

CAROLINA BEACH

MASTER DEVELOPMENT PLAN



MASTER DEVELOPMENT PLAN FOR THE TOWN OF CAROLINA BEACH, NC

May 2008

For many decades, people have visited Carolina Beach to experience the riches nature has bestowed upon it. Carolina Beach is renowned for its sandy beaches, warm waters and ocean breezes. Each new day is announced with a dramatic sunrise over the Atlantic Ocean. The estuarine environment of the Cape Fear River meeting the Ocean provides a world rich in wildlife and landscape form. Carolina Beach is a community immersed in natural beauty. It is a community whose evolution is deeply rooted in its relationship with the natural environment.

Carolina Beach became a popular recreation destination following the end of the Civil War. Several steamers transported people across the River to the peninsula to enjoy the sun and ocean waters, and it wasn't long before private cottages were seen along the beach. Near the turn of the 20th century, two beach clubs were built to accommodate the new visitors. Lodging, restaurants, entertainment and amusements were now available; Carolina Beach became a major attraction.

The primary attraction of the Town were the many activities of the "Boardwalk." Originally a single pavilion and bathhouse, with a wooden promenade for strolling, the Boardwalk evolved into the nucleus of Carolina Beach and a place full of life, energy and activity. The Boardwalk boasted a theatre, a bowling alley, an arcade with games, amusement rides and several eateries and gift shops.

The past few decades has unfortunately seen the decline of the Boardwalk area and in turn, the Central Business District (CBD). Changes in visitor demographics, preferences and habits and economic and market conditions, as well as coastal legislation introduced to protect the community from the devastating effects of hurricanes and flooding, all contributed to the decline of the CBD.

Purpose of the Study

Recognizing the wealth of opportunity inherent in its location, and in response to new development pressures, the Town of Carolina Beach retained peter j. smith & company, inc., to prepare a Master Development Plan for the CBD. The fundamental purpose of the Plan is to provide a clear and exciting vision for the CBD that stimulates revitalization and provides guidance and direction to the Town as it endeavors to pursue its future.

While memories of the past are ever present, the future that awaits is full of excitement and opportunity. Carolina Beach is poised once again to become a Town that offers residents a remarkable quality of life and rewards visitors with a truly memorable experience. In summary, this study is about ***Recapturing the Spirit*** that once filled the Town of Carolina Beach.

Plan Organization

The Plan is organized in two sections: *The Plan* and *Background*. *The Plan* section provides the direction for the Town, with actions and strategies for Carolina Beach. The *Background* section provides information regarding the research, analysis and public input conducted to complete the Plan. Within both sections are action-oriented chapters that can be identified by historic postcards of Carolina Beach. The specific organization of the Plan is detailed in the adjacent Table of Contents. Additional support documents for the Plan are provided under separate cover.

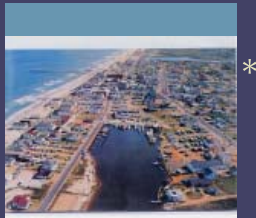
peter j. smith & company, inc.

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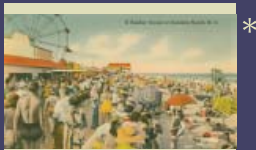
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*Postcard from *Postcard History Series: Carolina Beach* by Elaine Blackmon Henson
www.arcadiapublishing.com

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Elected Officials

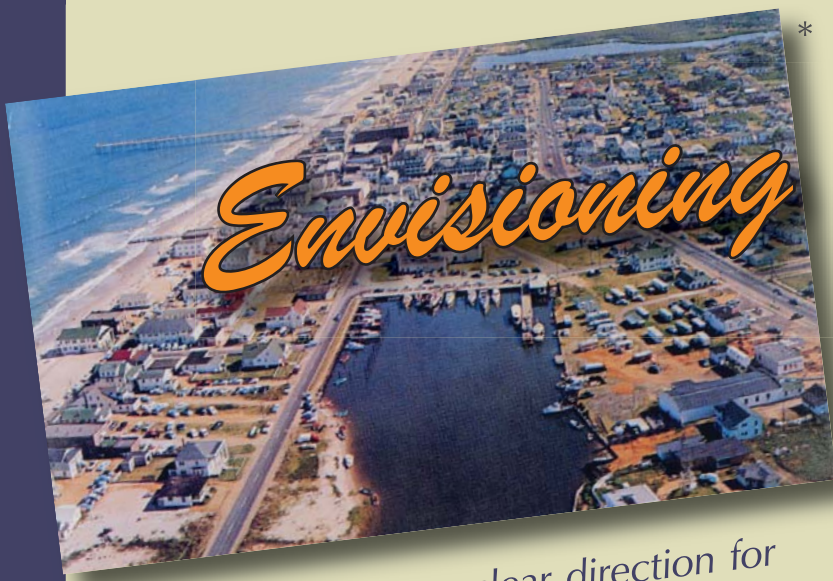
Mayor Joel Macon
Mayor Pro Tem Dan Wilcox
Councilwoman Pat Efird
Councilman Alan Gilbert
Councilman Jerry Johnson
Former Mayor Bill Clark

Town of Carolina Beach, NC

The People of Carolina Beach

Thank you!

peter j. smith & company, inc.



...through defining a clear direction for Carolina Beach

The evolution of a community is influenced by many factors. Market conditions, lifestyle and cultural changes and decisions by individual property owners, are a few of the factors that shape a community's future. While it is difficult to predict with precision how a community will grow over a 20 year period, ensuring a desirable future starts with developing **a clear vision**.

A clear vision articulates what a community can become and what it aspires to be. Vision provides direction to community leaders and guides municipal policy. Comprehensive plans, land use plans and zoning regulations all take their lead from a well defined vision.

The vision for Carolina Beach is bold and dramatic. It is comprehensive and is intended to capture the full potential of the Town as a remarkable place to live or visit. The vision is based on a wealth of opportunities identified by the consulting team with meaningful input from citizens, stakeholders and business leaders, and numerous other participants concerned about the Town's future. The Master Development Plan vision is supportive of the vision articulated in the Town of Carolina Beach CAMA Land Use Plan (2007).

Envisioning the Future

THE VISION

The Town of Carolina Beach strives to be a community that offers its residents an outstanding quality of life. Through enriching our natural, cultural and recreational resources, the Town seeks to become a great place to raise a family, operate a business, retire or vacation. Carolina Beach welcomes visitors and strives to become a destination of choice throughout the year by offering a diversity of high quality experiences and opportunities.

Carolina Beach is community that ...



...embraces the principles of good environmental planning, design and development and is considered the most "green" community in North Carolina

Ektachrome by J. Taylor



...has attractive and safe pedestrian friendly streets and public places



...has successful "shopkeepers" and business operators who fulfill the needs of residents and visitors



...celebrates its rich and unique coastal heritage by preserving its natural and cultural resources and encouraging new growth and development that is compatible in character



...offers residents and visitors an abundance of quality recreational, entertainment, cultural and commercial opportunities

*Postcard from Postcard History Series: Carolina Beach by Elaine Blackmon Henson www.arcadiapublishing.com

GOALS & OBJECTIVES

The goals and objectives further the vision of the community. They serve as a guide for the Master Development Plan and articulate what the community ultimately intends to achieve over the coming years. The goals and objectives are the standard against which the accomplishments of the Plan are measured. They are realistic and attainable and are flexible enough to accommodate changes in the forces that might influence how the vision is achieved and how the Plan is implemented.

Specifically, the goals describe the key accomplishments Carolina Beach will strive to attain by implementing the Master Development Plan, while the objectives are results orientated and outline the specific actions to be undertaken to attain each goal.

The Master Development Plan details goals and objectives for five elements of development, these elements include:

- 1. Land Use
- 2. Economic Development
- 3. Urban Form
- 4. Natural Resources
- 5. Circulation

1 GOAL #1: LAND USE

Encourage a mix of land uses in Carolina Beach that support the needs and desires of residents and visitors.

Objectives

- To encourage a full range of uses throughout the Central Business District (CBD), including, retail, commercial, entertainment and live/work spaces, to create a healthy, thriving and sustainable community
- To offer residents a range of amenities, services and variety of housing opportunities to ensure that Carolina Beach remains a safe, attractive and desirable place to live
- To provide a full range of amenities, attractions and services that will enhance Carolina Beach as a destination for visitors
- To implement effective land use policies, development regulations and design controls that result in high quality projects and eliminate undesirable development that negatively impacts the character of the Town

2 GOAL #2: ECONOMIC DEVELOPMENT

Enhance economic development opportunities in Carolina Beach in a manner that improves the livability of the Town for residents and its attraction as a destination for visitors.

Objectives

- To create a business and investment atmosphere that results in a stable economic environment and encourages high quality developments offering a variety of services and retail opportunities
- To facilitate future growth and economic development with strategic public investments and capital improvement projects that support private sector investment and encourage long term sustainability
- To nurture partnerships with the private sector and local business community to stimulate revitalization efforts that support the long term vision for the Town
- To preserve and enhance the unique scenic, natural and cultural assets of the Town and the surrounding region, to promote Carolina Beach as a destination for new visitors

GOAL #3: URBAN FORM

Create an urban form in the Central Business District (CBD) that strengthens the unique character of Carolina Beach and encourages appropriate and sustainable development.

Objectives

- To establish Carolina Beach as an attractive and welcoming oceanfront community with new development that is well planned and designed
- To develop the CBD as the cultural, social, business and recreational center of the Town in a manner that creates a unique identity for Carolina Beach and strengthens its relationship to the oceanfront
- To improve the inner harbor as a destination and important public space in the Town and to strengthen its relationship to the CBD
- To develop Lake Park Boulevard as the Town's "Main Street" and primary retail destination with a strong pedestrian focus
- To preserve and integrate important cultural and heritage resources in the Town that contribute to its sense of place and uniqueness

GOAL #4: NATURAL RESOURCES

Enhance the natural resources of the Town in a manner that preserves their environmental function and accommodates human interaction and access where appropriate.

Objectives

- To implement best management practices to minimize the negative environmental impacts of urban development on water quality, air quality, sound levels, groundwater recharge, stormwater runoff, wildlife habitat, vegetation, "dark sky" and turtle-friendly lighting
- To preserve and enhance the natural character of the beach in a manner that supports its environmental, visual and natural quality
- To preserve and enhance the bio-physical function of the beach in a manner consistent with its potential to protect the Town from flood hazard and hurricane events

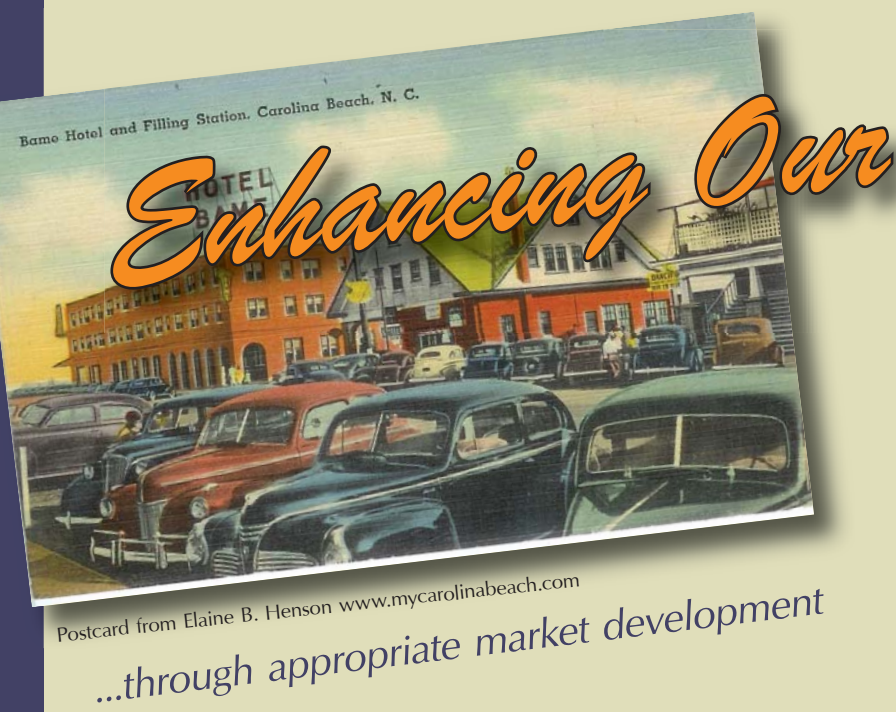
GOAL #5: CIRCULATION

Develop a comprehensive circulation network that integrates vehicular, pedestrian and bicycle systems as a key organizing element of the Town.

Objectives

- To create a connected pedestrian system that promotes walking by developing high quality pedestrian orientated streetscapes, parks, plazas and trails that provide easy access to all key destinations in the Town
- To improve the visual quality of primary streets and implement traffic calming measures and techniques at busy roads and intersections to improve traffic flow and pedestrian safety
- To provide attractive, organized and well designed on / off-street parking areas that provide convenient access to Town attractions
- To create a hierarchy of gateways that announce arrival to the Town, the CBD and the beach
- To implement a wayfinding system that clearly identifies destinations and helps visitors navigate their way through Town





...through appropriate market development

MARKET DEVELOPMENT OVERVIEW

The economic future of Carolina Beach lies with the community's ability to capture the momentum of regional trends and use them to the Town's greatest advantage. The Master Development Plan represents an effort to take the greatest advantage of the following trends:

- A strong and growing regional visitor market that includes nature and heritage tourists.
- Priority funding by the State of North Carolina related to protecting and enhancing the natural environment.
- A decline in local real estate prices and overall demand that has temporarily "cooled" the market, but makes new opportunities more feasible.

The strategy to capitalize on these trends includes the following action areas:

1. Attract the Existing Regional Tourist Market
2. Retain Visitors Longer
3. Upgrade the Quality of the Retail and Accommodation Base
4. Expand the Environmental Education Base

Destinations

1 ATTRACT THE EXISTING REGIONAL TOURIST MARKET

Tourism is one of North Carolina's largest industries. In 2006, domestic travelers spent \$15.4 billion across the State (an 8.3% increase over 2005). Domestic tourism expenditures directly supported 187,200 jobs for North Carolina residents. The tourism industry contributed \$3.86 billion to the State's payroll in 2006. Traveler spending generated over \$2.5 billion in tax receipts. North Carolina ranks sixth in person-trip volume by state behind California, Texas, Florida, New York and Pennsylvania.

Domestic tourism in New Hanover County had an economic impact of \$388 million in 2006, an increase of 10.8% over 2005.¹ New Hanover County ranks eighth in "travel impact" among North Carolina's 100 Counties and more than 5,260 jobs in New Hanover County were directly attributable to travel and tourism. In total, travel generated an \$88.7 million payroll in 2005, and State and local tax revenues from travel to New Hanover County amounted to \$31.7 million, an overall average tax savings of \$175.65.²

Carolina Beach is strategically located within the triangular-shaped Cape Fear/Wilmington tourist region. Improvements to the community will enable the Town to draw from a significant pool of existing visitors. Most popular are the North Carolina Aquarium at Fort Fisher and the USS North Carolina (Wilmington). Both of these attractions made the State Division of Tourism, Film and Sports Development's 2002 list of Top 25 Attractions in North Carolina, based on attendance. The aquarium drew more than one million visitors. About 216,600 visitors toured the battleship. The Cape Fear/Wilmington region draws most in-state visitors from Raleigh-Durham, Greensboro and Charlotte, and most out-of-state visitors from New York, Florida, South Carolina and Virginia.

Figure 1 graphically depicts the locational diversity of attractions in the Wilmington region. The area offers attractions that cater to several types of tourists: family/beach tourists, nature tourists and heritage tourists. Statistically, there are significant "crossover" characteristics between tourist profiles. For example nearly half of all heritage tourists, who typically enjoy history-oriented visits, share the nature-based tourists' interest in wildlife viewing, hiking, and camping.³ Nature and heritage tourists⁴ share some of the same characteristics and habits, including:

- Typical Age – 35-54 years
- Gender – 50% male 50% female
- Education – 40% college graduates 73% some college
- 60% travel as a couple, 15% travel with families, 13% travel alone
- Expenditure – traditionally spend 25% more than other tourists
- Length of Visit – 5 to 7 days

In comparison, the typical family/beach tourist has a lower age profile, lower overall educational attainment, a larger group travel size and is more cautious in spending on food, accommodations and entertainment.⁵ While the typical tourist to Carolina Beach today might fit the family/beach tourist profile, the Master Development Plan identifies opportunities to attract all three tourist types and increase overall economic impact to the region.

¹ Data prepared for the North Carolina Division of Tourism, Film and Sports Development by the Travel Industry Association of America.

