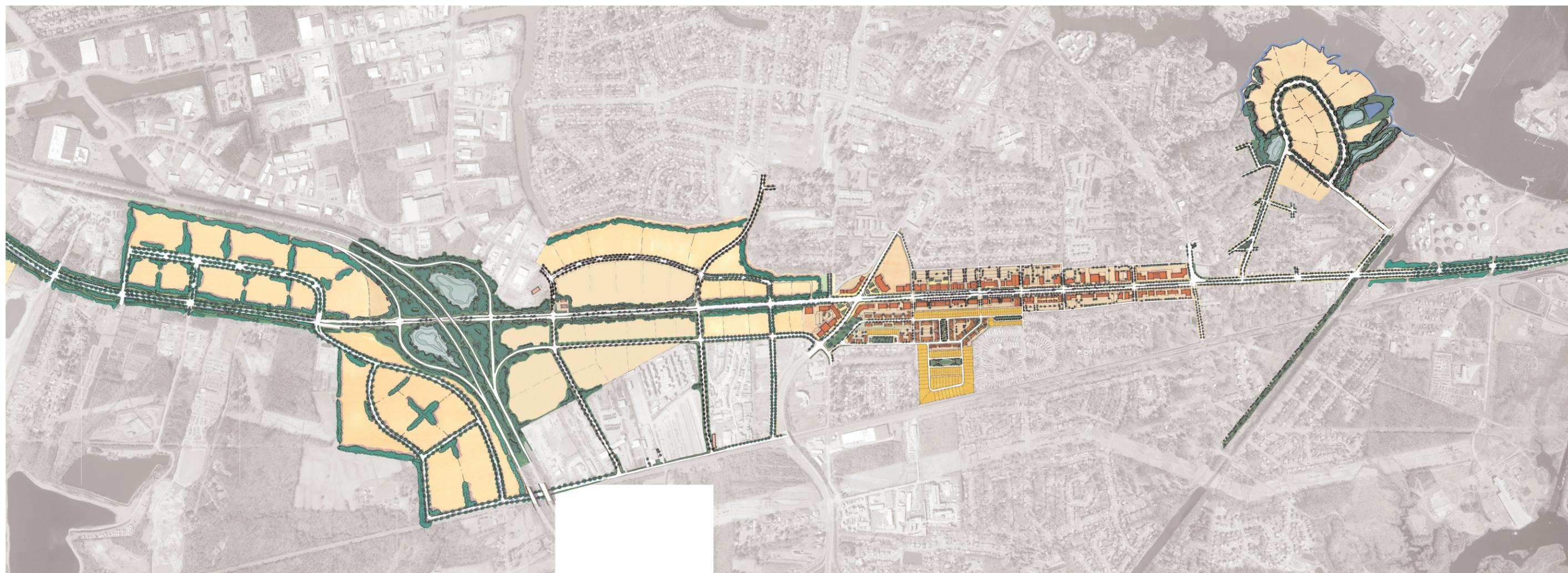


SOUTH MILITARY HIGHWAY CORRIDOR STUDY:

Chesapeake, Virginia **U R B A N D E S I G N A S S O C I A T E S**

21 DECEMBER 2005



South Military Highway Corridor Study

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Concerned Citizen/Area Resident

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Deep Creek/Parkview Civic League

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FUNDED BY
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Table of Contents

EXECUTIVE SUMMARY	1
PROCESS	4
URBAN DESIGN ANALYSIS	7
STRATEGIC RECOMMENDATIONS	12
FRAMEWORKS	14
THE STRATEGIC PLAN	17
Bower's Hill	18
The Core	21
Gilmerton	25
URBAN DESIGN GUIDELINES	28
ARCHITECTURAL DESIGN GUIDELINES	37
IMPLEMENTATION	38
APPENDIX: TRANSPORTATION	42

Executive Summary

Background

South Military Highway in Chesapeake, Virginia has a long and treasured history. It was the region's primary thoroughfare and economic driver prior to the construction of the interstate system in Hampton Roads during the late 1960s. However, the status and condition of the corridor has been in a steady decline for twenty years.

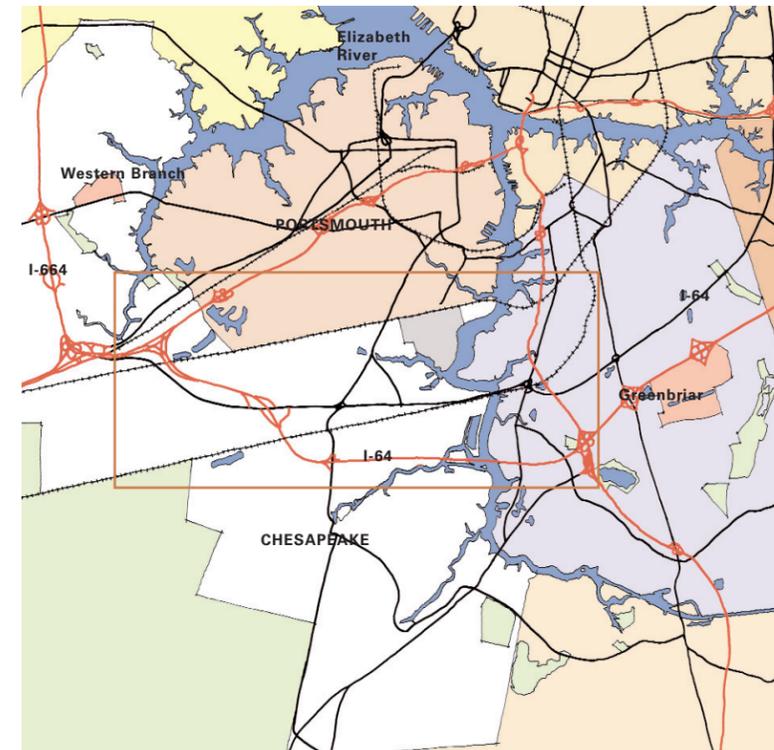
Currently the corridor is in disrepair. Many of the uses along it are poorly maintained and inappropriately located. The roadway is in need of repair and the traffic volumes and speeds split the community. Industrial access to the freeway is restricted due to limited capacity and an aging infrastructure. As a result, the residential neighborhoods are negatively effected by the circuitous industrial traffic. South Military highway is no longer a driver for economic development.

In February of 2003, recognizing the importance of the corridor in the community from an economic standpoint and in the region from a transportation perspective, the City Council established a task force to study and make recommendations for improving the corridor. The Task Force was organized into three committees (Fix Up, Clean Up and Build Up).

Process

In the Spring of 2005, Urban Design Associates and Kimley-Horn and Associates were retained by the City of Chesapeake to develop a plan for the future "Build Up" of South Military Highway.

Urban Design Associates (UDA) was the lead firm responsible for the planning process and the urban design plan. Joining the UDA team as sub-consultants to address traffic engineering and transportation planning was Kimley-Horn and Associates (KHA).



Existing conditions along South Military Highway

A representative and diverse South Military Highway Corridor Steering Committee was established prior to the onset of the planning work to include residents, property owners, merchants, cultural organizations, churches, and City and County government officials. The planning process had three phases:

Phase I: Understanding Data Collection and Analysis

Phase II: Exploring Design Charrette and Trying Out Design Ideas

Phase III: Deciding Creation of a Final Plan

Each phase was organized around a team visit to Chesapeake.

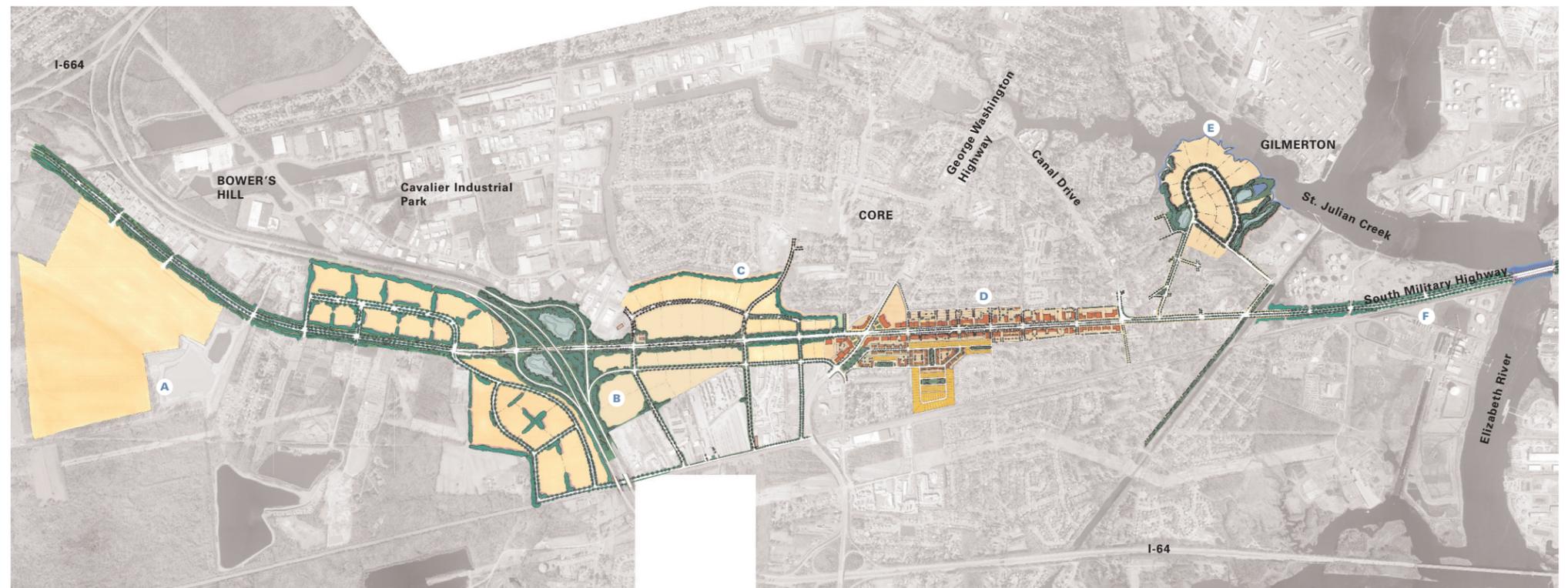
The first visit, in Phase I, involved collection of “hard” data, such as land use, traffic and transit data, and historic data, as well as the collection of “soft” data from interviews, focus groups, and an initial public meeting with residents, property owners, business persons, major institutions, churches, City officials, and other stakeholders (April 2005).

The second visit, in Phase II, was a four-day design charrette in Chesapeake to explore and test design alternatives. The charrette culminated in a public presentation (May 2005).

The third visit, in Phase III, included a final presentation of the plan at a public meeting and a meeting with the Steering Committee.

Vision

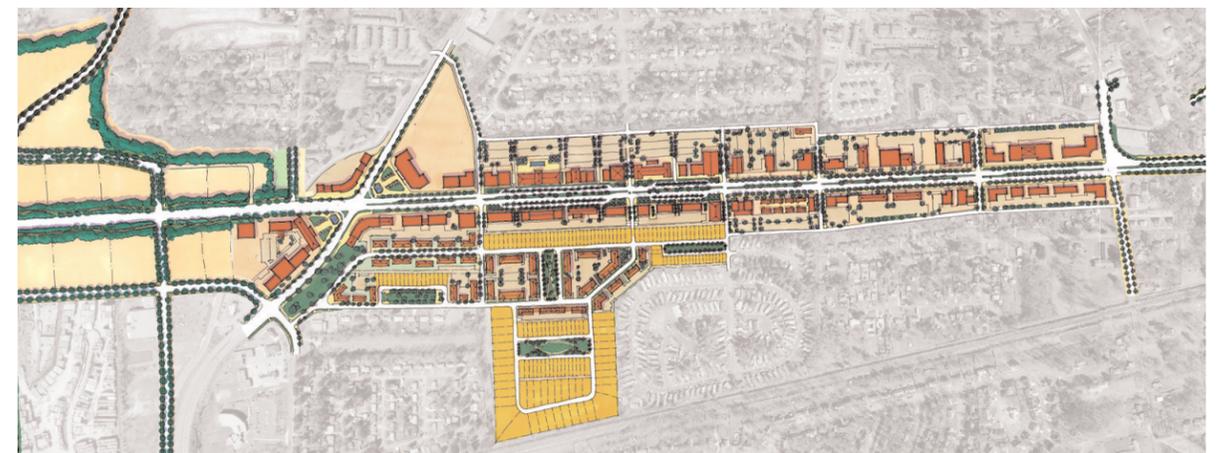
The planning process was highly participatory, engaging the citizens and stakeholders along the corridor and the neighborhoods astride it. An overall vision emerged which was embraced by all.



ILLUSTRATIVE MASTER PLAN

- A New industrial/economic development opportunities
- B Improved Interchange and new economic development opportunities
- C Parallel roads and development opportunities
- D Redeveloped core with neighborhood supportive uses
- E Improved circulation and a redeveloped industrial waterfront
- F New Gilmerton Bridge

South Military Highway will transform into a roadway that balances local needs and regional needs. South Military Highway will positively contribute to the quality of life of the immediate community by providing employment, retail, commercial and development opportunities.



Key Strategic Recommendations

The Plan contains five key recommendations. These recommendations organize land uses and structure the streets and open spaces in the study area.

1 Balance the Regional and Local Demands of Traffic

Facilitate access to properties as well as through traffic

2 Encourage Industrial Uses adjacent to the freeway

Improve freeway access, discourage industrial uses adjacent to neighborhoods

3 Reclaim the Core of the Corridor for the Community

Create a pedestrian friendly street with a mix of uses

4 Build a Network of Streets

Improve cross connections, create regular streets and blocks and signal spacing,

5 Connect to Open Spaces

Create greenways, blueways, paths, and trails that link the neighborhoods together.

Initiatives

The South Military Highway Corridor Plan focused on three initiative areas.

1 Bower's Hill

2 Community Core

3 Gilmerton

The three initiative areas represent three different land uses, community characters and functions. The western portion of the Study Area, Bower's Hill, extends from the I-664/Bower's Hill interchange

in the west to the I-64/Cavalier Boulevard Interchange and will develop as a low-density, light-industrial area. However it will remain rural in character. The roadway will become a four lane parkway, with industrial uses tucked behind the existing tree wall. A reconfigured interchange and an improved roadway will spur growth in the undeveloped portions of the corridor.

The Central portion of the Study Area will transition into the Community Core. The Community Core is defined as the area between the intersection of South Military Highway and George Washington Highway in the west and the South Military Highway/Canal Drive intersection in the east. This portion will contain mixed use buildings, improved intersections, additional traffic signals and a pedestrian friendly environment. The residential areas will become connected to the uses along the corridor as the uses will serve the daily needs of the residents and employees in the area. Industrial uses will be relocated to either of the other two initiative areas and new uses, compatible with neighborhood development, will continue to be developed.

The eastern portion of the corridor, the Gilmerton Area, will be strengthened as an industrial area. The Gilmerton Area begins immediately east of the South Military Highway/Canal Drive intersection and ends in the immediate vicinity of the South Military Highway/Bainbridge Boulevard interchange. Water dependent uses will be located along the southern branch of the Elizabeth River and Saint Julian Creek. Access to these properties will be improved in order to protect the adjacent residential communities. South Military Highway will be rebuilt as a six-lane boulevard with a median and regularly spaced traffic signals.



Perspective of the redeveloped core



Perspective of the redeveloped intersection of George Washington Boulevard and South Military Highway

Process

Phase 1

During Phase 1 of the project, the UDA team met with focus groups to learn first-hand their perceptions of community issues, the strengths and weaknesses of the Study Area, and their visions for the future. The focus groups included residents, major employers, service institutions (churches, schools, social services), building owners and real estate brokers, merchants, City staff, the Mayor, and members of Council. A public meeting was held on 24 April 2005 at the G.A. Treakle Elementary School. All participants at the focus groups and the public meeting were asked the same three questions:

- What are the strengths, or good things, about South Military Highway?
- What are the weaknesses, or bad things, about South Military Highway?
- What is your vision for the future of South Military Highway?

In addition, each participant was asked to place colored dots on a map identifying good places (green dots), bad places (red dots), and places where things can improve (blue dots).

The images and charts on the following pages summarize the responses to the three questions and the dot exercise.

Prior to the design charrette in May 2005, a one-day working session was held with key members of the client group at UDA's office in Pittsburgh to review the data analysis and drawings produced by UDA and KHA.

Phase 2

The second phase of the planning process included an intense three-day working session in Chesapeake in which the design and development principles developed in the first phase were translated into a series of design alternatives. The focus groups and steering committee were re-convened throughout the Charrette and design ideas were presented and refined. On Thursday evening a public meeting was held at G.A. Treakle Elementary School where design alternatives were presented. Attendees were invited to comment on what they liked and disliked about the alternatives.

Phase 3

The third phase included developing a preferred plan and an implementation plan which identifies sources and uses of funds and phasing. This report was presented to City Council December 21, 2005.



STRENGTHS

- Central location and access to the region
- Strong Market: rooftops, employees, traffic volumes, and Deep Creek
- Loyal and established surrounding neighborhoods
- Historic sense of place
- Redevelopment opportunities



WEAKNESSES

- Traffic: trucks, dangerous intersections, poorly timed signals, feeder roads, no sidewalks
- Nuisance uses intermingling with the neighborhoods
- Lack of service retail for the community
- Unattractive. Poorly maintained businesses and infrastructure



- VISIONS**
- Improved road with better access and circulation
 - Healthy businesses serving the community
 - Better enforcement and compliance with codes
 - Access to parks and open spaces
 - Coordinated design of infrastructure and private development



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Urban Design Analysis

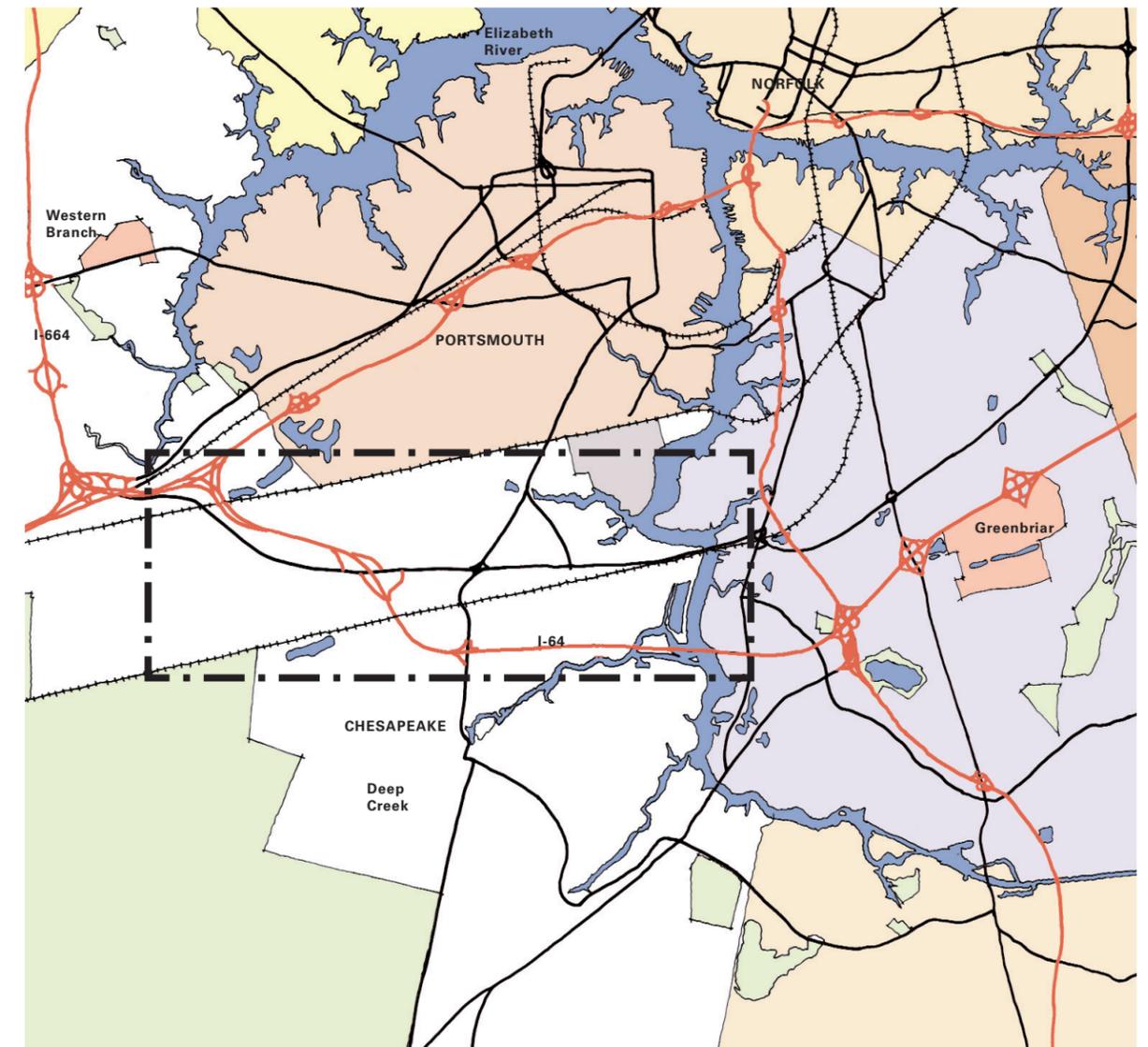
After the data gathering from the initial trip to Chesapeake in April 2005 was completed, the consultant team prepared an analysis of the physical conditions of the study area, as well as a summary of citizen input on the current strengths and weaknesses of Chesapeake and visions for its future. The following section includes the analysis drawings assembled from hard data, in the form of UDA X-Rays®, followed by a summary of the soft data from interviews, focus group meetings, and the public meeting.

The aerial photograph, shown on the following page, describes the existing conditions of the study area. The study area contains industrial, rural, commercial, and residential uses. The Corridor divides several neighborhoods and connects directly to the interstate system on the east and west ends.

The Study Area is located in the middle of Chesapeake, in the Hampton Roads/Tidewater metropolitan area. Greenbriar and western Branch, the closest commercial areas are both approximately 15 minutes away by car.

X-Ray Drawings

The consultant team collected and analyzed hard data to better understand the study area, as well as to illustrate to residents the assets and natural patterns of the community. A UDA X-Ray drawing isolates a physical element, such as streets, to illustrate patterns and opportunities difficult to perceive when combined with other uses in a single drawing. By studying natural and man-made systems, the underlying patterns, problems and opportunities of a project area are unveiled. Often from these patterns, the beginnings of strategies and solutions emerge.



