ABBREVIATIONS

AB	ABOVE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BEL	BELOW
BHP	BRAKE HORSEPOWER
CLG	CEILING
CONN	CONNECT, CONNECTIONS
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EACH, EXHAUST AIR
EFF	EFFICIENCY
EL	ELEVATION
ENT	ENTERING
FF	FINISHED FLOOR
FL	FLOOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
HP	HORSEPOWER
HZ	HERTZ (CYCLES PER SECOND)
KW	KILOWATTS
LVG	LEAVING
MBH	THOUSANDS OF BTU PER HOUR
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
NO.	NUMBER
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
PH	PHASE
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RPM	ROTATIONS PER MINUTE
SA	SUPPLY AIR
SP	STATIC PRESSURE
TYP	TYPICAL
△T	TEMPERATURE DIFFERENCE IN °F.
⍁	SQUARE FEET
V	VOLTS
WB	WET BULB

DRAWING LIST

M-001	MECHANICAL LEGENDS, ABBREVIATIONS, NOTES AND SCHEDULE
M-101	MECHANICAL FIRST AND SECOND FLOOR NEW WORK
M-301	MECHANICAL DETAILS
M-401	MECHANICAL SPECIFICATIONS SHEET 1 OF 2
M-402	MECHANICAL SPECIFICATIONS SHEET 2 OF 2

DUCTWORK LEGEND

SYMBOL	ABBREV	DESCRIPTION
	N	NECK SIZE
	VD	VOLUME DAMPER
	MD	MOTORIZED DAMPER
	FC	FLEXIBLE CONNECTION
R D		RISE OR DROP IN THE DIRECTION OF AIR FLOW
		CEILING SUPPLY AIR DEVICE
		CEILING RETURN OR EXHAUST AIR DEVICE
	AL	ACOUSTICAL LINING SIDE CONNECTED SUPPLY, RETURN OR EXHAUST AIR DEVICE
	FD	FIRE DAMPER
	BS TS EQS	BOTTOM SPLIT SIZE TOP SPLIT SIZE EQUAL SPLIT
	TV	TURNING VANES
T		THERMOSTAT
OC		OCCUPANCY SENSOR

EQUIPMENT TAGS

TAG/NO	DESCRIPTION
EF-1	EXHAUST FAN

"X" PREFIX DENOTES EXISTING EQUIPMENT

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED BY PROFESSIONALS IN THE FIELD AND COMPLY WITH THE APPLICABLE REGULATIONS OF DEC/DEP, DOB, OSHA AND OWNER'S WORK RULES.
2. ALL NOTES PROVIDED IN THESE DOCUMENTS ARE PART OF THE CONTRACT AND CARRY EQUAL VALUE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND BE RESPONSIBLE TO ARRANGE AND SECURE ALL NECESSARY INSPECTIONS..
4. ONLY EXPERIENCED CONTRACTORS MAY BID OR PERFORM THE WORK INCLUDED IN THIS PROJECT. PROOF OF EXPERIENCE SHALL BE REQUIRED PRIOR TO ISSUANCE OF ANY CONTRACT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS AND ITEMS PERFORMED BY ANY SUBCONTRACTORS. PLANNED LIST OF SUBCONTRACTORS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL. NO SUBCONTRACTOR SHALL PERFORM WORK ONSITE WITHOUT A REPRESENTATIVE OF THE PRIME CONTRACTOR HOLDER, OR HIS DESIGNATED REPRESENTATIVE ON SITE.
6. THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, STANDARD FORM OF THE AMERICAN INSTITUTE OF ARCHITECTS, CURRENT EDITION, SHALL APPLY TO ALL WORK IN THIS CONTRACT, EXCEPT AS SPECIFICALLY MODIFIED BY THESE NOTES OR ADDITIONAL CONDITIONS IN THE CONTRACT DOCUMENTS.
7. PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL FURNISH A CONSTRUCTION SCHEDULE SHOWING THE CHRONOLOGICAL PHASES OF HIS WORK, AND ALL RELATED WORK FOR THE COMPLETION OF THE PROJECT. THIS SCHEDULE SHALL INDICATE ALL ORDERING LEAD TIME, LENGTH OF TIME FOR EACH PHASE, ITS START AND COMPLETION, WITH A PROJECTED COMPLETION DATE. INITIAL SCHEDULE SHALL BE SUBMITTED WITHIN TWO WEEKS AFTER THE NOTICE OF AWARD, AND UPDATED EVERY TWO MONTHS THEREAFTER.
8. ALL WORK PERFORMED BY THE CONTRACTOR/SUB-CONTRACTORS SHALL CONFORM TO THE REQUIREMENTS OF MUNICIPAL, LOCAL OR FEDERAL AND STATE LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.
9. CONTRACTOR SHALL SOLELY BE RESPONSIBLE FOR JOBSITE SAFETY AND SHALL ARRANGE WORK IN SUCH A MANNER TO PROVIDE FOR SAFE ACCESS FOR OWNER INSPECTION OF ALL WORK.
10. ANY FORCED STOPPAGE OF WORK BY THE OWNER OR AGENCY DUE TO NONCOMPLIANCE FOR SAFETY, ACCESS, MATERIAL OR WORK PRACTICE SHALL NOT BE CAUSE FOR CLAIM BY THE CONTRACTOR.
11. THE CONTRACT DOCUMENTS GENERALLY SHOW THE WORK REQUIRED TO COMPLETE THE SCOPE OF WORK REQUIRED, IT SHALL NOT BE RESPONSIBLE TO NOTE EVERY DETAIL OR PRODUCT THAT CAN BE REASONABLY ASSUMED AS COMMON KNOWLEDGE TO EXPERT AND EXPERIENCED CONTRACTORS IN THE FIELD.
12. THE TERMS "PROVIDE" OR "FURNISH AND INSTALL" SHALL INCLUDE ALL LABOR, MATERIALS, DEVICES, WIRING, RIGGING, SUPPORTS, DELIVERY ETC. THAT WOULD BE NECESSARY TO PROVIDE FOR A FULLY FUNCTIONAL DEVICE AS INDICATED.
13. ALL MATERIAL SHALL BE NEW. REBUILT OR REFURBISHED MATERIALS SHALL BE REJECTED.
14. ALL MATERIALS, TOOLS, TRUCKS ETC. SHALL BE STORED IN AREAS DESIGNATED BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCT STORAGE CONDITIONS AND SECURITY.
15. ALL WORK SHALL BE PERFORMED WITH MINIMAL INTERRUPTION TO THE OWNER. ANY WORK REQUIRING UTILITY SHUTDOWN, OR OTHER DISRUPTION SHALL NOT BE DONE WITHOUT OWNER APPROVAL. CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST 2 WEEKS IN ADVANCE OF ANY SUCH INTERRUPTION. AT TIME OF SHUTDOWN, COORDINATE WITH OWNER.
16. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS, SHOP DRAWINGS, AND PERFORMANCE INFORMATION ON ALL PRODUCTS FOR OWNER APPROVAL. ALL PRODUCTS INSTALLED WITHOUT APPROVAL SHALL BE AT RISK. OWNER APPROVAL SHALL BE LIMITED TO THAT THE PRODUCT COMPLIES WITH THE SPECIFICATIONS OR EXPECTED PERFORMANCE; ACTUAL PERFORMANCE TO THE LIMITS DEFINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. CONTRACTOR SHALL PROVIDE INSTRUCTION TO THE OWNER FOR ALL EQUIPMENT SUPPLIED AND INSTALLED UNDER THIS CONTRACT, INCLUDING ANY WORK PERFORMED BY SUBCONTRACTORS.
18. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM AND COORDINATE JOBSITE DIMENSIONS THAT AFFECT THE ERECTION OR OPERATION OF SYSTEMS, AS INTENDED BY THESE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ENSURE INSTALLED EQUIPMENT MAINTAINS ADEQUATE CLEARANCES FOR OPERATIONAL ACCESS AND SERVICE, AND HE SHALL MAINTAIN ANY CLEARANCES REQUIRED BY ALL APPLICABLE CODES.
19. THE CONTRACTOR SHALL MAKE ALL REQUIRED ARRANGEMENTS FOR DELIVERY OF EQUIPMENT AND/OR MATERIALS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE RULES AND REGULATIONS GOVERNING WORK ON THE PREMISES.
20. THE CONTRACTOR, HIS SUBCONTRACTORS, AND ANY OTHER CONTRACTOR INVOLVED IN THIS PROJECT SHALL TAKE NOTE THAT ANY COST CAUSED BY DEFECTIVE OR ILL-TIMED WORK, AS A RESULT OF, BUT NOT LIMITED TO INFERIOR WORKMANSHIP OR MATERIALS, IMPROPER SCHEDULING OR DELINQUENT ORDERING SHALL BE BORNE BY THE PARTY RESPONSIBLE THEREFORE.
21. ALL CONTRACTORS SHALL BE RESPONSIBLE TO REMOVE ALL RUBBISH AND WASTE MATERIALS. AT THE END OF EACH WORK DAY THE PROJECT SITE SHALL BE LEFT IN A SAFE AND BROOM CLEANED CONDITION.
22. CONTRACTORS SHALL SUBMIT ALL FABRICATION SHOP DRAWINGS AND FIXTURE CUTS TO OWNER FOR APPROVAL. ALL SHOP DRAWINGS AND CUTS SIGNED 'APPROVED' SHALL SUPERSEDE ORIGINATING DRAWINGS IN DESIGN APPEARANCE ONLY. CONTRACTORS SHALL ASSUME RESPONSIBILITY FOR ERRORS IN THEIR DRAWINGS.
23. CONTRACTORS SHALL PROPERLY PROTECT THE BUILDING AND ANY ADJOINING PROPERTY OR WORK AND ANY DAMAGE TO THE SAME CAUSED BY HIS WORK OR WORKMEN MUST BE MADE GOOD WITHOUT DELAY, PATCHING AND REPLACING OF DAMAGED WORK SHALL BE DONE BY THE CONTRACTOR WHO IS RESPONSIBLE FOR THE DAMAGE.
24. ONCE WORK HAS STARTED THE CONTRACTOR SHALL REMAIN ONSITE FOR THE DURATION UNTIL PROJECT COMPLETION. ANY ABSENCE FROM THE JOBSITE WITHOUT OWNER KNOWLEDGE SHALL BE CAUSE FOR DELAY AND THE CONTRACTOR SUBJECTED TO POSSIBLE BACK CHARGES.
25. ALL ACCEPTANCE TESTING SHALL BE WITNESSED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
26. THE CONTRACTOR SHALL MAINTAIN THE WORK AREA IN A STATE FREE FROM HAZARDS AND A NEAT AND CLEAN CONDITION AT THE END OF EACH WORKDAY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, FOLLOW SAFE WORKING PRACTICES, AND MAINTAIN THE SITE AND ADJACENT AREAS SAFE FOR WORKERS AND FACILITY EMPLOYEES. JOB BOX SAFETY MEETING SHALL BE HELD EVERY WEEK.
27. ALL MATERIALS, TOOLS, TRUCKS ETC. SHALL BE STORED IN AREAS DESIGNATED BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCT STORAGE CONDITIONS AND SECURITY. THE OWNER SHALL NOT BE RESPONSIBLE FOR ANY OF THE CONTRACTOR'S SHIPPING, DELIVERY OR OFFLOADING.
28. ALL WORK BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF FIVE YEARS FROM THE DATE OF ACCEPTANCE. THIS GUARANTEE SHALL INCLUDE ALL WORK PERFORMED BY ANY AND ALL OF HIS SUBCONTRACTORS. THE PRIME CONTRACTOR SHALL MAKE GOOD ON ALL SUBCONTRACTOR WORK DURING THIS PERIOD.
29. PREPARE AND FURNISH TO THE OWNER "AS-BUILT" DRAWINGS.
30. IT IS A VIOLATION OF STATE LAW TO FOR ANY PERSON OR PERSONS TO ALTER THESE PLANS. ANY MODIFICATIONS SHALL BE UNDER THE DIRECTION OF A LICENSED ENGINEER.

DEMOLITION NOTES:

1. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, STORAGE FACILITIES, SERVICES AND SUPERVISION NECESSARY FOR THE DEMOLITION WORK AS INDICATED ON DRAWINGS AND SPECIFIED HEREIN.
2. ALL EXISTING EQUIPMENT, MATERIALS AND WORK SHALL BE PROTECTED FROM DAMAGE DURING DEMOLITION. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE OCCURRING FROM HIS WORK.
3. ALL WORK SHALL BE EXECUTED IN AN ORDERLY AND CAREFUL MANNER WITH DUE CONSIDERATION FOR PUBLIC SAFETY AND IN CONFORMANCE WITH OSHA REGULATIONS.
4. CONTRACTOR SHALL PROVIDE BARRIERS TO PREVENT DUST, ODORS, DIRT AND DEBRIS FROM MIGRATING TO AREAS NOT AFFECTED BY THIS WORK.
5. REMOVAL OF ANY MATERIAL AND EQUIPMENT SHALL INCLUDE ALL ASSOCIATED ITEMS SUCH AS FASTENERS, SUPPORTS, CONDUIT, FLASHING, ADHESIVE, ETC.
6. REMOVE DEBRIS AS IT ACCUMULATES. DO NOT STORE OR PERMIT DEBRIS TO ACCUMULATE ON SITE. IF THE CONTRACTOR FAILS TO REMOVE DEBRIS PROMPTLY OR PROPERLY, THE OWNER SHALL REMOVE IT AT THE CONTRACTOR'S EXPENSE.
7. EXISTING EQUIPMENT OR MATERIALS NOT SHOWN TO BE RE-USED BY OWNER, OR NOT SHOWN ON THE DRAWINGS TO BE RETAINED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PREMISES.
8. PRIOR TO SUBMISSION OF BID, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE EXISTING CONDITIONS AND SHALL INCLUDE ALL COSTS FOR REMOVALS IN THE CONTRACT. THESE COSTS SHALL INCLUDE WORK DESCRIBED HEREIN AND/OR SHOWN ON THE DRAWINGS WITH ALLOWANCES FOR UNFORESEEN FIELD CONDITIONS. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN SPECIFIC CASES CONSIDERED JUSTIFIABLE BY THE ENGINEER.
9. TAKE POSSESSION AND REMOVE FROM THE PREMISES ALL ABANDONED MATERIALS AND EQUIPMENT UNLESS OTHERWISE REQUESTED BY THE OWNER, IN WHICH CASE REMOVE WITHOUT DAMAGE ALL SUCH EQUIPMENT AND DELIVER TO OWNER WITHIN BUILDING AT LOCATION DESIGNATED BY THE OWNER.
10. ALL CHARGES ASSOCIATED WITH TESTING, FILING, DISPOSAL, PREPARATION AND SUBMISSION OF ALL REQUIRED DOCUMENTATION SHALL BE INCLUDED IN THE CONTRACTOR'S BID. ALL REQUIRED FORMS, RECORDS, TEST, DISPOSAL AND TRANSPORTATION COSTS AND THE LIKE SHALL BE INCLUDED IN THE CONTRACTOR'S PROPOSAL AND SUBMITTED TO OWNER. NO ADDITIONAL COSTS SHALL BE PAID TO THE CONTRACTOR BECAUSE OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE ABOVE.
11. CONTRACTOR TO CAP ALL DUCTWORK AND PIPING WHICH IS TO BE ABANDONED IN PLACE.
12. ALL DUCTWORK IS SHOWN DIAGRAMMATICALLY, CONTRACTOR TO FIELD VERIFY.