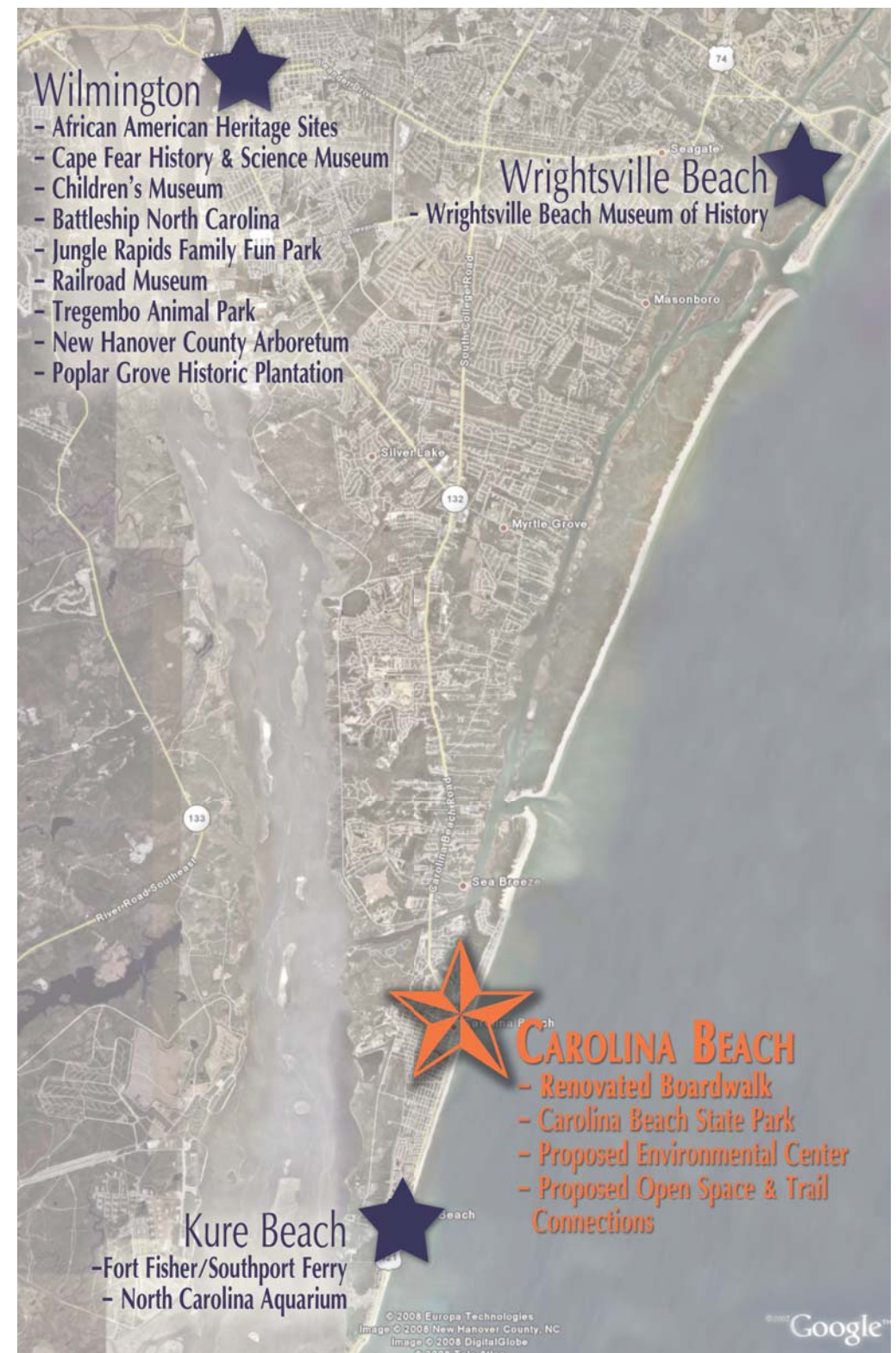
² North Carolina Department of Commerce.

³ www.patrimoinecanadien.gc.ca, 2007.

⁴ The Travel Industry Association of America, 2001.

⁵ Ibid, 2001.

Figure 1: Regional Attractions



2 RETAIN VISITORS LONGER

A tourist who visits a community for the day or for the afternoon spends a limited amount of money. Lunch, gas and entry costs to tourist attractions are typical expenditures. However, capturing the visitor for an overnight or extended visit will capture more significant rewards. On an overnight visit, the costs of accommodation, additional meals and entertainment are greater and circulate more dollars throughout the regional economy.

According to the North Carolina Division of Tourism, overnight travelers expenditures in 2006 were:

2006 Average Trip Spending for Overnight Visitors

United States Average Visitor Party Spending	\$756
North Carolina Average Visitor Party Spending	\$549
North Carolina Out-of-state Visitor Party Spending	\$636
North Carolina Resident Visitor Party Spending	\$369

2006 Average Trip Spending for Overnight Visitors by Primary Purpose of Trip

Average Overnight Business Travel Party Spending	\$616
- Out-of-State Travel Party Spending	\$763
- NC Resident Travel Party Spending	\$305
Average Overnight Leisure Travel Party Spending	\$555
- Out-of-State Travel Party Spending	\$634
- NC Resident Travel Party Spending	\$390

The Master Development Plan for the Town of Carolina Beach is intended to provide a diversity of activity and accommodation for the visitor. Offering more and higher quality activities can encourage longer visits and stimulate the regional economy more significantly.

3 UPGRADE THE QUALITY OF THE RETAIL AND ACCOMMODATION BASE

The Master Development Plan seeks to upgrade both the quantity and quality of the existing retail and accommodation base. Providing a higher quality visitor experience will encourage regional heritage and nature tourists to include Carolina Beach as part of their itineraries. These tourists tend to be older, wealthier and better educated than typical tourists; they stay longer and spend more money on their trips.

According to the 2007 CAMA Land Use Plan, 1,973 accommodation units exist in the Town of Carolina Beach. In comparison, Kure Beach and Wrightsville Beach were reported to have 511 and 1,341 rooms respectively.⁶ Many of the Carolina Beach establishments, based on a visual inventory completed in 2007, would not meet the high standards of the typical nature or heritage tourist. Similarly, the business-oriented traveler demands a higher quality accommodation and offerings that accommodate a “mobile office” like computer centers, faxing and high speed internet. Since the goal of the Master Development Plan is to encourage these visitors and expand the existing market, higher quality hotels are presented as part of the development scheme. At least 500 higher quality rooms could readily be accommodated in the Master Development Plan. Based on conversations with local Realtors, developers and the Wilmington-area Chamber of Commerce, this figure is considered realistic and would be absorbed in Carolina Beach.

An inventory of the Carolina Beach retail base was also conducted in 2007. Approximately 142 establishments were in operation at this time.⁷ Tourist-oriented businesses represent the majority of offerings: waterfront eateries, clothing and gift shops, galleries and fishing charters. A visual condition inventory indicated that many of the buildings in which businesses are housed are in average to below-average condition. A survey of nearly 300 residents and business owners, also conducted in the Fall of 2007, indicated that many of the businesses themselves offer a substandard product. Survey respondents felt strongly that Carolina Beach needs both a physical “upgrade” of its building inventory and more unique, upscale retail and restaurants to attract more visitors. The Master Development Plan encourages physical upgrades to the Town’s retail infrastructure.

⁶ Cape Fear Coast Convention and Visitors Bureau (CFCVB). The CFCVB compiled information regarding the number of rooms based on bed tax receipts provided by New Hanover County.

⁷ peter j. smith & company, inc., 2007.

4 EXPAND THE ENVIRONMENTAL EDUCATION BASE

The State of North Carolina promotes and funds a Statewide network of Environmental Education Centers (EEC’s). The rapidly increasing population of the State (more than 200,000 new residents annually)⁸ has encouraged government officials to seek ways to ensure that residents and visitors understand and protect the complexity of the State’s ecosystem. The typical Environmental Education Center is a facility open to the public that promotes environmental awareness and knowledge. The end result of a visit to a Center should be the ability to “... make informed decisions, take constructive action, and ensure the stewardship of all interdependent parts of the earth’s environment”⁹ New EEC’s are established on an ongoing basis throughout the State.

Carolina Beach has one official EEC: Carolina Beach State Park. The Park offers an exhibit hall, classroom, auditorium, hiking and nature trails, picnic areas, campgrounds and group camping areas. Nearby, the North Carolina Aquarium at Fort Fisher is also a part of this State system. The Master Development Plan for the Town of Carolina Beach designates an additional Environmental Education Center. By focusing a network of these Centers in the region, Carolina Beach can take advantage of “economies of scale” and open the region to a new visitor market. School-children from across the State visit EEC’s as a part of their annual curriculum. A cluster of these facilities offer opportunity for students and families to visit the region on extended field trips that include an overnight stay.

Public Funding Opportunities for the Master Development Plan

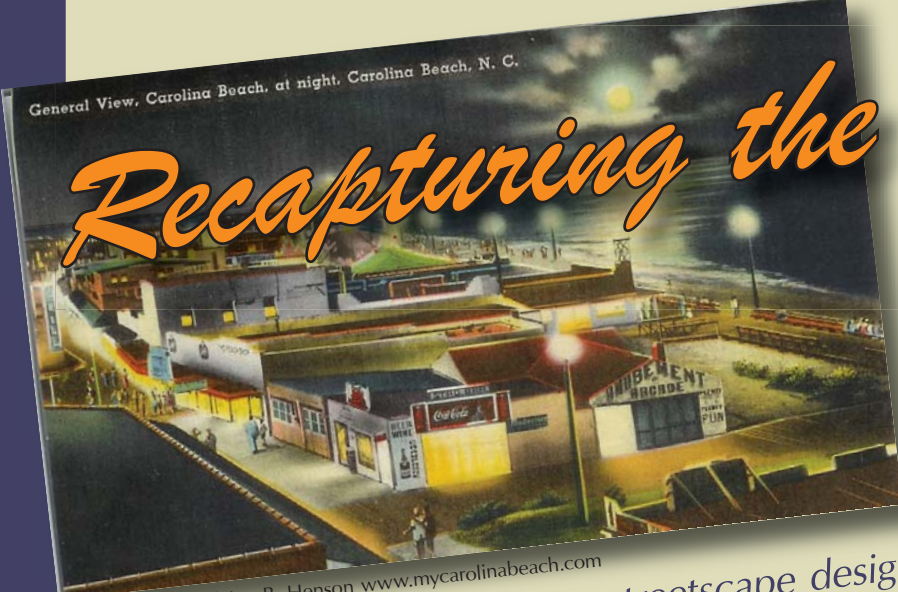
The State of North Carolina prioritizes the funding of recreational activities in its annual North Carolina Outdoor Recreation Survey. In 2007, 10 activities were rated as having “high priority support” for public funding: walking for pleasure, tent and vehicle camping, picnicking, visiting historic sites, freshwater fishing, visiting natural areas, beach activities, visiting zoos, using play equipment and attending outdoor cultural events.¹⁰ The Master Development Plan programs development that is properly positioned to take advantage of these State funding opportunities and attract visitors interested in these activities.

⁸ North Carolina Office of Environmental Education, 2007.

<http://www.eenorthcarolina.org/eecenters/ncaeec/ncaeec.htm>

⁹ Ibid, 2007.

¹⁰ Statewide Comprehensive Outdoor Recreation Plan (SCORP): North Carolina Outdoor Recreation Plan 2003-2008.



Postcard from Elaine B. Henson www.mycarolinabeach.com

...through plan preparation, streetscape design and design guidelines

THE MASTER DEVELOPMENT PLAN

The Master Development Plan for Carolina Beach is bold, exciting and attainable. It is a Plan that has been developed with extensive public input and consultation and is grounded in an understanding of market conditions and trends, both current and future. Furthermore, the Plan is based on an analysis of the physical attributes of the Town and capitalizes on the opportunities inherent in the community. The Master Development Plan is a long term initiative that is intended to carry the community forward over the next 20 to 25 years.

The Master Development Plan is comprehensive and is comprised of seven key components. These components are interrelated and collectively function to depict and describe the Town's future. The seven components of the Master Development Plan are:

1. Key Urban Design Principles
2. The Urban Framework
3. Central Business District Master Plan
4. Boardwalk Core Area Concepts
5. Streetscape Classification System
6. Building Massing Guidelines
7. Zoning and Future Land Use

1 Key Urban Design Principles

The Master Development Plan for Carolina Beach is based on a series of key urban design principles. The principles support the vision articulated and align with the Town's objectives for revitalizing the CBD. The principles draw from opportunities identified throughout the study process and are consistent with successful urban environments. They have guided the physical organization of the CBD as illustrated in the plans and renderings contained within this document. It is important to note they are not ranked in terms of priority or importance. Rather, the principles should be considered collectively when making future development decisions.

- *Implement a coordinated development program for the CBD that organizes and integrates building masses, circulation facilities and public space into a cohesive and structured urban system.*
- *Encourage mixed use development in the CBD that generates year round retail, commercial, entertainment and recreational activity and provides amenities for residents and visitors. Provide a range of opportunities and attractions that appeal to a wide diversity of people and user groups.*
- *Reestablish the Boardwalk area as the primary destination in Carolina Beach and the focal point of civic activities. Create a unique "sense of place" at the Boardwalk that is distinct to Carolina Beach and provides a clear identity for the Town.*
- *Develop a coordinated theme for the Boardwalk area that is compatible with the Town's coastal environment and provides a strong sense of design character and visual continuity.*
- *Create an environmentally-based signature destination in Carolina Beach that "brands" the Town and provides unique educational and interpretive opportunities for visitors and residents.*
- *Develop the Marina area as an anchor of the CBD and a major attraction of the Town. Develop facilities for transient boaters and enhance sport fishing/charter opportunities.*
- *Preserve and enhance visual and physical access to the ocean. Integrate the character and quality of the beachfront into the CBD to create a strong relationship with the urban environment.*
- *Develop a hierarchy of streetscapes that establish strong connections throughout the CBD, enhance the pedestrian experience and improve the visual quality of the public realm.*
- *Develop an integrated system of multi-use trails and bicycle lanes that connect attractions and facilities and serves as a recreational feature of the Town.*
- *Implement a coordinated approach to the provision of parking in the CBD. Encourage and promote public/private partnerships and shared facilities to meet parking demand. Organize and integrate on-street parking into streetscape improvements.*

Urban Framework

Underlying the strategy to revitalize the Central Business District of Carolina Beach is a framework of signature features, an energized town center and a unifying network of streetscapes and public spaces. This framework provides the “skeleton” from which all physical elements of the strategy are connected.

The signature features create gateways to the CBD and serve to define its spatial boundaries. They capitalize on existing Town assets and expand on the opportunities inherent at their location. Each signature feature is unique and provides a diversity of experiences for both residents and visitors to the Town.

The signature features surround and embrace the Town Center. The Town Center is iconic and defines the very essence of Carolina Beach. Re-focused on the oceanfront, it functions as the social, cultural, recreational and commercial nucleus of the Town.

Lake Park Boulevard is transformed into a dynamic “main street.” Throughout the CBD, streetscapes are enhanced to elevate the quality of the public realm and create a truly walkable community. Plaza spaces and activity nodes are linked with tree-lined promenades. A beachfront boardwalk is a major feature of the CBD and links the north and south signature destinations. Clearly defined “portals” direct visitors to the Ocean.

Reaching out from the CBD, an integrated system of pedestrian orientated streets, multi-use trails and bicycle lanes knit the community together. A trio of new public park spaces are connected to the system and provide a greater diversity of recreational opportunities for residents and visitors.

Figure 2: Urban Framework Plan



Central Business District

Master Plan

The Master Development Plan prepared for the Central Business District is comprised of a number of elements which combine to create a unified urban environment and experience. Creating a character unique to Carolina Beach, the elements of the Plan are intended to stimulate the types of uses and activities required to revitalize the CBD. Collectively, they create a CBD that thrives throughout the year and is a destination for both residents and visitors.

The key elements of the CBD Master Development Plan include:

- Harborfront Village
- Community Center Campus
- Conference Center
- Beach Boardwalk
- Environmental Education Center
- Vehicular Circulation
- Multi-Modal Facility
- Parking
- Boardwalk Core Area Concepts

The adjacent plan illustrates many of the key elements of the CBD Master Development Plan. The Boardwalk Core Area Concepts, an integral component of the Master Development Plan, are discussed and illustrated separately.

KEY ELEMENTS OF THE CENTRAL BUSINESS DISTRICT

Harborfront Village

A Harborfront Village has been created as the northern anchor and gateway to the CBD. The concept for the Village is based on creating a retail and entertainment destination within the context of a working waterfront. The commercial fishing industry has historically been a part of the local economy for many years. To foster growth in the industry and preserve a key traditional aspect of the Town's heritage, a fish market has been included in the concept. A series of themed oceanfront pavilions with active facades facing both the street and harbor define the Village.

The marina basin has been expanded towards Lake Park Boulevard to enhance its street frontage and presence as a major feature of the Town. Expansion of the basin increases docking capacity and allows new boating facilities to be developed. These facilities include docking and mooring for transient boaters, charter operators and a water taxi. A generous pedestrian promenade lines the perimeter of the basin and provides outdoor activity spaces.

Community Center Campus

There is the potential to redevelop the existing Community Center on 3rd Street to better support the needs and desires of Carolina Beach residents. The redevelopment could include a senior center, a youth center, day care facility, public library and multi-purpose rooms. Developed to create a campus of buildings and spaces linked by an internal pedestrian circulation system, the Center would be connected to a proposed multi-modal facility as discussed further in this section. The Community Center would be integrated into the town-wide streetscape system to be easily accessible by pedestrians and cyclists. Outdoor green spaces, parkettes and seating areas would be developed in the campus setting. The acquisition of the residential properties at the western end of the block would provide additional lands to develop the campus.

Conference Center

The lands south of the Harbor between Carl Winner Drive and Harper Avenue have great redevelopment potential. The current configuration of buildings, roads and parking lots is fragmented and disjointed. The built form of the area is suburban in character and is not conducive to an urban environment or experience. The distance between Carl Winner Drive and Harper Avenue along Lake Park Boulevard is great and inconsistent with the typical block pattern of the CBD.

A new east/west street has been integrated to create more developable blocks and establish an urban street grid to better organize the area. A Conference Center is proposed within the block to capitalize on that market and extend visitation to the Town throughout the year. Situated with its primary frontage on Lake Park Boulevard, the Center maintains a strong relationship to the Harborfront Village and supports the retail and entertainment activities envisioned for the area.

A new linear park replaces the existing municipal parking lot south of the Harbor to create a strong visual and public space link with the Conference Center and the Boardwalk Core Area. A parking garage would be developed in conjunction with the Center to accommodate both public/private needs.

Beach Boardwalk

A Beach Boardwalk is proposed along the beachfront as a major feature of the CBD. Integrated into the dune system and integral to beach re-nourishment, the Boardwalk provides a strong oceanfront link between the Harborfront Village and the Environmental Education Center. The Boardwalk would be raised to provide views overlooking the ocean and would be designed to provide generous pedestrian space with shade pavilions/seating areas, interpretive stations and beach access platforms. A series of pedestrian entrance portals at street ends and public right-of-ways connect the Boardwalk to the streetscape and open space system designed for the CBD.

