

Appendix K

Proposed Vegetation Management for Jekyll Island Causeway: (Route 17- West side of Jekyll Creek Bridge/Jekyll Creek)

The vegetation management plan for the Causeway includes management approaches for existing buffers and vistas, wildflower areas, and road shoulder mowing management. A graphical depiction of these objectives is included.

Existing Buffers and Vistas Main Objectives:

- Remove all highly visible dead snags and broken branches that lie within the existing buffers:
This work would be accomplished by hand, employing the use of a chainsaw. A Clam shell loader would be used to reach the cut branch in order to remove it as safely from the existing buffer to minimize the disturbance to surrounding healthy native vegetation.
- Maintain 1.29 miles of protected buffers:
The protected buffer comprises an area of 6,816 l.f. of the causeway. The only vegetation that would be removed from these areas would be dead trees, visible dead snags, broken branches and invasive exotic vegetation. This work would also be performed in the same manner as described above. In addition, as the protected buffers expand in width and start to encroach upon the road shoulder sections of the causeway, we want to employ the use of a side mounted mower to suppress vegetation. Any large tree limbs impacting the same area will be flush cut back to the main trunk of each tree. This work would be conducted by hand employing the use of a chainsaw.
- Maintain 1.08 miles of existing under brushed areas:
The scope of this work comprises 5,737 l.f. or 9.8% of the causeway. All low hanging, broken or dead branches will be removed and the shrub undergrowth will be cut with a walk behind brush mower. Shrubbery that is growing within patches of sea oxeye daisy will be cut by hand.
- Create 1.48 miles of permanently cleared buffers/vistas:
The scope of this work comprises 7836 l.f. or 13.4% of the causeway. All mature native shade trees that are in sound structural condition will remain. The resulting cleared vegetation will be mowed approximately 3-4 times per year at the following locations:
 - Pole #72-74 North side
 - Pole #72-74 South side
 - Pole #84-86 South side
 - Pole #103-108 South side
 - Pole #116-119 South side
- Create 1.3 lineal miles of Rotational Cleared Buffer Vistas/ year:
The scope of this work comprises a total of 27,803 l.f. (5.27 miles) or 47.4% of the causeway. Each 1.3 lineal mile section will be rotationally cut once every five years in order to create a diversity of successional growth. This would equal 11.8% of the entire length of the causeway that would be cut back on an annual basis. These areas were targeted due to an abundance of

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invasive exotic vegetation that is present in these specific locations. In addition, these sections do not contain an excessive amount of mature native shade trees and most of the mature tobacco flower and wax myrtle shrubs were severely damaged by Tropical Storm Faye. The precise selection of which section will be cut each calendar year will be determined by the overall health and appearance of the existing buffers. All initial clearing for permanently cleared buffers, under brushed areas, and rotational clearing would be conducted from December 1st - May 1st. Locations included in this would include:

- Pole #122- Jekyll Creek Bridge North Side
- Pole #119-122 South side
- Pole #115-119 North side
- Pole #110-113 South side
- Pole #101-106 North side
- Pole #99-100 North side
- **Pole #82-98 North side -** Cut 1.3 lineal miles year #1
- Pole #89-102 South side
- Pole #82-84 South side
- Pole #74-77 North side
- Pole #75-78 South side
- Pole #71-72 South side
- Pole #69-72 North side

Process:

Initial Clearing

The proposed method of clearing is to employ the use of a large tracked excavator with a mulching head that will be operated from the adjacent grass road shoulder. The machine would employ the use of the boom to reach out and perform the mulching work. The rotating head will be kept perpendicular to the marsh so the “chips” and ground up debris will exit the mulching head parallel to the marsh. In addition, the mulching head will be operated just above the ground level in order to minimize disruption to the soil. The last three to five feet of shrub vegetation that is growing adjacent to the sea oxeye daisies would be selectively removed by hand. We also feel this method will keep the chipped debris out of the marsh as much as possible. All existing native trees that are in sound condition will be preserved. All existing living vegetation will be maintained within the drip line of trees to be preserved in order to provide protection from wind damage.

Yearly Maintenance

Within the rotational buffers, only invasive exotic vegetation would be targeted for permanent removal. This vegetation would be cut by hand and a paint-on herbicide application will be applied to the fresh wounds of the exotic vegetation to suppress re-sprouting. Within the permanent vista clearings, in late spring, the re-sprouting vegetation will be low growing. This vegetation would be foliar sprayed with the appropriate herbicide only when environmental conditions are favorable. A couple of weeks after the herbicide application, a brush hog mower would be used to mow all brush inside the permanent vista to keep “brown out” from becoming an aesthetic eyesore. This may require an additional treatment in early fall in order control additional establishment of woody brush, but after the second application, most of the woody brush should be controlled and therefore yearly maintenance can be achieved by routine mowing.

