

Project Description

Located along a major thoroughfare of U-M campus, the New College of Pharmacy Building sits at the nexus of Central Campus to the south and the Medical Center Campus to the northeast. The new building at the corner of Glen Avenue and East Huron Street provides a prominent location for the college and further reinforces an important gateway to the university.

The new facility will consolidate the College of Pharmacy’s teaching, research and office spaces; house state-of-the-art academic learning environments, class laboratories and wet and dry research, as well as administrative offices. The new teaching and research facility will allow for the college to continue to achieve its mission “...to educate and inspire a diverse group of future pharmacists and pharmaceutical scientists to be leaders, advance patient care, and improve health for all.”



Mass Timber Construction and Benefits

The building’s hybrid structure consists of concrete, mass timber, and steel. The strength, durability, inherent fire-resistance, visual appeal and reduced embodied carbon in the mass timber emphasize the building’s focus on sustainability.



Recycled Materials

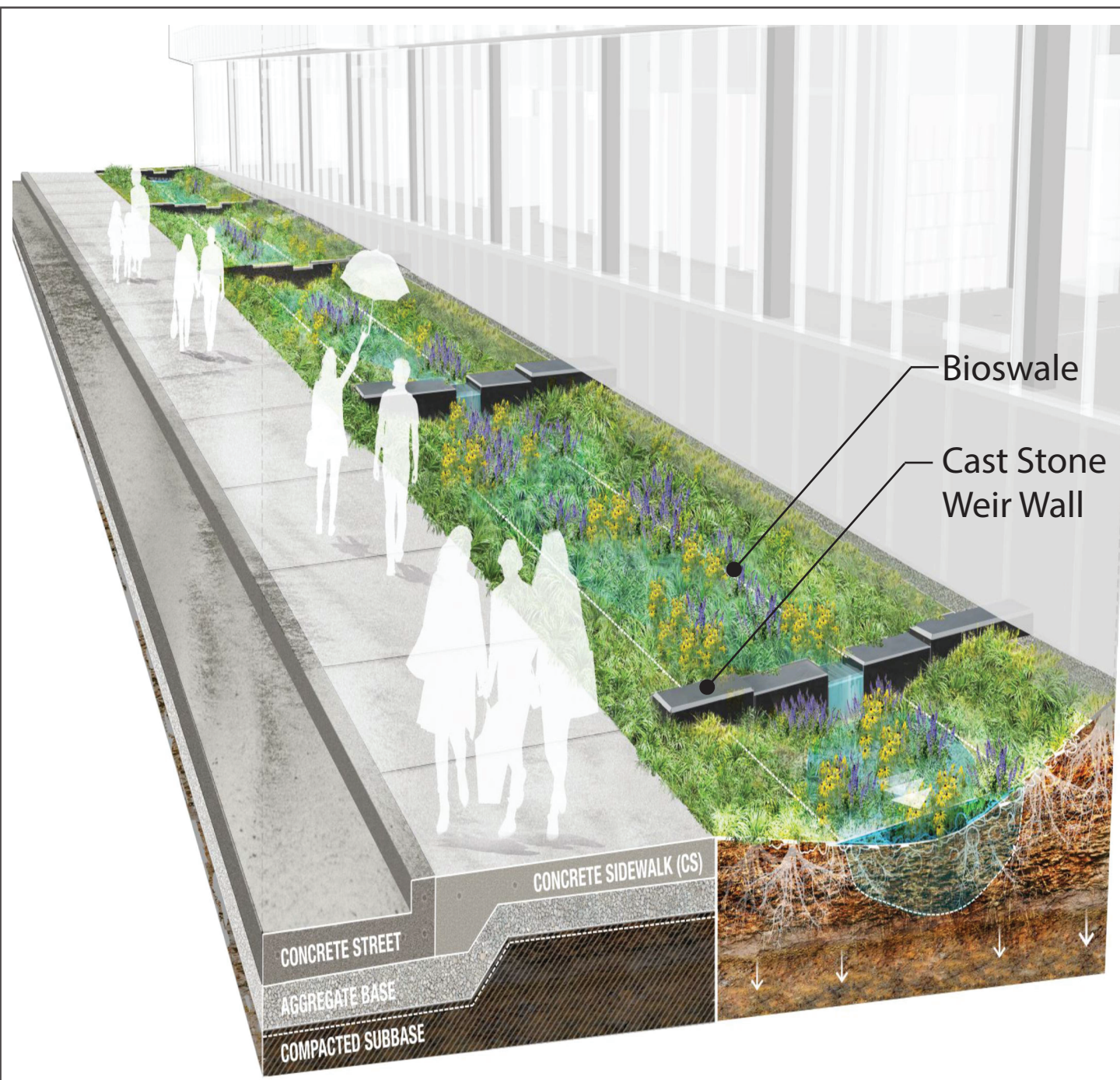
Exterior furnishings are made with recycled high-density polyethylene (HDPE) sourced primarily from milk jugs and manufactured in Duluth, Minnesota.

