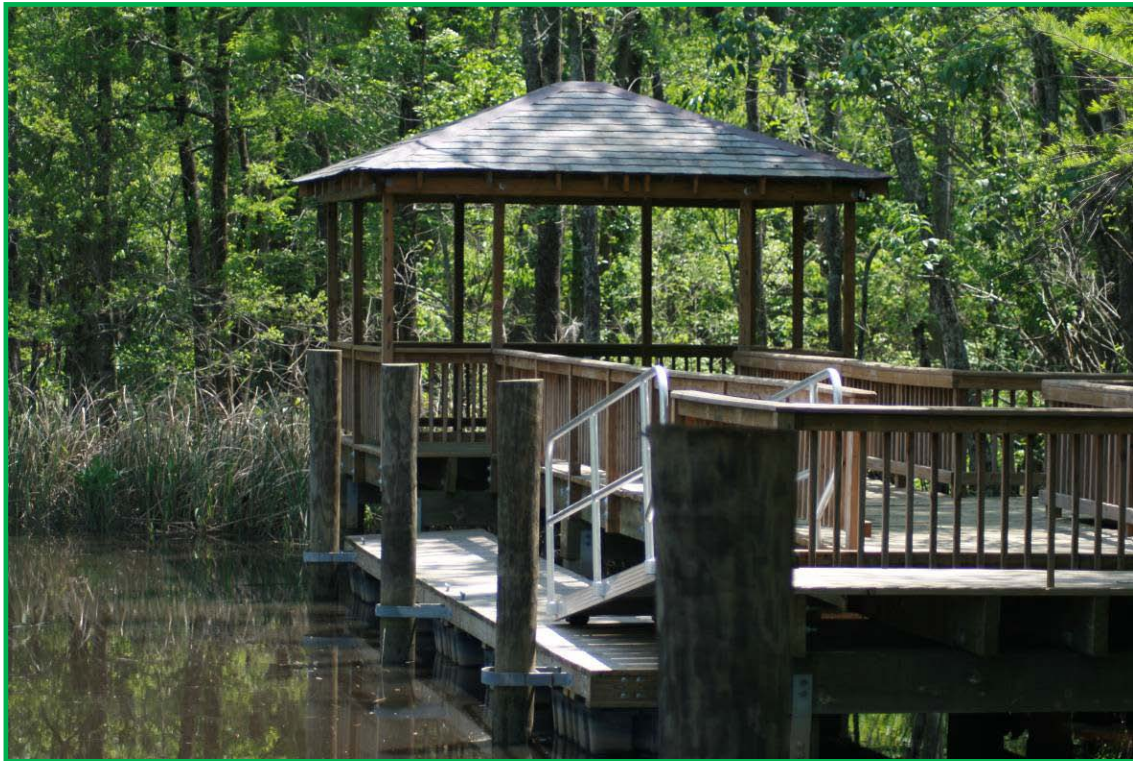


# Navassa Parks & Recreation Master Plan



Prepared by

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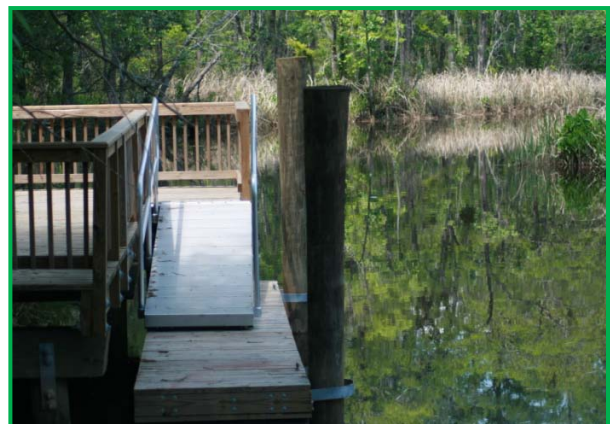
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# 1. Introduction

The purpose of the Navassa Parks and Recreation Master Plan and the planning process is to give the citizens of Navassa an opportunity to discuss the types of recreational activities they enjoy and the types of facilities they would like to see developed in the future. As part of the plan, an inventory of existing facilities was conducted in order to identify the parks and recreational opportunities currently available to town residents. The plan utilized public input gathered from a parks and recreation survey and from community meetings to determine the current and future recreational needs of the town. This public input was used in partnership with an analysis of recreational standards and a recreational needs assessment to make recommendations for improving existing facilities and the provision of future parks to address the planned population growth of the town. The recommendations include proposals for park facility development, parks and recreation staffing levels, and the location of future parks. At the conclusion of the master plan is an implementation plan that identifies potential funding sources for recreational improvements and which serves as a guide to the community for enhancing parks and recreational opportunities for Navassa citizens over the 5-10 year planning period.



## Previous Planning Efforts

### 1999 CAMA Land Use Plan:

In 1999 the Town of Navassa adopted its first CAMA Land Use Plan in order to provide a source of information for basing public policy and governmental decisions. North Carolina passed the Coastal Area Management Act, known as CAMA, in 1974. CAMA established the Coastal Resources Commission (CRC) to oversee the regulation of the coast. CAMA also provided a program framework for regulating development activity in coastal areas and required local land use planning in the 20 coastal counties including Brunswick County. Navassa's CAMA Land Use Plan consists of policies, maps and relevant technical data that serve as the community's blueprint for growth. Land Use Plans can provide guidance for both individual development projects and a broad range of policy issues at the local level. Navassa's 1999 CAMA Land Use Plan includes several policies related to the provision of parks and recreational opportunities, most of which are included in Appendix 1 of this plan. The following list summarizes relevant planning goals and policies contained in the CAMA Land Use Plan:

- Establish a comprehensive recreation program
- Establish a system of parks, trails, and greenways
- Encourage the dedication of private land for public park development
- Encourage the use of conservation easements
- Provide public water access for fishing and boating
- Seek grant funding for development of parks and recreational facilities
- Provide both passive and active recreational opportunities
- Provide public recreational facilities to service the town's growing population
- Require new developments to provide bicycle and pedestrian facilities
- Create a Master Plan for Recreation
- Develop a town Recreation Department

### Navassa Zoning Ordinance and Subdivision Ordinance:

The Town of Navassa adopted a new Zoning Ordinance and Subdivision Ordinance in 2009 that greatly increased the town's ability to regulate development and redevelopment activity within its jurisdiction. Zoning Ordinances are one of the best tools local governments can utilize to ensure quality growth within a town by shaping what types of land uses are permitted and where and how

development will take place. Several articles of the Zoning Ordinance work to increase the parks and recreational opportunities available within the town by requiring new developments to preserve trees, provide passive and active open space, and construct bicycle and pedestrian amenities. Appendix 2 contains a few relevant sections of the town's Zoning Ordinance that pertain to the provision of parks and recreation opportunities.

Subdivision Ordinances are designed to regulate the development of residential neighborhoods within the town limits by establishing orderly procedures for the division of land and requiring certain neighborhood amenities to be provided within new neighborhood development. Appendix 3 lists excerpts from the town's Subdivision Ordinance that relate to parks and recreation facilities. Collectively, Navassa's development regulations serve as a means of enhancing community connectivity, access, property values, and overall quality of life. The list below highlights some of the issues regulated in the Zoning and Subdivision Ordinances that deal with the provision of open space, parks, and recreational facilities:

- Provision of land for open space and parks
- Minimum acreage requirements for open space and recreation with new development
- Land suitability and location requirements for open space and recreation areas
- Land accessibility and usability requirements for open space and recreation areas
- Active open space requirements for parks
- Tree preservation requirements
- Bicycle and pedestrian facility requirements

## Public Involvement

The most important part of this Parks & Recreation Master Plan is the effort the Town made to get a broad range and representative number of Navassa Citizens involved in the planning process. At the beginning of the planning process, the Town Council established a Parks & Recreation Advisory Committee to coordinate and facilitate the creation of the plan. One of the primary tasks of the Advisory Committee was to review, approve, and distribute a Parks & Recreation questionnaire. Surveys were distributed electronically through the Town website and in hard copy at Town Hall, through distribution with water bills, and by announcement at all town meetings. Questionnaires were also hand delivered to those that did not receive water bills.

Community outreach and public notification was essential to the success of the survey. Parks & Recreation committee members personally distributed questionnaires to local churches and community groups and efforts were made by the consulting firm to distribute the survey to Navassa high school seniors, who were given the opportunity to complete the questionnaire during their history / government class at school. Furthermore, a notice about the Parks & Recreation questionnaire and four public meetings was also included in the Town's Newsletter and phone messages about completing the questionnaire were delivered through the Town's CTY voice notification service. A copy of the letter sent with water bills and of the newsletter article can be found in Appendix 4.

The Parks & Recreation Advisory Committee held four public input meetings to give residents of Navassa the opportunity to meet and share with the Committee their thoughts on the types of recreation facilities they would like to see made available in Navassa. The meetings were held on January 18<sup>th</sup>, 19<sup>th</sup>, 24<sup>th</sup>, and 26<sup>th</sup> of 2011. The results of the January 18<sup>th</sup> and January 26<sup>th</sup> community meetings can be found in Appendix 5, along with a list of attendees. No members of the community attended the meetings on January 19<sup>th</sup> or 24<sup>th</sup>.

In addition to public involvement through community meetings and the distribution of the Parks & Recreation Questionnaire, the Parks & Recreation Advisory Committee and Town Planning Staff have held numerous planning meetings that have all been open to the public. A public meeting was held on August 11, 2011 by the Navassa Parks & Recreation Advisory Committee to give the residents of Navassa the opportunity to comment on the plan before its approval by the Advisory Committee. Also, a public meeting was held on August 25, 2011 by the Navassa Town Council to review the plan and receive public comment before its adoption. The results of the public involvement process have been used to establish goals and priorities and recommendations for facilities, staffing, and capital improvements during the 5 to 10 year planning period.

## **Navassa Demographics**

Based on United States Census Bureau data, the Town of Navassa had a population of 439 in 1980, 445 in 1990, and 479 in 2000. In 2010, the Town of Navassa had a population of 1,505, which is a substantial increase in population over the 2000 Census. The town's population increase is due to annexation of the Phoenix area in 2002, the construction of new residential housing as part of the Lena

Springs Subdivision, and the general influx of new residents to the southeastern North Carolina region as a whole. The racial make-up of Navassa, based on the 2010 Census, is 62.6% African American, 23.3% white, 10.0% Hispanic, 0.5% either American Indian or Alaskan Native, 0.1% Asian, 3.4% two or more races, and 0.1% other races. The age groups and percentage of the population for the Town of Navassa are shown in Table A below.

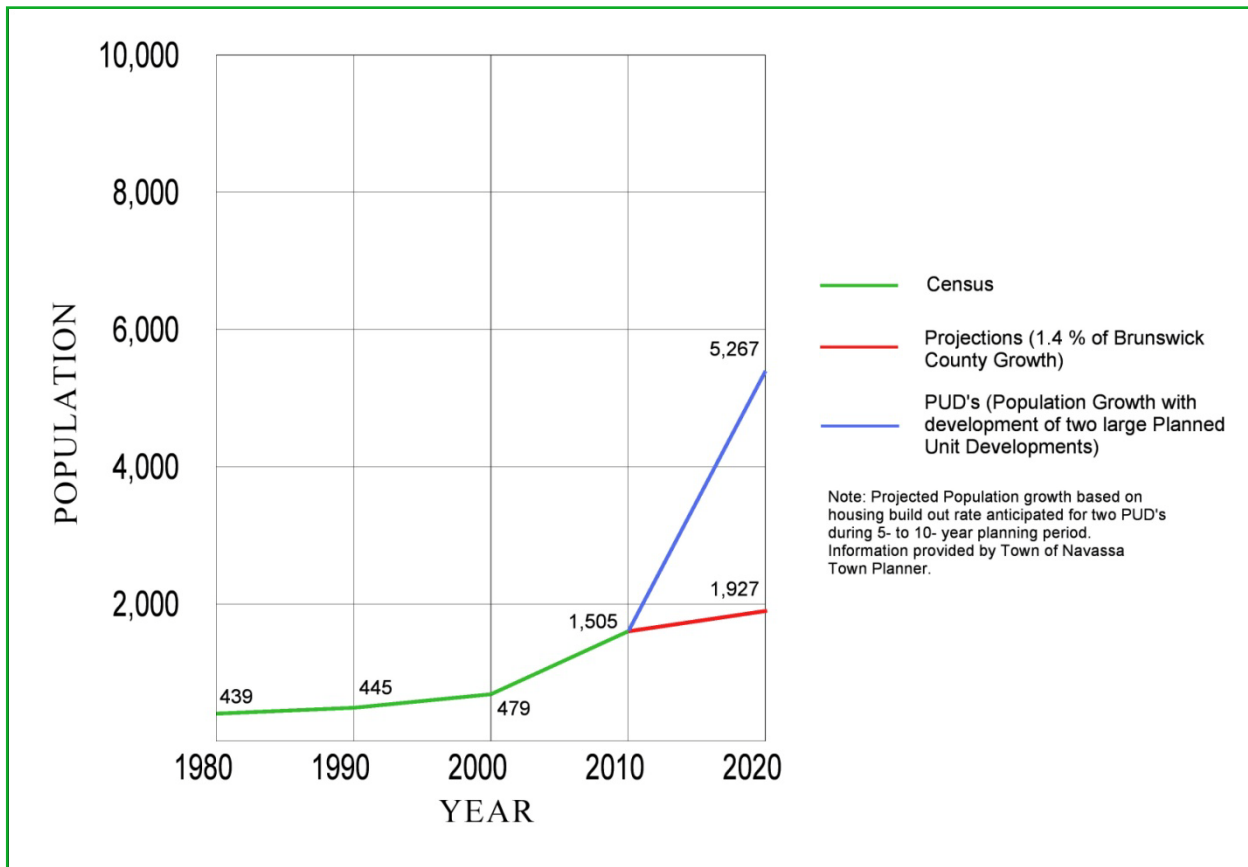
**Table A. Age Group Distribution**

<b>Age Group</b>	<b>2010</b>	<b>Percentage</b>
Under 5 years	108	7.2%
5-14	196	13.0%
15-24	216	14.3%
25-34	212	14.1%
35-44	212	14.1%
45-54	185	13.3%
55-64	202	13.4%
65 and Older	174	11.6%
<b>Total</b>	<b>1505</b>	<b>100.0%</b>

To determine parks & recreation needs during the 5 to 10 year planning period, the existing population and anticipated population growth must be considered. Navassa anticipates a substantial increase in population by the year 2020 with the scheduled completion of the I-140 bypass in 2017, which has two highway interchanges in town that are expected to spur new development. Additionally, the Navassa Town Council recently approved the rezoning of two large Planned Unit Developments (PUD) that are collectively permitted to construct over 5,500 residential units over the next 20 years, providing there is adequate water and sewer capacity made available to accommodate such large scale development. When determining the town’s population growth, the State demographer recommended using a rate of 1.4% of the projected growth of Brunswick County for future projections since that represents a typical growth rate for Navassa without the benefit of annexation or the development of large subdivisions. Using this method, the population of Navassa in 2020 would be 1,927 people, which is considered a very conservative projection due to other factors such as the I-140 bypass and recent approval of two large Planned Unit Developments (PUD’s). The population projection for the Town of Navassa is illustrated in Graph A. Complete population projections for the town can be found in Appendix 6.



**Graph A. Navassa Census / Population Projections**



With the recent approval by the Navassa Town Council of the Indian Creek and River Bend PUD's, a substantial increase in population is anticipated beginning in 2014 with construction of new homes in one or both of these large residential developments. According to the developers of each project, both desire a build-out period of twenty years for the developments to be completed. However, since the housing market continues to remain weak due to the nationwide economic downturn since 2008, the Navassa Planning Department has used a more conservative build-out schedule to estimate the population increase between 2010 and 2020. Indian Creek's initial design anticipates a total residential population of 9,542 people and River Bend is designed to accommodate 5,673 people. If these two developments are able to build, market, and sell homes at our more conservative build-out rate, the population of Navassa will increase by 557 people per year during the next 7 years beginning in 2014, which would represent a total projected population increase between 2014 and 2020 of 3,340 people or a total population in 2020 of 5,267 (1.4 % annual growth plus growth of two PUD's). Graph A reflects a growth rate of 1.4% or a population of 1,927 people in 2020, and a population estimate of 5,267 people in 2020 if the two recently approved PUD's build homes at the rate outlined above.

