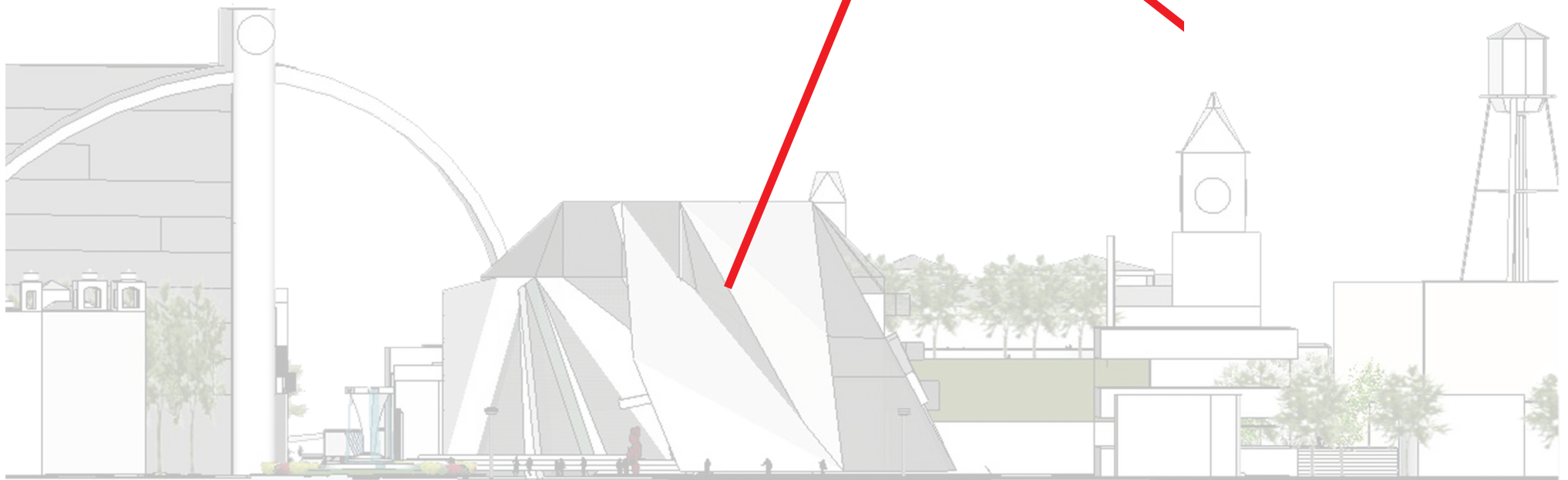


Boulevard

Broad

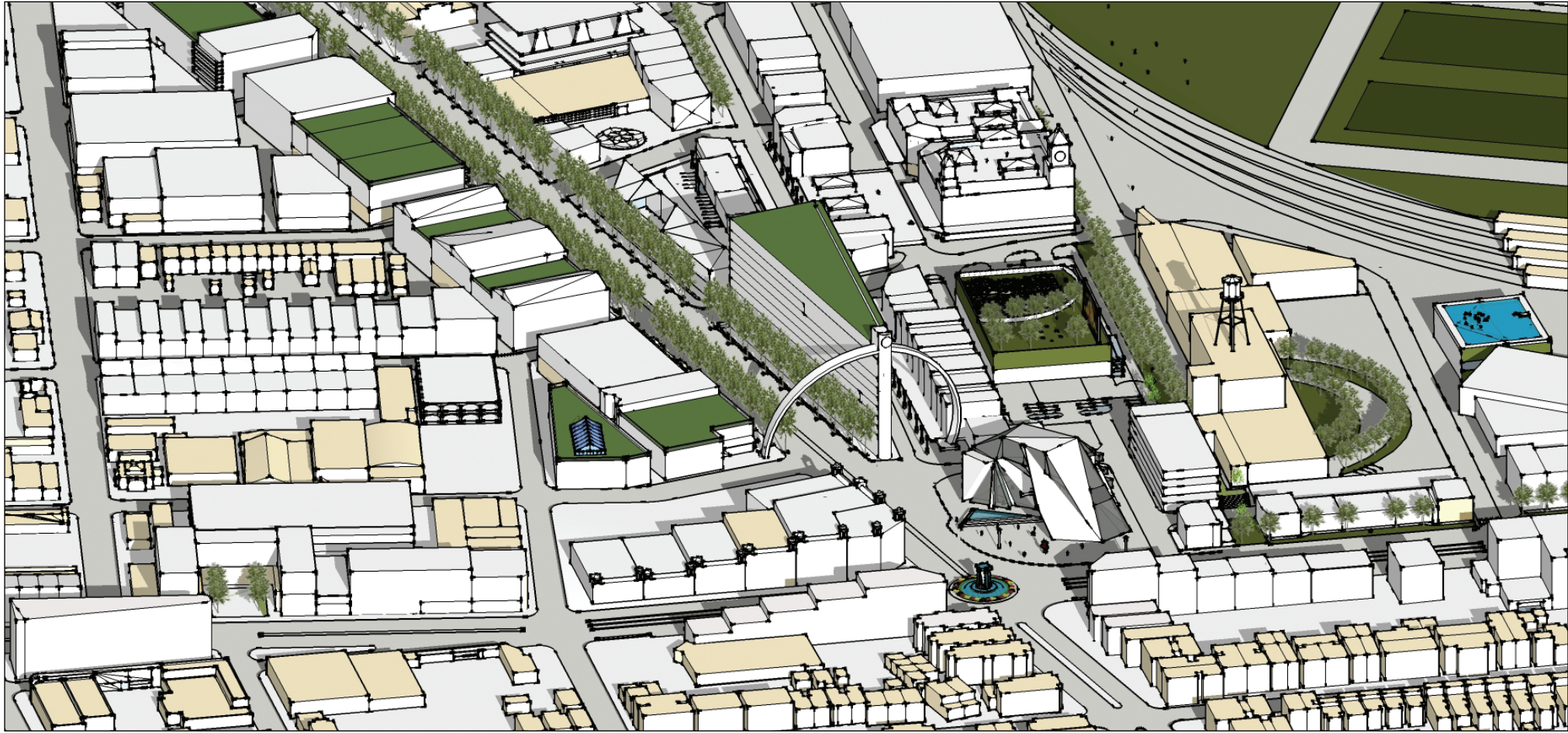


Boulevard Broad

An Urban Design Plan for the intersection of Boulevard and Broad Street in Richmond, Va.

Prepared for The City of Richmond

Prepared by Virginia Commonwealth University's Master of Urban Regional Planning Program's Spring 2013 Studio I class under the direction of Instructor Mr. James C. Smither, ASLA



The study area with improvements over the next 40 years, as viewed looking northeast from Broad Street.

Acknowledgements

This plan would not be possible without the help and guidance from Mark Olinger, Jim Hill, Tom Flynn, and Daniel Cohen from the City of Richmond; from Rob Hargett, Principal at