

STEM Lab Alterations & Renovations at

Clearview Regional Middle School

595 Jefferson Rd, Mullica Hill, NJ 08062

Clearview Regional School District

420 Cedar Rd, Mullica Hill, NJ 08062

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CONSULTING ENGINEERS | Mont Clare - Pennsylvania

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Project Name
STEM Lab Alterations
& Renovations at
Clearview Regional
Middle School

Project Owner Name
Clearview Regional
High School District

Project Location
595 Jefferson Rd,
Mullica Hill, NJ
08062

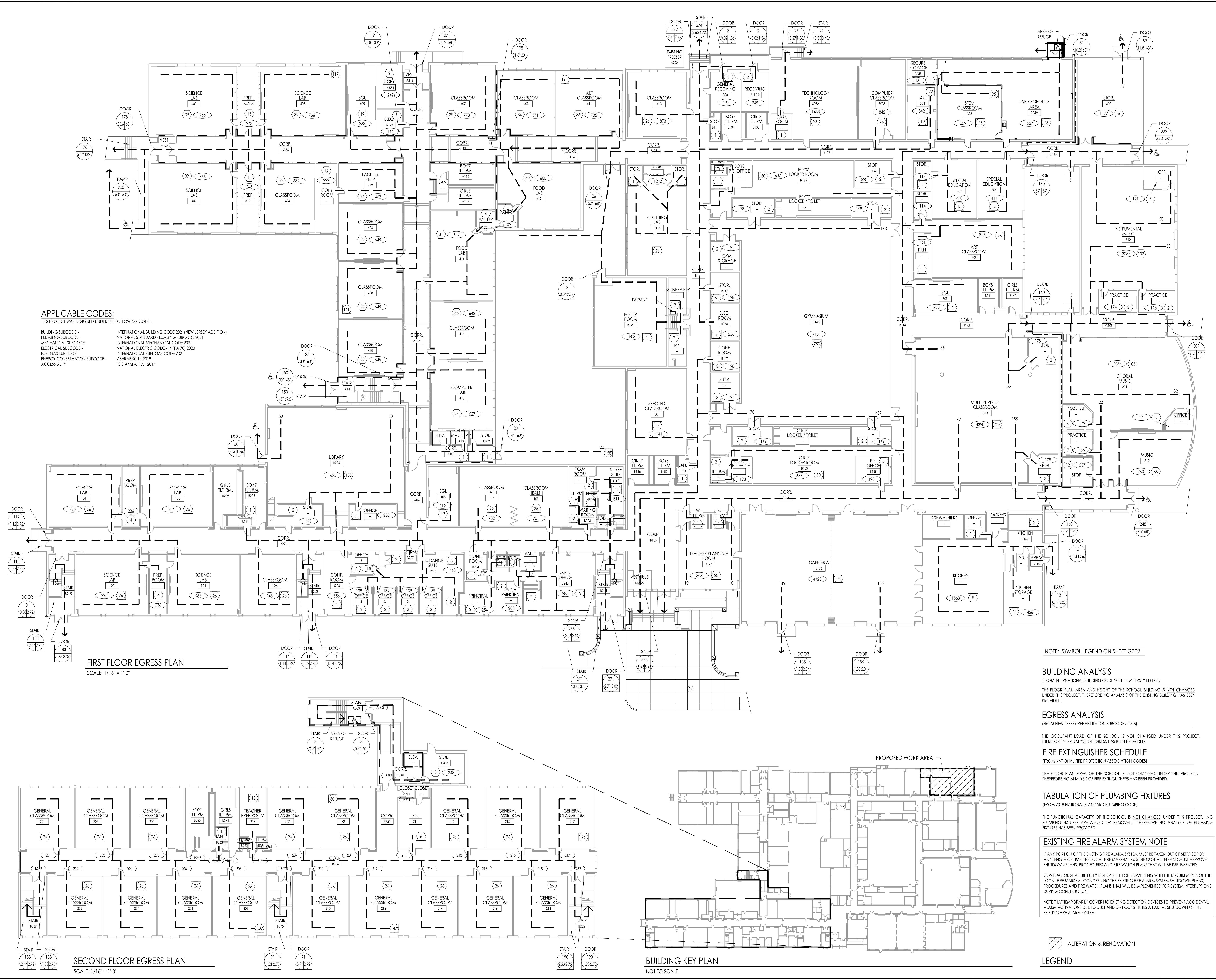
Project Number
5162C
Project Date
10/11/2023
Checked By
GRD
Drawn By
SB
Scale
AS NOTED

Drawing Name
TITLE SHEET

No.	Date	Description

Drawing Number
G001

Revisions		
No.	Date	Description



APPLICABLE CODES:
 THIS PROJECT WAS DESIGNED UNDER THE FOLLOWING CODES:
 BUILDING SUBCODE - INTERNATIONAL BUILDING CODE 2021 (NEW JERSEY ADDITION)
 PLUMBING SUBCODE - NATIONAL STANDARD PLUMBING SUBCODE 2021
 MECHANICAL SUBCODE - INTERNATIONAL MECHANICAL CODE 2021
 ELECTRICAL SUBCODE - NATIONAL ELECTRICAL CODE - (NFPA 70) 2020
 FUEL GAS SUBCODE - INTERNATIONAL FUEL GAS CODE 2021
 ENERGY CONSERVATION SUBCODE - ASHRAE 90.1 - 2019
 ACCESSIBILITY - ICC ANS A117.1 2017

FIRST FLOOR EGRESS PLAN
 SCALE: 1/16" = 1'-0"

SECOND FLOOR EGRESS PLAN
 SCALE: 1/16" = 1'-0"

BUILDING KEY PLAN
 NOT TO SCALE

NOTE: SYMBOL LEGEND ON SHEET G002

BUILDING ANALYSIS
 (FROM INTERNATIONAL BUILDING CODE 2021 NEW JERSEY EDITION)
 THE FLOOR PLAN AREA AND HEIGHT OF THE SCHOOL BUILDING IS NOT CHANGED UNDER THIS PROJECT. THEREFORE NO ANALYSIS OF THE EXISTING BUILDING HAS BEEN PROVIDED.

EGRESS ANALYSIS
 (FROM NEW JERSEY REHABILITATION SUBCODE S:23-6)
 THE OCCUPANT LOAD OF THE SCHOOL IS NOT CHANGED UNDER THIS PROJECT. THEREFORE NO ANALYSIS OF EGRESS HAS BEEN PROVIDED.

FIRE EXTINGUISHER SCHEDULE
 (FROM NATIONAL FIRE PROTECTION ASSOCIATION CODES)
 THE FLOOR PLAN AREA OF THE SCHOOL IS NOT CHANGED UNDER THIS PROJECT. THEREFORE NO ANALYSIS OF FIRE EXTINGUISHERS HAS BEEN PROVIDED.

TABULATION OF PLUMBING FIXTURES
 (FROM 2018 NATIONAL STANDARD PLUMBING CODE)
 THE FUNCTIONAL CAPACITY OF THE SCHOOL IS NOT CHANGED UNDER THIS PROJECT. NO PLUMBING FIXTURES ARE ADDED OR REMOVED. THEREFORE NO ANALYSIS OF PLUMBING FIXTURES HAS BEEN PROVIDED.

EXISTING FIRE ALARM SYSTEM NOTE
 IF ANY PORTION OF THE EXISTING FIRE ALARM SYSTEM MUST BE TAKEN OUT OF SERVICE FOR ANY LENGTH OF TIME, THE LOCAL FIRE MARSHAL MUST BE CONTACTED AND MUST APPROVE SHUTDOWN PLANS, PROCEDURES AND FIRE WATCH PLANS THAT WILL BE IMPLEMENTED DURING CONSTRUCTION.
 CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE LOCAL FIRE MARSHAL CONCERNING THE EXISTING FIRE ALARM SYSTEM SHUTDOWN PLANS, PROCEDURES AND FIRE WATCH PLANS THAT WILL BE IMPLEMENTED FOR SYSTEM INTERUPTIONS DURING CONSTRUCTION.
 NOTE THAT TEMPORARILY COVERING EXISTING DETECTION DEVICES TO PREVENT ACCIDENTAL ALARM ACTIVATIONS DUE TO DUST AND DIRT CONSTITUTES A PARTIAL SHUTDOWN OF THE EXISTING FIRE ALARM SYSTEM.

LEGEND
 ALTERATION & RENOVATION

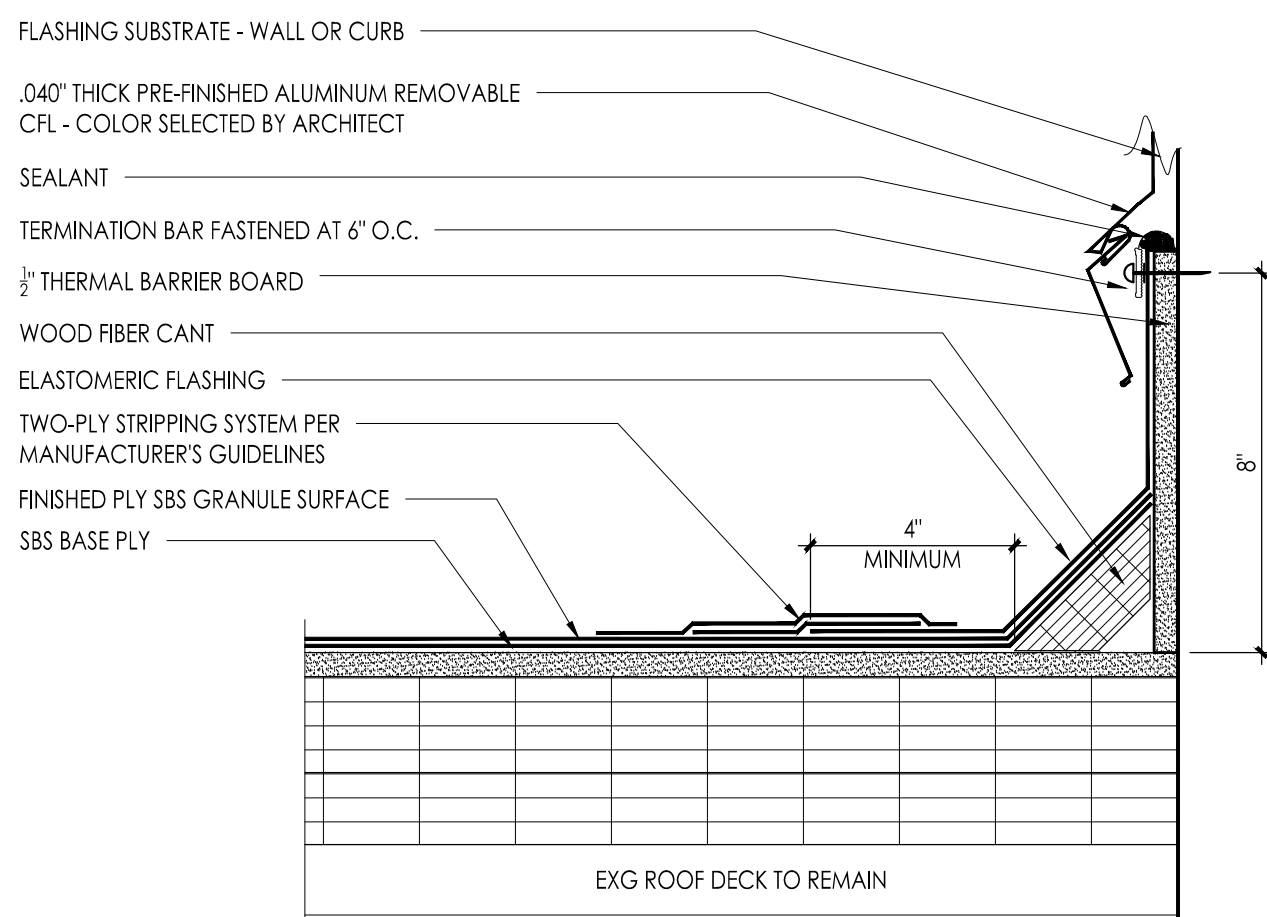
GENERAL ROOFING DEMOLITION NOTES:

- THE ROOFING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MECHANICAL AND ELECTRICAL DISCONNECTIONS AND RE-CONNECTIONS REQUIRED FOR THE INSTALLATION OF ALL WORK REQUIRED BY THE DOCUMENTS INCLUDING: REMOVAL, PROTECTION AND REINSTALLATION OF ALL EXISTING ROOF MOUNTED EQUIPMENT. IF REQUIRED FOR REINSTALLATION, EXTEND OR REVERSE EXISTING ELECTRICAL CIRCUITS, DUCTWORK, ETC. THE ROOFING CONTRACTOR IS RESPONSIBLE TO NOTIFY AND COORDINATE WITH THE OWNER TO DE-ENERGIZE ALL ELECTRICAL EQUIPMENT PRIOR TO DISCONNECTION AND REMOVAL OF ALL ELECTRICAL AND MECHANICAL EQUIPMENT. ALL EXISTING CONDUIT AND GAS LINES SHALL BE RASSED TO FACILITATE NEW ROOFING INSTALLATION AND TO ACHIEVE AN 8" MINIMUM HEIGHT FROM FINISHED ROOF SURFACE. (PERFORM ALL WORK IN ACCORDANCE WITH N.F.P.A. 70 AND PROVIDE AND INSTALL DUCTWORK IN ACCORDANCE WITH S.M.A.C.S.A. GUIDELINES). RE-CHARGE ALL A/C UNITS THAT WERE RASSED AND HAD THEIR BRING MOORED AND ALSO PROVIDE NEW PIPE INSULATION.
- THE ROOFING CONTRACTOR SHALL VERIFY THE EXACT LOCATION, DIMENSION, CONDITION AND QUANTITY OF ALL ROOFTOP EQUIPMENT AND APPURTENANCES WHICH INCLUDES, BUT ARE NOT LIMITED TO: EXHAUST FANS, VENT PIPES, DRAINS, HATCHES, FLUE PIPES, HOT STACKS, HVAC EQUIPMENT, CURBS, BASE FLASHING AND OTHER PENETRATIONS AND WORK ASSOCIATED WITH THIS ROOF PROJECT. (INCORPORATE SAME IN THE ROOF INSULATION SHOP DRAWING SUBMITTAL.)
- THE ROOFING CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM DEMOLITION CAREFULLY CAUSING NO DAMAGE TO EXISTING CONSTRUCTION TO REMAIN. ANY DAMAGES MUST BE REPAIRED AND OR REPLACED BY THE ROOFING CONTRACTOR TO THE OWNER'S AND ARCHITECT'S SATISFACTION AND AT NO ADDITIONAL COST TO THE CONTRACTOR PRICE. PRIOR TO THE COMMENCEMENT OF WORK, THE ROOFING CONTRACTOR IS RESPONSIBLE TO INSPECT AND PHOTOGRAPH EXISTING CONDITIONS WHICH COULD BE MISCONSTRUED AS DAMAGE RESULTING FROM DEMOLITION AND INSTALLATION WORK.
- FOR PURPOSES OF THIS PROJECT, REMOVE SHALL MEAN REMOVE AND DISPOSE OF SAME OFF SITE IN AN APPROVED AND LEGAL MANNER.
- THE ROOFING CONTRACTOR SHALL COORDINATE ALL DUMPSTER STAGING AND TRUCK ROUTES WITH THE OWNER. THE ROOFING CONTRACTOR SHALL PROTECT ALL EXISTING PAVED AND PLANTED AREAS. THE ROOFING CONTRACTOR SHALL REPAIR ANY PAVED OR PLANTED AREAS TO THE SATISFACTION OF THE OWNER. THE REPAIRS ARE TO INCLUDE, BUT ARE NOT LIMITED TO: REPAIRING OF ASPHALT DRIVEWAYS AND PARKING LOTS; REGRADING AND SEEDING OF LAWN; AND REPLACING DAMAGED PLANTS, SHRUBS, ETC. ALL REPAIRS AND RESTORATIONS SHALL BE DONE AT NO ADDITIONAL COST TO THE CONTRACTOR PRICE.
- IF THE BUILDING IS OCCUPIED, THE ROOFING CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION AND FOR THE SAFETY OF ALL PERSONS AT THE PROJECT SITE.
- IF THE PRESENCE OF ASBESTOS IS SUSPECTED, THE CONTRACTOR IS TO NOTIFY THE OWNER AND ARCHITECT IMMEDIATELY. IF THE PRESENCE OF ASBESTOS IS CONFIRMED, THE CONTRACTOR IS RESPONSIBLE FOR MEANS REQUIRED TO PREVENT ANY HAZARDOUS MATERIAL FROM ENTERING INTO THE BUILDING. CONTRACTOR IS TO REMOVE AND DISPOSE OF SAID ASBESTOS IN FULL COMPLIANCE WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION RELATING TO THE TREATMENT, REMOVAL AND DISPOSAL OF ASBESTOS.

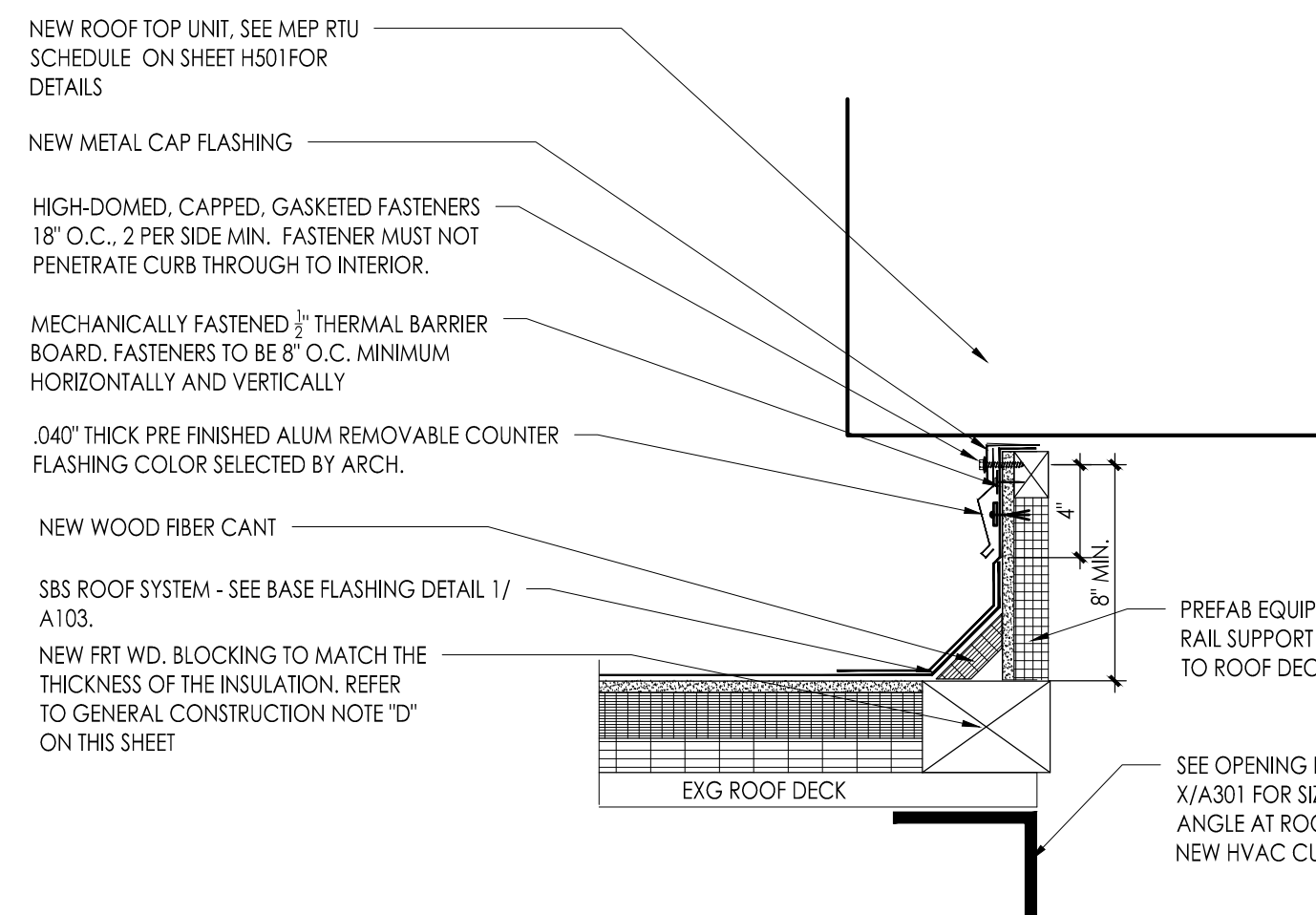
GENERAL CONSTRUCTION NOTES

- PROVIDE ROOFING MATERIALS THAT COMPLY WITH A CLASS 'A' SYSTEM.
- NEW IMPOSED DEAD LOAD IS EQUAL TO OR LESS THAN EXISTING DEAD LOAD.
- INSTALL WATER DIVERTING CRICKETS ON HIGH SIDE OF ROOF AT ROOFTOP UNITS, CURBS AND SKYLIGHTS AS SHOWN ON PLAN.
- FRT WOOD BLOCKING SHOWN ON DRAWINGS IS DIAGRAMMATIC. PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING CONSTRUCTION IN THICKNESS AND HEIGHT TO MATCH THICKNESS OF INSULATION AND/OR TAPERED INSTALLATION AS RECOMMENDED BY ROOFING MANUFACTURER AND TO MAINTAIN A CONSTANT ROOF EDGE. ELEVATION IN A HORIZONTAL PLANE UNLESS NOTED OTHERWISE. AT ROOF EDGES PROVIDE AN ADDITIONAL FRT 2 X 6 ABOVE INSULATION AND/OR TAPERED INSTALLATION.
- ALL WORK PERTAINING TO THESE DRAWINGS SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND WITH ALL AGENCIES HAVING JURISDICTION.
- ALL CONDITIONS MEETING THE ROOF SURFACE PERPENDICULAR MUST BE MODIFIED TO CREATE A MINIMUM 8" FLASHING HEIGHT. CURBS AND WALL COUNTER FLASHINGS MUST BE RASSED.
- DO NOT SCALE THE DRAWINGS.
- ALL LOW SLOPED ROOF AREAS ARE 1/2" PER FOOT IN THE FIELD AND 1/4" PER FOOT AT THE CRICKETS. SLOPE OF CRICKET IS PERPENDICULAR TO CRICKET +1/2 VALLEY LINE.
- THE ROOFING CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL GOOD ROOFING PRACTICES INCLUDING THOSE SET FORTH BY THE ROOFING MATERIALS MANUFACTURER, THE SHONKA SHEET METAL MANUAL, FACTORY MUTUAL, UNDERWRITERS LABORATORIES, AND THE NRCA'S ROOFING AND WATERPROOFING MANUAL.
- THE ROOFING CONTRACTOR IS RESPONSIBLE FOR FLASHING ALL ROOF TOP PENETRATIONS, UNITS, AND CURBS ON THE ROOFTOP TO A WATERIGHT CONDITION TO BE INCLUDED IN THE MANUFACTURER'S WARRANTY. REVIEW ALL DRAWINGS INCLUDED IN THIS SET FOR ROOFTOP PENETRATIONS.
- ALL CRICKETS/GUSSETS/SADDLES SHALL HAVE A 3:5 RATIO. WHERE THIS CONDITION CANNOT BE ACHIEVED DUE TO VALLEY LINE OF CRICKET INTERSECTING MECHANICAL EQUIPMENT, PENETRATION AND A HIGH POINT GREATER THAN THE THRU-WALL COUNTER FLASHING, PROVIDE MAXIMUM CRICKET WIDTH TO PROMOTE POSITIVE DRAINAGE TO ALL ROOF DRAINS AND SCUPPERS.
- UNLESS NOTED OTHERWISE ALL ROOFING, ACCESSORIES, MATERIALS, ETC. SHALL BE CONSIDERED NEW.
- HIGH POINTS INDICATED ON DRAWINGS ARE SHOWN FOR GUIDANCE ONLY. THE ROOFING CONTRACTOR IS RESPONSIBLE FOR FINAL TAPERED INSULATION DESIGN. ANY REQUIRED ADJUSTMENTS MADE BY THE ROOFING CONTRACTOR TO THE INDICATED DESIGN GUIDELINES ARE AT NO ADDITIONAL COST TO THE OWNER.
- ROOFING CONTRACTOR SHALL RETAIN A LICENSED ELECTRICAL SUBCONTRACTOR FOR ALL ELECTRICAL WORK.
- ROOFING CONTRACTOR SHALL RETAIN A LICENSED HVAC SUBCONTRACTOR FOR ALL HVAC WORK.
- PRIME ALL SURFACES WHICH ARE TO RECEIVE BITUMINOUS ROOFING.
2. INSTALL ENVELOPE EDGES TO ELIMINATE THE POTENTIAL FOR BITUMEN AND ADHESIVE DRIPPAGE INTO THE BUILDING.
3. ALL WOOD BLOCKING TO BE FRT. (FIRE RETARDANT LUMBER).
- CONTRACTOR SHALL MAKE NECESSARY TIES AND ALTERATIONS TO EXISTING ROOF IN ACCORDANCE WITH ORIGINAL ROOF MANUFACTURERS REQUIREMENTS, SO AS TO MAINTAIN ORIGINAL WARRANTY ON EXISTING ROOF.
- CONTRACTOR SHALL AT ALL TIMES HAVE A FULL SET OF DRAWINGS AND SPECIFICATIONS ON ROOF TOP WHILE WORK IS IN PROGRESS.
- CONTRACTOR RESPONSIBLE TO RECTIFY ANY PONDING WATER ON FINISHED ROOF SURFACE THAT REMAINS AFTER 48 HOURS AT NO ADDITIONAL COST.

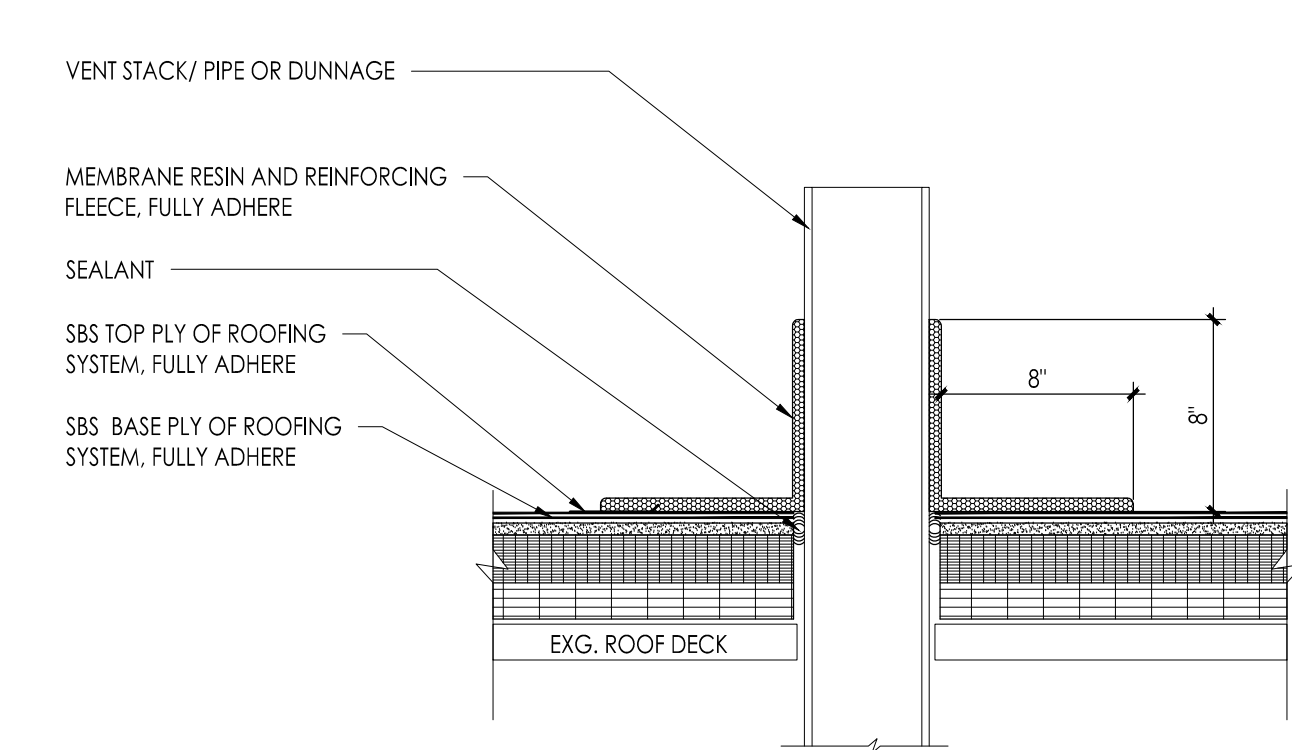
NOTE:
WHERE BASE FLASHING IS HIGHER THAN 24", TERMINATE SHEET WITH FASTENERS AND TERMINATION BAR. PRE-DRILL PRIOR TO INSTALLATION OF FASTENER RUN A SEPARATE SHEET UP ONTO THE REMAINING WALL SECTION. OVERLAP TERMINATION BAR A MINIMUM OF 6".



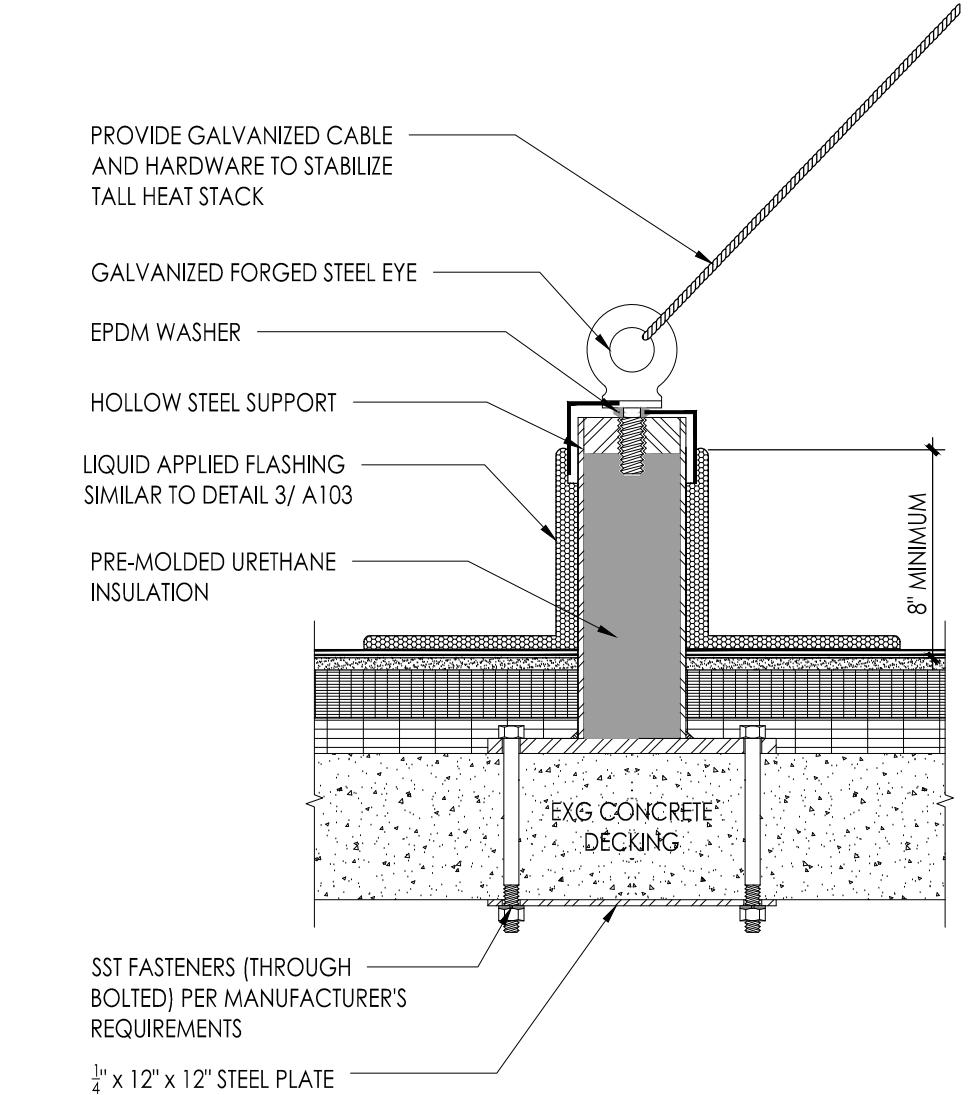
1 TYPICAL BASE FLASHING DETAIL
3" = 1'-0"



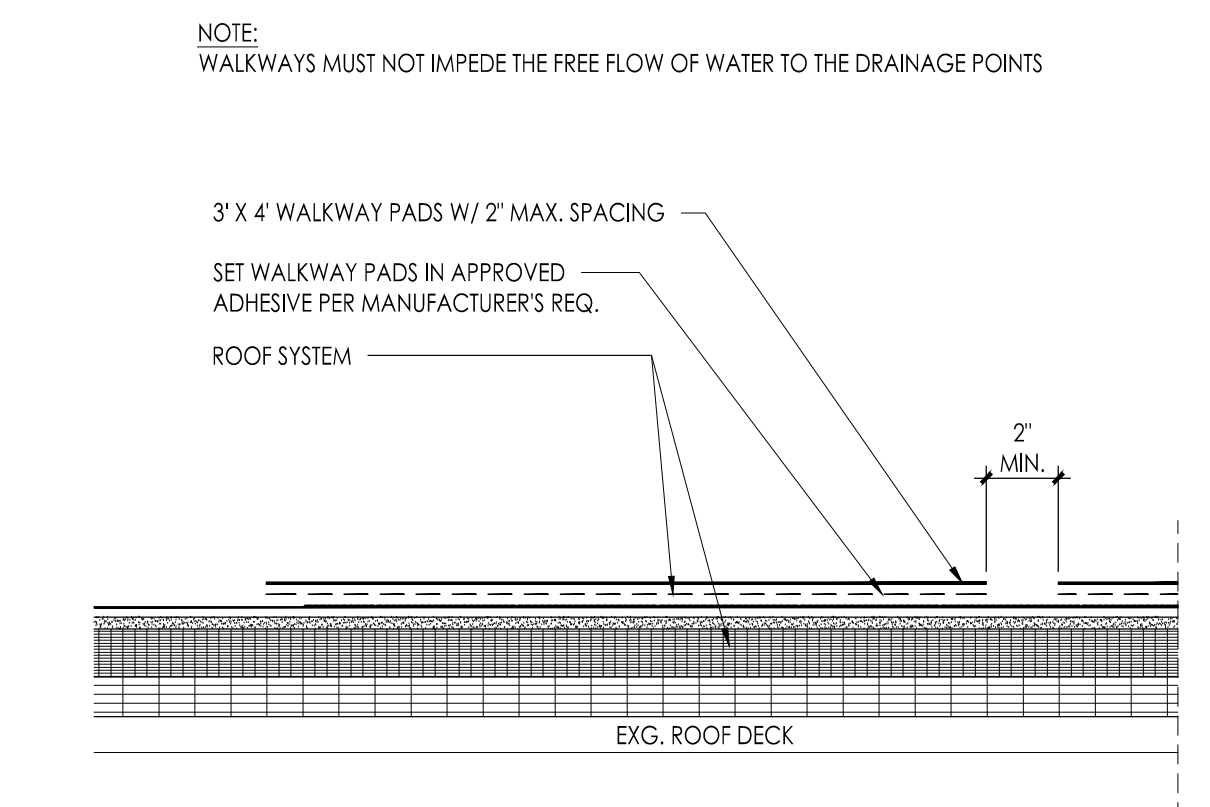
2 TYPICAL NEW ROOFTOP UNIT CURB DETAIL
1-1/2" = 1'-0"



3 TYPICAL PVC PIPE/ DUNNAGE DETAIL
1-1/2" = 1'-0"



4 TYPICAL GUY WIRE SUPPORT DETAIL
NOT TO SCALE



5 TYPICAL WALKWAY PAD
1-1/2" = 1'-0"

DEMOLITION NOTES:

- REMOVE EXISTING EQUIPMENT. CAP EXISTING CURB TO REMAIN. SEE MEP DRAWINGS FOR ADDITIONAL NOTES AND DETAILS.
- MODIFY EXISTING OPENING OF GRAVITY VENT TO ACCOMMODATE NEW EQUIPMENT. THE CONTRACTOR IS TO TAKE ALL NECESSARY STEPS TO ENSURE WEATHERIGHTNESS DURING THE COURSE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY RENOVATION TO MATCH EXISTING ADJACENT SURFACES ACCORDING TO ROOFING MANUFACTURER.
- DE-ENERGIZE, UNINSTALL PANELS AND ASSOCIATED CONDUITS AND APPURTENANCES AS SHOWN ON DRAWING OUTLINED. CONTRACTOR SHALL DETERMINE WHICH SECTION OF THE PANELS ARE TO BE REMOVED WITH OWNER BEFORE ANY REMOVAL AND THEN HAND OVER ALL EQUIPMENT TO OWNER. CONTRACTOR IS TO PATCH AND REPAIR ALL DAMAGES INCURRED BY THE REMOVAL OF THE SOLAR PANELS ACCORDING TO THE ROOFING MANUFACTURER.

CONSTRUCTION NOTES - SBS:

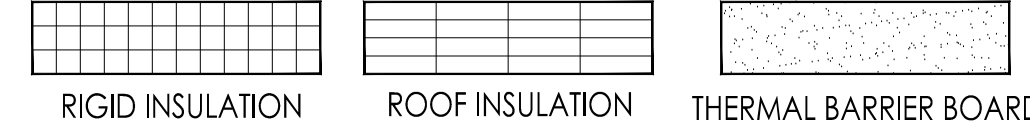
- AT VENT PIPES, INSTALL LIQUID APPLIED FLASHING SYSTEM W/ FLEECE REINFORCING. INSTALL PER MANUFACTURER'S LATEST INSTALLATION GUIDELINES FLASHING SHALL BE INCLUDED IN ROOF MANUFACTURER'S WARRANTY SEE DETAIL 3/ A103. MODIFY/EXTEND ANY VENT PIPES THAT DO NOT MEET THE 8" MINIMUM BASE FLASHING HEIGHT.
- AT ALL ROOFTOP EQUIPMENT ON FULLY ENCLOSED CURBS, ROOF HATCHES, & SKYLIGHTS, INSTALL ON WOOD BLOCKING WHICH HAS BEEN FASTENED TO THE ROOF DECK TO MAINTAIN 8" MINIMUM FLASHING HEIGHT FROM THE SURFACE OF THE ROOF. INSTALL INSULATION AND CANT STRIP. RUN ROOF MEMBRANE UP CURBS 2" ABOVE THE CANT STRIP. INSTALL SBS MODIFIED BITUMEN BASE FLASHING. FASTEN TOP EDGE AND INSTALL A REMOVABLE COUNTER FLASHING. SEE DETAIL 2/A103 AND FOLLOW MFR'S LATEST INSTALLATION REQUIREMENTS. CURBS MUST ALSO BE SET LEVEL WHERE REQUIRED FOR PROPER FUNCTIONING OF THE ROOF TOP UNIT. ALL COLORS ARE SELECTED BY ARCH.
- AT ALL REMOVED EQUIPMENT THAT WILL EXPOSE THE UNDERSIDE (INTERIOR), CAP EXISTING CURB AS SHOWN ON MEP'S DETAIL 3/H501.
- EXG ROOF TO REMAIN ARE UNDER WARRANTY. INSTALLATION OF ROOFTOP EQUIPMENT IN THIS AREA SHALL BE DONE IN ACCORDANCE WITH THE ROOFING MANUFACTURER'S REQUIREMENTS TO MAINTAIN SAID WARRANTY, TYPICAL.
- WALKWAY PADS - INSTALL AROUND ALL ROOFTOP UNITS, ROOFTOP EQUIPMENT AND ROOF ACCESS POINTS SUCH AS ACCESS LADDERS AND ROOF HATCHES. MODIFY WALKWAY PADS AS REQUIRED SO THAT THE PAD DOES NOT IMPEDE THE FREE FLOW OF WATER TO THE DRAINAGE POINTS. SEE DETAIL 5/A103

SYMBOLS

- DEMOLITION/ CONSTRUCTION NOTE
- CONSTRUCTION NOTE
- DIRECTION OF ROOF SLOPE
- ROOF ASSEMBLY TYPE
- 1/2" PER FOOT SLOPED TAPERED INSULATION CRICKETS

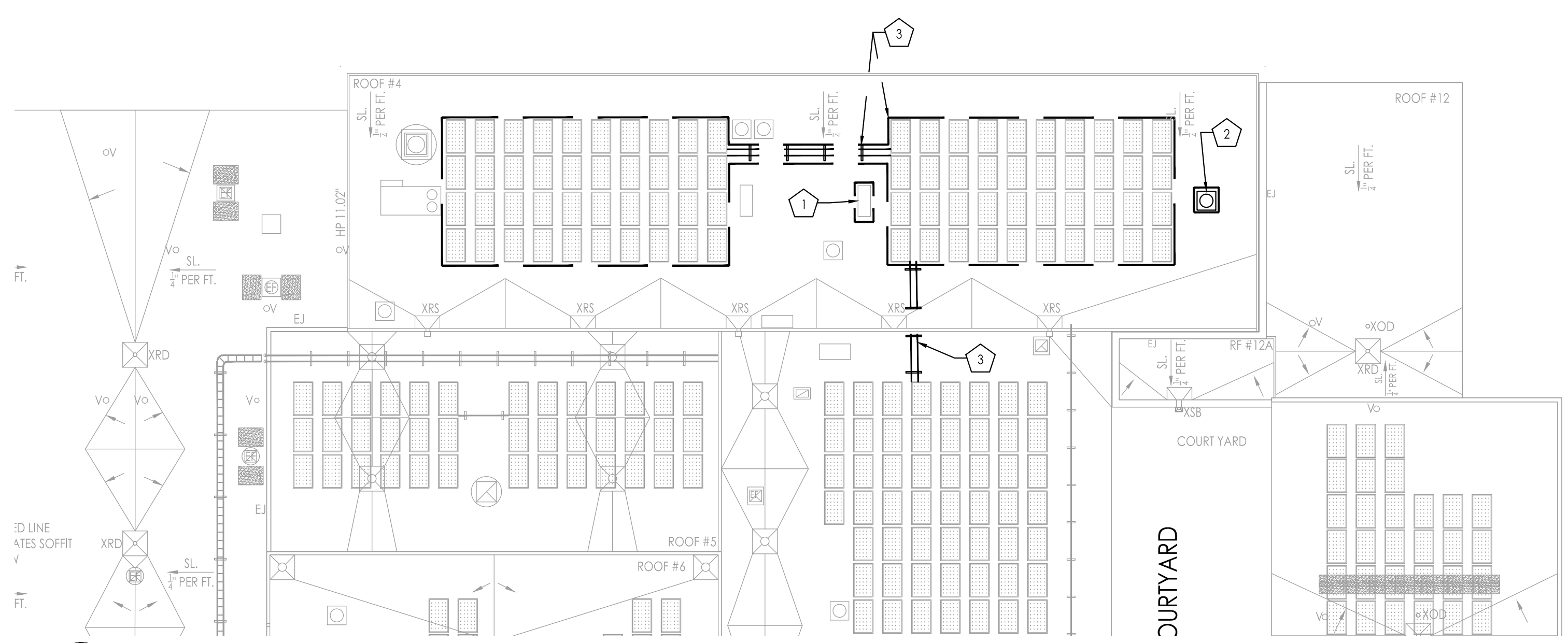
LEGEND

- EXG ROOF DRAIN
- TAPERED INSULATION
- ROOF DRAIN
- OVERFLOW ROOF DRAIN
- TAPERED INSULATION
- EXG GUTTER OUTLET AND RAIN WATER LEADER
- EXHAUST FAN UNIT
- EXHAUST FAN UNIT
- PIPE CURB
- EXG SCUPPER BOX AND RAIN WATER LEADER
- HEAT STACK
- EXG OVERFLOW DRAIN
- VENTILATOR
- GOOSE NECK
- RTU
- ROOF TOP UNIT
- VENT PIPE
- WALKWAY PADS
- ROOF HATCH
- PIPE SUPPORT
- PITCH POCKET
- SKYLIGHT
- ABANDON CURB TO BE REMOVED

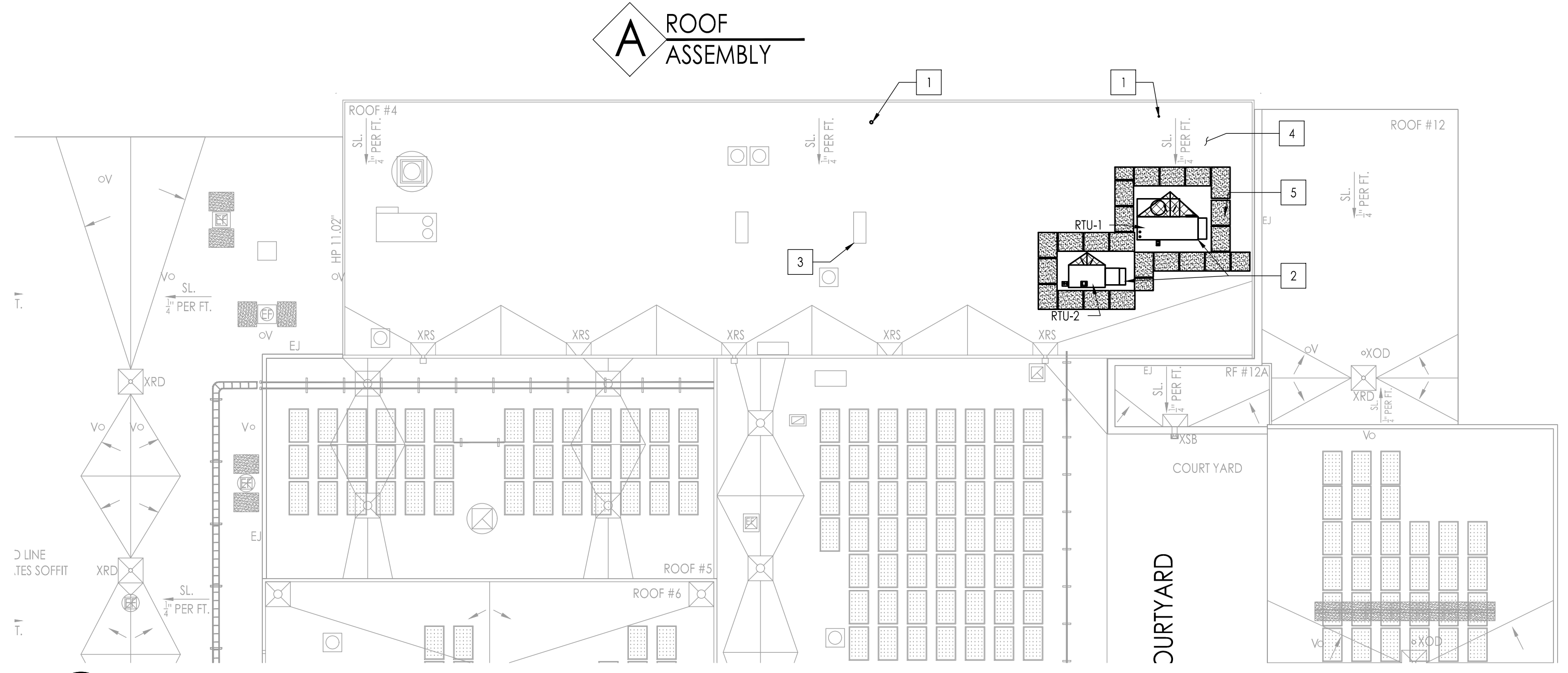


SOLAR PANEL EQUIPMENT NOTE:

THE EXISTING SOLAR EQUIPMENT IS CURRENTLY OWNED BY THE SCHOOL DISTRICT AND NON-OPERATIONAL. THE GC IS TO REMOVE THE PANELS AND ASSOCIATED EQUIPMENT WITH CARE AND HAND OVER TO THE OWNER.



