



## CARBON FOOTPRINT



# MONTH 1: THE ENERGY CONSERVATION OPPORTUNITY

## Gymnasium to Office Building Application

### BASIS OF DESIGN – ORIGINAL

Application: Original design intent - Gymnasium with single zone H&V system

Current design intent - Office space with multiple HVAC zones and 24/7 data room

Room type	Hours of occupancy	Days of occupancy	Months of occupancy	Remarks
Public space	24 hrs/day	7 days/wk	12 mo/yr	
Gymnasium	24 hrs/day	7 days/wk	12 mo/yr	

Room type	Space pressure	Min. ach	OA (ach or cfm/person)	Direct exhaust
Public space	Neutral	12 ach	6 ach	Toilet exhaust
Gymnasium	Neutral	8 ach	2 ach	None

### TEMPERATURE AND HUMIDITY FOR PUBLIC SPACE AND GYMNASIUM

- Heating season: Occupied 75°F and 11/A %rh
- Cooling season: Occupied 72° and 60 %rh
- Energy conservation features: None
- Energy conservation features for central AHU: None
- Filters: prefilter, 30% efficiency (MERV 1)
- Temperature HWS: 200° HWR: 180° CHWS: 44° CHWR: 54°
- Supply air temperature: 80° heating season, 55° cooling season

### CURRENT BASIS OF DESIGN

Room type	Hours of occupancy	Days of occupancy	Months of occupancy	Remarks
Public space	6 a.m. to 6 p.m.	Mon. through Fri.	12 mo/yr	
Admin/office	6 a.m. to 6 p.m.	Mon. through Fri.	12 mo/yr	
Tel-data	24 hrs/day	7 days/wk	12 mo/yr	
Classrooms	8 a.m. to 3 p.m.	Mon. through Thur.	September through May	
Conference	None	None	None	Occupancy sensor

Room type	Space pressure	Min. ach	OA (ach or cfm/person)	Direct exhaust
Public space	+0.01	2 ach	1 ach	Toilet exhaust
Admin/office	Neutral	4 ach	30 cfm/person	None
Tel-data	Neutral	12 ach	75 cfm	None
Classrooms	Neutral	6 ach	2 ach	None
Conference	-0.01	6 ach	2 ach	None

### TEMPERATURE AND HUMIDITY FOR PUBLIC SPACE, ADMIN/OFFICE, CLASSROOMS, AND CONFERENCE ROOMS

- Heating season: Occupied 70°F and 11/A % rh, unoccupied 60° and 11/A % rh, Remarks: No humidifier
- Cooling season: Occupied 76° and 60% rh, unoccupied 80° and 55% rh

### TEMPERATURE AND HUMIDITY FOR TEL-DATA ROOM

Heating season: Occupied 72° and 50% rh Cooling season: Occupied 72° and 50% rh

### ENERGY CONSERVATION FEATURES FOR OCCUPIED SPACE

CO<sub>2</sub>: Yes VAV: Yes Night setback: Yes Morning warm-up: Yes Airside economizer: Yes  
O.A. Compensated HWS: Yes



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