the Rebkee Company; and from Karen Coltrane, CEO of the Children's Museum of Richmond. Additional thanks go to Jane Ferrara, Jeannie Welliver, Justine Roberts, Kyle Brackett for providing valuable feedback, the Department of Planning and Development Review for providing crucial materials, and the Department of Economic and Community Development for providing conference space in Main Street Station.

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Executive Summary

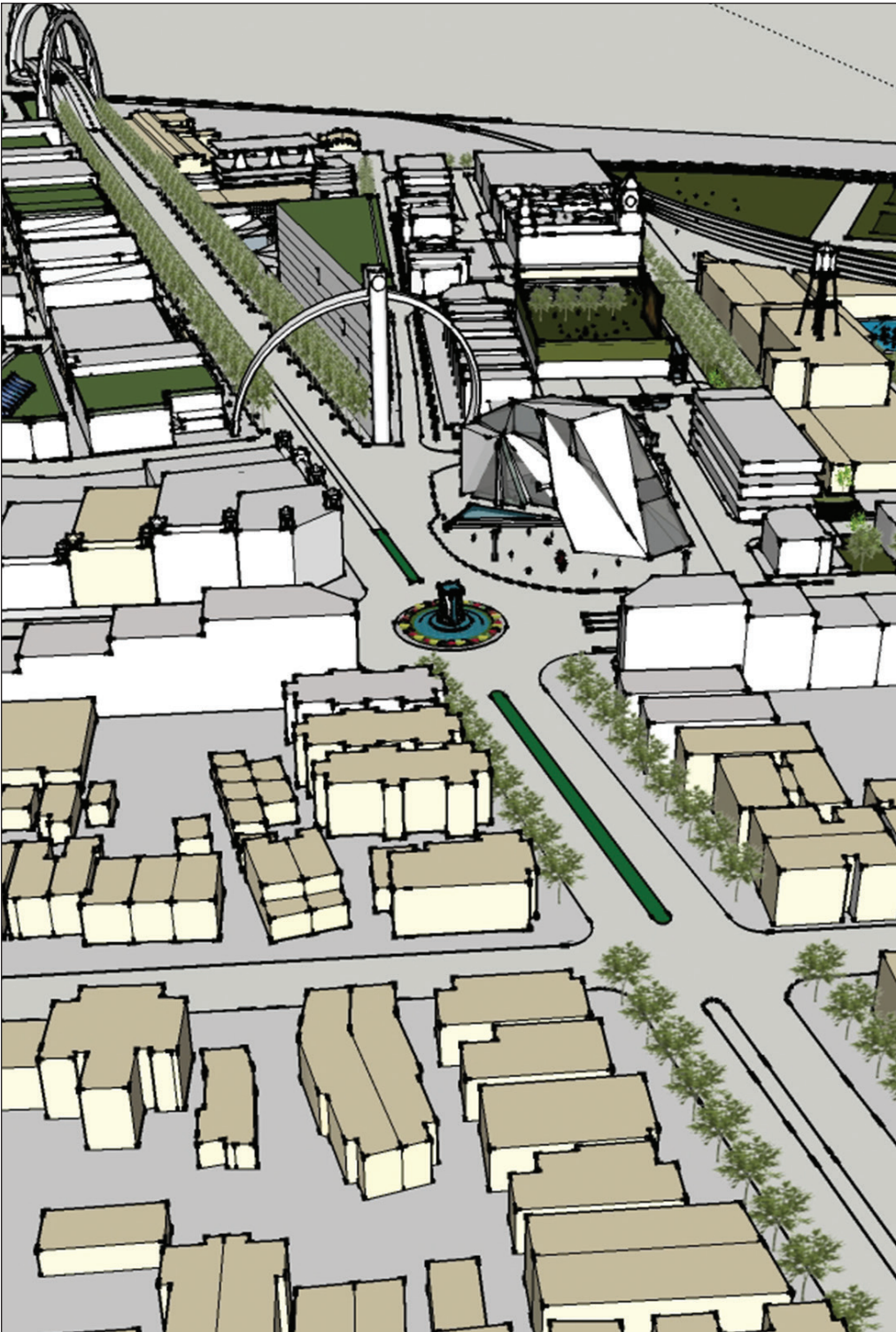
This document was produced for the City of Richmond as an urban design plan. It also fulfills the Studio I requirement in the Master of Urban and Regional Planning program at Virginia Commonwealth University.