1 ROOF PLAN DEMOLITION
SCALE: 1/16" = 1'-0"

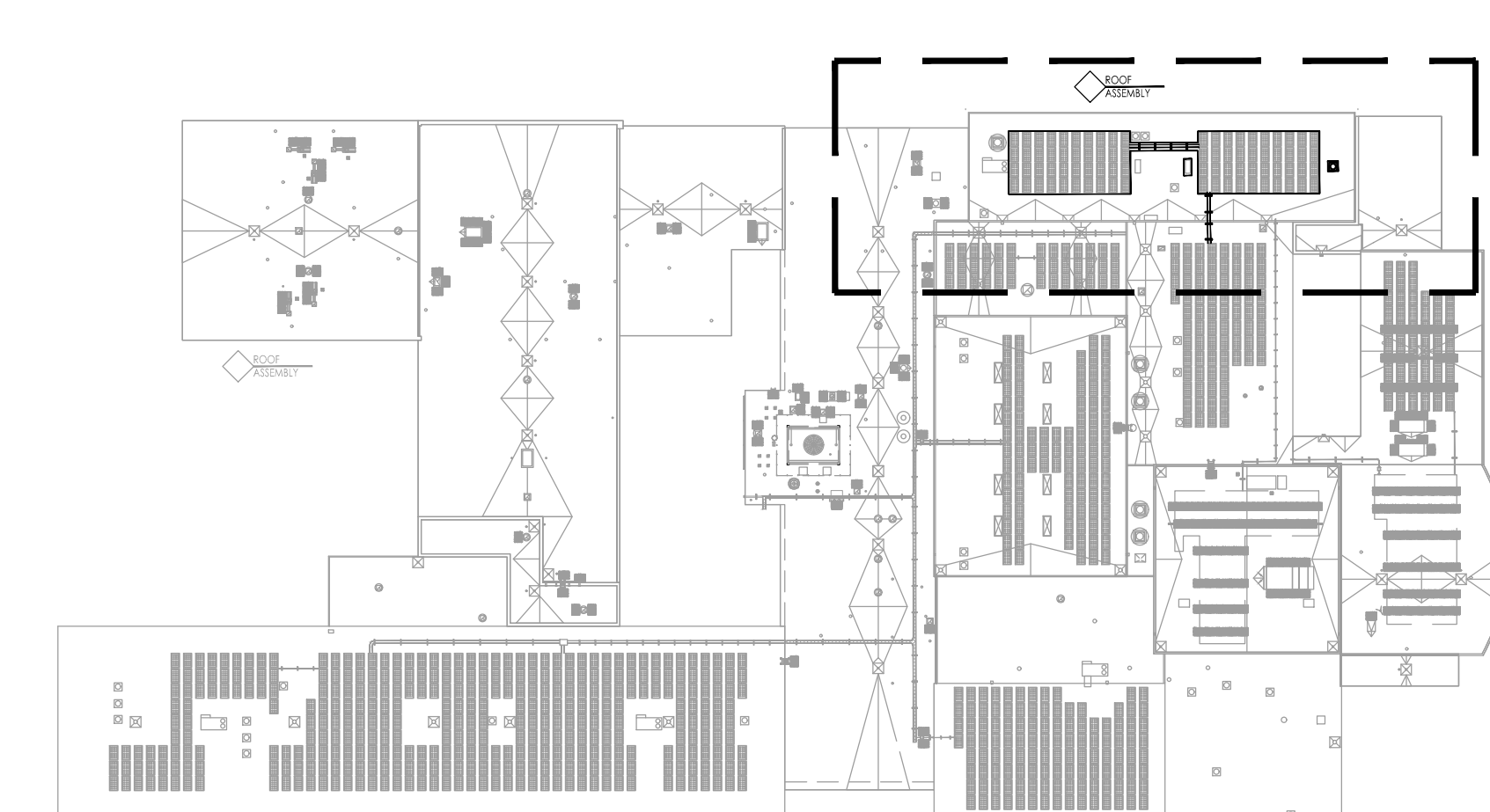


2 ROOF PLAN
SCALE: 1/16" = 1'-0"

ROOF ASSEMBLY

NOTES

- BEFORE APPLICATION OF MEMBRANE RESIN AND REINFORCING FLEECE FLASHING MEMBRANE OR ELASTOMERIC SEALANT SHOULD BE USED TO FILL VOIDS WHERE ROOFING FLEECE FLASHING MEMBRANE OR ELASTOMERIC SEALANT PRIOR TO APPLICATION OF MEMBRANE RESIN AND REINFORCING FLEECE FLASHING.
- REFER TO MANUFACTURER'S PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF MEMBRANE RESIN AND REINFORCING FLEECE FLASHING.
- MEMBRANE RESIN AND REINFORCING FLEECE CANNOT BE APPLIED OVER MEMBRANE OR OTHER MATERIALS CONTAINING UNCLURED, SOLVENT-BASED MATERIALS.
- REFER TO MANUFACTURER'S FLEECE CUTTING RECOMMENDATIONS FOR CONFIGURATIONS, CUTTING, FOLDING, AND LAPPING TECHNIQUES.



KEY PLAN
SCALE: 1/64" = 1'-0"

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10/11/23
Date
FVHD P.C. COM
FVHD architects planners
Fraytak Veisz Hopkins Duthie P.C.
1515 Lower Ferry Road - Trenton - New Jersey, 08618
Companys: 140 Whitaker Ave - Mont-Claire - Pennsylvania, 17403

Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

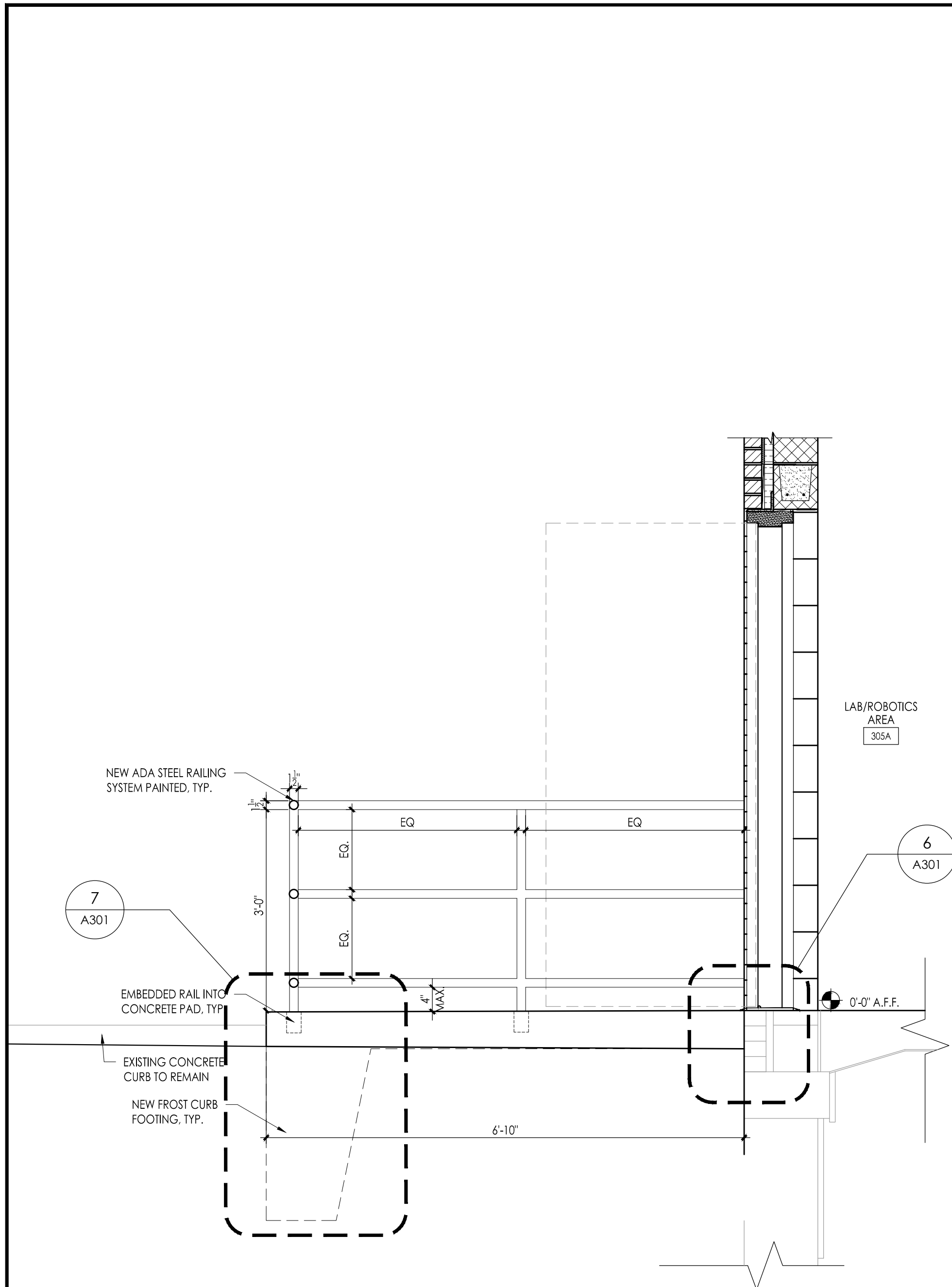
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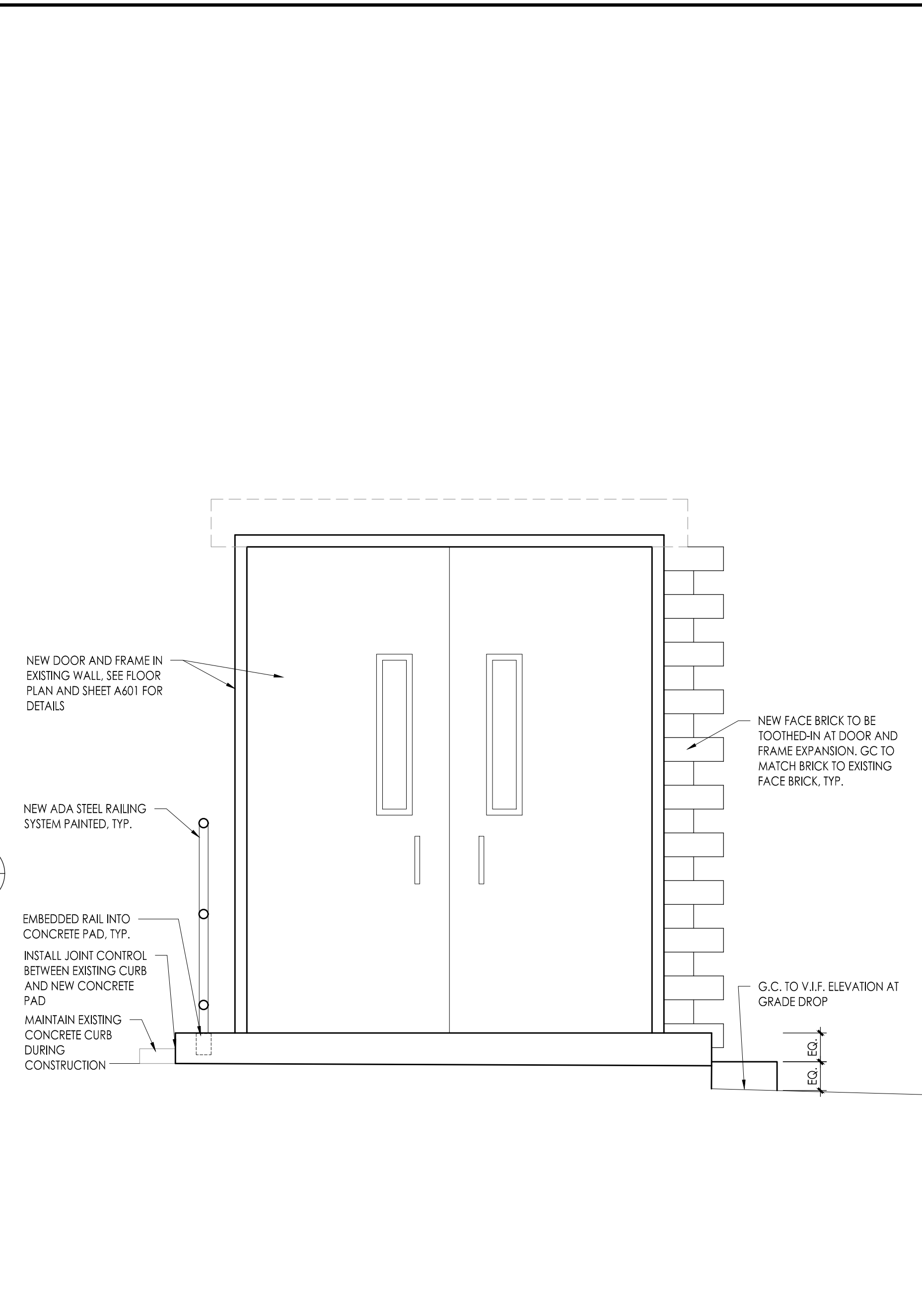
Drawing Name
ROOF PLAN, DETAILS, AND NOTES

Revisions		
No.	Date	Description

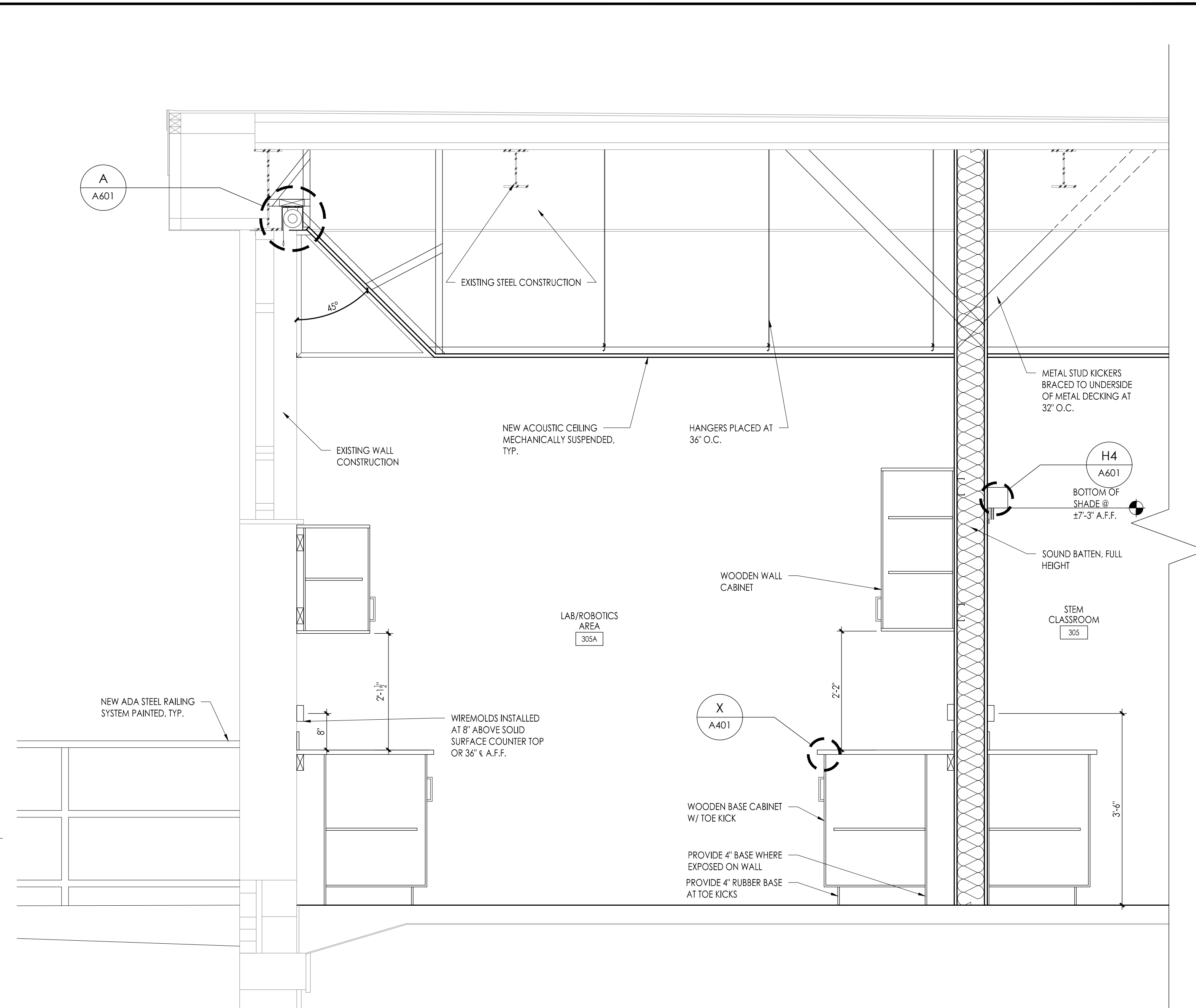
Drawing Number
A103



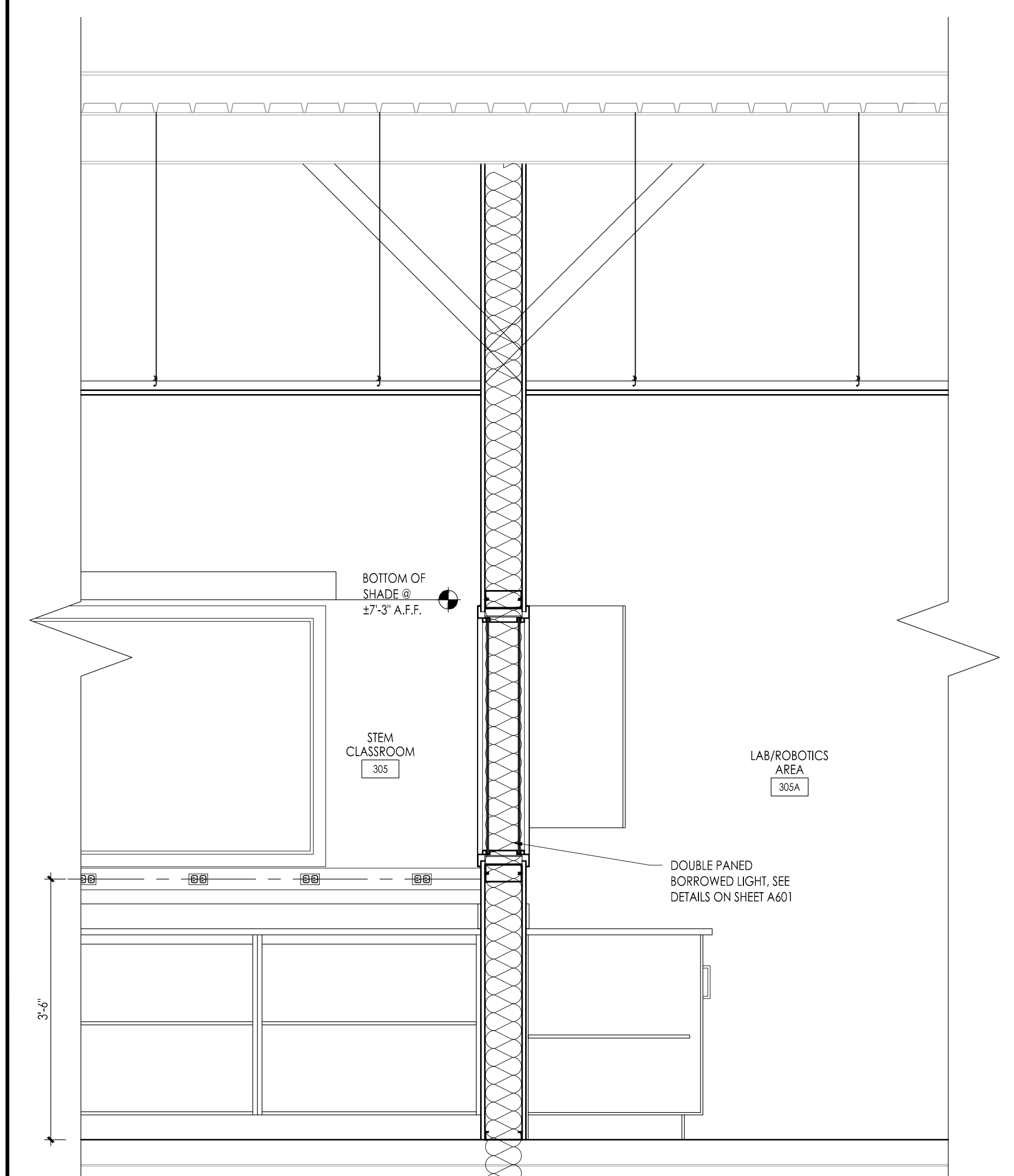
1 WALL SECTION
Scale: 3/4" = 1'-0"



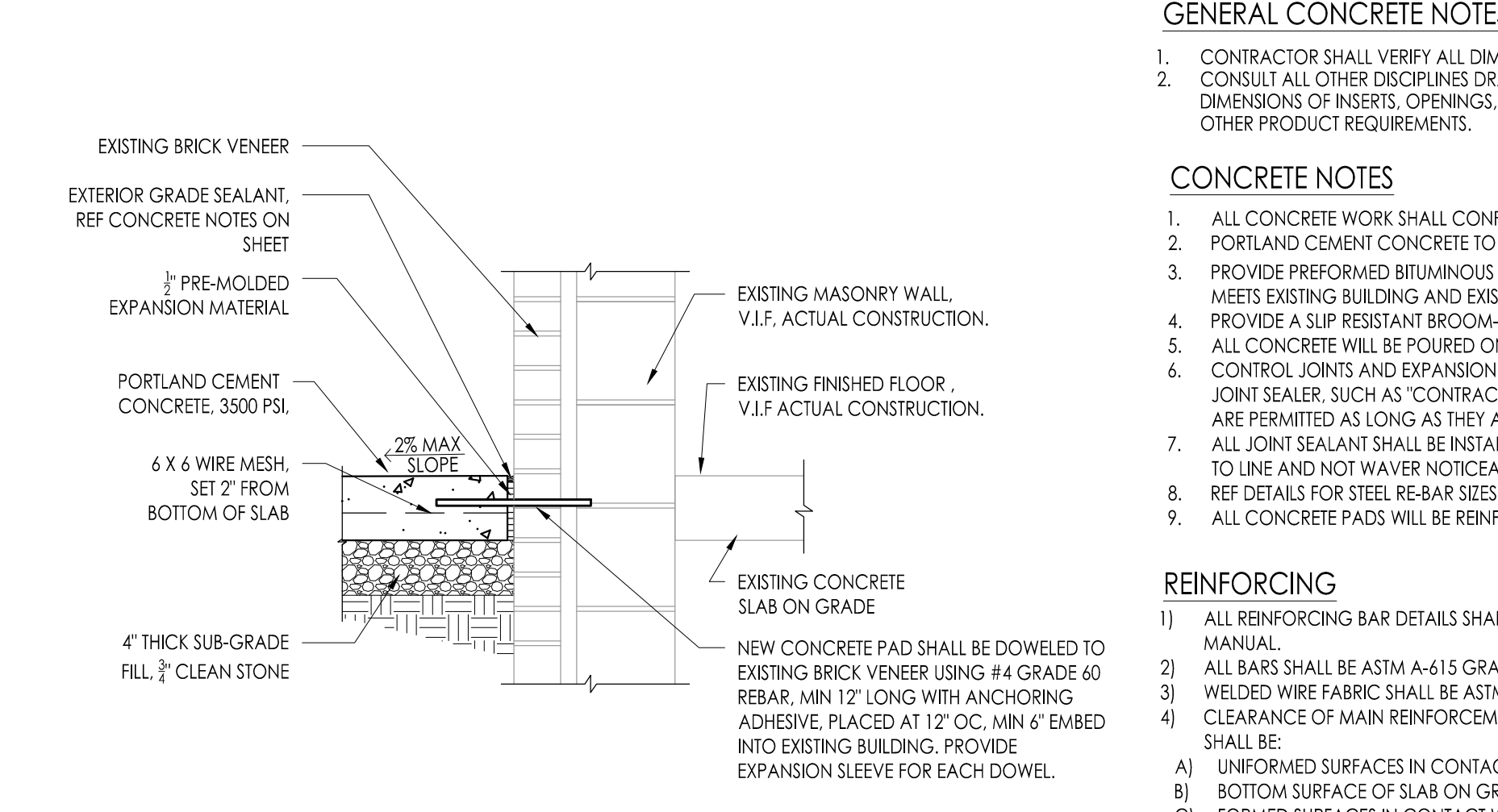
2 WALL SECTION
Scale: 3/4" = 1'-0"



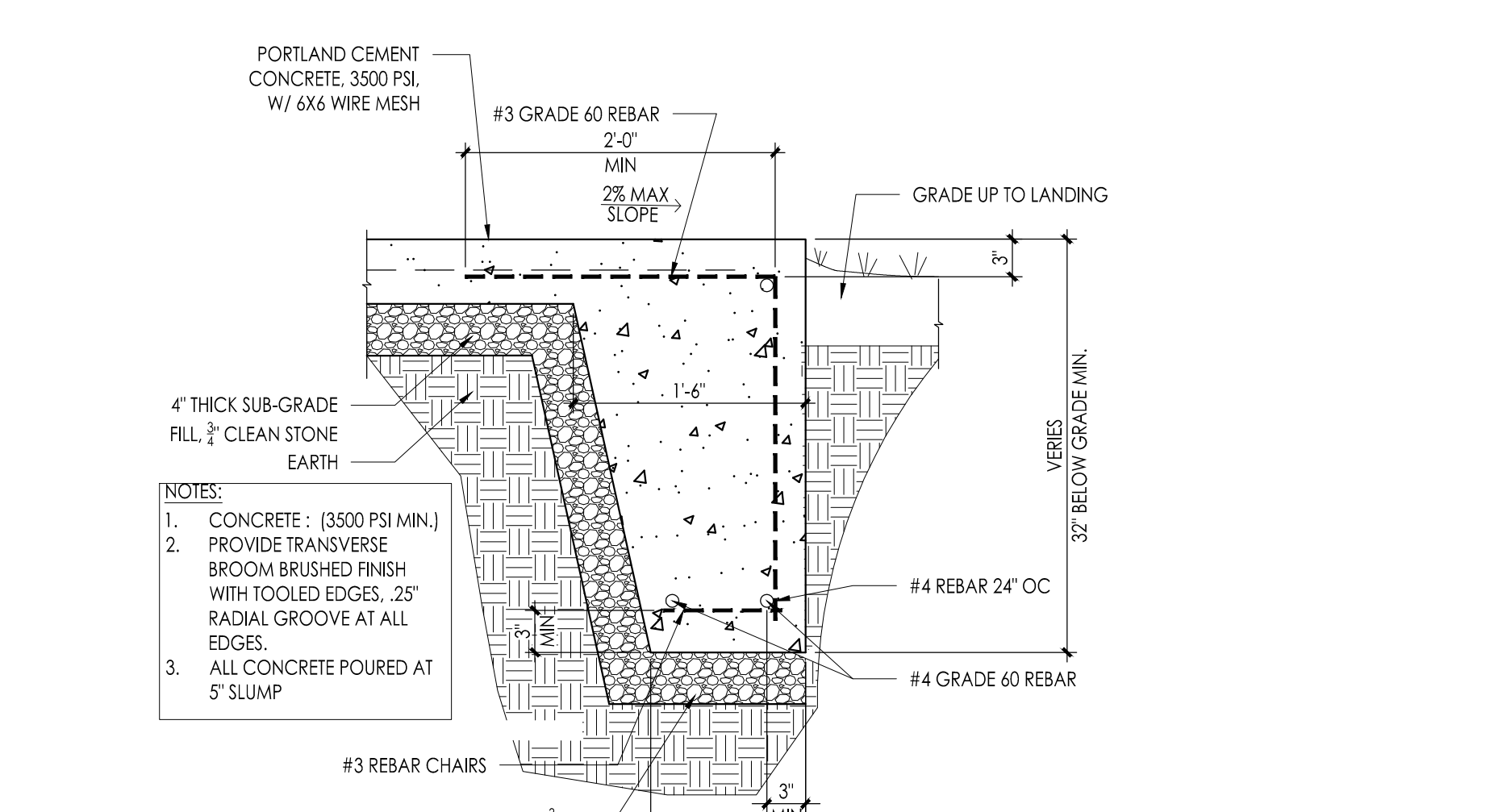
3 WALL SECTION
Scale: 3/4" = 1'-0"



5 WALL SECTION
Scale: 3/4" = 1'-0"



6 CONCRETE PAD TIE-IN TO EXISTING
Scale: 1" = 1'-0"



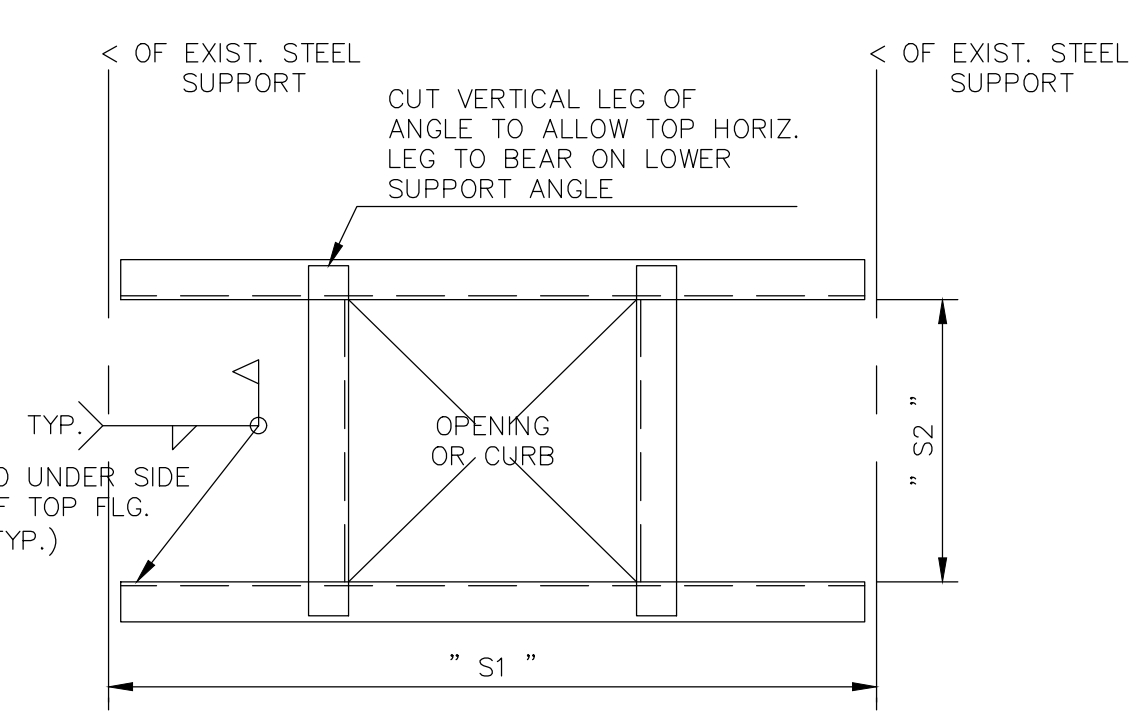
7 TURNDOWN CONCRETE PAD
Scale: 1" = 1'-0"

GENERAL CONCRETE NOTES

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, SECTIONS AND ELEVATIONS ON JOB.
 - CONSULT ALL OTHER DISCIPLINES DRAWINGS FOR VERIFICATION OF LOCATIONS AND DIMENSIONS OF INSERTS, OPENINGS, SLEEVES, WASHES REVEALS, EQUIPMENT PADS AND OTHER PRODUCT REQUIREMENTS.
- CONCRETE NOTES**
- ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE ACI BUILDING CODE.
 - PORTLAND CEMENT CONCRETE TO BE 3500 PSI, 5" SLUMP (TESTING BY CONTRACTOR)
 - PROVIDE PREFORMED BITUMINOUS FIBER EXPANSION JOINTS 1/2" THICK WHERE NEW CONCRETE PAD MEETS EXISTING BUILDING AND EXISTING SIDEWALK.
 - PROVIDE A SLIP RESISTANT BROOM-GROOVE FINISH, TYPICAL.
 - ALL CONCRETE WILL BE POURED ON CLEAN, COMPACTED SUB-GRADE, PER DETAILS.
 - CONTROL JOINTS AND EXPANSION JOINTS SHALL BE SEALED WITH EXTERIOR GRADE CONCRETE JOINT SEALER, SUCH AS CONTRACTORS CONCRETE SEALANT BY DOW CORNING. SUBSTITUTES ARE PERMITTED AS LONG AS THEY ARE EQUAL OR BETTER THEN SAID SEALANT.
 - ALL JOINT SEALANT SHALL BE INSTALLED IN A PROFESSIONAL AND WORKMEN LIKE MANNER. (TRUE TO LINE AND NOT WAVER NOTICEABLY OUTSIDE OF JOINTS)
 - REF DETAILS FOR STEEL RE-BAR SIZES AND LOCATIONS IN THICKENED CONCRETE SLABS.
 - ALL CONCRETE PADS WILL BE REINFORCED WITH 6x6 1/4" (10 Gg) WIRE MESH, TYP.

REINFORCING

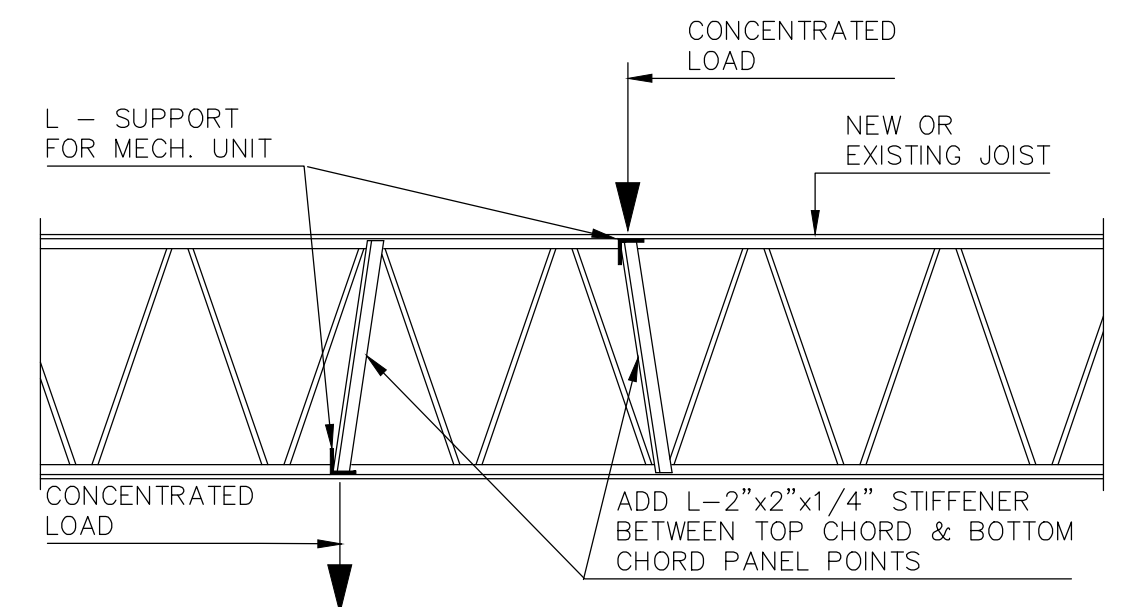
- ALL REINFORCING BAR DETAILS SHALL CONFORM TO THE LATEST ACI CODE AND DETAILING MANUAL.
- ALL BARS SHALL BE ASTM A-615 GRADE 60.
- WELDED WIRE FABRIC SHALL BE ASTM A-185.
- CLEARANCE OF MAIN REINFORCEMENT FROM ADJACENT SURFACES, UNLESS SHOWN OTHERWISE, SHALL BE:
 - A) UNFORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO WEATHER: #5 BARS OR SMALLER: 1";
 - B) EXTERIOR WALL SURFACES: 2";
 - C) ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY ARCHITECT BEFORE CONCRETE IS POURED.



- NOTES:**
- CONTRACTOR SHALL VERIFY ALL OPENINGS AND EXACT LOCATIONS OF OPENINGS PRIOR TO FABRICATION & ERECTION.
 - PROVIDE NEW STEEL ANGLES ON ALL SIDES OF MECH'L CURBS UNLESS EXISTING BEAM, JOIST OR ANGLE IS SHOWN ON PLAN.

NEW ANGLE SIZES TO BE:
 FOR "S1" OR "S2" ≤ 6'-6" L-4"x4"x3/16"
 FOR "S1" OR "S2" > 6'-6" L-6"x6"x3/8"

TYPICAL OPENING DETAIL AT ROOF UNDER NEW HVAC CURB
NOT TO SCALE



- NOTE:** SUPPORTING LOAD AT CONDENSERS, MECHANICAL UNITS AND ALL CONCENTRATED LOADS GREATER THAN 300 lbs. OMIT IF LOAD IS WITHIN 3" OF A PANEL POINT.

TYPICAL DETAIL AT REINFORCED JOIST
NOT TO SCALE

LOOSE LINTEL SCHEDULE
(FOR 4", 8", 12" & 16" WALLS)

MASONRY OPENING	LINTEL SIZE	REMARKS
UP TO 4'-0"	L-3 1/2" x 3 1/2" x 1/4"	
4'-1" TO 6'-0"	L-5" x 3 1/2" x 5/16"	
6'-1" TO 8'-0"	L-6" x 3 1/2" x 5/16"	
OVER 8'-0"	W 8 x 18 +>	

LOOSE LINTEL SCHEDULE
(FOR 6" WALLS)

MASONRY OPENING	LINTEL SIZE	REMARKS
2'-0" TO 4'-0"	WT 7 x 11	
4'-1" TO 8'-0"	WT 8 x 13	

- NOTES:**
- PROVIDE ONE (1) ANGLE FOR EACH 4" OF MASONRY WIDTH.
 - BEAR LINTELS 6" MINIMUM EACH SIDE OF OPENING.
 - ALL LINTELS IN EXTERIOR WALLS TO BE GALVANIZED.
 - WHERE OPENINGS LOCATED NEXT TO COLUMNS OR BEAMS, ATTACH TO STRUCTURAL STEEL CONNECTION NOT TO PROTRUDE INTO OPENING.
 - CONSULT ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS FOR OPENING SIZE & LOCATION.

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10/11/22
 Date

F V H D P C . C O M

Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

Project Location
595 Jefferson Rd, Mullica Hill, NJ 08062

Project Number
5162C

Project Date
10/11/2023

Checked By
GRD

Drawn By
SB

Scale
AS NOTED

Drawing Name
WALL SECTIONS AND MISCELLANEOUS DETAILS

Revisions

No.	Date	Description

Drawing Number
A301

GENERAL CASEWORK NOTES:

- CATALOG NUMBERS REFER TO MOST CURRENT CAMPBELL RHEA CASEWORK CATALOG UNLESS OTHERWISE NOTED. FOR REFERENCE ONLY.
- ALL CASEWORK DOORS AND DRAWERS TO HAVE LOCKS KEYS ALIKE PER ROOM AND MASTER KEY.
- ALL TOPS SHALL HAVE PLYWOOD AND SOLID SURFACE COVERING ON ALL EXPOSED SURFACES (UNLESS NOTED OTHERWISE). SEE EDGE DETAILS ON SHEET A402 FOR SPECIFIC THICKNESS.
- ALL BACKSPASHES SHALL BE 1/2" SOLID SURFACES (UNLESS NOTED OTHERWISE).
- ALL FURNITURE AND EQUIPMENT SHOWN DOTTED AND/OR INDICATED AS (N.I.C.) & NOT IN CONTRACT.
- THE CASEWORK & EQUIPMENT (SUB-CONTRACTOR(S)) SHALL TURN OVER TO THE PLUMBING AND ELECTRICAL GENERAL CONTRACTOR IN A PACKAGE. ALL SINKS, FIXTURES, FAUCETS, TAILPIECES, STRAINERS, GAS COCKS, ETC., AND ELECTRICAL DEVICES, NIPPLES AND LOCKNUTS, ETC., FOR INSTALLATION AND FINAL CONNECTION.
- THE CASEWORK AND EQUIPMENT SUB-CONTRACTOR SHALL PROVIDE AN ITEMIZED LIST AND A DESIGNATED SITE LOCATION FOR THE TRANSFER OF THE MATERIALS REFERENCED IN NOTE 6 TO THE PLUMBING AND ELECTRICAL PRIME CONTRACTORS. THE LIST SHALL HAVE A DESCRIPTION OF THE ITEMS AND QUANTITY ALONG WITH A SIGN-OFF LINE FOR THE PLUMBING AND ELECTRICAL PRIME CONTRACTORS. A COPY OF THE SIGNED LIST IS TO BE SUBMITTED TO THE ARCHITECT / OWNER PRIOR TO BILLING FOR THIS EQUIPMENT.
- EQUIPMENT SUB-CONTRACTOR SHALL MAKE SINK CUT-OUTS.
- ALL DUPLEX OUTLETS SHALL BE G.F.C.I. UNLESS NOTED OTHERWISE.
- SINK CABINETS SHALL BE INSTALLED BEFORE THE INSTALLATION OF ADJACENT CABINETS.
- ALL CONTRACTORS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT IN WRITTEN FORM OF ANY DISCREPANCIES.
- PROVIDE ALL FILTERS AS REQUIRED. FILTERS AT BASE CABINETS SHALL BE AT FRONT OF CABINET AND COUNTERTOP SHALL BE CONTINUOUS OVER FILLER PANEL. FILTERS AT TALL CABINETS SHALL BE AT FRONT AND TOP OF CABINET. FILTERS AT WALL CASES SHALL BE AT FRONT, TOP AND BOTTOM OF CABINET. REFER TO MATCH CASEWORK.
- ALL PRINTERS AND COMPUTERS ARE N.I.C. (TYPICAL)
- RUBBER BASE ON ALL CASEWORK BY G.C. (TYPICAL)
- ALL SCHEDULED EQUIPMENT MANUFACTURERS ARE "BASIS OF DESIGN", OR APPROVED EQUAL.

NOTE:
ALL FURNITURE AND EQUIPMENT WITHOUT THE SYMBOL OR MARKED (N.I.C.) IS NOT IN CONTRACT UNLESS NOTED OTHERWISE. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT MARKED WITH THE SYMBOL.

NOTE:
PROVIDE A MINIMUM 18" BARRIER-FREE MANEUVERING CLEARANCE AT THE FULL SIDE OF ALL DOORS ADJACENT TO CABINETS, SHELVING, CORRIDOR LOCKERS, ETC.

