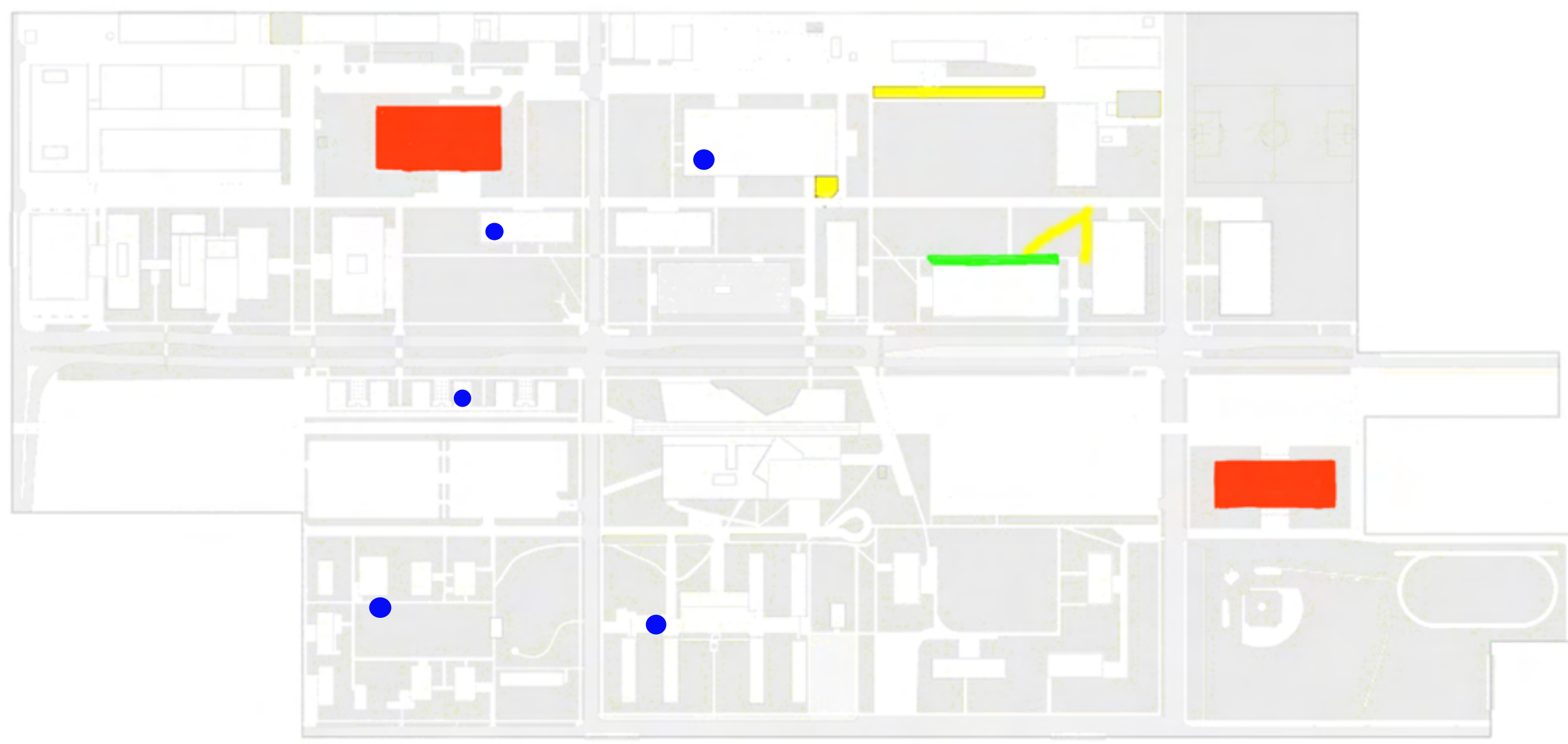


# Facility Improvements

S Block. M Chamales. J Ma. H Um.



The sustainability and promotion thereof on the IIT campus is the main focus of the facilities group. Some possible improvements planned are improved sprinkler systems, insulated windows, drainage promoting pavement, and heat blocking green wall. Through the few improvements on campus we believe the university will not only promote sustainability and environmental awareness but also save money in the process. In today's world people want to know what places like IIT are doing to improve the environment. Undertaking projects like these will show that IIT is increasing its level of sustainability and is doing its part to conserve our resources and energy.