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The Jekyll Island Authority recognizes the sensitivity of vegetation maintenance along the causeway. We will make every effort to oversee that all work is conducted within the above described guidelines. The following is a list of herbicides under consideration for the use on the causeway project.

<u>Herbicide</u>	<u>Active Ingredient</u>
Accord	Aquatic Glyphosate
Renovate3	Aquatic Triclopyr
Habitat	Aquatic Imazapyr
Escort	Metsulfuron

Adjuvant
Timberland 90
NuFilm IR

All herbicides will be applied at ultra-low volume rates through the use of backpacks. A rate of 10 gallons per acre of total mix will be applied on initial applications and less than 5 gallons per acre on follow up applications.

Wild Flower Plantings Main Objectives:

Locations:

Wildflower plantings are proposed at three principle locations on both the north and south sides of the causeway. The first location will be in the vicinity of the Causeway Entrance Towers in the areas that lie between the palm avenues and the existing underbrushed buffer areas. The second location is near the Visitor Information Center on the mowed road shoulders between telephone poles 107-113. The last location is just west of Jekyll Creek Bridge within the existing mowed road shoulders. Collectively all three areas would total approximately 125,000 sqft. of wildflower plantings.

Process:

Beginning in early fall, we would mow as closely to ground in areas for wildflower planting. After a slight regrowth of vegetation (1-2 weeks) the area would be sprayed with a light contact herbicide (Roundup or Prosecutor). After two weeks, we want to lightly cultivate the soil surface and avoid deep tilling. Limestone would be applied to planting sites if pH levels are below 5.0.

Wildflower seeds would then be broadcast over each planting area at a rate of at least 25 lbs. per acre at the causeway entrances and at 10lbs per acre in the vicinity of the Visitor Information Center. December 15th would be the target date to begin seeding at all locations.

After wildflower establishment, competition by grasses can be reduced by an overspray of grass specific herbicides (Poast, Fusilade or Ornamec).

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The wildflowers will be mowed at least once a year just prior to beginning or end of terrapin turtle nesting season (May 15- July 15) at a height of 4-6 inches.

Potential Wild Flower List:

Asclepias tuberosa - Butterfly-weed,
Coreopsis grandiflora - Large-flowered
Coreopsis
Erythrina herbacea - Coral Bean
Gaillardia pulchella - Indian Blanket
Flower
Helianthus debilis - Dune Sun Flower
Ipomoea pes-caprae - Railroad Vine
Liatris elegans - Blazing Star
Oenothera humifusa - Evening Primrose
Phlox drummondii - Annual Phlox
Pluchea odorata - Saltmarsh Flea-Bane

Portulaca pilosa - Hairy Portulaca
Rhexia alifanus - Meadow Beauty
Rudbeckia hirta - Black-eyed Susan
Solidago sempervirens - Seaside
Goldenrod
Solidago altissima - Field Goldenrod
Teucrium canadense - Woodland Sage
Tradescantia virginiana - Spiderwort
Trifolium hybridum - Alsike Clover
Trifolium pratense - Red Clover
Verbena rigida - Stiff Verbena

Road Shoulder Mowing Main Objectives:

The Jekyll Island Authority would like to mow all Bermuda grass road shoulders on a 4-5 times per year mowing cycle. Precise mowing times would be determined by yearly growth rates of the vegetation, but tentative target dates would be the following:

Dec. 15th, May 1st, July 15th, Sept 1st, and Oct. 15th. No mowing will occur during nesting season except for perhaps a 10' wide strip on either side of the causeway to allow for emergency pull off of vehicles. DOT would be requested to cut the causeway on the July 15th target date while the Jekyll Island Authority would perform mowing for the remaining dates.

All mowing would be performed above the high tide line and no grass clippings would be discharged into the marsh. This work will initially be performed using brush hog tractor mowers, but we are planning to purchase a larger tractor mower with a 15' wide bat wing rear mounted mower to perform this work.








