MECHANICAL A. THE WORK HEREIN INCLUDE **SPECIFICATIONS** AND SARY FOR

CONNECTIONS TO ALL EQUIPMENT PROVIDED BY THIS CONTRACTOR AS WELL AS ALL EQUIPMENT PROVIDED BY OTHERS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST RULES, REGULATIONS AND CODES OF THE STATE OF PENNSYLVANIA, AS WELL AS LOCAL AND/OR ORDINANCE CODES. WORK IS SUBJECT TO INSPECTION BY ANY AND ALL CERTIFIED PROFESSIONALS PERTINENT TO THE COMPLETION OF THIS PROJECT.

NOTES

ACID RESISTANT EPOXY COATING FOR ALL PARTS AND ACCESSORIES (BACKDRAFT DAMPER, ETC.) EXPOSED TO AIRFLOW. WITH HIGH PLUME DISCHARGE NOZZLE, ROOF CURB, BY-PASS PLENUM AND MOTORIZED ISOLATION DAMPER.

THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THESE DRAWINGS ARE **DIAGRAMMATIC IN NATURE** AND THEREFORE SHOW GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURERS STANDARD ROUGH-IN DRAWINGS FOR EXACT CONNECTION LOCATIONS. COORDINATE CAREFULLY WITH EXISTING DUCT, EQUIPMENT AND STRUCTURE.

. ALL WORK IS TO BE COORDINATED WITH THE WORK OF ALL OTHER TRADES AND WITH EQUIPMENT FURNISHED BY OTHERS.

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CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CONTRACTOR FAILURE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES THEREIN FOR RESOLUTION.

SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT TO ENGINEER FOR APPROVALPRIOR TO COMMENCING WORK.

ALL INSULATION SHALL MEET TEMPERATURE AND SMOKE RATINGS AS REQUIRED BY NFPA FOR THE INTENDED USE. ALL NEW EQUIPMENT, MATERIALS AND INSTALLATION ARE TO BE WARRANTED FROM ONE YEAR TO BE FREE OF DEFECT.

COORDINATE ALL EQUIPMENT TO ALLOW FOR SERVICE ACCESS. DO NOT ALLOW PIPING, CONDUITS OR OTHER MATERIALS TO BE INSTALLED THAT WOULD PREVENT ACCESS. PROVIDE ACCESS PANELS WHERE WALLS AND/OR CEILINGS PREVENT ACCESS TO EQUIPMENT.

INSTALL ALL EQUIPMENT PER MANUFACTURERS INSTRUCTIONS MECHANICAL CONTRACTORS TO INSPECT ALL NEW DUCTWORK FOR AIR LEAKAGE AND PATCH/REPAIR DUCTWORK AS REQUIRED WITH ACCEPTABLE SEALANT. DUCTWORK SEALING SHALL BE TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.

DUCTWORK

OTED IN LOCAL CODES. ALVANIZED STEEL DUCTS: ASTM A525 AND ASTM A527 GALVANIZED STEEL SHEET, DCK-FORMING QUALITY, HAVING G60 ZINC COATING OF IN CONFORMANCE WITH ASTM CCORDANCE WITH SMACNA - HVAC DUCT CONSTRUCTION AND FLEXIBLE, UNLESS MORE STRINGENT REQUIREMENTS ARE

C. FABRICATE AND SUPPORT IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, UNLESS MORE STRINGENT REQUIREMENTS ARE NOTED IN LOCAL CODES.

D. INSTALLATION - GENERAL:

1. INSTALL AND SEAL DUCTS IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, UNLESS MORE STRINGENT REQUIREMENTS ARE NOTED IN LOCAL CODES.

2. SUPPORT DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, CHAPTER 4, HANGERS AND SUPPORTS.

3. DUCT HANGERS SHALL NOT ATTACH TO BOTTOM CHORD OF STEEL JOIST OR METAL ROOF DECKING. ATTACH TO TOP CHORD OF STEEL JOIST OR METAL ROOF DECKING. ATTACH TO TOP CHORD OF STEEL JOIST.