Environmental Education Center

An Environmental Education Center has been created as a southern anchor and gateway to the CBD. Drawing from the character and environmental qualities of the coastal landscape, which defines the very essence of Carolina Beach, the Center is envisioned as a signature facility comparable in significance to the North Carolina Aquarium. As a “companion” facility to the Aquarium and the attractions at Carolina Beach State Park, the Center would provide interpretive opportunities for visitors throughout the year and would serve as an educational facility for students of all ages. The potential exists to program the Center to link with the North Carolina’s educational curriculum on the natural sciences.

The Center would be comprised of two architecturally-dramatic structures. The first replaces the car wash located at the existing “triangle” where Woody Hewett Avenue meets Lake Park Boulevard. A pedestrian bridge passing over Lake Park Boulevard would connect with a smaller, second building in Lake Park that fronts onto the water. A wetland and pedestrian boardwalk overtop the water, with interpretive stations, would be developed as a feature of the Environmental Education Center. Parking would be provided at both locations.

The Environmental Community

The Center is seen as a signature facility that announces Carolina Beach as a community that embraces the principles of environmental design and the preservation of natural resources. As a potential stimulus to re-brand Carolina Beach, the opportunity exists to recognize and celebrate Carolina Beach as the most “green” community in all North Carolina. This will require that the Town, in partnership with the private sector, undertake the actions necessary to encourage “smart buildings,” “green sites” and “sustainable neighborhoods.” Furthermore, this new environmental ethic will provide the basis for future capital improvement and community enhancement initiatives undertaken by the Town. A commitment to good environmentally-based planning, design and development will result in a healthy, productive and viable community.

Vehicular Circulation

The traditional street pattern of the CBD has slowly eroded over time impacting vehicular and pedestrian circulation and the relationships between building masses and open space. A number of vehicular circulation improvements are proposed in the CBD to better organize the urban environment and establish a more functional grid system. The improvements proposed include the following new roads:

- Develop a new east/west street between Carl Winner Drive and Harper Avenue
- Extend Charlotte Avenue east of Lake Park Boulevard
- Reestablish Woody Hewett Avenue south from Cape Fear Boulevard to Hamlet Avenue

Multi-Modal Facility

A multi-modal facility is proposed to be developed in conjunction with the Community Center on 3rd Avenue. The facility provides a centrally located transportation hub linking Carolina Beach with the City of Wilmington and its air, bus and rail transportation facilities and the NCDOT Ferry System. The multi-modal facility would include a parking garage to accommodate parking needs on-site and in the CBD, and a depot for transit/shuttle service. Accessed from Transit Streets, the facility is integrated into the pedestrian and bicycle system developed for the Town.

Parking

An important aspect of the master plan for the CBD includes taking a more strategic approach to the supply of parking. The master plan has been developed to encourage public/private partnerships and envisions shared parking structures developed to accommodate both private and public use needs. Surface parking lots which are not well integrated or designed in a manner that supports the urban environment should be discouraged. The streetscape classification system developed includes on-street parking with the Main Street, Main Street Transition and Transit Street concepts.

Figure 3: Central Business District Master Plan



4 Boardwalk Core Area

The Boardwalk Core Area has historically been the centerpiece of Carolina Beach and the focus of urban activities. The concepts developed maintain this position and are intended to recapture the spirit and energy that once defined the Boardwalk area. The concepts strive to strengthen the relationship between the ocean and the surrounding urban environment. An emphasis has been placed on striking an appropriate balance between building massing, public space and enhancement of public access/ views to the ocean.

BOARDWALK CORE AREA BOUNDARIES



The Boardwalk Core Area is defined as the lands between Harper Avenue, Cape Fear Boulevard, Lake Park Boulevard and the beach. Within the Boardwalk Core Area there are two sections: the Boardwalk Core Area West, between Lake Park Boulevard and Canal Drive; and the Boardwalk Core Area East, between Canal Drive and the beach.

Prior to developing the concepts, a build-out analysis was undertaken to identify the development potential of the existing Boardwalk Core Area based on current coastal regulations and zoning. This potential is important when considering and assessing the two alternative concepts prepared.

The two alternative concepts are:

- 1. Pier Park Concept
- 2. Town Center Concept

Figure 4: Boardwalk Core Area - Build Out



BUILD OUT – CURRENT REGULATIONS

- Develop Boardwalk Core Area to 2007 Land Use Plan policies (50' height limit, 0 setback)
- Maintain all publically-owned lands and right-of-ways
- Current regulations provides approximately 270,000 gross floor area (gfa) commercial space on existing Boardwalk site
- Develop Boardwalk Core Area to current CAMA and FEMA regulations
- Building elevated 1 story in VE zone (Flood Protected)
- No structures are allowed within the 0 - 60' setback; between the 60 - 120' setback structures can be built up to 5,000 sq ft.; any structures greater than 5,000 sq ft. must be behind the 120' setback

Note: Oceanfront setbacks currently under review by the Division of Coastal Management Coastal Resources Commission

Figure 5: Boardwalk Core Area - Pier Park Concept



PIER PARK CONCEPT ALTERNATIVE

- Develop full block, Boardwalk Core Area East, into public park and green space
- Contain Park block with building masses around exterior of block (12 stories) to overlook Park and the Ocean
- Develop Pier extending into ocean; extend Pier towards CBD and provide frontage onto Canal Drive
- Develop retail pavilions on Pier
- Integrate Pier into dune system and the ecology of the beach landscape
- Provide access from Beach Boardwalk to Pier
- Concept accommodates approximately 270,000 gfa commercial space west on the side of Canal Drive with 12 story buildings (in AE zone; commercial space at grade)

Figure 6: Boardwalk Core Area - Town Square Concept



TOWN SQUARE CONCEPT ALTERNATIVE

- Create a Town Square as the primary public space in the Town and the focus of activity
- Integrate an outdoor amphitheater to accommodate programmed events, special performances and large group gatherings
- Develop commercial space on the second level and link with a continuous elevated walkway
- Integrate the top level of the amphitheater with elevated walkway, Beach Boardwalk
- Integrate an observation tower providing distant views over the Town and ocean as a vertical anchor of the Square
- Define the Square by a perimeter buildings ranging in height from 8-12 stories
- Develop parking on the ground level of buildings containing the Square
- Develop temporary use retail "kiosks" on the ground level underneath buildings fronting the Square
- Develop "Market Square" fronting onto Main Street, with indoor/outdoor commercial space linking spaces together
- Concept accommodates approximately 270,000 gfa commercial space on existing Boardwalk site with 9 story buildings (8 over 1 in VE zone)



PHOTO-SIMULATION:
PIER PARK CONCEPT ALTERNATIVE

PHOTO-SIMULATION:
TOWN SQUARE CONCEPT ALTERNATIVE

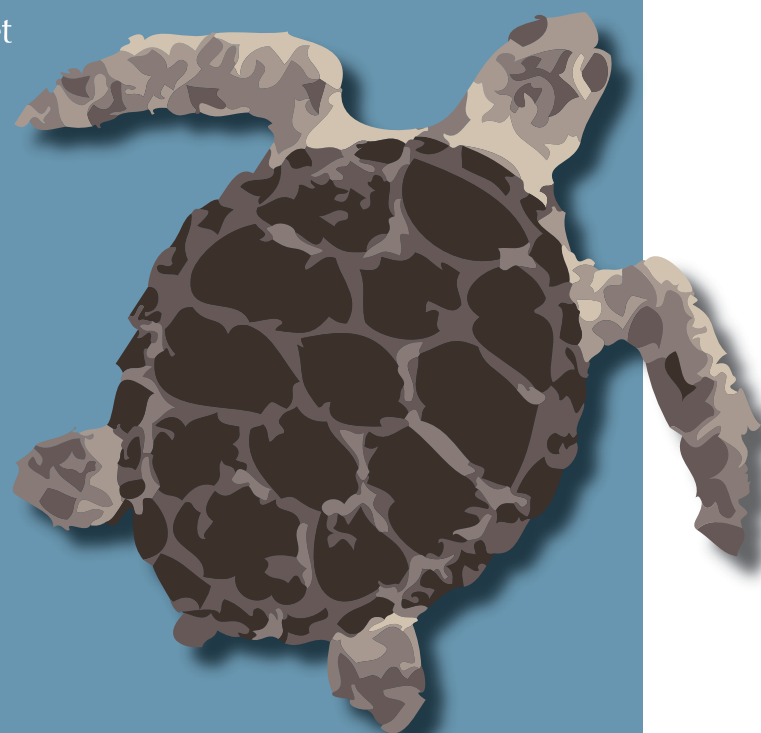


5 Streetscape Classification System

A streetscape classification system has been developed to create a hierarchy of streets with well defined circulation functions and design attributes. The key objectives in developing the system include making the community more walkable and pedestrian friendly, enhancing the aesthetic/environmental quality of the Town, improving vehicular circulation, and developing an integrated system of bicycle lanes. Concept plans, supported with existing/proposed photo-simulations, illustrate the key design attributes for each type of street. The street types which comprise the system, as shown on the adjacent plan, include:

1. Main Street
2. Main Street Transition
3. Commuter Street
4. Transit Street
5. Commercial Street
6. Town Street

Sea turtles are air breathing reptiles that inhabit tropical and subtropical ocean waters. While sea turtles spend most of their life at sea, females must travel to the coast, including the shores of Carolina Beach, to lay eggs.



SEA TURTLES IN CAROLINA BEACH

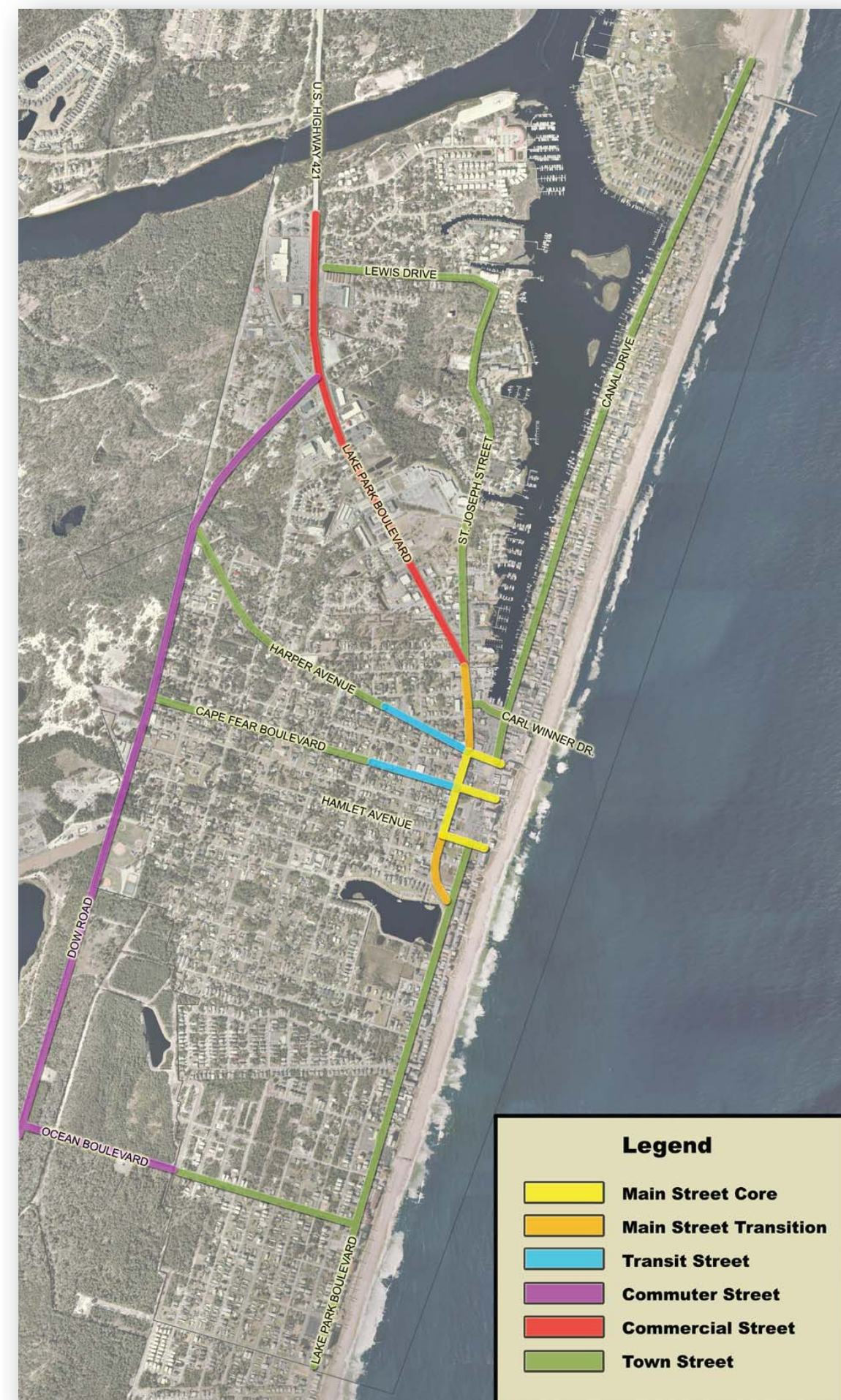
The sea turtle is featured in the proposed streetscape for Carolina Beach to highlight its importance in this coastal community and foster increased environmental awareness. All U.S. sea turtles are protected under the Endangered Species Act of 1973. Through the Sea Turtle Rehabilitation and Hatchling Program, the North Carolina Aquarium is working to help protect the local sea turtle populations.

KEY DESIGN PRINCIPLES

The principles used to guide development of the classification system and the concept plans for each street type include:

- *Create a more walkable community with strong pedestrian connections to key attractions and destinations throughout the CBD.*
- *Improve vehicular circulation and flow in the CBD by strengthening the urban grid, alleviating congestion along Lake Park Boulevard and introducing traffic calming measures.*
- *Enhance the pedestrian friendliness of Carolina Beach through creating useable, attractive and safe streets.*
- *Enhance the aesthetic quality of the public realm by establishing a high standard of streetscape design quality emphasizing the unique coastal character of Carolina Beach.*
- *“Green” the community through the integration of street tree plantings native to the Coastal Plain.*
- *Integrate and better organize on-street parking in the CBD.*
- *Promote public/private partnerships and shared facilities to meet parking demands in the CBD.*
- *Develop an integrated multi-use trail and bicycle lane system through the Town to strengthen linkages and provide a recreational feature.*

Figure 7: Streetscape Classification System Map



MAIN STREET CORE

- create a traditional “main street” whose primary function is retailing
- reinforce the urban wall by massing buildings to the street edge
- create wide pedestrian promenades with themed fixtures/furniture
- develop intersections as public space nodes and portals to the beach
- develop a center median with one travel lane in each direction
- provide bicycle lanes on both sides
- provide parallel on-street parking
- formalize street tree planting

Figure 8: Streetscape Concept Plan: Main Street Core

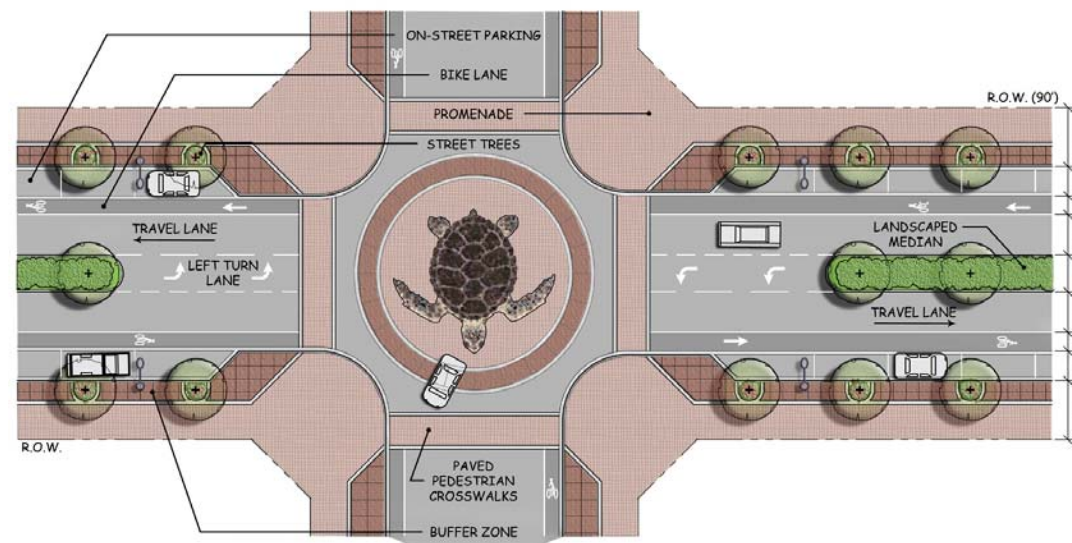


Figure 9: Photo-Simulation: Main Street Core

Proposed



Existing

MAIN STREET TRANSITION

- create a streetscape transition between the suburban character of Lake Park Boulevard and the urban core
- create wide pedestrian promenades with themed fixtures/furniture
- develop pedestrian prioritized intersections
- develop center median with one travel lane in each direction
- provide bicycle lanes on both sides of the street
- provide parallel on-street parking on east side of the street
- implement less formal street tree planting and landscaping in the center median and street boulevard

