the panther's den

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bes 2018
unit iv

design intent

The design concept for the stadium comes from the St. Frances mascot itself, the panther. As the animal is considered to be "the ghost of the forest," it very much relates to how one could view Johnston Square. Once considered, the "donut hole" of Baltimore, Johnston Square is surrounded by highly populated neighborhoods like Mount Vernon and Oliver, but is becoming increasingly vacant as the years pass by. Using the form of a panther, one can find beauty, power, and fierceness. Thus, the concept of the design is to create a space that represents those forms found from the panther in creating both the stadium, and the community space that will lie adjacent to it.

bes goals & implementation

reuse of water & increase pervious surfaces

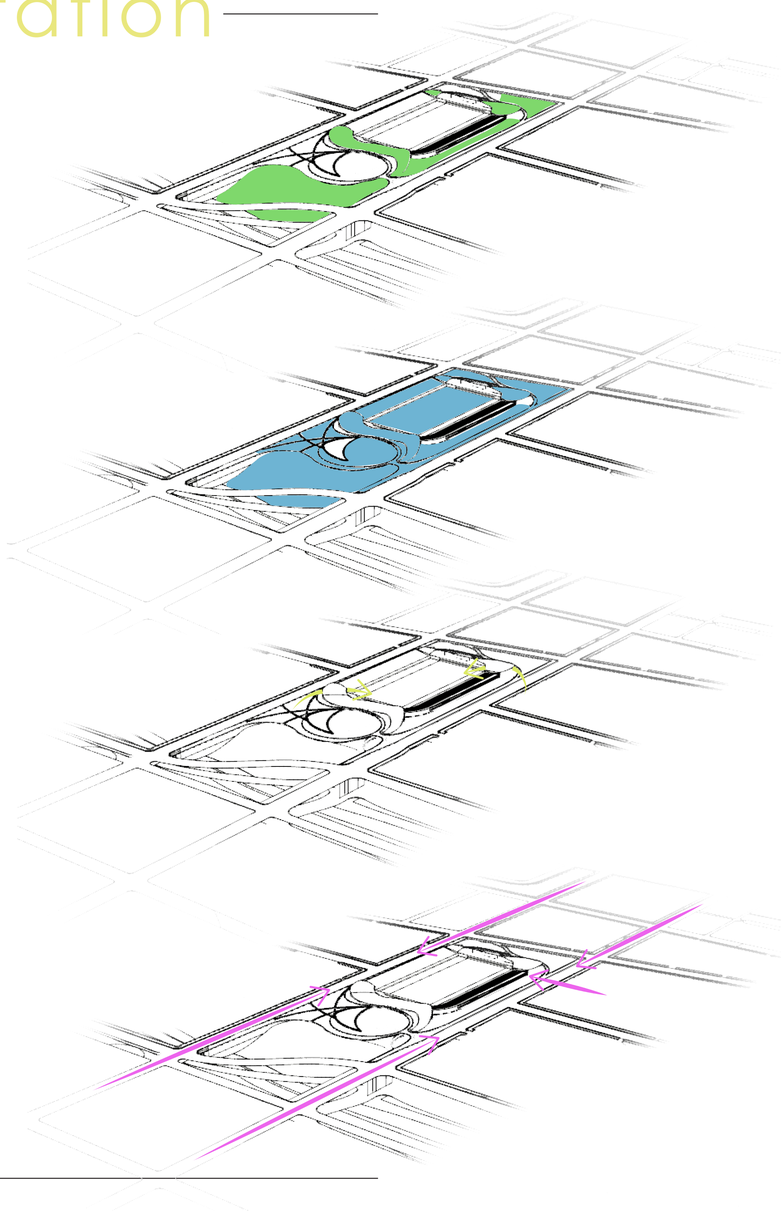
Reusing the stormwater that reaches the site decreases waste water discharges and reduces and prevents pollution in Baltimore's ecosystem. Recycled water can be used to irrigate landscapes as it can provide an additional source of nutrients and lessen the need to apply synthetic fertilizers.

increase canopy coverage

By slowing and intercepting rainfall, increasing groundwater infiltration, taking up nutrients, and transpiring water to the atmosphere, increasing trees can reduce the amount of pollution-carrying stormwater runoff that enters the Chesapeake Bay.

stormwater management

Finding ways to manage the stormwater that enters the site will reduce the amount of runoff, thus lessening the amount of pollutants the runoff would pick up which enters Baltimore's streams, and, eventually, Bay.



vegetative cover

the design includes keeping 66% of the existing vegetative cover and adding street trees and two large green roofs which increase the canopy cover on the site by over 6%.

