CITY OF OCEAN CITY

POST-SANDY PLANNING ASSISTANCE GRANT



COMMUNITY DEVELOPMENT AND NEIGHBORHOOD PLANS

ECONOMIC PLAN

HISTORIC PRESERVATION PLAN

COMMUNITY RESILIENCE PLAN (9TH STREET & CBD)

Varial Streule

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The original of this document has been signed and sealed as required by <u>NJS</u> 45:14A-12.

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PREFACE

This document consists of three separate and inter-related parts:

- Master Plan Economic Plan Element
- \circ $\,$ Master Plan Historic Preservation Plan Element, and
- Community Resilience Plan (9th Street gateway and Central Business District).

These three elements have been consolidated into a single report due to common elements they share including land use, access and vulnerability to flooding. The 9th Street gateway, historic district and central business district are interconnected physically and functionally. Ninth Street is the primary access to the City via NJ Route 52 (and is an evacuation route) and provides direct connection to the downtown business district on Asbury Avenue. Ninth Street has taken on new significance in providing access for bicyclists and pedestrians since completion of the Route 52 causeway. These areas combine to provide an inter-connected and walkable commercial core with over one hundred shops and cafes. The adjoining Historic District as an extension of the downtown provides walking tours of the City's important historic neighborhood.

Flooding associated with major storm events has caused significant damage to properties on 9th Street, downtown and in the Historic District. During severe storm events access to the mainland via 9th Street is not possible due to flooding. The overarching goal of this document is to provide possible solutions that will minimize flooding. Reducing flooding impacts to the central business district and historic assets while securing emergency access to the mainland at all times will significantly improve the City's resilience to future storms.

The general content of this document was organized via discussions with City administration, staff and a Planning Board Subcommittee. Progress and updates to the individual elements in this document were reviewed periodically by the Subcommittee and presented to the Planning Board at their regular meetings. Formal updates describing progress on document preparation that complemented the Subcommittee's review were issued and available for public review. Draft documents have been available to the public via the City's website. Comments received from the City, Planning Board Subcommittee, Planning Board, Ocean City Regional Chamber of Commerce, merchants, public participants and NJDCA have, to the extent of their appropriateness, been incorporated into this document.

The preparation of this Ocean City Master Plan Economic Plan, Historic Preservation Plan and Community Resilience Plan (9th Street Gateway and CBD) has been funded by a Post-Sandy Planning Assistance Grant (CDNP-2016-0508-681) awarded to Ocean City by the New Jersey Department of Community Affairs.

ECONOMIC PLAN

Executive Summary

Coastal and waterfront communities have a distinctive sense of place created by their history, as well as by their characteristic sights, sounds, and smells. On the coast the salty taste of ocean air, water, beaches, and other natural features —all come together to shape our sense of these special places. Living near the water has historically been, and is expected to remain, desirable. Coastal counties, which cover less than 17 percent of the land area in the United States, are home to about 52 percent of the population and are expected to continue to grow.¹ The ways in which cities, towns, and neighborhoods along the water handle the development pressures they face will affect their environment, economy, and quality of life for decades to come.

Ocean City offers residents and visitors amenities, attractions and activities that most towns would be envious of – a family-friendly community with clean beaches, an oceanside boardwalk, hundreds of shop and restaurants. Tourism is extremely beneficial to the local, regional and State economies. According to a 2015 report prepared by Tourism Economics, "the tourism industry directly supported 318,330 jobs in New Jersey and sustained more than 512,000 jobs including indirect and induced impacts" and "The tourism sector generated \$37.3 billion of state GDP in 2015, representing 6.6% of the entire state economy." ²

Significant capital investment by the City in public improvements and safety enhancements in the downtown business district and the Boardwalk ensure an atmosphere that compliments the successful attractions and shopping venues in these areas. Although the City's economy is seasonal in nature, concerted efforts to market the City's assets and special events have extended the tourism season beyond the traditional peak months of June, July, and August.

Barrier islands, while offering incredible opportunities to residents and visitors, are particularly susceptible to coastal storms. Major coastal storms remind us of the vulnerability to flooding that some parts of the City experience especially in the lower-elevation areas. Ocean City's downtown has experienced significant damage from coastal storms. The impacts on individual properties vary depending on the elevation of the structure, flood prevention measures and other factors.

¹ Statistic calculated by U.S. National Oceanic and Atmospheric Administration (NOAA) using U.S. Census Bureau 2007 County Population Estimates. U.S. Census Bureau, 2007. Available at U.S. Census Bureau. Population Estimates, www.census.gov/popest/estimates. php (accessed March 1, 2009). Also Woods and Poole Economics, Inc. Complete Economic and Demographic Data Source (CEDDS). 2007.

² The Economic Impact of Tourism in New Jersey, Tourism Satellite Account Calendar Year 2015.

A companion document to this Economic Plan prepared with a NJDCA Post-Sandy Planning Grant provides recommendations to improve resilience for the central business district and 9th Street.

Introduction

An update of the City's Economic Plan is recommended in the City's Strategic Recovery Planning Report as a means to facilitate continued recovery from Superstorm Sandy and build resiliency to future storms.

This amendment to the City's Master Plan replaces the 1988 Economic Plan Element, and has been prepared in accord with the requirements of the Municipal Land Use Law <u>NJS</u> 40:55D-28.b(9) as follows:

An economic plan element considering all aspects of economic development and sustained economic vitality, including (a) a comparison of the types of employment expected to be provided by the economic development to be promoted with the characteristics of the labor pool resident in the municipality and nearby areas and (b) an analysis of the stability and diversity of the economic development to be promoted.

When planning for economic development, the goal is to create and maintain a strong, vibrant local economy. The economic development plan provides a comprehensive overview of the economy, and identifies potential implementation actions the City may pursue as it enacts business retention, expansion, and attraction efforts, maintains a fiscally healthy government, and makes Ocean City a better place to live, play and work.

Sandy's Economic Impacts

A lot has happened in the more than four years since Ocean City residents evacuated the island as Superstorm Sandy bore down on the Jersey Shore on Oct. 29, 2012. In economic terms, Hurricane Sandy's impact on Ocean City was severe. Estimates indicate that the City incurred approximately \$17 million in restoration and repair costs for public property and facilities. Sandy-related adjustments for individual property assessments resulted in a \$15.5 million reduction to the City's ratable base in 2013. As a result of Superstorm Sandy 29% (6,137) of the homes in Ocean City sustained "severe" or "major" damage.

Superstorm Sandy devastated many businesses in New Jersey, causing substantial commercial property damage and short-term and long-term business operations losses. All of these losses also affected the labor market, which in the month after the storm saw more than double the historically expected amount of unemployment claims filed. In addition to the physical damage Sandy caused to businesses themselves, widespread power outages resulted in inventory losses and working capital losses. Damage to public infrastructure such as roads, rail and bridges, compromised water utility systems and gas unavailability compounded those damages.

Most Ocean City businesses damaged by the storm have since recovered. To date, the NJEDA has approved 36 grants in Ocean City, totaling over \$1.6 million. Statewide, more than 630 businesses have been approved for grants and loans totaling over \$68.7 million.

While Superstorm Sandy caused damage across all state industries, some industries - particularly the tourism industry - were critically affected. New Jersey's tourism industry, the State's third largest industry, contributes more than \$38 billion to the State's Gross Domestic Product and, for 2011, represented 24.5% of private sector employment. In the midst of early recovery, and in an effort to show potential tourists that Ocean City was a viable vacation option, the Chamber of Commerce, City and Tourism Development Commission developed an award-winning "Ready for Your Stay" ad campaign. In 2014, Ocean City recognized a record \$4 million in tourism-related revenues.

What is Resilience?

Comprehensive and effective adaptation planning is part of what communities do to build resilience. In coastal areas, NOAA defines resilience as "building the ability of a community to 'bounce back' after hazardous events such as hurricanes, coastal storms, and flooding—rather than simply reacting to impacts" (NOAA 2015f). Resiliency planning includes the ability to understand potential impacts and to take appropriate action before, during, and after a particular event to minimize negative effects and maintain the ability to respond to changing conditions. Resilience strategies involve evaluating and upgrading the lifeline systems infrastructure— communication, power, transit—that are essential immediately following a disaster. Resilience also involves protective infrastructure, including built systems (e.g., seawalls and breakwaters) and natural systems (e.g., salt marshes and dunes). Hybrid strategies, a combination of green and gray infrastructure strategies, may provide the most effective outcome as they balance the range of planning and engineering considerations.

Goal Statements

- To provide sufficient space and facilities in appropriate locations for residential, business, office, public, quasi-public uses and supportive infrastructure in a manner which will provide for balanced and compatible growth and development.
- To encourage economic development through new investment and maintenance and reinvestment in existing commercial retail, amusement, accommodations and related resort activities within the City in areas suitable for such development and redevelopment.
- To improve the quality of life for residents and visitors.
- To foster economic development by creating an atmosphere to attract private investment for residential and commercial purposes.

• To provide for a variety of residential and non-residential uses and to encourage the continuation and enhancement of Ocean City as a quality family resort community.

Economic Development Opportunities

The Master Plan and Zoning Ordinance designate areas within the City for commercial and residential development. Areas where commercial development is encouraged include the following zone districts:

- Central Business
- Central Business-1
- Drive-in Business
- Hospitality
- Marine Place Neighborhood Business
- Marine Village Harbor
- Neighborhood Business
- On-Boardwalk
- 34th Street Gateway

The above noted zoning districts allow for a wide range of commercial uses including retail, personal service, professional offices, medical facilities, restaurants and amusements. Taken collectively, these zoning districts comprise approximately 625 acres (15% of the total land area). Approximately 95 acres are developed with commercial land uses. The City's Zoning Map can be found here - <u>https://imageserv11.team-</u>

logic.com/mediaLibrary/242/Zoning_Map_rev_8_31_16.pdf.

Past Initiatives

Below is a listing of completed public projects that enhance business opportunities and economic development in the City:

- Route 52 Causeway reconstruction
- 9th Street (from Bay to West Avenue) streetscape and traffic lights
- Asbury Avenue streetscape including lighting, crosswalks and utilities
- Wayfinding sign program
- Boardwalk reconstruction

Current and on-going initiatives and projects that will improve business prospects in the City are described in the *Sustainability and Capital Planning* section of this plan.

Community Amenities and Assets

Ocean City continues to receive accolades as "America's Favorite Family Resort" from many groups and organizations who evaluate communities across the country, including the following.

A complete list of awards can be found at <u>http://www.oceancityvacation.com/about-the-island/awards.html</u>.

- Best Beach in America by Coastal Living Magazine in 2016
- New Jersey's Favorite Beach in 2016 in NJ Sea Grant Consortium's
- Best Beach by Philly.com in 2016
- Best Beach in New Jersey Monthly's Shore Town Showdown in 2016
- o "25 Best Family Beach Vacations on the East Coast" by Vacation Idea Magazine in 2016
- o "Top Ten Christmas Towns in New Jersey" in 2015 by OnlyInYourState.com
- State of New Jersey's "Complete Streets Excellence Award" in 2015
- Top 5 Best Places for Women-Owned Businesses in 2015 by NerdWallet
- Best Boardwalk in 2014 by New Jersey Monthly
- Forbes ranks Ocean City, NJ #3 as America's Smartest Small Town in 2014
- People's Choice Award for Favorite NJ Downtowns in 2014
- #1 City for Independent Retailers in the Nation in 2011.
- o Sustainable Jersey Certified Community Award in 2009, 2010, 2011 and 2012.
- 2009 Forbes' list of Best Small Places for Business and Careers.
- 2009 Nielsen Clarita's Restaurant Growth Index ranked Ocean City in the top five Cities to open new restaurants.
- Fine Living Magazine rated the Boardwalk # 4 in the Nation. Noting "Ocean City more in touch with its 19th century roots, The Ocean City Boardwalk provides a glimpse of the elegant Victorian seaside resorts that once dotted the mid-Atlantic coast".
- National League of Cities for winning the 2008 Innovation in governance Award in the category of Innovative Local Use of Clean and Sustainable Energy.
- American Heart Association named Ocean City one of the few Fit Friendly communities in the country. OCNJ was prominently mentioned in Forbes Magazine in October 2008 for receiving this honor.

While the main draw to Ocean City for many is the beach and ocean, it is recognized by residents and visitors that there are a myriad of factors that define the City's popularity. The historic downtown area and boardwalk provide unique shopping and dining experiences for thousands of visitors to the City each year. The vitality of these areas contributes to their continued success, and provides opportunities for the traditional Ocean City experience that is enjoyed by generations of families.

The bayside area provides attractive views to the water and various water related activities including fishing, boating, jet ski rentals, parasailing, and restaurants. These activities and the City Marina make the bayside a destination point for many visitors and locals.

The Ocean City business community is supported by a number of organizations interested in the City's economic health. Identification of these groups and their respective roles are discussed in the *Business Promotion* section of this plan.

Historic Significance

Ocean City was founded in 1879 as a Christian resort community. Initial development included the Tabernacle, downtown area and residential lots. Hotels, guest houses and summer bungalows for vacationers followed. The City retains significant architectural and cultural resources many of which gained protection following adoption of the first historic ordinance in 1980. An historic district and historic preservation commission have been established to implement the *Historic Preservation Element* of the City's Master Plan.

A Historic Site Survey in 1985 identified a total of 160 buildings built between 1880 and 1890. An additional 541 buildings were constructed between 1890 and 1909. Although not within the historic district, a number of historic buildings remain within the central business district, providing nuance and visual interest to this area. These older structures, however, present considerable challenges in terms of improving resilience to future flooding.

Notable historic sites and properties in the City include:

- National Register of Historic Places –Public Transportation Center
- New Jersey Historic Site Sindia ship wreck site
- Music Pier
- City Hall
- Boardwalk and pavilion
- o U.S. Lifesaving Station No. 30

Community Profile

Population

As of the 2010 United States Census, the City's population was 11,701, reflecting a decline of 3,677 (-23.9%) from the 15,378 counted in the 2000 Census, which had in turn declined by 134 (-0.9%) from the 15,512 counted in the 1990 Census. The decline in population is not reflective of the City's vitality. In fact, this population trend in shore communities first became evident in 2000 when coastal communities experienced a 4.7% decrease. The fact that the decline in year-round population in oceanfront communities since 2000 coincides with a relatively modest increase in the total number of housing units, along with a more dramatic increase in the percent of housing units that are seasonally vacant, suggests that year-round residence is being replaced by seasonal occupancy.

<u>Age</u>

America is aging, and as a result, the elderly account for a larger percentage of the population every year. Approximately 12% of the current U.S. population is age 65 years and older. This figure is projected to increase to 16% by 2020 and approach 20% by 2030. These trends are evident in Ocean City. The percentage of the population 65 and over has increased from 26% in 2000 to 30% in 2010. The median age of the City's population in 2010 was 49.9 years; in 2014 it was 53.8 years. The growing number of older adults can be expected to increase and/or change

demands on the public health system, medical and social services, community facilities, public services and consumer habits.

<u>Income</u>

The Census Bureau's American Community Survey showed that (in 2015 inflation-adjusted dollars) median household income in Ocean City was \$57,813 and the median family income was \$83,721. The per capita income for the City was \$42,629. About 5% of families and 9.4% of the population were below the poverty line, including 12.2% of those under age 18 and 5.1% of that age 65 or over.

Housing

Between 2000 and 2010 the region (including Ocean City) experienced losses of population and in the number of occupied housing units. Cape May County recorded a 5% reduction in population and a 2% loss in occupied housing units. Changes in Ocean City's population and housing between 1990 and 2010 are indicated in the following table. These shifts in population (-24%) are similar to other nearby shore communities including Sea Isle and Stone Harbor, and the loss of occupied housing units (-21%) is similar to Cape May City and Sea Isle. By comparison Avalon lost 38% of its population and 34% of its occupied housing between 2000 and 2010.

The percent of housing units that are used seasonally (i.e., summer vacation properties) along the Atlantic oceanfront has increased dramatically since 2000, from 26.7 percent of the total housing stock in 2000 to 31.4 percent in 2014. The percentage of housing units that were built since 2000 is higher in the coastal communities than in the state's non-coastal municipalities -11.1 percent versus 9.6 percent; this has occurred despite these municipalities being mostly built-out.

Average residential values (including all properties, whether year-round or seasonal) are much higher in the oceanfront municipalities and have been increasing faster. As of 2014, the median oceanfront municipality now has an average residential value of \$589,650, double the average value of \$295,167 in the median non-coastal municipality. The median value of owner-occupied housing in Ocean City in 2015 was \$575,500.

A review of building permits provides the following information regarding the characteristics of new single-family home construction in Ocean City from 1997 to 2014. Of particular interest is the marked increase in new construction in 2013 and 2014 in the aftermath of Hurricane Sandy.

- 1997: 45 buildings, average cost: \$82,000
- 1998: 52 buildings, average cost: \$91,100
- 1999: 66 buildings, average cost: \$97,200
- 2000: 95 buildings, average cost: \$146,700
- 2001: 60 buildings, average cost: \$257,700
- 2002: 89 buildings, average cost: \$256,800
- 2003: 96 buildings, average cost: \$270,600

- 2004: 117 buildings, average cost: \$267,900
- 2005: 154 buildings, average cost: \$298,200
- 2006: 81 buildings, average cost: \$413,900
- 2007: 65 buildings, average cost: \$336,200
- 2008: 52 buildings, average cost: \$390,800
- 2009: 26 buildings, average cost: \$447,900
- 2010: 29 buildings, average cost: \$360,100
- 2011: 35 buildings, average cost: \$401,800
- 2012: 44 buildings, average cost: \$450,200
- 2013: 100 buildings, average cost: \$297,800
- 2014: 113 buildings, average cost: \$346,800

The relationship between the aging of the population and owner-occupied housing units indicates significant decreases in owner-occupancy for the 25-34 and 35-44 age cohorts and a substantial increase in owner-occupancy for the 55-64 age group in 2010. Residential properties comprise 92% of assessed parcels in the City, and account for 93.5% of total assessed value according to the 2016 City Budget. According to tax assessment records, there are 587 commercial properties accounting for 4.3% of the City's total assessed value.

Ocean City	1990	2000	2010	2015
Population	15,512	15,378	11,701	11,470
Dwelling Units	18,880	20,298	20,871	20,204
Occupied Units	7,074	7,464	5,890	5,660
Owner-Occupied Units	3,801	2,837	3,642	3,524
Household Size	2.19	2.02	1.98	2.01
Vacant Units	11,806	12,834	14,981	14,544

 TABLE 1

 Ocean City – Population and Housing

Source: U.S. Census Bureau (1990, 2000, 2010), 2011-2015 American Community Survey 5-Year Estimates

Employment

As documented in the 1988 Master Plan, Ocean City's economic health depends in large part on tourism. "The City of Ocean City was founded as a shore resort community in 1879 and economic development within the City has continued to be dominated by the seasonal resort

tourism business."³ Despite storms, casino closures and sluggish economic growth, the proceedings at the 2016 Cape May County Tourism Conference indicate that tourism in New Jersey continues to grow.

- 2015 marks six straight years of spending and visitation growth.
- Tourism demand grew 3.3% in 2015 to reach \$43.4 billion.
- Visitation expanded 2.4%.

Good summer weather and the fading memory of Sandy helped to drive strong growth in bed tax receipts for the shore counties in the summer months, increasing by more than 8% in 2015. Visitor spending on food, recreation and retail drove much of the spending growth with lower gas prices freeing up travel budgets.⁴

In 2015, the tourism industry directly supported 318,330 jobs in New Jersey and sustained more than 512,000 jobs including indirect and induced impacts. Including all impacts, the industry accounts for 9.9% of total employment or nearly 1-in-10 jobs in New Jersey. The tourism sector generated \$37.3 billion of state GDP in 2015, representing 6.6% of the entire state economy. Including indirect and induced impacts, tourism in New Jersey generated \$10.2 billion in government revenues last year, including \$4.7 billion in state and local tax revenues.

- □ Tourism spans nearly a dozen sectors including lodging, recreation, retail, real estate, air passenger transport, food and beverage, car rental, taxi services, travel agents...
- □ Examining the Tourism industry against other private sector industries, tourism is the 7th largest employer in the State of New Jersey.
- □ The tourism sector directly and indirectly supported 5127,157 jobs, or 9.9% of all employment in New Jersey last year.
- \Box Tourism generated the most employment in the restaurant, lodging, and retail sectors.⁶

Statistical data from the Census Bureau and Department of Labor provides details regarding the components of the City's economic base.

The employment data in the following tables suggests considerable diversification in the City's economy has developed in recent years. The 1988 Plan identified "retail trade", and "real estate and related services" accounting for 42% and 30% of the City's employment, respectively. Data in the following table shows significant employment reduction in these two categories, and growth in the "educational services, and health care and social assistance" (25.7%) and "arts, entertainment, and recreation, and accommodation and food services" (14.5%) sectors. Current data indicates that "retail trade," "professional, scientific, and management, and administrative

⁶ Ibid

³ Ocean City Master Plan, February 3, 1988, Page 11-1

⁴ Cape May County Tourism Conference Report, May 4, 2016

⁵ Ibid

and waste management services" and "finance and insurance, and real estate and rental and leasing" account for 10.2%, 11.3% and 10.8% of the City's labor force, respectively.

