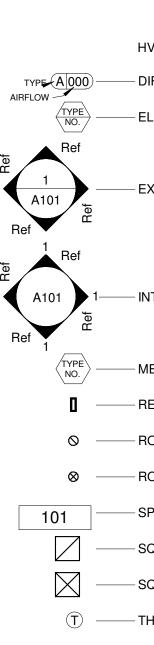


VA



IVAC SYMBOLS	A ACH
NFFUSER TAG	AHU ASHRA
ELECTRO-MECHANICAL EQUIPMENT TAG	C CFM CHWR CHWS
NTERIOR ELEVATION	D DCW DHW DHWR E EA EF
IECHANICAL EQUIPMENT TAG	ERV ET
RECTANGULAR WALL DIFFUSER	F
OUND RETURN DIFFUSER	FLT
ROUND SUPPLY DIFFUSER	H HHWR HHWS
PACE NUMBER	HP HZ
QUARE RETURN DIFFUSER	L
QUARE SUPPLY DIFFUSER	LB
HERMOSTAT	M MCA
	O OA
	R

### HVAC ABBREVIATIONS

#### AMF AIR CHANGES PER HOUR AIR HANDLING UNIT

AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR-CONDITIONING ENGINEERS

#### CUBIC FEET PER MINUTE CHILLED WATER RETURN CHILLED WATER SUPPLY

DOMESTIC COLD WATER DOMESTIC HOT WATER DOMESTIC HOT WATER RETURN

#### EXHAUST AIR EXHAUST FAN ENERGY RECOVERY VENTILATOR EXPANSION TANK

FILTER

HEATING HOT WATER RETURN HEATING HOT WATER SUPPLY HORSEPOWER HERTZ

## POUND

MINIMUM CIRCUIT AMPACITY

OUTSIDE AIR

**RETURN AIR** 

SUPPLY AIR SQUARE FOOT

# TYPCIAL METEOROLOGICAL YEAR

VOLTAGE VOLT-AMP (ERV).

THE PASSIVE CHILLED BEAMS USE VENTILATION AIR TO CREATE INDUCTION CURRENTS IN THE ROOM, DISTRIBUTING THE HEATED OR COOLED AIR WITHOUT AN ADDITIONAL FAN. THE VENTILATION AIR WILL BE DEHUMIDIFIED WITH A CHILLED WATER (CHW) COIL AT THE ERV TO PREVENT CONDENSATION AT THE PCB. THIS ALSO ELIMINATES THE REQUIREMENT FOR CONDENSATE PUMPS AT THE PCBS.

EACH PCB WILL HAVE A HEATING HOT WATER (HHW) AND A CHW CONNECTION AND INTEGRAL CONTROL VALVE THAT WILL MODULATE TO MAINTAIN ROOM TEMPERATURE. EACH PCB ALSO MEASURES CO2 AND/OR OCCUPANCY TO PROVIDE DEMAND-CONTROLLED VENTILATION (DCV). SUPPLEMENTAL BASEBOARD HEATING WILL BE PROVIDED TO ENSURE COMFORT DURING VERY COLD EXTERIOR CONDITIONS, DUE TO THE LOW INSULATION VALUE AND HIGH WINDOW-TO-WALL RATIO ON THE NORTH AND SOUTH WALLS.

AIR WILL BE EXHAUSTED FROM THE KITCHENETTES AND BATHROOMS, PLUS GENERAL SPACE EXHAUST TO BALANCE THE SUPPLY AIR VOLUME. CONSTANT EXHAUST AIR VOLUMES IN THE BATHROOMS AND KITCHENETTES WILL BE CONTROLLED WITH CONSTANT AIRFLOW REGULATORS (CARS) IN THE BRANCH DUCTS TO THOSE SPACES. AN AIR-COOLED CHILLER ON THE REAR ROOF WILL SERVE A CHW BUFFER TANK AND PUMP IN THE BASEMENT.

THE LOBBY WILL BE HEATED WITH HOT WATER FROM THE EXISTING BOILERS.

