

## ABSTRACT

Title of Document:

A PLAN FOR SALISBURY, MD: URBAN  
DESIGN TRANSFORMATIONS IN  
RESPONSE TO SEA LEVEL RISE

Daniel Moreno-Holt, Masters of Architecture &  
Masters of Real Estate Development, Fall 2015

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This thesis proposes a master plan for Salisbury, MD that embraces the transformative effect climate change will have on the city's landscape. Creative solutions, developed through architectural, urban, and landscape architecture thinking, transform the threats posed by sea level rise into economic, ecologic, and social assets.

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RESPONSE TO SEA LEVEL RISE

By

Daniel Moreno-Holt

Thesis submitted to the Faculty of the Graduate School of the  
University of Maryland, College Park, in partial fulfillment  
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# Chapter 1: Introduction

## Introduction

### Abstract

This thesis proposes a master plan for Salisbury, MD that embraces the transformative effect climate change will have on the city's landscape. Creative solutions, developed through architectural, urban, and landscape architecture thinking, transform the threats posed by sea level rise into economic, ecologic, and social assets.

### Introduction

Through a process of diagrammatic analysis, four distinct thesis goals were developed: Propose transformative responses to sea level rise, improve the street network and urban connectivity, develop distinct neighborhoods that capitalize on existing assets, and propose a catalytic first phase of downtown redevelopment.

### Urban Connectivity

Route 50 and Route 13 frame the city's north and east core with rears of buildings and parking lots, creating a poor connection between these arteries, downtown, and the residential neighborhood Newtown to the North. Meanwhile, the Wicomico River, which frames downtown to the South and West, is disengaged from surrounding development and separates neighborhoods to the South. Repairing these arteries is essential to creating active points of entry to the city core.

## Sea Level Rise

Sea level rise is a significant threat to the city and provides an opportunity to create dynamic relationships to the waterfront. Transforming this threat into an ecological, economic, and educational asset through design thinking that merges architecture, landscape architecture, development, and urbanism can create resilient, thriving waterfront communities.

## Develop Distinct Corridors

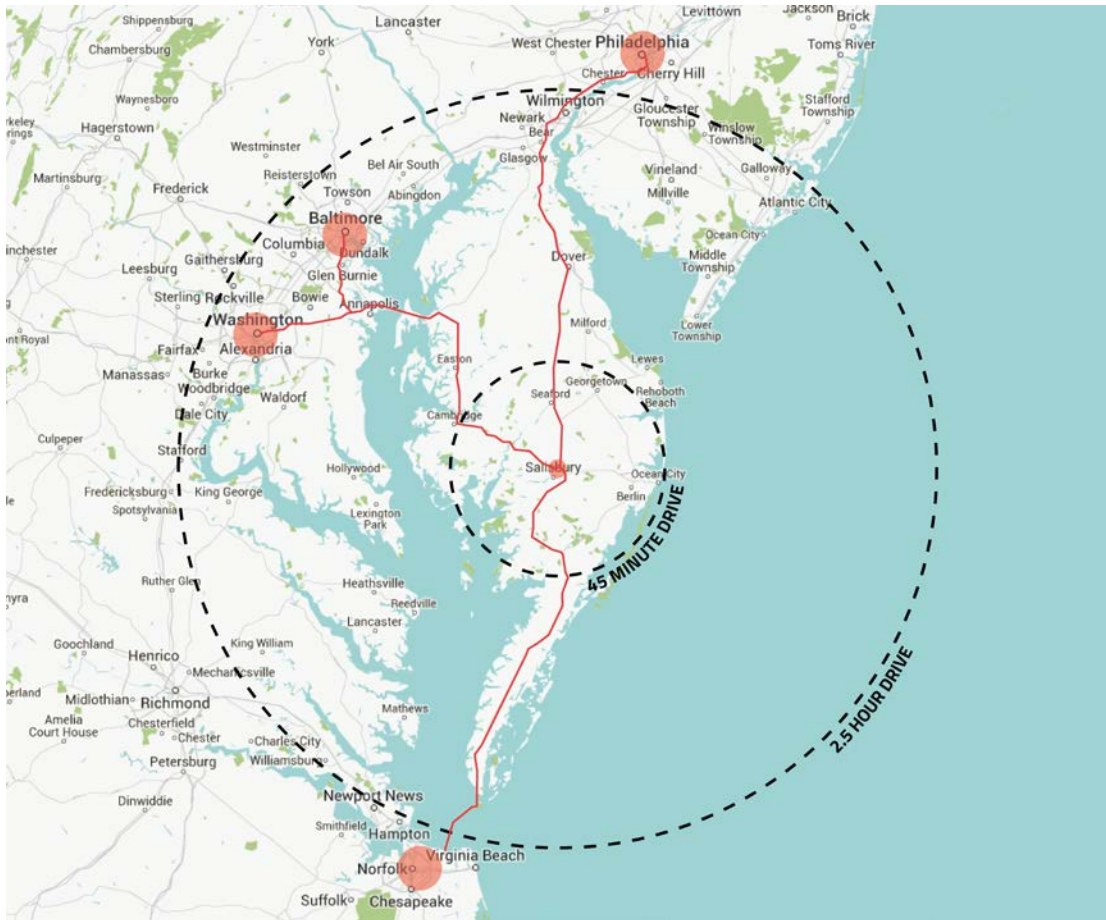
Outside the historic portion of Main Street, downtown Salisbury is characterized primarily by single story office buildings built in the mid-20<sup>th</sup> century. Proposing a mix of uses, with more residences, could bring density and activity to downtown, creating a vibrant, thriving place. By partnering with nearby institutions, such as the Hospital, University, and Purdue headquarters, the city's major economic players can become active participants in revitalization and uniquely shape the character of the city core.

## Site Background

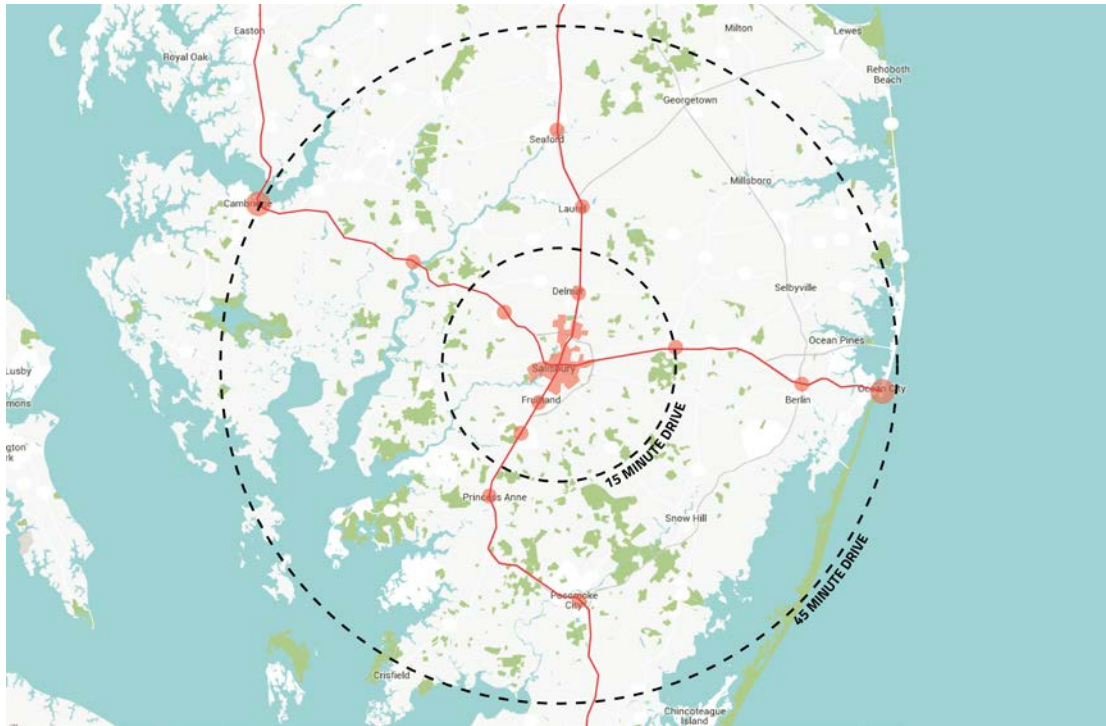
### Salisbury Background

Salisbury is the largest city in Maryland's Eastern Shore and the metropolitan heart of the lower Delmarva region. The Eastern Shore is a rural area, with only 8% of Maryland's population (1). The landscape is largely low flatlands, mostly used for farming. With 30,000 people Salisbury is the economic hub of the Delmarva Peninsula. Diverse employers include a state university, a hospital, Purdue Chicken's headquarters, and various industrial plants. Many of these employment opportunities

are very close to downtown. The Wicomico River, one of the city's main reasons for being, cuts through the heart of downtown, as the city grew around a fork in this river. Goods were navigated downstream while mill dams were set up at each fork. Like many other cities, Salisbury experienced growth away from downtown over the last 60 years. Today it is largely made up of auto-dominated sprawl, spreading to a metropolitan population of 120,000 people.



**Figure 1: Salisbury Regional Diagram**



**Figure 2: Salisbury Local Diagram**

While the underdeveloped historic downtown has seen almost no growth in the last 30 years, recent events point to a revitalization. Third Friday, a festival held every third Friday of the month, draws in thousands of visitors to downtown for events, food, and live music. Two projects recently received entitlements, with one starting construction. New businesses and attractions have opened up in the last few years, including several restaurants, a music venue in the historic fire hall, an art gallery for Salisbury University, and a large building on Main Street that was recently gifted to the University by a local developer, which will be used for a business innovation center. Vacancy rates downtown are very low, signaling a demand for new housing (2).

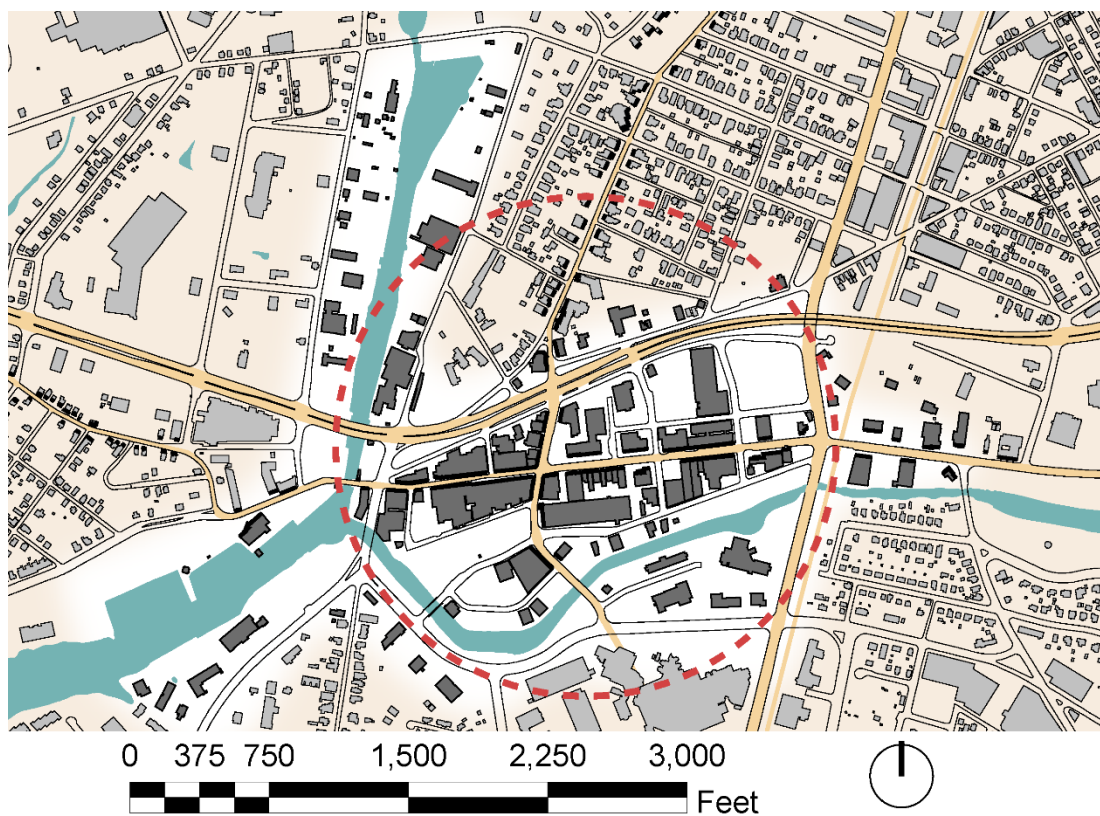


**Figure 3: River View Commons, Mixed-use adaptive reuse of historic Feldman's Furniture Store building. Currently undergoing construction. Image & architecture by Becker Morgan Group Architects**



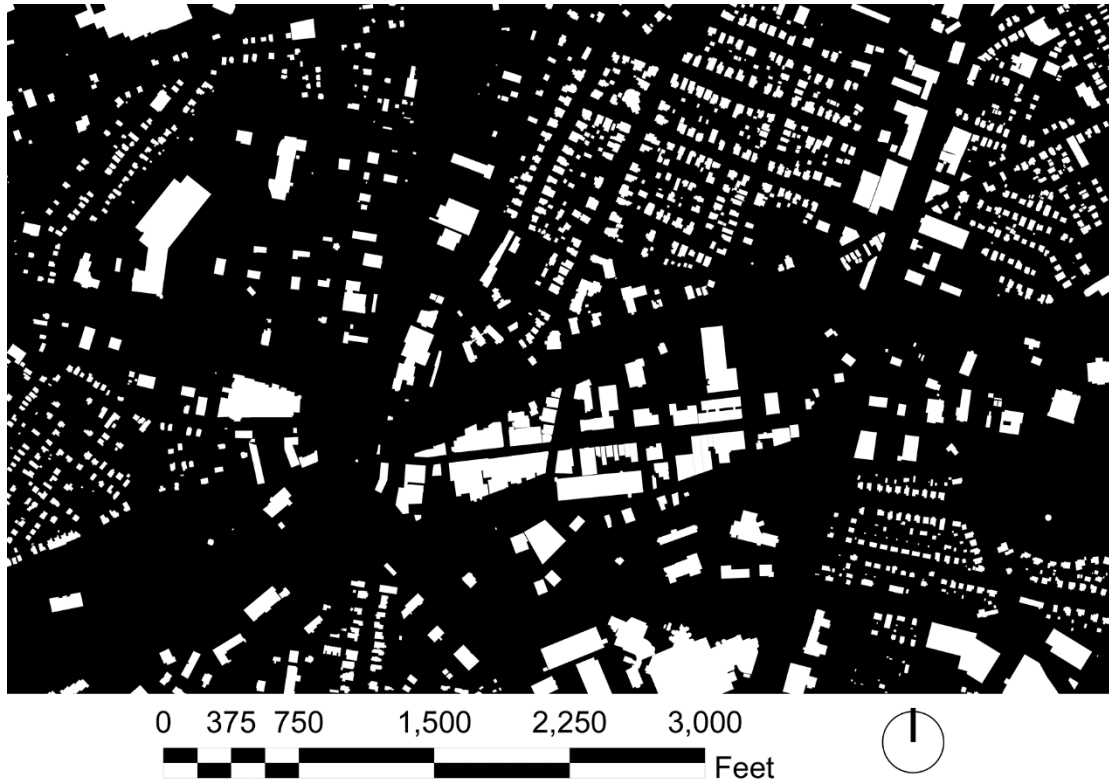
**Figure 4: Main Street during Third Friday. Image from [Lowereasternshorenews.com](http://Lowereasternshorenews.com)**





**Figure 5: Thesis Site Area showing intervention buildings in dark gray and quarter mile radius**



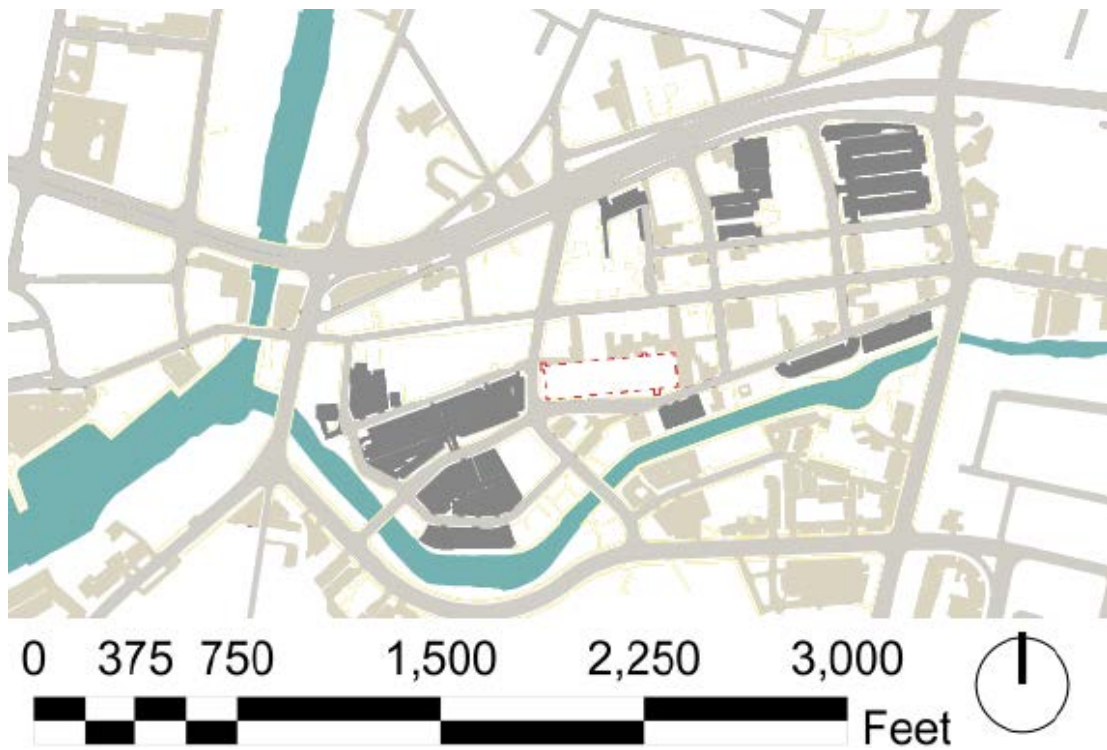


**Figure 6: Reverse Figure Ground, Shows wide spaces separating downtown from communities, high density of downtown buildings mixed with empty parking lot spaces.**

#### Description of Site Area

The site area for this master plan consists of the whole of downtown Salisbury and the immediate corridors around downtown. These corridors, which include Route 13, Route 50, and the Wicomico River, contribute to the island condition of downtown and present opportunities to strengthen connections between downtown and adjacent neighborhoods. The total site area is approximately 260 acres, and all portions of the site are a half a mile or less from the crossing of Main and Division Streets, the heart of downtown. The edge of the site area extends to healthy urban fabric, providing the

opportunity to create fluid connections between downtown and adjacent neighborhoods.



**Figure 7: Downtown Roads & Parking Lots: Municipal parking lots shown in dark grey. Recent parking study showed that all municipal parking can be absorbed by parking garage (Shown in red dotted line)**

## Chapter 2: Salisbury History and Context

### History

#### Introduction

Diverse economic and natural factors have shaped Salisbury's urban form. The city first formed along a fork in the Wicomico River, allowing goods to move in and out while providing locations for mill dams. As transportation systems evolved from water based travel, to rail, to roads, they repeatedly reshaped the urban fabric. Natural disasters, such as the 1886 fire and 1907 dam collapse, have also shaped the city's growth. (3)

#### Early History

Salisbury was formed in 1732, by an act of legislation, with the intent of creating a county seat for Somerset County. The site was chosen due to its location at the headwaters of the navigable Wicomico River. In the 19<sup>th</sup> century the city became an active Maryland seaport second only to Baltimore. The city's port and central location on the Eastern Shore quickly made it "The Hub of Delmarva". In the 19<sup>th</sup> century the railroad expanded the city's importance, connecting it to Philadelphia, and bolstering industrial growth along the North Prong of the Wicomico River. Salisbury's central location in the Delmarva Peninsula made it an active trade hub for moving goods and people to and from the Eastern Shore of Maryland. (3)

### Major disasters in the late 19<sup>th</sup> and early 20<sup>th</sup> century

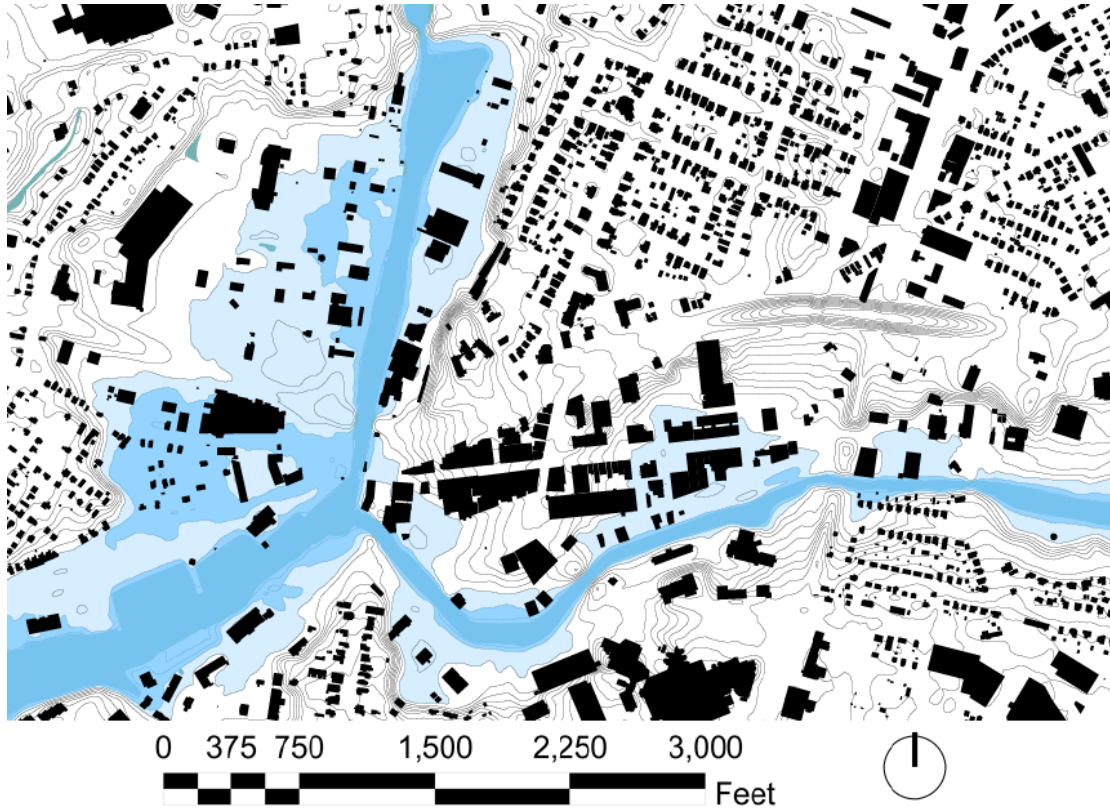
Two events in the late 19<sup>th</sup> and early 20<sup>th</sup> century had a significant effect on the form of downtown Salisbury. First, in 1886 a major fire destroyed over 200 buildings, including most of downtown. Second, the collapse of Humphrey's Dam drained Humphrey's Lake, forever re-shaping the urban fabric around downtown. (3)

### Contemporary History

With the growth of the automobile in the 20<sup>th</sup> century Salisbury flourished, benefitting from its location at the crossing of the two major highways on the Delmarva Peninsula, U.S. Route 13 and U.S. Route 50. The highways allowed for the passage of goods and people to and from the city and strengthened regional connections. Philadelphia, Baltimore, Washington D.C., and Norfolk, VA are all accessible by a two-and-a-half hour drive. Over the course of the 20<sup>th</sup> century Salisbury's growth shifted from the downtown to suburban sprawl in the outskirts of the city. This started with development to the East in the 1960s and 70s and continued with the current commercial retail corridor on the north side of town. In the last 50 years downtown has seen significant economic contraction, as housing and retail shifted to the suburbs. A revitalized interest in downtown has developed in recent years, and popular community events such as 'Third Friday' reflect this change in spirit.