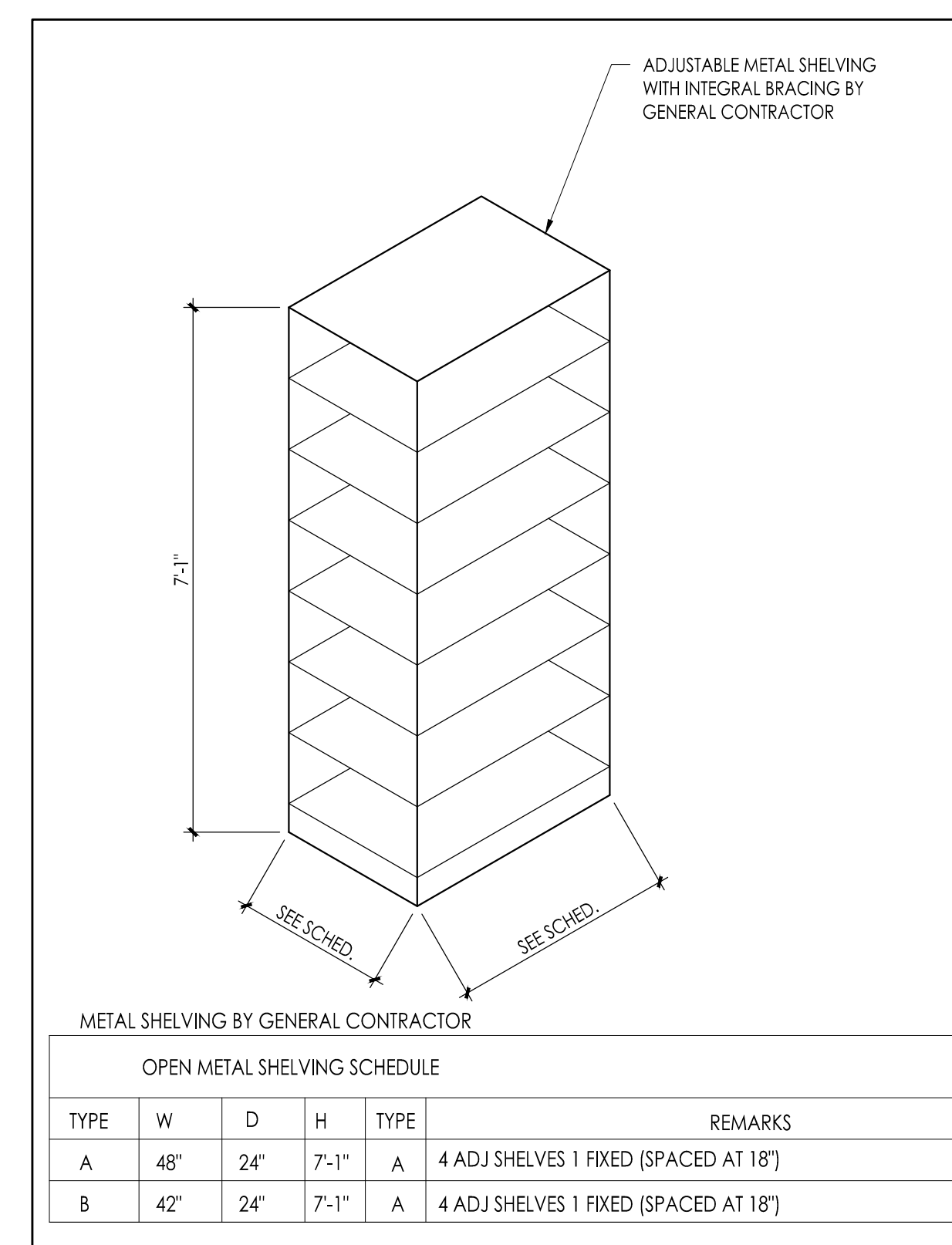
***EQUIPMENT CONTRACT NOTE:**
THE EQUIPMENT SUB-CONTRACTOR(S) SHALL BE (A) SUBCONTRACTOR(S) OF THE GENERAL CONSTRUCTION WORK CONTRACTOR.

EQUIPMENT SCHEDULE

ITEM NO.	MANUFACTURER	CAT. NO.	DESCRIPTION	WIDTH	DEPTH	HEIGHT	REMARKS
1	CAMPBELL RHEA (OR APPROVED EQUAL)	5666	WARDROBE AND STORAGE CASE	35-1/4"	22-1/2"	84"	ONE FIXED SHELF; THREE ADJUSTABLE SHELVES; ONE HANGER ROD; 3 POINT LATCHING HANDLE; WARDROBE ON LEFT.
2	CAMPBELL RHEA (OR APPROVED EQUAL)	5690	TALL STORAGE CABINET	41-1/4"	22-1/2"	84"	ONE FIXED SHELF; 4 ADJUSTABLE SHELVES
3	CAMPBELL RHEA (OR APPROVED EQUAL)	3480C	OPEN BASE CABINET	35-1/4"	22-1/2"	33"	2 ADJUSTABLE SHELVES
4	CAMPBELL RHEA (OR APPROVED EQUAL)	3755E	BASE CABINET DOUBLE DOORS	41-1/4"	22-1/2"	33"	POWER/ DATA IN BASE CABINET
5	CAMPBELL RHEA (OR APPROVED EQUAL)	3703E	4 DRAWERS AND DOOR HINGED LEFT	41-1/4"	22-1/2"	33"	
6	CAMPBELL RHEA (OR APPROVED EQUAL)	6960	WARDROBE AND SUPPLY CASE				ONE HANGER; 1 FIXED HAT SHELF; 2 ADJUSTABLE SHELVES; 2 LARGE FILE DRAWERS WITH FILE FOLLOWERS; 1 SHALLOW DRAWER WITH ADJUSTABLE PARTITIONS TO ACCOMMODATE RECORD CARDS UP TO 3" X 5"; ONE 10" X 12" MIRROR; PIN TRAY AND TOWEL BAR ON RIGHT HAND DOOR
7	CAMPBELL RHEA (OR APPROVED EQUAL)	7302	STUDENT WORK BENCH	54"	48"	31-1/4"	BASE CABINET HAS 12 INDIVIDUAL LOCKERS, MASTER KEYS. ASSEMBLY HAS FOUR 7352-A WOODWORKING VIBES WITH ALUMINUM HANDLES. TOP IS 2-1/4" LAMINATED HARD MAPLE.
8	VIROCO (OR APPROVED EQUAL)	FT2460	FLIP-TOP TECHNOLOGY TABLES	60"	24"	24"-34"	
9	VIROCO (OR APPROVED EQUAL)	ZU4188R	ZUMA SERIES - 4-LEG STACK CHAIRS, 18" SEAT HEIGHT WITH BOOKRACK				QUANTITY 24 CHAIRS
10	VIROCO (OR APPROVED EQUAL)						
11	VIROCO (OR APPROVED EQUAL)						
11A	VIROCO (OR APPROVED EQUAL)						
12	CAMPBELL RHEA (OR APPROVED EQUAL)	6779A	FLAMMABLE STORAGE CABINET	35"	22"	35"	ONE ADJUSTABLE SHELF; SWINGING DOORS OPEN TO 180°; DOORS HAVE THREE-POINT LATCHING SYSTEM WITH BUILT-IN LOCK.
13	CAMPBELL RHEA (OR APPROVED EQUAL)	3461F	BASE CABINET DOUBLE DOORS	47-1/4"	22-1/2"	33"	
14	CAMPBELL RHEA (OR APPROVED EQUAL)						
JUST	SL-ADA-1921-A-GR		STAINLESS STEEL ADA COMPLIANT SINK	19"	17-1/2"	5-1/2"	ADA COMPLIANT

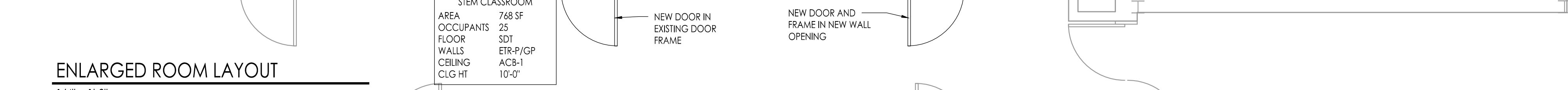
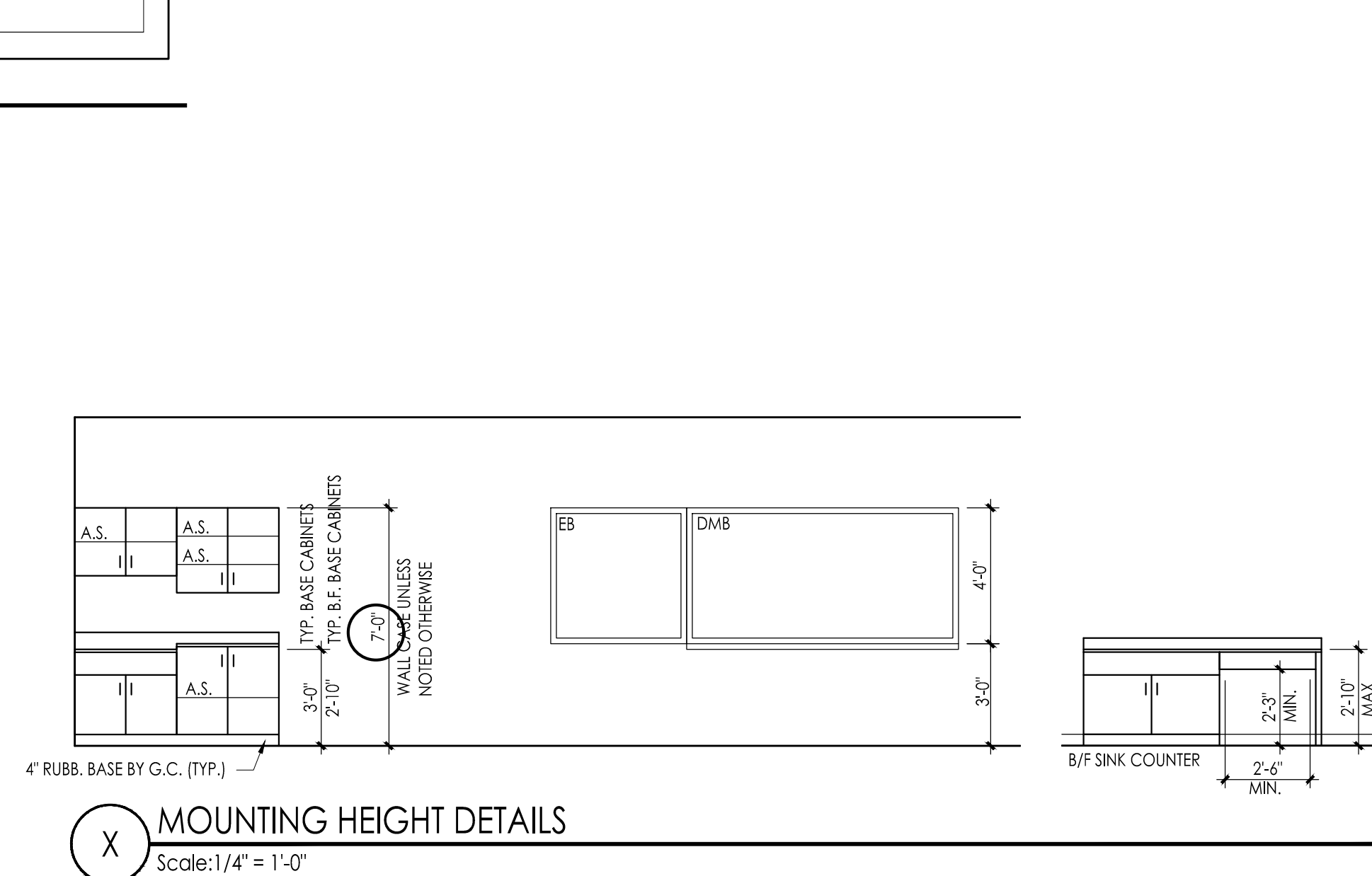
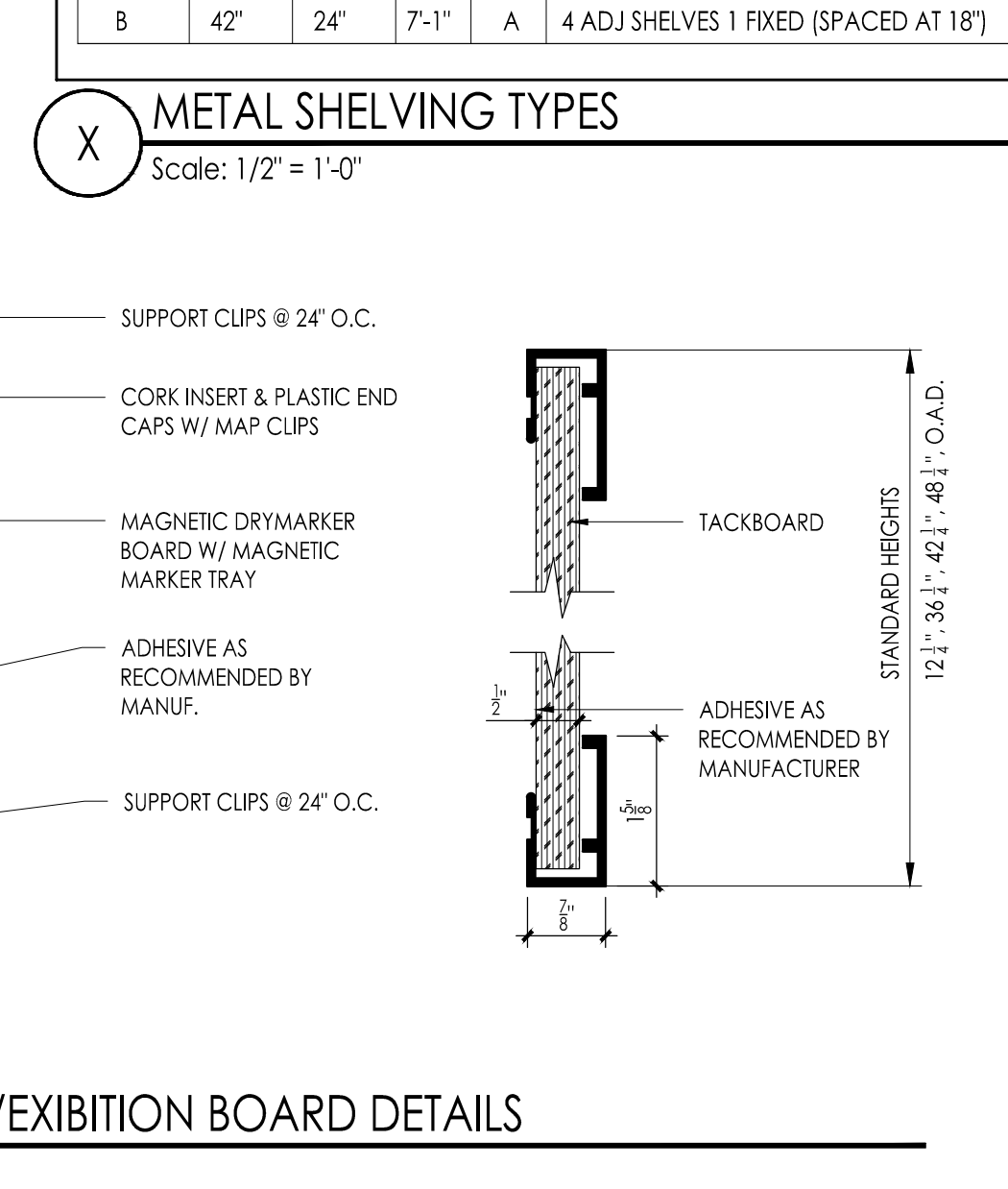
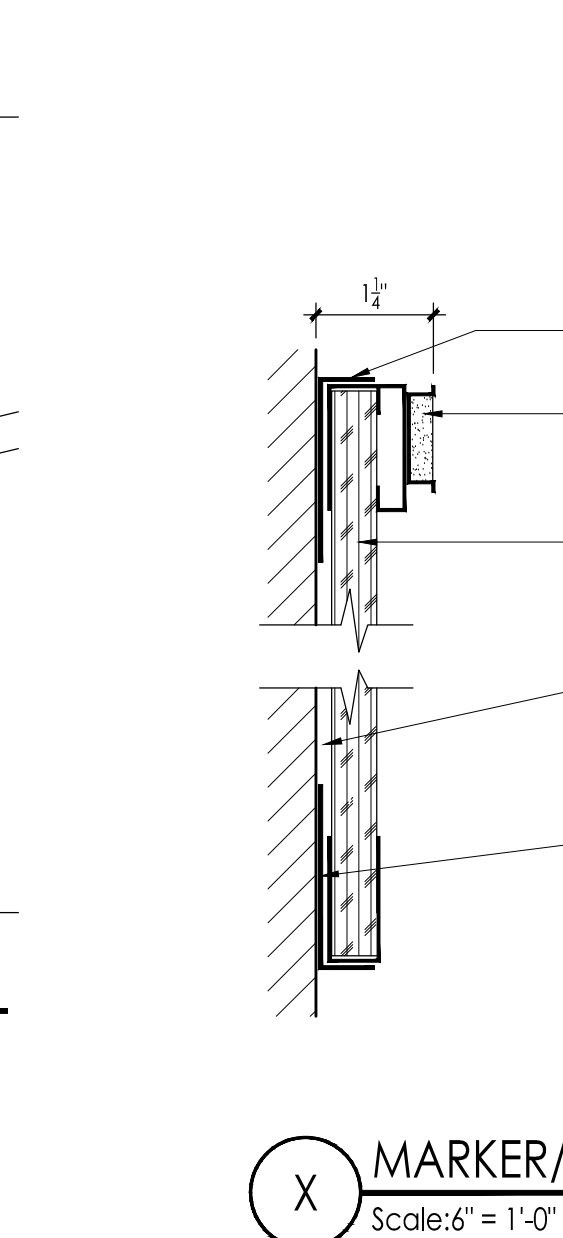
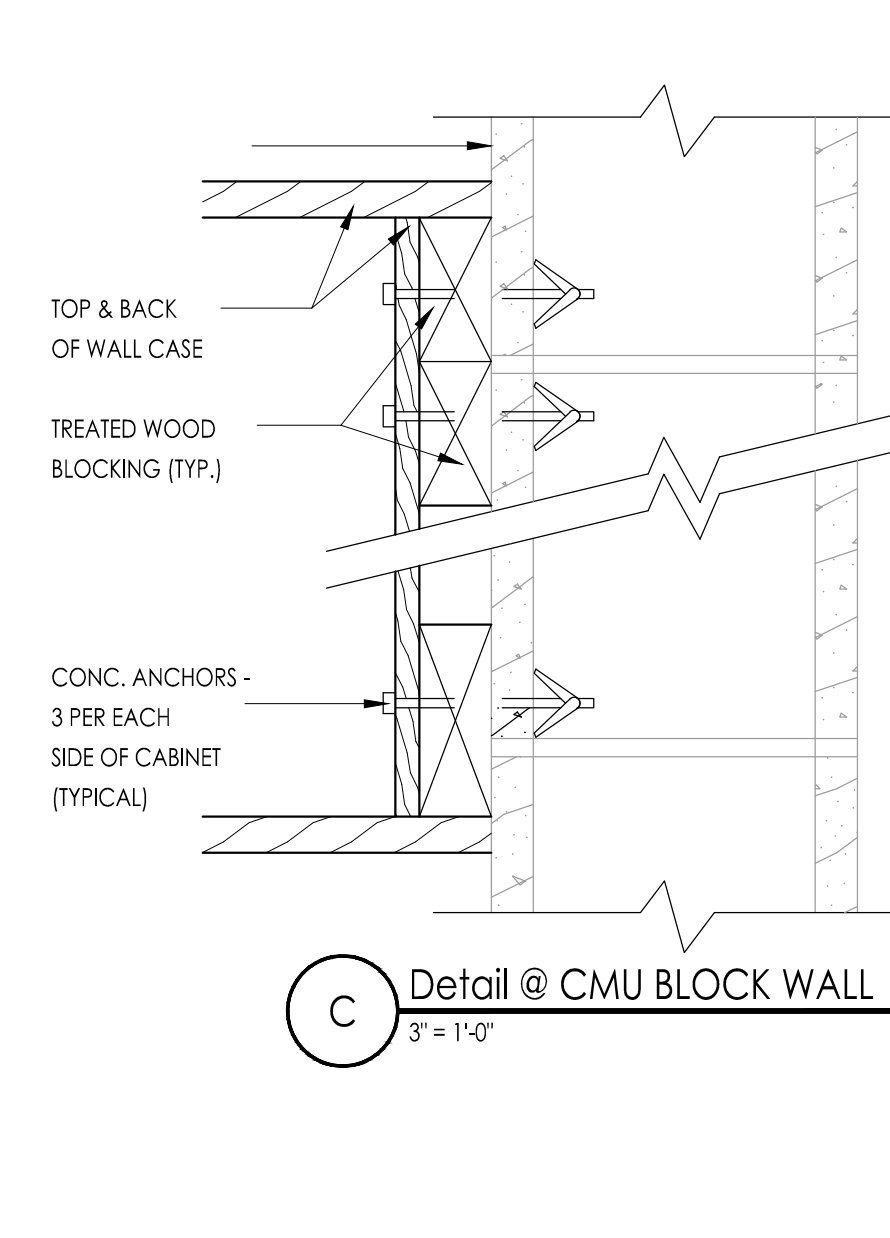
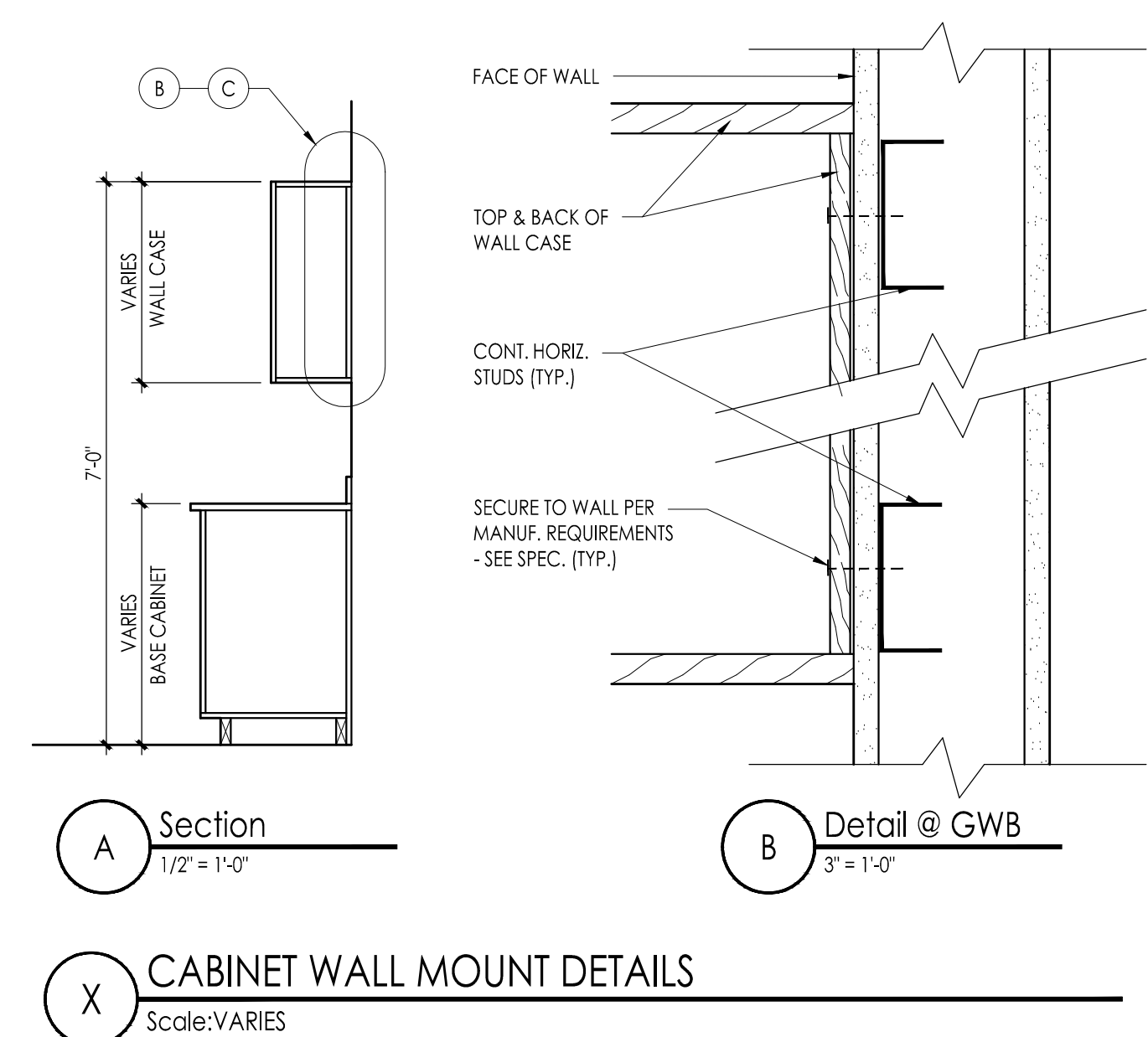
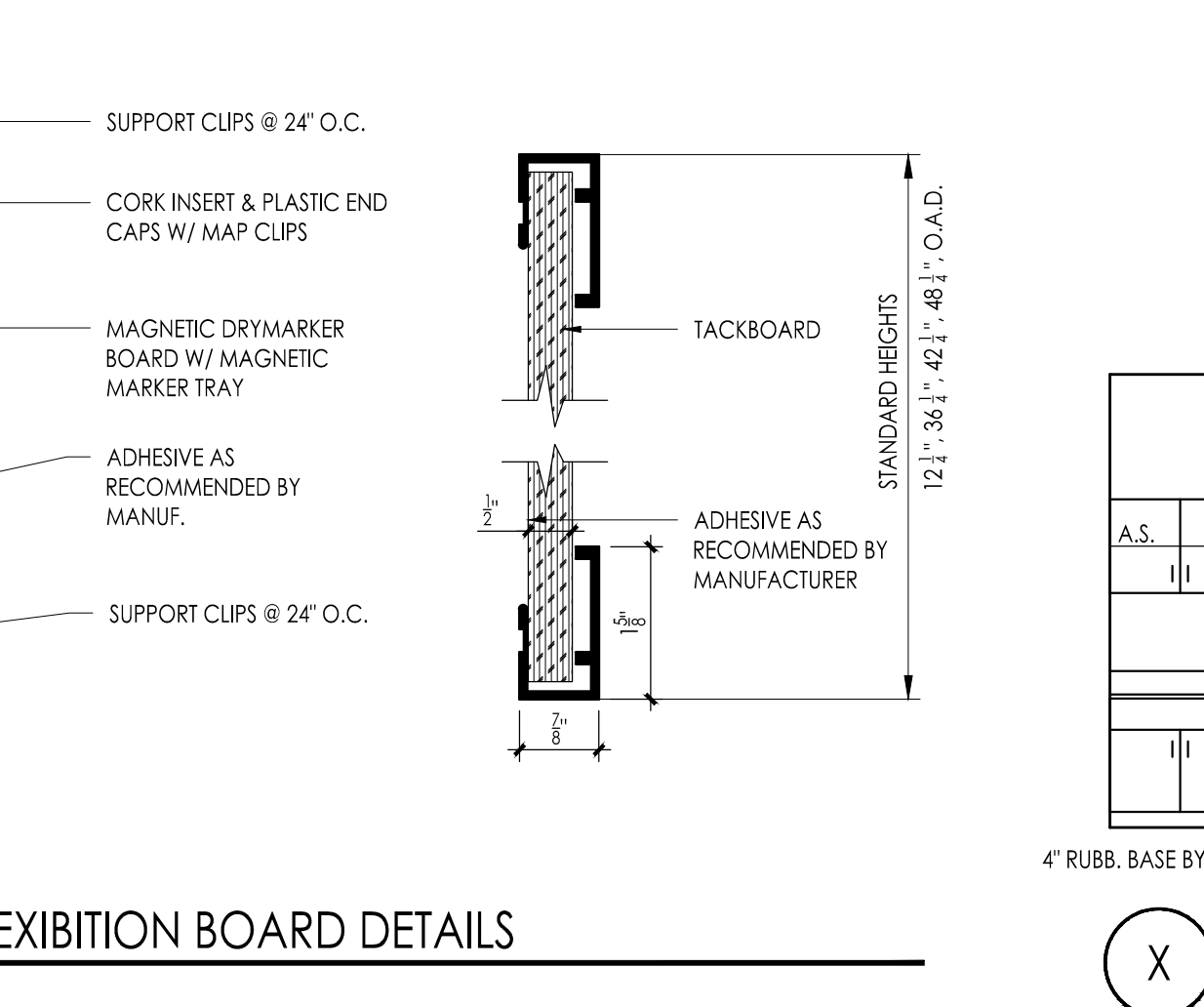
ENLARGED ROOM LAYOUT

1/4" = 1'-0"



METAL SHELVING TYPES

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



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Project Name: **STEM Lab Alterations & Renovations at Clearview Regional Middle School**

Project Owner Name: **Clearview Regional High School District**

Project Location: **595 Jefferson Rd, Mullica Hill, NJ 08062**

Project Number: **5162C**

Project Date: **10/11/2023**

Checked By: **GRD**

Drawn By: **KM/SB**

Scale: **AS NOTED**

Drawing Name: **ENLARGED ROOM LAYOUT**

Drawing Number: **A401**

DOOR AND FRAME SCHEDULE

DR NO	DOOR LOCATION	DOOR				FRAME				HARDWARE	RATING	SIGN TYPE	NOTES	
		SIZE	TYPE	MATL	GLAZING	TYPE	MATL	HEAD	JAMB					SADDLE
305	STEMCLASSROOM 305	3'-0" x 7'-0"	B	WD	FRG-1/SWF	HM	HM	ETR	ETR	S2	5.0	20 MIN	9	SEE DOOR SCHEDULE NOTES 1, 6, 9, 10, 11
305.1	STEMCLASSROOM 305	3'-0" x 7'-0"	B	WD	TPG	H1	HM	H3	J3	--	4.0	--	8	SEE DOOR SCHEDULE NOTES 6, 8, 9, 10
305.2	STEMCLASSROOM 305	3'-0" x 7'-0"	B	WD	TPG	H1	HM	H3	J3	--	3.0	--	--	SEE DOOR SCHEDULE NOTES 6, 8, 9, 10
305.3	STEMCLASSROOM 305	2 @ 5'-0" x 3'-6"	--	--	TPG	B1	HM	H4	J4	S3	--	--	--	SEE DOOR SCHEDULE NOTES 3, 9
305.4	STEMCLASSROOM 305	2 @ 5'-0" x 3'-6"	--	--	TPG	B1	HM	H4	J4	S3	--	--	--	SEE DOOR SCHEDULE NOTES 3, 9
305.5	STEMCLASSROOM 305	2 @ 5'-0" x 3'-6"	--	--	TPG	B2	HM	H4	J4	S3	--	--	--	SEE DOOR SCHEDULE NOTES 3, 9
305.6	STEMCLASSROOM 305	2 @ 5'-0" x 3'-6"	--	--	TPG	B2	HM	H4	J4	S3	--	--	--	SEE DOOR SCHEDULE NOTES 3, 9
305A	LAB / ROBOTICS AREA 305A	3'-0" x 7'-0"	B	WD	FRG-1/SWF	HM	HM	H2	J2	S2	5.0	20 MIN	9	SEE DOOR SCHEDULE NOTES 2, 4, 6, 9, 10, 11
305A-2	LAB / ROBOTICS AREA 305A	2 @ 3'-0" x 7'-0"	C	FRP	SG	AL	AL	H1	J1	S1	1.0	--	3	SEE DOOR SCHEDULE NOTES 5, 7, 11
305B	SECURE STORAGE 305B	5'-0" x 7'-0"	A	WD	TPG	ETR	HM	ETR	ETR	--	2.0	--	10	SEE DOOR SCHEDULE NOTE 1, 11

DOOR SCHEDULE ABBREVIATIONS

- AL - ALUMINUM
- EX - EXISTING TO REMAIN
- FRG-1 - FIRE-RATED IMPACT-RESISTANT GLAZING-TYPE 1
- FRP - FIBERGLASS REINFORCED POLYESTER
- HM - HOLLOW METAL
- SG - SECURITY GLAZING
- ST - STEEL
- SWF - SECURITY WINDOW FILM
- TPG - TEMPERED PLATE GLASS
- WD - WOOD

GENERAL DOOR NOTES

- ALL NEW DOORS IN NEW FRAMES TO BE 1 1/2" THICK AND HAVE A 1" UNDERCUT.
- UNLESS NOTED OTHERWISE
- ALL WIRING FOR DOOR SECURITY TO BE CONCEALED IN NEW FRAMES
- ANY EXISTING FRAME TO REMAIN ARE TO BE PRIME AND REFINISHED TO MATCH NEW FRAME COLOR. COLOR TO BE SELECTED BY ARCHITECT.
- ALL INTERIOR DOORS TO HAVE A METAL VIBRON TRIM KIT
- ALL DOORS IN PROJECT TO BE NEW CONTINUOUS HINGES
- ALL DOORS TO HAVE KICK PLATES ON THE PUSH SIDE
- DOORS WITH SECURITY WINDOW FILM SHALL HAVE IFA ON GLASS - SEE SPECIFICATION AND SECURITY WINDOW FILM DETAIL ON SHEET.

DOOR SCHEDULE NOTES

- NEW DOOR IN EXISTING FRAME. VERIFY DOOR SEE IN FIELD
- KNOCKDOWN FRAME
- BORROWED LIGHT FRAME W/ DOUBLE PANE GLAZING
- VERIFY EXISTING WALL THICKNESS
- AUTOMATIC FLUSH BOLT W/ EXIT PANIC ON ACTIVE DOOR
- PROVIDE DOOR PERIMETER SOUND SEAL AND AUTOMATIC DOOR BOTTOM
- PROVIDE SOUND & WEATHERSTRIPPING AT PERIMETER
- INSTALL DOUBLE PANE GLAZING IN FRAME
- INSTALL WINDOW SHADES. SEE DRAWINGS AND SPECIFICATIONS FOR DETAILS
- PROVIDE DOOR STOP
- DOOR TO HAVE CLOSER

ROOM FINISH SCHEDULE

NUMBER	ROOM NAME	FLOOR	BASE MAT. HT.	WAINSCOT MAT. HT.	WALL FINISH	CEILING MAT. HT.	NOTES
305	STEMCLASSROOM	SDT	RUB 4"	--	ETR-P/ GP	ACB-1 10'-0"	SEE ROOM FINISH SCHEDULE NOTE 2
305A	LAB / ROBOTICS AREA	SDT	RUB 4"	--	CP, GP	ACB-1 VARIES	SEE FINISH ROOM SCHEDULE NOTES 1, 4 & 5
305B	SECURE STORAGE	VCT	RUB 4"	--	ETR-P	ACB-1	SEE ROOM FINISH SCHEDULE NOTES 5

ROOM FINISH SCHEDULE ABBREVIATIONS

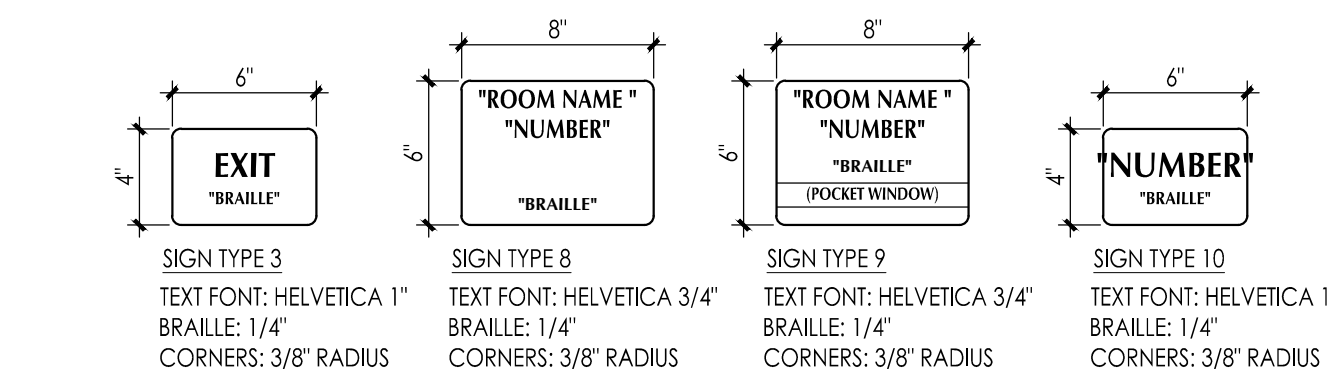
- ACB-1 - ACOUSTIC CEILING BOARD TYPE 1 (2x4)
- A.F.F. - ABOVE FINISHED FLOOR
- B.F. - BARRIER FREE
- CP - CONCRETE MASONRY UNIT - PAINTED
- ETR-P - EXISTING TO REMAIN PAINT
- GP - GYPSUM BOARD - PAINT
- RUB - RUBBER BASE
- SDT - STAINC DIBRAVE TILE
- VCT - VINYL COMPOSITION TILE

GENERAL ROOM FINISH NOTES

- SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION ON MATERIALS / MANUFACTURER / PERFORMANCE AND WARRANTY INFORMATION.
- REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS ON GROUNDING THE SDT FLOORING.
- WALLS ARE TO BE SOUND ATTENUATED FROM THE BOTTOM OF THE TRACKS TO THE BOTTOM OF THE STRUCTURAL DECK.
- GC TO PROVIDE SOUND SEALANT AT THE BOTTOM AND TOP OF METAL STUD TRACKS.
- ANY EXISTING RECEPACLES TO REMAIN. GC OR ELECTRIC SUBCONTRACTOR TO REPLACE FACE COVERS WITH NEW FACE COVERS TO MATCH NEW RECEPACLES.
- REFERENCE EQUIPMENT SCHEDULE TO SEE EQUIPMENT THAT WILL BE PROVIDED BY OWNER AND INSTALLED BY GC.

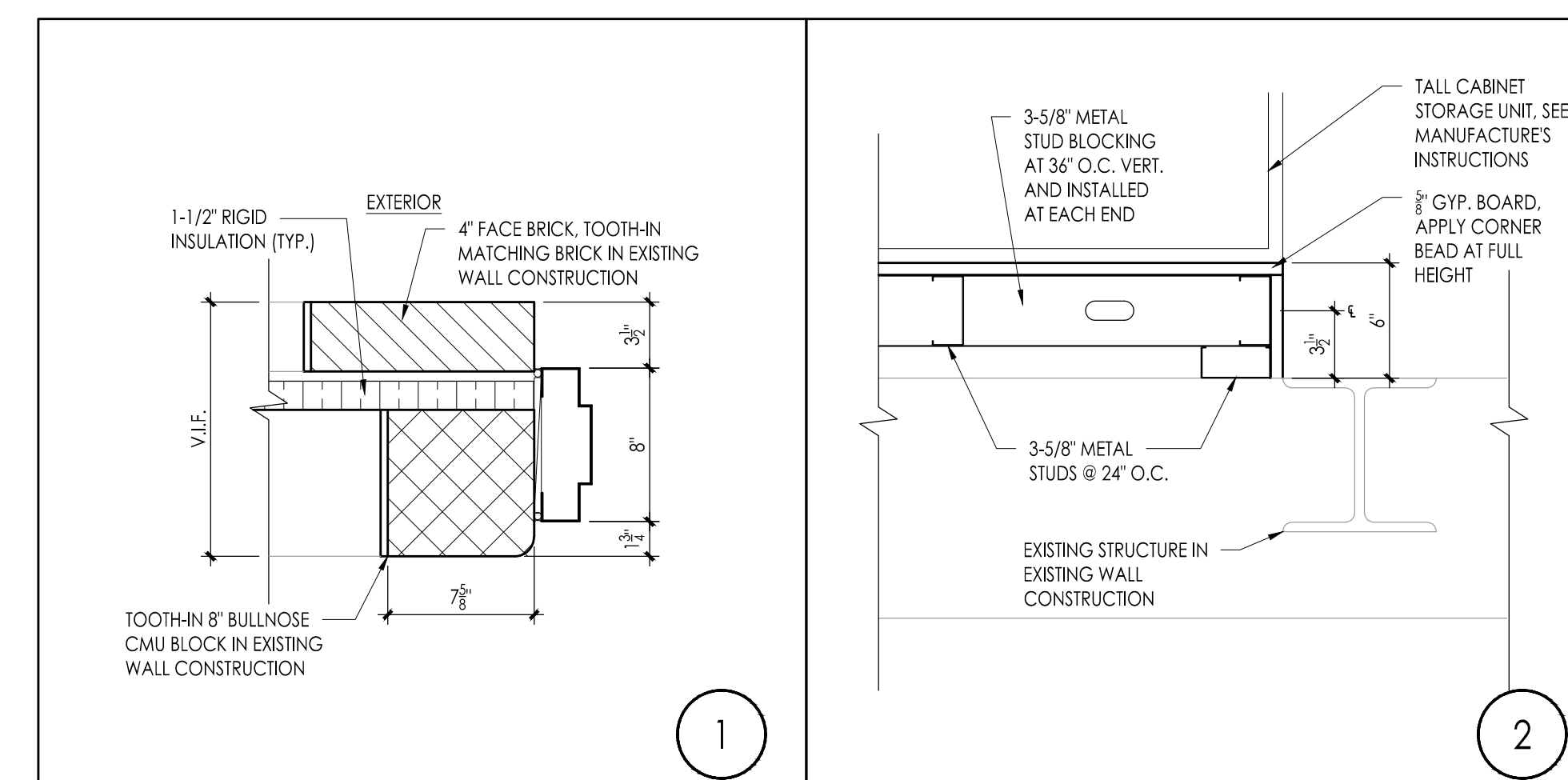
ROOM FINISH SCHEDULE NOTES

- WINDOW TREATMENT (WT-1) ELECTRICAL ROLLER SHADE SYSTEM AT EXTERIOR WINDOWS. SEE SPECIFICATION SECTION 1249A.
- WINDOW TREATMENT (WT-2) MANUAL ROLLER SHADE SYSTEM AT CLASSROOM BORROWED LIGHTS. SEE SPECIFICATION SECTION 1249A.
- REFERENCE EQUIPMENT SCHEDULE TO SEE EQUIPMENT THAT WILL BE PROVIDED BY OWNER AND INSTALLED BY GC.
- CEILING HEIGHT VARIES - SEE REFLECTED CEILING PLAN.
- NEW TILES IN EXISTING TO REMAIN. PAINT GRD AND LIGHT SUPPORTS.



