Phase 1

Phase 1 of the design will consist of the removal of many of the existing parking lots and broken sidewalks and in turn re-use the material to help build the new pathways. Both concrete and asphalt will be used. Along the paths, new trees will be installed along with smaller shrub plantings. Also, the three educational water features will be placed.

Phase 2

Phase 2 of the design will consist of installation of the greenroof areas on top of the four water-tight structures. The pedestrian wave walks along the water's edge and tying them into the rest of the park. Building facades will be updated and abandoned buildings will be discarded or relocated.

Phase 3

Phase 3 of the design will consist of laying and installation of the oyster paths as well as adding new fishing docks, boardwalk along the water's edge and tying them into the rest of the city. Oyster bay paths will be installed and educational signage will be placed at this time.

Phase 4

Phase 4 of the design will consist of the construction of a multipurpose pier. The pier will consist of a 150' biofilter that will clean and promote growth of both SAV vegetation, draw in visitors to the site, educate and promote blue crab growth. The biofilter will consist of anchored stainless steel cables intertwined with underwater vegetation that acts as a nutrient pump, recycling nitrogen and phosphorus from the sediments to the bay and the animals in it.

Biofilter Goals

Submerged aquatic plants lined along the biofilter can affect the water quality of Chesapeake Bay by using dissolved nitrogen and phosphorus for their growth. By withdrawing the nutrients from the water, they make them unavailable for use by algae, which often reach peak-sap concentrations in summer in rivers that flow into the bay. The grasses then convert these nutrients into plant tissue, which eventually is incorporated into Chesapeake Bay food webs by animals that consume live plants or detritus such as blue crabs. The grasses thus act as a "nutrient pump" by recycling nitrogen and phosphorus from the sediments to the bay and the animals in it.

Overall Results

The overall design will have a profound effect on the city of Crisfield, its residents, visitors and the overall ecosystem. With a new opportunity for blue crab production and an improved ecosystem, Crisfield will now be capable of surviving well into the future as the "Crab Capital of the World."

Analysis

Using GIS design tools and analysis tools I was able to determine many critical design interventions and proper placement. Calculating proper slope, drainage areas, viewsheds and crabbing habitat areas with GIS helped me properly position the new pier design as well as proper biofilter layout.

Precision elevation calculations and viewsheds came about using GIS overlay onto the site making the site flow and function extremely effectively.

Can a city built solely on the fishing industry survive into the future with a diminishing water ecosystem?

The newly designed Crisfield site is not only functional to the fishermen who live here but also a wonderful all around experience for visitors. With one of the largest man-made biofilters ever made, Crisfield, MD, will see growth in both tourist visitors as well as a much higher yield production of blue crabbing efforts. This is truly a design founded on both form and function.

Design

The overall streetscape design is primarily to attract and engage visitors to the area and lead them to the pier. With the paving design mimicking waves in order to create an open-close effect will create a sense of wonder and shifting throughout the site.

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