DUCTWORK NOTES

1. THE MATERIALS, THICKNESS AND CONSTRUCTION OF SHEET METAL DUCTS SHALL PROVIDE STRUCTURAL STRENGTH AND DURABILITY. DUCTS SHALL BE CONSTRUCTED, BRACED AND REINFORCED IN ACCORDANCE WITH LOW PRESSURE AND HIGH PRESSURE DUCT STANDARDS OF THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA), LATEST EDITION IN PRINT OR IN ACCORDANCE WITH THE FUNDAMENTALS VOLUME BOOK OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE), LATEST EDITION IN PRINT.
2. DUCTS SHALL BE SUBSTANTIALLY SUPPORTED. HANGERS AND BRACKETS FOR SUPPORTING DUCTS SHALL BE OF METAL HANGERS SHALL HAVE SUFFICIENT STRENGTH AND DURABILITY AND SUFFICIENT RESISTANCE TO THE CORROSIVE EFFECTS OF THE ATMOSPHERE TO WHICH THEY WILL BE EXPOSED, TO PROPERLY AND SAFELY SUPPORT THE DUCTWORK. HANGERS SHALL NOT BE USED IN DIRECT CONTACT WITH A DISSIMILAR METAL THAT WOULD CAUSE GALVANIC ACTION IN THE HANGER, DUCT, FASTENINGS OR STRUCTURE.
3. HANGERS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS:
   a. HANGERS SHALL BE FASTENED TO THE SIDES OF DUCT. FOR DUCTS OVER 48 INCHES WIDE, HANGERS SHALL TURN UNDER DUCT AT LEAST TWO INCHES AND SHALL BE FASTENED TO THE BOTTOM AS WELL AS TO THE SIDES.
   b. FOR DUCTS WITH A CROSS-SECTIONAL AREA OF TWO SQUARE FEET OR LESS, HANGERS SHALL BE CONSTRUCTED OF AT LEAST ONE INCH BY 1/16 INCH STEEL STRAP.
   c. FOR DUCTS WITH A CROSS SECTIONAL AREA OVER TWO SQUARE FEET, HANGERS SHALL BE CONSTRUCTED OF THREADED STEEL ROD (MINIMUM 1/2"-DIAMETER) WITH STEEL SINGLE TRAPEZE SUPPORTS.
4. DUCTS AND ALL PARTS OF THE DUCT SYSTEM SHALL BE SUBSTANTIALLY SUPPORTED AND SECURELY FASTENED TO THE STRUCTURAL MEMBERS OF THE BUILDING WITH APPROVED DEVICES OF NONCOMBUSTIBLE MATERIAL DESIGNED TO CARRY THE REQUIRED LOADS. THE USE OF EXPANSION BOLTS IN CINDER CONCRETE IS PROHIBITED. CONNECTIONS SHALL NOT IMPAIR THE EFFECTIVENESS OF THE FIRE PROTECTION OF STRUCTURAL MEMBERS.
5. DUCTS SHALL NOT BE HUNG FROM OR SUPPORTED BY SUSPENDED CEILINGS.

FAN SCHEDULE

TAG	SERVICE	LOCATION	TYPE	AIR FLOW, CFM	ESP, IN. WG	DRIVE TYPE	SOUND DATA, SONES	MOTOR DATA			MANUFACTURER	MODEL NO.	WEIGHT, LBS	REMARKS
								HP (W)	RPM	V/PH/HZ				
EF/1	BATHROOM	FIRST FLOOR	CEILING	50	0.5	DIRECT	2	14.4	828	208/60/3	GREENHECK	SP-AP0511W	50	SEE 1 THROUGH 6
EF/2	BATHROOM	FIRST FLOOR	CEILING	50	0.5	DIRECT	2	14.4	828	208/60/3	GREENHECK	SP-AP0511W	50	SEE 1 THROUGH 6

REMARKS

1. PROVIDE SHOP DRAWINGS INCLUDING FAN CURVES.
2. FANS SHALL BE AMCA RATED FOR SOUND AND PERFORMANCE.
3. FURNISH AND INSTALL VARI-GREEN EC MOTOR WITH VARI-GREEN DAIL CONTROL MOUNTED AND WIRED ON EXTERIOR OF FAN HOUSING WITH HUMIDITY CONTROL. PROVIDE WIRED AND MOUNTED JUNCTION BOX.
4. PROVIDE BACKDRAFT DAMPER.
5. PROVIDE (5) YEAR WARRANTY ON PARTS AND LABOR.
6. ALTERNATE MANUFACTURERS: TWIN CITY FANS, NEW YORK BLOWER, COOK.

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516 484 1020 Lizardos.com
Lizardos Engineering Associates D.P.C.

NO.	REVISION	DATE
1	ISSUED FOR BID	03/17-2023

SEAL:

CLIENT:
SUNY PURCHASE COLLEGE

PROJECT TITLE:
SUNY PURCHASE APARTMENT
REPAIR ALUMNI VILLAGE
INTERIOR RENOVATIONS OF THE
COMMONS APARTMENTS
10.1 (ADA COMPLIANT) & 10.3

DRAWING TITLE:
MECHANICAL LEGENDS, ABBREVIATIONS, NOTES AND SCHEDULE

DRAWN BY: SE	SCALE: AS NOTED
DESIGNED BY: ABD	DATE: 11-29-22
CHECKED BY: ABD	PROJECT NO: 10652
PLOT DATE/TIME: 3/17/2023 3:52:03 PM	
DRAWING NO: M-001.00	
SHEET: 1 OF 5	

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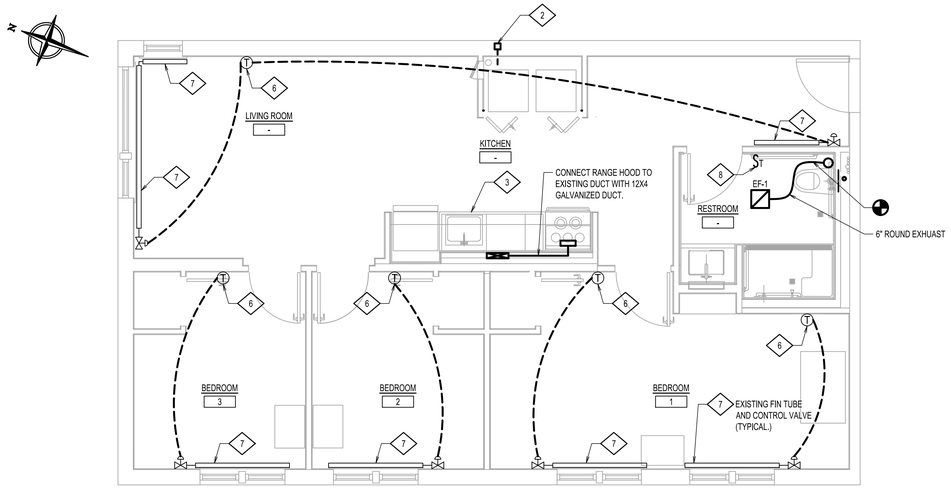
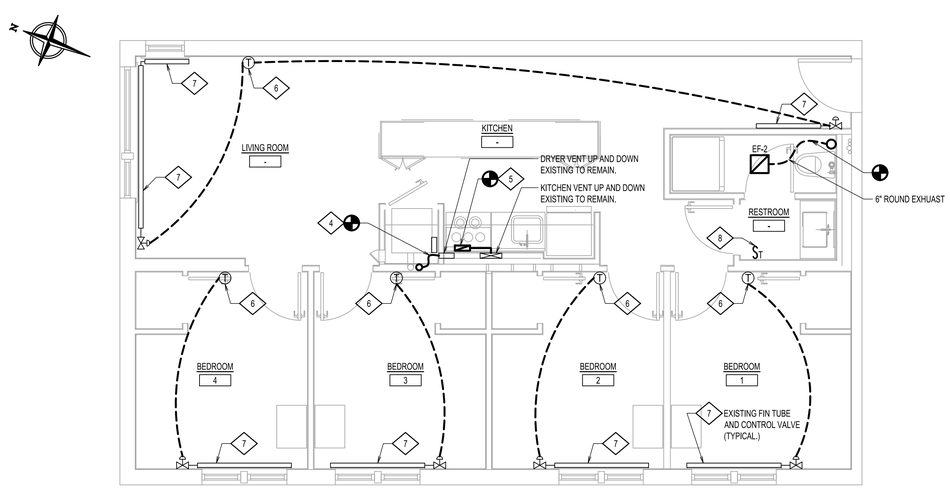
NOTES

1. REFER TO DRAWING M-001 FOR MECHANICAL LEGENDS, ABBREVIATIONS, NOTES AND SCHEDULE.
2. PROVIDE NEW 6" SIDE WALL PAINTED DRYER VENT WITH BACK DRAFT DAMPER WITH 6" RIGID GALVANIZED CONNECTION TO DRYER.
3. CONNECT NEW KITCHEN EXHAUST HOOD TO EXISTING DUCT.
4. CONNECT NEW ELECTRIC DRYER TO EXISTING DRYER VENT WITH 6" RIGID GALVANIZED DUCT.
5. CONNECT NEW KITCHEN EXHAUST HOOD TO EXISTING DUCT.
6. PROVIDE HONEYWELL 7 DAY PROGRAMMABLE HEATING ONLY THERMOSTAT. CONFIRM CONTROL VALVE VOLTAGE. THERMOSTAT TO BE TH115-A-120S OR APPROVED EQUAL.
7. REMOUNT EXISTING ENCLOSURES FOR EXISTING FIN TUBE.
8. WALL SWITCH FOR EXHAUST FAN. REFER TO ELECTRICAL DRAWINGS FOR INFORMATION. DRYER AND HOOD EXHAUST SHALL HAVE SMOOTH INNER WALLS AND BE AIR TIGHT.



MECHANICAL FIRST FLOOR NEW WORK
SCALE: 1/4" = 1'-0"



MECHANICAL SECOND FLOOR NEW WORK
SCALE: 1/4" = 1'-0"

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DRAWN BY: SE	SCALE: AS NOTED
DESIGNED BY: ABD	DATE: 11-29-22
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PLOT DATE/TIME: 3/17/2023 3:52:16 PM	

DRAWING NO:
M-101.00

SHEET: 2 OF 5

23 00 01 GENERAL STANDARDS

A. GENERAL:

1. NOT WITHSTANDING ANYTHING TO THE CONTRARY CONTAINED WITHIN THE CONTRACT DOCUMENTS, ALL MECHANICAL WORK UNDER THIS PROJECT SHALL BE IN ACCORDANCE WITH THE CONTRACT DRAWINGS, SPECIFICATIONS, DETAILS, GENERAL NOTES, ADDENDA, ETC. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY PRIOR TO SUBMITTING PROPOSAL.

2. EACH BIDDER SUBMITTING HIS PROPOSAL SHALL EXAMINE ALL CONTRACT DOCUMENTS INCLUDING DRAWINGS, SPECIFICATIONS, ADDENDA, ETC. RELATING TO THIS WORK AND VERIFY ALL GOVERNING CONDITIONS AT THE JOB SITE AND SHALL BECOME FULLY INFORMED AS TO THE EXTENT AND CHARACTER FOR OF THE WORK REQUIRED AND ITS RELATION TO OTHER WORK. NO CONSIDERATION WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED OR WORK TO BE DONE, IT BEING UNDERSTOOD THAT THE SUBMISSION OF A PROPOSAL IS AN AGREEMENT TO ALL ITEMS AND CONDITIONS REFERRED TO HEREIN OR INDICATED ON THE ACCOMPANYING DRAWINGS.

3. ALL DUCTWORK, PIPING, ETC. INDICATED ON DRAWINGS ARE DIAGRAMMATIC AND DUE TO CLARITY ISSUES, ETC., THE CONTRACT DOCUMENTS MAY NOT SHOW ALL PIPING AND DUCTWORK RUNS, OFFSETS, DROPPING AND RISING OF RUNS, ETC. AS MAY BE NECESSARY.

4. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROLS, FOR ALL EQUIPMENT SPECIFIED IN THE CONTRACT DOCUMENTS AS REQUIRED AND WHATEVER ADDITIONAL TASKS AS MAY BE REQUIRED FOR THE SPECIFIED EQUIPMENT AND SYSTEMS TO BE COMPLETE IN EVERY RESPECT AND FULLY FUNCTIONAL. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER, PRIOR TO SUBMITTING A PROPOSAL.

5. WHERE DUE TO UNION REGULATIONS OR TRADE AGREEMENTS, IF ANY OF THE WORK SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN IS NOT CONSIDERED "WORK INCLUDED", THIS CONTRACTOR SHALL SUB-CONTRACT THE WORK IN QUESTION, BUT THIS CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE COMPLETE INSTALLATION.

