



The green roof plus the new park design will prevent 100% of annual stormwater runoff from GSU's Sports Arena from entering Atlanta's combined sewer system. The three main LID controls used are a green roof, stormwater harvesting, and a rain garden. Precipitation not contained by a 3-inch green roof on the Sports Arena would be diverted to a 165,848-gallon, above-ground cistern behind the Sports Arena. Water harvested in the cistern would be used to irrigate the green roof and a 2,304-ft² living wall adjacent to the Sports Arena. Excess water would be diverted to an 856-ft² rain garden adjacent to the living wall. The green roof and rain garden will support ecosystems that are not currently found on the GSU campus, thereby renewing biodiversity. Additionally, the park will provide students, faculty, visitors and daily commuters a temporary and necessary place of relaxation, meditation, and escape.

Green Roof



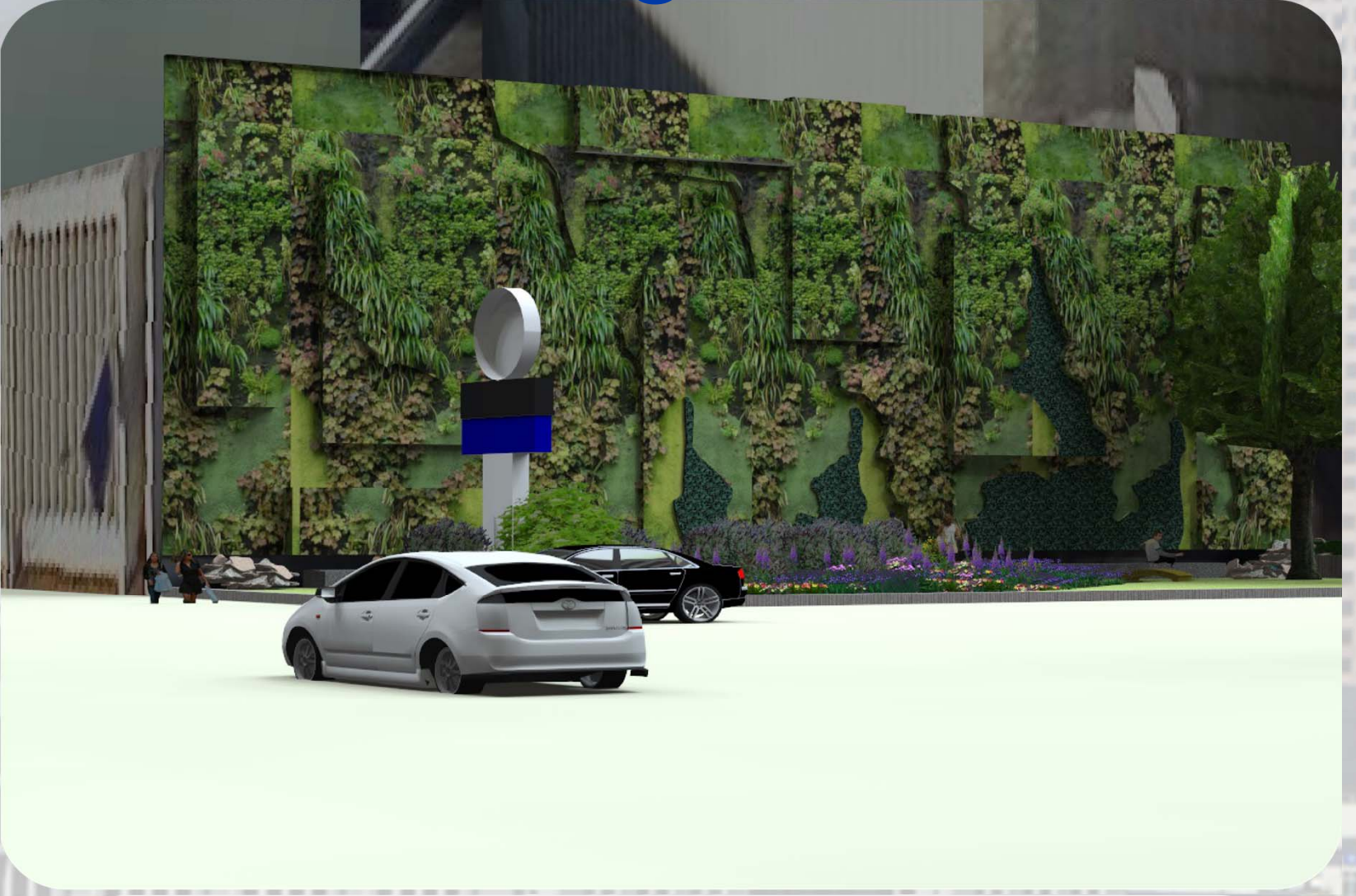
- 26,920 ft² of 38,900-ft² Sports Arena roof will be covered with a 3-inch green roof.
- Roof runoff will be reduced by 12%.
- Up to 18 °C reduction in surface temperature of roof during summer.
- Will remove 57 lbs. of criteria air pollutants annually.
- Creates high contrast with the GSU logo for high visibility and brand recognition from aerial views.