## 2. Inventory of Existing Parks & Recreation Facilities

### Navassa Township District Park (9.87 acre Community Park with 3 mile service area)

Navassa is a small community with a population of 1,505 people. Although the community is small in population, it does contain existing parks that are serving the community and there are current plans to improve these facilities. Before a determination can be made on current and future parks needs, it is first necessary to review existing park facilities. There are three existing parks in Navassa, the largest of which is the Navassa Township District Park. This 9.87-acre District Park, which is categorized the same as a community park, is located in the southeastern section of Navassa. Brunswick County owns 4.77 acres of the park while the Town of Navassa owns the remaining 5.1 acres. This park has a 3.0 mile service area and contains the following facilities:

- Baseball Field
- Dugouts
- Bleachers
- Concession building with restrooms
- 2 picnic shelters
- Paved basketball court (lighted/fenced)
- Play equipment with benches (2-5 age)
- Play equipment with benches (5-12 age)
- Unpaved parking area
- Tennis Court (lighted)





**Picnic Tables / Shelter**



**Concession / Restrooms**



**Play Equipment**

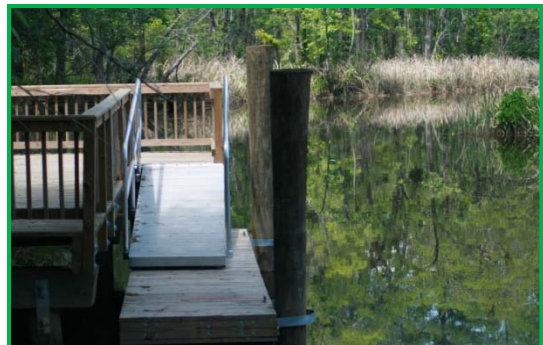


**Play Equipment**

**Davis Creek Park (5.42-acre Regional Park, 5-mile service area)**

Davis Creek Park, which is a 5.42-acre regional water-access park developed with Coastal Area Management Act funds, is the next largest existing park in Navassa. The town has recently received grant funds to pave the access road, add gravel to the parking area, add an entrance sign, and repair the existing boat ramp. This park contains the following facilities:

- Boat ramp
- Small boat dock
- Boardwalk
- Waterfront gazebo
- Picnic tables
- Parking area (unpaved)



**Davis Creek Floating Walk**



**Davis Creek Kayak Launch  
with Boat Ramp**



**Davis Creek with Water Access  
to Cape Fear River**



**Boardwalk / Gazebo**



**Picnic Area**

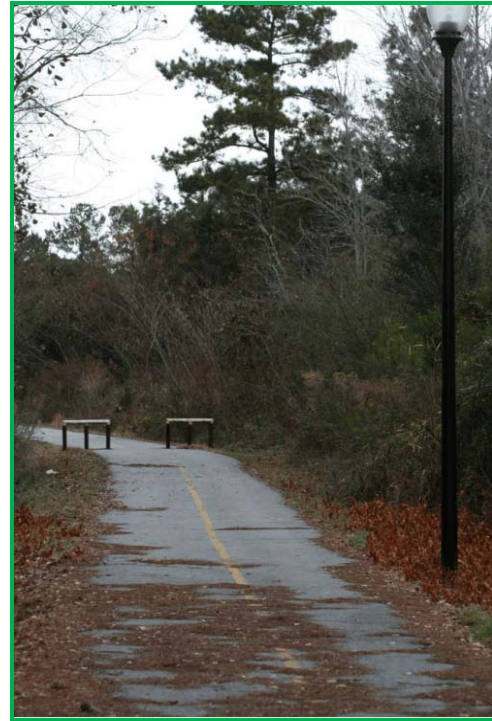
**Multi-Use Trail (1.03 acre Neighborhood Park, ¼-mile service area)**

The Navassa Multi-Use Trail runs from the intersection of Brooklyn Street and Water Street east across Broadway Street, and northeast to Main Street. East of Brooklyn Street, the beginning of the trail is located on an easement, while the remaining portion of the trail is on land owned by the Town of Navassa or along an old railroad right of way. This multi-use trail is 10 feet wide and approximately 1,800 linear feet in length. The three town owned parcels of land, containing approximately 1.03 acres, has the potential for passive recreation facilities and some playground equipment which could serve the adjacent neighborhood. This property contains the following facilities:

- 10' paved trail (asphalt paving)
- Lighting along trail
- Adjacent undeveloped property with recreation potential



Walking / Bike Trail

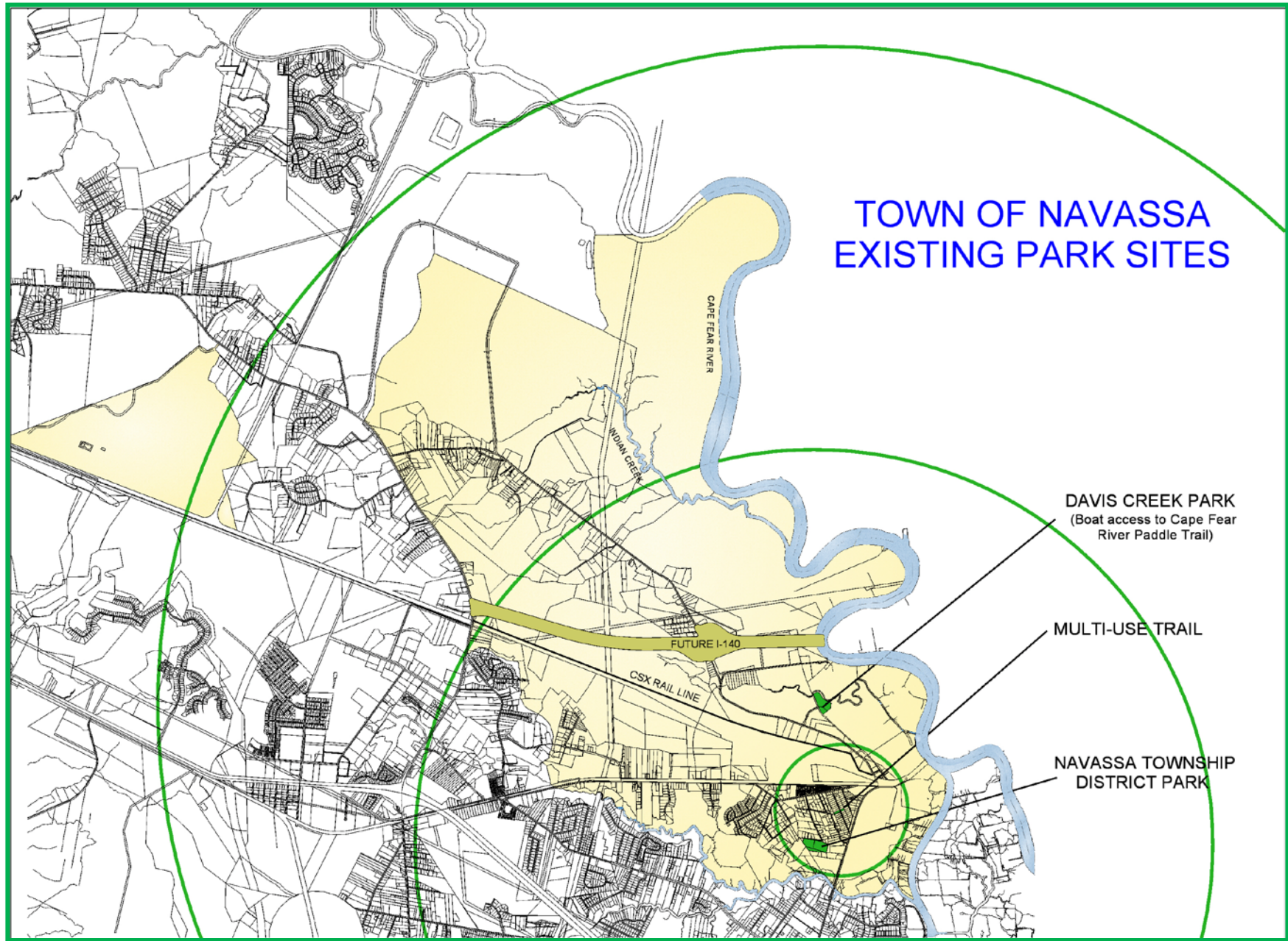


Walking / Bike Trail

The Town of Navassa does not have any other park or recreation facilities or opportunities—neither Town affiliated nor those affiliated with any other groups, organization, or government bodies—within the Town limits.

In summary, Navassa has three existing parks totaling 16.32 acres as follows:

<u>Existing Parks</u>	<u>Size</u>	<u>Service Area</u>
Navassa Township District Park	9.87 ac.	3 miles
Davis Creek Park	5.42 ac.	5 miles
Multi Use Trail	1.03 ac.	¼ mile
<b>Total Existing Park Acreage</b>	<b>16.32 ac.</b>	



### 3. Inventory of Proposed Parks & Recreation Facilities

#### Proposed Phoenix Park (4.65 acre Community Park)

In addition to the three existing parks currently serving the community, the Mayor and Town Council identified a potential park site in the Phoenix area of town. Since all of the existing parks were located in the eastern part of the community, the Mayor and Town Council wanted to provide a recreation facility in the western portion of the community which was annexed into Navassa in 2002. The Town identified a 4.65 acre site at the intersection of Mt. Misery Road and Cedar Hill Road owned by the Du Pont de Nemours and Company. The town has signed a 35 year lease with Du Pont in order to utilize the site for the development of a community park. A site master plan was completed in 2010 with the following facilities proposed based on public input gathered during community meetings and in coordination with the Parks & Recreation Advisory Committee:

- Softball field (fenced and lighted)
- Dugouts
- Bleachers
- Concession building with restrooms
- 3 picnic shelters
- Basketball court (lighted)
- Playground equipment (age 2-5 years)
- Playground equipment (age 5-12 years)
- Picnic tables
- Benches
- Trash receptacles
- Water fountains
- Bike racks
- 57 car parking lot (paved and lighted)
- Entrance gate
- Park sign
- Park fencing
- Nature trail
- 2 pedestrian bridges over wetlands



**Phoenix Park**  
Navassa, North Carolina

**CONCEPT PLAN**

Howard T. Capps & Associates, Inc.  
Wilmington, North Carolina



### **Proposed Community Center (3.66 acre Community Facility)**

The Town of Navassa has also received funding for the design and construction of a Community Center which will be located on a 3.66-acre site on Main Street west of the Navassa Town Hall. This facility, once designed and built, will contain an indoor gym. The Parks & Recreation questionnaire demonstrated that a community recreation center with a gym is the number one priority for those responding to the survey, with 75 responses to question number 10 concerning preference for recreation facilities. Although it may be two to three years before this indoor gym is available for use, when completed it will provide a significant and desired recreational facility for community use.

### **Proposed Planned Unit Development Parks (91.65 acres of Community parks)**

During the Parks & Recreation Master Planning process, two large Planned Unit Developments (PUD's) were considered and approved by the Navassa Town Council. The Navassa Zoning and Subdivision Ordinances contain requirements for the provision of parks, recreation, and open space, and based on those requirements, the following active recreation areas have been proposed for Indian Creek PUD and River Bend PUD as part of their approved PUD Master Plans and accompanying zoning narratives. It is important to note that the provision of these park facilities is based on the development schedules of the associated PUDs and that it will most likely be after 2014 before any of these park sites are available for parks and recreation use.

#### **Proposed Indian Creek Park Facilities**

These eight future park sites range in size from 1.0 acres to 8.53 acres and equal 39.43 acres in total. Some portion of these sites should be developed during the 5 to 10 year planning period; however, the specific schedule is unknown since their development is not tied directly to the schedule for creation of residential lots or construction and sale of homes. It can be anticipated that some of these park sites will be developed with recreation facilities during the 5 to 10 year planning period. Table B below summarizes the facilities that will be provided as part of the Indian Creek PUD.

**Table B. Proposed Indian Creek PUD Park Facilities – 39.43 acres**

<b>Park Site</b>	<b>Acres</b>	<b>Proposed Use</b>	<b>Developer's Responsibility</b>
PA-1	1.0	Active open space site with a kayak access area and parking and a connection with the multi-use trail to the Phoenix Park.	Site clearing and grading, kayak access area, parking installation, and the attainment of all necessary permits
PA-2	4.79	Active open space site with kayak access area and parking	Site clearing and grading, kayak access area, parking installation, and the attainment of all necessary permits
PA-3	4.90	Active open space site with kayak access area and parking	Site clearing and grading, kayak access area, parking installation, and the attainment of all necessary permits
PA-4	8.53	Active open space site with facility improvements to be determined	Site clearing and grading, parking installation, and the attainment of all necessary permits.
PA-5	5.0	Active open space adjacent to the proposed school site with facility improvements to be determined	Site clearing and grading, parking installation, and the attainment of all necessary permits
PA-6	3.12	Active open space site with facility improvement to be determined	Site clearing and grading, parking installation, and the attainment of all necessary permits
PA-7	5.94	Active open space site with an elevated walkway connecting the site to the multi-use path and with other facility improvements to be determined	Site clearing and grading, parking installation, construction of elevated walkway across wetlands, and the attainment of all necessary permits.
PA-8	6.15	Active open space site with connection to the multi-use path and with other facility improvements to be determined	Site clearing and grading, parking installation, construction of elevated walkway across wetlands, and the attainment of all necessary permits.
Multi-use Trail	10ft wide	Multi-use trail will connect through-out the development with public access from public parking areas. The trail will be maintained by the master HOA and will also run adjacent to the western commercial district connecting PA-1 with the proposed Phoenix Community Park	Site clearing and grading, parking installation, construction of multi-use trail, and the attainment of all necessary permits.

Note: The town will be responsible for providing all capital improvements not listed in the table.

**Proposed River Bend Park Facilities**

The sixteen future park sites for River Bend range in size from 0.48 acres to 9.4 acres and equal a total of 52.22 acres. Like Indian Creek, some portion of these sites at River Bend should be developed during the 5 to 10 year planning period; however, the specific schedule is unknown since their development is not tied directly to the schedule for creation of residential lots or construction and sale of homes. It can be anticipated that some of these park sites will be available for development of some recreation facilities during the 5 to 10 year planning period. Like Indian Creek, it may be after 2014 before any of these sites are available for parks and recreation use. Table C below summarizes the facilities that will be provided as part of the River Bend PUD.

**Table C. Future River Bend PUD Park Facilities – 52.22 acres**

<b>Park Site</b>	<b>Acres</b>	<b>Proposed Use</b>	<b>Developer’s Responsibility</b>
Site 1	3.9	Active open space site on Royster Road across the street from the commercial district.	Dedicate land to the town for use by the public
Site 2	9.4	Private community amenity site for active recreation and community club house	This site will be private and only open to residents of the development. Developers are responsible for all facility construction and permitting.
Site 3	5.5	Restoration of the Historic Cemetery and adjacent open space.	Restoration and maintenance of the cemetery, maintenance of adjacent open space areas
Site 4	0.48	Pocket park with potential facilities to be determined	Site clearing, grading, future maintenance, and provision of any facilities
Site 5	0.55	Pocket park with potential facilities to be determined	Site clearing, grading, future maintenance, and provision of any facilities
Site 6	2.32	Active open space connecting to the historic cemetery with walking trail other potential facilities to be determined	Site clearing, grading, future maintenance, and provision of any facilities
Site 7	3.86	Active open space with facilities to be determined	Site clearing, grading, future maintenance, and provision of any facilities
Site 8	1.98	Entrance greenway to the community outside the right of way adjacent to Cedar Hill Rd with a 8 ft wide pedestrian sidewalk	Site clearing, grading, and construction of sidewalk. Dedicate land to the town for future maintenance
Site 9	5.66	Active open space adjacent to wetlands to most likely contain multi-use trails with any other facilities to be determined	Site clearing, grading, future maintenance, and provision of any facilities

<b>Park Site</b>	<b>Acres</b>	<b>Proposed Use</b>	<b>Developer’s Responsibility</b>
Site 10	1.98	Continuation of entrance greenway with 8 ft wide pedestrian sidewalk to PUD District 4 with other facilities to be determined	Site clearing, grading, construction of sidewalk, and all future maintenance
Site 11	2.73	Active open space with trail connecting open space site 9 with the community amenity in open space site 2	Site clearing, grading, construction of trail, and all future maintenance
Site 12	3.44	Active open space with trail connecting community amenity in open space site 2 with PUD District 4, 5, and 6	Site clearing, grading, construction of trail, and all future maintenance
Site 13	1.98	Continuation of public greenway from multi-family district to the mixed-use district with future facilities to be determined	Site clearing, grading, construction of sidewalk, and all future maintenance
Site 14	3.09	Continuation of public greenway from entrance to the multi-family district with future facilities to be determined	Site clearing, grading, construction of sidewalk, and all future maintenance
Site 15	3.55	Continuation of entrance greenway with 8 ft wide pedestrian sidewalk to PUD District 4 with other facilities to be determined	Site clearing, grading, construction of sidewalk, and all future maintenance
Site 16	1.8	Active open space site on Royster Road across the street from the commercial district.	Dedicate land to the town for use by the public

Note: The town will be responsible for providing all capital improvements not listed in the table.