permeable surfaces

the materials in the design are all meant to reduce runoff and increase infiltration in the site. Thus, the pavement used in the sidewalks and pathways are all made of porous concrete and the field collects the rainwater to be reused as irrigation for the green wall.

entrances into the stadium

the stadium can be entered on both biddle street and chase street. One entrance is directly across the street from St. Frances, and the other entrance can be found at the top of the community space along biddle street.

accessibility

the site is only a five minute walk from Mount Vernon, and other parks located throughout Johnston Square, including Johnston Square Park and Ambrose Kennedy park. As the stadium serves the needs of the St. Frances Academy football team, it is located directly across the street from the school.

design goals

ensure a healthy and sustainable environment

using the guidelines from the baltimore ecosystem study, the design ensures a healthy and sustainable environment for the residents and visitors of johnston square. Increasing biodiversity and reducing runoff are two main ideas that were considered when designing.

create an iconic football stadium

johnston square is home to the St. Frances panthers, the #3 best football team in the nation. The design hopes to create a stadium that emulates their great power and success.

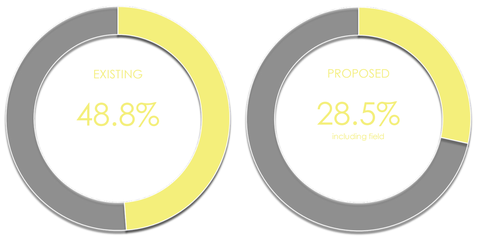
make johnston square a destination

many people will be traveling far and wide to watch the St. Frances Panthers play, thus setting the tone with an exciting space for people to enjoy outside of football will make johnston square a place visitors will want to stay.

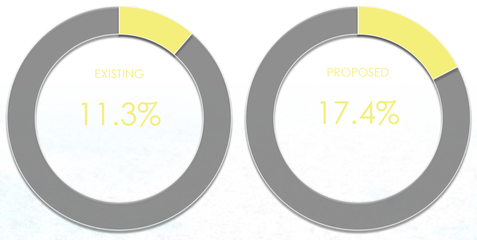
community space

The community space is a multi-functional space to be enjoyed all-year round. Its range of programs and activities allows for visitors of all ages to enjoy the many social benefits it supplies. Also, it's composition of materials and plants make it an extremely sustainable and healthy environment. The use of porous pavement for sidewalks and paths, and the abundant green space create more of an opportunity for infiltration instead of runoff.

impervious surfaces



canopy cover



materials palette


dark stone


porous pavement


MSP's Safer Surface

design lines
the change in pavement throughout the plaza space

porous pavement
the pathways and sidewalks throughout the site are made of pervious pavement to reduce runoff.

splash pad
to ensure safety and function, the splash pad is made of My Splash Pad's anti-slip coating

