

Project Name: University of Iowa Seamans Center

Project Location: Iowa City, Iowa

Project Purpose:

To support an influx of new students into the College of Engineering, The University of Iowa commissioned an addition to the Seamans Center for Engineering Arts and Sciences. This 65,000 square foot addition sits opposite the Old Capitol Town Center, a busy campus hub drawing thousands of students daily. To save \$4 million in utility relocation costs and maintain an important pedestrian thoroughfare, the building is perched above ground with at-grade clearance below to allow utility access and create a pedestrian route free of obstructions. This sheltered space provides ample bike parking protected from the elements and has become the most desirable bike parking on campus. From there, the pedestrian path extends down along a terraced slope which integrates stormwater treatment biocells into the steep topography. The strategic use of permeable pavement, building roof stormwater capture and daylighting, and native plant selection are combined to create a sustainable, low-maintenance water quality treatment system. The site also serves as a vital learning space, seamlessly weaving outdoor classroom space and stormwater monitoring stations into the multifunctional pedestrian thoroughfare.

Role of the Landscape Architect or Relevant Party

We served as the primary site designer and landscape architect of record.

- **site design:** orientation of amenities
- **coordination with other disciplines:** engineers, architects
- **hardscape design:**
 - permeable pavement and water capture system
 - terraced outdoor classroom
 - integration of accessible route through steep site
 - bicycle channel along stair and bike parking
- **landscape design:**
 - native bio-cells that could tolerate wet or dry conditions
 - turf replacement/woodland restoration
 - streetscaping
- **site furnishings:** benches, bike racks, green screen

Special Factors and Project Significance

- **Enhance pedestrian & bicycle circulation**

- The site had an existing slope of 13% making pedestrian & bicycle circulation a challenge. A custom bike channel was integrated into the series of stairs to allow for continuous movement through the busy corridor.
- An ADA route was designed to meander through the woodland plant community to enhance user experience and accommodate all user types.

- **Create a sustainable site / LEED Gold certification**

- Native plant communities/ No irrigation
- Stormwater capture and treatment
- Pedestrian and bicycle friendly

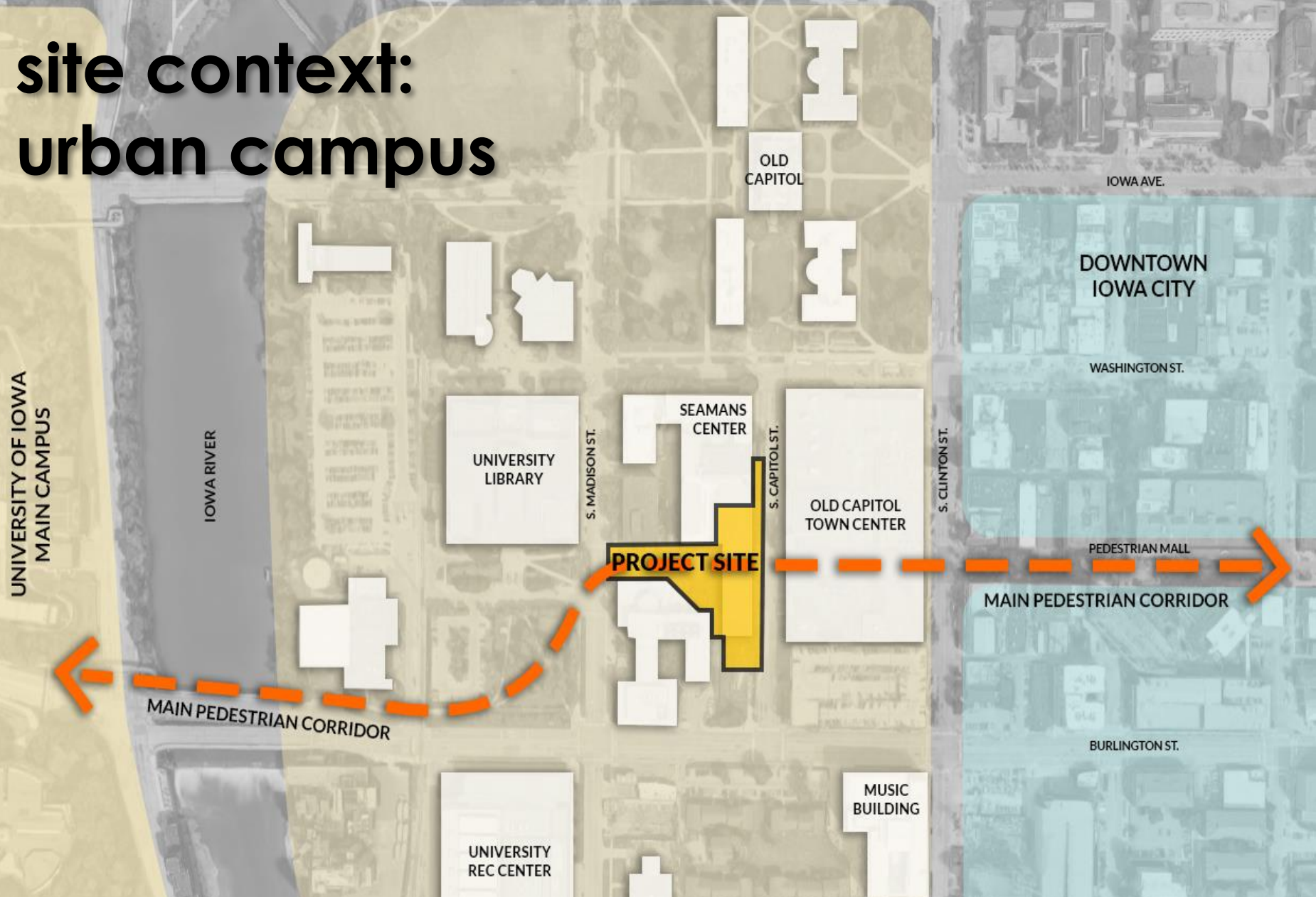
- **Design an integrated stormwater treatment system**