The City of Richmond requested a long-term plan to improve the intersection of Broad Street and the Boulevard and the corridors radiating out from that central intersection. The purpose of this plan is to create a memorable neighborhood that radiates out from the intersection at Broad and the Boulevard that will become a choice locality within Richmond where people will want to live, work, and play.

This plan attempts to provide a vision of what is possible, a blueprint for the future not limited in scope what is considered presently realistic, but a recognition of this site's full potential. This includes planning for placemaking, walkability, adaptive reuse and infill development, multimodal transportation, and culture.

Furthermore, analysis of this site reveals the area to be a gateway into the City of Richmond. When entering the city from Interstate-95 via the Boulevard, this neighborhood will create a first impression. This plan proposes a new design for the bridge that carries the Boulevard over the railroad tracks that provides a truly aesthetically dramatic welcome to the city. This design will be the first thing that draws the eye of the observer on the highway the way The Diamond does at present.

The existing conditions reveal a contrast between



A rendering of the study area looking north on Boulevard.

the southern and northern sections of this study area. In the southern blocks, which on the Boulevard serves as an unofficial border between the Fan and the Museum District, there is an easily walkable, pedestrian-friendly streetscape. The Virginia Museum of Fine Arts, despite its large parcel does not disrupt this walkability. Rather, the museum anchors the neighborhood. Residential uses on the Boulevard and surrounding exist in harmony with the museum and Benedictine High School.

The recommendations in this plan seek to bring this same level of walkability to the northern sections of the study area, especially the northwestern quadrant. A new home for the Children's Museum, along with a retail corridor, professional suites, music venue, and specialty dining will emerge as new destinations in this part of the study area.

Placemaking is equally as important as destination in bringing pedestrians north of Broad Street. A major recommendation is to close Myers Street to vehicular traffic and convert it to a pedestrian mall that will serve as a hub for residents and visitors to the neighborhood. It will be essential for this pedestrian mall to have connectivity to all the other adjacent neighborhoods and destinations.

Many of the recommendations set forth in this plan seek to bring a modern design to the northern part of the study area, creating a distinct place in and of itself and not just an extension of the same architecture that exists in the southern end. However, while that is a clear goal of this plan, it is important not to overlook opportunities for

adaptive re-use where they exist, especially with regard to buildings that have historical significance.

Another set of recommendations focus on transforming the auto-centric corridors that radiate out in three directions from the Broad/Boulevard intersection into a multi-modal transportation network that balances pedestrian safety while still moving automobiles efficiently. Specific recommendations include converting the intersection of Broad and the Boulevard into a roundabout and integrating a tram that would connect the neighborhood with Carytown, Manchester, and Shockoe Bottom. Existing plans call for Bus Rapid Transit to traverse the study area on Broad Street and this plan recommends keeping stops at least four blocks from the roundabout.

Finally, culture is the tie that binds this area together. Culture is the intangible that supports everything else. This includes sports and entertainment venues, in addition to museums. Attractions in the study area include the VMFA, Science Museum, Children's Museum, Bow-Tie Cinemas, the Redskins training camp site, and the Diamond.

The recommendations in this plan will come together to make it not only feasible to walk from any of the attractions to another, but will make walking the most desirable way to travel among these sites. Once implementation begins and these recommendations become reality, the neighborhood radiating out from the intersection of Broad and the Boulevard will become a superior place to live, work, and play.

Introduction

Plan Purpose

The Department of Planning and Development Review is interested in improving the vitality of a neglected and deteriorating intersection that is not currently meeting its full potential for robustness. The purpose of this plan is to revitalize the intersection of Broad Street and the Boulevard and the corridors radiating out from this intersection using urban design techniques to facilitate a walkable, mixed-use neighborhood.

The current design for this study area is very auto-centric in nature and holds little sense of place, despite its cultural attractions and its location adjacent to The Fan and The Museum District. The vision statement for this plan is to create a memorable neighborhood that radiates out from the intersection at Broad and the Boulevard that becomes a choice locality where people will want to live, work, and play.

The proximity to existing walkable neighborhoods and plethora of museums, sports and entertainment destinations, combined with the prospects for adaptive reuse and infill development creates a great opportunity to re-imagine this area into a new “Broad & Boulevard,” which would be a vital, dynamic, and most importantly, attractive place. The recommendations in this plan attempt to provide the guiding principles for how to get there.