## 4. Navassa Future Park Needs Assessment

To establish current and future park needs and priorities the town utilized community input gathered from Navassa citizens through questionnaire results, public meetings, and meetings with the Parks & Recreation Advisory Committee and Town Planner.

### Parks & Recreation Questionnaire Results

A total of 131 questionnaires were completed and tabulated. Of the 131 questionnaires, 75 respondents, or 57.3%, were males and 56 respondents, or 42.7%, were females living in Navassa. One hundred six respondents, or 80.9%, were African American residents, 22 respondents, or 16.8%, were white residents, and the remaining three respondents, or 2.4%, were Hispanic or Native American residents. It is important to note that the survey was not distributed in Spanish, which could explain the lower response rate amongst Navassa’s Hispanic population. However, the results of the questionnaire responses compare favorably to the 2010 racial make-up of Navassa, specifically as follows in Table D.

**Table D. Racial Makeup and Survey Responses**

<b>Ethnic Make-up</b>	<b>2010 Census</b>	<b>Response to Recreation Questionnaire</b>
African American	62.6%	80.9%
White	23.3%	16.8%
Hispanic	10.0%	0.8%
American Indian or Alaskan Native	0.5%	1.5%

The questionnaire contained three multiple choice questions: the household's preferred recreation activities, what would need to be done to encourage households to use recreational facilities and parks more often, and the household's preference for recreation facilities. Questions 11 through 16 asked those completing the questionnaire to indicate their opinion regarding the adequacy of current parks and the need for additional recreation facilities. The survey responses to questions 8 through 16 of the questionnaire are described below.

In question number 8, residents were asked to select their household's five most preferred recreation activities from a list of 21 choices. Based on the responses received, 89 preferred basketball, 70 preferred baseball, and 56 preferred walking / hiking, which represented the top three preferred recreational activities. Bicycling, with 46 responses, was the fourth most preferred recreation activity, and fitness program was the fifth most preferred recreation activity with 44 responses. The top 10 responses to question 8 are shown in Table E. Responses to the entire questionnaire can be found in Appendix 7.

**Table E. Responses to Question 8**

<b>Question 8. Please select your household's 5 most preferred recreation activities. (Select 5)</b>		
<b>Activity</b>	<b>Response</b>	<b>Ranking</b>
Basketball	89	1
Baseball	70	2
Walking/Hiking	56	3
Bicycling	46	4
Fitness Program	44	5
Weight Lifting	43	6
Football	41	7
Aquatics/Swimming	33	8
Aerobics	26	9
Arts & Crafts	13	10
Shooting Sports	13	11

In question number 9, residents were asked what would need to be done to encourage households to use recreational facilities and parks more often from a list of eleven choices. Based on the responses received, 58 indicated that there was a need for more to do at the facilities. The second highest response, with 43 responses, was the need for recreational programs to be offered. The third highest response, with 42 responses, was the need to better maintain the parks. The top five responses to question number 9 are shown in Table F below.

**Table F. Responses to Question 9**

<b>Question 9. My household would use the recreational facilities and parks more often if (check all that apply)</b>		
<b>Top Selections</b>	<b>Response</b>	<b>Ranking</b>
There was more to do at the facilities	58	1
Recreational programs were offered	43	2
Parks were better maintained	42	3
I knew more about the Opportunities	31	4
They were safer	22	5

Question 10 asked residents to select their household’s 10 most preferred recreation facilities from a list of 21 options. Space was provided on the questionnaire to add 5 additional recreation facilities if a preferred facility was not listed as an option. Based on responses, the number one requested facility was a Community Center with 75 responses. The second choice, with 66 responses, was a Fitness Center. Walking Trails, with 44 responses, was number three, and a Playground was number four with 41 responses. Baseball / Softball and a Weight Room each received 40 responses, which tied them for the 5<sup>th</sup> highest response to the question. The top five responses to question 10 are shown in Table G below.

**Table G. Responses to Question 10**

<b>Question 10. Select your household’s 10 most preferred recreation facilities. (Select 10)</b>		
<b>Preferred Facility</b>	<b>Response</b>	<b>Ranking</b>
Community Recreation Center	75	1
Fitness Center	66	2
Walking Trails	44	3
Playground	41	4
Weight Room	40	5
Baseball / Softball Fields	40	5

Residents responding to questions 11 through 16 were asked to indicate their responses ranging from strongly agree to strongly disagree. See Table H for responses to questions 11 through 16. It is worth noting that of those who responded to question 15, 52 strongly agreed and 44 agreed that in addition to current facilities used for recreation, the Town of Navassa should develop additional recreation facilities. This represents 94.1% of those responding to question 15 that strongly agreed or agreed that the Town should develop additional recreation facilities. When asked in question 16 if those who responded would be willing to pay more in taxes to provide better recreation services, 38.1% who responded either said they strongly agreed or agreed to pay more taxes for better recreation services. It is also worth noting that 37 respondents, or 35.2%, were neutral on the question, and only 28 respondents, or 26.6%, disagreed or strongly disagreed with paying more taxes for better recreation services. Responses to the entire questionnaire can be found in Appendix 7.

**Table H. Responses to Questions 11-16**

<b>Questions 11-16: Please check the answer that best represents your opinion for each statement:</b>					
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
11. The Town of Navassa offers excellent facilities.	15	34	31	25	8
12. The Town of Navassa does an excellent job of maintaining their facilities.	11	50	34	13	5
13. The Town of Navassa offers excellent recreational programming.	9	18	43	27	8
14. Current Town of Navassa recreational program fees are reasonable.	12	18	63	4	4
15. In addition to current facilities used for recreation The Town of Navassa should develop additional recreation facilities.	52	44	14	4	1
16. I would be willing to pay more taxes to provide better recreation services.	13	27	37	17	11

\*Note: Question 15: 94.1% responding strongly agree or agree that Town of Navassa should develop additional recreation facilities.

Question 16: 38.1% responding strongly agree or agree that they would be willing to pay more taxes to provide better recreation services, 37 or 35.2% were neutral with only 28 or 26.6% disagree or strongly disagree with paying more taxes to provide better recreation services.

## Parks & Recreation Community Meetings

In addition to the questionnaire distribution and responses, the Parks & Recreation Advisory Committee held four Community Meetings on January 18, 19, 24, and 26<sup>th</sup>. The purpose of the meetings was to give residents the opportunity to be involved in the preparation of the Parks & Recreation Master Plan from the beginning of the planning process. Although there were four Community Meetings held in January, residents were only in attendance at the January 18<sup>th</sup> and 26<sup>th</sup> meetings. On January 18<sup>th</sup>, six residents attended the meeting. After a brief review on the purpose of the Parks & Recreation Master Plan, those in attendance were asked what types of recreation facilities they would like to see made available in Navassa. Each person was given the opportunity to share their thoughts and the information was written down on a flip chart and then reviewed at the end of the meeting. Tables I, J, and K summarize the information provided at the meetings. Attendees of the meetings can be found in Appendix 5.

**Table I. Response from January 18, 2011 Community Meeting**

<b>What types of recreation facilities would you like to see made available in Navassa?</b>	
Picnic Areas	Tennis Court
Grills	Playground Equipment
Camping	Bike Trail
Leave Programs like T-ball, Basketball, Baseball, Softball	Corporate Partners and funding for League Sports
Sidewalks on roads	Boat Rental at Davis Creek Park
Putt Putt Course	Keep Davis Creek Park Clean
Driving Range	Safety Concerns at Existing Park
Gazebo	Extend Bike Trail & Keep Clean
Seating at Davis Creek Park	Look at Rail Trail Potential
Gazebo or cover at WAVE Transit Site	

On January 26<sup>th</sup>, one resident was in attendance. The purpose of the Parks & Recreation Master Plan was reviewed and the same questions asked as at the January 18<sup>th</sup> meeting. The responses were written down on a flip chart and reviewed at the end of the meeting. The following responses were received.



**Table J. Response from January 26, 2011 Community Meeting**

<b>What types of recreation facilities would you like to see made available in Navassa?</b>	
Community Center	Basketball Court (Outdoors)
Softball	Picnic Tables / Grills
Enhance Current Facilities	Tennis Courts
All Activities in Same Facility	District #2 has no Facilities
Extend Bike Path	Trails for Dirt Bikes
Use Abandoned Railroad Corridor	Fishing Area

**Table K. Recreation facilities that were mentioned at both Community Meetings**

<b>What types of recreation facilities would you like to see made available in Navassa?</b>
Picnic Area or Picnic Tables
Grills
Tennis Courts
Extend Bike Trail
Look at Rail Trail Potential

**Parks & Recreation Future Needs**

The current and projected population was used to determine adequacy of current recreation acreage and to determine future acreage needs. The acreage requirements for current and future needs during the 5- to 10- year planning period is based on a standard of 10 acres per 1,000 population. Navassa has an estimated population in 2011 of 1,556, or a need for 15.56 acres of parks and recreation land. With a net increase in population of 41 people per year (1.4% of Brunswick County population) Navassa will have a population of 1,927 people by 2020 and a need for 19.27 acres of parks & recreation land using this standard. When the projected population increase for the two PUD’s is included, the estimated population for Navassa in 2020 would be 5,267, which represents a need for 52.67 acres of parks and recreation land. Some of this needed land area will be provided by the two PUD’s if developed as planned; however, there is no specific relationship to development of residential lots in the two developments and when parks and recreation sites become available. Also, population projections used in this plan cannot predict other residential subdivisions that may be developed due to the I-140 bypass being developed and opening substantially improved access to Navassa.

Based on existing parks, there are 16.32 acres available for recreation use. When the Community Center with its indoor gym now being designed and the 4.65 ac. Phoenix Park site are added, Navassa

will have a total of 24.63 acres of parks and recreation land. The Community Center design now being done and Phoenix Park site with a 35-year land lease both show the commitment local elected officials have in providing improved recreation opportunities for Navassa citizens.

Navassa citizens, during two community meetings, indicated a high priority for more picnic areas with grills, tennis courts, bike trail, and a recommendation that Town officials look at establishing a rail trail. The recreation questionnaire responses showed a high response for more basketball, baseball, walking, and bicycling. There was also a high response rate for Community Recreation Center with gym, fitness center, walking trails, and playground. They also indicated that they would like to see recreation facilities with more to do, recreation programs offered and that existing parks were maintained better.

Based on citizen input and available park acreage, there is a need to make more recreation facilities available, starting with upgrading existing park facilities and then providing new facilities on currently-proposed sites like Phoenix Park. To address the desire for more walking and bicycling opportunities, the potential rail trail should be researched and implemented when feasible. Also, the MPO should be contacted about adding a multi-use path along Cedar Hill Road and Mt. Misery Road as part of a complete street upgrade. This request should be added to the next TIP update. This multi-use path would help connect current and future park sites for walking and bicycling. The recommendations chapter provides more detail in meeting current and future park needs.

## **5. Classifications for Parks, Open Space, and Greenways**

This section of the plan provides information on the types of parks that typically make up a park system and would be appropriate for a community with Navassa's current and projected population. Development standards for outdoor park facilities are also reviewed in order to provide guidance for future capital improvements to park facilities. Standards for parks outlined in the plan are based on development standards proposed by the National Recreation and Park Association (NRPA) in its 1995 report "Park, Recreation, Open Space and Greenway Guidelines."

A comprehensive park system contains a variety of park types. Parks range from a mini park with one acre or less to a large urban park that might contain 50 to 75 acres. The descriptions on the following

pages provide an outline of the types of parks that would be appropriate for a community the size of Navassa now and during the 5- to 10- year planning period. For example, the Parks, Open Space, and Pathways classification table includes a general description and size criteria for a number of park types including a large urban park. Because this type of park usually contains 50 to 75 acres, we have included it in this section but have not included a more detailed description like we have for Mini-Park, Neighborhood Park, Community Park, and Greenways, which we feel are more appropriate for a Town the size of Navassa. As the Town grows in population and beyond the 5- to 10- year planning period, an urban park may become part of Navassa's future. Tables L and M summarize the classifications. The following pages describe various park types:

### **A. Mini-Park**

Mini-Parks are often very small in size (2,500 s.f. to 1 acre) and are easily accessible from residential setting surrounding the park. These parks are usually located within easy walking distance of area or neighborhood served. This type of facility has a limited variety of activities.

#### **Service Area**

¼ - ½ mile radius to serve walk-in recreation needs of adjacent population. Accessibility is by way of interconnecting sidewalks, trails, or low-volume residential streets.

#### **Size Criteria**

2,500 s.f to 1 acre

#### **Site Selection Criteria**

This type of park serves a specific recreation need with easy access from surrounding area by community walks and other pathways. Physical characteristics of site should be appropriate for intended uses. Site should have well drained soils and usually the site would be fairly level. Vegetation (natural or planted) should enhance the aesthetic quality of the site.

#### **Development Parameters / Recreation Activity Menus**

Since the Mini-Park is small in size and located within ¼ - ½ mile radius of end users, the adjacent community should help determine park uses and activities. Parking is typically not provided and site lighting should be provided for security and safety.

## **B. Neighborhood Park**

Neighborhood Parks are the basic unit of any park system. This type of park should be developed with both active and passive recreation activities to serve those living within the ¼ - ½ mile service area. Facilities should accommodate children, adults, the elderly and special populations.

### **Service Area**

Park should be centrally located within its ¼ - ½ mile service area. Site access should be by way of interconnecting trails, sidewalks, or low traffic volume residential streets. Easy access and walking distance are critical in the location of a Neighborhood Park.

### **Size Criteria**

Five acres is generally an acceptable minimum size necessary to provide space for desirable recreation activities. Seven to 10 acres is considered optimal size.

### **Site Selection Criteria**

Easy access to the park from surrounding neighborhoods with a central location is a key concern in selecting the site. Linkage between sidewalks, greenways and bike trails is important when feasible. Another important issue in selection of a site is existing aesthetic quality of the site being considered. Neighborhood Park development should be part of the subdivision review and approval process. Neighborhood Parks should also have well-drained soils.

### **Development Parameters / Recreation Activities Menus**

Neighborhood input should be used to determine the types of facilities proposed for the park. There should be a balance between active and passive recreation use. Active recreational facilities are intended for informal and unstructured activities. Active recreation facilities could include play structures (2-5 and or 5-12 age groups), court games, playfield or open space, tennis courts, volleyball courts, shuffleboard, horseshoe area, or activity room. Passive recreation activities could include internal trails, and connections to greenways or adjacent sidewalks, picnic / sitting areas, and general open space. As a general rule, recreation should take approximately 50% of the site acreage with the remaining portion of the site for passive recreation use.

The site should accommodate a minimum of 7 to 10 off-street parking spaces or on-street parking if feasible. Park lighting should be used for security and safety. If tennis courts are provided, lighting should be considered if night time use is desirable and adjacent residential uses will not be adversely affected.

### **C. School Park**

Although there are no school sites within the Navassa jurisdiction, a school site is planned as part of the recently-approved Indian Creek Planned Unit Development. School Park sites can complement other community open space. Depending on size, a school park site can serve a number of capacities, from neighborhood park to youth athletic fields such as baseball, softball, or soccer.

#### **Size Criteria**

Size of school site varies depending on function of school.

#### **Site Selection Criteria**

The park should contain the physical characteristics appropriate for a school site. Criteria for Neighborhood Park and Community Park should be used to determine how School Park site should function.

#### **Development Parameters / Recreation Activities Menus**

Criteria for Neighborhood and Community Park should be used to determine how School Park site is developed. If athletic fields are developed on the School Park sites, orientation should be toward youth programs rather than adult programs. A clearly defined joint-use agreement between the Town and School Board is critical to making school park relationships work. Particularly important to a successful partnership are issues like land acquisition, facility developments, maintenance, liability, types of uses, hours of use, and programming of facilities.

### **D. Community Park**

Community Parks are larger in size than Neighborhood Parks and provide for the recreation needs for several neighborhoods and a larger section of the community. This type of park should be preserving unique landscapes and be developed for both active and passive recreation activities.

#### **Service Area**

.5 – 3.0 mile radius

#### **Size Criteria**

Recreation demand, resources available, population density, and demographic profiles within a service area are the primary determinants of a Community Park's size. Optimal size for a community park is between 20 and 50 acres; however, actual size is based on land area required to accommodate desired uses.

**Site Selection Criteria**

This type of park should have physical characteristics suitable for both active and passive recreation use. The site should have suitable soils, good drainage, and variety of vegetation. If possible, this type of facility should be adjacent to natural resource areas and greenways or walking trails.