Regional locator

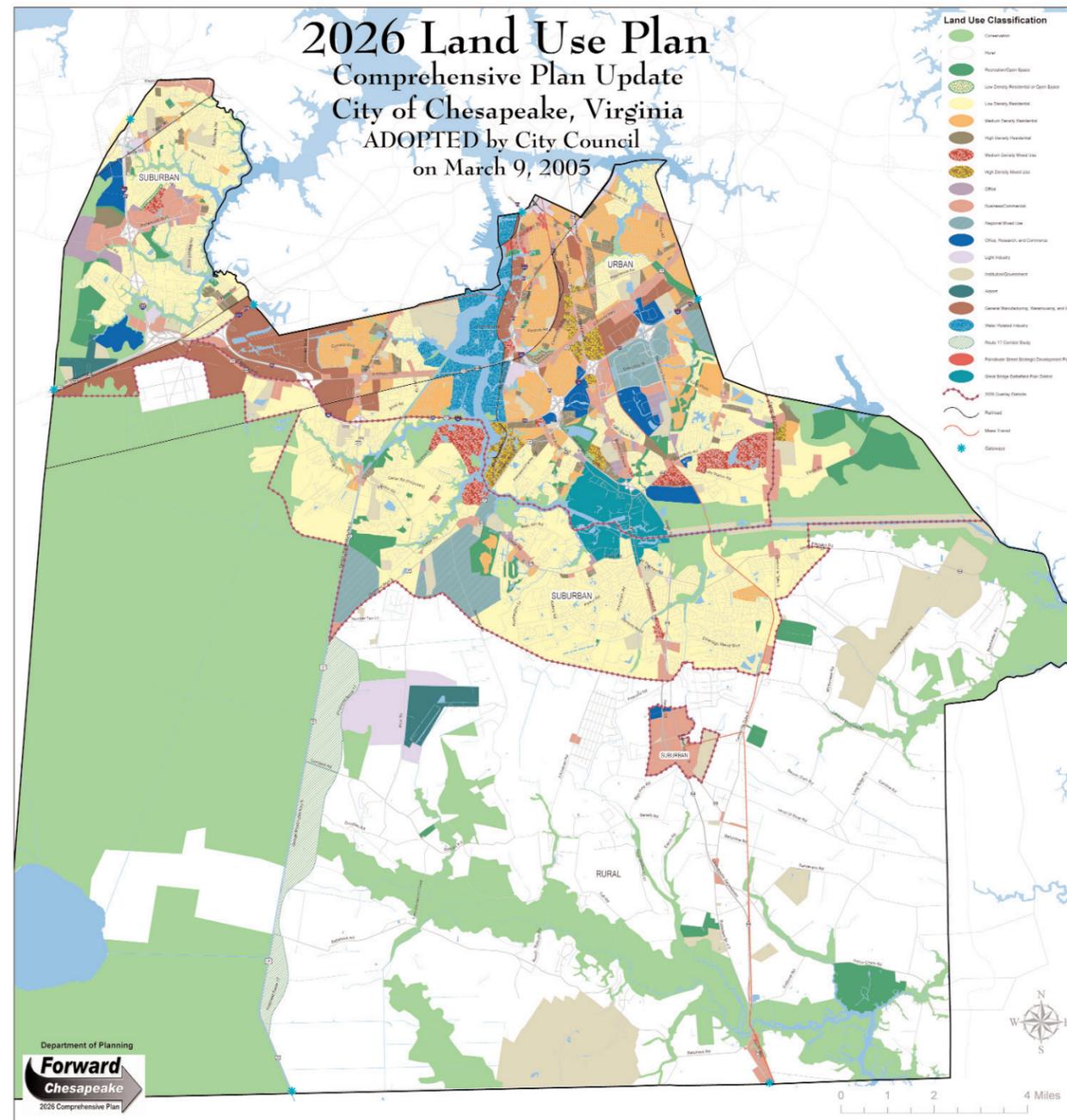
Previous Studies

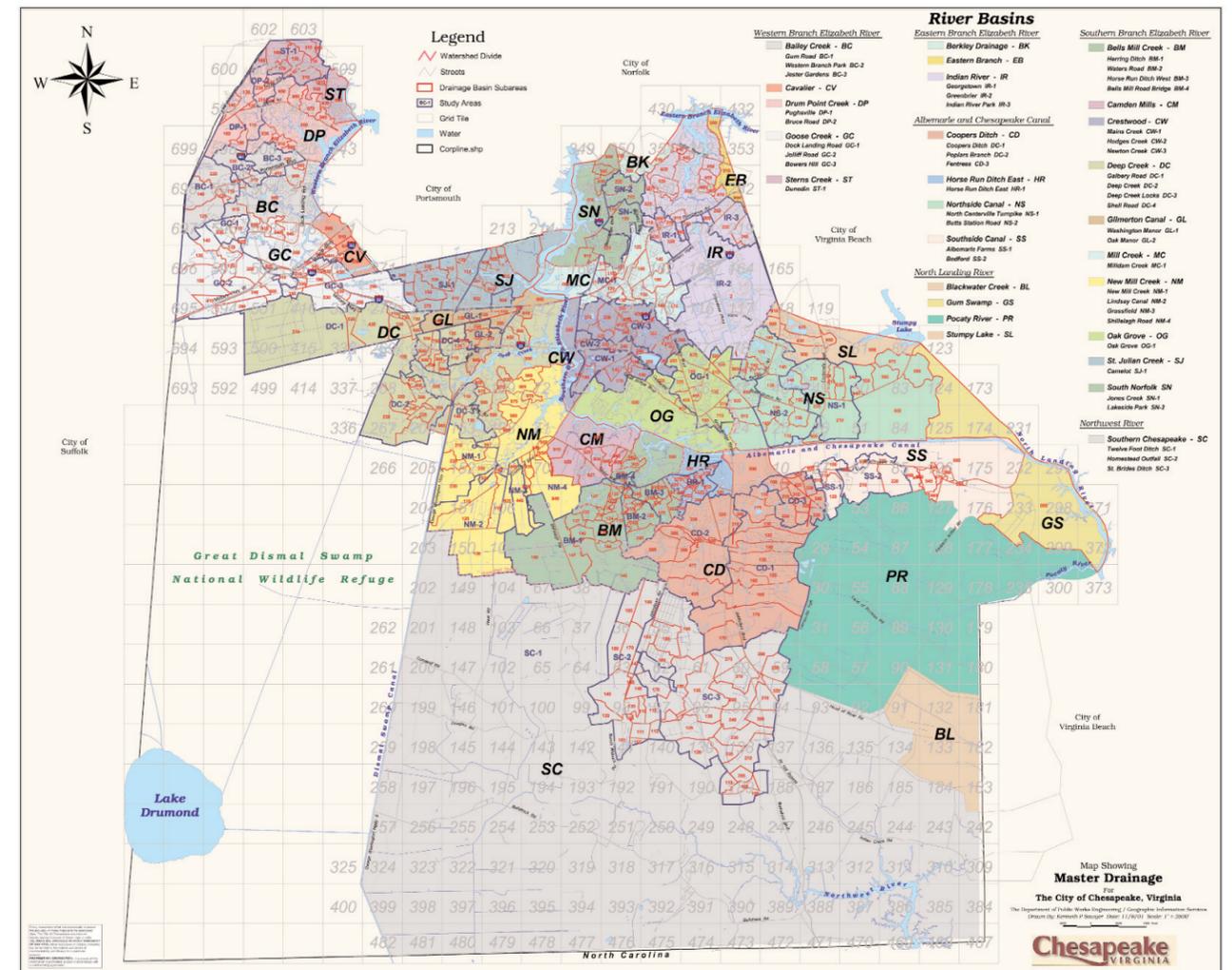
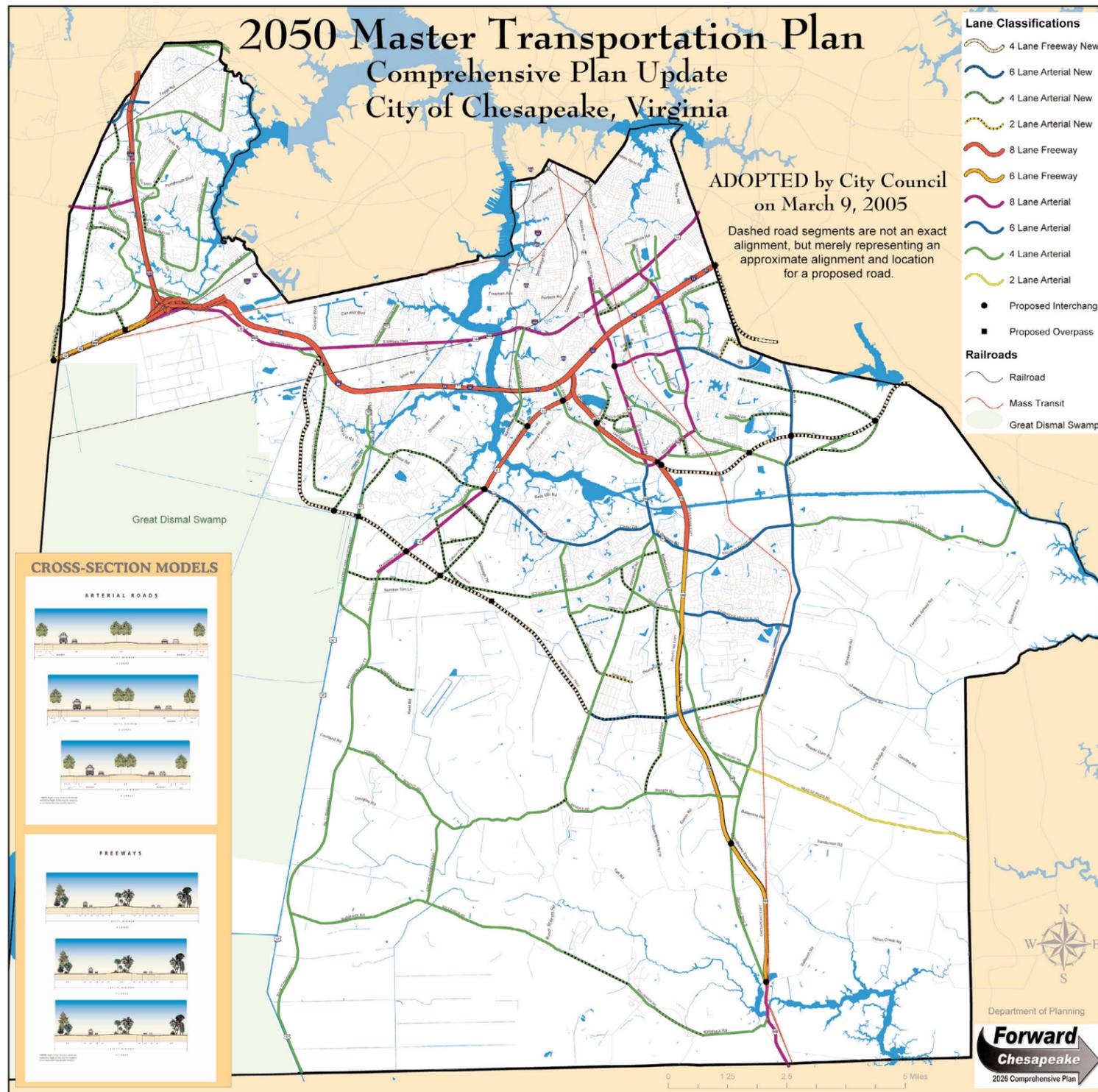
This Plan is firmly rooted in several studies and efforts that preceded it. Many of the ideas contained in this plan endorse or build upon initiatives from a range of stakeholders.

In February 2003, City Council established the South Military Highway Task Force. This Task Force was charged with studying the existing corridor and making recommendations for improvements along the corridor. The Committee forwarded several recommendations to City Council that are built upon in this Report.

The City's Comprehensive Plan, adopted in the Spring of 2005, establishes an aggressive growth policy that has wide ranging implications on the City as a whole and on the study area in particular. The Comprehensive Plan establishes a growth boundary that requires most new development be directed inward; to areas of the City that are already served with infrastructure. South Military Highway is one such location that is identified by the Comprehensive Plan as a future growth area.

In addition to the City's Comprehensive Plan, a Master Transportation Plan (MTP) for 2050, was adopted by City Council on March 9, 2005. The plan projects the future transportation demand for the City, and models proposed street sections to meet this future demand. The MTP reinforces the importance of South Military Highway as a regional transportation asset.





(LEFT) City of Chesapeake Master Transportation Plan (MTP) for 2050 that was adopted by City Council on March 9, 2005.
(TOP) City of Chesapeake Master Drainage map for the City.

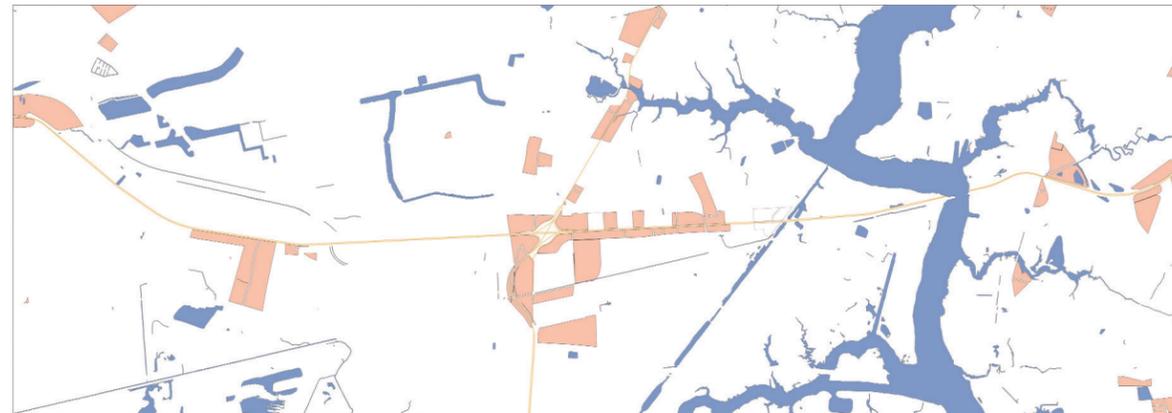


Existing conditions





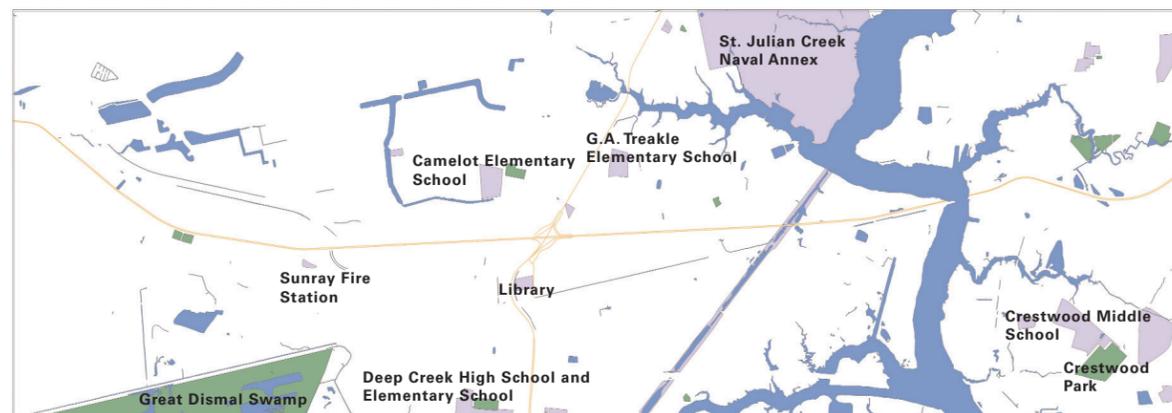
ARTERIALS AND HIGHWAYS Military Highway is parallel to the interstate with access on both ends; it is an alternate route when incidents occur on the interstate. South Military Highway serves both regional and local needs.



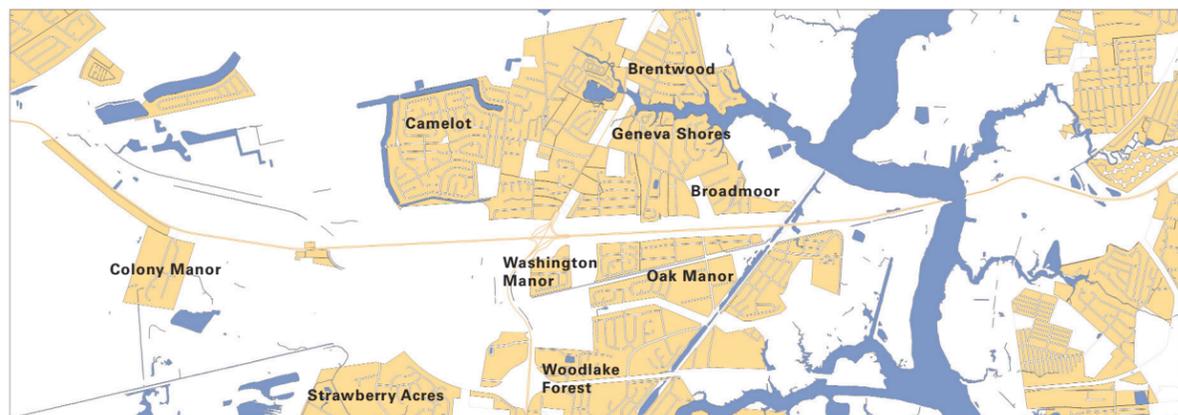
COMMERCIAL Commercial uses are congregated along Military Highway and George Washington Highway.



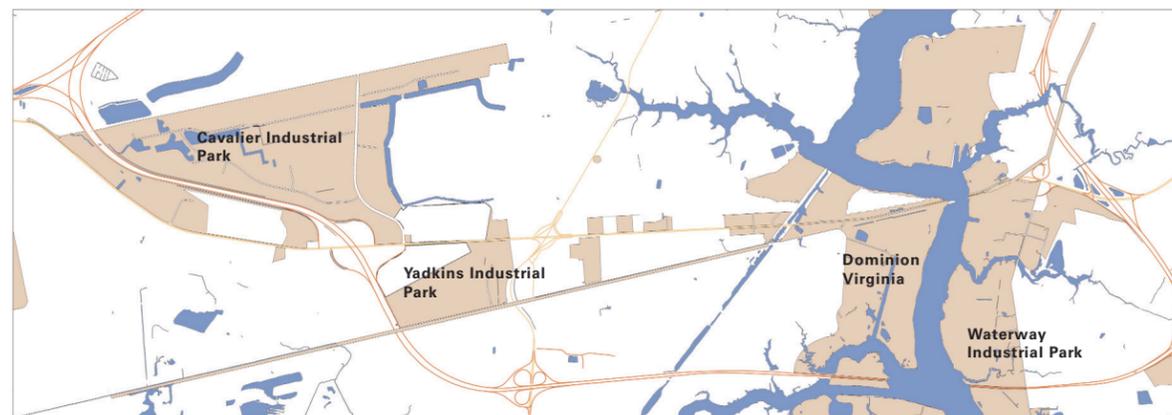
ARTERIALS AND STREETS Neighborhood street grids are discontinuous. The incomplete street network burdens Military Highway and George Washington Highway with all through traffic.



PARKS AND INSTITUTIONS There are very few parks serving the community.



RESIDENTIAL Residential neighborhoods are split by South Military Highway.



INDUSTRIAL Most industrial uses are located at the ends of the study area.

Strategic Recommendations

On the pages following are the development framework and open space framework that form the structure of the South Military Highway Corridor Plan. These two frameworks are based on the five strategic recommendations illustrated at the right and listed below.

1. Balance the Regional and Local Demands of Traffic

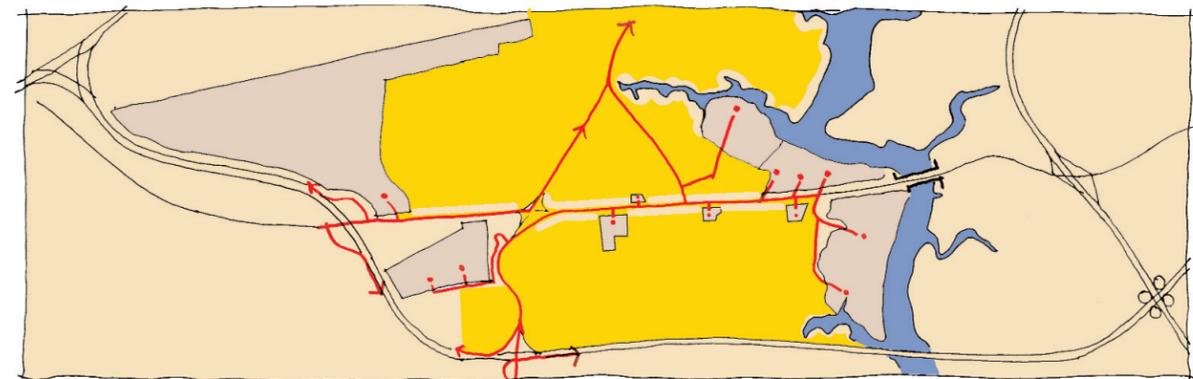
South Military Highway must serve both regional and local needs. For the region, the road must support through traffic between points east and west. In addition, South Military Highway serves in the role as a relief valve for the interstate in the event of an incident or congestion on Interstates 64 and 464. The Plan recommends achieving this balance by creating a roadway with sufficient capacity to carry through-traffic but also a roadway with regular signal spacing, regular blocks and coordinated parking and access such that local traffic can easily and safely access properties within the corridor.

2. Encourage Industrial Uses Adjacent to the Interstate

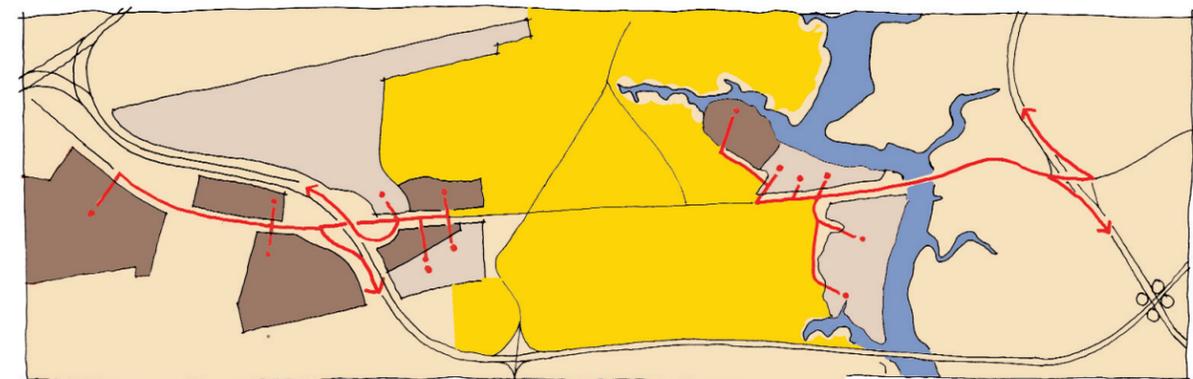
The Plan recommends industrial uses be consolidated at the ends of the corridor where there is superior access to Interstates 64 and 464. Currently, with the weight restrictions on the Gilmerton Bridge and the scattered industrial uses, the neighborhoods and non-industrial uses along the corridor are negatively impacted by the high volumes of truck traffic. All traffic to and from industrial uses along the southern branch of the Elizabeth River are forced to use Canal Drive and South Military Highway, and George Washington Highway. New industrial development should be encouraged along the southern branch of the Elizabeth River, Saint Julian Creek, in the Bower's Hill area, and properties adjacent to Interstate 64.



STRATEGY 1 Balance regional and local traffic.



STRATEGY 2: EXISTING Industrial traffic traverses through the neighborhoods.



STRATEGY 2: PROPOSED Encourage industrial uses adjacent to the freeway and interchanges. New street connections and a new Gilmerton Bridge will improve access to Interstates 64 and 464.

3. Reclaim the Core of the Corridor for the Community

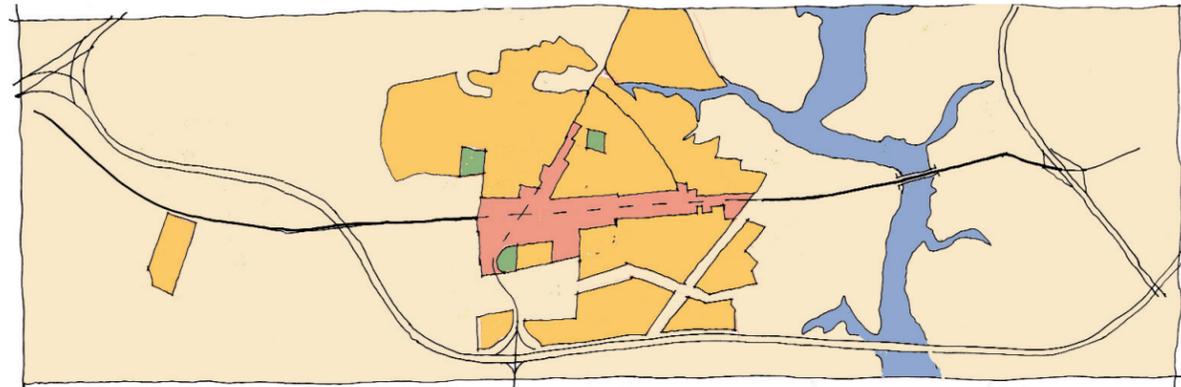
The properties in between Canal Drive and King Arthur Road should be reclaimed for the Community. Industrial uses should be eliminated and mixed uses, including restaurants, offices, new housing and retail should be located in the core of the corridor such that residents of Woodland Trails, Oak Manor and Geneva Shores can find many of their daily activities of life along the South Military Corridor. The intersection of the South Military Highway and George Washington Highway should be re-built such that exclusive right-turn lanes are incorporated into the intersection and adjacent properties can be reclaimed for development.