4. CONNECT DIFFUSERS OR LIGHT TROFFER BOOTS TO LOW PRESSURE DUCTS DIRECTLY OR WITH 5 FEET MAXIMUM LENGTH OF FLEXIBLE DUCT HELD IN PLACE WITH STRAP OR CLAMP.

E. PROTECTION: DURING CONSTRUCTION, PROVIDE TEMPORARY CLOSURES OF METAL OR TAPED POLYETHYLENE ON OPEN DUCTWORK TO PREVENT CONSTRUCTION DUST FROM ENTERING DUCTWORK SYSTEM.

G. INSULATION: ALL SUPPLY AND RETURN DUCTWORK SHALL HAVE 1-1/2" DUCTWORK FROM PROVIDE 1" DUCTWRAP INSULATION ON FIRST 10 FEET OF EXHAUST DUCTWORK FROM ROOF PENETRATION.

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ADJUSTING ∞ BALANCING

A. WORK INCLUDES:
1. TESTING, ADJUSTMENT, AND BALANCING OF NEW AIR SYSTEMS.
2. MEASUREMENT OF FINAL OPERATING CONDITION OF HVAC SYSTEMS.
2. MEASUREMENT OF FINAL OPERATING CONDITION OF HVAC SYSTEMS.
B. SERVICES PROVIDED BY AN INDEPENDENT, CERTIFIED TESTING AND BALANCING AGENCY.
C. PERFORM TOTAL SYSTEM BALANCE IN ACCORDANCE WITH AABC NATIONAL STANDARDS FOR FIELD MEASUREMENT AND INSTRUMENTATION, TOTAL SYSTEM BALANCE OR NEBB PROCEDURAL STANDARDS FOR TESTING. BALANCING AND ADJUSTING OF ENVIRONMENTAL SYSTEMS.
D. SUBMIT COPIES OF T&B REPORT TO ENGINEER FOR APPROVAL PRIOR TO FINAL INSPECTION. PROVIDE COPY OF FINAL APPROVED T&B REPORT TO CODE INSPECTOR AT FINAL INSPECTION.

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AUTOMATIC TEMPERATURE CONTROLS

1.2 EXHAUST FAN (EF-1)

1. EXHAUST FAN EF-1 SHALL BE INDEXED 'ON' AT EITHER LAB HOOD. EXHAUST FAN SWITCHES SHALL BE WIRED IN PARALLEL TO START FAN AT EITHER HOOD.

2. A LOW LEAKAGE, MOTORIZED DAMPER SHALL BE PROVIDED IN EXHAUST FAN CURB TO CLOSE WHEN EXHAUST FAN IS 'OFF'.

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MAKE-UP AIR UNIT (MAU-1)
 MAKE-UP AIR UNIT MAU-1 SHALL BE INTERLOCKED TO RUN WHENEVER EXHAUST FAN EF-1 IS OPERATING.
 A DISCHARGE AIR THERMOSTAT SHALL BE INSTALLED IN THE SUPPLY AIR DUCTWORK FROM THE UNIT.
 AN OUTDOOR THERMOSTAT SHALL INDEX THE UNIT TO COOLING WHEN THE OUTDOOR AIR TEMPERATURE RISES ABOVE 70° F (ADJUSTABLE).
 THE OUTDOOR AIR TEMPERATURE DROPS BELOW 65° F (ADJUSTABLE).
 THE DISCHARGE THERMOSTAT SHALL CYCLE THE COOLING TO MAINTAIN A DISCHARGE AIR TEMPERATURE OF 72 DEGREES F (ADJUSTABLE).
 THE DISCHARGE THERMOSTAT SHALL CYCLE THE HEATING TO MAINTAIN A DISCHARGE TEMPERATURE OF 70 DEGREES F (ADJUSTABLE).
 A LOW LEAKAGE, MOTORIZED OUTDOOR AIR DAMPER SHALL BE PROVIDED IN OUTDOOR AIR INTAKE TO CLOSE WHEN THE MAKE-UP AIR UNIT IS 'OFF'.