Figure 10: Streetscape Concept Plan: Main Street Transition

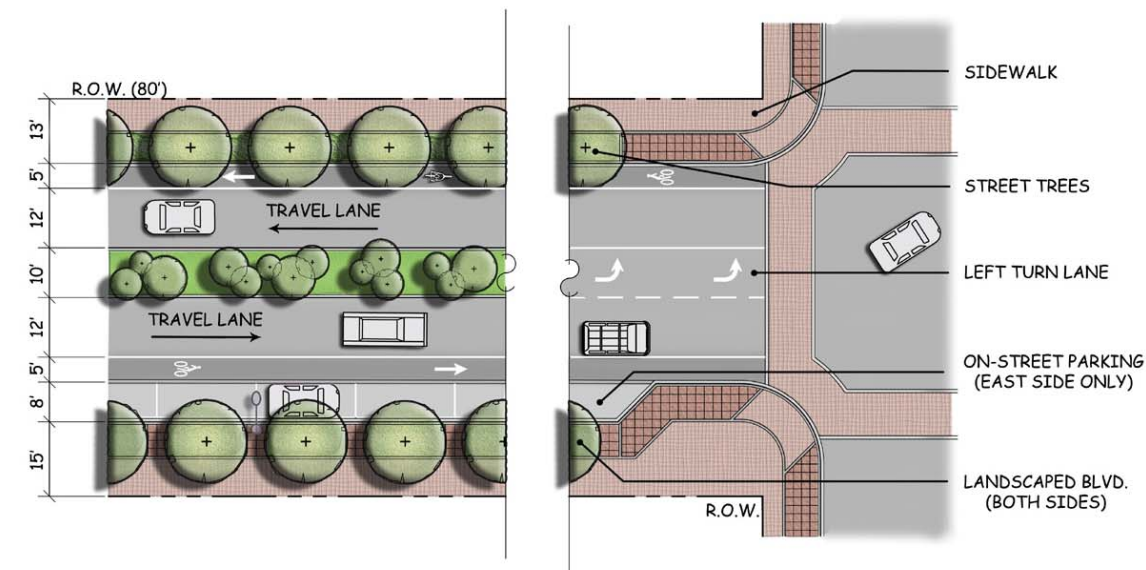


Figure 11: Photo-Simulation: Main Street Transition

Proposed



Existing

COMMUTER STREET

- create a bypass of the CBD to accommodate commuter traffic and allow implementation of Main Street and Main Street Transition concepts
- develop off-road multi-use trail on one side of the street
- accommodate future road widening to accommodate traffic volume

Figure 12: Streetscape Concept Plan: Commuter Street

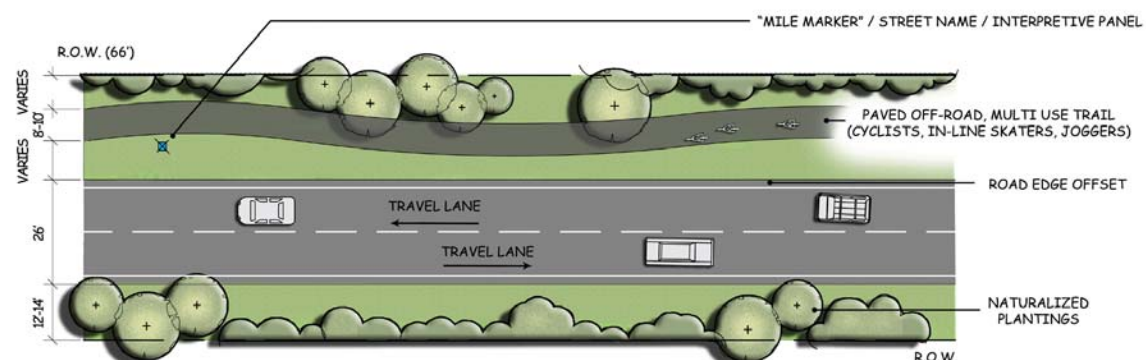


Figure 13: Photo-Simulation: Commuter Street

Proposed



Existing

TRANSIT STREET ■

- create a street that maximizes on street parking in the core area and accommodates transit vehicles
- create pedestrian promenades to link to Main Street
- develop angled parking in the center if the street is separated by a continuous landscape median
- integrated landscape islands between long runs of parking stalls
- provide one travel lane in each direction
- provide facilities to accommodate all types of vehicles
- provide bicycle lanes on both sides of the street

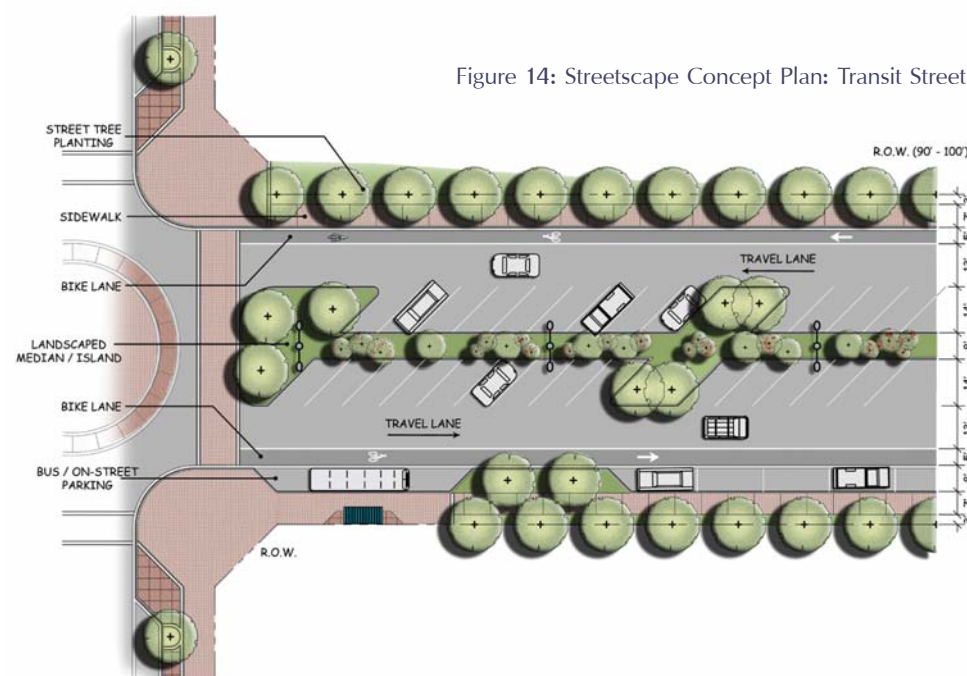


Figure 14: Streetscape Concept Plan: Transit Street

Figure 15: Photo-Simulation: Transit Street

Proposed



Existing

COMMERCIAL STREET ■

- enhance the character and quality of the streetscape approach to the CBD
- minimize the number of curb cuts and driveway entrances to better manage turning movements on the street
- internally link off-street parking lots, promote shared lots and require landscape buffering of parking lots
- create continuous sidewalks and street trees on both sides of the street
- develop a landscape center median with two travel lanes in each direction
- provide bicycle lanes on both sides of the street

Figure 16: Streetscape Concept Plan: Commercial Street

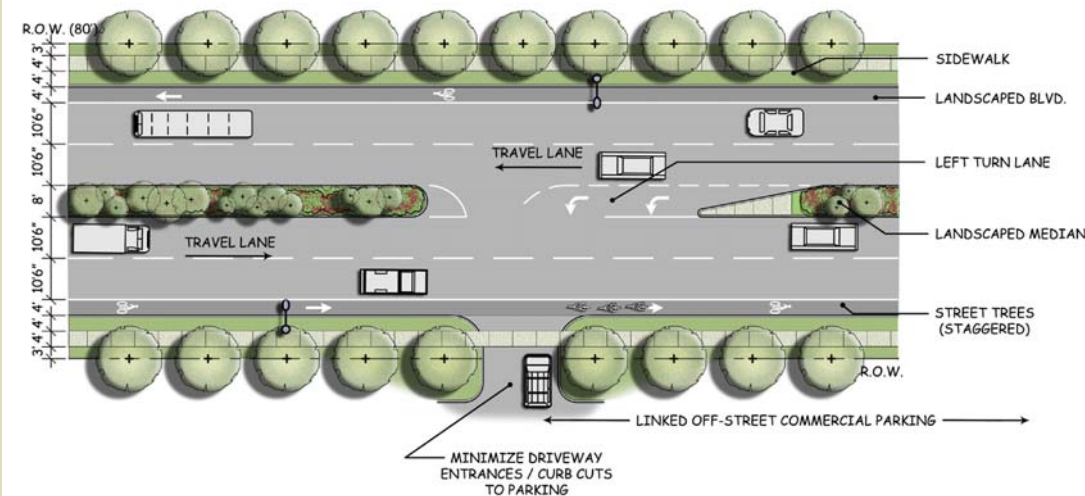


Figure 17: Photo-Simulation: Commercial Street

Proposed



Existing

TOWN STREET ■

- create a network of local streets to distribute traffic to local/residential areas
- provide sidewalks and street trees on both sides of the street
- develop bicycle lanes on both sides of the street

Figure 18: Streetscape Concept Plan: Town Street

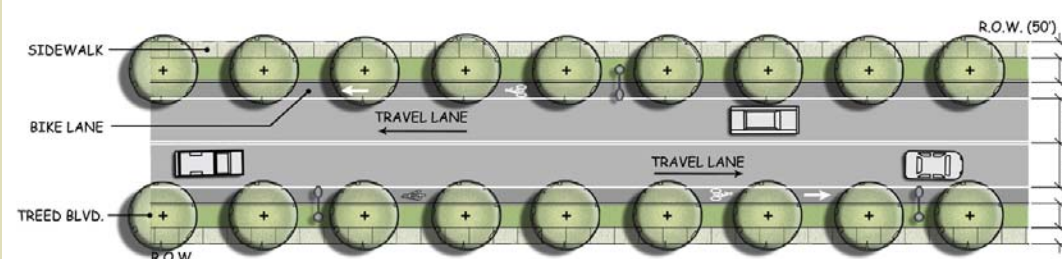


Figure 19: Photo-Simulation: Town Street

Proposed



Existing

6 Building Massing Design Guidelines

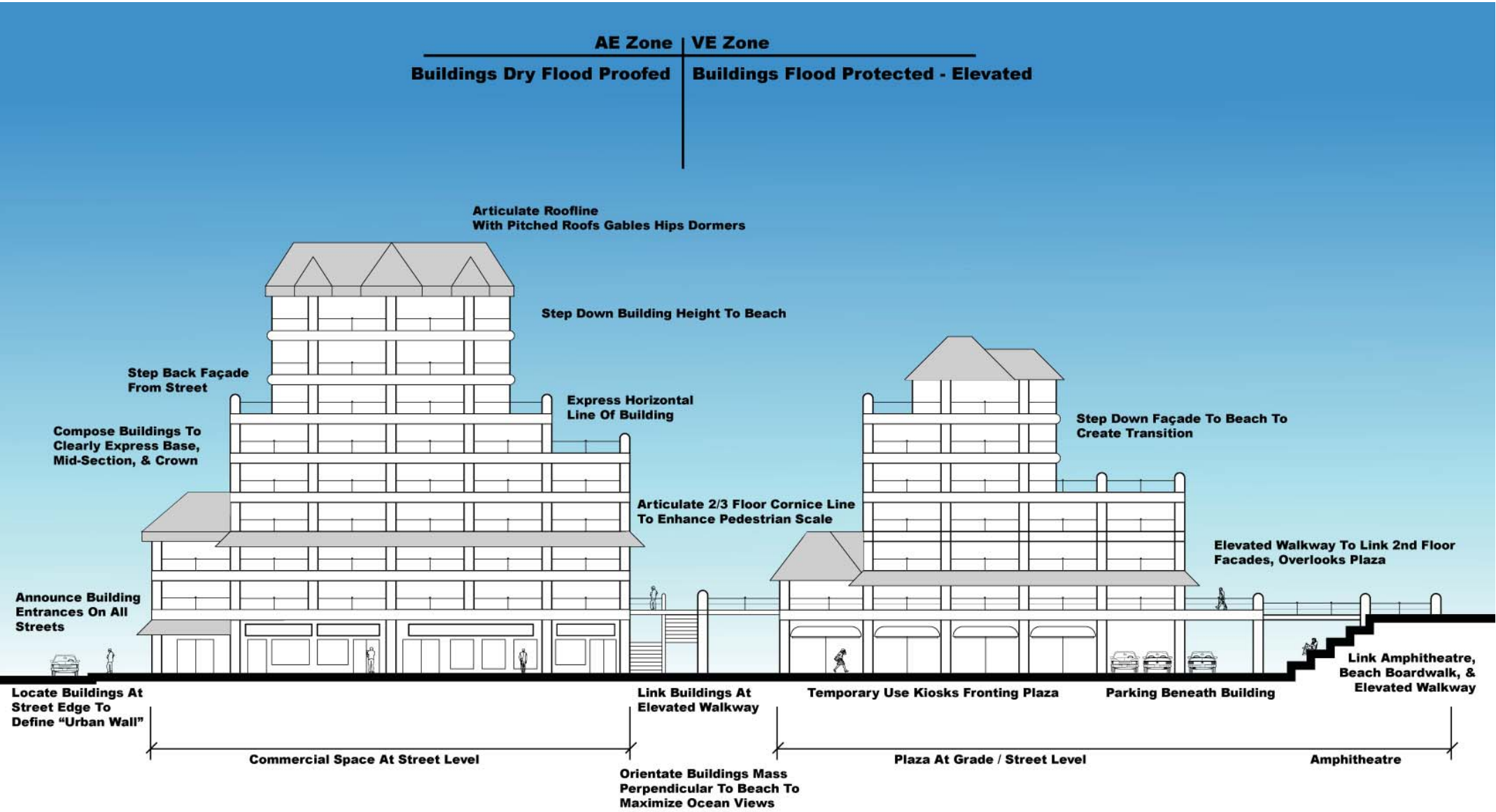
Design Guidelines are advisory and can be an effective tool to direct the design quality and character of the public realm. They provide specific guidance on how built form is to evolve and are important to the vision established for the CBD. They are important tools in the process of implementing the Master Development Plan and allow builders, developers and landowners to understand what is expected by the Town in built projects. The Guidelines allow meaningful discussion to occur in the development process regarding matters of design and how it influences the public realm.

The building massing guidelines presented here are intended to be a first step in the process of developing Design Standards for the CBD, a key recommendation of the Plan. They illustrate important design considerations regarding building mass, scale, orientation and relationship to the public realm. They are not comprehensive or definitive; rather, they identify some of the key attributes that should be considered in the design of new buildings.

KEY GUIDELINES

- Buildings should be designed to express a clearly defined base, mid-section and crown. The base of the building should extend no higher than the top of the 3rd floor and should be articulated with an architectural cornice feature.
- Buildings should step back in profile from the base as they rise in height to create and “wedding cake” effect. Buildings should step down towards the ocean.
- Tall buildings should be orientated perpendicular to the beach to maximize “windows” to the ocean and convey a mass that is more narrow than wide.
- Buildings should have an articulated roofline; pitched roofs with gable features, projecting overhangs, hips and dormers should be encouraged.
- Buildings should be located at the street edge to create a well defined “urban wall,” sense of enclosure and strong relationship to the public realm.
- All buildings with street frontages should have an entrance. Building entrances should be highlighted and clearly defined with enhanced architectural treatment.
- The façade of all street frontages should be equal; avoid blank walls fronting the public realm.
- Buildings should express a dominant horizontal line.

Figure 20: Building Massing Design Guidelines Diagram



7 Zoning and Future Land Use

The following is a summary of the future land use plan developed for the Master Development Plan and a summary of zoning amendments needed to implement the Master Development Plan.

FUTURE LAND USE

The future land use plan amends the Central Business District with a Boardwalk Core Area District as defined on the accompanying map. The two predominant land uses would consist of mixed use and open space.

As of right permitted Mixed Uses are:

- commercial uses: retail, office, hotel, amusement & entertainment
- open space

Conditional uses are:

- residential subordinate multi-family - restricted to a percentage of development

PROPOSED REGULATIONS

The following outlines proposed revisions to the zoning ordinance in addition to the implementation plan and the 2007 Land Use Plan.

- Require a building height restriction of +/- 130 feet on the buildings fronting Canal Drive (parallel to the beach) to minimize summer shadow impacts as shown in Figure 22
- Require buildings to step down from setback buildings as outlined in the Plan
- Require the preparation of shadow impact studies for all future development over 50 feet
- Require an open space dedication equal to the building footprint
- Outline a mixed-use Planned Unit Development. The conditions are not specified and existing PUD's exclude residential, retail and entertainment component
- Incorporate open space dedication as a requirement of any Planned Unit Development approval
- Prepare Commercial Design Standards for building, landscape and site
- Develop design standards for temporary uses and temporary buildings
- Restrict the allowance of Conditional Use Permits and grant building height increases (in excess of 50 feet) based on open space dedication
- Develop an incentive program for commercial development based on open space dedication (TIF, etc.)

Figure 21: Future Land Use Plan



Figure 22: Shadow Study Illustration (Extent Shadows on September 1st at 4:00 p.m.)





Postcard from Elaine B. Henson www.mycarolinabeach.com
...applying the Master Development Plan to
Carolina Beach

IMPLEMENTATION

To accomplish the goals and objectives of the Master Development Plan, the following provides a strategy that will help **Recapture the Spirit of Carolina Beach**.

The implementation strategy includes five key components that will provide the Town with a clear direction for pursuing the objectives of the Master Development Plan. These components include:

1. Key Recommendations
2. Capital Improvements Implementation Matrix
3. Potential Funding Sources
4. Boardwalk Core Area Implementation Strategies
5. Remedial Actions for the Boardwalk Core Area

A Strategy for the Future

1 Key Recommendations

Adopt the Plan

It is recommended that the Town of Carolina Beach adopt the document and integrate it into comprehensive and strategic plans where appropriate.

Amend Zoning and Land Use

The Carolina Beach Zoning Ordinance and CAMA Land Use Plan should be amended according to the future land uses and proposed regulations described in the Plan.

Beach Boardwalk Design Plan

The Town should develop a detailed design plan for the Beach Boardwalk. With the completion of a detailed design plan the Boardwalk construction is anticipated to be completed in two phases as is detailed in the Capital Improvements Implementation Matrix.