- The combination of a vegetated tray green roof, terraced native planted bio-cells and permeable pavement chambers treats 3600 gallons of water during a 1.25" rainfall.

- **Integrate outdoor learning**

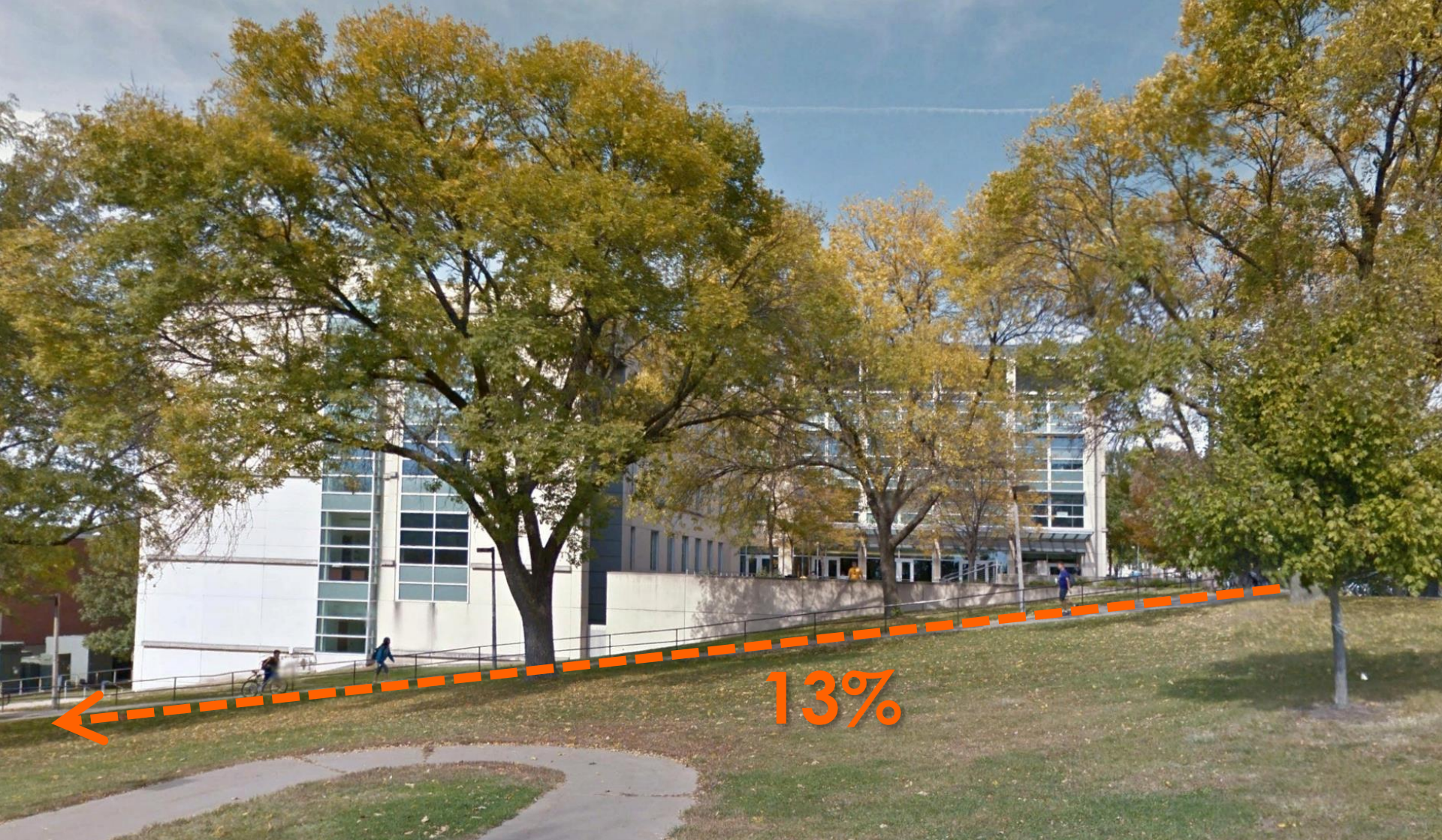
- A series of seat steps were installed in the lower plaza to allow students and classes to gather and learn or study while enjoying the lush surroundings.
- A monitoring system in the bio-cells was integrated for educational use and tracking.

