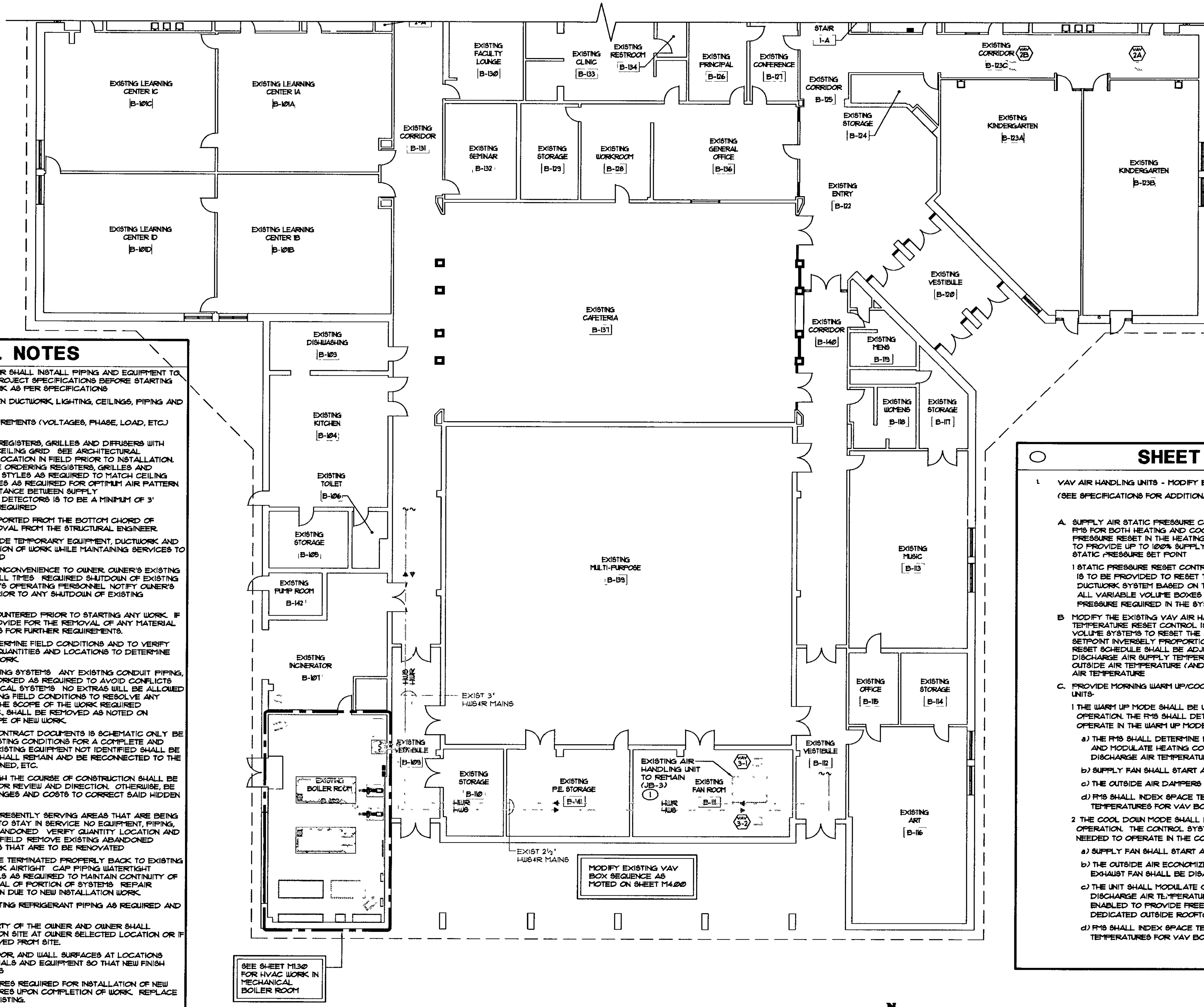

1 PARTIAL FIRST FLOOR PLAN - MECHANICAL FLOOR PLAN
3/32" = 1'-0"

GENERAL NOTES

A. LAYOUT IS DIAGRAMMATIC AND CONTRACTOR SHALL INSTALL PIPING AND EQUIPMENT TO MEET ACTUAL FIELD CONDITIONS. REVIEW PROJECT SPECIFICATIONS BEFORE STARTING ANY WORK. SUBMIT SHOP DRAWINGS OF WORK AS PER SPECIFICATIONS