Complete Feasibility Studies/Plans

The Town should complete feasibility studies for several of the key elements identified in the Central Business District Master Plan including the Environmental Education Center, the Community Center and the Convention Center.

Create an Implementation Committee

In order to initiate implementation of the Plan and maintain momentum once started, an Implementation Committee should be established. The Committee would function as the lead entity responsible for coordinating implementation of Town initiatives. Additionally, the role of the Committee would include promoting the Plan to potential investors, nurturing partnerships, participating in securing funding for implementation and encouraging communication and information sharing.

Develop Design Standards and Regulations for Integration in the Town's Zoning Ordinance

The Town should prepare design standards for the CBD that promote high quality buildings and public spaces. In addition, the Town should prepare environmental regulations that protect the ecological integrity of the Town.

Eco Plan Development for Lake Park Area

The Town should develop a plan for the Lake Park area that details how the Master Development Plan's signature facility, the Environmental Education Center should be programmed and developed. In addition to the development of the Center, the plan should address specific strategies for the creation of an Environmental Community.

Harborfront Master Plan

The Town should develop a detailed Master Plan for the Harborfront that further identifies issues and opportunities consistent with the Master Development Plan.

Multi-Modal Transit Development

The Town should promote multi-modal transit development that enhances access to Carolina Beach and movement through Town.

Partner with the Marriott for Road/Services Implementation

The Town should pursue partnering with the Marriott to implement road/services improvements that will enhance access to the hotel and its street presence.

Prepare an Acquisitions Plan

The Town should prepare an acquisitions plan in order to focus funding on integral acquisitions for Town improvement.

Public Art Program

The Town should initiate a public art program that encourages local artists to participate in the capital improvement of Carolina Beach. The program should set up a system for requesting, selecting and acquiring artwork for public display. Artwork enhances the identity of the Town and its people.

Update the Parking Study for the CBD

The Town should update the parking study for the CBD to assess how much parking is needed to accommodate current and future needs, based on the Master Development Plan.

Wayfinding Plan

The Town should develop a Wayfinding Plan for Carolina Beach. A Wayfinding system is a coordinated and comprehensive information system allowing people to navigate their way through unfamiliar territory. The Wayfinding Plan should define gateways and features and should develop a thematic directional signage that emphasizes the Town's identity and directs people to the Town's attractions.

Capital Improvements Implementation Matrix

The ultimate revitalization of Carolina Beach’s Central Business District is dependant on leveraging significant public improvements to stimulate private sector investment. The implementation matrix for the Plan details the improvement schedule for the Town to follow to accomplish this leveraging.

Table 1: Capital Improvements Implementation Matrix

Project	Estimated Cost	Priority	Responsibility	Potential Funding
Main Street Phase 1 (Harper - Cape Fear)	\$1,200,000.00	High	NCDOT, Town of Carolina Beach	TE
Harbor Basin/Promenade	\$4,400,000.00	High	Town of Carolina Beach	BIG Program
Main Street Phase 2 (Cape Fear - Hamlet)	\$1,400,000.00	Medium	NCDOT, Town of Carolina Beach	TE
Beach Boardwalk Phase 1 (north section)	\$1,100,000.00	Medium	Town of Carolina Beach	PARTF, DCM
Main Street Transition (Harper - Goldsboro)	\$1,400,000.00	Medium	NCDOT, Town of Carolina Beach	TE
Main Street Transition (Hamlet - Atlanta/EEC)	\$1,300,000.00	Low	NCDOT, Town of Carolina Beach	TE
Carolina Beach Lake Boardwalk	\$650,000.00	Low	Town of Carolina Beach	PARTF
Beach Boardwalk Phase 2 (south section)	\$1,300,000.00	Low	Town of Carolina Beach	PARTF, DCM

Potential Funding Sources

The following provides brief descriptions of several potential funding sources for the implementation of the Master Development Plan.

North Carolina Parks and Recreation Trust Fund (PARTF)

The Parks and Recreation Trust Fund (PARTF) provides dollar-for-dollar matching grants to local governments for parks and recreational projects to serve the public. Recipients use the grants to acquire land and/or to develop parks and recreational projects that serve the general public. More information can be found at: http://www.ncparks.gov/About/grants/partf_main.php

Public Beach and Waterfront Access Grant Program

Local governments may use access grants to construct low-cost public access facilities, including parking areas, restrooms, dune crossovers and piers. Projects range in size from small, local access areas to regional access sites with amenities such as large parking lots, bathrooms and picnic shelters. Towns and counties also may use the grants to replace aging access facilities. In addition, local governments can use the funds to help acquire land for access sites or to revitalize urban waterfronts.

Funding for the Public Beach and Coastal Waterfront Access Program comes from the N.C. Parks and Recreation Trust Fund. The program is administered by

the Division of Coastal Management (DCM). More information can be found at: <http://dcm2.enr.state.nc.us/Access/grants.htm>

Boating Infrastructure Grant (BIG) Program

The Boating Infrastructure Grant Program provides grants to States and Territories to construct, renovate, or maintain tie-up facilities for recreational boats 26 feet or more in length. More information can be found at: <http://wsfrprograms.fws.gov/Subpages/GrantPrograms/BIG/BIG.htm>

Transportation Enhancement

Transportation Enhancement (TE) activities must benefit the traveling public and help communities increase transportation choices and access, enhance the built or natural environment, and create a sense of place. In addition, projects must have a relationship to surface transportation and be one of 12 qualifying activities. The 12 qualifying activities are as follows: Bicycle and Pedestrian Facilities; Bicycle and Pedestrian Safety; Acquisition of Scenic Easements, Scenic or Historic Sites; Scenic or Historic Highway Programs (including tourist or welcome centers); Landscaping and other Scenic Beautification; Historic Preservation; Rehabilitation of Historic Transportation Facilities; Preservation of Abandoned Rail Corridors; Control of Outdoor Advertising; Archaeological Planning and Research; Environmental Mitigation; or Transportation Museums. The Enhancement Program is a North Carolina Department of Transportation Program. More information can be found at: <http://www.ncdot.org>

Acronyms used in the Matrix are:

PARTF - North Carolina Parks and Recreation Trust Fund
DCM - Public Beach and Waterfront Access Grant Program, administered by the Division of Coastal Management
BIG Program - Boating Infrastructure Grant Program
TE - Transportation Enhancement

Other Potential Funding Sources:

Clean Water Management Trust Fund
NC Division of Marine Fisheries
Waterfront Access and Marine Industry Fund

Water Resource Development Project Grant

The Water Resources Development Project Grant Program is designed to provide cost-share grants and technical assistance to local governments throughout the State. Applications for grants are accepted for seven purposes: General Navigation, Recreational Navigation, Water Management, Stream Restoration, Beach Protection, Land Acquisition and Facility Development for Water-Based Recreation, and Aquatic Weed Control. More information can be found at: http://www.ncwater.org/Financial_Assistance/

Federal Land and Water Conservation Fund (LWCF)

Local government and state agencies can apply for land acquisition and/or development projects at a single site. Property can be acquired for public outdoor recreation or to protect outstanding natural or scenic resources. Development projects can include new or renovated outdoor recreational facilities and support facilities. More information can be found at: http://www.ncparks.gov/About/grants/lwcf_main.php

4 Boardwalk Core Area Implementation Strategies

The Master Development Plan examines four implementation strategies for the build-out of the Boardwalk Core Area. For each scenario, it is implied that the Town would accomplish the following:

- Adopt the Master Development Plan in principle
- Restrict the issuance of Conditional Use Permits that allow building heights of greater than five stories

The potential scenarios for implementation are described in the following text:

SCENARIO #1

Master Developer

In this scenario, Boardwalk property owners would form a consortium and collectively “parcelize” their properties into one marketable parcel for a future developer. Negotiations would then take place between the developer and the consortium to establish a financing scenario based on realistic current market conditions. The consortium could either remain a “silent partner” to the developer by accepting a percentage of future revenue for the site, or sell the land outright to the developer for a negotiated fee.

Town Actions

- Town calls a collective meeting with the Boardwalk Consortium to establish and approve the elements of a formal Request for Proposals
- The Town prepares a Request for Proposals based on the concepts presented in the adopted Master Development Plan.
- The Town could offer development incentives to the Master Developer including rights to build beyond the allowable five story limit, temporary property tax abatements, tax increment financing for infrastructure improvements, reduced permit fees and/or increased density bonuses.

SCENARIO #2

“Planned Unit Development” & Design Standards

In this scenario, the Boardwalk area is treated similar to “Planned Unit Development” with the Master Development Plan encoded in the Town Zoning Ordinance. A set of detailed urban design standards and standards for the provision for open space dedication would be included in the Zoning Code based upon the adopted Master Development Plan. This scenario would allow incremental development with multiple developers and would not require a commitment from property owners to participate.

Town Actions

- The Town establishes a Planned Unit Development or a Specific Area Plan in the Zoning Code based upon the recommendations of the adopted Master Development Plan. The PUD and design standards should include open space requirements that enable the implementation of the Master Development Plan.
- The Town could offer development incentives to the interested developers, similar to scenario one.

SCENARIO #3

Purchase/Transfer of Development Rights

In scenario three, willing property owners would sell or obligate their development rights (based on five developable stories or the allowable square footage available under CAMA regulations) to a land trust established specifically for this purpose. The land trust would establish “receiving areas”, where development would be concentrated, and “sending areas”, where land would be preserved as town open space. The designation should be based on the Master Development Plan, which designates 50% of the Boardwalk Core Area as town open space and 50% as developable land. Developers would have the opportunity to buy rights to develop up to 10 stories and could potentially receive a two story bonus (up to 12 stories) from the pool established by the land trust. For each proposed development, property equivalent to the floor plate of the proposed development would be dedicated as town open space. In this scenario owners would not be required to sell the entire value of their property. By the same token, the land trust would not have to maintain the total value of the development rights of all property owners.

Town Actions

- The Town establishes a land trust. The trust would pay Boardwalk property owners fair market value for the development. As developers come in to make improvements and build in the district they replenish the moneys spent by the Town from the trust to purchase the open space.
- The Town determines a development area and an open space for the process.

**The trust would be voluntary as PDR's and TDR's are not available in North Carolina State legislation at present but could be feasible in the future. To date, North Carolina has only used the purchase and/or transfer of development rights in cases of access within public right-of-ways. The NCDOT has been the primary recipient of these development rights.

SCENARIO #4

Town Purchase of Property

In scenario four, the Town would purchase the Boardwalk area using grant funding. As the owner of the waterfront area, the Town would be free to develop the land as it is proposed in the Master Development Plan. (Note: Kure Beach is an example of the actions proposed in this scenario.)

Town Actions

- The Town prepares grant proposals to raise money for the purchase of the property.
- The Town develops the Boardwalk area according to what is proposed in the Master Development Plan.

5 Remedial Actions

Regardless of the implementation strategy, there are several short term actions that could lead toward overall improvement of the Boardwalk Core Area.

IMPROVEMENTS

The Town can continue ongoing work with the established Boardwalk Makeover group to complete cosmetic improvements to the CBD area. Proposed improvements to date include:

- Pressure washing and repair of concrete walks
- Acquire CAMA landscaping permit and install landscaping materials
- Construct planter boxes
- Install banners and pennants
- Replace lighting elements
- Renovate the bathhouse
- Install drinking water fountains
- Paint and repair of gazebo, trash cans, planters and benches
- Install bike racks

BUSINESS IMPROVEMENT DISTRICT (BID)

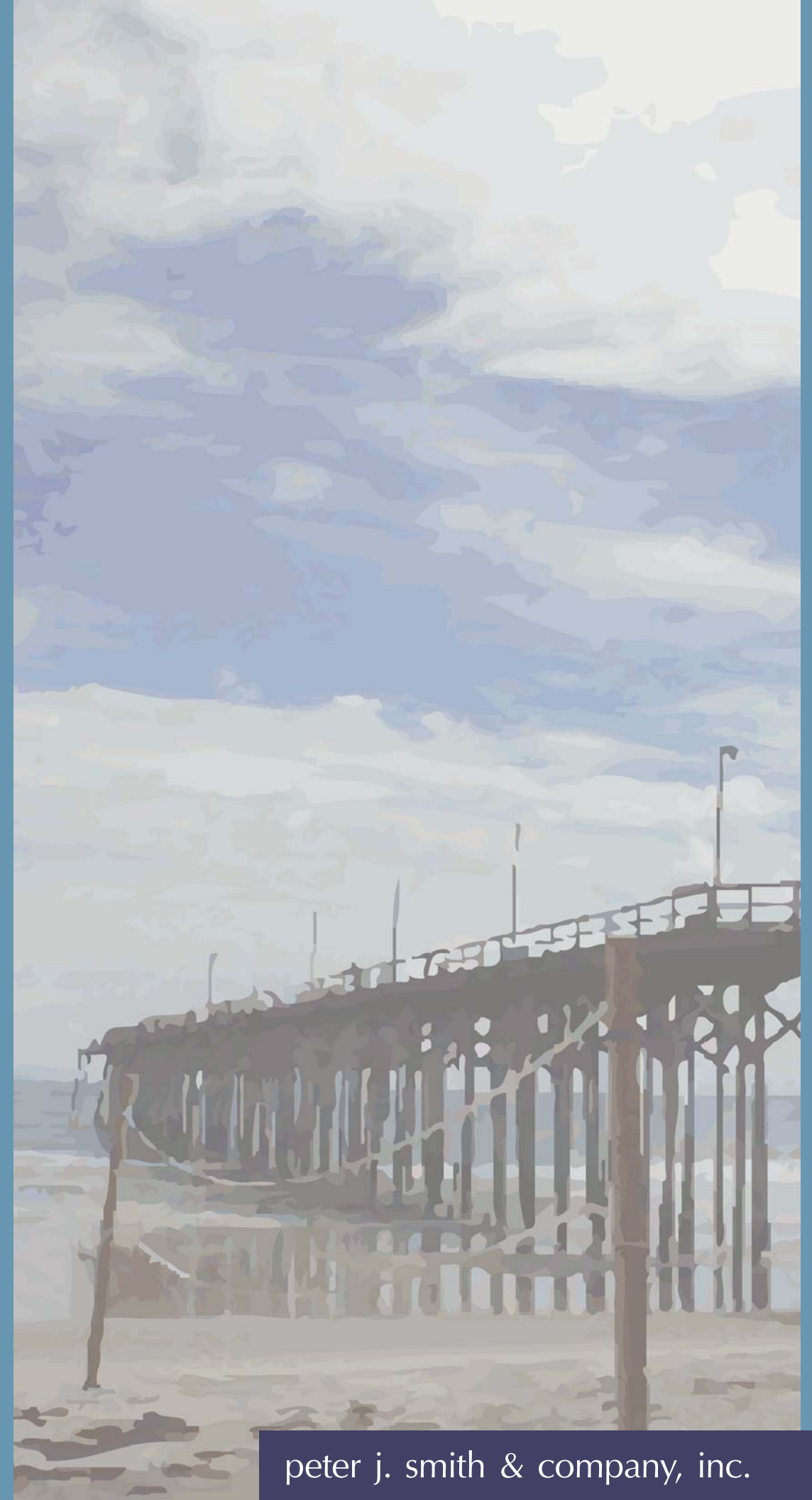
Forming a Business Improvement District (BID) and/or business association would enable the continued financing of special services and improvements within the Boardwalk Core Area. 51% of property owners within the Boardwalk Core Area must participate by contributing a special assessment to the Town annually. This assessment would then be used to fund necessary improvements.

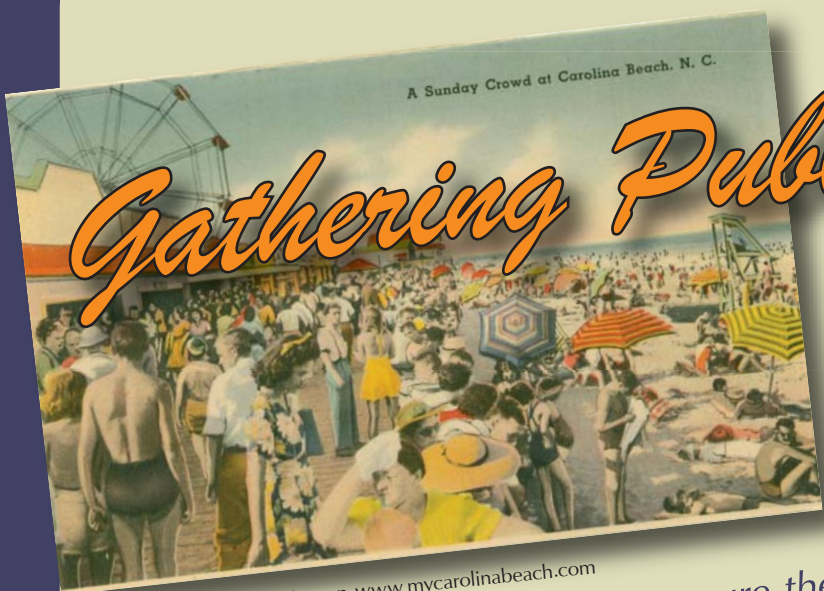
Boardwalk owners also have the option to form a business association to enable collaborative initiatives including:

- Holiday and event-related promotions
- Establishment of common hours including added shopping hours during holidays and throughout the year
- Participation in cooperative advertising programs, developing a common promotional theme aimed at bringing customers to the district
- Cooperative membership in business development organizations including the Chamber of Commerce or other organizations offering members access to reduced cost insurance, as well as training and informational and staff/executive development opportunities
- Public forums or speaker series on matters of interest to merchants as well as others

RENOVATIONS

According to CAMA regulations, Boardwalk owners can make structural improvements to their buildings with a value of up to 50% of the tax or appraised value of the structure or owners can demolish their properties and rebuild, on an elevated platform, to a height of five stories.