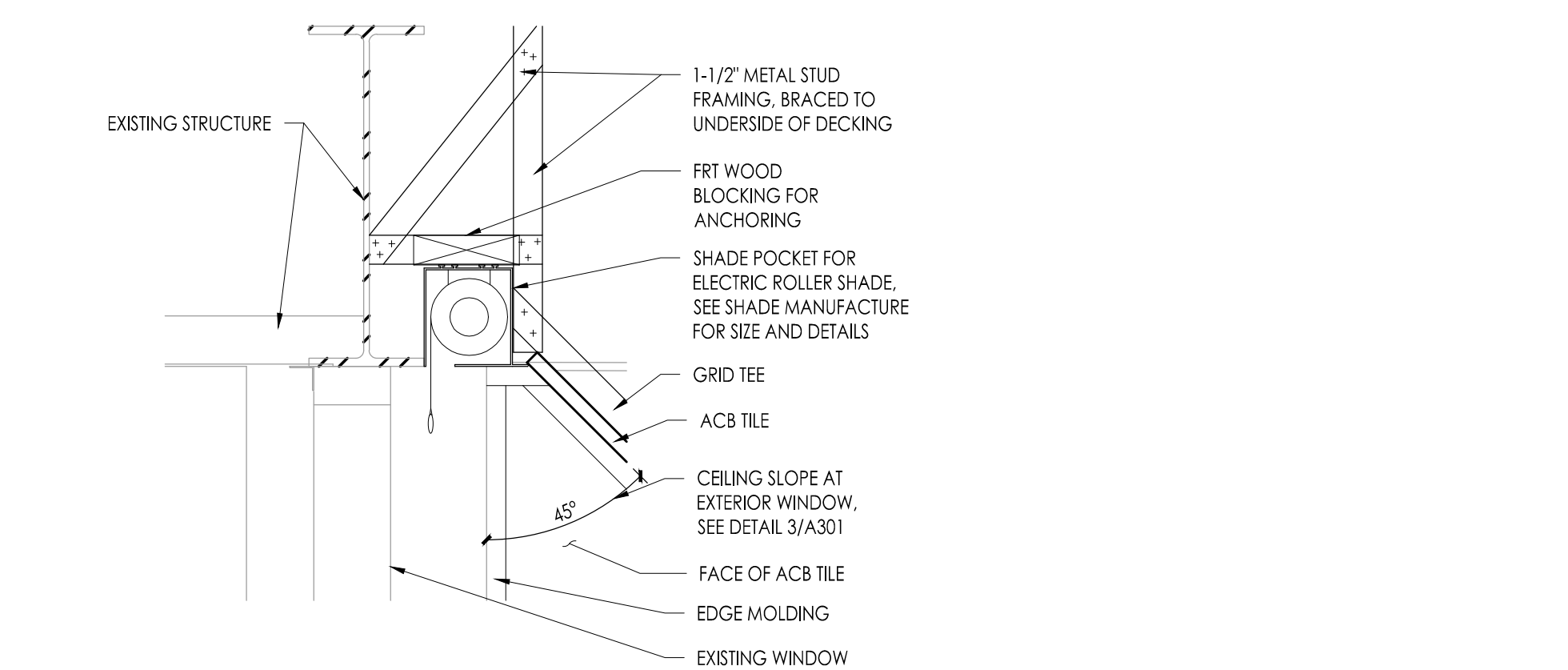
DOOR SIGNAGE TYPES

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



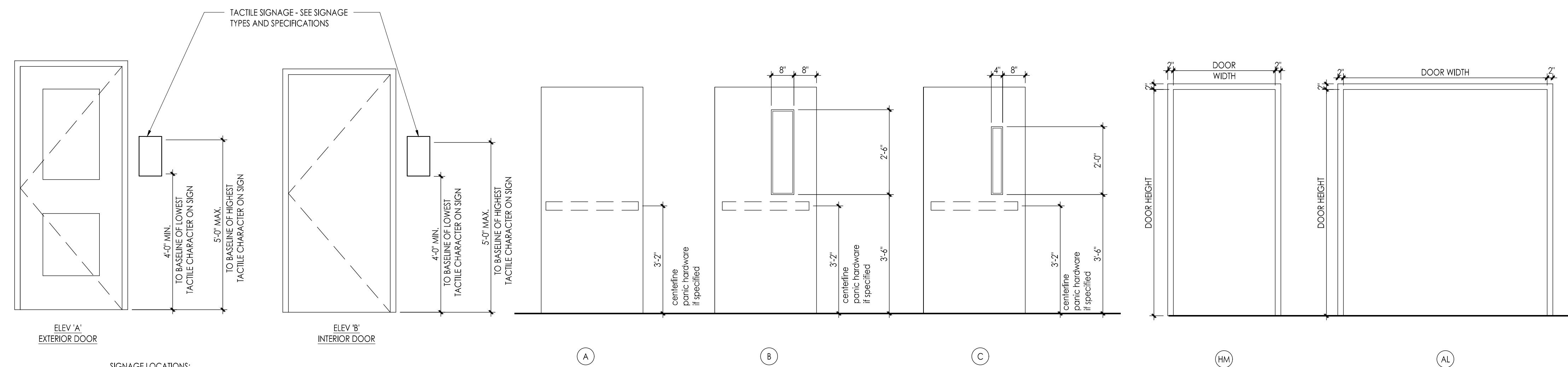
PLAN DETAILS

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



A ELECTRIC ROLLER SHADE POCKET AT WINDOW

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

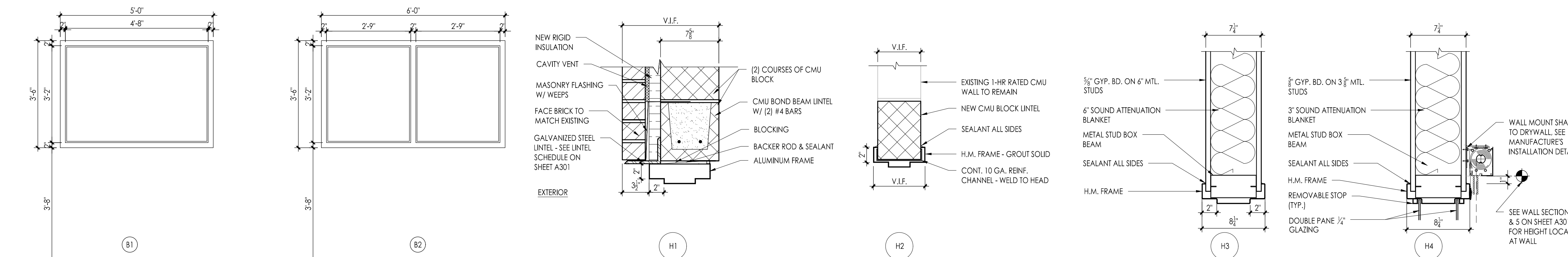


SIGN LOCATIONS

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

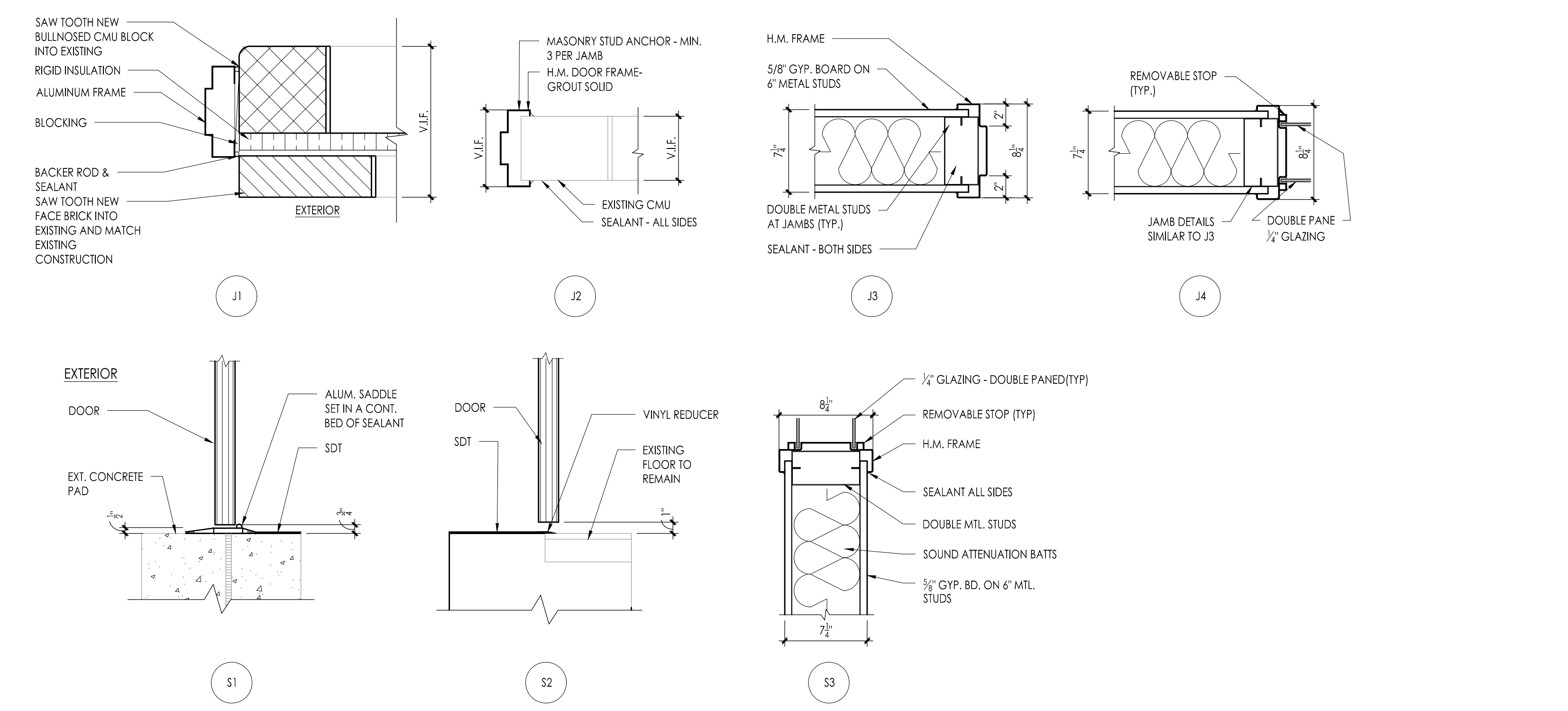
DOOR & FRAME TYPES

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



BORROWED LITE FRAME TYPES

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



HEAD, JAMB, & SILL DETAILS

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

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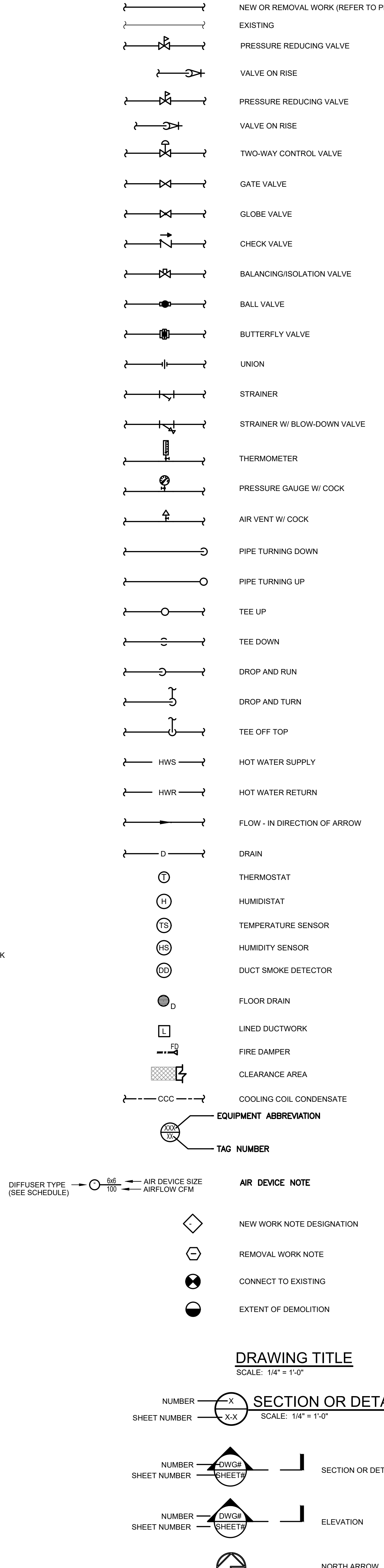
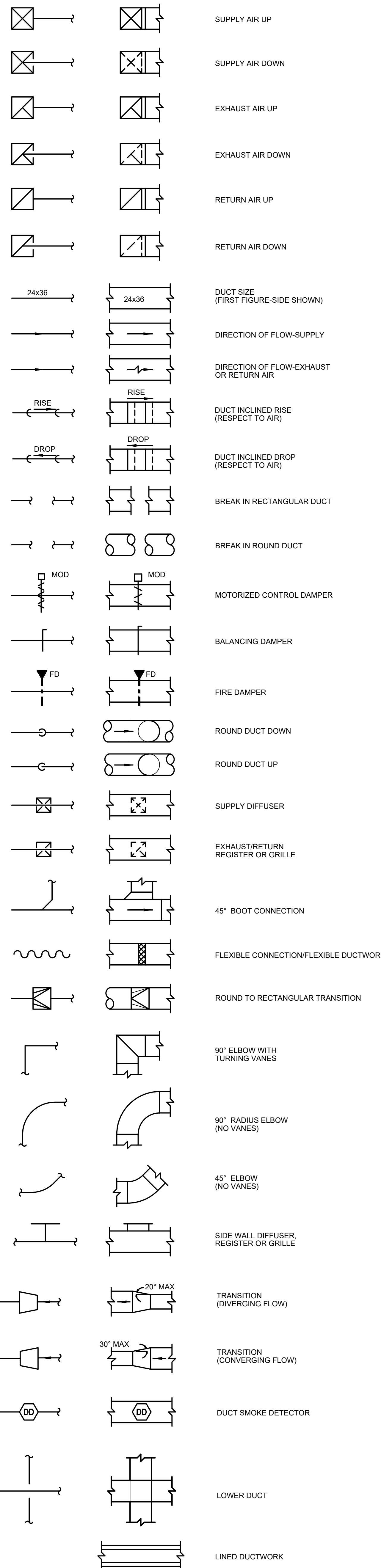
Project Number
5162C
 Project Date
10/11/2023
 Checked By
GRD
 Drawn By
SB
 Scale
AS NOTED

Drawing Name
DOOR & FRAME DETAILS, SCHEDULES, NOTES AND PLAN DETAILS

Revisions	No.	Date	Description

Drawing Number
A601

LEGEND:



ABBREVIATIONS:

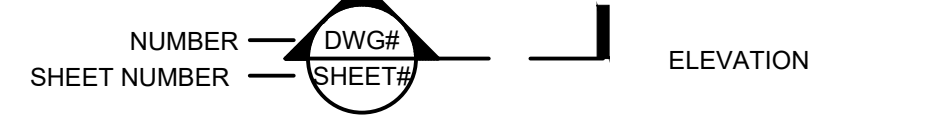
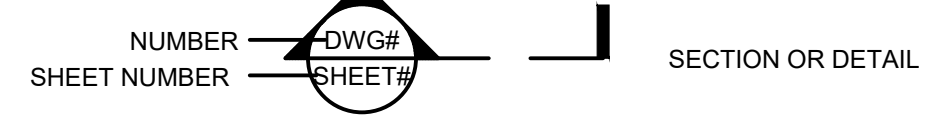
ABS	ABSOLUTE	L	LENGTH
AD	AIR FILTER	LAT	LEAVING AIR TEMPERATURE
AF	AIR FILTER	LBS	POUNDS
AFD	ADJUSTABLE FREQUENCY DRIVE	LH	LATENT HEAT
AFF	ABOVE FINISHED FLOOR	LIQ	LIQUID
AFMS	AIR FLOW MONITORING STATION	LPC	LOW PRESSURE CONDENSATE
AHU	AIR HANDLING UNIT	LPS	LOW PRESSURE STEAM
AMB	AMBIENT	LVG	LEAVING
AP	ACCESS PANEL	LWT	LEAVING WATER TEMPERATURE
APD	AIR PRESSURE DROP	MAX	MAXIMUM
ARCH	ARCHITECT OR ARCHITECTURAL	MB	MIXING BOX
ATC	AUTOMATIC TEMPERATURE CONTROL	MBH	THOUSANDS BTU/HR
ATM	ATMOSPHERIC	MCA	MINIMUM CIRCUIT AMPACITY
ATV	ATMOSPHERIC VENT	MD	MODULATING
AUTO	AUTOMATIC	MIN	MINIMUM
A/C	AIR CONDITION (ER) (ING)	MOD	MOTOR OPERATED DAMPER
B	BOILER	MOP	MAXIMUM OVER CURRENT PROTECTION
BBD	BOILER BLOW DOWN	MPC	MEDIUM PRESSURE CONDENSATE
BC	BOTTOM CONNECTION	MPS	MEDIUM PRESSURE STEAM
BDD	BACK DRAFT DAMPER	MU	MAKE-UP WATER
BFW	BOILER FEED WATER	MWT	MEAN WATER TEMPERATURE
BFP	BACK FLOW PREVENTER	M/A	MAKE-UP AIR
BHP	BRAKE HORSEPOWER	N/A	NOT APPLICABLE
BOO	BOTTOM OF DUCT	NC	NOISE CRITERIA
BTU	BRITISH THERMAL UNIT	NEC	NATIONAL ELECTRICAL CODE
C	CONDENSER	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CA	COMPRESSED AIR	N.I.C.	NOT IN CONTRACT
CAB	CABINET	NTS	NOT TO SCALE
CC	COOLING COIL	NC	NORMALLY CLOSED
CCC	COOLING COIL CONDENSATE	N/O	NORMALLY OPEN
CD	CEILING DIFFUSER	OBD	OPPOSED BLADE DAMPER
CFM	CUBIC FEET PER MINUTE	OED	OPEN ENDED DUCT
CI	CAST IRON	OD	OUTSIDE DIAMETER
CO	CLEANOUT	O/A	OUTSIDE AIR
COND	CONDENSATE	P	PUMP
CONN	CONNECTION	PBD	PARALLEL BLADE DAMPER
COP	COEFFICIENT OF PERFORMANCE	P.C.	PLUMBING CONTRACTOR
CU	CONDENSING UNIT	PD	PRESSURE DROP
CUH	CABINET UNIT HEATER	PNEU	PNEUMATIC
CV	CONSTANT VOLUME	PNL	PANEL
CW	COLD WATER (DOMESTIC)	POS	POSITION
D	DRAIN	PRESS	PRESSURE
DB	DECIBEL	PRV	PRESSURE RELIEF VALVE
D.b.	DRY BULB	PSI	POUNDS PER SQUARE INCH
DC	DUCT COIL	PSIA	POUNDS PER SQUARE INCH ABSOLUTE
DD	DUAL DUCT	RAF	RETURN AIR FAN
DEG	DEGREE	RFB	RUN BELOW FLOOR
DIA	DIAMETER	RD	ROOF DRAIN
DIV	DIVISION	RF	RELIEF AIR FAN
DN	DOWN	RH	RELATIVE HUMIDITY
DP	DIFFERENTIAL PRESSURE SENSOR	RL	REFRIGERANT LIQUID
DPR	DAMPER	RLA	RATED LOAD AMPS
DPT	DEW POINT TEMPERATURE	RPM	REVOLUTIONS PER MINUTE
DTL	DETAIL	RRP	REFRIGERANT RELIEF PIPING
DTR	DUAL TEMPERATURE RETURN	RS	REFRIGERANT SUCTION
DTS	DUAL TEMPERATURE SUPPLY	RTU	ROOF TOP UNIT
DWG.	DRAWING	R/A	RETURN AIR
DX	DIRECT EXPANSION	SAN	SANITARY
(E)	EXISTING	SD	SMOKE DETECTOR
EAT	ENTERING AIR TEMPERATURE	SENS	SENSIBLE
E.C.	ELECTRICAL CONTRACTOR	SF	SUPPLY AIR FAN
EDH	ELECTRIC DUCT HEATER	SH	SENSIBLE HEAT
EER	ENERGY EFFICIENCY RATIO	SL	SOUND LINING
EF	EXHAUST FAN	SP	STATIC PRESSURE
EFF	EFFICIENCY	SPEC	SPECIFICATION
ENT	ENTERING	SS	STAINLESS STEEL
ER	EXHAUST REGISTER	STD	STANDARD
ESP	EXTERNAL STATIC PRESSURE	STM	STEAM
ET	EXPANSION TANK	SYS	SYSTEM
EWT	ENTERING WATER TEMPERATURE	S/A	SUPPLY AIR
F	FAN	TEMP	TEMPERATURE
F&T	FLOAT & THERMOSTATIC	TOS	TOP OF STEEL
FC	FAN COIL	TSP	TOTAL STATIC PRESSURE
FD	FIRE DAMPER	T STAT	THERMOSTAT
FLA	FULL LOAD AMPS	TYP.	TYPICAL
FPM	FEET PER MINUTE	UCD	UNDER CUT DOOR
FTR	FINNED TUBE RADIATION	UH	UNIT HEATER
FPS	FEET PER SECOND	UL	UNDERWRITERS LABORATORIES
FT	FEET	U.N.O	UNLESS NOTED OTHERWISE
F&BP	FACE & BY-PASS	UV	UNIT VENTILATORS
GAL	GALLONS	V	VALVE
G.C.	GENERAL CONTRACTOR	VAC	VACUUM
GPM	GALLONS PER MINUTE	VAV	VARIABLE AIR VOLUME
GRV	GRAVITY ROOF VENTILATOR	VD	VOLUME DAMPER
GVR	GAS VENT RELIEF	VEL	VELOCITY
H	HOOD	VOL	VOLUME
HC	HEATING COIL	W	WIDTH
H.C.	HVAC CONTRACTOR	WAC	WINDOW AIR CONDITIONER
HD	HEAD	W.b.	WET BULB
HP	HORSEPOWER	WC	WATER COLUMN
HPC	HIGH PRESSURE CONDENSATE	WG	WATER GAUGE
HPS	HIGH PRESSURE STEAM	WPD	WATER PRESSURE DROP
HRU	HEAT RECOVERY UNIT	WT	WEIGHT
HT	HEIGHT	W	WITH
HTG	HEATING	W/O	WITHOUT
HUMID	HUMIDIFIER		
HW	HOT WATER		
HWC	HOT WATER COIL		
HWR	HOT WATER RETURN		
HWS	HOT WATER SUPPLY		
HX	HEAT EXCHANGER		
HZ	HERTZ		
ID	INSIDE DIAMETER		
IN	INCHES		
INTL	INTERLOCK		
KW	KILOWATT		

GENERAL NOTES:

- GENERAL NOTES APPLY TO ALL HEATING, VENTILATING AND AIR-CONDITIONING (HVAC) DRAWINGS.
- COORDINATE THE ROOF SUPPORT SYSTEM, STRUCTURAL STEEL, CROSS BRACING, PENETRATIONS, BUILDING EQUIPMENT REINFORCEMENT/SUPPORTS, ETC. TO FACILITATE THE INSTALLATION OF HVAC EQUIPMENT AND ROUTING/LOCATION OF DUCTWORK, PIPING, HV'S, AND THE LIKE.
- COORDINATE AND FIELD VERIFY ALL DIMENSIONS, SIZES, CLEARANCES AND LOCATION PRIOR TO THE START OF CONSTRUCTION. WHEN CONFLICTS ARISE, MAKE ANY NECESSARY CHANGES TO ROUTING OF PIPING AND/OR DUCTWORK WITHOUT COMPROMISING THE INTEGRITY AND PERFORMANCE OF THE SYSTEM, AND AT NO ADDITIONAL COST TO THE SCHOOL DISTRICT.
- PROVIDE FIRE DAMPERS, SMOKE DAMPERS, AND ALL ASSOCIATED LIFE SAFETY DEVICES FOR ALL DUCTWORK/PIPING PENETRATIONS THRU RATED ASSEMBLIES. REFER TO HVAC AND ARCHITECTURAL DRAWINGS FOR REQUIRED RATINGS AND LOCATIONS.
- HVAC PIPING AND DUCTWORK AND PIPING LAYOUTS ARE SCHEMATIC IN NATURE, PROVIDE OFFSETS AND FITTINGS AS REQUIRED TO ACCOMMODATE FIELD CONDITIONS AND ALL TRADE WORK BY OTHERS.
- GENERAL LOCATION OF DIFFUSERS AND REGISTERS AS SHOWN ON HVAC DRAWINGS ARE SCHEMATIC IN NATURE. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS.
- FLEXIBLE DUCTWORK SHALL NOT EXCEED 7'-0" IN LENGTH, OR BE INSTALLED WITH BEND RADIUS GREATER THAN 1 TIMES THE DIAMETER AND 90°.
- COORDINATE CONSTRUCTION OF ALL HVAC WORK WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING, ETC. SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
- ALL PIPING AND CONTROL WIRING TO BE CONCEALED IN WALLS, CEILINGS AND CHASES.
- COORDINATE THE LOADING REQUIREMENTS FOR THE SUPPORT OF ALL HVAC SYSTEMS INCLUDING, BUT NOT LIMITED TO ROOFTOP UNITS, PIPING AND DUCTWORK.
- PROVIDE HANGERS AND SUPPORTS PER THE SPECIFICATIONS FOR ALL PIPING, DUCTWORK AND HVAC EQUIPMENT TO FACILITATE INSTALLATION OF THE WORK.
- PROVIDE VIBRATION ISOLATION DEVICES FOR ALL HVAC EQUIPMENT AND SYSTEMS. REFER TO DETAIL SHEET FOR TYPICAL CONSTRUCTION.
- ALL MATERIALS EXPOSED WITHIN RETURN AIR PLENUMS SHALL BE RATED FOR USE IN PLENUMS. PROVIDE MATERIALS THAT ARE NON COMBUSTIBLE OR HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E-84.
- SCHEDULE AND OBTAIN APPROVAL FOR ALL SYSTEM SHUTDOWNS WITH OWNER PRIOR TO COMMENCING WITH REMOVAL AND NEW WORK.
- PERFORM ALL CUTTING AND PATCHING NECESSARY TO PERFORM WORK. MATCH MATERIALS, FINISHES, FIRE RATINGS, PAINT COLORS, ETC. IN ALL AREAS OF PATCHING.
- NOTE THAT THE IDENTIFICATION LABELS TO BE USED/MADE FOR ALL SYSTEMS MUST USE THE OWNER'S ROOM NUMBERS AND ROOM NAMES, NOT THE NUMBERS OR NAMES ON THE CONSTRUCTION DOCUMENTS. MEET WITH OWNER TO REVIEW AND CONFIRM ROOM NUMBERS AND NAMES PRIOR TO LABELING SYSTEMS.
- THOROUGHLY COORDINATE ALL CONSTRUCTION, PRIOR TO COMMENCEMENT OF INSTALLATION OF HVAC SYSTEMS.
- COORDINATE REQUIREMENTS FOR LOSS OF PHASE PROTECTION ON ALL THREE PHASE MOTORS SERVING EQUIPMENT ON THIS CONTRACT.
- ALL EQUIPMENT AND/OR MATERIAL BEING REMOVED DURING REMOVAL SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR AND SHALL BE RETAINED OR DISPOSED OF AND REMOVED FROM THE SITE AT THE DIRECTION OF THE OWNER.
- ASPECT RATIO OF DUCTWORK SIZING CAN BE CHANGED TO SUIT FIELD CONDITIONS AT THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
- PROVIDE FLEXIBLE CONNECTIONS AT ALL DUCTWORK TO EQUIPMENT CONNECTIONS.
- PROVIDE TURNING VANES IN ALL DUCT ELBOWS.
- PROVIDE VOLUME DAMPERS AT BOOT CONNECTIONS AND BRANCHES OF MAINS FOR ALL SUPPLY, RETURN, AND EXHAUST AIR SYSTEMS.
- DUCTWORK DIMENSIONS INDICATE INTERNAL CLEAR DIMENSIONS.
- EQUIPMENT INSULATION SHALL BE INSTALLED AS NOT TO CONCEAL THE EQUIPMENT NAME PLATE.
- HVAC REMOVAL WORK IN THE BUILDING SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR INCLUDING HVAC EQUIPMENT, SYSTEMS, APPARATUS, AND ACCESSORIES.
- THE REMOVAL DRAWINGS SHOW A GENERAL REPRESENTATION OF QUANTITIES AND LOCATIONS OF EXISTING HVAC COMPONENTS AND SYSTEMS, AND ARE NOT ALL INCLUSIVE. IT IS CONTRACTOR'S RESPONSIBILITY TO PROVIDE REMOVAL OF THE HVAC SYSTEMS TO FULFILL THE INTENT OF THE DESIGN INDICATED BY THE CONTRACT DOCUMENTS, UNLESS OTHERWISE NOTED. REMOVAL WORK IS TO INCLUDE, BUT NOT LIMITED TO REMOVAL OF EQUIPMENT, APPARATUS, SYSTEM ACCESSORIES, DUCT, PIPING, INSULATION, DROPS, RISERS, AUXILIARY SYSTEMS/PIPING/CONTROLS, VALVES, PIPING ACCESSORIES, CONTROLS, CONTROL WIRING/TUBING, CONDUITS, BASES, SUPPORTS, HANGERS AND SYSTEM APPURTENANCES.
- ENSURE ALL WORK IS IN CONFORMANCE WITH ALL APPLICABLE BUILDING CODES. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF THE APPLICABLE CONSTRUCTION CODE, AND ALL OTHER FEDERAL, STATE AND LOCAL AGENCY REGULATIONS HAVING JURISDICTION OVER THIS PROJECT. IN THE EVENT OF ANY DISCREPANCIES BETWEEN AGENCY REQUIREMENTS, OBSERVE THE MORE STRINGENT OF REQUIREMENTS.
- ALL WORK SHALL COMPLY WITH THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS (NBFU), INDUSTRIAL RISK INSURANCE UNDERWRITERS (IRI), FACTORY MUTUAL (FM), OR THE APPLICABLE RATINGS BUREAU, THE NATIONAL ELECTRIC CODE (NEC), THE AMERICAN GAS ASSOCIATION (AGA), AND THE AMERICAN SOCIETY OF HEATING AND AIR CONDITIONING ENGINEERS (ASHRAE), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES AND THE REQUIREMENTS OF ALL PUBLIC UTILITY COMPANIES SERVING THE PROJECT SITE.
- COORDINATE LOCATION AND SIZE OF ALL WALL PENETRATIONS WITH STRUCTURAL FOR FRAMING AND ADDITIONAL SUPPORTS REQUIRED PRIOR TO BEGINNING WORK.
- INSTALL ALL EQUIPMENT TO MAINTAIN ADEQUATE CLEARANCES PER MANUFACTURER'S REQUIREMENTS. PROVIDE OFFSETS AS NECESSARY TO FACILITATE.
- ALL NEW EQUIPMENT LOCATED ON EXISTING ROOFS ARE TO BE LOCATED SO AS NOT TO INTERRUPT EXISTING ROOF DRAINAGE PATTERNS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING IN SHOP DRAWINGS, ROOF PLANS IN AREAS OF WORK. THESE ROOF PLANS ARE REQUIRED TO SHOW AT A MINIMUM ALL NEW AND EXISTING EQUIPMENT, ROOF DRAINS, ROOF PENETRATIONS, VALLEYS AND CRICKETS. ALL NEW EQUIPMENT TO HAVE REQUIRED CRICKETS INSTALLED TO MAINTAIN POSITIVE ROOF DRAINAGE.
- ALL ROOF CURBS FURNISHED BY HVAC CONTRACTOR AND INSTALLED BY HVAC CONTRACTOR. FLASHING FOR ROOF CURBS FURNISHED BY GENERAL CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR. COUNTER FLASHING FOR ROOF CURBS FURNISHED BY HVAC CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR. OPENINGS IN ROOF FOR ROOF CURBS PROVIDED BY HVAC CONTRACTOR.

DRAWING TITLE

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



REFERENCE DIMENSION



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ENGINEER DATE

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Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

Project Location
595 Jefferson Rd, Mullica Hill, NJ 08062

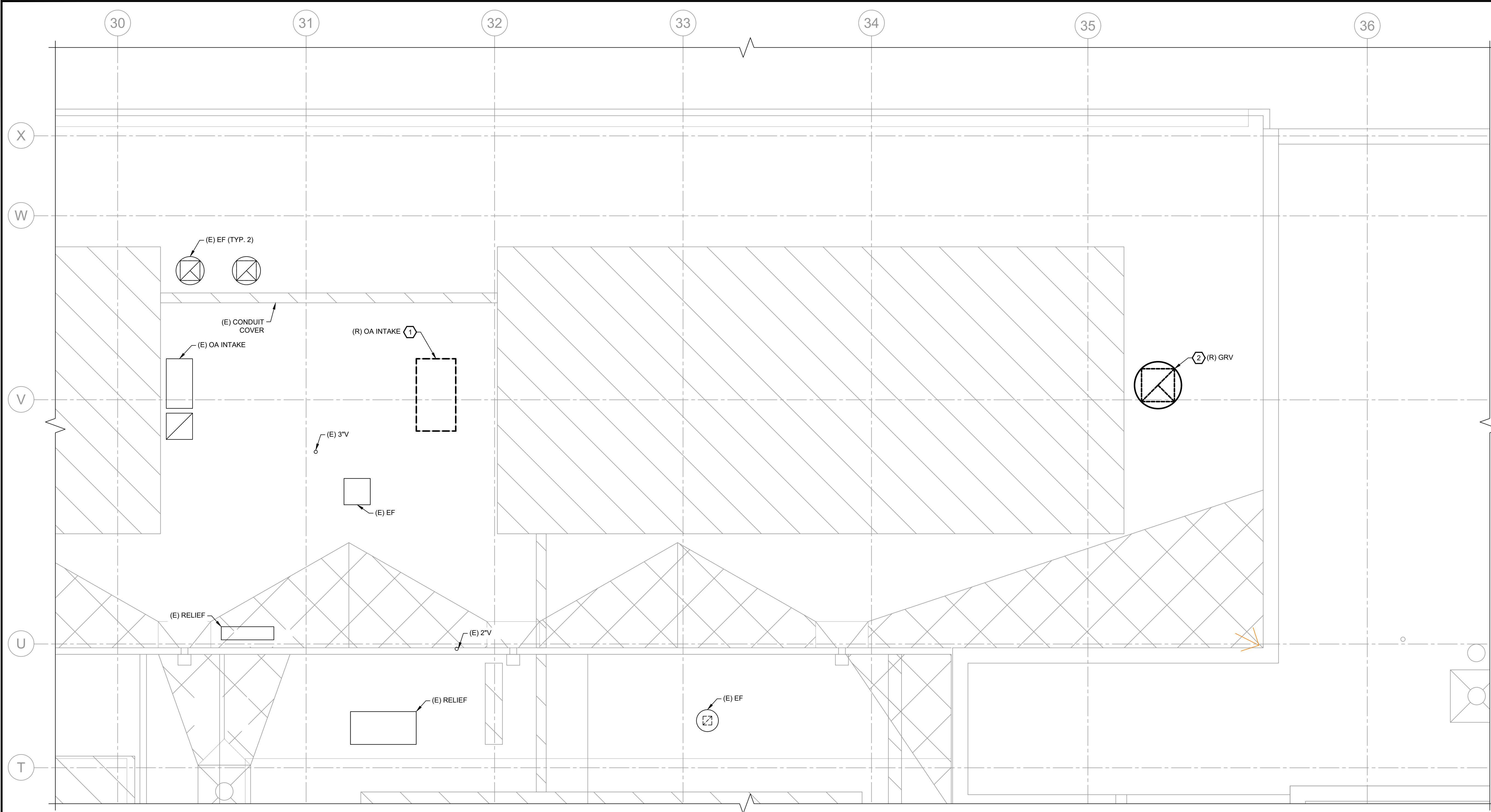
Project Number
5162C
 Project Date
10/11/2023
 Checked By
DLD
 Drawn By
RAMS
 Scale
AS NOTED

Drawing Name
HVAC SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

Revisions

No.	Date	Description

 Drawing Number
H001



DEMOLITION NOTES:

- ① DEMOLISH AND REMOVE OUTSIDE AIR INTAKE AND ALL ASSOCIATED DUCTWORK, CONTROLS AND MOUNTING. COORDINATE WITH THE GENERAL CONTRACTOR FOR ALL INFILL/PATCHING/PAINTING.
- ② DEMOLISH AND REMOVE EXISTING ROOF MOUNTED GRAVITY VENTILATOR WITH MOTOR OPERATED MODULATING DAMPER AND ALL ASSOCIATED CONTROLS AND MOUNTING. RETAIN OPENING AND TEMPORARILY CAP FOR RE-USE UNDER NEW WORK.

1 PARTIAL ROOF PLAN - HVAC DEMOLITION
SCALE: 1/4" = 1'-0"

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Architect
 Date: 10/11/23
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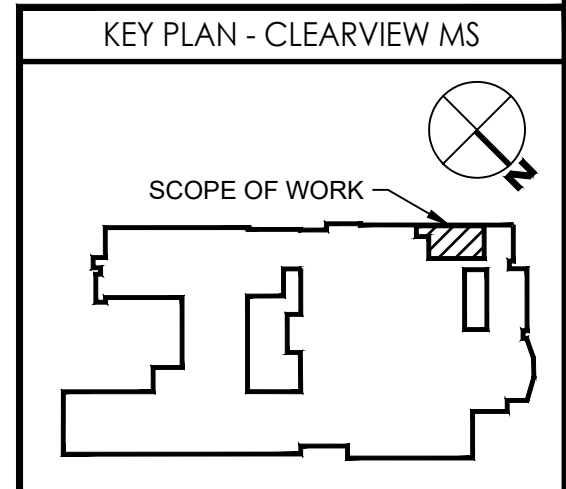
Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

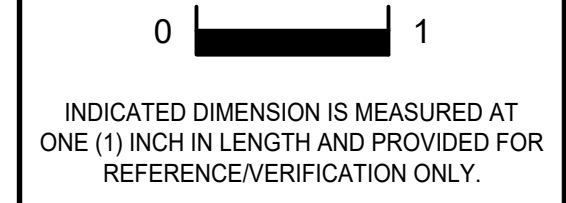
Project Location
**595 Jefferson Rd,
 Mullica Hill, NJ
 08062**

Project Number
5162C
 Project Date
10/11/2023
 Checked By
DLD
 Drawn By
RAMS
 Scale
1/4" SCALE

Drawing Name
HVAC ROOF DEMOLITION PLAN



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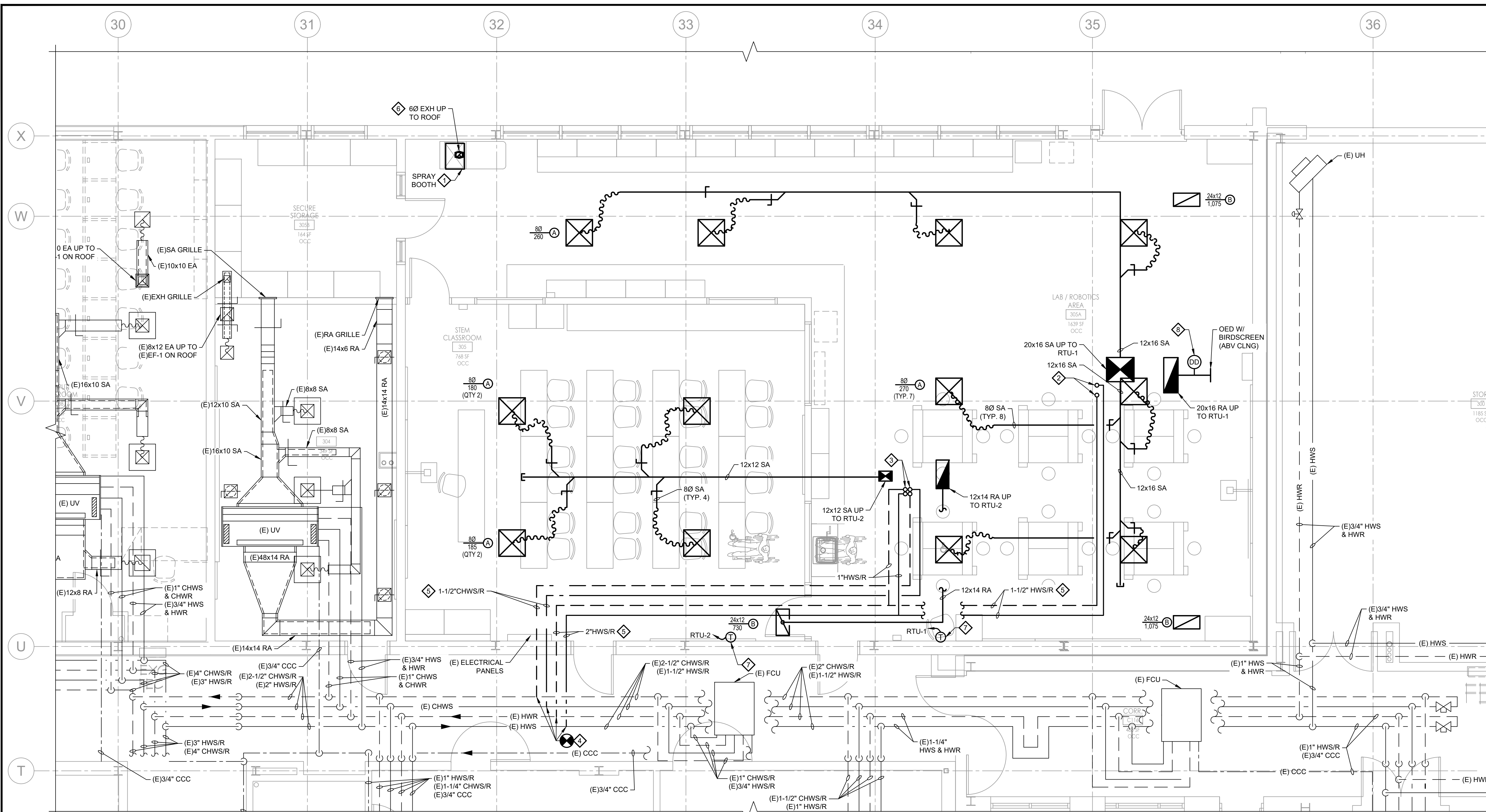


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ENGINEER _____ DATE _____

Revisions		
No.	Date	Description

Drawing Number
H102



1 PARTIAL FIRST FLOOR PLAN - HVAC NEW WORK
 H201 SCALE: 1/4" = 1'-0"

NEW WORK NOTES:

- ◇ MECHANICAL CONTRACTOR SHALL FURNISH AND CONNECT 6" EXHAUST DUCTWORK TO SPRAY BOOTH AND EXHAUST FAN PROVIDED BY OTHERS. EXTEND 6" EXHAUST UP THRU ROOF WITH THIMBLE AND FLASHING COLLAR. TERMINATE ABOVE ROOF. REFER TO DETAIL ON DRAWING H501 FOR ADDITIONAL REQUIREMENTS.
- ◇ 1-1/2" HWS/R UP THROUGH ROOF INTO RTU-1 SERVICE ENTRY. ROUTE PIPING INSIDE OF PIPE ENCLOSURE TO HOT WATER COIL. INSULATE AND SEAL PIPE PENETRATIONS THROUGH COVER. REFER TO DETAIL FOR PIPE CURB.
- ◇ 1-1/2" CWS/R AND 1" HWS/R UP THROUGH ROOF INTO RTU-2 AND CONNECT TO COILS. ROUTE PIPING INSIDE OF PIPE ENCLOSURE. INSULATE AND SEAL PIPE PENETRATIONS THROUGH COVER. REFER TO DETAIL FOR PIPE CURB.
- ◇ VERIFY IN FIELD EXISTING CWS/CWR & HWS/HWR PIPING NEAR LOCATION INDICATED. EXTEND AND CONNECT TO EXISTING MAIN/BRANCH WITH SHUT-OFF'S AS REQUIRED. COORDINATE CORING/CUTTING/PATCHING/PAINTING WITH THE GENERAL CONTRACTOR.
- ◇ PIPE ROUTE SHOWN IS APPROXIMATE. CONTRACTOR SHALL ADJUST AS REQUIRED TO AVOID CONFLICTS WITH NEW/EXISTING CONDITIONS.
- ◇ ADJUST FINAL PLACEMENT OF SPRAY BOOTH EXHAUST DUCT ROOF PENETRATION AS REQUIRED TO MAINTAIN MINIMUM 10' CLEARANCE FROM ALL OUTSIDE AIR INTAKES.
- ◇ APPROXIMATE LOCATION OF THERMOSTAT COORDINATE FINAL PLACEMENT WITH THE ARCHITECT AND GENERAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL WIRING AND CONDUIT BETWEEN FINAL T-STAT LOCATIONS AND ASSOCIATED ROOF MOUNTED EQUIPMENT.
- ◇ DUCT MOUNTED SMOKE DETECTOR AND SHUNT-TRIP FURNISHED LOOSE BY ELECTRICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL INSTALL DUCT SMOKE DETECTOR AND SHUNT-TRIP INCLUDING ALL REQUIRED CONTROL WIRING AND INTERCONNECTION TO RTU-1. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO POWER AND FIRE ALARM SYSTEMS.