The recommendations fall into 5, 15, and 40-year increments for targeted implementation. A plan of this magnitude will affect many existing stakeholders, including many private enterprises, such as Bow-Tie Cinema, the Washington Redskins, the Children’s Museum and Science Museum, and many others. When possible, the goals and ambitions of these stakeholders, especially those stakeholders with a large enough presence to serve as anchors for the community, should receive consideration.



The Pearl District in Portland, Oregon fosters a walkable community through the use of public transportation and progressive urban design.

Introduction

Client



The Broad/Boulevard Urban Design Plan was a request by the City of Richmond Department of Planning and Development Review. It fulfills the requirements of the Master of Urban and Regional Planning program at the L. Douglas Wilder School of Government and Public Affairs at Virginia Commonwealth University.

The Department of Planning Development Review defines its mission statement as follows, “We act on the genuine belief that we care about creating and maintaining the best quality of life for Richmond’s citizens, businesses, and visitors. To that end, we provide excellent planning and enforcement services to enhance our city’s built and natural environments.” The Planning Department was established in 1948 when planning functions were transferred from the Department of Public Works, which had previously overseen those tasks. The department staff present for meetings concerning this plan included the director, Mark Olinger. Also present were City Traffic Engineer, Tom Flynn; Planning and Preservation director Jim Hill; Projects Managers, Kyle Brackett, Daniel Cohen, Justine Roberts, and Jeannie Welliver. Stakeholders from the community included Rob Hargett, Principal at the Rebkee Company and Karen Coltrane, president and CEO of the Children’s Museum.

While this plan was prepared primarily for the City of Richmond, many of the recommendations presented will require the cooperation of the Greater Richmond Transit Company (GRTC) and the Richmond Metropolitan Authority (RMA). It will also necessitate recruitment of private developers for implementation and the cooperation of any developers with existing site plans in the study area.

Introduction

Study Area



The plan's study area consisted of several boundaries including Roseneath Rd to the west, Meadow St to the east, the Virginia Museum of Fine Arts to the south and the CSX railroad tracks to the north.

The intersection of Broad Street and the Boulevard is located in the northwest part of the City of Richmond. Like the intersection, the study area is at the confluence of The Fan, The Museum District, and Scott's Addition. Residential land use dominates the former two neighborhoods, while the latter has a more industrial function. Commercial development dominates the two arterials.

For the purposes of this plan, the study includes the Boulevard and Broad Street corridors

radiating out from the intersection of the two roads extending to Roseneath Road in the west, to the Virginia Museum of Fine Arts in the south, to Meadow Street in the east, and to the bridge that carries the over the CSX railroad tracks in the north. The study area extends one block deep in either direction from the two arterials, except in the northeastern quadrant, where it encompasses all of Myers Street, the Science Museum, the Washington Redskins training camp site, and points in between.

Introduction History

Broad Street follows a roughly east-west route for 15 miles through the City of Richmond and Henrico County from Chimborazo Park to Short Pump. Broad Street has a primarily commercial history. The Boulevard follows a north-south route in the City of Richmond and runs from Blanton Avenue in Byrd Park to a five-way intersection with Westwood Avenue and Hermitage Road. The Boulevard has a primarily sports and cultural history, and a portion of it is on the National Register of Historic places, where it is designated as the Boulevard Historic District. (See Figure 1)

The official application to the National Register identifies what it calls, “three monumental public buildings of exceptional local architectural significance - Battle Abbey (Virginia Historical Society), the Virginia Museum of Fine Arts, and the National Headquarters of the United Daughters of the Confederacy.”

Originally laid out by Jacquelin Harvie in 1817 as part of his plan for the town of Sydney, the Boulevard’s original name was Clover Street. It was a country road until the City of Richmond constructed a reservoir in 1875 at what is now Byrd Park. The street’s name had changed to the Boulevard by 1890

In the late 1800s, a home for needy Confederate Veterans was established on a tract bounded by Grove Avenue, Sheppard Street, Mulberry Street and Kensington Avenue, encompassing all of what is today the VMFA parcel and some surrounding parcels. The Boulevard has also hosted Minor League Baseball in Richmond since 1954, first at Parker Field, and then at The Diamond, which opened in 1985 and is the current home of the Richmond Flying Squirrels, who play in the AA-level Eastern League.

Broad Street is also home to a commercial historic district. However, it is located well to the east of this plan’s study area. The Science Museum of Virginia and the Children’s museum of Richmond are the most significant buildings on the section of Broad Street that is within the study area.



top: A photograph circa 1970s looking north on Boulevard depicting traffic and previous parking arrangements.

bottom: The former Woody's Auto Service building, renovated into a hair salon, stands adjacent to the Interbake site which is planned to go under a major renovation of its own.