Postcard from Elaine B. Henson www.mycarolinabeach.com

...through various techniques to ensure the public opinion is heard

PROJECT METHODOLOGY

Extensive consultation and public input was sought over the course of study, providing a foundation for the Master Development Plan. This section highlights some of the findings from the public input conducted in the following components:

1. Public Input Diagram
2. Height Assessment

Input Techniques

As illustrated in the charts, the following techniques were employed to gather input into the study and have been summarized as follows:

Steering Committee Vision Session

The project was initiated in August 2007 with a Vision Session with the project Steering Committee. The fundamental purpose of the session was to brainstorm ideas and opportunities to define a vision for Carolina Beach.

Interviews with Elected Officials

All elected officials were interviewed to identify what they intended the study would achieve for the Town.

Focus Groups

A series of five focus group sessions were held with experts invited by the Town of Carolina Beach to address core issues to the study.

Public Meetings

Four public meetings were held during the study process. The sessions were interactive and focused on identifying key issues/opportunities, building heights, prioritization, and gathering comments on draft plans. All sessions included a comment/question period and allowed participants to provide written comment.

Stakeholder Interviews

Project Stakeholders identified by the Town of Carolina Beach were interviewed during the study to determine the relationship between their interests and the Master Development Plan.

Community Survey

More than 600 community surveys were mailed to randomly selected Carolina Beach residents; 185 responses were received.

Business Survey

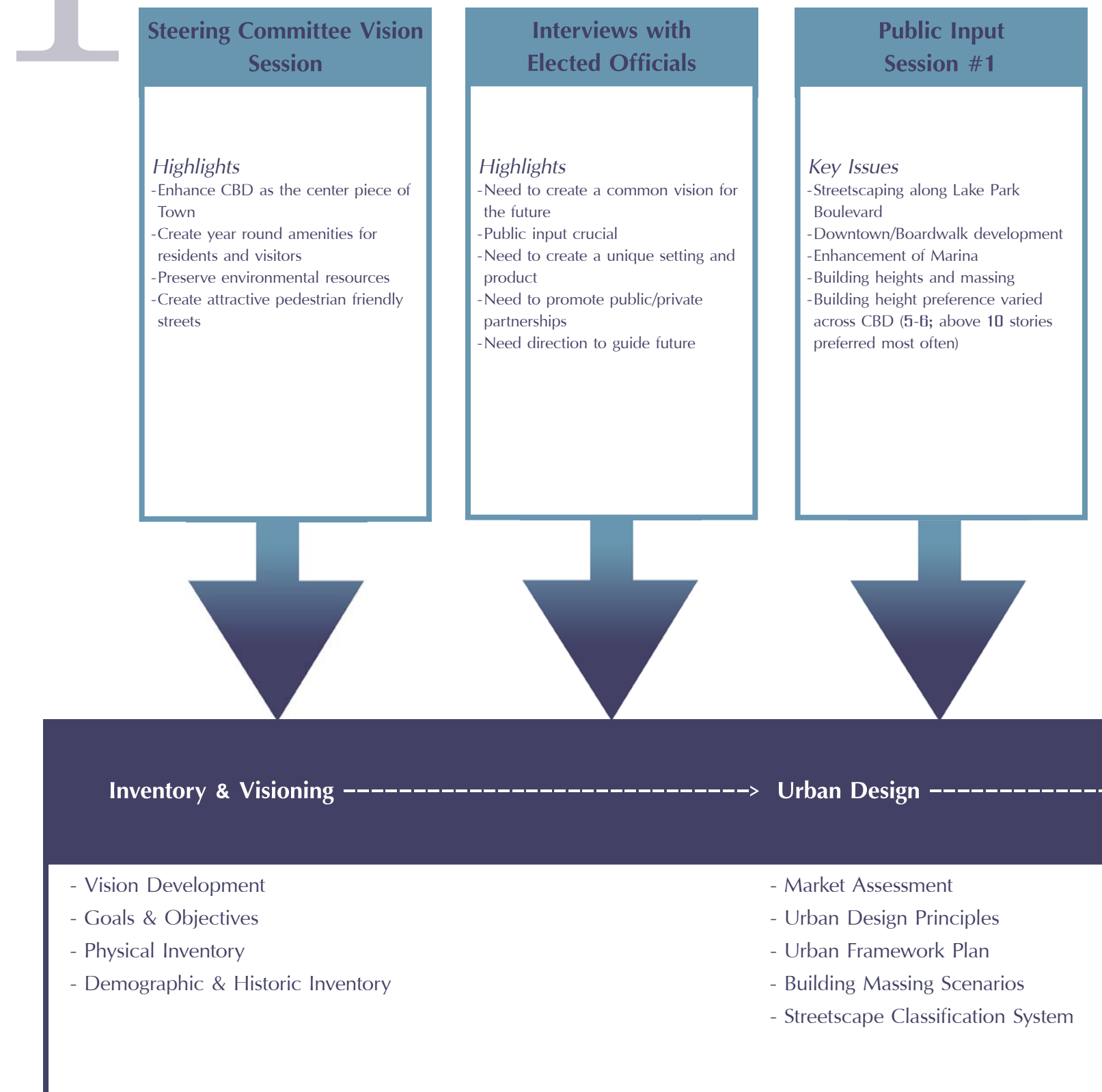
All registered business in the Carolina Beach (320) were mailed a survey, 85 responses were received.

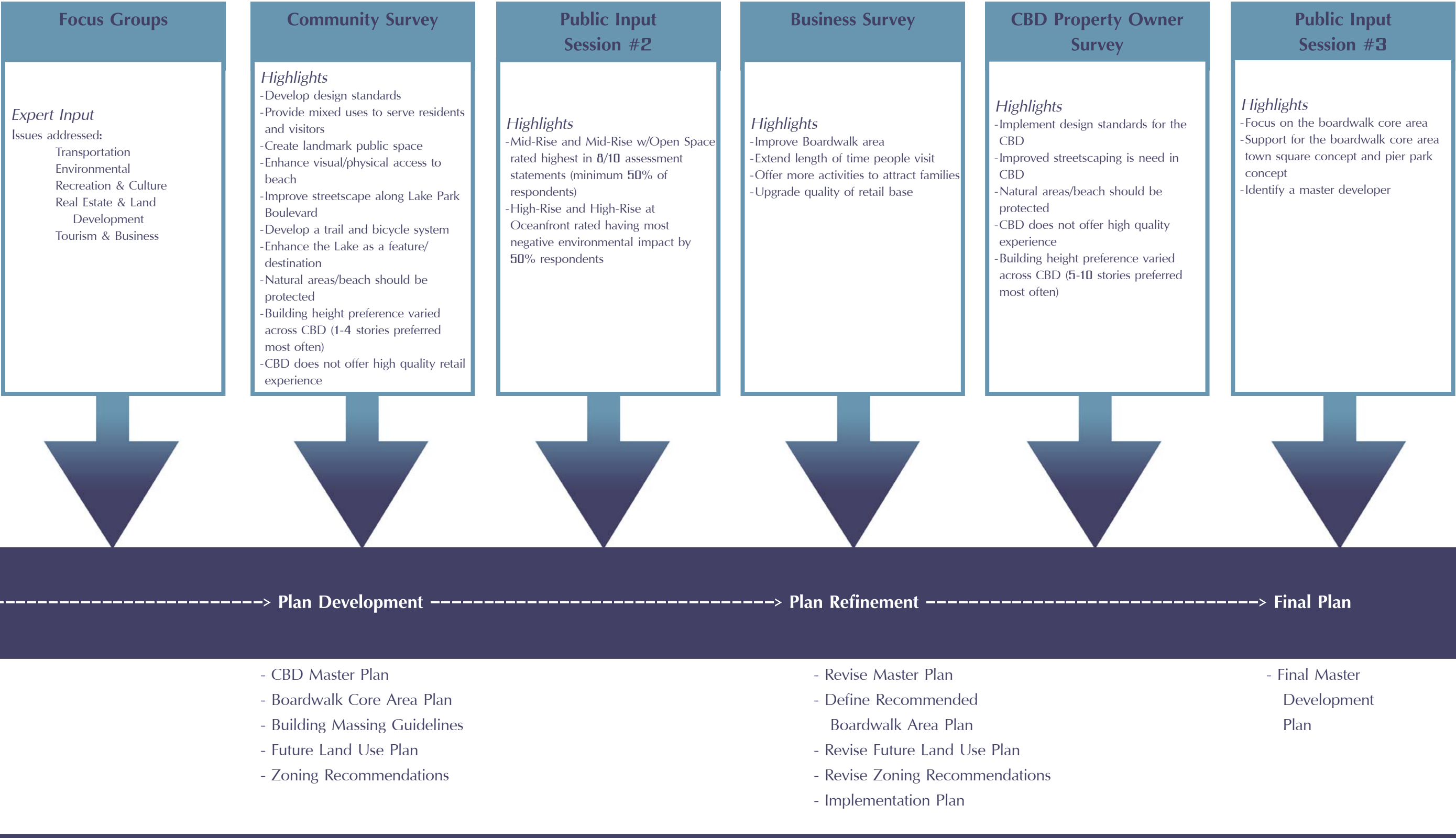
Property Owner Survey

All property owners (85) in the CBD were mailed a survey, 21 responses were received.

Public Input Diagram

The following flowchart illustrates the planning process and summarizes the key input provided during the course of study.





2 Height Assessment

A series of building massing scenarios were prepared to solicit public comment on building heights in the CBD. Using 3-dimensional computer modeling and animations. Lowrise, Midrise, Midrise Public Space, Highrise and Oceanfront Highrise scenarios were prepared and shown at the second public consultation session in November, 2007.

MIDRISE SCENARIO (4-7 STORIES)



LOWRISE SCENARIO (1-3 STORIES)



MIDRISE PUBLIC SPACE SCENARIO (4-7 STORIES)



HIGHRISE SCENARIO (10 STORIES)



EVALUATION OF THE SCENARIOS
Criteria were developed to assess each scenario. The criteria related directly to the key issues identified by the public at the first public consultation session. Results from the first public input session are shown on Figure 23. During the second public meeting, participants documented their comments regarding the five scenarios on Assessment Forms. The results were tabulated and are shown in Table 2.

Figure 23: Results From Public Meeting #1: Desired Building Heights for CBD Zones

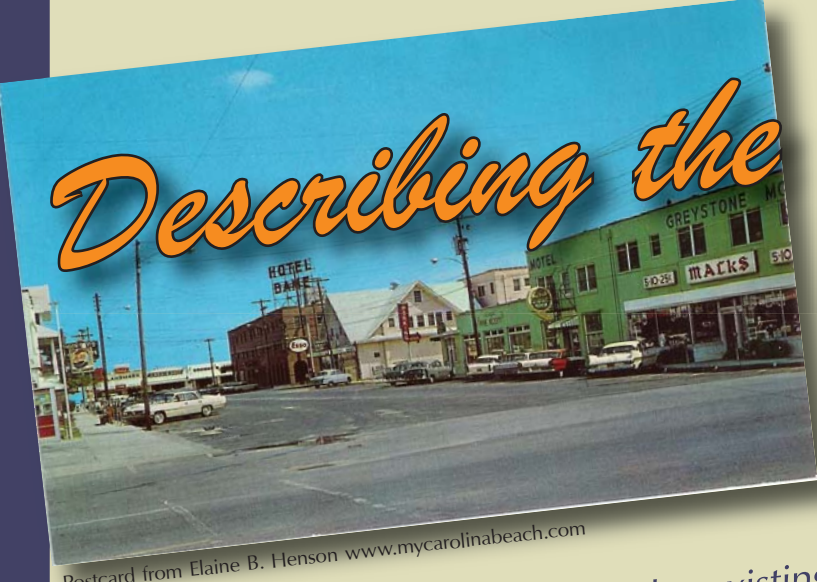


OCEANFRONT HIGHRISE SCENARIO (10 STORIES)



Table 2: Scenario Assessment Results from Public Meeting #2: Percentage of Respondents Who Strongly Agree/Agree with the Scenario Assessment Statement

Scenario Assessment Statement	Scenario 1 Lowrise	Scenario 2 Midrise	Scenario 3 Highrise	Scenario 4 Midrise Public Space	Scenario 5 Oceanfront Highrise
Creates a desirable character for the CBD	40%	61%	30%	59%	28%
Encourages investment to revitalize CBD	31%	63%	56%	47%	32%
Provides adequate public access to the oceanfront	50%	55%	30%	67%	26%
Provides adequate public open space at the ocean	42%	49%	20%	71%	20%
Improves pedestrian linkages to the beach	29%	37%	20%	67%	18%
Improves vehicular circulation	19%	24%	22%	29%	18%
Provides adequate views to the oceanfront	40%	57%	30%	73%	20%
Negatively impacts environmental quality	14%	29%	50%	8%	50%
Provide attractions that appeal to residents/visitors	35%	71%	36%	61%	36%
Provides a focus and enhances the Town's identity	28%	57%	36%	57%	26%



Postcard from Elaine B. Henson www.mycarolinabeach.com

...by conducting an inventory of the existing community conditions

EXISTING CONDITIONS REVIEW

Essential to creating the Master Development Plan is an understanding of the current circumstances of the community. The following section provides a review of the existing conditions in Carolina Beach that serve as a basis for planning. The components of this review include:

- 1. Population Growth
- 2. Infrastructure Inventory
- 3. Zoning Review

Community Population Growth

Carolina Beach is a coastal town located in southeastern North Carolina. Between Cape Fear River and the Atlantic Ocean, the Town possesses a unique environment that has attracted residents and visitors to the Town year after year. Today the Town continues to grow, in fact the NC State Demographer estimated population in 2006 to be 5,796, a growth of 23% since 2000. While a portion of this growth can be attributed to annexation by the Town, annexation accounts for less than half the total growth.

In addition to a permanent population, also another important planning consideration in Carolina Beach is the seasonal population. The 2007 Town of Carolina Beach CAMA Land Use Plan provides three estimates of the seasonal population that range from an additional population of approximately 3,000 to an additional population of approximately 8,000.

Table 3: Demographic Profile

	Carolina Beach	Kure Beach	Wrightsville Beach	New Hanover County	North Carolina
Estimated Population July 2006*	5,796	2,048	2,663	184,120	8,860,341
Population 2000	4,729	1,498	2,719	160,307	8,049,313
Population 1990	3,631	618	2,797	120,284	6,628,637
Population % Change from 1990 to 2000	30.2%	142.4%	-2.8%	33.3%	21.4%
2000 Median Age	43.6	50.5	37.1	36.3	35.3
2000 Median Income	\$37,662	\$47,143	\$55,903	\$40,172	\$39,184
Percentage of Population Over 25 with a High School Diploma	89%	91%	99%	86%	78%

Source: US Census Data

*Source: NC State Demographer (<http://demog.state.nc.us/>)

Table 4: Vacancy Status in 2000

	Carolina Beach	Kure Beach	Wrightsville Beach	New Hanover County	North Carolina
Occupied	56.6%	46.0%	43.5%	85.6%	88.9%
Owner occupied	67.7%	73.8%	55.2%	64.7%	69.4%
Renter occupied	32.3%	26.2%	44.8%	35.3%	30.6%
Vacant	43.4%	54.0%	56.5%	14.4%	11.1%
For rent	22.1%	26.9%	32.1%	34.0%	24.0%
For sale only	5.5%	6.0%	2.4%	13.5%	13.3%
Rented or sold, not occupied	1.2%	0.5%	0.0%	5.2%	8.4%
For seasonal, recreational, or occasional use	70.4%	66.6%	64.2%	41.0%	37.5%
Other vacant	0.8%	0.0%	1.3%	6.2%	16.9%

Source: US Census Data

Population Characteristics

The median age of Carolina Beach is significantly higher than both the County and the State. Only Kure Beach, which more than doubled its population between 1990 and 2000, has a higher median age than Carolina Beach. Because Carolina Beach, Kure Beach and Wrightsville Beach are oceanfront communities, there may be an increase in the retired population.

The 2000 median income in Carolina Beach is lower than the two oceanfront comparison communities, the County and the State.

Carolina Beach has a greater percentage of 25 or older population with a high school diploma than does the County or the State.

While Carolina Beach has a large percentage of vacant housing units compared to the County and the State, it has less vacant units than the two oceanfront comparison communities.

Carolina Beach has a greater percentage of multi family units with between 5 to 49 units than all the comparison communities.

Table 5: Units in Structure in 2000

	Carolina Beach	Kure Beach	Wrightsville Beach	New Hanover County	North Carolina
Single Family Detached	42.8%	61.2%	31.3%	60.7%	64.4%
Single Family Attached	4.5%	8.7%	10.2%	5.8%	3.0%
Multi Family (2 Units)	7.1%	5.0%	23.2%	5.1%	2.5%
Multi Family (3 or 4 Units)	4.0%	4.7%	9.9%	4.7%	3.2%
Multi Family (5 to 9 Units)	10.9%	9.0%	5.7%	6.6%	4.3%
Multi Family (10 to 19 Units)	14.0%	5.3%	7.4%	5.5%	3.2%
Multi Family (20 to 49 Units)	8.3%	1.7%	3.7%	2.8%	1.4%
Multi Family (50 or more Units)	5.9%	0.0%	8.1%	2.6%	1.4%
Mobile home	2.5%	4.5%	0.5%	6.1%	16.4%
Boat, RV, van, etc.	0.0%	0.0%	0.0%	0.1%	0.2%

Source: US Census Data

Infrastructure Inventory

The following is an overview of the infrastructure in the study area. It is not intended to be a comprehensive analysis, but rather a summary that describes the current conditions and planned improvements in the study area. The overview will address whether the infrastructure in the study area presents any opportunities or constraints for planning purposes.

A more detailed analysis of infrastructure is contained in the Town of Carolina Beach 2007 CAMA Land Use Plan.