B. STANDARDS AND CODES:

1. BUILDING CODE OF NEW YORK STATE
2. EXISTING BUILDING CODE OF NEW YORK STATE
3. RESIDENTIAL CODE OF NEW YORK STATE
4. MECHANICAL CODE OF NEW YORK STATE
5. FUEL GAS CODE OF NEW YORK STATE
6. PLUMBING CODE NEW YORK STATE
7. FIRE CODE OF NEW YORK STATE
8. ENERGY CONSERVATION AND CONSTRUCTION CODE OF NEW YORK STATE
9. NATIONAL ELECTRIC CODE
10. FEDERAL, STATE AND LOCAL CODES HAVING JURISDICTION
11. ASHRAE STANDARDS AS APPLICABLE
12. SMACNA STANDARDS AS APPLICABLE
13. NFPA STANDARDS AS APPLICABLE
14. BUILDING STANDARDS AND REQUIREMENTS

C. EXAMINATION OF EXISTING CONDITIONS:

1. BEFORE SUBMITTING PROPOSALS BIDDERS SHALL VISIT THE SITE AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AFFECTED BY THIS WORK SO AS TO FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH EXAMINATION BEEN MADE, AS DETERMINED BY THE ARCHITECT, WILL

NOT BE RECOGNIZED.

D. PERMITS AND CERTIFICATES:

1. THIS CONTRACTOR SHALL GIVE NECESSARY NOTICES, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENTS HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK, AND PAY ALL FEES REQUIRED.

E. SUBMITTALS:

1. SUBMIT COORDINATED SHOP DRAWINGS, (CONTRACTOR SHALL SUBMITTING SHOP DRAWINGS ELECTRONICALLY IN PDF FORMAT, AFTER ENGINEERS REVIEW ONE COPY WILL BE RETURNED TO YOU IN PDF FORMAT). UNLESS OTHER WISE NOTED. MATERIAL AND EQUIPMENT REQUIRING SHOP DRAWING SUBMITTALS SHALL INCLUDE BUT NOT BE LIMITED TO, ALL PIPING MATERIALS AND ACCESSORIES, HANGERS AND SUPPORT INCLUDING VIBRATION ISOLATION EQUIPMENT, SHEET METAL STANDARDS, INSULATION (ALL TYPES), DAMPERS (ALL TYPES), ALL DUCTWORK ACCESSORIES, GRILLES, REGISTERS AND DIFFUSERS, INSTRUMENTATION, CONTROL DIAGRAMS AND SEQUENCE OF OPERATION, COORDINATED LAYOUT DRAWINGS, AS-BUILT DRAWINGS, WARRANTIES AND GUARANTEES, CERTIFICATIONS, BALANCING AND TEST REPORTS, AND OPERATING AND MAINTENANCE MANUALS.

2. SHOP DRAWINGS SHOWING MANUFACTURER'S PRODUCT DATA SHALL CONTAIN DETAILED DIMENSIONAL DRAWINGS, ACCURATE AND COMPLETE DESCRIPTION OF MATERIALS OF CONSTRUCTION, MANUFACTURER'S PUBLISHED PERFORMANCE CHARACTERISTICS AND CAPACITY RATINGS (PERFORMANCE DATA, ALONE, IS NOT ACCEPTABLE), ELECTRICAL REQUIREMENTS AND WIRING DIAGRAMS. DRAWINGS SHALL CLEARLY INDICATE LOCATION (TERMINAL BLOCK OR WIRE NUMBER), VOLTAGE AND FUNCTION FOR ALL FIELD TERMINATIONS, AND OTHER INFORMATION NECESSARY TO DEMONSTRATE COMPLIANCE WITH ALL REQUIREMENTS OF CONTRACT DOCUMENTS.

3. FURNISH SHOP DRAWING SUBMITTALS SHOWING DETAILS OF PIPING CONNECTIONS TO ALL HVAC EQUIPMENT. IF CONNECTION DETAILS ARE NOT SUBMITTED AND CONNECTIONS ARE FOUND TO BE INSTALLED INCORRECTLY IN THE FIELD, THIS CONTRACTOR SHALL REINSTALL THEM WITHIN THE ORIGINAL CONTRACT PRICE.

4. ALL PIPING, DUCTWORK AND EQUIPMENT LAYOUT SHALL BE SUBMITTED ON SCALE 3/8" = 1'-0" DRAWINGS, AND SHALL BE COORDINATED AND STAMPED BY ALL TRADES. SHOP DRAWINGS SHALL SHOW LOCATION OF ALL EXISTING AND NEW EQUIPMENT, EXISTING WORK AND NEW WORK.

5. SUBMIT COMPACT DISC (CD) "AS-BUILT" RECORD DRAWINGS FOR BUILDING FILES AT COMPLETION OF THE PROJECT, TO INCLUDE DUCTWORK, PIPING, AND EQUIPMENT DRAWINGS. SCALE 3/8"=1'-0".

F. SUBSTITUTIONS:

1. CONTRACTOR'S SUBSTITUTION OF PRODUCTS OTHER THAN THOSE LISTED CAN BE SUBMITTED; HOWEVER, SUBMITTALS WITH MANUFACTURERS NOT ACCEPTABLE TO CONSULTANTS MAY BE REJECTED WITHOUT COMMENT.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS FOR PIPING, DUCTWORK, CONTROLS, ACCESSORIES, APPURTENANCES, ETC., REQUIRED FOR THE APPROVED SUBSTITUTED EQUIPMENT.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS FOR CHANGES TO OTHER TRADES SUCH AS ELECTRICAL, ETC. REQUIRED FOR THE APPROVED SUBSTITUTED EQUIPMENT.

4. ANY OWNER CONSULTANT COSTS MADE NECESSARY BY CONTRACTOR REVISIONS OR SUBSTITUTIONS SHALL BE BORNE TO THE CONTRACTOR. THIS INCLUDES ADDITIONAL FILING, EXPEDITING, PRINTING AND ENGINEERING COSTS.

G. SPECIAL REQUIREMENTS:

1. IDENTIFY EQUIPMENT CONTROLLS AND SENSORS WITH LAMINATED PLASTIC NAMEPLATES EQUAL TO SETON NAME PLATE CORP., STYLE M4564 ENGRAVED SETONPLY NAMEPLATE.

H. SCAFFOLDING AND RIGGING:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL SCAFFOLDING, RIGGING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY ONTO THE PREMISES OF ALL MATERIALS FURNISHED AND/OR INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS AND REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.

I. CLEAN UP:

1. CONTRACTOR SHALL MAINTAIN CONSTRUCTION SITE IN A CLEAN AND ORDERLY CONDITION AND SHALL REMOVE ALL TRASH FROM THE PREMISES ON A DAILY BASIS AND PRIOR TO ACCEPTANCE OF THE WORK, AS DIRECTED BY THE OWNER.

J. GUARANTEE:

1. THE CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK INSTALLED WILL BE FREE FROM ANY AND ALL DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK. THIS GUARANTEE SHALL INCLUDE ALL WORK BY ANY AND ALL OF THEIR SUBCONTRACTORS. THE PRIME CONTRACTOR SHALL MAKE GOOD ON ALL SUBCONTRACT WORK DURRING THIS PERIOD.

23 00 02 SCOPE OF WORK

A. WORK INCLUDED

1. WORK UNDER THIS DIVISION SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE THE MECHANICAL WORK SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

2. PREPARE AND SUBMIT COORDINATED SHOP DRAWINGS, DIAGRAMS AND ILLUSTRATIONS TO THE OWNER.

   a. WHERE CONFLICTS OCCUR, REQUEST CLARIFICATION THROUGH THE ENGINEER. COORDINATE ALL WORK OF THIS DIVISION WITH THE WORK OF ALL OTHER TRADES.

3. THE MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH WORK OF ALL OTHER TRADES AS REQUIRED.

   a. MECHANICAL CONTRACTOR SHALL COORDINATE ALL WORK TO AVOID INSTALLATION OF ALL PIPING, DUCTWORK, EQUIPMENT, ETC. ABOVE ELECTRICAL SWITCHBOARDS, PANELBOARDS, DISTRIBUTION BOARDS, MOTOR CONTROL CENTERS, ETC. PER NEC 110.26.

4. SUBMIT MANUFACTURER'S SUBMITTAL SHEETS AS SPECIFIED WITHIN THE CONTRACT DOCUMENTS.

   a. HIGHLIGHT ALL APPLICABLE MATERIAL AND DATA.

   b. NON-APPLICABLE MATERIAL AND DATA SHALL BE STRUCK PRIOR TO SUBMITTAL.

5. PROCURE ALL NECESSARY PERMITS AND APPROVALS AND PAY ALL REQUIRED FEES AND CHARGES IN CONNECTION WITH THE WORK OF THIS DIVISION.

6. ARRANGE FOR ALL INSPECTIONS AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.

   a. FURNISH ALL AFFIDAVITS OF INSTALLATION OF EQUIPMENT AND COMPLETION OF WORK AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION

7. PROTECT, TEST, BALANCE, CLEAN, ADJUST AND GUARANTEE ALL OF THE WORK OF THIS DIVISION TO OPERATE SAFELY, PROPERLY AND CONTINUOUSLY.

8. SUBMIT AS-BUILT DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTIONS, AND MANUALS.

9. FURNISH AND INSTALL HANGERS, SUPPORTS, PIPING, DUCTWORK, EQUIPMENT AND CONDUIT INSTALLED UNDER THE WORK OF THIS DIVISION.

10. FURNISH AND INSTALL INSULATION FOR EQUIPMENT, PIPING, DUCTWORK CONDUIT AND ACCESSORIES INSTALLED UNDER THE WORK OF THIS DIVISION.

    a. CONTRACTOR SHALL REPAIR ALL EXISTING EQUIPMENT, PIPE AND DUCT INSULATION DAMAGED OR REMOVED DUE TO WORK PERFORMED UNDER THIS CONTRACT.

11. MAINTAIN ALL EXISTING MECHANICAL SERVICES IN THE BUILDING AREAS NOT AFFECTED BY THE ALTERATIONS DURING THE PROGRESS OF THE WORK, INCLUDING PROVIDING ALL TEMPORARY PIPING, CAPS, PROTECTIVE DEVICES, CONNECTIONS AND EQUIPMENT REQUIRED.

12. DEMOLISH AND REMOVE EXISTING DUCTWORK, EQUIPMENT AND ACCESSORIES AS SHOWN ON THE DRAWINGS AND ANY OTHER ABANDONED ITEMS OR EQUIPMENT FOUND EVEN THOUGH NOT SHOWN ON THE DRAWINGS.

13. FURNISH AND INSTALL ALL EQUIPMENT, COMPONENTS AND APPURTENANCES FOR EXHAUST AIR SYSTEMS INCLUDING VOLUME DAMPERS, AIR OUTLETS, AND DUCTWORK.

14. FURNISH AND INSTALL EXHAUST AIR DUCT SYSTEMS WITH AIR DEVICES, MANUAL DAMPERS AND ACCESSORIES.

15. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROLS, FOR ALL EQUIPMENT SPECIFIED IN THE CONTRACT DOCUMENTS AS REQUIRED AND WHATEVER ADDITIONAL TASKS AS MAY BE REQUIRED FOR THE SPECIFIED EQUIPMENT AND SYSTEMS TO BE COMPLETE IN EVERY RESPECT AND FULLY FUNCTIONAL. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER, PRIOR TO SUBMITTING A PROPOSAL. THE CONTROLS SHALL INCLUDE, BUT ARE NOT LIMITED TO:

    a. LINE VOLTAGE THERMOSTAT
    b. CONDUIT
    c. CONTROL WIRING

        1) ALL LINE VOLTAGE AND LOW VOLTAGE CONTROL WIRING SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

            a) ALL POWER REQUIRED FOR INDIVIDUAL STAND-ALONE CONTROLS INCLUDING: CONTROLLERS, CONTROL VALVES, DAMPER ACTUATORS, ETC. SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR INCLUDING ALL REQUIRED TRANSFORMERS, ETC.

            b) ALL EXPOSED CONDUIT SHALL BE RUN IN EMT BY MECHANCIAL OR SUBCONTRACTORS.

            c) ALL CONDUIT IN FREEZERS SHALL BE STAINLESS STEEL.

            d) CONDUIT IN INACCESIBLE SPACES ABOVE FREEZER AND CEILINGS MAY BE INSTALLED IN GREENFIELD.

16. PROVIDE BALANCING OF AIR SIDE SYSTEMS SPECIFIED HEREIN.

    a. SUPPLY ALL BALANCING EQUIPMENT ETC. AS NECESSARY FOR THE AIRSIDE AND WATERSIDE SYSTEMS

    b. FURNISH COMPLETE REPORTS OF BALANCING

23 05 00 COMMON WORK FOR HVAC SYSTEMS

A. HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

1. PIPE HANGERS AND SUPPORTS SHALL BE WROUGHT IRON ASTM B31.1 EQUAL TO "GRINNELL." HANGER RODS SHALL BE GALVANIZED STEEL, ASTM A575 EQUAL TO GRINNEL.

2. FURNISH AND INSTALL PIPE STANDS, SUPPORTS, HANGERS AND OTHER SUPPORTING APPLIANCES AS NECESSARY TO SUPPORT WORK REQUIRED BY CONTRACT DOCUMENTS.

3. SELECT AND SIZE PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH THE LATEST EDITION OF MSS MANUALS. SP-58, SP-69 AND SP-89.

4. FURNISH AND INSTALL VIBRATION ISOLATION HANGERS AND SUPPORT EQUAL TO AMBER BOOTH TYPE BSR FOR ALL PIPING OVER ONE INCH DIAMETER IN THE EQUIPMENT ROOMS AND FOR 50 FEET FROM THE EQUIPMENT CONNECTION.