Introduction

Previous Plans

City of Richmond Master Plan

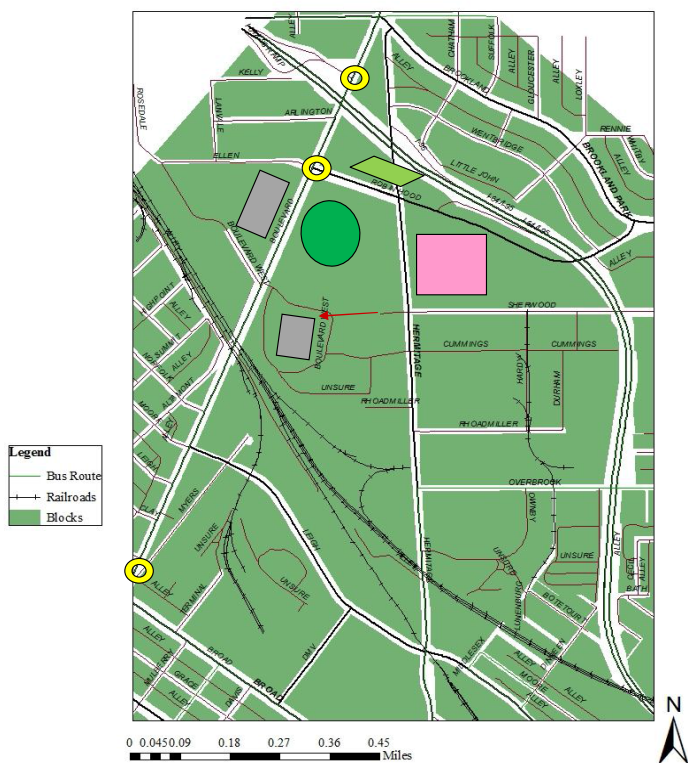
The study area is located within the Near West Planning District in the most recent iteration of the Master Plan (2000). The Master Plan recognizes the popularity of The Fan and The Museum District as places to live, and credits the pedestrian scale of these neighborhoods and the proximity of nearby attractions, such as the VMFA. It also acknowledges that the commercial uses along several streets, including Broad Street, create significant conflicts with adjacent residential uses. However, much of the commercial use in this study area is auto-oriented, which is a major catalyst for the lack of compatibility.







The Master Plan also stresses the importance of identifying reuse strategies for vacant industrial buildings in the Near West Planning District. In addition, regarding the desire for infill development, the plan also notes that, with a few exceptions, there exists no mechanism to apply design standards for new development. As a guiding land use principle, the plan states that infill development of like density, scale and use is appropriate.

Regarding land use on Broad Street between Belvidere Street and the Boulevard, the Master Plan says that Broad Street “should be a dense urban development that is oriented to the pedestrian and compatible with adjacent residential development.” Broad Street west of the Boulevard is to assume the condition resembling more of a suburban commercial corridor.



Map 6. Proposed Circulation in the Boulevard Plan Area



-  Gateway points
-  Multilevel parking decks
-  Arterial road connections to parking deck
-  Proposed stadium point
-  Proposed commercial office
-  Proposed municipal recreation facility

The City Master Plan and previous plans such as the one by former VCU MURP Yawandale Birchett-Thompson provided insight to the area prior to launching the study.

Boulevard Corridor Redevelopment Plan

In the spring of 2008, VCU MURP student, Yawandale Birchett-Thompson completed the Boulevard Corridor Redevelopment Plan as a Studio II. This plan details the history of the Boulevard as a sports and entertainment corridor. It also references the Atlanta Braves withdrawal of their AAA affiliate after an agreement could not be reached for a new stadium.

The Boulevard Corridor Redevelopment Plan also contains language in its vision that describes the Boulevard as a gateway to Richmond. It also recommends a special-attraction focused public transit bus route to connect the Boulevard corridor's attractions, including the museums on Broad Street, with Carytown and downtown Richmond.

This plan acknowledges the importance of creating a sense of place, and maintains that the Boulevard corridor has the potential for what the plan calls district status and envisions a Boulevard where both ends of the street are one continuous corridor.