B. LAYOUT WORK TO AVOID CONFLICTS BETWEEN DUCTWORK, LIGHTING, CEILINGS, PIPING AND BUILDING STRUCTURE

C. COORDINATE EQUIPMENT ELECTRICAL REQUIREMENTS (VOLTAGES, PHASE, LOAD, ETC.) BEFORE ORDERING ANY EQUIPMENT

D COORDINATE EXACT LOCATION OF CEILING REGISTERS, GRILLES AND DIFFUSERS WITH LIGHTING LAYOUT, SPRINKLER HEADS, AND CEILING GRID SEE ARCHITECTURAL REFLECTED CEILING PLAN. VERIFY EXACT LOCATION IN FIELD PRIOR TO INSTALLATION. VERIFY CEILING STYLES AND TYPES BEFORE ORDERING REGISTERS, GRILLES AND DIFFUSERS. PROVIDE APPROPRIATE FRAME STYLES AS REQUIRED TO MATCH CEILING STYLE AND TYPES SET ADJUSTABLE BLADES AS REQUIRED FOR OPTIMUM AIR PATTERN AND TO PREVENT DRAFTS THE MINIMUM DISTANCE BETWEEN SUPPLY DIFFUSERS/REGISTERS AND SMOKE OR HEAT DETECTORS IS TO BE A MINIMUM OF 3' COORDINATE WITH FIRE ALARM SYSTEM AS REQUIRED

E. PIPING, EQUIPMENT, ETC. SHALL NOT BE SUPPORTED FROM THE BOTTOM CHORD OF ENGINEERED JOISTS WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

F COORDINATE PHASING OF WORK AND PROVIDE TEMPORARY EQUIPMENT, DUCTWORK AND PIPING AS REQUIRED FOR THE IMPLEMENTATION OF WORK WHILE MAINTAINING SERVICES TO PORTIONS OF BUILDING TO REMAIN OCCUPIED

G. SCHEDULE WORK TO AVOID DOWNTIME AND INCONVENIENCE TO OWNER. OWNER'S EXISTING FACILITY SHALL REMAIN IN OPERATION AT ALL TIMES REQUIRED SHUTDOWN OF EXISTING UTILITIES SHALL BE SCHEDULED WITH OWNER'S OPERATING PERSONNEL NOTIFY OWNER'S REPRESENTATIVE 48 HOURS IN ADVANCE PRIOR TO ANY SHUTDOWN OF EXISTING MECHANICAL SYSTEMS.

H. VERIFY IF EXISTING ASBESTOS WILL BE ENCOUNTERED PRIOR TO STARTING ANY WORK. IF ASBESTOS IS PRESENT, THE OWNER WILL PROVIDE FOR THE REMOVAL OF ANY MATERIAL CONTAINING ASBESTOS SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.

I VISIT SITE PRIOR TO BIDDING TO FULLY DETERMINE FIELD CONDITIONS AND TO VERIFY EXISTING MECHANICAL SYSTEMS INCLUDING QUANTITIES AND LOCATIONS TO DETERMINE THE FULL EXTENT O⁻ NEW AND DEMOLITION WORK.

J COORDINATE NEW INSTALLATIONS WITH EXISTING SYSTEMS ANY EXISTING CONDUIT PIPING, DUCTWORK, EQUIPMENT ETC., SHALL BE REWORKED AS REQUIRED TO AVOID CONFLICTS WITH THE INSTALLATION OF THE NEW MECHANICAL SYSTEMS NO EXTRAS WILL BE ALLOWED AFTER BIDDING FOR ANY REWORK OF EXISTING FIELD CONDITIONS TO RESOLVE ANY CONFLICTS OR NOT FULLY UNDERSTANDING THE SCOPE OF THE WORK REQUIRED EXISTING EQUIPMENT, DUCTWORK, PIPING, ETC., SHALL BE REMOVED AS NOTED ON DRAWINGS AND AS REQUIRED TO MEET SCOPE OF NEW WORK.