**Development Parameters / Recreation Activities Menus**

Community involvement is important in development of recreation facilities and programs for a Community Park. Park facilities are typically developed for both active and passive uses and generally fifty percent of a community park site should remain undeveloped to serve as passive recreation and open space. Potential active recreation facilities could include the following:

Recreation Center	Picnic Tables with Grills
Basketball Courts	Benches or Bench Swings
Tennis Courts (lighted)	Nature Trails
Baseball / Softball Fields (lighted)	Restroom / Concessions
Multi-purpose Fields	Parking
Soccer Fields (lighted)	Playgrounds
Swimming Pool	Volleyball Courts
Amphitheater	Disc Golf
Observation Decks	Lakes
Picnic Shelters	Paddle Boat / Canoe Harbor
Picnic Shelter with Grills	Fishing Pier / Boat Docks

**E. Greenways**

Greenways are an important part of the overall park system. Greenways tie park components together to create a cohesive park, recreation, and open space system by providing for uninterrupted and safe pedestrian / bicycle movement between park facilities throughout the community.

**Location Criteria**

Greenways generally follow suitable natural resource areas such as land adjacent to rivers, creeks, areas with steep slopes, drainageways, and areas adjacent to wetlands. Land availability is the primary factor that determines location. The objective is to provide access to natural areas that enhance the livability and character of the community by preserving as many of its natural areas as feasible.

Providing access to the natural environments and connecting park facilities by way of greenways can also serve as a means of protecting local waterways and habitat corridors within a community. This can be accomplished in the following ways:

- Setting aside specific natural resource areas for preservation purposes through the Natural Resource Area/ Preserve classification.
- Carefully and insightfully regulating development to preserve natural resources and open space.
- Working with other natural resource agencies, such as the Corps of Engineers, local watershed districts, forest preserve districts, floodplain and wetland districts, etc. to protect natural resources and ecosystems.

### **Corridor Width Criteria**

Land availability is the primary factor that determines width of a greenway corridor. Fifty feet in width is usually considered a minimum, unless the greenway is located in a subdivision, in that case, 25' wide would be acceptable. Widths over 200' are considered optimal.

### **Site Selection Criteria / Guideline**

Resource availability in conjunction with the trail system plan are the primary determinants when it comes to selecting land for greenways. Natural corridors are most desirable, but man-made corridors can also be very appealing if designed properly. Greenways can be developed for a number of different modes of recreational travel. Most notable are hiking, walking, jogging, bicycling, and in-line skating. They can also be developed for cross-country skiing and horseback riding. Canoeing is another possibility, where the greenway includes a navigable creek or stream. In a boulevard or parkway setting, automobiles can be accommodated.

## **F. Bikeways (Bike Routes and Lanes)**

Bikeways are paved segments of roadways that serve to safely separate bicyclists from traffic.

Bikeways can either be bike routes or bike lanes. Bike routes are paved road shoulders or portions of the roadway that separate bicyclists from traffic. Bike lanes are designated sections of the roadway for the exclusive use of bicyclists. Bikeways serve distinct user groups such as the following:

- Commuters who use bicycles rather than cars as a way of getting from one point to another.
- Fitness enthusiasts who cycle for fitness as well as recreation.
- Bicycle athletes who bicycle competitively.

These groups are typically interested in speed (excess of 10 to 15 mph); therefore, safety of a typical trail user becomes important. Bikeways should be planned as stand-alone systems that connect to any off-street trail system.

**Development Parameters: Important steps in developing bikeways are:**

- Preparing a comprehensive park and trail system plan that clearly defines the routing of bikeways.
- Establishing design standards that define how bikeways are to be built. Design should coincide with standards adopted by local and state departments of transportation and AASHTO (American Association of State Highway Transportation Organizations), as appropriate.

**Types of Bikeways**

There are two types of bikeways: bike routes and bike lanes. Bike lanes should be used in situations where traffic volumes are heavy enough to warrant clear separation between bicycles and vehicles. Although an adequate right-of-way may not always be available in existing transportation systems, proper planning in evolving systems will preclude this from happening in the future. Bike routes (paved shoulders) should be used in all other situations.

**G. Park Trails (Type I, II, and III)**

Park trails are the most desirable type of trail because they are multi-purpose trails within natural resource areas, parks, and greenways. These trails are the most desirable for the following reasons:

- Trails emphasize harmony with natural environment.
- Allow for relatively uninterrupted pedestrian movement to and through the city's park system and development areas, including, where possible, through commercial and industrial parks.
- Effectively tie the various parks and recreation areas together to form a comprehensive park and trail system.
- Protect users from urban development and associated vehicular traffic.

The three types of park trails illustrated are intended to accommodate walkers, bicyclists, and in-line skaters.

**Development Parameters: Important steps in developing park trails are**

- Preparing a comprehensive park and trail system plan that clearly defines the routing of park trails, especially those with greenways.



- Acquiring the desired land or establishing trail easements at an early stage of community development.
- Establishing appropriate development policies (backed by city ordinance) requiring land developers to incorporate greenways and park trail corridors into their development plans in accordance with the trail system plan.
- Establishing design standards that define how park trails are to be built. Trail design should coincide with standards adopted by local and state departments of transportation and AASHTO, as appropriate. All trails should comply with ADA (Americans with Disabilities Act) design criteria.

In previously-developed cities, abandoned railroad beds, run-down waterfronts, utility rights-of-way, and scenic/ historic routes provide the greatest opportunity for park trails.

**Types of Trails: There are three types of trails under the park trail classification**

- Type I trails are used in situations where use patterns dictate separate paths for pedestrians and bicyclists / in-line skates. An example would be a trail around a lake or along a riverfront.
- Type II trails are more suited for lighter use patterns, such as from a housing subdivision to a natural resource area.
- Type III trails are suited for areas requiring minimum impact, such as nature preserves.

**Commuter Linkages**

Park trails can certainly be used for bicycle commuting purposes. The type of trail used and its design should reflect the anticipated magnitude of commuter use. On the high end, Type I trails as shown may not be adequate to safely accommodate a “bicycle freeway” type of use. In such a case, wider or directional trails may be appropriate.

**H. Connector Trails (Types I, and II)**

The significant difference between connector and park trails lies largely in their location. Park trails emphasize a strong relationship with the natural environment within a park-like setting, while connector trails or recreation connectors emphasize safe travel for pedestrians and bicyclists to and from parks and around the community. In general, connector trails are located within existing road rights-of-way and utility easements or along artificial drainageways. The two classes of connector trails illustrated are intended to accommodate walkers, horseback riders, bicyclists, and in-line skaters.

**Development Parameters: Important steps in developing connector trails are**

- Preparing a comprehensive park and trail system plan that clearly defines the routing of connector trails.
- Establishing trail rights-of-way and easements at an early stage of community development.
- Establishing design standards that define how connector trails are to be built. Trail design should coincide with standards adopted by local and state departments of transportation and AASHTO, as appropriate.

**Types of Trails: There are two types of trails under the connector trail classification**

- Type I trails are used in situations where use patterns dictate separate paths for pedestrians, bicyclists and, if necessary, in-line skaters. An example would be a trail within the shoulder of right-of-way of a collector street or parkway.
- Type II trails are suited to lighter use patterns, such as link between a parkway or thoroughfare and a nearby housing development.

**Commuter Linkages**

Connector trails can be used for bicycle commuting purposes. The type of trail used and its design should reflect the anticipated magnitude of commuter use. As was with Type I Park Trails, Type I Connector Trails may not be adequate to safely accommodate a “bicycle freeway” type of use. In such case, wider or directional trails may be appropriate.

**Table L. Suggested Outdoor Facility Development Standards**

Activity Format	Recommended Size and Dimensions	Recommended Space Requirements	Recommended Orientation	Service Radius and Location Notes
<b>Basketball</b> 1. Youth 2. High School 3. Collegiate	46'-50'x84' 50' x 84' 50'x94' with 5' Unobstructed space all sides	2400-3036 s.f. 5040-7280 s.f. 5600-7980 s.f.	Long axis north-south	¼ - ½ mile. Same as badminton. Outdoor courts in neighborhood/ community parks, plus active recreation areas in other park settings.
<b>Handball</b> (3-4 wall)	20' x 40' with a minimum of 10' to rear of 3-wall court. Minimum 20' overhead clearance.	800 s.f. for 4-wall, 1000 s.f. for 3-wall	Long axis is north-south. Front wall at north end	15-30 min. travel time, 4-wall usually indoor as part of multi-purpose building. 3-2 all usually in park or school setting.
<b>Tennis</b>	36'x78'. 12 ft. clearance on both ends	Min. of 7,200 s.f. single court area (2 acres per complex)	Long axis north-south	¼ - ½ mile. Best in batteries of 2-4. Located in neighborhood / community park or near school.
<b>Volleyball</b>	30' x 60'. Minimum of	Minimum 4,000 s.f.	Long axis north-	½ - 1 mile.

	6' clearance on all sides.		south	
<b>Baseball</b> 1. Official	Baselines – 90' Pitching dist. - 60.5' Foul lines – min 320' Center field – 400'+	3.0 -3.85 Acre Min.	Locate home plate so pitcher is not throwing across sun, and batter not facing it. Line from home plate through pitchers mound to run east-northeast	¼ - ½ mile. Part of neighborhood complex. Lighted fields part of community complex.
<b>Baseball</b> 2. Little League	Baselines – 60' Pitching dist. – 46' Foul lines – 200' Center field – 200-250'	1.2 Acre Min.	Line from home plate through pitchers mound to run east-northeast	
<b>Football</b>	160' x 360' with a minimum of 6' clearance on all sides.	Minimum 1.5 acres	Fall season – Long axis northwest or southeast. For longer periods, north/south	15 – 30 min. travel time. Usually part of baseball, soccer complex in community park or adjacent to high school.
<b>Soccer</b>	195' to 225' x 330' to 360' with 10' minimum clearance on all sides	1.7-2.1 acres	Same as football	1-2 miles. Number of units depends on popularity. Youth popularity. Youth soccer on smaller fields adjacent to field on neighborhood parks.

**Suggested Outdoor Facility Development Standards**

<b>Activity Format</b>	<b>Activity Format</b>	<b>Activity Format</b>	<b>Activity Format</b>	<b>Activity Format</b>
<b>¼ mile running track</b>	Over-all width – 276' length – 600'. Track width for 8 – 4 lanes is 32'.	4.3 acres	Long axis in sector from north to south to northwest – southeast, with finish line at north end.	15-30 minute travel time. Usually part of a high school or community park complex in combination with football, soccer, etc.
<b>Softball</b>	Baselines – 60' Pitching dist – 45' men, 40' women Fast pitch field radius from plate – 225' Slow pitch – 275' (men) 250' (women)	1.5 – 2.0 acres	Same as baseball	¼ - ½ mile. May also be used for youth baseball.
<b>Multiple use court (basketball, tennis, etc)</b>	120' x 80'	9,480 s.f.	Long axis of court with primary use north and south.	1 -2 miles, in neighborhood or community parks.
<b>Swimming Pools</b>	Teaching – min. 25 yds x 45' even depth of 3-4 ft.  Competitive – min. 25 m x 16 m Min of 25 s.f. water surface per swimmer. Ration of 2 to 1 deck to water.	Varies on size of pool and amenities. Usually 1 -2 acre site.	None, but care must be taken in sitting life stations in relation to afternoon sun.	15 – 30 minute travel time. Pools for general community use should be planned for teaching competitive and recreational purposes with enough to accommodate 1m and 3m diving boards. Located in community park or school site.

**Table M. Outdoor Facility Development Standards**

<b>Parks, Open Space, and Pathways Classification Table</b>			
<b>Classification</b>	<b>General Description</b>	<b>Location Criteria</b>	<b>Size Criteria</b>
Mini - Park	Used to address limited, isolated or unique recreational needs	Less than a 1/4 mile distance in residential setting	Between 2500 sq. ft. and one acre in size
Neighborhood Park	Neighborhood park remains the basic unit of the park system and serves as the recreational and social focus of the neighborhood. Focus is on informal active and passive recreation	1/4 mile to ½ mile distance and interrupted by non-residential roads and other physical barriers.	5 acres is considered minimum size. 5 to 10 acres is optimal
School-Park	Depending on circumstances, combining parks with school sites can fulfill the space requirements for other classes of parks, such as neighborhood, community, sports complex, and special use	Determined by location of school district property	Variable - depends on function
Community Park	Serves broader purposes than neighborhood park. Focus is on meeting community-based recreation needs, as well as preserving unique landscapes and open spaces	Determined by the quality and suitability of the site. Usually serves two or more neighborhoods and ½ to 3 mile distance.	As needed to accommodate desired uses. Usually between 30 and 50 acres
Large Urban Park <b>N/A to Navassa</b>	Large urban parks serve a broader purpose than community and neighborhood parks and are used when community and neighborhood parks are not adequate to serve the needs of the community. Focus is on meeting community-based recreational needs, as well as preserving unique landscapes and open spaces	Determined by the quality and suitability of the site. Usually serves the entire community	As needed to accommodate desired uses. Usually a minimum of 50 acres, with 75 or more acres being optimal
Natural Resource Areas	Lands set aside for preservation of significant natural resources, remnant landscapes, open space, and visual aesthetics/buffering	Resource availability and opportunity	Variable
Greenways	Effectively tie park system components together to form a continuous park environment	Resource availability and opportunity	Variable

<b>Parks, Open Space, and Pathways Classification Table</b>			
<b>Classification</b>	<b>General Description</b>	<b>Location Criteria</b>	<b>Size Criteria</b>
Park Trail	Multipurpose trails located within greenways, parks, and natural resource areas. Focus is on recreational value and harmony with natural environment	Type I: Separate /single-purpose hard surfaced trails for pedestrians or bicyclists/ in-line skaters. Type II: Multipurpose hard surfaced trails for pedestrians and bicyclists / in-line skaters. Type III: Nature trails for pedestrians. May be hard or soft-surfaced.	
Connector Trails	Multipurpose trails that emphasize safe travel for pedestrians to and from parks and around the community. Focus is as much on transportation as it is on recreation	Type I: Separate / single-purpose hard surfaced trails for pedestrians or bicyclists/ in -line skaters located in independent r.o.w. (e.g. old railroad r.o.w.) Type II: Separate / single-purpose hard-surfaced trails for pedestrians or bicyclists / in-line skaters. Typically located within road r.o.w.	
On Street Bikeways	Paved segments of roadways that serve as a means to safely separate bicyclists from vehicular traffic	Bike Route: Designated portions of the roadway for the preferential or exclusive use of bicyclists Bike Lane: Shared portions of the roadway that provide separation between motor vehicles and bicyclists, such as paved shoulders	
All-Terrain Bike Trail	Off-road trail for all-terrain (mountain) bikes	Single-purpose loop trails usually located in larger parks and natural resource areas	

## 6. Master Plan Proposals and Recommendations

The Town of Navassa had a population of less than 500 between 1980 and 2000. However, the population has increased significantly through annexation and growth as reflected in the recently released 2010 Census. As discussed in an earlier section of the plan, Navassa currently has three existing parks, all located on the eastern side of the community. The Navassa Township District Park currently provides most of the active recreation opportunities for Navassa residents. The Multi-Use Trail site does provide an opportunity for off-road bicycling, walking, or jogging with potential for some additional passive and active recreation opportunities that could serve the adjacent neighborhood. The Davis Creek Park provides waterfront access for boating and kayak launch and a waterfront boardwalk and gazebo. Davis Creek is scheduled for access road paving, lighting upgrades, graveling of existing parking area, and repairs to the existing boat ramp. There are other projects in Navassa such as the Community Center and Phoenix Park that, once built, will provide additional recreation opportunities at the center of Navassa and on the western edge of the community.

The Navassa Town Council and Navassa Parks and Recreation Advisory Committee, in having this Master Plan prepared, desire to improve recreational opportunities for Navassa residents while at the same time being realistic about current economic conditions in the community, state, and nation. For that reason these recommendations have been divided into short, medium, and long term priorities. Funding for capital improvements, staffing, and land acquisition recommended in the plan is based on financial feasibility, including current and future tax base, and success in securing grants or low interest loans. Putting funds in a reserve account to be used for capital improvements and acquisition of future park space is recommended in this plan.

Recommendations for short, mid, and long term priorities are as follows:

### I. Short Term (2011 – 2013)

#### A. Capital Improvement Plan

Following approval of 2011-2012 Town budget, it is recommended that the Town Finance Officer and a committee of representatives from the Town Council and Navassa Parks & Recreation Advisory Committee begin work on a Capital Improvement Plan based on short-, mid-, and long-term parks and recreation priorities outlined in this plan. It is recommended that the Town Council adopt the Capital Improvement Plan prior to preparing the 2012-2013 Town budget. It is worth noting that having an

approved Capital Improvement Plan for Parks and Recreation will provide three additional points when applying for PARTF Grant for capital improvements or for future land acquisition.