plant palette


london plane


river birch


german garlic


summer beauty onion

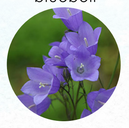

butterfly weed


clusterhead pink


dwarf hairy-beard tongue

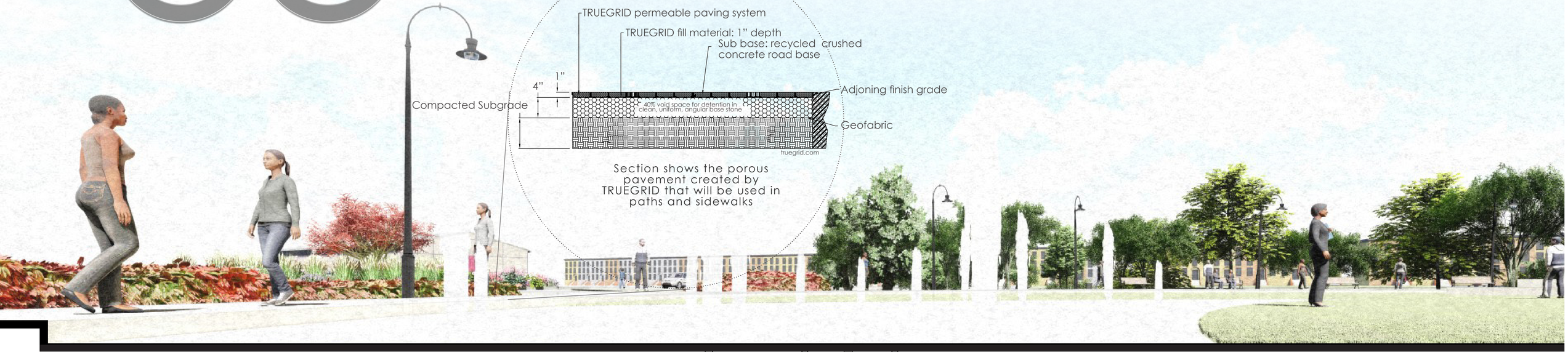

moss phlox

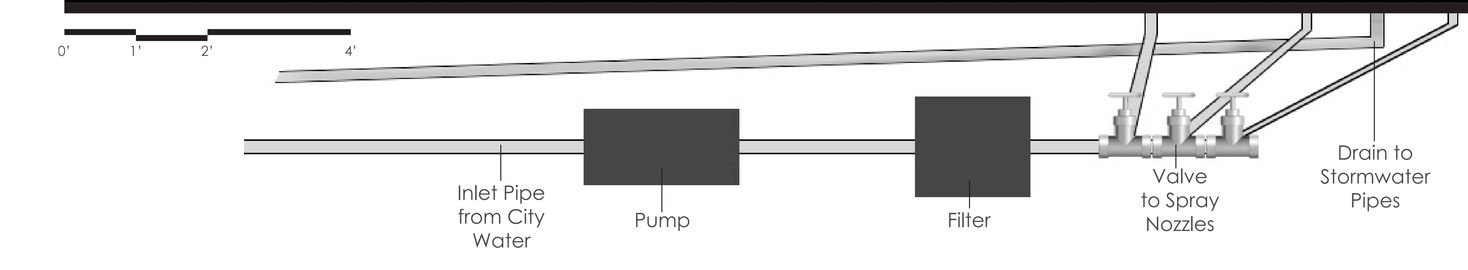

little bluestem


bluebell

street trees
according to the Baltimore Tree Study, these trees show to be the most suitable to urban environments.

green wall vegetation
all species are chosen to attract pollinators, increase biodiversity, and show color all year round





For the splash pad, water from the city is pumped into the filter and chlorinator where it is cleaned to ensure healthy water for the children to play in. Next, it is sent to the spray nozzles on the splash pad. The water will then drain down into the stormwater pipes.