MANAGEMENT

Municipal infrastructure in the Town of Carolina Beach is under the jurisdiction of the Operations Department.

The Department's mission is to operate and maintain all divisions safely and in compliance with State and Federal Rules and Regulations. Other types of infrastructure, such as the telecommunications and cable lines and the electric service infrastructure, are owned by private utility companies. Trash pickup is also provided by a private company.

Under the Department there are several Divisions including the Divisions of:

Water:

Produces and delivers water to customers, while continuing to improve and upgrade its wells and groundwater system.

Wastewater Collection:

Provides a wastewater collection system and operates and maintains 14 pump stations.

Wastewater Treatment:

Operates, maintains and manages the Waste Water Treatment Plant which is a regional facility that treats wastewater produced by the Town of Carolina Beach, the Town of Kure Beach and Fort Fisher.

General Maintenance:

Maintains and constructs streets, parking lots and associated drainage; provides vegetation control; maintains/provides signage, markings and traffic safety control; cleans streets, public buildings, grounds and maintains the town lighting system.

Storm Water:

Maintains and constructs drainage and provides large equipment needs for the implementation of town projects.

Environmental:

Keeps all area of the Town, including beach areas, Central Business District, marina and roadside, free of debris and vegetation overgrowth. Also provides trash receptacles and benches and installs sand fencing.

Mowing:

Responsible for mowing all the rights-of-way and other town property.

Fleet Maintenance:

Provides maintenance/repair of town vehicles and equipment.

WATER SYSTEM

Water Source

The source for municipal domestic water in the Town of Carolina Beach is from 14 separate wells that range in depth from 120 to 190 feet and draw water from the Castle Hayne aquifer. At six of those wells, the water is treated and chlorinated directly at the well site before being pumped into the distribution system. At the remaining wells, water is pumped to a separate location where it is treated and stored in two half million gallon elevated water towers and one million gallon ground level reservoir. Water pressure in the system is maintained at approximately 55 pounds per square inch. Some residents have private wells for irrigation water. Private wells must be less than 60 feet in depth and the Town requires a special permit for an irrigation well.

The Town routinely monitors for over 150 contaminants in the water according to Federal and State laws. The Town is required to publish an Annual Drinking Water Quality Report which details from where the water comes, what it contains and how it compares to standards set by regulatory agencies. The report is available online through the Town's website.

Water Distribution System

The Town of Carolina Beach owns and operates a network of water pipes approximately 57 miles in length to distribute treated water to its customers. There are approximately 3,800 water service accounts and all customers have a meter to measure the volume of water used. Backflow preventers are required for irrigation systems and restaurants to prevent contaminated water from backing up into the supply lines.

Implications for Development

During peak demand, the Town is currently hovering around its maximum ability to treat and distribute water. In addition, the age of current wells and the potential for maintenance issues could further hamper production of water. To address this concern the Town is planning to construct a new three million gallon storage tank which should be completed in 2009. In addition, two or three more wells are also planned to be added to the system.

The Town is planning to complete a 12 inch looped waterline around the Town. Looped lines allow water to flow from two directions thereby reducing pressure reductions through friction loss. One key segment of pipe that the Town hopes to have completed in order to form the looped system is a section of line in the north end of Town. The Town will work with individual developers to build portions of this line along with their projects and the Town may build some segments themselves. With these improvements, the Town will be positioned to allow new development to occur in the project area without the need for periodic rationing.

WASTEWATER SYSTEM

All properties in the Town of Carolina Beach are connected to the sanitary sewer system. There are no known on-site wastewater disposal systems such as septic tanks. The Town of Carolina Beach's wastewater collection system has 14 lift stations, 30 miles of 10" and 8" gravity sewer lines and five miles of force main lines that serve both the Town of Carolina Beach and Kure Beach.

The Town's wastewater treatment facility is located on the west edge of the Town, west of Dow Road. The facility has a permitted flow of 3.0 million gallons per day (mgd) though flows generally range from 1.6 to 2.1 mgd. Effluent is partly disposed of through a spray irrigation/reclaimed water utilization system on a 6.7 acre field adjacent to the treatment facility. The facility is permitted to spray a maximum average daily volume of 30,000 gallons of treated effluent water per day on the field, which is seeded with Bermuda grass that is used to make sod for landscape purposes.

Implications for Development

As the population of Carolina Beach and Kure Beach continues to grow, the existing wastewater treatment plant will reach its capacity and an expansion will be necessary. Such expansions are sometimes mandated by the State as the plant is near its capacity. The plant has an expansion in the planning process to be completed in the next three to five years that will increase its capacity to 4.0 mgd. According to an analysis of projected population growth and the associated increase in wastewater volumes in the 2007 Town of Carolina Beach CAMA Land Use Plan, the expanded plant will meet the needs of the Town through the year 2020.

Stormwater System

The Town of Carolina Beach is responsible for insuring that stormwater is managed to prevent flooding and contamination of water quality in the surrounding waterways. To this end, the Town owns and operates a stormwater collection system that diverts stormwater off of surfaces such as streets, building roofs, parking areas and landscaped areas and directs it to the surrounding waterways. In addition, the Town regulates development to insure that it does not increase pollution or flooding.

Regulatory Controls

As stated in the Town of Carolina Beach 2007 CAMA Land Use Plan, the Town has a Stormwater Management Ordinance that is structured on the North Carolina Division of Environmental Management requirements set forth in 15A NCAC 2H.1003. This section of the administrative code regulates the density of developments and mandates standards for engineered stormwater controls. The Carolina Beach Stormwater Management Ordinance was last updated in 2008, consistent with state requirements for Phase II, to better adapt to local conditions and trends. The regulations provide for management of existing developments, future developments and other construction activities, as well as instituting mandatory requirements to prevent careless or illicit pollution to surface waters. As stated in the Town's Stormwater Management Ordinance,

"It is the policy of the Town that all developed land within the Town have sufficient stormwater management controls so as to ensure the adequate protection of life and property. To this end, at a minimum, developed land within the Town shall be provided with management of post-development run-off from a ten-year frequency storm, so that the on-site and off-site effects of development are the same or better than the pre-development state."

The stormwater control regulations apply to any development creating 500 square feet or more of impervious surface area and all new major subdivisions. Stormwater discharge permits are required prior to the approval of the above activities. Application for a permit requires a detailed stormwater management plan that shows on-site stormwater management facilities, or, off-site stormwater management facilities. Development utilizing on-site stormwater management facilities is permitted and encouraged to implement the following strategies listed in order of Town preference:

- 1) Flow attenuation by use of open vegetated swales and natural depressions, except that open vegetated swales as roadside ditches in lieu of curbs and gutters are not allowed;
- 2) Infiltration;
- 3) Retention (permanent pool structures); and
- 4) Detention (non-permanent pool structures)

The utilization of off-site stormwater facilities typically requires payment of a fee in lieu of construction of on-site management facilities. Fees in lieu, if approved and accepted by the Town for off-site stormwater management, may be used by the Town for acquiring land and easements; or to finance the study, design, purchase, construction, expansion, repair, maintenance, landscaping or inspection of public stormwater management facilities.

In addition to regulations concerning the quantity of stormwater discharge, there are regulations regarding the quality of the discharged stormwater since pollutants and contaminants found in stormwater runoff can include sediment from construction sites, nutrients from fertilizers, bacteria from animal and pet waste, oil and grease from cars and toxic chemicals from everyday pesticides. Most of the stormwater quality regulations originated with the federal government and are administered by the State.



Lift station along Woody Hewitt Avenue



Carolina Beach water storage tanks



Carolina Beach water storage tank

The National Pollutant Discharge Elimination System (NPDES) program was established under the federal Clean Water Act and then delegated to the Division of Water Quality for implementation in North Carolina. Carolina Beach is regulated by part II of these regulations since it is listed by the State as being part of the Wilmington Urbanized Area. To comply with these regulations, the Town must file a permit with the State that includes a Storm Water Management Program Plan that describes the Best Management Practices for each of the following six measures:

- Public Education and Outreach
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post Construction Runoff Control
- Pollution Prevention/Good Housekeeping

The State Stormwater Management Program requires developments to protect sensitive waters by maintaining a low density of impervious surfaces, maintaining vegetative buffers and transporting runoff through vegetative conveyances.

Stormwater Collection System

The collection system that is owned and operated by the Town consists of numerous catch basins, manholes, drainage pipe and swales. There are also four detention/retention ponds – three of which are maintained by the Town and one by a private developer. Carolina Beach Lake also serves as a stormwater basin. Most of the stormwater collection system in the Central Business District drains to Carolina Beach Lake. When the weather forecast calls for a heavy rainfall that may cause flooding, the lake is pumped to the Cape Fear River to create storage capacity.



Freshwater Ecosystem interpretive sign at Carolina Beach Lake

- Proposed Improvements**
- The Town of Carolina Beach has identified the need for several stormwater system improvements. These projects are all long term and are not in the **2008** Town budget.
- Wilmington Beach Street and Drainage Project – Wilmington Beach was annexed by the Town in 2000 and the area is lacking in drainage. Future development of this area will depend upon US Army Corps of Engineers approval and the Corps will require a stormwater treatment system among other improvements such as wetland mitigation.
 - Stormwater Improvements at Myrtle Grove Sound – The Sound currently has approximately **35** stormwater outlets leading to the basin. With the creation of the Harbor Management Plan, the public has expressed concern that the outfalls are degrading water quality. Treatment structures could be installed at the outfalls to address this concern.
 - Dredging of Carolina Beach Lake and Pump Upgrades – The Lake is used as a stormwater retention basin, however, years of silting in have reduced its capacity. The Town’s search for grant money to pay for the dredging has been unsuccessful to date.

Implications for Development

There is currently room in the storm drainage system for expansion that may occur in the Town due to regulations that require developments to hold runoff rates to no more than pre-development conditions. The proposed improvements described above will improve the quality of stormwater and reduce the likelihood of flooding from a catastrophic event but will not restrict new development if not completed.



Carolina Beach Lake is used for the storage of stormwater

SOLID WASTE DISPOSAL

Curbside residential and commercial sanitation service and recycling pickup is contracted to Waste Industries, Inc., a private waste disposal company. Each customer in the Town is given a special roll out container that must be used for refuse and a smaller tub for recycling. Recyclables that are collected include some metals, plastics and newspapers.

Once a week, Town employees will remove non-household refuse placed at curbside for an additional charge payable to the Town. This gives customers an option for disposing of items such as yard waste and large items such as appliances, etc.

OVERHEAD UTILITIES

Most of the electric and telephone infrastructure in Carolina Beach is overhead. In a vision session for this project, the public expressed the concern that the overhead lines, particularly in the Central Business District, cause a cluttered appearance. According to a former Town Engineer, it is technically feasible to bury the overhead utilities. There are a number of options as to how to handle electrical switch gear and meters in a flood prone area such as elevating them, or placing them in a watertight vault. There are two advantages to burying the overhead utilities – one is the improved appearance and the other is that there would be a reduced likelihood of power outages during a hurricane. The biggest hurdle to burying the existing overhead utilities in currently developed areas is funding.

Electric Service & Telecommunications

Electric distribution in Carolina Beach is provided by Progress Energy and all properties have access to electric service. There are now a variety of providers for telecommunications in Carolina Beach ranging from land lines to cellular phone service. This is a dynamic market and new suppliers are being added at a rapid rate. Cellular coverage is reported to be good but variable depending on the individual provider. BellSouth Telephone owns the physical phone lines. A cable television franchise is operated by Charter Communications, which has an office in Carolina Beach and a district office in Holly Ridge, North Carolina.



Overhead utilities along Carolina Beach Avenue

TOWN PROPERTIES

The Town of Carolina Beach owns and/or manages a system of parks, trails, beach access sites and opens space for use by its residents. The following is a brief description of that system. To thoroughly assess the current state of the system and to determine goals for the future, the Town has commissioned a Parks, Recreation and Open Space Plan which as of the fall of 2007, is in a draft form. The Plan includes a more detailed analysis of the parks listed below and recommendations for each.

Town Parks

There are several developed parks managed by the Town that consist of:

Mike Chappell Park

This is the Town's major sports park located on South Dow Road which features four lighted baseball and softball fields, a batting cage, a soccer field, two tennis courts, a volleyball court, playground equipment, a dog park, a new skateboard park, picnic areas and a restroom, concession building.

Carolina Beach Lake Park

This is the Town's showcase park due to its picturesque quality and visibility from Lake Park Boulevard. It is 11 acres in size and features, a greenway trail around the lake, gazebos and observation decks, a sheltered picnic area, an amphitheater, a veteran's memorial island and a playground.

Freeman Park

This is a large park with approximately 1.4 miles of beachfront on the north edge of the Town. Though most of it is outside the Town limits, the Town manages it since the only land access is at the north end of Canal Drive. The beach is open for use by four wheel drive vehicles and the Town charges for a daily or annual permit to access the park. Overnight camping and fires are permitted in designated areas.

McDonald Park

This is a small, half-acre playground park that, according to the Parks, Recreation and Open Space Master Plan, lacks imaginations and is badly in need of renovation.



Aerial view of Mike Chappell Park



Carolina Beach Lake Park



The entrance to Freeman Park



Downtown Plaza at Cape Fear Blvd.



Park with the Municipal Marina in the background

Town Public Spaces

In addition to parks, the Town has developed the following public spaces:

Downtown Plaza

This is a small plaza at the east end of Cape Fear Boulevard at the intersection of Canal Drive. The Town has taken the former parking area and landscaped it, installed tables and benches and built a gazebo/bandshell for concerts, lectures, etc. The plaza occupies a key piece of property which is about one block from the beach and on the south end of the Boardwalk Core Area.

Municipal Marina

The Town owns the Municipal Marina located at the southern end of the Myrtle Grove Sound. According to the draft Town of Carolina Beach Water Use and Harbor Management Plan, the Town rents 29 slips to commercial boats for fishing and sightseeing. In addition, there is one floating dock at the southwest corner of the marina that can be used by private boats for loading and unloading. There is a two-hour time limit for use of this dock. No other facilities are provided for transient boats by the Town at this location.

There is a walkway that surrounds the south, east and west side of the marina providing access for the public to walk around and for charter boat customers to stage in. The Town has provided ample metered parking near the marina in several lots. There is also a small park at the south end that features benches, landscaping and planters and provides an attractive amenity for passing motorists.

Boardwalk

The Town owns the boardwalk that is the namesake of the commercial area known as the Boardwalk Core Area. The boardwalk is approximately 750 feet in length running between the ends of Harper Avenue and the end of Charlotte Avenue, now occupied by the Courtyard Marriott. The boardwalk has four beach access walkways that align with roads or pedestrian walkways. Amenities include a shower and restroom. The boardwalk is a popular place for visitors to stroll and enjoy views of the adjacent ocean.

Trails

Snow's Cut Bike Path

This is a newly constructed stone surfaced trail about a half mile in length that runs along the south edge of Snow's Cut built on US Army Corps of Engineers property. The trail offers scenic views in a natural setting.

Town of Carolina Beach Greenway

This is a new ten foot wide asphalt paved trail about one mile in length that runs parallel to Old Dow Road. The trail crosses the Carolina Beach State Park entrance road and terminates on the north end at the end of Snow's Cut Bike Path completing a connection.



The Boardwalk



The entrance to Snow's Cut Bike Path



The south entrance to the Carolina Beach Greenway



Sailfish Lane Beach Access

Recreation Center

In addition to parks, the Town has a 22,000 square foot indoor recreation center available for use by residents. The facility includes basketball, racquetball, weights, cardiovascular room, foosball, ping pong, offices and meeting rooms.

Beach Access Sites

The Town of Carolina Beach has 21 oceanfront access sites along 3.5 miles of beach. The importance of these beach access sites cannot be overstated because they allow most residents and visitors to be within walking distance of an access point and help to create the beach atmosphere that attracts visitors and residents alike. The sites vary in terms of the level of development and size. The least developed sites have an access sign and a boardwalk crossing the fragile dunes. Many of the sites have metered parking and some have restrooms and showers. The sites are generally evenly distributed along the beach and are usually local street ends (paper streets) that create a public right-of-way.