Mass Timber Benefits

- Reduce Greenhouse Gas Emissions
- Ease and Speed of Construction
- Minimize Construction Waste
- Fire Resistant
- Reduce Additional Finish Materials
- Connection to Nature



Big house photo: Michigan Photography



Stormwater System

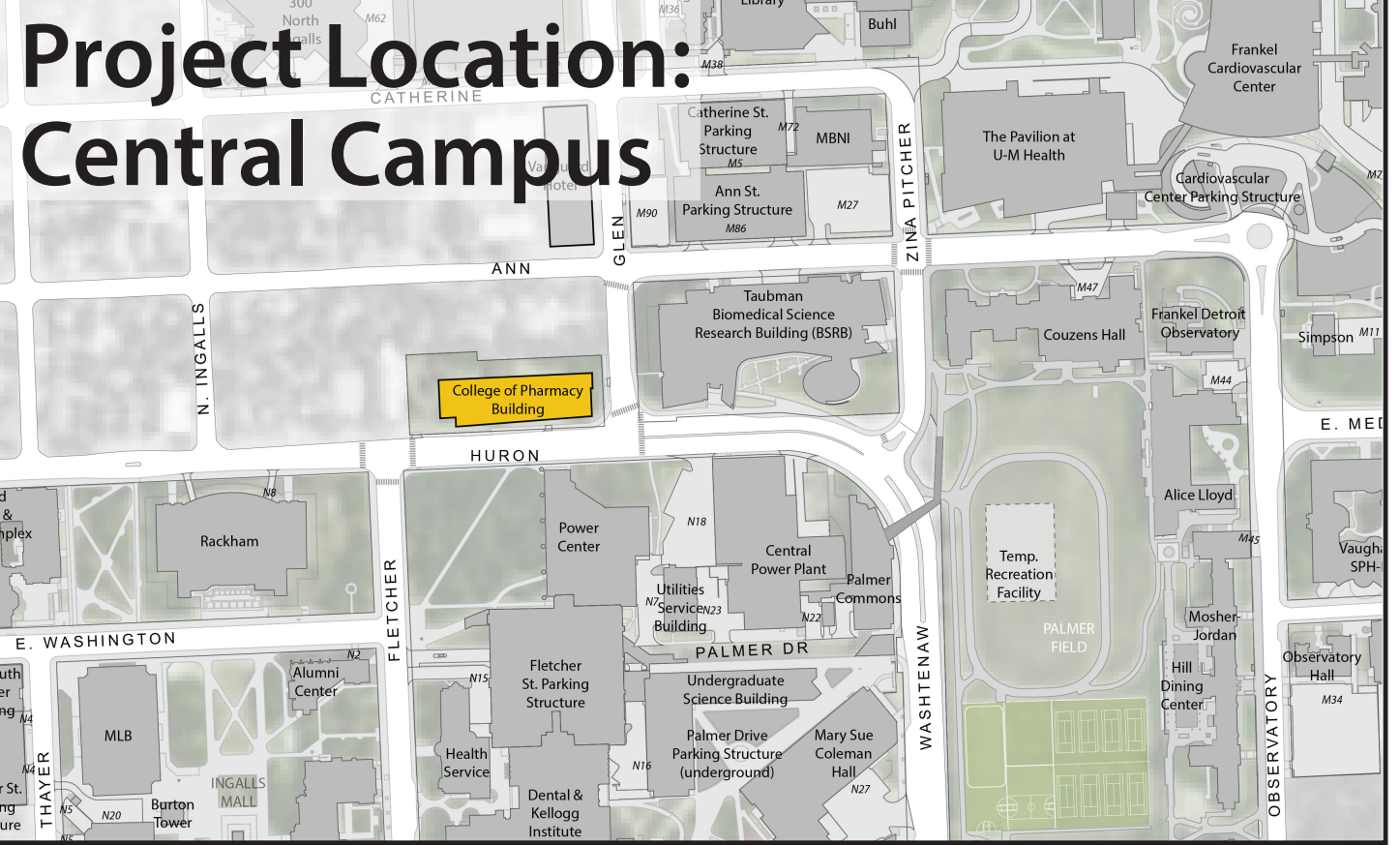
The stormwater system consists of underground rainwater storage tanks to temporarily store water from a 100-year storm underground and slowly release it into the regional groundwater system through underlying soils. In addition, an emergency overflow weir provides a secondary stormwater outflow path in case of system failure or a storm event exceeding the 100-year storm.