site context: urban campus



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)

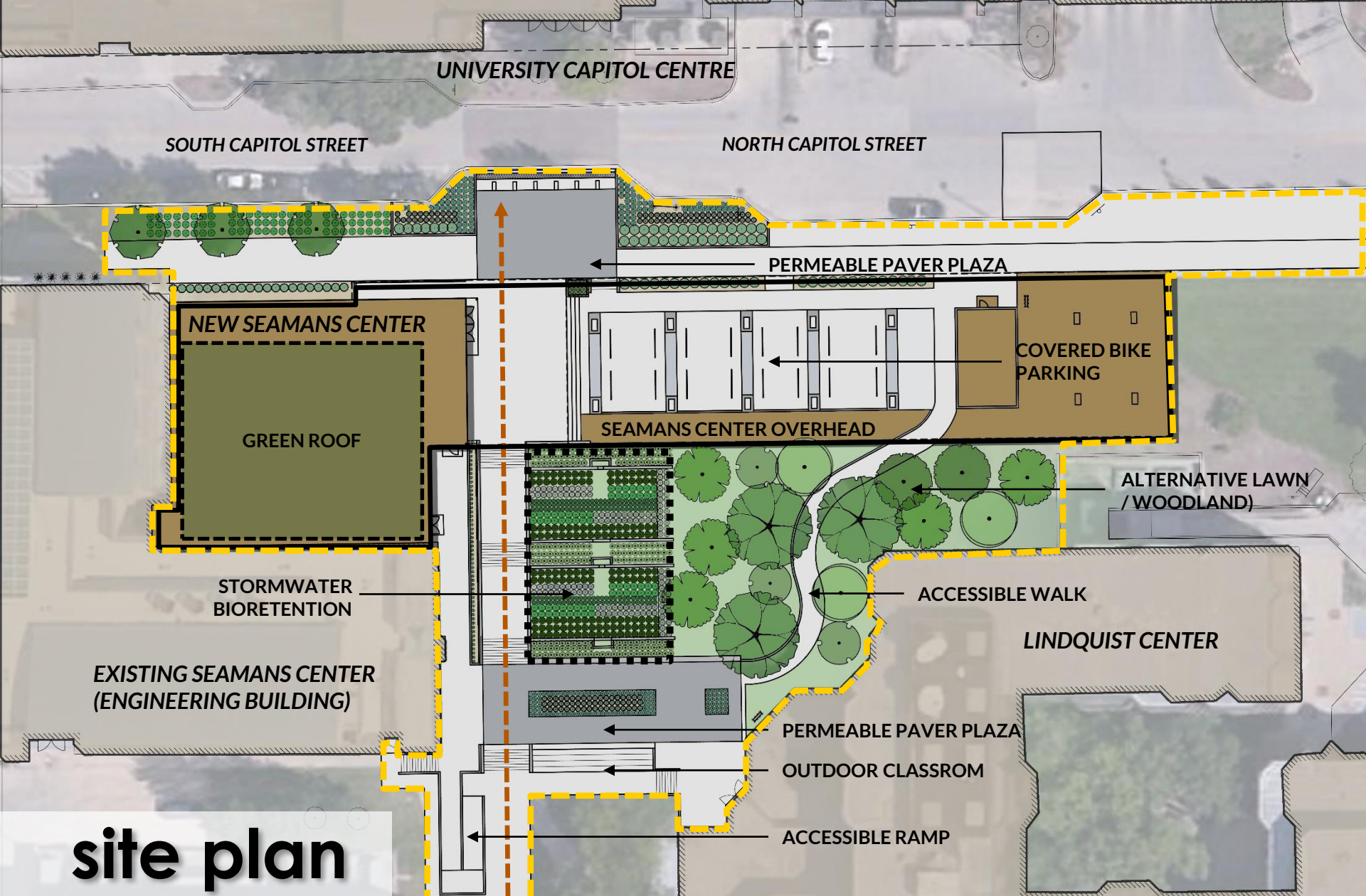


existing primary pedestrian corridor



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)



site plan



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)

- 
- An architectural rendering of a courtyard space. On the left is a modern building with a glass-enclosed staircase. The courtyard features a large green roof with a central rectangular area containing a small structure and a water feature. A winding path runs along the right side of the courtyard, and a