## Ecological Context

### Susceptibility to Sea Level Rise



**Figure 8: Susceptibility to sea level rise: Different shades of blue show: current location of Wicomico River, 3' of sea level rise, and 6' of sea level rise. Scientists predict sea level will rise at least 8" and as much as 6.6'. 1.6' is the intermediate-low prediction, and 3.9' is the intermediate-high prediction (NOAA Global Sea Level Rise Scenarios for the United States National Climate Assessment)**

The low-lying geography of the Delmarva Peninsula makes the region highly susceptible to Sea Level Rise, and the Wicomico River brings storm surge events into downtown. One hundred year estimates call for six feet of sea level rise, which would inundate many portions of the city. Along the southwest portion of the Wicomico, downstream, both the north and south face will experience significant flooding. The area around the Perdue Chicken plant already faces significant flooding. Their facilities are designed to flood, but these events disrupt their operations. Along the

north prong of the river both the east and west side will suffer from significant flooding. Along the east prong of the river susceptibility to flooding is more intermittent. However, the area formerly occupied by Humphrey's Lake is very low, and already sees significant flooding. As sea level rises this portion of downtown will face more frequent and large floods, and may eventually be underwater.

#### Wicomico River

The Wicomico River is an underutilized amenity that suffers from a lack of building frontage and industrial and commercial uses that don't benefit from their riverfront location. The east prong of the river extends into the city park, but a lack of public space and pedestrian paths cut off this amenity from downtown. Transforming the relationship to the riverfront is essential to improving pedestrian connections through the city, improving the ecological condition of the river, strengthening resilience to sea level rise, and creating new opportunities for development.

An interview with Dr. Michael Lewis, the Chair of the Department of Environmental Studies and Professor of Environmental Studies and History at Salisbury University, provided insights into the Wicomico River's ecological and historic condition. Dr. Lewis is also the founder of Wicomico Creekwatchers, an organization that monitors and analyzes the Wicomico River's pollution and ecological condition.

Mr. Lewis identified stormwater from impervious surface as the primary cause of pollutants in the downtown portion of the Wicomico River, as determined by water quality studies. Further upriver, in residential neighborhoods, fecal runoff from domesticated animals is the primary cause of contamination, while agricultural contamination is the primary pollutant downriver. Currently the downtown portion of

the river isn't swimmable, but could be used for other recreational activities. This thesis proposes steps for improving the river's water quality, and their implementation may lead to further recreation being possible on the river, including swimming.

### *Economic Context*

#### Economic Analysis

Salisbury's economic drivers are different from most other large towns on Maryland's Eastern Shore. Towns closer to the western shore, such as Easton and Cambridge, benefit from tourism and vacation homes of wealthy residents of Maryland's western shore. Beach towns such as Ocean City receive a large influx of tourists during the summer but are inactive during colder months.

Salisbury is too far from the western shore to draw wealthy residents to its waterfront, and doesn't have the draw of the beach. However, the city is a regional hub that benefits from its central location in the lower eastern shore. Existing economic drivers include Peninsula Regional Medical Center (PRMC), a 300 bed hospital, Perdue Chicken's headquarters and processing plant, and Salisbury University. These institutions could fuel economic growth downtown and become active participants in its revitalization. PRMC and Perdue's Headquarters are both directly adjacent to downtown, while Salisbury University is approximately a mile away.

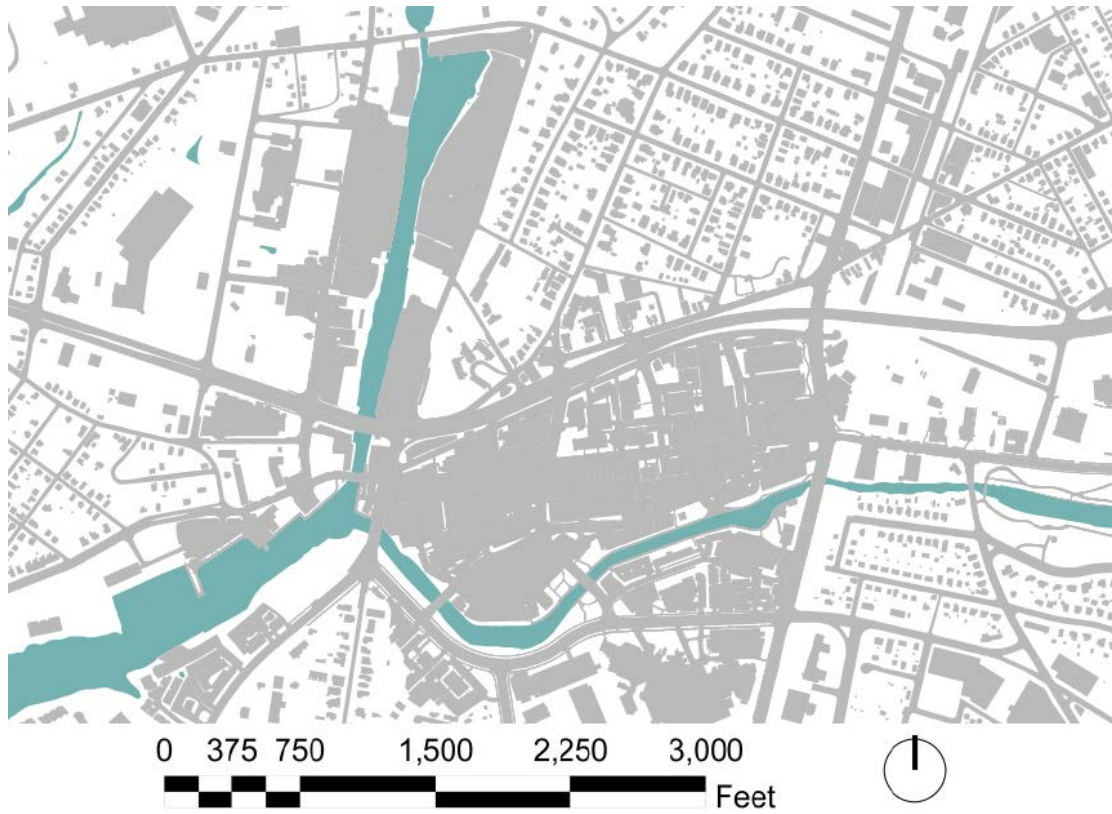
The largely rural Eastern Shore has very few pedestrian oriented, urban areas, and a dense downtown could be a unique place among suburban sprawl and rural farmland. The city has a relatively large metropolitan population, approximately 120,000

people, compared to the 30,000 people within the city limit. The city's metropolitan population makes up over a quarter of the population on Maryland's Eastern Shore (about 450,000 people). A revitalized downtown can draw on this large population to bolster housing demand.

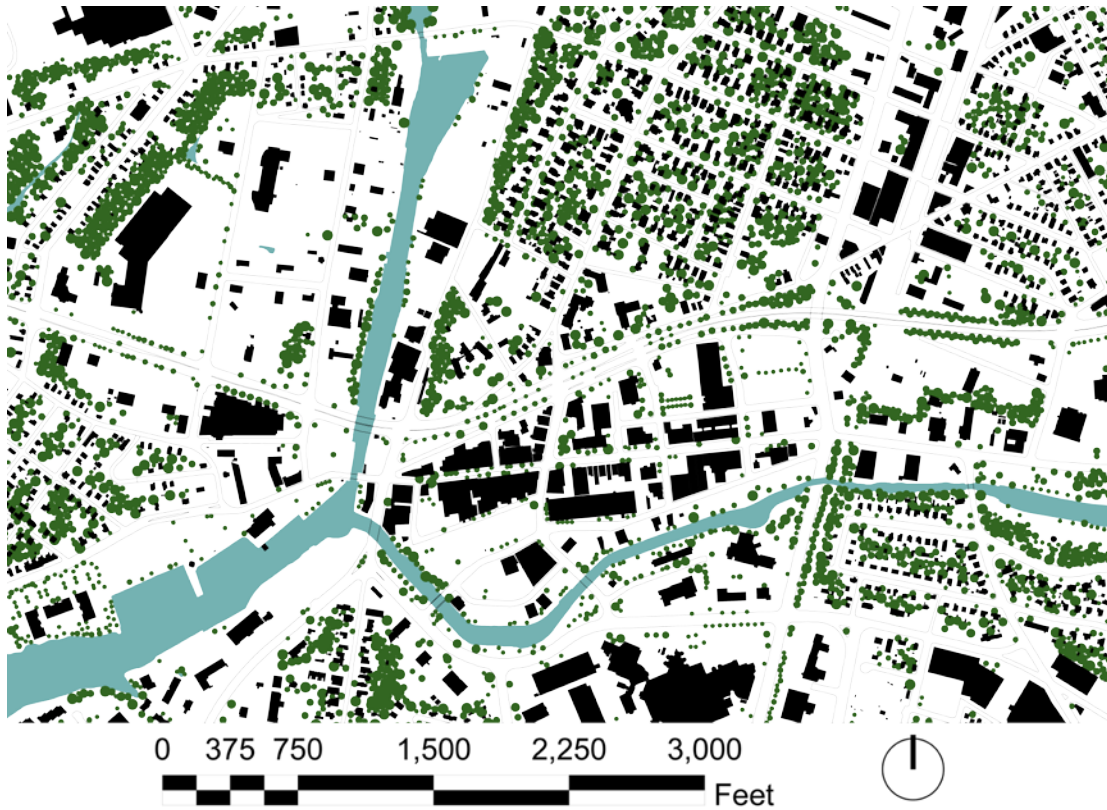
#### Potential downtown residents

Potential residents for a revitalized downtown represent diverse groups. The Hospital and Perdue Chicken plant both employ people of very diverse incomes. Improving transit and infrastructure connections, such as the existing bike lanes and bus routes, to Salisbury University, could encourage students and faculty to live downtown. Furthermore, a pedestrian friendly city core could draw on the 120,000 people living in the city's metropolitan area who don't have the opportunity to live in a walkable, active neighborhood (1).





**Figure 9: Existing Impervious Surface: Significant impervious surface in downtown parking lots and north prong old industrial sites**



**Figure 10: Green space, trees & impervious surface: Little green space downtown, some green space along riverfront, but largely underutilized**

### History of Urban Form

#### Early History (1732-1850s)

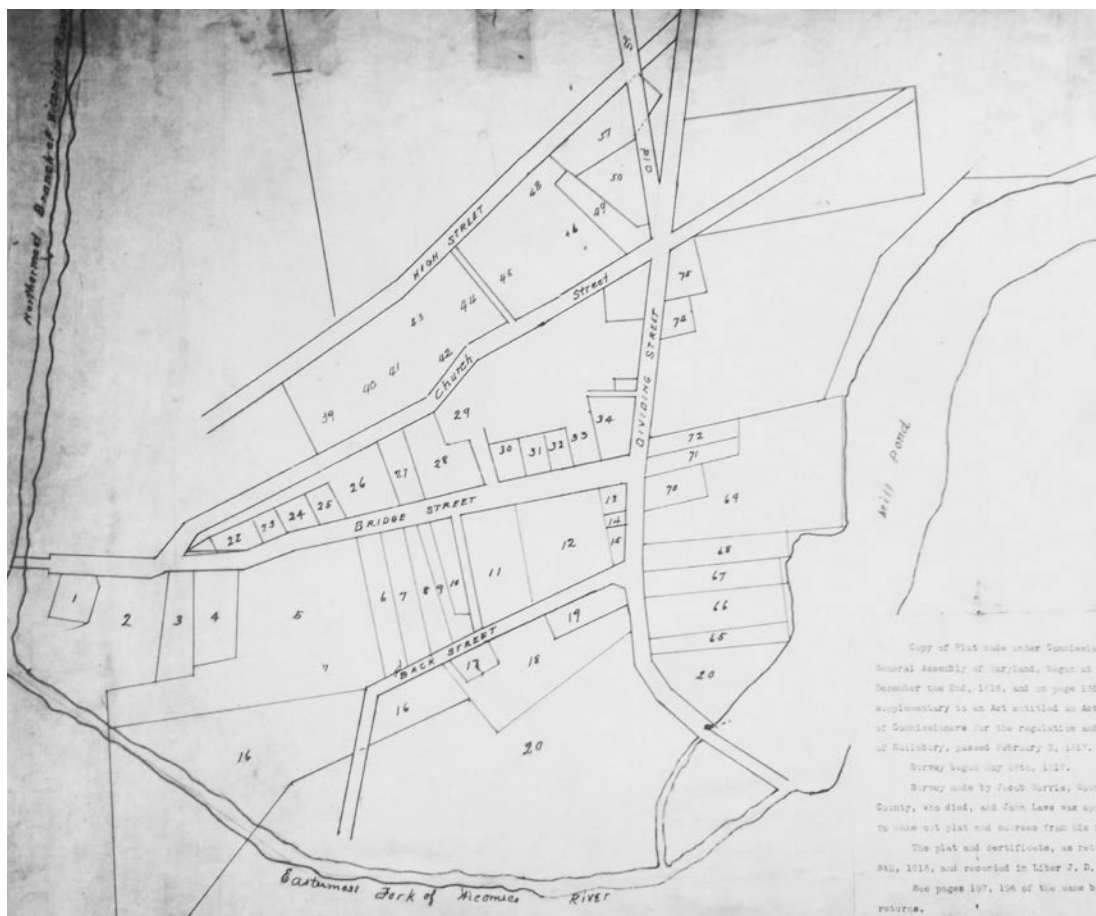
The city's form is shaped by connections to existing travel networks, locations of major bridges across the Wicomico's two forks, and access to the water and milling operations.

The first streets in the town were what is now Main Street and Division Street. Main Street crossed the Northern Fork of the Wicomico and went west, connecting to other eastern shore towns. The street's east end terminated on Division Street, which connected to other Eastern Shore towns to the north and south. The Wicomico River's

South Prong was dammed for milling operations at Division Street, forming Humphrey's Lake.



**Figure 11: Major Streets, 1750's: First Streets emerge, shows Main Street dying into Division Street, Humphrey's Lake**



**Figure 12: 1817 Plat Map, courtesy of the Edward. H. Nabb Research Center. Shows Bridge St. (Became Main St.), Back St. (Became Camden St.), Church St., High St., and Division St.**

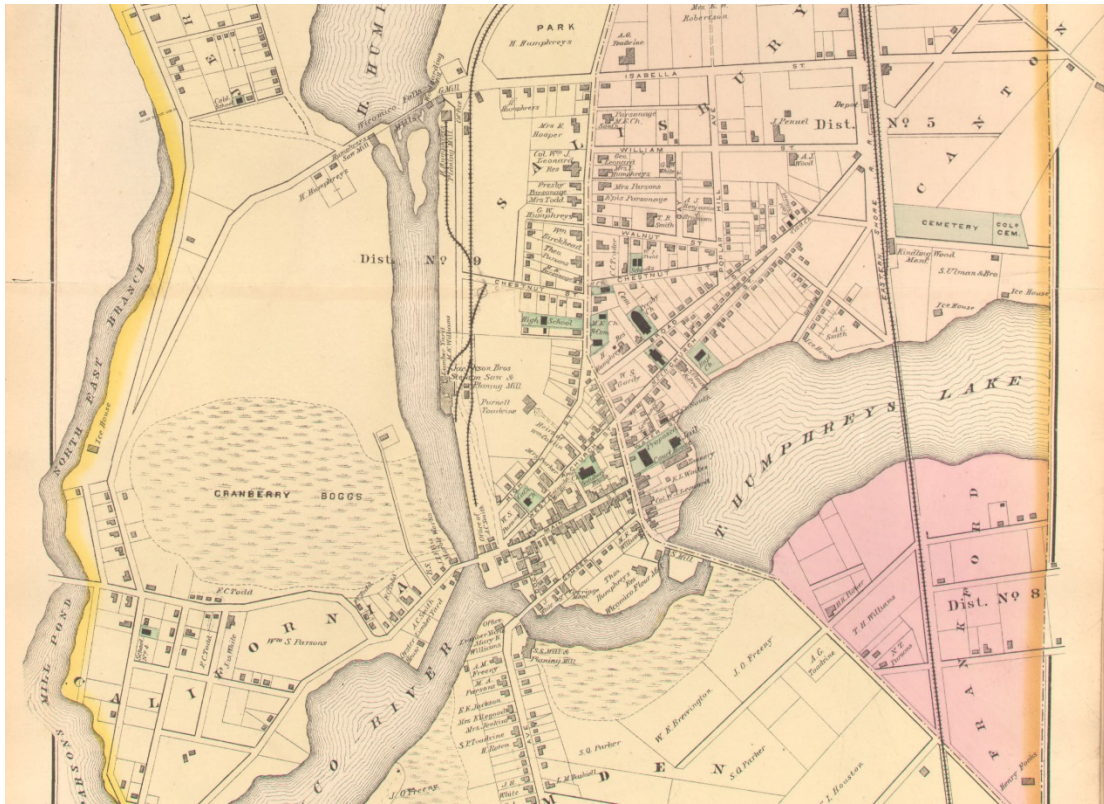




**Figure 13: Major Streets, 1817: Church St. bypasses Humphrey's lake, High St. and Back St. (Became Camden St.) form behind Bridge St. (Became Main St.) and Church St. respectively**

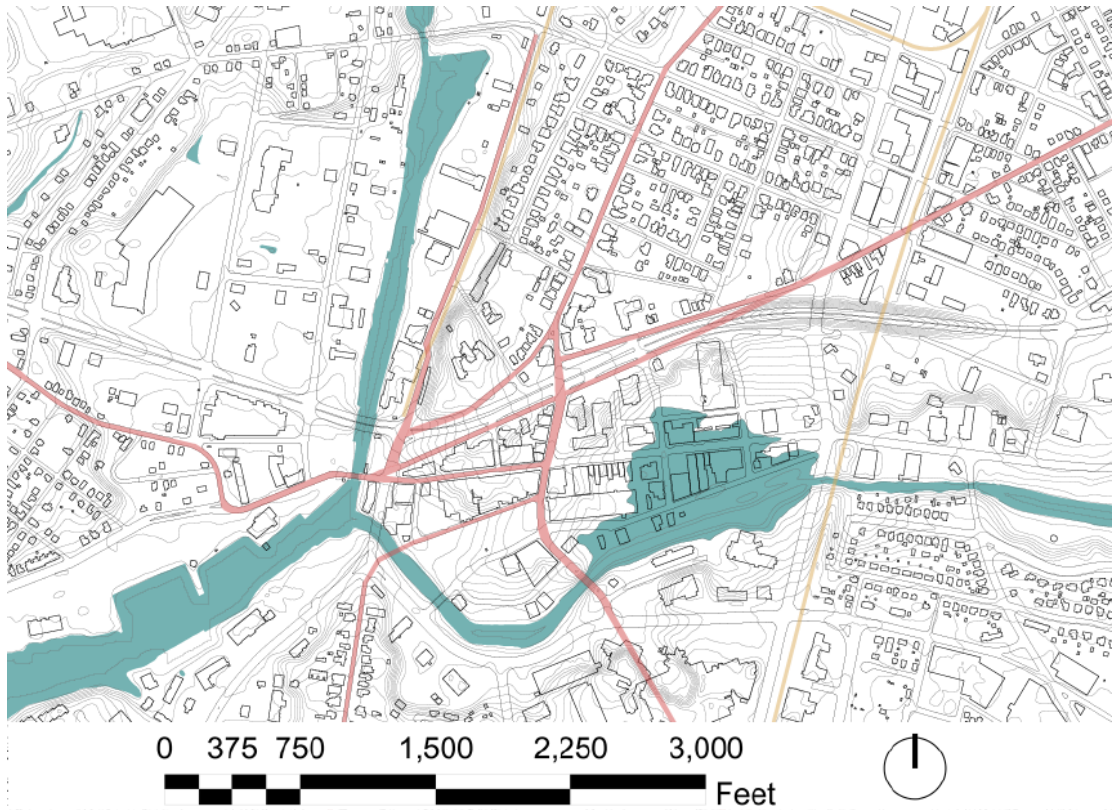
By 1817 what would be Church, High and Camden Streets emerged. Church Street connected to the east by traveling from the northern edge of Humphrey's Lake to the bridge at Main Street. High street paralleled Church Street, but traveled along high ground and connected to Division Street in a northbound direction. Camden Street, which was named Back Street at the time, an indication of its secondary nature, paralleled Main Street, stretching from Division Street to the Wicomico River, which it would eventually cross.