	Ocean City, New Jersey					
Subject	Estimate	Margin of Error	Percent	Percent Margin of Error		
EMPLOYMENT STATUS						
Population 16 years and over	9,990	+/-250	9,990	(X)		
In labor force	5,418	+/-246	54.2%	+/-2.2		
Civilian labor force	5,418	+/-246	54.2%	+/-2.2		
Employed	5,028	+/-271	50.3%	+/-2.3		
Unemployed	390	+/-90	3.9%	+/-0.9		
Armed Forces	0	+/-19	0.0%	+/-0.3		
Not in labor force	4,572	+/-260	45.8%	+/-2.2		
Civilian labor force	5 / 18	1/246	5 / 18	(Y)		
Unemployment Pate	3,418 (X)	+/-240	7.2%	(Λ)		
	(A)	(A)	1.270	+/-1./		
Females 16 years and over	5,336	+/-196	5,336	(X)		
In labor force	2,573	+/-184	48.2%	+/-3.1		
Civilian labor force	2,573	+/-184	48.2%	+/-3.1		
Employed	2,339	+/-202	43.8%	+/-3.4		
Own children of the householder under 6 years	538	+/-163	538	(X)		
All parents in family in labor force	316	+/-148 58.7%		+/-19.1		
Own children of the householder 6 to 17 years	1,133	1,133 +/-204		(X)		
All parents in family in labor force	929	+/-173	82.0%	+/-6.3		
COMMUTING TO WORK						
Workers 16 years and over	4 892	+/-274	4 892	(X)		
Car. truck, or van drove alone	3,490	+/-273	71.3%	+/-4.8		
Car, truck, or van carpooled	300	+/-137	6.1%	+/-2.7		
Public transportation (excluding	109	+/-62	2.2%	+/-1.2		
taxicab)		.,	3.2/0	.,		
Walked	362	+/-164	7.4%	+/-3.2		
Other means	372	+/-190	7.6%	+/-3.9		
Worked at home	259	+/-79	5.3%	+/-1.6		
	27.5					
Mean travel time to work (minutes)	27.5	+/-2.4	(X)	(X)		

TABLE 2 2011-2015 American Community Survey 5-Year Estimates

OCCUPATION]			
Civilian employed population 16 years	5.029	. / 071	5.029		
and over	5,028	+/-2/1	5,028	(X)	
Management, business, science, and arts	2 256	1/ 251	46.0%	+/ 17	
occupations	2,330	+/-231	40.9%	+/-4./	
Service occupations	959	+/-205	19.1%	+/-3.6	
Sales and office occupations	1,090	+/-197	21.7%	+/-3.9	
Natural resources, construction, and	402	+/ 130	8 0%	1/27	
maintenance occupations	402	+/-139	8.070	+/-2.7	
Production, transportation, and material	221	+/ 101	1 1%	+/ 2.0	
moving occupations	221	17-101	7.770	17-2.0	
INDUSTRY					
Civilian employed population 16 years	5.028	+/-271	5.028	(X)	
and over	5,020	17 271	5,020	(21)	
Agriculture, forestry, fishing and	13	+/-20	0.3%	+/-0.4	
hunting, and mining	15	17 20	0.570	17 0.4	
Construction	396	+/-142	7.9%	+/-2.8	
Manufacturing	309	+/-109	6.1%	+/-2.2	
Wholesale trade	132	+/-60	2.6%	+/-1.2	
Retail trade	512	+/-174	10.2%	+/-3.2	
Transportation and warehousing, and	48	+/-27	1.0%	+/-0 5	
utilities	10	., 2,	1.070	17 0.2	
Information	94	+/-54	1.9%	+/-1.1	
Finance and insurance, and real estate	541	+/-143	10.8%	+/-3.0	
and rental and leasing	0.11	., 1.0	101070	.,	
Professional, scientific, and					
management, and administrative and waste	569	+/-135	11.3%	+/-2.6	
management services					
Educational services, and health care	1,290	+/-178	25.7%	+/-3.5	
and social assistance					
Arts, entertainment, and recreation, and	729	+/-172	14.5%	+/-3.2	
accommodation and food services					
Other services, except public	209	+/-106	4.2%	+/-2.1	
administration	196	+ / 92	2 70/		
	180	+/-83	3.1%	+/-1.0	
CLASS OF WORKER					
civitian employed population to years	5,028	+/-271	5,028	(X)	
Brivete wege and salery workers	2 9 2 5	+/ 251	76 10/	+/ 2.0	
Covernment workers	3,823	+/-231	/0.1%	+/-3.9	
Salf amployed in own not incorporated	/70	+/-133	13.7%	+/-2.0	
business workers	387	+/-123	7.7%	+/-2.3	
Unnaid family workers	18	±/_21	0.4%	$\pm /_{-0} 4$	
	10	1-/-2.1	0.470	-/-0.4	
INCOME AND BENEFITS (IN 2015					
INELATION_ADILISTED DOLLARS)					
INI LATION-ADJUSTED DOLLARS)					

Total households	5,660	+/-275	5,660	(X)
Less than \$10,000	244	+/-75	4.3%	+/-1.3
\$10,000 to \$14,999	323	+/-115	5.7%	+/-1.9
\$15,000 to \$24,999	683	+/-155	12.1%	+/-2.6
\$25,000 to \$34,999	452	+/-130	8.0%	+/-2.3
\$35,000 to \$49,999	845	+/-178	14.9%	+/-2.9
\$50,000 to \$74,999	876	+/-160	15.5%	+/-2.6
\$75,000 to \$99,999	564	+/-101	10.0%	+/-1.8
\$100,000 to \$149,999	826	+/-147	14.6%	+/-2.6
\$150,000 to \$199,999	377	+/-105	6.7%	+/-1.8
\$200,000 or more	470	+/-95	8.3%	+/-1.7
Median household income (dollars)	57,813	+/-5,000	(X)	(X)
Mean household income (dollars)	85,998	+/-6,392	(X)	(X)
With earnings	3,844	+/-202	67.9%	+/-2.6
Mean earnings (dollars)	81,193	+/-7,414	(X)	(X)
With Social Security	2,437	+/-209	43.1%	+/-2.9
Mean Social Security income (dollars)	21,892	+/-980	(X)	(X)
With retirement income	1,484	+/-188	26.2%	+/-3.1
Mean retirement income (dollars)	32,236	+/-3,535	(X)	(X)
With Supplemental Security Income	238	+/-84	4.2%	+/-1.4
Mean Supplemental Security Income	7.000	. / 1.512		
(dollars)	7,892	+/-1,513	(X)	(X)
With cash public assistance income	72	+/-35	1.3%	+/-0.6
Mean cash public assistance income	3 959	1/2008	(X)	(Y)
(dollars)	3,030	+/-2,098	(A)	(A)
With Food Stamp/SNAP benefits in the	305	+/ 130	7.0%	+/ 2 4
past 12 months	375	+/-130	7.070	+/-2.4
Families	3,196	+/-173	3,196	(X)
Less than \$10,000	64	+/-44	2.0%	+/-1.3
\$10,000 to \$14,999	52	+/-37	1.6%	+/-1.1
\$15,000 to \$24,999	157	+/-81	4.9%	+/-2.5
\$25,000 to \$34,999	289	+/-109	9.0%	+/-3.5
\$35,000 to \$49,999	418	+/-111	13.1%	+/-3.4
\$50,000 to \$74,999	455	+/-116	14.2%	+/-3.4
\$75,000 to \$99,999	428	+/-96	13.4%	+/-2.9
\$100,000 to \$149,999	672	+/-121	21.0%	+/-3.5
\$150,000 to \$199,999	260	+/-88	8.1%	+/-2.7
\$200,000 or more	401	+/-88	12.5%	+/-2.7
Median family income (dollars)	83,721	+/-7,007	(X)	(X)
Mean family income (dollars)	108,603	+/-8,738	(X)	(X)
Per capita income (dollars)	42,629	+/-3,050	(X)	(X)
Nonfamily households	2,464	+/-290	2,464	(X)

Median nonfamily income (dollars)	36,587	+/-5,753	(X)	(X)	
Mean nonfamily income (dollars)	56,119	+/-6,075	(X)	(X)	
Median earnings for workers (dollars)	32,378	+/-4,111	(X)	(X)	
Median earnings for male full-time, year-	62,708	+/-17,685	(X)	(X)	
Median earnings for female full-time,	51,959	+/-6,657	(X)	(X)	
year-round workers (donars)					
LIE AL TH INCHDANCE COVED ACE					
HEALTH INSURANCE COVERAGE	11.409	+/ 20	11.409	(V)	
With backh incomes accurate	11,408	+/-39	11,408	(\mathbf{A})	
With health insurance coverage	10,295	+/-379	90.2%	+/-3.3	
with private health insurance	8,693	+/-447	/6.2%	+/-3.9	
With public coverage	4,673	+/-338	41.0%	+/-3.0	
No health insurance coverage	1,113	+/-381	9.8%	+/-3.3	
Civilian noninstitutionalized population	1,781	+/-251	1,781	(X)	
under 18 years	110	. / 140	6.20/		
No health insurance coverage	110	+/-148	6.2%	+/-8.0	
Civilian newigetitutionalized newslation					
18 to 64 years	6,129	+/-257	6,129	(X)	
In labor force:	4,772	+/-252	4,772	(X)	
Employed:	4,442	+/-261	4,442	(X)	
With health insurance coverage	3,727	+/-231	83.9%	+/-4.6	
With private health insurance	3,615	+/-229	81.4%	+/-4.4	
With public coverage	317	+/-101	7.1%	+/-2.2	
No health insurance coverage	715	+/-222	16.1%	+/-4.6	
Unemployed:	330	+/-96	330	(X)	
With health insurance coverage	212	+/-67	64.2%	+/-18.3	
With private health insurance	158	+/-56	47.9%	+/-16.1	
With public coverage	54	+/-37	16.4%	+/-10.9	
No health insurance coverage	118	+/-78	35.8%	+/-18.3	
Not in labor force:	1,357	+/-194	1,357	(X)	
With health insurance coverage	1,187	+/-174	87.5%	+/-7.4	
With private health insurance	914	+/-152	67.4%	+/-8.1	
With public coverage	364	+/-103	26.8%	+/-6.5	
No health insurance coverage	170	+/-110	12.5%	+/-7.4	
PERCENTAGE OF FAMILIES AND					
PEOPLE WHOSE INCOME IN THE					
PAST 12 MONTHS IS BELOW THE					
POVERTY LEVEL					
All families	(X)	(X)	5.1%	+/-2.2	
With related children of the householder	(V)	(\mathbf{V})	11.5%	1/61	
under 18 years	(A)	(A)	11.3%	+/-0.4	
With related children of the	(Y)	(Y)	10 49/	1/ 19 7	
householder under 5 years only	(A)	(A)	17.470	1/ 10./	

Married couple families	(X)	(X)	2.3%	+/-1.6	
With related children of the householder	(V)		1 60/	1/52	
under 18 years	(A)	(A)	4.0%	+/-3.3	
With related children of the	(Y)	(V)	22.80/	1/ 22.6	
householder under 5 years only	(A)	(A)	22.870	+/-23.0	
Families with female householder, no	(Y)	(V)	10.0%	+/ 10.0	
husband present	(A)	(A)	19.9%	+/-10.9	
With related children of the householder	(V)	(V)	20.20/	. / 17 1	
under 18 years	(A)	(A)	50.5%	+/-1/.1	
With related children of the	(X)	(X)	100.0%	+/ 100.0	
householder under 5 years only	(A)	(A)	100.0%	+/-100.0	
All people	(X)	(X)	9.4%	+/-2.2	
Under 18 years	(X)	(X)	12.2%	+/-6.7	
Related children of the householder	(Y)	(V)	12 204	1/67	
under 18 years	(A)	(A)	12.270	+/-0.7	
Related children of the householder	(\mathbf{V})	(V)	10 104		
under 5 years	(A)	(A)	19.170	+/-11.5	
Related children of the householder 5		(V)	0.7%	1/80	
to 17 years	(A)	(A)	9.170	+/-0.0	
18 years and over	(X)	(X)	8.8%	+/-2.0	
18 to 64 years	(X)	(X)	10.9%	+/-2.8	
65 years and over	(X)	(X)	5.1%	+/-1.9	
People in families	(X)	(X)	6.0%	+/-2.8	
Unrelated individuals 15 years and over	(X)	(X)	19.2%	+/-5.1	

Source: American Community Survey (ACS) - DP03: SELECTED ECONOMIC CHARACTERISTICS

Local Business Patterns and Employment

The following table provides business data for Ocean City for years 2006-2014. For these nine years, the City's business sector exhibits remarkable stability in terms of payroll, number of businesses and employees. The data in this table is consistent with information from the City's 2016 tax assessment records the number of parcels classified as 4A (commercial use).

Year	Number of Establishments	Paid Employees	1 st Quarter Payroll	Annual Payroll
2006	654	3,300	\$24,457	\$117,062
2007	640	3,189	\$22,309	\$110,792
2008	621	3,162	\$22,260	\$109,941
2009	604	2,880	\$20,169	\$104,716
2010	595	2,828	\$18,900	\$101,845
2011	584	2,892	\$19,404	\$105,013
2012	576	2,735	\$20,114	\$107,528
2013	568	2,837	\$20,815	\$110,700
2014	569	3,092	\$20,874	\$114,886
Median	601	2,990	\$21,034	\$109,165

TABLE 3 Ocean City Business Trends

Source: American Factfinder – Zip Code Business Statistics

The following table contains a quarterly count of employment and wages reported by employers for Ocean City in the second quarter of 2015. In the private sector, the largest number of employees are in the accommodations/food (25%), health/social (17%), and retail trade (17%).

TABLE 4

Quarterly Census of Employment and Wages (QCEW)

Decomination	A vous as Linita	<u>Employment</u>					<u>Wages</u>		
Description	Average Units	March	June	<u>September</u>	December	Average	Total	Annual	Weekly
FEDERAL GOV'T TOTALS	2	47	44	44	47	45	\$2,681,852	\$59,377	\$1,142
LOCAL GOV'T TOTALS	4	817	1,185	1,156	877	965	\$55,874,133	\$57,876	\$1,113
LOCAL GOV'T EDUCATION	1	385	414	357	400	346	\$24,272,210	\$70,185	\$1,350
Construction	48	226	250	223	227	232	\$10,369,827	\$44,698	\$860
Manufacturing	17	71	220	197	90	143	\$3,242,528	\$22,728	\$437
Wholesale Trade	6	23	33	32	25	28	\$551,834	\$19,592	\$377
Retail Trade	97	549	1,042	877	639	776	\$20,115,993	\$25,920	\$498
Information	5	30	33	30	31	31	\$1,094,281	\$35,299	\$679

Finance/Insurance	30	389	273	257	259	294	\$21,492,661	\$73,187	\$1,407
Real Estate	43	178	257	244	187	213	\$6,937,221	\$32,544	\$626
Professional/Technical	40	175	191	185	184	183	\$8,714,990	\$47,666	\$917
Admin/Waste	20	92	138	131	107	113	\$2 989 304	\$26 376	\$507
Remediation	20)2	150	151	107	115	\$2,707,304	\$20,570	ψ307
Education	6	29	37	38	30	36	\$434,161	\$12,230	\$235
Health/Social	29	785	804	789	758	786	\$20,625,613	\$26,239	\$505
Arts/Entertainment	17	41	462	351	63	231	\$5,044,368	\$21,821	\$420
Accommodations/Food	112	407	1,906	1,532	626	1,125	\$21,088,161	\$18,744	\$360
Other Services	51	213	264	246	222	239	\$6,617,166	\$27,677	\$532
Unclassifieds	17	36	34	29	26	27	\$914,258	\$33,449	\$643
PRIVATE SECTOR	549	3 276	5 990	5 207	3 518	4 501	\$131 828 477	\$29 289	\$563
TOTALS	5.17	3,270	5,770	5,207	3,310	1,501	φ131,020, 1 77	<i>\$27,207</i>	ψ505

Source: US Department of Labor, Bureau of Labor Statistics, ANNUAL MUNICIPAL DATA BY SECTOR - 2015

Sustainability and Capital Planning

Across New Jersey, hundreds of towns are now working on sustainability programs to help the environment and their bottom lines. Efforts to curb carbon emissions, protect natural resources and reduce waste are happening at the local level. Through voluntary programs, communities are implementing solar power and wind turbine projects, rain capture and reuse efforts, new walking and biking programs, building and operating community food gardens, launching community outreach programs on recycling and energy, and dozens of other initiatives.

Ocean City is one of only 25 New Jersey towns that are Sustainable Jersey certified at the *silver level*. Ocean City was certified on October 11, 2016 with 430 points. To become Sustainable Jersey certified, the City completed a rigorous program of sustainability actions including creating a green team and completion of five priority actions: 1) a fleet inventory, 2) municipal carbon footprint, 3) sustainable land use pledge, 4) natural resource inventory, and 5) prescription drug safety and disposal. Ocean City was credited with such initiatives as solar panels on top of several city facilities, experimenting with low-speed alternative fuel vehicles, holding a green fair, promoting a farmers market, and participating in a Safe Routes to Schools program.

Capital improvements often represent the most significant investments made by communities. Coastal communities in particular must plan for not just growth and future development, but also for infrastructure degradation due to sea level rise, extreme weather events, and other climate hazards. The Capital Plan is Ocean City's financing and implementation plan for the construction and renovation of the City's infrastructure. This plan includes paving and drainage, dredging, beach, boardwalk, public building and properties, public areas, large equipment and vehicles, departmental equipment, communications, and intermodal, transportation, and parking infrastructure. The Capital Plan is structured as a five-year plan for the City (2017-2021). Ocean City in recent years has committed an unprecedented level of funding to completing longneglected projects. The city proposes to spend more than \$112 million over the next five years to improve every part of island from the beach and boardwalk to the bay. Refer to the following link for detailed information regarding the capital projects listed below http://www.ocnj.us/projects/.

- Roads and drainage
- Beach
- <u>Bayside dredging</u>
- <u>Boardwalk</u>
 - o Boardwalk pavilions
 - o 14th Street and 19th Street Boardwalk Ramps
- Parks and Public Facilities
 - 29th Street Firehouse
 - Pickleball Courts
 - o Restoration of Historic Transportation Center
 - Historic US Lifesaving Station
 - On-street Bike Racks
 - Aquatic and Fitness Center Pool Painting
 - Downtown Streetscape Improvements
 - Community Center Improvements
 - City Hall Plumbing Improvements
 - New Police Station and Municipal Court
 - o Bayside Center Improvements
 - Civic Center Roof
 - o 34th Street Recreation Building
 - Construction of Salt Storage Facility

Neighborhood and Community Revitalization Programs

Community Revitalization Program

The State has implemented a Neighborhood and Community Revitalization Program (NCR), funded with \$75 million in Community Development Block Grant (CDBG) Disaster Recovery funds, that incorporates three separate initiatives.

First, the Streetscape Revitalization Grant Program, to which the State has allocated \$10 million of NCR funds, offers grants to commercial corridors in the most impacted towns and cities throughout the State. Second, the State set aside \$2.5 million of NCR funds for Community Development Financial Institutions (CDFIs) to support micro-lending for businesses. Lastly, the remainder of NCR funding is directed to support large economic revitalization projects through the Development and Improvement Program.

The Neighborhood and Community Revitalization Program supports projects located throughout the state, with a focus on the nine most Sandy impacted counties of Atlantic, Bergen, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean, and Union, as defined by the federal government.

For more information about the Neighborhood and Community Revitalization Program, please visit the NJDEA website.

Workforce Development

Due to the high concentration of seasonal resorts along the county's coastline, accommodation and food services experienced the most hiring (5,676 new hires) in Cape May County during the 3rd quarter of 2015. These data represent individuals who started working for an employer that they had not worked for in any other quarter over the past year and is important to consider because industries may have many job opportunities available due to turnover regardless of the growth rate projected for that industry. The following graph depicts total jobs and new hires in Cape May County, by employment sector.



EXHIBIT 1 Cape May County Employment

Source: U.S. Census Bureau, Center for Economic Studies, LEHD, Employment and hiring during the 3rd Quarter of 2015

Cape May County's private sector employment totaled 29,104 in the 3^{rd} quarter of 2015. Leisure and hospitality added the most jobs between the 3^{rd} quarters, 2010 and 2015(+1,217). Estimate of stable jobs, i.e., the number of jobs that are held on both the first and last day of the quarter with the same employer. This information helps explain which private sector industries dominate the local economy and provide the largest numbers of jobs both full and part-time, overall.



EXHIBIT 2

Employment in Cape May County is expected to remain relatively flat from 2014 to 2024, adding 1,445 jobs over the period. Healthcare and social services (+528), construction (+526), and retail trade (+487) are projected to post the largest employment gains during the period. The county's payrolls are projected to grow significantly less than the state (3.4% vs. 6.5%, respectively) over the same period.

Industry employment projections for all nonfarm jobs are valuable data for identifying the potential future employment growth or decline of industries within the county. The industry employment projections use the nonfarm wage salary employment definition of employment. The primary data input is an employment time series, by industry, which goes back to 1990. Employment refers to jobs, both full and part-time, not the number of employed persons.

Source: U.S. Census Bureau, Center for Economic Studies, LEHD, 3rd Quarter 2010 and 3rd Quarter 2015 employment

Cape May County, 2014-2024 Projected Employment Change					
			Change 2014-2024		
	2014	2024		Per	cent
Industry Title (Two Digit NAICS)	Jobs	Jobs	Number	Total	Annual
Total All Industries	41,910	43,355	1,445	3.4	0.3
Healthcare and Social Services	5,070	5,598	528	10.4	1.0
Construction	2,165	2,691	526	24.3	2.2
Retail Trade	6,767	7,254	487	7.2	0.7
Professional, Scientific, and Technical Services	1,081	1,274	193	17.9	1.7
Accommodation and Food Services	9,210	9,369	159	1.7	0.2
Arts, Entertainment, and Recreation	1,762	1,919	157	8.9	0.9
Administrative and Waste Services	1,003	1,112	109	10.9	1.0
Real Estate and Rental and Leasing	859	917	58	6.8	0.7
Other Services	1,875	1,904	29	1.5	0.2
Transportation and Warehousing	271	291	20	7.4	0.7
Management of Companies and Enterprises	257	273	16	6.2	0.6
Wholesale Trade	373	387	14	3.8	0.4
Finance and Insurance	1,122	1,133	11	1.0	0.1
Utilities	146	152	6	4.1	0.4
Natural Resources and Mining	45	37	-8	-17.8	-1.9
Manufacturing	759	693	-66	-8.7	-0.9
Information	245	174	-71	-29.0	-3.4
Educational Services	3,176	2,958	-218	-6.9	-0.7
Government	5,724	5,219	-505	-8.8	-0.9
Note: Total nonfarm employment excludes self-employed and unpaid family workers. Percent Changes are based on unrounded data - Source: New Jersey Department of Labor and Workforce Development					

EXHIBIT 3 Cape May County Employment Projections

Source: NJLWD, Industry and Occupational Employment Projections 2014 - 2024.

Business Promotion

Ocean City Chamber of Commerce.

The Ocean City Regional Chamber of Commerce works to stimulate trade and create a prosperous climate for business growth and development in the Greater Ocean City area. The Chamber helps over 500 member businesses generate business, maintain visibility, create contacts, and grow. The Chamber also serves as an information hub for year-round residents and visitors. A full-time team answers over 35,000 telephone inquiries per year and refers consumers to Chamber members ... all in an effort to keep Ocean City New Jersey one of the top-rated shore towns in the country. The Chamber assists in marketing downtown businesses, and is also active in tracking legislation and other items important to the business community.

Ocean City Hospitality Association (OCHA.)

The OCHA maintains a website that enables potential visitors to check availability calendars online of over 30 Ocean City hotels, motels and bed and breakfasts.

Ocean City Restaurant Association.

The OCRA maintains a website that contains detailed information related to the incredible array of eating and dining establishments in the City.

Boardwalk Merchants Association.

The Boardwalk Merchants will continue themed promotions such as the weekly Family Nights, Mummers Nights and Character Nights.

Downtown Merchants Association.

Two downtown business groups — the Retail Merchants Association and Main Street Ocean City merged into a single organization called the Downtown Merchants Association. This new group will focus more directly on marketing downtown businesses and work collaboratively with other groups in town. There are over 100 shops and cafes in *Downtown Ocean City*, located midway between the beach and bay along Asbury Avenue from 6th to 14th streets.