4. Build a Network of Streets

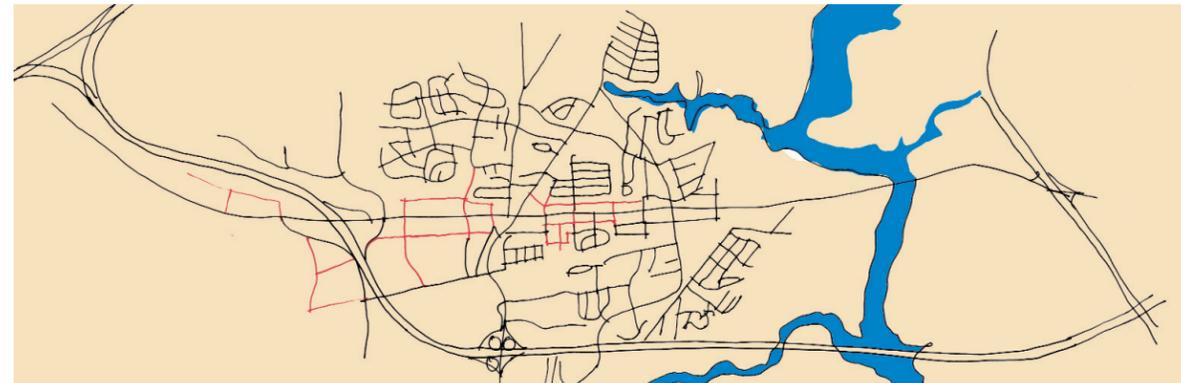
In order to minimize reliance on South Military Highway for all traffic movements, a network of streets both parallel and perpendicular to South Military Highway should be introduced. New parallel streets will provide access to properties as well as provide an alternative means for local traffic to move east and west. New perpendicular streets will connect the neighborhoods across the corridor and provide a structure for regularly spaced traffic signals.

5. Connect to Open Spaces

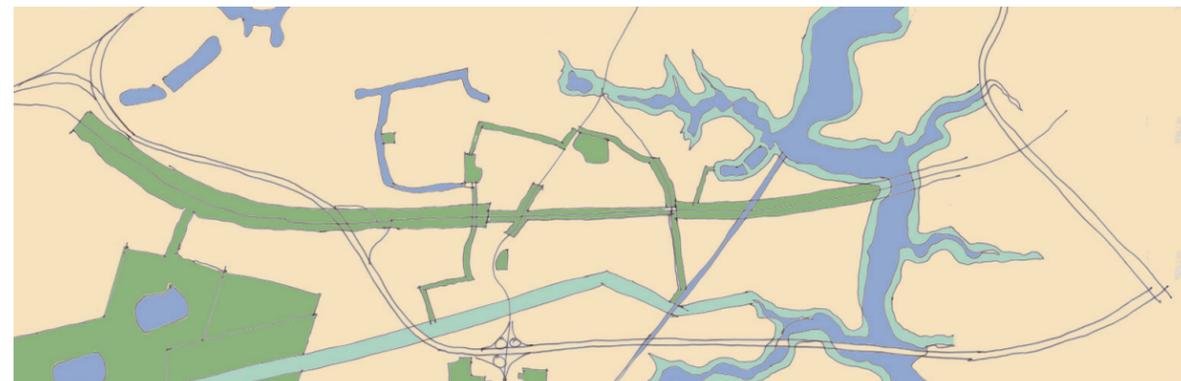
A connected open space is important for maintaining the quality of life of the residents along the corridor. A frequently cited strength of the area is the Library and the local schools. The plan recommends connecting these important institutions with a network of sidewalks, paths, trails. The connected system will become a recreation amenity and will improve the quality of the neighborhoods.



STRATEGY 3 Reclaim the Core for the community.



STRATEGY 4 Build a network of streets.



STRATEGY 5 Connect to open spaces.

Frameworks

Streets

The Master Plan recommends several street connections and improvements designed to facilitate the appropriate movement of industrial traffic, local traffic and regional traffic. Most significantly, the Plan recommends that South Military Highway is to be rebuilt as a six lane road from the Gilmerton Bridge west to the I-64/Cavalier Boulevard interchange and remain as a four-lane road from the I-64/Cavalier Boulevard interchange to its terminus with U.S. Route 58 in Bower's Hill. This considerable investment will improve the front door to hundreds of businesses in the area. In addition, the Plan recommends several local street connections that will facilitate the movement of industrial and commuter traffic to the interstate, and away from the proposed commercial center for the community. Finally, the Plan recommends local connections between the neighborhoods and the proposed community commercial center.

Development

The development framework establishes the areas and patterns of new development along South Military Highway over the next five to ten years. Much of the existing land uses will remain unchanged. The plan recommends consolidation of industrial uses towards the east and west of the study area, where there is good access to freeway interchanges. All industrial uses and uses not otherwise compatible with neighborhood development should be eliminated from the core of the study area. This area should redevelop with a mix of uses, including office, commercial, retail, restaurant and residential. Light industry and manufacturing can be located along the corridor, east of Canal Drive and west of King Arthur Road to Bower's Hill which

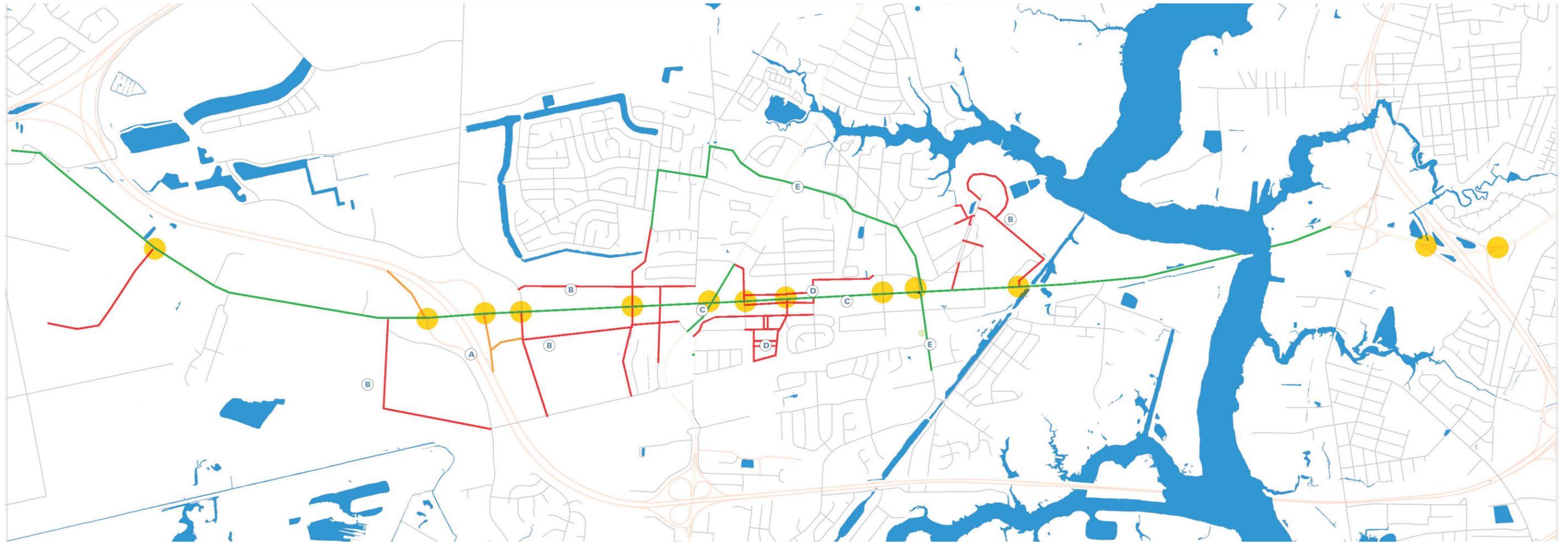
should be opened to industrial and light-industrial development opportunities.

Open Space

The open space framework for The Study Area will enhance the community's quality of life. The open space system will create connections between existing and planned parks and institutions. The open space system contains broad recreational greenways in the power easement, bike trails, and bike lanes along Military Highway, Canal Street, Gilmerton Road, and King Arthur Road. In addition, the Plan recommends a location for a future large scale recreation park with multiple athletic fields.



- OPEN SPACE FRAMEWORK**
- A** Proposed Regional Recreation facility and City Reservoir
 - B** Bike path/lanes on Military Highway
 - C** Bike lanes/signs on local streets
 - D** Recreational greenway in the Dominion Power easement



STREET FRAMEWORK

- A** Improved interstate interchange
- B** New industrial access roads
- C** Improved South Military Highway and George Washington Highway
- D** New community cross streets aligned across South Military Highway
- E** Green Streets that link neighborhoods to community facilities and institutions

- NEW STREETS
- IMPROVED STREETS

The Strategic Plan

The Strategic Plan divides the corridor into three distinct zones and character areas. The three zones correspond with the proposed development patterns envisioned along the corridor.

The western end of the corridor, Bower's Hill, is envisioned as a rural industrial corridor. The roadway will remain four lanes wide and undeveloped parcels will become opportunity sites for economic development. An improved interchange will facilitate revenue generating redevelopment.

The central portion of the corridor, the Core, will transform into a community serving commercial node with retail and community services. All industrial uses will be relocated to either the east or west end of the corridor. The road will be reconstructed as a six-lane facility with new landscaping, parking and signage.

The eastern section of the corridor, Gilmerton, will feature a six-lane boulevard with a new Gilmerton Bridge. Properties along South Military Highway in this portion of the study area will redevelop as light industrial and manufacturing uses.



STRATEGIC PLAN The Plan is divided into three zones – each will evolve into a distinct area with consistent character and development patterns

Bower's Hill

Bower's Hill is the western district in the corridor study. The district boundaries include Interstate 664 to the west and George Washington Highway to the east. The Bower's Hill area is ideal for further industrial development, because of the large undeveloped parcels and direct access to Interstates 664 and 64 and US Route 58.

1. South Military Highway Street Section

South Military Highway will be widened over time into a new six-lane boulevard with a lush natural buffer. As the corridor develops with new industrial uses, buildings are encouraged to face South Military Highway with open views through the buffer. Truck docks and parking is encouraged to be placed behind buildings facing away from South Military Highway.

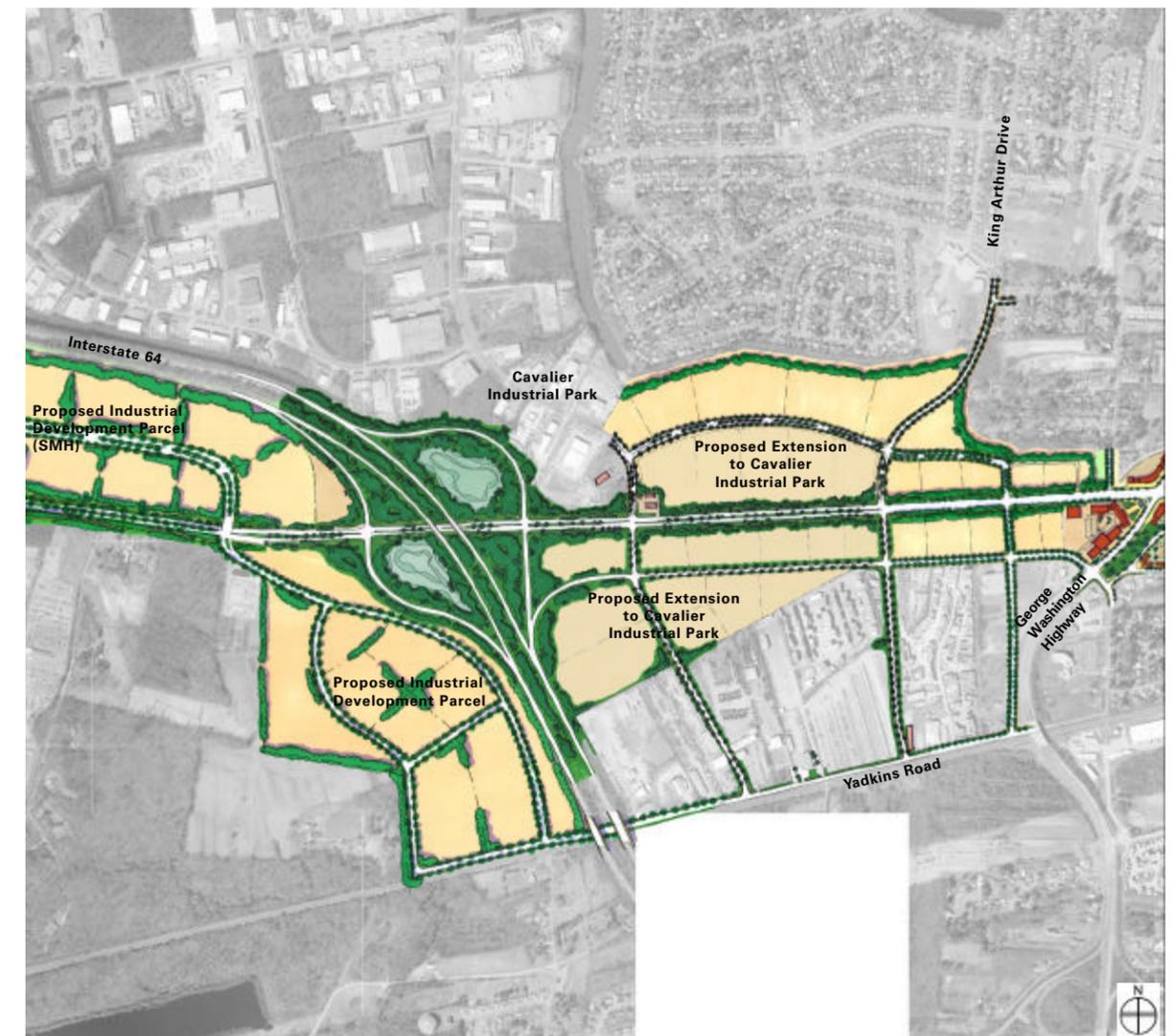
2. Revised Interchange at Interstate 64 and South Military Highway

There are two proposals for the interchange at Interstate 64 and South Military Highway. Both alternatives are designed to work with the proposed Interstate I-64/Pleasant Grove Parkway. Modifications to the ramps will transform this ramp system into an organized interchange by aligning the on and off ramps into two intersections.

3. Expansion of Cavalier Industrial Park

Cavalier Industrial Park should be extended east and south across Military Highway. Two new parallel streets are proposed north and south of Military Highway. Curb cuts should be eliminated along South Military Highway, and all parcels should be accessed from the new network of streets.

4. Increased Street Network



BOWER'S HILL An improved interchange in the Bower's Hill area will improve access to existing industrial parks and new industrial developments.

Additional street networks should be built. Parallel routes and new north/south connections should be made at regular intervals to connect truck traffic directly to South Military Highway. King Arthur Drive is an example of a street that should be extended south to Yadkins Road. The increased network removes truck traffic from the US Route 17/George Washington Highway intersection, and relieves congestion along South Military Highway.

5. New Greenway Connections

All new roads and all road improvements should account for the pedestrian and bicyclist. A bikeway is proposed in the buffer along South Military Highway from Interstate 664 to George Washington. The extension of King Arthur Drive south to Yadkins Road will be a new connection from the Camelot Community Center to the Library.



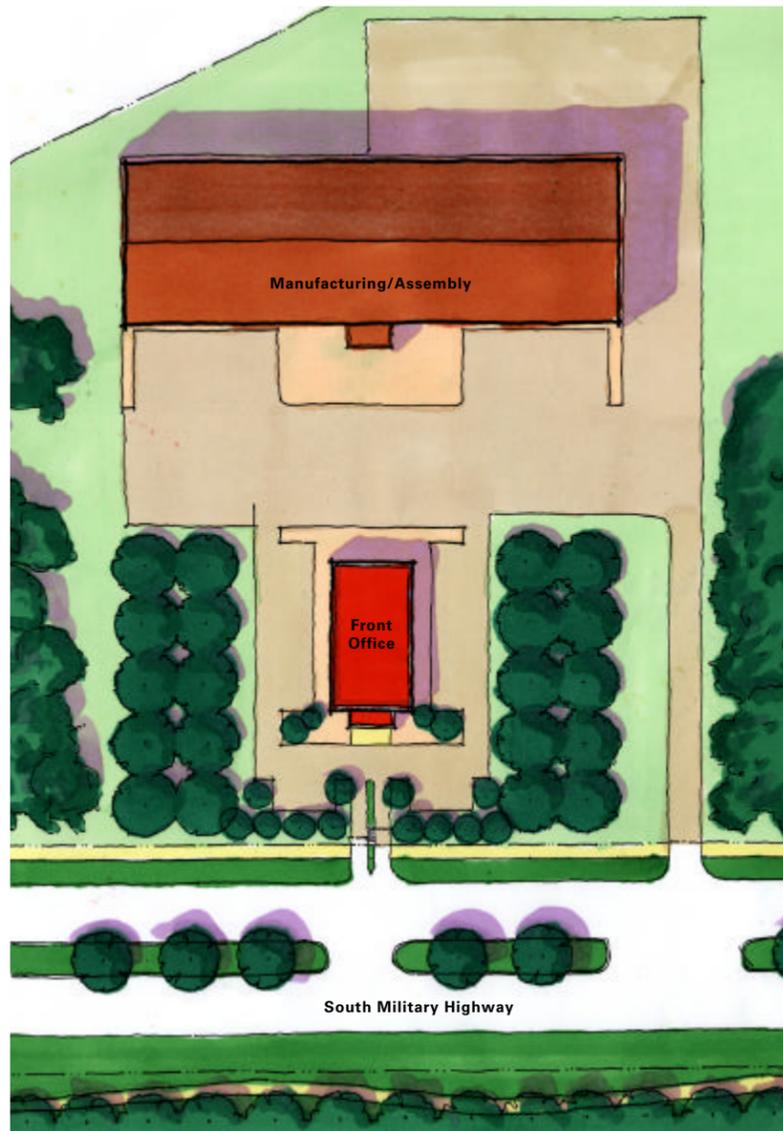
ALTERNATIVE ONE (ABOVE) Interstate 64 north exit ramp directly exiting into the new Cavalier Industrial Park South development.
 ALTERNATIVE TWO (ABOVE RIGHT) Interstate 64 north on ramp from Cavalier Industrial Park



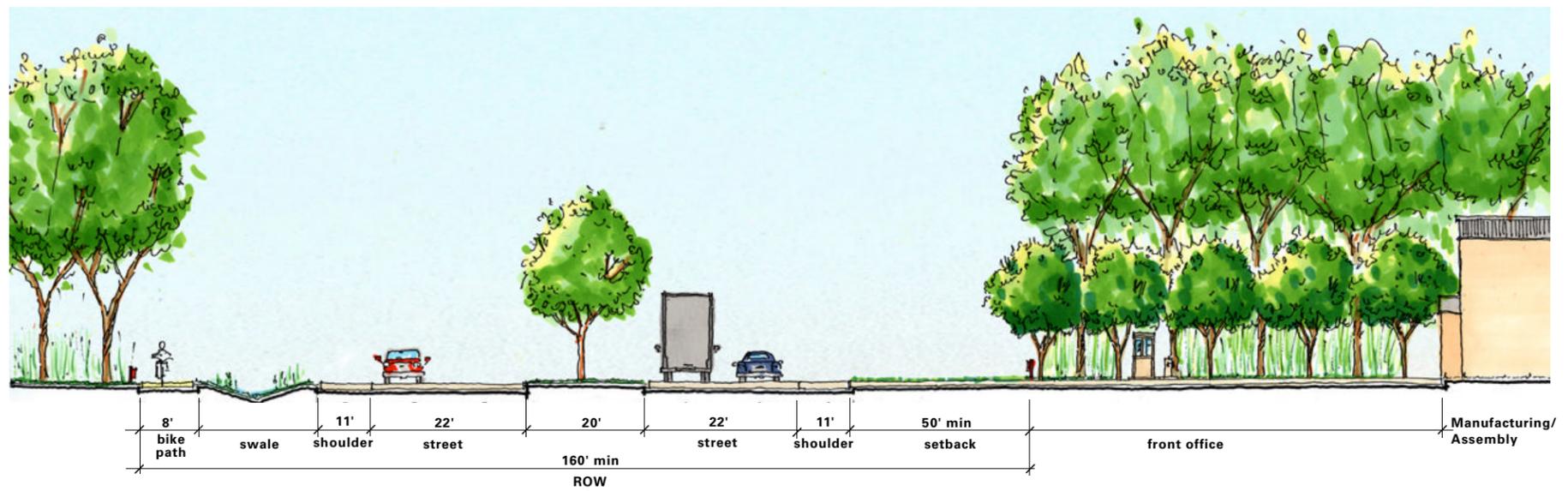
EXISTING CONDITIONS The freeway interchange has offset intersections. Northbound traffic originating at Cavalier Industrial park is required to make two difficult right hand turns.



ALTERNATIVE ONE (ABOVE) Proposed Interstate 64/Pleasant Grove Connector overlay.
 ALTERNATIVE TWO (ABOVE RIGHT) Proposed Interstate 64/Pleasant Grove Connector overlay.



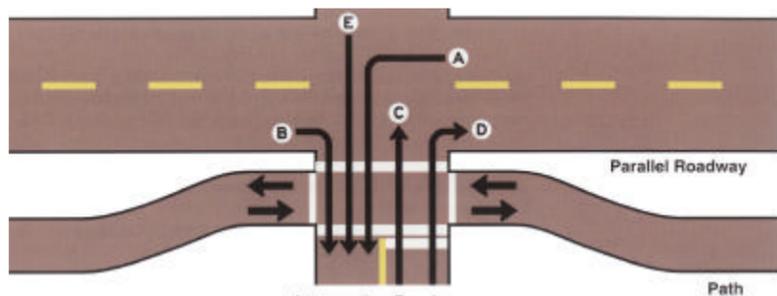
REDEVELOPMENT PATTERN New industrial development should be set back from Military Highway to maintain the current tree canopy and rural character. Tree clearance and site disturbance should be concentrated on the back of the property.



(ABOVE) Proposed street section for South Military Highway
(BELOW) Existing character of western South Military Highway



Existing Conditions



(ABOVE) Character for the proposed multi-lane bike path along South Military Highway
(LEFT) Approaching traffic (C,D) should stop short of the intersection of the bike path

The Core

The Core is the geographic center of the study, and the heart of the corridor. The district is bounded by Yadkins Road to the west, and Canal Drive to the east. The core is currently comprised of shallow commercial lots that back onto stable residential neighborhoods. The plan proposes mixed commercial and residential uses in the core.

1. South Military Highway Street Section

South Military Highway will be widened into new a six-lane boulevard with large sidewalks. The current frontage roads will be transformed into one-way parking streets to encourage ground floor retail development. A five foot easement on both sides of the road will be encouraged to create a wide 10-foot sidewalk. On-street bike lanes, in both directions will be accommodated

2. South Military Highway Street Frontage

Buildings are encouraged to be built up to the property line with parking lots at the rear of the lot. The buildings along the core of South Military Highway should be two to three stories tall. Large sidewalks and on-street bike lines are proposed along the core of South Military Highway to encourage ground floor retail and public uses.

3. Parking Streets

The current frontage roads should be transformed into one-way parking streets that can be accessed from South Military Highway. Over time, curb cuts should be limited along South Military Highway, and public alleys and shared parking should be encouraged.