**B. Phoenix Park**

It is recommended that Town Planner and Mayor continue to work with the property owner in expanding the 35-year lease to include approximately 17 additional wooded acres. Following the inclusion of additional acres in the lease, Town Planner, Mayor, and Town Attorney should attempt to get the property owner to make a land donation which could be used for local match on a future PARTF Grant for capital improvements. If the donation of land cannot be worked out, it is recommended that funds be included in the Capital Improvement Plan for 2012-2013 budget to fund capital improvements to the park if financially feasible for the Town.

**C. Cedar Hill Road / Mt. Misery Road / Navassa Road Loop**

The future and proposed parks map reflects the Cedar Hill Road Loop. This loop was also reflected as an extension of a Leland Parks, Recreation, and Open Space Master Plan dated July 2009. The purpose of this loop would be to provide opportunities for off-road walking, bicycling, or jogging in a safe environment. Since the three roads within Navassa's jurisdiction are all NCDOT roads it is recommended that the Town Planner contact the Wilmington Metropolitan Planning Organization (WMPO) as soon as possible and request that any future road improvements scheduled in the current or future Transportation Improvement Plan (TIP) adhere to NCDOT Complete Streets Guidelines. Having sidewalks, paved shoulders, and multi-use paths developed as road improvements are made will create a system for walking or bicycling to safely connect existing and future parks. NC DOT complete streets guidelines can be found in Appendix 8.

**D. Community Center Gym**

It is recommended that the Town Council consider including space in the Community Center for crafts, educational classes, and a fitness center if feasible, and if these uses would be compatible with other required or desired uses in the building. This recommendation is based on the response to question #10 of the parks and recreation survey. Specifically, a Community Recreation Center for crafts, education classes, meeting rooms and gym received the highest response when residents were asked about their household's most preferred recreation facility. A fitness center had the second highest number of responses.

**E. Parks and Recreation Director**

Following construction of the Community Center, it is recommended that the Town advertise for and employ a Parks and Recreation Director to oversee operation of the Community Center and

implementation of the Parks and Recreation Plan in coordination with Town Council. The Parks and Recreation Director should also coordinate all recreation programming as well as oversee facility maintenance. Based on the Community Center being completed in two years, it is recommended that funds be put in the 2013-2014 Town Budget to employ a Parks and Recreation Director.

**F. Davis Creek Park**

It is recommended that a Capital Improvement Plan include funds for tree planting along the entrance drive and for the addition of site amenities as outlined in this plan. Improvements are recommended in 2014-2017 or earlier if financially feasible. Cost estimates for this park can be found in Appendix 9.

**G. Rail Trail**

It is recommended that the Town Planner continue to investigate the feasibility of creating a rail trail (multi-use path) from Davis Creek to open space on the southern edge of the planned River Bend PUD. Recommend including funds for capital improvements as outlined in this plan in 2014-2017 period. Cost estimates for this park can be found in Appendix 10.

**II. Mid-Term (2014-2017)**

**A. Capital Improvement Plan**

Review and update Capital Improvement Plan as needed on an annual basis. This annual update will be necessary due to possible implementation of park facility improvements, future needs, and matching grant fund opportunities. As River Bend and Indian Creek PUD's develop, there will most likely be needs for additional funding for park facilities that are currently unknown. Also, include funds in reserve account for purchase of a 20-acre community park in long-term period (2018-2020).

**B. Indian Creek / River Bend Parks**

It is recommended that funds be included in the Capital Improvement Plan for future park facilities in River Bend and Indian Creek once these park sites are officially dedicated to the Town of Navassa. Since both of these PUD's were approved in June 2011, with construction beginning in 2013 or 2014, it is recommended that the Capital Improvement Plan include anticipated funding needs based on coordination between the developers and the Town Planner or Parks & Recreation Director.

**C. Cedar Hill Loop**

Continue to coordinate with NCDOT, WMPO, and Town of Leland in implementation of Complete Streets Design along Cedar Hill Road / Mount Misery Road and Navassa Road to create an off-road



multi-use path to connect current and future parks. This multi-use path would also provide off-road access to Leland.

**D. Rail Trail**

If it is found to be feasible during earlier research, prepare construction documents and request grant funds for the construction of this multi-use path from Davis Creek to the southern edge of River Bend during this mid-term period of the Master Plan.

**E. Davis Creek Park**

Plant trees along entrance drive and add site amenities as outlined in this plan.

**F. Parks and Recreation Master Plan Update**

It is recommended that funds be allocated in the 2015-2016 Town budget for a 5-year update to the Master Plan.

**III. Long Term (2018-2020)**

**A. Capital Improvement Plan**

Review and update Capital Improvement Plan as needed.

**B. Purchase of 20-acre Community Park**

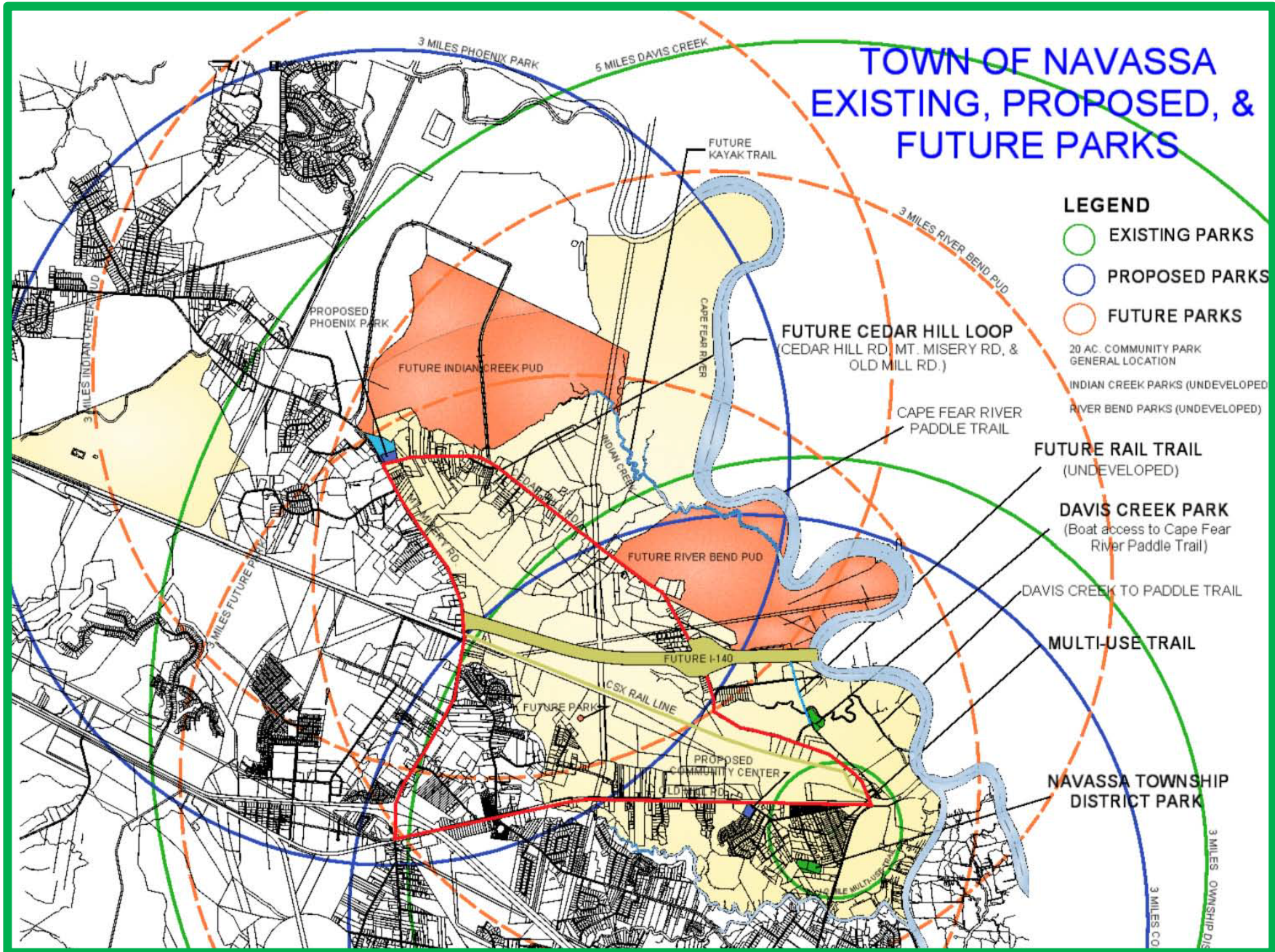
The Town Council, Parks & Recreation Director and Parks & Recreation Advisory Committee should begin to search for a 20-acre park site in the southern portion of Navassa and in the general area shown on the Proposed and Future Parks Map. Purchase of park site in 2019 or 2020 that has both site amenities for active and passive recreation as outlined in Section 5 of the plan is recommended.

**C. 20-Acre Community Park Master Plan**

Prepare a site Master Plan for new Community Park in 2020 following purchase of site.

**D. Indian Creek / River Bend PUD's**

Continue to design and fund capital improvements for public park sites in both Indian Creek and River Bend as these sites become available to the Town of Navassa.



## 7. Action Plan Implementation

The Action Plan Implementation section provides specific recommendations to address the community's recreational needs based on input from community meetings, questionnaire responses, coordination with the Parks & Recreation Advisory Committee, and coordination with the Town's Planning Staff. It includes recommended improvements to existing parks, proposed parks recently planned, or currently being planned, acquisition for future parks and staffing. This action plan is based on a 5 to 10 year planning period for implementation utilizing revenues from annual Town budget, grants, future tax revenues, donations, possible future bond issue and/or user fees and charges.

### 1. Capital Improvements

As discussed in the previous section of the plan, it is recommended that the Capital Improvement Plan for Parks & Recreation be prepared and include the following:

<u>Facility</u>	<u>Probable Cost</u>	<u>Period</u>
1. Community Center Gym	Grants / Loans	2011-2013
2. Phoenix Park	\$954,614.00	2011-2013
3. Davis Creek Upgrades	\$74,981.00	2014-2017
4. Rail Trail	\$390,885.00	2014-2017
5. Indian Creek / River Bend Park	<u>TBD *</u>	2014-2017
<b>Total Probable Cost for Capital Improvements</b>	<b>\$1,420,480.00</b>	

\* The amount of funds to be allocated in Capital Improvement Plan for Indian Creek and River Bend Parks to be determined in coordination with developers' schedule on when park sites will be available for improvements and in anticipation of type and cost of planned facilities. Parks & Recreation Advisory Committee should hold public meetings to allow the residents of Navassa and these two communities to assist in identification of recreation facilities desired and needed for each park site as they become available.

### 2. Staffing Needs

Following completion of the Community Center, the plan recommends hiring a Parks & Recreation Director. Based on a review of the N.C. Municipal & County Parks & Recreation Services Study (Fiscal year 2008-2009), salaries for a Parks & Recreation Director vary widely. For example, in 2009 a beach community with a population of 1,695 people paid the director over \$82,000 annually. During

the same period a community with a population of 4,594 people paid the director \$26,031.00. It is recommended that, when directed by Town Council, the Town Planner and Parks & Recreation Advisory Committee begin additional research to determine a salary that would be appropriate for the Navassa Parks & Recreation Director. A recommendation to the Town Council on salary level should be made so funds can be allocated in a future annual budget.

### **3. Land Acquisition**

The Brunswick County Land Appraiser indicated that land values in Brunswick County have dropped in the last three years. Recent land sales near Navassa range from \$5,000 to \$10,000 per acre. Based on these numbers, and in anticipation that land values will rise as the general economy improves and the I-140 is completed, it is recommended that the Town of Navassa begin to set aside funds to purchase the recommended 20-acre Community Park in the 2018-2020 period at an anticipated cost of \$260,000 or \$13,000 per acre.

Master Plan implementation will result in meeting current and future parks and recreation facility and service needs. The Town of Navassa should begin including, as financially feasible, funds in future annual budgets for projected capital improvement costs, staffing needs, operations, and maintenance costs for parks and recreation. This action plan is intended to give Town Council and staff a realistic approach to financing the recommendations of this Master Plan using local financial resources and grant funds. As indicated earlier in the plan, it is recommended that this plan be reviewed and updated in 5 years or 2016.

### **4. Potential Funding / Revenue Sources**

Funding for capital improvements, staffing, and land acquisition for Navassa Parks & Recreation, will be more of a challenge like it is for most communities due to the current condition of the national economy. The primary funding for parks and recreation would be property tax (general funds), user fees, general obligation bonds, state grants, and donations for land acquisition. The following potential funding sources should also be considered as the Town moves forward with plan implementation.

#### **General Tax Revenue**

General tax revenue traditionally provides the principle source of funds for operations and maintenance of municipal parks and recreation systems. Recreation, like other public services, is included in the regular budget. The assessed valuation of personal and real property provides the basis or general tax revenue for parks and recreation facilities and programs.

## **User Fees**

As future recreation facilities are added, Town officials may want to consider user fees for use of recreation facilities to generate funds for parks and recreation operations in addition to general tax revenue.

## **General Obligation Bonds**

The State of North Carolina gives municipal government the authority to borrow funds for parks and recreation by issuance of bonds that do not exceed the total cost of parks and recreation improvements including land acquisition. To repay the debt on these bonds the local government can levy a special tax. Bonding capacity for the local government is limited to parks and recreation to a maximum percentage of assessed property valuation.

## **Grants**

### **A. PARTF**

The North Carolina Parks & Recreation Trust Fund (PARTF) provides funding for capital improvements, renovations, and land acquisition for local parks. PARTF is a 50/50 cost-sharing grant program to help develop or acquire park land and provide or improve park facilities. Applications are made available in August of each year and are due by the end of the following January. For more information the PARTF webpage is at [www.ncparks.gov](http://www.ncparks.gov).

### **B. U.S. Park Service Land and Water Conservation Fund (LWCF)**

The LWCF Program provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities. The program is intended to create and maintain a nationwide legacy of high quality recreation areas and facilities and to stimulate non-federal investments in the protection and maintenance of recreation resources across the United States. In previous years, the State of North Carolina has used the PARTF application for consideration for LWCF funds. Applications are made available in August of each year and are due by the end of the following January. For more information the LWCF webpage is at [www.nps.gov/lwcf/](http://www.nps.gov/lwcf/).

**C. U.S. Department of Housing and Urban Development’s Community Development Block Grant Program (CDBG)**

There may be potential funding for parks and recreation improvements through the CDBG program. Applications have various releases dates and deadlines. For more information on the CDBG program their website is at [www.hud.gov](http://www.hud.gov).

**D. N.C. Rails-Trail (NCRT)**

N.C. Rails-Trail actively pursues rail corridor preservation and conversion to public trails. NCRT supports local rail-trail initiatives. It is recommended the Town contact this organization as the community moves forward with conversion of old rail line at Davis Creek to a multi-use trail. Eligible projects must have at least 25% matching funds for the project’s cost. Applications are released in December of each year and are due by the following February. More information is available at the NCRT webpage at [www.ncrails.org](http://www.ncrails.org).

**E. Private Grants / Foundations**

Private grants from foundations are another potential source of funding for both development and construction of parks and recreation facilities. The Foundation Center is an excellent resource to research private grants and to determine application requirements. Applications have various releases dates and deadlines. For additional information on private grants that may be available for park and recreation go to their webpage which is [www.foundationcenter.org](http://www.foundationcenter.org).

**F. Transportation Grants / NCDOT Enhancement Funds**

NCDOT provides funding for roads, multi-use trails through transportation enhancements, Recreation Trail Program, Congestion Mitigation Air Quality Program, a program that contains funding for bike-pedestrian transportation corridors. More information can be obtained from NCDOT web page at [www.ncdot.org](http://www.ncdot.org).