Tourist Development Commission.

The Ocean City Tourist Development Commission was created in 1993 to promote tourism on behalf of the City through assisting the City with appropriate advertising and promotional literature. Funding to support these activities is derived from an assessment on mercantile licenses. The Commission is also authorized pursuant to apply for, receive and accept contributions or donations of money, property, labor or other thing of value to be used for the Commission's authorized purposes; and make grants of money, property or personal services to any person, business or organization engaged in the tourist industry.

Special Improvement Districts.

The Improvement District (whether business, or special, or downtown or some other name) is a model for management of the municipality's commercial corridor. It is authorized by state law (the Pedestrian Mall and Special Improvement District Act, N.J.S.A. 40:56-65, et seq.) to be formed by ordinance in any municipality in New Jersey. The Improvement District provides a mechanism for the businesses and property owners of a community to organize as a single entity, to raise funds for activities that *enhance* or *expand upon* municipal services and to manage themselves to become a more effective destination for commerce.

The State provides ad hoc technical assistance and support to communities already having created Improvement Districts that are being managed by a District Management Corporation, as well as assistance to communities seeking to explore the implementation of an Improvement District. As resources allow, the State also manages the Downtown Business Improvement Zone Loan Fund and two Improvement District Challenge Grant programs.

Ocean City has created Improvement Districts and assigned an entity to manage the resulting assessments and to provide enhanced services to those commercial businesses and properties in the defined District. Ocean City's Special Improvement Districts include the retail section of the Ocean City Boardwalk, the downtown section of Asbury Avenue and the gateway section of

Ninth Street. Assessments on the businesses in the district are supplemented by an appropriation from the City to provide social media marketing, help plan events, beautification and promoting special events.

Recommendations

Based on review of the initiatives and programs contributing to the City's economy, multiple efforts appear necessary to maintain a healthy environment for business success. This is especially true in Ocean City where many of the businesses are seasonal in nature and dependent upon tourism.

Marketing.

Maintenance and redevelopment of the City's central business district is supported by physical improvements. The City also provides funds for a marketing campaign to attract tourists. Marketing videos, press releases and newsletters are regularly produced by the Ocean City Chamber of Commerce to showcase various redevelopment successes to the general public and development community. These efforts have demonstrated their value to the community and should be continued.

Funding.

The City may consider creation of development incentives (tax abatements, and tax increment financing) to encourage additional business activity. Within Ocean City there is a unique network of organizations that make up the *community partners*. The main objective of this group is to promote Ocean City's considerable assets as "America's Greatest Family Resort." The *community partners* should strive to make the most efficient use of their resources and talents.

Business Assistance Programs.

The City may consider creating and funding business assistance programs that will help downtown businesses to attract desired uses and avoid vacant spaces. Google's "Let's Put Our Cities on the Map," is a new program designed to help local businesses get online using city-based Web resources. It aims to get cities, local organizations and small businesses working together and with Google to make the most out of Web- and location-based marketing. Part of the Get Your Business Online project, Let's Put Our Cities on the Map gives each city a custom website that local businesses can use to create, establish and manage their presence online, while giving back to the community by boosting local commerce. According to Google, consumers are 38 percent more likely to visit and 29 percent more likely to consider purchasing from businesses with complete listings. See more at: <u>http://www.businessnewsdaily.com/7871-google-put-cities-on-the-map.html#sthash.cot52YOQ.dpuf</u>

Design Standards and Streetscape.

A "sense of place" is a difficult product to achieve in a downtown environment such as Ocean City where a variety of architectural styles exist. 'Community Design Guidelines' for the Asbury Avenue business district and 9th Street were developed in 2009. This document includes street profile, and streetscape standards, allowable uses, building envelopes, building height, design of parking areas, and building encroachments such as awnings. The code also contains Architectural Standards that regulate the design of facades, roofs, walls, awnings, and signage of buildings within the Districts. The 'Community Design Guidelines' were not adopted but may contain standards that will assist the City in retaining its unique character as redevelopment of the downtown continues. A companion document titled "Design Standards – 9th Street Gateway and Central Business District" contains design standards that will benefit the City's economic base and improve resilience by reducing damage from future flooding.

Public Arts Program.

Public art can be a major component in creating a city's visual image. Public art improves the visual experience and can help in making a city memorable for succeeding generations. The Community Arts Program was formed in October 2004 by a group of citizens who recognized the need for public art in Ocean City. In the past few years, CAP honored Ocean City's vibrant surf culture with a mural on the Moorlyn Theatre on the Boardwalk; created a child's view of the world in glass mosaics in the entrance of Ocean City High School; started a sculpture garden at the Ocean City Cultural and Arts Center and opened students' eyes to art and the importance of leaving your mark on the world with a sculpture at the south entrance at the Ocean City Primary School. The City recognizes the importance of public art as a means of enhancing the quality of life in the community and as a means of providing professional opportunities to local and regional visual artists.

Historic Preservation Program.

The downtown business district although not within the historic district contains several structures and sites that have interest from a historic and architectural viewpoint. The preservation and enhancement of such places can be beneficial to the business community. However, without any incentives to fit these structures into the future plans for the Downtown area, many will continue to deteriorate and be demolished. The City in cooperation with the Historic Commission may develop educational materials and/or financial incentives to promote the preservation of specific structures.

Capital Planning.

Capital improvements often represent the most significant investments made by communities. Coastal communities in particular must plan for not just growth and future development, but also for infrastructure degradation due to sea level rise, extreme weather events, and other climate hazards. And while many coastal communities are facing this reality, the techniques and costs of incorporating adaptation and hazard planning into the capital planning process are unclear.

As capital improvements planning often results in projects that directly impact the built and unbuilt environments, incorporating hazards planning into the capital improvements planning process could greatly enhance a community's resilience to extreme weather and sea level rise. Standardizing and mainstreaming these techniques will benefit Ocean City as it continues with long-term adaptation.

Smart Growth.

Planning with smart growth principles can help communities make efficient investments in buildings and other infrastructure, protect and restore critical environmental areas, and protect public health. In applying these principles to any development project, communities need to explicitly consider natural hazards, including the potential impact of climate change. Resilience to natural hazards, such as storms and storm surges, sea-level rise, and shoreline erosion, is inextricably linked to the siting and design of development, as well as to the built and green infrastructure that supports it.

Well-planned and well-maintained natural systems can help protect communities in many ways. For example, natural floodplains and wetlands can act as protective buffers that absorb floodwater, reducing the speed and amount of flooding, controlling erosion, protecting drinking water supplies and water quality, and insulate buildings and roads from damage.

Integrated Coastal Zone Management.

Integrated Coastal Zone Management (ICZM) is a process of governance and consists of the legal and institutional framework necessary to ensure that development and management plans for coastal zones are integrated with environmental (including social) goals and are made with the participation of those affected. The purpose of ICZM is to maximize the benefits provided by the coastal zone and to minimize the conflicts and harmful effects of activities upon each other, on resources and on the environment. The City should evaluate opportunities to incorporate elements of this management tool developed by the World Bank into their continuing planning programs.

Green Infrastructure.

For the purposes of the [Hurricane Sandy] Rebuilding Strategy, green infrastructure is defined as the integration of natural systems and processes, or engineered systems that mimic natural systems and processes, into investments in resilient infrastructure. Green infrastructure takes advantage of the services and natural defenses provided by land and water systems such as wetlands, natural areas, vegetated sand dunes, and forests, while contributing to the health and quality of America's communities. Damage from flooding in inland areas, and from storm surge and flooding in coastal environments, is significantly reduced when natural wetland, riparian, and floodplain areas and the ecosystem services they provide are protected. A particularly effective use of green infrastructure to reduce damage from natural disasters is to conserve environmentally sensitive areas through strategies such as acquisition of land or easements, natural resource protection ordinances, and other regulatory controls and incentives.

Potential benefits to Ocean City's economy associated with green infrastructure include, but are not limited to the following:

- Creation of job and business opportunities
- Increased tourism, retail sales, and other economic activity
- Increased property values
- Reduced energy, health care, and gray infrastructure costs
- Provision of locally produced resources (food, fiber, and water)

While many of the above benefits do not directly relate to post-disaster recovery, they can contribute to increased community resilience and, in doing so, reduce vulnerability to natural disasters.

According to a recent study by the Natural Capital Project and the Nature Conservancy, 16 percent of the U.S. coastline, inhabited by 1.3 million people and representing \$300 billion in residential property value, is located in high-hazard areas⁷. Sixty-seven percent of these areas are protected by natural green infrastructure (intact reefs, sand dunes, marshes, and other coastal vegetation), and the number of people and total property value exposed to hazards would double if this habitat were lost. These findings underscore the effectiveness of preserving and restoring natural habitat areas, as well as mimicking the services provided by such areas through "nature-based" approaches (e.g., artificial oyster reefs and living shorelines), to increase resilience to natural disasters.

⁷ Arkema, Katie K., Greg Guannel, Gregory Vertutes, Spencer A. Wood, Anne Guerry, Mary Ruckelshaus, Peter Kareiva, Martin Lacayo, and Jessica M. Silver. 2013. *Coastal Habitats Shield People and Property from Sea-Level Rise and Storms*. The Natural Capital Project, Stanford University and The Nature Conservancy. Published in Nature Climate Change 3, pp. 913–918. Available at <u>http://www.nature.com/nclimate/journal/v3/n10/full/nclimate1944.html</u>.

Ocean City should continue to explore new and innovative ways to increase coastal resilience. Integrated approaches to planning for future disasters combine green and gray infrastructure strategies such as those used in Howard Beach, a neighborhood in Queens that was flooded by Hurricane Sandy, concluded that a combination of natural and structural defenses would provide the most cost-effective protection against future storms⁸. These "hybrid" strategies include restored marsh, mussel beds, rock groins, removable flood walls, and flood gates. At a larger scale, *A Stronger, More Resilient New York*⁹ combines nature-based (e.g., beach, dune, and marsh restoration) and structural (e.g., floodwalls and storm surge barriers) measures to protect against the effects of climate change. Louisiana's *Coastal Protection Master Plan*¹⁰ proposes a combination of restoration, nonstructural, and targeted structural measures to provide increased flood protection.

Disaster Recovery Programs

<u>Businesses</u>

Superstorm Sandy devastated many businesses in New Jersey, causing substantial commercial property damage and short-term and long-term business operations losses. In addition to the physical damage Sandy caused to businesses themselves, widespread power outages resulted in inventory losses and working capital losses. Damage to public infrastructure such as roads, rail and bridges as well as compromised water utility systems and gas unavailability compounded those damages. While Superstorm Sandy caused damage across all state industries, some industries – particularly the tourism industry – were substantially affected.

New Jersey has implemented four economic recovery and revitalization programs with Community Development Block Grant (CDBG) Disaster Recovery funds. These programs focus on direct assistance to small businesses to satisfy unmet needs, financial support to stormaffected communities for economic revitalization efforts, and a marketing campaign to inform the public that New Jersey's tourism assets are open for visitors. Below are financial resources offered by organizations across New Jersey for business recovery.

Storm Recovery Loans through UCEDC.

UCEDC, a statewide economic development corporation, is offering working capital loans up to \$50,000 at only 2% for five years to meet the needs of small businesses impacted by Sandy. Proceeds can be used to cover costs associated with physical or financial damage (business interruption, etc.) due to the storm. No collateral is required and a decision will be made within two weeks of receiving a complete application.

⁸ Nature Conservancy. 2013. *Integrating Natural Infrastructure into Urban Coastal Resilience*: Howard Beach, Queens. Available at http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/newyork/

⁹ New York, City of. 2013. A Stronger, More Resilient New York. Available at http://www.nyc.gov/html/sirr/html/ report/report.shtml.

¹⁰ Louisiana, State of. 2012. *Louisiana's Comprehensive Master Plan for A Sustainable Coast*. Coastal Protection Master Plan available at http://coastal.la.gov/a-common-vision/2012-coastal-master-plan.

REBUILD New Jersey.

Offered by New Jersey Community Capital (NJCC), REBUILD is available to provide critical loans from \$10,000 to \$65,000 to help small businesses pay for building repairs, equipment and inventory purchases, rent or mortgage payments, salary expenses, and utility costs for which they may need assistance. The loans are for up to 24 months and are at a 3% interest rate, with up to three months interest free. EDA has also provided financing to REBUILD for the organization to advance to small businesses recovering from Superstorm Sandy.

Cooperative Business Assistance Corporation (CBAC).

CBAC is a nonprofit organization providing market or below market interest rate business loans and technical assistance to small businesses located in or moving into the Philadelphia, Pennsylvania and Southern New Jersey region. EDA has also provided financing to CBAC for the organization to advance to small businesses recovering from Superstorm Sandy.

New Jersey Business Action Center.

Information for all services may be easily accessed through New Jersey's Business Action Center (BAC) by calling 1-866-534-7789 or through the state's business portal at <u>www.newjerseybusiness.gov</u>, the "one-stop" shop for business resources. Agents are also available to assist callers that speak Spanish.

Federal Emergency Management Agency (FEMA) Assistance.

In addition to recovery resources being offered through the State of New Jersey, the federal government has issued a major disaster declaration for all New Jersey counties. That means the Federal Emergency Management Agency (FEMA) is accepting applications for disaster assistance from businesses and individuals in those counties. You can register online at <u>http://www.disasterassistance.gov</u>, by web-enabled mobile device at m.fema.gov or by calling 1-800-621-FEMA(3362) or 1-800-462-7585 (TTY) for the hearing and speech impaired. The toll-free telephone numbers will operate from 7 a.m. to 10 p.m. EDT seven days a week until further notice.

New Jersey's Hurricane Sandy Information Center.

The official Hurricane Sandy information center for the State of New Jersey. Small & Mid-Sized Business - The EDA has a long history of supporting growth in New Jersey for businesses of all sizes, but support of small to mid-sized businesses has always been one of our top priorities. With the creative and versatile loan solutions available to small to mid-sized businesses through the EDA, now is an opportune time to contact EDA to determine if any of our programs may be the right fit for your small to mid-sized business needs.

Premier Lender Program.

The Premier Lender Program creates new opportunities for small businesses and EDA's lending partners by providing new, low-cost financing opportunities with faster turnaround. If your small business is discussing potential financing with one of EDA's Premier Lender banks, EDA's participation or guarantee of a portion of the financing can lower the cost of borrowing for your business.

Communities

Superstorm Sandy had a severe impact on local communities and their ability to: perform basic functions; serve their residents, businesses and visitors; and plan for future disasters. Several Sandy recovery programs assist in these areas. The following recovery programs apply to communities:

- Post-Sandy Planning Assistance Grant Program
- Essential Services Grants Program
- Zoning Code Enforcement Grant Program for Municipalities
- Non-Federal Cost Shares (Match) Program
- Unsafe Structures Demolition Program
- Flood Hazard Risk Reduction Programs
- New Jersey Energy Resilience Bank
- Neighborhood and Community Revitalization Program
- Lead Hazard Reduction Program
- Rebuild By Design Hudson River
- Rebuild By Design Meadowlands
- National Disaster Resilience Competition

References



planning advisory service

AMERICAN SOCIETY OF PLANNING OFFICIALS 1313 EAST 60th STREET - CHICAGO 37, ILLINOIS

Information Report No. 80

November 1955

PROGRAMS FOR CENTRAL BUSINESS DISTRICT IMPROVEMENT*









HISTORIC PRESERVATION PLAN

Background and Introduction.

Originally known as Peck's Beach, Ocean City is a long barrier island at the northern end of Cape May County. The island remained largely undeveloped and uninhabited until 1879, when a group of Methodist ministers selected it for the site of their new religious community. Development was rapid, and centered on the grassy, camp meeting grounds that occupied a strip of land between Fifth and Sixth Streets on the northern part of the island. A large number of permanent residential structures were erected during the 1880s and 1890s, reflecting the range of architectural styles popular during the Victorian era. By the late 1920s, available lots in the district were nearly fully developed, with <u>Colonial Revival</u> and <u>Craftsman</u> style structures joining the earlier dwellings.

Ocean City's heritage is rich and varied. Historic properties are physical links to the past that provide meaning to the present and continuity to the future. They are physical records of the places, the events, and especially the people that helped shape the broad patterns of Ocean City's development.

A Historic Preservation Plan Element was included in the City's 1988 Master Plan. The 1988 Plan briefly describes the most prominent historic sites in the City and recommends a more detailed analysis of historical structures and possible State and National Register designations. An amendment to the Historic Preservation Plan adopted in December 1989 proposes establishing an historic district and Historic Preservation Commission.

This update and amendment to "Historic Preservation Plan" has been prepared in response to recommendations contained in the Ocean City Strategic Recovery Planning Report (October 7, 2015), and has been made possible with funding provided by a Post-Sandy Planning Assistance Grant administered by the New Jersey Department of Community Affairs.

Historic District



The Ocean City historic district was created in 1991 and includes the area from Third to Eighth streets along Wesley, Ocean and Central avenues on both sides, and Eighth to Ninth streets on Wesley Avenue, as well as U.S. Life Saving Station 30 at Fourth Street and Atlantic Avenue.

The Ocean City Residential Historic District survives today as a significant

example of the type of religious resort community that was created along New Jersey's shore during the second half of the nineteenth century, and stands in contrast to other Cape May County barrier islands, founded purely as pleasure resorts.

The Historic Residential District was Nationally-registered on March 20, 2003 (NR# 03000129) <u>National Register of Historic Places</u>, and State-registered January 15, 2003. The original nomination document found that,

"There have been changes to the Ocean City Residential Historic District over time, specifically the addition of synthetic siding, although there are remarkably few intrusions or non-contributing properties within the district as delineated. Particularly when viewed within the context of Ocean City as a whole, where much of the development is recent or ongoing, and barrier islands in general, this collection of buildings still clearly conveys a sense of the community's roots, retaining its parklike core and varied collection of late nineteenth and early twentieth century dwellings and religious institutions."

A complete listing of properties within the Historic District is included in Table 1. Figure 1 depicts the locations and designations of these historic properties and sites.

Historic Preservation Ordinance

The City's historic preservation regulations are codified as Article 1800 of the City Code. The Code sets forth rules for establishing an historic preservation
commission, and the commission's powers and duties; criteria for designating historic districts and sites; permit requirements and application review procedures; standards and design guidelines; and demolition. The Historic Preservation Commission of Ocean City was established pursuant to <u>N.J.S.A.</u> 40:55D-107 et seq. by Ordinance #89-24.

Historic Preservation Guidelines

The City's Historic District Guidelines prepared by the Rothe Partnership in 1991 are intended to assist property owners, the Historic Preservation Commission and all others in the implementation of the Historic Preservation Ordinance. These Guidelines contain recommendations for the most appropriate historic forms, materials and methods addressing the elements of design which are common to all building types and styles. The City's Guidelines incorporate the Secretary of "The Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings."

Sandy's Damage to Historic Sites

Several historic Ocean City properties were named recipients of Hurricane Sandy Disaster Relief Grants, with awards totaling over \$1.3 million. Recipients include St. Peter's United Methodist Church at \$145,229; First Presbyterian Church at \$151,000; My Shore House at \$335,879, the city-owned Ocean City Transportation Center at \$501,000; US Life Saving Station 30 at \$143,031; and City Hall at \$230,000.

Sandy Disaster Relief Grants for historic properties are intended to fund the preservation, stabilization, rehabilitation and repair of New Jersey historic structures that were damaged by Hurricane Sandy, which pounded the Jersey coastline in October 2012, causing widespread flooding and property damage.



Floodwaters from <u>Hurricane Sandy</u> damaged the first floor of City Hall causing the offices to be relocated for over a year. City Council approved a \$1.17 million contract to rebuild and improve the first floor, including improved flood gates, water-proofing up to 4 feet deep, vapor barrier, elevation of all electrical components, windows, doors, and a new layout that added a public information area and larger bathrooms.



Ocean City Tenth Street Station was built in 1898 by the <u>Ocean City</u> <u>Railroad</u>, which was acquired by the <u>Atlantic City Railroad</u> in 1901, and later by the <u>Pennsylvania-Reading</u> <u>Seashore Lines</u>. Trains last served the station in August 1981, when service was cancelled due to poor track conditions and limited funding from the <u>New Jersey Department of</u>

<u>Transportation</u>. Tenth Street Station was added to the <u>National Register of</u> <u>Historic Places</u> on June 22, 1984. Now known as the Ocean City Transportation Center, the building is in use as a <u>New Jersey Transit</u> bus station.

During Hurricane Sandy, the Transportation Center was flooded and severely damaged. City Council awarded a restoration contract for \$522,826 to TNT Construction Company, Inc. of Deptford. The Sandy Disaster Relief Grant will help pay for the majority of this work.



Lifesaving stations, designed to aid victims of shipwrecks, began to be constructed along the New Jersey coast during the late 1840s, with one of the first being located at Peck's Beach. This Ocean City station was called Beazeley's Station until 1883. Rebuilt in 1885-1886, it is the only U.S. Life Saving Service

station left in New Jersey that was rebuilt according to the Service's distinctive 1882-type design. This design is both stunning architecturally, with its gabled roof and lookout tower, and highly effective in the use of space to house both boats and surf men.

In 1905-06, the station was expanded to add a boat bay, a wrap-around porch, and other improvements. The footprint of the building was doubled, and the structure is the only surviving 1882-type station to be expanded according to the historic New Jersey Pattern.

In 1915, the U.S. Coast Guard absorbed the U.S. Life Saving Service and assumed control of the Ocean City Station. It is the last of the three stations that were located on the island. The others were the Peck's Beach and Corson's Inlet Stations. The Station passed into private hands in 1945.

A major renovation project on the downstairs was completed after floodwater from Sandy caused considerable damage. US Life Saving Station 30, located at Fourth Street and Atlantic Avenue, is currently undergoing extensive exterior renovation. However, there was damage to the exterior of the structure during Hurricane Sandy, as well as to the grading and slate sidewalk. The Sandy Disaster Relief Grant will pay for these repairs.

Ordinance Considerations

The following potential changes to Article 1800 may be considered.

- Amending the definition of "alteration" to include replacement of an existing portion of an existing building.
- A definition of "contributing property," which will be defined as a building, site, structure or object that was constructed during the historic district's period of significance, is an integral part of the theme of the district, and constitutes the historic district's significance when taken in aggregate with other contributing buildings;
- A definition of "key building," which will mean a structure of such outstanding quality and state of preservation that it independently enhances the district's significance;
- A definition of "noncontributing building";
- A definition of "maintenance."
- Under "Powers and Duties of the Commission," include "recommend the purchase of properties," estates, easements, rights, restrictions and less than fee acquisitions, subject to final approval of City Council and at the direction of City Council.