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Project Name
 STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
 Clearview Regional High School District

Project Location
 595 Jefferson Rd,
 Mullica Hill, NJ
 08062

Project Number
 5162C

Project Date
 10/11/2023

Checked By
 DLD

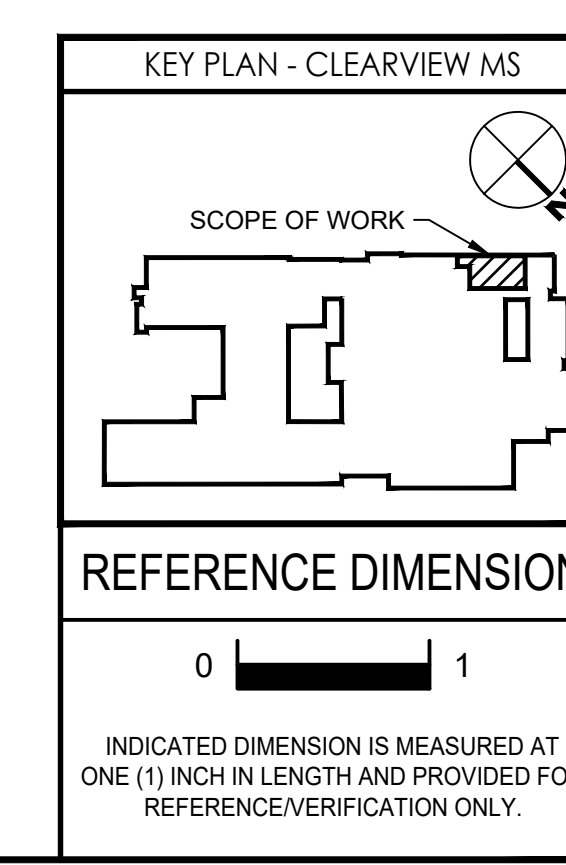
Drawn By
 RAMS

Scale
 1/4" SCALE

Drawing Name
 HVAC
 FIRST FLOOR
 NEW WORK PLAN

Revisions
 No. | Date | Description

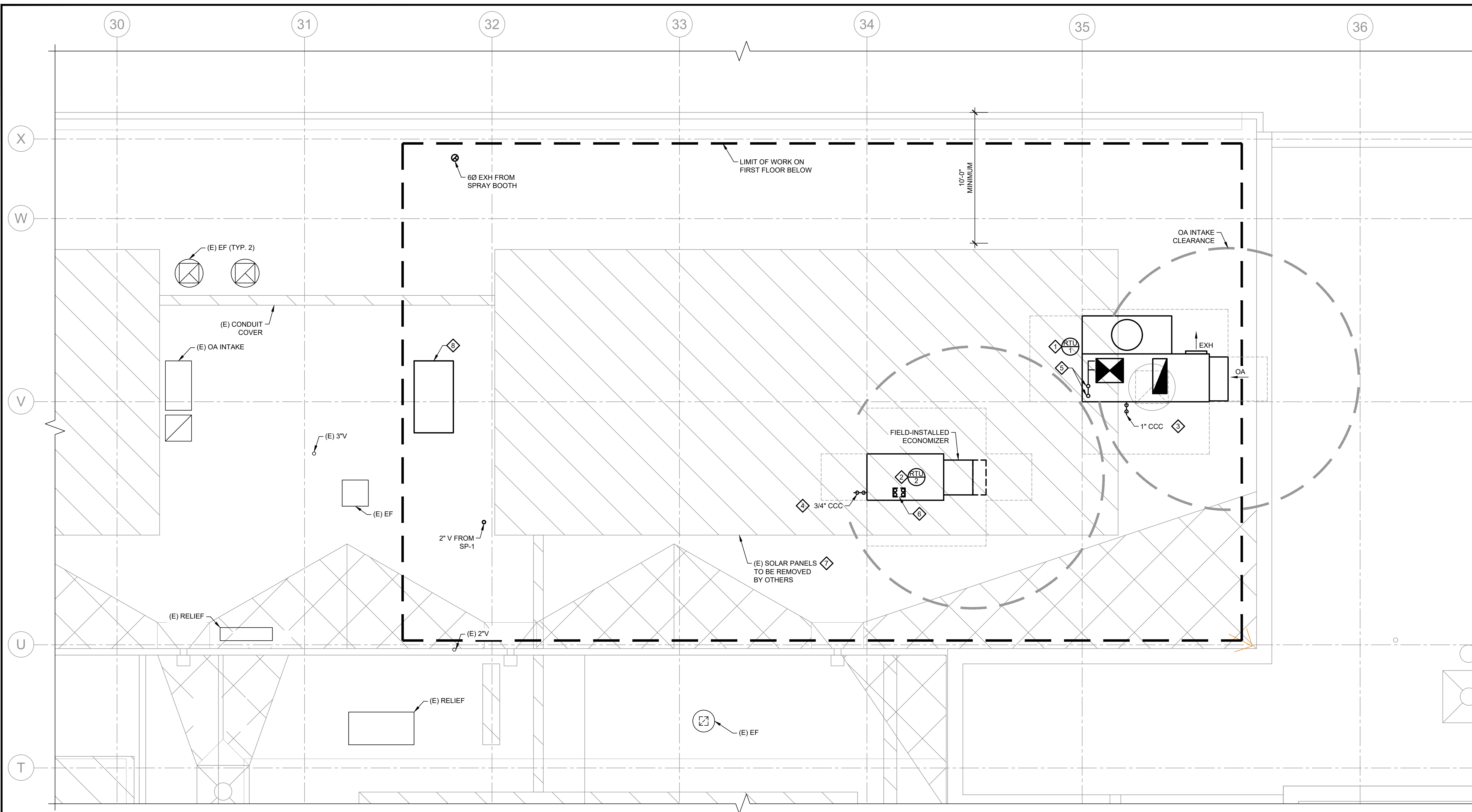
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10/04/2023
 HVAC COORDINATION SET
 NOT FOR CONSTRUCTION

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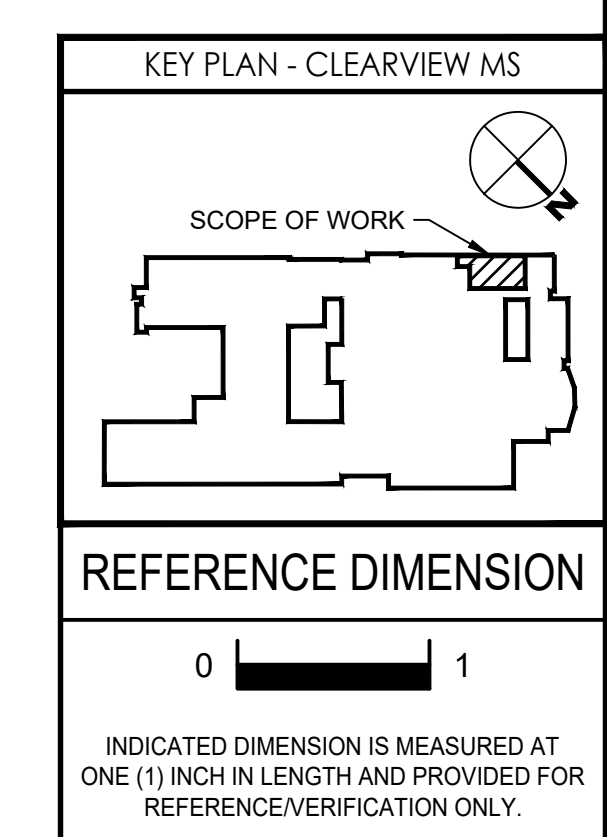
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NEW WORK NOTES:

- ◆ FURNISH AND INSTALL ROOF MOUNTED 100% OUTDOOR AIR DOAS UNIT (RTU-2) NEAR LOCATION INDICATED WITH ROOF CURB. ENLARGE ROOF OPENING REMAINING FROM PREVIOUSLY REMOVED GRAVITY VENTILATOR AS REQUIRED FOR DOAS-1. COORDINATE FINAL INSTALLATION WITH THE ELECTRICAL AND GENERAL CONTRACTORS.
- ◆ FURNISH AND INSTALL ROOF MOUNTED ROOF TOP UNIT (RTU-1) NEAR LOCATION INDICATED WITH ROOF CURB. COORDINATE FINAL INSTALLATION WITH THE ELECTRICAL AND GENERAL CONTRACTORS.
- ◆ 1" CONDENSATE DRAIN FROM RTU-1 DRAIN TO ROOF.
- ◆ 3/4" CONDENSATE DRAIN FROM RTU-2 DRAIN TO ROOF.
- ◆ 1-1/2" HWS/R UP TO RTU-1. ROUTE PIPING INSIDE OF ROOF CURB.
- ◆ 1-1/2" CHWS/R AND 1" HWS/R UP THROUGH ROOF TO RTU-2. ROUTE PIPING INSIDE OF ROOF CURB.
- ◆ EXISTING SOLAR PANELS TO BE REWORKED UNDER SEPARATE PROJECT.

1 PARTIAL ROOF PLAN - HVAC NEW WORK
SCALE: 1/4" = 1'-0"



KEY PLAN - CLEARVIEW MS

REFERENCE DIMENSION

0 1
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Architect
 Date
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Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

Project Location
595 Jefferson Rd, Mullica Hill, NJ 08062

Project Number
5162C
 Project Date
10/11/2023
 Checked By
DLD
 Drawn By
RAMS
 Scale
1/4" SCALE

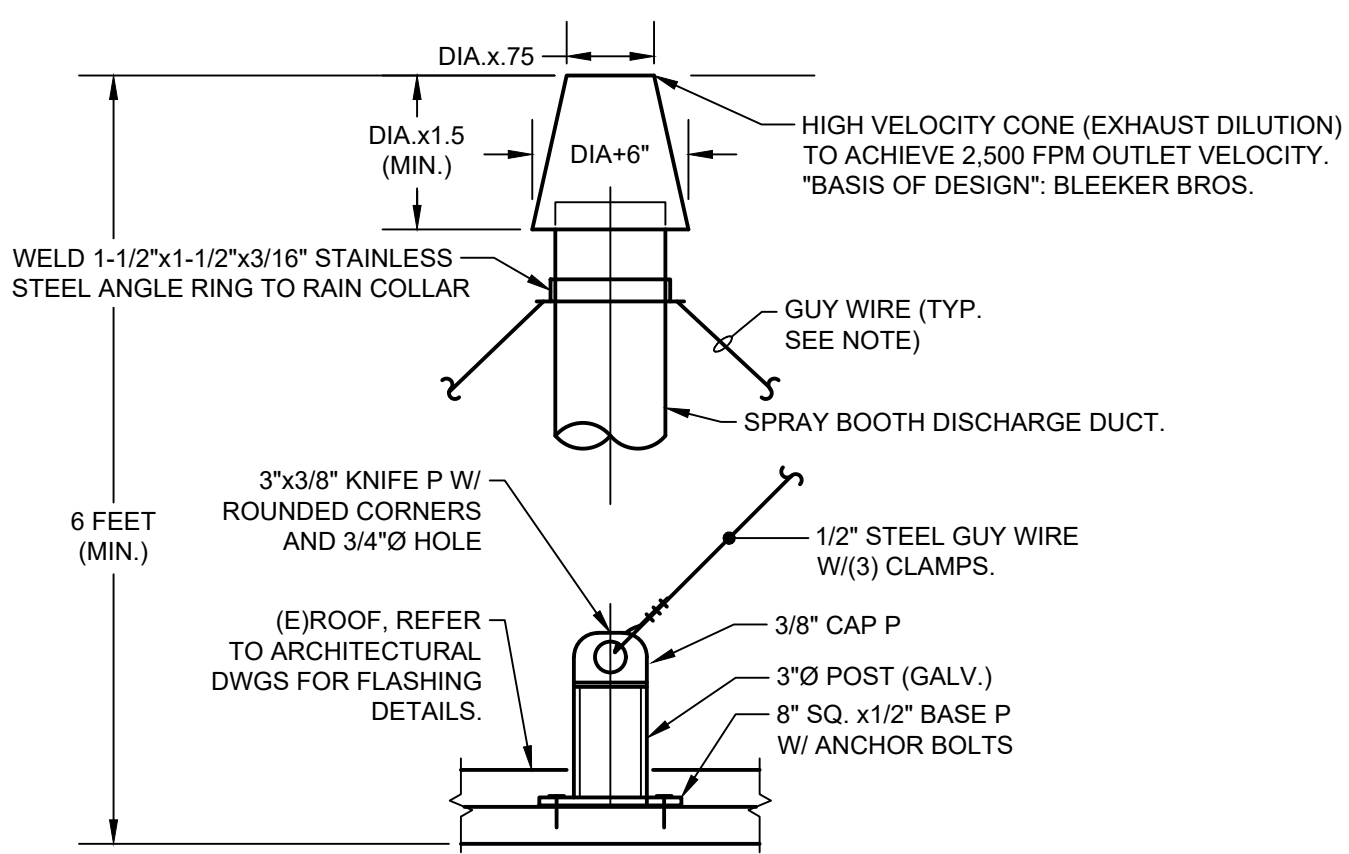
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HVAC ROOF NEW WORK PLAN

Revisions		
No.	Date	Description

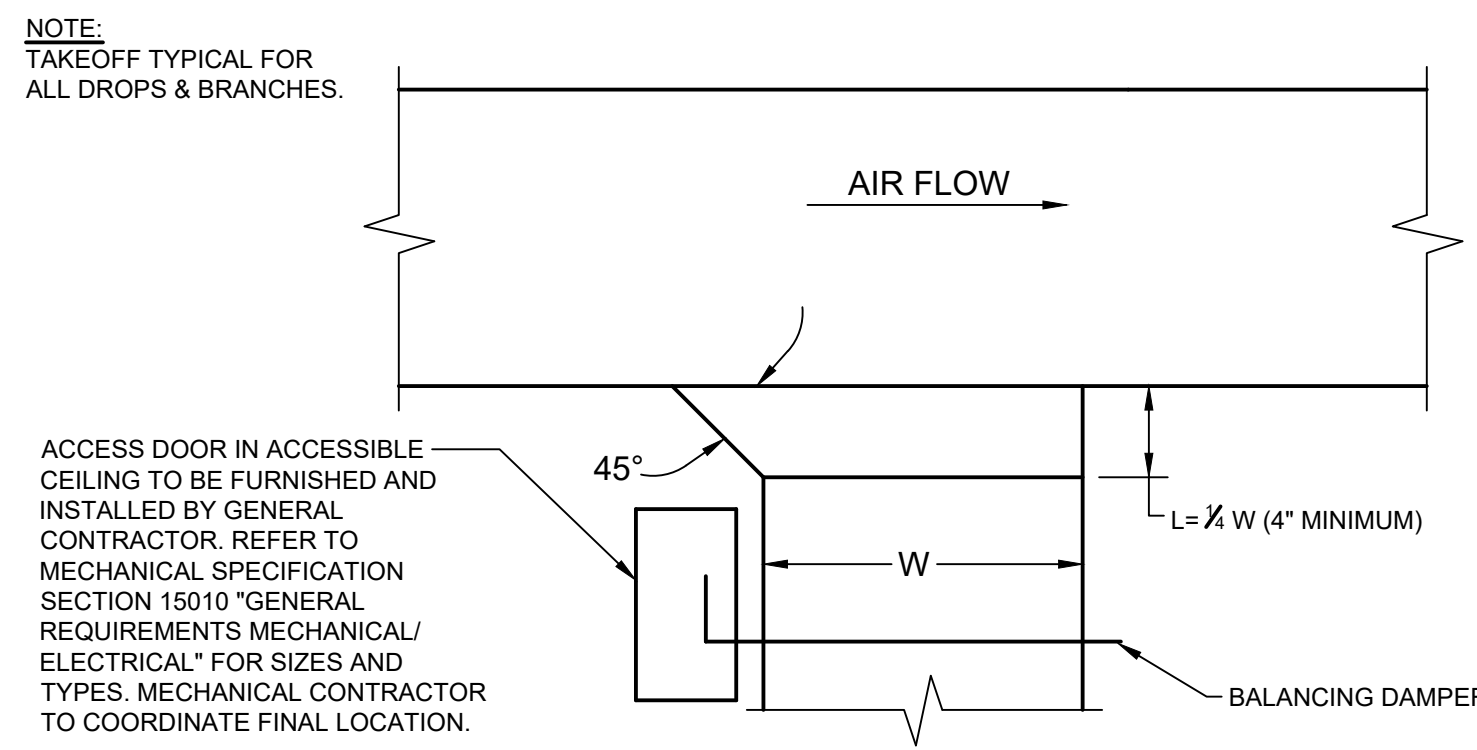
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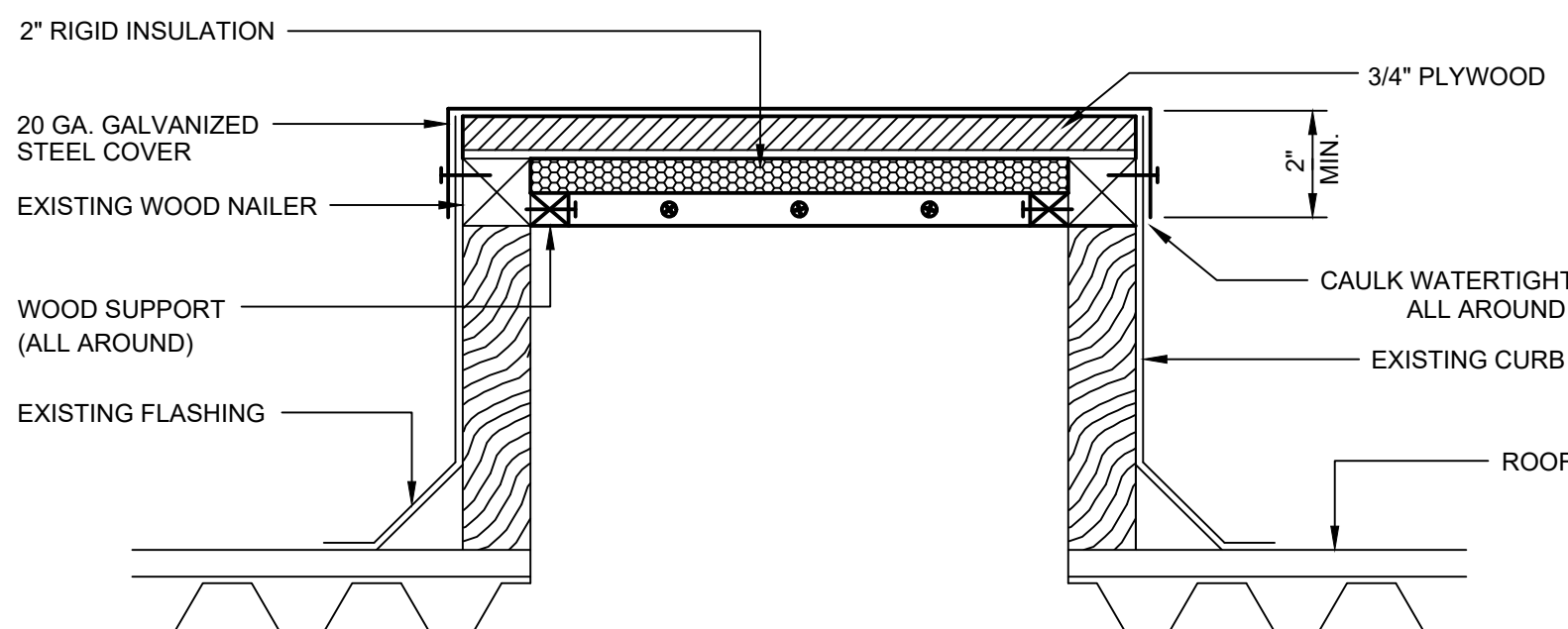
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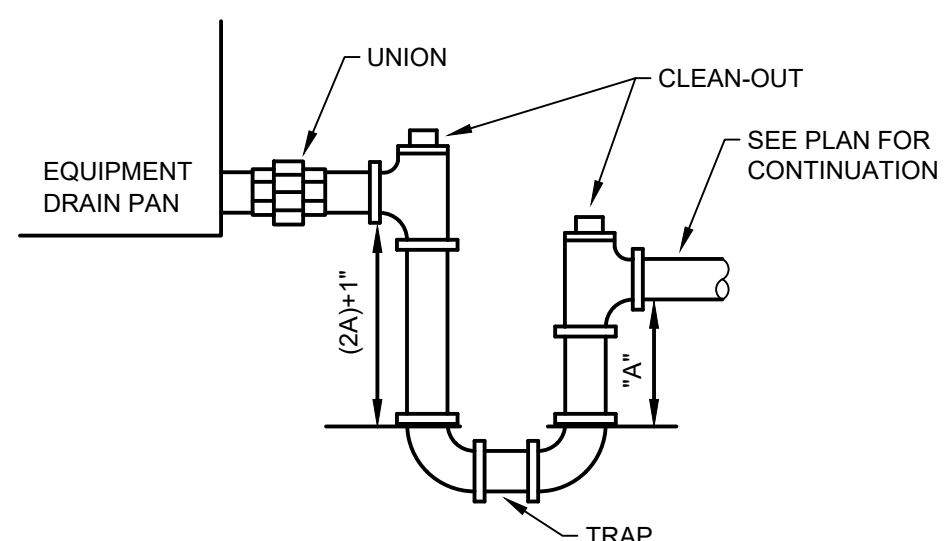
1 DETAIL-DISCHARGE CONE & GUY WIRE
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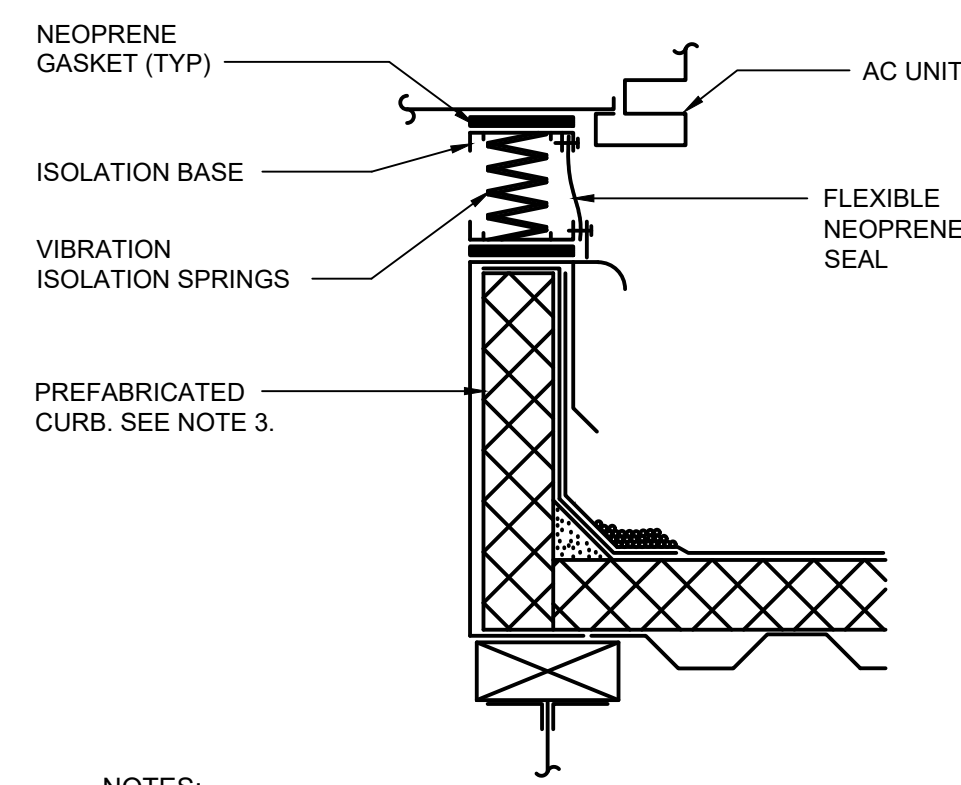
2 DETAIL - TYPICAL TAKE-OFF
H501 NO SCALE



3 DETAIL - CURB CAPPING
H501 NO SCALE



4 DETAIL - CONDENSATE DRAIN
H501 NO SCALE



4 DETAIL - ROOFTOP UNIT CURB
H501 NO SCALE

HVAC SEQUENCE OF OPERATIONS:

RTU-1 (100% OA, DX COOLING, HW HEATING)

CONTROL: LOCALIZED CONTROL WITH DISCHARGE TEMPERATURE SENSOR (NEUTRAL AIR). RTU-1 FURNISHED WITH FACTORY INSTALLED NETWORK CARD FOR FUTURE CONNECTION TO BUILDING WIDE BMS SYSTEM UNDER SEPARATE CONTRACT.

INTERLOCK OPERATION: RTU-1 OPERATION SHALL BE INTERLOCKED WITH PAINT BOOTH EXHAUST FAN FURNISHED BY OTHERS. ON PAINT BOOTH OPERATION, RTU-1 SHALL INCREASE SUPPLY FAN CFM TO MEET SPRAY BOOTH EXHAUST RATE. WHEN PAINT BOOTH EXHAUST FAN DE-ENERGIZES, RTU-1 SUPPLY AIR CFM SHALL RETURN TO NORMAL.

TIME/TEMPERATURE: COORDINATE START/STOP TIMES AND SPACE TEMPERATURE SET POINTS FOR OCCUPIED/UNOCCUPIED MODES WITH CLEARVIEW SCHOOL DISTRICT ENGINEERING.

OCCUPIED MODE: COOLING - ON A CALL FOR COOLING FROM SUPPLY TEMPERATURE DISCHARGE, RTU-2 SHALL INDEX TO COOLING MODE, OUTSIDE AIR DAMPERS SHALL MODULATE TO MAINTAIN 100% SUPPLY/EXHAUST AIR, SUPPLY/EXHAUST FANS SHALL ENERGIZE, DX COOLING WITH HOT GAS REHEAT SHALL OPERATE TO MAINTAIN SPACE TEMPERATURE SET POINT.

HEATING - ON A CALL FOR HEATING FROM SUPPLY TEMPERATURE DISCHARGE, RTU-1 SHALL INDEX TO HEATING MODE, OUTSIDE AIR DAMPERS SHALL MODULATE TO MAINTAIN 100% SUPPLY/EXHAUST AIR, SUPPLY/EXHAUST FANS SHALL ENERGIZE, 3-WAY HEATING WATER VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.

UN-OCCUPIED MODE: COOLING - ON A CALL FOR COOLING FROM SPACE THERMOSTAT, RTU-2 SHALL INDEX TO COOLING MODE, OUTSIDE AIR DAMPER SHALL MODULATE TO FULLY CLOSED, SUPPLY FAN SHALL ENERGIZE, 3-WAY CHILLED WATER VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.

HEATING - ON A CALL FOR HEATING FROM SPACE THERMOSTAT, RTU-2 SHALL INDEX TO HEATING MODE, OUTSIDE AIR DAMPER SHALL MODULATE TO MINIMUM OA POSITION, SUPPLY FAN SHALL ENERGIZE, 3-WAY HEATING WATER VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.

RTU-2 (CHILLED HOT WATER HEATING/COOLING)

CONTROL: LOCALIZED CONTROL WITH WALL MOUNTED THERMOSTAT. RTU-2 FURNISHED WITH FACTORY INSTALLED NETWORK CARD FOR FUTURE CONNECTION TO BUILDING WIDE BMS SYSTEM UNDER SEPARATE CONTRACT.

INTERLOCK OPERATION: NONE

TIME/TEMPERATURE: COORDINATE START/STOP TIMES AND SPACE TEMPERATURE SET POINTS FOR OCCUPIED/UNOCCUPIED MODES WITH SCHOOL DISTRICT ENGINEERING.

OCCUPIED MODE: COOLING - ON A CALL FOR COOLING FROM SPACE THERMOSTAT, RTU-2 SHALL INDEX TO COOLING MODE, OUTSIDE AIR DAMPER SHALL MODULATE TO MINIMUM OA POSITION, SUPPLY FAN SHALL ENERGIZE, 3-WAY CHILLED WATER VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.

HEATING - ON A CALL FOR HEATING FROM SPACE THERMOSTAT, RTU-2 SHALL INDEX TO HEATING MODE, OUTSIDE AIR DAMPER SHALL MODULATE TO MINIMUM OA POSITION, SUPPLY FAN SHALL ENERGIZE, 3-WAY HEATING WATER VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.

UN-OCCUPIED MODE: COOLING - ON A CALL FOR COOLING FROM SPACE THERMOSTAT, RTU-2 SHALL INDEX TO COOLING MODE, OUTSIDE AIR DAMPER SHALL MODULATE TO FULLY CLOSED, SUPPLY FAN SHALL ENERGIZE, 3-WAY CHILLED WATER VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.

HEATING - ON A CALL FOR HEATING FROM SPACE THERMOSTAT, RTU-2 SHALL INDEX TO HEATING MODE, OUTSIDE AIR DAMPER SHALL MODULATE TO MINIMUM OA POSITION, SUPPLY FAN SHALL ENERGIZE, 3-WAY HEATING WATER VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.

AIR DEVICE SCHEDULE						
REF. NO.	TYPE	BLOW PATTERN	NECK SIZE	CFM	MODEL	MANUFACTURER NOTES
A	SUPPLY DIFFUSER	4 WAY	SEE PLANS	SEE PLANS	TMS-AA	TITUS (1)(2)
B	RETURN/EXHAUST GRILLE	SEE PLANS	SEE PLANS	50F	TITUS	(1)(2)

GENERAL NOTES:

- PROVIDE 24"x24" LAY-IN PANEL FOR LAY-IN CEILING GRIDS.
- COLOR TO BE SELECTED BY THE PROFESSIONAL.

VENTILATION RATES						
RM NO.	ROOM NAME	SG. FT.	NO. OF PEOPLE	CFM REQUIRED	CFM FURNISHED	
					O/A	EXHAUST
305	STEM CLASSROOM	750	26	438	-	730
305A	LAB/ROBOTICS AREA	1,665	26	700	1,665	2,150

ROOF TOP UNIT SCHEDULE (CHILLED WATER & HOT WATER COIL)																																	
TAG	AREA SERVED	FAN SECTION						HEATING COIL						COOLING COIL						OUTSIDE AIR		MODEL	MANUFACTURER	NOTES									
		CFM	RPM	STATIC PRESS. IN. WG.		MAX BHP	MOTOR			AIR TEMP (°F)	MBH	FACE VEL. (FPM)	WATER TEMP (°F)		GPM	PRESS. DROP IN. WG.	MIN. CFM	MAX. CFM															
				TOT.	EXT.		HP	VOLTS	PHASE				Hz	ENT.					LVG.	ENT.	LVG.												
RTU-2	305	730	1,665	2.66	0.28	1	2	460	3	60	34.5	87.4	44.83	467.9	180	148	2.9	2	86	70.8	53.14	52.87	39.33	318.5	45	55	7.8	11.7	438	438	39S 02	CARRIER	(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)

GENERAL NOTES:

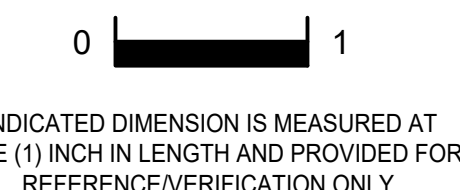
- PROVIDE CONDENSATE DRAIN PIPING AND P-TRAP PER CONDENSATE TRAP DETAIL.
- COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- PROVIDE MANUFACTURER'S ELECTRICAL SINGLE POINT CONNECTION AND INTEGRAL STARTER AND PRE-WIRED DISCONNECT SWITCH.
- PROVIDE VIBRATION ISOLATION RAILS WITH SIGNED AND SEALED VIBRATION CALCULATIONS PER THE SPECIFICATIONS.
- PROVIDE WITH INSULATED ROOF CURB.
- PROVIDE PREMIUM EFFICIENCY MOTORS WITH VFD FOR BALANCING.
- PROVIDE LOSS OF PHASE PROTECTION PER THE SPECIFICATIONS.
- INSTALL UNIT OUTSIDE AIR INTAKE 10 FEET AWAY FROM ALL EXISTING PLUMBING VENTS. COORDINATE FINAL LOCATION OF OUTSIDE AIR INTAKE WITH EXISTING STRUCTURE AND ARCHITECTURAL DRAWINGS.
- PROVIDE BAROMETRIC RELIEF.
- INSTALL MANUFACTURER PROVIDED 3-WAY VALVE. PROVIDE MINIMUM GPM THROUGH 3-WAY VALVE TO PREVENT HEATING COIL FROM FREEZING.

ROOFTOP UNIT SCHEDULE (100% OA DX AND HOT WATER)																																							
TAG	AREA SERVED	FAN SECTION						HEAT RECOVERY SECTION						HEATING COIL						COOLING COIL						OUTSIDE AIR		MODEL	MANUFACTURER	NOTES									
		CFM	RPM	STATIC PRESS. IN. WG.		HP	VOLTS	PHASE	Hz	EXHAUST AIR CFM	EXHAUST AIR FAN HP	WINTER AIR TEMP (°F)		HEATING SENSIBLE MBH		SUMMER AIR TEMP (°F)				COOLING TOTAL MBH	HEAT WHEEL HP	AIR TEMP (°F)		MBH	WATER TEMP (°F)		GPM				PRESS. DROP IN. WG.	MIN. CFM	MAX. CFM						
				TOT.	EXT.							ENT.	LVG.	D.B.	W.B.	D.B.	W.B.	ENT.	LVG.			ENT.	LVG.		ENT.	LVG.													
RTU-1	305A	2,150	2026	3.9	1.0	3	460	3	60	2,150	1	10	41.8	76	95	75	83.8	68.4	53.24	0.05	45	37.5	115.5	190	140.3	12	-	82.8	67.8	52.3	53.4	91	252.7	R-410A	2,150	2,150	RN 008	AAON	(1)(2)(3)(4)(5)(6)(7)(8)

GENERAL NOTES:

- PROVIDE CONDENSATE DRAIN PIPING AND P-TRAP PER CONDENSATE TRAP DETAIL.
- COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- PROVIDE MANUFACTURER'S ELECTRICAL SINGLE POINT CONNECTION AND INTEGRAL STARTER AND PRE-WIRED DISCONNECT SWITCH.
- PROVIDE VIBRATION ISOLATION RAILS WITH SIGNED AND SEALED VIBRATION CALCULATIONS PER THE SPECIFICATIONS.
- PROVIDE WITH INSULATED ROOF CURB.
- PROVIDE PREMIUM EFFICIENCY MOTORS WITH VFD FOR BALANCING.
- PROVIDE LOSS OF PHASE PROTECTION PER THE SPECIFICATIONS.
- INSTALL UNIT OUTSIDE AIR INTAKE 10 FEET AWAY FROM ALL EXISTING PLUMBING VENTS. COORDINATE FINAL LOCATION OF OUTSIDE AIR INTAKE WITH EXISTING STRUCTURE AND ARCHITECTURAL DRAWINGS.
- INSTALL MANUFACTURER PROVIDED 3-WAY VALVE. PROVIDE MINIMUM GPM THROUGH 3-WAY VALVE TO PREVENT HEATING COIL FROM FREEZING.

REFERENCE DIMENSION



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MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS
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Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

Project Location
595 Jefferson Rd,
Mullica Hill, NJ
08062

Project Number
5162C

Project Date
10/11/2023

Checked By
DLG

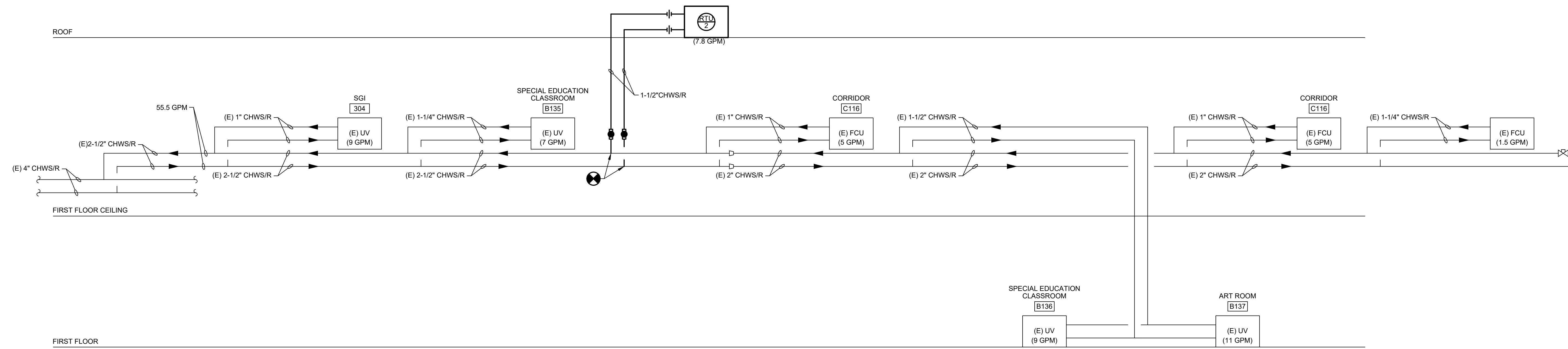
Drawn By
RAMS

Scale
AS NOTED

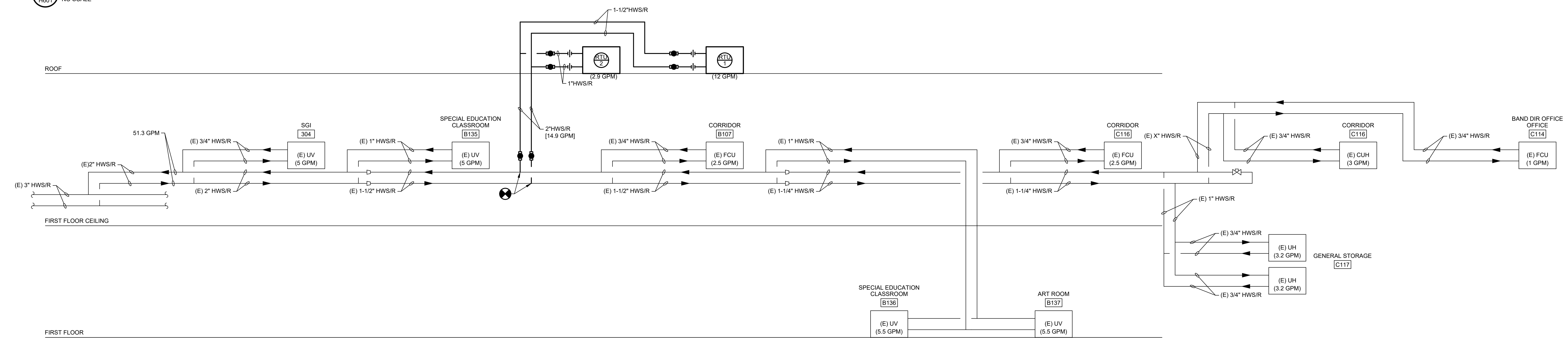
Drawing Name
HVAC DETAILS & SCHEDULES

Revisions
No. | Date | Description

Drawing Number
H501



1 HVAC - CHILLED WATER DIAGRAM
H601 NO SCALE



2 HVAC - HEATING WATER DIAGRAM
H601 NO SCALE

REFERENCE DIMENSION



INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

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STEM Lab Alterations & Renovations at Clearview Regional Middle School

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Scale
AS NOTED

Drawing Name
HVAC CHILLED WATER / HOT WATER DIAGRAMS

Revisions	No.	Date	Description

Drawing Number
H601

SYMBOL LEGEND:

- SYMBOL INDICATED WITH THIN-LINED DASHED LINES INDICATES DEVICE THAT IS SAME AS THAT DESCRIBED WITH SOLID LINES, BUT IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
- LED TYPE 1'x4' LIGHT FIXTURE; LETTER INDICATES TYPE AS DESCRIBED IN THE LIGHT FIXTURE SCHEDULE; LOWER CASE LETTER INDICATES SWITCHING GROUP
- LED TYPE 2'x4' LIGHT FIXTURE; LETTER INDICATES TYPE AS DESCRIBED IN THE LIGHT FIXTURE SCHEDULE; LOWER CASE LETTER INDICATES SWITCHING GROUP
- HALF SHADING SHOWN ON LIGHT FIXTURE SYMBOL INDICATES FIXTURE ON EMERGENCY LIGHTING CIRCUIT
- EXIT LIGHT WALL MOUNTED. PROVIDE NUMBER OF FACES AND DIRECTION CHEVRONS SHOWN ON ELECTRICAL AND ARCHITECTURAL DRAWINGS AND AS REQUIRED FOR PATH OF EGRESS. CONNECT TO THE UNSWITCHED, CONTINUOUSLY POWERED PORTION OF THE INDICATED EMERGENCY POWER CIRCUIT. WG = PROVIDE WIRE GUARD WHERE INDICATED.
- WALL MOUNTED EXTERIOR EGRESS LIGHT FIXTURE. LETTER INDICATES TYPE AS DESCRIBED IN THE LIGHT FIXTURE SCHEDULE.
- DUAL TECHNOLOGY (ULTRASONIC + PASSIVE INFRARED) LIGHTING CONTROL OCCUPANCY SENSOR; CEILING FLUSH MOUNTED; MINIMUM 1000 SQUARE FOOT COVERAGE. INCLUDE PROVISIONS AND SET ALL SENSORS FOR 30 MINUTE TIME DELAY OFF. PROVIDE AUXILIARY RELAYS FOR LIGHTING AND HVAC CONTROL AS DESCRIBED ON SPECIFICATION 260923.
- CONTROL WIRING FOR OCCUPANCY SENSOR.
- SAW-CUT PATH FOR TEACHER DESK AND STEM LAB STUDENT DESK RECEPTACLES. PATCH TO MATCH SURROUNDING AREA. SOLID CIRCLE INDICATES RACEWAY VERTICAL DROP LOCATION FROM ABOVE CEILING.
- HOME RUN - 2#12+1#12G IN 3/4" UNLESS NOTED OTHERWISE.
- BRANCH CIRCUIT RUN CONCEALED IN CEILINGS AND WALLS - 2#12+1#12G IN 3/4" UNLESS NOTED OTHERWISE.
- FINAL CONNECTION TO EQUIPMENT - 2#12+2#12G. IN 3/4" UNLESS NOTED OTHERWISE.
- SEE CONTINUATION OF BRANCH CIRCUIT CEILING AND WALLS - 2#12+1#12G IN 3/4" UNLESS NOTED OTHERWISE.
- BRANCH CIRCUIT WIRING FOR EMERGENCY LIGHTING.
- FUSED DISCONNECT SWITCH AS PER SPECIFICATION REQUIREMENTS, 3 POLE, 30 AMP UNLESS NOTED OTHERWISE. WP = EXTERIOR WEATHERPROOF
- SINGLE POLE, THREE WAY SWITCH, AND FOUR WAY SWITCH. LOWER CASE LETTER INDICATES SEPARATE SWITCHING CIRCUIT; LETTER "K" INDICATES KEY OPERATED SWITCH
- CIRCUIT BREAKER
- EXTERIOR NEMA 3R RATED JUNCTION BOX
- JUNCTION BOX
- ELECTRICAL REMOVAL/DEMOLITION NOTES ON REMOVAL/DEMOLITION DRAWINGS
- SEE SHEET NOTE #
- MECHANICAL EQUIPMENT TAG, REFER TO MECHANICAL DRAWINGS
- DUPLEX CONVENIENCE RECEPTACLE, MOUNTED 18" AFF UNLESS NOTED OTHERWISE. "T" INDICATES CEILING TRACK MOUNTED.
- TAMPERPROOF GFI TYPE DUPLEX CONVENIENCE RECEPTACLE CONTROLLED BY OCCUPANCY SENSOR, INSTALLED IN THE ASSOCIATED WIREMOLD UNLESS NOTED OTHERWISE.
- EXTERIOR WEATHERPROOF GFI TYPE DUPLEX CONVENIENCE RECEPTACLE WITH COVER TO MAINTAIN WEATHERPROOF CONNECTION FOR ATTACHMENT PLUG IN ACCORDANCE WITH NEC 406.9(B)
- TAMPERPROOF QUADPLEX CONVENIENCE GFI RECEPTACLE CONTROLLED BY OCCUPANCY SENSOR INSTALLED IN THE ASSOCIATED WIREMOLD UNLESS NOTED OTHERWISE.
- SPECIAL RECEPTACLE, TYPE AS NOTED. COORDINATE FINAL CONFIGURATION WITH FURNISHED EQUIPMENT.
- TWO CHANNEL (POWER AND DATA), SURFACE WALL MOUNTED, METAL WIREMOLD 4000 SERIES RACEWAY. SOLID CIRCLE INDICATES RACEWAY VERTICAL DROP LOCATION FROM ABOVE CEILING. PROVIDE CONTINUOUS VERTICAL AND HORIZONTAL WIREMOLD INSTALLATION WHERE SHOWN. COORDINATE WITH THE ARCHITECT FOR THE FINAL COLOR OF THE WIREMOLD. PROVIDE ALL REQUIRED WIREMOLD PARTS AND ACCESSORIES FOR A COMPLETE WIREMOLD INSTALLATION FOR THE POWER AND DATA OUTLETS THAT ARE INDICATED.
- NEW PLUGSTRIP SURFACE WALL MOUNTED, TAMPER-RESISTANT WH20GB060TR (FOR 6' SEGMENTS) AND WH20GB06TR (FOR 3' SEGMENTS), OR APPROVED EQUIVALENTS. SOLID CIRCLE INDICATES RACEWAY VERTICAL DROP LOCATION FROM ABOVE CEILING. PROVIDE CONTINUOUS VERTICAL AND HORIZONTAL WIREMOLD INSTALLATION WHERE SHOWN. COORDINATE WITH THE ARCHITECT FOR THE FINAL COLOR OF THE WIREMOLD. PROVIDE ALL REQUIRED WIREMOLD PARTS AND ACCESSORIES FOR A COMPLETE WIREMOLD INSTALLATION FOR THE POWER AND DATA OUTLETS THAT ARE INDICATED.
- EXISTING PANELBOARD OR SWITCHBOARD TO REMAIN IN PLACE
- NEW ELECTRICAL DISTRIBUTION POWER PANEL.
- FIRE ALARM SYSTEM HEAT DETECTOR. NEW DEVICES ARE TO BE ADDRESSABLE AND FLUSH MOUNTED ON THE CEILING. PROVIDE A COVERPLATE PAINTED TO MATCH THE CEILING FOR ANY DETECTOR NOT REPLACED AT THE SAME LOCATION. THE LETTER "A" INDICATES AN EXISTING ASSOCIATED HEAT DETECTOR LOCATED ABOVE THE CEILING TO BE REMOVED. WG = PROVIDE WIRE GUARD WHERE INDICATED.
- FIRE ALARM HORN W/ADA STROBE LIGHT. MOUNT NEW WALL MOUNTED, METAL WIREMOLD 4000 SERIES, WHICHERVER IS LOWER. ADJUST HORNS IN CLASSROOMS DEVICES, AND OTHER SMALL AREAS OTHER THAN CORRIDORS TO NOT EXCEED 110dB AS PER NFPA 72. "C" INDICATES CEILING MOUNTED. SET STROBE AT 15cd UNLESS NOTED OTHERWISE.
- FIRE ALARM SYSTEM DUCT MOUNTED SMOKE DETECTOR WITH REMOTE ALARM INDICATING AND TEST STATION. INSTALL NEW REMOTE TEST AND ALARM INDICATING STATIONS FLUSH MOUNTED IN THE NEAREST CORRIDOR DROPPED CEILING BELOW THE UNIT (OR WALL SURFACE MOUNTED WITH ALL REQUIRED FITTED SURFACE BACKBOX AND WIREMOLD RACEWAY PAINTED TO MATCH THE WALL UNLESS NOTED OTHERWISE). LABEL THE INDICATOR TO IDENTIFY THE ASSOCIATED HVAC UNIT.
- EXISTING MAIN FIRE ALARM CONTROL PANEL TO REMAIN IN PLACE.
- MANUAL FIRE ALARM PULL STATION. PROVIDE NEW ADDRESSABLE PULL STATIONS AS SHOWN ON NEW WORK DRAWINGS. PROVIDE ALL NEW ADDRESSABLE PULL STATIONS WITH ALARMED LIFT COVER (PROVIDE ALARM LIFT COVER EXTENSION RINGS AS REQUIRED). SURFACE MOUNT 48" AFF. CONCEAL WIRING IN SURFACE MOUNTED WIREMOLD RACEWAY PAINTED TO MATCH THE WALL. WG = PROVIDE WIRE GUARD WHERE INDICATED.
- EMERGENCY POWER OFF PUSH BUTTON STATION MOUNTED 48" AFF. COORDINATE THE EXACT LOCATION WITH THE ARCHITECT PRIOR TO ROUGH-IN. SEE DETAIL 4E701 FOR REQUIREMENTS.
- CLOCK (POWERED AND CONTROLLED FROM THE BUILDING WIDE CLOCK SYSTEM) AND PUBLIC ADDRESS SYSTEM (POWERED AND CONTROLLED FROM THE BUILDING WIDE CLOCK SYSTEM) SPEAKER WITH LISTED COMPATIBLE BACKBOX. SEE DRAWING NOTES FOR REQUIREMENTS ASSOCIATED WITH THESE DEVICES
- DATA OUTLETS INSTALLED IN WIREMOLD RACEWAY. PROVIDE RJ45 DATA JACK, COVER PLATE, CAT6 DATA CABLE TERMINATED TO THE JACK AND EXTENDED TO DATA RACK "C" ROOM "B138". PROVIDE IDENTIFICATION LABELING ON THE COVERPLATE AS REQUIRED IN THE SPECIFICATION (COORDINATE IDENTIFICATION REQUIREMENTS WITH THE OWNER).
- EXHAUST FAN PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR
- SURFACE MOUNTED WIRELESS CLOCK.
- WALL MOUNTED PUBLIC ADDRESS LOUDSPEAKER.
- CEILING MOUNTED DIGITAL LIGHT CONTROLLER, BASIS OF DESIGN: WATTSTOPPER DLM SYSTEM.
- CEILING MOUNTED DIGITAL PLUG CONTROLLER, BASIS OF DESIGN: WATTSTOPPER DLM SYSTEM.
- FIRE ALARM COMBINATION VOICE AUDIO AND ADA COMPLIANT VISUAL STROBE ALARM INDICATION DEVICE FLUSH MOUNTED IN A DROPPED CEILING WITH MINIMUM 15cd INTENSITY UNLESS NOTED OTHERWISE. COORDINATE ACTUAL CANDELA LEVEL WITH THE FIRE ALARM SHOP DRAWING REQUIREMENTS. "H" WHERE SHOWN INDICATES DEVICE SURFACE MOUNTED ON A HARD OR STRUCTURAL CEILING AND PROVIDED WITH A FITTED BACK BOX (FITTED TO MATCH THE DEVICE) AND SURFACE MOUNTED WIREMOLD RACEWAY FROM THE DEVICE UP TO THE CEILING WHERE THE WIRING EXTENDS CONCEALED. COORDINATE CEILING MOUNTING REQUIREMENTS (DROP CEILING OR HARD CEILING) AND INCLUDE PROVISIONS FOR DROP CEILING OR HARD CEILING AS REQUIRED. PAINT THE SURFACE MOUNTED RACEWAY TO MATCH THE EXISTING WALL FINISH.
- CARBON MONOXIDE DETECTOR WIRED TO THE NEW FIRE ALARM SYSTEM TO PROVIDE A TROUBLE SIGNAL UPON ACTIVATION. COORDINATE CEILING MOUNTING REQUIREMENTS (DROP CEILING OR HARD CEILING) AND INCLUDE PROVISIONS FOR DROP CEILING OR HARD CEILING AS REQUIRED.