K. EXISTING INFORMATION IDENTIFIED ON THE CONTRACT DOCUMENTS IS SCHEMATIC ONLY BE RESPONSIBLE TO PROPERLY ADDRESS EXISTING CONDITIONS FOR A COMPLETE AND PROPER INSTALLATION OF NEW SYSTEMS. EXISTING EQUIPMENT NOT IDENTIFIED SHALL BE REVIEWED AS TO WHETHER THE EQUIPMENT SHALL REMAIN AND BE RECONNECTED TO THE NEW SERVICES, BE RELOCATED, BE ABANDONED, ETC.

L. ANY HIDDEN CONDITIONS IDENTIFIED THROUGH THE COURSE OF CONSTRUCTION SHALL BE IMMEDIATELY REPORTED IN WRITTEN FORM FOR REVIEW AND DIRECTION. OTHERWISE, BE RESPONSIBLE FOR ANY AND REQUIRED CHANGES AND COSTS TO CORRECT SAID HIDDEN CONDITION.

M. REMOVE EXISTING EQUIPMENT, PIPING, ETC. PRESENTLY SERVING AREAS THAT ARE BEING RENOVATED AND THAT ARE NOT REQUIRED TO STAY IN SERVICE NO EQUIPMENT, PIPING, SUPPORTS HANGERS ETC, IS TO BE LEFT ABANDONED VERIFY QUANTITY LOCATION AND ELEVATION OF EXISTING TO BE REMOVED IN FIELD REMOVE EXISTING ABANDONED EQUIPMENT, DUCTWORK AND PIPING IN AREAS THAT ARE TO BE RENOVATED

N. REMOVED PIPING AND CONTROLS ARE TO BE TERMINATED PROPERLY BACK TO EXISTING MAINS. PATCH AND SEAL EXISTING DUCTWORK AIRTIGHT CAP PIPING WATERTIGHT PROVIDE ADDITIONAL, PIPING AND CONTROLS AS REQUIRED TO MAINTAIN CONTINUITY OF EXISTING SYSTEMS MODIFIED DUE TO REMOVAL OF PORTION OF SYSTEMS REPAIR DAMAGED DUCTWORK AND PIPING INSULATION DUE TO NEW INSTALLATION WORK.

O CAPTURE EXISTING REFRIGERANT FROM EXISTING REFRIGERANT PIPING AS REQUIRED AND REUSE OR DISPOSE OF IN A LEGAL MANNER.

P EXISTING EQUIPMENT SHALL REMAIN PROPERTY OF THE OWNER AND OWNER SHALL DETERMINE IF EQUIPMENT IS TO BE STORED ON SITE AT OWNER SELECTED LOCATION OR IF EQUIPMENT IS TO BE ABANDONED OR REMOVED FROM SITE.

Q. PROVIDE FINISHING OF EXISTING CEILING, FLOOR, AND WALL SURFACES AT LOCATIONS AFFECTED BY REMOVAL OF EXISTING MATERIALS AND EQUIPMENT SO THAT NEW FINISH WILL MATCH EXISTING IN SURROUNDING AREAS

R. REMOVE EXISTING CEILINGS AND LIGHT FIXTURES REQUIRED FOR INSTALLATION OF NEW WORK. REINSTALL CEILING AND LIGHT FIXTURES UPON COMPLETION OF WORK. REPLACE DAMAGED CEILING MATERIALS TO MATCH EXISTING.

S REPAIR AND/OR REPLACE DAMAGED PIPE INSULATION THAT OCCURS AS THE RESULT OF THIS CONSTRUCTION.

T MINIMUM SIZE FOR HOT WATER HEATING SUPPLY AND RETURN PIPING TO BE 3/4"

U. DRAIN AND REFILL EXISTING PIPING SYSTEMS AS REQUIRED FOR INSTALLATION OF NEW WORK. PROVIDE CHEMICAL TREATMENT, GLYCOL/ANTI-FREEZE MIXTURE FOR WATER PIPING SYSTEM ACCORDING TO OWNER'S REQUIREMENTS AFTER SYSTEM IS FILLED AND VENTED PROPERLY VENT PIPING SYSTEMS.

SHEET NOTES

1. VAV AIR HANDLING UNITS - MODIFY EXISTING SEQUENCE AS FOLLOWS:
(SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.)