- Under the "Permits" section, in the subsection "Actions Requiring Review," add: "In the event the change in exterior appearance is obstructed by vegetation or an accessory structure, then the change is subject to review" in regard to a change in exterior, as well as change in existing walls, fences, porches, railings, steps or signs or construction of any of those, if visible to the public from a name or numbered street.
- In that same section, under the subsection for application procedures, requirements for the application form are removed. Add a subsection on required documents and compliance certification.
- In the subsection "Application to Demolish or Move a Structure," add "The integrity of historic districts depends on the preservation and retention of the original historic structures. Therefore, the review of applications for demolition should be undertaken with the greatest care."
- Amend the penalties to make them more severe, including from not more than \$25 a day to not more than \$100 a day for each day up to 10 days in violation of the ordinance; between 11 and 25 days, from not more than \$25 per day to not more than \$100 per day; and for each day beyond 25 days, from not more than \$75 per day to not more than \$500 per day. The jail term, not to exceed 90 days, remains unchanged.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) gives special consideration to the unique value of one of historic buildings, landmarks, and sites. It does so in two ways. First, the NFIP floodplain management regulations provide significant relief to historic structures. Historic structures do not have to meet the floodplain management requirements of the program as long as they maintain their historic structure designation. They do not have to meet the new construction, substantial improvement, or substantial damage requirements of the program. This exclusion from these requirements serves as an incentive for property owners to maintain the historic character of the designated structure (44 CFR §60.3). It may also serve as an incentive for an owner to obtain historic designation of a structure.

Secondly, a designated historic structure can obtain the benefit of subsidized flood insurance through the NFIP even if it has been substantially improved or

substantially damaged so long as the building maintains its historic designation. The amount of insurance premium charged the historic structure may be considerably less than what the NFIP would charge a new non-elevated structure built at the same level. Congress requires that the NFIP charge actuarial rates for all new construction and substantially improved structures (National Flood Insurance Act of 1968, 42 U.S.C. 4015).

Although the NFIP provides relief to historic structures from having to comply with NFIP floodplain management requirements for new construction, communities and owners of historic structures should give consideration to mitigation measures that can reduce the impacts of flooding on historic structures located in Special Flood Hazard Areas (44 CFR §60.3). Mitigation measures to minimize future flood damages should be considered when historic structures are rehabilitated or are repaired following a flood or other hazard event. Qualified professionals such as architects, historic architects, and engineers who have experience in flood mitigation techniques can help identify measures that can be taken to minimize the impacts of flooding on a historic structure while maintaining the structure's historic designation.

Floodplain Management Requirements for Historic Structures

The NFIP floodplain management requirements contain two provisions that are intended to provide relief for "historic structures" located in Special Flood Hazard Areas:

(1) The definition of "substantial improvement" at 44 CFR 59.1 includes the following exclusion for historic structures, "Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as an "historic structure". The same exemption also applies to "historic structures" that have been "substantially damaged".

This provision exempts historic structures from the substantial improvement and substantial damage requirements of the NFIP.

(2) The other provision of the NFIP floodplain management regulations that provides relief for "historic structures" is the variance criteria at 44 CFR 60.6(a). This provision states: "*Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair*

or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure."

Under the variance criteria, communities can place conditions to make the building more flood resistant and minimize flood damages, but such conditions should not affect the historic character and design of the building.

Communities have the option of using either provision for addressing the unique needs of "historic structures". Communities should adopt only one option to address "historic structures." Some communities have chosen to adopt an ordinance that requires variances for improvements or repairs to "historic structures" and do not exclude such improvements from the substantial improvement definition in their ordinance. Other communities include the "historic structures" exemption as part of their "substantial improvement" definition. In either case, "historic structures" can be excluded from the NFIP elevation and floodproofing requirements. Whether a community exempts a "historic structure" under the substantial improvement definition or through the variance process, the exemption of the "historic structure" from the NFIP floodplain management requirements should be documented and maintained in the community permit files.

However, if plans to substantially improve a "historic structure" or repair a substantially damaged "historic structure" would result in loss of its designation as an "historic structure", the structure no longer qualifies for the exemption and would be required to meet the NFIP floodplain management regulations (44 CFR §60.3). This determination needs to be made in advance of issuing a permit. This provides an incentive to the property owner to maintain the structure's historic designation rather than altering the structure in such a way that it loses its designation as a "historic structure".

Even if a "historic structure" is exempted from the substantial improvement and substantial damage requirements, consideration should be given to mitigation measures that can reduce the impacts of future flooding. There are mitigation measures that can reduce flood damages to historic structures without affecting the structure's historic designation.

Flood Insurance for Historic Structures

In addition to the relief from the NFIP floodplain management requirements described above, owners of "historic structures" can obtain and maintain flood insurance at subsidized rates. Flood insurance coverage is required for most mortgage loans and for obtaining Federal grants and other financial assistance. The ability to obtain flood insurance coverage is also important to ensuring that historic structures can be repaired and restored after a flood event.

Minimizing Impacts of Flooding and Protection Measures for Historic Structures

The primary damage to historic buildings in a flood disaster is from immersion of building materials in floodwaters and the moving force of floodwaters that can cause structural collapse. Storm and sanitary sewer backup during flooding is also a major cause of flood damage to buildings. In addition, floods may cause a fire due to ruptured utility lines; result in the growth of mold and mildew; and lead to swelling, warping, and disintegration of materials due to prolonged presence of moisture.

One of the challenges in mitigating the flood risk to a "historic structure" is the need to incorporate mitigation measures in such a way that the structure does not lose its historic designation. When evaluating mitigation measures for historic structures, care should be taken so that new designs and new materials do not obscure existing significant historic features. Retrofitting a historic structure to reduce flood damages can be done that it has minimal impact on the structure's historic integrity and so that it maintains its historic designation.

A range of mitigation measures may be available for a particular historic structure. By adhering to the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and by seeking the help of an architect or engineering professional experienced in rehabilitating historic structures, a structure's original historic setting, scale, and distinctive features can be preserved. You may want to also refer to the *Preservation Briefs* published by the National Park Service, which provide guidance on preserving, rehabilitating, and restoring

historic buildings. You may also want to seek guidance from your State Historic Preservation Officer or Tribal Historic Preservation Officer.

Possible Mitigation Measures

There may be opportunities in Ocean City's central business district to improve resilience from future flooding by implementing measures that have proven successful in other communities.



Following the devastating damage from the 1993 floods, Darlington, Wisconsin found creative solutions to retain the historic charm of its nineteenth century business district, while eliminating the threat of future flood devastation.

The town took advantage of the very high ceilings common to many of the older buildings; their height allowed first floors to be elevated out of flood danger with minimal impact to other historic features. Basements were filled with sand and gravel, floodproofing that portion of the building most vulnerable to flooding, and all utilities were upgraded and raised. All these measures were implemented without altering the exteriors or disrupting the historic integrity of these older buildings.

These mitigation measures resulted in the successful floodproofing of the historic central business district against the 100-year flood event, as well as the revitalization of Darlington's economy.

Protection Measures for Historic Structures

There is a variety of relatively simple measures that can be implemented to minimize the effects of flooding. Although these measures are designed to reduce flood damages, they may not eliminate flooding altogether. Many of the techniques described below may have minimal impact on the character-defining design features of the historic structure and some are relatively inexpensive to implement. Several of these will require a design professional and licensed contractor to implement.

- Relocate contents to a safer location. For example, heirlooms and other cultural resources should be located above the BFE. At a minimum, valuable contents should be removed from flood-prone basements.
- Create positive drainage around the building. In places where ground slope against the building facade is either flat or toward the building, increase the grade immediately adjacent to the façade to achieve positive drainage away from the building. In some situations, existing masonry and concrete window wells around basement windows may need to be built up to retain the extra height of the fill.
- Protect mechanical and utility equipment. Elevating mechanical and utility equipment (including electrical, heating, ventilation, plumbing and air conditioning equipment) above the BFE can protect them from flood damage. Guidance for protecting mechanical and utility equipment from flooding can be found in the FEMA publication, *Protecting Building Utilities from Flood Damage, Principles and Practices for the Design and Construction of Flood Resistant Building Utility Systems* (FEMA 348/November 1999).
- Remove modern finished materials from basements or other areas that are flood-prone. Often historic structures are constructed from materials that are relatively flood-resistant. For example, basements often had stone or rubble walls and dirt floors. These buildings often were repeatedly flooded with minimal flood damages except to building contents. In more recent years many of these areas have been finished off using modern materials that are less resistant to flood damage and building utilities added. It may be possible to wetfloodproof the building merely by removing these modern materials and restoring these areas to their original configuration.
- Use flood resistant materials below the BFE. When rehabilitating or repairing a damaged historic structure, use flood resistant materials below the BFE to improve the structure's ability to withstand flooding. Guidance for using flood resistant materials can be found in Technical Bulletin 2-93, *Flood-Resistant Materials Requirements for Buildings Located in Special Flood Hazard Area in accordance with the National Flood Insurance Programs*.

- Fill in the basement. For historic structures with basements, a simple solution to minimize flood damage and reduce the potential for structural damage is to abandon the basement, raise any mechanical and utility equipment, and fill in the basement with sand or gravel.
- Wet floodproofing the basement. This measure allows the internal flooding of a basement. Flooding of a structure's interior is intended to counteract hydrostatic pressure on the walls, surfaces, and supports of the structure by equalizing interior and exterior water levels during a flood. Inundation also reduces the danger of buoyancy from hydrostatic uplift forces. Such measures may require alteration of a basement's design and construction, use of flood resistant materials, adjustment of the basement's maintenance, relocation of equipment and contents, and emergency preparedness. Guidance for wet floodproofing a basement can be found in Technical Bulletin 7-93 *Wet Floodproofing Requirements for Structures Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program.*
- Install "mini"-floodwalls to protect openings, such as a window well. For low level flooding, a type of "mini"-floodwall can be used to permanently protect various types of openings. Possible materials for this use include brick, concrete block and poured concrete. They should be supported by and securely tied into a footing so that they will not be undercut by scouring and the soil under these walls should be fairly impervious to control seepage. Some form of sealant may be needed on the outside to control seepage.
- Temporary measures. Where it is not possible to use the above measures to protect a building from flooding, it may be possible to use temporary measures to reduce flood damages. Examples include sand-bagging openings, installing temporary barriers or flood shields in openings, and evacuating building contents to floors above the flood level. In order for this approach to work, one must develop an emergency plan and stock-pile the required materials ahead of time. The amount of flood warning time available for the site is critical and it must be ensured that adequate personnel are available to install the measures. Do not try to keep water out of buildings unless an engineering analysis is conducted to ensure that the walls are strong

enough to withstand flood forces (hydrostatic, hydrodynamic, debris, and buoyancy).

<u>Elevation</u>

One of the common methods of protecting flood-prone buildings is to elevate the lowest floor of a structure above the BFE (elevation of the one-percent-annual chance flood). Elevation is an effective mitigation measure, if designed and constructed appropriately to withstand flood forces. Although elevation is a practical solution for flooding problems, the flooding conditions and other hazards at the site must be carefully examined so that the most suitable technique and foundation type can be determined. There are two types of elevation to consider:

- (1) The entire building is lifted and placed on a new elevated foundation (columns, piers, posts, or raised foundation walls such as a crawl space).
- (2) In situations where it is possible to leave the exterior of the building the same, raise the interior floor of the building above the BFE. This may be an alternative for older stone buildings with high ceilings and elevated window sills.



While elevating a structure above the BFE will provide the structure the most protection, a less intrusive elevation may be desired or more feasible for a historic structure. Other protection measures, such as utilities elevating and equipment above the BFE. should be considered if elevating a historic structure to

the BFE is not practicable.

Elevation of a historic structure does not have to be achieved by unsightly pilings or other foundation that would impair the aesthetics of a historic district. The structure could be elevated on pilings or foundation walls and the foundation area could then be covered by an architecturally pleasing facade that is consistent with materials from the historic structure. The lower area can also be camouflaged with landscaping.

<u>Floodproofing</u>

Another alternative is to "floodproof" the building, so that it will not sustain damage or so that damages are minimized. There are two types of floodproofing called "dry-floodproofing" and "wet-floodproofing." commonly Drv floodproofing means making a building watertight, substantially impermeable to floodwaters. This form of floodproofing requires that the building be properly anchored to resist flotation, collapse, and lateral movement. It also may require the reinforcement of walls to withstand flood forces and impact forces generated by floating debris; the use of membranes and other sealants to reduce seepage of floodwater through walls and wall penetrations; the installation of pumps to control interior water levels; the installation of check valves to prevent entrance of floodwater or sewage flows through utilities; and the location of electrical, mechanical, utility, and other valuable vulnerable equipment and contents above the expected flood level. Dry-floodproofing must be implemented with an appropriate design by a registered professional engineer or architect. Additional guidance on dry floodproofing can be found in Technical Bulletin 3-93 Non-Residential Floodproofing – Requirements and Certification for Buildings Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program and in *Floodproofing Non-Residential Structures* (FEMA 102/May 1986).

Wet-floodproofing allows for the flooding of a structure's interior to equalize hydrostatic pressure on exterior walls, surfaces, and supports of the structure during a flood. Application of wet-floodproofing as a flood protection technique should be limited to specific situations in A Zones (including A, AE, A1-30, AH, AO, and AR zones).

Flooding of a structure's interior is intended to counteract hydrostatic flood forces on the exterior walls, surfaces, and supports of the structure during a flood. Inundation also reduces the danger of buoyancy from uplift forces. Use of wet floodproofing for historic structures requires careful consideration of protection techniques. Building materials for the area that is to be wet-floodproofed should be replaced with flood resistant materials. Valuable contents should be relocated to or above the BFE. Light, portable furnishings should be able to be moved quickly and easily before a flood. Utilities and equipment should be elevated to or above the BFE or located on a platform that is above the BFE. Consideration must be given to flood duration, frequency, and depth to determine if wet-floodproofing is a viable option. For example, flood-prone basements may be modified, so that they can be flooded without damage to the building or foundation. Additional guidance on wet floodproofing can be found in Technical Bulletin 7-93 *Wet Floodproofing Requirements for Structures Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program*.

<u>Relocation</u>

Relocation is the mitigation measure that can offer the greatest security from future flooding. Relocation involves moving the entire structure out of the floodplain or it may involve dismantling a structure and rebuilding it elsewhere. It may be possible to relocate a building to a higher part of the same parcel or lot, but often it will be necessary to move the building to another site. In either case, it is the most reliable of all mitigation measures. In addition to relieving the property owner from future anxiety about flooding, this method can offer the opportunity to significantly reduce or even eliminate the need for flood insurance.

Relocation may be the best option in cases where the building site is subject to repeat flooding or severe flooding, where flood depths and velocities can have significant impact on the building.

Table 1 - Historic District Inventory

Table 1 contains a complete listing of properties in the City's Historic District.

Table 1

Block	Lot	Street Address	Status	Date designated	Style/ Year Built	Use
70.10	6	29 Bay Road	Withdrew from designation		Unknown	
10	23	30 Central Ave	Local key		Unk/1890-1909	1
303	49	801 4th St	Local Key	COE 4/9/01	Stick/1880s	lss
304	1	701 4th St	Non contributing		Altered Mission/1910s	С
304	2				Craftsman Neoclassical	
304	2	705 4th St	Local Contributing		Revival altered/1910-20	1
204	2				Neoclassical Revival/1910-	
304	3	707 4th St	Local Contributing		20	1
304	4	709 4th St	Local Contributing		Colonial Revival/1910s	1
304	5	335 Ocean Ave	Local Contributing		Craftsman/1920s	1
304	6	333 Ocean Ave	Local Contributing		Craftsman/1920s	1
304	7	331 Ocean Ave	Non contributing		Folk Victorian/1890-1909	2
204	0				Folk Victorian	
304	0	325 Ocean Ave	Non contributing		Craftsman/1880s	1
204	0				Neoclassical Revival/1890-	
304	9	321-323 Ocean Ave	Local Contributing		1909	1
204	10					
304	10	319 Ocean Ave	Local Contributing		Neoclassical Revival/1920s	3
004					Neoclassical	
304	11	317 Ocean Ave	Non contributing		Craftsman/1890-1909	5
304	12	313 Ocean Ave	Local Contributing		Craftsman/1920s	3
304	13	311 Ocean Ave	Non contributing		Classical Revival/1920s	1
004			<u> </u>		Craftsman/1920s;DEMO	
304	14	309 Ocean Ave	Non contributing		2005	1
304	15	305 Ocean Ave	Non contributing		Craftsman altered/1920s	1
304	16	307 Ocean Ave	Non contributing			1
304	17	700 3rd St	Non contributing		2001	2
304	17.01	704 3rd St	Non contributing		2001	
			i tori oʻoʻni izdalig		Altered Neoclassical	
304	18	708 3rd St	Local Contributing		Revival/post 1909	2
304	19	712 3rd St	Local Contributing		Craftsman/1910	1
		342 Atlantic/717-725	Local Contracting			
304	34	4thSt	Non contributing			7
305	1	341 Wesley Ave	Local Key		Queen Anne/1890-1909	1
305	2	337 Wesley Ave	Non contributing		Colonial Revival/1910s	2
305	3	331 Wesley Ave	Non contributing		1950-70	2
305	4	327 Wesley Ave	Local Contributing		Colonial Revival/1930	1
305	5	321 Wesley Ave	Local Contributing		Colonial Revival/1910-20	1
000	Ū		Local Contributing		Craftsman(beavily	
305	6	319 Wesley Ave	Local Contributing		modified)/1910-20	1
305	7	317 Wesley Ave	Local Contributing		Craftsman/1910-20	1
000	1		Local Contributing		Craftsman/1910-20:DEMO	
305	8	315 Wesley Ave	Non contributing		2002	2
					Craftsman	-
305	9	309 Wesley Ave	Non contributing		altered/1920s:DEMO 2001	2
305	10	307 Wesley Ave	Local Contributing		Classical Rivival/1930	- C
000	10	COT TTOOLOY AVE			Colonial Revival/nost 1000	0
305	11	600 3rd St	Local Contributing		c 1910-20	1
					Neoclassical Revival/nost	1
305	12	606 3rd St			1909 c 1910-20	2
305	13	608 3rd St	Linknown		1000 0. 1010-20	<u>-</u> 1
305	1/		Local Contributing		Mission Revival/1020	، د
305	15	322-26 Ocean Ava	Non contributing		Contemporary/1020c	1
505	10	ULL-LU UUEAII AVE			Neoclassical Povival	+
305	16	330 00000 410	Local Contributing		Crofteman/1020c	2
		550 Ocean Ave				3
305	17	222 Occan Arm	Loool Contributing		Croftemon/1020c	2
		352 Ocean Ave			Vialisinal 19205	3
305	18	600 4th St	Loool Contributing		Croftomon/1010c	4
		003 411 31				í
305	19	612 4th St	Loool Contribution		Croftemen/1010-	4
		13 4th St	Local Contributing		Cransman/1910S	1

	1					
305	20				Neoclassical	
	20	615 4th St	Local Contributing		Vernacular/1910-20	1
305	21	334 Ocean Ave	Non contributing		Colonial Revival/1920s	1
305	22	4th & Ocean	Non contributing			1
306	1	502 4th St	Local Contributing		Colonial Boying/ post 1000	1
206	2	503 4th St	Non contributing		Colonial Revival post 1909	1
300	2	307 4th St	Contributing	NR 2/20/02: SR 1/15/02	Colonial Bouival/1880a	1
306	3	341 Central Ave	Contributing	NR 3/20/03, SR 1/15/03	Colorital Revival/1880s	1
306	4	337 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Neoclassical Revival/1930s	1
000	_		Ŭ		International	
306	5	335 Central Ave	Local contributing		Vernacular/1960	2
306	6	329 Central Ave	Local Contributing		Craftsman/1910-20	1
306	7	325 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Craftsman/1910-20	3
306	8	321 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1918-22	1
306	9	317 Central Ave	Local Contributing		Folk Victorian/1880-90	1
306	10	315 Central Ave	Contributing	NR 3/20/03: SR 1/15/03	Folk Victorian/1819s	1
306	11	309-11 Central Ave	Non contributing		2001	2
306	11.01	305 Central Ave	Contributing	NR 3/20/03: SR 1/15/03	Queen Anne/1880s	2
306	12	301 Central Ave	Contributing	NR 3/20/03: SR 1/15/03	Folk Victorian/1880s	1
000	12	oor oonaarriio	Contaibdang		Craftsman/Colonial	
306	13	300 Wasley Ave	Non contributing		Revival/1910-20	1
306	1/	304-06 Wesley Ave	Local Contributing		Colonial Pevival/1910-20	2
306	14	308-10 Wesley Ave	Non contributing			2
300	15	JUD-10 Wesley Ave	Non contributing		Colonial Povival	2
306	16	214 Maalay Ava	Local Contributing		Colorital Revival	2
206	17	314 Wesley Ave	Non contributing			
306	10	220 Wesley Ave			T9905	1
306	10	320 Wesley Ave	Local Contributing		FOR VICIONAL/1690-1909	1
306	19	326 Wesley Ave	Non contributing		1950	
306	20	000 00 14/2 - 1 1	No		Folk Victorian Gotnic	0
000	04	328-30 Wesley Ave	Non contributing		Revival/1910; DEMO 2007	2
306	21	509 4th St	Local Contributing		Folk Victorian/1900	1
306	- 22	511 4th St	Local Contributing		Folk Victorian/1900	1
306	23	332 Wesley Ave	Local Contributing		Second Empire/1890-1909	1
306	24	336 Wesley Ave	Local Contributing		Queen Anne/1890-1909	1
000			Loodi Continouting		Cape Cod Colonial	
307	13	300 Central Ave	Non contributing		Revival/1950	1
307	1/	304 Central Ave	Contributing	NR 3/20/03: SR 1/15/03	Folk Victorian/1890-1909	1
307	15	308 Central Ave	Contributing	NR 3/20/03: SR 1/15/03	Folk Victorian/1890-1909	1
307	16	312 Central Ave	Kov	NR 3/20/03: SR 1/15/03	Second Empire/1890s	1
307	17	321 Central Ave			Lipk/1880-1890	1
307	17.01	320-22 Central Ave	Non contributing		2001	2
307	17.01	J20-22 Central Ave	Non contributing		Capa Cod Colonial	2
307	18	328 Central Ave	Non contributing		Cape Cou Coloniai Rovival/1950s	1
307	19 20	330-332 Central Ave	Contributing	NR 3/20/03: SR 1/15/03	Craftsman/1920s	11
307	13, 20	550-552 Central Ave	Contributing		Dutch Colonial	1,1
307	21	334 Central Ave	Key	NR 3/20/03; SR 1/15/03	Revival/Queen Anne/1892	1
307	22	340-342 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1920s	1
				-,	Craftsman/post 1909 c.	
307	23	411 4th St	Local Contributing		1910-20	1
307	24	346 Central Ave	Contributing	NR 3/20/03 SR 1/15/03	Folk Victorian/1880s	1
404	1	701 5th St	Local Contributing		Craftsman/1920	2
404	2	435 Ocean Ave	Kev	NR 3/20/03 SR 1/15/03	Craftsman/1910-20	1
404	3	705 5th St	Local Contributing		Craftsman/1920	1
404	4	707 5th St	Local Contributing		Craftsman/1920	1
			Loodi Contributing			

