D
1	04/13/22	ISSUED FOR CONSTRUCTION	TMF	MMH	DAJ
0	01/10/22	ISSUED FOR REVIEW	TMF	MMH	MMH

RELEASED FOR:
CONSTRUCTION

PROJECT MANAGER: MMH
N.B.: N/A
DATE: 09/02/21
BASE BY: N/A
DESIGNED BY: MMH
CHKD:
DRAWN BY: TMF

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610.821.7900
WEST CHESTER
1101 Wilson Drive
West Chester, PA 19380
610.627.3000

SCHUYLKILL VALLEY
SCHOOL DISTRICT
BERKS COUNTY, PENNSYLVANIA

HVAC UPGRADE
MECHANICAL
ENLARGED PLAN

DATE	DIGITAL FILENAME
10/29/21	103916.0008 M.D-07

WORK ORDER NUMBER
103916.0008

DRAWING NUMBER
M.D-07