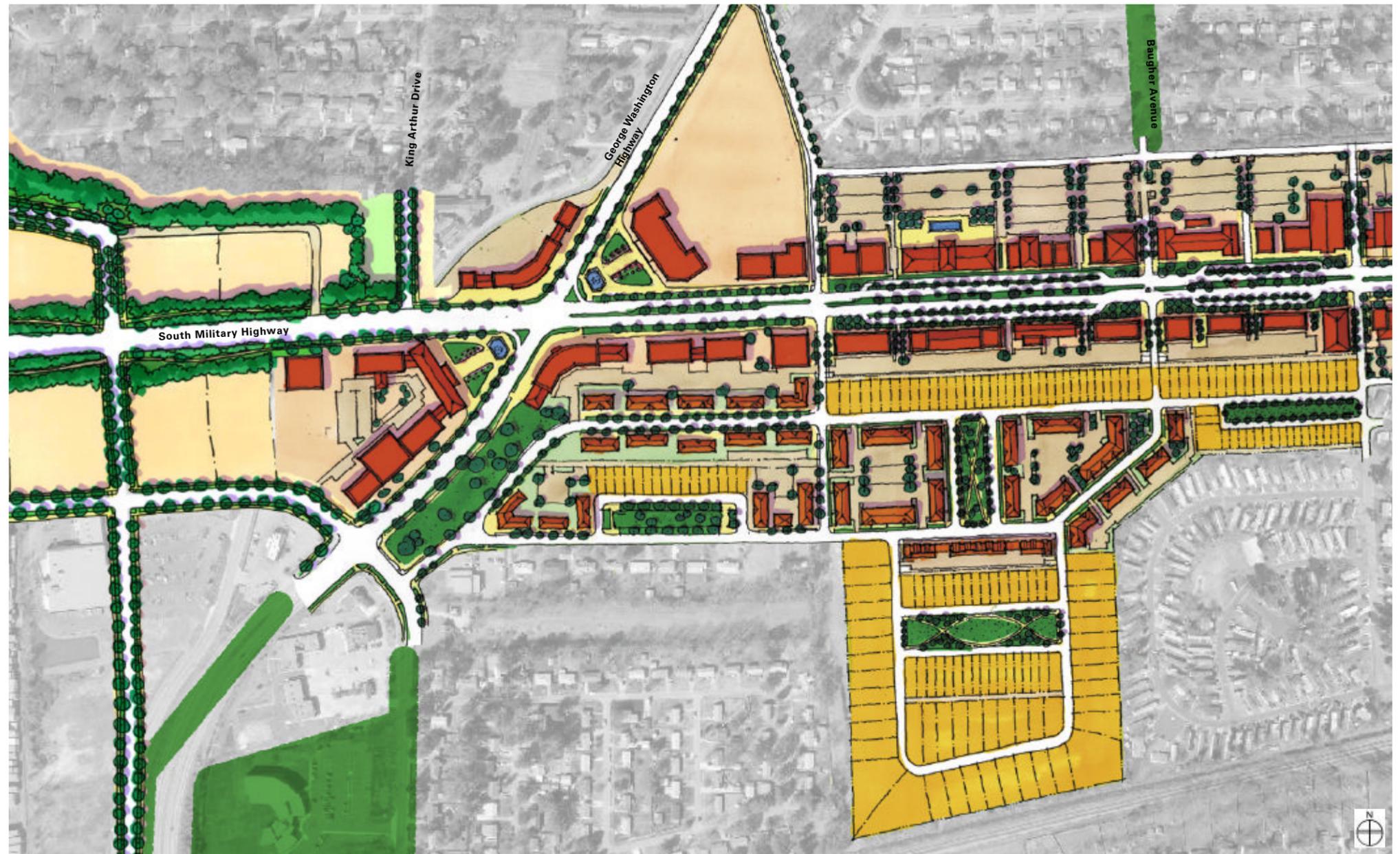
EXISTING CONDITIONS The neighborhoods in the Core are bisected by South Military Highway.

4. New Residential Neighborhoods

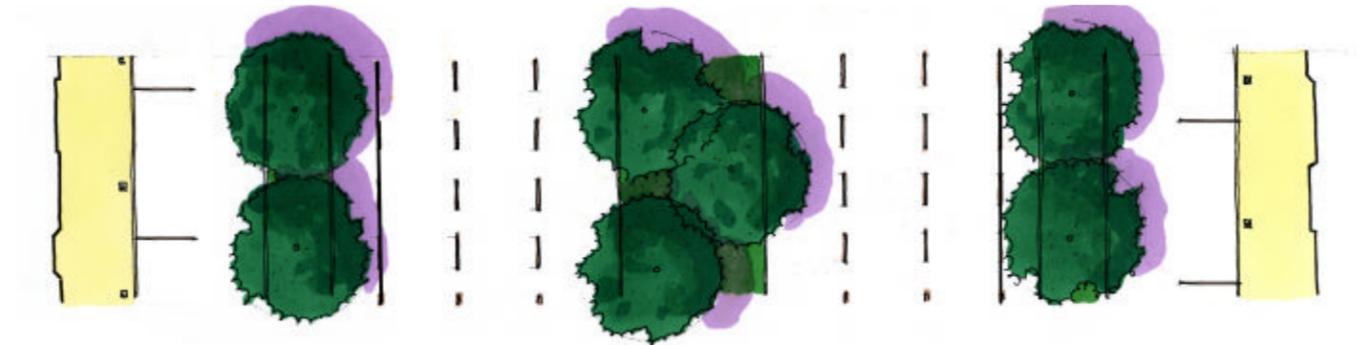
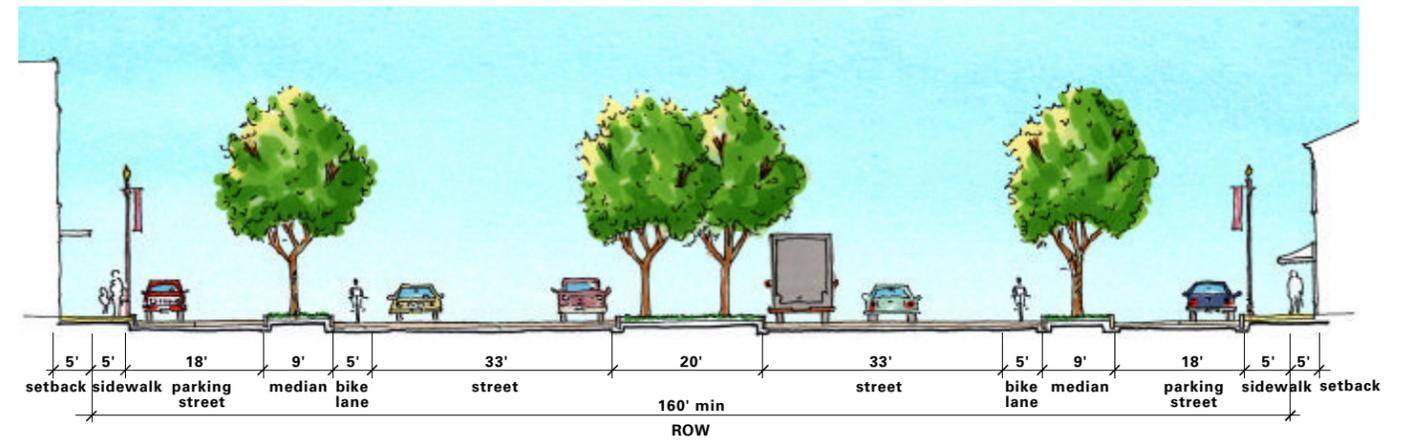
Reclaiming the core for the community is one of the design principles for this study. Large parcels not facing onto South Military Highway in the core are encouraged to develop into mixed use residential neighborhoods.

5. Gateway

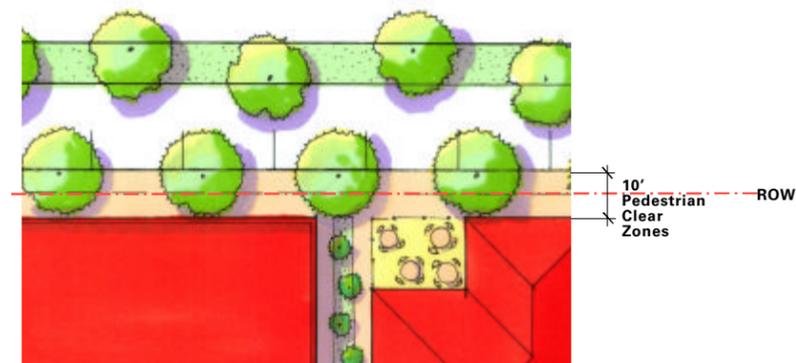
The existing intersection at South Military Highway and George Washington Highway can be reclaimed as an urban intersection. By reconstructing and modifying the dedicated right-turn lanes, the corner properties can be redeveloped with multi-story buildings making a gateway to the community.



ILLUSTRATIVE PLAN The Core will be redeveloped with new mixed-use development and neighborhood serving retail and commercial.



PARKING STREET Proposed street section and plan for the parking streets and pedestrian oriented development along South Military Highway



10' PEDESTRIAN ZONE Proposed plan detail of the sidewalk and building setback



Mainline of South Military Highway

Parking Street

Parking Street



Mainline of South Military Highway

Parking Street

(TOP) Perspective of initial phase of redevelopment in the Core
 (BOTTOM) Perspective of proposed mixed-use corridor

(TOP) Existing conditions along South Military Highway
 (BOTTOM) Aerial perspective looking west along South Military Highway towards George Washington Highway

Gilmerton

The Gilmerton District is bound by Canal Drive to the west, and the South Military Highway/I-464 interchange to the east. The area has access to the southern branch of the Elizabeth River and Saint Julian Creek, and with the construction of the new Gilmerton Bridge, trucks will have direct access to Interstate 464. The district should encourage industrial uses that utilize the deep water access.

1. Street Section

The Plan recommends widening South Military Highway into a six-lane boulevard and removing the two-way frontage roads.

2. Industrial Development Along Deep Creek

The frameworks include new roads for truck traffic along Canal Drive and the extension of Michael Drive. The remaining properties along Saint Julian Creek should be developed as industrial uses. The site should gain access by extending a new road to the Atlantic Energy access road.

3. Rebuilding of the Gilmerton Bridge

The new Gilmerton Bridge will be widened to six lanes to accommodate heavy truck traffic. With this route open for heavy truck traffic, trucks can directly access Interstate 464. Truck traffic will be directed east and away from the core. The Plan recommends modifying the current proposal to assure provisions for bicycles and pedestrians on the new bridge into the future.

4. Open Space

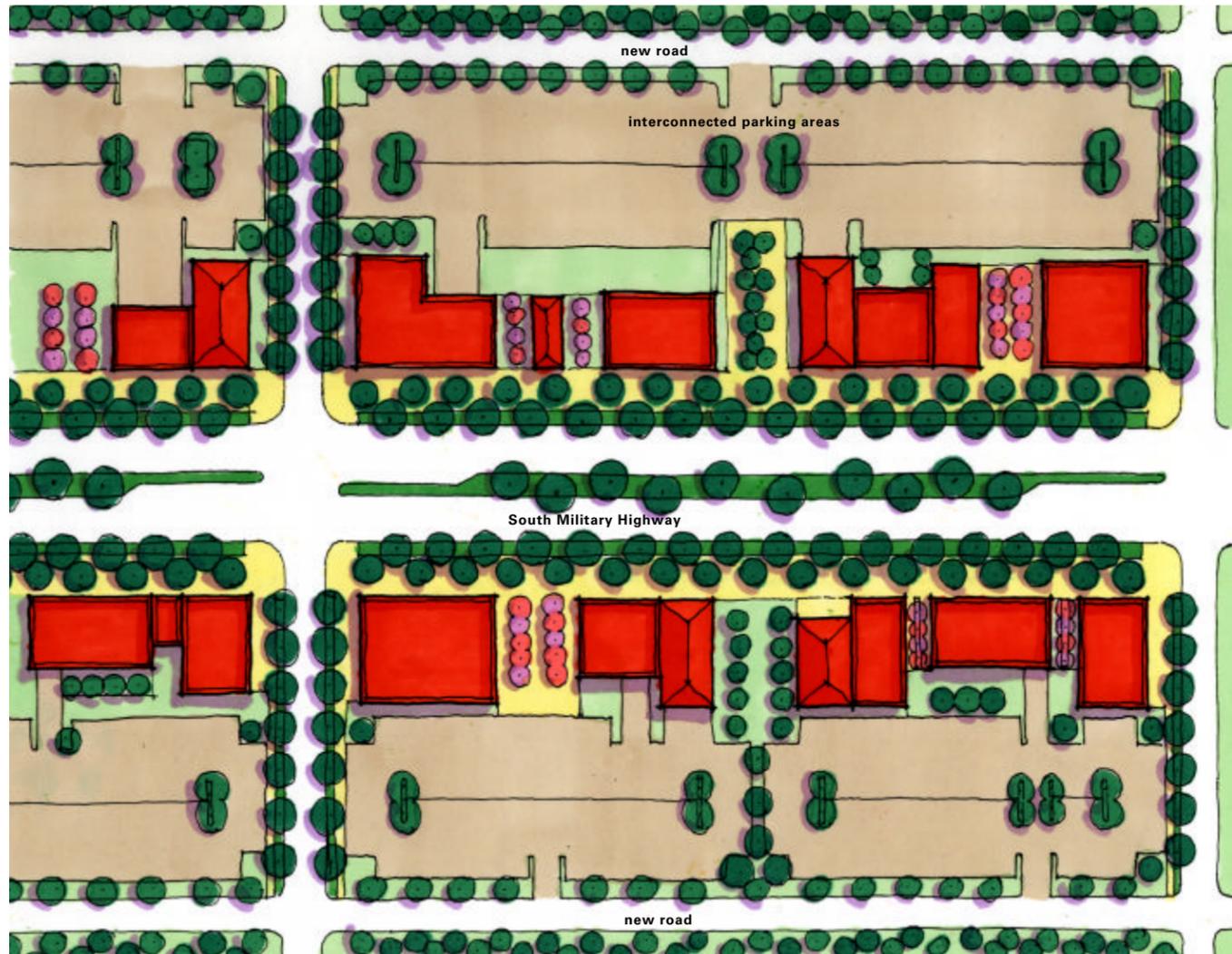
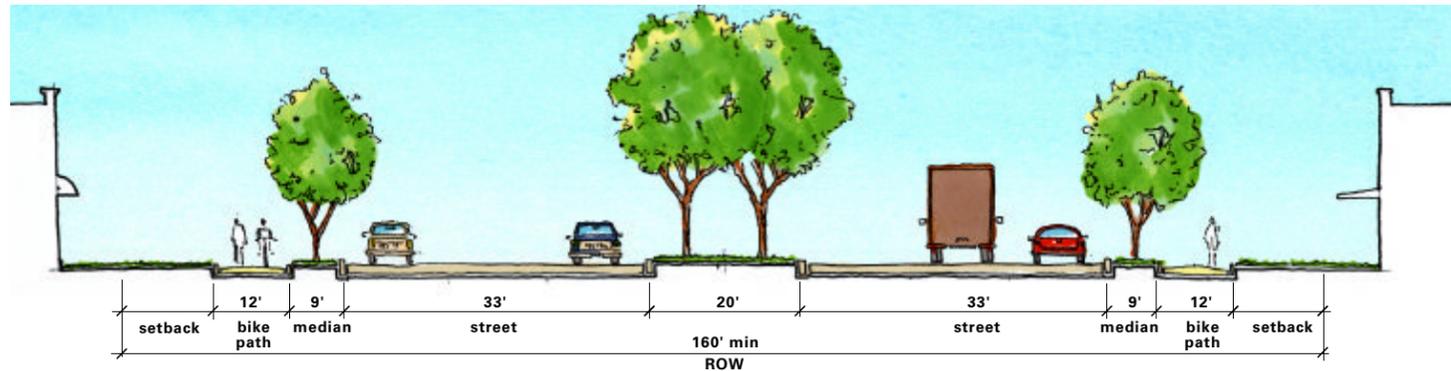
The The Old Inter-Coastal Waterway is an opportunity to be a bridgehead to the regional park plan for the Great Dismal Swamp. The proposal shows the crossing of South Military Highway and the Canal is an opportunity for a green way crossing and portage site. The Canal also crosses the power line easement that can become a recreational greenway.



ILLUSTRATIVE PLAN The neighborhoods in the Core are bisected by South Military Highway.

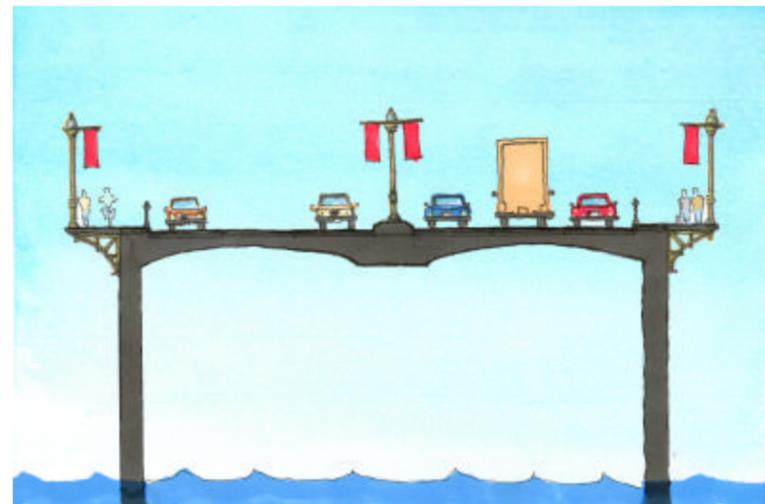
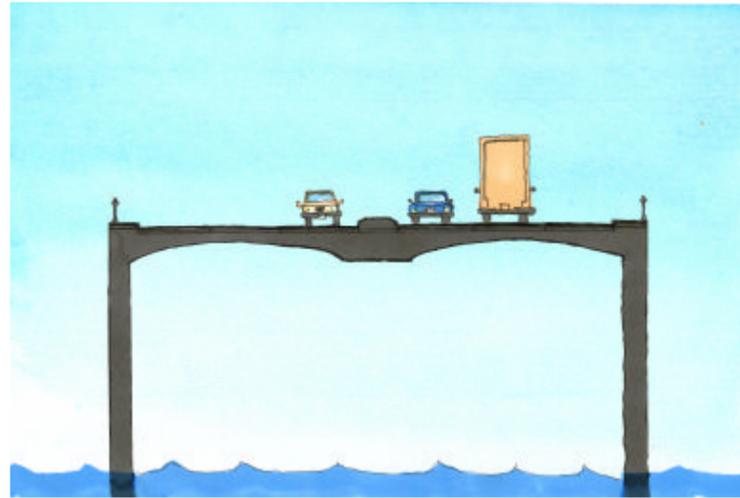


Proposed industrial park along Saint Julian Creek



TYPICAL STREET Proposed street improvements and rear road plan for development along South Military Highway

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GILMERTON BRIDGE The Plan recommends maintaining pedestrian and bicycle facilities across the new bridge, even when the bridge is increased to six lanes.



Urban Design Guidelines

The Urban Design Guidelines contained in this section offer direction for the eventual redevelopment of the Core Area of the Master Plan. The diagrams on the following pages illustrate the critical elements such as land use, building height, setbacks and parking that should be followed by the incremental redevelopment that will eventually transform the corridor from an under used strip commercial/ industrial corridor to a vital mixed use core that services the community.

The Master Plan defined South Military Highway into three distinct areas. Criteria for the specific areas include the development frameworks of streets, blocks, open space, view corridors, setbacks, building heights, and parking.

Site Specific Design Guidelines

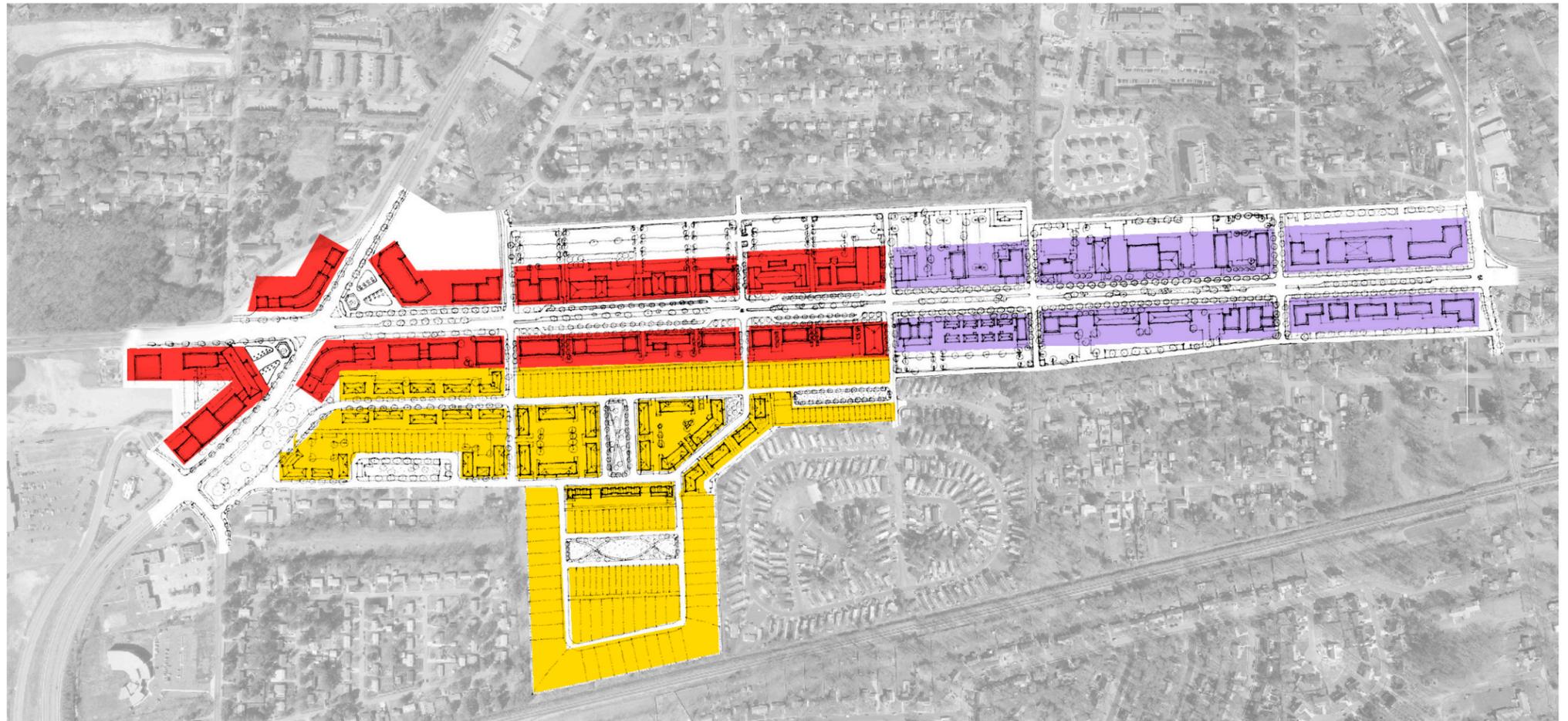
The Site Specific Design Guidelines define the development framework for each initiative area. Guidelines outlined for each area include the following:

1. **Land Use** The permitted uses for the buildings in the plan are defined. A mix of uses throughout the corridor is key to continuing growth along South Military Highway.
2. **Framework of Streets and Open Space** The streets and open space framework provides for the pedestrian, the bicyclist, and the automobile.
3. **Development Blocks** The limits of development of buildings are defined. The edges of development blocks, outside of which no building may be placed.
4. **Building Setbacks** Front setbacks define the character of the street and the semi-public space between buildings.



Land Use

The South Military Highway Corridor Study vision for the Core is a mix of commercial and residential uses that establishes a community center to South Military Highway. Residential apartments or condominiums are permitted upper floor uses in the mixed-use buildings. All buildings are served by on-street parking and shared parking behind the buildings. Additionally, a mix of residential types is proposed as a transition from the core to adjacent residential neighborhoods.