Cistern



- A 165,848-gallon cistern will be used to harvest and redistribute all stormwater runoff from the Sports Arena roof.
- Water will be pumped up to the roof for green-roof irrigation.
- Hydraulic head will naturally force water from the cistern to the living wall and rain garden, located on the other side of the building.
- It will provide a prominent backdrop for the GSU women's sand volleyball complex.

Living Wall

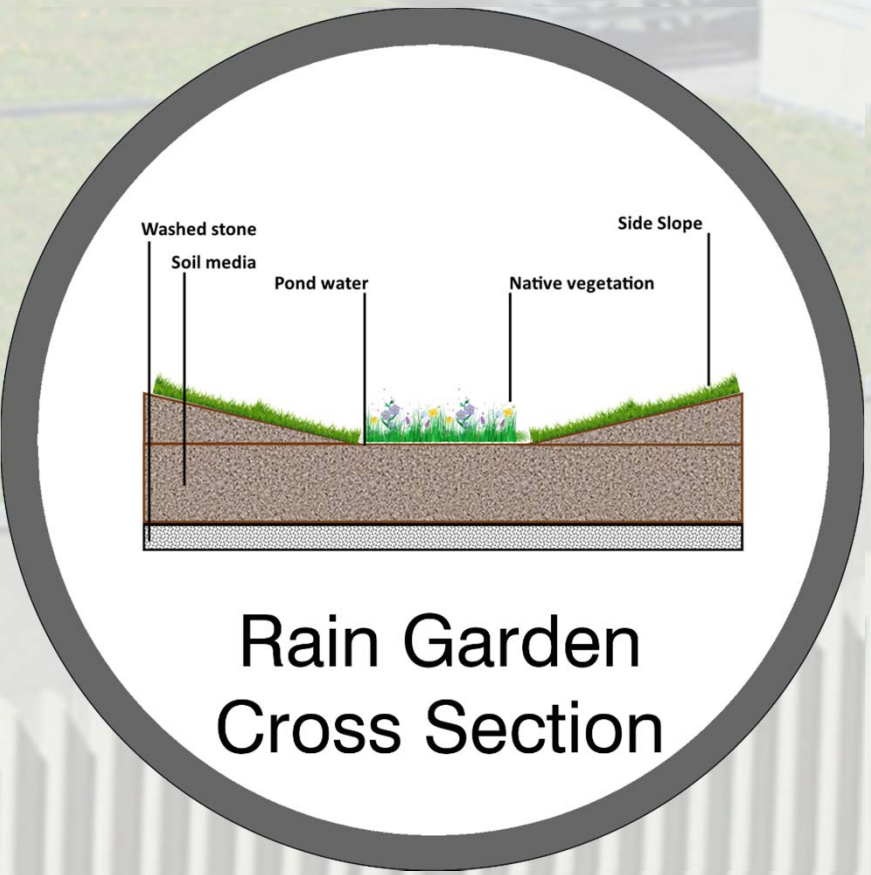
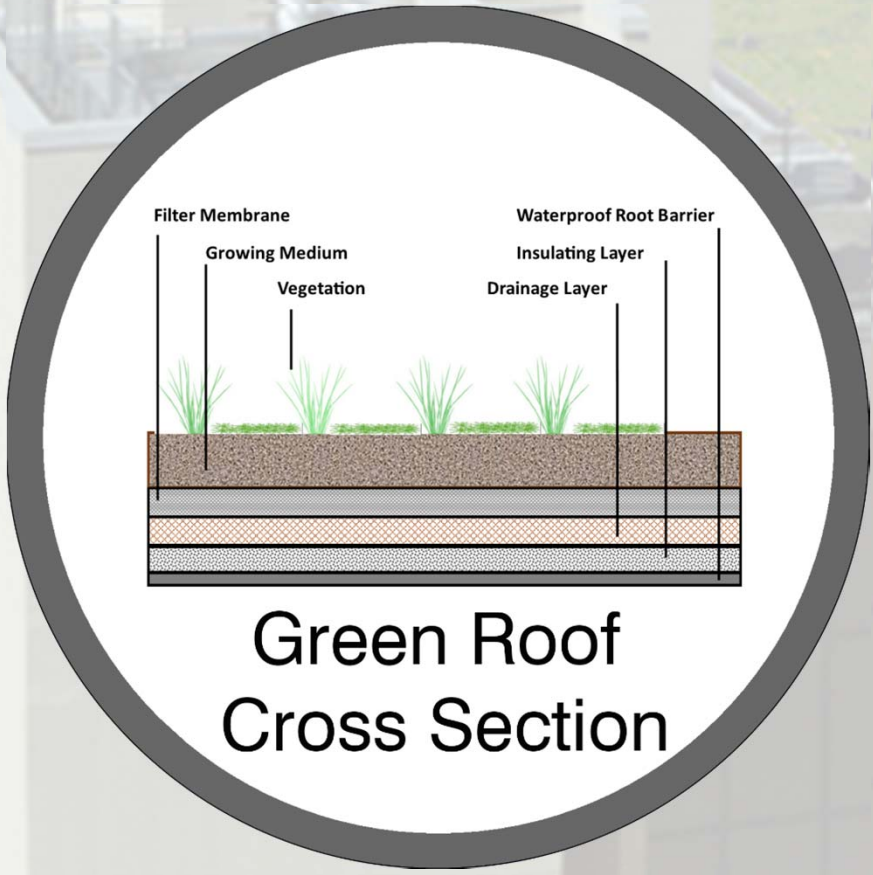
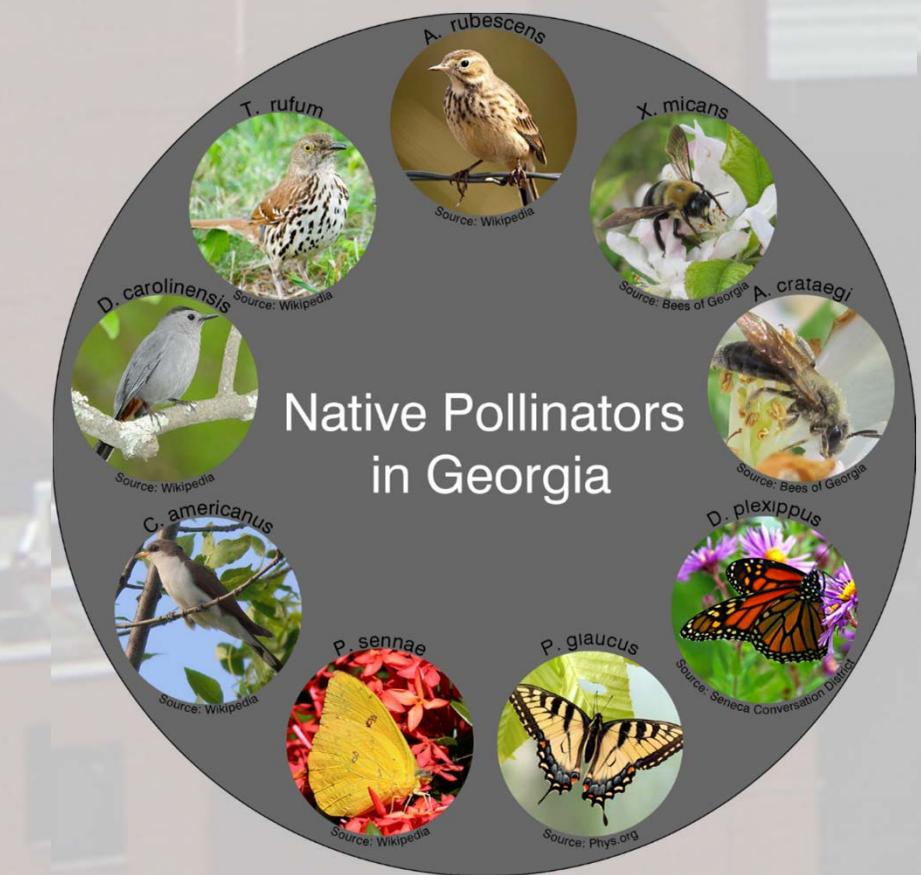


- 2,300 ft² of vegetation irrigated with harvested stormwater
- Provides a living medium for art students to create living art installations
- Absorbs traffic noise
- Provides an aesthetically pleasing frame for the park
- An essential element of biophilic design; creating the sense of being surrounded by nature.

Rain Garden



- 856 ft² of native habitat that is currently not available in this area.
- Habitat that is especially beneficial to birds and pollinators.
- Helps filter pollutants from stormwater runoff.
- Promotes groundwater recharge by sinking approximately 2,000 gallons of water per day.
- The curves of the garden along with the movement of the flowers are essential biophilic design principles.



100 % reduction in stormwater runoff from site

57 extra pounds of criteria pollutants removed annually

50 % reduction in sensible heat flux from roof

3K dollars saved in energy costs for Sports Arena

10x increase in vegetative cover

1M gallons of stormwater prevented from entering the city's sewer system