pathway along community space

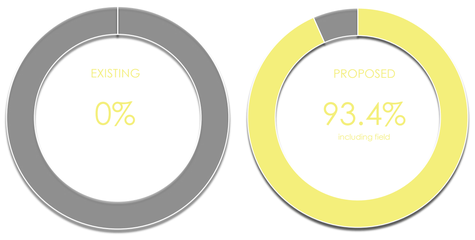

elevated seating area next to lawn


plaza space near entrance to stadium


stadium entrance from plaza space

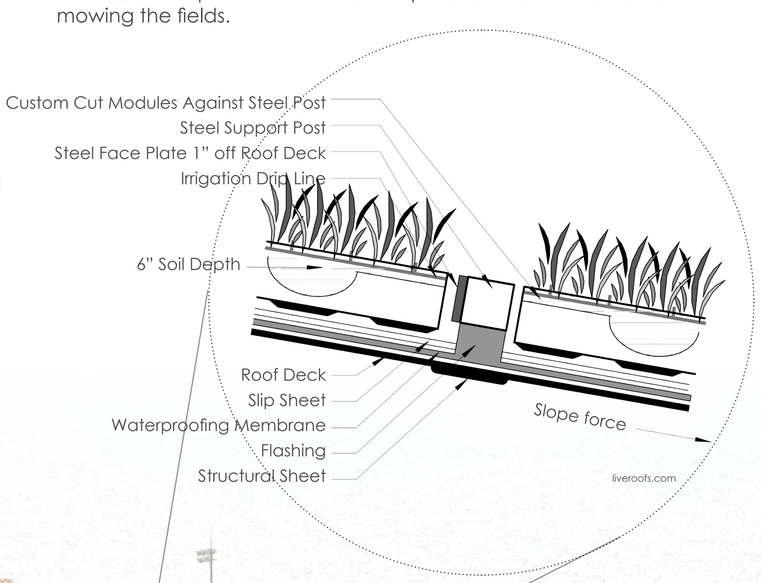
the stadium

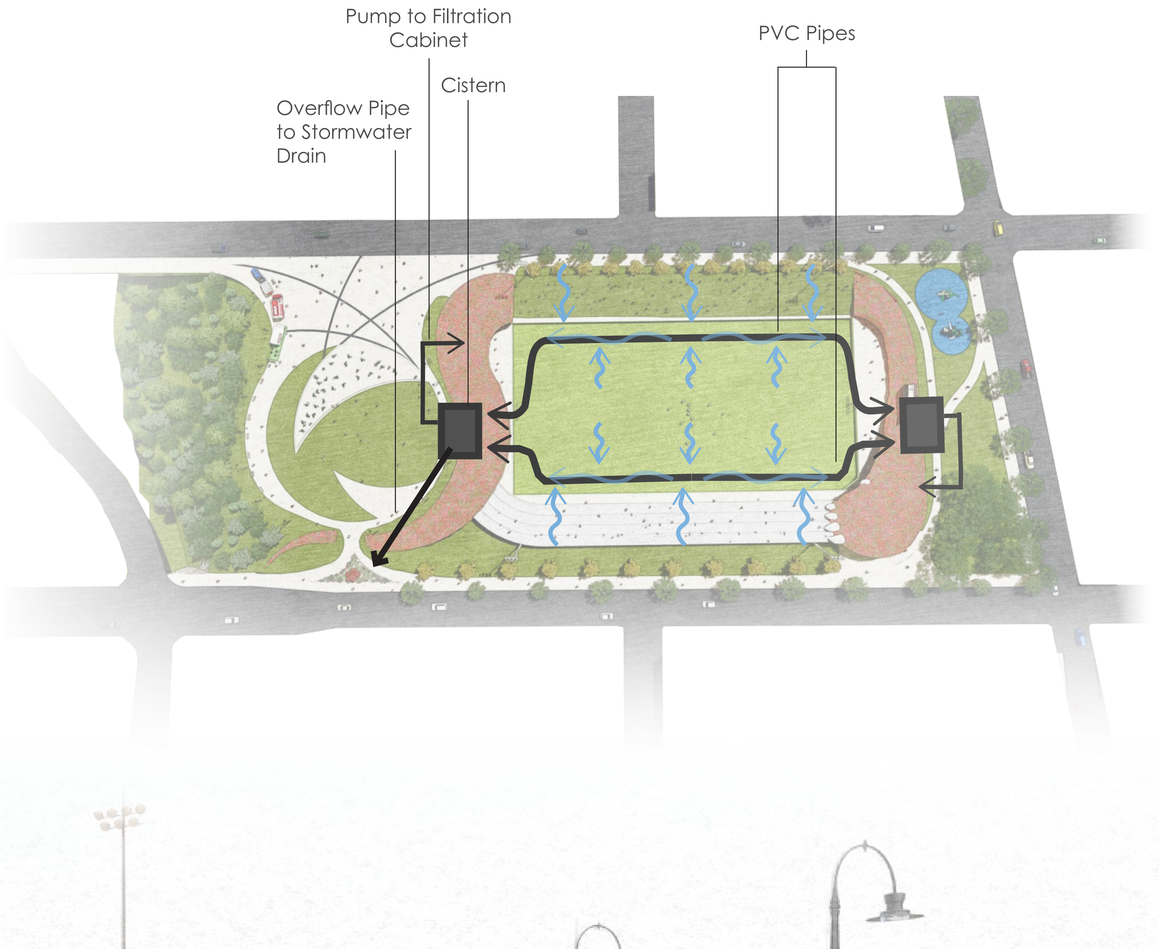
reusable runoff

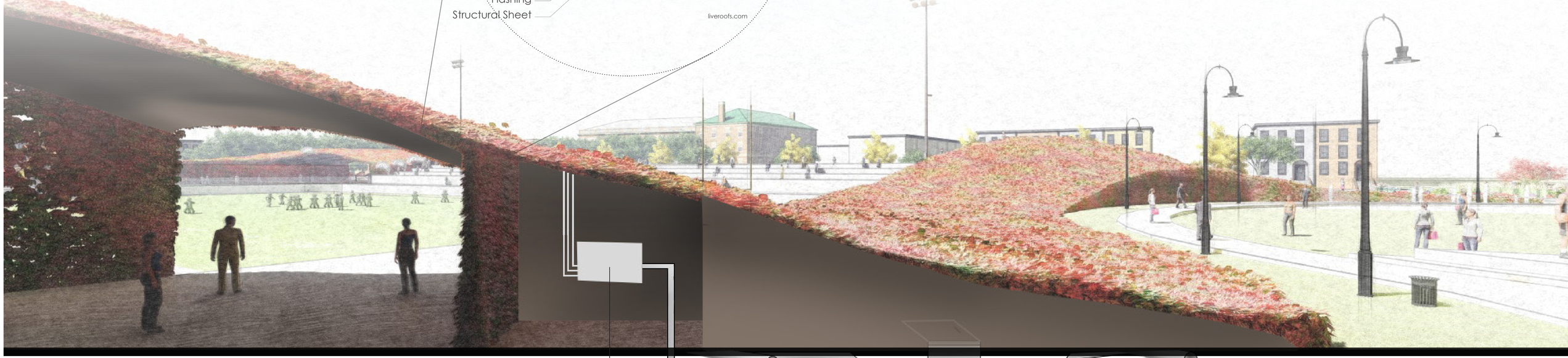


This design is implementing a drainage system laid out by FieldTurf, a company that specializes in athletic turf fields. FieldTurf offers many advantages to natural turf and is more consistent with sustainability initiatives being implemented both in Maryland and on the national level.
1. Maintenance costs are significantly lower for artificial turf products and far fewer days are lost in terms of usage due to field conditions.
2. FieldTurf does not require labor associated with frequent mowing or striping of natural turf athletic fields.
3. Since the use of gas powered mowers is not necessary for this type of field, this helps limit the amount of pollution that would come from mowing the fields.