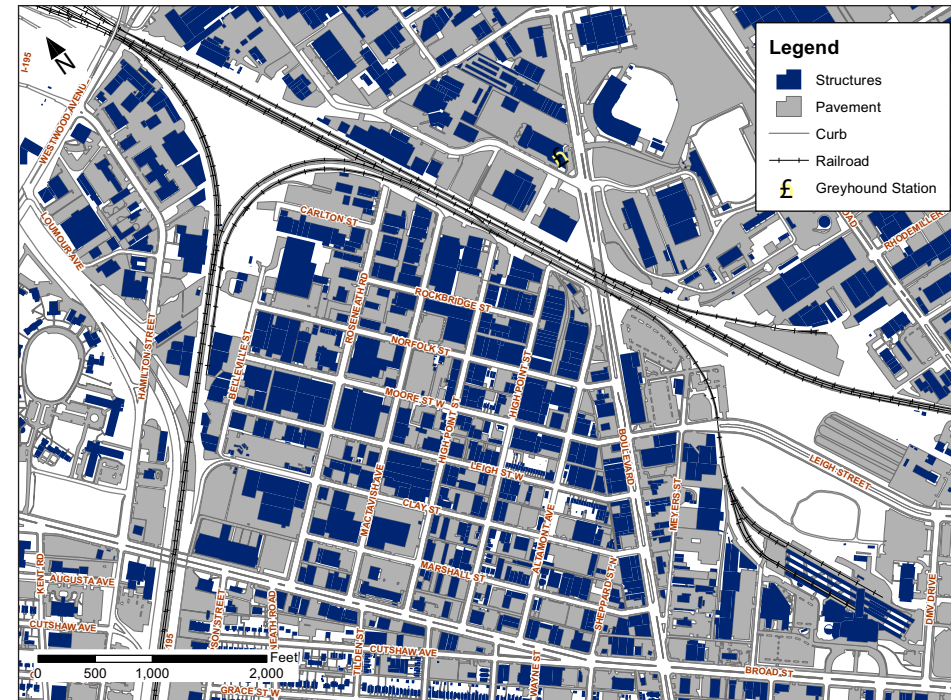
Approach & Methods

At the request of the client in the first meeting, the Studio I team approached this plan with an objective of exploring what is possible, rather than limiting recommendations to what is politically or financially realistic in the current climate. Taking this approach and using feedback from the first two meetings, the team attempted to provide a vision of the best possible alternate future in the designs presented.

A Strengths, Weaknesses and Opportunities (SWO) analysis was performed, omitting the traditional inclusion of threats, so as not to feel limited in what recommendations were possible. Team members evaluated the study area and produced land use, transportation, and urban design recommendations, and created a model of a possible alternate future.

Working with the program, Sketchup, the team imported the footprints of every building in the study area, and using Google satellite views, built an existing conditions model that included every structure in the study area. The team then worked off the existing conditions model to explore different possibilities for alternate future.