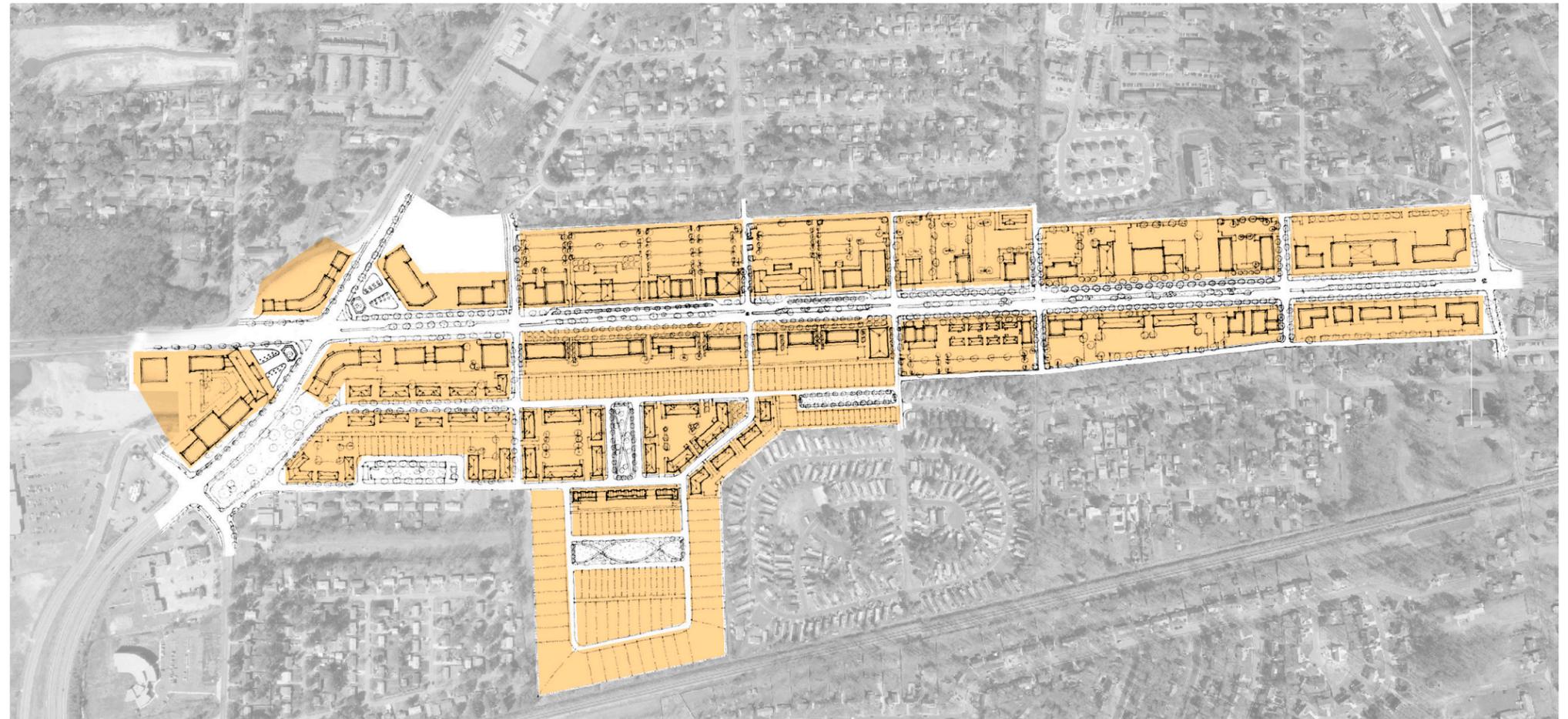
Land Use

- MIXED-USE
- LIGHT INDUSTRIAL/MANUFACTURING
- RESIDENTIAL

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Development Blocks

New streets and alleys are proposed to establish a regular block pattern with multiple public access points to South Military Highway. The organized development block pattern reduces curb cuts along South Military Highway thereby enhancing the pedestrian experience.



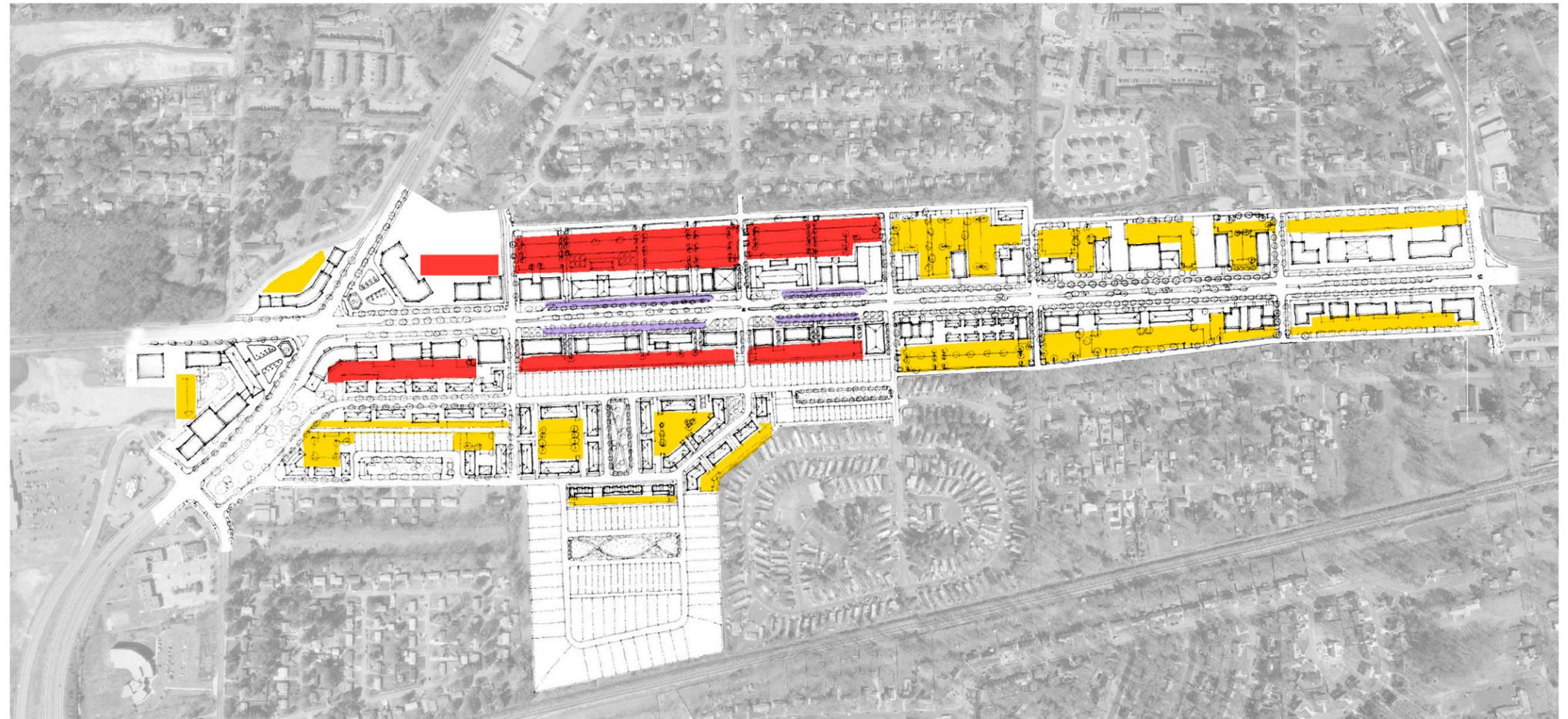
Development Blocks

DEVELOPMENT BLOCKS

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Parking

A variety of parking options are available. On-street parallel parking is extremely important for the proposed retail uses. Two parking streets are proposed to fulfill this need. Parking lots are required to be placed at the rear of the development blocks. All parking lots are required to be screened from the street with either buildings or landscaping, and shared parking lots should be accessed by side streets and alleys.

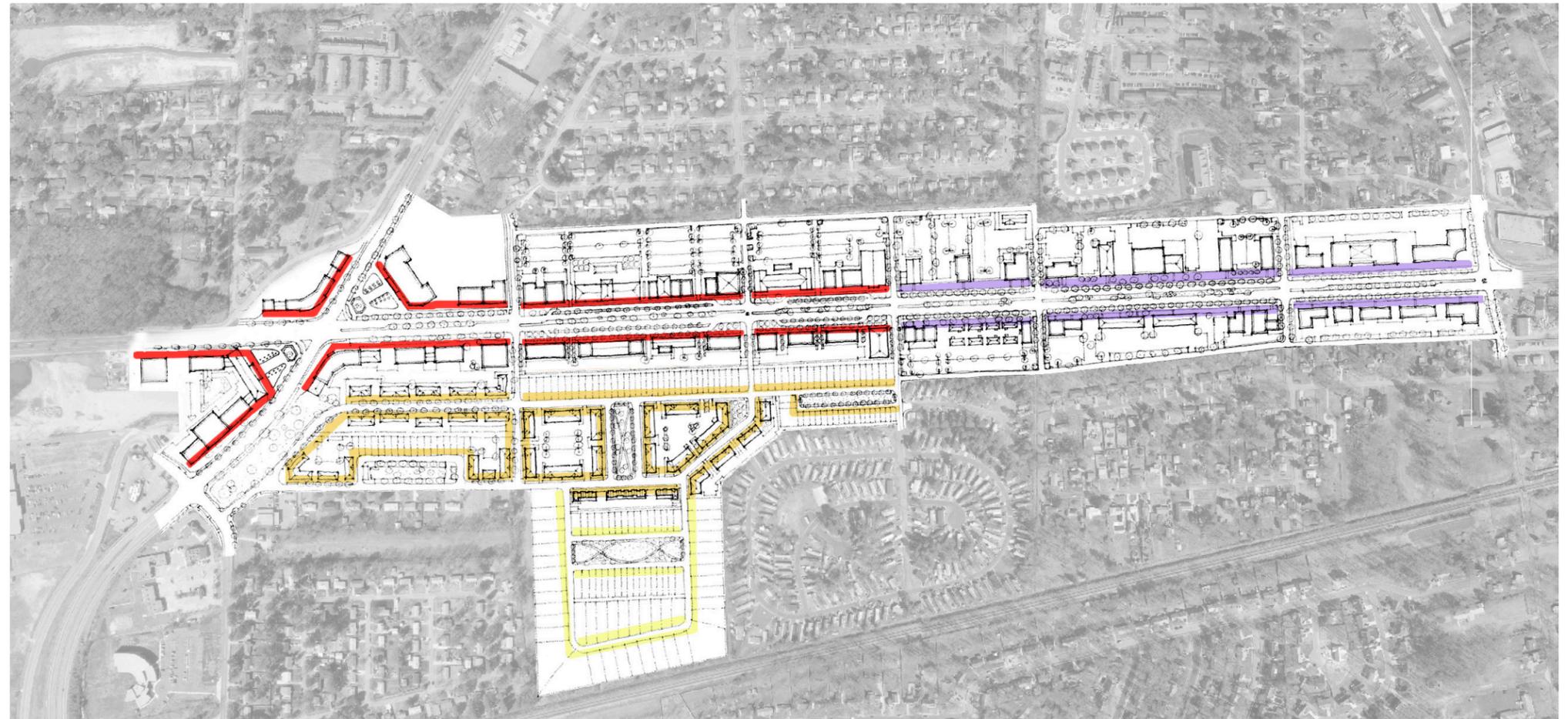


Parking

- ON-STREET PARKING
- SHARED COMMERCIAL PARKING
- DEDICATED PARKING

Setbacks

South Military Highway in the Core is designed to be of an urban character, and all buildings are required to have the front elevation facing the street. Buildings are placed within the prescribed setbacks to provide spacious sidewalks and a pedestrian friendly commercial core. Some flexibility is permitted to create visual variety, add flexibility in sidewalk widths and facade elements, and to accommodate the light industrial uses along the corridor. In the Core, 85% of the linear footage of the setback zones should be occupied by building. Gaps in the setback zones should be composed as gardens, courts, plazas, or public paths to shared parking lots.

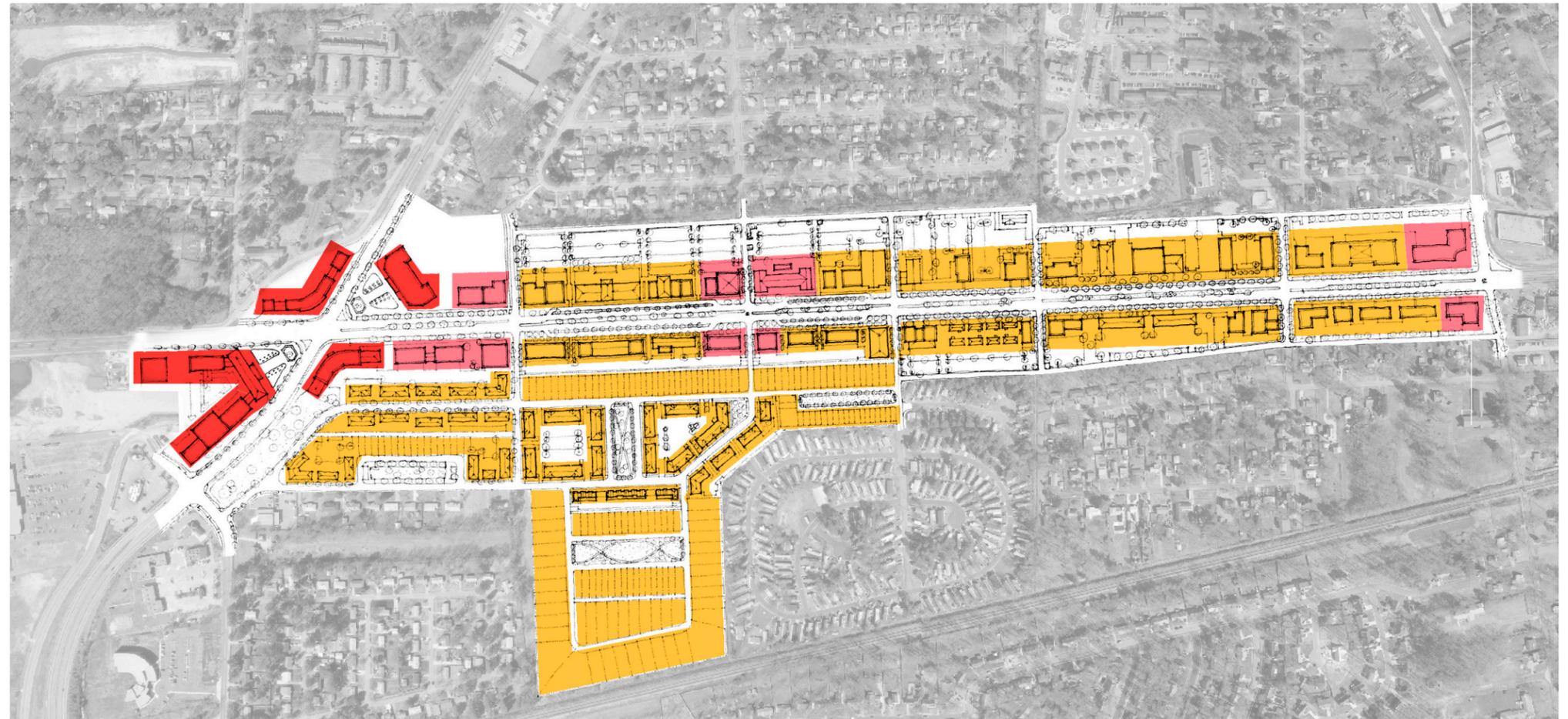


Setbacks

- 5' SETBACK
- 5'-10' SETBACK
- 10'-15' SETBACK
- 15'+ SETBACK

Building Heights

Development heights range from two to six stories to address the scale of South Military Highway. The building heights are set to encourage upper floor uses above retail such as professional offices and apartments or condos. The scales of the buildings are such to address the dimensions of South Military Highway. The massing of the mixed-use buildings in the region have a tall ground floor with vertical proportions with an upper cornice expression. All roof top equipment should be concealed from the eye of the pedestrian.



Building Heights

- 2-3 STORIES
- 4-5 STORIES
- 6-7 STORIES

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Focal Points and Views

The most important focal point for the corridor is the intersection of South Military Highway and George Washington Highway. This intersection is the geographic and social center of the corridor. The intersection of South Military Highway and Canal Drive is also an important gateway for the mix-use core. Special attention should be made in the design of the corners of buildings that have been identified as focal points.

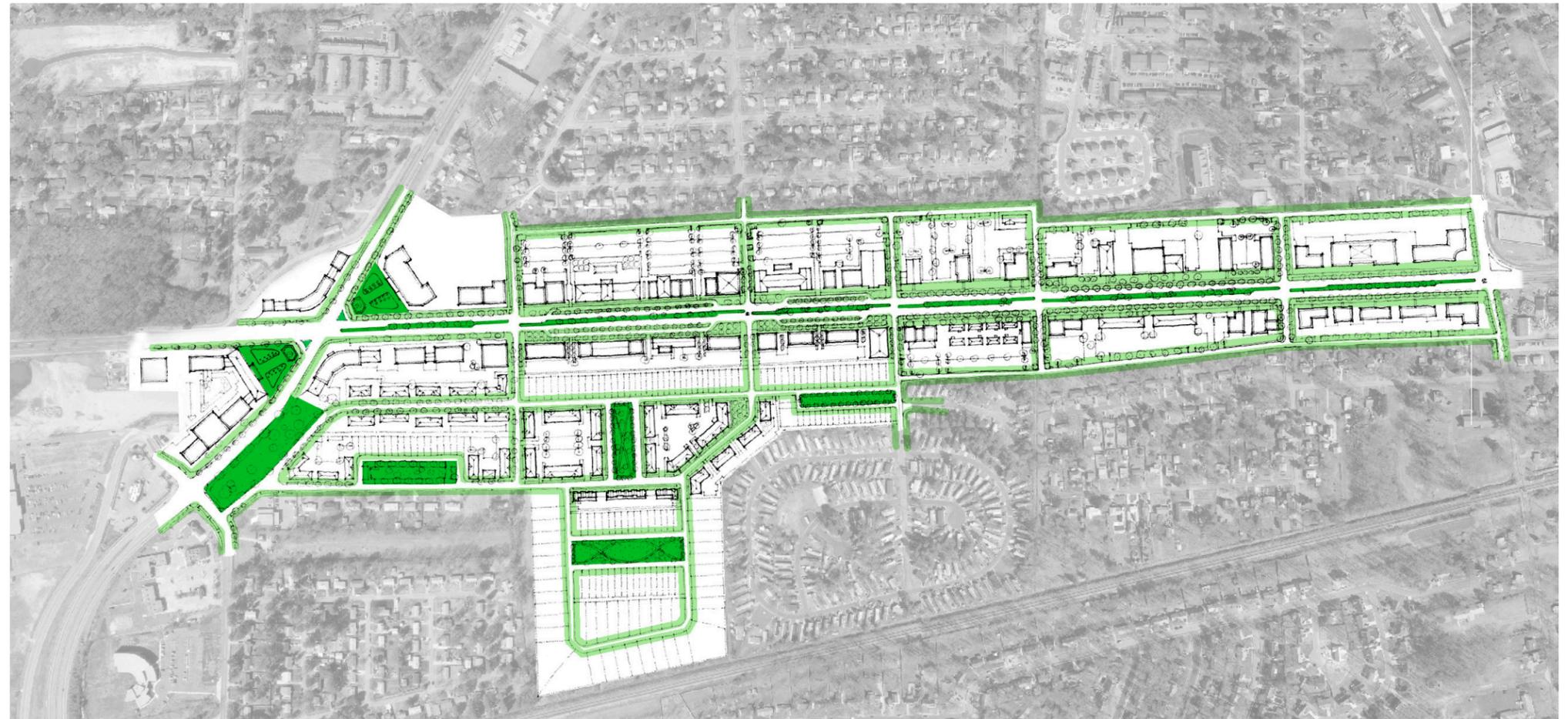


Focal Points and Views

- AXES/VIEW CORRIDORS
- FOCAL POINT
- FOCAL FACADE

Parks and Open Space

Two new parks are proposed in the plan to mark the Core at the intersection of South Military Highway and George Washington Highway. A planted boulevard along South Military Highway and new street scape will provide shade for pedestrians and bicyclists. Additional public parks are proposed to provide opportunities for new public open space along the corridor.



Parks and Open Space

-  PARKS
-  STREETSCAPE

Architectural Design Guidelines

Massing

Buildings along the South Military Highway shall vary in height from two stories (min. 35') to six stories (max. 65') at the primary corner of South Military Highway and George Washington Highway.

Regulating Lines

Base Line: 1'- 3'

Expression line: 16'

Expression line 2: 42'

Vertical Breaks and articulation shall occur every 50'

Facade Composition

Windows shall be vertically proportioned

Ground level windows shall be full height

All windows shall be transparent. Tinted glass is discouraged

Ratio of glass to solid on ground floor: minimum 70%

Ratio of glass to solid on upper floor: maximum 50%, minimum 30%

Add on elements

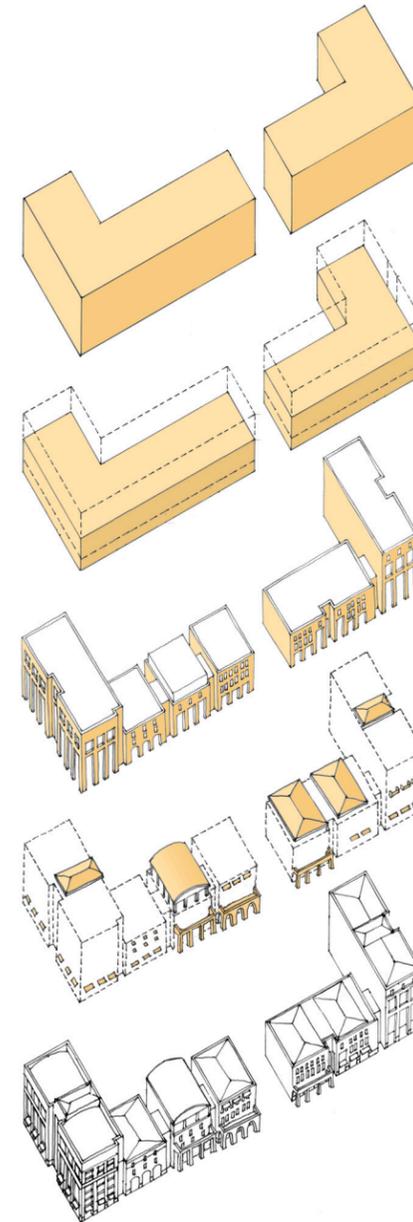
Various roof forms are encouraged. The top floor (above expression line 2 at 42') should create a cap for the building

Balconies on upper floors are encouraged

Awnings are encouraged along all north facing retail frontage

Awnings are required on all south facing retail frontage

Corners should be emphasized in locations as indicated on the previous pages



Implementation

Many resources, both public and private, will have to be mobilized to implement the South Military Highway Master Plan. The projects will require multiple funding sources and a firm organizational foundation. The tools and mechanisms can be organized into five categories:

- 1 Organizational
- 2 Regulatory
- 3 Public Finance
- 4 Private Finance
- 5 Additional Studies

ORGANIZATIONAL

The City of Chesapeake has been proactive in the development of public projects and cultural institutions for its citizens. The City has many examples of such initiatives including museums, libraries, and parks. The City has also forged public/private partnerships that have facilitated both commercial and residential development.

South Military Highway Development Authority

The recommendations in this Plan suggest a new climate of development in which the City may consider forming a South Military Highway Development Authority to focus on development opportunities in the study area. The creation of such an agency, could be done either by amending the bylaws of one of Chesapeake's existing authorities currently enabled under state law, or by creating a new agency with a specific development charter and strong accountability to the City.

Coordinating Task Force

While the creation of a redevelopment authority is being considered, existing public/private agencies should convene on a regular basis to ensure a coordinated effort to support the implementation of the Plan. These existing agencies operate under their own charters and have their own missions, but many of their decisions have far reaching implications on the quality of life and economic development opportunities for the entire community.

It is recommended that the City form a Coordinating Task Force of these existing agencies to implement specific projects and to ensure that their efforts complement each other for the best possible outcome consistent with the Plan. As a minimum, the following organizations should be represented in the Coordinating Task force:

- Hampton Roads Transit Authority
- Virginia Department of Transportation
- Chesapeake Public Schools Board
- City of Chesapeake Planning, Economic Development, and Parks and Recreation Departments
- City of Chesapeake Department of Public Works
- City of Chesapeake Economic Development Authority
- Citizens Advisory Board and Neighborhood Associations
- Hampton Roads Chamber of Commerce, Chesapeake Division
- Chesapeake Conventions and Tourism Bureau

This list is not intended to be exhaustive or exclusive; however, the intent is to establish an ongoing, task oriented forum to leverage public projects and investment to the greatest extent possible in fur-

thering the development goals of the Plan. It is intended to be a working forum that provides and receives regular reports on the status of projects under way and on new projects as they are being planned and implemented.

Working Committees

During the planning process, the Chesapeake community demonstrated significant interest in the Plan. The persons who attended the focus groups (residents, major employers, developers, service providers, merchants, and transportation officials) that were convened during the planning process should continue their involvement as a resource for the Coordinating Task Force. They could be organized into Working Committees (such as Business Needs and Amenities; Neighborhood Needs and Amenities; Cultural and Entertainment Support; Permitting and Development Procedures; and District Committees) to promote, direct, and enact current components of the Plan, as well as incubate new ideas in furtherance of the Plan. The committees could be organized and supported administratively by the City.

REGULATORY

Land Use

Current zoning designations and permitted land uses for office, business, institutional, commercial, and residential, and industrial parcels in the study area would remain valid under the Plan. However, the Plan also makes bold recommendations for land use in the "core" area of the corridor, some of which suggest changes in category, such as the expansion and enhancement of residential development to

include mixed-use housing types and the expansion of service oriented business. Most of these changes are consistent with the recently adopted Comprehensive Plan, which identifies this corridor as a major activity center for regional scale commercial and industrial activity.