Summary:

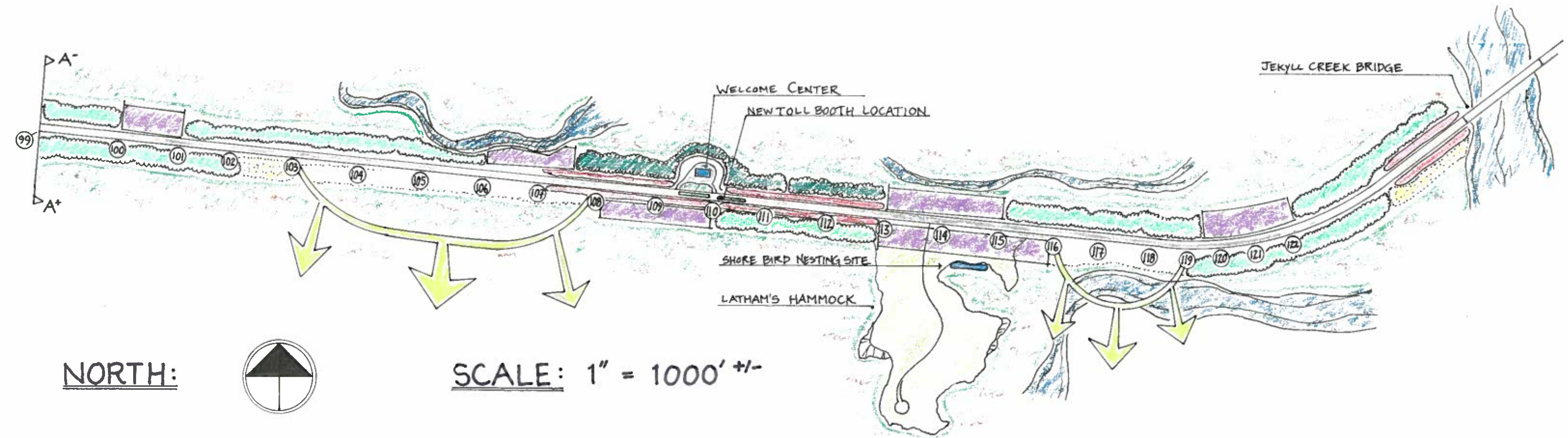
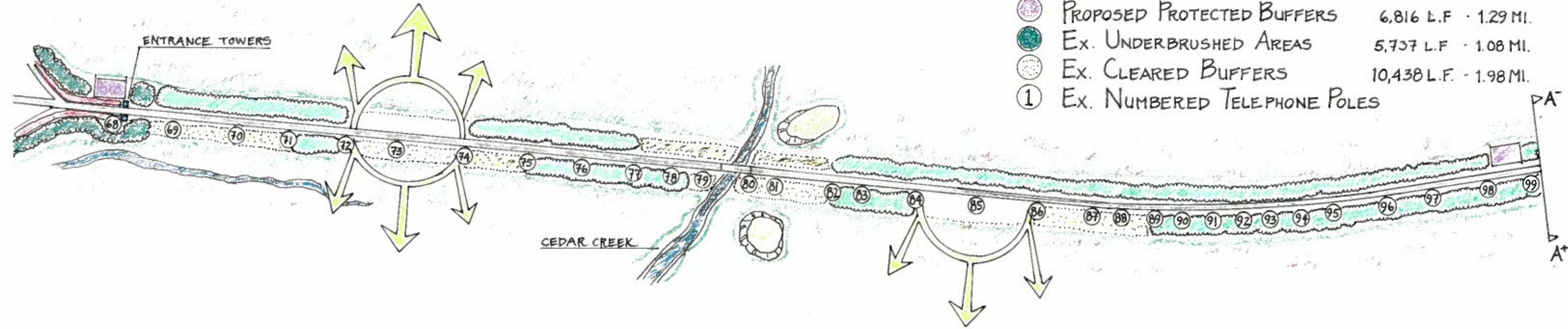
The Jekyll Island Authority does not have sufficient funds available to begin all of this work this winter season. Any trimming that would be conducted this winter would be limited to maintaining existing under brushed vistas, removing existing aesthetic eyesores and very small amount of vista clearing that would be performed by hand. Our main objective is gain approval from all necessary agencies so that we will be able to execute this plan once sufficient funding is secured.

CAUSEWAY VEGETATION MANAGEMENT PLAN:

CAUSEWAY TOTAL: 58,630 LF OR 11.10 MI.

LEGEND:

-  PROPOSED PERMANENT VISTAS 7,836 L.F. - 1.48 MI.
-  PROPOSED ROTATIONAL VISTAS 27,803 L.F. - 5.27 MI.
-  PROPOSED WILDFLOWER PLANTINGS 125,000 # +/-
-  PROPOSED PROTECTED BUFFERS 6,816 L.F. - 1.29 MI.
-  Ex. UNDERBRUSHED AREAS 5,737 L.F. - 1.08 MI.
-  Ex. CLEARED BUFFERS 10,438 L.F. - 1.98 MI.
-  ① Ex. NUMBERED TELEPHONE POLES



NORTH:



SCALE: 1" = 1000' +/-