# Appendices

## Appendix 1. 1999 CAMA Land Use Plan Excerpts

The 1999 CAMA Land Use Plan includes the following language addressing parks and recreation policy:

- *(2)(i)(2)1/Navassa's long range policy is to establish a comprehensive recreation program which will include a system of parks, trails and greenways.*
- *(2)(i)(6)4/The Town of Navassa policy is to consider the acceptance of donated property for the purpose of holding such property or for some specific designated future purpose, such as recreation or municipal or community type uses, and wishes to encourage persons who may consider such a gift to contact Town staff or the Mayor. The Town also encourages donations of property to land trusts or other conservation organizations. The operation and maintenance of game preserves is consistent with Town policy.*
- *(4)(j)(1)It is the policy of Navassa to continue to provide access to public trust waters through the development and redevelopment of parks and boat launching areas. Development and redevelopment activity shall be consistent with the need to protect the areas natural resources. Navassa will, in the future, seek financial assistance from State and federal sources to support the development, and/or expansion, of parks and recreational facilities in appropriately sited locations.*
- *(4)(1)(2)As a waterfront community, Navassa recognizes both the need for provision of parks and open space and adequate public access to the water. Navassa supports the CRC's Public Access Program and recognizes the need to plan for recreational facilities in appropriately sited locations.*
- *(4)(k)(1)The Town of Navassa will support the exploration, assessment and development of estuarine access opportunities for the public to enjoy. The Town wishes to construct/buy/develop more recreation opportunities for local citizens.*
- *(4)(k)(2)The Town will seek County, State, and federal funds to expand both passive and active park and recreational lands and public water access (including the Davis Creek Access). (4)(k)(3)The Town will provide public recreational facilities and open space to service the growing population.*
- *(4)(k)(4)The Town of Navassa will pursue outside (such as private foundations) funding sources for recreational facility development (including expansion. of the Davis Creek Access). (4)(k)(5)It is Navassa policy to develop a pedestrian and bicycle path, to increase pedestrian sidewalks, and to strictly enforce traffic laws.*
- *(4)(k)(6)The Town will require new development projects to make provisions for a comprehensive network of bicycle and pedestrian facilities on collector streets and arterials. (4)(k)(7)The Town of Navassa supports the development of parks and recreational facilities for the benefit of its residents and visitors.*
- *(4)(k)(8)The Town of Navassa will create a Master Plan for Recreation.*
- *(4)(k)(9)The Town of Navassa currently has a Recreation Department! The Town will continue to work to improve the local provision of recreational opportunity. Navassa policy on recreation is to work with the Brunswick County Parks and Recreation Department to help meet municipal and area need.*



## Appendix 2. Navassa Zoning Ordinance Excerpts

Article 9 Section (16)(H) of the Navassa Zoning Ordinance contains the following requirements for Recreation and Open Space when developing multi-family dwellings

### *(H) General Requirement for Recreation and Open Space*

- 1. Every person or corporation who establishes a multi-family project for residential purposes shall be required to dedicate a portion of such land for the purpose of park, recreation, and open space sites to serve the residents of the multi-family or townhouse project. The recreation area shall be clearly designated on the site plan for the project.*
- 2. The minimum amount of land that shall be dedicated for recreation, parks, or open space in all multi-family projects shall be three-hundredths (.03) of an acre times the number of dwelling units or lots whichever is greater.*

### *(I) Suitability of Land for Recreation and Open Space*

*Criteria for evaluating suitability of proposed recreation, parks, and open space areas shall include, but not be limited to, the following, as determined by approving body.*

- 1. Unity. The dedicated land shall be a single parcel except where the approving body determines that two (2) or more parcels are in the public interest. Multiple parcels shall be connected by a multi-use path located in a dedicated corridor of no less than fifteen (15) feet in width in addition to the land required in this subsection.*
- 2. Location. The dedicated land shall be located so as to serve the recreational needs of the residents.*
- 3. Accessibility. Public access to the dedicated land shall be provided either by an abutting street or by public easement. Such easement may be required to be up to sixty (60) feet in width and shall in no case be less than thirty (30) feet in width.*
- 4. Usability. No less than twenty-five percent (25%) of the dedicated land shall be usable for active recreation (play areas, ball fields, tennis courts, or similar recreation uses). Lakes may not be included in computing amount of land to be dedicated unless approved by the Town Council. If the Town Council determines that active recreation needs are being met by other dedicated parcels or existing recreation facilities, then land that is suitable for open space may be dedicated.*
- 5. Adjustments. The Town Council may, in cases of unusual or exceptional nature, allow adjustments in the dedication requirements established in or required by this ordinance. Such adjustments shall be reviewed by the Planning Board before action by the Town Council.*

6. *Land Required. In the case of a condominium project, the land required by this section shall be deeded to a homeowners' association.*
7. *Open Space. Nothing herein shall be construed to limit the amount of privately controlled open space which may be included in this agreement, over and above the recreation and park site obligation.*

#### Navassa Zoning Ordinance (Manufactured Home Space)

Article 9 Section (29)(F) of the Navassa Zoning Ordinance says the following about providing recreation area for each manufactured home space:

**(F) *Recreational Space Requirements***

*Each manufactured home park shall provide three hundredths (.03) acres of recreational area for each manufactured home space*

### Appendix 3. Navassa Subdivision Ordinance Excerpts

Sections 4.8, 4.8.2 of the Navassa Subdivision Ordinance addresses sites for public use and parks, recreation, and open space. As Navassa grows in population, this portion of the ordinance will be important in providing parks, recreation, and open space for future residents. Also, the Payment in Lieu of Dedication provision in the subdivision ordinance is another way for the Town to accumulate funds to acquire public open space or to provide capital improvements to public open spaces. The wording from this section of the subdivision ordinance is outlined below.

#### **4.8 Sites for Public Use**

*To ensure orderly development of the planning area in accordance with the general principles set forth in any applicable comprehensive plan, the subdivider shall give due consideration to the reservation of open spaces for parks, schools, fire stations, and/or playgrounds in accordance with the procedures in N.C.G.S. 160A-372.*

##### **4.8.1 Reservation of School Sites**

*If the Town of Navassa Town Council and the Brunswick County Schools have jointly determined the specific location and size of any school sites to be reserved and this information appears in the Navassa adopted plans, the Subdivision Administrator shall immediately notify the Brunswick County Schools when a plat for a subdivision is submitted which includes all or part of a school site to be reserved. The Brunswick County Schools shall promptly decide whether it still wishes the site to be reserved. If the Brunswick County Schools does not wish to reserve the site, it shall so notify the Subdivision Administrator. If the Brunswick County Schools does wish to reserve the site, the subdivision shall not be approved without such reservation. The Brunswick County Schools shall have eighteen (18) months beginning on the date of final approval of the subdivision within which to acquire the site by purchase or by initiating condemnation proceedings. If the Brunswick County Schools has not purchased or begun proceedings to condemn the site within eighteen (18) months, the subdivider may treat the land as freed of the reservation.*

##### **4.8.2 Parks, Recreation and Open Space**

- (A) *Every person or corporation who subdivides land for residential purposes shall at the time of final approval of the subdivision plan be required to dedicate a portion of such land, as set forth in this section, for the purpose of providing park, recreation, and open space sites to service the future residents of the neighborhood in which the subdivision is located. This section shall apply to major subdivisions only.*
- (B) *As an alternative to dedication of such land by the subdivider, or where it is determined by the Town Council that a dedication of land is not feasible in a given plat or incompatible with the Town's plan, the subdivider may make provisions for an equitable amount of land in another location or pay the Town a fee in lieu of dedication as provided in this section.*
- (C) *Computation of Size of Area Required for Dedication.*  
*The amount of qualifying land (in acres) required to be dedicated by a subdivider shall be equal to four hundredths (.04) of an acre times the number of dwelling units or lots, whichever is greater, unless the subdivision is part of an approved PUD where the open space requirements have already been determined.*
- (D) *Suitability of Land. Criteria for evaluating suitability of proposed recreation, parks and open space areas shall include but not be limited to the following as determined by the Town Council.*
  - (1) *Unity. The dedicated land shall be a single parcel except where it is*

determined that two (2) parcels or more would be in the public interest. The Town Council may require that parcels be connected, and may require the dedication of a connecting path of up to thirty (30) feet in width.

- (2) *Shape. The dedication area shall be sufficiently round or square in order to be usable for recreational activities such as softball/baseball, tennis, basketball, and other related activities, provided that, upon a favorable recommendation by the Planning Board, the Town Council may approve a dedication area of an alternate shape where it can be shown by the applicant that such shape will accommodate desirable recreational facilities.*
- (3) *Location. The dedicated land shall be located so as to serve the recreation needs of the immediate neighborhood within the subdivision and shall bear a reasonable relationship to the use of the area by the future inhabitants of the subdivision or residential development.*
- (4) *Access. Public access to the dedicated land shall be provided either by an abutting street or public easement at least twenty (20) feet in width.*
- (5) *Usability.*
  - (a) *No less than twelve and a half (12.5%) of the dedicated land shall be usable for active recreation (play areas, ballfields, tennis courts, or similar recreation uses).*
  - (b) *The Town Council may allow significant natural waterbodies (SNWs) such as natural lakes and streams to be counted as qualifying open space provided that:*
    - (i) *public ancillary features such as docks, piers, launching facilities, adjacent walking trails or paddle trails are provided;*
    - (ii) *SNWs shall comprise no more than fifty percent (50%) of passive open space; and*
    - (iii) *SNWs shall be counted at a rate of 1:2, where one (1) acre of required qualifying open space shall be equivalent to two (2) acres of SNWs.*
  - (c) *The following shall be counted at a rate of 1:2, where one (1) acre of required qualifying open space shall be equivalent to two(2) acres:*
    - (i) *land that lies within an area of the one hundred-year (100) floodplain;*
    - (ii) *land that has slopes greater than fifteen percent (15%); or*
    - (iii) *land that is included within overhead utility easements.*
  - (d) *If the Town Council determines that active recreation needs are being met by other dedicated parcels or existing recreation facilities, they may require that land suitable for open space be dedicated.*
    - (i) *Topography. Generally areas dedicated for recreation shall not exceed slopes of five percent (5%), subject to 4.8.2(D)(5) (c) above.*

- (ii) *Plans. Municipal and county plans shall be taken into consideration when evaluating land for dedication.*

(E) *Payments in Lieu of Dedication*

- (1) *Where a fee is paid in lieu of dedication, the amount of such payment shall be the product of the number of acres required to be dedicated, as outlined in Section 4.8.2(C) above, and the average fair market value of the land being subdivided at the time of the submission of the preliminary subdivision plan. The Town Council shall decide the average fair market value of the land based on the value of the land for property tax purposes, information submitted by the subdivider, including an appraisal by an appraiser licensed in North Carolina, and other relevant information. The cost of the appraisal shall be the responsibility of the subdivider.*

*The payment in lieu of dedication shall not exceed the fair market value of the land that would otherwise have been required to be dedicated by the subdivision.*

- (2) *Upon approval by the Town Council, payment in lieu of dedication shall be made to the Town at the time of final subdivision plat approval or within one year of approval of the preliminary subdivision plat, whichever occurs first. All monies received by the Town of Navassa pursuant to these requirements shall be placed into the Navassa Open Space Improvement Fund, which shall be used only for the acquisition of public open space, providing capital improvements to public open spaces, landscaping of public open space, tree plantings, and beautification projects of public open spaces within the Town of Navassa. The Town shall also have the authority to sell land dedicated pursuant to these provisions with the proceeds of any such sale used solely for the acquisition and/or development of other recreation or park sites within the immediate service area.*

(F) *Standards for Selection of Dedication or Fee*

- (1) *Whether the Town Council accepts the land dedication or elects to require payment of a fee in lieu thereof shall be determined by consideration of the following:*
  - (a) *the recreational element of the Town's Coastal Area Management Act (CAMA) Land Use Plan or other applicable plan;*
  - (b) *the recommendation of the Planning Board;*
  - (c) *topography, geology, access, and location of land available for dedication in the subdivision; and*
  - (d) *size and shape of the subdivision.*

- (2) *The determination by the Town Council as to whether land shall be dedicated or whether a fee should be exacted shall be final and conclusive.*

(G) *Procedures*

- (1) *Subdivider*

*At the time of submitting a preliminary subdivision plat, the subdivider shall, as part of such submission, indicate whether dedication of the property for park and*

*recreational purposes is proposed, or whether the subdivider proposes to pay a fee in-lieu thereof. If the subdivider proposes to dedicate land for this purpose, the subdivider shall designate the area on the preliminary subdivision plat as submitted.*

(2) *Town Action*

*At the time of preliminary subdivision review, the Planning Board shall recommend to the Town Council whether to require a dedication of land within the subdivision or payment of fee in-lieu thereof, pursuant to standard listed in 4.8.2.*

(3) *Approval of Final Plat*

*Where dedication is required, such dedication shall be shown on the final plat for the subdivision submitted for approval. Where fees are required, the same shall be deposited with the Town prior to the recording of the final plat for subdivision. Open space covenants for park or recreational facilities shall be submitted to the Town prior to approval of the final plat and shall be record with the final plat.*

(H) *Use of Land by Town*

(1) *Generally. The land received by the Town under this article shall be used only for the purpose of providing neighborhood open space, park and recreational areas, but shall not be so restricted should the town decide to sell the land as provided by the following paragraph.*

(2) *Fee collected in lieu of dedications and any proceeds from the sale of dedicated land shall be held in the Navassa Open Space Improvement Fund by the Town, and the funds shall be used by the Town for the sole purpose of acquisition of public open space, providing capital improvements to public open spaces, landscaping of public open space, tree plantings, and beautification projects of public open spaces within the Town of Navassa. The depository for such funds may be the same as permitted for other funds of the Town and pending their expenditure in accordance with the terms of this section, such funds may be invested as other funds of the Town. The Town may, as its discretion, add additional monies to the fund for the purpose of purchasing public recreational land to be used for public recreational purposes. On all matters not specifically provided for in this section, the Local Government Budget and Fiscal Control Act shall be controlling.*

(I) *Privately Owned Park and Recreational Areas*

*Private parks and recreational facilities are encouraged; however, such facilities cannot be credited toward the requirement of dedication for public park and recreation purposes, unless approved by the Town Council.*

(J) *Greenways and Multi-Use Trails.*

*Greenways and Multi-Use Trails land may be credited toward the dedication provided that such greenway or trail system is dedicated for public use.*

## Appendix 4. Community Announcement and Newsletter



**TOWN OF NAVASSA**  
334 Main Street  
Navassa, NC 28451  
Phone: (910) 371-2432  
Fax: (910) 371-0041  
[www.townofnavassa.org](http://www.townofnavassa.org)

**Town Council**  
Eulis Willis, **Mayor**  
Michael Ballard, **Mayor Pro Tem**  
Jerry Merrick  
Craig Suggs  
Milton Burns  
Tony Burgess

January 3, 2011

Claudia Bray, **Town Administrator**  
Charlena Alston, **Town Clerk**

Dear Navassa Citizen,

Beginning this January the Navassa Planning Department will be working with the town's Parks and Recreation Advisory Committee and planning consultant Howard Capps in order to create a Comprehensive Parks and Recreation Master Plan. The Parks and Recreation Master Plan will include an inventory of existing parks and recreation facilities, a current and projected demographics analysis of the town, development of recreation standards and a needs assessment, recommendations for the future, and an implementation plan.

The goal of the Parks and Recreation Master Plan is to enable the town to better compete for grant funding for park improvements to the Phoenix Park, identify future staffing requirements for creating a Parks and Recreation Department within the town, and to help identify the recreational needs of Navassa citizens.

A series of public meetings will be held in order to gather information and ideas from the public. The town encourages citizens to attend the public meetings and to also fill out the attached parks and recreation survey attached to this letter. Completed surveys can be turned in to the Navassa Town Hall. If you would like to see more recreational opportunities here in Navassa, please come out and support these planning efforts at the public workshops and complete a survey!

The dates for the public parks and recreation input meetings are:

- Tuesday, January 18, 2011 at 7:00 PM at Town Hall
- Wednesday, January 19, 2011 at 7:00 PM at Town Hall
- Monday, January 24, 2011 at 7:00 PM at Town Hall
- Wednesday, January 26, 2011 at 7:00 PM at Town Hall

If you have any questions, please contact Travis Barnes, Town Planner at (910) 371-2432.

Thank you,

Travis Barnes  
Town Planner  
334 Main Street  
Navassa, NC 28451  
[tbarnes@townofnavassa.org](mailto:tbarnes@townofnavassa.org)

## Public Hearing on Adoption of Navassa Stormwater Ordinance

The Town of Navassa will be holding a public hearing on Thursday, December 16<sup>th</sup> at 7:00 PM at the Town Hall, in order to consider the adoption of the Navassa Phase II Stormwater Ordinance. The town is required to adopt the stormwater ordinance as part of the State of North Carolina's requirements for the town's Phase II National Pollutant Discharge Elimination System Permit. Navassa is required to have a Stormwater Ordinance in place due to the town's proximity to the coast and to the City of Wilmington. The Stormwater Ordinance will help implement illicit discharge detection and elimination programs, establish post-construction stormwater management programs, and provide other means for the town to better protect our local waterways from pollutants carried by stormwater runoff. This ordinance will significantly affect future development within the town. Currently the town's website already has a great deal of information on stormwater pollution for the public to review and a draft of the stormwater ordinance can be downloaded at (<http://www.townofnavassa.org/stormwatermanagement.html>). Written comments on the draft stormwater ordinance may be submitted to Travis Barnes, Town Planner, at [tbarnes@townofnavassa.org](mailto:tbarnes@townofnavassa.org) or can be delivered to the Town Hall.