5. SUBMIT SHOP DRAWINGS.

6. ALL HANGERS SHALL BE ICC-ES CERTIFIED.

B. HANGERS AND SUPPORTS FOR HVAC DUCTWORK AND EQUIPMENT

1. STANDARDS

   a. LATEST SMACNA HVAC DUCT CONSTRUCTION STANDARDS: CHAPTER 4 – HANGERS & SUPPORTS

2. GENERAL

   a. FURNISH AND INSTALL HANGING AND SUPPORT SYSTEMS FOR SHEET METAL DUCTS AS SPECIFIED IN THE LATEST SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

   b. FURNISH AND INSTALL HANGING AND SUPPORT SYSTEMS FOR SHEET METAL DUCTS INSTALLED IN NEW YORK OF THE TYPE AND SIZE LISTED IN THE SCHEDULES

   c. WALL AND FLOOR FIRE STOP: INTUMESCENT FIRE BARRIER FOR ALL DUCTWORK, INSULATED AND UNINSULATED.ASTM E-119, ASTM E-814, UL 1479, NFPA 101, NEC. MANUFACTURER & MODEL NO. 3M, CAULK: CP 25 NS, CP 25 S/L, WRAP/STRIP: FS-195, COMPOSITE SHEET: CS-195

3. EXECUTION

   a. SUPPORT EACH DUCT INDEPENDENTLY.

   b. SUPPORT DUCTS USING METAL HANGERS AND BRACKETS. HANGERS SHALL HAVE SUFFICIENT STRENGTH AND DURABILITY AND SUFFICIENT RESISTANCE TO THE CORROSIVE EFFECTS OF THE ATMOSPHERE TO WHICH THEY WILL BE EXPOSED, AND TO PROPERLY AND SAFELY SUPPORT THE DUCTWORK. HANGERS SHALL NOT BE USED IN DIRECT CONTACT WITH A DISSIMILAR METAL THAT WOULD CAUSE GALVANIC ACTION IN THE HANGER, DUCT, FASTENINGS OR STRUCTURE.

   c. SUPPORT SUBSTANTIALLY AND SECURELY FASTEN ALL DUCTS AND ALL PARTS OF THE DUCT SYSTEM TO THE STRUCTURAL MEMBERS OF THE BUILDING, WITH APPROVED DEVICES OF NONCOMBUSTIBLE MATERIAL DESIGNED TO CARRY THE REQUIRED LOADS. THE USE OF EXPANSION BOLTS IN CINDER CONCRETE IS PROHIBITED. CONNECTIONS SHALL NOT IMPAIR THE EFFECTIVENESS OF THE FIRE PROTECTION OF STRUCTURAL MEMBERS.

   d. INSTALL SLEEVES AND SEAL ANNULAR SPACE BETWEEN SLEEVE AND BARE DUCT OR INSULATED DUCT, WHERE DUCTS PASS THROUGH FLOORS AND WALLS, WITH NON-COMBUSTIBLE MATERIAL TO PREVENT THE PASSAGE OF FLAME AND SMOKE.

4. DUCT HANGER AND SUPPORTS (NEW YORK)

   a. DUCT CROSS-SECTIONAL AREA, SQ. FT: 2 OR LESS: MIN. STRAP SIZE, IN: 1 X 1/16, MAX. HANGER SPACING, FT: 6

23 09 00 INSTRUMENTATION AND CONTROL FOR HVAC

A. INSTRUMENTATION AND CONTROL DEVICES FOR HVAC

1. AUTOMATIC CONTROLS: THE AUTOMATIC CONTROLS SHALL BE STAND ALONE.

2. THE INTENT OF THIS SECTION IS TO DESCRIBE THE FUNCTIONAL CONTROL OF ALL MECHANICAL EQUIPMENT, SYSTEMS, AND DEVICES OF THE PROJECT. THE CONTRACTOR SHALL DESIGN THE AUTOMATIC CONTROL SYSTEM AND SHALL FURNISH AND INSTALL AS REQUIRED ALL NECESSARY CONTROL COMPONENTS INCLUDING, BUT NOT LIMITED TO: CONTROL WIRING, CONTACTORS, RELAYS, THERMOSTATS, ELECTRICAL TIMERS ETC., TO ACHIEVE THE DESIRED OPERATION FOR MECHANICAL SYSTEMS

3. PROVIDE ON-THE-JOB TRAINING TO THE OWNER'S OPERATING PERSONNEL.

4. FURNISH SIX (6) COPIES OF A COMPLETE INSTRUCTION MANUAL INCLUDING OPERATING INSTRUCTIONS, AS-BUILT DRAWINGS, SPECIFICATION DATA SHEET AND MAINTENANCE SCHEDULE.

5. INSTALL THE ELECTRICAL COMPONENTS FOR THE AUTOMATIC CONTROLS IN ACCORDANCE WITH:

   a. THE LATEST NATIONAL ELECTRIC CODE (NEC).

6. ALL CONTROL WIRING IN EXPOSED AREAS TO BE WITHIN METAL CONDUIT

7. SUBMITTALS

   a. TECHNICAL BULLETINS AND CATALOG DATA FOR ALL EQUIPMENT AND SYSTEM COMPONENTS. CLEARLY IDENTIFY, BY USE OF SYMBOL OR TAG NUMBER, THE SERVICE OF EACH ITEM. ALL IRRELEVANT INFORMATION SHALL BE MARKED OUT LEAVING ONLY PERTINENT DATA.

   b. SHOP DRAWINGS

   c. SYSTEM BLOCK DIAGRAM SHOWING QUANTITY AND LOCATION OF CPU, OPERATOR CONSOLE EQUIPMENT, DDCS, FIELD EQUIPMENT PANELS AND MAJOR SYSTEM COMPONENTS.

   d. CONTROL DIAGRAMS FOR ALL SYSTEMS CONTROLLED. CONTROLS SHALL BE SHOWN ON SYSTEM FLOW DIAGRAMS.

   e. POWER WIRING DIAGRAMS AND ELECTRICAL REQUIREMENTS.

   f. DETAILED BILL OF MATERIALS.

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NO.	REVISION	DATE
1	ISSUED FOR BID	03/17-2023

SEAL:

CLIENT:
SUNY PURCHASE COLLEGE

PROJECT TITLE:
SUNY PURCHASE APARTMENT
REPAIR ALUMNI VILLAGE
INTERIOR RENOVATIONS OF THE
COMMONS APARTMENTS
10.1 (ADA COMPLIANT) & 10.3

DRAWING TITLE:
MECHANICAL DETAILS

DRAWN BY:	SE	SCALE:	AS NOTED
DESIGNED BY:	ABD	DATE:	11-29-22
CHECKED BY:	ABD	PROJECT NO:	10652
PLOT DATE/TIME:	3/17/2023 3:52:39 PM		

DRAWING NO:
M-301.00

SHEET: 3 OF 5

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23 00 01 GENERAL STANDARDS

A. GENERAL:

1. NOT WITHSTANDING ANYTHING TO THE CONTRARY CONTAINED WITHIN THE CONTRACT DOCUMENTS, ALL MECHANICAL WORK UNDER THIS PROJECT SHALL BE IN ACCORDANCE WITH THE CONTRACT DRAWINGS, SPECIFICATIONS, DETAILS, GENERAL NOTES, ADDENDA, ETC. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY PRIOR TO SUBMITTING PROPOSAL.

2. EACH BIDDER SUBMITTING HIS PROPOSAL SHALL EXAMINE ALL CONTRACT DOCUMENTS INCLUDING DRAWINGS, SPECIFICATIONS, ADDENDA, ETC. RELATING TO THIS WORK AND VERIFY ALL GOVERNING CONDITIONS AT THE JOB SITE AND SHALL BECOME FULLY INFORMED AS TO THE EXTENT AND CHARACTER FOR OF THE WORK REQUIRED AND ITS RELATION TO OTHER WORK. NO CONSIDERATION WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED OR WORK TO BE DONE, IT BEING UNDERSTOOD THAT THE SUBMISSION OF A PROPOSAL IS AN AGREEMENT TO ALL ITEMS AND CONDITIONS REFERRED TO HEREIN OR INDICATED ON THE ACCOMPANYING DRAWINGS.

3. ALL DUCTWORK, PIPING, ETC. INDICATED ON DRAWINGS ARE DIAGRAMMATIC AND DUE TO CLARITY ISSUES, ETC., THE CONTRACT DOCUMENTS MAY NOT SHOW ALL PIPING AND DUCTWORK RUNS, OFFSETS, DROPPING AND RISING OF RUNS, ETC. AS MAY BE NECESSARY.

4. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROLS, FOR ALL EQUIPMENT SPECIFIED IN THE CONTRACT DOCUMENTS AS REQUIRED AND WHATEVER ADDITIONAL TASKS AS MAY BE REQUIRED FOR THE SPECIFIED EQUIPMENT AND SYSTEMS TO BE COMPLETE IN EVERY RESPECT AND FULLY FUNCTIONAL. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER, PRIOR TO SUBMITTING A PROPOSAL.

5. WHERE DUE TO UNION REGULATIONS OR TRADE AGREEMENTS, IF ANY OF THE WORK SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN IS NOT CONSIDERED "WORK INCLUDED", THIS CONTRACTOR SHALL SUB-CONTRACT THE WORK IN QUESTION, BUT THIS CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE COMPLETE INSTALLATION.

B. STANDARDS AND CODES:

1. BUILDING CODE OF NEW YORK STATE
2. EXISTING BUILDING CODE OF NEW YORK STATE
3. RESIDENTIAL CODE OF NEW YORK STATE
4. MECHANICAL CODE OF NEW YORK STATE
5. FUEL GAS CODE OF NEW YORK STATE
6. PLUMBING CODE NEW YORK STATE
7. FIRE CODE OF NEW YORK STATE
8. ENERGY CONSERVATION AND CONSTRUCTION CODE OF NEW YORK STATE
9. NATIONAL ELECTRIC CODE
10. FEDERAL, STATE AND LOCAL CODES HAVING JURISDICTION
11. ASHRAE STANDARDS AS APPLICABLE
12. SMACNA STANDARDS AS APPLICABLE
13. NFPA STANDARDS AS APPLICABLE
14. BUILDING STANDARDS AND REQUIREMENTS

C. EXAMINATION OF EXISTING CONDITIONS:

1. BEFORE SUBMITTING PROPOSALS BIDDERS SHALL VISIT THE SITE AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AFFECTED BY THIS WORK SO AS TO FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH EXAMINATION BEEN MADE, AS DETERMINED BY THE ARCHITECT, WILL

NOT BE RECOGNIZED.

D. PERMITS AND CERTIFICATES:

1. THIS CONTRACTOR SHALL GIVE NECESSARY NOTICES, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENTS HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK, AND PAY ALL FEES REQUIRED.

E. SUBMITTALS:

1. SUBMIT COORDINATED SHOP DRAWINGS, (CONTRACTOR SHALL SUBMITTING SHOP DRAWINGS ELECTRONICALLY IN PDF FORMAT, AFTER ENGINEERS REVIEW ONE COPY WILL BE RETURNED TO YOU IN PDF FORMAT). UNLESS OTHER WISE NOTED. MATERIAL AND EQUIPMENT REQUIRING SHOP DRAWING SUBMITTALS SHALL INCLUDE BUT NOT BE LIMITED TO, ALL PIPING MATERIALS AND ACCESSORIES, HANGERS AND SUPPORT INCLUDING VIBRATION ISOLATION EQUIPMENT, SHEET METAL STANDARDS, INSULATION (ALL TYPES), DAMPERS (ALL TYPES), ALL DUCTWORK ACCESSORIES, GRILLES, REGISTERS AND DIFFUSERS, INSTRUMENTATION, CONTROL DIAGRAMS AND SEQUENCE OF OPERATION, COORDINATED LAYOUT DRAWINGS, AS-BUILT DRAWINGS, WARRANTIES AND GUARANTEES, CERTIFICATIONS, BALANCING AND TEST REPORTS, AND OPERATING AND MAINTENANCE MANUALS.

2. SHOP DRAWINGS SHOWING MANUFACTURER'S PRODUCT DATA SHALL CONTAIN DETAILED DIMENSIONAL DRAWINGS, ACCURATE AND COMPLETE DESCRIPTION OF MATERIALS OF CONSTRUCTION, MANUFACTURER'S PUBLISHED PERFORMANCE CHARACTERISTICS AND CAPACITY RATINGS (PERFORMANCE DATA, ALONE, IS NOT ACCEPTABLE), ELECTRICAL REQUIREMENTS AND WIRING DIAGRAMS. DRAWINGS SHALL CLEARLY INDICATE LOCATION (TERMINAL BLOCK OR WIRE NUMBER), VOLTAGE AND FUNCTION FOR ALL FIELD TERMINATIONS, AND OTHER INFORMATION NECESSARY TO DEMONSTRATE COMPLIANCE WITH ALL REQUIREMENTS OF CONTRACT DOCUMENTS.

3. FURNISH SHOP DRAWING SUBMITTALS SHOWING DETAILS OF PIPING CONNECTIONS TO ALL HVAC EQUIPMENT. IF CONNECTION DETAILS ARE NOT SUBMITTED AND CONNECTIONS ARE FOUND TO BE INSTALLED INCORRECTLY IN THE FIELD, THIS CONTRACTOR SHALL REINSTALL THEM WITHIN THE ORIGINAL CONTRACT PRICE.

4. ALL PIPING, DUCTWORK AND EQUIPMENT LAYOUT SHALL BE SUBMITTED ON SCALE 3/8" = 1'-0" DRAWINGS, AND SHALL BE COORDINATED AND STAMPED BY ALL TRADES. SHOP DRAWINGS SHALL SHOW LOCATION OF ALL EXISTING AND NEW EQUIPMENT, EXISTING WORK AND NEW WORK.

5. SUBMIT COMPACT DISC (CD) "AS-BUILT" RECORD DRAWINGS FOR BUILDING FILES AT COMPLETION OF THE PROJECT, TO INCLUDE DUCTWORK, PIPING, AND EQUIPMENT DRAWINGS. SCALE 3/8"=1'-0".

F. SUBSTITUTIONS:

1. CONTRACTOR'S SUBSTITUTION OF PRODUCTS OTHER THAN THOSE LISTED CAN BE SUBMITTED; HOWEVER, SUBMITTALS WITH MANUFACTURERS NOT ACCEPTABLE TO CONSULTANTS MAY BE REJECTED WITHOUT COMMENT.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS FOR PIPING, DUCTWORK, CONTROLS, ACCESSORIES, APPURTENANCES, ETC., REQUIRED FOR THE APPROVED SUBSTITUTED EQUIPMENT.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS FOR CHANGES TO OTHER TRADES SUCH AS ELECTRICAL, ETC. REQUIRED FOR THE APPROVED SUBSTITUTED EQUIPMENT.

4. ANY OWNER CONSULTANT COSTS MADE NECESSARY BY CONTRACTOR REVISIONS OR SUBSTITUTIONS SHALL BE BORNE TO THE CONTRACTOR. THIS INCLUDES ADDITIONAL FILING, EXPEDITING, PRINTING AND ENGINEERING COSTS.

G. SPECIAL REQUIREMENTS:

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H. SCAFFOLDING AND RIGGING:

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL SCAFFOLDING, RIGGING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY ONTO THE PREMISES OF ALL MATERIALS FURNISHED AND/OR INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS AND REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.