In general, the current zoning designations for the study area allows for the type of mixed use development that the Comprehensive Plan recommends. However, there are aspects of the existing zoning pattern that still need to be addressed to facilitate project mixes and support developers who undertake these projects. At a minimum, specific steps need to occur.

The first is to update parking requirements to support market driven on site needs and to account for the availability of off site parking in the area.

The second, implement a range of zoning incentives for developers when they achieve other objectives of the plan for mixed market housing, open space, or similar targeted outcomes of the Plan. Such incentives should have the ultimate objective of facilitating a more compatible and unified zoning pattern along the corridor, rather than the disjointed pattern that now exists.

Thirdly, formalize heavy-industrial and light-industrial development zones at the eastern and western ends of the corridor to further promote property availability, land use intent, and economic incentives.

Next, update the City's development review and/or zoning requirements to require more landscaping, screening, and buffering between mixed land uses, particularly where industrial and residential uses are located near to each other.

Lastly, enhance or expand the City's zoning inspections program as needed to support a sustained and proactive effort aimed at ensuring better compliance with the Zoning Ordinance and other pertinent City Codes.

Overlays

In addition to the land use, zoning, and district designations there will be opportunities to apply special overlay regulations that induce plan objectives in specific areas. This exercise will call for focused investigation of overlay boundaries, development intent, and design character to have tangible value as a development tool. The City of Chesapeake City Council has adopted a Transportation Corridor Overlay District (TCOD) Policy that applies to Route 17 (Dominion Boulevard Corridor) and Route 168 (Battlefield Boulevard Chesapeake Expressway Corridor). The intent of the TCOD is to preserve the economic development potential of those two corridors by creating opportunities for high quality, attractive development. Although the overlay approach for the South Military Highway corridor is appropriate, the intentions for development/redevelopment management in this area are slightly different from those for the TCOD growth corridors.

As a part of the needs assessment conducted during this study, and extensive public, input during the design charrette indicated the need to promote commercial-retail, light industrial, and heavy industrial development opportunities within the corridor. That intent, combined with the geographic location of the corridor and surrounding area land uses shape the need to establish – via an Industrial Corridor Overlay District (ICOD) – guidelines for industrial oriented development along the improved roadway.

As with the existing TCODs, the Industrial Corridor Overlay District will provide a policy framework that will define industrial and commercial/retail development consistent with the character of the corridor. The establishment of an ICOD for the South Military Highway corridor will offer the ability to generate tax revenue and employment opportunities for the City of Chesapeake.

PUBLIC FINANCE

The City has used two primary sources for financing public infrastructure along South Military Highway: Federal Aid transportation program funding using Federal and State funds for road improvements and acquisition, if necessary; and the City bond fund program under the Capital Improvement Budget for park projects, sewer construction, and street improvements.

City bond funds can also be a source for financing affordable housing programs, as well as public facilities, such as schools, museums, libraries, and public buildings.

The two main public funding sources for affordable housing are the Federal HOME program and Federal Community Development Block Grants (CDBG). HOME is used exclusively for housing, while CDBG funds can be applied for both housing and infrastructure in eligible areas. A good housing strategy is to use CDBG funds for rehab of existing low and moderate income housing and infrastructure and HOME funds for down payment assistance, first time home buyer counseling and assistance, and construction of new infill affordable housing. The City should consider promoting the establishment of a Community Housing Development Organization (CHDO) to facilitate the creation of affordable housing in the area.

Other special purpose Federal and State grant and loan programs should also be considered, such as: Federal Aid transportation program funding for streets, trails, and parking; Federal Brownfield funds for environmental remediation of industrial/commercial sites; the Federal Section 108 Loan Guarantee Program; the Industrial Development Loan Fund; and Federal Home Loan Bank Economic Development & Growth Enhancement (EDGE) funds.

Designating the corridor as an Enterprise Zone, special taxing district, or business improvement district could be a mechanism for facilitating revitalization activities and economic development, including the provision of dedicated revenues streams for various corridor improvements. Additionally, the City should consider promoting the establishment of a Community Development Corporation (CDC) to promote economic opportunity and improved quality of life in the project area.

Lastly, Federal Community Development Block Grants (CDBG) could be used for public infrastructure and for site assembly in the project area, as well as special code enforcement activities by the City.

PRIVATE FINANCE

All Federally chartered banks are required to provide loans and equity investments in low and moderate income neighborhoods under provisions of the Community Reinvestment Act of 1977 (CRA).

Three Federal tax credit programs are especially valuable in attracting private equity to historic downtowns undergoing revitalization: New Markets tax credits; Low Income Housing tax credits; and Historic Rehabilitation tax credits.

Local and national foundations, such as the Ford Foundation, and non profit organizations, such as the Urban League of Hampton Roads, Inc., can invest private dollars for progressive housing and economic development projects in the project area and in adjacent neighborhoods. The City should explore and promote public/private partnerships and efforts by service clubs, faith-based entities, and other community-based organizations whose desire and goal is to engage in mutually beneficial and sustained efforts to improve the overall quality of life along the corridor.

The backbone of private financing will come from developers, anchor tenants, merchants, entrepreneurs, and institutional investors (insurance companies, pension funds, and trusts). These private investments will be attracted to the area by the leverage provided by the public finance programs listed above, by a favorable business climate provided by groups such as the Chamber of Commerce and the Department of Economic Development.

ADDITIONAL STUDIES

The South Military Highway Plan is a policy document, in essence a strategic development plan, a road map for the future. The hard work of implementing the Plan will now be the focus of the City's policy makers and administrators, the major stakeholders, and the citizens of Chesapeake. Additional detailed studies and plans will need to be undertaken to implement specific aspects of this overall strategic plan for the S. Military Highway Corridor, such as:

Commercial Market Study

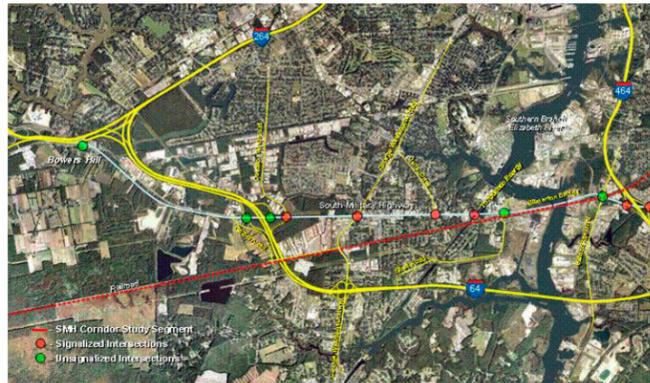
Residential Market Study

Neighborhood Stabilization Plan

Industrial Market Study

These and other detailed studies and plans that may be conducted should maintain continuity with, and serve as an enhancement to, this strategic plan, the City's Comprehensive Plan, and other City economic development, housing, and quality of life goals and objectives.

Appendix: Transportation



Study area

The intent of the strategic plan is to identify and address the needs of the three distinct zones or districts along the corridor. The proposed development patterns will require and result in transportation improvements and recommendations that correspond with the characteristics of these districts.

Bower's Hill

The Bower's Hill segment of the strategic plan begins in the west at the I-664/Bower's Hill interchange and continues east to a point immediately west of the South Military Highway/George Washington Highway signalized intersection. This section of the corridor is a four-lane section and rural in nature. It is planned to retain this rural character while accommodating future light-industrial land uses. Future traffic volumes are expected to increase along this segment. However, it is envisioned that South Military Highway will remain a four-section from the I-664/Bower's Hill interchange to the I-64/Cavalier Boulevard interchange. As a part of the strategic plan two alternatives are under consideration for the I-64/Cavalier Boulevard interchange that would maintain access to/from the Industrial Park and the interstate while also offering the ability to capture more land for the industrial park and improve traffic operations.

Community Core

The Community Core district is the geographic center of the study area and is defined by the South Military Highway/George Washington Highway signalized intersection in the west and the South Military Highway/Canal Drive signalized intersection in the east. Today this portion of the corridor is four-lane section comprised of an inconsistent mix of commercial, retail, and residential land uses. This section is planned to be widened to a six-lane boulevard section. It is envisioned that this section will become the community and economic core for residential neighborhoods and businesses in the area. In addition to improving South Military Highway to a six-lane facility two alternatives are being entertained to support commercial/retail and office access along the corridor. Both intend to limit direct access points to the primary route while retaining interconnectivity among adjacent land uses. One option looks at developing a local street system located behind businesses while buildings front the corridor. The second option considers converting existing two-way frontage roads to one-way frontage roads or "parking streets" that offer on-street parking and more direct access for customers to businesses.

Gilmerton

The Gilmerton district is bound by the South Military Highway/Canal Drive signalized intersection in the west and the South Military Highway/I-464 interchange in the east. A key transportation improvement along this segment is the replacement of the Gilmerton Bridge. This segment currently carries the highest volume of traffic on a daily basis. Improvements to the bridge and increases in regional traffic demand result in this segment of the corridor continuing to experience the highest volumes of traffic. The Gilmerton district supports heavy industrial land uses and land uses requiring deep water access to the Southern Branch of the Elizabeth River and Saint Julian Creek. Heavy industrial land uses will continue to be promoted within this segment. The plan recommends the widening of South Military Highway to a six-lane facility and the elimination of existing two-way frontage roads. With improvements to the Gilmerton Bridge truck traffic from the Dominion Virginia Power Plant and other heavy and light industrial businesses can be directed away from the Community Core. Truck traffic will be directed east for more direct access to Brambleton Boulevard, I-464, and I-64.

Existing Conditions

South Military Highway (U.S. Route 13) has long been an important roadway for the City of Chesapeake and the Hampton Roads area. In the early 1940s, before the construction of I-64, South Military Highway was built as a defense highway to serve the Norfolk Naval Station, Little Creek Amphibious Base and the Norfolk Naval Shipyard. It bypassed the congested traffic areas of Portsmouth and Norfolk, providing a direct route to transport military supplies. At the time of its construction, the roadway ran through rural farm areas with an average daily traffic (ADT) count of approximately 2,000 vehicles per day.

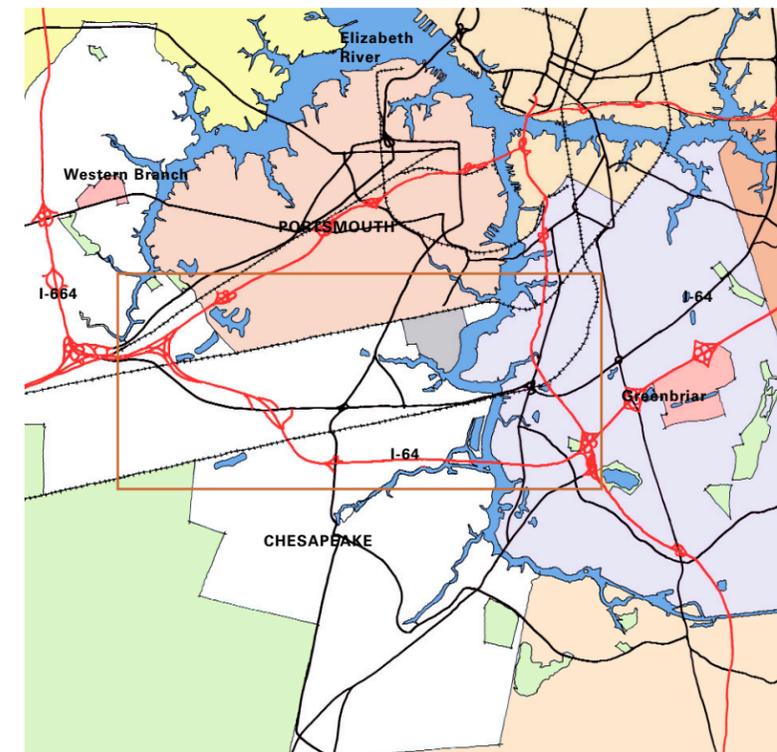
South Military Highway continues to be an important roadway for the City of Chesapeake and the Hampton Roads region. The facility is no longer just a military transport route but an urban arterial serving the traffic demands of both a local and regional population. Its location is both an asset and a detriment for the users it serves. It serves as a major east-west arterial for a variety of users including through commuters and heavy trucks from numerous light industrial businesses. Various neighborhoods and commercial uses along the corridor also generate traffic on South Military Highway.

Today, South Military Highway serves as an incident management route to Interstate 64. When incidents occur at the high-rise bridge (G.A. Treacle Bridge) and traffic is diverted from I-64 to the South Military Highway corridor, traffic volumes rise dramatically and significantly impact traffic operations and level-of-service conditions for the corridor. This roadway is classified as a principal arterial, defined as a multi-lane facility serving major centers of activity, characterized by high traffic volumes carrying significant portions of

urban area traffic. Major intersections along the corridor are signalized. Current average daily traffic counts along the corridor gathered by Kimley-Horn in the spring of 2005.

As population growth and associated traffic volumes continue to increase in the region, the regional dependence on this corridor will continue to climb. One of the critical pieces of this corridor that requires immediate attention is the replacement of the Gilmerton Bridge. In the east, the Gilmerton Bridge serves as a gateway into the corridor.

The bridge was constructed in 1938 and crosses the Southern



Branch of the Elizabeth River. The bridge is a twin bascule span, four-lane structure that has an average daily vehicle count of 36,000 vehicles per day. Because of its age, the bridge has the following weight restrictions:

Single Units: 14 Tons

Semi-Trailers: 20 Tons

Twin Trailers: 27 Tons

These restrictions affect commercial activity along the corridor forcing all heavy vehicle traffic generated at the east end of the corridor to travel west and access I-64 via George Washington Highway. The Virginia Department of Transportation has planned for the replacement of the Gilmerton Bridge and the design work for the new bridge is to be finalized in 2005. The City Council approved that the new bridge be built along the existing alignment using a staged construction process that allows traffic to continued passage along South Military Highway over the Elizabeth River. The six-lane bridge will initially have four vehicle travel lanes, with two shared pedestrian/bicycle lanes. The reconfiguration of the laneage to accommodate six travel lanes is based on future demand. The new bridge structure is currently being designed with no weight restrictions and an increased mean water clearance resulting in a 25% to 30% reduction in bridge openings. Fewer openings equal fewer interruptions in traffic flow. Currently, construction is expected to begin in the fall of 2007 and will be completed in the fall of 2009.

Along with the volume of traffic and variety of users, the corridor has many current problems, many of which are inter-related with the traffic issues. The image of South Military Highway is impacted by poor property maintenance and aesthetics, insufficient buffers between land uses (particularly industrial activity adjacent to residen-

tial areas), and inadequate or deteriorating infrastructure (Gilmerton Bridge, South Military Highway pavement needs resurfacing, uncoordinated traffic signalization, poor lighting, and sewer and utility lines).

Land uses along the corridor are generally characterized by:

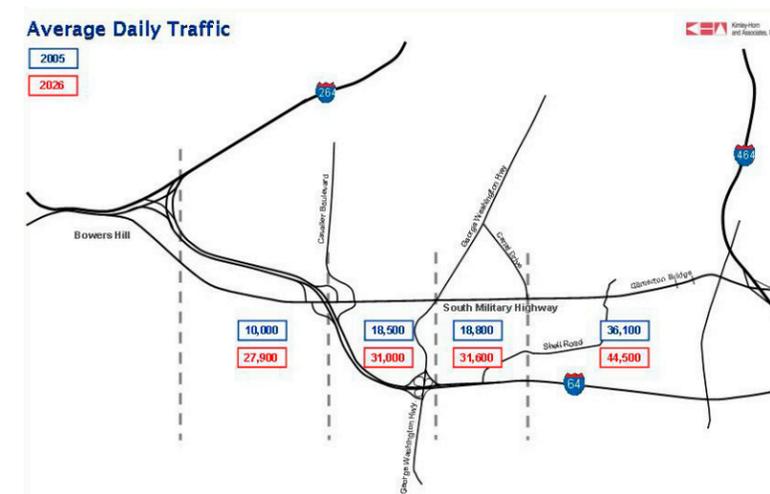
- heavy and light water-related industry with some residential and business\commercial in the eastern portion (Gilmerton)
- a mix of business\commercial, residential and office\institutional in the middle portion (Community Core)
- a mix of warehousing\light-industrial
- residential, and agricultural uses in the western portion (Bower's Hill)

The City's most recently updated Land Use Plan reflects a mixture of uses along the corridor, with a continued emphasis on Water Related Industrial and Heavy Industrial uses in the vicinity of the Gilmerton Bridge, General Business\Commercial uses in the middle portion, and Warehousing\Light Industrial uses in the western portion of the corridor.

In addition to the updated 2026 Land Use Plan which is part of the recently adopted 2026 Comprehensive Plan, the City of Chesapeake has also adopted their 2050 Master Transportation Plan (MTP). The development of the 2050 MTP plays a key role in sustaining and directing future development in the City of Chesapeake. The 2050 MTP identifies the ultimate typical section of South Military Highway as an eight-lane facility. For the South Military Highway Corridor Study, and in a effort to remain consistent with the 2026 Hampton Roads Planning District Commission (HRPDC) Regional Transportation Plan and the 2026 City of Chesapeake Comprehensive Plan, horizon year analysis was kept at 2026. The

planning horizon year of 2026 results in traffic projections requiring only six-lanes for a major portion and four-lanes for the western section of the South Military Highway Corridor. The 2050 traffic projections prepared by the City of Chesapeake however, indicated the need for an eight-lane facility and therefore that ultimate configuration is identified in the MTP.

The interim year (2026) of analysis reflects the traffic demand that will need to be accommodated over the next twenty to twenty-five years. The 2050 MTP addresses traffic demand that is expected in the next forty to forty-five years. It should be recognized that the 2026 planning horizon is an interim year of analysis in relation to the 2050 MTP. The recommended improvements and the associated Plan addresses the needs for 2026 and are not intended to contradict those needs and the ultimate eight-lane configuration for South Military Highway per the 2050 MTP.



Current average daily traffic counts along South Military Highway

Corridor Needs Assessment

Stakeholders and local citizens aided in the corridor needs assessment process by identifying the strengths and weaknesses of the South Military Highway corridor.

Strengths for the corridor included:

- Central location in the region
- Accessibility to the interstate
- Provides alternate route to the interstate
- Vital link in the regional transportation system
- Relatively wide existing right-of-way
- Plan for Gilmerton Bridge replacement
- Potential for a major commercial corridor

It was very clear that residents in the study area understand the transportation and economic significance of the South Military Highway corridor at both the local and regional level. It can also be said there was general agreement regarding the challenges or weaknesses of the corridor as they relate to transportation.

Weaknesses identified for the corridor include:

- Gilmerton Bridge
- Condition of pavement
- Uncoordinated signal system (signal timing)
- Lack of access management (too much access)
- Lack of exclusive turn lanes
- Feeder road system
- Poor lighting
- Lack of pedestrian and/or bicycle facilities
- Minimal transit service

Upon identifying both the perceived strengths and weaknesses of the corridor an inventory was conducted by Kimley-Horn to identify and verify issues facing local residents, businesses, and the City of Chesapeake for the following elements:

- Gilmerton Bridge
- Signal timing
- Intersection level of service analysis
- Turn lane requirements
- Corridor accessibility
- Pedestrian and bicycle facilities
- Signage
- Lighting

Gilmerton Bridge

The Gilmerton Bridge is a four-lane undivided twin bascule span bridge constructed in 1938. Currently the bridge carries an average daily traffic volume of approximately 36,000 vehicles. This number increases significantly when an incident occurs at the high-rise bridge, and commuters begin to seek alternative routes to crossing the Southern Branch of the Elizabeth River.

Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a specified period under prevailing roadway, traffic, and control conditions. LOS is defined as a qualitative measure that describes operational conditions and motorist’s perception within a traffic stream. The Highway Capacity Manual (HCM) defines six levels of service, LOS A through LOS F; with A being the best and F the worst. LOS D or better (i.e., LOS A, B, or C) is typically recognized by VDOT and other agencies as the industry standard or the limit of acceptable LOS.

Even under normal traffic conditions the current daily traffic volume exceeds the vehicle carrying capacity of the bridge as a four-lane undivided facility.

LOS	4-LANE ARTERIAL	6-LANE ARTERIAL
A	0-10,800	0-16,200
B	10,800-18,000	16,201-27,000
C	18,001-24,800	27,001-37,100
D	24,801-29,100	37,101-43,700
E	29,101-33,000	43,701-49,500

In addition to being undersized, the Gilmerton Bridge also has a low vertical clearance between the water surface and the bridge deck. This low vertical clearance prohibits moderately sized ships from accessing industrial deep water businesses located immediately north of the bridge and along the shore line of the Elizabeth River without requiring a bridge lift. Low vertical clearance combined with vibrant river traffic result in frequent bridge openings that interrupt traffic flow along the corridor at this location.

Weight limitations associated with the bridge require truck traffic to be diverted toward the George Washington Highway intersection attempting to access I-64 and through the Community Core of the corridor. This results in a large amount of through truck traffic unnecessarily traveling within the core impacting traffic operations.

Given the era in which the bridge was constructed, there are inherent safety concerns. Average travel speeds across the bridge range from 45mph to 55mph with no physical barrier separation on-coming inside lane traffic. Travel lanes across the bridge are approximately 10 feet in width and offer little room for error or maneuverability. Sidewalks are provided along the bridge deck in each direction. However, there is no physical barrier separating vehicle and pedestrian or bicycle traffic. The combination of a deteriorating structure, inadequate capacity, frequent openings, and general traffic operations safety concerns support the need for the City of Chesapeake to replace this structure.



Signal Timing

There are six signalized intersections along South Military Highway at the following locations:

- I-464 Northbound off-ramp
- I-464 Southbound off-ramp
- Atlantic Energy (railroad crossing)
- Canal Drive
- George Washington Highway
- Cavalier Boulevard

The traffic signals at these intersections are not interconnected and thus not coordinated such that they operate like a system. Rather they operate independently of one another and do not promote the progression of traffic through the corridor. Motorist traveling this 7.5 mile stretch of roadway often incur frequent stops, significant delays and persistent congestion.

Given the amount of traffic that uses South Military Highway today, it is obvious that additional capacity is required. While the city recognizes South Military Highway will ultimately be an eight-lane divided facility (per the 2050 Master Transportation Plan), in the short-term, capacity can be improved with signal timing.

When developing optimized signal timings and overall system boundaries, three key factors are considered: traffic demands, signal spacing, and driver expectancy. Given this criteria, all six signals along South Military Highway should operate as a coordinated signal system.

This will serve two key functions, provide increased capacity under normal conditions, as well as provide an opportunity to implement incident management plans when traffic is diverted off of I-64.



Signal locations

Intersection Level of Service Analysis

To further assess detail signal operations including phasing, storage lane lengths and detailed lane assignments associated with the corridor, Kimley-Horn conducted level-of-service (LOS) analysis for the following five signalized intersections:

- I-464 Northbound off-ramp
- I-464 Southbound off-ramp
- Canal Drive
- George Washington Highway
- Cavalier Boulevard

The traffic signal located at the Atlantic Energy entrance was not included in the detailed analysis since it only serves a single user and has a low side street volume

There are plans for the construction of a traffic signal at the I-64 Off-Ramp at Military Highway west of Cavalier Boulevard. Therefore this proposed signalized intersection was assessed under 2026 traffic volume projections.



I-464 Northbound Off-Ramp

By the nature of its location, this intersection experiences highly directional variations in delay based on arrival and departure of commuters. Located at the eastern edge of the study area, the I-464 northbound off-ramp signalized intersection currently operates at LOS F during the AM peak hour and LOS D during the PM peak

hour. In minimizing the potential of I-464 vehicles from queuing on the northbound off-ramp, this movement receives a significant amount of green time. Therefore, South Military Highway experiences a significant delay during the AM peak. However, during the PM peak hour, the South Military Highway mainline is the primary focus and operates at a higher LOS.



I-464 Southbound Off-Ramp

The I-464 southbound off-ramp at South Military Highway operates at LOS B during the AM peak and LOS C during the PM peak hour. Because the southbound exit ramp volumes are lower than the northbound ramp, more green time can be allocated to South Military Highway, resulting in better level-of-service.



Canal Drive

Traffic operations at this intersection are significantly influenced by employment at the Norfolk Naval Shipyard to the north and residential neighborhoods to the east. This intersection operates at LOS E

during both the AM and PM peak hours. Canal Drive itself is a local connector between South Military Highway and George Washington Highway that allows motorists destined toward the east of the corridor to bypass the intersection of Military Highway and George Washington Highway. Since Canal Drive functions as a natural bypass, southbound left-turn movement equals those along the mainline of South Military Highway. This traffic pattern is consistent throughout the day. The heavy Canal Drive side-street volume restricts the progression opportunities along South Military Highway.



