

12.0 FINDINGS

This report documents the process and results of an analysis of multiple options for providing alternative transportation to BBNWR. Taken together, the options form a comprehensive and linked system of trail access, water access, and transit access. Given funding and construction realities, it is unlikely that the City and its partners can implement all of these options in the short-term. However, the report and associated plans establish a basis for the City, FWS, DCR, or other entities to advance a specific project should funding become available consistent with stakeholder priorities.

The improvements identified in this report have the potential to help complete the multimodal transportation system within the study area. They also have the potential to complement and expand existing and planned facilities both within the project area and beyond. Connections to efforts such as the Green Sea Blueway and Greenway would create opportunities for coordinated branding and marketing, with imagery recognizing the City, FWS, and DCR. In addition, the alternatives analyzed herein each offer sustainability benefits that could be enhanced through the use of sustainable materials, native plantings, and low-maintenance materials.

The City, FWS, DCR, and their other partners have opportunities to implement multimodal transportation alternatives that would improve access to primary destinations, enhance the visitor experience, and help achieve sustainability goals. In general, based on the study process and results, the study team has established the following findings:

◆ No-Construction Alternative

Given their low relatively cost and wide range of benefits that complement other ongoing efforts, the City could pursue the program and policy options described herein consistently over time. Many of the specific actions can be undertaken immediately, while others will require longer-term sustained effort.

◆ Non-motorized land access

• Back Bay Refuge Trail SUP and On-Road Facilities

Although relatively expensive, the BBRT SUP is a strong candidate for outside funding sources. It would deliver modest mobility benefits, but would convey significant sustainability and visitor experience benefits. The facility would extend an existing SUP, and would provide a direct connection between existing residential neighborhoods and the Sandbridge resort area. The path meets the goals of the Refuge and is one of the seven Top Priority Infrastructure Projects in the City's Bikeways and Trails Plan. The City could phase the construction if needed based on funding limitations.

To the extent that the City could advance the on-road portions of the BBRT as part of programmed repaving or maintenance activities, they represent a relatively affordable way to enhance the system for bicyclists. The facilities would convey modest mobility benefits, but by restoring the existing unmarked bike lanes would help complete the area's transportation network. The project would also support the goals of the Refuge.

• Sigma Trail

The Σ T would convey similar benefits and require a similar capital investment to the BBRT SUP. Because it crosses multiple private driveways and intersecting roadways, the Σ T may face a higher degree of constructability constraints. However, it would provide a direct connection to the Future Visitor Contact Station, as well as a direct connection to the Green Sea Scenic Byway. The path meets the goals of the refuge, and the City could phase the construction if needed based on funding limitations.

◆ Shuttle Service

The shuttle alternative would require sustained partnerships and would convey modest benefits to congestion within the corridor. It has the potential to become part of an overall access system and could enhance the experience of Refuge visitors. In addition to removing a relatively small number of cars from the roadway, the shuttle would provide an opportunity for advance education and interpretation, thereby supporting Refuge goals.

◆ Enhanced Water Access

• Canoe/Kayak Launch Sites

The water access improvements would convey limited transportation benefits, but would significantly enhance the visitor experience, and could eventually help complete a Back Bay Water Trail. The cost for each site varies, based on existing conditions as well as the level of proposed improvements. Development of the sites would support the Refuge's wildlife viewing goals. Although the City could likely secure outside funding, the overall amount of that funding is likely small.

• Water Taxi

The water taxi would result in modest mobility benefits, and it involves operational and partnership complexity in addition to infrastructure needs. To the extent that the City could accomplish the needed improvements as part of the water access sites development, the City could minimize the additional cost for this alternative. Based on projected ridership and operating costs, this alternative is not likely to prove viable; however, a private boat owner may build an on-demand business model which could have the flexibility to be viable.



The ultimate alternative transportation options are envisioned to work as a network. Travel time is often a determining factor in trip planning. The chart, or Table 12.1, presents the time it takes to travel from one location to another by mode choice. This chart provides a tool for planning a chained trip through Back Bay. If a visitor group decided to leave their homes and bike the BBRT to Fire Station #17 it would take about 15 minutes; then get on the shuttle there to BBNWR 20 minutes; bike around BBNWR for a few hours and end up at Barbour Hill to take the water taxi; the taxi to Mill Landing would take about 30 minutes; they could choose to ride the shuttle to the future Visitor Contact Station in Sigma which would be 30 minutes; and they return home along the existing 25/50 Loop; starting on Lotus Drive.

TABLE 12.1: TRAVEL TIMES

STOP/TRAIL HEAD	MODE	TRAVEL TIME IN MINUTES											
		NIMMO/ REALTY	SAND-PIPER/FIRE STATION	BONITA LANE	LITTLE ISLAND PARK	BACK BAY NWR	BARBOUR HILL	SIGMA	HORN POINT	LOVITT'S LANDING	MILL LANDING	PA WILDLIFE MGMT	VIRGINIA AQUARIUM
Albuquerque	Bike	9	14	23	34	43		21					
Nimmo/Realty	Bike		5	14	25	34		12					
	Shuttle		3	9	16	21		7			37		
Sandpiper/Fire Station	Bike	5		9	20	29		17					
	Shuttle	3		6	13	18		10			40		
Bonita Lane	Bike	14	9		11	20		26					
	Shuttle	9	6		7	12		16			46		
Little Island Park	Bike	25	20	11		9		37					
	Shuttle	16	13	7		5		23			53		
	Kayak/Canoe					46	112	100	45	70	124	190	
Back Bay NWR	Bike	34	29	20	9			46					
	Shuttle	21	18	12	5			28			58		
	Kayak/Canoe				46		75	140	83	66	108	180	
	Water Taxi						15				30		
Barbour Hill	Kayak/Canoe				112	75		200	144	112	90	108	
	Water Taxi					15					30		
Sigma	Bike	12	17	26	37	46			21		45		40
	Shuttle	7	10	16	23	28					30		24
	Kayak/Canoe				100	140	200		60	130	178	206	
Horn Point	Kayak/Canoe				45	83	144	60		70	120	200	
Lovitt's Landing	Kayak/Canoe				70	66	112	130	70		84	150	
Mill Landing	Shuttle	37	40	46	53	58		30					
	Kayak/Canoe				124	108	90	178	120	84		86	
	Water Taxi					45	30						
PA Wildlife Mgmt	Kayak/Canoe				190	180	108	206	200	150	86		
Virginia Aquarium	Shuttle							24					