I. CLEAN UP:

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J. GUARANTEE:

1. THE CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK INSTALLED WILL BE FREE FROM ANY AND ALL DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK. THIS GUARANTEE SHALL INCLUDE ALL WORK BY ANY AND ALL OF THEIR SUBCONTRACTORS. THE PRIME CONTRACTOR SHALL MAKE GOOD ON ALL SUBCONTRACT WORK DURRING THIS PERIOD.

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   a. WHERE CONFLICTS OCCUR, REQUEST CLARIFICATION THROUGH THE ENGINEER. COORDINATE ALL WORK OF THIS DIVISION WITH THE WORK OF ALL OTHER TRADES.

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7. PROTECT, TEST, BALANCE, CLEAN, ADJUST AND GUARANTEE ALL OF THE WORK OF THIS DIVISION TO OPERATE SAFELY, PROPERLY AND CONTINUOUSLY.

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   b. FURNISH AND INSTALL HANGING AND SUPPORT SYSTEMS FOR SHEET METAL DUCTS INSTALLED IN NEW YORK OF THE TYPE AND SIZE LISTED IN THE SCHEDULES

   c. WALL AND FLOOR FIRE STOP: INTUMESCENT FIRE BARRIER FOR ALL DUCTWORK, INSULATED AND UNINSULATED.ASTM E-119, ASTM E-814, UL 1479, NFPA 101, NEC. MANUFACTURER & MODEL NO. 3M, CAULK: CP 25 NS, CP 25 S/L, WRAP/STRIP: FS-195, COMPOSITE SHEET: CS-195

3. EXECUTION

   a. SUPPORT EACH DUCT INDEPENDENTLY.

   b. SUPPORT DUCTS USING METAL HANGERS AND BRACKETS. HANGERS SHALL HAVE SUFFICIENT STRENGTH AND DURABILITY AND SUFFICIENT RESISTANCE TO THE CORROSIVE EFFECTS OF THE ATMOSPHERE TO WHICH THEY WILL BE EXPOSED, AND TO PROPERLY AND SAFELY SUPPORT THE DUCTWORK. HANGERS SHALL NOT BE USED IN DIRECT CONTACT WITH A DISSIMILAR METAL THAT WOULD CAUSE GALVANIC ACTION IN THE HANGER, DUCT, FASTENINGS OR STRUCTURE.

   c. SUPPORT SUBSTANTIALLY AND SECURELY FASTEN ALL DUCTS AND ALL PARTS OF THE DUCT SYSTEM TO THE STRUCTURAL MEMBERS OF THE BUILDING, WITH APPROVED DEVICES OF NONCOMBUSTIBLE MATERIAL DESIGNED TO CARRY THE REQUIRED LOADS. THE USE OF EXPANSION BOLTS IN CINDER CONCRETE IS PROHIBITED. CONNECTIONS SHALL NOT IMPAIR THE EFFECTIVENESS OF THE FIRE PROTECTION OF STRUCTURAL MEMBERS.

   d. INSTALL SLEEVES AND SEAL ANNULAR SPACE BETWEEN SLEEVE AND BARE DUCT OR INSULATED DUCT, WHERE DUCTS PASS THROUGH FLOORS AND WALLS, WITH NON-COMBUSTIBLE MATERIAL TO PREVENT THE PASSAGE OF FLAME AND SMOKE.

4. DUCT HANGER AND SUPPORTS (NEW YORK)

   a. DUCT CROSS-SECTIONAL AREA, SQ. FT: 2 OR LESS: MIN. STRAP SIZE, IN: 1 X 1/16, MAX. HANGER SPACING, FT: 6

23 09 00 INSTRUMENTATION AND CONTROL FOR HVAC

A. INSTRUMENTATION AND CONTROL DEVICES FOR HVAC

1. AUTOMATIC CONTROLS: THE AUTOMATIC CONTROLS SHALL BE STAND ALONE.

2. THE INTENT OF THIS SECTION IS TO DESCRIBE THE FUNCTIONAL CONTROL OF ALL MECHANICAL EQUIPMENT, SYSTEMS, AND DEVICES OF THE PROJECT. THE CONTRACTOR SHALL DESIGN THE AUTOMATIC CONTROL SYSTEM AND SHALL FURNISH AND INSTALL AS REQUIRED ALL NECESSARY CONTROL COMPONENTS INCLUDING, BUT NOT LIMITED TO: CONTROL WIRING, CONTACTORS, RELAYS, THERMOSTATS, ELECTRICAL TIMERS ETC., TO ACHIEVE THE DESIRED OPERATION FOR MECHANICAL SYSTEMS

3. PROVIDE ON-THE-JOB TRAINING TO THE OWNER'S OPERATING PERSONNEL.

4. FURNISH SIX (6) COPIES OF A COMPLETE INSTRUCTION MANUAL INCLUDING OPERATING INSTRUCTIONS, AS-BUILT DRAWINGS, SPECIFICATION DATA SHEET AND MAINTENANCE SCHEDULE.

5. INSTALL THE ELECTRICAL COMPONENTS FOR THE AUTOMATIC CONTROLS IN ACCORDANCE WITH:

   a. THE LATEST NATIONAL ELECTRIC CODE (NEC).

6. ALL CONTROL WIRING IN EXPOSED AREAS TO BE WITHIN METAL CONDUIT

7. SUBMITTALS

   a. TECHNICAL BULLETINS AND CATALOG DATA FOR ALL EQUIPMENT AND SYSTEM COMPONENTS. CLEARLY IDENTIFY, BY USE OF SYMBOL OR TAG NUMBER, THE SERVICE OF EACH ITEM. ALL IRRELEVANT INFORMATION SHALL BE MARKED OUT LEAVING ONLY PERTINENT DATA.

   b. SHOP DRAWINGS

   c. SYSTEM BLOCK DIAGRAM SHOWING QUANTITY AND LOCATION OF CPU, OPERATOR CONSOLE EQUIPMENT, DDCS, FIELD EQUIPMENT PANELS AND MAJOR SYSTEM COMPONENTS.

   d. CONTROL DIAGRAMS FOR ALL SYSTEMS CONTROLLED. CONTROLS SHALL BE SHOWN ON SYSTEM FLOW DIAGRAMS.

   e. POWER WIRING DIAGRAMS AND ELECTRICAL REQUIREMENTS.

   f. DETAILED BILL OF MATERIALS.

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SEAL:

CLIENT:

SUNY PURCHASE COLLEGE

PROJECT TITLE:

SUNY PURCHASE APARTMENT
REPAIR ALUMNI VILLAGE
INTERIOR RENOVATIONS OF THE
COMMONS APARTMENTS
10.1 (ADA COMPLIANT) & 10.3

DRAWING TITLE:

MECHANICAL SPECIFICATIONS
SHEET 1 OF 2

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M-401.00

SHEET: 4 OF 5

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g. OWNER'S MANUALS

h. PROVIDE MAINTENANCE MANUAL TO SERVE AS TRAINING AND REFERENCE MANUAL FOR ALL ASPECTS OF DAY-TO-DAY MAINTENANCE AND MAJOR SYSTEM REPAIRS.

i. PROVIDE PROGRAMMING MANUAL TO SERVE AS TRAINING AND REFERENCE MANUAL FOR ALL ASPECTS OF SYSTEM PROGRAMMING.

8. ACCEPTANCE TESTING

a. SUBMIT FOR APPROVAL, A DETAILED ACCEPTANCE TEST PROCEDURE DESIGNED TO DEMONSTRATE COMPLIANCE WITH CONTRACTUAL REQUIREMENTS.

9. OPERATIONS AND MAINTENANCE TRAINING

a. PROVIDE TECHNICAL REPRESENTATIVES OF THE MANUFACTURER TO INSTRUCT OPERATING PERSONNEL IN THE OPERATION AND MAINTENANCE OF THE DDC, FOR A MINIMUM OF FIVE (5) 8-HOUR DAYS.

23 31 00 HVAC DUCTS AND CASINGS

A. DUCTWORK

1. EXCEPT AS OTHERWISE NOTED, ALL DUCTWORK AND OTHER SHEET METAL WORK SHALL BE IN ACCORDANCE WITH LATEST EDITION OF SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC (SMACNA). "HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE. SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL AND ADC AND TIMA FLEXIBLE DUCT PERFORMANCE STANDARDS.(EXCEPT AS OTHERWISE NOTED, ALL DUCTWORK AND OTHER SHEET METAL WORK SHALL BE IN ACCORDANCE WITH LATEST EDITION OF SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC (SMACNA).

2. WHEN MAKING OFFSETS AND TRANSFORMATIONS NECESSARY TO ACCOMMODATE STRUCTURAL CONDITIONS, PRESERVE FULL CROSS-SECTIONAL AREA OF DUCTWORK SHOWN ON DRAWINGS.

3. GAUGE OF METAL:

a. GALVANIZED SHEET METAL DUCTS: MINIMUM SHEET METAL GAUGE, EXCEPT AS OTHERWISE NOTED IN CONTRACT DOCUMENTS, SHALL BE AS PER RECOMMENDED GUIDELINES OF THE LATEST EDITION OF SMACNA HVAC DUCT CONSTRUCTION STANDARDS OR THE AUTHORITY HAVING JURISDICTION.

4. EXCEPT AS OTHERWISE NOTED, MINIMUM SHEET METAL REINFORCEMENT UNLESS OTHERWISE NOTED, SHALL BE AS PER RECOMMENDED GUIDELINES OF THE LATEST EDITION OF SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

5. ALL DUCTWORK SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE AND MECHANICAL CODE OF NEW YORK

a. LOW PRESSURE DUCT SYSTEMS:
1) 2 IN.W.G. OR LESS
a) ALL LONGITUDINAL AND TRANSVERSE JOINTS AND SEAMS AND CONNECTIONS OF SUPPLY AND RETURN DUCTS SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), OR MASTIC-PLUS-EMBEDDED FABRIC SYSTEMS, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

b) THE USE OF TAPES, FOR SEALING DUCTWORK, IS NOT ACCEPTABLE.

6. ALL DUCTWORK SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH THE LATEST EDITIONS OF SMACNA "HVAC DUCT CONSTRUCTION STANDARDS"

DUCT CONSTRUCTION CLASS, IN. W.G.	STATIC PRESSURE RATING, IN. W.G.	SMACNA LEAKAGE CLASS, CFM/100 SQ. FT. POS. OR NEG.	SEAL CLASS
2 IN.	OVER 1 TO 2 IN.	6	A

7. SEALING REQUIREMENTS:

a. SEAL CLASS

1) "A": ALL TRANSVERSE JOINTS LONGITUDINAL SEAMS AND DUCT WALL PENETRATIONS.

8. CONSTRUCTION:

a. NO SHARP METAL EDGES SHALL EXTEND INTO AIR STREAMS.

9. JOINTS:

a. LONGITUDINAL LOCK SEAMS SHALL BE DOUBLE-LOCKED AND FLATTENED TO MAKE TIGHT JOINTS.

b. MAKE TRANSVERSE JOINTS, FIELD CONNECTIONS, COLLAR ATTACHMENTS AND FLEXIBLE CONNECTIONS TO DUCTS AND EQUIPMENT WITH SHEET METAL SCREWS OR BOLTS AND NUTS. DO NOT USE RIVETS AND STAPLES.

10. PREFABRICATED TRANSVERSE DUCT JOINTS:

a. TRANSVERSE JOINTS IN GALVANIZED SHEET METAL DUCTWORK MAY BE MADE WITH GALVANIZED GASKETED FRAME AND ANGLE DUCT JOINT SYSTEM BY DUCTMATE, TDF, TDC OR APPROVED EQUAL. ANGLES SHALL BE AT LEAST 20 GAUGES. PREFABRICATED TRANSVERSE DUCT JOINTS SHALL NOT BE USED FOR DUCT 16 GA. AND HEAVIER, NOR FOR DUCT 23 GA. OR LIGHTER.

11. ELBOWS AND BENDS:

a. USE SQUARE THROAT ELBOWS, UNLESS OTHERWISE NOTED, AS THE FIRST SUPPLY AND RETURN ELBOW FROM EQUIPMENT CONNECTION, WHEREVER ELSE THEY ARE SHOWN ON CONTRACT DRAWINGS AND WHEN SPACE DOES NOT PERMIT THE USE OF RADIUS ELBOWS. WHEN THE USE OF SQUARE THROAT ELBOWS IS NECESSARY, ELBOWS SHALL BE CONSTRUCTED WITH DOUBLE THICKNESS TURNING VANES. SECURELY FASTEN VANES TO RUNNERS FOR QUIET, VIBRATION FREE OPERATION. TRAILING EDGES ARE NOT ACCEPTABLE.

12. ALL OPEN END DUCTS SHALL HAVE 18 GAUGE X ¾ IN. MESH WMS.

13. DUCTWORK MATERIAL:

DUCT MATERIAL	SPECIFICATION	SERVICE
GALVANIZED STEEL	ASTM A527 WITH ASTM A525 ZINC COATING DESIGNATIONS G90	ALL SYSTEMS EXCEPT AS LISTED BELOW OR AS NOTED ON CONTRACT DRAWINGS.

14. CONTRACTOR TO ALLOW FOR ADDITIONAL DUCTWORK REQUIRED FOR CONNECTIONS TO UNIT, COORDINATION WITH CEILING AND STRUCTURE, PIPING, LIGHTING AND OTHER TRADES. FURNISH AND INSTALL ADDITIONAL DUCTWORK FOR FIELD COORDINATION AS REQUIRED

23 33 00 HVAC DUCT ACCESSORIES

A. DUCT ACCESSORIES

1. VOLUME DAMPERS:

a. GALVANIZED STEEL: PER SMACNA "LOW VELOCITY MANUAL", EXCEPT PROVIDE BEARING AT ONE END OF DAMPER ROD AND QUADRANT, WITH LEVER AND LOCKSCREW AT OTHER END. FOR INSULATED DUCTS, FURNISH AND INSTALL 2" HANDLE EXTENSION TO CLEAR INSULATION, INSTALL WITH LEVERS ACCESSIBLE. BALANCING DAMPERS SHALL BE THE OPPOSED BLADE TYPE.

1) DAMPERS LESS THAN 9 IN. IN HEIGHT SHALL BE OPPOSED MULTIBLADE TYPE WITH AXIS PARALLEL TO SHORT DIMENSION OF DUCT.