George Washington Highway

The intersection of George Washington Highway at South Military Highway currently operates at LOS D during the AM and PM peak hours. Despite actual volumes through the intersection being relatively balanced, the physical appearance of this intersection suggests a failing condition. Pavement conditions at the intersection are heavily deteriorating, the pavement shows signs of rutting from increased truck traffic, and tire marks traverse the grass median where volumes are exceeding turning lane capacity. Because stops at this intersection are frequent and common, the poor LOS can easily be improved with interconnect and coordination between the signals along the corridor.



I-64 Off-Ramp\Cavalier Boulevard

Cavalier Industrial Park is one of many economic development success stories in the City. To ensure the success of this development, easy ingress\egress of truck traffic were a key component. The I-64 Off-ramp\Cavalier Boulevard intersection currently operates at LOS D during the AM and PM peak hours. The existing timings for the intersection accommodate the I-64 exit ramp traffic and the east-bound South Military Highway left-turn traffic oriented into the Cavalier Industrial Park. Volumes oriented into the industrial park are of such magnitude, that they often queue to lengths that impede South Military Highway operations.

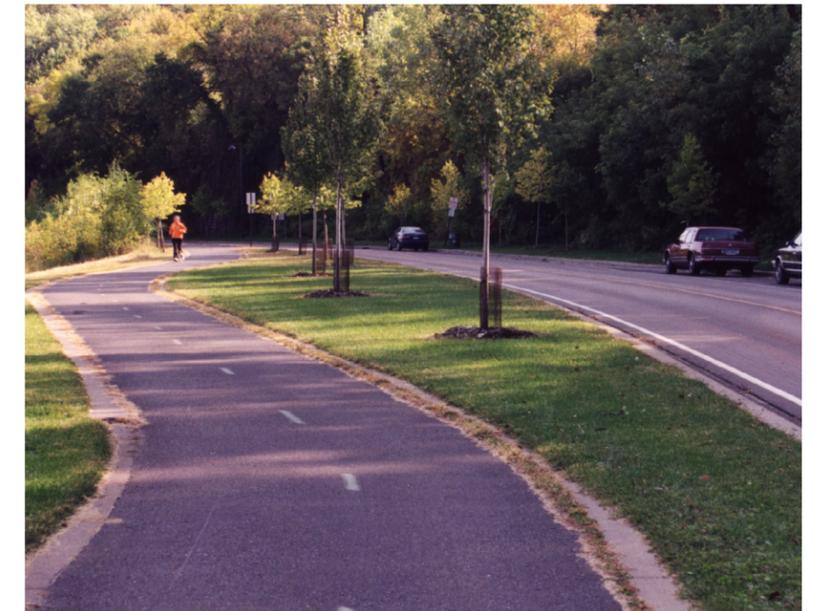
Pedestrian and Bicycle Facilities

Throughout the planning process, numerous groups including the Chesapeake Bicycle/Trails Committee and individuals expressed the desire for pedestrian and bicycle facilities to be provided along the corridor. Many of the study area streets have some sidewalk segments, but others do not. Where there are sidewalks, many were built in an era that did not provide ADA compliant curb ramps. Today, in most cases pedestrians are forced to walk on the shoulder, in the grass, or along the frontage roads. Paths exist along the roadway demonstrating the presence of pedestrians and/or bicyclist activity.

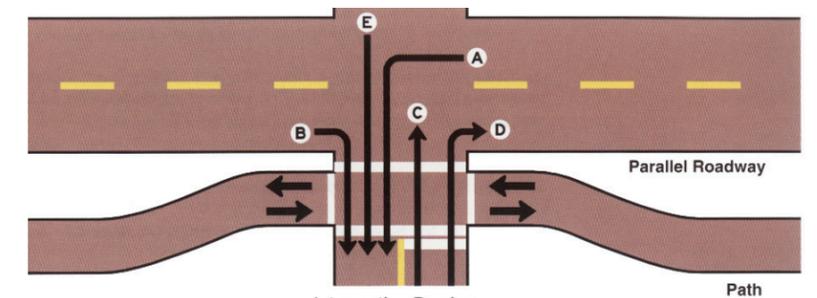
The major roadway network through the South Military Highway corridor is well-established. Within the study area there are no designated bicycle facilities, although bicyclists are not prohibited from cycling on public streets and sidewalks. As part of this study, we are recommending the designation of separate bicycle facilities along the entire corridor to accommodate this activity. In addition to the Class II bike lanes recommended in this study, the Chesapeake Bicycle/Trails Committee representatives recommend also including a Class I multi-purpose path along the core area.



Existing conditions



(ABOVE) Character for the proposed multi-lane bike path along South Military Highway
(BELOW) Approaching traffic (C,D) should stop short of the intersection of the bike path



Signage and Lighting

Signage

Improved and consistent signage is an integral component of the City of Chesapeake’s redevelopment and enhancement efforts for the South Military Highway corridor. Improved signage will help patrons and visitors find local businesses and services along the corridor. It will help trucks delivering and picking up materials more efficiently navigate the corridor. More importantly, replacement of the Gilmerton Bridge combined signage identifying truck routes will establish and preserve the character of the desired Community Core.

During the planning and design charrette process, lack of signage for trucks was identified as a concern. Although less evident today, the need for improved and consistent signage will become more vital to support redevelopment efforts for business owners and community members in the future. Future signage improvements for the corridor should focus on directional and/or way finding techniques that lead visitors, patrons, and truck traffic to appropriate areas of activity. As commercial and retail investment in the Community Core section of the corridor evolves, storefront signage standards and readability will be necessary. In general, future signage improvements should obey two basic rules – they should be reasonable and be recognizable. To promote foot traffic and a general pedestrian mall environment in the commercial/retail core, the City must create an enjoyable atmosphere. Signage is probably the least expensive, highest impact improvement that can be made to further this goal.

Lighting

Basic lighting placement and techniques were discussed during the planning and design charrette process. Numerous charrette participants noted the lack of lighting at the I-64/South Military Highway interchange and along the western segment of the corridor heading toward Bower’s Hill.

Poor lighting at the interchange is exacerbated by the amount of tree coverage and canopy adjacent to the roadway further diminishing the amount of natural light during early morning and early evening hours. The tree cover also darkens the corridor during nighttime operations especially at the interchange. At the interchange, tall well established trees line the roadway minimizing opportunities for natural light. The public noted their uneasiness about driving in the evening along this portion of the corridor.

While lighting is present in the central section of the corridor between the George Washington Highway and Atlantic Energy intersections, it is in need of upgrade and repair. Lighting fixtures appear to have been installed ad hoc over time. Light posts are leaning, do not emit adequate coverage, and fixture styles are inconsistent.

Similar to the western section of the corridor, the eastern section does not currently have sufficient lighting between Atlantic Energy and the Gilmerton Bridge. Lighting along this section is inconsistent and does not emit adequate coverage.



Alternatives Analysis

In addition to looking at the corridor as a whole, three key areas were further evaluated for detailed opportunities.

- Bower's Hill
- The Community Core
- Gilmerton

Of these three initiatives, the Bower's Hill and Community Core Area both proposed significant changes to the transportation network. Understanding that the proposed alternatives not only need to work for today but for the future as well, these two alternatives were tested using future 2026 traffic conditions.



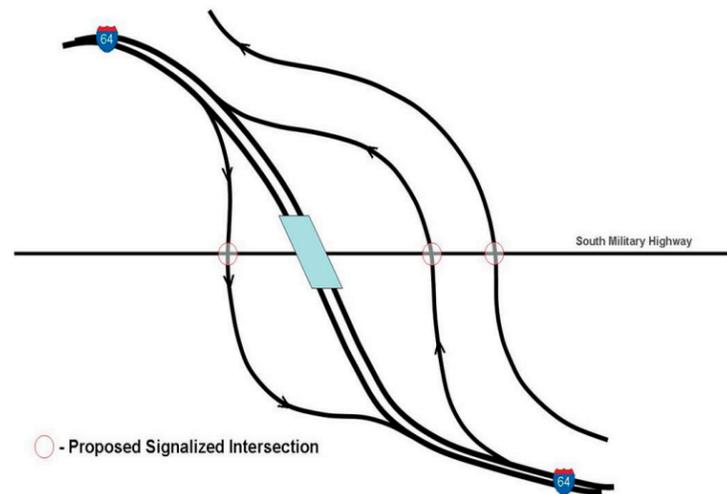
Pleasant Grove Parkway Interchange

It should be noted that the alternatives evaluated took into consideration those alternatives associated with the Pleasant Grove Parkway Feasibility Study. The Pleasant Grove Parkway is a facility intended to relieve congestion along I-64, Battlefield Boulevard, and Dominion Boulevard. This is achieved by providing an alternative means of access to areas of southern Chesapeake and Virginia Beach.

One of the interchange alternatives presented in the Pleasant Grove Parkway Feasibility Study envisioned tying into the I-64/Cavalier Boulevard interchange (as seen below). Both alternatives evaluated for the South Military Highway are consistent with the ability to tie into this proposed configuration and do not contradict those options already presented to the City of Chesapeake.

The City of Chesapeake has long envisioned a facility that would relieve traffic congestion along I-64 between I-664 and Greenbriar Parkway. It is the purpose of this study to not preclude the PGP but we are considering it and the Interchange options presented as a part of that study and within this Plan. The plan does not endorse any specific alternative identified in the Feasibility Study, but this Plan did not want to preclude those efforts.

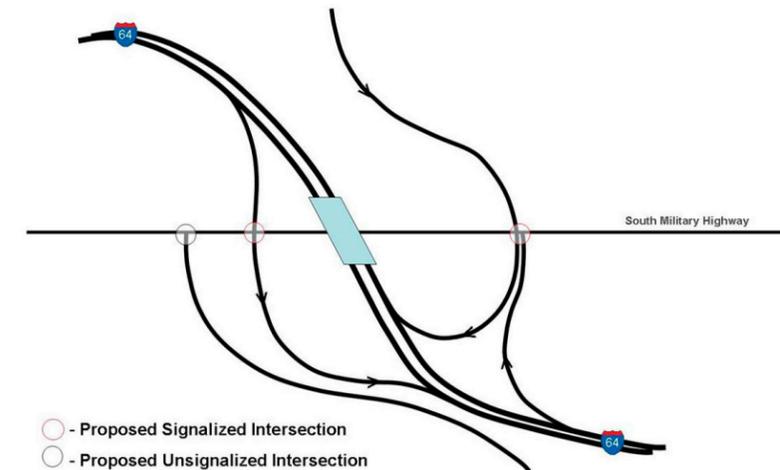
This alternative identified below was presented as a part of the Pleasant Grove Parkway Feasibility Study and represents the one most consistent with those options presented for the South Military Highway study. Another option is under consideration but based on its location was not considered as a part of this analysis.



Alternative 1

Alternative 1 aligns both the northbound and southbound on- and off-ramps at two conventional signalized intersections. This alternative maintains the signal at Cavalier Boulevard and provides a direct off-ramp from I-64 to South Military Highway. Additionally, this option considers a split along the off-ramp that will allow for access to the proposed expansion of the Industrial Park to the south of South Military Highway. An additional signal is required under this scenario at a proposed new intersection located immediately east of the existing South Military Highway/Cavalier Boulevard intersection. With coordinated signals and optimized timings, this additional signal should not adversely impact the capacity of South Military Highway, since a majority of the traffic in this area is destined for I-64.

This conventional configuration creates a known travel pattern for the general public under signalized conditions, which will greatly improve the safety aspects as well as maintain access to the existing Cavalier Industrial Park along with direct access to the expansion of the Industrial Park.



Alternative 2

Similar to Alternative 1, this option aligns the off- and on-ramps west of I-64 overpass. To the east, the existing off-ramp configuration is maintained to provide direct access into Cavalier Industrial Park. Under this scenario, the on-ramp to I-64 is converted to a loop that is located at the existing signalized intersection. While this creates a heavier demand at this location with access on and off of I-64, it eliminates the need for a third signalized intersection. By eliminating the on-ramp to the east of I-64, additional land is available in the northeast quadrant of this interchange.

This alternative captures land for the expansion of the existing Cavalier Industrial Park, provides access to the proposed expansion of the Park to the south, and improves ingress/egress through a signalized intersection at the front door to the Industrial Park.

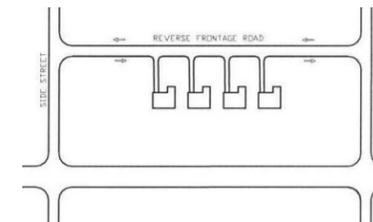
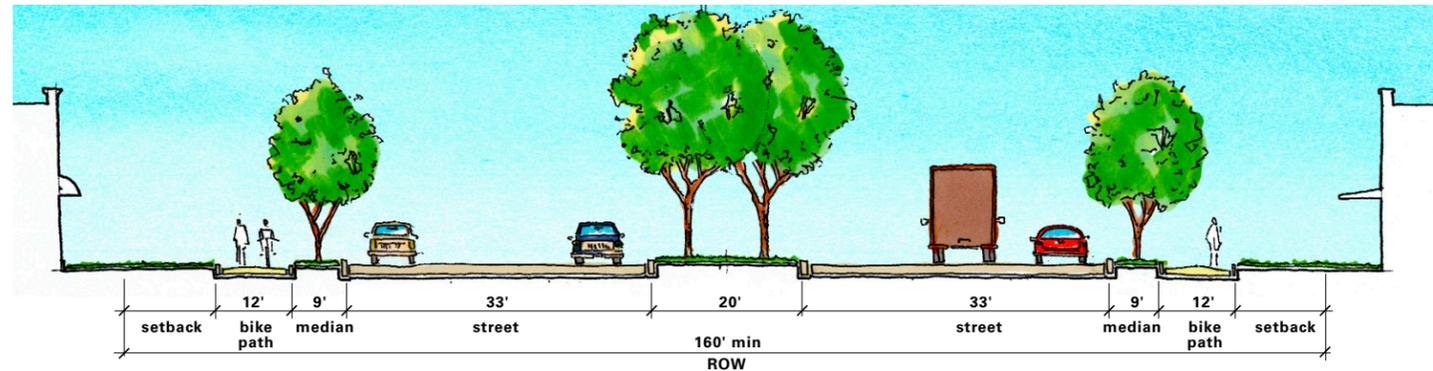
Community Core Area

The central portion of the study area between George Washington Highway and Canal Drive will become the Community Core area. This segment of the corridor is expected to contain mixed use buildings, improved intersections, additional traffic signals, and a more pedestrian friendly environment. The intent of creating an active commercial/retail center along the corridor drove the need to assess two conceptual alternatives that addressed the balance of regional and local traffic demands while responding to the economic and retail needs of the community. Based on the projected traffic volumes along this corridor, it was determined that South Military Highway required a minimum of six through-lanes between the I-64 Cavalier Boulevard interchange east to the Gilmerton Bridge. To the west of the I-64 interchange, the existing four-lane section was determined to be adequate. The primary difference between the two alternatives is how access is accommodated when redevelopment occurs within the core area.



Concept 1A

Concept 1A calls for the existing frontage roads along South Military Highway to be relocated behind businesses fronting the corridor to create a local street network through “reverse” frontage roads. The concept introduces three new signalized intersections to address controlled direct access to South Military Highway yet support a defined street grid network to be located behind commercial/retail establishments and neighborhoods along the corridor. While this concept presents a streamlined approach to improving corridor capacity and traffic progression, it also requires the greatest intervention on behalf of the City to work with private property owners to dedicate public right-of-way at the rear of their properties and consider share access. This concept was very well received by the public during the design charrette process.



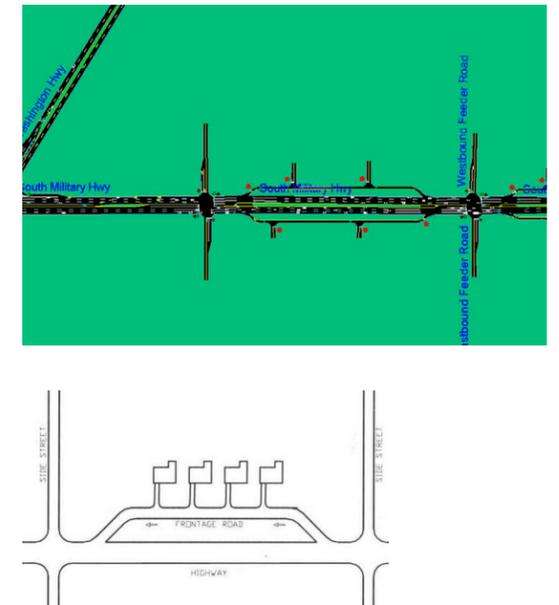
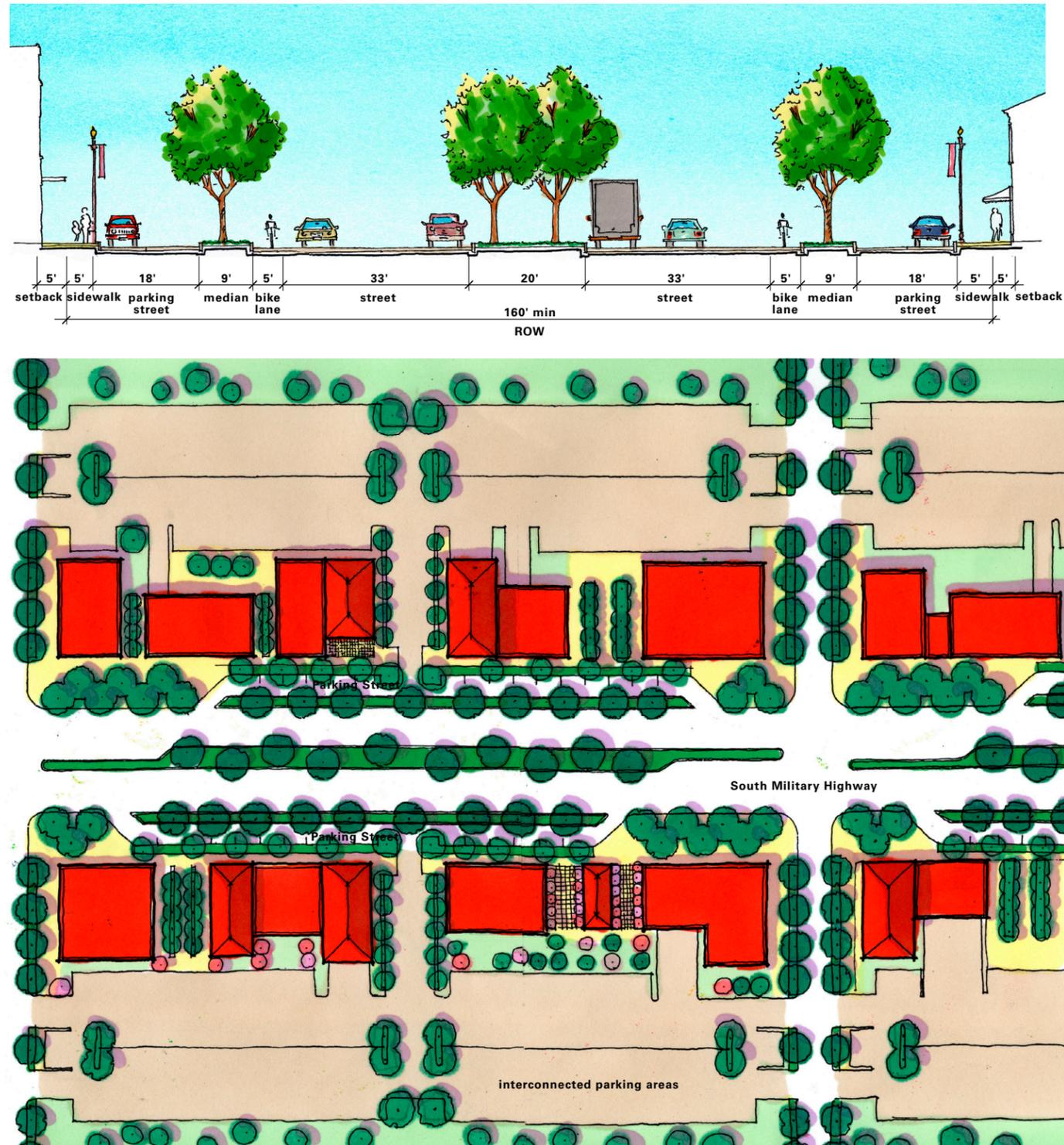
TYPICAL STREET Proposed street improvements and rear road plan for development along South Military Highway

Concept 1B

Concept 1B also upgrades South Military Highway to a six-lane facility but locates the access street at the front of the redevelopment property within the Community Core. While these access streets appear similar to the frontage roads, they will function very differently. The frontage roads will be reconfigured to accommodate only one-way traffic and function much like an elongated right-in/right-out along the corridor. As with Concept 1A, this concept will introduce three new signalized intersections to the corridor, which will control access along this corridor and improve progression opportunities.

The access streets will be one-way only with on-street parking. They will begin and end prior to the proposed signalized intersection and hence function as right-in/right-out driveways. This configuration will allow shoppers and local residents easy access to shops and neighborhoods located along the corridor and within the already existing right-of-way. By terminating these access streets prior to the signalized intersection, the number of vehicle conflicts and driver confusion is greatly reduced from existing conditions.

The concept of parking on an access street met some initial resistance. However, Concept 1B allows redevelopment to occur while providing individual owners with continued partial access to South Military Highway. The access streets while functional for motorists, pedestrians, and businesses, also help to establish the boundaries of the Community Core by the physical character of the roadway.



Corridor Recommendations and Implementation

INTER-PARCEL CONNECTIVITY

Both alternative Concept A and Concept B segments of the Community Core suggest a system of interconnected local streets and local interconnectivity. The retaining of the frontage road system as parking streets or the introduction of reverse frontage roads behind development along the corridor will aid in limiting the use of short sections of South Military Highway for local traffic. Inter-parcel connectivity places an emphasis on the strategic placement of access at median crossovers, preferably with a traffic signal, that will serve ingress/egress of commercial developments or large residential developments. Anticipatory planning of future development and redevelopment efforts along the South Military Highway Corridor will lead to establishing adequate access and traffic control measures. Inter-parcel connectivity and the frontage road concept both demonstrate an effective methodology to consolidating the number of access points and therefore the number of movement conflicts along the corridor.

ACCESS MANAGEMENT STRATEGIES

Access management provides two major benefits to the transportation system, the preservation of highway capacity and safety. Access management requires the implementation of policies and roadway features that manage the movement of vehicles along a street. Policies and design solutions are varied and can be adapted to fit different situations. One published document that may help with the selection of appropriate measures for access management policies is the National Cooperative Highway Research Program's (NCHRP) Report 420, Impact of Access Management Techniques. As described in this report, access management is "the process that provides (or manages) access to land development, while simultaneously

preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed." This document provides an assessment of access management techniques. Common examples of access management strategies described in the aforementioned document include:

- Establishing adequate signal spacing
- Establishing adequate unsignalized access spacing
- Constructing median treatments
- Providing appropriate median openings
- Providing left-turn lanes
- Providing alternatives to left-turns
- Establishing driveway design criteria

Signal Spacing

Appropriate signal spacing is critical in being able to provide good two-way vehicle progression along a corridor. It is commonly understood that appropriate spacing of traffic signals can dramatically improve safety and traffic operations. To achieve good signal coordination and provide traffic progression in both directions of travel, traffic signal spacing at multiples of ¼ mile is generally recommended for roadways in developed segments of the corridor, although this does not mean that a signal is warranted every ¼ mile interval. Depending on desired speeds and development along a roadway, signal spacing should be adjusted accordingly. The first priority for a proposed signal should be based on demand. In addition, consideration should be given to the type of property being served whether it is a centralized location of neighborhood use or direct access for industrial development.