GENERAL FIRE ALARM WORK NOTES

1. FOR NEW DEVICES BELOW CEILINGS IN OCCUPIED SPACES THAT ARE REQUIRED TO BE INSTALLED ON EXISTING WALLS, PROVIDE WIRING IN SURFACE MOUNTED WIREMOLD RACEWAYS PAINTED TO MATCH THE WALL, AND PROVIDE FITTED BACKBOXES (FITTED = COLOR AND SIZE MATCHED TO THE DIMENSIONS OF THE FIRE ALARM DEVICE, LISTED BY THE FIRE ALARM EQUIPMENT MANUFACTURER TO BE USED WITH THE DEVICE). EXPOSED CONDUIT AND NON-FITTED BACKBOXES ARE NOT ACCEPTABLE. CONCEAL ALL REMAINING WIRING ABOVE ACCESSIBLE CEILINGS. SEE GENERAL FIRE ALARM NOTE 3 FOR EXCEPTIONS.
2. IDENTIFICATION LABELS TO BE USED MADE FOR THE FIRE ALARM SYSTEM ADDRESSES MUST USE THE OWNER'S ROOM NUMBERS AND ROOM NAMES, NOT THE NUMBERS OR NAMES ON THE CONSTRUCTION DOCUMENTS. MEET WITH OWNER TO REVIEW AND CONFIRM ROOM NUMBERS AND NAMES PRIOR TO LABELING SYSTEMS.
3. THE EXISTING FIRE ALARM SYSTEM IS AN EDWARDS SYSTEM MAINTAINED BY WAYMAN FIRE PROTECTION, INC. (TELEPHONE 302-994-5757 or 1-800-999-1134). ALL NEW FIRE ALARM COMPONENTS PROVIDED AS A PART OF THIS PROJECT SHALL BE FULLY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.
4. COORDINATE WITH THE FIRE ALARM SYSTEM VENDOR AND PROVIDE ALL REQUIRED WIRING, EQUIPMENT, LABOR, PROGRAMMING, AND MATERIALS TO REMOVE EXISTING FIRE ALARM DEVICES INDICATED TO BE REMOVED AND PROVIDE NEW FIRE ALARM SYSTEM DEVICES AS INDICATED FOR A FULLY FUNCTIONAL SYSTEM.
5. PROVIDE TEMPORARY SUPPORT AND PROTECTION OF EXISTING CEILING MOUNTED FIRE ALARM SYSTEM SMOKE AND HEAT DETECTORS AND WIRING DURING CONSTRUCTION.
6. THIS PROJECT INCLUDES, BUT IS NOT LIMITED TO REQUIREMENTS FOR THE REMOVAL OF FIRE ALARM DEVICES AS SHOWN ON THE REMOVAL PLAN AND THE INSTALLATION OF NEW FIRE ALARM DEVICES AS SHOWN ON THE SYSTEMS PLAN, INCLUDING NEW PULL STATIONS, SMOKE DETECTORS, HEAT DETECTORS, AND DUCT MOUNTED SMOKE DETECTORS.
7. SEE SPECIFICATION 283111 FOR ADDITIONAL FIRE ALARM SYSTEM REQUIREMENTS.
8. PROVIDE SEPARATE SURFACE MOUNTED WIREMOLD RACEWAY (PAINTED TO MATCH THE WALL FINISH) FOR ALL FIRE ALARM DEVICES EXTENDING FROM THE DEVICES AND UP TO ABOVE THE CEILING.

AUTOMATIC LIGHTING CONTROL GENERAL NOTES:

COMPLY WITH THESE NOTES IN ROOMS WHERE AUTOMATIC DIGITAL LIGHTING CONTROL DEVICES ARE INDICATED TO BE PROVIDED.

1. COORDINATE WITH THE LIGHTING EQUIPMENT VENDOR AND PROVIDE THE REQUIRED TYPES AND AMOUNT OF CONTROL EQUIPMENT (INCLUDING NORMAL POWER RELAY PACKS, EMERGENCY POWER RELAY PACKS, MANUAL AND DIMMER SWITCHES, ROOM CONTROLLERS, PLUG LOAD CONTROLLERS, CORRIDOR ZONE CONTROLLERS, VACANCY SENSORS, AND OCCUPANCY SENSORS), LABOR, POWER WIRING, CONTROL WIRING, AND ALL REQUIRED ACCESSORIES AS REQUIRED BY THE MANUFACTURER FOR A FULLY FUNCTIONAL AND OPERATIONAL SYSTEM THAT SATISFIES ASHRAE 90.1-2013 AND "SEQUENCE OF OPERATION" REQUIREMENTS GIVEN BELOW.
2. COORDINATE CHARACTERISTICS OF THE LED LIGHT FIXTURE DIMMING DRIVER WITH THE REQUIREMENTS OF THE LIGHTING CONTROL RELAY PACKS. TO EITHER PROVIDE THE SAME TYPE OF DIMMING DRIVER IN ALL FIXTURES FED FROM A COMMON RELAY PACK OR PROVIDE ADDITIONAL SEPARATE RELAY PACKS FOR EACH TYPE OF DIMMING DRIVER IN THE ROOM.
3. PROVIDE (2)#12, 3/4" BRANCH CIRCUIT WIRING FROM THE LIGHTING BRANCH CIRCUIT POWER JUNCTION BOX SHOWN IN EACH ROOM TO EACH RELAY PACK AND TO EACH OF THE LIGHT FIXTURES FED FROM THAT RELAY PACK. EXTEND THE SEPARATE DIMMING CONTROL WIRING (WIRING AS RECOMMENDED BY THE MANUFACTURER) TO EACH LIGHT FIXTURE FED FROM THAT RELAY PACK IN A SEPARATE RACEWAY AS PER THE 2014 NEC.
4. PROVIDE THE LOW VOLTAGE CONTROL WIRING AS REQUIRED BY THE MANUFACTURER FROM THE MANUAL ON/OFF/DIMMING SWITCH TO EACH OF THE ON/OFF SWITCHES, RELAY PACKS, AND OCCUPANCY SENSORS IN EACH ROOM AS REQUIRED BY THE MANUFACTURER AND IN ACCORDANCE WITH THE NEC.
5. THE SEQUENCE OF OPERATION FOR THE LIGHT FIXTURES SHALL BE AS FOLLOWS:
 1. MANUAL ON TO 100% LIGHTING LEVEL
 2. MANUAL DIMMING BY OPERATOR AT A DIMMING SWITCH.
 3. LIGHT LEVEL AUTOMATICALLY SHUT OFF AFTER 20 MINUTES OF NO OCCUPANCY.
 4. IN THE EVENT OF LOSS OF NORMAL POWER, LIGHT FIXTURES IDENTIFIED AS EMERGENCY WILL TURN ON AT 100% LIGHTING LEVEL.
6. COMPLY WITH THE SHOP DRAWING, PRECONSTRUCTION CONFERENCE, AND TESTING REQUIREMENTS IN THE PROGRAMMED LIGHTING CONTROL DEVICES IN THE LIGHTING CONTROLS SPECIFICATIONS.

GENERAL NOTES APPLICABLE TO ALL DRAWINGS:

1. COORDINATE FINAL LOCATION AND MOUNTING HEIGHT OF ALL OUTLETS AND DEVICES WITH OWNER AND ARCHITECT WITH RESPECT TO MOUNTING HEIGHTS AND LOCATION OF EQUIPMENT, FURNITURE AND WALL FURNISHINGS. COORDINATE FINAL LOCATION SO AS NOT TO INTERFERE WITH EXHIBIT BOARDS, DRY MARKER BOARDS AND OTHER EXISTING OR NEW SURFACE MOUNTED ITEMS.
2. ALL 20A BRANCH CIRCUITS LONGER THAN 100 FEET SHALL BE MINIMUM WIRE SIZE 2#10AWG-1#12AWG UNLESS NOTED OTHERWISE.
3. THE BASIS OF DESIGN LISTED MANUFACTURER DOES NOT INDICATE A PROPRIETARY SYSTEM, BUT IS INTENDED TO PROVIDE A LEVEL OF ACCEPTABLE QUALITY. REFER TO THE PROJECT SPECIFICATION MANUAL AND ASSOCIATED SECTION FOR EQUIPMENT MANUFACTURERS LIST. EQUAL SUBSTITUTIONS WILL BE REVIEWED AND ACCEPTED IF THEY MEET THE SAME LEVEL OF QUALITY AND ARE SUBMITTED IN ACCORDANCE WITH SPECIFICATION PROCEDURES.
4. PROVIDE SURFACE MOUNTED RACEWAYS FOR ALL NEW OR RELOCATED WALL MOUNTED DEVICES SHOWN IN AREAS OF EXISTING CONSTRUCTION UNLESS NOTED OTHERWISE. COORDINATE THE COLOR OF ALL SURFACE MOUNTED RACEWAYS WITH THE ARCHITECT PRIOR TO ORDERING THIS EQUIPMENT.
5. COORDINATE FINAL LOCATION, OVERCURRENT PROTECTION REQUIREMENTS, AND CONNECTION REQUIREMENTS FOR MECHANICAL AND PLUMBING EQUIPMENT WITH THE ASSOCIATED TRADE DRAWINGS, TRADE SHOP DRAWINGS, AND RESPECTIVE TRADE CONTRACTORS. COORDINATE LOCATION AND INSTALLATION OF CONTROL DEVICES WITH THE TRADE CONTRACTORS.
6. OCCUPANCY SENSORS SHOWN ON LIGHTING PLANS ARE TO CONTROL ALL LIGHT FIXTURES IN THE SAME ROOM AS SENSOR UNLESS NOTED OTHERWISE. ROOMS WITH MULTIPLE SENSORS SHALL HAVE SENSORS NETWORKED TOGETHER TO FUNCTION AS A SINGLE UNIT. SENSORS SHALL BE INITIALLY PROGRAMMED TO TURN OFF LIGHTS 30 MINUTES AFTER THE LAST DETECTED MOTION. ANY MOVEMENT DETECTED BY SENSOR SHALL RESTART THE 30 MINUTE INTERVAL BEFORE LIGHTS ARE TURNED OFF. SENSOR CONTROL OF LIGHTS SHALL BE PROGRAMMED TO FUNCTION BEFORE THE LOCAL WALL SWITCH. PROVIDE SENSOR POWER MODULES, RELAYS, AND WIRING AS REQUIRED. VERIFY ACTUAL QUANTITIES OF ASSOCIATED ELECTRICAL EQUIPMENT TO BE DEMOLISHED, SUCH AS DISCONNECT SWITCHES AND MOTOR STARTERS, AND INCLUDE IN BID.
7. PERFORM ALL CUTTING AND PATCHING NECESSARY TO PERFORM WORK. MATCH EXISTING MATERIALS, FINISHES, FIRE RATINGS, PAINT COLORS, ETC. IN ALL AREAS OF PATCHING.
8. PROVIDE FIRE PROOFING AT WALL PENETRATIONS.
9. PROVIDE TEMPORARY SUPPORT AND PROTECTION OF EXISTING CEILING MOUNTED FIRE ALARM LIGHT FIXTURES, PA SYSTEM SPEAKERS, MOTION DETECTORS, AND ASSOCIATED WIRING WHEN THE CEILINGS ARE REMOVED IN ANY PHASE OF CONSTRUCTION PRIOR TO WORK IN THAT AREA.
10. ALL WORK AND INSTALLED EQUIPMENT MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE 2020 EDITION.
11. UTILIZE THE EQUIPMENT CURBS PROVIDED WITH THE HVAC EQUIPMENT (CURBS PROVIDED BY THE HVAC CONTRACTOR) FOR BRANCH CIRCUIT ACCESS TO ROOFTOP OUTLETS AND EQUIPMENT CONNECTION POINTS.
12. THE ELECTRICAL CONTRACTOR SHALL REMOVE, STORE AND RE-INSTALL EXISTING CEILING SYSTEMS AS NECESSARY TO PERFORM WORK. NOTIFY OWNER OF ANY EXISTING DAMAGE TO CEILING TILE AND SUPPORTS PRIOR TO REMOVAL. REPLACE ANY TILES AND SUPPORTS DAMAGED AS A RESULT OF WORK. AMOUNT OF CEILING TO BE REMOVED IS AT CONTRACTOR'S DISCRETION. REINSTALL ALL REMOVED CEILING AT COMPLETION OF WORK. MAKE EVERY EFFORT TO MINIMIZE OPEN CEILINGS.

GENERAL DEMOLITION NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL ITEMS ASSOCIATED WITH THE HVAC EQUIPMENT, LIGHTING FIXTURES, AND FIRE ALARM SYSTEM SHOWN ON THE DEMOLITION PLAN. DEMOLISHED ITEMS TO INCLUDE ALL SWITCHES, SAFETY SWITCHES, EMERGENCY LIGHTING POWER SUPPLIES AND BATTERIES, ELECTRICAL BOXES, RACEWAYS AND WIRING BACK TO THE POWER SOURCE. MAINTAIN POWER TO LOADS THAT ARE TO REMAIN BUT FED FROM CIRCUITS OF EQUIPMENT TO BE REMOVED; INTERCEPT AND EXTEND WIRING AS REQUIRED. CLEARLY MARK BREAKERS IN EXISTING PANEL AS "SPARE" FOR DEMOLISHED CIRCUITS AND UPDATE PANEL SCHEDULES.
2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK AND COSTS ASSOCIATED WITH DISCONNECTING, RELOCATION, AND DISPOSAL OF THE ELECTRICAL EQUIPMENT THAT IS REQUIRED TO BE DEMOLISHED.
3. THE OWNER RETAINS THE FIRST RIGHT TO KEEP ANY REMOVED EQUIPMENT. REVIEW THE DISPOSITION OF ALL EQUIPMENT WITH OWNER PRIOR TO REMOVAL. ALL EQUIPMENT AND OR MATERIAL BEING REMOVED IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RETAINED, DISPOSED OF, AND REMOVED FROM THE SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL GUIDELINES.
4. QUANTITY OF HVAC EQUIPMENT SHOWN ON THE DEMOLITION DRAWINGS IS INDICATIVE OF EXISTING QUANTITY AND LOCATION. REFER TO THE MECHANICAL DEMOLITION DRAWINGS FOR QUANTITIES AND LOCATIONS OF HVAC EQUIPMENT TO BE DEMOLISHED. VERIFY ACTUAL QUANTITIES OF ASSOCIATED ELECTRICAL EQUIPMENT TO BE DEMOLISHED, SUCH AS DISCONNECT SWITCHES AND MOTOR STARTERS, AND INCLUDE IN BID.
5. REMOVE ALL ABANDONED EXISTING ELECTRICAL LIGHT FIXTURES, RACEWAYS, WIRING, CABLE, DEVICES, AND EQUIPMENT WHERE CEILINGS, WALLS, OR STRUCTURE ARE REMOVED. RACEWAYS MAY BE ABANDONED WHERE THEY ARE CONCEALED BY NEW CONSTRUCTION. LABEL ALL ABANDONED RACEWAYS AT EACH JUNCTION BOX.
6. PERFORM ALL REQUIRED PATCHING AND PAINTING AFTER DEMOLITION AS REQUIRED TO RESTORE SURFACES TO MATCH SURROUNDING SURFACE FINISHES.
7. TAG ALL EQUIPMENT AND DEVICES BEING REMOVED AND REINSTALLED WITH THE ROOM NUMBER AND LOCATION FROM WHICH IT IS BEING REMOVED TO ENSURE THAT IT IS REINSTALLED IN THE SAME ROOM AND LOCATION.
8. THE OWNER WILL REMOVE AND REINSTALL ALL MOVABLE EQUIPMENT AND FLOOR MOUNTED SHELVING UNLESS NOTED OTHERWISE. REMOVE, STORE AND REINSTALL EXISTING BUILT-IN EQUIPMENT AS REQUIRED TO PERFORM THE WORK, UNLESS NOTED OTHERWISE.

LIGHTING FIXTURE SCHEDULE

SEE SPECIFICATION 265119 FOR LIGHT FIXTURE REQUIREMENTS

TYPE	MODEL	LAMPING	WATTAGE	LUMENS	CRI	COLOR TEMP	DESCRIPTION	VOLT	MOUNTING HEIGHT	NOTES
A1	PHILIPS DAY-BRITE 2FGG42B840-4-D-UNV-DM	LED	34	4214	80	4000K	RECESSED 2'x4' ARCHITECTURAL	120	CEILING	-
A2	PHILIPS DAY-BRITE 2FGG44B840-4-D-UNV-DM	LED	49	5594	80	4000K	RECESSED 2'x4' ARCHITECTURAL	120	CEILING	-

NUMBER PLAN OR DETAIL
SHEET NUMBER SCALE: 1/4" = 1'-0"

REFERENCE DIMENSION



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Date: 10/11/2023

Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

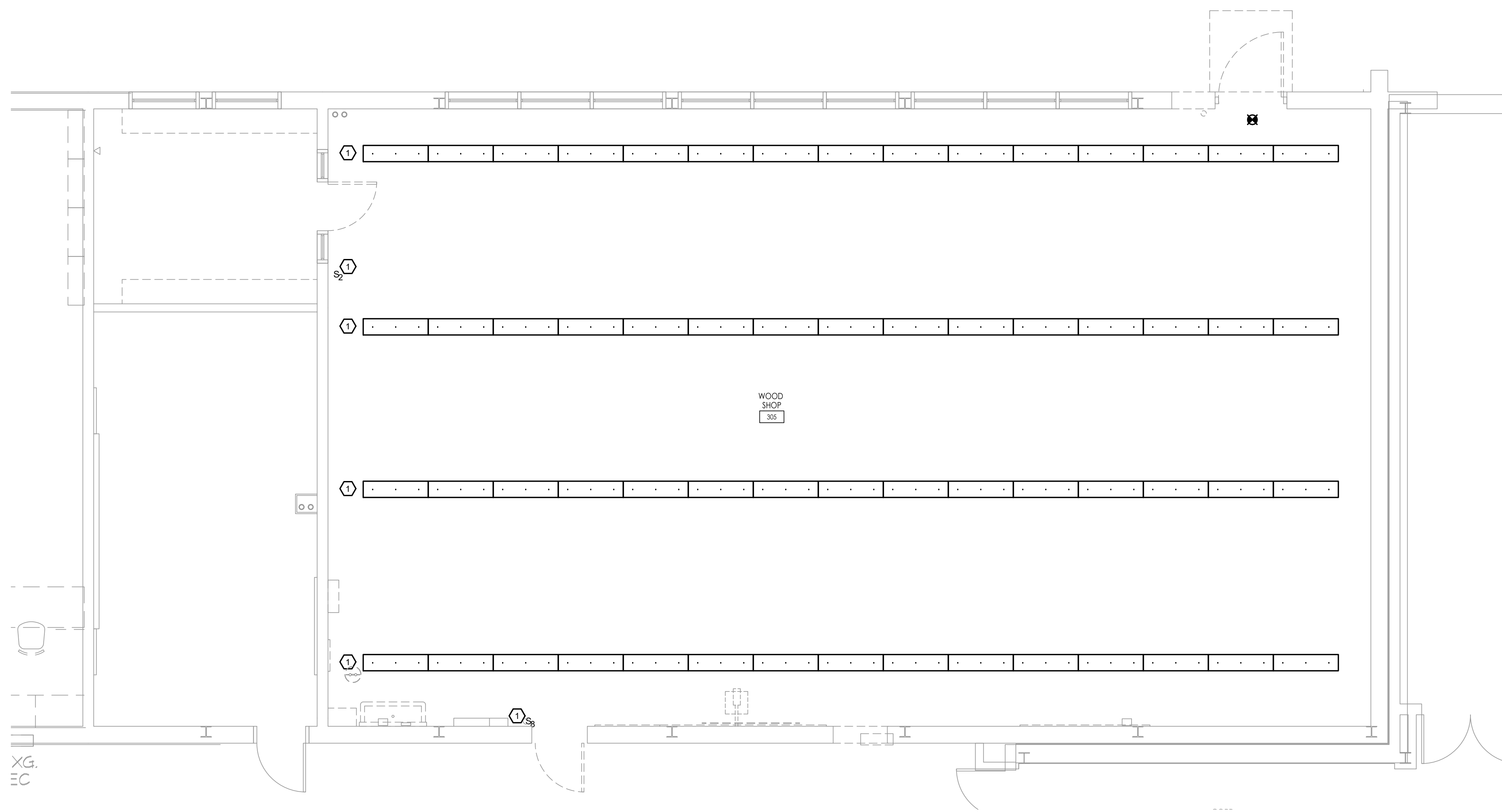
Project Location
595 Jefferson Rd, Mullica Hill, NJ 08062

Project Number
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Project Date
10/11/2023
Checked By
DRH
Drawn By
IJA
Scale
AS NOTED

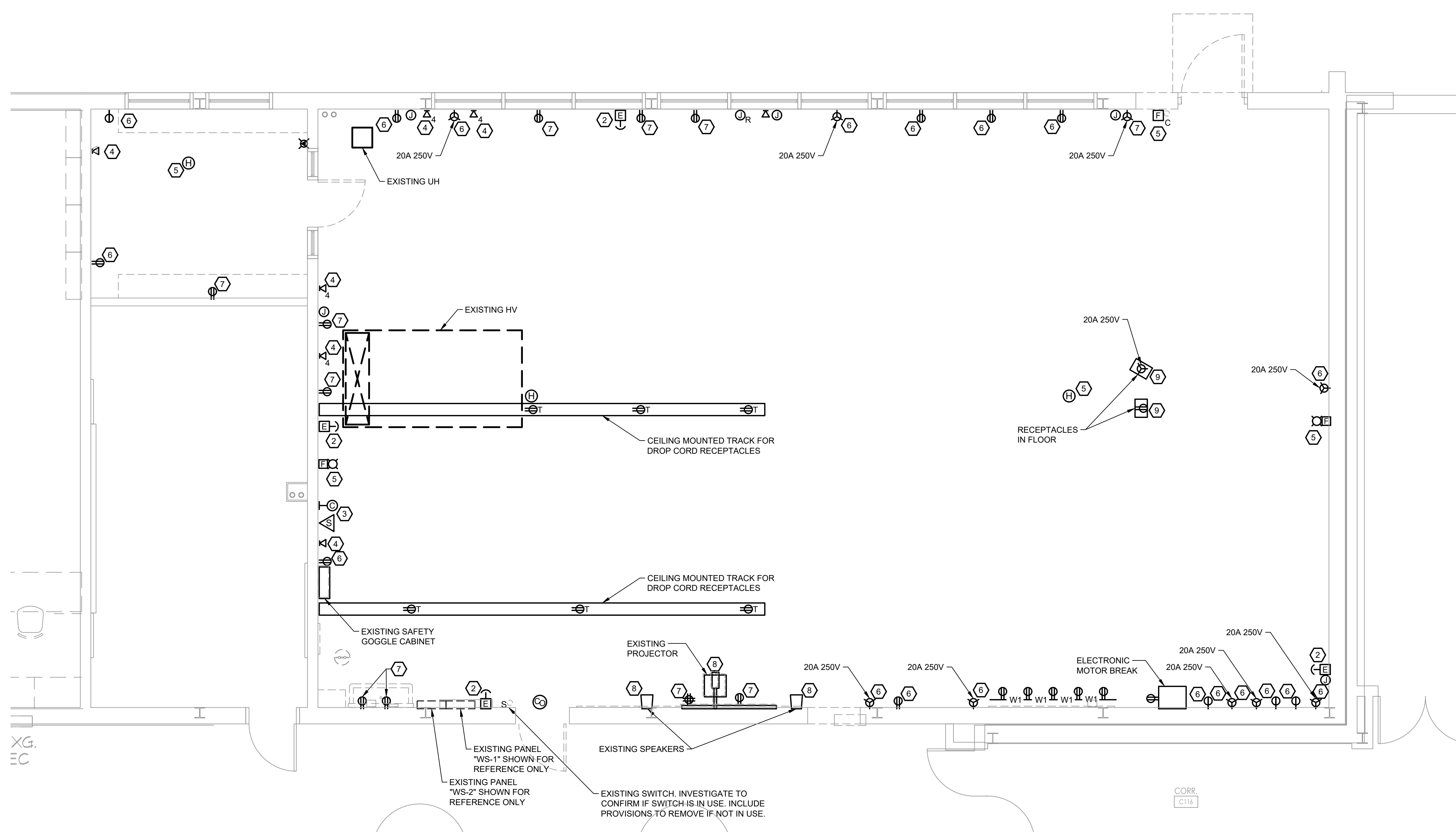
Drawing Name
ELECTRICAL SYMBOL LEGEND

Revisions	No.	Date	Description

Drawing Number
E001



1 STEM LAB - LIGHTING REMOVAL WORK
SCALE: 1/4" = 1'-0"

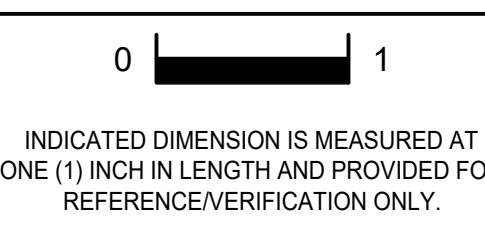


2 STEM LAB - POWER AND NETWORK REMOVAL WORK
SCALE: 1/4" = 1'-0"

REMOVAL NOTES:

- 1 DISCONNECT AND REMOVE ALL EXISTING LIGHTS AND ASSOCIATED LIGHT SWITCHES AS SHOWN INCLUDING EXIT SIGNS AND BATTERY POWERED LIGHTS AND ASSOCIATED BATTERIES AND BOXES. INSTALL COVER PLATES WHERE WALL SWITCHES WERE REMOVED AND NOT BEING REPLACED AND PAINT TO MATCH WALL FINISH. SEE GENERAL DEMOLITION NOTES ON DRAWING E001.
- 2 DISCONNECT AND REMOVE POWER AND CONTROL WIRING FROM EXISTING EPO BACK TO ITS SOURCE. COORDINATE ALL WORK WITH THE MC.
- 3 REMOVE, CLEAN AND STORE EXISTING CLOCK, SPEAKER, AND COVER FROM THE BACK BOX FOR REINSTALLATION AS SHOWN ON 2/E02. PROTECT THE WIRE CONNECTIONS IN THE BACK BOX FROM PAINT AND DIRT. BACK BOX IS TO REMAIN IN PLACE.
- 4 DISCONNECT AND REMOVE DATA JACK AND WIRING BACK TO THE SOURCE. TURN DATA JACK OVER TO OWNER.
- 5 PROTECT AND SUPPORT EXISTING FIRE ALARM DETECTORS AND NOTIFICATION DEVICES TO MAINTAIN FIRE ALARM SYSTEM SERVICE THROUGHOUT THE PROJECT UNTIL NEW DEVICES ARE IN SERVICE. COORDINATE ALL WORK WITH THE FIRE ALARM SYSTEM VENDOR. REFER TO GENERAL NOTES ON DRAWING E001 FOR ALL REMOVAL WORK.
- 6 DISCONNECT AND REMOVE WIRING FOR RECESSED RECEPTACLES AND REPLACE WITH BLANK FACEPLATE.
- 7 DISCONNECT AND REMOVE WIRING FOR SURFACE MOUNTED RECEPTACLES AND ASSOCIATED WIREMOLD.
- 8 DISCONNECT AND REMOVE PROJECTOR, SPEAKERS, AND ASSOCIATED WIRING BACK TO SOURCE.
- 9 DISCONNECT AND REMOVE FLOOR MOUNTED RECEPTACLES AND ASSOCIATED WIRING BACK TO SOURCE. REMOVE ASSOCIATED JUNCTION BOX AND SEAL FLUSH WITH FLOOR.

REFERENCE DIMENSION



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Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

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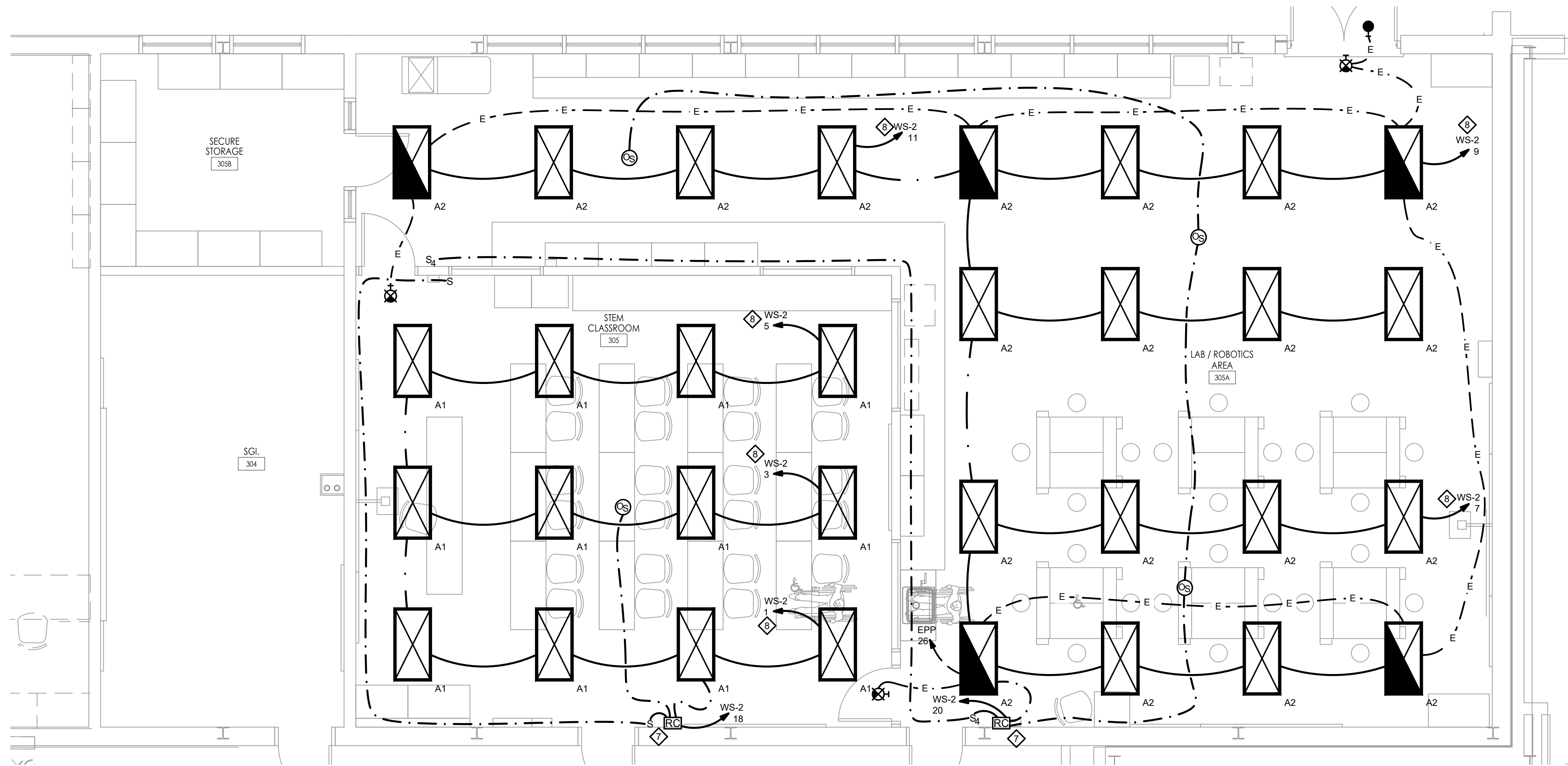
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Scale
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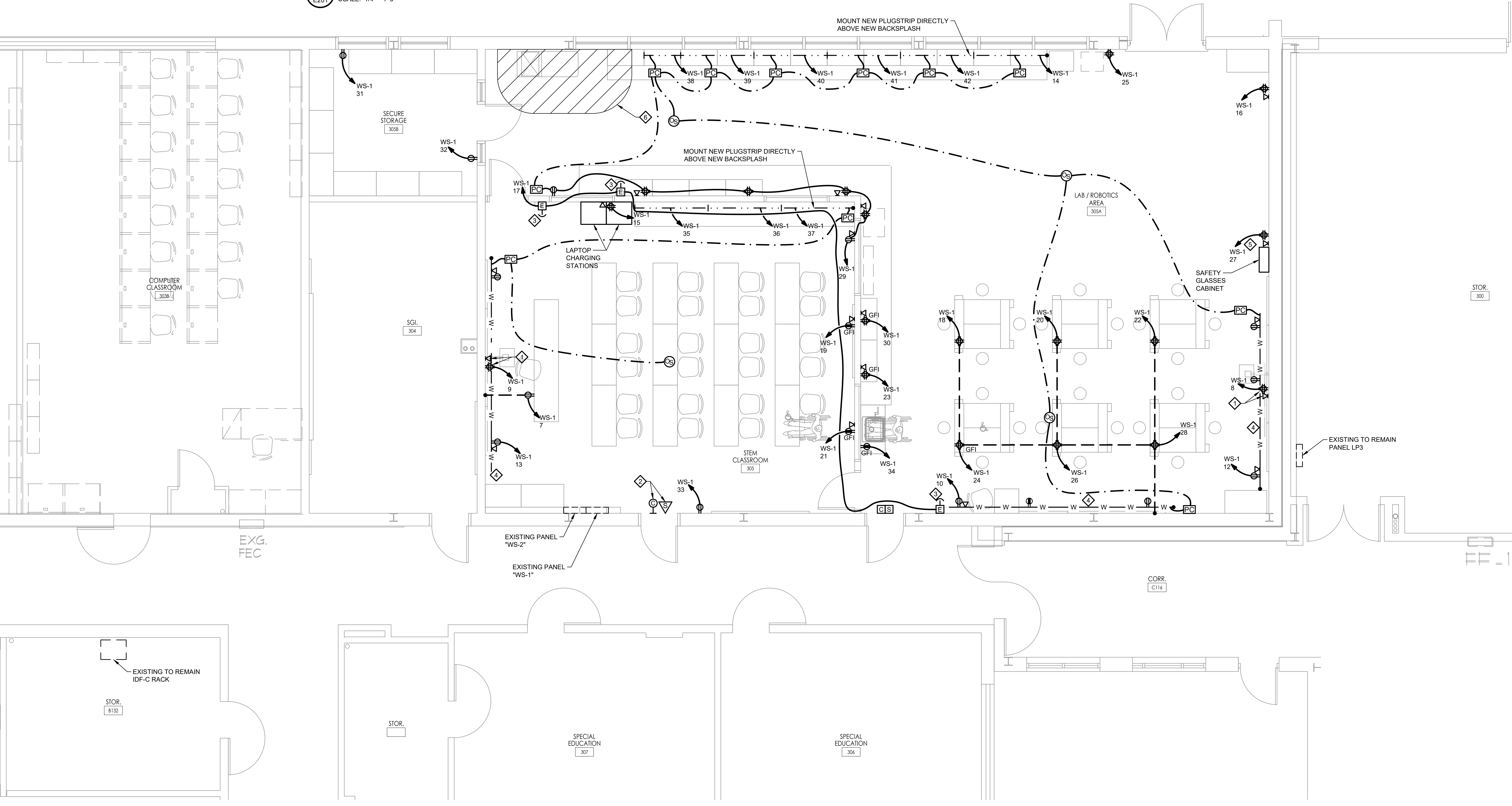
Drawing Name
LIGHTING AND POWER REMOVAL WORK

Revisions		
No.	Date	Description

Drawing Number
E101



1 STEM LAB - LIGHTING NEW WORK
E201 SCALE: 1/4" = 1'-0"



2 STEM LAB - POWER AND NETWORK NEW WORK
E201 SCALE: 1/4" = 1'-0"

NEW WORK NOTES:

- ◆ PROVIDE ONE WALL MOUNTED DUPLEX RECEPTACLE AND ONE WALL MOUNTED DATA OUTLET IN SEPARATE BACKBOXES ADJACENT TO THE PROJECTOR. COORDINATE EXACT LOCATION WITH THE OWNER.
- ◆ REINSTALL CLOCK, SPEAKER, AND COVER THAT WERE REMOVED IN DRAWING 1/E101.
- ◆ PROVIDE NEW EMERGENCY POWER OFF DEVICES AS SHOWN ON DRAWING. COORDINATE LOCATIONS OF EPO SWITCHES AND KEYED RESET SWITCHES WITH OWNER.
- ◆ PROVIDE NEW SURFACE MOUNTED TWO CHANNEL METAL, WIREMOLD RACEWAY VERTICALLY DOWN AND HORIZONTALLY ALONG THE WALL APPROXIMATELY 48" AFF (UNLESS NOTED OTHERWISE) AS SHOWN ON DRAWING. COORDINATE THE EXACT LOCATION OF THE WIREMOLD MOUNTED RECEPTACLES AND THE EXACT HEIGHT AND LENGTH OF THE WIREMOLD WITH THE OWNER AND GC PRIOR TO BEGINNING OF WORK.
- ◆ COORDINATE LOCATION OF THE RECEPTACLE WITH THE LENGTH OF CORD PROVIDED WITH THE WALL MOUNTED GOGGLE CABINET.
- ◆ DO NOT INSTALL ANY ELECTRICAL DEVICES OR CONNECTIONS OTHER THAN THOSE SPECIFICALLY SHOWN WITHIN THIS BOUNDED AREA OF THE SPRAY BOOTH.
- ◆ INSTALL NEW ROOM CONTROLLER ABOVE DROP CEILING.
- ◆ PROVIDE AUTOMATIC AND MANUAL LIGHTING CONTROL AS SHOWN ON DETAIL 1/E701.