2) THE USE OF SINGLE BLADE, SHOP FABRICATED DAMPERS IS NOT PERMITTED.

b. SPLITTER DAMPERS:

1) FABRICATE SPLITTER DAMPERS OF DOUBLE THICKNESS SHEET METAL TO STREAMLINE SHAPE, MINIMUM 18 GAUGE.

2) ¼ INCH DIAMETER STEEL ADJUSTING ROD EXTENDING THROUGH SIDE OF DUCT.

3) METAL GROMMET AND THUMB SCREW LOCK.

2. INDOOR FLEXIBLE CONNECTIONS: NEOPRENE COATED GLASS FIRE RETARDANT FABRIC, 30 OZ. PER SQ. YD. WITH SEWED AND CEMENTED SEAMS, SIMILAR TO VENT FABRICS.

23 36 00 AIR OUTLETS AND INLETS

A. REFER TO AIR OUTLET SCHEDULE ON DRAWINGS FOR SIZES, PERFORMANCE, ACCESSORIES, MANUFACTURER AND MODEL NUMBERS. TESTING AGENCY QUALIFICATIONS: AN NRTL

B. STANDARDS.

1. DESIGN AND PERFORMANCE OF AIR DEVICES SHALL COMPLY WITH APPLICABLE PROVISIONS OF THE AIR DIFFUSION COUNCIL STANDARDS AND RECOMMENDATIONS.

2. MANUFACTURER SHALL CERTIFY CATALOG PERFORMANCE DATA AND ENSURE CORRECT APPLICATION OF AIR OUTLET TYPES.

3. ASHRAE: AMERICAN SOCIETY OF HEATING, REFRIGERATING, & AIR CONDITIONING ENGINEERS

4. SMACNA: SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION.

C. CHECK LOCATION OF OUTLETS AND MAKE NECESSARY ADJUSTMENT IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY AND LIGHTING ARRANGEMENT.

D. INSTALL ALL ITEMS IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.

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SEAL:

CLIENT:
SUNY PURCHASE COLLEGE

PROJECT TITLE:
SUNY PURCHASE APARTMENT REPAIR ALUMNI VILLAGE INTERIOR RENOVATIONS OF THE COMMONS APARTMENTS 10.1 (ADA COMPLIANT) & 10.3

DRAWING TITLE:
MECHANICAL SPECIFICATIONS SHEET 2 OF 2

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5 OF 5

PLUMBING LEGEND

S	SANITARY OR WASTE ABOVE FLOOR (SAN. OR W.)
S	SANITARY OR WASTE BELOW FLOOR (SAN. OR W.)
	COLD WATER (C.W.)
	HOT WATER (H.W.)
	HOT WATER RECIRCULATION (H.W.R.)
	VENT PIPING (V.)
	EXISTING SANITARY OR WASTE ABOVE FLOOR (SAN. OR W.)
S	EXISTING SANITARY OR WASTE BELOW FLOOR (SAN. OR W.)
	EXISTING COLD WATER (C.W.)
	EXISTING HOT WATER (H.W.)
	EXISTING HOT WATER RECIRCULATION (H.W.R.)
	EXISTING VENT PIPING (V.)
	TO BE REMOVED
	CONNECT NEW PIPING TO EXISTING
	POINT OF DISCONNECTION
	CAP
	DIRECTION ARROW
	PIPE DROP / DN
	PIPE RISE / UP
	BOTTOM TAKE-OFF
	BALL VALVE
	CHECK VALVE
	GATE VALVE
	BREAK
	CLEANOUT (CO)
A.F.F.	ABOVE FINISHED FLOOR
ASSY	ASSEMBLY
CISP	CAST IRON SOIL PIPE
DN	DOWN
G.P.F.	GALLONS PER FLUSH
G.P.M.	GALLONS PER MINUTE
H.C.	HANDICAPPED
HVAC	HEATING VENTING AIR CONDITION
LAV.	LAVATORY
MECH	MECHANICAL
RM	ROOM
SCHED	SCHEDULE
SPEC	SPECIFICATIONS
TYP	TYPICAL
WHA	WATER HAMMER ARRESTOR
WTR	WATER
W.C.	WATER CLOSET

DRAWING LIST

DRAWING NUMBER	DRAWING LIST
P-001.00	PLUMBING LEGENDS, NOTES, ABBREVIATIONS, AND SCHEDULE
P-101.00	PLUMBING FIRST FLOOR DEMOLITION PLAN AND RISERS
P-102.00	PLUMBING SECOND FLOOR NEW WORK PLAN AND RISERS
P-201.00	PLUMBING FIRST FLOOR NEW WORK PLAN AND RISERS
P-202.00	PLUMBING SECOND FLOOR NEW WORK PLAN AND RISERS
P-301.00	PLUMBING DETAILS
P-401.00	PLUMBING SPECIFICATIONS

GENERAL PLUMBING NOTES:

1. ALL WORK SHALL BE GOVERNED BY THE N.Y.C. BUILDING CODE, LATEST EDITION, AND ALL REQUIREMENTS SPECIFIED IN THE CODE SHALL BE ADHERED TO AS IF THEY WERE CALLED FOR, OR SHOWN ON THE DRAWINGS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT ANY REQUIREMENTS SET FORTH ON THE DRAWINGS MAY BE MODIFIED BECAUSE THEY ARE MORE STRINGENT THAN THE CODE REQUIREMENTS OR BECAUSE THEY ARE NOT SPECIFICALLY REQUIRED BY CODE.
2. VERIFY ALL EXISTING CONDITIONS COVERING OR AFFECTING THE WORK AND PIPE ROUTING, OBTAIN AND VERIFY ALL DIMENSIONS TO ENSURE ITS PROPER STRENGTH, FIT AND LOCATION. VISIT EXISTING SITE TO BECOME FAMILIAR WITH ITS CONSTRUCTION REQUIREMENTS, REPORT TO THE ENGINEER ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH AND OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK.
3. ANY EXISTING CONSTRUCTION, INCLUDING FIREPROOFING, SUSPENDED CEILINGS AND/OR FINISHES DISTURBED AS A RESULT OF THIS CONTRACT SHALL BE REPLACED AS REQUIRED TO THE SATISFACTION OF THE ENGINEER.
4. EXISTING CONSTRUCTION NOT UNDERGOING ALTERATION IS TO REMAIN UNDISTURBED. WHERE SUCH CONSTRUCTION IS DISTURBED AS A RESULT OF THE OPERATIONS OF THIS CONTRACT, IT SHALL BE REPAIRED OR REPLACED AS REQUIRED BY AND TO THE SATISFACTION OF THE ENGINEER.
5. COORDINATE FOR EASE AND RAPIDITY OF CONSTRUCTION, THE WORK OF OTHER TRADES. ALL SLOTS, SLEEVES, AND/OR OTHER OPENINGS TO BE COORDINATED AND SET BEFORE CLOSING OPENINGS AND TO MAINTAIN REQUIRED CEILING HEIGHTS.
6. EACH CONTRACTOR SHALL PROVIDE ALL THE NECESSARY SUPPORT, BRACING SHORING, ETC. (TEMPORARY AND/OR PERMANENT) OF BOTH NEW AND EXISTING CONSTRUCTION AS REQUIRED FOR THE SAFE DEMOLITION OF THE SPACE.
7. MATERIALS, EQUIPMENT AND SYSTEMS INSTALLED SHALL MEET ALL PERTINENT REQUIREMENTS OF NEW YORK STATE BUILDING CODES, NEW YORK CITY BUILDING CODES, NATIONAL FIRE PROTECTION ASSOCIATION, FEDERAL REGULATIONS, OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND ANY NATIONALLY RECOGNIZED APPROVAL AGENCIES AS WELL AS APPLICABLE LOCAL CODE AND REGULATIONS.
8. DURING CONSTRUCTION OPERATIONS "BUSINESS AS USUAL" IS TO BE MAINTAINED THROUGHOUT THE BUILDING, THEREFORE THE CONSTRUCTION TECHNIQUES, TIME OF CONSTRUCTION, TEMPORARY PARTITIONS AND PROTECTION METHODS SHALL SAFELY ALLOW FOR THIS REQUIREMENT.
9. FINAL CLEAN-UP (BROOM CLEAN) AND THE REMOVAL OF ALL DEBRIS ON A DAILY BASIS SHALL BE INCLUDED AS PART OF THE CONTRACT. CONTRACTOR IS SPECIFICALLY DIRECTED TO THE REQUIREMENT THAT IS MANDATORY TO MINIMIZE ALL DUST.
10. DIELECTRIC FITTINGS SHALL BE INSTALLED BETWEEN DISSIMILAR METALS.
11. ALL NEW WATER PIPING SHALL BE INSULATED.
12. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL PLUMBING FIXTURE AND RELATED PIPING. PLUMBING FIXTURES ARE. REFER TO ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE SELECTION.

COORDINATED SHOP DRAWING NOTE:

IT SHALL BE THE RESPONSIBILITY OF THE GC, MC, PC, EC AND FPC, TO PREPARE COORDINATED SHOP DRAWINGS PRIOR TO SUBMISSION TO DESIGN ENGINEER'S FOR APPROVAL. COORDINATED SHOP DRAWINGS SHALL BE ALL ENCOMPASSING AND SHALL INCLUDE BUT NOT BE LIMITED TO PIPING, CONDUITS, DUCTWORK, ROUTING, INVERT, SIZES SHOWN TO SCALE. ALL CONFLICTS SHALL BE RESOLVED TO THE BEST OF THE CONTRACTORS ABILITIES PRIOR TO SUBMISSION FOR ENGINEER REVIEW. THE FOLLOWING SHALL BE THE PROCESS FOR COORDINATED SHOP DRAWINGS.

MECHANICAL CONTRACTOR SHALL PREPARE A SHOP DRAWING INDICATING ALL DUCTWORK AND PIPING WITH THE PROPER INVERTS AND SIZES SHOWN TO SCALE. THE MC WILL THEN SEND THEIR DRAWINGS TO THE PC FOR PUTTING ON PLUMBING PIPING.

PLUMBING CONTRACTOR SHALL DRAFT ALL PROPOSED PLUMBING PIPING DIRECTLY ON THE MC PREPARED SHOP DRAWING. IF ANY CONFLICTS CANNOT BE RESOLVED INTERNALLY WITHIN PC OFFICE, THEY SHALL BE RETURNED BACK TO MC FOR FURTHER COORDINATION. THIS PROCESS SHALL REPEAT AS NEEDED WITH DUCTWORK AND PIPING MODIFICATIONS AS NEEDED TO CLEAR ALL POTENTIAL CONFLICTS.

ONCE NO CONFLICTS EXIST, THE COORDINATED SHOP DRAWING SHALL BE RELEASED TO THE ELECTRICAL CONTRACTOR. THE EC SHALL DRAFT ONTO THE COORDINATED SET, THEIR CONDUITS AND PIPING AT PROPER INVERT ELEVATION. ONCE AGAIN, ALL CONFLICTS THAT CANNOT BE HANDLED INTERNALLY BY THE EC, SHALL BE PASSED ALONG TO THE PC AND MC. THIS PROCESS SHALL BE REPEATED AS NEEDED WITH DUCTWORK AND PIPING MODIFICATIONS AS NEEDED TO CLEAR ALL POTENTIAL CONFLICTS.

ONCE NO CONFLICTS EXIST, THE COORDINATED SHOP DRAWINGS SHALL BE RELEASED TO THE FIRE PROTECTION CONTRACTOR. THE FPC SHALL DRAFT ONTO THE COORDINATED SET THEIR PIPING AND APPURTENANCES. ALL POTENTIAL CONFLICTS THAT CANNOT BE HANDLED INTERNALLY BY THE FPC, SHALL BE PASSED ALONG TO THE PC, MC AND EC. THIS PROCESS SHALL BE REPEATED AS NEEDED WITH DUCTWORK AND PIPING MODIFICATIONS AS NEEDED TO CLEAR ALL POTENTIAL CONFLICTS.

ONCE COORDINATED SHOP DRAWINGS ARE COMPLETE BY ALL SUB-CONSULTANTS AND CONTRACTORS, THE COORDINATED SHOP DRAWINGS SHALL BE SIGNED BY ALL RESPECTIVE DRAFTERS, AND ONLY THEN, CAN THE COORDINATE SHOP DRAWINGS BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL.

QUESTIONS FROM EACH TRADES FOR CLARIFICATIONS ARE ENCOURAGED TO BE ASKED DIRECTLY TO THE DESIGN ENGINEER. ANY PHONE CONVERSATIONS HAD SHALL BE FOLLOWED UP WITH A CONFIRMATION EMAIL CC'ING THE PROPER CHAIN OF COMMAND INCLUDING BUT NOT LIMITED TO GC AND ARCHITECT.

PLUMBING FIXTURE SCHEDULE

	FIXTURE	MODEL NUMBER	TRIM	FLOW CONTROL GPM/GPF	TRAP SIZE	REMARKS
P-1	WATER CLOSET	AMERICAN STANDARD MADERA FLOWISE NO. 3465.128 FLOOR MOUNT ELONGATED BOTTOM OUTLET, TOP SPUD, WHITE	SLOAN SOLIS DUAL FLUSHOMETER, MODEL #8111-1.6/1.1, SENSOR ACTIVATED, SOLAR POWERED, CHROME PLATED	1.6 / 1.6 GPF	INTEGRAL	PROVIDE AMERICAN STANDARD MODEL #5905.100 OPEN FRONT SEAT, LESS COVER AND ZURN NO. Z1214 OUTLET FITTING
P-2	LAVATORY	AMERICAN STANDARD STUDIO UNDERCOUNTER SINK, VITREOUS CHINA, WHITE	AMERICAN STANDARD MONTERREY FAUCET, MODEL # 6500.140, WIDESPREAD, TWO HANDLE, 4" WRIST BLADE HANDLES, DECK MOUNTED 4" CENTERS, 3 HOLE FAUCET, PROVIDE 0.5 GPM FLOW RESTRICTOR IN BASE, CHROME PLATED	0.5 GPM	1-1/4"x1-1/2"C.P. CAST BRASS "P" TRAP	PROVIDE MCGUIRE #201 TRAP, 1149-WC BRASS FLAT GRID STRAINER, 2127 NIPPLE.
P-3	SHOWER SYSTEM	MOEN MODEL NO. T9342 SHOWER SYSTEM WITH HAND HELD SPRAY, LEVER DIVERTER WITH VOLUME CONTROL, PRESSURE BALANCE MIXING VALVE, INTEGRAL STOPS, IN-LINE VACUUM BREAKER, 1.5 FLOW RATE	SHOWER TRENCH DRAIN WITH 2" DRAIN OUTLET,	1.5 GPM	---	ALL SHOWER ENCLOSURES TO BE PROVIDED WITH SHOWER TRENCH DRAINS. COORDINATE THE EXACT LOCATION OF TRENCH DRAIN WITH THE ARCHITECTURAL LAYOUT.
P-4	KITCHEN SINK	KOHLER STRIVE MODEL #K-5286, UNDERMOUNT SINGLE-BOWL SINK, STAINLESS STEEL, PROVIDE MODEL #K-8801 DRAIN AND STRAINER	MOEN MODEL #CA87094, SINGLE LEVER HANDLE, HIGH ARC PULLDOWN FAUCET,	1.5 GPM	1-1/2"x2"C.P. CAST BRASS "P" TRAP	MCGUIRE#201 TRAP, 155-WC OFFSET DRAIN, 2127 NIPPLE, H171LK SUPPLY.