## Navassa Parks and Recreation Advisory Committee and the Planning Board Requests Your Input on Creating a Parks and Recreation Master Plan

Beginning in 2011, the Navassa Planning Department will be working with the town's advisory boards and planning consultant Howard Capps in order to create a Parks and Recreation Master Plan for the town. The Parks and Recreation Master Plan will include an inventory of existing parks and recreation facilities, a current and projected demographic analysis of the town, development of recreation standards and a needs assessment, recommendations, and an implementation plan. A series of public meetings will be held in order to gather information and ideas from the public. The town will also be distributing a parks and recreation survey in order to get feedback from citizens. If you would like to see more recreational opportunities here in Navassa, please come out and support these planning efforts at the public workshops and complete a survey. The survey can be picked up at the Town Hall or can be downloaded from the town's website at [www.townofnavassa.org](http://www.townofnavassa.org). Additionally, the creation of the Parks and Recreation Master Plan will improve the ability of the town to compete for grant funding for capital improvements to the Phoenix Park and other park facilities in town.

The dates for the public park input meetings are:

1. Tuesday, January 18, 2011 at 7:00 PM at Town Hall
2. Wednesday, January 19, 2011 at 7:00 PM at Town Hall
3. Monday, January 24, 2011 at 7:00 PM at Town Hall
4. Wednesday, January 26, 2011 at 7:00 PM at Town Hall





**Appendix 5. Town of Navassa Community Meeting Information**

**Town of Navassa  
Parks & Recreation Master Plan Meeting #1  
Sign In Sheet  
January 18, 2011  
7:00 PM**

Please Print Name	Group Represented
1. Christine Allen	
2. Jill Allman	
3. Greg Bryant	
4. William Graham	
5. Brian Bobbe	
6. Carley Moore	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	

**Navassa Parks & Recreation Master Plan  
January 18, 2011  
Community Meeting  
Town of Navassa, N.C.**

The following comments were received during a community meeting held at Town Hall. Those in attendance were asked what types of recreation facilities would they like to see made available in Navassa.

Picnic Areas  
Grills  
Camping  
Bike Trail  
Sidewalks on roads  
Putt Putt Course  
Driving Range  
Gazebo  
Seating at Davis Creek Park  
Gazebo or cover at WAVE site  
Tennis Court  
Playground equipment  
Leave programs like T-ball, basketball, baseball, softball  
Corporate partners and funding for league sports  
Boat rental at Davis Creek Park  
Keep Davis Creek Park clean  
Safety concerns at existing park  
Extend bike trail and keep clean  
Look at rail trail potential

**Town of Navassa  
Parks & Recreation Master Plan Meeting #4  
Sign In Sheet  
January 26, 2011  
7:00 PM**

	<b>Please Print Name</b>	<b>Group Represented</b>
1.	Darsey Song, Jr.	Citizen
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		

**Navassa Parks & Recreation Master Plan  
January 26, 2011  
Community Meeting  
Town of Navassa, N.C.**

The following comments were received during a community meeting held at Town Hall. Those in attendance were asked what types of recreation facilities would they like to see made available in Navassa.

Community Center  
Softball  
Enhance current facilities  
All activities in same facility  
Extend bike path  
Use abandoned railroad corridor  
Basketball court (outdoors)  
Picnic tables / grills  
Tennis Courts  
District #2 has no recreation facilities  
Trails for dirt bikes  
Fishing area

Appendix 6. Population Projections

Town of Navassa Population Projections 2010-2036

Year	Current Population from 2010 Census	Estimated County Population from the North Carolina State Data Center	Share of County growth at 1.4%	Net Increase of people at 1.4%	homes per year River Bend PUD	homes per year Indian Creek PUD	population of River Bend + Indian Creek @ 2.2 person p/HH	Total Population (Net Increase at 1.4%+ New population from PUD homes + previous year population)
2010	1,505	107,431	1,505	0				1,505
2011		111,127	1,556	51				1,556
2012		114,078	1,597	41				1,597
2013		117,027	1,638	41				1,638
2014		119,977	1,680	41	95	158	557	2,236
2015		122,926	1,721	41	95	158	557	2,278
2016		125,876	1,762	41	95	158	557	2,875
2017		128,825	1,804	41	95	158	557	3,473
2018		131,777	1,845	41	95	158	557	4,071
2019		134,725	1,886	41	95	158	557	4,669
2020		137,677	1,927	41	95	158	557	5,267
2021		140,627	1,969	41	95	158	557	5,865
2022		143,576	2,010	41	95	158	557	6,463
2023		146,526	2,051	41	95	158	557	7,061
2024		149,477	2,093	41	95	158	557	7,659
2025		152,426	2,134	41	95	158	557	8,257
2026		155,377	2,175	41	95	158	557	8,854
2027		158,326	2,217	41	95	158	557	9,452
2028		161,276	2,258	41	95	158	557	10,050
2029		164,227	2,299	41	95	158	557	10,648
2030		167,178	2,340	41	95	158	557	11,246
2031		170,126	2,382	41	95	158	557	11,844
2032		173,188*	2,425	43	95	158	557	12,443
2033		176,138*	2,466	41	95	158	557	13,041
2034		179,088*	2,507	41	95	158	557	13,639
2035		182,038*	2,549	41	95	158	557	14,237
2036		184,988*	2,590	41	100	168	590	14,868

\*Estimates for these years are not available from the NCSDC. Estimates assume a 1.8% annual increase.

## Appendix 7. Parks and Recreation Survey

### Town of Navassa Parks and Recreation Survey

In order to better serve the citizens of Navassa, the Town has developed this parks and recreation survey. This information will be used to establish recreational goals, objectives and priorities for the Town of Navassa. We appreciate your participation. **Please return completed surveys by January 31, 2011.**

Return completed surveys to:

Navassa Town Hall  
334 Main Street  
Navassa, NC 28451

For additional information, please contact:

Travis Barnes—Town Planner  
(910) 371-2432

1. Do you live within the Town of Navassa? Yes 131 No       
If no where do you live? \_\_\_\_\_
2. Gender: Male 75 -57.3% Female 56 - 42.7% Total questionnaires received 131
3. Ethnic background:  
African American 106 80.9% Caucasian 22 16.8%  
Asian American      Hispanic 1 0.8%  
Native American 2 1.5% Pacific Island       
Other \_\_\_\_\_
4. What is the age of the individual completing this survey?  
Under 18 3 18-30 30 31-45 44 46-55 19 56-65 22 66+ 13  
2.2% 22.9% 33.5% 14.5% 16.7% 9.9%
5. What are the ages of the members in your household? (How many in each age group?)  
Under 6 22 6-12 26 12-17 34 18-30 36 31-45 52 46-55 20  
56-65 18 66+ 22
6. Please indicate how often you or any member of your household normally visit any park in the Town of Navassa (Check One)  
Daily 23 Once a Week 21 A few times a week 25 Once a month 6  
A few times a month 13 A few times a year 14 Never 21

If never skip to question 8.

7. Which recreational parks/facilities in the Town of Navassa does your household use most often?

**8. Please select your household's 5 most preferred recreation activities. (Select 5 from the following list.)**

- |                               |  |
|-------------------------------|--|
| <u>89</u> Basketball #1       | <u>26</u> Performing Arts (i.e. Dance, theatre, singing) |
| <u>70</u> Baseball #2         | <u>44</u> Fitness programs #5                            |
| <u>41</u> Football #7         | <u>26</u> Aerobics #9                                    |
| <u>10</u> Soccer              | <u>43</u> Weight lifting #6                              |
| <u>19</u> Volleyball          | <u>56</u> Walking/Hiking #3                              |
| <u>8</u> Tennis               | <u>33</u> Aquatics/Swimming #8                           |
| <u>11</u> Camping             | <u>3</u> Bocce Ball                                      |
| <u>13</u> Arts and Crafts #10 | <u>46</u> Bicycling #4                                   |
| <u>11</u> Golf                | <u>1</u> Other <u>Softball</u>                           |
| <u>11</u> Sightseeing trips   | <u>1</u> Other <u>Fishing</u>                            |
| <u>5</u> Bird watching        | Other _____  |
| <u>17</u> Boating             | Other _____  |
| <u>13</u> Shooting sports #10 |  |

**9. My household would use the recreational facilities and parks more often if (check all that apply):**

- |   |  |
|---|--|
| <u>16</u> They had longer hours                     | <u>42</u> Parks were better maintained #3        |
| <u>11</u> Their locations were more convenient      | <u>43</u> Recreational programs were offered #2  |
| <u>4</u> They were less crowded                     | <u>3</u> They were fewer rules/less restrictions |
| <u>31</u> I knew more about the opportunities #4    | <u>22</u> They were safer #5                     |
| <u>58</u> There was more to do at the facilities #1 | Other _____                                      |
| <u>18</u> The parks/facilities were larger          |  |
| <u>--</u> The parks/facilities were smaller         |  |

**10. Please select your household's 10 most preferred recreation facilities. (Select 10 from the following)**

- |   |  |
|---|--|
| <u>75</u> Community recreation center #1<br>(i.e. crafts, educational classes,<br>meeting rooms, gym, ect.) | <u>7</u> Soccer fields                     |
| <u>66</u> Fitness center #2   | <u>40</u> Baseball/softball fields #5      |
| <u>40</u> Weight room #5  | <u>10</u> Golf course                      |
| <u>44</u> Walking trails #3   | <u>10</u> Tennis facility                  |
| <u>32</u> Bicycle trails #7   | <u>38</u> Swimming Pool/Aquatics center #6 |
| <u>41</u> Playground #4   | <u>3</u> Golf driving range                |
| <u>13</u> Natural areas, open areas, gardens  | <u>10</u> Skateboard park                  |
| <u>38</u> Picnic areas #6   | <u>29</u> Fishing areas #8                 |
| <u>1</u> Camping areas (RV or Tent)   | <u>18</u> Senior Center #9                 |
| <u>15</u> Access areas to rivers and creeks #10   | <u>1</u> Other <u>Basketball</u>           |
| <u>13</u> Amphitheater (open air theater)   | Other _____                                |
| <u>29</u> Education center #8   | Other _____                                |
|   | Other _____                                |
|   | Other _____                                |

Questions 11-16: Please check the answer that best represents your opinion for each statement:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
11. The Town of Navassa offers excellent facilities.	15	34	31	25	8
12. The Town of Navassa does an excellent job of maintaining their facilities.	11	50	34	13	5
13. The Town of Navassa offers excellent recreational programming.	9	18	43	27	8
14. Current Town of Navassa recreational program fees are reasonable.	12	18	63	4	4
15. In addition to current facilities used for recreation The Town of Navassa should develop additional recreation facilities.	52	44	14	4	1
16. I would be willing to pay more taxes to provide better recreation services.	13	27	37	17	11

Note: Question 15 94.1% responding to questionnaire question strongly agree or agree that Town of Navassa should develop additional recreation facilities.

Question 16 39.2% responding to questionnaire question strongly agree or agree that they would be willing to pay more taxes to provide better recreation services.

17. How many miles ON AVERAGE do you have to travel to reach a recreation facility?

18. If you could tell the Town of Navassa one thing they need to do better regarding parks and recreation, what would it be?

19. Please feel free to make additional comments regarding the recreational needs in Navassa:

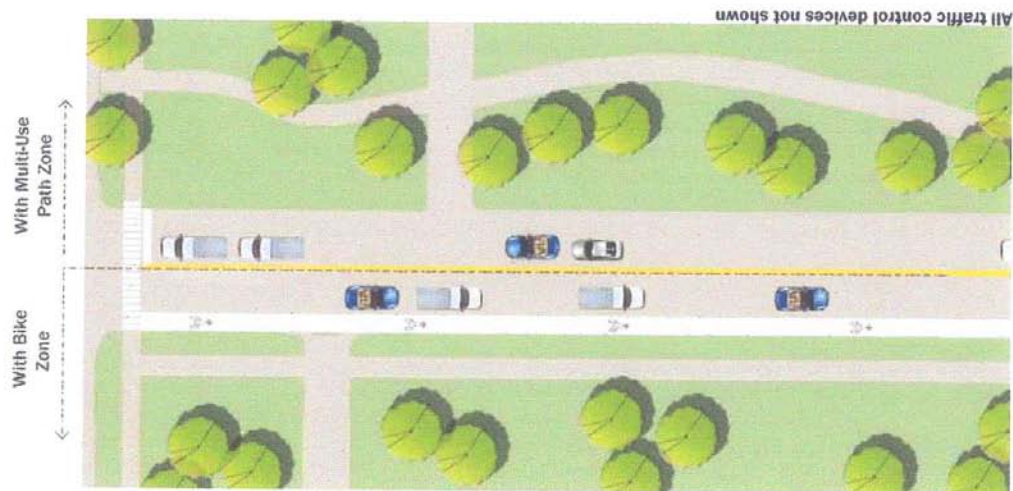
Thank you for taking time to complete this survey!!



## Appendix 8. NCDOT Complete Streets Planning and Design Guidelines

### RURAL ROAD

#### PLAN VIEW



#### KEY ELEMENTS

- May function as an arterial, collector or local route, but with a range of speeds.
- A road outside of cities and towns serving a range of traffic levels in a country setting.
- Paved shoulders can be used to provide bicycle and pedestrian accommodations.
- Multi-use paths separated from the roadway may be appropriate treatment for bicycle and pedestrian accommodations.
- Accommodates bus facilities including turnouts as appropriate. Public transit stops and shelters should be clearly marked and placed within the right of way.

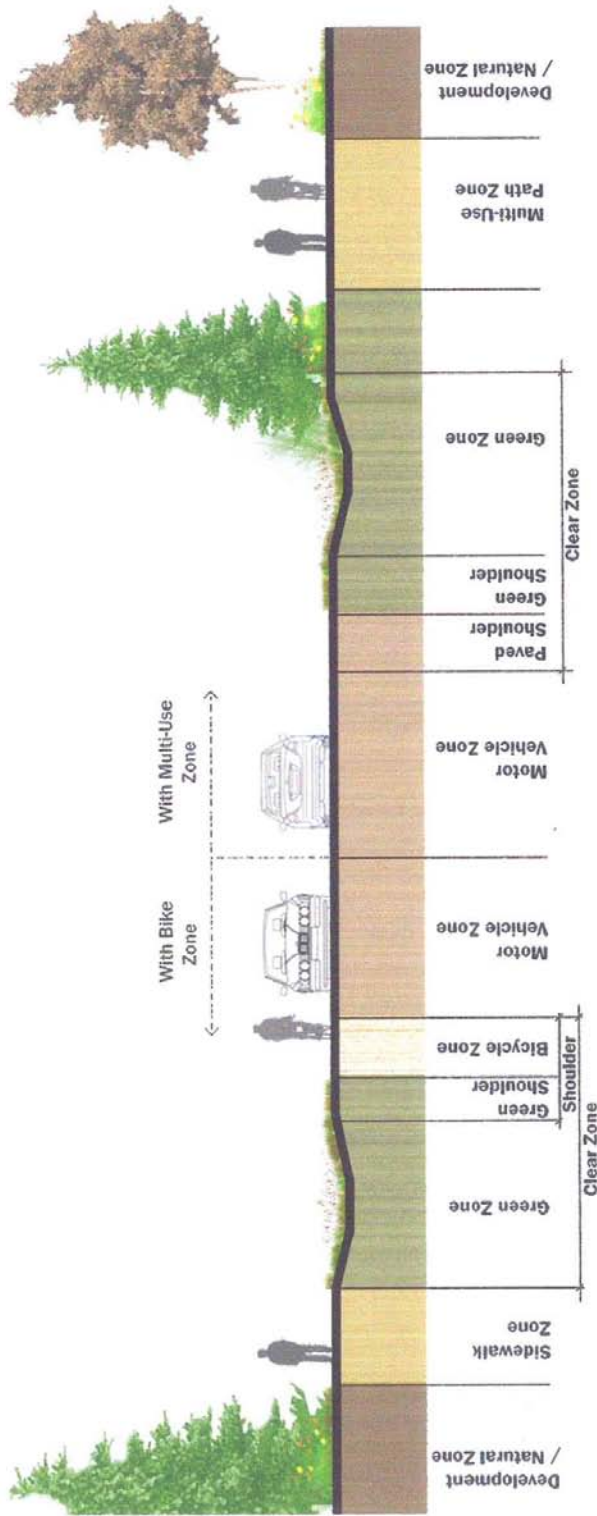


#### STREET CROSS-SECTION ZONES

	<b>Sidewalk Zone:</b> Sidewalks on rural roads are rare. If sidewalk is provided it should be placed outside of the clear zone.
	<b>Green Zone:</b> The landscaped area along the edge of a roadway and could include grass, landscaping or trees (as permitted). Serves as drainage conveyance.
	<b>Bicycle Zone:</b> A zone for bicyclists separate from vehicular traffic.
	<b>Motor Vehicle Zone:</b> The primary travel way for vehicles.
	<b>Multi-Use Path Zone:</b> A zone for pedestrians and bicyclists in a multi-use path separate from the motor vehicle zone. Please see <i>Multi-Use Path Zone Typology</i> for more details.
	<b>Development Zone / Natural Zone:</b> Land uses are typically set back from the street. This zone may also consist of natural vegetation.