404	9	417 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1910-20s	1
404	10	415 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1910-20s	1
404	11	413 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Bungalow Craftsman/1910- 20	1
404	12			NR 3/20/03: SR 1/15/03		
		409 Ocean Ave	Contributing		Neoclassical Revival/1920s	1
404	13	403 Ocean Ave	Non contributing			2
404	14				Neoclassical Revival	
		708-710 4th St	Local contributing		vernacular/1910-20	1
405	1	435 Wesley Ave	Key/Local Key	NR 3/20/03; SR 1/15/03	Queen Anne/1881	apt
405	2			NR 3/20/03: SR 1/15/03	Queen Anne Gothic	
400	2	429 Wesley Ave	Contributing		Revival/1890s	1
405	3	423 Wesley Ave	Non contributing		2001	2
405	4	407-21 Wesley Ave	Non contributing			2
405	5	403-05 Wesley Ave	Contributing Local Key	NR 3/20/03; SR 1/15/03	Queen Anne Gothic Revival/1880s	1
405	6	401 Wesley Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Queen Anne/1890-1909	1
405	7				Craftsman/post 1909 c	
400	,	610 4th St	Local Contributing		1910-20	1
405	8	400 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1880s	1
405	9	408 Ocean Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Folk Victorian/1890-1909	1
405	10	410 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Folk Victorian/1890-1909	1
405	11	412 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1920-30	1
405	12	414 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1920-30	1
405	13	416-18 Ocean Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Second Empire/1890-1909	С
405	14	420 Ocean Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Free Classic Queen Ane/1890-1909	1
405	15	424 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1890-1909	1
405	16	428 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1890-1909	1
405	17	430 Ocean Ave	Contributing	NR 3/20/03; SR 1/15/03	Neoclassical Revival/1910- 20	1
405	18	611 5th St	Non contributing	NR 3/20/03; SR 1/15/03	Neoclassical Revival/1900	1
405	19	615 5th St	Contributing	NR 3/20/03; SR 1/15/03	Neoclassical Revival/1910- 20	1
405	20	617-19 5th Dt	Contributing	NR 3/20/03; SR 1/15/03	Neoclassical Revival/1910- 20	1
405	21	621 5th St	Non contributing		1970s	2
406	1	5th & Central Ave	Кеу	NR 3/20/03; SR 1/15/03	Second Empire/1890-1909	3
406	2	435 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/Craftsman/1900s	1
406	3	433 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/Craftsman/1900s	1
406	4,5	429-431 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Second Empire/1890-1909	1,1
406	6	425-427 Central Ave	Non contributing		Contemporary/1980-90	2
406	7,8	421-423 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Second Empire/1890s	1,1
406	9	417 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Craftsman Bungalow/1910- 20	1
406	10	411 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Unk/1920s	1
406	11	413-415 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Craftsman/Colonial Revival/1910-20	1
406	12	409 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Craftsman/1920s	1
406	13	405 Central Ave	Non contributing		1990 modifications	1
406	14	506-08 4th St	Non contributing			1
406	15	400-02 Wesley Ave	Non contributing		1980	2
406	15.01	404-406 Wesley Ave	Non contributing		Late 20th century	2
406	16	408-14 Wesley Ave	Non contributing		Late 20th century	mf
406	17	420 Wesley Ave	Local contributing	NR 3/20/03; SR 1/15/03	Folk Victorian Gothic Revival/1880s	1
406	18	424 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Queen Anne/1910-20	apt

406	19	426 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Queen Anne/1890-1909	1
					Folk	
406	20			NR 3/20/03; SR 1/15/03	Victorian/1880s;DEMO	
	-	428 Wesley Ave	Non contributing		2006	2
406	21	515 5th St	Contributing	NR 3/20/03 SR 1/15/03	Colonial Revival/1910-20	1
406	22	519 5thSt	Kev/Local Kev	NR 3/20/03 ⁻ SR 1/15/03	Queen Anne/1882	1
407	12	408 4th St			Neoslassical/1910s	1
			Loodi contributing		Transitional Craftsman	
407	10				Needlassiaal/ post 1000 a	
407	13	440.4% 0	Less et a sectorite stime et		Neociassical/ post 1909 C.	0
		410 4th St	Local contributing		1910-20	2
					Transitional Craftsman	
407	14				Neoclassical/ post 1909 c.	
		412 4th St	Local contributing		1910-20	2
407	15	406 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Italiante/1880s	1
407	16			NP 2/20/02: SP 1/15/02		
407	10	408 Central Ave	Contributing	NR 3/20/03, 3R 1/15/03	Colonial Revival/1890-1909	2
407	47				Neoclassical Revival/1910-	
407	17	412 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	20	1
407	18	416 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Second Empire/1890-1909	ant
			Contributing		Eree Classic Queen	upi
407	19	120 Control Avo	Contributing	NR 3/20/03; SR 1/15/03	Appo/1990c	2
407	20	420 Central Ave	Contributing	ND 2/20/02: CD 4/45/02	Anne/ Toous	3
407	20	426 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Folk Victorian/1890-1909	1
407	21	428 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Queen Anne/1890-1909	1
407	22	432 Central Ave	Non contributing		Contemporary/late 1900s	2
407	23				Modified Colonial	
407	20	434 Central Ave	Non contributing		Revival/1920s	1
407	24,25	411-13 5th St	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Folk Victorian/1909	1,1
407	26	438 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Folk Victorian/1910	1
502	1	502 Wesley Ave	Key/Local Key	NR 3/20/03; SR 1/15/03	War Memorial/Park	р
					International Style/1957	
503	1	503 Block of Wesley	Key/Local Key	NR 3/20/03; SR 1/15/03	OC Tabernacle	p
508	2	514-28 Bay Ave	Local Contributing		Unknown	P
601	1	6/3 Ocean Ave	Non contributing		late 20th century	2
601	2	620 Ocean Ave	Non contributing		late 20th century	1
001	2	COS Ocean Ave	Non contributing			1
001	3	035 Ocean Ave	Non contributing			1
601	4	629 Ocean Ave	Non contributing		2nd half 20th century	2
601	5	625 Ocean Ave	Non contributing		2002	2
601	6	621 Ocean Ave	Non contributing		Neoclassical Revival/1909	3
601	7	617 Ocean Ave	Local contributing		Neoclassical Revival/1909	1
601	8, 8.01,					
001	8.02	609-615 Ocean	Non contributing		2001	2,2,2
601	9	607 Ocean Ave	Local contributing		Neoclassical Revival/1909	1
601	10	605 Ocean Ave	Local contributing		Neoclassical Revival/1909	2
			¥		Colonial Revival/post 1909	
601	11	6th & Ocean	Local contributing		c. 1910-20	С
					Neoclassical Revival/post	
601	12	702 6th St	Local contributing		1000	1
		702 011 31			Needlassiaal Devivel/neet	1
601	13	704.04 04	Less et a sustribution et			4
		704 6th St	Local contributing		1909	1
601	14	706 6th St	Local contributing		Crattsman/1910s	1
601	15	708 6th St	Local contributing		Colonial Revival/1900s	1
602	1			NR 3/20/03: SR 1/15/03	Queen Anne	
002		637 Wesley Ave	Contributing/Local Key		Craftsman/1890-1909	1
602	2	605 7th St	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1900s	2
602	3	609 7th St	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1910-20	1
602	4	633 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Bungalow/1910-20	1
					Craftsman Neoclassical	
602	5	631 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Revival/1910-20	1

	1		1			
602	6	000 \\/ = = A	O anataliku tina n	NR 3/20/03; SR 1/15/03	Colonial Revival	
	_	629 Wesley Ave	Contributing		Craftsman/1910-20	1
602	7	625 Wesley Ave	Unknown	NR 3/20/03; SR 1/15/03		1
602	8			NR 3/20/03: SR 1/15/03	Free Classical Queen	
002	0	623 Wesley Ave	Contributing	NIC 3/20/03, SIC 1/15/03	Anne/1910-20	1
602	9	619 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1909	1
					Free Classical Queen	
602	10	617 Wesley Ave	Local contributing		Appe/1910-20	4
-			Local contributing			
602	11		Contributing/Logal Kay	NR 3/20/03; SR 1/15/03	Casend Empire/1900 1000	ant
000	40		Contributing/Local Key		Second Empire/ 1890-1909	apı
602	12	609 Wesley Ave	Local contributing		1950s	2
602	13			NR 3/20/03 SR 1/15/03		
	.0	605 Wesley Ave	Contributing/Local Key		Second Empire/1890-1909	1
602	14	604 6th St	Key/Local Key	NR 3/20/03; SR 1/15/03	Folk Victorian/1880-1890s	1
602	15	606 6th St	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1880s	1
602	16	608 6th St	Contributing	NR 3/20/03: SR 1/15/03	Colonial Revival 1910s	1
602	17	612-614 6th St	Non contributing		2006	2
602	18	616-618 6th St	Non contributing		2002	2
602	19.01	600.02 Occar Ave	Non contributing		2002	2
002	10.01	000-02 Ocean Ave	Non contributing		2002	2
602	19	608 Ocean Ave	Non contributing		1995	2
602	20	608-10 Ocean Ave	Non contributing		Modern	2
602	21	612, 614, 616 Ocean				
002	21	Ave	Local contributing		Unk	2
602	22,23	620-628 Ocean Ave	Non contributing		1970s	9
602	24	630 Ocean Ave	Local contributing		Colonial Revival/1910-20	1
602	25	630 Ocean Ave Rear	Unknown			n
002	20					P
602	26	611 7th St	Contributing	NR 3/20/03; SR 1/15/03	Second Empire/1800, 1000	1
000	07		New contributing		Second Empire/ 1890- 1909	1
602	27	632 Ocean Ave	Non contributing		1940s	2
602	28	636 Ocean Ave	Non contributing		Bungalow/1940s	1
603	1	501 7th St/645 Central		NR 3/20/03: SR 1/15/03		
000	•	Ave	Contributing/Local Key		Second Empire/1880s	С
603	2	641 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Folk Victorian/1910	1
603	3	639 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Folk Victorian/1880s	1
603	4	635 Central Ave	Contributing	NR 3/20/03: SR 1/15/03	Neoclassical Revival/1910	2
603	5	631 Central Ave	Contributing	NR 3/20/03: SR 1/15/03	Second Empire/1880s	1
602	6	620 Control Ave	Contributing	NP 2/20/02: SP 1/15/02	Bobuilt 2000	1
003	0	029 Central Ave	Contributing	NK 3/20/03, SK 1/15/03	Rebuilt 2009	1
603	7			NR 3/20/03; SR 1/15/03	Queen Anne allered/1890-	
		625 Central Ave	Contributing		1909	2
603	8	623 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Queen Anne/1890-1909	1
603	a			NR 3/20/03: SR 1/15/03		
005	3	617 Central Ave	Contributing	NIC 3/20/03, SIC 1/15/03	Second Empire/1890-1909	1
603	10	613 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Folk Victorian/1890-1909	1
603	11	611 Central Ave	Contributing	NR 3/20/03: SR 1/15/03	Folk Victorian/1890-1909	1
603	12	500 6th St	Non contributing			C
			. ton contracting		Contemporary	
603	13	6th 8 Control Ave			Bungalow/1000c	0
000	45		Kov	ND 2/20/02: 0D 4/45/22		C C
603	15	600 Wesley Ave	Key	INR 3/20/03; SR 1/15/03	Colonial Revival/1880s	C
603	16	606 Wesley Ave	INON CONTRIbuting		1990s	2
603	17			NR 3/20/03 SR 1/15/03		
000		608 Wesley Ave	Contributing		Second Empire/1890-1909	1
603	18	610 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1910-20	1
000			-			
603	19	612 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1890-1909	1
603	20		Contributing	NP 3/20/03: SP 1/15/03	Queen Anne/1890-1909	1
003	20		Contributing	NR 3/20/03; SR 1/15/03	Queen Anne/ 1890-1909	1
003	<u> </u>	UZZ WESIEY AVE		NR 3/20/03, 3K 1/13/03		1
603	22	004114		NR 3/20/03; SR 1/15/03		
		624 Wesley Ave	Contributing		Crattsman/1890-1909	1
603	23	628 Wesley Ave	Local contributing		Modern	1
603	24	632 Wesley Ave	Key	NR 3/20/03; SR 1/15/03	Craftsman/1890-1909	С
000	07				Craftsman Neoclassical	
603	25	509 7th St	Contributina	NR 3/20/03; SR 1/15/03	Revival/1910-20	1
603	26	638 Wesley Ave	Contributing	NR 3/20/03 SR 1/15/03	Queen Anne/1880s	ant
					altered Colonial	~~~
604	15	410 6th St	Non contributing			1
L	1	410 001 SL			133US	I

604	16	600 Central Ave	Contributing	NR 3/20/03 SR 1/15/03	Craftsman/1917	1
			Continuenting			
604	17	604 Control Avo	Contributing	NR 3/20/03; SR 1/15/03	Second Empire/1800 1000	1
		004 Central Ave	Contributing		Second Empire/1890-1909	- 1
					Free Classic Queen	
604	18			NR 3/20/03; SR 1/15/03	Anne/Colonial Revival/1890-	
		608 Central Ave	Contributing		1909	1
604	19	612-614 Central Ave	Contributing		Bungalow/1920s	2
					0	
604	20	618 Control Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Povival/1800, 1000	1
		018 Central Ave	Contributing			- 1
					Free Classic Queen	
604	21			NR 3/20/03; SR 1/15/03	Anne/Colonial Revival/1890-	
		622-24 Central Ave	Contributing		1909	1
604	22	626 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Folk Victorian/1880s	1
604	23	628 Wesley Ave	Local contributing		Llnk/1910-20	1
604	24.25	634-636 Central Ave	Local contributing			11
004	24,20	C20 Control Ave	Contributing	ND 2/20/02: CD 4/45/02	Gdeen Anne/10003	1,1
604	20	638 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Fork victoriari/1880s	1
604	27, 28	640-642 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Queen Anne/1880s	1,1
604	29	644 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1880s	1
604	30	650 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Folk Victorian/1880s	1
703	1	701 Ocean Ave	Contributing	NR 3/20/03: SR 1/15/03	Colonial Revival/1909	apt
			g		Folk Victorian/1post 1909	
703	2	702 00000 410	Contributing	NR 3/20/03; SR 1/15/03		4
		703 Ocean Ave	Contributing		C. 1910-20	1
703	3			NR 3/20/03: SR 1/15/03	Colonial Revival/post 1909	
100	Ŭ	705 Ocean Ave	Contributing		c.1910-20	1
703	4	704 7th St	Local contributing		Unk/1909	1
703	12	705 Plymouth Place	Local contributing		/Unk1910-20	С
703	13	701 Plymouth Place	Contributing	NR 3/20/03: SR 1/15/03	Queen Anne/1890-1909	1
705	15	7011 lymodil11 lace	Contaibdailig	NIC 3/20/03; SIC 1/13/03	Verseeuler	1
704	10			NR 3/20/03; SR 1/15/03	Vernacular	
		701 8th St	Кеу	,	Neoclassical/1910-20	2
705	1	601 8th St	Non contributing		2005	3
705	0				Second Empire/1890-	
705	2	605 8th St	Contributing	NR 3/20/03; SR 1/15/03	1909: 1906	с
705	34	733-735 Wesley Ave	Contributing	NR 3/20/03: SR 1/15/03	Queen Anne/1880s	11
100	0,4		Contributing			1,1
705	5	700 \4/ 4		NR 3/20/03; SR 1/15/03		
		729 Wesley Ave	Contributing/Local Key		Second Empire/1890-1909	1
705	6			NR 3/20/03: SR 1/15/03	Colonial Revival	
705	0	725 Wesley Ave	Contributing	NIX 3/20/03, SIX 1/13/03	Foursquare/1890-1909	р
705	7	721 Wesley Ave	Unknown			p
705	8	715-19 Wesley Ave	Unknown			n
	Ű		Children		Cothic Pevival/1906 1960	P
705	9	74- 0 \0/	K	NR 3/20/03; SR 1/15/03		
		7th & Wesley	key		addition	р
705	10			NR 3/20/03: SR 1/15/03	Colonial Revival/post 1909	
100	10	610 7th St	Contributing		c.1910-20	р
705					Colonial Revival/post 1909	
705	11	704 Ocean Ave	Local Contributing	NR 3/20/03; SR 1/15/03	c.1920	2
					Neoclassical Revival	
70F	10			NR 3/20/02 CR 4/45/02	Crafteman/nost 1000 a	
705	12	700 0	O sa tributia a	INR 3/20/03, SR 1/13/03		
		708 Ocean Ave	Contributing		1920	1
705	13	710 Ocean Ave	Non contributing		Modern	9
705	14	718 Ocean Ave	Non contributing		New construction	v
	<i>i</i> –					
705	15	720 Ocean Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Queen Anne/1890-1909	ant
		720 0000117100	Contributing/Local ricey		Transitional Queon Appa	upi
705	40					
705	16			NR 3/20/03; SR 1/15/03	Neoclassical Revival/1890-	
		724 Ocean Ave	Contributing		1909	apt
705	17	617 8th St	Local contributing		Vernacular/1910-20	С
700					Gothic Revival/1908 w	
706	1	8th & Central	Kev	NR 3/20/03; SR 1/15/03	1956 addition	n
<u> </u>				1		٣
706	2,3	715 17 Control Aug	Contributing	NR 3/20/03; SR 1/15/03	Second Empire/4000 4000	
		7 10-17 Central Ave			Second Empire/1890-1909	1,1
706	4,5	/11-13 Central Ave	Local contributing		St. Peters Church	p,p
706	6	705 Central Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Folk Victorian/1891	1
706	7	701 Central Ave	Key	NR 3/20/03; SR 1/15/03	Queen Anne/1880s	1
	-					
706	8	508 -10 7th St	Contributing	NR 3/20/03; SR 1/15/03	Second Empire/1890-1909	2
L				1	1000	

706	9	700-702 Wesley Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Second Empire/1890-1909	2
706	10	704-06 Wesley Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Second Empire/1890-1909	2
706	11	708 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Queen Anne/1890-1909	1
706	12	712 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Queen Anne/1890-1909	1
706	13	710-12 Ocean Ave	Non contributing		1970	р
706	14	718 Ocean Ave	Non contributing		Demo	р
706	15	730 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Free Classic Queen Anne/1910-20	1
706	16	732 Wesley Ave	Local key		Unk/1890-1909	1
706	17	517-19 8th St	Contributing	NR 3/20/03; SR 1/15/03	Mission Revival Commercial/1910s	с
706	18	736 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1880s	С
707	14	700 Central Ave	Unknown			р
707	15	716-22 Central Ave	Unknown			р
707	16	732 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Queen Anne/1890-1909	р
707	18	724 Central Ave	Non contributing	,	Craftsman/1920s;DEMO 2006	р
707	19	726 Central Ave	Non contributing		Bungalow/1920s;DEMO 2006	р
707	20	728 Central Ave	Non contributing			1
707	21	732 Central Ave	Non contributing		Parking lot	2
707	22	736-738 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Neoclassical Revival altered/1910s	1
707	23	740 Central Ave	Non contributing		Altered 2nd half of 20th century	1
707	24	411 8th St	Non contributing		Second Empire/1900-05	mx
707	25	744 Central Ave	Contributing	NR 3/20/03; SR 1/15/03	Unk/1901	С
804	1	839 Wesley Ave	Non contributing		Unk/Craftsman	С
804	2	833-35 Wesley Ave	Non contributing		1950s	С
804	3	825 Wesley Ave	Local key		Unk/1929	V
804	3.01	825 Wesley	Кеу	NR 3/20/03; SR 1/15/03	Neoclassical Revival/1890- 1909	
804	4	821-23 Wesley Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Queen Anne/1890-1909	1
804	5	819 Wesley Ave	Local Key		Unk/1890-1909	1
804	6	815 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1910	1
804	7	811 Wesley Ave	Contributing	NR 3/20/03; SR 1/15/03	Colonial Revival/1910-20	apt
804	8	807 Wesley Ave	Contributing/Local Key	NR 3/20/03; SR 1/15/03	Colonial Revival/1880s	1
804	9	801 Wesley Ave	Unknown			С
805	11	801 Central Ave	Кеу	NR 3/20/03; SR 1/15/03	Free Classis Queen Anne/1890-1909	с
805	12	510-516 8th St	Кеу	NR 3/20/03; SR 1/15/03	Queen Anne Neoclassical Revival/1890-1909	с
805	13	804 Wesley Ave	Key/Local Key	NR 3/20/03; SR 1/15/03	Italian Renaissance Revival/1890-1909	apt



Figure 1- Ocean City Historic District Map

References

- Ocean City Master Plan, February 3, 1988
- Ocean City Historic Preservation Ordinance Article 1800
- o FEMA Floodplain Management Bulletin (P-467-2), May 2008
- o Ocean City Historic District Guidelines

COMMUNITY RESILIENCE PLAN

9th STREET GATEWAY and CENTRAL BUSINESS DISTRICT

Introduction

This "Community Resilience Plan - 9th Street Gateway and Central Business District" identifies characteristics and potential solutions to flooding within Ocean City's 9th Street Gateway corridor and Central Business District (Asbury Avenue from 6th Street to 14th Street). This Plan identifies design constraints and provides a detailed inventory of physical infrastructure and constraints including elevation data for streets, stormwater facilities and buildings." 34th Street is not addressed in this Plan since it is under the jurisdiction of Cape May County. Design standards to reduce flooding and enhance resilience from future storm events are described in a companion document titled: "Design Standards – 9th Street Gateway and Central Business District.

This Plan has been prepared to address recommendations contained in the Ocean City Strategic Recovery Planning Report (October 7, 2015). Preparation of this "Community Resilience Plan - 9th Street Gateway and Central Business District" has been made possible with funding provided by a Post-Sandy Planning Assistance Grant administered by the New Jersey Department of Community Affairs.

Community Resiliency Plan (9th Street Gateway)

Assessment Goals

The following summarizes the Community Resiliency Plan goals for the 9th Street Gateway:

- Increase City access during and after storm events through the raising of the 9th Street cartway elevation and associated improvements between Central Avenue and the 9th Street Bridge.
- (2) Reduce potential for tidal flooding through the raising of existing stormwater inlets and manholes within the 9th Street right-of-way.
- (3) Raise the 9th Street centerline elevation between Central Avenue and the 9th Street Bridge to match the elevation of the intersection of 9th Street and Central Avenue (El. 5.60 NAVD 1988).
- (4) Facilitate the future raising of adjacent existing buildings and site improvements and/or new construction at higher building and site elevations.
- (5) Provide safe vehicular and pedestrian access as properties redevelop.