REFERENCE DIMENSION



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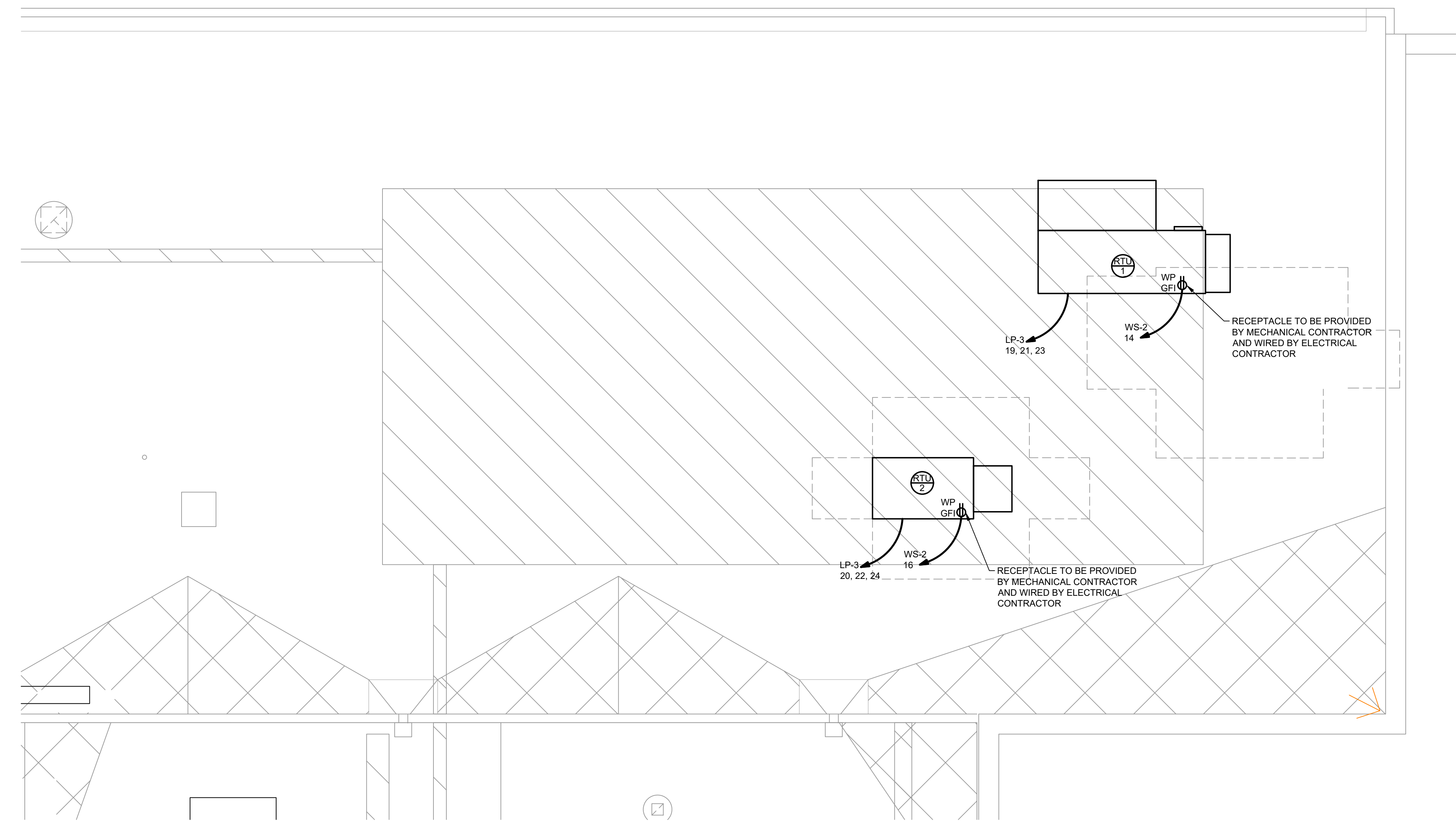
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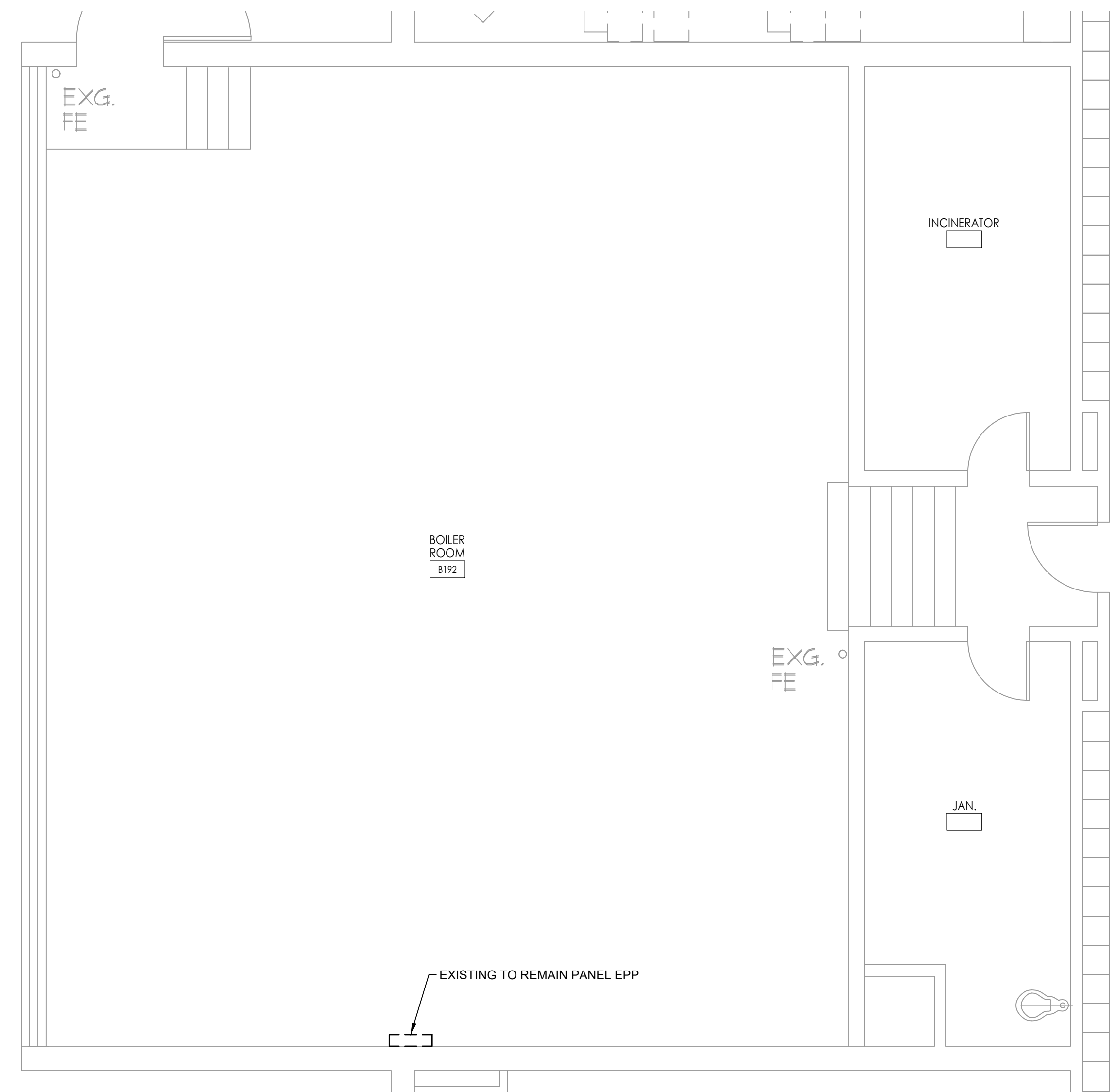
Drawing Name
LIGHTING AND POWER NEW WORK

Revisions	No.	Date	Description

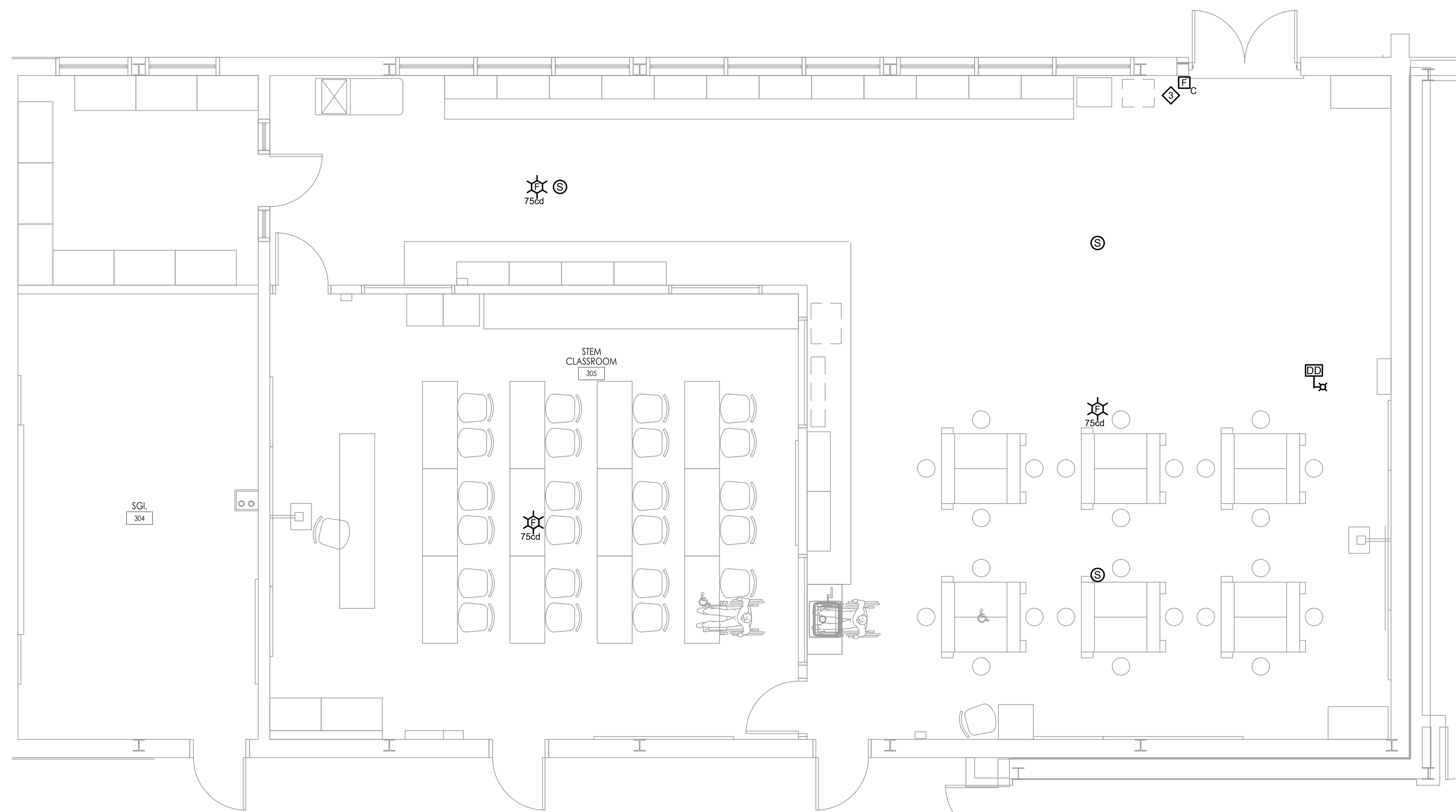
Drawing Number
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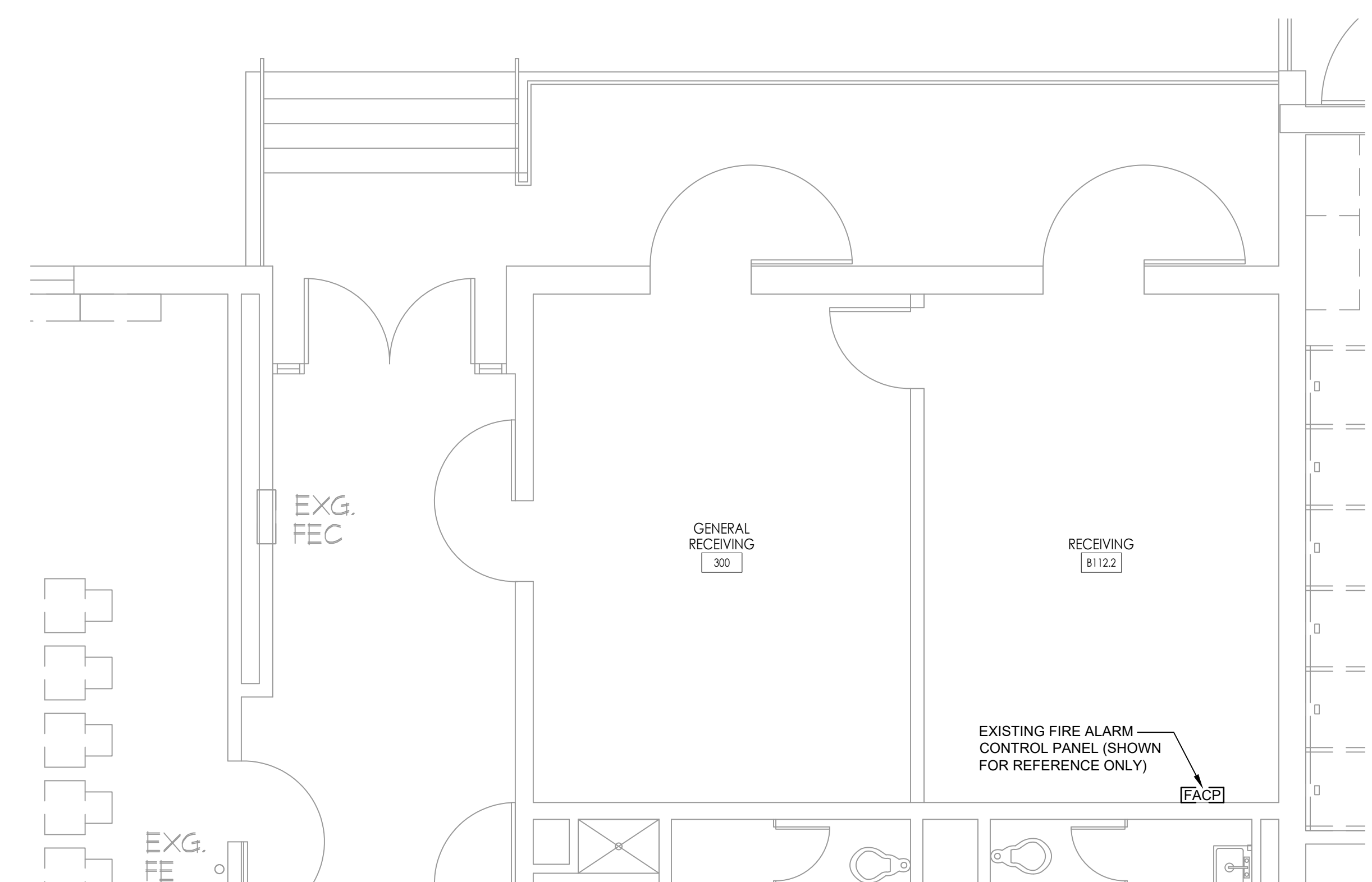
1 STEM LAB - ROOF PLAN NEW WORK
E202 SCALE: 1/4" = 1'-0"



3 STEM LAB - BOILER ROOM EMERGENCY PANLE "EPP"
E202 SCALE: 1/4" = 1'-0"

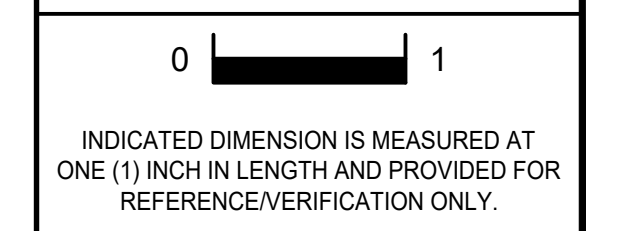


2 STEM LAB - FIRE ALARM NEW WORK
E202 SCALE: 1/4" = 1'-0"



4 STEM LAB - FIRE ALARM CONTROL PANEL
E202 SCALE: 1/4" = 1'-0"

REFERENCE DIMENSION



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ENGINEER MICHAEL S. GILLAN, PE DATE NO. 24E04470000

- NEW WORK NOTES:**
- ◆ INSTALL THE NEW WEATHERPROOF GFI RECEPTACLE ON TOP OF ROOF ADJACENT TO NEW UNITS RTU-1 AND RTU-2.
 - ◆ REINSTALL AND INTERCEPT EXISTING WIRING FOR SPECIFIED FIRE ALARM DEVICE AS REQUIRED.

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Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

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595 Jefferson Rd, Mullica Hill, NJ 08062

Project Number
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Project Date
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Checked By
DRH
Drawn By
IJA
Scale
AS NOTED

Drawing Name
STEM LAB ROOF POWER AND FIRE ALARM NEW WORK

Revisions	No.	Date	Description

Drawing Number
E202

SHEET NOTES:

- 2 #12, 1 #12G, 3/4" CONDUIT WIRING UNLESS OTHERWISE INDICATED. PROVIDE THE REQUIRED BOXES AND CONNECTORS FOR WIRING WHERE THE MANUFACTURER RECOMMENDS ONE WIRE PER RECEPTACLE TERMINAL.
- WIRING AS REQUIRED BY THE EQUIPMENT MANUFACTURER AND THE NATIONAL ELECTRICAL CODE. PROVIDE WIRING IN 3/4" CONDUIT WHERE CONCEALED IN WALLS.

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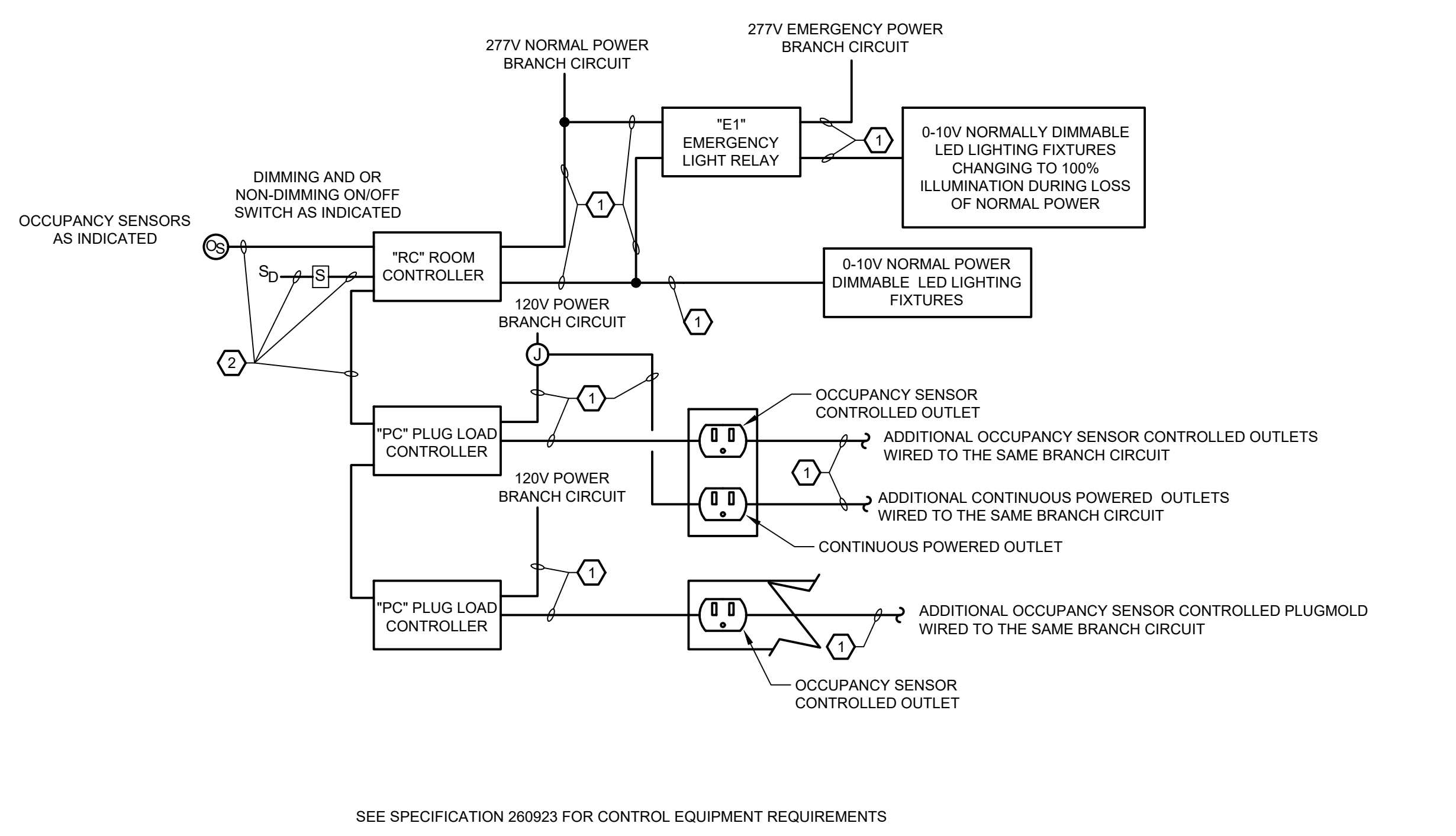
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 Project Date
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Drawing Name
ELECTRICAL DETAILS

Revisions

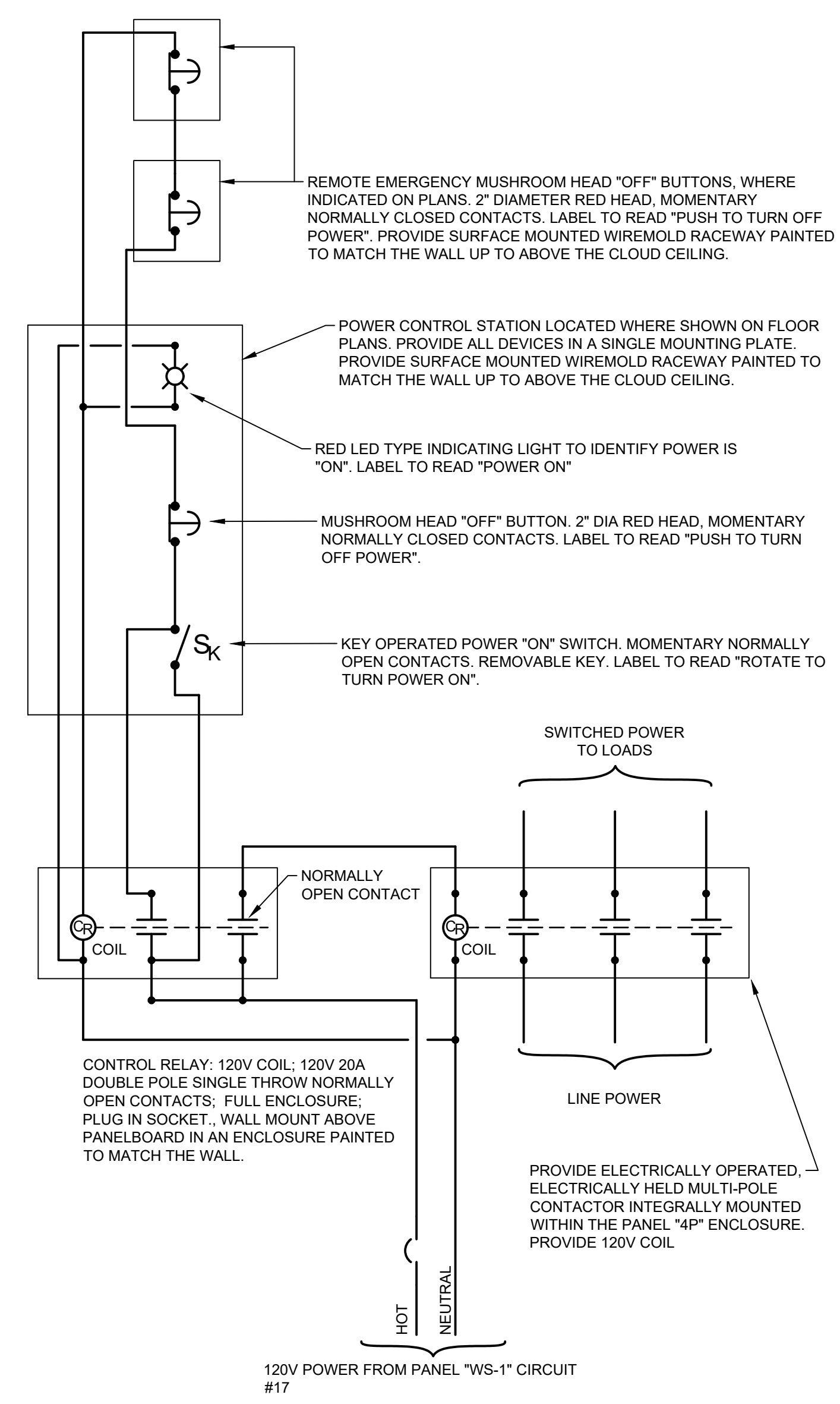
No.	Date	Description

Drawing Number
E701



SEE SPECIFICATION 260923 FOR CONTROL EQUIPMENT REQUIREMENTS

1
 E701 NO SCALE
DIGITAL LIGHTING CONTROL WITH OCCUPANCY SENSOR AND MANUAL DIMMING SWITCH WITH "RC" ROOM CONTROLLER AND EMERGENCY LIGHTING RELAY "PC" RECEPTACLE CONTROL DEVICE



2
 E701 NO SCALE
STEM LAB ROOM POWER CONTROL DIAGRAM

SCHEDULE FOR EXISTING ELECTRICAL PANEL										GENERAL PANEL DATA										AIC: 22K	
LP3										VOLT: 480/277V, 3PH, 4W										MOUNT: SURFACE	
LOAD SERVED	COND	GRD	WIRE SIZE	NO.	KVA	BKR SIZE	CKT No.	PHASE LOAD	NO.	A	B	C	BKR SIZE	CKT No.	MLO	GRD	WIRE SIZE	NO.	LOAD SERVED	NOTES	
LIGHTS STORAGE							20	1	0.0				2	20					LIGHTS ROOM 310	2	
LIGHTS HALL							20	3	0.0				4	20					LIGHTS ROOM 310	2	
LIGHTS ROOM 308							20	5	0.0				6	20					LIGHTS EXTERIOR	2	
LIGHTS ROOM 309: BOYS, GIRLS							20	7	0.0				8	20					SPARE		
SPARE							20	9	0.0				10	20					SPARE		
SPARE							20	11					12	20					SPARE		
SPARE							20	13	0.0				14	20					SPARE		
SPARE							20	15	0.0				16	20					SPARE		
SPARE							20	17					18	20					SPARE		
RTU - 1	3/4"	#10	#8	3	6.9		19	7.3					20	0.4	3/4"	#12	#12	3	RTU - 2	1	
SPARE					6.9		21						22	15	0.4						
SPARE							23			7.3			24	0.4							
SPARE							25	0.0					26								
SPARE							27	0.0					28								
SPARE							29	0.0					30								
SPARE							31	0.0					32								
SPARE							33	0.0					34								
SPARE							35	0.0					36								
SPARE							37	0.0					38								
SPARE							39	0.0					40	20							
SPARE							41	0.0					42								
LOCATION: STORAGE ROOM 300										PHASE KVA											
NOTES										7.3 7.3 22.0											
1. PROVIDE NEW 3 POLE CIRCUIT BREAKER OF SPECIFIED AMPACITY										TOTAL KVA											
2. EXISTING LOAD										22.0											
3.																					
4.																					

SCHEDULE FOR EXISTING ELECTRICAL PANEL										GENERAL PANEL DATA										AIC: 22K	
WS-2										VOLT: 120/208V, 3PH, 4W										MOUNT: SURFACE	
LOAD SERVED	COND	GRD	WIRE SIZE	NO.	KVA	BKR SIZE	CKT No.	PHASE LOAD	NO.	A	B	C	BKR SIZE	CKT No.	MLO	GRD	WIRE SIZE	NO.	LOAD SERVED	NOTES	
RM 305 LIGHTS	3/4"	#12	#12	2	1.0		20	1	1.0				2	20					SPARE		
RM 305 LIGHTS	3/4"	#12	#12	2	1.0		20	3	1.0				4	20					SPARE		
RM 305 LIGHTS	3/4"	#12	#12	2	1.0		20	5	1.0				6	20					SPARE		
RM 305A LIGHTS	3/4"	#12	#12	2	1.0		20	7	1.0				8	20					SPARE		
RM 305A LIGHTS	3/4"	#12	#12	2	1.0		20	9	1.0				10	20					SPARE		
RM 305A LIGHTS	3/4"	#12	#12	2	1.0		20	11	1.0				12	20					SPARE		
LIGHTS							14	20	1.0				14	20	1.0	3/4"	#12	#12	2	RTU - 2 RECEIPT	2
LIGHTS							15	1.0					16	20	1.0	3/4"	#12	#12	2	RTU - 2 RECEIPT	2
OFFICE LIGHTS & RECEIPT							17	1.0					18	20	1.0	3/4"	#12	#12	2	ROOM CONTROLLER RM 305	2
SPARE							19	1.0					20	20	1.0	3/4"	#12	#12	2	ROOM CONTROLLER RM 305A	2
SPARE							21	0.0					22						SPACE		
SPARE							23	0.0					24						SPACE		
SPARE							25	0.0					26						SPACE		
SPARE							27	0.0					28						SPACE		
SPARE							29	0.0					30						SPACE		
SPARE							31	0.0					32						SPACE		
SPARE							33	0.0					34						SPACE		
SPARE							35	0.0					36						SPACE		
SPARE							37	0.0					38						SPACE		
SPARE							39	0.0					40						SPACE		
SPARE							41	0.0					42						SPACE		
LOCATION:										4.0 3.0 10.0										PHASE KVA	
NOTES										10.0										TOTAL KVA	
1. REPLACE EXISTING CIRCUIT BREAKER WITH NEW BREAKER OF SPECIFIED AMPACITY																					
2. PROVIDE NEW SINGLE POLE BREAKER OF SPECIFIED AMPACITY																					
3. EXISTING LOAD																					
4.																					

SCHEDULE FOR EXISTING ELECTRICAL PANEL										GENERAL PANEL DATA										AIC: 22K	
WS-1										VOLT: 120/208V, 3PH, 4W										MOUNT: SURFACE	
LOAD SERVED	COND	GRD	WIRE SIZE	NO.	KVA	BKR SIZE	CKT No.	PHASE LOAD	NO.	A	B	C	BKR SIZE	CKT No.	MLO	GRD	WIRE SIZE	NO.	LOAD SERVED	NOTES	
SPARE							50	3	0.0				4	50					SPARE		
TEACHER DESK RECEIPT	3/4"	#12	#12	2	1.0		20	7	2.0				8	20	1.0	3/4"	#12	#12	2	ROOM 305A SMARTBOARD RECEIPT	1
ROOM 305 SMARTBOARD RECEIPT	3/4"	#12	#12	2	1.0		20	9					10	20	1.0	3/4"	#12	#12	2	ROOM 305A PLUGMOLD	1
PLUGMOLD / HALLWAY	3/4"	#12	#12	2	1.0		20	11					12	20	1.0	3/4"	#12	#12	2	ROOM 305A PLUGMOLD	1
ROOM 305 PLUGMOLD	3/4"	#12	#12	2	1.0		20	13	2.0				14	20	1.0	3/4"	#12	#12	2	ROOM 305A PLUGMOLD	1
RM 305 LAPTOP CHARGING STATION	3/4"	#12	#12	2	1.0		20	15	2.0				16	20	1.0	3/4"	#12	#12	2	ROOM 305A RECEIPT	1
EPO CONTROL	3/4"	#12	#12	2	1.0		20	17					18	20	1.0	3/4"	#12	#12	2	ROOM 305A DESK RECEIPT	1
ROOM 305A RECEIPT	3/4"	#12	#12	2	1.0		20	19	2.0				20	20	1.0	3/4"	#12	#12	2	ROOM 305A DESK RECEIPT	1
ROOM 305A RECEIPT	3/4"	#12	#12	2	1.0		20	21	2.0				22	20	1.0	3/4"	#12	#12	2	ROOM 305A DESK RECEIPT	1
ROOM 305A GFI RECEIPT	3/4"	#12	#12	2	1.0		20	23					24	20	1.0	3/4"	#12	#12	2	ROOM 305A DESK RECEIPT	1
ROOM 305A RECEIPT	3/4"	#12	#12	2	1.0		20	25	2.0				26	20	1.0	3/4"	#12	#12	2	ROOM 305A DESK RECEIPT	1
SAFETY GLASSES CABINET	3/4"	#12	#12	2	1.0		20	27	2.0				28	20	1.0	3/4"	#12	#12	2	ROOM 305A DESK RECEIPT	1
ROOM 305A RECEIPTS	3/4"	#12	#12	2	1.0		20	29					30	20	1.0	3/4"	#12	#12	2	ROOM 305A GFI RECEIPT	1,2
STORAGE CLOSET 305B RECEIPT	3/4"	#12	#12	2	1.0		20	31	2.0				32	20	1.0	3/4"	#12	#12	2	STORAGE CLOSET 305B RECEIPT	1,2
ROOM 305 RECEIPT	3/4"	#12	#12	2	1.0		20	33	2.0				34	20	1.0	3/4"	#12	#12	2	RM 305A GFI RECEIPT UNDER SINK	1,2
ROOM 305 PLUGMOLD	3/4"	#12	#12	2	1.0		20	35					36	20	1.0	3/4"	#12	#12	2	ROOM 305 PLUGMOLD	1
ROOM 305 PLUGMOLD	3/4"	#12	#12	2	1.0		20	37	2.0				38	20	1.0	3/4"	#12	#12	2	ROOM 305A PLUGMOLD	1
ROOM 305A PLUGMOLD	3/4"	#12	#12	2	1.0		20	39					40	20	1.0	3/4"	#12	#12	2	ROOM 305A PLUGMOLD	1
ROOM 305A PLUGMOLD	3/4"	#12	#12	2	1.0		20	41					42	20	1.0	3/4"	#12	#12	2	ROOM 305A PLUGMOLD	1
LOCATION: ROOM 305										12.0 12.0 36.0										PHASE KVA	
NOTES										36.0										TOTAL KVA	
1. REPLACE EXISTING CIRCUIT BREAKER WITH NEW BREAKER OF SPECIFIED AMPACITY																					
2. PROVIDE A NEW GROUND FAULT INTERRUPTER CIRCUIT BREAKER																					
3. EXISTING LOAD																					

PLUMBING

	NEW OR REMOVAL WORK (REFER TO PLAN)
	EXISTING
	GAS
	STORM DRAIN
	SOIL OR WASTE PIPING
	VENT
	ACID WASTE
	ACID VENT
	DOMESTIC COLD WATER
	SOFT COLD WATER
	CHILLED DRINKING WATER SUPPLY
	CHILLED DRINKING WATER RETURN
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	DISTILLED WATER
	DEIONIZED WATER
	DOMESTIC HOT WATER (140°)
	DOMESTIC HOT WATER RETURN (140°)
	DOMESTIC HOT WATER (180°)
	DOMESTIC HOT WATER RETURN (180°)
	FIRST AID PIPING
	PRE ACTION SPRINKLER PIPING
	DRY SPRINKLER PIPING
	FORCED SANITARY / STORM MAIN
	FIRE PROTECTION WATER SUPPLY
	SPRINKLER PIPING
	AUTOMATIC FIRE SPRINKLER SYSTEM DRAIN
	FUEL OIL SUPPLY
	FUEL OIL RETURN
	FUEL OIL VENT
	REGULAR UNLEADED GASOLINE
	PREMIUM GASOLINE
	DIESEL FUEL
	GASOLINE VENT
	LUBRICATING OIL
	LUBRICATING OIL VENT
	WASTE OIL
	WASTE OIL VENT
	COMPRESSED AIR
	MEDICAL COMPRESSED AIR
	LABORATORY COMPRESSED AIR
	VACUUM
	LABORATORY WASTE
	MEDICAL VACUUM
	LABORATORY VACUUM
	VACUUM CLEANING
	OXYGEN
	LIQUID OXYGEN
	HIGH PRESSURE STEAM (100-70 PSI)
	HIGH PRESSURE CONDENSATE
	NITROUS OXIDE
	NITROGEN
	TEMPERED WATER
	INDIRECT WASTE PIPING
	LAWN SPRINKLER SUPPLY
	PIPE SLOPE - IN DIRECTION OF ARROW
	FLOW - IN DIRECTION OF ARROW
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BALANCING VALVE
	BALL VALVE
	BUTTERFLY VALVE
	ANGLE GATE VALVE
	VALVE ON RISE
	GAS PRESSURE REGULATOR
	GAS COCK, GAS STOP
	SOLENOID VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	RELIEF OR SAFETY VALVE
	UNION
	STRAINER
	STRAINER W/ BLOW-DOWN VALVE
	FLOW SENSOR
	SIGHT GLASS
	PIPE GUIDE
	PIPE ANCHOR
	FLEXIBLE CONNECTION

	THERMOMETER
	PRESSURE GAUGE W/ COCK
	AIR VENT W/ COCK
	AUTOMATIC AIR VENT
	AQUASTAT
	SHOCK ABSORBER
	FLOW SWITCH
	PRESSURE SWITCH
	HOSE BIB
	UPRIGHT SPRINKLER HEADS
	PENDANT SPRINKLER HEADS
	EXISTING SPRINKLER HEADS
	SIDE WALL WET SPRINKLER HEADS
	SIDE WALL DRY SPRINKLER HEADS
	DIAPHRAGM
	METER
	ROOF DRAIN
	PLAIN COMBO FLOOR DRAIN
	PLAIN ROUND FLOOR DRAIN
	PLAIN SQUARE FLOOR DRAIN
	BACK FLOW PREVENTER
	SHOWER HEAD
	SIAMSESE CONNECTION
	PIPE TURNING DOWN
	PIPE TURNING UP
	TEE UP
	TEE DOWN
	DROP AND RUN
	DROP AND TURN
	TEE OFF TOP

PLUMBING ABBREVIATIONS

AD	AREA DRAIN
A.P.	ACCESS PANEL
BT	BATH TUB
B	BIDET
BS	BAR SINK
BFP	BACKFLOW PREVENTER
CS	CLINICAL SERVICE SINK
CP	CONCRETE PIPING
CO	CLEAN OUT
C.I.	CAST IRON
CB	CATCH BASIN
CSK	CUP SINK
DW	DISHWASHER
DS	DRY STANDPIPE
DD	DECK DRAIN
D.A.P.	DUPLEX ALARM PANEL
D.Z.V.	DUPLEX ZONE VALVE BOX
D.I.P.	DUCTILE IRON PIPE
ES	EMERGENCY SHOWER
EWC	ELECTRIC WATER COOLER
(E)	EXISTING
EW	EYE WASH
F.S.E.C.	FOOD SERVICE EQUIPMENT CONTRACTOR
FH	FIRE HYDRANT
FS	FIRE SWITCH
FE	FIRE EXTINGUISHER
F.D.V.	FIRE DEPARTMENT VALVE
F.D.C.	FIRE DEPARTMENT CONNECTION
F.A.I.	FRESH AIR INLET
F.C.V.	FLOW CONTROL VALVE
FD	FLOOR DRAIN
F.H.C.	FIRE HOSE CONNECTION
FM	FORCED MAIN
G	GAS OUTLET
GD	GARAGE DRAIN
GT	GARAGE TRAP
HB	HOSE BIB
I.E.	INVERT ELEVATION
I.W.	INDIRECT WASTE
LAV	LAVATORY
LT	LAUNDRY TUB
KS	KITCHEN SINK
MR	MOP RECEPTOR
N ₂	NITROUS OXIDE OUTLET
O ₂	OXYGEN OUTLET
PD	PLANTER DRAIN
PVC	POLY VINYL CHLORIDE
P.I.V.	POST INDICATOR VALVE
PRV	PRESSURE REGULATING VALVE
Q.Z.V.	QUADRUPLE ZONE VALVE BOX
Q.A.P.	QUADRUPLE ALARM PANEL
RD	ROOF DRAIN
RWC	RAIN WATER CONDUCTOR
R.C.P.	REINFORCED CONCRETE PIPE
S.A.	SHOCK ABSORBER
SH	SHOWER
S	SANITARY
SW	SAFE WASTE
SMH	SANITARY MANHOLE
STMH	STORM MANHOLE
SS	SERVICE SINK
SK	SINK
SL	SURGEONS LAVATORY
TC	TERRA COTTA
T.A.P.	TRIPLE ALARM PANEL
T.Z.V.	TRIPLE ZONE VALVE BOX
T.E.	TOP ELEVATION
TB	THRUST BLOCK
TS	TAMPER SWITCH
UR	URINAL
V	VACUUM
V	VENT
VTR	VENT THRU ROOF
VB	VACUUM BREAKER
YH	YARD HYDRANT
WC	WATER CLOSET
WH	WALL HYDRANT
WB	WASHER BOX
W	WASTE

PLUMBING GENERAL NOTES:

- GENERAL NOTES APPLY TO ALL PLUMBING DRAWINGS.
- COORDINATE AND FIELD VERIFY ALL DIMENSIONS, SIZES, CLEARANCES, AND LOCATIONS PRIOR TO THE START OF CONSTRUCTION. WHEN CONFLICT ARISES, MAKE ANY NECESSARY CHANGES TO ROUTING OF PIPING WITHOUT COMPROMISING THE INTEGRITY AND PERFORMANCE OF THE SYSTEM, AND AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE ALL ASSOCIATED LIFE SAFETY DEVICES FOR ALL PIPING PENETRATIONS.
- PLUMBING PIPING LAYOUTS ARE SCHEMATIC IN NATURE. PROVIDE OFFSETS AND FITTINGS AS REQUIRED TO ACCOMMODATE FIELD CONDITIONS.
- COORDINATE CONSTRUCTION OF ALL PLUMBING WORK WITH ARCHITECTURAL, ELECTRICAL, HVAC, ETC. SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
- EQUIPMENT INSULATION SHALL BE INSTALLED AS NOT TO CONCEAL THE EQUIPMENT NAME PLATE.
- PLUMBING REMOVAL WORK IN THE BUILDING SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR INCLUDING PLUMBING EQUIPMENT, SYSTEMS, APPARATUS, AND ACCESSORIES.
- THE DRAWINGS SHOW A GENERAL REPRESENTATION OF QUANTITIES AND LOCATIONS OF EXISTING PLUMBING COMPONENTS AND SYSTEMS, AND ARE NOT ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE REMOVAL OF THE PLUMBING BUILDING SYSTEMS TO FULFILL THE INTENT OF THE DESIGN INDICATED BY THE CONTRACT DOCUMENTS. UNLESS OTHERWISE NOTED, REMOVAL WORK IS TO INCLUDE, BUT NOT LIMITED TO REMOVAL OF EQUIPMENT, APPARATUS, SYSTEM ACCESSORIES, PIPING, INSULATION, DOMESTIC WATER HEATERS, VALVES, DROPS, RISERS, AUXILIARY SYSTEMS/PIPING/CONTROLS, VALVES, PIPING ACCESSORIES, CONTROLS, CONTROL WIRING/TUBING, CONDUITS, BASES, SUPPORTS, HANGERS AND SYSTEM APPURTENANCES.
- ENSURE ALL WORK IS IN CONFORMANCE WITH ALL APPLICABLE BUILDING CODES. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF THE APPLICABLE CONSTRUCTION CODE, AND ALL OTHER FEDERAL, STATE, AND LOCAL AGENCY REGULATIONS HAVING JURISDICTION OVER THIS PROJECT. IN THE EVENT OF ANY DISCREPANCIES BETWEEN AGENCY REQUIREMENTS, OBSERVE THE MORE STRINGENT OF REQUIREMENTS.
- ALL WORK SHALL COMPLY WITH THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS (NBFI), INDUSTRIAL RISK INSURANCE UNDERWRITERS (IRI), FACTORY MUTUAL (FM), OR THE APPLICABLE RATING BUREAU, THE NATIONAL ELECTRIC CODE (NEC), THE AMERICAN GAS ASSOCIATION (AGA), AND THE AMERICAN SOCIETY OF HEATING AND AIR CONDITIONING ENGINEERS (ASHRAE), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES AND THE REQUIREMENTS OF ALL PUBLIC UTILITY COMPANIES SERVING THE PROJECT SITE.
- COORDINATE LOCATION OF ALL MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT WITH THE RESPECTIVE TRADE CONTRACTORS.
- ALL EQUIPMENT AND OR MATERIAL BEING REMOVED IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR AND WILL BE RETAINED, DISPOSED OF, AND REMOVED FROM THE SITE AT THE DIRECTION OF THE OWNER.
- NOTE THAT THE IDENTIFICATION LABELS TO BE USED/MADE FOR ALL SYSTEMS MUST USE THE OWNER'S ROOM NUMBERS AND ROOM NAMES, NOT THE NUMBERS OR NAMES ON THE CONSTRUCTION DOCUMENTS. MEET WITH THE OWNER TO REVIEW AND CONFIRM ROOM NUMBERS AND NAMES PRIOR TO LABELING SYSTEMS.
- PERFORM ALL CUTTING AND PATCHING NECESSARY TO PERFORM ABOVE SLAB WORK. MATCH EXISTING MATERIALS, FINISHES, FIRE RATINGS, PAINT COLORS, ETC. IN ALL AREAS OF PATCHING.
- ALL PIPING TO BE CONCEALED UNLESS OTHERWISE INDICATED.
- PROVIDE ALL NECESSARY HANGERS AND/OR SUPPORTS TO FACILITATE INSTALLATION OF ALL PIPING, EQUIPMENT, ETC.
- PLUMBING CONTRACTOR TO COORDINATE ALL PLUMBING VALVE ACCESS WITH G.C.
- PLUMBING CONTRACTOR SHALL PERFORM SAW CUTTING, EXCAVATION, AND BACKFILL FOR ALL BELOW SLAB PIPING. FINAL FLOOR FINISH IS BY G.C. COORDINATE WORK WITH G.C.
- ALL ROOF CURBS FURNISHED BY PLUMBING CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR. FLASHING FOR ROOF CURBS FURNISHED BY GENERAL CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR. COUNTER FLASHING FOR ROOF CURBS FURNISHED BY PLUMBING CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR. OPENINGS IN ROOF FOR ROOF CURBS PROVIDED BY PLUMBING CONTRACTOR.

REFERENCE DIMENSION



INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

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10/04/2023
 HVAC COORDINATION SET
 NOT FOR CONSTRUCTION

ENGINEER _____ DATE _____

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F. V. H. D. P. C. C. O. M.

Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

Project Location
595 Jefferson Rd, Mullica Hill, NJ 08062

Project Number
5162C

Project Date
10/11/2023

Checked By
DLD

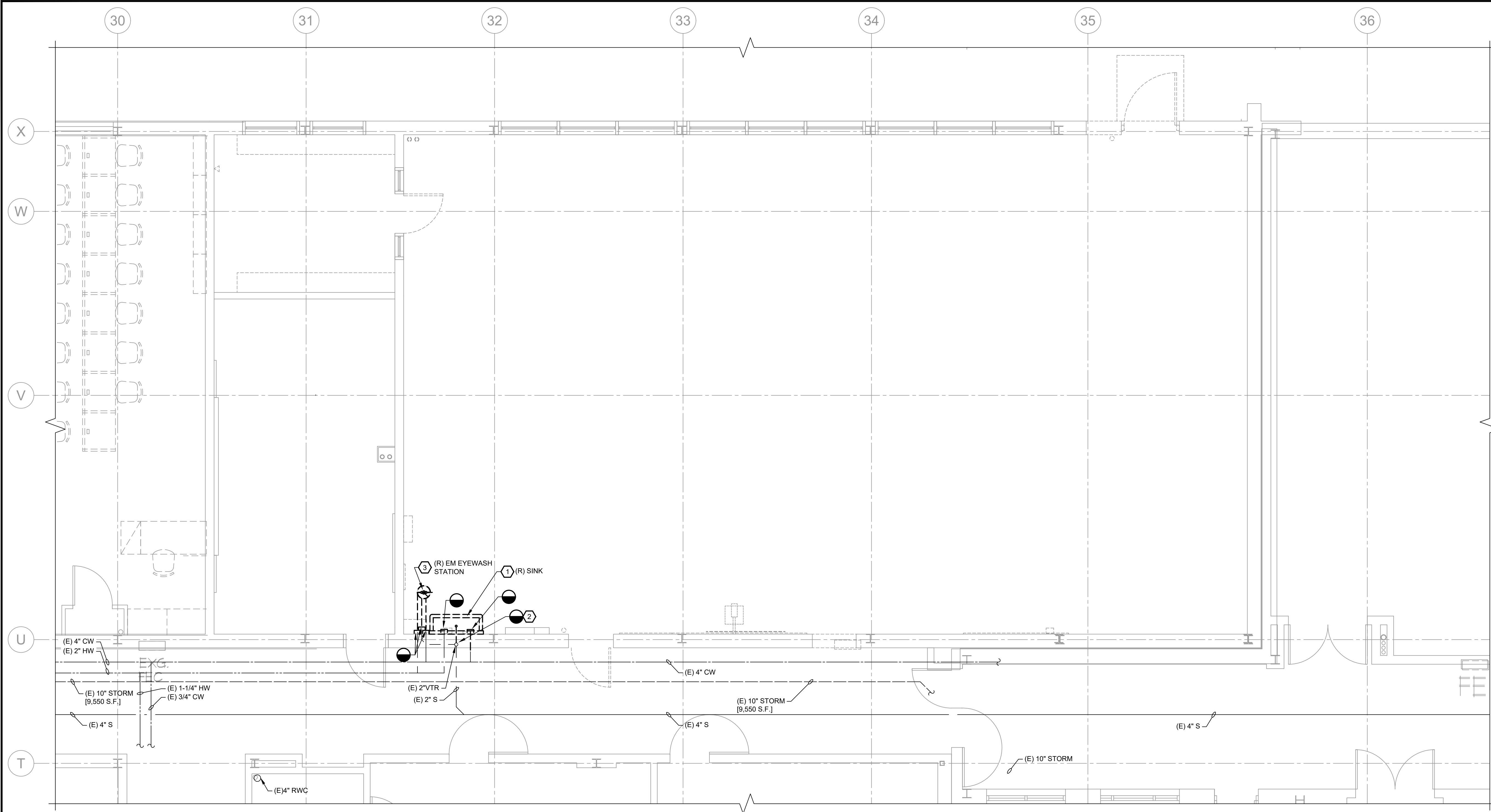
Drawn By
RAMS

Scale
AS NOTED

Drawing Name
PLUMBING SYMBOLS, ABBREVIATIONS, & GENERAL NOTES

Revisions		
No.	Date	Description

Drawing Number
P001



1 PARTIAL FIRST FLOOR PLAN - PLUMBING DEMOLITION
 P101 SCALE: 1/4" = 1'-0"

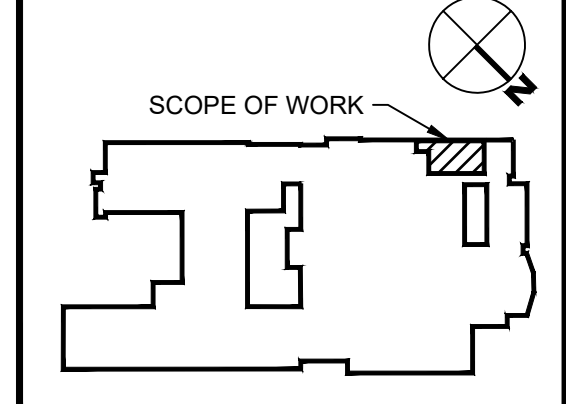
GENERAL SHEET NOTES:

1. FIELD VERIFY EXISTING CONDITIONS AND LOCATIONS PRIOR TO WORK. IMMEDIATELY REPORT ANY DISCREPANCIES OR CONDITIONS NOT SHOWN ON THE DRAWINGS TO THE ARCHITECT OR OWNER.
2. ALL EQUIPMENT AND OR MATERIAL BEING REMOVED DURING DEMOLITION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RETAINED OR DISPOSED OF AND REMOVED FROM THE SITE AT THE DIRECTION OF THE OWNER.
3. SCHEDULE ALL TEMPORARY SHUTDOWNS OF EQUIPMENT OR SYSTEMS WITH THE OWNER PRIOR TO WORK.