Embodied Carbon reduction

The embodied carbon of a building includes the greenhouse gas emissions associated with the extraction, transportation, manufacturing and installation of building materials. Through the incorporation of a mass timber structure, the building has reduced the embodied of the structure and envelope by 22%.

When taking into account the biogenic carbon (the carbon sequestered by a tree during its growth), the total carbon avoided is more than 1,500 MT CO₂e. This is equal to the amount of carbon sequestered by 1,800 acres of forest in one year. That is 144 times the footprint of the Michigan Stadium!



Sustainability Facts

New Building for the College of Pharmacy
Building Use College of Pharmacy
Location Ann Arbor, Michigan
Size 142,000 Square Feet
Number of Occupants 248 Regular; 512 Peak Load

LEED version	v4/ v4.1	
LEED certification level	TBD	
ASHRAE 90.1 version	2013	
Energy cost savings compared to ASHRAE baseline	62%	
Total energy savings*	\$188,407 year	
Total electrical savings*	1,830,522 KWh/ year	
Natural Gas savings*	48,612 Therms/ year	
CO2 emissions avoided*	1,655 metric tons/ year	
Embodied Carbon Savings (Structure & Enclosure)	22%	
Water fixture baseline	2015 Michigan Plumbing Code	
Total water savings	30%	
Construction/Demolition waste diverted from landfill	TBD	
Insulation (R-Value)**	Code	Project
Wall assembly - above grade	18.2	18.2
Wall assembly - below grade	7.5	7.5
Roof assembly	30	30
Glazing - Curtain wall system		
U-value***	0.55	0.42
Solar Heat Gain Coefficient (SHGC)***	0.40	0.28
Visible Light Transmittance (VT)****	1.10	0.441

Project Team	
Owner	University of Michigan - College of Pharmacy
Architect	RDG Planning and Design
Engineer	Alvine Engineering
Contractor	Turner Construction Company
MEP Commissioning Authority (CxA)	U-M AEC
Building Envelope CxA	Wiss Janney Elstner Associates Inc
Project Management	U-M AEC

*Savings indicated take into account the efficiencies of the Central Power Plant
** The higher the R-value the better the insulating quality
*** The lower the U-value and SHGC the more energy efficient the window
**** The higher the VT value the more daylight in the space. VT is measured between 0 and 1

