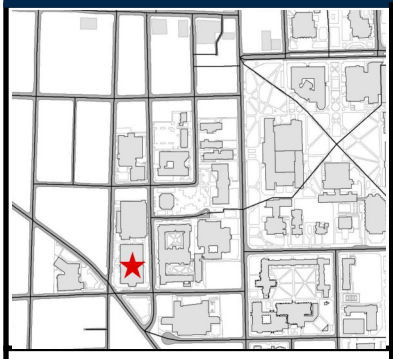
FACILITIES & OPERATIONS
ENVIRONMENT, HEALTH & SAFETY
UNIVERSITY OF MICHIGAN

STORM WATER MANAGEMENT PROJECTS



Munger Graduate Residence Hall Infiltration Measures

U-M installed water quality devices, underground infiltration, rain gardens, porous surface (permeable pavers), and a partial green roof as part of the eight-story Munger Graduate Residence Hall at the intersection of E. Madison Street and Division Street. The storm water control measures are designed to treat and infiltrate runoff well beyond the required storm water management for the site.

Requirements: The disturbed area is greater than one acre triggering adherence to U-M Storm Water Permit Post Construction requirements—> http://ehs.umich.edu/construction-projects/environmental-considerations/storm-water-management

Drainage Area:
2.2 acres

Watershed Protected:
Storm sewers in this area discharge to Allen Creek at Hill Street

Soil:
Well-drained sandy soil

Construction Completed:
2015

Storm Water Control Measures:

- Water quality devices
- Underground infiltration
- Rain Garden/Infiltration
- Porous surface (pavers)
- Green roof

U-M Maintenance:

- Vacuuming pavers
- Removing sediment from water quality devices
- Maintaining vegetation

U-M Storm Water Permit Requirements (based on site size and characteristics)	Constructed
Minimum Treatment Volume Required: 34,400 gallons (4,600 cubic feet) of runoff	115,100 gallons (15,400 cubic feet) of treatment and infiltration for the 100-year, 24-hour storm event
Channel Protection Volume Required (no increase to runoff and peak rate through the 2-year storm): Because there is a slight decrease in runoff and peak flow rate due to the project, no storage is required.	

Performance: For the 2-year, 24-hour design storm, the project results in a 79% reduction in storm water runoff volume and a 66% reduction in peak flow as compared to the pre-project condition. A 63% reduction in runoff volume and 48% reduction in peak flow is expected for the 100-year, 24-hour design storm.

Benefits: This system helps to remove volume and peak flow from City storm lines, provides water quality treatment, reduces flooding, and replenishes groundwater.

Rain Garden Retaining Walls