## Railroad and Major Disasters (1860-1930s)



**Figure 14: 1877 Map, Courtesy of NABB Center. Shows Milling operations creating Humphrey's Lake to the East and Humphrey's Pond to the North. Historic neighborhoods New Town and Camden form to the North along Division St. and to the South along Camden Ave.**

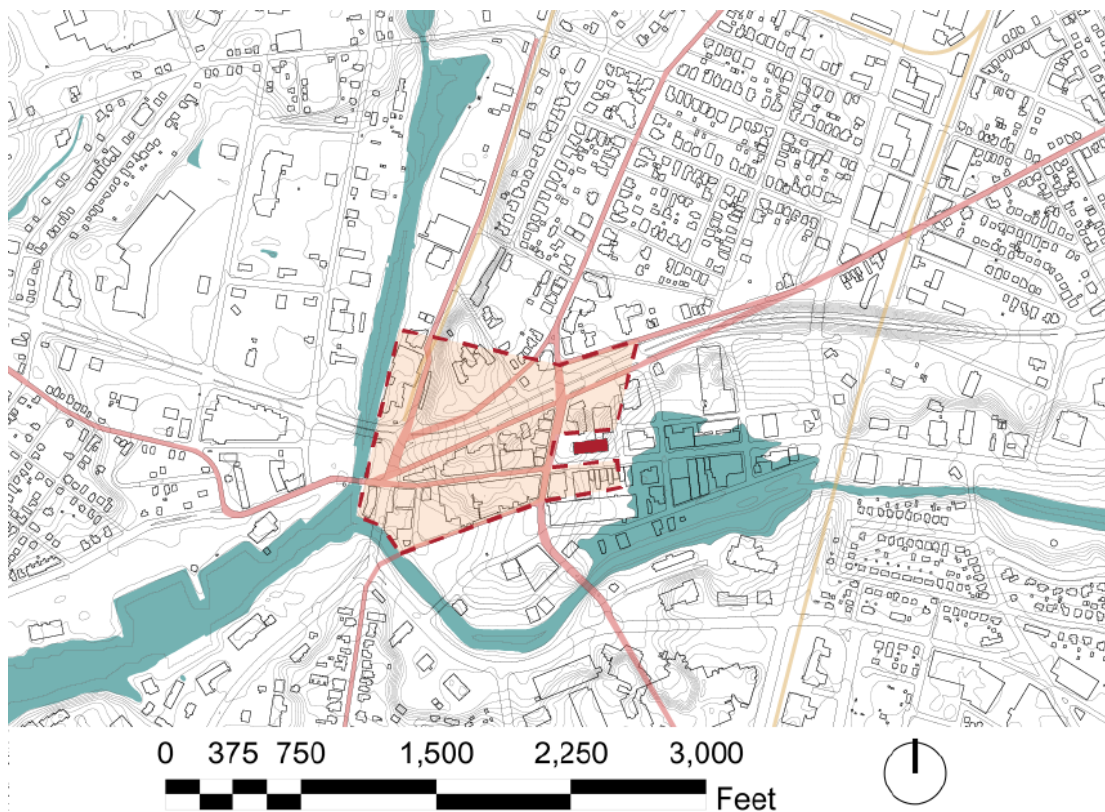
By 1877 the railroad came to Salisbury, terminating along low, flat land on the eastern side of the northern prong of the Wicomico. Mill Street was built at this time, most likely to help transfer and move goods from the water and rail lines. This area became an industrial hub whose remnants can still be seen today.



**Figure 15: Major Streets, 1877: Railroad shown in yellow**

The city's two major fires, in 1860 and 1886, destroyed much of downtown, but the city regrew largely without changes in street network. However, the collapse of Humphrey's Dam in 1907 transformed downtown. With the dam's failure Humphrey's Lake drained, and Dock Street and Main Street extended east on the former lakebed.





**Figure 16: Extents of 1886 Fire. The courthouse, shown in red, is narrowly avoided, and today is one of the most significant historic buildings downtown.**

#### Highways & Contemporary History (1940s-present)

Route 13, one of the first highway systems in the country, came to Salisbury in 1930, traveling along Division Street. The Highway was moved to its current location and expanded in 1939 (4). At some point between 1923 and 1933 Carroll Street formed along the southern side of the Wicomico's eastern branch.





**Figure 17: Major Streets, circa 1940: Route 13 forms to the west, Carroll Street forms along the South side of the East branch of the Wicomico River**

Shortly before the Bay Bridge's completion in 1948 Route 50 was brought through Salisbury, along Main Street, bringing beach traffic through the town. High volumes of summer traffic headed for the ocean made it necessary to expand the highway, and it was relocated to the blocks between Church Street and High and Broad Streets (4), destroying an existing African-American neighborhood. Expansions to PRMC cut off Division Street to the south, with traffic re-routed to the newly created Waverly Drive. The bridge across Camden Street was replaced with a bridge on Mill Street, which bypasses downtown.

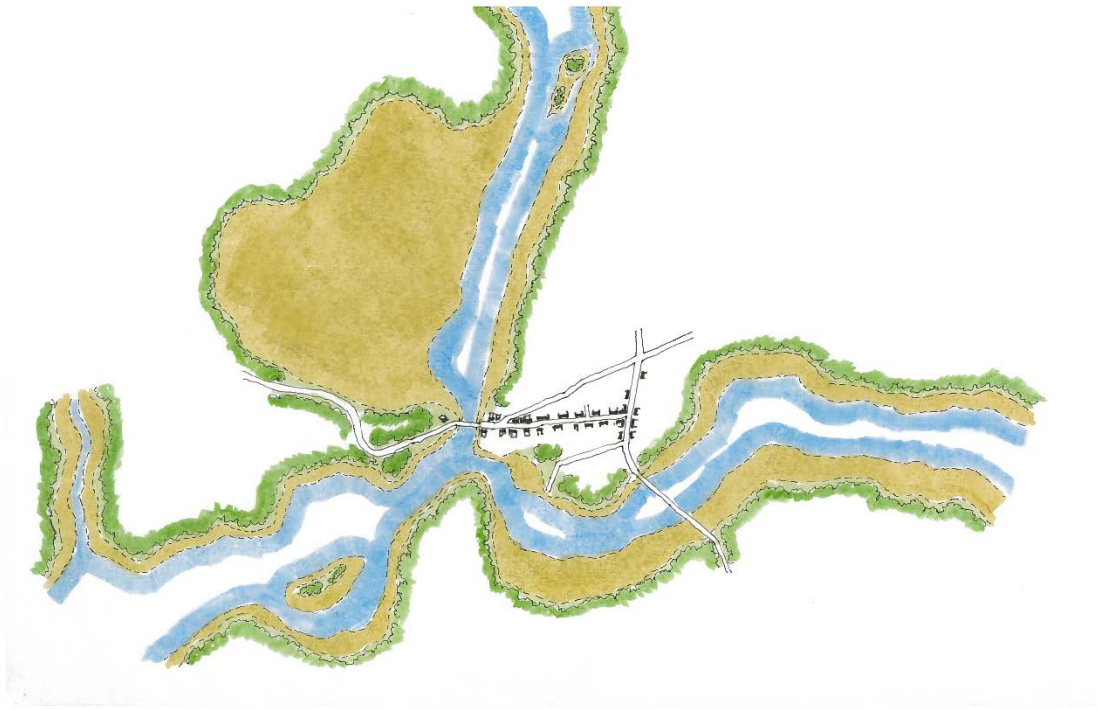
The street changes during this time created downtown's island condition. Bringing Route 50 in between Church and High and Broad Streets creates a dangerous set of

streets. With Route 50 Church, Broad, and High Street have lost their reason for being, and the streets combine to create an unfriendly, difficult to cross streetscape with building face to building face distances ranging from 140' to 270'. Along the south side of downtown the removal of the Camden Bridge, cutting off of Division Street, and re-routing of traffic onto Waverly Drive, disconnects downtown's street grid from adjacent neighborhoods.



**Figure 18: Major Streets, circa 1970: Route 50 cuts between Church St. and High and Broad St., South Division is cut off by the hospital, Camden St. bridge is replaced by bridge on Mill St.**

## History of Waterfront

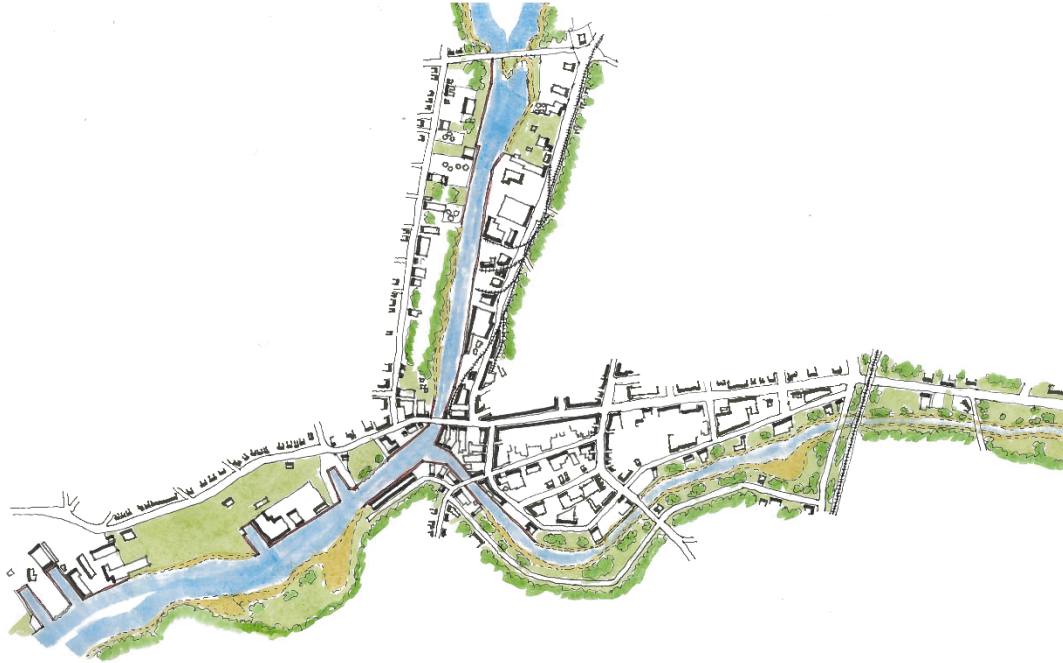


**Figure 19: Waterfront circa 1750: natural edge along water, development along Main & Division Streets. Bogs along west end of North Prong**

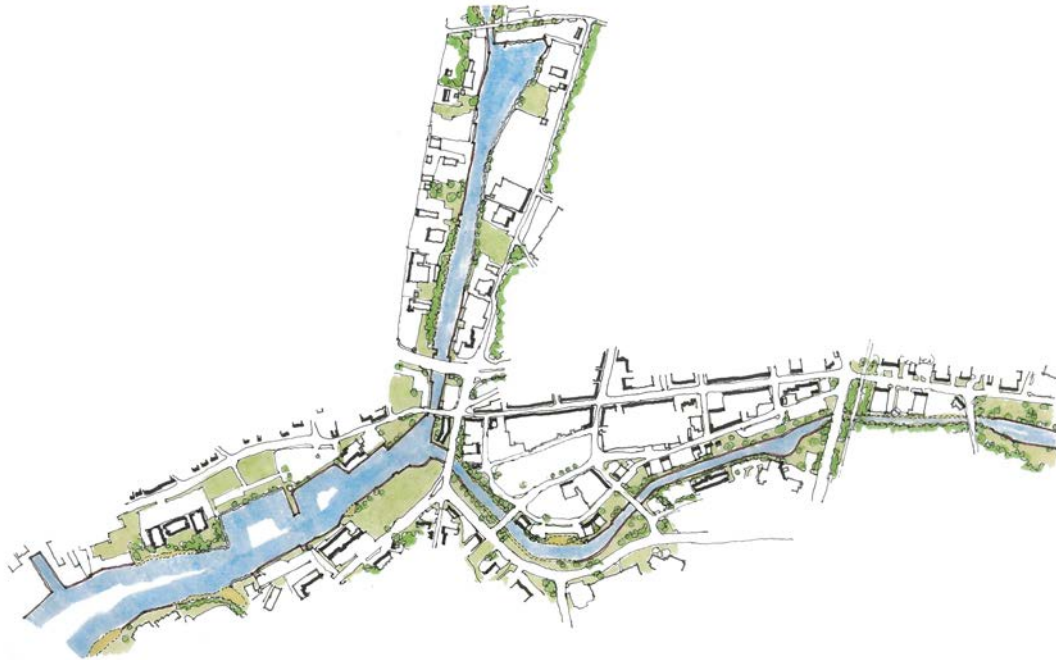


**Figure 20: Waterfront 1877: Dam along Division St. makes Humphrey's Lake, North Prong utilized to transfer goods from rail to water, wetlands on what is now Carroll St., cranberry bogs on west end of North Prong**





**Figure 21: Waterfront 1931: Humphrey's Dam collapses & Main St. continues along former lakebed, density develops along waterfront & rail, Carroll St. built**



**Figure 22: Waterfront 2015: High amount of hard edge along water & impervious surface no longer needed for industry, less development along the waterfront**

### Importance of History

Analysis of Salisbury's historic conditions provides a context for proposed interventions. The history of the street network explains the current lack of connection and hierarchy while suggesting strategies for interventions. For example, Division Street was once one of the most important streets in Salisbury, and while the hospital prevents it from becoming a major North-South connector, the Street's historic character along its northern portion, location at the heart of downtown, and historic significance justifies interventions that return it to prominence.

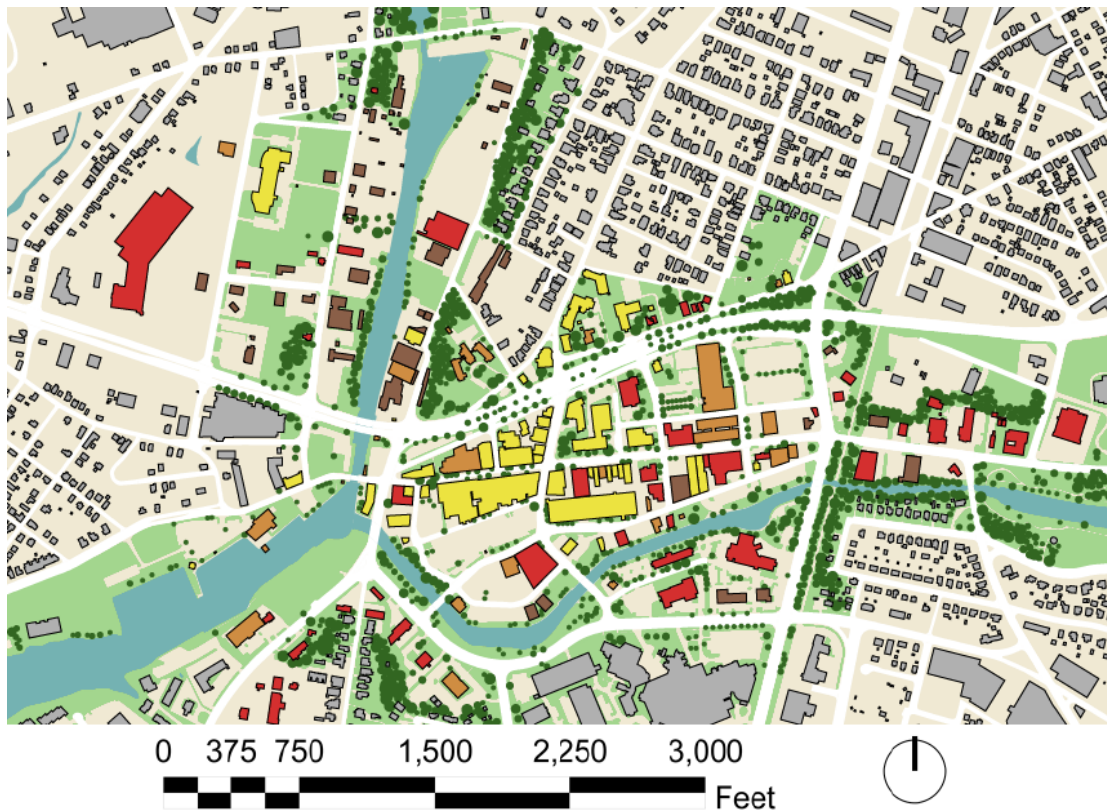
On the other hand, Carroll Street was built on former wetlands in the mid-20<sup>th</sup> century as a vehicular through-way. Its auto-oriented origin and history as an undeveloped site explains the lack of density along its edge. Interventions for Carroll Street should improve its pedestrian character, thereby reducing its condition as a pedestrian buffer to downtown, while providing waterfront development that accommodates the sea level rise challenges of the road's low topography.

Analysis of the historic ecological condition provides an understanding of the site's natural tendencies, thereby suggesting strategies for returning the riverfront to a more natural, ecologically sustainable state. Furthermore, understanding how this ecology was utilized in the past, such as the cranberry bogs along the Wicomico's north prong, can provide inspiration for future uses of the waterfront, such as urban

farming, which taps into Salisbury's history as a major port for the Delmarva Peninsula's agriculture.

## Chapter 3: Thesis Principles

### *Diagrammatic Analysis of Downtown*

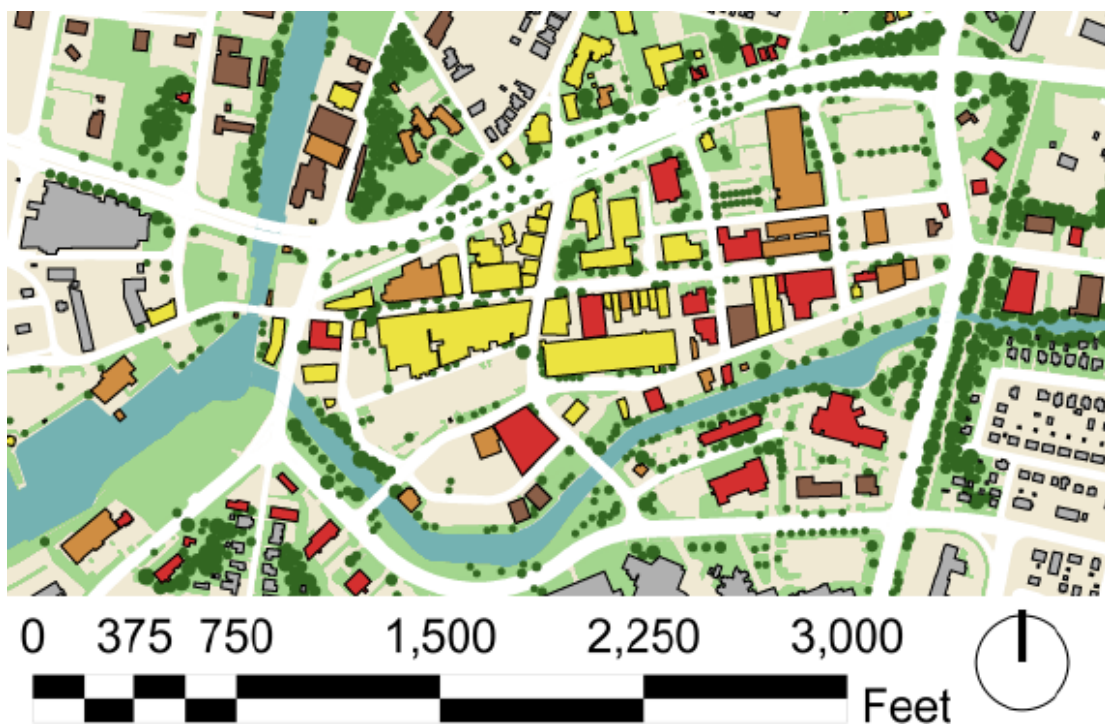


**Figure 23: Opportunities for Redevelopment, Full Site Area**

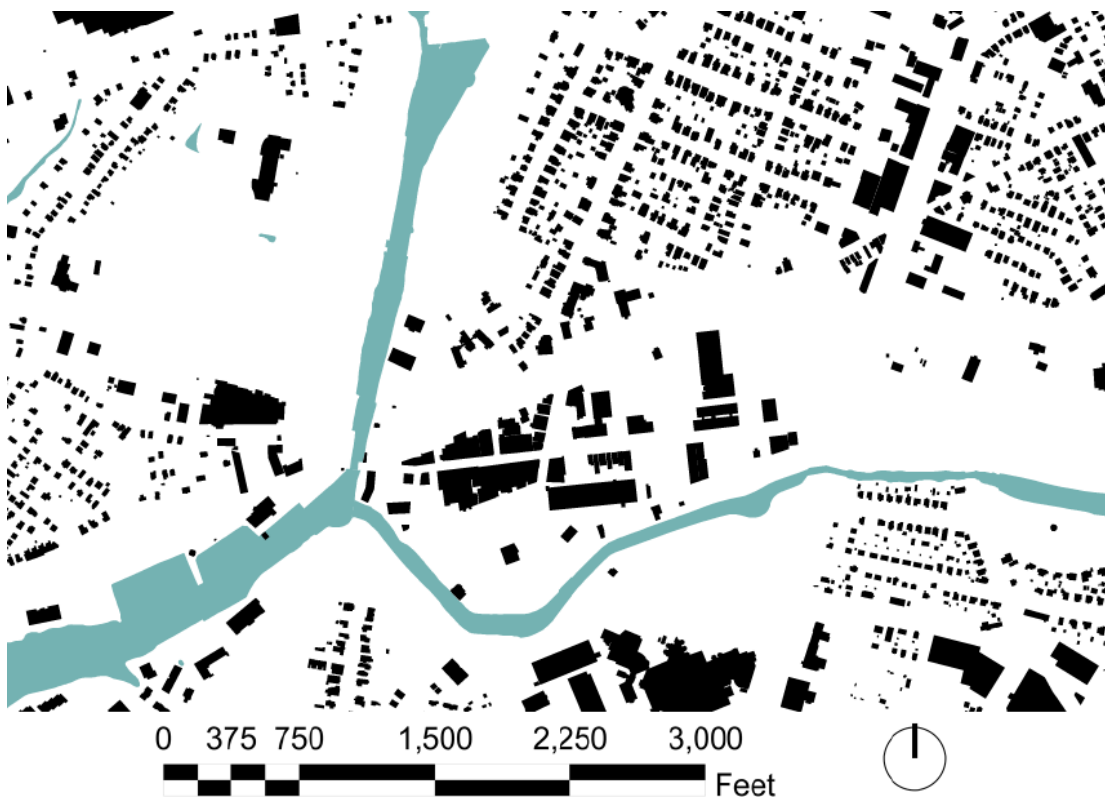
- Can't be redeveloped/demolished: Great historic, cultural, aesthetic, social or economic value**
- Low Likelihood of redevelopment/demolition: Possibly historic or recently built, requires compelling reason for removal, high economic/cultural value**
- Opportunities for redevelopment: Decent to poor urban condition, some economic value, underdeveloped**
- High opportunity for redevelopment: Poor urban condition, very limited economic value, incompatible use**

Note: Grouping of buildings determined by historic significance, property utilization (over or under-utilized), compatibility of use, economic significance, and aesthetic value.