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ROOF MOUNTED EXHAUST FAN SCHEDULE

MECHANICAL LEGEND

PBCI

Engineering

SUPPLY DIFFUSER

FLEX DUCT

VOLUME DAMPER

EXHAUST GRILLE

RETURN GRILLE

2746 West College Avenue State College, PA 16801 phone: 814.234.7366 fax: 814.234.7040

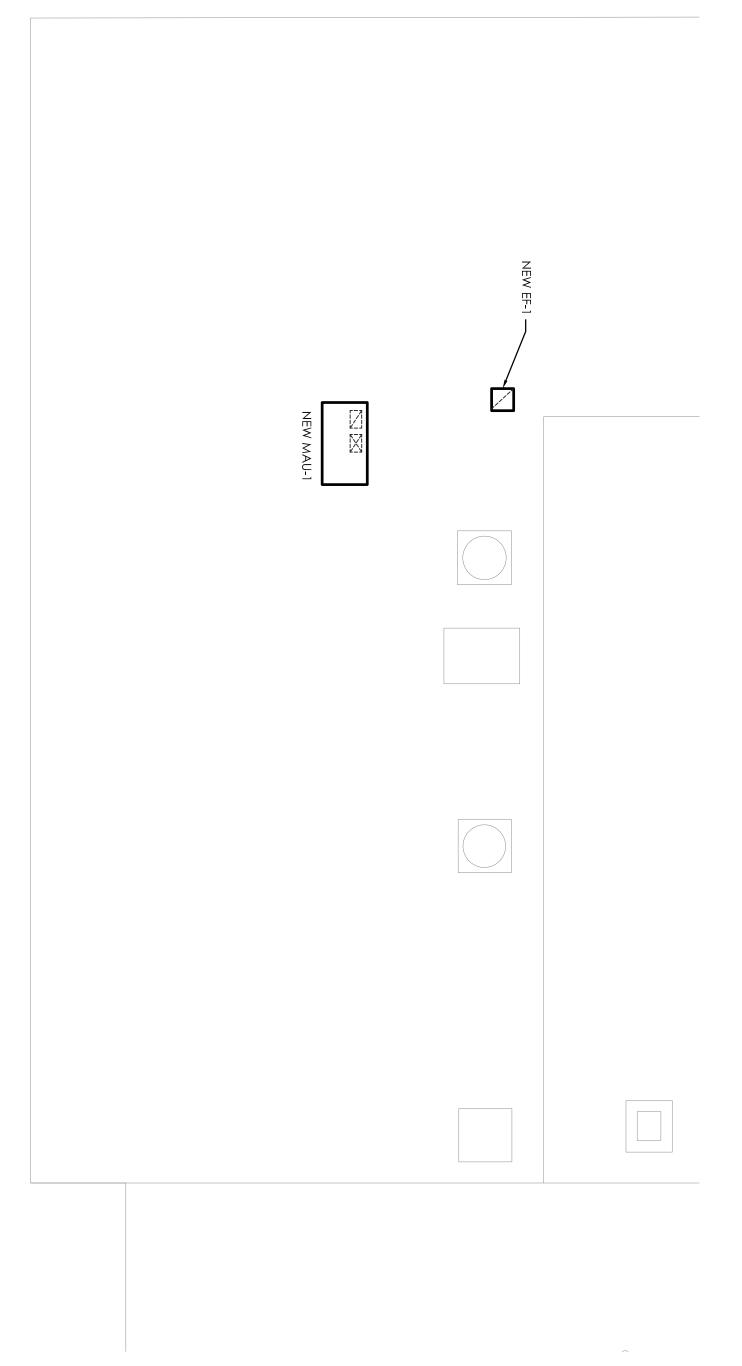
PBCI No.: E33004

CFM SERVED
CHEMISTRY / PREP

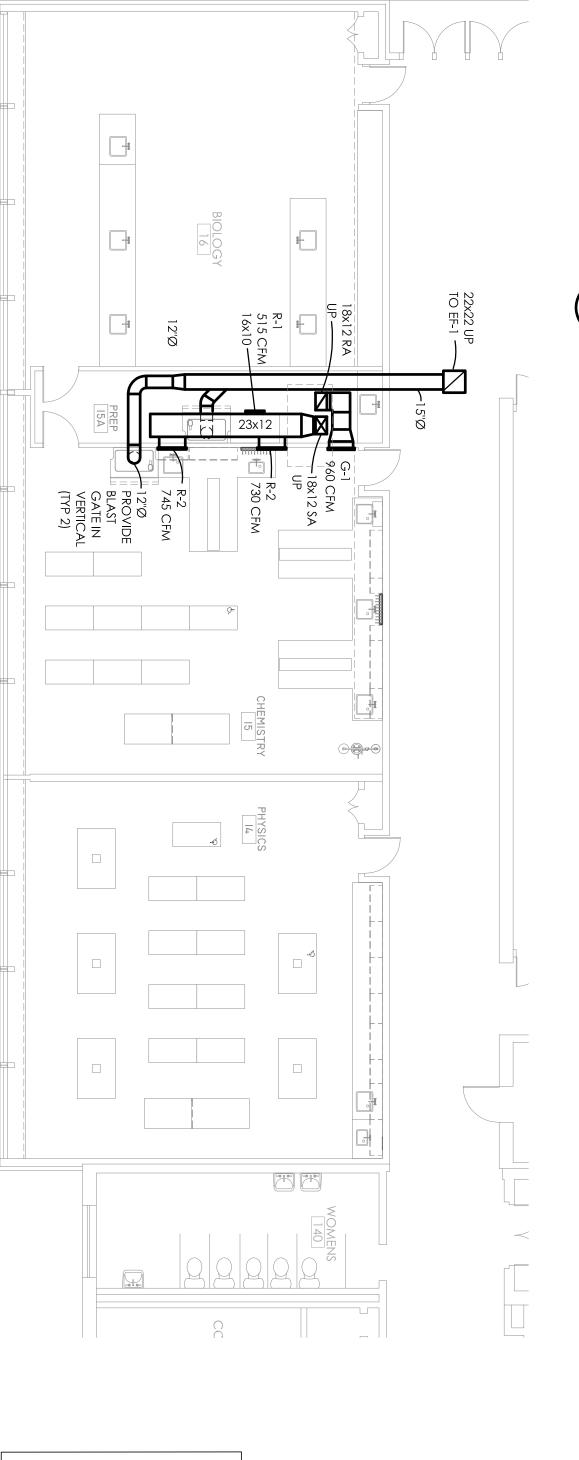
MAKE-UP AIR UNIT SCHEDULE

NOTE: PROVIDE DISCHARGE AIR SENSOR. INTERLOCK UNIT REFRIG. OA CFM TO RUN WITH EF-1.

				DIFFUSER GRILLE		REGISTER	& REGISTER SCHEDULE	Ē	
Ġ	AIR SERVICE	FACE TYPE	FACE SIZE	NECK SIZE	MOUNT	FRAME	DAMPER	MANUFACTURER / MODEL	NOTES
) -1	RETURN	BAR	25-3/4 X 13-3/4	24X12	WALL	PLASTER	OBD	PRICE / 24" X 12" 510 F L D A B12	BLADES SHALL BE ANGLED UP
-1	SUPPLY	BAR	17-3/4 X 11-3/4	16X10	WALL	PLASTER	OBD	PRICE / 16" X 10" 520D F S D A B12	
-2	SUPPLY	BAR	23-3/4 X 11-3/4	22X10	WALL	PLASTER	OBD	PRICE / 22" X 10" 520D F S D A B12	

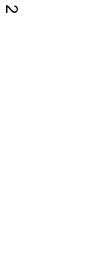












POINT OF NEW CONNECTION

VELOCITY PROBE

ACCESS PANEL

FIRE DAMPER



SMOKE DETECTOR

MOTORIZED DAMPER

THERMOSTAT

SIDE WALL REGISTER

FLEXIBLE CONNECTION

DUCT TAKE OFF

PROGRESS DATES

DESIGN REVIEW SET CODE & BIDDING SET

02/18/13 02/25/13

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CATHOLIC **JOSEPH'S ACADEMY**

901 Boalsburg Pike Boalsburg, PA 16827

SCIENCE LAB RENOVATIONS

SPECIFICATIONS **HVAC PLANS &**

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