paved area at the bottom shows people walking and a bicycle. The scene is surrounded by other buildings and greenery.
- Maintain / Enhance Pedestrian & Bicycle Circulation
 - Integrate Stormwater Treatment
 - Integrate Outdoor Learning
 - Create a Sustainable Site / Achieve LEED GOLD Certification

site programming goals



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)



**primary
accessible
circulation**



**bike parking
& circulation**



**stormwater
treatment**



**native lawn
alternative**



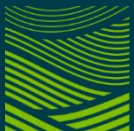
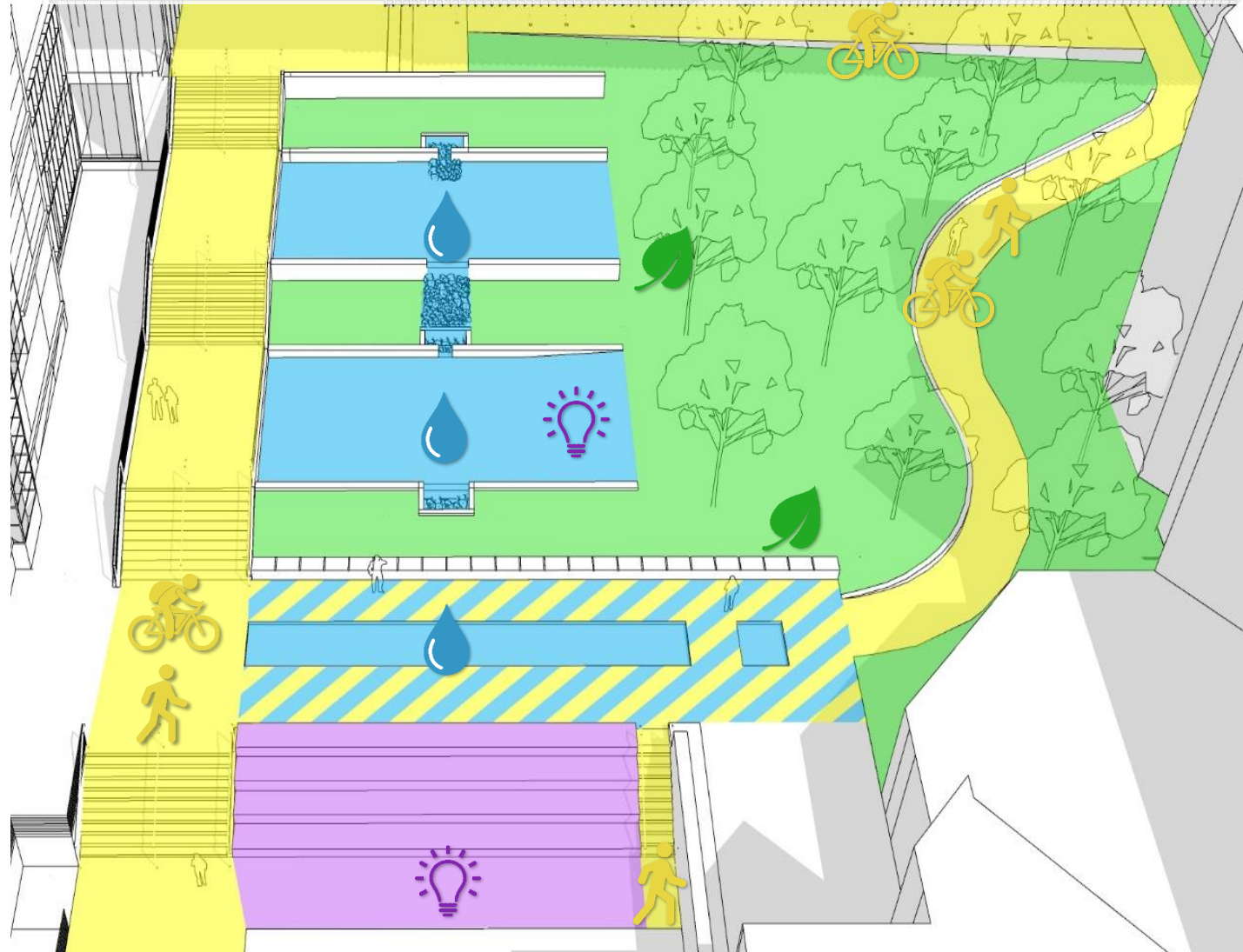
woodland