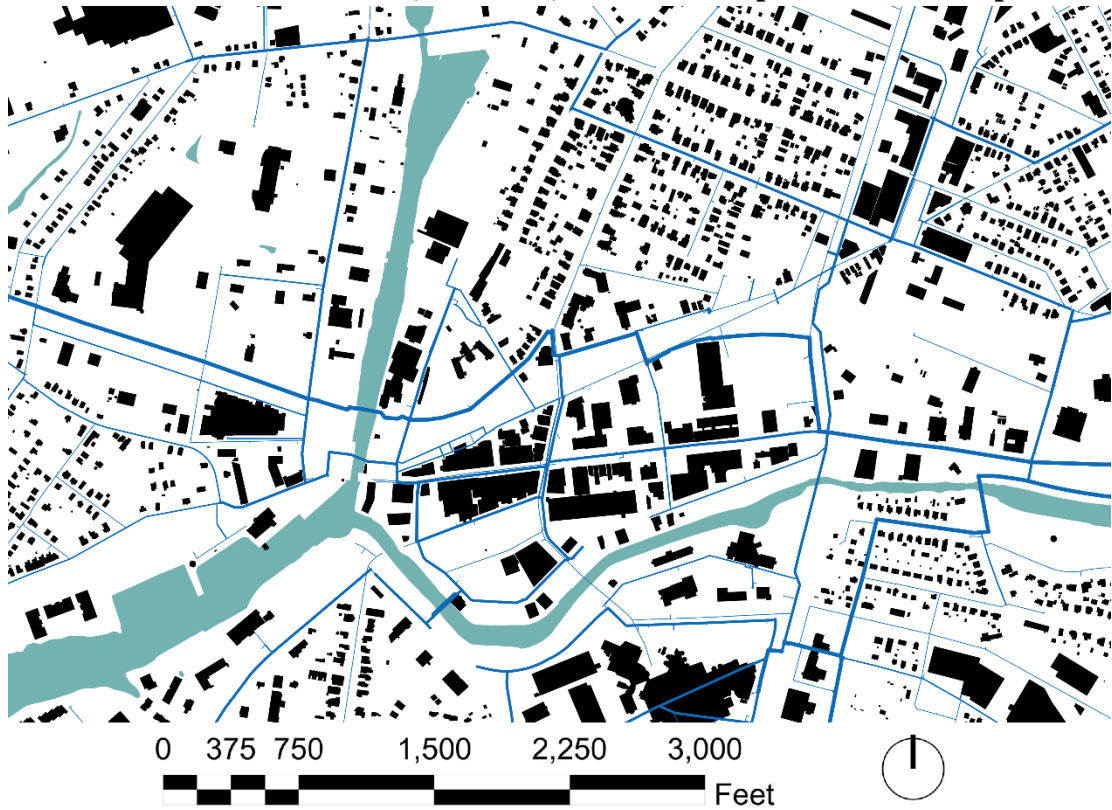
**Figure 24: Opportunities for Redevelopment, Downtown**



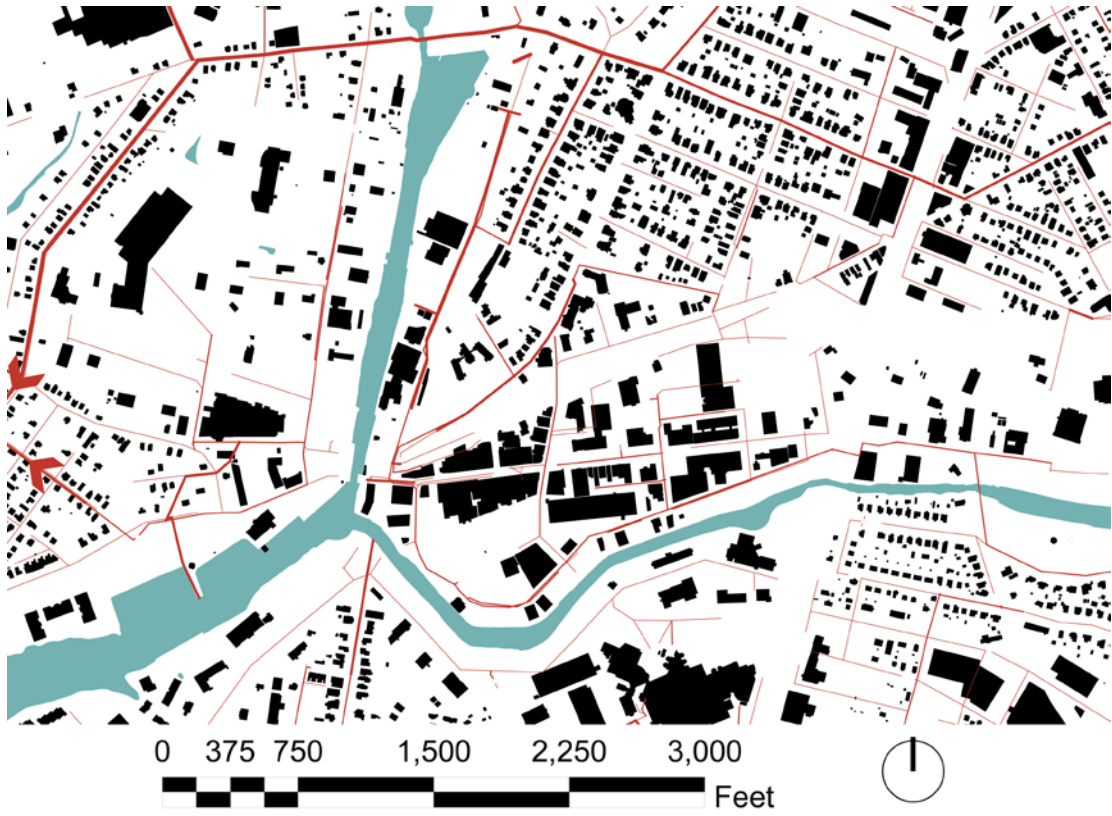
**Figure 25: Figure Ground with Buildings that can or should be removed. Opportunity to reshape relationship to the river.**



**Figure 26: Downtown Building Frontages & Sidewalks: Few Activated sidewalks outside Main Street. Route 50, Route 13, & Carroll St. pedestrian dead spaces**



**Figure 27: Underground Utilities: Water**



**Figure 28: Underground Utilities: Sanitary Sewer**



**Figure 29: Underground Utilities: Stormwater**



### Repair of Downtown Arteries

#### 'Island condition' of downtown

Salisbury's downtown is disconnected from its surrounding neighborhoods. Physical barriers on every side of the city center create this impediment. The two major highways in the city – Route 50 running East-West and Route 13 running North-South, each create an edge condition that's difficult to traverse. On the southern edge of downtown the east branch of the Wicomico River and Carroll Street disrupt the street network and create inactive spaces.

Route 50



**Figure 30: Route 50 Existing Conditions: lack of street frontage, redundant roads**

Along Route 50, the barrier between downtown and Newtown is exacerbated by Church, Broad, and High Streets. By removing portions of these streets and reducing lanes on Route 50, a move approved by the State Highway Administration (2), the

highway becomes a boulevard that strengthens connections between downtown and Newtown.

#### Route 13 and Railroad



**Figure 31: Route 13, Railroad, & Wicomico River East Prong existing conditions: Railroad & Highway disconnect street network to the East, very little frontage along the Wicomico River**

On Route 13, the barrier of the highway is exacerbated by the rail line that runs parallel. While this rail line was once central to the city's growth, it now disconnects adjoining neighborhoods by limiting through streets and development along Route 13. The small gap between Route 13 and the rail line, approximately 60' edge to edge, makes it difficult to activate the east side 13. Significant topographic rise between Route 13 and the rail line make it challenging and expensive to make connections into neighborhoods to the east.



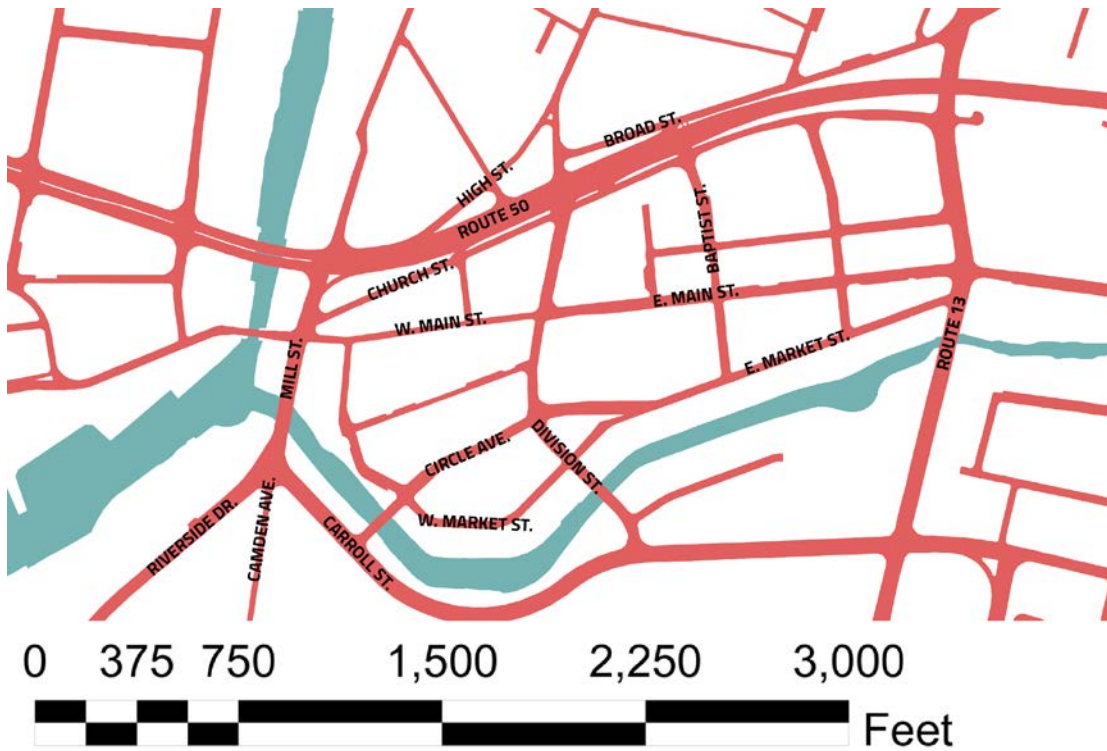
**Figure 32: Southwest side of downtown existing conditions: Little frontage along Wicomico River, buildings along Carroll St. don't engage street edge**

Along the southern side of downtown, Carroll Street and the southern tributary of the Wicomico River create a pedestrian barrier to downtown. The over-engineered, car centric Carroll Street is surrounded by auto-centric development. Furthermore, it disrupts the city's street grid, forcing those headed downtown to shift from Camden Avenue and Waverly Drive onto Carroll Street before entering downtown through Circle Avenue and South Division Street. Navigating these paths is challenging and dangerous for pedestrians and cyclists. While the riverfront has a pedestrian walk, a lack of building frontage keeps the space inactive. The riverfront isn't engaged on either side - downtown or Carroll Street, reinforcing a sense of separation.

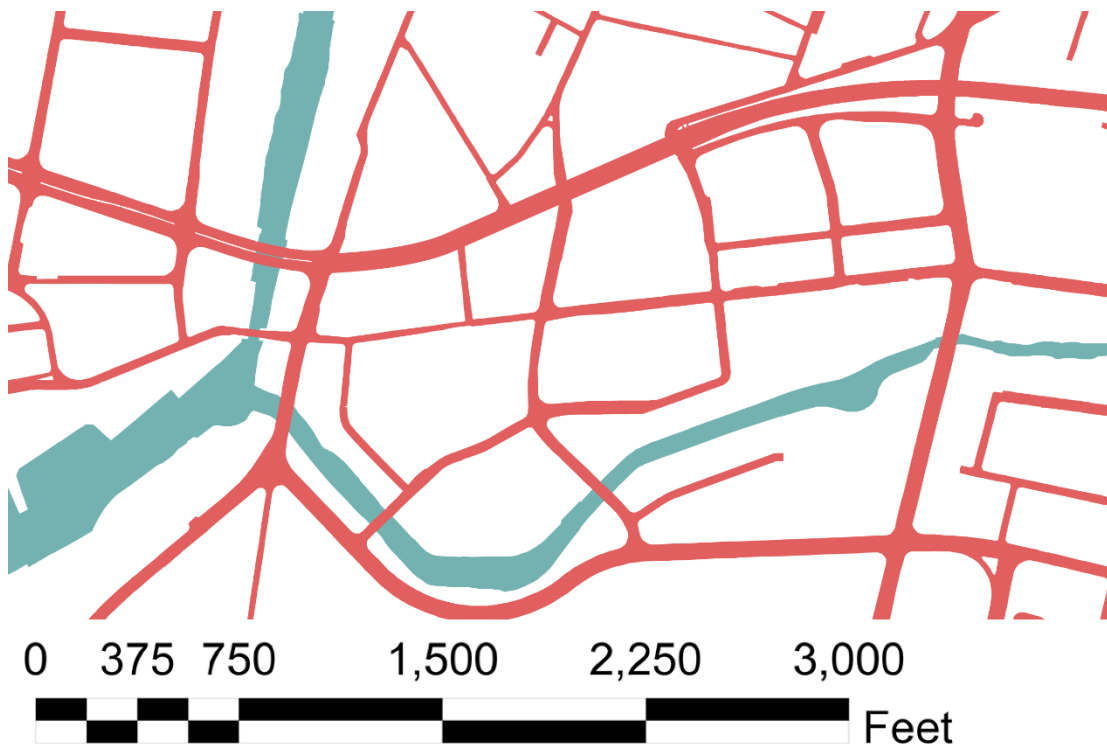
## Improve Street Grid & Remove Redundant Streets

Downtown streets suffer from a lack of hierarchy, poor block dimensions, and redundancies. As an example, Circle Avenue starts as a primary street that bridges the Wicomico River and connects downtown to Carroll Street. As it travels east, it parallels Market Street, creating a thin, 180' block. Circle then merges with Market Street, and becomes a rear alley for Main Street, with blocks as narrow as 80 feet, rears of buildings along the waterfront, and a difficult intersection with Route 13 only 70 feet from the Main Street intersection. A possible solution involves removing either Circle or Market Street and re-routing the merged street onto Baptist Street. This provides room for a mixed-use path/berm along the riverfront and makes the street a through-way that connects to Route 50 and Route 13. Furthermore, it allows for riverfront development, correction of the thin block dimensions, and removal of the awkward intersection with Route 13.





**Figure 33: Existing street network: small block dimensions, redundant streets along Route 50**



**Figure 34: Proposed street network: repaired block dimensions, improved hierarchy, removal of redundant streets, & narrowing of Route 50**

### Create a vibrant Civic Hub for Downtown

#### Phase 1 Development to Catalyze Downtown Revitalization

Downtown Salisbury currently suffers from a perception of a high risk, low return real estate market. The market rents for the neighborhood are fairly low (approx. \$1/s.f.) while 30 years without development make downtown an untested market (5). This thesis examines how a Phase 1 development could catalyze revitalization and create a stable, improved real estate market, making way for future downtown growth. The 'Lot 1' parking lot (Between Market St, Division St, Camden St, and Circle Ave) and adjacent 'Lot 11' and 'Lot 15' make an ideal location for phase 1 development. The properties are all city owned, making acquisition easy. The west end of the site is in a flood plane, creating an opportunity for a waterfront civic square, an amenity desperately needed downtown. Furthermore, the north-south streets at each end of the site, Market Street and Division Street, bookend the historic portion of Main Street. By developing these cross streets, this proposal facilitates the redevelopment of Main Street.

#### Financial & Partnership Strategy to Make Downtown Development Feasible

The current downtown real estate market makes it difficult to finance redevelopment. This thesis proposes a partnership between the City of Salisbury, Salisbury University and a private developer that leverages each entity's assets to increase equity and reduce project risk.

The city has made concerted efforts to revitalize downtown by reducing zoning requirements and promoting civic events, such as the very popular '3rd Friday'

outdoor festival. By selling the development properties for little or no cost they can provide equity to help make the project feasible.

By partnering in redevelopment Salisbury University can make itself more attractive to potential faculty and students. Furthermore, downtown presents a growth opportunity for the University, which is surrounded by residential neighborhoods on three sides and Route 13 on one side. In recent years the University has expanded to former industrial lots on the opposite side of Route 13, but these sites are limited in their potential to provide a campus setting, and are largely utilized for sports fields and administrative and management offices. By shifting growth downtown, Salisbury University can develop an urban campus that will bolster Salisbury's core while creating an attractive urban environment for potential students and faculty. The University can help reduce development risk by expanding their housing, office, and academic uses into new downtown properties.

#### Investigate Mix of Uses that Create a Vibrant Downtown

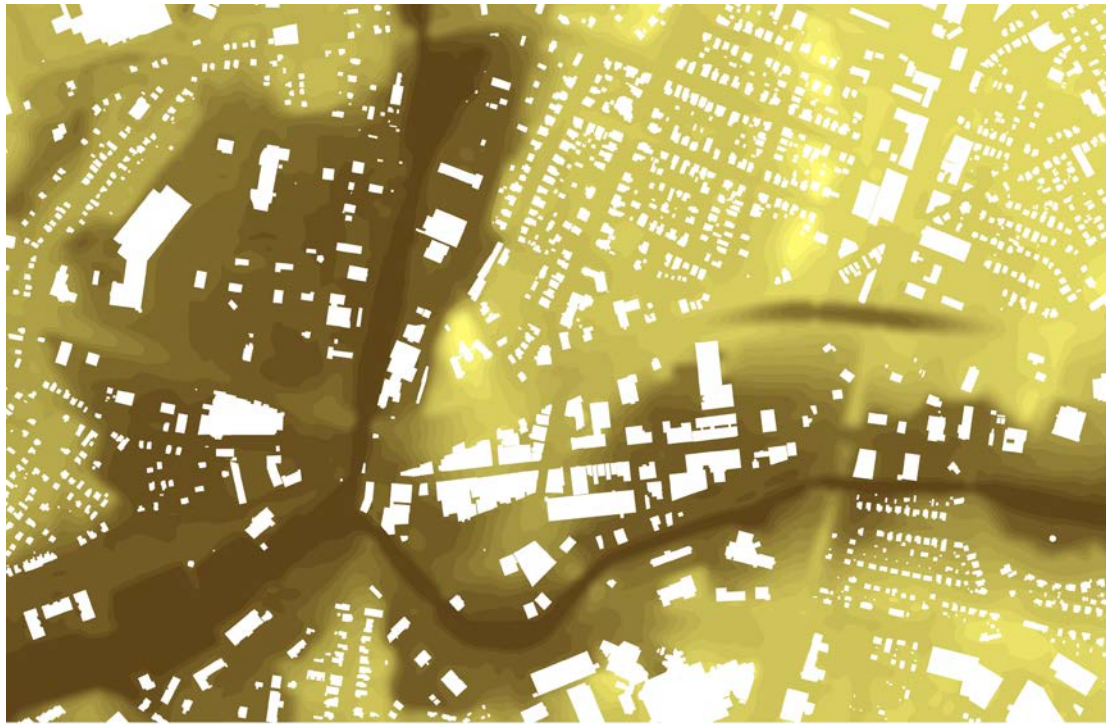
Creating a vibrant downtown hub requires a diverse mix of programs that create an active place at all hours. In addition to residential apartments and retail, possible uses for the first phase of development include student apartments, academic spaces, a business incubator that could also be used for Salisbury University's Business Economic and Community Outreach Network (BEACON, a business and economic research network that directs a business innovation competition), a junior retail anchor, art galleries, artist workspaces, and a performance center, which could be shared between private entities, public community uses, and the university. A civic

square could be a hub for these activities while providing outdoor space for a variety of events.