Using a green roof/green wall system implemented by LivingRoof, the tail and the claw that form the stadium are covered in vegetative material. Green Roofs have great social, and aesthic benefits, but more importantly, environmental benefits, including:
1. Water Conservation
2. Reduction of Stormwater Runoff
3. Urban Heat Island Mitigation

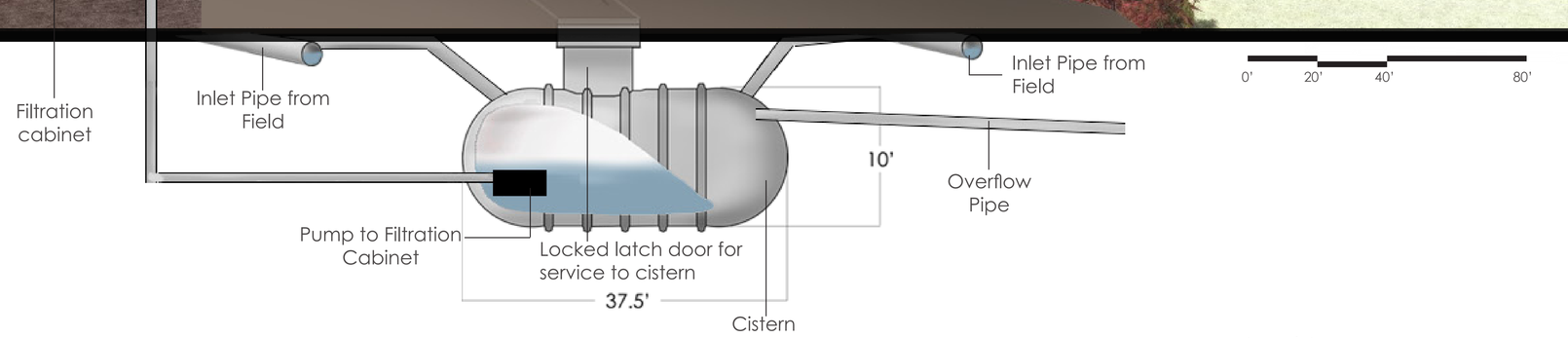




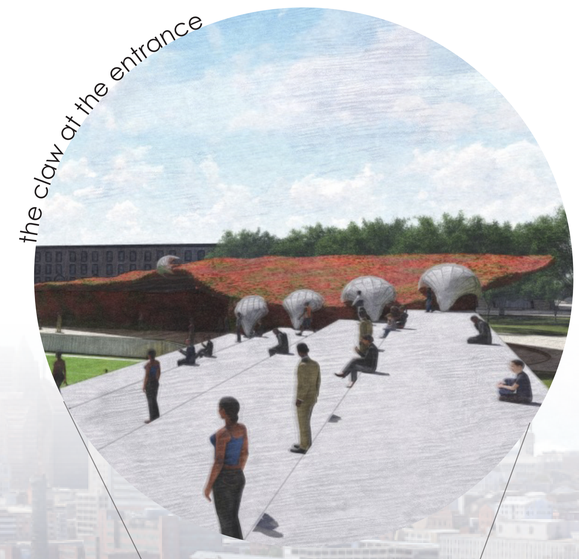


The runoff collected from the fields will be stored in a 20,000 gallon cistern located on either side of the stadium. The water that is held in the cistern will be pumped up through a filtration cabinet. Here there is space for the irrigation controller, fertilization system, filter, zone valves, backflow preventer, and so on. It is readily accessible to maintenance personnel as it sits in a locked utility room inside the stadium.

An overflow pipe is used in the event that too much water is being kept in the cistern. In the look out area of the tail, a locked latch door can be found when the cistern needs to be serviced.




relocated playground


the claw at the entrance


views of the field from hill stands


sidewalk next to stadium with street trees