Existing Conditions

The 9th Street corridor study area extends from the intersection of 9th Street and Central Avenue westwardly to the 9th Street Bridge. The existing physical and topographic conditions were provided by the City of Ocean City in a CAD format. The topographic information is based on field surveys performed by Fralinger Engineering in December 2015. All topographic elevations included within this assessment are based on NAVD 1988 datum.

The following NJDOT plans were reviewed as part of the assessment:

- "Construction Plans," NJ Route 52 Causeway, Sheet 36 last revised March 22, 2011.
- "Construction Plans," NJ Route 52 Causeway, Sheet 37 last revised March 10, 2011.
- "Drainage and Utility Plans with Existing Contours and Drainage Areas," NJ Route
 Causeway, Sheet 1/1 last revised February 7, 2011.
- "Grades," NJ Route 52 Causeway, Sheet 118, last revised March 22, 2011.

Figure No. 1 provides a summary of the 9th Street corridor existing conditions for each of the segments described herein.

Existing cartway elevations are provided in Figure No. 2 and existing inlet grate elevations are provided in Figure No. 3 for each segment of the 9th Street corridor.

In addition to the documents referenced above, the existing conditions summarized below are also based on visual observations by Hyland Design Group staff.

Figure No. 1

Summary of Existing Conditions - 9th Street Gateway

	9th Street Corridor Existing Conditions Summary												
	ROW Width (Ft)	Cartway Width (Ft)	Sidewalk Area Width North (Ft)	Sidewalk Area Width South (Ft)	Off-Street Parking	Concrete Gutters	Decorative Sidewalk Pavers	Intersection Ramps	Street Trees	Sidewalk Amenities	Street Lighting		
Central Ave. to Asbury Ave.	60	40	10	10	No	No	No	Yes	No	No	Yes (Area Roadway)		
Asbury Ave. to West Ave.	Asbury Ave. to West Ave.												
Asbury Ave. to Mid-Block Alley	60	40	10	10	No	Yes	Yes	Yes	Yes	No	Yes (Area Roadway)		
Mid-Block Alley to West Ave.	80	40 to 55	10	10	No	Yes	Yes	Yes	Yes	Yes (Benches)	Yes (Area Roadway)		
West Ave. to Bay Ave.	80	63.5	0.5	16	No	Yes	Yes (South)	Yes	Yes (South)	No	Yes (Ornamental)		
Bay Ave. to Bridge	80	62	2	16	No	Yes	Yes (South)	Yes	Yes (South)	No, Except at Base Bridge	Yes (Ornamental)		

Figure No. 2

Existing 9th Street Corridor Elevations										
9th Street Corridor Section	Centerline	Elevations	South Gutte	r Elevations	North Gutter Elevations					
9th Street Comdor Section	Average	Lowest	Average	Lowest	Average	Lowest				
Central Ave. to Asbury Ave.	5.05	4.70	4.31	4.08	4.40	3.94				
Asbury Ave. to West Ave.	4.15	3.83	3.41	3.14	4.00	2.96				
West Ave. to Bay Ave.	4.49	4.15	3.49	3.16	3.42	3.12				
Bay Ave. to Bridge	5.07	4.47	3.80	3.49	3.46	2.95				

9th Street Gateway Raising Summary

Potential 9th Street Corridor Elevations										
9th Street Corridor Section	Centerline	Elevations	South Gutte	r Elevations	North Gutte	North Gutter Elevations				
9th Street Corndor Section	Average	Lowest	Average	Lowest	Average	Lowest				
Central Ave. to Asbury Ave.	5.60	5.60	4.95	4.80	4.85	4.60				
Asbury Ave. to West Ave.	5.60	5.60	4.45	4.00	4.45	3.90				
West Ave. to Bay Ave.	5.60	5.60	4.35	4.10	4.35	4.00				
Bay Ave. to Bridge	5.87	5.65	5.15	5.00	5.00	4.65				

Potential Extent of 9th Street Corridor Raising										
9th Street Corridor Section	Centerline Ra (Fe	aising Height et)	South Gut Height	ter Raising : (Feet)	North Gutter Raising Height (Feet)					
	Average	Lowest	Average	Lowest	Average	Lowest				
Central Ave. to Asbury Ave.	0.55	0.90	0.64	0.72	0.45	0.66				
Asbury Ave. to West Ave.	1.45	1.77	1.04	0.86	0.45	0.94				
West Ave. to Bay Ave.	1.11	1.45	0.86	0.94	0.93	0.88				
Bay Ave. to Bridge	0.80	1.18	1.35	1.51	1.54	1.70				

Figure 4.1

9th Street Gateway – View East



Central Avenue to Asbury Avenue

This portion of 9th Street is within the central business corridor and is bordered by a PNC Bank building and City Park to the south and the Ocean City Café restaurant, public parking and City Hall to the north (See Aerial Photo-Figure 4.1)

Traffic signals are located at both the Central Avenue and Asbury Avenue intersections and "area roadway" street lighting exists.

The right-of-way (ROW) is 60 feet wide with a 40-foot wide cartway and 10-foot wide sidewalk areas between the curb and ROW lines. The cartway consists of two east bound and two westbound travel lanes with no shoulder and no provision for on-street parking.

Handicapped ramps and painted crosswalks are provided at the street intersections and ramps are provided at the mid-block alleys.

No street trees or amenities (benches, trash receptacles, etc.) are provided within the concrete sidewalk area. Decorative pavers are provided at the Asbury Avenue intersection sidewalk corners.

The center line elevation at the 9th Street and Central Avenue intersection is 5.61. The 9th Street and Asbury Avenue intersection elevation is 4.93.

The street generally slopes from Central Avenue westwardly toward Asbury Avenue; however an inlet exists at the low point in the north gutter line east of the alley. This inlet is located approximately 15 feet east of the alley and the grate elevation is 3.94. A low point (El. 4.08) also exists along the southerly gutter line approximately 80 feet west of the alley.

Stormwater inlets exist at the intersection corners. The inlet grate elevations at the Central Avenue intersection range from elevation 4.31 to 4.58. The inlet grate elevations at the Asbury Avenue intersection range from elevation 3.72 to 4.39.

The intersecting alleys slope from an approximate mid-block high point toward the 9th Street gutter line.

The PNC bank building floor elevation is 5.95 and access is located along Central Avenue as well as the alley. Ocean City Café first floor elevation is 5.93 and access is along 9th Street. A seasonal outdoor dining area is provided along the 9th Street sidewalk area.

The City Hall ground floor elevation is 5.72 with access along 9th Street and the adjacent alley.

Asbury Avenue to West Avenue

This portion of 9th Street between Asbury Avenue and the mid-block alley is within the central business district. The portion between the mid-block alley and West Avenue is in the Drive-In Business district. It is bordered by a retail store (Collette), a public parking lot and Luigi's restaurant to the south and Domino's Pizza and a public park and parking to the north (See Aerial Photo-Figure 4.1).

Traffic signals are located at both the Asbury Avenue and West Avenue intersections and "area roadway" street lighting exists.

The right-of-way (ROW) is 60 feet wide with a 40-foot wide cartway and 10-foot wide sidewalk areas between Asbury Avenue and the mid-block alley. The ROW is 80 feet wide between the mid-block alley and West Avenue with a cartway widening from 40 feet to approximately 55 feet at West Avenue.

Concrete gutters and decorative sidewalk pavers are provided and street trees, decorative planters and benches are provided along portions of this section of 9th Street.

The cartway consists of two eastbound and two westbound travel lanes with no shoulder and no provision for on-street parking. Handicapped ramps and painted crosswalks are provided at the street intersections and ramps are provided at the mid-block alleys.

The 9th Street and Asbury Avenue intersection elevation is 4.93. The center line elevation at the 9th Street and West Avenue intersection is 4.90.

The street generally slopes from Asbury Avenue and West Avenue to mid-block low points. A stormwater inlet exists in the north gutter line at the alley and the grate elevation is 3.08. An inlet also exists along the southerly gutter line, having a grate elevation of 3.0+/- and located approximately 90' west of the alley.

Stormwater inlets exist at the Asbury Avenue intersection corners. The inlet grate elevations range from elevation 3.70 to 3.92. There are no inlets at the West Avenue intersection other than a curb inlet located along West Avenue approximately 90' south of the southerly curb line of 9th Street.

The intersecting alleys slope from an approximate mid-block high point toward the 9th Street gutter line.

The Collette retail store floor elevation is 5.28 at the Asbury Avenue entrance and 5.33 at the 9th Street entrance. Luigi's first floor elevation is 4.90 at the first floor entrance along 9th Street. Domino's first floor elevation is 5.61 at the Asbury Avenue intersection entrance.

Figure 4.2

9th Street Gateway – View West



West Avenue to Bay Avenue

This portion of 9th Street, extending from West Avenue to Bay Avenue, is in the Drive-In Business district and bordered by several commercial facilities. The facilities extending from West Avenue to Bay Avenue on the north include Wiesenthal's Service Station, a Sunoco gas station and mini-market, vacant land and a TD Bank. An access drive to the ACME located at the corner of 8th Street and West Avenue is located between the Sunoco station and the vacant lot.

A McDonald's parking lot and commuter parking lot exists along the south side between West Avenue and Haven Avenue. A miniature golf course and a new office/retail building exist between Haven Avenue and Simpson Avenue and a retail/office building and vacant lot exist between Simpson Avenue and Bay Avenue.

The described lands and uses are shown on an aerial photograph (Figure 4.2).

Traffic signals are located at both the West Avenue and Bay Avenue intersections and ornamental double-fixture street lighting exists on both sides of the street. There is also a 9th Street pedestrian and bicycle crossing signal and crosswalk located between Haven Avenue and Simpson Avenue extended.

The right-of-way (ROW) is 80 feet wide and the cartway is approximately 63.5 feet wide. A 16-foot wide sidewalk area exists along the south side with essentially no sidewalk area (~ 0.5 ') provided within the ROW along the north side.

Concrete gutters, decorative sidewalk pavers with a grass strip between the sidewalk and curb as well as street trees exist along the south side.

Concrete gutters are provided along the north side; however there is no defined sidewalk area along the Wiesenthal's Service Station and the majority of the Sunoco station frontage due to the extensive access driveway widths. A defined concrete sidewalk begins at the western portion of the Sunoco station and generally extends to Bay Avenue; however, this sidewalk is outside the limits of the ROW. This sidewalk is located beyond the limits of the ROW and on private property. Street trees exist along a portion of the TD Bank building frontage.

The cartway consists of two eastbound and two westbound travel lanes with no shoulder and no provision for on-street parking. A center turn lane is also provided. A Westbound left turn lane is provided at Bay Avenue and an eastbound left turn lane is provided at West Avenue. A 4-foot wide concrete island separates the Bay Avenue intersection left turn lane and the east bound lanes.

Handicapped ramps and paver crosswalks are provided at the street intersections and ramps along the south side. Handicapped ramps and painted crosswalks are provided along the north side.

The 9th Street and West Avenue intersection elevation is 4.90. The 9th Street center line elevations at the Haven Avenue and Simpson Avenue center lines extended are

approximately 4.23 and 4.35 respectively. The 9th Street and Bay Avenue intersection elevation is 4.72.

The cartway elevations between West Avenue and Bay Avenue are relatively flat with minimal gutter slopes and several stormwater inlets are provided at the low points along the gutter lines. The cartway also drains toward the existing inlets within Haven Avenue and Simpson Avenue.

Three (3) stormwater inlets exist along the north gutter line and between the Wiesenthal's Service Station and the vacant lot at the alley. The inlet grate elevations are 3.31 (between the Wiesenthal's Service Station and Sunoco Gas Station), 3.03 (at the Sunoco frontage) and 3.29 at the ACME access driveway. An inlet also exists along the southerly gutter line, having a grate elevation of 3.0+/- and located approximately 90 feet west of the alley.

A portion of 9th Street drains to the two stormwater inlets within the portion of Aldrich Road that is no longer a through street and is use solely for TD Bank ingress. The inlet grate elevations are 3.12 and 3.19. Three (3) additional stormwater inlets are located along the TD Bank frontage. The inlet grate elevations at the easterly driveway are 3.14 and 3.15 and the grate elevation at the westerly driveway is 3.10.

Two (2) stormwater inlets exist along the southerly gutter line and between West Avenue and Haven Avenue. These inlet grate elevations are 3.42 and 3.16. Double stormwater inlets also exist along the Haven Avenue gutter lines approximately 35 feet south of the southerly 9th Street curb line. These inlet grate elevations are 2.16 (west) and 2.10 (east).

Stormwater inlets exist at the Simpson Avenue intersection. Inlet grate elevations along the 9th Street gutter line are 3.29 (east) and 3.19 (west). Double stormwater inlets also exist along the Simpson Avenue gutter lines approximately 35 feet south of the southerly 9th Street curb line. These inlet grate elevations are 2.27 (west) and 2.09 (east).

An additional stormwater inlet exists along the southerly gutter line and between Simpson Avenue and Bay Avenue. This inlet grate elevation is 3.52.

Stormwater inlets exist at the Bay Avenue intersection corners and along the easterly Bay Avenue gutter line. The northerly inlet grate elevation is 3.00 and the southerly double inlet grate elevation is 2.42.

The intersecting alleys slope from an approximate mid-block high point toward the 9th Street gutter line.

The building first floor elevations along the north side of 9th Street are as follows:

* Wiesenthal's Service Station: 4.93

- * Sunoco Gas Station & Mini-Mart: 6.97
- * TD Bank: 6.41

The building first floor elevations along the south side of 9th Street are as follows:

* Pirate's Cove Miniature Golf: 8.37

* New Commercial Building: 8.74

* Commercial Business Building: 8.89

The adjacent properties along this corridor generally drain toward the 9th Street gutter line or the intersecting streets which then also drain toward inlets at the intersection with 9th Street. The exception is the westerly portion of the Sunoco property where an inlet (grate el. 2.58) exists and the paving elevations are lower than the 9th Street gutter line at that location. The vacant lot is also an exception; however, it is poorly graded with a low area in the middle of the property.

Bay Avenue to 9th Street Bridge

This portion of 9th Street, extending from Bay Avenue to the easterly end of the 9th Street Bridge, is primarily in the Drive-In Business district and bordered by several commercial facilities. The facilities extending from Bay Avenue on the north include two vacant lots that were recently cleared. The property on the northeast corner of Bay Avenue was a Getty Gas Station and the adjacent property to the west was also the site of a gas station. The property west of these two vacant lots is occupied by Bud's Outboard Marine.

The described lands and uses are shown on an aerial photograph (Figure 4.2).

A multi-family facility is located along the waterfront however, access is not provided from 9th Street or the bridge. Access is provided from Revere Place.

Retail stores (Island Beach Gear and Sherwin Williams) exist between Bay Avenue and Pleasure Avenue and the Ocean City bike path and pedestrian access to the bridge walk exists between Pleasure Avenue and the bridge.

Access to Pleasure Avenue from 9th Street is prohibited and access from Pleasure Avenue to 9th Street is limited to right turns onto the eastbound lanes.

A traffic signal is located at the Bay Avenue intersection and a traffic island separates the

eastbound and westbound lanes. The traffic island varies in width and is landscaped west of Pleasure Avenue. Ornamental double-fixture street lighting exists on both sides of the street.

The right-of-way (ROW) is 80 feet wide and the cartway is approximately 63 feet wide. The cartway consists of two eastbound and two westbound travel lanes with no shoulder and no provision for on-street parking. The eastbound portion of the cartway widens to 35 feet east of Pleasure Avenue to allow for a left turn lane. An approximate 16 feet wide sidewalk area exists along the south side with essentially no sidewalk area provided along the north side.

Concrete gutters, decorative sidewalk pavers with a grass strip between the sidewalk and curb as well as street trees exist along the south side.

Concrete gutters and a concrete sidewalk are provided along the north side. This sidewalk is located beyond the limits of the ROW and on private property.

Handicapped ramps and paver crosswalks are provided at the Bay Avenue street intersection and ramps exist at the street intersections and driveways along both sides of the street.

The 9th Street and Bay Avenue center line intersection elevation is 4.72.

Stormwater inlets exist at the west corners of the intersection and along the Bay Avenue gutter line. The inlet grate elevation at the northwest corner is 3.53 and the double inlet at the southwest corner grate elevation is 2.35.

The cartway elevations between Bay Avenue and the base of the bridge undulate creating small shallow depression areas with several stormwater inlets being provided at the low points along the gutter lines. The cartway also drains toward the existing inlets within Pleasure Avenue.

Four (4) stormwater inlets exist along the north gutter line and between Bay Avenue and the base of the bridge. The inlet grate elevations range from 2.95 to 3.00 along the two vacant lots and the inlet grate elevation is 4.71 at the approximate base of the bridge along the Bud's Outboard Service property.

Two (2) stormwater inlets exist along the south gutter line between Bay Avenue and Pleasure Avenue. The inlet grate elevations are approximately 3.49. An additional inlet exists just west of the Pleasure Avenue intersection (grate elevation 3.76).

Stormwater inlets also exist along the Pleasure Avenue gutter lines approximately 20 feet south of the southerly 9th Street curb line. These inlet grate elevations are 2.50 (west) and 2.38 (east). Additional inlets are provided within Pleasure Avenue exist approximately 75 feet south of the 9th Street curb line. These inlet grate elevations are 2.90 (west) and 2.60 (east).

The Bud's Outboard Marine buildings have floor elevations at grade which is lower than the adjacent gutter line.

The Island Beach Gear building is located approximately 120 feet from the southerly curb line and the first floor elevation is approximately 7.00. The Sherwin Williams paint store floor elevation is approximately 6.00.

The adjacent properties along this corridor generally drain toward the 9th Street gutter line or the intersecting streets which then also drain toward inlets at the intersection with 9th Street.

Conceptual Improvements Design Parameters & Constraints (9th Street Gateway)

Design parameters and constraints related to the goal of reducing the impact from flooding within the 9th Street Gateway corridor are described below. Based on the analysis of this information design standards for the this corridor have been developed and are contained in a companion document entitled "Design Standards to Mitigate Flooding - 9th Street Gateway and Central Business District."

Future 9th Street Center Line Elevations

The design goal for the future 9th Street center line elevations is to match the 9th Street and Central Avenue intersection centerline elevation which is 5.61. According to the City Engineer, Central Avenue is minimally flooded during storm events and the goal is to provide an accessible vehicular travel route between Central Avenue and the 9th Street bridge during and after significant flooding events.

Flooding History

Figure No. 5 provides a summary of historic and recent tidal flooding elevations in NAVD 1988 datum. Major Flooding events are considered to have tidal water elevations greater than elevation 4.52. Major flooding has occurred multiple times since the 1944 hurricane and has occurred six times since 2009. The flood elevations associated with these six storms range from 4.58 (October 2015 Storm) to 7.25 (Superstorm Sandy).

Moderate Flooding events are considered to have tidal water elevations between 3.53 and

4.53. These storm events are expected to occur once every five years. This extent of flooding recently occurred during the December 2014 nor'easter (El. 4.52) and the January 2017 coastal storm (El. 4.45).

Minor Flooding events are considered have tidal water elevations between 2.53 and 3.53 and are expected to occur an average of 6 times a year. This extent of flooding recently occurred in April 2017 (El. 3.04) and July 2016 (El. 2.92).

Based on recent storm events, the frequency and extent of flooding is ever increasing. Six moderate or greater tidal flooding events have occurred in the last three years, four of which were considered major flooding with the greatest tidal water elevation being 5.69 in January 2016 (Jonas). This elevation is comparable to the existing centerline elevation (5.61) at the 9th Street and Central Avenue intersection.

The center line and gutter line water depths based on existing conditions and the tidal flooding elevations associated with Jonas (El. 5.69) and Super Storm Sandy (El. 7.25) are provided in Figure No. 6.

Water Depth	s Based or	n Jonas Stor	m Event (I	El. 5.69 NAV	D 1988)				
	Centerline Water Depths (Ft)		South Gu Dept	itter Water ths (Ft)	North Gutter Water Depths (Ft)				
9th Street Corridor Section	Average	Average Maximum		Maximum	Average	Maximum			
Central Ave. to Asbury Ave.	0.6	1.0	1.4	1.6	1.4	1.8			
Asbury Ave. to West Ave.	1.5	1.9	1.7	1.75	2.1	2.4			
West Ave. to Bay Ave.	1.2	1.5	2.2	2.7	2.0	2.6			
Bay Ave. to Bridge	0.8	1.2	1.9	2.6	2.1	2.7			
Water Depths Based on Super Storm Sandy (El. 7.25 NAVD 1988)									
Oth Street Carridar Section	Centerline Water Depths		South G	utter Water	North Gutter Water				
Still Street Corridor Section	Average	Maximum	Δverage	Maximum		Maximum			

Figure 6

9th Street Gateway – Water Depths Summary

Water Depths Based on Super Storm Sandy (El. 7.25 NAVD 1988)						
9th Street Corridor Section	Centerline Water Depths		South Gutter Water		North Gutter Water	
	Average	Maximum	Average	Maximum	Average	Maximum
Central Ave. to Asbury Ave.	2.2	2.6	3.0	3.2	3.0	3.3
Asbury Ave. to West Ave.	3.1	3.4	3.3	3.3	3.7	4.0
West Ave. to Bay Ave.	2.8	3.1	3.8	4.3	3.5	4.2
Bay Ave. to Bridge	2.4	2.8	3.5	4.2	3.7	4.3

Adjacent Building Floor Elevations & Access

The grade level floor elevations associated with the existing buildings along the corridor will have a major impact on the ability to raise the cartway and still provide sufficient slope (1% minimum for sheet flow) away from the buildings and toward the gutter.

FEMA Special Flood Hazard Area per FEMA Preliminary Map

The entire 9th Street Corridor is located within Special Flood Hazard Zone AE El. 9 (BFE 9.00, NAVD 1988) as shown on FEMA Preliminary Flood Maps 34009C0087F dated January 30, 2015 and 34009C0089F dated June 30, 2014.

The NJDEP Flood Hazard Rules require that the minimum first floor elevation for a commercial structure be set at least one foot above the BFE. If it is not feasible to set the first floor at this elevation, it must be set as close as possible to the required elevation and be flood-proofed in accordance with the applicable standards. In no case shall the lowest floor of the building be set below grade along all adjoining exterior walls.

Adjacent Sidewalk Cross Slopes

Raising the cartway and adjacent curb and sidewalk should include a maximum cross slope of 2% between the property line or building line to the curb. This slope is the maximum per ICC/ANSI A117.1-2009, Section 403.3 which states the cross slope of a walking surface shall not be steeper than 1:48.

