IMSB Renovation





SITE ATTRIBUTES BUS STOP



54

BIKE RACK Bicycle parking immediate to front entrance



WATER USE REDUCTION

Low-flow plumbing fixtures and automatic sensor faucets provide a 36% water use reduction when compared to the Michigan Plumbing Code.





FACILITIES & OPERATIONS ARCHITECTURE, ENGINEERING AND CONSTRUCTION





1000719 U-M Building Number

DESCRIPTION: The IMSB renovation project updates infrastructure and addresses contemporary programmatic needs for fitness and recreational space. The project reconfigures existing space within the building to provide larger areas for cardio and weight training, group exercise rooms, racquetball courts, locker rooms, staff offices, and spaces for social interaction. Infrastructure upgrades include accessibility improvements, plumbing, wired and wireless networks, exterior window replacement, masonry repairs, lighting improvements, and gymnasium floor replacement.

- 95% of exterior walls reused to preserve historic detailing, massing, and character.
- Wall insulation added in some locations to improve thermal performance.



ENERGY REUSE

Enthalpy Wheel allows return air to condition outside air which reduces heating/cooling load in the air handling unit.

SMART SYSTEMS

VARIABLE DRIVES Motors on equipment allow for equipment to conserve energy when demand is low

VAV SYSTEMS Variable air volume HVAC systems, including Laundry and Maintenance Shop



BIKE SHARE



ENERGY SAVINGS The building's design and systems include energy efficient features that provide an estimated 30% energy savings compared with a code compliant building per ASHRAE 90.1.

	&	Intramural Sports Building Renovati	ion	
3	VIEWS	Building Use	Recreation	al Spor
2	VIEVUS	Location	Ann Ardor, 08 754 Sc	WIICHIG
)		Number of Occupants	30,7 54 50	1,3
		ASHRAF 90.1 version		200
		Energy cost savings compared to ASHRAE baseline		30
			\$50,8	302 / ye
		Total electrical savings	316,165 K	Wh / ye
		Total natural gas savings		N
		CO2 emissions avoided		294 to
		Water fixture baseline2012 Michi	gan Plumb	oing Coo
		Total water savings		40
		Construction/Demolition waste diverted from landfill		TB
		Insulation (R-Value)*	Code	Proje
		Wall assembly - above grade	15.5	18.4
		Glazing - Curtain wall system	0.55	0.0
		U-value**-existing	0.55	0.2
	\mathbf{O}	Glazing - Fixed assembly	0.40	0.0
		U-value**	0.55	0.2
		Solar Heat Gain Coefficient (SHGC)**	0.40	0.3
		Glazing - Visible Light Transmittance (VT)***		0.4
		Project Team		
		Owner University of Michigan - Re	ecreationa	al Spor
	DOILDING	Architect Integrated Design Solutions with RDG	Planning &	& Desig
	REUSE	Engineer Integrated	igineer Integrated Design Solu	
		Contractor Clark Cons	truction C	ompar
	The project registering	Commissioning Authority	(J-M AE
	ine project maintains	Project Management		J-M AE
	approximately 80% of	Design Period: 07/2014 - 05/2015		
		Construction Period: 07/2015-08/2016		
	existing walls, floors,	* The higher the R-value the better the insulating quality		
	and roof	*** The higher the VT value the more daylight in the space. VT is measu	JW Jrad batweer	0 and 1
		The higher the vi value the more daylight in the space. Vi is measured	iled betweel	

HVAC Controls designed to prevent simultaneous heating and cooling; controls temperature using occupancy sensors

Recreational Sports IMSB Renovation

P00007757 U-M Project Number