

“GREEN” FEATURES:

LEED Rating Goal:

"The State Gym Renovation and Expansion project was designed under the LEED (Leadership in Energy and Environmental Design) New Construction (NC) version 2.2 guidelines and has a sustainability goal for a minimum of a LEED Gold Rating.

Site Planning;

- Utilizing a previous developed site
- Access to Public Transportation: The availability of CyRide routes with links to the commuter parking lots and to the Ames community helps reduce car emissions and encourages people to take the bus when visiting campus.
- Bicycle Storage and Changing Rooms: Bicycle storage and changing rooms in the building promote and encourage bicycle use by the occupants of the building.
- The exterior lighting surrounding the building is designed to prevent direct-beam illumination leaving the building site, thus reducing night sky light pollution
- Building rain water runoff is diverted to an underground storage basin where it will be reused within the facility.
- The construction site was limited around building to reduce disturbances to an established site.
- The design of the roof minimizes heat gain by utilizing a roofing system made from highly reflective materials. Portions of the building will also utilize a green roofing system. This reduces energy required for cooling and lessens the heat impact on the neighborhood.

Water;

- Toilets have low consumption flush valves to encourage less water consumption
- Sinks have low flow faucets
- Native site plantings were chosen to eliminate the requirement for irrigation
- Rain water collected from the roof will be reused to flush toilets within the facility

Energy;

- The building energy consuming systems will be commissioned
- High performance windows will provide greater thermal comfort by reducing heat gain from the sun's rays.
- Icynene spray foam insulation, which also reduces air infiltration, will be used in wall cavities and attic/roof areas
- An energy recovery system will transfer heat and cool from the exhaust air stream to the fresh incoming air reducing the demand for energy consumption to temper the air
- State of the art building automation controls roll back thermostat set points during the night and unoccupied periods
- Optimized energy performance should exceed stringent energy codes (ASHRAE 90.1) by 32%.
- Electrical energy consumption for the building will be measured and monitored as well as the overall energy consumption for the buildings mechanical equipment and operating systems

Building Materials;

- Recycling collection areas and desk side recycling is in use in the building
- A waste management plan is in place throughout construction to ensure that a minimum of 50% of construction debris was recycled or salvaged.
- Recycled content is used in many of the building materials, such as carpet and ceiling tile, soundproofing materials used in walls and floors, counters, bathroom partitions, and steel.
- Rapidly renewable resources were incorporated into building materials, such as linoleum, corkboard, etc.
- A minimum of 10% of all building materials specified were manufactured regionally within a 500 mile radius of the building site.

Indoor Environmental Quality;

- Carbon dioxide levels will be monitored to ensure ventilation systems are providing adequate ventilation to occupied spaces.
- A Construction Indoor Air Quality Management Plan is in place during construction to provide for the health of the construction workers as well as the incoming building occupants.
- Low VOC (Volatile Organic Compound) adhesives, paints, composition wood, and carpet tile will be used.
- A ventilation and humidification system will ensure human thermal comfort for all occupants.
- Windows provide for daylight in 75% of the regularly occupied spaces