*Propose Transformative, Flexible Responses to Sea Level Rise*

Uncertainty in sea level rise challenges

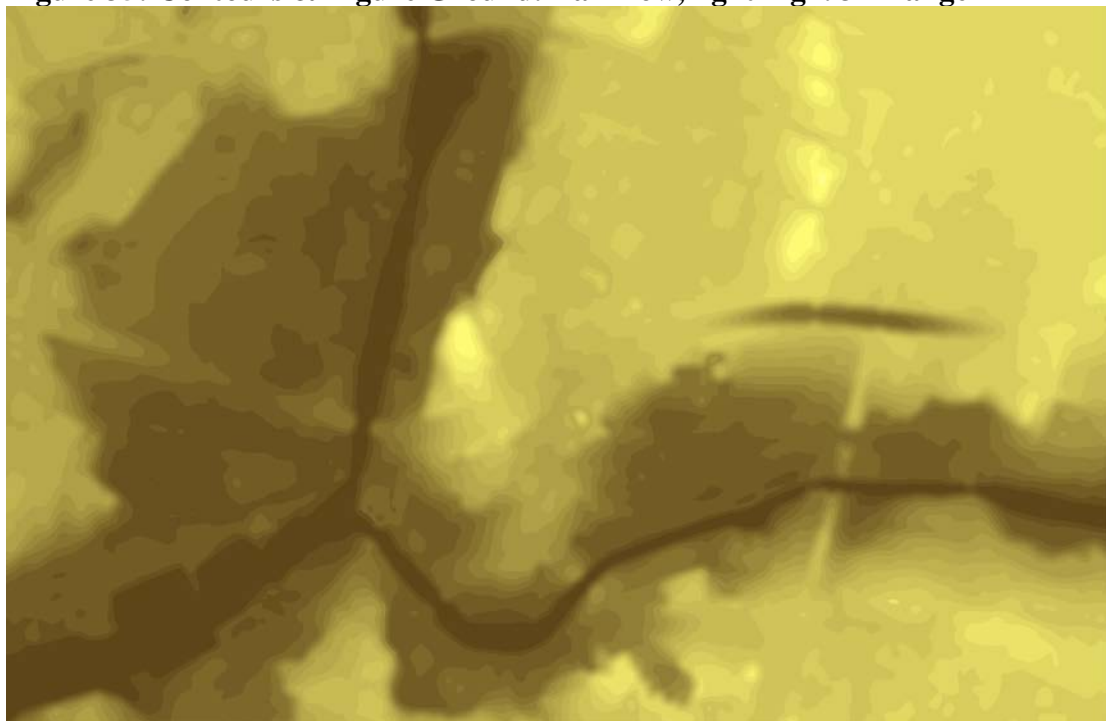
The problem of sea level rise is plagued with uncertainty. Low estimates for long term sea level rise predict three feet of rise, whereas higher estimates predict six feet of rise. Furthermore, climate change's impact on atmospheric systems presents an uncertainty on future storm events. Storm surge events in inland, tidal communities may remain mild, or might be exacerbated by climate change. This uncertainty presents challenges in designing waterfront communities. Future sea level rise may be as little as three feet or as much as six feet, and storm surge events may be as low as one to two feet and as high as three or four feet. This creates a zone, between four feet and ten feet above sea level, which requires flexible, transformative solutions to this ambiguous problem.



0 375 750 1,500 2,250 3,000 Feet



**Figure 35: Contours & Figure Ground. Dark low, light high. 34' range**

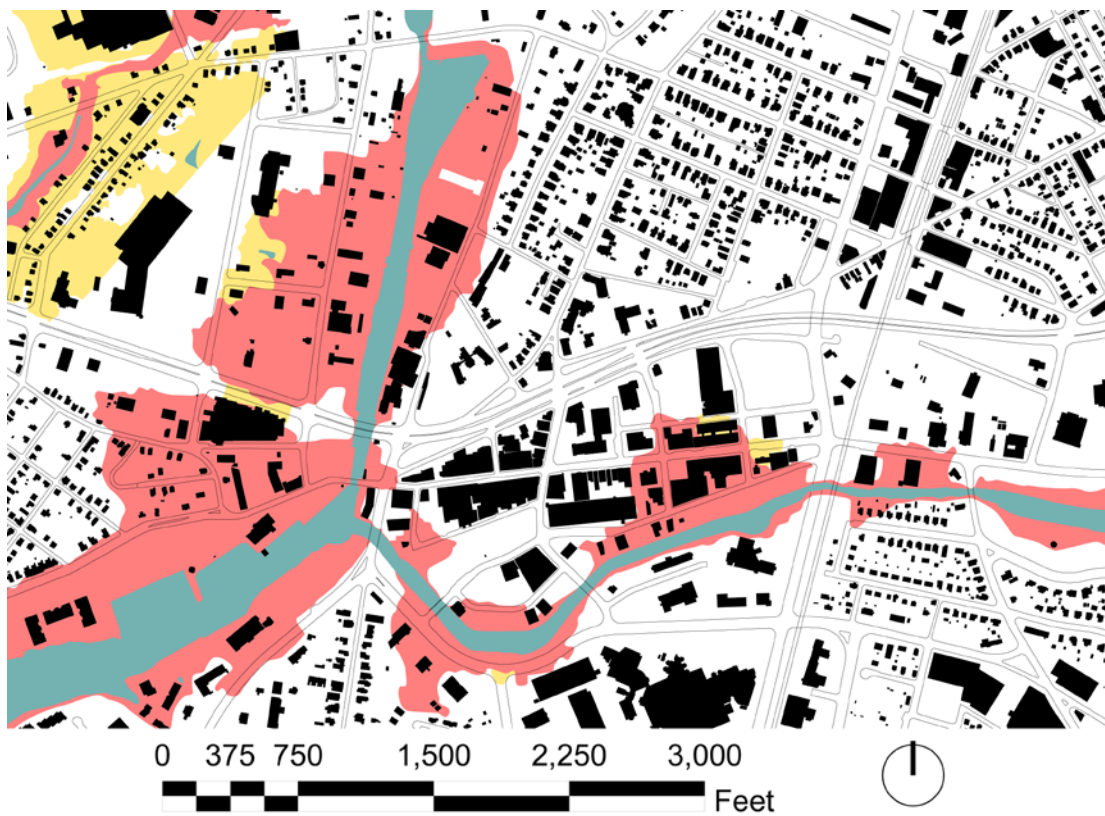


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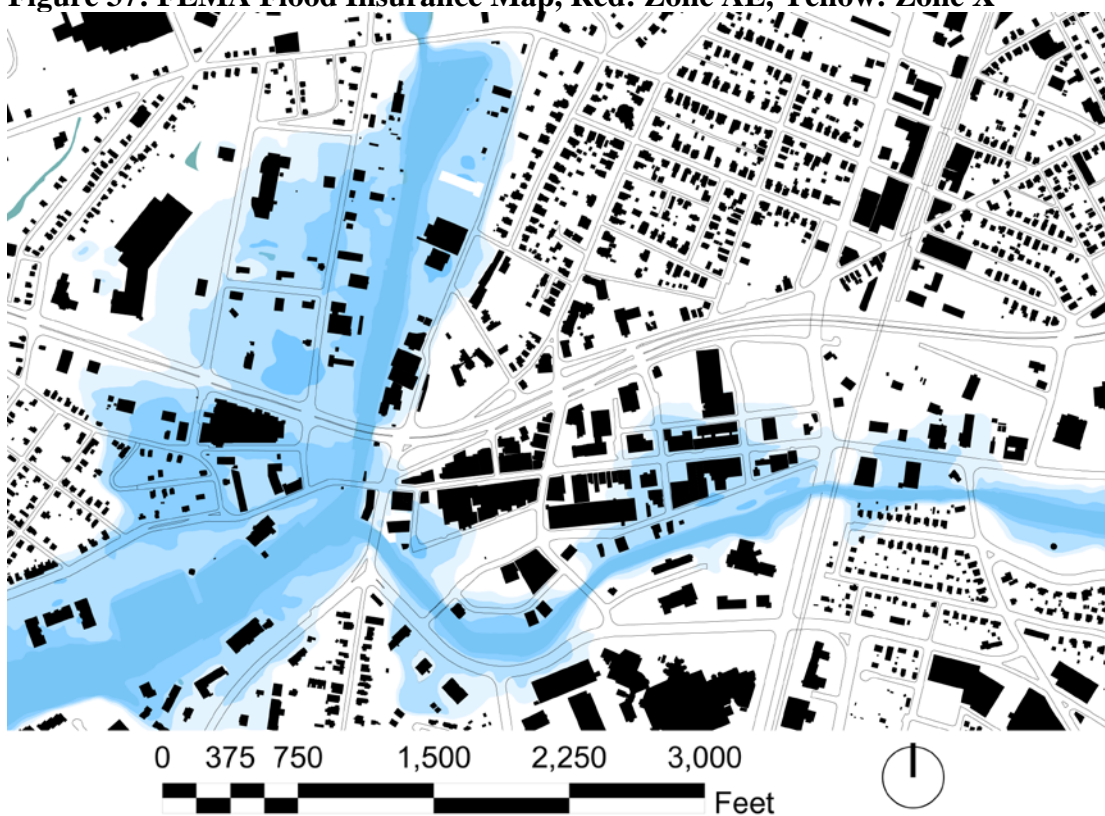


**Figure 36: Contours. Dark low, light high 34' range**





**Figure 37: FEMA Flood Insurance Map, Red: Zone AE, Yellow: Zone X**



**Figure 38: Opportunities for Redevelopment & Sea Level Rise**



Develop transformative solutions to an ambiguous problem

The ambiguity and uncertainty underlying the problem of sea level rise presents opportunities for creative design solutions. Radical rethinking of the design of public space, building typologies, and landscape can create places that dynamically transform in response to different sea rise scenarios.

Diverse relationships between urban fabric and the Wicomico River permeate downtown. Low lands along East Main Street are very prone to flooding, and may require a hard edged solution, such as a levee, to protect the existing, valuable fabric and allow for dense downtown development. Meanwhile, areas along the North Prong of the River are also low lands, but are underdeveloped, and present opportunities for responsive landscape, urbanism, and typology solutions that embrace the influx of water into the city. Other areas, such as the parking lot between Market and Division Streets, slowly step out of the flood plane, and could be utilized for civic spaces that transform in response to sea rise.

Merging of architectural, development, landscape architecture, and urbanist thinking

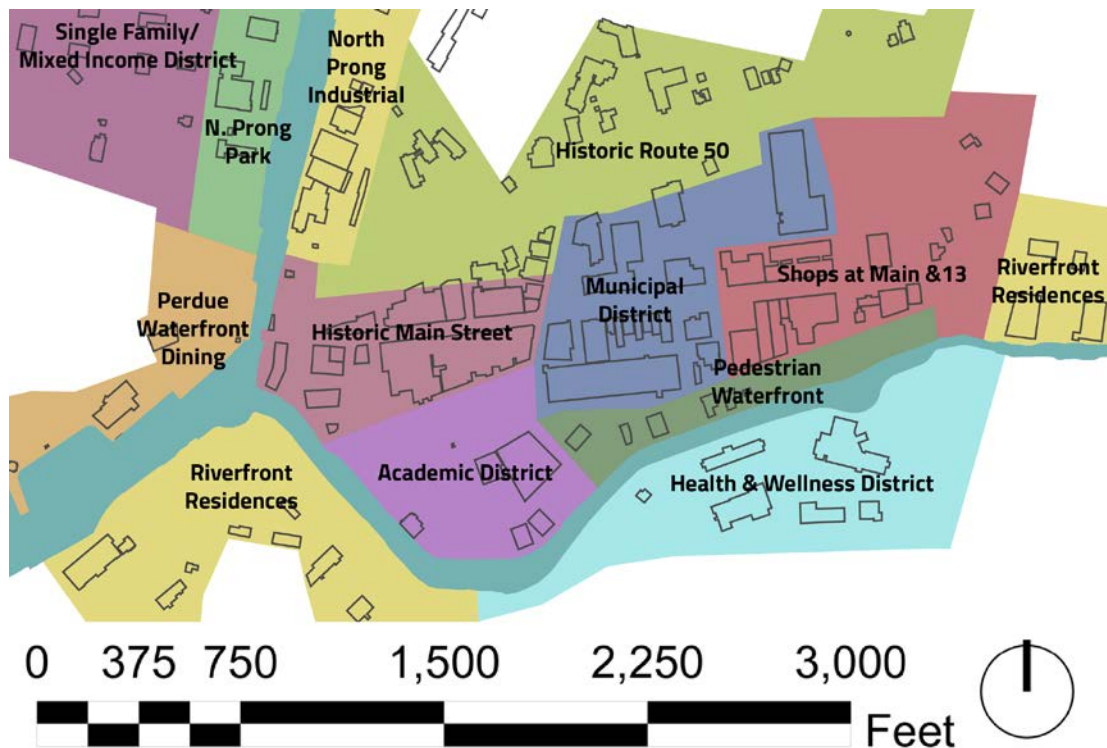
By integrating development, architectural, urbanist, and landscape thinking responses to sea level rise can succeed on an economic, ecological, and spatial level. As an example, rather than face the waterfront with a hard edge, blocks may open up into wet fingers that store and treat water. The earth removed to transform these spaces into catchment basins can be used to berm the landscape for paths and edges of buildings, creating a dynamic landscape. This form will also lead to increased property values, as more units have visual access to the waterfront.

### Development of Distinct Neighborhoods

Fix lack of distinct 'Placeness' downtown

Apart from the historic portion of Main Street, downtown is made up primarily of single-story, brick clad office buildings constructed between the 1940s-1960s, leading to a monotonous, inactive urban fabric. Despite this lack of character, downtown contains many latent assets that could be capitalized to develop neighborhoods with distinct and unique character. Such assets include the underutilized riverfront,

Peninsula



**Figure 39: Proposed street network: repaired block dimensions, improved hierarchy, removal of redundant streets, & narrowing of Route 50**

Regional Medical Center, the Purdue Factory, historic industrial buildings along the North Prong of the Wicomico, and a blank slate, in terms of built environment, in underdeveloped areas. This thesis proposes different neighborhoods for downtown that build on existing, latent assets.

#### Historic Main Street

The historic portion of Main Street, between Market Street and Division Street, could utilize its attractive, historic architecture and well defined, ornate, pedestrian oriented streetscape to create a boutique retail corridor with locally owned businesses and outdoor eating areas. The historic and unique character of this street lends itself to boutique, rather than commodity, shopping.

#### Health & Wellness District

The Health & Wellness District capitalizes on the proximity of the hospital to downtown. The Hospital, UMES, and Salisbury University have proposed a nurse and pharmacy school on the North side of Carroll Street across from the Hospital, which is integrated in the master plan, and might include a pharmacy on the ground floor to activate Division Street and terminate the street's programs. The Health and Wellness District adopts the rest of this block, introducing assisted/senior living along the riverfront (transitioning the institutional district to residential uses on the opposite side of the river), and further hospital uses at the corner of Carroll Street and Route 13. The existing hotel could remain, activating the riverfront and generating revenue from hospital visitors.

A civic district could build on Salisbury University's existing presence downtown, which includes an Art Gallery on North Division Street and the Plaza Gallery building on Main St and Camden St, which was recently gifted to the University by local developers and will be used as a business incubator, along with other uses. Locating the University District between Camden Street, Market Street, and Division Street allows it to contribute to the first phases of development, engage the riverfront, and make a symbolic connection to the University Campus by terminating the axis on Waverly Drive. Furthermore, the academic uses could be merged with civic uses to create a hub for downtown along the north end of Market Street, where it benefits from strong connections to historic Main Street and the waterfront.

Possible uses in the Academic District include University offices, upper level and graduate residences, maker/innovation spaces, and art galleries and performance spaces. Some of these uses, such as a performance center, could be shared with the community and help form the proposed civic square.

The University campus is about a mile from the city core, putting it just outside walking distance. A recently started shuttle bus provides public transportation between the downtown and University campus, and existing bike lanes could be improved to strengthen this connections.

#### North Prong Industrial

While much of the North Prong of the Wicomico River is underdeveloped, several historic industrial structures, remnants of the site's history as a transfer points of goods from rail to water, remain. These buildings could be adapted into housing and

their industrial character and large spaces could be utilized for informal uses, such as community artist and maker space.

#### Historic Route 50

Route 50 could be transformed into a residential boulevard that re-expresses the historic significance of Church and Broad Street by celebrating the many historic buildings along the streetscape, including several churches and the historic City Hall.

#### Shops at Main & 13

The portion of Main Street between Baptist Street and Route 13 could be used for a new commodity retail district. The small amount of historic fabric in this area allows for robust two sided retail development, unlike the portion of Main Street between Division Street and Baptist Street, which has the historic City Hall and Post Office on its North end. Furthermore, the existing city parking lot to the Northeast of this neighborhood is the only open space downtown large enough to accommodate a new parking garage and a retail anchor. A new retail anchor at the corner of Main Street and Route 13 terminates the retail street and capitalizes on adjacency to the highly trafficked Route 13.

#### Purdue Waterfront Dining

The portion of the Wicomico River adjacent to the Purdue factory could be used for a waterfront restaurant district, building on the success of Brew River, an existing restaurant, and boat access through the city marina. Many community residents already take boat trips to the marina to eat at the existing restaurant. Purdue could build the success of this area by creating restaurants and other culinary uses to

promote healthy eating. Other possible uses for this neighborhood include a market, which was recommended for the block between Route 50, Lake Street, and Main Street by a feasibility study conducted by Urban Salisbury.

## Chapter 4: Precedent Analysis

### Frederick, MD

#### Introduction



**Figure 40: Frederick Places Diagram: Downtown, green spaces, outline of conduits in translucent red, Baker Park to the West acts as flooding overflow. Diagram emphasizes the definition of a green corridor along the waterfront and access to downtown.**

Frederick, Maryland has faced many similar issues to Salisbury, including flooding problems and an underutilized riverfront. The town is built along Carroll Creek,





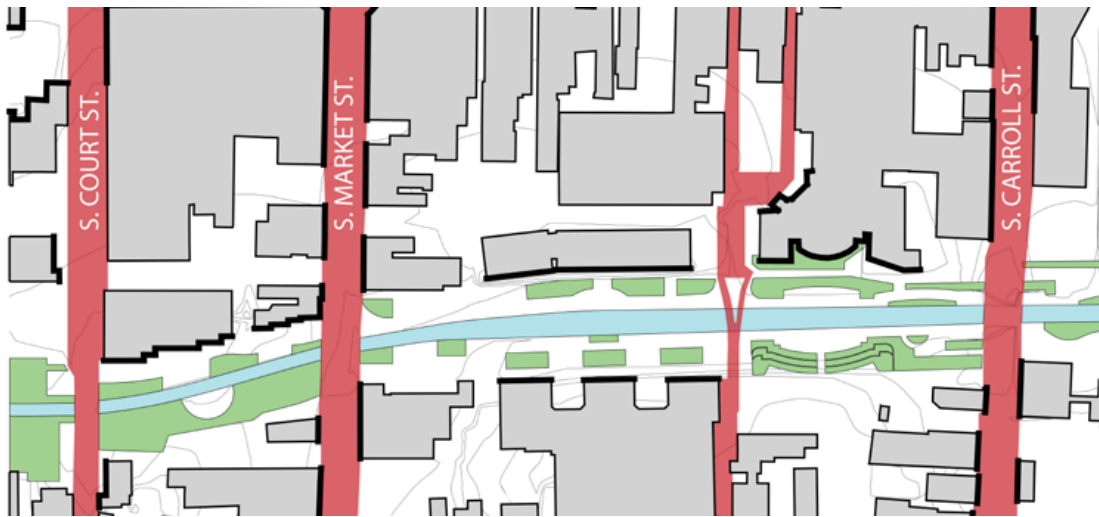
## Frederick Riverwalk



**Figure 42: Frederick Riverwalk: Well defined, pedestrian space, but underutilized**

Following the construction of the conduits, Frederick's downtown experienced a renaissance. As the city grew, it made significant investments in its riverfront. An attractive pedestrian riverwalk, framed by new construction of retail (only along the north side), housing and civic uses, such as the city library and art galleries, replaced industrial uses that lost their reason for being along the water. An abundance of building frontages and strong built form activate the space and give it a well-defined, street-like quality. While the Frederick riverwalk is hailed as a financial, civic, and hydrological success, it has many issues.

The primary streets in downtown Frederick, which include Patrick Street and Church Street, run parallel to the Carroll Creek. This makes visual access to the riverfront difficult, as only secondary streets, most of which have very little street activation on the ground floor, access the riverwalk. Market Street, the only major downtown North-South street, provides an activated space to reach the riverfront, but it's arrival to Carroll Creek is uncelebrated, and pedestrians and cars can easily pass by without taking notice of the space. Furthermore, a lack of automotive traffic and the riverwalk's one sided retail make it difficult for businesses to succeed, evidenced by the closing of many businesses (6). While pedestrian retail streets can succeed, they require powerful drivers to create a critical mass of activity.



**Figure 43: Street Frontage & Access to Riverwalk – lack of active cross streets makes it difficult to reach riverwalk**

## Culvert System and Storm water Issues

While the conduit system in Frederick has succeeded in preventing flooding, it presents many issues. Undertaking such a massive infrastructure investment today might be impossible considering the limited funds of most municipalities. Active infrastructure systems, such as the conduits, require significant maintenance costs. Furthermore, this system prevents the re-introduction of an active ecology along the river, replaced with an engineered creek that sustains no plant or animal life, and has algae growth problems due to a lack of water flow. In Salisbury, which has very little topographic change, problems of lack of water flow might only be exacerbated. Furthermore, the flooding issues Frederick faced in the 1970's are very different from the issues Salisbury faces from sea level rise. Flooding in Frederick, the 1976 flood in particular, was the result of flows from upstream Carrol Creek meeting the reverse flow of the Monocacy River. In Salisbury, issues of sea level rise are a result of the Wicomico River's tidal waters and storm surge.

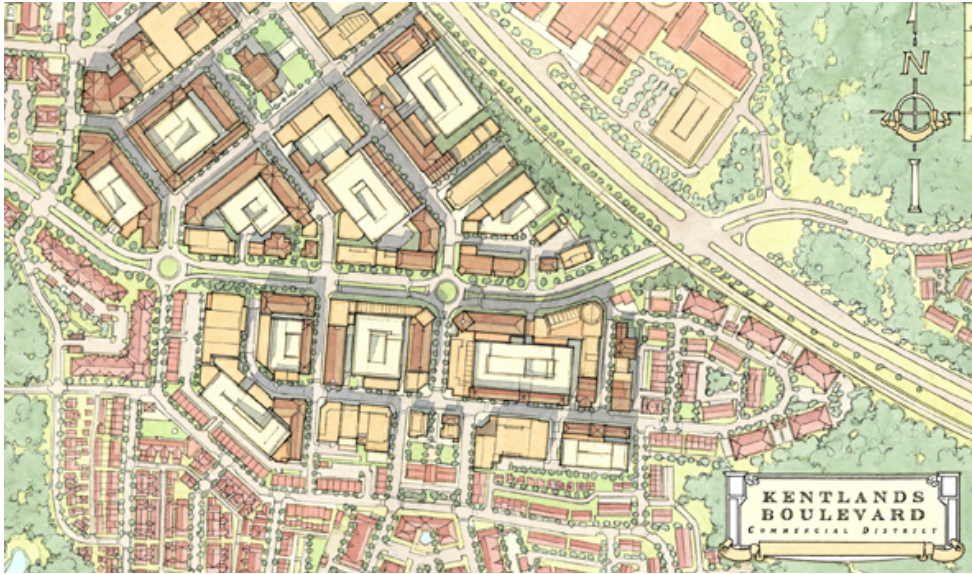
### Kentlands, Gaithersburg, MD

#### New Urbanist Principles

Kentlands is a new urbanist community in Gaithersburg, MD designed by DPZ. While similarities to Salisbury are limited, the town is a precedent for this thesis because of its application of new urbanist principles. The community is a good choice for in-person analysis due to its proximity to College Park. The town does share some similarities to a proposal for downtown Salisbury, including the design of a town



center with mixed retail and office uses, and its pedestrianization of a major thoroughfare, Kentlands Boulevard, that runs through the town.