- Green Walls
- Window Replacement
- Sprinkler Sensors
- Permeable Pavement

## Sprinklers

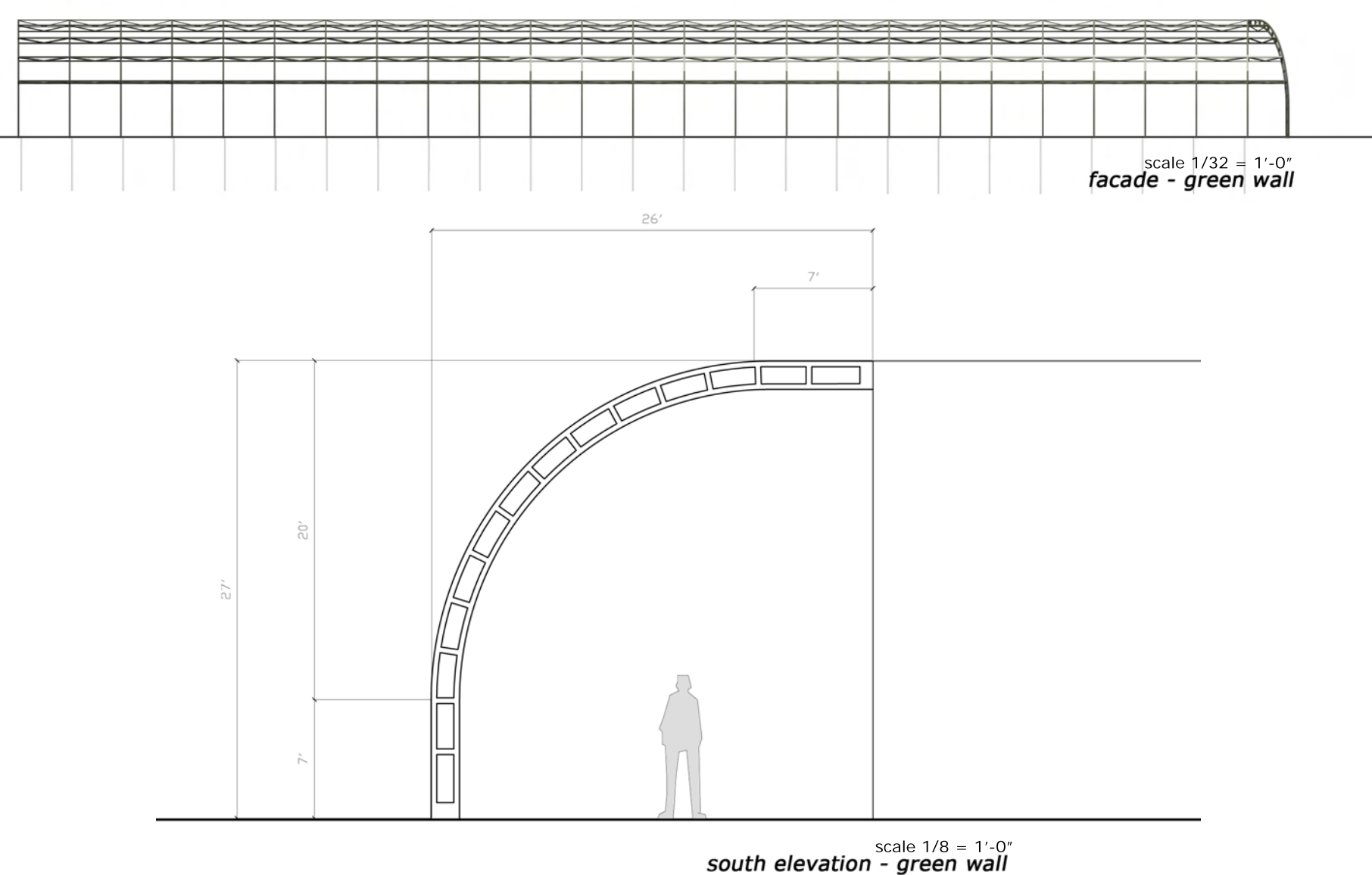


## Sprinkler Sensors

- Optimize campus lawn sprinkler system
  - Shut system down during rain and kept off for certain amount of time depending on amount of rainfall
  - Temperature sensors shut system down near freezing temperatures
  - Time sprinklers more effectively; no watering during mid-day
  - One roof mounted sensor wired to each sprinkler zone control box;
- Cost per sensor: wired \$26.30 (five sensors)