PLUMBING INSULATION SCHEDULE

INSULATE THE FOLLOWING:

1. HOT WATER PIPING
2. COLD WATER PIPING
3. LAVATORY TRAP AND WATER SUPPLIES

INSULATION PRODUCTS AND INSTALLATION SHALL COMPLY WITH ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.

HOT WATER PIPING INSULATION SHALL BE PREFORMED, SNAP-ON FIBERGLASS INSULATION WITH PAINTABLE WHITE KRAFT OR ALUMINUM FOIL JACKET.

DOMESTIC COLD WATER PIPING INSULATION SHALL BE SIMILAR TO HOT WATER WITH VAPOR BARRIER.

INSULATION THICKNESS SCHEDULE

SERVICE	INSULATION THICKNESS FOR PIPE SIZES*		
	1" AND LESS **	1-1/4" TO 2"	3" TO 4"
DOMESTIC COLD WATER (CW)	1"	1"	1"
DOMESTIC HOT WATER (HW)	1"	1"	1"

* BASIS RN4

** RUNOUTS AS DEFINED BY ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE CAN BE 1/2" THICK UP TO 140° F, 3/4" OVER 140° F.

*** INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER IN/H SF/xF

PIPING SHALL BE INSULATED IN CONFORMANCE WITH SECTION 504.5 OF THE NYCECC

FIXTURE CONNECTION SCHEDULE

ABBREV	DESCRIPTION	SOIL	VENT	COLD WTR	HOT WTR
P-1	WC - FLOOR MOUNTED WATER CLOSET	4"	2"	1-1/4"	-
P-2	LAV - LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"
P-3	SHOWER STALL	2"	2"	1/2"	1/2"
P-4	SINK	1-1/2"	1-1/2"	1/2"	1/2"

*ALL EXPOSED PLUMBING PIPING SHALL BE CHROME PLATED.
*REFER TO ARCHITECTURAL CONTRACT DRAWINGS FOR PLUMBING FIXTURE SELECTION.

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REPAIR ALUMNI VILLAGE
INTERIOR RENOVATIONS OF THE
COMMONS APARTMENTS
10.1 (ADA COMPLIANT) & 10.3

DRAWING TITLE:
PLUMBING LEGENDS,
ABBREVIATIONS, NOTES,
SCHEDULE AND DETAILS

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DRAWING NO:
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SHEET:
1 OF 7

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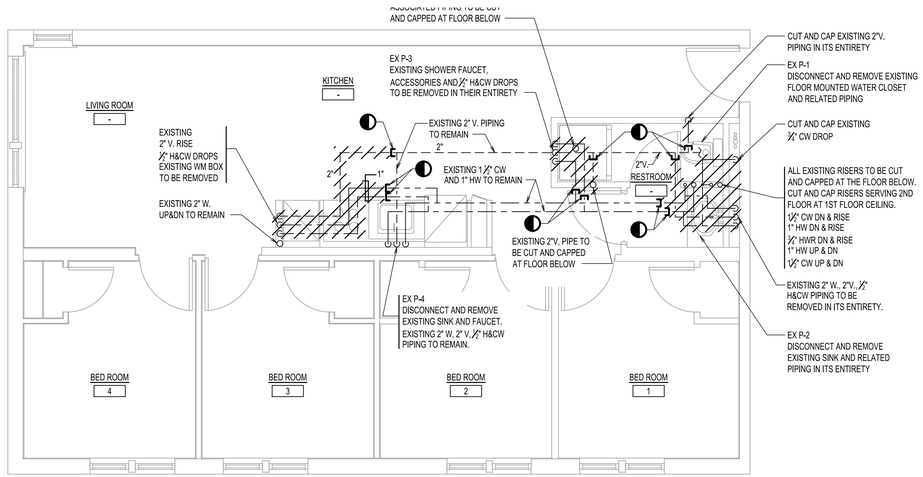
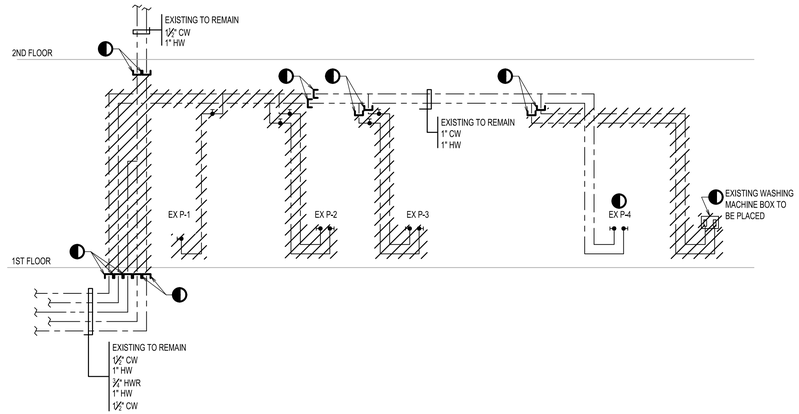


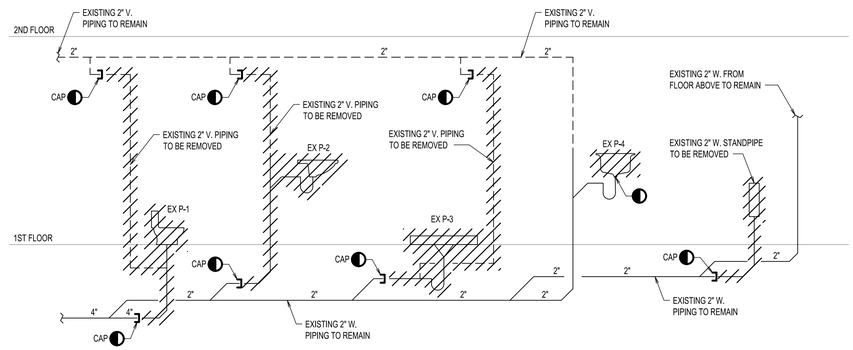
PLUMBING FIRST FLOOR DEMOLITION PLAN

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



PARTIAL DOMESTIC WATER RISER DIAGRAM

NOT TO SCALE



PARTIAL SANITARY RISER DIAGRAM

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NO.	REVISION	DATE
1	ISSUED FOR BID	03/17-2023

SEAL:

CLIENT:

SUNY PURCHASE COLLEGE

PROJECT TITLE:

SUNY PURCHASE APARTMENT
REPAIR ALUMNI VILLAGE
INTERIOR RENOVATIONS OF THE
COMMONS APARTMENTS
10.1 (ADA COMPLIANT) & 10.3

DRAWING TITLE:

PLUMBING FIRST FLOOR
DEMOLITION AND RISER
DIAGRAMS

DRAWN BY: SE	SCALE: AS NOTED
DESIGNED BY: AO	DATE: 10-04-22
CHECKED BY: AO	PROJECT NO: 10652
PLOT DATE/TIME: 3/17/2023 3:55:44 PM	

DRAWING NO:

P-101.00

SHEET: 2 OF 7

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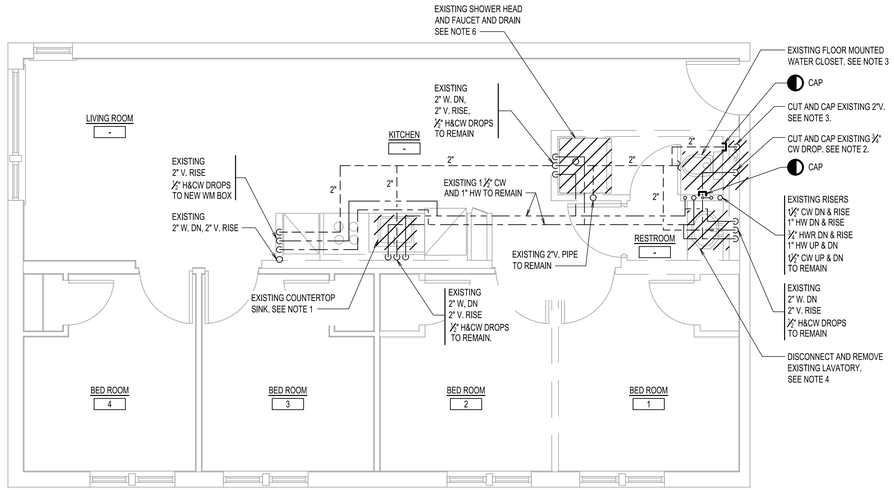
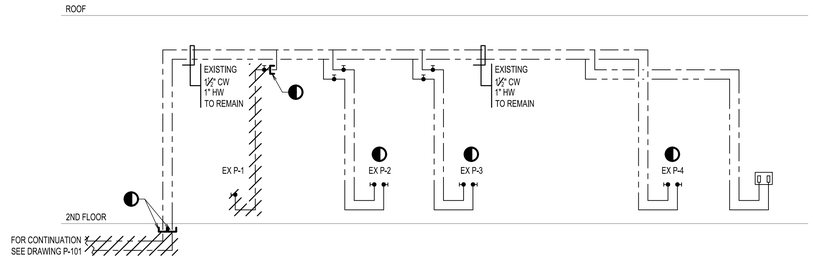


PLUMBING SECOND FLOOR DEMOLITION PLAN

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

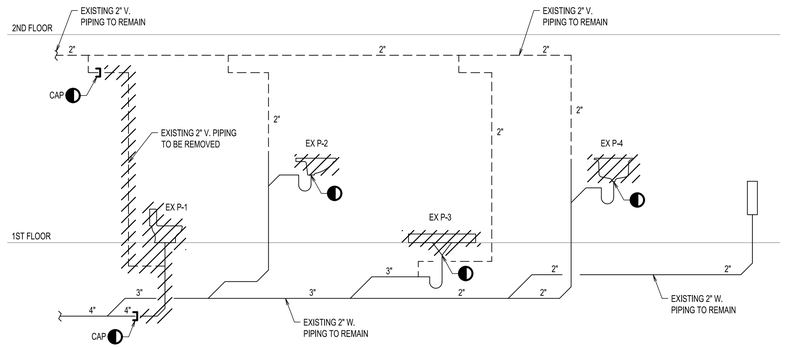
NOTES:

1. DISCONNECT AND REMOVE EXISTING COUNTERTOP SINK AND FAUCET. PREP EXISTING 2" W., AND ½" H&CW PIPING FOR CONNECTION OF NEW COUNTERTOP SINK. FOR ADDITIONAL INFORMATION SEE NEW WORK PLAN.
2. DISCONNECT AND CAP EXISTING ¾" CW PIPE TO WATER CLOSET BACK TO MAIN.
3. DISCONNECT AND CAP EXISTING 2" V. PIPE AT CEILING.
4. DISCONNECT AND REMOVE EXISTING FLOOR MOUNTED WATER CLOSET, 4" S. AT CEILING OF FLOOR BELOW, 2" V. AT CEILING AND ¾" CW PIPING AT CEILING, PREP EXISTING 4" S. AND 2" V. PIPING FOR CONNECTION OF NEW WATER CLOSET. FOR ADDITIONAL INFORMATION SEE NEW WORK PLAN.
5. DISCONNECT AND REMOVE EXISTING COUNTERTOP LAVATORY AND FAUCET, EXISTING 2" W., 2" V., ½" H&CW DROPS TO REMAIN, PREP EXISTING 2" W., 2" V., ½" CW PIPING FOR CONNECTION TO NEW COUNTERTOP LAVATORY AND FAUCET. FOR ADDITIONAL INFORMATION SEE NEW WORK PLAN.
6. EXISTING SHOWER HEAD, FAUCET AND ACCESSORIES TO BE REMOVED IN THEIR ENTIRETY. EXISTING 2" W., 2" V., ½" H&CW PIPING TO REMAIN AND PREPPED FOR NEW CONNECTION. FOR ADDITIONAL INFORMATION SEE NEW WORK PLAN



PARTIAL DOMESTIC WATER RISER DIAGRAM

NOT TO SCALE



PARTIAL SANITARY RISER DIAGRAM

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NO.	REVISION	DATE
1	XXX	00-00-00

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PLUMBING SECOND FLOOR
DEMOLITION AND RISER
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PLOT DATE/TIME: 3/17/2023 3:55:58 PM	

DRAWING NO:

P-102.00

SHEET: 3 OF 7

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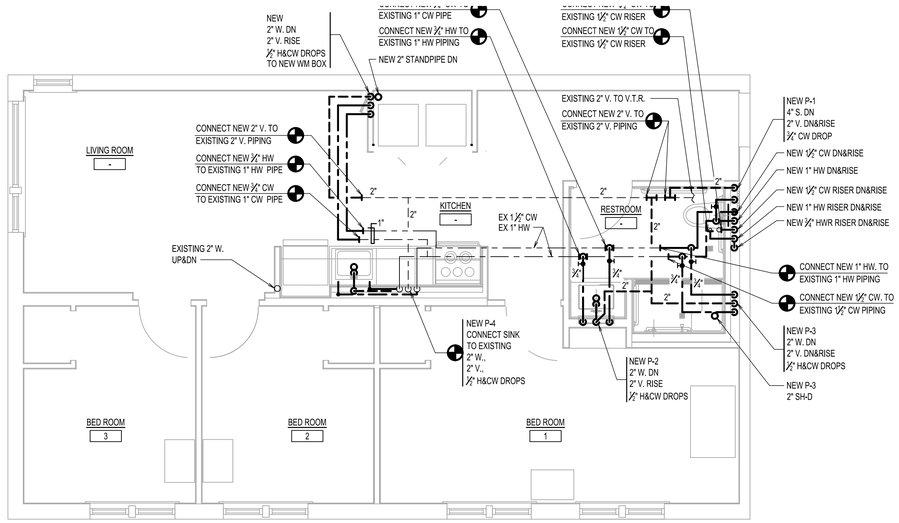
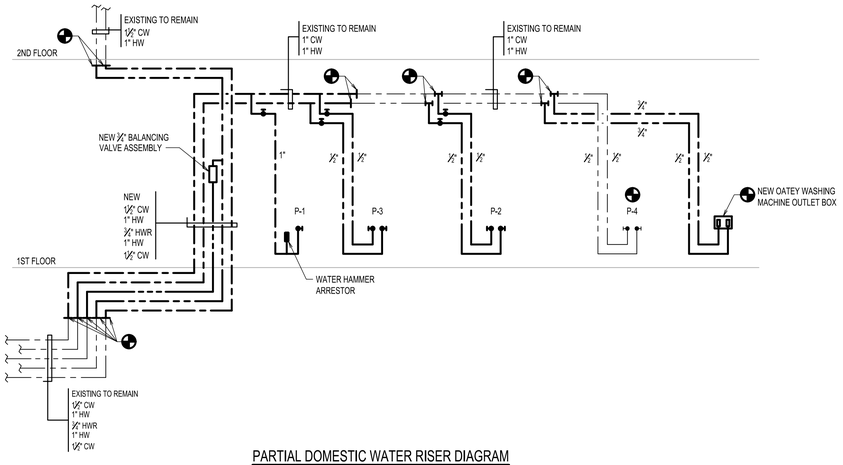


PLUMBING FIRST FLOOR NEW WORK PLAN

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



PARTIAL DOMESTIC WATER RISER DIAGRAM

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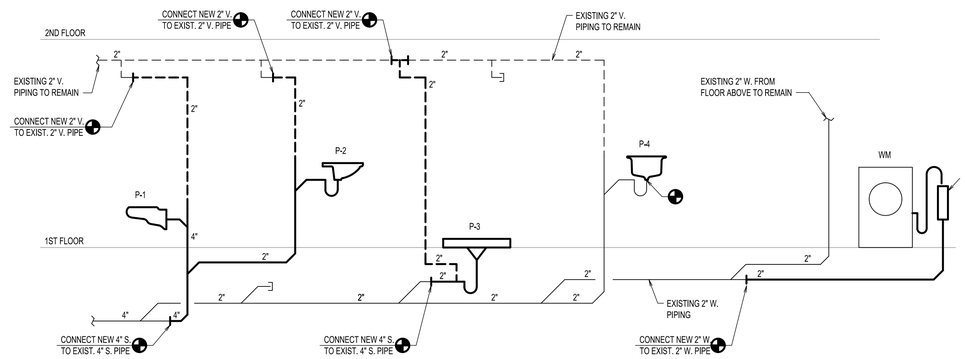

PARTIAL SANITARY RISER DIAGRAM

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10.1 (ADA COMPLIANT) & 10.3

DRAWING TITLE:

PLUMBING FIRST FLOOR NEW
WORK AND RISER DIAGRAMS

DRAWN BY: SE	SCALE: AS NOTED
DESIGNED BY: AO	DATE: 10-04-22
CHECKED BY: AO	PROJECT NO: 10652
PLOT DATE/TIME: 3/17/2023 3:56:12 PM	

DRAWING NO:

P-201.00

SHEET: 4 OF 7

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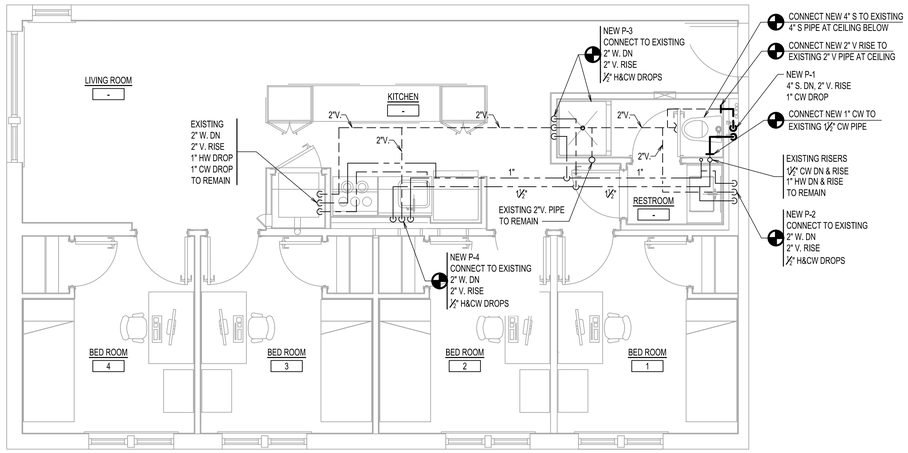
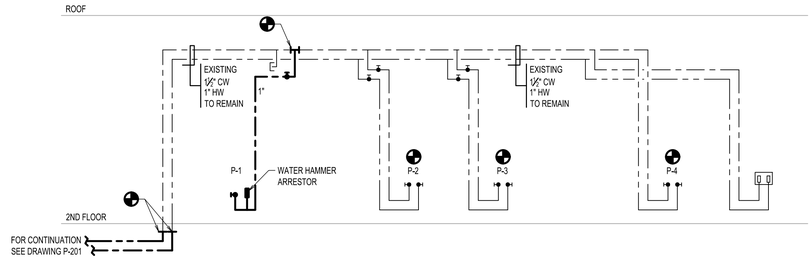


PLUMBING SECOND FLOOR NEW WORK PLAN

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



PARTIAL DOMESTIC WATER RISER DIAGRAM

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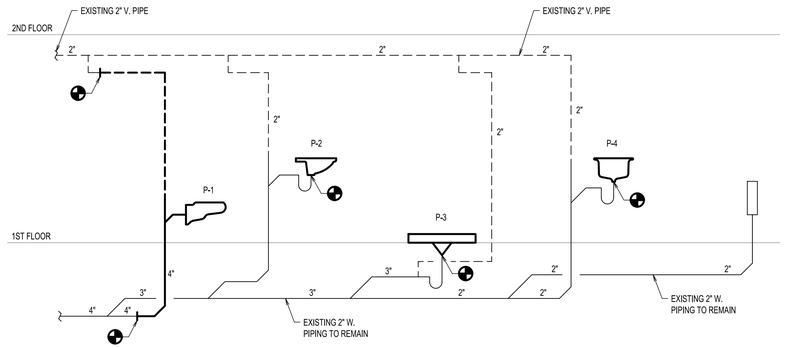

PARTIAL SANITARY RISER DIAGRAM

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REPAIR ALUMNI VILLAGE
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DRAWING TITLE:

PLUMBING SECOND FLOOR NEW WORK PLAN AND RISER DIAGRAMS

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DESIGNED BY:	AO	DATE:	00-00-00
CHECKED BY:	RS	PROJECT NO:	10652
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SHEET: 5 OF 7

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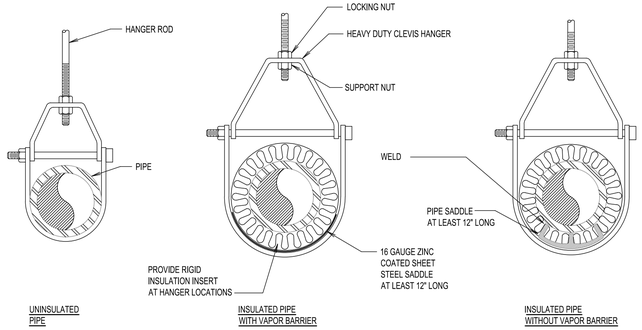
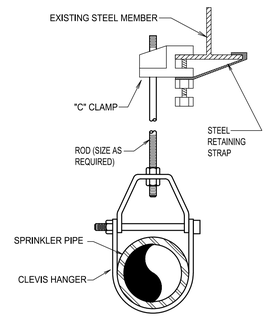


TYPICAL CLEVIS HANGER PIPE SUPPORT DETAIL
NOT TO SCALE



TYPICAL HANGER DETAIL
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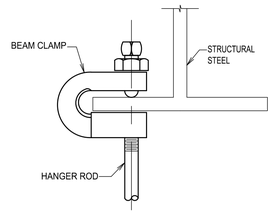

ATTACHMENT TO STEEL BEAM
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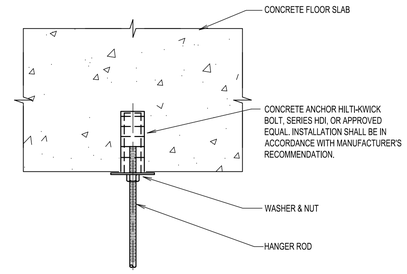

TYPICAL ATTACHMENT TO SLAB
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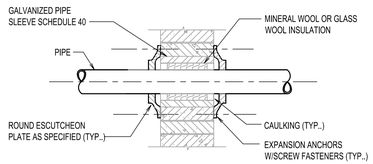

PIPE PENETRATION IN INTERIOR PARTITION DETAIL
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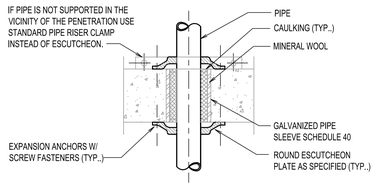
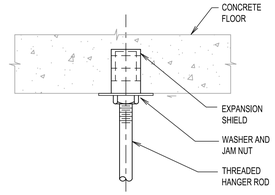
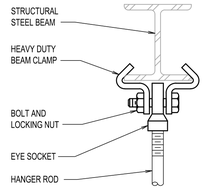


PIPE PENETRATION IN FLOOR SLAB DETAIL
NOT TO SCALE



TYPICAL EXPANSION SHIELD
NOT TO SCALE



ATTACHMENT TO STEEL BEAM
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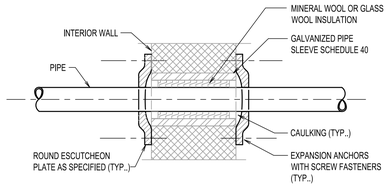
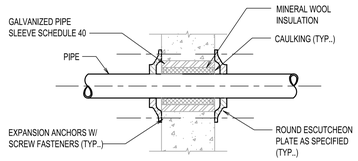
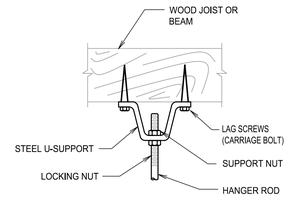


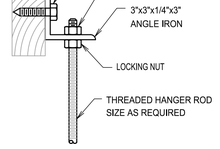
PIPE PENETRATION IN INTERIOR WALL DETAIL
NOT TO SCALE



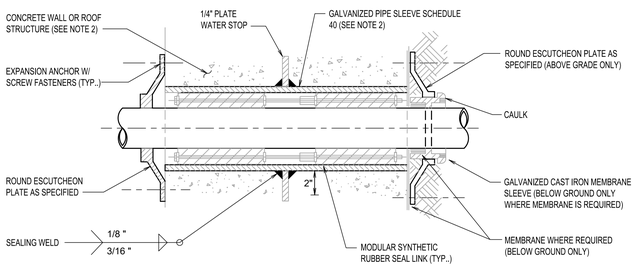
PIPE PENETRATION IN INTERIOR FIRE WALL DETAIL
NOT TO SCALE



ATTACHMENT TO WOOD JOISTS
NOT TO SCALE



TYPICAL PIPE HANGER SUPPORT FROM WOOD JOISTS
NOT TO SCALE

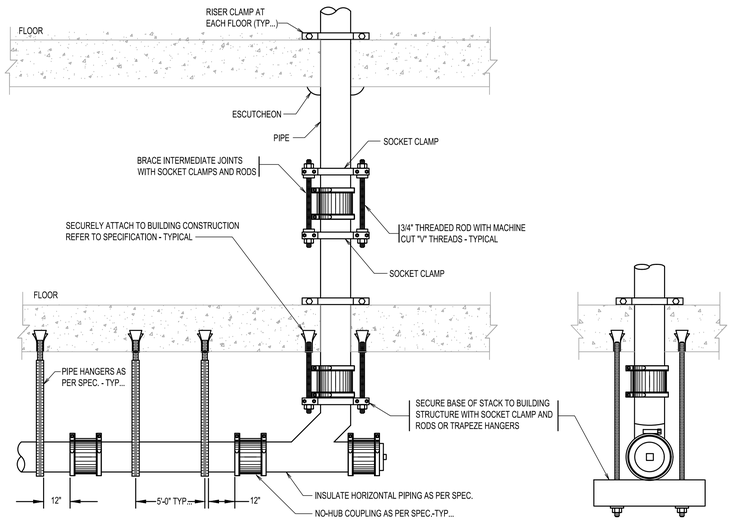


PIPE PENETRATION IN INTERIOR WALL OR ROOF DETAIL
NOT TO SCALE

PIPE SLEEVE DATA - INTERIOR WALLS AND FLOORS	
CARRIER PIPE NOMINAL SIZE (IN.)	SLEEVE SCHEDULE 40 PIPE NOM. SIZE (IN.)
3/4	2
1	3
1 1/2	4
2	4
2 1/2	6
3	6
4	8
6	10
8	12
10	14

NOTES:

1. THE TYPES AND LOCATIONS OF PIPE PENETRATIONS SHALL BE BASED ON PIPING LAYOUT SHOWN ON PLANS AND SECTIONS.
2. FOR FLASHING DETAILS SEE ARCHITECTURAL DRAWINGS.
3. REINFORCING BARS SHALL NOT BE IN CONTACT WITH PIPE SLEEVE.
4. WELDING SYMBOLS SHALL BE ACCORDING TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
5. ALL STEEL HARDWARE SHALL BE HOT-DIPPED GALVANIZED.



NO HUB PIPE BRACING FOR VERTICAL PIPING
NOT TO SCALE

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DESIGNED BY: AO	DATE: 10-04-22
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SHEET: 6 OF 7