**Figure 44: Kentlands Site Plan: Intended plan prepared by DPZ**



**Figure 45: Kentlands Residential Neighborhood: Dense typologies & robust pedestrian spaces**

The goal of new urbanism is stated in the first portions of its charter: “We advocate the restructuring of public policy and development practices to support the following principles: neighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice.”

In Kentlands a town center is built where the town’s heart meets Kentlands Boulevard. Dense typologies in the downtown taper off to densely placed single-family homes. Strategies for maintaining an active, well defined, and dense street edge include build to lines, parking access through in-block alleys, and buildings oriented with their short sides fronting the street.

#### Retail Strategies

Retail in the town center along Market Street benefits from a central location with visibility from the highway. The town locates parking behind the retail street with business entrances on the front and back, making access easy for both car and foot patrons. Main Street, the primary perpendicular street to Market Street, emulates a more traditional downtown Main Street than Market Street, with retail and office uses with housing above.

#### Crossing of Kentlands Boulevard

Much like the highways in Salisbury, Kentlands Boulevard cuts through the heart of the town. While the original city plan shows building frontage along this road, the

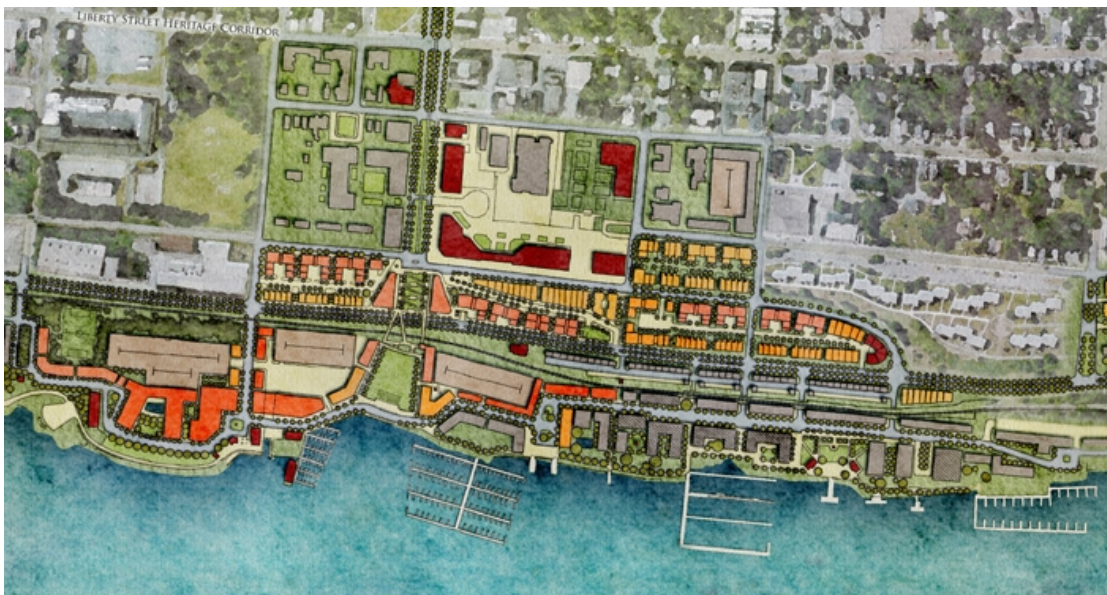


development implemented a strategy of a careful, pedestrian treatment of important crossings, which facilitates pedestrian connections on each side. Kentlands Boulevard is largely fronted by parking lots, allowing easy automotive access to the town's retail. Details that help pedestrianize the street include a heavy use of street trees, brick pavers along the crossings, and traffic circles at major intersections, which slow down automotive traffic, prevent congestion, and reinforce a sense of place.

### Newburgh, NY

#### Introduction

DPZ designed an unimplemented plan for the waterfront of Newburgh, NY. The design addresses many issues similar to Salisbury. Newburgh's plan demonstrates diverse strategies for capturing the value of the waterfront through streets and building forms that provide public access to the river and private enjoyment of the waterfront.



**Figure 46: Newburgh, NY Site Plan: Diverse waterfront strategies. Courtesy of DPZ Architects.**

#### Waterfront Treatment

The proposed design for Newburgh takes a varied strategy for riverfront development. In many parts of the site the waterfront is activated through streets and building frontages along the waterfront. In some areas, however, the backs of buildings face the water, allowing residents unimpeded, intimate views of the water. In these areas pedestrian paths continue by the waterside, ensuring that these spaces remain within the public realm. All major streets and pedestrian paths to the waterfront are given direct views to the water, raising the value of buildings along these streets and providing a wayfinding device that connects to the waterfront. Unlike in Frederick, the design for Newburgh is careful to front streets perpendicular to the waterways, thereby activating the path to the water.

#### Highway Treatment

Like the major highways in Salisbury, which prevent access to downtown, Newburgh negotiates Water Street, a broad road, and a rail line, that run parallel to the Hudson River, and prevent access to the waterfront. Like Kentlands, the design crosses this barrier by activating major intersections. The main green at the center of this project exemplifies this strategy. Event spaces on either side of the crossing bridge this gap and provide views to the water, while an abundance of pedestrian crossings slow down traffic. By bringing building frontages to the edge of this crossing the street remains active.

## *Summerfield, Snow Hill, MD*

### Introduction

Summerfield is a yet-to-be-built community in Snow Hill, MD. Like some other precedents, this development was designed by DPZ, but is particularly interesting as an example of new urbanist principles applied to a small town twenty minutes outside Salisbury. In addition, the development includes many waterways and green spaces, demonstrating how these natural features can be integrated into blocks and street systems. At its heart the community includes a waterfront square and town center, providing a precedent for new waterfront civic spaces in downtown Salisbury. The project also provides examples of the eastern shore vernacular in the architecture of residential and mixed use buildings.



**Figure 47: Summerfield Site Plan: Town Center at topmost Lake. Courtesy of DPZ Architects**

#### Waterfront and Park Treatment

Summerfield engages the water and surrounding green spaces in diverse ways. In many parts of the community v-shaped fingers bring water and green space into the community, raising property values by providing views to this amenity. Small canal-like waterways permeate the neighborhood, often treated in different ways. Along smaller waterways cross-streets bridge the creeks, and single-family homes intimately face the water. The large number of creek crossings, along with buildings fronting these waterways, ensure this will be a safe, patrollable space within the public realm.

Along larger waterways public streets front the water, and in the town's center a square with parking and retail amenities opens to a broad lake. Retail uses with rear parking lead from the neighborhood's primary street to this public square.



**Figure 48: Summerfield Town Center: Eastern Shore of Maryland downtown vernacular and waterfront plaza. Courtesy of DPZ Architects**

#### Eastern Shore Vernacular

While this thesis does not propose a traditional vernacular language for downtown Salisbury, Summerfield provides an example of the form such architecture might take. Simple, traditionally designed homes make up the single family typologies, while brick two and three story buildings, recalling the historic downtowns of eastern shore towns, form the public square.





**Figure 49: Summerfield Residences: Waterfront relationship and Eastern Shore vernacular residential architecture. Courtesy of DPZ Architects**



## Chapter 5: Design Proposal

### Introduction

Four thesis goals were developed through a process of diagramming and analysis.

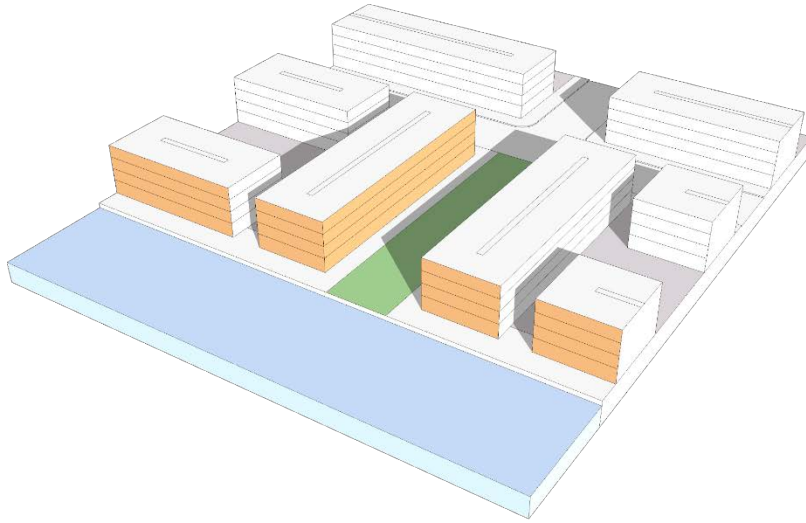
The first goal is to develop transformative responses to sea level rise which respond to the site's varying flood conditions. The second goal is to utilize existing downtown assets to develop distinct neighborhoods, repairing downtown's lack of placeness.

Next, downtown arteries are reshaped to improve urban connectivity and reduce the island condition of downtown. The thesis also proposes a first phase of development for downtown, creating a 24/7 civic hub that will be catalytic for future phases of redevelopment.

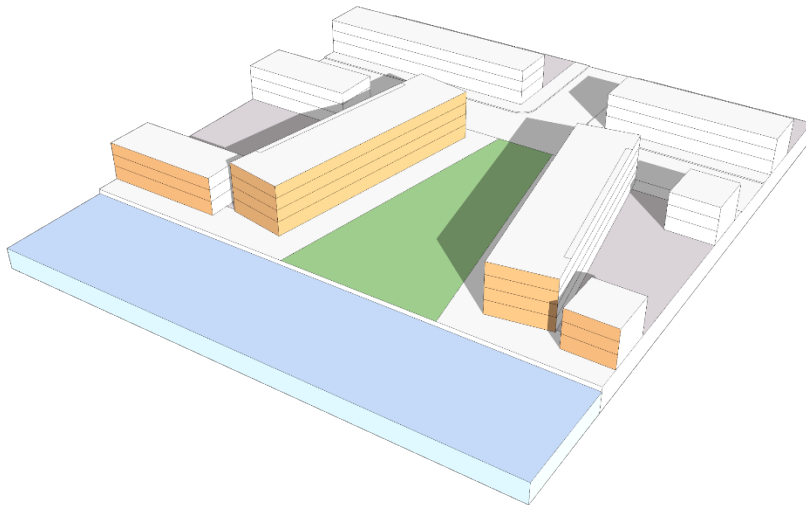
### Typology Transformations

Diagrams were prepared exploring how block and building typologies can transform in response to sea level rise. These diagrams informed the typologies proposed in the final design. Townhouse and multi-family types were explored for these transformations.

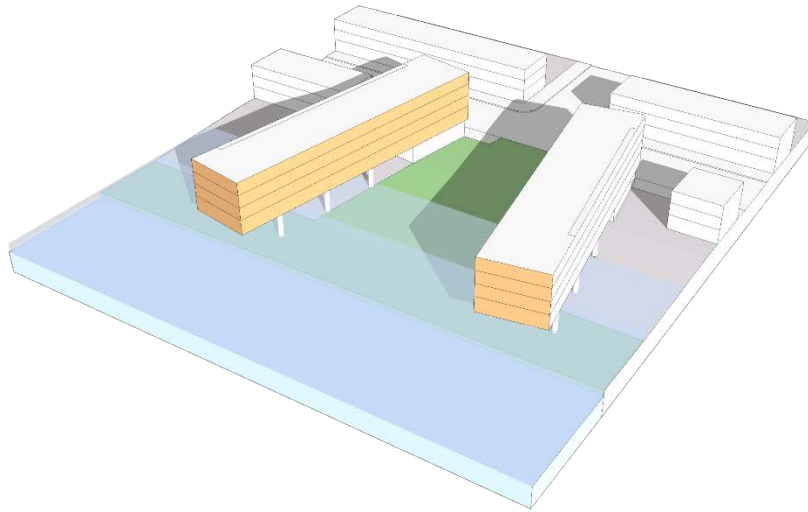
## Multifamily



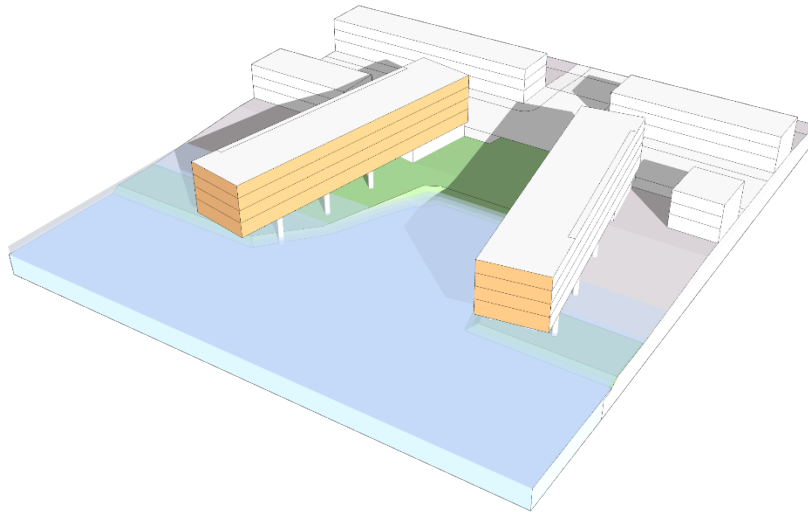
**Figure 50: Typical Multifamily Block**



**Figure 51: Single Loaded Corridors & Canted Buildings improve view to water**

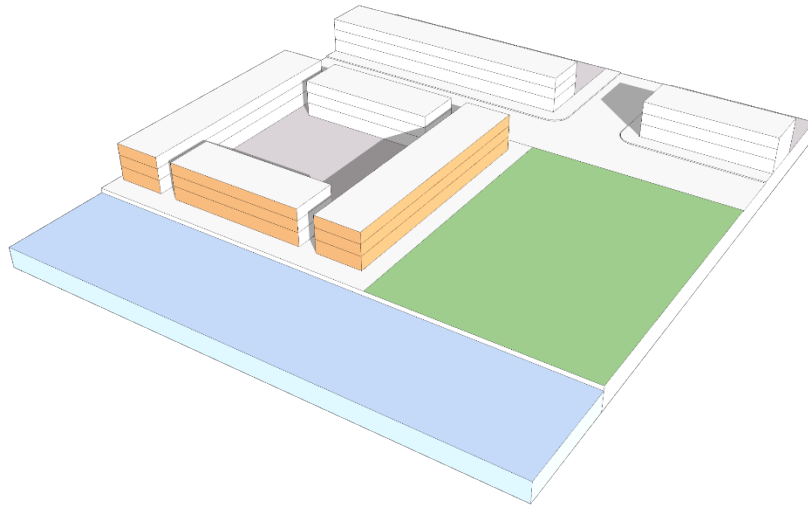


**Figure 52: Raise to Protect from Flooding & Lengthen for Core Efficiency**

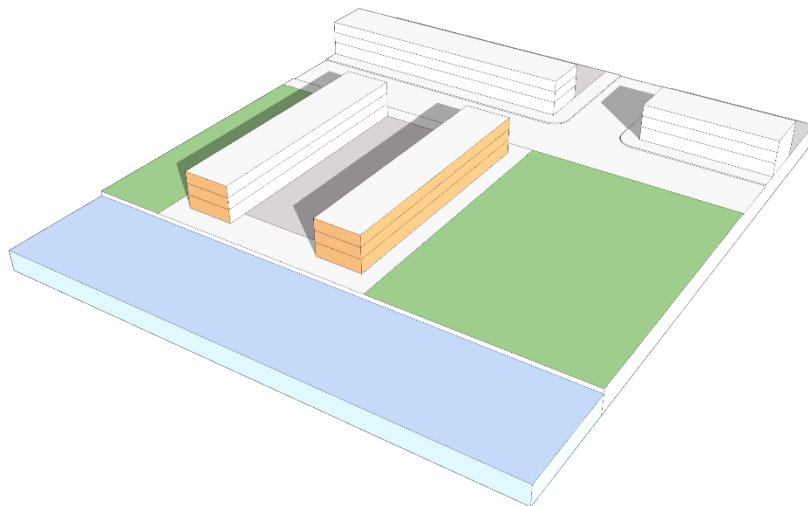


**Figure 53: Raise Roads & Allow Ground Plane to Bring Water In**

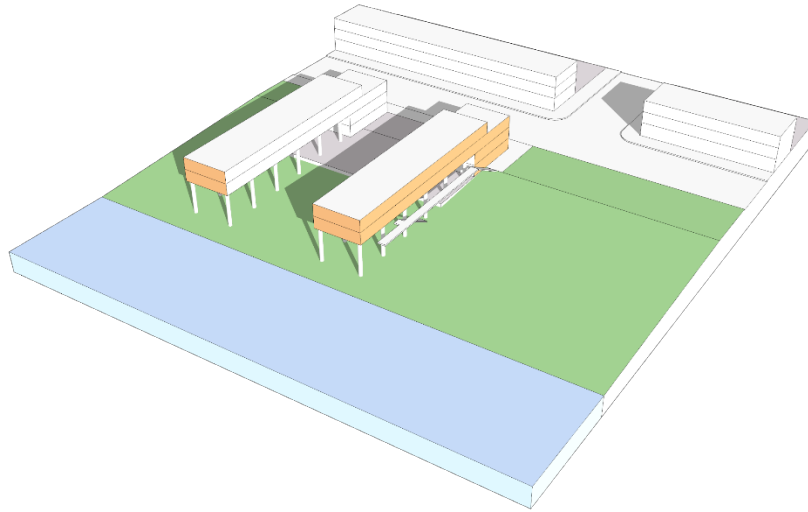
## Townhouse



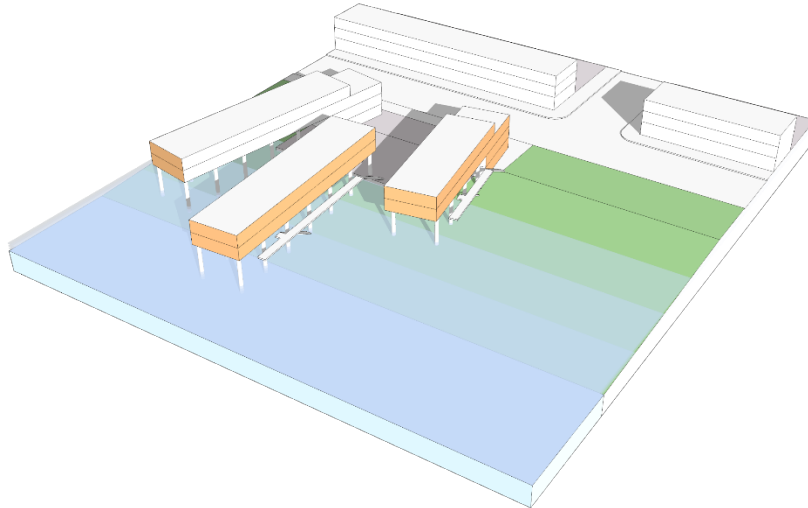
**Figure 54: Typical Townhouse Block**



**Figure 55: Enlarge Green Space & Orient to Waterfront**



**Figure 56: Raise Units Sensitive to Sea Rise while Maintaining Connection to Street. Parking Remains in Defensible, in-block area**



**Figure 57: Introduce More Units & Cant to Maximize Views to Water**

### *Develop Transformative Responses to Sea Level Rise*

#### Response to Sea Level Rise

This thesis proposes adaptive solutions to sea level rise. These solutions embrace the transformative effect climate change will have on our landscape and transform the threats of flooding from sea rise into an ecological, economic, and cultural asset. The

proposed plans prepare for the worst case scenarios of sea level rise while improving the environmental quality of the Wicomico watershed. These solutions combine an exploration of urban, typological, architectural, and landscape strategies to create a dynamic, transformative relationship with the water's edge. In general, buildings and levees are located at least 12 feet above sea level, allowing for the six feet of projected sea rise expected in the next hundred years, and another six feet associated with a 100-year storm after six feet of sea rise.

Downtown Plaza



**Figure 58: Downtown Plaza Sea Rise Strategy: Levee walls, raised streets, and water catchment along the civic plaza**

In the downtown plaza a strategy of protection, retreat, and adaptation is employed.