Intersection Elevations and Stormwater Infrastructure

The highest cartway, sidewalk and general floor elevations are at mid-block along the intersecting streets and stormwater runoff typically flows within the gutter line to stormwater inlets at the 9^{th} street intersections.

Raising the 9th Street intersection elevations will require additional transition improvements along the intersecting streets.

Raising the intersection stormwater inlet grates will result in the establishment of new low points along the intersecting street gutter lines that will most likely require installation of additional stormwater infrastructure. This infrastructure is expected to include additional inlets that will be connected to the existing infrastructure via new storm drainage pipe.

Alley and Adjacent Driveway Grade Transitions

Raising the cartway will need to be sensitive to the additional improvements required to provide safe vehicular and pedestrian access to private facilities along the corridor, primarily between West Avenue and the bridge. These improvements may include "ramped" access driveways and stormwater infrastructure to accommodate any resultant changes in runoff patterns.

Community Resiliency Plan (Central Business District)

Assessment Goals

- (1) Reduce the potential for street and building flooding during storm events in the Central Business District through the raising of Asbury Avenue and associated improvements between 6th Street and 14th Street.
- (2) Reduce the potential for tidal flooding through the raising of existing stormwater inlets at street intersections.
- (3) Facilitate the future construction of new buildings with floor elevations at a minimum of 12 inches above the FEMA Flood Hazard Zone Base Flood Elevation (BFE).
- (4) Retain existing streetscape and building characteristics to the greatest possible extent.

Existing Conditions

The existing physical and topographic conditions were provided by the City of Ocean City in a CAD format. The topographic information is based on field surveys performed by FraIinger Engineering in January 2016. All topographic elevations included within this assessment are based on NAVD 1988 datum. The existing conditions summarized below are also based on visual observations by Hyland Design Group staff.

Asbury Avenue represents the main corridor within the Central Business District extending from 6^{th} Street to 14^{th} Street. The right-of-way (ROW) width is 65 feet wide with a 45 feet wide cartway and 10-foot wide sidewalk areas between the curb and ROW lines. The cartway consists of a single northbound travel lane and a single southbound travel lane with on-street parking provided on both sides of the street.

The uses and building characteristics along Asbury Avenue differ in certain areas along the corridor and can generally be described as follows:

6th Street to 7th Street

This portion of the Central Business District (CB) is characterized by 30-foot wide lots with a relatively even mix of commercial, residential and mixed use buildings with minimal side yard open space. The majority of the buildings are setback approximately 4
feet from the ROW and a 14-foot wide concrete and partial paver sidewalk exists between the curb and the buildings.

Many of the buildings have commercial on the first floor with residential units on the upper floors.

Twin ornamental street lights, street trees, wooden benches and decorative trash receptacles exist within the "sidewalk area" on both sides of the street.

7th Street to 10th Street

This portion of the Central Business District (CB) is characterized by lots with widths ranging from 15 feet to 210 feet and first floor commercial retail or restaurant uses with some of the buildings having residential units above. City Hall is located at the corner of 10th Street and there are a few parking lots along this section of Asbury Avenue. The majority of the buildings are adjoined and several buildings have multiple commercial spaces. The buildings are typically setback approximately 4 feet from the ROW and a 14-foot wide concrete and partial paver sidewalk exists between the curb and the buildings. Many buildings have recessed entries.

Twin ornamental street lights, wooden benches and decorative trash receptacles exist within the "sidewalk area" on both sides of the street. Street trees are limited and exist sporadically throughout this section of Asbury Avenue.

10th Street to 11th Street

This portion of the Central Business District (CB) is characterized by 30-foot wide lots with the majority of the buildings having first floor commercial retail or restaurant uses with residential units above. Several residential buildings also exist. Banks with associated parking lots are located at the two corners at 10th Street. This section of Asbury Avenue differs slightly from the previously described section due to the separation and minimal open space provided between buildings. The buildings are typically setback approximately 4 feet from the ROW and a 14-foot wide concrete and partial paver sidewalk exists between the curb and the buildings.

Twin ornamental street lights, street trees, wooden benches and decorative trash receptacles exist within the "sidewalk area" on both sides of the street. There is potential for the provision of tables and outdoor cafes.

11th Street to 14th Street

This portion of the Central Business District (CB-1) is characterized by typical 30-foot wide lots with a relatively even mix of first floor commercial uses with residential units above and individual residential uses.

Area roadway street lights and limited street trees are provided in this section of Asbury Avenue. Some benches and decorative trash receptacles are provided. Traffic signals are located at the 6th, 8th, 9th, 10th and 14th Street intersections.

Individual Block Topography & Stormwater Infrastructure

6th Street to 7th Street

The Asbury Avenue cartway between 6th Street and 7th Street is crowned and has a midblock high point that facilitates gutter stormwater flow toward the 6th Street and 7th Street intersections.

The center line elevations at the 6^{th} Street and 7^{th} Street center line intersections are 4.46 and 4.41 respectively. The mid-block high point centerline elevation is 4.85. The westerly gutter line high point elevation is 3.84 and the easterly high point is 4.39. Therefore, the easterly gutter line is significantly higher than the westerly gutter line.

Figure 7

	Center	Line & Gut	ter Elevs		Stormwater In	nlet Eleva	tions
				No	rth Inlets	So	uth Inlets
Block	North	Mid Block (High Pt.)	South	Asbury	Intersecting Street	Asbury	Intersecting Street
600 (6th St. to 7th St.)							
Centerline Elevations	4.46	4.85	4.41				
West Gutter Line	3.31	3.84	3.36	N/A	N/A	3.36	2.92 (7th St.)
East Gutter Line	3.55	4.39	3.45	N/A	N/A	3.45	3.34 (7th St.)
700 (7th St. to 8th St.)							
Centerline Elevations	4.41	5.02	4.52				
West Gutter Line	3.44	4.23	3.62	3.44	3.30 (7th St.)	3.62	3.31 (8th St.)
East Gutter Line	x.xx	4.53	3.94	x.xx	3.30 (7th St.)	3.94	3.57 (8th St.)
800 (8th St. to 9th St.)							
Centerline Elevations	4.52	5.21	4.93				
West Gutter Line	3.62	4.37	3.70	3.62	3.55 (8th St.)	3.70	3.89 (9th St.)
East Gutter Line	3.63	4.40	3.72	3.63	3.62 (8th St.)	3.72	4.39 (9th St.)
900 (9th St. to 10th St.)							
Centerline Elevations	4.93	5.46	5.03				
West Gutter Line	3.92	4.86	4.29	3.92	N/A	4.29	4.00 (10th St.)
East Gutter Line	3.96	4.88	4.66	3.96	4.16 (9th St.)	4.66	4.15 (10th St.)
1000 (10th St. to 11th St.)							
Centerline Elevations	5.03	5.71	5.09				
West Gutter Line	4.32	4.86	4.50	4.32	4.66 (10th St.)	4.50	4.32 (11th St.)
East Gutter Line	4.75	5.13	4.58	4.75	4.28 (10th St.)	4.58	4.84 (11th St.)
1100 (11th St. to 12th St.)							
Centerline Elevations	5.09	5.73	5.02				
West Gutter Line	4.41	4.92	4.29	4.41	4.78 (11th St.)	4.29	4.06 (12th St.)
East Gutter Line	4.75	5.15	4.47	4.75	4.68 (11th St.)	4.47	4.19 (12th St.)
1200 (12th St. to 13th St.)							
Centerline Elevations	5.02	5.59	4.88				
West Gutter Line	4.34	4.71	4.08	4.34	4.00 (12th St.)	4.08	4.00 (13th St.)
East Gutter Line	4.37	4.87	4.32	4.37	4.29 (12th St.)	4.32	4.28 (13th St.)
1300 (13th St. to 14th St.)							
Centerline Elevations	4.88	5.61	5.18				
West Gutter Line	4.35	4.83	4.28	4.35	4.02 (13th St.)	4.28	4.21 (14th St.)
East Gutter Line	4.42	4.97	4.56	4.42	4.04 (13th St.)	4.56	4.61 (14th St.)

Asbury Avenue Cartway Elevations Summary

Stormwater inlets do not exist at the 6th Street intersection and the gutter elevations at the 6th Street curb line are 3.31 (west) and 3.55 (east). Stormwater Inlets exist at the 7th Street intersection; one along the Asbury Avenue gutter line and a Type E inlet along the 7th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet elevation is 3.36 and the 7th Street inlet elevation is 2.92. The easterly Asbury Avenue inlet elevation is 3.45 and the 7th Street inlet elevation is 3.34.

Cartway and stormwater inlet elevations are provided in Figure No. 7.

The first floor elevations of the buildings within blocks 604 and 605 fronting on Asbury Avenue are provided in Figure 8.

Eleven of the thirteen lots in Block 604 are developed and commercial buildings exist on six lots. Private commercial parking lots associated with adjacent uses exist on three lots. Residential dwellings exist on two lots.

The average first floor elevation in the block is 6.56 but the commercial building average is elevation is 5.76.

Fourteen of the fifteen lots in Block 605 are developed and commercial buildings exist on twelve lots. Residential dwellings exist on two lots. The additional lot is vacant.

The average first floor elevation in the block is 5.53 but the commercial building average is elevation is 5.23.

7th Street to 8th Street

The Asbury Avenue cartway between 7th Street and 8th Street is crowned and has a midblock high point that facilitates gutter stormwater flow toward the 7th Street and 8th Street intersections.

The center line elevations at the 7th Street and 8th Street center line intersections are 4.41 and 4.52 respectively. The mid-block high point centerline elevation is 5.02. The westerly gutter line high point elevation is 4.23 and the easterly high point is 4.53.

Stormwater inlets exist at the 7th Street intersection; one along the Asbury Avenue gutter line and one along the 7th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 3.36 and the 7th Street inlet elevation is 2.92. The easterly Asbury Avenue inlet grate elevation is 3.45 and the 7th Street inlet grate elevation is 3.34.

Stormwater inlets exist at the 8th Street intersection; one along the Asbury Avenue gutter line and one along the 8th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 3.62, the 8th Street inlet elevation is 3.31. The easterly Asbury Avenue inlet grate elevation is 3.94, the 8th Street inlet grate elevation is 3.57.

Figure 8

Lot Address Use Name Ist Floor El. (NAVD 1988) No. of Risers Const. Date 1 661 Bank Parking Sturdy Savings 5.31 0 0 2 661 Bank Parking Sturdy Savings - - - 3 661 Bank Parking Sturdy Savings - - - 4 641 Office/Retail Verizon, Etc. 5.16 0 1929 - - - 5.78 0 - <th></th> <th colspan="9">Block 604 (East Side of Asbury Avenue)</th>		Block 604 (East Side of Asbury Avenue)								
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8 628 Vacant Image: Constraint of the state of	7	624	Restaurant	Arlene's	5.04	0				
9 632-634 Duplex 8.80 6 1983 9.01 636 $1st Commercial 2nd Residential Hearth & Sole 0 1979 10 640 1st Commercial 2nd Residential Yes! Nails & Spa 4.82 0 1979 11 660 1st Commercial 2nd & 3rd Resid. Yes! Nails & Spa 4.82 0 1 11 650 1st Commercial 2nd & 3rd Resid. Olde City Millwork 5.18 1 1 12 654 Residential Olde City Millwork 5.18 1 1920 13 654 Retail 7th Street Surf Shop 5.95 3 1920 14 656 Retail Primo's 4.87 1 1900 15 654 Office Weichert Realty 5.47 2 4.87 5.77 $	8	628	Vacant							
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12 654 Residential 4.86 0 1920 13 654 Retail 7th Street Surf Shop 5.95 3 1 14 656 Retail Primo's 4.87 1 1900 15 654 Office Weichert Realty 5.47 2 Average Commercial First Floor Flevation	11	650	2nd & 3rd Resid.	Olde City Millwork	5.18	1				
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15 654 Office Weichert Realty 5.47 2 Average Commercial First Floor Elevation 5.27	14	656	Retail	Primo's	4.87	1	1900			
Average Commercial First Floor Elevation 5 27	15	654	Office	Weichert Realty	5.47	2				
	Averag	e Commer	cial First Floor Fleva	tion	5.27	-				

Cartway and stormwater inlet elevations are provided in Figure No. 7.

The first floor elevations of the buildings within blocks 707 and 708 fronting on Asbury Avenue are provided in Figure 9.

All of the lots in Block 707 are developed with buildings having first floor commercial uses. The average first floor elevation in the block is 5.57.

All of the lots in Block 708 are developed with buildings having first floor commercial uses. The average first floor elevation in the block is 5.16.

Figure 9

		Block 70	7 (East Side of Asbury A	venue)		
Lot	Address	Use	Name	1st Floor Elev. (NAVD 1988)	No. of Risers	Const. Date
1	761	Retail	Interiors By Joann	5.28	0	
2	755	Restaurant	Café Trattoria	5.23	0	
3	753	Retail	Sun Seekers	5.95	0	
4	743	Retail	The Flying Carp	5.78	0	
		Commercial	Diva Nail & Spa	5.74	0	
		Commercial	Curlie's Cutting Crew	5.65	0	
5	737-739	Restaurant	Jay's Crab Shack	5.70	0	
		Retail	Jay's Doll Shoppe	5.70	0	
6	733	Retail	Second Chance	5.93	0	
		Retail	Ruth's Hallmark	5.95	0	
7	725	Retail	Donna/Gay Dillon	6.04	0	
8	721	Retail	Rauhauser's	5.47	0	
9	717	Retail		5.34	0	
10	715	Retail	August Heart	5.21	0	
11	709-711	Retail		5.35	1	
		Retail	Sky Blue	5.22	1	
12	705	Retail	Animal House	5.38	1	1972
10	701	1st Floor Retail		гээ	0	
13	701	2nd & 3rd Resid.		5.38	U	
Averag	e Commerc	ial First Floor Elevat	ion	5.57		

		Block 70	8 (West Side of Asbury A	venue)		
Lot	Address	Use	Name	1st Floor Elev. (NAVD 1988)	No. of Risers	Const. Date
10	700	Retail	Gatherings on Asbury	4.75	0	1967
11	704	Retail	Sneaker Shop	4.99	1	
		Retail	Glazed Over	4.65	0	
12	710	Retail	Sea Oats	4.90	0	
13	714 ABC	1st Commercial 2nd & 3rd Resid.	Retail	4.83	0	
14	716	Retail	ould Be Yours Consignmen	5.59	0	
15	720-726	Retail	7th Street Surf Shop	5.69	0	
16	728	Retail	Ward's Bakery	5.45	0	
17	734	Retail	Hoy's 5 & 10	5.12	0	1983
18	740	Retail	Hoy's 5 & 10	5.12	0	
19	744	Retail	Pappagallo	5.25	0	
20	750	Retail	Wallace Hardware	5.33	0	
21	752	Commercial	Ocean City Vision	5.18	0	
22	754	Commercial	Berkshire Hathaway	5.17	0	
23	756	Retail	Sunrose	5.55	0	
24	760	Retail	Island Gypsy	4.95	1	
Average	e Commerc	ial First Floor Elevat	ion	5.16		

8th Street to 9th Street

The Asbury Avenue cartway between 8th Street and 9th Street is crowned and has a midblock high point that facilitates gutter stormwater flow toward the 8th Street and 9th Street intersections.

The center line elevations at the 8th Street and 9th Street center line intersections are 4.52 and 4.93 respectively. The mid-block high point centerline elevation is 5.21. The westerly gutter line high point elevation is 4.37 and the easterly high point is 4.40.

Stormwater inlets exist at the 8th Street intersection; one along the Asbury Avenue gutter line and one along the 8th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 3.62 and the 8th Street inlet elevation is 3.55. The easterly Asbury Avenue inlet grate elevation is 3.63 and the 8th Street inlet grate elevation is 3.62.

Stormwater inlets exist at the 9th Street intersection; one along the Asbury Avenue gutter line and one along the 9th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 3.70 and the 9th Street inlet elevation is 3.89. The easterly Asbury Avenue inlet grate elevation is 3.72 and the 9th Street inlet grate elevation is 4.39.

Cartway and stormwater inlet elevations are provided in Figure No. 7.

The first floor elevations of the buildings within blocks 806 and 807 fronting on Asbury Avenue are provided in Figure No. 10.

All of the lots in Block 806 are developed with buildings having first floor commercial uses as well as City Hall. The average first floor elevation in the block is 5.88.

All of the lots in Block 807 are developed with buildings having first floor commercial uses. The average first floor elevation in the block is 5.58.

Figure 10

		Block 806 (East Side of Asbury	Avenue)		
Lot	Addross		Nama	1st Floor El.	No. of	Const.
LOI	Address	Use	Name	(NAVD 1988)	Risers	Date
1	861	Quasi-Public	City Hall	5.72	0	
2	847	Restaurant	Yanni's Café	6.03	1	1930
3	827-	Retail	B & B	5.71	0	1986
4	831	Retail	B & B			
- 00		1st Retail	"D" Carribean & The	F OC	0	1020
5	825A-D	2nd Residential	One Shop	5.96	0	1930
6	819	Commercial	Fashion Nails	6.09	0	1913
			Pacific Soul	6.21		
7	815A-E	Commercial	Fabiana Edwards	6.00	0	
			Blue Eden	5.98		
8	801	Commercial	Parking			
9	801	Commercial	Crown Bank Building	5.25	2	
Averag	ge Commer	cial First Floor Eleva	tion	5.88		

		Block 807 (\	West Side of Asbury	Avenue)		
Lot	Address	Use	Name	1st Floor El.	No. of	Const.
				(NAVD 1988)	Risers	Date
5	800	Commercial	Fortress Financial	5.76	2	
6	810	Commercial	Stainton's	5.10	0	
7	7 834	Commorcial	Creative Window	E 9C	0	
/		Commerciai	Design Center	5.80	U	
8	836	Retail	Making Waves	5.48	0	
٥	929A_E	Commercial	Yoasis	E 40	0	
9	030A-L	Retail	Retail	5.40	0	
10	846	Commercial	P. Francis	5.36	0	
11	050	Commercial	Sting Ray	E 90	0	
11	052	Commercial	Golden Buddha	5.60	U	
12	858	Commercial	Spinning Wheels	5.75	0	1900
13	862	Restaurant	Domino's	5.61	0	1900
Averag	ge Commer	cial First Floor Eleva	tion	5.58		

9th Street to 10th Street

The Asbury Avenue cartway between 9th Street and 10th Street is crowned and has a midblock high point that facilitates gutter stormwater flow toward the 9th Street and 10th Street intersections.

The center line elevations at the 9th Street and 10th Street center line intersections are 4.93 and 5.03 respectively. The mid-block high point centerline elevation is 5.46. The westerly gutter line high point elevation is 4.86 and the easterly high point is 4.88.

Stormwater inlets exist at the 9th Street intersection; one along the westerly Asbury Avenue gutter line and two at the easterly corner; one along the Asbury Avenue gutter line and one along the 8th Street gutter line. The westerly Asbury Avenue inlet grate elevation is 3.92. The easterly Asbury Avenue inlet grate elevation is 3.96 and the 9th Street inlet grate elevation is 4.16.

Stormwater inlets exist at the 10th Street intersection; one along the Asbury Avenue gutter line and one along the 10th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 4.29 and the 9th Street inlet elevation is 4.00. The easterly Asbury Avenue inlet grate elevation is 4.66 and the 9th Street inlet grate elevation is 4.15.

Cartway and stormwater inlet elevations are provided in Figure No. 7.

The first floor elevations of the buildings within blocks 904 and 905 fronting on Asbury Avenue are provided in Figure 11.

Sixteen (16) of the eighteen (18) lots in Block 904 are developed with buildings having first floor commercial uses with the remaining two lots comprising the Ocean City Public Parking Lot. The average first floor elevation in the block is 6.06.

All of the lots in Block 905 are developed with buildings having first floor commercial uses. The average first floor elevation in the block is 5.94.

Figure 11

		Block 904 (East Side of Asbury	Avenue)		
				1st Floor El.	No. of	Const.
Lot	Address	Use	Name	(NAVD 1988)	Risers	Date
1	965	Retail	Young's	5.57	0	
		1st Floor Retail				
2.01	961A-C	2nd & 3rd Floor	Water Wear	5.79	0	
		Residential				
3.01	959	Commercial	Mew to Yew	5.7	0	1925
				6.12		
4	955	Restaurant	Sandwich Bar	5.91	0	1925
5	951	Retail	Alyses Shoes	5.87	0	1913
6	949	Retail	(Vacant)	6.1	0	
7	949	Retail	(Vacant)	6.1	0	
8	945A-B	Commercial	Aveda	6.08	0	1913
9	943	Retail	Retail	6.12	0	1913
10	941	Retail	The Heart Casa	6.28	0	1913
11	027	Retail	OC Beach Supply	6.22	0	1016
11	957	Commercial	Bernies	0.23	U	1910
				6.18		
12	935	Retail	Frey	6.04	0	
12	020	Commorcial	Kitchen & Bath	6 22	0	
15	929	Commercial	Gallery	0.52	U	
		1st Floor Retail				
14	925A-C	2nd & 3rd Floor	Ta-Dah	6.55	1	
		Residential				
15	921	Retail	On Asbury	5.92	0	
			Ocean City Coffee			
16	917	Retail	Co.	6.24	0	1920
			Ocean City Parking			
17	915	Public	Lot			
10	0.04		Ocean City Parking			
18	901	Public	Lot			
Averag	ge Commer	cial First Floor Eleva	tion	6.06		

		Block 905 (West Side of Asbury	Avenue)		
Lot	Address	الدم	Name	1st Floor El.	No. of	Const.
LUI	Audress	036	Name	(NAVD 1988)	Risers	Date
14	900	Retail	Collette	5.28	0	1998
				5.33		
15	908-910	Commercial	Local Gym & Fitness	5.61	0	
				5.63		
10	01.0	Commercial	Blind Express	C 10	4	
10	916	Retail	Artisan Body	6.19	T	
	***************************************	***************************************		6.21	***************************************	
17	922	Retail	Red Tulip	6.47	1	1913
18	926	Restaurant	Sack O Subs	6.09	0	1930
19	930	Commercial	Johnson's	6.45	0	
20	028	Commercial	Johnson's Culinary	6 4 4	1	
20	530	Commercial	Concepts	0.44	T	
21	940	Retail	(Vacant)	6.22	0	1949
22	944	Retail	Potomac Bead Co.	6.31	0	
23	948	Retail	Potomac Bead Co.	6.10		
		1st Floor Retail				
24	952	2nd Floor	Ta-Dah	5.89	0	1999
		Residential				
24	956	Retail	Bowfish	5.54	0	1930
25	960	Restaurant	Drip n Scoop	5.3	0	1946
Avera	ge Commer	cial First Floor Eleva	tion	5.94		

10th Street to 11th Street

The Asbury Avenue cartway between 10th Street and 11th Street is crowned and has a mid-block high point that facilitates gutter stormwater flow toward the 10th Street and 11th Street intersections.