1.	GENERAL NOTES ON THIS DRAWING ARE APF NOTES APPLICABLE TO THAT DRAWING.
2.	DESIGN IN ACCORDANCE WITH MAINE UNIFOR
2.1.	2009 INTERNATIONAL ENERGY CONSERVATIO
2.1. 2.2.	2009 INTERNATIONAL ENERGY CONSERVATIO
2.3.	ASHRAE 62.1 2010
2.4.	ASHRAE 90.1 2010
3.	COORDINATE LOCATION OF GRILLES, REGIST WITH THE REFLECTED CEILING PLAN AND AR INSTALLED BY OTHER TRADES TO REFLECT O
4.	ARRANGE PIPING AND DUCTWORK, PARTICUL SPACE FOR PIPE HANGERS, EXPANSION LOO
5.	EQUIPMENT WITH FILTERS SHALL BE INSTALL
6.	CONTRACTOR SHALL VERIFY REFRIGERANT F
7.	COORDINATE LOCATION AND INSTALLATION (
8.	THERMOSTATS SHALL BE LOCATED IN THE RO OTHERWISE.
9.	EXTEND DRAIN LINES TO THE NEAREST FLOO MAINTENANCE ACCESS.
10.	PIPING AND DUCTWORK SHALL BE RUN CONT
11.	FLOOR MOUNTED EQUIPMENT IN THE MECHA OTHERWISE.
12.	CORRECT SETTINGS ON BALANCING FITTING
13.	PROVIDE ACCESS DOORS IN DUCTWORK WH
13.1.	FIRE AND SMOKE DAMPERS
13.2.	CEILING RADIATION DAMPERS
13.3.	BALANCING DAMPERS
14.	DIMENSIONS FROM REFERENCES TO EQUIPM

REQUIRED.

## MECHANICAL SYSTEM DESCRIPTION

PRIMARY HEATING, COOLING, AND VENTILATION FOR THE SECOND, THIRD, AND FOURTH FLOORS WILL BE THROUGH A PASSIVE CHILLED BEAM (PCB) SYSTEM SERVED BY THE EXISTING NATURAL GAS BOILERS, A NEW AIR-COOLED CHILLER, AND A NEW ENERGY RECOVERY VENTILATOR

HVAC GENERAL NOTES

PPLICABLE TO EACH MECHANICAL DRAWING OF THIS SET. SEE EACH DRAWING FOR SPECIFIC

ORM BUILDING AND ENERGY CODE. ION CODE

STERS, DIFFUSERS, THERMOSTATS AND OTHER WALL OR CEILING MOUNTED HVAC ACCESSORIES ARCHITECT'S ELEVATION DRAWINGS. COORDINATE LIGHTING FIXTURE LAYOUT AND ACCESSORIES GOOD WORKMANSHIP THROUGHOUT. ULARLY ABOVE CEILINGS, AS REQUIRED TO CLEAR STRUCTURE, DUCTS, CONDUIT, ETC. ALLOW DOPS AND ACCES TO VALVES, FILTERS AND EQUIPMENT. LLED SUCH THAT FILTERS ARE READILY ACCESSIBLE FOR REGULAR SERVICING. T PIPE SIZES WITH EQUIPMENT MANUFACTURERS FOR THE INDICATED INSTALLATION. N OF EQUIPMENT WITH OTHER TRADES. ROOMS INDICATED. INSTALL THERMOSTATS 4' 0" ABOVE THE FINISH FLOOR UNLESS NOTED

OOR DRAIN OR AS INDICATED. ROUTING SHALL NOT INTERFERE WITH PASSAGEWAYS NOR

NTINUOUSLY THROUGH NON-RATED FLOORS, WALLS AND PARTITIONS UNLESS NOTED OTHERWISE. HANICAL ROOM SHALL BE ON 6" THICK CONRETE PADS WITH ROUNDED EDGES UNLESS NOTED

IGS SHALL BE PERMANENTLY MARKED. HERE INDICATED OR REQUIRED FOR ACCESS TO SYSTEM COMPONENTS INCLUDING:

IMENSIONS FROM REFERENCES TO EQUIPMENT ARE AN AID FOR EQUIPMENT LOCATION. COORDINATE ACTUAL EQUIPMENT LOCATION(S) AS