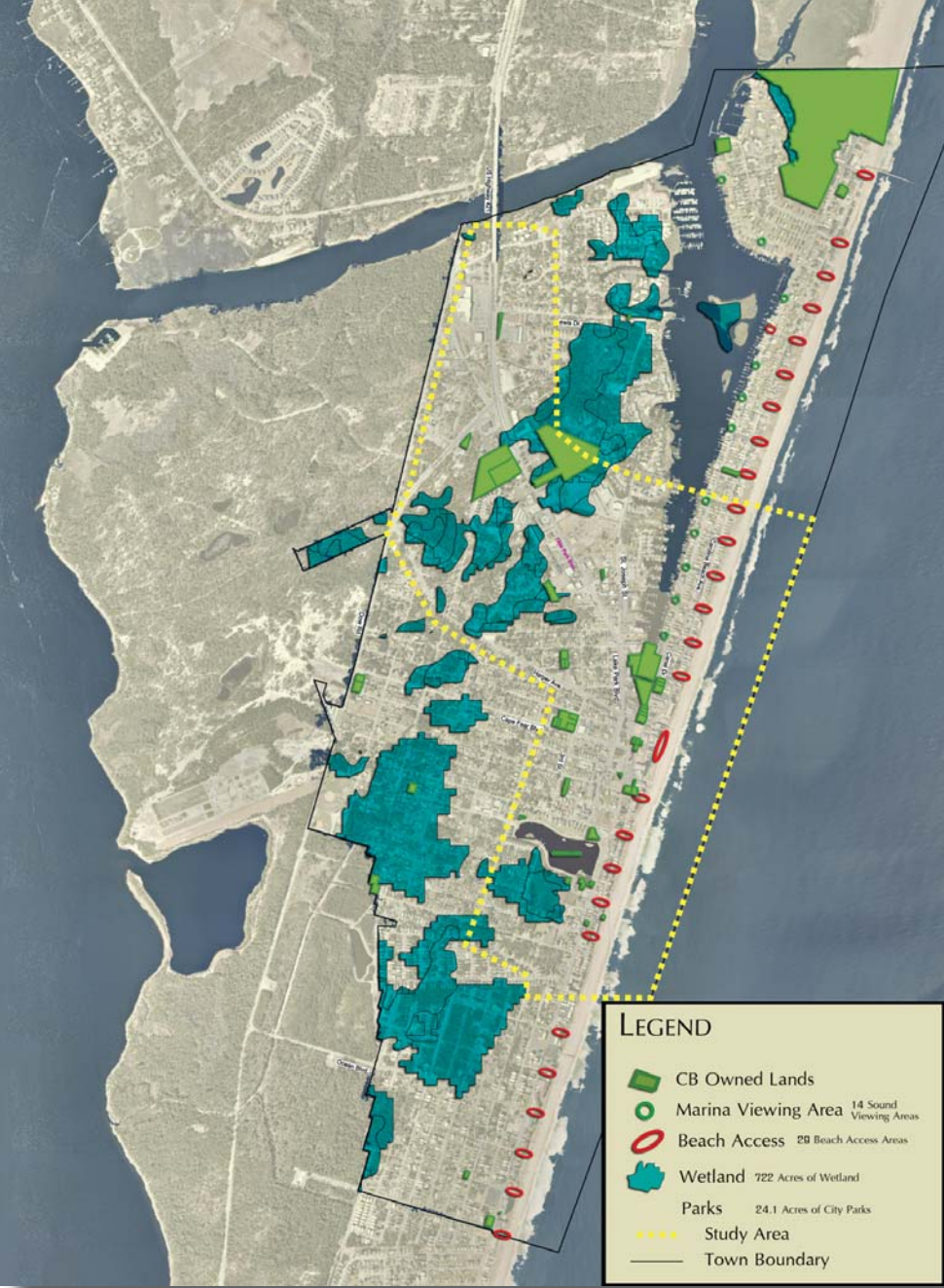
Harbor Access Sites

There are 14 public access sites within Myrtle Grove Sound, Carolina Beach's harbor area, that are road ends similar to the beach access sites. Unlike the beach access sites, these sites are generally not developed and are not well known to the public since many are landscaped and maintained by adjacent property owners. The Town has commissioned a Water Use and Harbor Management Plan which is currently in a draft form that lists each of the access sites and provides specific recommendations for their development. Recommendations for the sites vary, but generally include marked parking, signage, benches, bike racks and sometimes boat moorings or canoe and kayak launches. If implemented, these recommendations will create a tremendous asset for the public.

Town-owned Open Space

Town-owned parcels are scattered throughout the Town, including a large piece of undeveloped land west of Lighthouse Drive which is also a wetland. Besides the Town Hall and Recreation Center site, the largest developed Town parcel is the marina area which also includes a small park and several municipal parking lots. Another significant Town-owned parcel is the current site of the water storage tank and library on Cape Fear Boulevard. Other properties that are maintained by the Town are listed as right-of way properties.

Figure 24: Open Space and Environment Inventory Map



BOARDWALK CORE AREA PROPERTY VALUATION

The Boardwalk Core Area consists of the property between Harper Avenue, Cape Fear Boulevard, Lake Park Boulevard and the beach. According to the North Hanover County property assessments for 2007, this property is valued at \$9,430,634.00. Within this property, the Boardwalk Core Area West, between Lake Park Boulevard and Canal Drive, is valued at \$3,737,595.00; the Boardwalk Core Area East, between Canal Drive and the beach, is valued at \$5,693,039.00.

REGIONAL PARKS, OPEN SPACES AND PUBLIC FACILITIES

In addition to the Town-owned parks, trails and open space there are a number of significant regional facilities:

Carolina Beach State Park

This park is on the northwest side of the Town and provides approximately 700 acres of parkland with a visitor center, over six miles of nature trails, ponds, campgrounds, fishing platforms and a boat launch. The park is free for visitors but there are fees for using the boat launch and camping.

North Carolina Wildlife Resources Commission Boat Launch

This site is at the north end of Carolina Beach at the eastern end of Snow's Cut. The site includes a boat launch, picnic facilities and a fishing platform.

Fort Fisher State Historic Site and Recreation Area

This site located south of Kure Beach has the Fort Fisher Civil War Museum, a Visitor Center, seven miles of beach, a beach access site for vehicles, a boat ramp, concession stand, hiking trails, restrooms and showers.

North Carolina Aquarium at Fort Fisher



Source: North Carolina Aquariums, <http://www.ncaquariums.com/about.htm>

The Fort Fisher facility is one of three North Carolina Aquariums which are a division of the North Carolina Department of Environment and Natural Resources. The Aquariums are accredited by the American Zoo and Aquarium Association. Over one million visitors a year visit these facilities. The Fort Fisher facility includes numerous themed displays, classrooms, a gift shop and a large auditorium for school groups, special demonstrations and lectures.

Sunny Point Conservation Area

This large piece of open space is located on the west side of the Town along the Cape Fear River within the Town's Extra Territorial Jurisdiction (ETJ). Most of the property is undeveloped, except for the Town's wastewater treatment plant that is located in this area. The reason that the property is largely undeveloped is that it is in the buffer zone of the Sunny Point Military Ocean Terminal - the largest ammunition port in the nation and the Army's primary east coast deep-water port. This is where munitions are brought in by truck or train and loaded aboard ships bound for Europe. The port has 16,000 acres of property and is surrounded by a large undeveloped buffer zone and huge sand berms for safety. Lands around the Port are managed as forest and fish & wildlife areas. According to planners at Sunny Point, the military's focus for the conservation lands are primarily on maintaining safety for the public, however, they will consider proposal for other uses on a case by case basis.

ROADS AND PARKING

Circulation Hierarchy

A hierarchy of roads was established for this project using a series of criteria including traffic counts from the North End Traffic and Circulation Study completed in 2004 by Wilbur Smith Associates combined with personal observation and review of roadway maps and driving the roads in question. The hierarchy is meant to be a general description of relative traffic volumes and the directness of routes and is not based on specific NCDOT criteria for a roadway rating system.

Clearly the primary roadway system in the Town of Carolina Beach is US 421, also known as Lake Park Boulevard. This route is used by traffic to pass by Carolina Beach to reach destinations to the south such as Fort Fisher or Kure Beach. All southbound traffic from the north enters Carolina Beach on the US 421 Bridge over Snow's Cut Inlet and continues on through the Town. Secondary roads are those that provide a necessary link or access to a given area. It should be noted that NCDOT has recommended that Dow Road (a secondary road in this plan) be widened to four lanes with median and turn lanes and an extension to Fort Fisher to divert through traffic from US 421. Greenways are dedicated off-road trails for bicycles or pedestrians.

Figure 25: Circulation Inventory Map



Central Business District (CBD) Parking

An inventory of public parking was completed with counts derived from aerial photographs and verified by the Town. Within the CBD, there are 233 on-street spaces and 351 off-street spaces for a total of 584 public parking spaces.

CAMA AND FLOOD ZONES

Development in the Town of Carolina Beach is subject to a series of dynamic restrictions based on the fact that it is in a coastal flood zone. Several major flood producing storms have affected Carolina Beach in the last 100 years including Hurricane Hazel in 1954, which caused \$17 million in damage and destroyed 362 buildings, and Hurricane Fran in 1996, which damaged 930 homes. To address this concern, regulations and designations for flood prone areas have been established by both the State and Federal governments. These regulations have significant impacts on the types of development that can or cannot happen in the Town of Carolina Beach. Following is a brief synopsis of the current state of coastal flood related regulations:

CAMA Regulations and Setbacks

As part of the State of North Carolina's 1974 Coastal Area Management Act (CAMA) a Coastal Resources Commission (CRC) was established that required local land use planning in 20 coastal counties and provided for a program of regulating development. As part of this program the CRC designated Areas of Environmental Concern (AEC's) and set rules for managing development within these areas. An AEC is an area of natural importance; it may be easily destroyed by erosion or flooding; or it may have environmental, social, economic or aesthetic values that make it valuable to the State. The CRC's rules are administered by the North Carolina Division of Coastal Management, a part of the State Department of Environment and Natural Resources.

In order to comply with CAMA regulations, the Town has prepared the 2007 Town of Carolina Beach CAMA Land Use Plan which was adopted by the Town Council in October of 2007 and the CRC in November of 2007. This plan has several objectives:

- It introduces the public to CAMA
- It identifies and prioritizes quality of life issues being faced by the community
- It establishes goals and policies
- It provides desired growth and development patterns

CAMA setbacks

In addition to the local CAMA Land Use Plan, there are a number of statewide CAMA AEC setback regulations that impact development in the Town of Carolina Beach's CBD. There are several types of AEC's; Estuarine and Ocean System; Ocean Hazard System; Public Water Supplies; and Natural and Cultural Resources. The CBD in Carolina Beach is in an Ocean Hazard System AEC. This type of AEC has a series of building setback regulations that are based

off of a line commonly known as the CAMA line which is the "first line of stable vegetation in 1981." Since 1981, the actual first line of stable vegetation has been altered by factors such as ongoing erosion and counteractive beach nourishment. Nevertheless, the CAMA line remains static in a dynamic environment, can only be changed by the State and is the baseline for building setbacks. Following is brief summary of the current building setback requirements off the CAMA line:

- From the CAMA line 60 feet back, no structures, roads, parking lots or public infrastructure such as utilities can be built
- From the 60 foot setback to 120 feet from the CAMA line, structures cannot exceed 5,000 square feet (except that any size single-family residence can be built)
- From the 120 feet setback line and beyond, any size structure can be built
- From the CAMA line, 420 feet back is the limit of the AEC and all development work must have a CAMA permit

As of January of 2008, new regulations for setbacks have been proposed by the Coastal Resources Commission. These proposed regulations have a more gradual increase in the allowed size of structures past the 120 foot setback and they eliminate the size exemption for single family residential structures.

CAMA Permits

CAMA permits are issued by a local Licensed Permit Officer (LPO) provided that the project is eligible for a Minor Permit. Minor permits can be issued in a relatively short time frame requiring an advertisement in the local newspaper and an eight day comment period. Major Permits are issued by a state official and the process is longer, normally being three months in duration unless the applicant pays extra for an Express Permit which takes 30 days. The setbacks and all CAMA regulations are subject to change by the State of North Carolina. For a more on CAMA regulations and setbacks, the North Carolina Department of Environment and Natural Resources, Division of Coastal Management has a website that covers the topic in greater depth.

Flood Zones

In addition to the CAMA regulations, the Federal Emergency Management Agency (FEMA) determine Special Flood Hazard Areas (SFHA) and publishes Flood Insurance Rates Maps (FIRM) that define the boundaries of areas that are prone to flooding. FEMA updated the local FIRM's in April of 2006. A property is in the Special Flood Hazard Area if it is located in the AE or VE zones within the town (see map).

- AE zones - Areas subject to inundation by the 1-percent-annual chance flood event (100-year storm event) was determined by detailed methods. Mandatory flood insurance purchase requirements and floodplain management standards apply.
- VE zones - Areas subject to inundation by the 1-percent-annual chance flood event with additional hazards due to storm-induced velocity wave action. Mandatory flood insurance purchase requirements and floodplain management standards apply.
- X zones Moderate flood hazard areas, labeled Zone X (shaded blue) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500- year) flood. Flood insurance is not mandatory.

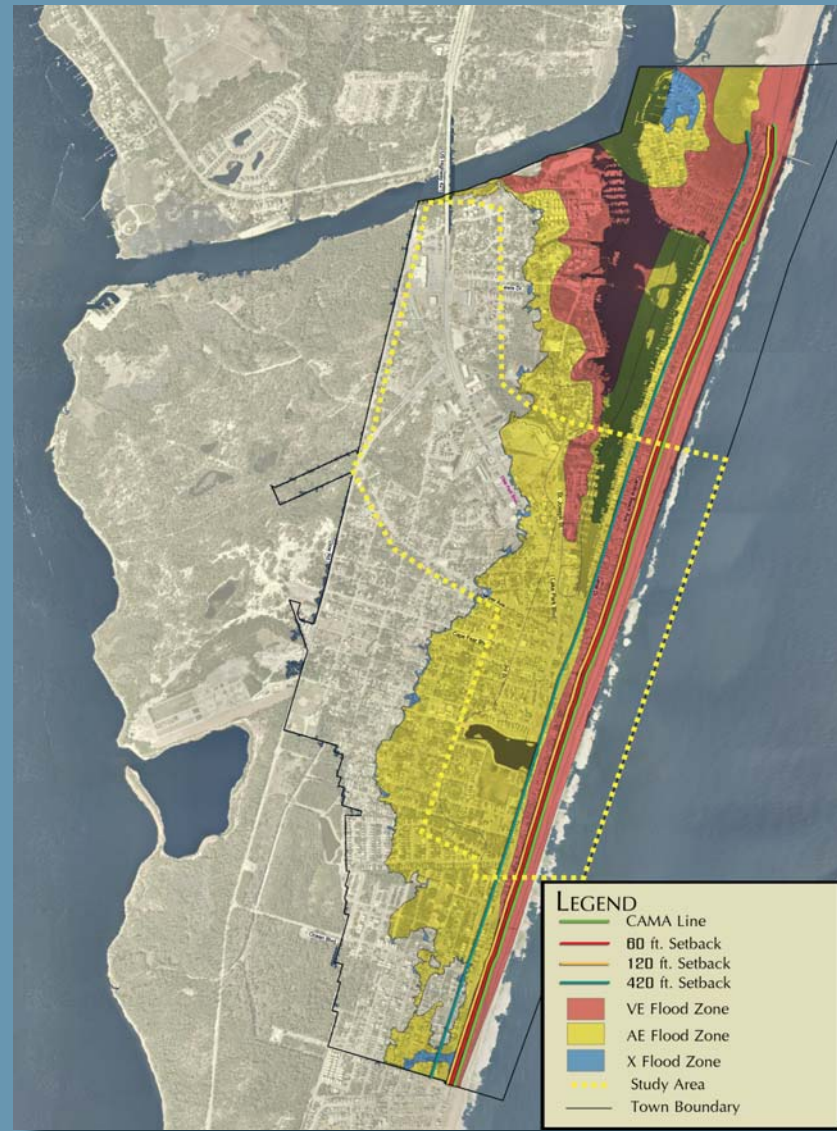
Property owners or those that plan to purchase property in one of the SFHAs, are required to purchase flood insurance in order to obtain a mortgage loan. Usually, homeowner's insurance does not cover losses due to flooding; however, the Town of Carolina Beach participates in the National Flood Insurance Program (NFIP), which makes Federal Flood Insurance available to everyone in town. Flood insurance premiums are reduced for Carolina Beach residents because the town participates in the Community Rating Systems Program (CRS). Properties that are in compliance with the Flood Damage Prevention Ordinance will qualify for the highest reduction in rates.

Flood Zone Building Requirements

In addition to insurance requirements, there are building design requirements that are intended to reduce flood related damage to structures that are in flood zones. These requirements apply to new structures as well as existing structures that are “substantially improved.” NFIP Regulations and the Town’s Flood Damage Prevention Ordinance require that if the cost of reconstruction, rehabilitation, addition or other improvements to a building equals or exceeds 50% (over the life of the structure) of the building’s tax or appraised value, then the building must meet the same construction requirements as a new building. One of the major requirements is that most structures in the flood zones be elevated. The specific requirements vary by zone:

- VE zone - all structures, regardless of use, must have the top of the lowest floor (reference level) elevated to the base flood elevation (regulatory flood protection level).
- AE zone - all residential properties must be have the top of the lowest floor elevated to the base flood elevation. Non-residential structures may be floodproofed to the

Figure 2B: CAMA and Flood Zones Inventory Map



regulatory flood protection elevation in lieu of elevation provided that all areas of the structure below the flood protection elevation are watertight with walls substantially impermeable to the passage of water.

Temporary, non-residential structures and accessory structures such as sheds and garages are allowed in the flood zone with certain restrictions and are not required to be elevated. The specific language for these requirements is found in the Town of Carolina Beach Flood Damage Prevention Ordinance which is available through the Town's website. The Town also has a map available online showing general elevations in relation to the base flood elevations.

Existing Regulations Summary: Town of Carolina Beach Zoning Ordinance

This section highlights key elements of the zoning regulations as they apply to the Boardwalk Core Area. For more detailed zoning information, the Town of Carolina Beach Zoning Ordinance can be found on the Town website: www.carolinabeach.org

CBD – Central Business District

The Boardwalk Core Area is entirely in the Central Business District. Below is a excerpt from the Zoning Ordinance regarding the purpose of this district.

“This district is established to accommodate, protect, rehabilitate and maintain the traditional central business district and boardwalk area of Carolina Beach. This area accommodates a wide variety of pedestrian oriented, commercial and service activities including retail, business, office, professional financial, entertainment, and tourism. The regulations of this district are intended to encourage the use of land for concentrated development of permitted uses while maintaining a substantial relationship between land uses and the capacity of the Town's infrastructure. Developments, which would significantly disrupt the historic balance between pedestrians and automobiles within the district, thereby destroying the pedestrian-oriented nature of the area, are specifically discouraged. Large, off street parking areas are encouraged to locate outside the district. Similarly, buildings and structures should have pedestrian-oriented activities at ground level.”

Within the district there are a variety of permitted uses (permissible by right) as well as several conditional uses (uses that require a Conditional Use Permit be obtained). Subject to Article 12 there are specific Development Standards for particular uses. There are no Dimensional Standards and density limitations. Maximum height is 50 feet with additional height allowed under a Conditional Use Permit approval.

The CBD is also subject to:

- Flood Zone and CAMA Provisions
- Design standards for parking and landscaping
- Site plan and landscape plan approvals

Recapturing the Spirit