A. SUPPLY AIR STATIC PRESSURE CONTROL SHALL BE DETERMINED BY THE FMS FOR BOTH HEATING AND COOLING MODES. MODIFY THE STATIC PRESSURE RESET IN THE HEATING MODE TO ALLOW THE AIR HANDLING UNIT TO PROVIDE UP TO 100% SUPPLY AIR AS DETERMINED TO MAINTAIN DUCT STATIC PRESSURE SET POINT

1 STATIC PRESSURE RESET CONTROL FOR VARIABLE AIR VOLUME SYSTEMS IS TO BE PROVIDED TO RESET THE STATIC PRESSURE SETPOINT IN THE DUCTWORK SYSTEM BASED ON THE POSITION OF THE VAV DAMPERS FOR ALL VARIABLE VOLUME BOXES WITHIN THE SYSTEM TO MINIMIZE THE STATIC PRESSURE REQUIRED IN THE SYSTEM.

B MODIFY THE EXISTING VAV AIR HANDLING UNITS SO THAT THE SUPPLY AIR TEMPERATURE RESET CONTROL IS TO BE PROVIDED FOR VARIABLE AIR VOLUME SYSTEMS TO RESET THE DISCHARGE SUPPLY AIR TEMPERATURE SETPOINT INVERSELY PROPORTIONAL TO THE OUTSIDE AIR TEMPERATURE. RESET SCHEDULE SHALL BE ADJUSTABLE, WITH INITIAL SCHEDULE OF 55F DISCHARGE AIR SUPPLY TEMPERATURE SETPOINT FOR 50 DEGREES F OUTSIDE AIR TEMPERATURE (AND ABOVE) TO 65F SETPOINT AT 0F OUTSIDE AIR TEMPERATURE

C. PROVIDE MORNING WARM UP/COOL DOWN CONTROL FOR VAV AIR HANDLING UNITS:

1 THE WARM UP MODE SHALL BE UTILIZED IN THE HEATING MODE OF OPERATION. THE FMS SHALL DETERMINE THE LENGTH OF TIME NEEDED TO OPERATE IN THE WARM UP MODE.

a) THE FMS SHALL DETERMINE REQUIRED DISCHARGE AIR TEMPERATURE AND MODULATE HEATING COIL CONTROL VALVE TO MAINTAIN DISCHARGE AIR TEMPERATURE SET POINT

b) SUPPLY FAN SHALL START AND RUN CONTINUOUSLY

c) THE OUTSIDE AIR DAMPERS SHALL BE FULLY CLOSED

d) FMS SHALL INDEX SPACE TEMPERATURE SET-POINTS TO OCCUPIED TEMPERATURES FOR VAV BOXES

2 THE COOL DOWN MODE SHALL BE UTILIZED IN THE COOLING MODE OF OPERATION. THE CONTROL SYSTEM SHALL DETERMINE THE LENGTH OF TIME NEEDED TO OPERATE IN THE COOL DOWN MODE.

a) SUPPLY FAN SHALL START AND RUN CONTINUOUSLY

b) THE OUTSIDE AIR ECONOMIZER DAMPER SHALL BE FULLY CLOSED AND EXHAUST FAN SHALL BE DISABLED

c) THE UNIT SHALL MODULATE COOLING CAPACITY TO MAINTAIN DISCHARGE AIR TEMPERATURE AT 55 F (ADJ) ECONOMIZER SHALL BE ENABLED TO PROVIDE FREE COOLING AS DETERMINED BY THE DEDICATED OUTSIDE ROOFTOP UNIT CONTROLS.

d) FMS SHALL INDEX SPACE TEMPERATURE SET-POINTS TO OCCUPIED TEMPERATURES FOR VAV BOXES

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2017 MECHANICAL RENOVATIONS AT:
JACKSON ELEMENTARY SCHOOL
811 N. 400 E. VALPARAISO, IN. 46383

WILLIAM A. HROMADA
REGISTERED
No. 10706283
STATE OF INDIANA
PROFESSIONAL ENGINEER

PROJECT NUMBER: 17-006	REVISIONS: 03/29/2017
PROJECT MANAGER:	
DRAWN BY: CH	
ISSUED FOR BID: 03/03/2017	

PARTIAL FIRST FLOOR PLAN - MECHANICAL FLOOR PLAN

M1.10