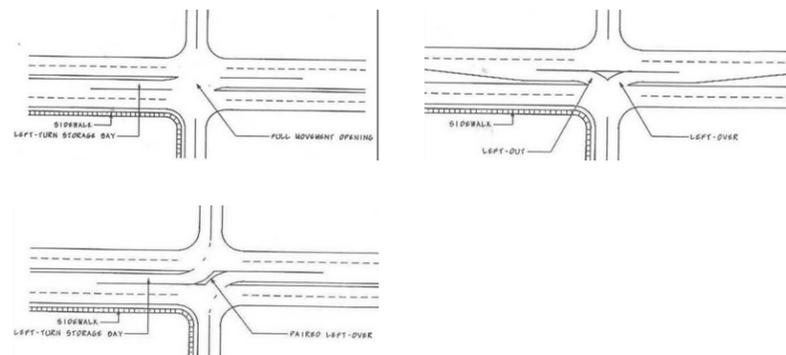
Unsignalized Access Spacing

As unsignalized driveways and intersections are planned and constructed, they should be spaced such that those that are likely to be converted into signalized intersections are spaced similar to existing intersections with signals. With the introduction of access streets, several developments can receive direct access to South Military Highway with a single access point.

Median Openings

Median openings are identified in one of two categories - full or directional. A full median opening accommodates all turning movements whereas a directional opening accommodates only specific movements through channelization. Examples of different types of median openings include:

- Full movement
- Left-over, left-out
- Paired left-over
- Left-out
- Right-in right-out (RIRO)



Median Crossover Width

Median crossover width is an important roadway feature that can significantly affect roadway access. Narrow medians do separate oncoming traffic. However, narrow median crossovers do not provide adequate shelter for turning vehicles or pedestrians. The physical conditions and the impact to traffic operations were observed at several locations along the South Military Highway Corridor. This can be observed on a daily basis. Since the majority of the corridor already benefits from the presence of medians, safety issues associated with median crossover width are a primary factor.

The ideal width of the median is dependent on the presence of turn-lanes in the median, and the vehicle composition and vehicle queuing needs for vehicles trying to perform a left-turn or U-turn from the median or trying to cross the highway from a side street. The lack of turn-lanes further fuels the need to not only introduce turning lanes but to also consider the widening of median crossovers as a part of the improvements needed along the corridor.

Crossover Spacing and Consolidation

As with driveway spacing, proper crossover spacing is important to the overall function of the South Military Highway corridor. In some instances, the proper spacing of medians may result in the opportunity to eliminate some median crossovers, and consolidate left-turning vehicles to specific intersections. The Virginia Department of Transportation's (VDOT) access management policy requires full median openings be spaced a minimum of 900 feet apart when the design speed is 50 mph. The City of Chesapeake crossover spacing for a Principal Arterial with a design speed of 50 mph is also 900 feet but with a roadway classification of Minor Arterial this spacing is reduced to 700 feet. This is a direct reflection of roadway volume and

the reduced potential to disrupt traffic flow on a lower roadway classification.

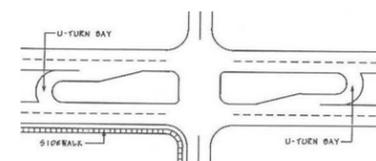
Left-turn Lanes

Providing adequate left-turn lanes and appropriate storage length is important for roadway capacity and safety. Left-turn lanes remove through vehicles from turning traffic, improve the visibility of oncoming traffic to left-turning vehicles, and reduce rear-end collisions. Turn-lanes and in particular left-turn lanes benefit highway operations. The NCHRP report cites several studies documenting delay reductions associated with left-turn lanes, and indicates that the "capacity of a shared lane is about 40 percent to 60 percent of that of a through lane." It is estimated that the provision of left-turn lanes on a four-lane arterial can increase capacity by as much as 33 percent.

Alternatives to Left-turns

In some instances it is necessary to control where left-turns can be made in a corridor. In other cases left-turns must be restricted altogether. In these cases, the left-turn movement can be displaced to a more suitable location with a lesser impact. There are numerous alternatives that can be applied in these situations. Examples include:

- Median U-turn
- Jug Handle



Driveway Design

Entrances to parcels must be designed, or the lack of design involves three components that create unnecessary vehicle delays and conflicts:

- Location
- Design
- High Occurrence

Drivers are forced to slow down for vehicles entering an existing driveway, decreasing the capacity of the mainline. By relocating, removing and combining driveways, this segment of South Military Highway would achieve an increase in safety and efficiency.

Access management provides vehicular access to land development in a manner that preserves the safety and efficiency of the transportation system. It applies traffic engineering principles to the location, design, and operation of access drives serving activities along the highway. Access management can improve safety and traffic operations by:

- Limiting the number of vehicle conflict points
- Increasing distance between conflict areas
- Reducing the number of turning vehicles from through traffic lanes
- Reducing conflicting vehicle volumes

As one can see, a wide variety of access management techniques can be implemented to manage roadway access. Measures will need to vary by roadway classification, existing conditions, and adjacent land uses. In the case of South Military Highway applicable techniques must keep in mind the corridor's mobility function (to accommodate relatively large volumes of traffic at moderate speeds within

and through the region).

The City of Chesapeake has an existing Access Management Policy and Plan for South Military Highway per Chapter 16 -Access Management Public Facilities Manual. However, the current access control plan was approved in 1985 and covers the segment from I-64 to Deep Creek Boulevard. It is recommended that with the adoption of the new 2026 Comprehensive Plan and the adopted 2026 Land Use Plan the City of Chesapeake should consider updating and extending the current access control plan. It is suggested that the plan be extended to address the South Military Highway Corridor study area beginning with the South Military Highway/I-64 Bower's Hill interchange in the west and extending to the South Military Highway/I-464 interchange in the east.

In general, the City of Chesapeake access management policy is consistent with median spacing and access management strategies set forth by VDOT. In some instances the City ordinance or entrance standards and median cross-over spacing exceed those of VDOT. For effectiveness, access management must consider both road design principles as well as land use planning principles. The relationship that will exist between the transportation system of South Military Highway and the adjacent land uses will require coordination between VDOT and the City of Chesapeake. This coordination effort will be necessary to establish and sustain orderly growth patterns that will minimize the impacts of land use on the transportation system.

Access Improvement Recommendations

- Median between I-64 Off-Ramp/Cavalier Boulevard intersection and cross-over at I-64 On-Ramp toward Virginia Beach: Eliminate utilities within the median

- Westbound Military Highway at I-64 (Toward Suffolk) On-Ramp: Construct an exclusive right-turn lane with 200 feet of storage and 200 foot taper
- Military Highway between State Street and George Washington Highway (U.S. Route 17): Consider exclusive full-width left-turn lanes at median crossover locations
- Military Highway between State Street and George Washington Highway (U.S. Route 17): Consider one-way frontage roads
- Military Highway between Cavalier Boulevard and Bower's Hill: Consider the construction of exclusive full-width left-turn lanes and consider the median crossover consolidation or the elimination of some median crossovers
- Military Highway at Deep Creek Boulevard: Eliminate full-movement median crossover and construct Deep Creek Boulevard right-out only

Intersection Recommendations

- Military Highway at I-64 (Toward Virginia Beach) On-Ramp: Construct exclusive eastbound right-turn lane
- Military Highway at Cavalier Boulevard: Extend eastbound left-turn lane and improve the radius for southbound right-turn movement to better accommodate truck traffic
- Military Highway at Canal Drive: Extend eastbound left-turn lane
- Military Highway at George Washington Highway: Extend westbound left-turn lane, extend eastbound left-turn lane, and reconstruct intersection to incorporate full-width right-turn lanes into intersection

- Modify I-664 Off-Ramp at Bower's Hill: Short ramp exits to stop controlled T intersection, queuing during peak periods backs up onto the Interstate, and traffic approaching from the west (U.S. Highway 13/58/460) and north (I-664) oriented toward eastbound Military Highway can access at the West Military Highway Off-Ramp or at the I-64/Military Highway interchange (Exit 297) planned for signalization; therefore, it is recommended that this ramp be closed.

In addition to the detailed access management and intersection recommendations, there are several other issues that require attention. These additional elements may not directly improve the capacity of the roadway but will improve the feel of the roadway, enhance communication, improve visibility, and thus allow motorists to move through the corridor with ease and ultimate improved safety.

SIGNAL TIMING

In addition to specific recommendations identified at each intersection, the entire South Military Highway should be up graded to operate as a coordinated signal system. This will improve the overall operation on a daily bases as well as allow for incident management plans to be implemented to accommodate incidents at the High Rise Bridge along I-64.

With a coordinated system in place, the City will have the flexibility to vary the system boundaries by time of day or under incident conditions. It is anticipated that the traffic signals serving the I-464/Military Highway interchange will be operated independently under normal commuter conditions. However, they will be coordinated with the other signals when incident management plans are in place.

Preliminary AM and PM peak hour signal timing plans have been prepared using Synchro 6.0 Professional to address existing conditions for review and consideration by the City of Chesapeake (See included CD). The signal timing analysis represents signalized intersection analysis for the corridor as a whole and an effort to best progress traffic along the mainline during these peak periods. The analysis also includes:

- 2026 volumes on Existing Geometry
- 2026 volumes Community Core Concept 1A
- 2026 volumes Community Core Concept 1B
- 2026 volumes Cavalier Interchange ALT 1
- 2026 volumes Cavalier Interchange ALT 2

Additionally, the data files contained on the CD are intended to demonstrate existing and future network deficiencies as well as demonstrate short term and long term solutions that enhance and sustain traffic operations along the corridor.

GILMERTON BRIDGE

The City of Chesapeake must actively pursue and designate the Urban Transportation improvement funds required to support the replacement and construction of the new Gilmerton Bridge. The new Gilmerton Bridge should continue to be designed and constructed to ultimately accommodate six travel lanes.

The replacement of the Gilmerton Bridge is a critical first step in the planned reinvestment and aesthetic improvement of the corridor. The new Gilmerton Bridge will help redefine the eastern gateway of the South Military Highway Corridor.

GEORGE WASHINGTON HIGHWAY

During the charrette process numerous participants discussed the need to improve George Washington Highway (U.S. Route 17) between South Military Highway and Canal Drive to a four-lane roadway. This segment is currently a two-lane facility with an exclusive left-turn lane at the southbound approach to South Military Highway. Conversations with local residents and the City and through additional data gathering, revealed that this section had at one time been a funded project but was taken off the list due to other higher priority needs in the region.

Intersection analysis revealed that with the additional laneage intersection LOS conditions could be improved to address existing and future demand. Additional laneage will better accommodate traffic traveling to/from the I-64/Deep Creek interchange in the south and other areas of Chesapeake and Portsmouth to the north. The additional capacity will require less green time being allocated to traffic along George Washington Highway and allow more green time to be allocated back to South Military Highway. Improving this segment of the George Washington Highway to a four-lane facility will add capacity and when combined with signal timing modifications at the intersection will enhance traffic operations and traffic progression through the intersection and along this portion of the South Military Highway corridor.

PEDESTRIAN AND BICYCLE FACILITIES

Today, South Military Highway is not a designated bike route. Lack of such facilities causes bicyclists and pedestrians to use the roadway or shoulder for recreational purposes and travel to and from work.

From our meetings with the steering committee members, local citizens, and representatives from the Chesapeake Bicycle\Trails Committee, it is recommended that designated (Class II) bike lanes be incorporated into the future corridor roadway design. These bike lanes should be constructed adjacent to the travel lanes beginning at the I-64/Cavalier Boulevard interchange in the west and continue through the planned Community Core and end in the area immediately east of the Gilmerton Bridge.

Along the western (Bower's Hill) segment of the corridor, it is recommended that bike lanes or multi-use paths be located beyond the roadway section to provide a buffer to the higher travel speeds, traffic volumes, and truck traffic. While representatives from the Bicycle/Trails Committee revealed that adjacent Class II bike lanes along this particular segment are preferred, the accommodation of separated multi-purpose paths will better serve multiple user interests along this part of the corridor.

It is noted that per the Chesapeake 2026 Comprehensive Plan bike facilities should be designed and maintained with the intended user in mind. Off-road paths are more appropriate for recreational users, while bike lanes adjacent to the roadway are more appropriate for the experienced cyclist. In the spirit of the Chesapeake 2026 Comprehensive Plan it is recommended that bicycle facilities should be considered with all future transportation projects.

Currently, the corridor is essentially void of such pedestrian facilities creating additional safety hazards for motorists and pedestrians. Sidewalks are critical transportation routes in a community and are a fundamental pedestrian component in street design. As new development\redevelopment, especially within the Community Core area comes to fruition, there will be an increased need to provide side-

walks for pedestrian mobility among land uses. To support the success of the proposed Community Core particularly for those businesses abutting residential neighborhoods and located along the parking streets, sidewalks offer the opportunity to establish an active pedestrian environment.

It is also recommended that intersections along the corridor be upgraded with corresponding corridor improvements to include sidewalks and ADA compliant curb ramps. Additionally, a minimum five-foot clear-zone should be provided along sidewalks conforming to ADA minimum passing space for a wheel chair. ADA requires a wheelchair passing space at intervals of no more than 200 feet on a walkway.

SIGNAGE

New signage and way finding techniques need to be responsive to the varying land use characteristics present throughout the corridor. Signage should be introduced that supports both existing and future local businesses, assists community members, guides truck traffic through the corridor, and is easily understandable.

- Uniform service signs (gas, food, lodging, etc.) should be located only around the major intersections and at the end points of the study area corridor
- Road signs (speed limit, traffic controls, etc.) should be posted at regular intervals as required by law
- The City may consider the introduction of historical signs and/or markers within the commercial/retail core of the corridor
- Gateway treatments such as landscaping or monument signs should be introduced at the end points of the study area to further define the varying character of the area

LIGHTING

Lighting along the corridor should be designed and installed that is consistent with the surrounding land uses and varying character of the corridor. Lighting for the corridor should meet VDOT lighting design guidelines, standards to support efficient and safe vehicular and pedestrian movement.

Numerous charrette participants noted the lack of lighting at the I-64/Cavalier Boulevard interchange and indicated that installation of lighting at this location should be a priority. It is also understood that the City of Chesapeake was in the process of developing a lighting plan and preparing to install lighting along the Bower's Hill segment of South Military Highway. This effort was put on hold until recommendations and findings were identified as a part of this study. As expected the lack of lighting along this segment was voiced and listed as a safety concern. Therefore, it is recommended that the City of Chesapeake proceed expeditiously with reinitiating their lighting design and installation effort for this segment of Bower's Hill based on the right-of-way necessary to accommodate the proposed four-lane typical section and associated multi-use paths.

In the planned commercial/retail core segment of the corridor, site lighting should be designed and installed to minimize the visibility of light sources and glare from public view or adjacent sites. In particular, overhead glow should be minimized as much as possible. Additionally, pedestrian lighting fixtures within the Community Core should be consistent in an effort to establish a sense of character or place.

Lighting in the Gilmerton area of the corridor will be dictated by lighting fixtures associated with the replacement of the Gilmerton Bridge. Lighting between the Gilmerton Bridge and the Community Core area should meet VDOT design guidelines.

REPAVING

The South Military Highway Task Force Study and the recent design charrette process identified the need to repave the corridor. Currently pavement conditions include cracking, fragmenting, and complete pavement failure along some edges of the roadway. It is very evident that the pavement of South Military Highway corridor has been neglected and not maintained on a consistent basis.

Realizing the Gilmerton Bridge will not be constructed for another five years and the funding and potential to improve South Military Highway to a six-lane facility in the time period is very unlikely, resurfacing of the corridor should be emphasized. Repaving the corridor presents a near term improvement that will offer an improved driving surface, establish a commitment to investment by the City, and address some of the aesthetic concerns the corridor presents. New pavement with new striping and marking begins to present a cleaner/new feel to the roadway. Repaving or resurfacing of the corridor should be a priority to the City.

LANDSCAPING

With future roadway improvements, it is recommended that gateway treatments (landscaping, monument signs, etc.) be constructed to further define the character and boundaries of the corridor. It is recommended that gateway signs with appropriate landscaping be implemented that define the entrances to the Community Core area. In addition to existing Zoning Ordinance requirements, the City should implement landscape and streetscape standards that define the character of the core and enhance the overall aesthetic qualities of the corridor.

Implementation of planned and maintained landscaping will provide several benefits. Such landscaping benefits include:

- Preserve and enhance the visibility of traffic along the South Military Highway Corridor
- Enhance the visual quality of the corridor
- Shade parking lots, reduce heat generation from asphalt
- Reduce the volume and improve the quality of stormwater runoff

Where stormwater management features will be required as a part of future roadway design, the City should consider landscaping opportunities that include recreated wetlands and reforestation zones (particularly along the Bower's Hill and Gilmerton segments of the corridor) to achieve the desired function. Existing landscaping or working landscapes such as fields, wetlands, wooded areas, or agricultural areas should be preserved where possible. Also, landscaping features should integrate with stormwater management plan needs to ensure consistency with a master drainage plan for the corridor.

The magnitude and character of landscaping implemented for the corridor should be reflective of the three areas that exist along the roadway. Landscaping should define the distinct characteristics of the corridor and further promote a sense of place while fulfilling necessary function. Landscaping along the corridor should offer a buffer between inconsistent land uses especially residential land uses and local businesses.

In addition to aesthetic quality enhancements and stormwater management benefits, it is expected that as with resurfacing, investment in landscaping along the corridor will reflect a commitment to investment on behalf of the City.

OTHER CONSIDERATIONS:

LIGHT RAIL TRANSIT (LRT)

As future need and conditions warrant, the City should study the feasibility of introducing light rail transit (LRT) into the corridor in coordination with Hampton Roads Transit (HRT).

INDUSTRIAL CORRIDOR OVERLAY DISTRICT (ICOD)

The City of Chesapeake has adopted Transportation Corridor Overlay District (TCOD) policy that applies to Route 104 (Dominion Boulevard) and Route 168 (Battlefield Boulevard). We understand that the intent of the TCOD is to preserve the economic development potential of the two corridors by creating opportunities for high quality, attractive development. A key component of the TCOD development is accessibility to the interstate system and primary regional transportation infrastructure systems (I-464, I-64, Rail lines, Southern Branch of the Elizabeth River, etc.). Accessibility provides new opportunities for people in terms of where to live, work, and shop. Although the overlay approach for the South Military Highway corridor is appropriate, the intentions for development/redevelopment management in this area are slightly different from those for the TCOD growth corridors.

As a part of the needs assessment conducted during this study, and extensive public input during the design charrette indicated the need to promote commercial-retail, light industrial and heavy industrial development opportunities within the corridor. That intent, combined with the geographic location of the corridor and surrounding area land uses shape the need to establish, via an Industrial Corridor Overlay District (ICOD), guidelines for development along the improved roadway.

The ICOD builds off of the TCOD principle that opportunities are created by existing transportation infrastructure and planned transportation improvements and it is vital to preserve such opportunities. The South Military Highway corridor is a vital link at the local and regional level due to its access relationships with I-464, U.S. Route 17 (George Washington Highway), I-64, I-664, and U.S. Route 58. South Military Highway will play a role in providing access to the future Pleasant Grove Parkway through the I-64 interchange at Cavalier Boulevard.

It is understood that interstate, rail, and deep water accessibility combined with more intense land uses are what will shape the future of the corridor. The defining difference is that the South Military Highway corridor is currently characterized by existing light and heavy industrial land uses at each end of the corridor with the intent to support and grow such uses into the future. Simultaneously, the Community Core segment will focus on community oriented commercial and retail services. Commitment to investment in the corridor combined with a vision for future land uses supports the concept of the ICOD.

The ICOD establishes a policy framework intended to define and manage new development and redevelopment efforts along the corridor. The area in which this policy framework will be defined is a one-mile buffer (1/2 mile to the north and 1/2 mile to the south the roadway) beginning immediately west of the I-464/South Military Highway interchange and ending in the east at the I-664 off-ramp in Bower's Hill. The proposed ICOD will be administered through the rezoning and conditional use permit (CUP) process. This provides the City with some discretion over the approval of conditional use permits and rezoning applications. The policy framework will pro-

vide the opportunity to implement shaping guidelines that lead to the generation of additional tax revenue for the City. Existing accessibility, existing zoning, and a vision create the potential to establish a vibrant and thriving community and corridor.

In addition to the economic development benefits, investment in transportation infrastructure improvements is intended to enhance the safety, function, and capacity of the corridor. As a major regional transportation facility, the establishment of the proposed ICOD for this section of the South Military Highway corridor, represents an opportunity for significant community investment that will contribute to public health, safety, and welfare. Improvements to the corridor will facilitate access to jobs and schools and support the movement of goods and services.

Therefore, it is recommended that the City of Chesapeake consider the establishment of an Industrial Corridor Overlay District.

Implementation Strategies

For the vision and recommendations expressed by UDA and KHA to be realized, specific implementation steps will need to be taken by the City of Chesapeake. The majority of the implementation steps seek to provide the conditions under which the vision can be achieved, by way of providing sensible land use regulation, necessary public investments, the development of appropriate programs and policies and other actions.

The implementation of this Plan will depend on action being taken to:

- Revise existing development regulations
- Undertake more detailed studies to resolve and explore the opportunities and constraints identified in this Plan
- Promote and assist special objectives; and,
- Make necessary infrastructure investments

The execution of the implementation steps will be phased and subject to a variety of factors, which will determine their timing. These factors include:

- The availability of financial resources necessary to implement specific proposals
- The interdependence of the various implementation tasks, in particular, the degree to which implementing one item is dependent upon the successful completion of another; and,
- The severity of the challenge that a particular implementation task is intended to address

The recommendations listed above have been divided into three types of projects:

- Immediate
- Near Term
- Long Term

Immediate

Low cost projects that are funded, easily implemented and consistent with the long range visions. These improvements are located within the existing right-of-way and can occur within 6 months to 5 years.

- Replace Gilmerton Bridge
- Corridor Signal Timing Coordination

Short-Term

Longer time horizon, engineering design may be required, slightly higher costs, can occur within 5 to 10 years.

- Strategic Intersection Improvements
- Lighting along Bower's Hill segment and at I-64/Cavalier Boulevard Interchange
- Update and Extend Access Management Plan (Access Control Plan) for South Military Highway
- Signage
- Repaving/Resurfacing of corridor
- Widen George Washington Highway to four-lane facility
- Establish Industrial Corridor Overlay District (ICOD)
- Landscaping and Streetscaping enhancement projects

Long-Term

Long time horizon, significant cost, right-of-way impacts, require other agency approval, may occur over next 10 to 15 years or beyond.

- I-64/Cavalier Boulevard Interchange Modification
- Widen South Military Highway to six-lane facility

PROJECT/PROJECT DESCRIPTION	IMPLEMENTED BY	PRIORITY	TIME HORIZON	COORDINATED WITH	PLANNING-LEVEL COST ESTIMATE
Gilmerton Bridge: Replacement of Gilmerton Bridge in the east is planned to begin construction in 2008 and completed by 2011.	City of Chesapeake	High	Immediate – Six Months to Five Years	VDOT, FHWA	
SMH Traffic Signal Coordination	City of Chesapeake	High	Immediate – Six Months to Five Years	VDOT	
SMH Traffic Signal Interconnect	City of Chesapeake	High	Short Term – Five Years to 10 Years	VDOT	
Repaving of SMH Corridor	City of Chesapeake	High	Short Term – Five Years to 10 Years	VDOT	
Turn-Lane Improvements along Corridor	City of Chesapeake	Medium	Short Term – Five Years to 10 Years	VDOT	
Improve and Provide Adequate Signage along SMH Corridor	City of Chesapeake	Medium	Short Term – Five Years to 10 Years	VDOT	
Update and Extend Access Management Plan (Access Control Plan) for SMH	City of Chesapeake	Medium	Short Term – Five Years to 10 Years	VDOT	
Upgrade George Washington Highway from SMH to Canal Drive to a Four-Lane Facility	City of Chesapeake	Medium	Short Term – Five Years to 10 Years	VDOT	
Upgrade SMH to a Six-Lane Facility	City of Chesapeake	Medium	Short Term – Five Years to 10 Years	VDOT	
Install New Lighting (Bower's Hill) and Replace Existing Light Poles throughout SMH Corridor	City of Chesapeake	Medium	Short Term – Five Years to 10 Years	VDOT	
Implement Landscaping and Streetscaping Enhancement Projects along SMH	City of Chesapeake, Developers, Corridor Business Owners	Low	Short Term – Five Years to 10 Years	VDOT, City of Chesapeake Planning and Economic Development	
I-64/Cavalier Boulevard at SMH Interchange Modification	City of Chesapeake	Low	Long Term – 10 Years to 20 Years	FHWA, VDOT	
Industrial Corridor Overlay District (ICOD)	City of Chesapeake	Low	Immediate – Six Months to Five Years	Economic Development, City Council, Planning Commission	

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