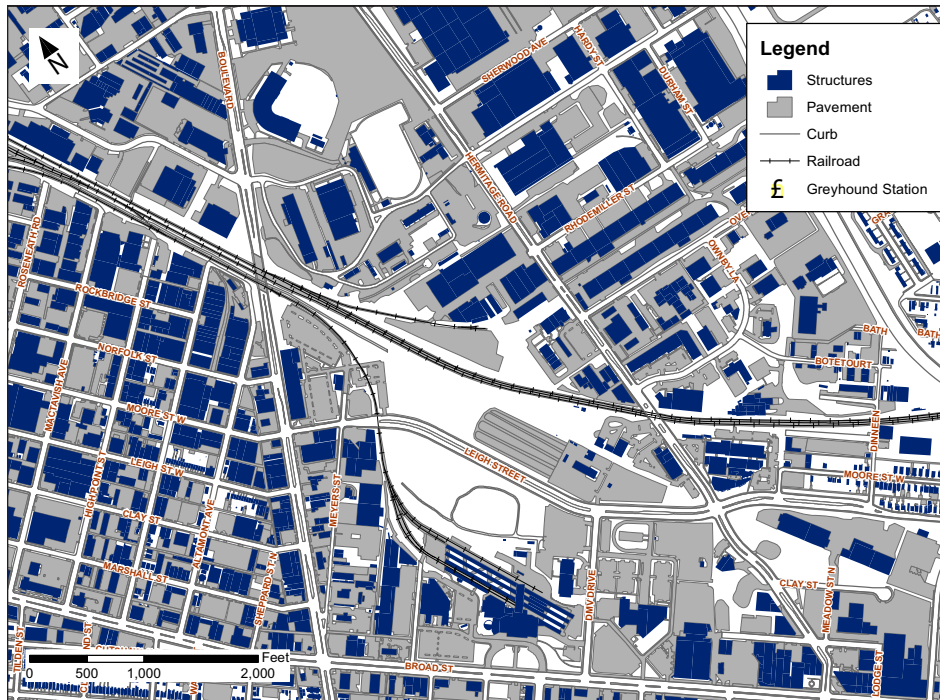
Northwest



Southwest



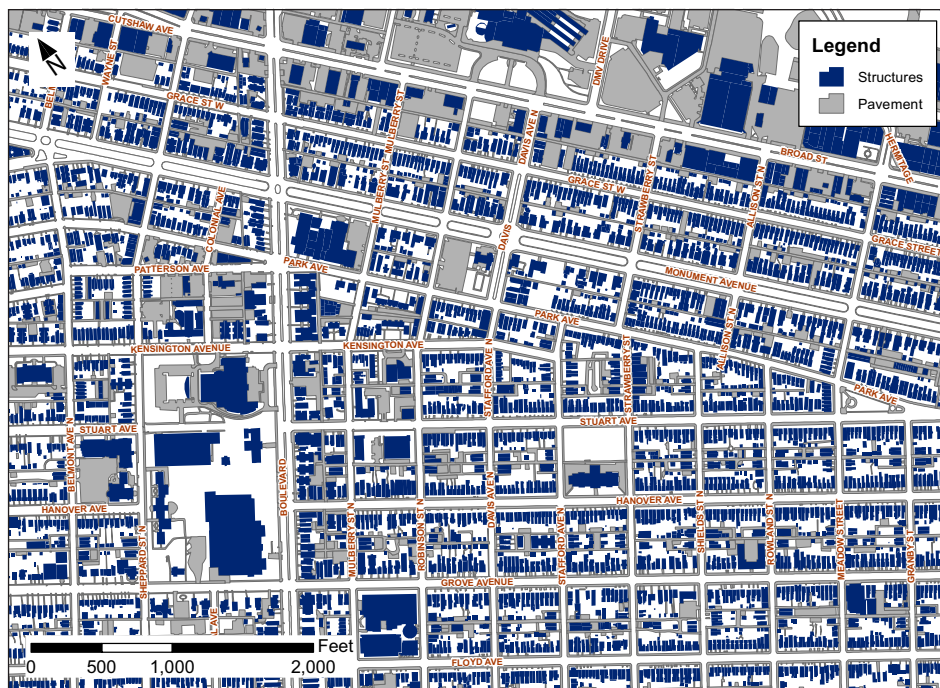
Northeast



The team rendered several different options for different parts of the study area, and worked off client feedback obtained in meetings when evaluating the strongest possibilities. Once the team settled on the best alternate future that best fit this plan's goals and objectives for each section of the study area, these recommendations were combined into a comprehensive model that displayed all proposals simultaneously. This comprehensive model represented the Studio I team's vision of what is possible for Broad Street and the Boulevard and served as the source for most of the renderings contained in this plan.

While reworking the model from existing conditions to a vision for the future, the team heeded crucial architectural requirements such as side or rear truck access for commercial parcels, length requirements for structured parking, etc. when building the proposed neighborhood. Honoring the necessity of parking requirements without compromising the plan's strong pedestrian focus was a key element of the team's methodology.

Southeast



These maps display the amount of impervious surface, buildings, and infrastructure such as rail, that exist in the study area.

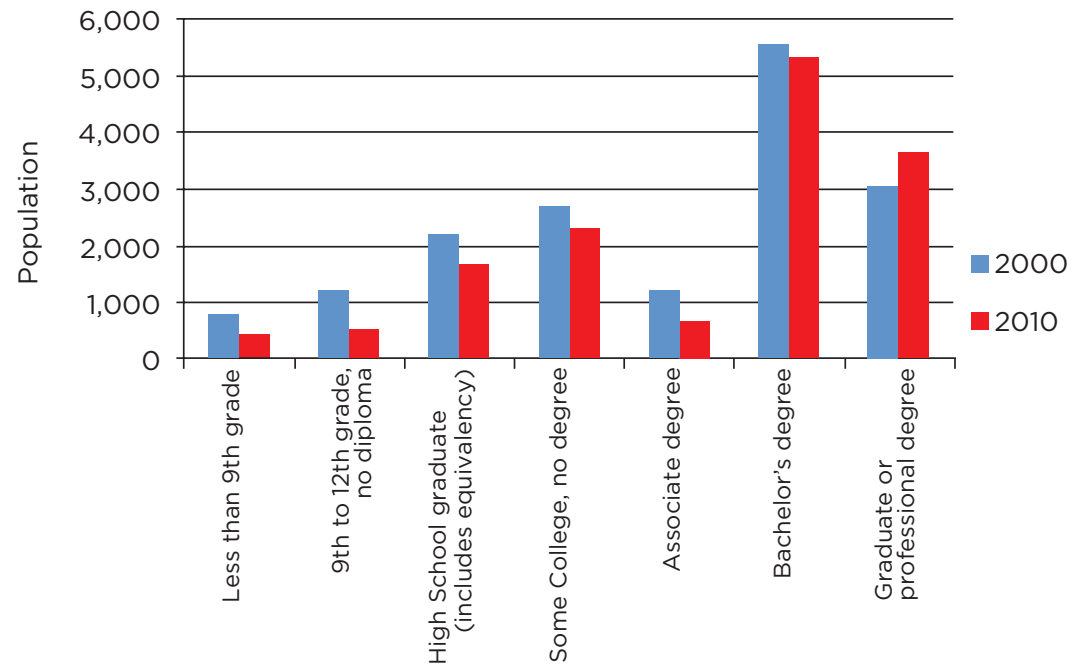
Existing Conditions

Demographics

An important component of the plan is to understand the characteristics of the current population to determine future growth and development. Understanding density is important to this study area because it provides insight on the feasibility of introducing certain services to the neighborhood, such as retail and residential development. One of the key principles for fostering a healthy neighborhood is education, as its role to growth and development is critical. Over half of the people living in the study area in both 2000 and 2010 year had at least a Bachelor's Degree (Figure 1). The future growth of the study area (Figure 2) utilized previous population numbers to determine an average percentage growth rate. When projecting the population growth in the coming decades, the growth climbed to nearly 35,000 people.