**outdoor
learning**

site programming zones

The following slides are color-coded to these programming zones / categories.



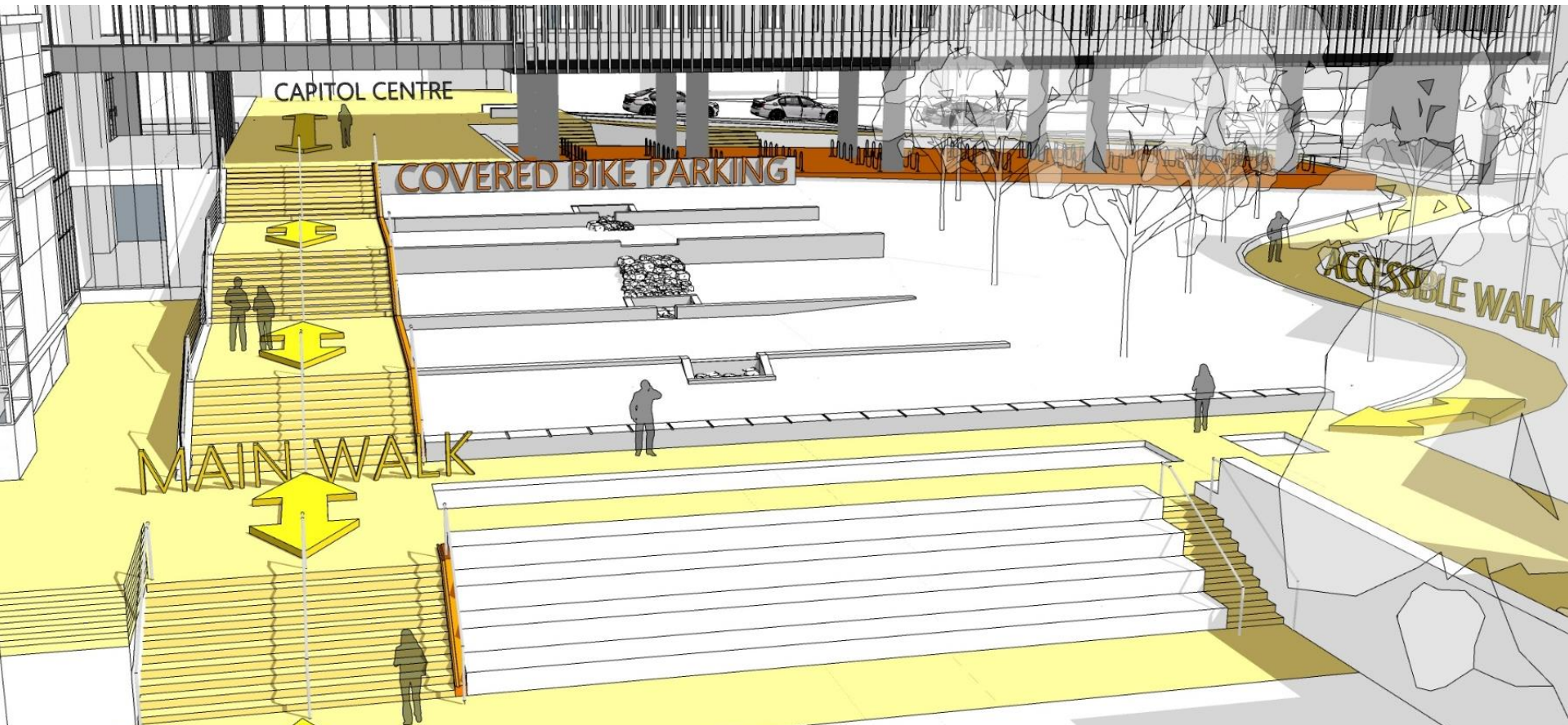
ASLA
IOWA

University of Iowa Seamans Center

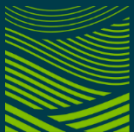
2019 Fall Awards – Category I – Design (Built)



pedestrian access



ADA compliance was achieved with two ramps on the site as well as a 24-hour elevator within the building that has access to the first and second floor at-grade building entrances. A snowmelt system was also installed in the ramps, stairs, and near each entrance to the addition.



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)

pedestrian movement

The site sits on the eastern edge of campus adjacent to a pedestrian mall /downtown district which presented the opportunity to create a transitional, pedestrian-friendly space between the University of Iowa campus and the City of Iowa City. The wide pedestrian thoroughfare and elevated building allow for an unobstructed flow.



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)



corridor connection

The existing relationship between the site and Capitol Street / Capitol Centre was an important corridor to maintain for the campus. The elevated building and sidewalk connections were designed to allow for continuous movement between the two spaces.



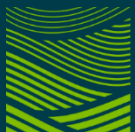
ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)



bike channel

A bike channel was integrated into the staircase to accommodate easy movement through the grade change on site. Students have an easy way to get their bicycles from the protected bike parking area to the lower campus level.



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)



bike parking

The void under the Seamans Center is utilized for protected bike parking for up to 128 bicycles, and has become a valued amenity on a campus where sheltered bike parking is at a premium.