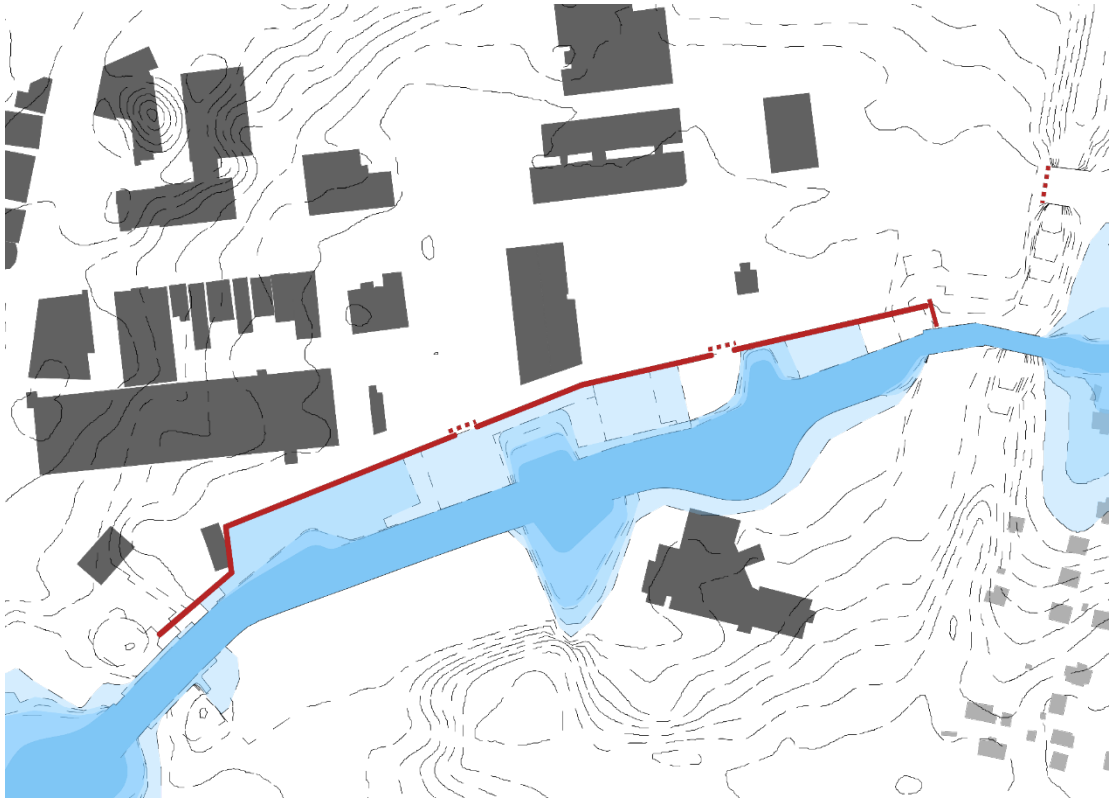
Existing buildings along the low lying, west end of Main Street will be protected through a levee, which will be built into pedestrian paths and restaurant plazas. Water will be allowed to enter into the civic plaza, while the performance center will create



a more intimate relationship with emerging sea rise, with its southern wall meeting the water with six feet or more of sea rise. The performance hall, with a dynamic relationship between the ground plane and the building above, expresses a strategy of adaptation and transformation in response to sea level rise. In contrast, the library, with its well defined base, expresses the strategy of retreat employed in the civic plaza.

#### South Prong

Along the south prong a strategy of protection will be necessary. A levee, stretching from Division Street to Route 13, protects businesses on Main Street, which already face significant flooding. This levee will be transformed into a vibrant mixed use path, with, public plazas, a dog park, exercise areas, and community gardens. Two greenways lead south from Main Street to the waterfront, providing grand stairs and strong axial connections to the waterfront.

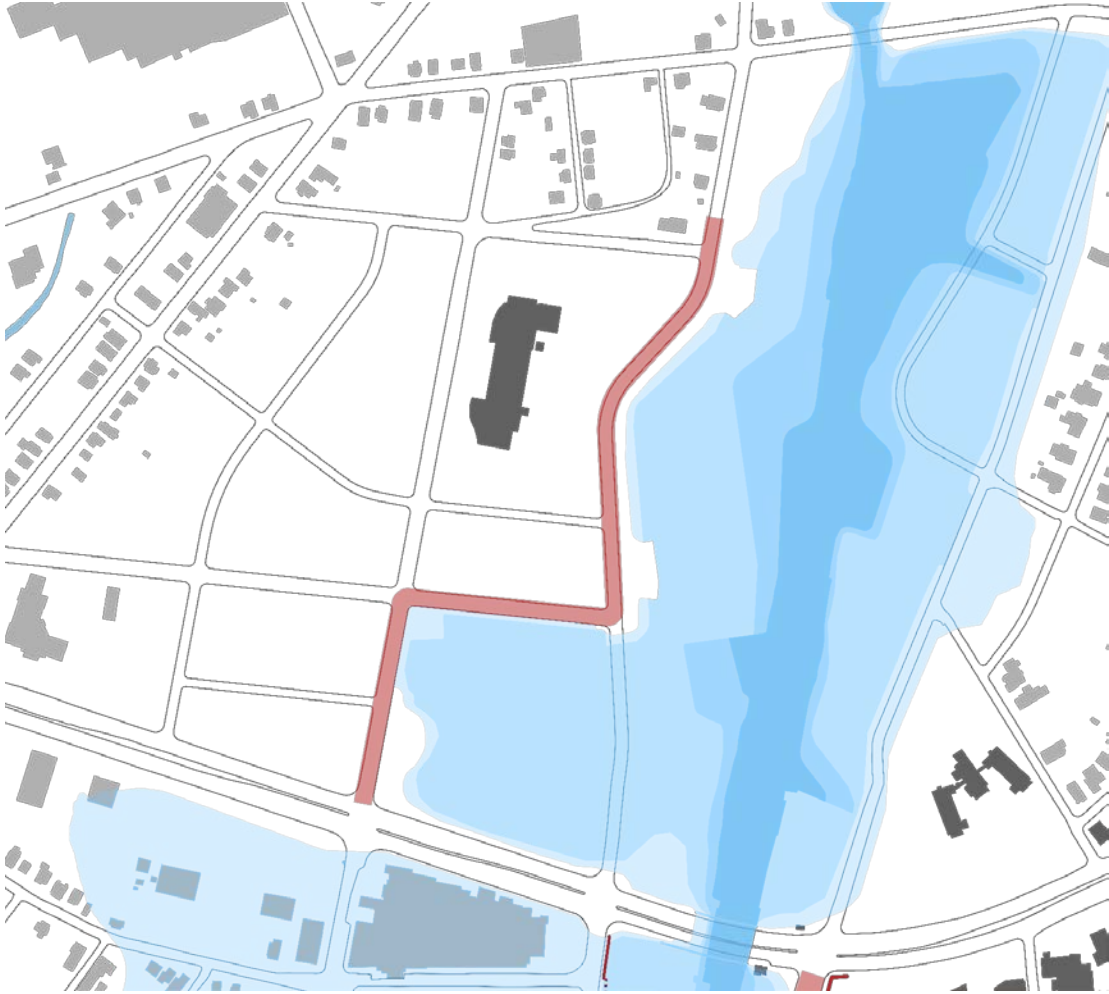


**Figure 59: South Prong Sea Rise Strategy: A levee stretching from Division Street to Route 13 protects low lying portions of Main Street from flooding**

#### North Prong

The North Prong of the Wicomico is currently surrounded by industrial and commercial buildings that don't capitalize on the connection to the waterfront. The proposed design transforms this area into a residential neighborhood and park that retreats from the low-lying portions of this site. Lake Street is slightly canted to improve the size of the catchment basin in this area, and a series of roads are raised to eight feet above sea level to protect the rest of the neighborhood from future significant flood events and maintain emergency access to the existing fire hall. Development on the riverside of these roads takes on typological transformations in response to their tenuous relationship with sea rise, while buildings to the west utilize

more traditional designs.

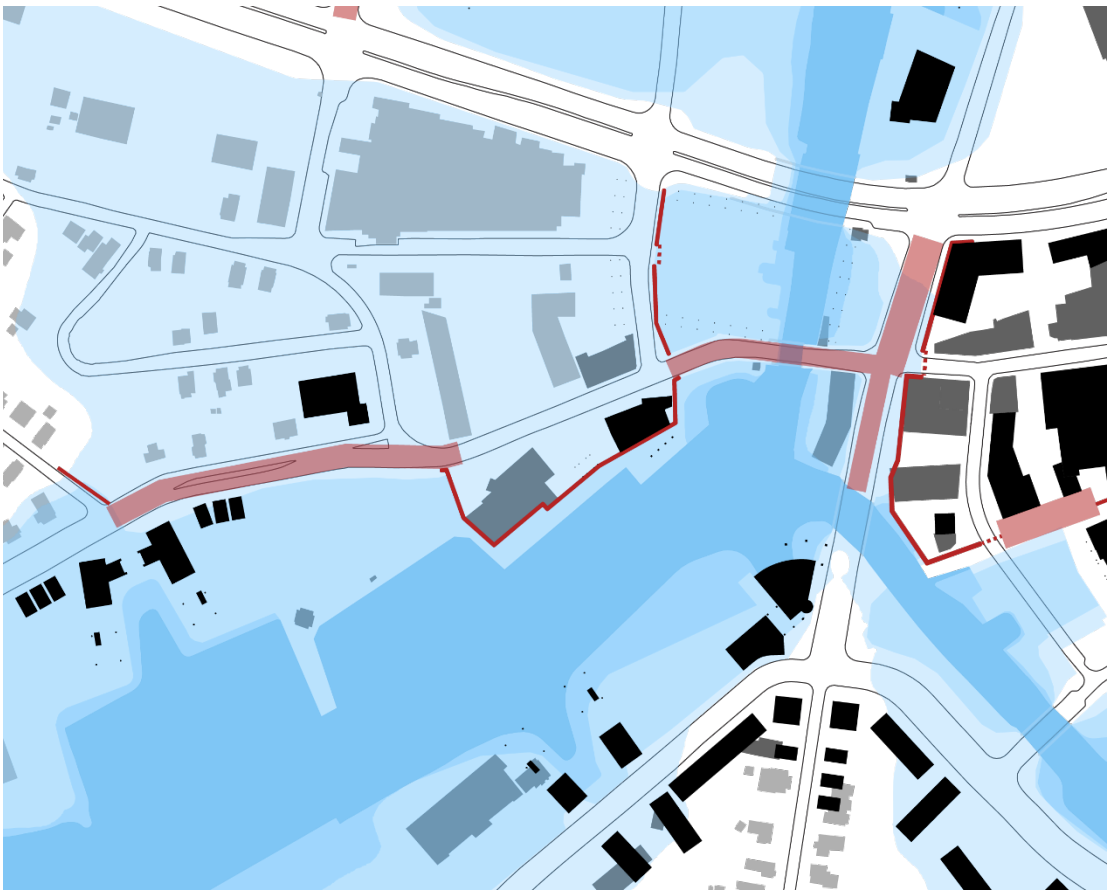


**Figure 60: North Prong Sea Rise Strategy: A series of roads are raised to create a catchment area along the waterfront**

#### River's Convergence

Along the southwest portion of town, on the western shore of the convergence of the North and South Prongs, a strategy of adaptation is employed. This low lying area includes several residences and a Purdue processing plant. The processing plant is built to allow for flooding, but flood events disrupt their operations. Thus, unlike the levee proposed for the South Prong, protection in this area needs to only protect from typical storms, while flooding may be allowed during very significant flood events.

Levees and streets in this area are raised to eight feet above sea level, in comparison with twelve feet in areas that are completely protected, such as south prong. This means new levees and raised streets will only be two to three feet high, which is much more manageable than the six to seven feet required to protect against twelve feet of flooding. Furthermore, this small grade change is easily traversable and makes it easier to connect to the waterfront. The limited number of homes in this area that are sensitive to flooding can be adapted or raised to allow for periodic flooding events.



**Figure 61: River's Convergence: A mix of roads and levees protect the neighborhood from most flooding events, but allow flooding during the most significant storms.**

## Utilize Existing Downtown Assets to Develop Distinct Neighborhoods

### Introduction

Downtown Salisbury suffers from a lack of ‘placeness’. Apart from the historic portion of Main Street, most buildings downtown are one to two story office buildings built in the mid 20<sup>th</sup> century. These buildings have a lack of distinct character, and their density and use is not compatible with a vibrant, mixed use downtown. However, many existing aspects of downtown could be utilized in developing distinct neighborhoods.

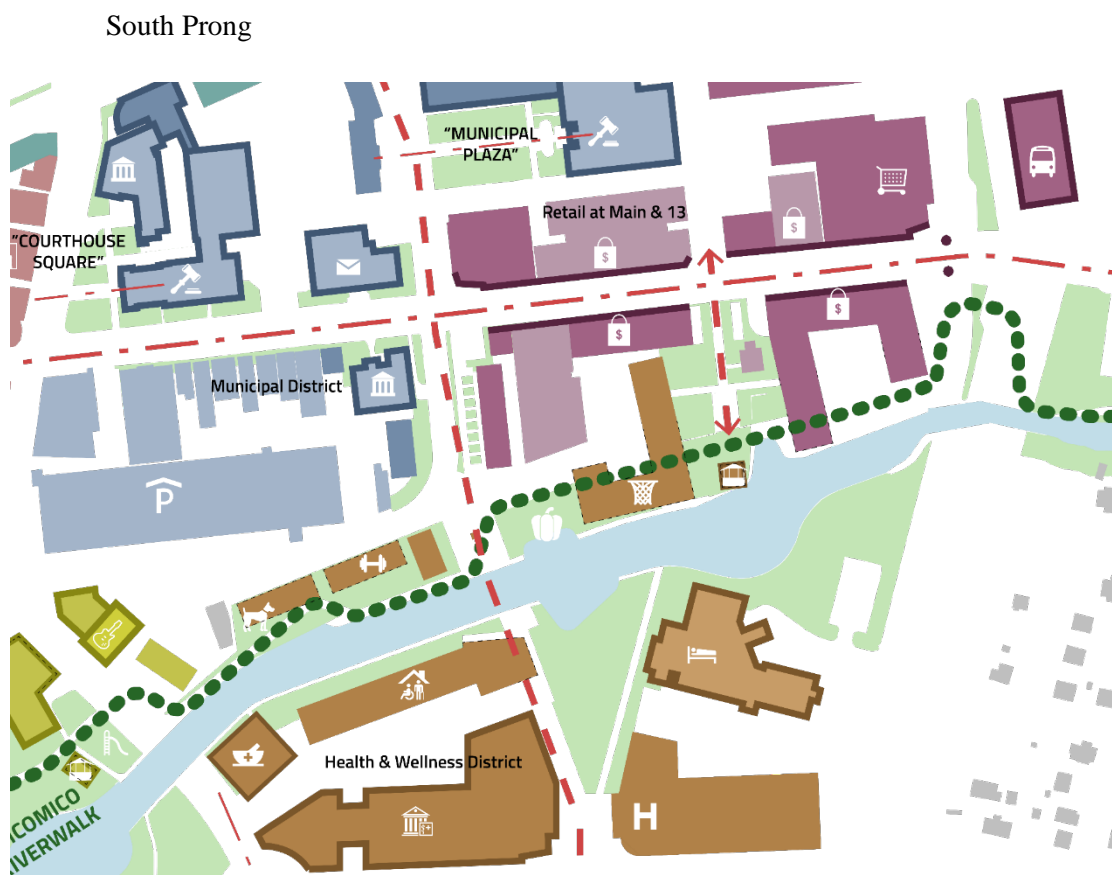
### Downtown Waterfront



**Figure 62: Downtown Waterfront: Develop a civic square “Riverwalk Plaza” to anchor historic Main Street and the Riverwalk**

A civic waterfront is proposed at the meeting of historic Main Street and the Wicomico River. Proposed programs for the downtown waterfront include a new

Library, an addition to Salisbury University's Continuing Education Center, a new Salisbury University performing arts center, which includes a concert hall and black box theater, hotel with restaurant, and teaching kitchen and restaurant. Outdoor uses along the waterfront include an outdoor theater, kayak and canoe rental stand, gazebos, and a playground. The proposed uses will bolster this civic heart and enhance Salisbury University's presence downtown.



**Figure 63: South Prong: Health & Wellness Waterfront District, Retail at Main & 13**

The proposed health and wellness district along the Wicomico River's South Prong proposes a partnership with Peninsula Regional Medical Center to build a neighborhood with a mix of institutional, residential, academic, and hotel uses.

Proposed buildings include a new Health Sciences School with a ground floor



pharmacy (an existing proposal) built in partnership between Peninsula Regional Medical Center, Salisbury University, and University of Maryland, Eastern Shore, a new building for an existing assisted living facility, additions to the existing hotel, and new buildings for Peninsula Regional Medical Center. Homes are located on the north shore of the river, with a series of outdoor programs, many of which are below buildings elevated on pilotis, include a dog park, exercise area, community gardens, basketball courts, and gazebos.

North of the Health and Wellness District, along Main Street, a new retail corridor, Retail at Main & 13, builds on the strong visibility at the intersection of Main Street and Route 13. This is an ideal location for a retail street for several reasons. It is the only place downtown large enough for a retail anchor (A 40,000 SF Grocery Store is proposed here) and the only place large enough for a large parking garage.

Furthermore, the levee protects this area from flooding, allowing retail businesses to operate at ground level. Across Route 13 a new bus terminal provides strong pedestrian connections to this retail corridor and auto connections to Route 13 and Route 50.

## North Prong



**Figure 64: North Prong: Residences and proposed park**

Along the North Prong a new residential district forms a new park, “North Prong Park”, which acts as a catchment basin during significant storm events. Playing fields and a Recreation Center anchor the park, and a town square serves neighborhoods to the west of downtown. New streets improve the surrounding neighborhood’s connection to the park and waterfront.

## River's Convergence



**Figure 65: River's Convergence: Waterfront Dining Corridor**

At the convergence of the two prongs of the river a market and waterfront restaurant/grocer builds on the success of an existing restaurant, Brew River, and the Salisbury Marina. The Crossroads Market sits at the crossroads of the Wicomico River, Main Street, and Route 13, creating connections across neighborhoods. A new community center, sponsored by Purdue, will provide amenities to the adjacent low income neighborhood. Historic industrial buildings along the North Prong are adaptively reused into a brewery with housing above, bridging this dining corridor across Route 50. Along the river's south bank the Salisbury University Museum for

Ecological Studies and Wicomico River Research Center acts as an icon along the waterfront.

Historic Route



**Figure 66: Route 50: Boulevard dotted with Historic Churches**

New tree plantings, parallel parking, and new residential buildings transform Route 50 into a pedestrian friendly boulevard. The street already has many culturally significant buildings, including several churches, the historic city hall, a historic mansion used as an assisted living facility, the Chipman Cultural Center museum, and a playground. Transforming Route 50's streetscape will help bring these amenities to the street's forefront.



**Figure 67: Existing Street Grid**



**Figure 68: Proposed Street Grid**

### Reduce “Island Condition” of Downtown

Steps are taken on all sides of downtown to reduce the urban core’s disconnect from surrounding neighborhoods. Along the North and South Prong, a network of mixed use paths and bridges unify the waterfront. Along the South Prong, Carroll Street is reduced to a 3 lane road with parallel parking at each end of the street. Along the east side of downtown, the space between Route 13 and the railroad tracks is turned into a mixed use path, making connections to Salisbury University to the south and low-income, minority neighborhoods to the north. The barrier condition along Route 50 is reduced by removing Church Street, introducing building frontage, and reducing Route 50 to 5 lanes by adding parallel parking. New paths for Route 50 were examined, but they provided little new room for development and weren’t worth the significant expense of rebuilding this infrastructure.

### Street Grid Improvements

Downtown Salisbury’s street grid lacks hierarchy and creates small blocks that are difficult for development. Several steps were taken to improve Salisbury’s street grid. Circle Avenue becomes an automotive through way, connecting Carroll Street to Route 50 and Route 13. By re-routing Circle Street onto Baptist Street, the blocks on the south side of Main Street have more room for development and make a stronger relationship to the waterfront. Along the civic waterfront a portion of Market Street is removed, allowing the Performance Hall and Hotel to fill out the block and make intimate connections to the water.



### Create a 24/7 Civic Hub

#### Create a Civic Hub for Downtown

This thesis proposes a first phase of development to jump-start revitalization of downtown. The parking lot just south of historic Main Street is an ideal choice for redevelopment. The property is easy to acquire, as it is owned by the city, it benefits from direct access to the riverfront, creating an opportunity to reshape the city's relationship to the river, it benefits from strong automotive visibility along Carroll Street, and it has strong connections to historic Main Street. The streets that bookend this site, Division Street and Market Street, also bookend historic Main Street, and their revitalization will lead to the revitalization of Main Street.

A new county library and Salisbury University performance center anchor a civic, waterfront plaza, located along the site's low lying, west end. These uses provide much needed civic amenities for the city and create a strong connection between Historic Main Street and the Wicomico Riverwalk. Furthermore, by introducing civic uses, the new development won't compete with existing commercial space downtown, instead revitalizing it. Furthermore, by building their performance center downtown, Salisbury University can act as a partner in the city's redevelopment.

### Conclusion

By developing solutions to the four goals outlined previously, this thesis proposes an actionable plan for a sustainable, successful rebirth of downtown Salisbury. A robust first phase of development will jump start revitalization and re-establish downtown as the heart of Salisbury. Embracing the transformative effects of sea level rise will

allow the town to live in a symbiotic, dynamic relationship with the Wicomico River. Improving the street and pedestrian network will strengthen access to downtown and help redevelopment thrive. Distinct corridors, which capitalize on existing assets, provide a unique vision for the city that builds on the already rich cultural, economic, and social character of downtown.