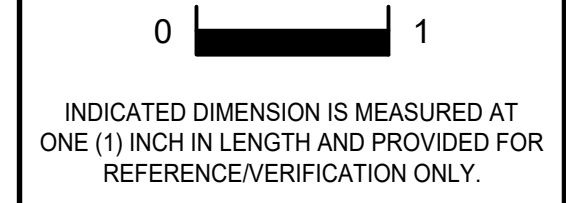
REMOVAL WORK NOTES:

1. DEMOLISH AND REMOVE EXISTING WALL MOUNTED SINK AND ALL ASSOCIATED FAUCETS, VALVES, DRAINS, TAILPIECES, TRAPS AND TRAP ARMS. RETAIN SAN DROP AND VENT RISER OPERATION FOR RE-USE UNDER NEW WORK. COORDINATE WITH THE GENERAL CONTRACTOR FOR PATCHING/PAINTING.
2. CONTRACTOR SHALL SNAKE/CLEAN EXISTING SANITARY DRAIN LINE DOWNSTREAM OF POINT INDICATED. VERIFY DRAIN IS FREE OF DEBRIS AND IN PROPER WORKING ORDER. TEMPORARILY CAP SANITARY DROP AND ASSOCIATED VENT RISER FOR RE-USE UNDER NEW WORK. COORDINATE WITH THE GENERAL CONTRACTOR FOR PATCHING/PAINTING.
3. DEMOLISH AND REMOVE EXISTING FLOOR STANDING EMERGENCY EYEWASH AND ALL ASSOCIATED FAUCETS, VALVES, DRAINS, TAILPIECES, TRAPS AND TRAP ARMS. REMOVE ASSOCIATED PIPING BACK TO BEHIND WALL. COORDINATE WITH THE GENERAL CONTRACTOR FOR PATCHING/PAINTING.

KEY PLAN - CLEARVIEW MS



REFERENCE DIMENSION



10/04/2023
 HVAC COORDINATION SET
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 Cert. of Auth #24227932400 © 2023 Project No. 21023-1107

ENGINEER _____ DATE _____

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 F V H D P C C O M
 Architect
 Date: 10/11/2023

Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

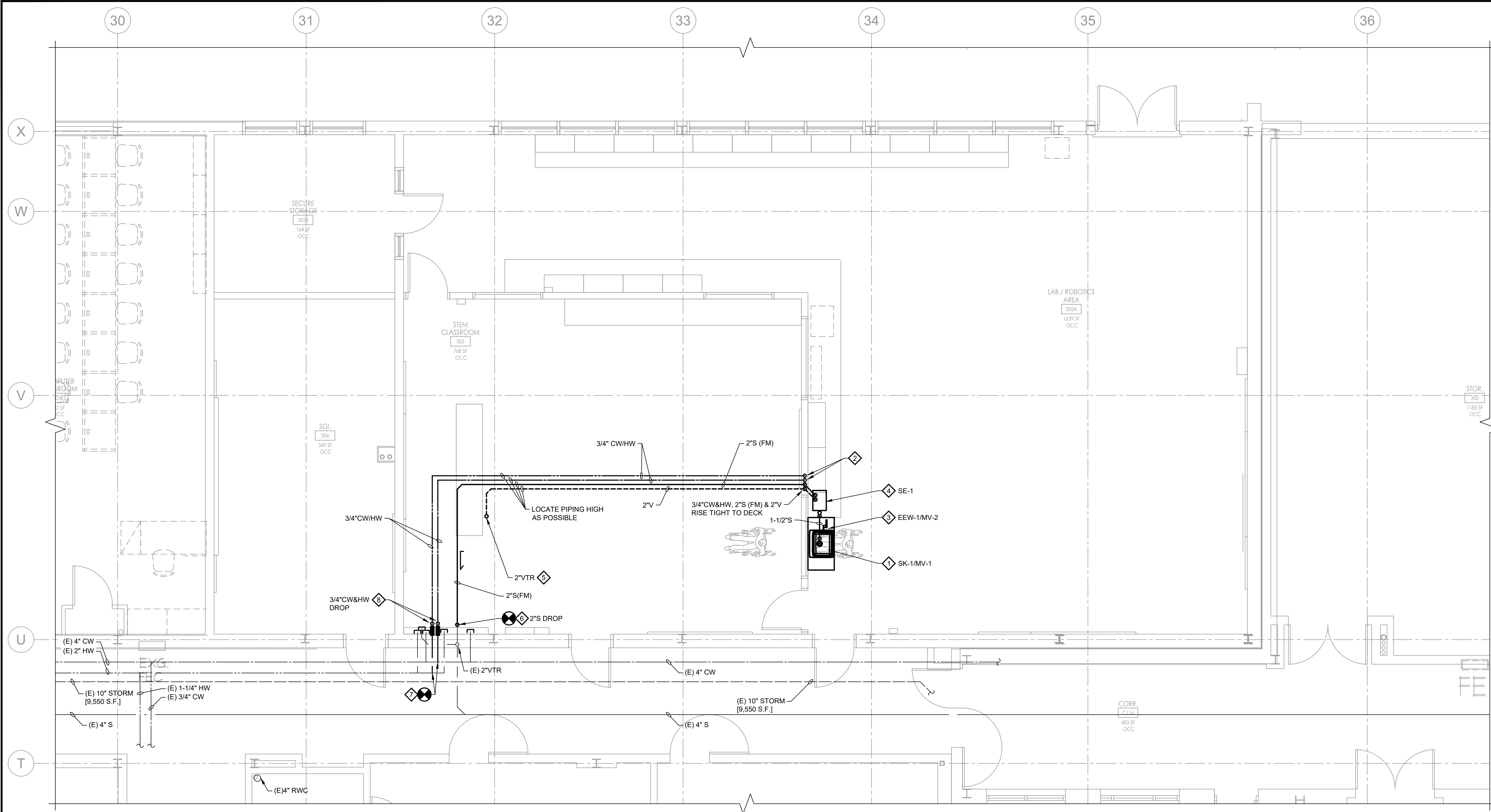
Project Location
595 Jefferson Rd, Mullica Hill, NJ 08062

Project Number
5162C
 Project Date
10/11/2023
 Checked By
DLD
 Drawn By
RAMS
 Scale
1/4" SCALE

Drawing Name
PLUMBING FIRST FLOOR DEMOLITION PLAN

Revisions		
No.	Date	Description

Drawing Number
P101



1 PARTIAL FIRST FLOOR PLAN - PLUMBING NEW WORK
 SCALE: 1/4" = 1'-0"

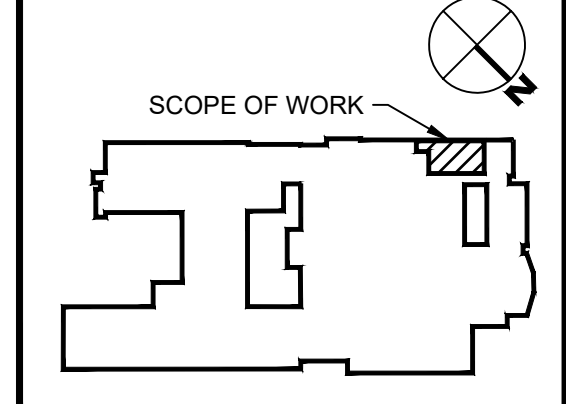
GENERAL SHEET NOTES:

- FIELD VERIFY EXISTING CONDITIONS AND LOCATIONS PRIOR TO WORK. IMMEDIATELY REPORT ANY DISCREPANCIES OR CONDITIONS NOT SHOWN ON THE DRAWINGS TO THE ARCHITECT OR OWNER.
- ALL EQUIPMENT AND OR MATERIAL BEING REMOVED DURING DEMOLITION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RETAINED OR DISPOSED OF AND REMOVED FROM THE SITE AT THE DIRECTION OF THE OWNER.
- SCHEDULE ALL TEMPORARY SHUTDOWNS OF EQUIPMENT OR SYSTEMS WITH THE OWNER PRIOR TO WORK.

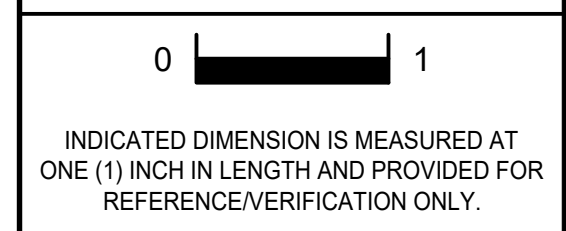
NEW WORK NOTES:

- ◆ CASEWORK AND COUNTER MOUNTED SINK (SK-1) FURNISHED AND INSTALLED BY OTHERS. FURNISH AND INSTALL DRAIN, TAILPIECE, TRAP AND TRAP ARM. 2" S FROM SK-1 AND DRAIN TO ADJACENT EJECTOR PUMP (SE-1). ROUTE SAN PIPING THROUGH WALL AS REQUIRED TO KEEP HIDDEN FROM VIEW. FURNISH AND INSTALL MIXING VALVE (MV-1) WITHIN CASEWORK BELOW SK-1 IN AN ACCESSIBLE LOCATION. 1/2" CW&HW TO MV-1, 1/2" CW & HW (105°F) FROM MV-1 UP TO SK-1 FAUCET ASSEMBLY WITH ANGLE STOP VALVES AND STAINLESS STEEL FLEXIBLE CONNECTIONS. COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR.
- ◆ DROP 3/4" CW&HW DOWN IN WALL AND OFFSET BELOW WINDOW TO SK-1 CASEWORK.
- ◆ INSTALL COUNTER MOUNTED EMERGENCY EYEWASH (EEW-1) FURNISHED BY OTHERS. LOCATE EEW-1 ON SK-1 DECK. INSTALL MIXING VALVE (MV-2) WITHIN CASEWORK BELOW SK-1 IN AN ACCESSIBLE LOCATION. 1/2" CW&HW TO MV-2, 1/2" TPEI FROM MV-2 UP TO EEW-1 ASSEMBLY WITH SHUT-OFF. COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR.
- ◆ FURNISH AND INSTALL SEWAGE EJECTOR PUMP (SE-1) WITH BASIN, LID, CONTROL PANEL WITH FLOATS AND CHECK VALVE. MOUNT UNIT ABOVE FLOOR BELOW CASEWORK NEAR LOCATION INDICATED. COORDINATE FINAL PLACEMENT WITH ARCHITECT. COORDINATE POWER CONNECTIONS WITH THE ELECTRICAL CONTRACTOR.
- ◆ 2" VENT THRU ROOF (VTR) SHOWN IN APPROXIMATE LOCATION. EXTEND VENT UP THROUGH ROOF WITH PENETRATION THIMBLE, FLASHING COLLAR AND CLAMP. COORDINATE FINAL PLACEMENT OF VTR WITH THE ARCHITECT AND GENERAL CONTRACTOR PRIOR TO ROUGH IN. ADJUST FINAL PLACEMENT TO MAINTAIN 10" MIN FROM ALL OUTSIDE AIR INTAKES AND AVOID CONFLICTS WITH ROOF MOUNTED SOLAR PANELS/EQUIPMENT.
- ◆ CONTRACTOR SHALL VERIFY IN FIELD EXISTING 2" SANITARY STUB NEAR CORRIDOR NEAR LOCATION INDICATED. EXTEND AND CONNECT NEW 2" S(FM) AND 2" V TO EXISTING. MODIFY EXISTING PIPING AS REQUIRED. COORDINATE CUTTING/PATCHING/PAINTING WITH THE GENERAL CONTRACTOR.
- ◆ CONTRACTOR SHALL VERIFY IN FIELD EXISTING CW&HW MAINS ABOVE THE CORRIDOR NEAR LOCATION INDICATED. EXTEND AND CONNECT NEW 3/4" CW&HW TO EXISTING. MODIFY EXISTING PIPING AS REQUIRED. COORDINATE CUTTING/CORING/PATCHING/PAINTING WITH THE GENERAL CONTRACTOR.
- ◆ 3/4" CW&HW DROP DOWN TO CRAWLSPACE BELOW. FURNISH AND INSTALL WALL/FLOOR SLEEVES FOR ALL PIPE PENETRATIONS AS REQUIRED. COORDINATE SAW-CUTTING, HOLE CORING, PATCHING AND FINAL PLACEMENT WITH THE ARCHITECT AND GENERAL CONTRACTOR. SEAL TO MATCH FIRE RATING OF WALLS PIPES PASS THROUGH.

KEY PLAN - CLEARVIEW MS



REFERENCE DIMENSION



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Project Date
10/11/2023

Checked By
DLD

Drawn By
RAMS

Scale
1/4" SCALE

Drawing Name
PLUMBING FIRST FLOOR NEW WORK PLAN

Revisions	No.	Date	Description

Drawing Number
P201

10/04/2023
 HVAC COORDINATION SET
 NOT FOR CONSTRUCTION

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ENGINEER _____ DATE _____

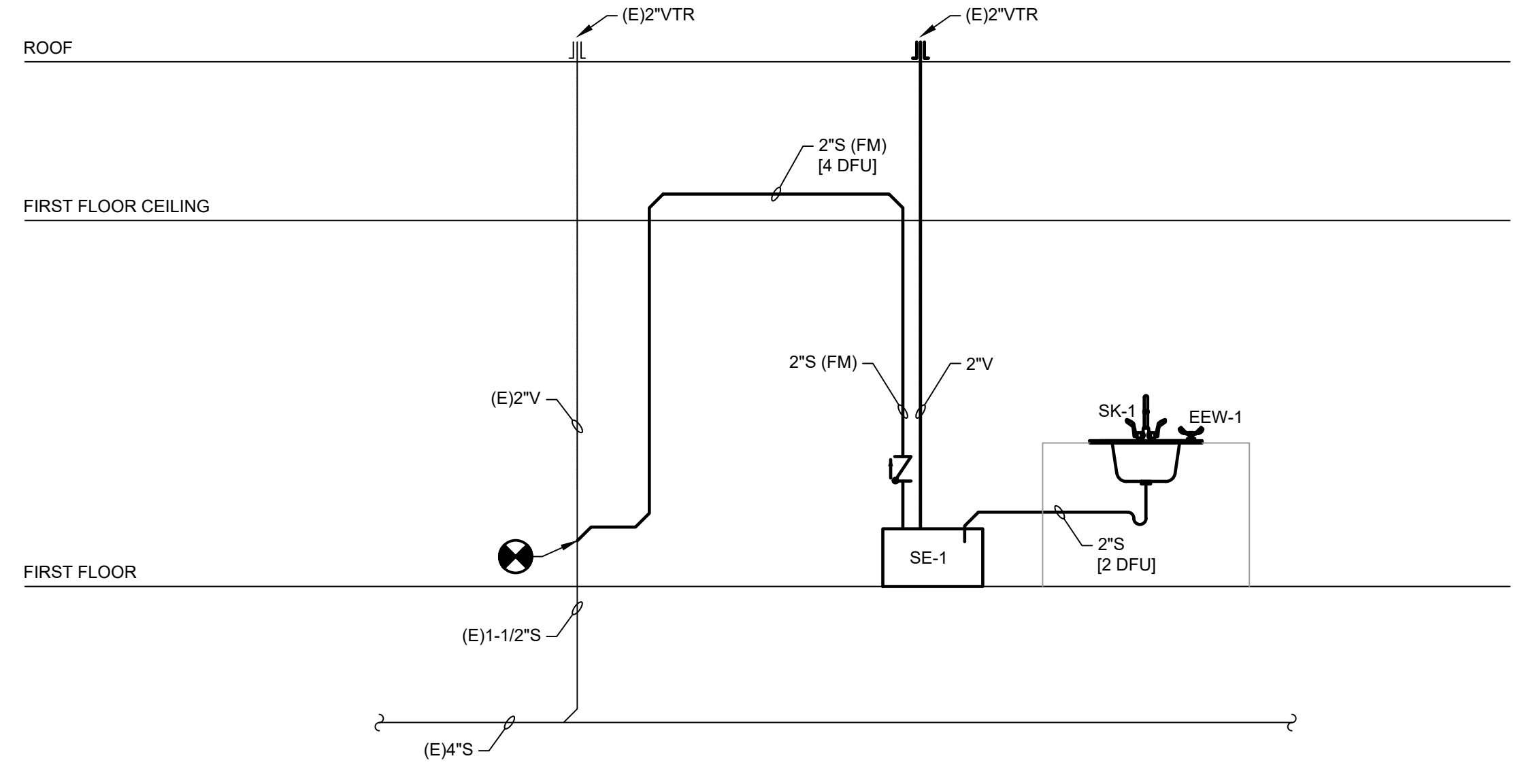
PLUMBING FIXTURE SCHEDULE										
REF. NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	FAUCET AND FLUSH VALVE	CW	HW	HWR	TRAP AND DRAIN	VENT	NOTES
SK-1	HAND SINK	JUST SINKS	SLXD-2333-A-GR	-	1/2"	1/2"	-	1-1/2"	2"	(1) DRAIN, TRAP, TAILPIECE AND TRAP ARM, ANGLE STOP VALVES AND FLEXIBLE 1/2"CW&HW SUPPLIES
FD-1	FLOOR DRAIN	J.R. SMITH	2005Y	-	1/2"	-	-	DEEP SEAL P-TRAP	-	ROUND TOP, DUCO CAST IRON BODY, COLLAR, ADJUSTABLE NICKEL BRONZE STRAINER HEAD, TRAP PRIMER CONNECTION, DEEP SEAL TRAP
MV-1	MIXING VALVE	WATTS	LFMMV	-	1/2"	1/2"	-	-	-	ASSE 1070
MV-2	EYE-WASH MIXING VALVE	NAVIGATOR	S19-2000 EFX8	-	1/2"	1/2"	-	-	-	ASSE 1071
SE-1	SEWAGE EJECTOR PUMP	ZOELLER	912 PACKAGE (266)	-	-	-	-	2"	2"	REFER TO SCHEDULE
EEW-1	EMERGENCY EYE-WASH STATION	BRADLEY	-	-	1/2"	1/2"	-	1-1/2"	-	TEPID WATER CONNECTION FROM NAVGATOR MIXING VALVE

PLUMBING FIXTURE CONNECTION SCHEDULE								
REF. NO.	DESCRIPTION	DOMESTIC WATER		SANITARY		NOTES		
		TOTAL WSFU	C.W. SUPPLY	H.W. SUPPLY	DFU		DRAIN SIZE	VENT SIZE
SK-1	HAND SINK	-	1/2"	1/2"	-	1-1/2"	-	(1)
MV-1	SK-1 MIXING VALVE	-	1/2"	1/2"	-	-	-	(1)
MV-2	EYE-WASH MIXING VALVE	-	1/2"	1/2"	-	-	-	(1)
SE-1	SUMP PUMP	-	-	-	-	-	-	(1)
EEW-1	EMERGENCY EYE-WASH STATION	-	-	-	-	AS NOTED	-	(1)

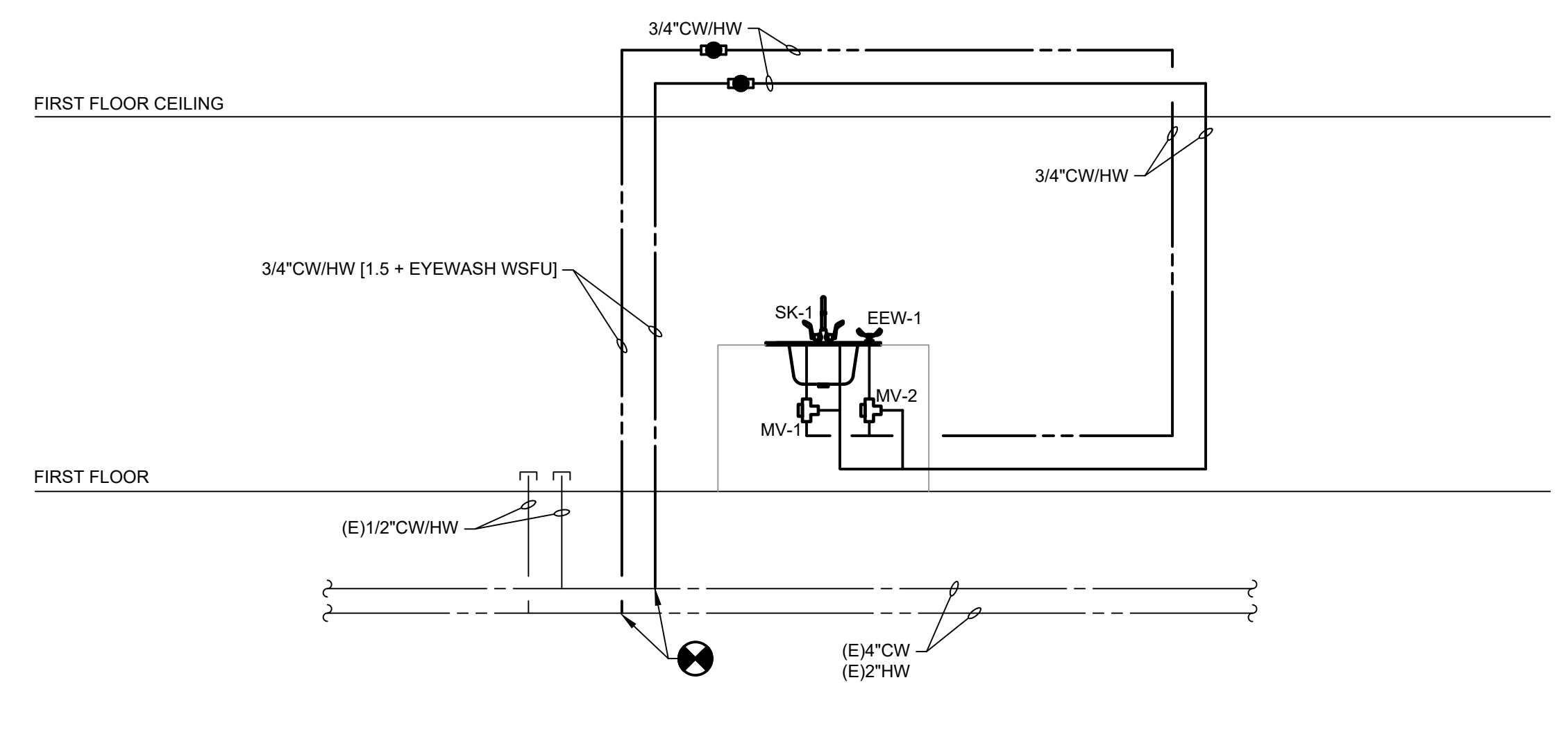
GENERAL NOTES:
1. REFER TO PLANS AND RISER DIAGRAMS FOR DRAIN AND VENT SIZES.

SEWAGE EJECTOR PUMP SCHEDULE												
REF. NO.	SYSTEM SERVED	LOCATION	CAPACITY (GPM)	DISCHARGE PRESSURE (FT. HD)	CON. SIZE	HP	VOLTS	PHASE	RPM	MANUFACTURER	MODEL	NOTES
SE-1	SK-1 & EEW-1	LAB AREA	45	15	2"	1/2	120	1	--	ZOELLER	912 PACKAGE (266)	(1)(2)

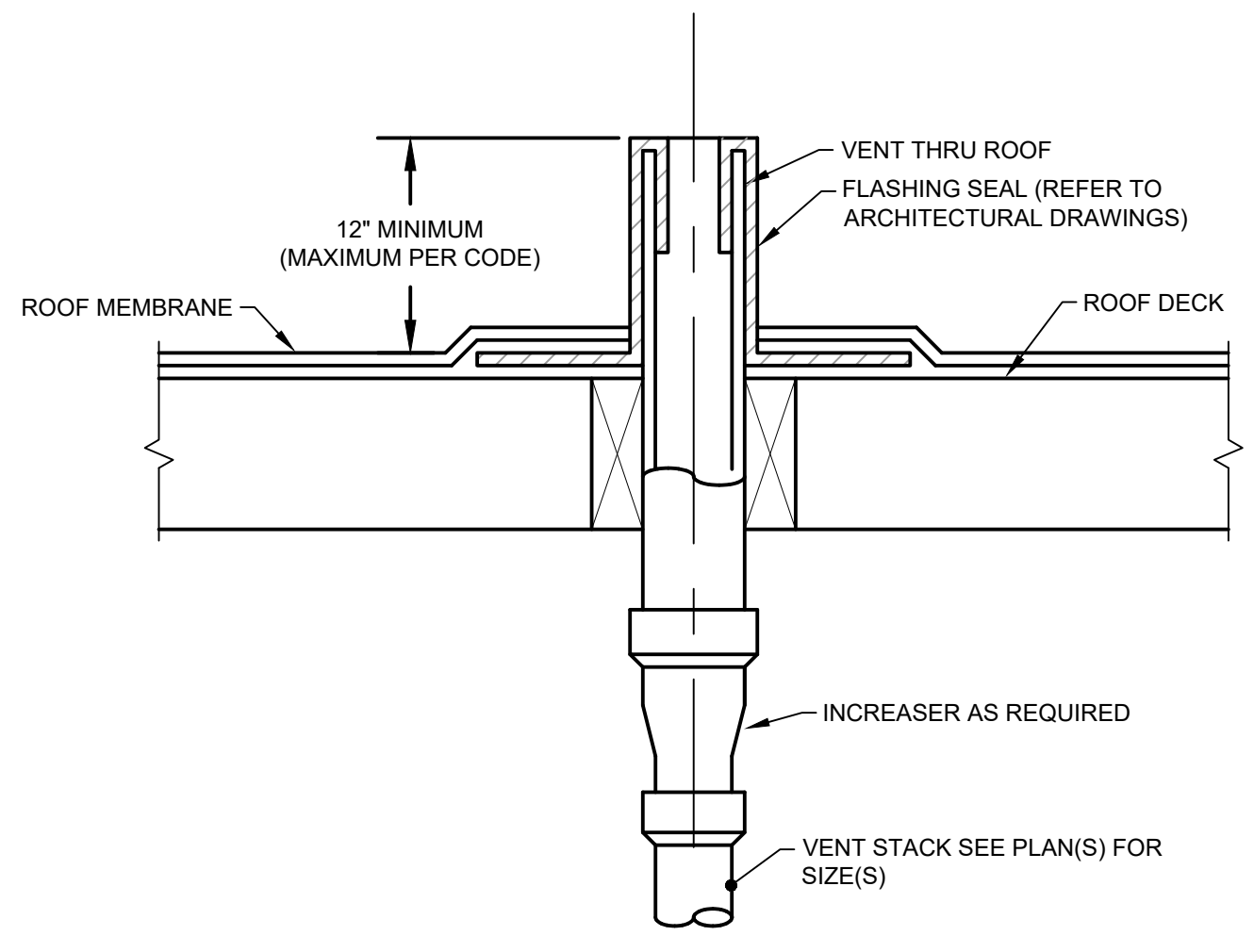
GENERAL NOTES:
1. PROVIDE CHECK VALVE AND FLOW CONTROL VALVE ON OUTLET OF PUMP.
2. INSTALL PUMP BELOW COUNTER, WITHIN CASEWORK NEXT TO SK-1.



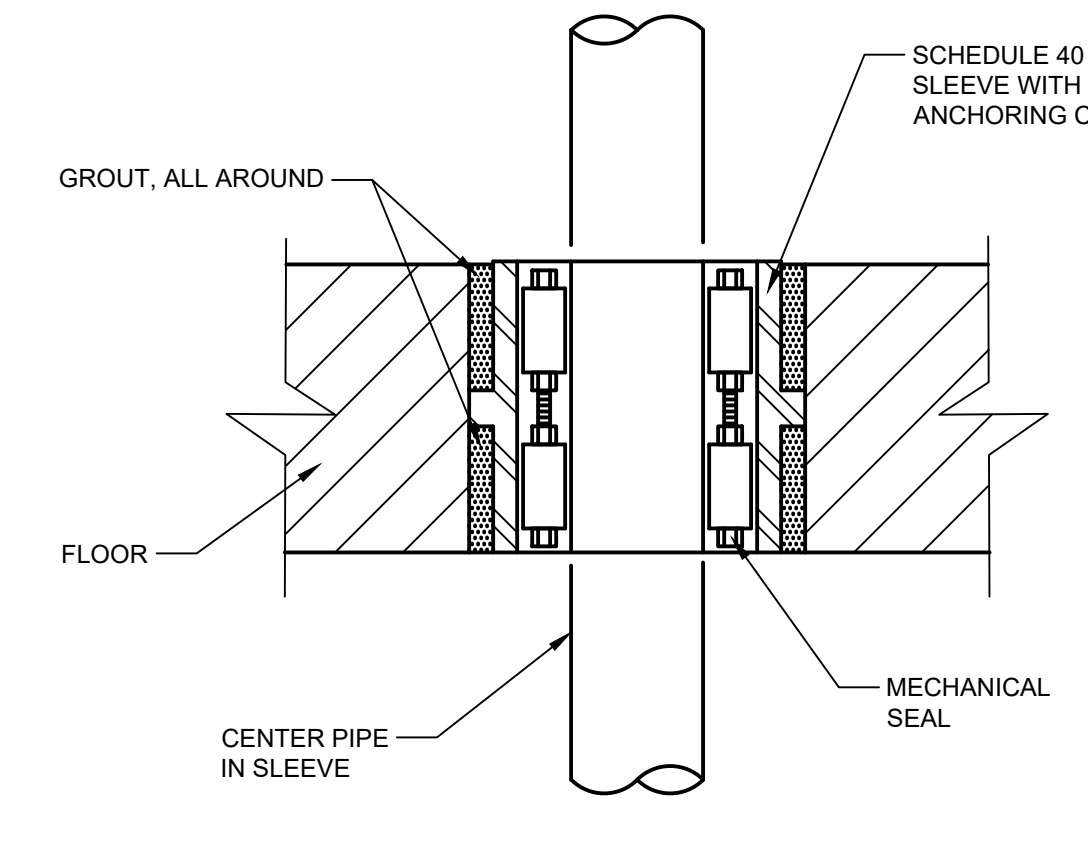
1 RISER DIAGRAM - SANITARY
P501 NO SCALE



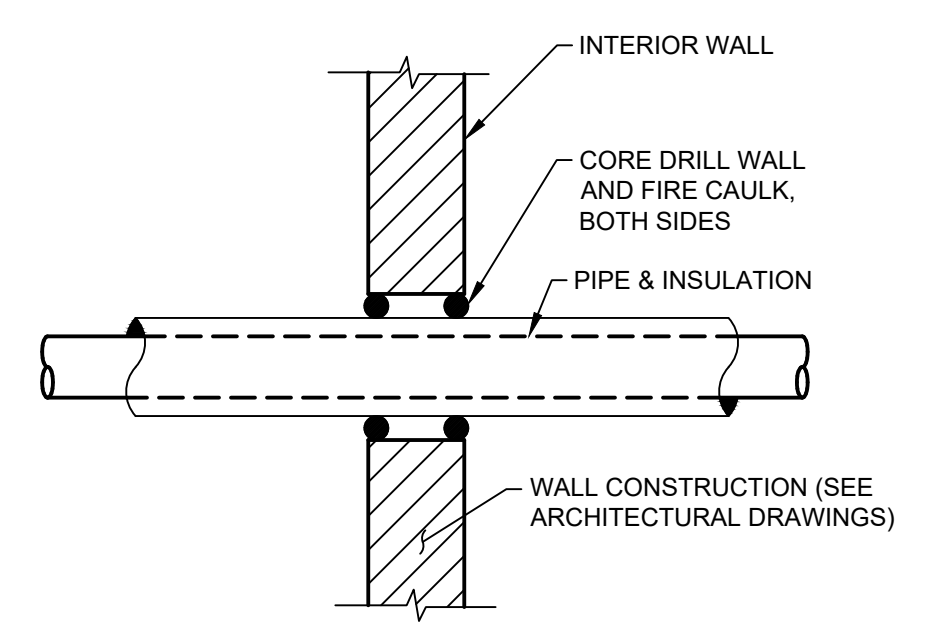
2 RISER DIAGRAM - DOMESTIC
P501 NO SCALE



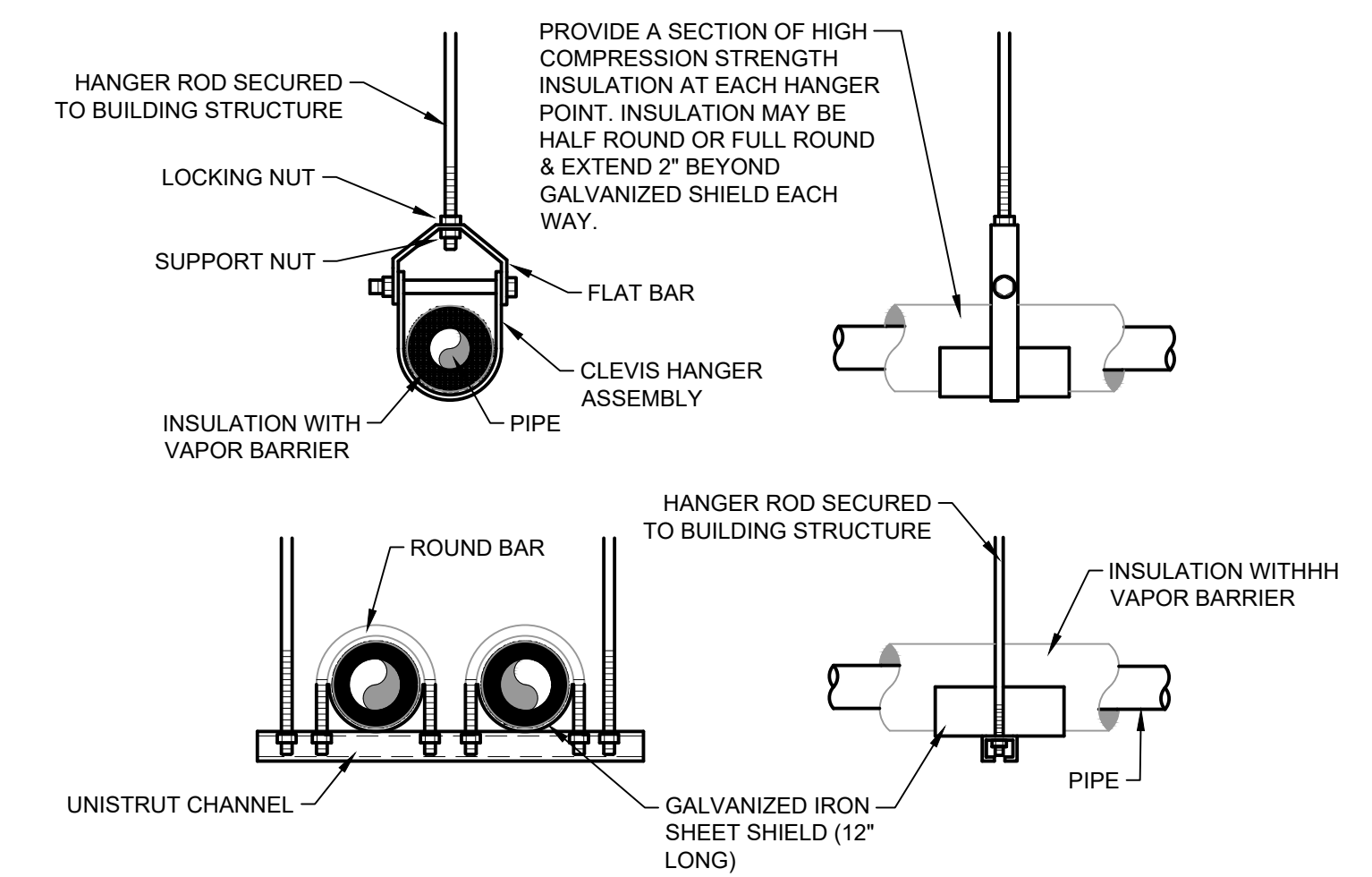
3 DETAIL-VENT THRU ROOF
P501 NO SCALE



4 DETAIL - TYPICAL PIPE THRU FLOOR
P501 NO SCALE



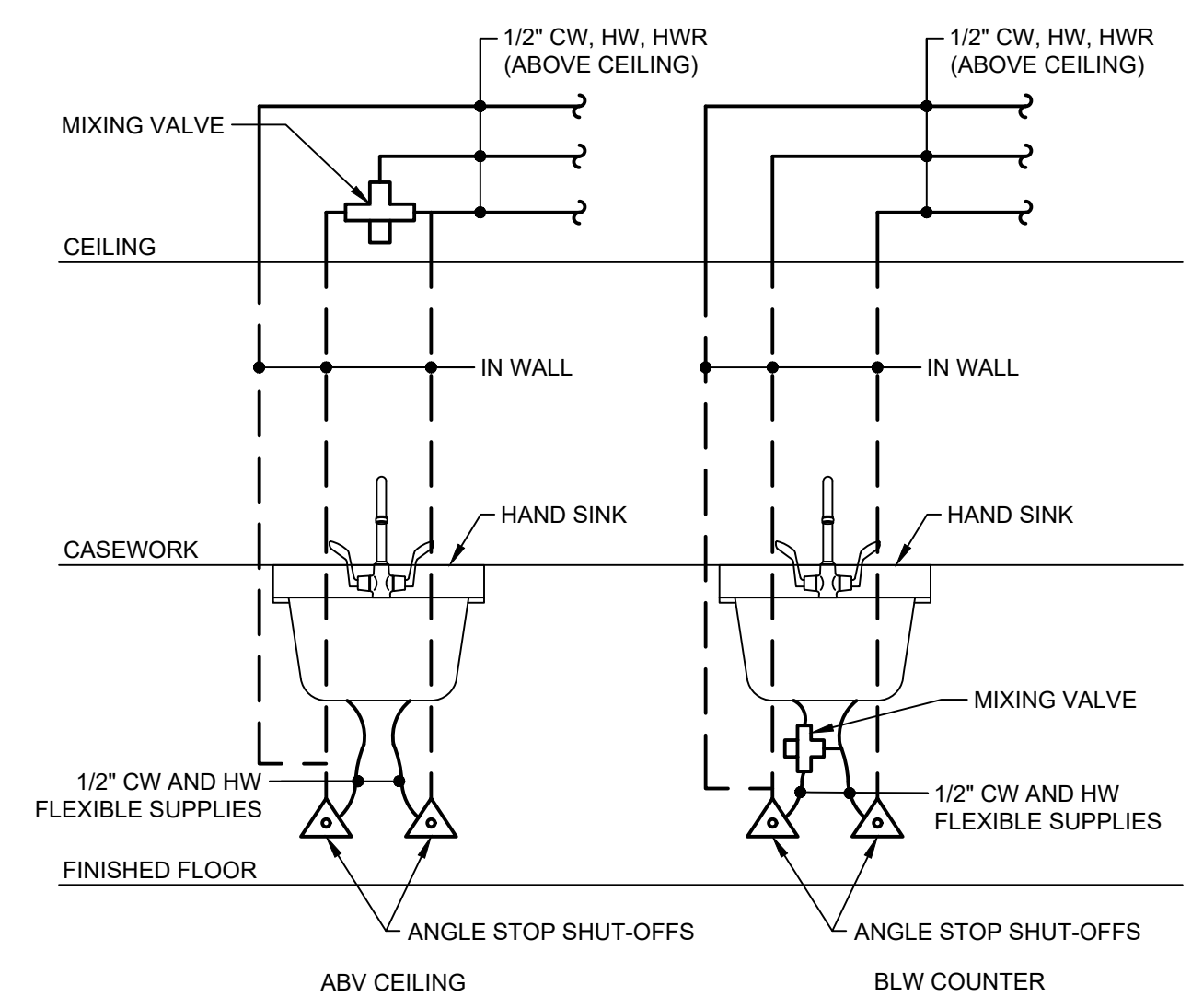
5 DETAIL - MASONRY WALL PIPE PENETRATION
P501 NO SCALE



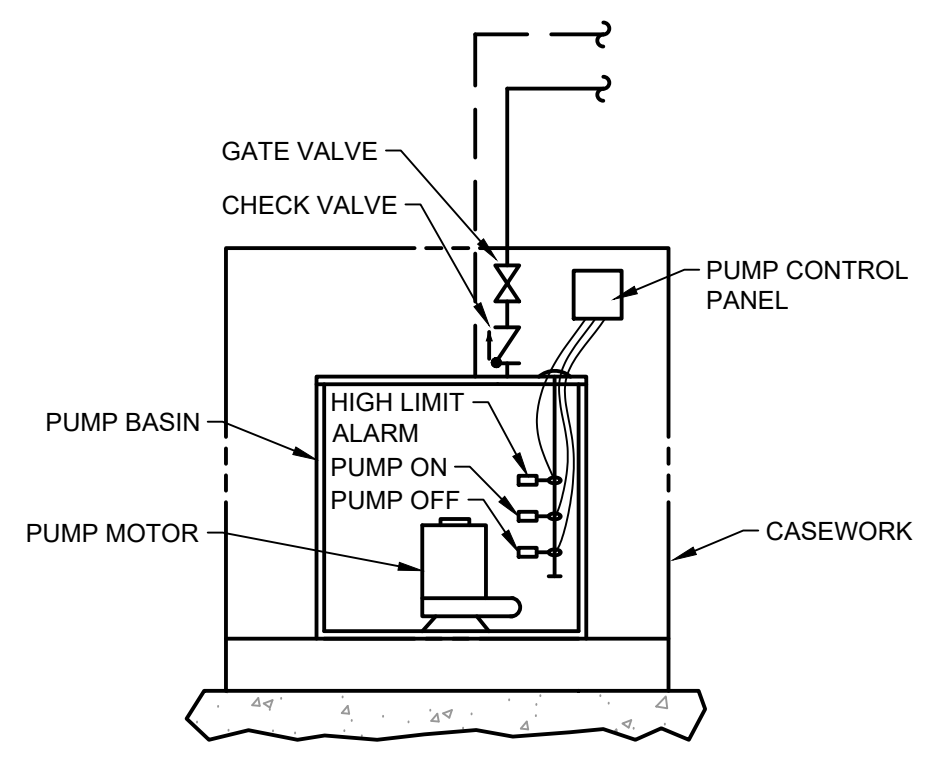
PLUMBING PIPING HANGER SPACING SCHEDULE			
PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)	REMARKS
CAST-IRON	5	15	(1), (2)
COPPER (1-1/2" AND LARGER)	10	10	(1), (3)
COPPER (1-1/4" AND SMALLER)	6	10	(1), (3)
STEEL	12	15	(1)

- (1) PIPE HANGER SPACING PER INTERNATIONAL PLUMBING CODE 2021 TABLE 308.5
 (2) THE MAXIMUM HORIZONTAL SPACING FOR CAST-IRON PIPING HANGERS SHALL BE INCREASED TO 10 FEET WHERE 10-FOOT LENGTHS OF PIPE ARE INSTALLED.
 (3) PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE.
 (4) PROVIDE CLEVIS AND HANGER ROD SIZING AS RECOMMENDED BY MANUFACTURER BASED ON PIPE MATERIAL AND SIZE TO BE USED.

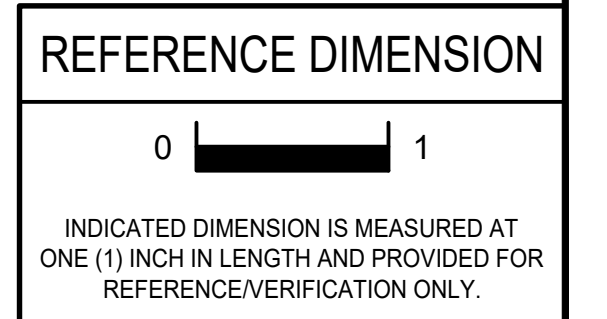
6 DETAIL-PIPE HANGERS
P501 NO SCALE



7 DETAIL - MIXING VALVE INSTALLATION
P501 NO SCALE



8 DETAIL-SEWAGE EJECTOR
P501 NO SCALE



10/04/2023
HVAC COORDINATION SET
NOT FOR CONSTRUCTION

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F.V.H.D.P.C.C.O.M.
Architect
10/11/23
Date

Project Name
STEM Lab Alterations & Renovations at Clearview Regional Middle School

Project Owner Name
Clearview Regional High School District

Project Location
595 Jefferson Rd, Mullica Hill, NJ 08062

Project Number
5162C
Project Date
10/11/2023
Checked By
DLD
Drawn By
RAMS
Scale
AS NOTED

Drawing Name
PLUMBING DETAILS, DIAGRAMS, & SCHEDULES

Revisions		
No.	Date	Description

Drawing Number
P501