# RURAL ROAD

## ILLUSTRATIVE STREET CROSS-SECTION



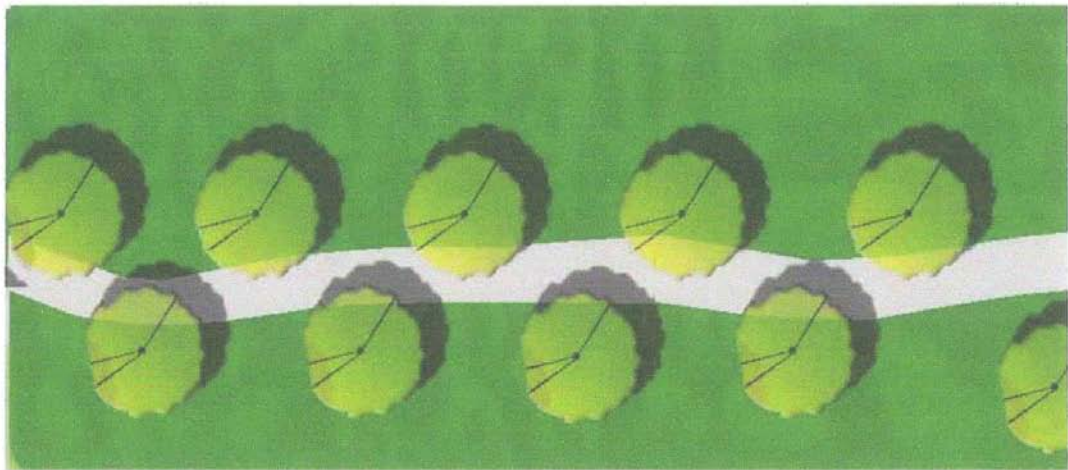
## STREET COMPONENT DIMENSIONAL GUIDELINES

Country-side	Sidewalk Zone (feet)	Green Zone (feet)	Bicycle Zone (feet)	Motor Vehicle Zone (lane width- feet)	Shoulder Zone (feet)	Multi-Use Path Zone (feet)
5' minimum	See note 2	4' - 6' bicycle lanes (see note 3)	10' - 12'	6' - 8'	10' - 12'	

1. Green zone is the grassed roadway shoulder and the ditch or fill slope. At intersections and intermediate locations it may include hardscaping to provide connectivity to pedestrian/bike/transit amenities.
2. The green zone and the shoulder for resurfacing, restoration, and rehabilitation (R-R-R) work on high-speed rural roads should be a minimum of 15' in width. The green zone and the shoulder for new construction work on high-speed rural roads should be 30' in width.
3. A paved shoulder without standard bicycle markings is commonly used in the place of bicycle lanes. On rural roads with lower access densities, higher speeds, and higher volumes, a separate 10-12' multi-use path could be considered to provide pedestrian and bicycle accommodations.
4. In typical rural settings the roadway shoulder provides the pedestrian walking area.
5. If sidewalk is deemed appropriate, it should be located behind the ditch and outside of the clear zone.

# MULTI-USE PATH

## PLAN VIEW






## KEY ELEMENTS

- Multi-use path can be provided as part of a parkway, rural road or greenway.
- Link multi-use paths (especially greenway trails) to make connections between homes, parks, schools, and shopping districts.
- Shade trees are recommended.
- Provide a green zone of 3'-6' on either side of the path.

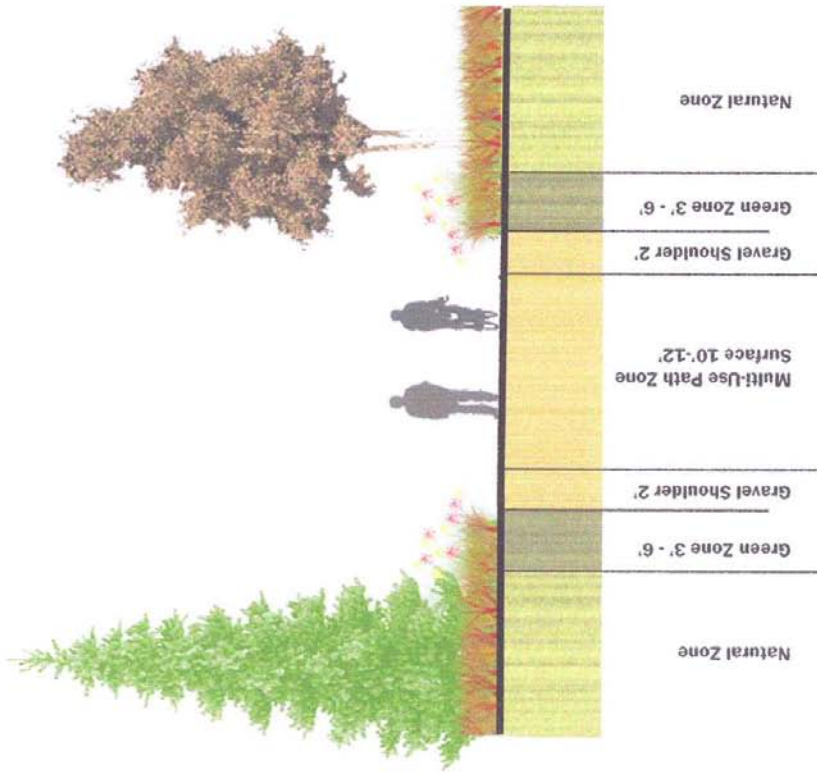


## PATH CROSS-SECTION ZONES

- 
**Natural Zone:** Buffer and offset for trees and other vegetation.
- 
**Green Zone:** This zone is a planting strip used to create lateral offset from edge of the multi-use path to trees and other objects.
- 
**Multi-Use Path Zone:** A zone for pedestrians and bicyclists in a multi-use path separate from the motor vehicle zone. Please see *Multi-Use Path Typology* for more details.

# MULTI-USE PATH

## ILLUSTRATIVE PATH CROSS-SECTION



## Appendix 9. Davis Creek Park Cost Estimate

**Probable Cost  
Davis Creek Upgrades  
June 2011**

	<u>Quantity</u>	<u>Unit Cost</u>	<u>Estimated Cost</u>
1. 6' Bench	8 each	\$1,281.00	\$10,248.00
2. Trash Receptacle	8 each	\$ 996.00	\$ 7,968.00
3. Picnic Tables	10 each	\$1,050.00	\$10,500.00
4. Shade Trees along Entrance Dr.	40 each	\$ 400.00	\$16,000.00
5. Landscaping	Lump Sum	\$10,000.00	\$10,000.00
6. Entrance Sign	Lump Sum	\$ 6,000.00	<u>\$ 6,000.00</u>
<b>Probable Cost Sub Total</b>			<b>\$60,716.00</b>
<b>General Conditions</b>		<b>12%</b>	<b>\$ 7,285.00</b>
<b>General Contractor Profit</b>		<b>5%</b>	<b>\$ 3,035.00</b>
<b>Bonds/ Insurance</b>		<b>1.5%</b>	<b>\$ 910.00</b>
<b>Contingency / Escalation</b>		<b>5%</b>	<b><u>\$ 3,035.00</u></b>
<b>Total Probable Cost</b>			<b>\$74,981.00</b>

## Appendix10. Rail Trail Cost Estimate

**Probable Cost  
Rail Trail (Multi-Use Trail)  
June 2011**

	<u>Quantity</u>	<u>Unit Cost</u>	<u>Estimated Cost</u>
1. Utility Service Extension	Lump Sum	\$25,000.00	\$25,000.00
2. 10' Wide Asphalt Trail (including clearing/ grading)	3,400 sq. yds.	\$25.00 sq. yd.	\$85,000.00
3. Pedestrian Lighting	60 each	\$1,490.00	\$89,400.00
4. 10' x 100' Bridge	100 l.f.	\$500.00 l.f.	\$50,000.00
5. 6' Bench	4 each	\$1,281.00	\$ 5,124.00
6. Trash Receptacle	4 each	\$ 996.00	\$ 3,984.00
7. Shade Trees	120 each	\$ 400.00	\$48,000.00
8. Landscaping	Lump Sum	\$10,000.00	<u>\$10,000.00</u>
<b>Probable Cost Sub Total</b>			<b>\$316,508.00</b>
<b>General Conditions</b>		<b>12%</b>	<b>\$ 37,980.00</b>
<b>General Contractor Profit</b>		<b>5%</b>	<b>\$ 15,825.00</b>
<b>Bonds/ Insurance</b>		<b>1.5%</b>	<b>\$ 4,747.00</b>
<b>Contingency / Escalation</b>		<b>5%</b>	<b><u>\$ 15,825.00</u></b>
<b>Total Probable Cost</b>			<b>\$390,885.00</b>

**Appendix 11. Phoenix Park Cost Estimate**

Probable Cost  
Phoenix Park  
Town of Navassa, N.C.  
August 25, 2010

Item	Quantity	Unit Cost	Probable Cost
<b>1. Clearing/Grading</b>	1,800 c.y.	4.00 c.y	\$7,200.00
<b>2. Parking Area</b>			
a. Grading / 6" Stone base/2 ½" Asphalt	2,900 s.y.	25.00 s.y.	72,500.00
b. Curb & Gutter	900 l.f.	11.00 l.f.	9,900.00
c. 18" Concrete Pipe	50 l.f.	35.00 l.f.	1,750.00
d. Striping (18' Long)	Lump Sum	500.00	500.00
e. Handicapped Signs	2	150.00	300.00
f. Lighting	Lump Sum	24,000	24,000.00
<b>Total for Parking Area</b>			<b>\$108,950.00</b>
<b>3. Basketball Courts</b>			
a. Grading /6" Stone base/2 ½" Asphalt	500 s.y.	25.00 s.y.	12,500.00
b. Basketball goal/post	2	3,325	6,650.00
c. Striping	Lump Sum	250	250.00
d. Lighting on timer	Lump Sum	13,000	13,000.00
<b>Total for Basketball Court</b>			<b>\$32,400.00</b>
<b>4. Three Picnic Shelters</b>			
a. Grading/6" Stone base/6" Conc. Slab	1,360 s.f.	5.00 s.f.	6,800.00
b. Prefabricated Shelter (20'x20')	2	12,250	24,500.00
c. Prefabricated Shelter (20'x28')	1	18,800	18,800.00
d. Electric	3	500	1,500.00
<b>Total for Three Picnic Shelters</b>			<b>\$51,600.00</b>
<b>5. Concession Bldg. / Restrooms (ADA Access)</b>			
a. Concession Structure on 4" Conc. Slab with Restrooms	1	225.00 s.f.	58,500.00
<b>Total Concession Bldg. / Restrooms</b>			<b>\$58,500.00</b>

Item	Quantity	Unit Cost	Probable Cost
<b>6. Turn Down Sidewalk</b>			
a. Grading/4" Stone base/4" Conc.	700 s.f.	4.00 s.f.	2,800.00
<b>Total Turn Down Sidewalk</b>			<b>\$2,800.00</b>
<b>7. Concrete Sidewalk</b>			
a. Grading/4" Stone base/4" Conc.	10,200 s.f.	4.00 s.f.	40,800.00
<b>Total Concrete Sidewalk</b>			<b>\$40,800.00</b>
<b>8. Softball Field</b>			
a. Grading /Reshape Field	10,000 s.y.	1.50 s.y.	15,000.00
b. Bases/ Home Plate	1	600.00	600.00
c. 2 Dugouts (8'x20' Split Block)	2	8,000	16,000.00
d. Bleachers	4	4,650	18,600.00
e. Lighting (timer)	Lump Sum	39,000	39,000.00
f. Backstop Fencing (250')	1	11,100	11,100.00
g. 6' Vinyl Fencing (850')	850 l.f.	7.50 l.f.	6,375.00
h. Grassing (Common Bermuda)	10,000 s.y.	.60 s.y.	6,000.00
i. Scoreboard	1	6,750	6,750.00
<b>Total Softball Field</b>			<b>\$119,425.00</b>
<b>9. Park Signage</b>			
a. Park Sign at Entrance (5' x 10')	Lump Sum	5,000	5,000.00
b. Park Sign at Fence (5' x 15')	Lump Sum	6,000	6,000.00
<b>Total Park Signage</b>			<b>11,000.00</b>
<b>10. Play Area (2-5 years) ADA Access</b>			
a. Grading (30'x35')	Lump Sum	500	500.00
b. Rubber Surface (30'x35')	1,050 s.f.	6.25 s.f.	6,563.00
c. 6x6 Treated Edging	11 ea.	45	495.00
d. Play Equipment	1	15,285	15,285.00
<b>Total Play Area (2-5 years)</b>			<b>\$22,843.00</b>
<b>11. Play Area (5-12 years) ADA Access</b>			
a. Grading (30'x35')	Lump Sum	500	500.00
b. Rubber Surface (30'x35')	1,140 s.f.	6.25 s.f.	7,125.00
c. 6x6 Treated Edging	12 ea.	45	540.00
d. Play Equipment	1	18,360	18,360.00
<b>Total Play Area (5-12 years)</b>			<b>\$26,525.00</b>



Item	Quantity	Unit Cost	Probable Cost
<b>12. Storm Drainage Pond</b>			
a. Excavation/ Grading	2,400 c.y.	13.65 c.y.	32,760.00
b. Sod	9,000 s.f.	1.00 s.f.	9,000.00
c. Water Plants	300	8.00 each	2,400.00
d. Shrubs	150	10.00 each	1,500.00
e. Trees (10 gal.)(3' calib.)	25	250.00 each	6,250.00
<b>Total Storm Drainage Pond</b>			<b>\$51,910.00</b>
<b>13. Pergola</b>			
a. Pavers for Pergola (6' x 30')	180 s.f.	10 s.f.	1,800.00
b. Pergola (6'x30')	Lump Sum	13,500	13,500.00
<b>Total Pergola</b>			<b>\$15,300.00</b>
<b>14. Water Service</b>			
a. 6" Water Line	400 l.f.	40.00 l.f.	16,000.00
b. Jack & Bore	30 l.f.	350.00 l.f.	10,500.00
<b>Total Water Service</b>			<b>\$26,500.00</b>
<b>15 Sewer Service</b>			
a. Sewer Line	250 l.f.	30.00 l.f.	7,500.00
b. Jack & Bore	30 l.f.	350.00 l.f.	10,500.00
<b>Total Sewer Service</b>			<b>\$18,000.00</b>
<b>16. Storm Drainage</b>	500 l.f.	8.00 l.f.	\$4,000.00
<b>17. Electric Service Lines</b>	Lump Sum	10,000	\$10,000.00
<b>18. Nature Trail</b>			
a. Clearing	Lump Sum	10,000	10,000.00
b. Footbridge of 404 (75'+75')	150 l.f.	76,000	76,000.00
c. Signage	Lump Sum	3,000	3,000.00
<b>Total Nature Trail</b>			<b>\$89,000.00</b>
<b>19. Trash Receptacles</b>	5	1,412	\$7,060.00
<b>20. Bike Racks</b>	2	778	\$1,560.00
<b>21. 6' Park Bench</b>	10	1,056	\$10,560.00

Item	Quantity	Unit Cost	Probable Cost
22. Water Fountain	3	2,985	\$8,955.00
23. 8' Picnic Tables	20	529	\$10,580.00
24. Park Signage (Regulations, etc.)	Lump Sum	2,500	\$2,500.00
25. Landscape Allowance	Lump Sum	35,000	\$35,000.00
Probable Cost Sub Total			\$772,968.00
Gen. Cond. & Field O.H.		12%	\$92,756.00
Gen. Contractor Profit		5%	\$38,648.00
Bonds/Insurances		1.5%	\$11,594.00
Contingency/ Escalation		5%	\$38,648.00
Total Probable Cost			\$954,614.00