## Chapter 6: Project Images

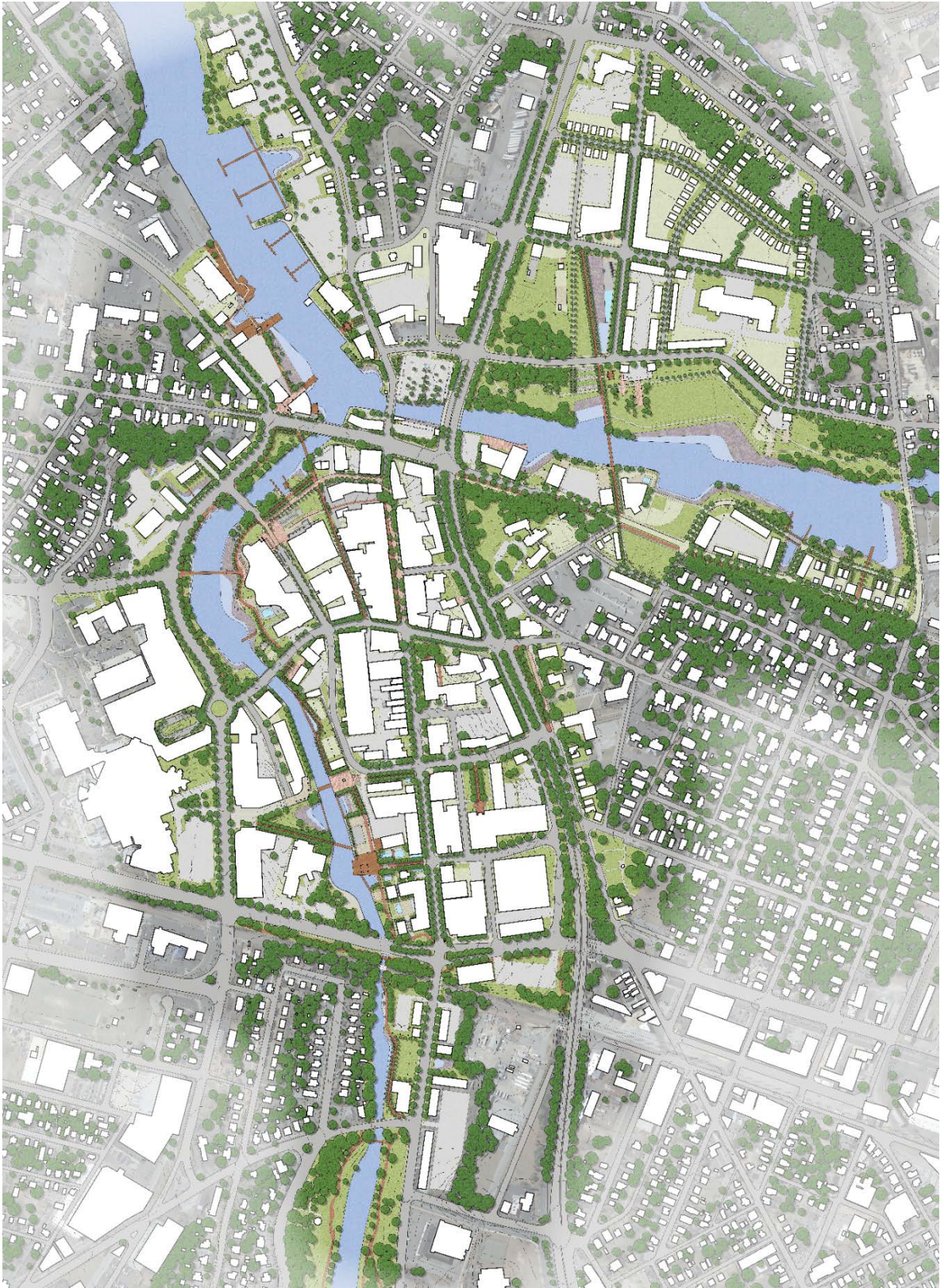
### Site Plans

Proposed Site Plan



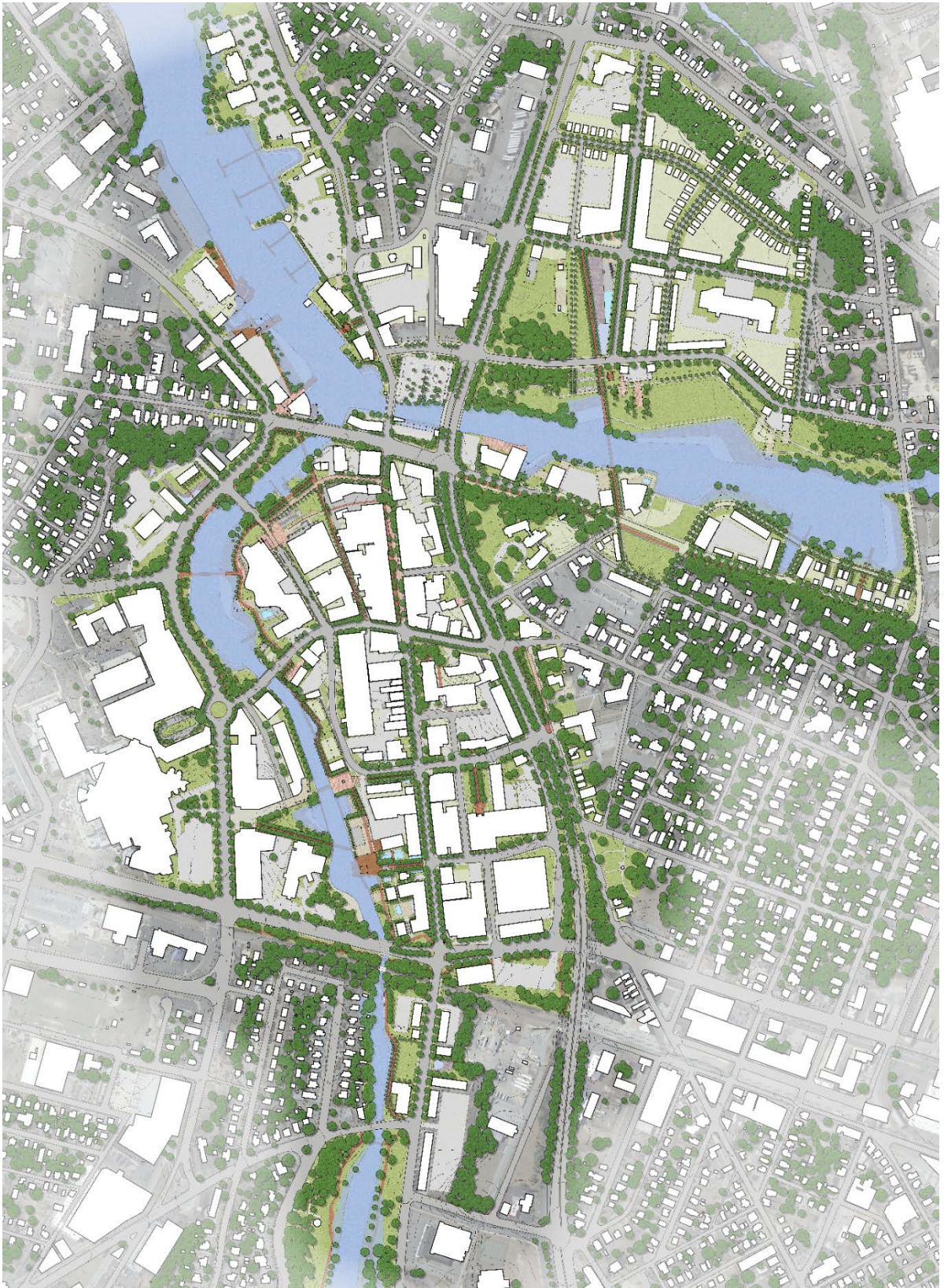


## Proposed Ground Floor Site Plan



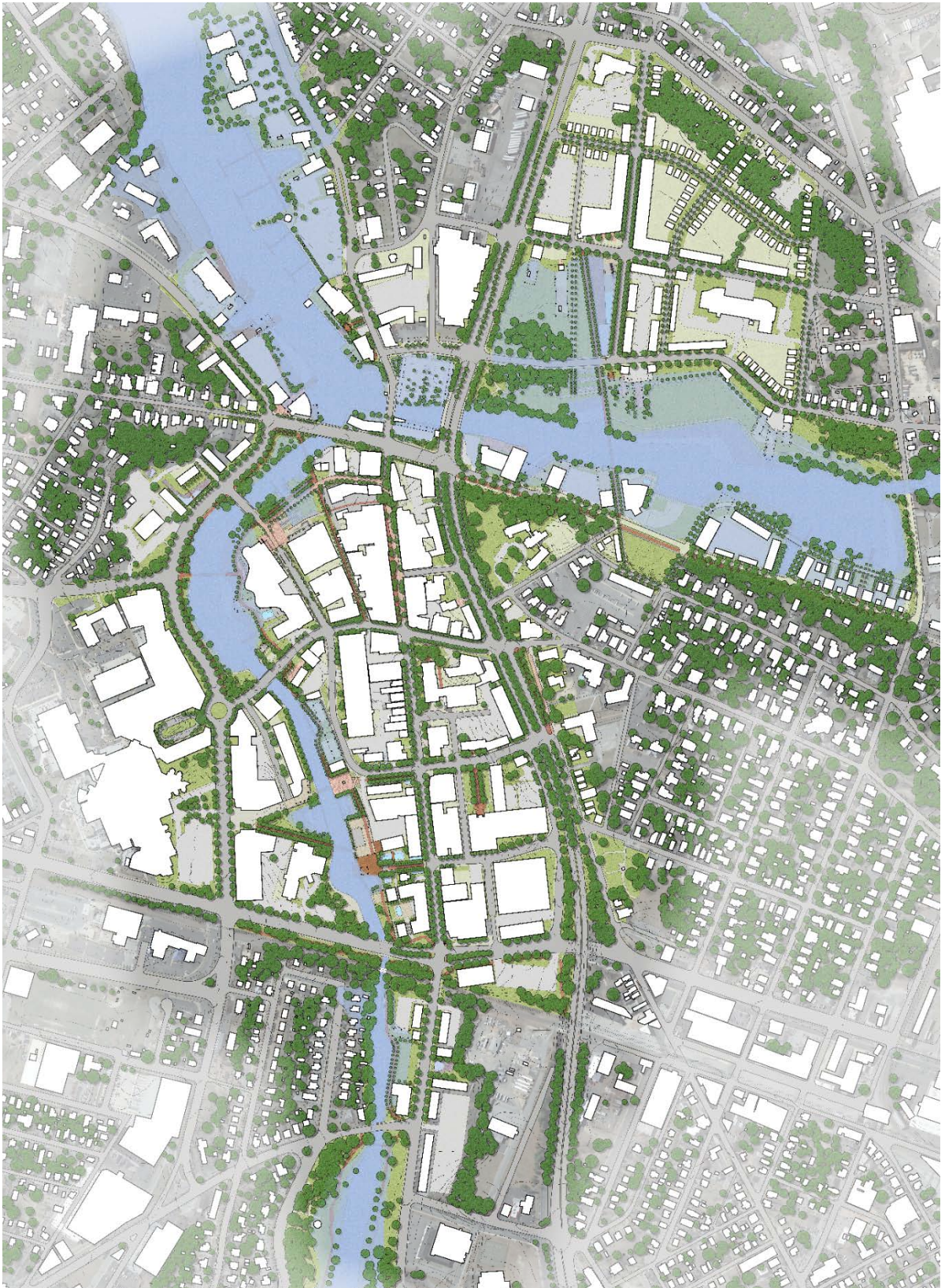


Proposed Ground Floor Site Plan – 3 feet of Sea Level Rise





Proposed Ground Floor Site Plan – 6 feet of Sea Level Rise





Proposed Ground Floor Site Plan – 8 feet of Sea Level Rise





## Nolli Plan – Phase 1 of Development



Perspectives & Section Perspectives

Plaza Aerial Perspective





Plaza Aerial Perspective – 8 feet of Sea Level Rise





Plaza Perspective



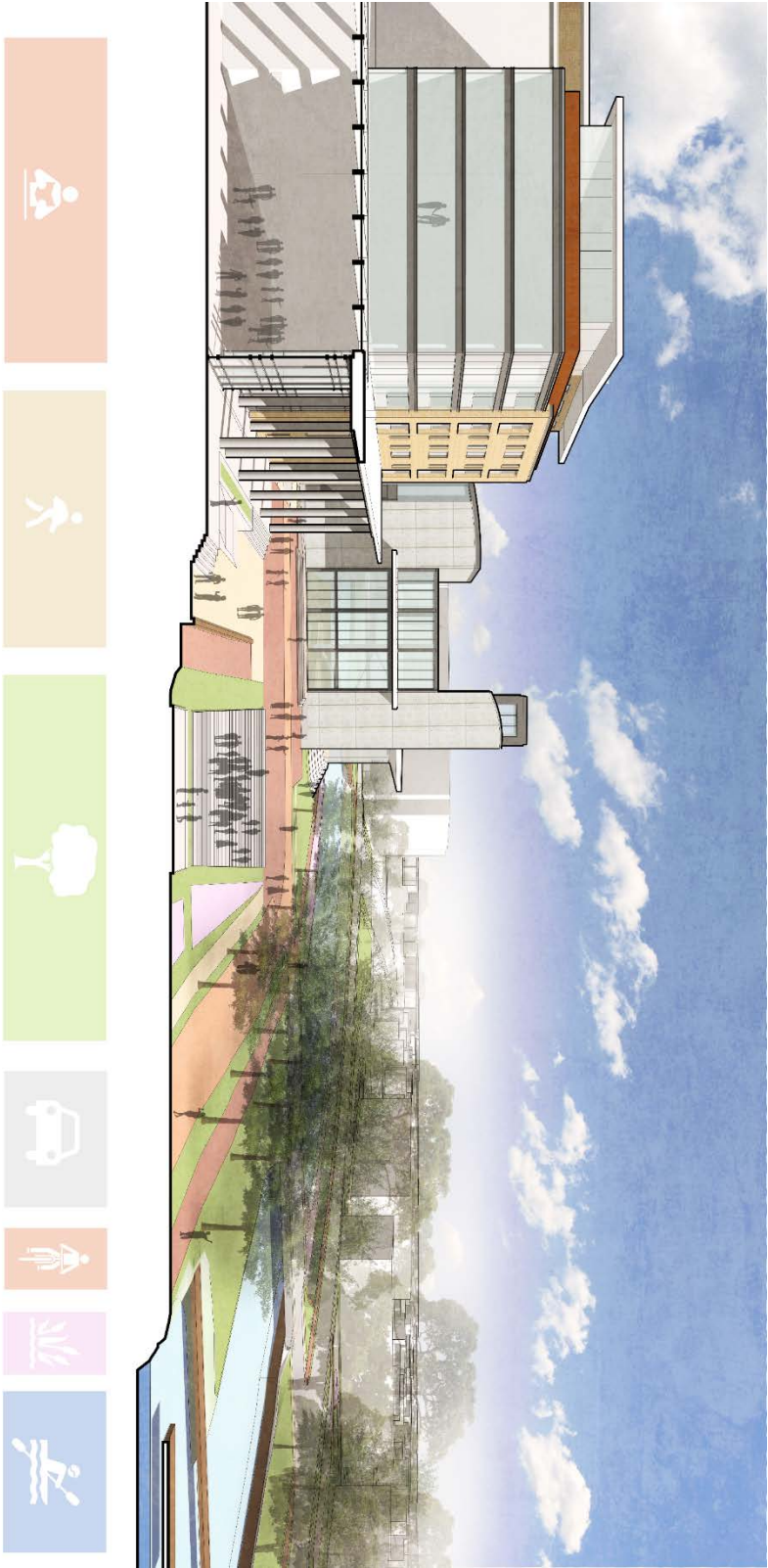


Plaza Perspective – 8 feet of Sea Level Rise





Plaza Section Perspective



Performance Hall Perspective





South Prong Aerial Perspective



South Prong Exercise Area Under Buildings



# South Prong Section Perspective





North Prong Aerial Perspective

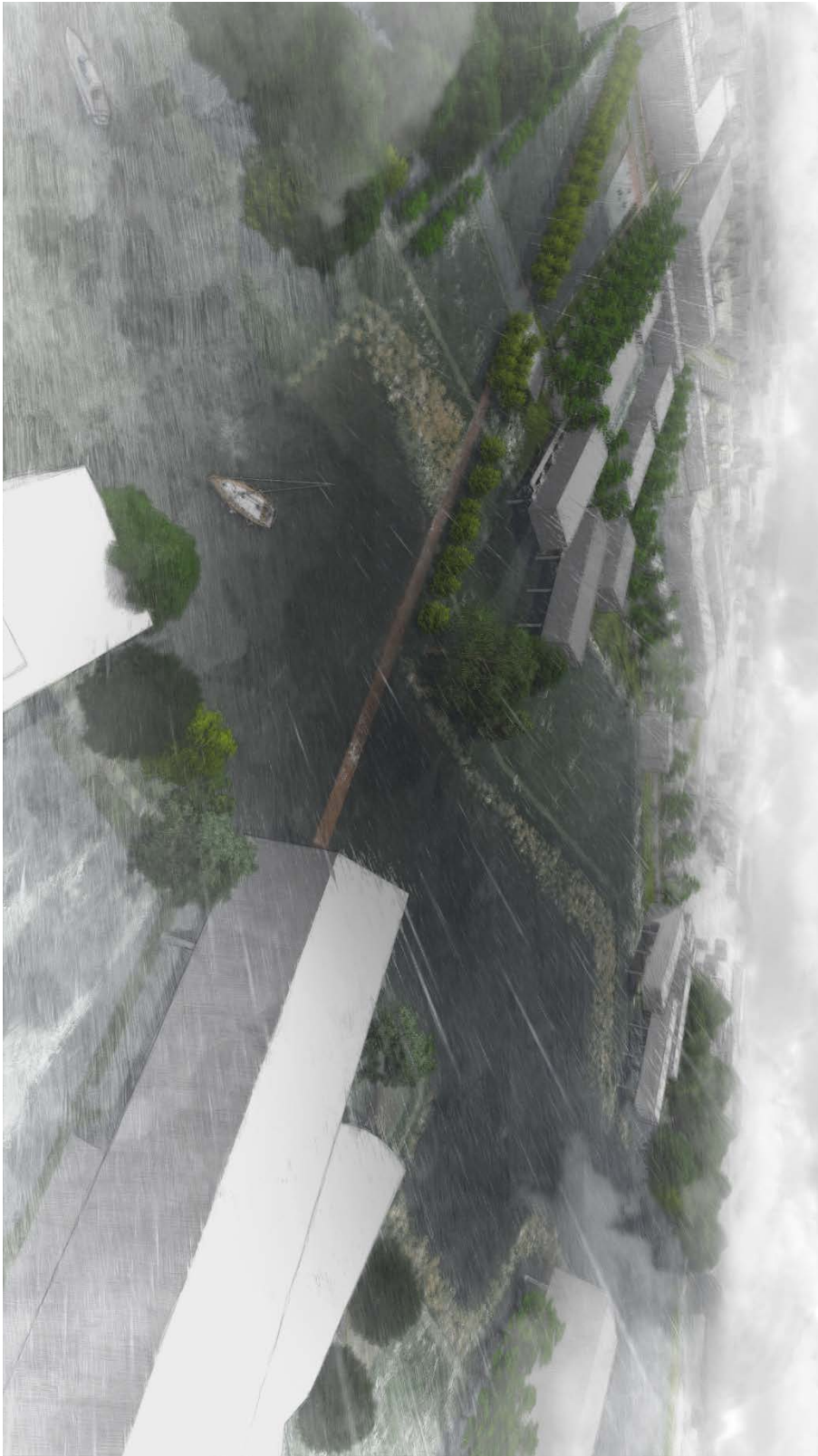




North Prong Aerial Perspective – 6 feet of Sea Level Rise



North Prong Aerial Perspective – 8 feet of Sea Level Rise





North Prong Perspective



North Prong Perspective – 6 feet of Sea Level Rise





North Prong Perspective – 8 feet of Sea Level Rise



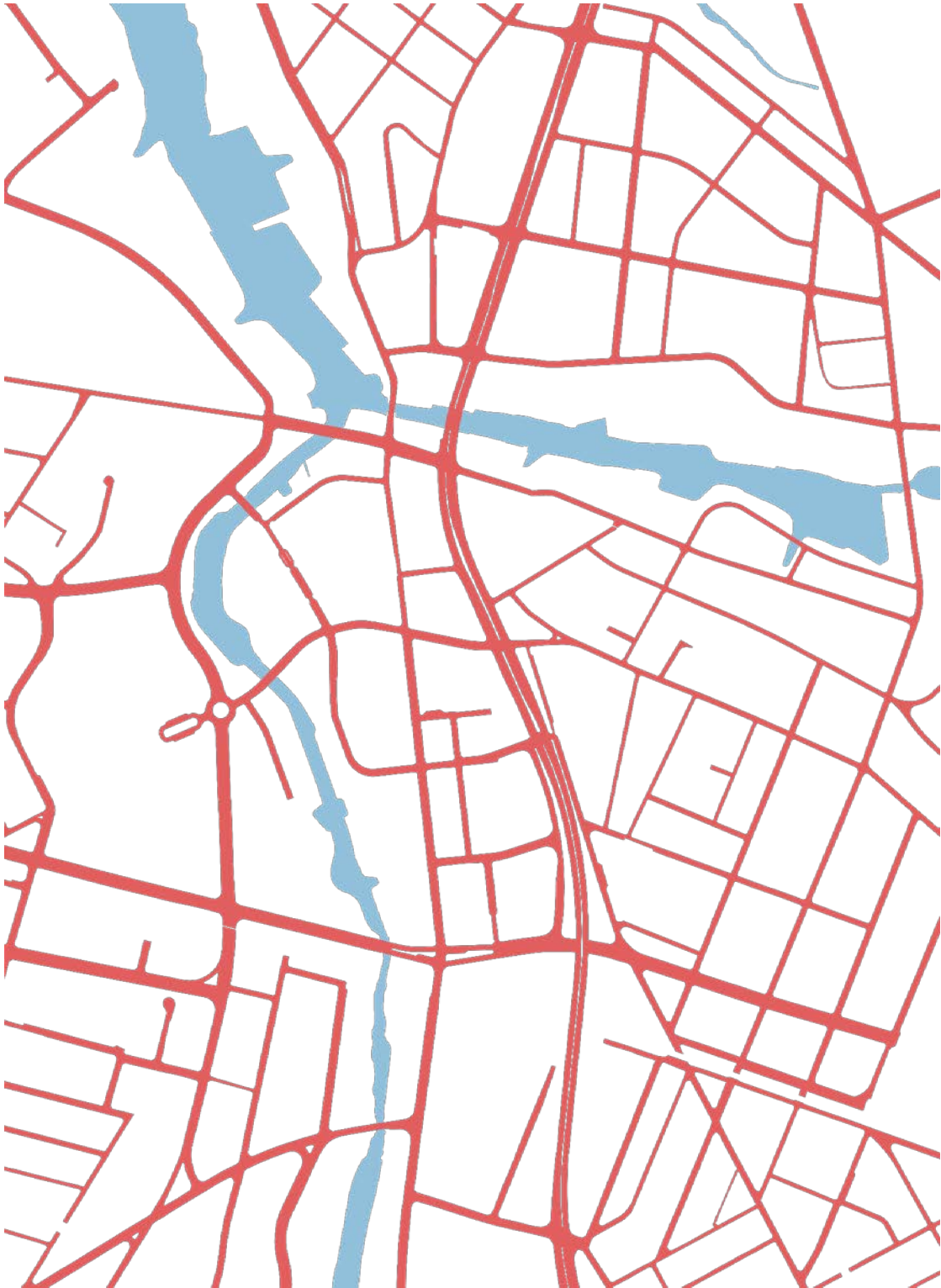
## North Prong Section Perspective





Diagrams

Proposed Street Grid



Proposed Figure Ground



## Proposed Places Diagram



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