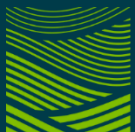
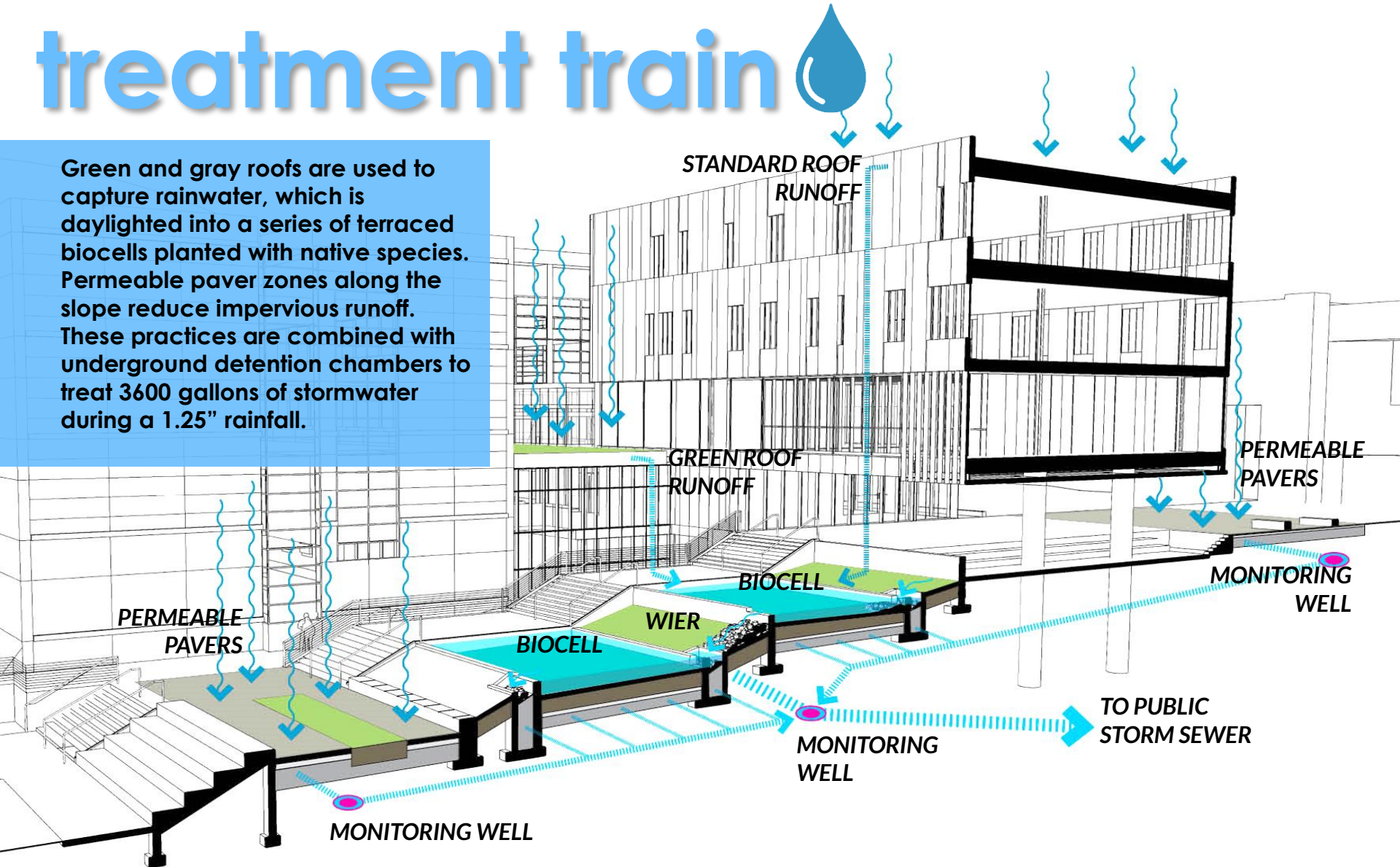


ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)

treatment train

Green and gray roofs are used to capture rainwater, which is daylighted into a series of terraced biocells planted with native species. Permeable paver zones along the slope reduce impervious runoff. These practices are combined with underground detention chambers to treat 3600 gallons of stormwater during a 1.25" rainfall.



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)



bioretention

Concrete weirs and retaining walls control ponded stormwater while drought-tolerant, native / adapted plant species and engineered soil filter pollutants and infiltrate water to underground detention chambers.



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)

Permeable paving was utilized to delineate changes in space / function and to reduce impervious surface runoff. Stormwater intercepted by the pavers in this plaza supplement adds soil moisture to the adjacent planting areas, and directs water to underground detention chambers.



 capture



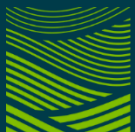
ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)

Native and adapted species of grasses, shrubs, and trees were planted to showcase the diverse plant palette that Iowa has to offer. The deep-rooted native plantings assist in water storage, water quality treatment can tolerate periods of drought and provide year-round interest.



native species



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)

alternative lawn

A variety of native trees will develop into a future woodland community featuring a native woodland sedge groundcover that can tolerate sun or shade. Mowing is not required on the hilly site making maintenance a breeze.

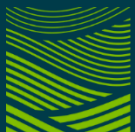


ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)

A passive seating area that doubles as a gathering space / outdoor classroom takes advantage of the grade change in this site. Water quality monitoring wells are integrated and hidden into the site design but are easily accessible for use by campus facilities staff or as a teaching tool for faculty and students.

outdoor learning 



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)



SOLAR PANELS

a sustainable site

GREEN
ROOF

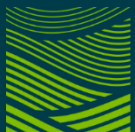
The site design was conceived of as an integrated system, with the interconnected goals of maintaining an accessible pedestrian corridor while capturing & treating stormwater. The client was able to reach LEED GOLD certification as the sustainable design elements embraced the vision of minimizing a footprint.

NATIVE PLANTS

ALTERNATIVE
LAWN

BIORETENTION

PERMEABLE PAVERS



ASLA
IOWA

University of Iowa Seamans Center
2019 Fall Awards – Category I – Design (Built)