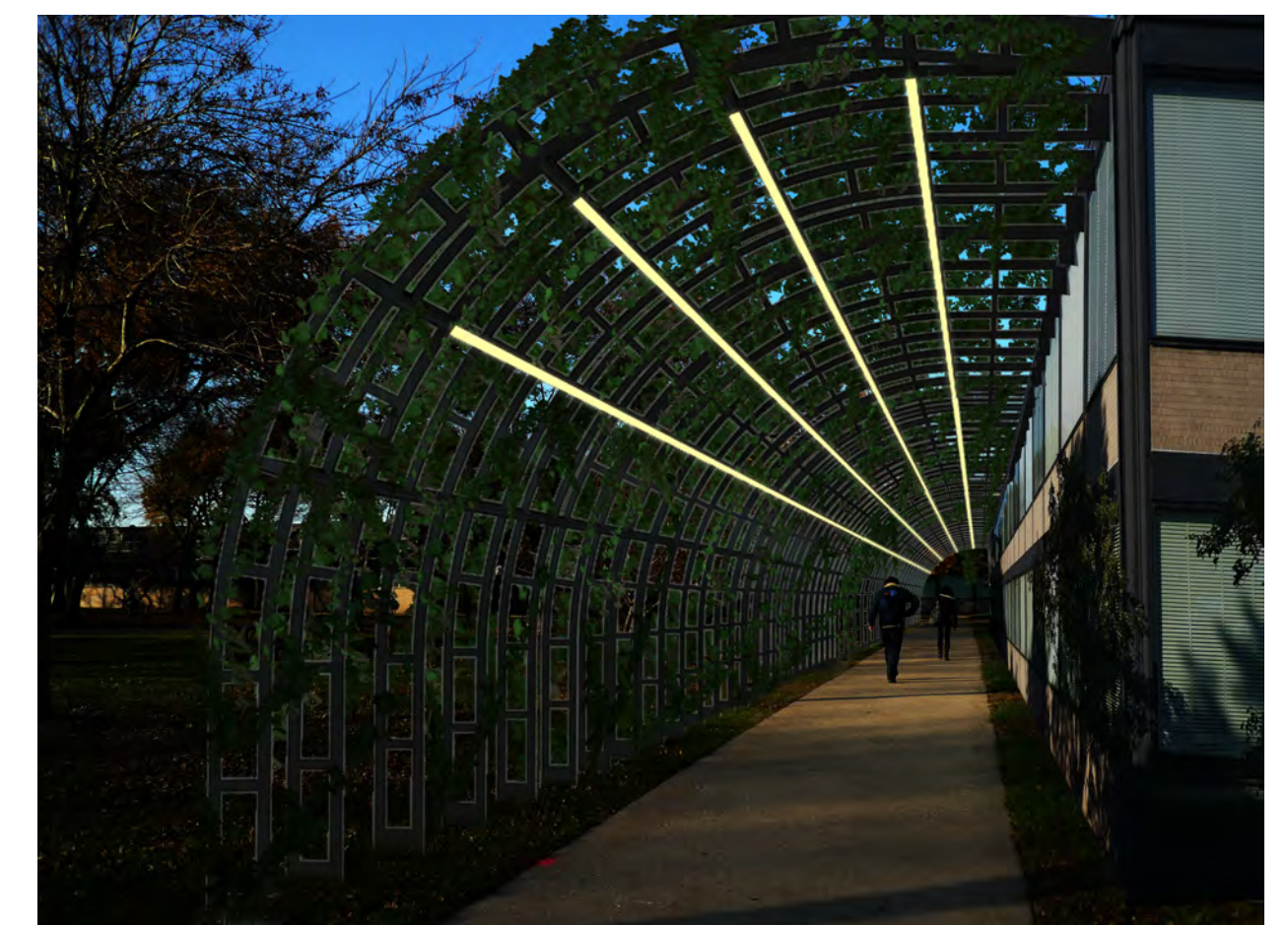


## Green walls



## Green wall

- Effective way of reducing heat absorbed into building from direct sunlight
- Beautifies campus and promotes "greenness"
- Ivy on canopy shaped trellis to shade west wall of E1
- Solar powered LEDs used to light inside of green wall after dark enhancing safety
- Total Cost of all materials: \$139,000 (not including installation)



## Permeable Pavement



## Permeable Pavement

- Pave area south of Vander Cook using permeable asphalt as test area; Cost: \$6,900 (not including installation)
- Pave area west of Vander Cook using permeable concrete as test area; Cost: \$21,600 (includes insulation)
- Pave existing dirt path from Dearborn to Life Science and E1 using permeable concrete; Cost: \$15,000 (Includes insulation)
- Reduce rainwater runoff and promote drainage of water back into ground



## Window Replacement



## Window Replacement

- Replace single pane glass with thermally insulated dual pane argon filled windows in structures like Galvin Library
- Replace single pane translucent glass with thermally insulated aergel filled translucent windows in Keating Hall
- Reduce costs of heating and cooling due to much greater insulating factor
- Material Cost of refitting Keating Hall: \$360,000-\$400,000
- Material Cost of refitting Galvin Library: \$450,000 (not including installation)