The center line elevations at the 10th Street and 11th Street center line intersections are 5.03 and 5.09 respectively. The mid-block high point centerline elevation is 5.46. The westerly gutter line high point elevation is 4.86 and the easterly high point is 5.13.

Stormwater inlets exist at the 10th Street intersection; one along the Asbury Avenue gutter line and one along the 10th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 4.32 and the 10th Street inlet elevation is 4.66. The easterly Asbury Avenue inlet grate elevation is 4.75 and the 10th Street inlet grate elevation is 4.28.

Figure 12

		Block 1	LOO4 (East Side of As	sbury Avenue)			
1.44	Adduces	llas	Neme	1st Floor El.	No. of	Recessed	Const.
LOT	Address	Use	Name	(NAVD 1988)	Risers	Entry	Date
1	1061- 1063	Commercial	Starbuck's	5.94	0	No	
2	1059	Commercial	Starbuck's	5.94	0	No	1942
3	1053	Commercial	Ocean City Wireless	5.97	0	No	1908
4	1049	Residential		6.29	0	No	1910
		1st Floor					
5	1045A-C	Commercial 2nd Floor Residential		6.47	0	No	1979
		1st Floor Retail					
6	1039A-C	2nd & 3rd Floor	Grass Roots	7.38	2	Yes	2006
	10254 0	Residential	N 4	6.20	0	Vee	1001
/	1035A-C	Commercial	iviassage	6.20	U	Yes	1961
8	1033A-C	1st Floor Retail 2nd & 3rd Floor Residential		6.15	0	No	
9	1029	Commercial	Vogue Nails	6.29	0	No	
10 -	1001-	Commercial	OC Home Savings &	8 57	5	Vec	
11.04	1025	Commercial	Loan	8.57	J	163	
Averag	ge Commer	cial First Floor Eleva	tion	5.90			
		Block 1	005 (West Side of A	sbury Avenue)		
15	1000	Commercial	Cape Bank	8.62	0	No	
16	1014	Retail	Annarelli's	5.97	0	No	
17	1018	Restaurant	Vittorio's	5.81	0	No	
18	1020	Commercial	Bretagne's	5.84	0	Yes	1924
19	1026	Retail	Ta-Dah	5.72	1	Yes	1890
20	1028A-B	Commercial	Atlantic Cape Home Care	7.20	3	No	1932
21	1034	Retail		8.18	4	No	1900
22	1038A-C	1st Floor Retail 2nd & 3rd Floor Residential	Ta-Dah	5.99	0	Yes	
23	1040A-C	1st Floor Retail 2nd & 3rd Floor Residential	Ta-Dah	5.96	0	Yes	2006
24	1044	Commercial	A & A Computers	6.09	1	No	1922
25	1046A-C	1st Floor Commercial 2nd & 3rd Floor Residential	The Cake Studio	6.19	1	No	2003
26	1048A-F	Commercial	Gleeson's	6.56	2	Yes	1920
27	1050	Retail		6.06	1	No	1953
28	1052	Retail	Bookateria	6.06	2	Yes	1908
29	1054	Retail	Paddle Board's	7.08	Ramp	Yes	1900
Averag	e Commer	cial First Floor Fleva	tion	6.01			

Stormwater inlets exist at the 11th Street intersection; one along the Asbury Avenue gutter line and one along the 11th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 4.50 and the 11th Street inlet elevation is 4.32. The easterly Asbury Avenue inlet grate elevation is 4.58 and the 11th Street inlet grate elevation is 4.84.

Cartway and stormwater inlet elevations are provided in Figure No. 7.

The first floor elevations of the buildings within blocks 1004 and 1005 fronting on Asbury Avenue are provided in Figure No. 12.

All of the lots in Block 1004 are developed with buildings having first floor commercial uses. The average first floor elevation in the block is 5.90.

All of the lots in Block 1005 are developed with buildings having first floor commercial uses. The average first floor elevation in the block is 6.01.

11th Street to 12th Street

The Asbury Avenue cartway between 11th Street and 12th Street is crowned and has a mid-block high point that facilitates gutter stormwater flow toward the 11th Street and 12th Street intersections.

The center line elevations at the 11th Street and 12th Street center line intersections are 5.09 and 5.02 respectively. The mid-block high point centerline elevation is 5.73. The westerly gutter line high point elevation is 4.92 and the easterly high point is 5.15.

Stormwater inlets exist at the 11th Street intersection; one along the Asbury Avenue gutter line and one along the 11th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 4.41 and the 11th Street inlet elevation is 4.78. The easterly Asbury Avenue inlet grate elevation is 4.75 and the 11th Street inlet grate elevation is 4.68.

Stormwater inlets exist at the 12th Street intersection; one along the Asbury Avenue gutter line and one along the 12th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 4.29 and the 12th Street inlet elevation is 4.06. The easterly Asbury Avenue inlet grate elevation is 4.47 and the 12th Street inlet grate elevation is 4.19.

Cartway and stormwater inlet elevations are provided in Figure No. 7.

The first floor elevations of the buildings within blocks 1104 and 1105 fronting on Asbury Avenue are provided in Figure No. 13-A and 13-B.

Figure 13-A

		Block 1104 (East Sid	e of Asbury Avenue			
Lot	Address	Use	Name	1st Floor El. (NAVD 1988)	No. of Risers	Const. Date
1	1161	Restaurant	Bennie's	5.99	0	
2	1155A-C	1st Floor Commercial 2nd & 3rd Residential		6.09	1	
3	1149-51	Restaurant	Marco Polo	6.19	1	
4	1145A-C	1st Floor Commercial 2nd & 3rd Residential		5.65	0	
5	1141	Residential		7.44	?	1900
6	1137	Commercial		7.19	2	1945
7	1129-31	Residential		11.81	8	1927
8	1127A-C	1st Floor Commercial 2nd & 3rd Residential		7.22	2 + Ramp	2001
8.01	1125A-C	1st Floor Commercial 2nd & 3rd Residential		7.46	2	2001
8.02	1123A-C	1st Floor Commercial 2nd & 3rd Residential		7.34	2	2001
9	1119A-C	1st Floor Commercial 2nd & 3rd Residential		7.30	2 + Ramp	2001
10	1115	Residential		5.76	0	1912
11	1109-11	Residential		11.14	6	2015
12	1101	Commercial		5.77	1	
Average C	Commercial Fir	st Floor Elevation		6.62		

<u>1100 Block Asbury Avenue Building Elevations Summary</u>

Ten (10) of the fourteen (14) lots in Block 1104 are developed with buildings having first floor commercial uses with the remaining four lots being residential. The average commercial first floor elevation in the block is 6.62. The average residential first floor elevation 9.04.

Eight (8) of the fourteen (14) lots in Block 1105 are developed with buildings having first floor commercial uses with five of the remaining six lots being residential. One lot is occupied by the Avalon Flooring parking lot. The average commercial first floor elevation in the block is 7.13. The average residential first floor elevation 9.46.

Figure 13-B

		Block 1105 (West Si	de of Asbury Avenu	e)		
Lot	Addross		Nama	1st Floor El.	No. of	Const.
LOI	Address	Use	Name	(NAVD 1988)	Risers	Date
18	1100A-C	Residential		10.54	7	1932
19	1104	Residential		9.56	5	1983
20	1110	Residential		x.xx	7	1912
21	1112	Commercial	Peace of Wood	7.01	7	
22	1116	Commorcial	Ocean City Cars &		0	
22	1110	commercial	Trucks Lot		0	
22	1110	Commonial	Ocean City Cars &		0	
23	1118	Commercial	Trucks Lot			
22.01	1112 1124	Commercial	Ocean City Cars &			
25.01	1112-1124	Commercial	Trucks Lot			
23.02	1126-1128	Commercial	Ocean City Cars &			
23.02	1120-1120	commercial	Trucks Lot			
24	1132	Residential		9.28	5	1900
25	1136	Restaurant	Pizza	7.10	2	1910
26	1140	Commercial		8.85	5 + Ramp	1900
27	1146	Residential		8.47	5	1912
20	1140	Commercial	Avalon Flooring		0	
28	1148	.148 Commercial	Parking		U	
29	1158	Commercial	Avalon Flooring	5.54	0	1942
Average (Commercial Fir	st Floor Flevation		7.13		

1100 Block Asbury Avenue Building Elevations Summary

12th Street to 13th Street

The Asbury Avenue cartway between 12th Street and 13th Street is crowned and has a mid-block high point that facilitates gutter stormwater flow toward the 12th Street and 13th Street intersections.

The center line elevations at the 12th Street and 13th Street center line intersections are 5.02 and 4.88 respectively. The mid-block high point centerline elevation is 5.59. The westerly gutter line high point elevation is 4.71 and the easterly high point is 4.87.

Stormwater inlets exist at the 12th Street intersection; one along the Asbury Avenue gutter line and one along the 11th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 4.34 and the 12th Street inlet elevation is 4.00. The easterly Asbury Avenue inlet grate elevation is 4.37 and the 12th Street inlet grate elevation is 4.29.

Figure 14-A

		Block 1204 (E	ast Side of Asbury A	venue)		
Lot	Address	Use	Name	1st Floor El. (NAVD 1988)	No. of Risers	Const. Date
1	1261A-C	1st Floor Commercial 2nd & Residential	Edward Jones	5.13	0	
2	1259A-C	1st Floor Commercial 2nd & 3rd Residential	Water's Edge Environmental	6.25	2	
3	1253A-C	1st Floor Commercial 2nd & 3rd Residential	Halliday Architecture	5.51	0	2006
4	1249A-C	1st Floor Commercial 2nd & 3rd Residential		5.59	0	2006
5	1245A-C	1st Floor Commercial 2nd & 3rd Residential	Kelly's Creations Salon & Spa	5.66	0	
6	1241	Residential		8.35	4	1900
7	1237-39	Residential		12.06	9	
8	1233-35	Residential		12.06	9	
9	1229A-B	Commercial	Fasy Real Estate	6.57	Ramp	
10	1225A-C	1st Floor Commercial 2nd & 3rd Residential	Fractured Prune & Donut	6.31	1	
11	1221-23	Residential		10.63	7	
12	1215A-C	1st Floor Commercial 2nd & 3rd Residential		5.95	1	
13	1211-13	Residential		12.08	10	2015
14	1209	Residential		9.33	6	1890
15	1201	Commercial	Parking Lot			
Avera	ge Commer	cial First Floor Elevation		5.87		

1200 Block Asbury Avenue Building Elevations Summary

Stormwater inlets exist at the 13th Street intersection; one along the Asbury Avenue gutter line and one along the 13th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 4.08 and the 13th Street inlet elevation is 4.00. The easterly Asbury Avenue inlet grate elevation is 4.32 and the 13th Street inlet grate elevation is 4.28.

Cartway and stormwater inlet elevations are provided in Figure No. 7.

The first floor elevations of the buildings within blocks 1204 and 1205 fronting on Asbury Avenue are provided in Figure No. 14.

Figure 14-B

Block 1205 (West Side of Asbury Avenue)										
Lot	Address	Use	Name	1st Floor El.	No. of	Const.				
				(NAVD 1988)	Risers	Date				
20	1200A-C	Restaurant	Sunrise	5.12	0					
20	1204-06	Residential		11.91	10					
21	1208	Residential		5.22	1	1906				
22	1212A-C	1st Floor Commercial	Turner	5.74	1 + Ramp	2009				
23		2nd & 3rd Residential								
24	1218A-C	1st Floor Commercial		5.17	0					
		2nd & 3rd Residential								
25	1220	Residential		7.69	3	1890				
26	1224A-C	1st Floor Commercial	Oceanside Nails &	F 0C	0	2006				
		2nd & 3rd Residential	Spa	5.90						
27	1228A-C	1st Floor Commercial		5.60	0					
		2nd & 3rd Residential								
28	1230A-C	1st Floor Commercial		5.60	0					
		2nd & 3rd Residential								
29	1232	Residential		5.56	0	1905				
30	1236	Residential		5.54	0	1932				
31	1244	Commercial		5.22	0	1910				
32	1246	Residential		5.12	0	1900				
33	1252	Residential		x.xx	0	1968				
34	1256	Residential		5.87	1	1935				
35	1258-60	Residential		11.81	11					
Average Commercial First Floor Elevation				5.49						

1200 Block Asbury Avenue Building Elevations Summary

Eight (8) of the fifteen (15) lots in Block 1204 are developed with buildings having first floor commercial uses with six of the remaining seven lots being residential. One lot is currently a parking lot. The average commercial first floor elevation in the block is 5.87. The average residential first floor elevation 10.75.

Eight (8) of the seventeen (17) lots in Block 1205 are developed with buildings having first floor commercial uses with the remaining nine lots being residential. The average commercial first floor elevation in the block is 5.52. The average residential first floor elevation 7.34.

13th Street to 14th Street

The Asbury Avenue cartway between 13th Street and 14th Street is crowned and has a mid-block high point that facilitates gutter stormwater flow toward the 13th Street and 14th Street intersections.

The center line elevations at the 10^{th} Street and 11th Street center line intersections are 4.88 and 5.18 respectively. The mid-block high point centerline elevation is 5.61. The westerly gutter line high point elevation is 4.83 and the easterly high point is 4.97.

Stormwater Inlets exist at the 13th Street intersection; one along the Asbury Avenue gutter line and one along the 13th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 4.35 and the 13th Street inlet elevation is 4.02. The easterly Asbury Avenue inlet grate elevation is 4.42 and the 13th Street inlet grate elevation is 4.04.

Stormwater Inlets exist at the 14th Street intersection; one along the Asbury Avenue gutter line and one along the 14th Street gutter line on both sides of Asbury Avenue. The westerly Asbury Avenue inlet grate elevation is 4.28 and the 14th Street inlet elevation is 4.21. The easterly Asbury Avenue inlet grate elevation is 4.56 and the 14th Street inlet grate elevation is 4.61.

Cartway and stormwater inlet elevations are provided in Figure No. 7.

The first floor elevations of the buildings within blocks 1304 and 1305 fronting on Asbury Avenue are provided in Figure No. 15.

Three of the eleven (11) lots in Block 1304 are developed with buildings having first floor commercial uses with six of the remaining eight lots being residential. The remaining two lots are occupied by St. Damien Parish. The average commercial first floor elevation in the block is 6.20. The average residential first floor elevation 8.52.

Thirteen (13) of the sixteen (16) lots in Block 1105 are developed with buildings having first floor commercial uses with two of the remaining three lots being residential and one lot vacant. The average commercial first floor elevation in the block is 6.04. The average residential first floor elevation is 7.36.

Block 1304 (East Side of Asbury Avenue)										
Lot	Address	Use	Name	1st Floor El.	No. of	Const.				
				(NAVD 1988)	Risers	Date				
1	1363-65	Commercial	Johnny B. Goode	7.29	3 + Ramp					
2	1357	Church	St. Damien Parish Thrift Shop	8.62	3					
3	1335	Church	St. Damien Parish	7.80	4					
4	1331	Residential		10.31	6	1918				
5	1327	Residential		9.50	5	1922				
6	1323	Residential		7.97	2	1928				
7	1317	Residential		8.67	5	1913				
8	1315A-B	Residential		7.51	3	1928				
9	1309A-C	1st Floor Commercial 2nd & 3rd Residential		6.28	1	2014				
10	1305-07	Residential		7.19	3					
11	1301A-C	1st Floor Commercial 2nd & 3rd Residential	Prospect Mortgage	5.04	0					
Averag	ge Commer	cial First Floor Elevation		7.00						
Block 1305 (West Side of Ashury Avenue)										
	1300	1st Floor Commercial	Eye Care	5.92	1 + Ramp					
16		2nd & 3rd Residential				1998				
17	1304A-C	1st Floor Commercial		6.45	2 + Ramp	2005				
18	1308	Residential		9.45	7	1928				
10	1300	1st Floor Commercial		5.45	/	1520				
19	1312A-C	2nd & 3rd Residential		5.64	0	2004				
20	1320	Vacant Land								
21	1322A-B	Residential		8.36	4					
22	1324A-C	1st Floor Commercial 2nd & 3rd Residential		6.21	1					
22	1326A-C	1st Floor Commercial		6.43	1					
23	1330	Retail		6.36	1					
24	1336A-C	1st Floor Commercial 2nd & 3rd Residential		5.93	1	2006				
25	1340A-E	1st Floor Commercial 2nd & 3rd Residential	Boyer's Food Market	6.22	2 + Ramp	2005				
27	1348A-C	1st Floor Commercial 2nd & 3rd Residential	Coffee House	6.18	1	******				
28	1352	1st Floor Commercial 2nd & 3rd Residential	Perfect Exposure	6.09	Ramp	1920				
29	1358	Restaurant	Chinese Kitchen	5.38	0					
30	1360	Commercial	O.C. Carpet & Tile	5.48	0					
Averag	ge Commer	cial First Floor Elevation	6.02							

Figure 15 Asbury Avenue Cartway Elevations

Design Parameters & Constraints (Central Business District)

Design parameters and constraints related to the goal of reducing the impact from flooding and improving resilience within the Central Business District are described below. Based on the analysis of this information design standards for the Central Business District have been developed and are contained in a companion document entitled "Design Standards to Mitigate Flooding - 9th Street Gateway and Central Business District."

The overarching storm resiliency improvement goal for the central business district is to raise the Asbury Avenue cartway and adjacent curb and sidewalk elevation to the greatest extent possible. The key factor affecting the extent of the raising is the maintaining of the existing buildings and associated first floor elevations in the interim until the properties along Asbury Avenue are developed in the future. Additional design parameters and constraints are as follows:

Existing Building Floor Elevations & Lower Level Pedestrian Access

A portion of the existing concrete sidewalk along the existing building frontages will need to be maintained for building access.

Upper Level Pedestrian Walkway

A pedestrian walkway at a higher elevation consistent with the new raised elevation of the cartway and curb will need to be provided.

Pedestrian Walkway Transition

Sufficient area must be provided for the transition between the elevated sidewalk and the existing sidewalk along the buildings. The transition is expected to be accomplished through the provision of stairs and handicapped ramps.

FEMA Special Flood Hazard Area per FEMA Preliminary Map

New construction and/or substantial building improvements are required to be constructed with the first habitable floor elevation being based on the Flood Zone Base Flood Elevation (BFE). Asbury Avenue and the adjacent properties between 6th Street and 14th Street are in Special Flood Hazard Area AE 9 (BFE 9.00, NAVD 1988) per FEMA Preliminary Flood Insurance Rate Maps 34009C0087F (June 30, 2014) and 34009C0079F (January 30, 2015).

The NJDEP Flood Hazard Rules require that the minimum first floor elevation for a commercial structure be set at least one foot above the BFE. If it is not feasible to set the first floor at this elevation, it must be set as close as possible to the required elevation and be flood-proofed in accordance with the applicable standards to one foot above the flood hazard

area design flood elevation. In no case shall the lowest floor of the building be set below grade along all adjoining exterior walls. The building must also be flood-proofed.

Therefore, the proposed Asbury Avenue improvements and roadway raising should take into account the floor elevation requirements associated with future reconstruction. As indicated above, the minimum first floor elevation for future commercial buildings along Asbury Avenue must be 10.00 (NAVD 1988), unless the building is flood-proofed and meeting the applicable State and Ocean City requirements.

Sidewalk Stormwater Drainage

Those properties along Asbury Avenue that have open space between adjacent buildings typically have high point elevations along the common side property lines at a point generally mid-way between the right-of-way or front property line and the public alley. Many of the properties have frontages that are completely developed with the exterior walls abutting the building on the adjacent lots. Therefore stormwater runoff currently drains toward the existing gutter line.

Since the raising of the cartway and a portion of the existing sidewalk will present a barrier to stormwater runoff, provisions for stormwater management must be provided.

Intersection Elevations and Stormwater Infrastructure

As indicated previously, the highest cartway, sidewalk and general floor elevations are at mid-block between the intersecting numbered streets and stormwater runoff flows within the gutter line to stormwater inlets at the street intersections.

The raising of the intersection elevations will require additional transition improvements from the raised Asbury Avenue sidewalk to the existing sidewalk along the intersecting streets.

Raising the intersection stormwater inlet grates will result in the establishment of new low points along the intersecting street gutter lines that will most likely require installation of additional stormwater infrastructure.

Tidal Flooding Frequency and Elevations

Raising Asbury Avenue to reduce the extent of tidal flooding and increase storm event resiliency should be sensitive to the frequency and extent of flooding. Figure No. 16 indicates tide heights associated with historical storm events and the characterization of the extent of flooding (Minor, Moderate, Severe or Extreme). Minor Flooding (6 times a year) occurs with tide elevations between elevation 3.23 and 3.73, Moderate Flooding (1 storm/ 5 years) occurs

with tide elevations between 3.73 and 4.73, Severe Flooding (1 storm/7 years) occurs with tide elevations between 4.73 and 5.73, and Extreme Flooding occurs with tide elevations greater than 5.73.

Roadway Design Standards

The AASHTO "A Policy on Geometric Design of Highways and Streets," New Jersey Residential Site Improvement Standards (RSIS) and the NJDOT Roadway Design Manual will be relied upon for roadway design.

<u>References</u>

The following documents and resources have been reviewed and utilized in the preparation of this Community Resilience $Plan - 9^{th}$ Street Gateway and Central Business District.

- Topographic Survey Information Provided By Fralinger Engineering and Based on Field Surveys Performed in December 2016 and January 2017.
- NJDOT "Construction Plans," NJ Route 52 Causeway, Sheet 36 last revised March 22, 2011.
- NJDOT "Construction Plans," NJ Route 52 Causeway, Sheet 37 last revised March 10, 2011.
- NJDOT "Drainage and Utility Plans with Existing Contours and Drainage Areas," NJ Route 52 Causeway, Sheet 1/1 last revised February 7, 2011.
- NJDOT "Grades," NJ Route 52 Causeway, Sheet 118, last revised March 22, 2011.
- New Jersey Residential Site Improvement Standards (<u>NJAC</u> 5:21) 2011.
- A Policy on Geometric Design of Highways and Streets, 2001 prepared by American Association of State Highway and Transportation Officials (AASHTO).
- New Jersey Department of Transportation Roadway Design Manual, 2015.
- Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 2009 Edition, U.S. Department of Transportation.
- FEMA Cape May County, NJ Preliminary Flood Maps 34009C0087F dated January 30, 2015 and 34009C0089F dated June 30, 2014.

- FEMA Flood Insurance Rate Maps
- NJDEP Flood Hazard Area Control Act Rules (<u>NJAC</u> 7:13), Last Amended February 2, 2015.
- 2009 ICC/ANSI A117.1 Accessible Usable Buildings and Facilities.
- New Jersey Uniform Construction Code (<u>NJAC</u> 5:23), June 5, 2017.