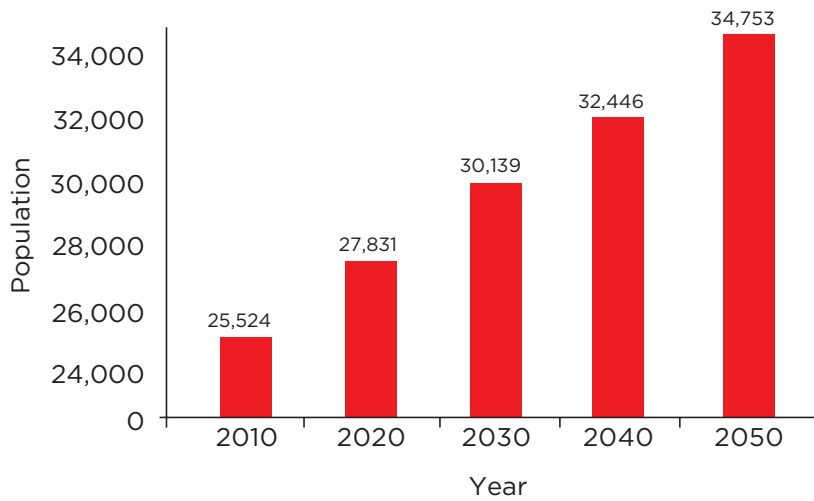
The information in Table 1 (see appendix) provides a snapshot of the study area and how the area's population is growing compared to the City of Richmond and Commonwealth of Virginia. The total population in 2000 for the study area was 25,165. The 2010 census showed a 1.17 percent population growth for the study area. The population growth experienced in the study area parallels the population growth in the City of Richmond and in the Commonwealth of Virginia. Figure 3 displays population by gender. In the year, 2000, there were more males living in the study area. However, in 2010 there was a slight increase in the female population. This chart shows population growth by gender.

Figure 1: Education Attainment in the Study Area



Source: U.S. Census Bureau

Figure 2: Projected Growth for Study Area

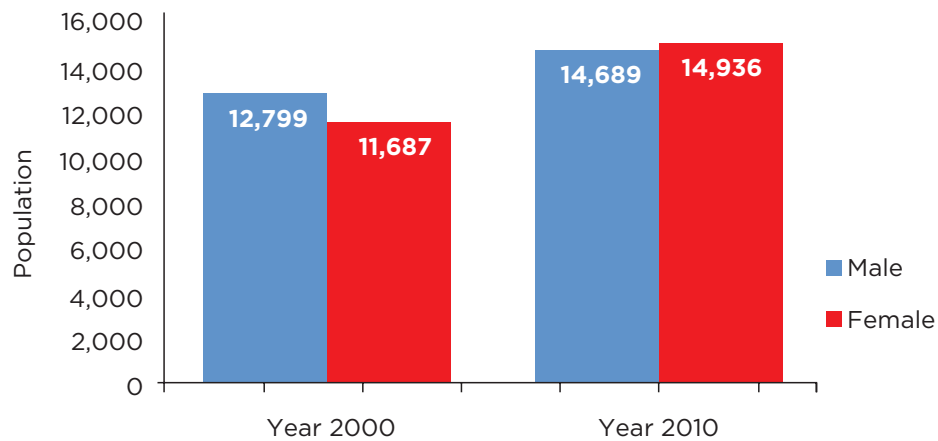


Source: U.S. Census Bureau

Table 2 (see appendix) displays population density of the neighborhoods that may impact the study area. The Fan had the highest population density with 18 people per acre. Northside had the lowest with six people per acre. The density of the fan may be due to the location of Virginia Commonwealth University and may serve as an indicator for growth. As the University continues to grow, housing needs may be found in the future development of the study area. In terms of income, Table 3 (see appendix) shows the study area has a large percentage of those making \$35,000 to \$49,000. When comparing residents with an income of \$200,000 or more the study area has a higher percentage of residents at 6.67%, whereas the MSA has a percentage of 4.7%.

The age of the study area, as displayed in Table 4 (see appendix), is largely made up of 20 to 24 year olds followed by 25 to 29 year olds. As indicated earlier, this may be a result of the university.

Figure 3: Gender Proportions of the Study Area



Source: U.S. Census Bureau, 2000, 2010

Existing Conditions

Transportation

The distribution of commuters for the Richmond Area is 68% by automobile, 9.1% by transit, with the remainder utilizing alternate transportation of bicycling or walking.

Automobile

The traffic volume along Broad Street and the Boulevard has remained consistent over the past 13 years. The average annual daily trips per year have been between 20,000 to 25,000 vehicles. These numbers are from the Virginia Department of Transportation and demonstrate slight fluctuations with a decrease in daily trips from 2010 to 2011.

Boulevard traffic counts for 2011 data that differentiate the type of vehicle show a distribution of 97% passenger vehicles, 1% buses, and 2% trucks.

Pedestrian

Although the City of Richmond receives a walkability score of 94 (Walkers Paradise) on the walkscore.com website, the study drops slightly depending upon the area and local environment. The Museum District scores 80 (Very Walkable) with Monument Avenue, Boulevard and the wide-open green spaces. Across Broad Street in Scott's Addition, the score is 71 still Very Walkable but the area is not as inviting for pedestrians.

Bicycle

The Richmond region and the Boulevard and Broad lack the bicycle improvements normally found in areas like northern Virginia according to the 2004 Richmond Regional Bicycle and Pedestrian Plan. The existing bicycle connection for the Boulevard and Broad area is the US Bike Route 1 that transits along the Boulevard from the south to the north.





above: The bridge on North Boulevard was created to allow automobile and pedestrian traffic safe passage over the CSX train tracks. It serves as a connection for residents living in the Northside neighborhoods of Ginter Park, Bryan Park, and Lakeside with the neighborhoods of Scott's Addition, the Fan, and the Museum District to the south.

top: 7-11 currently stands at the northwest corner of Boulevard and Broad.

opposite top: The northeast corner of Boulevard and Broad is currently home to a CVS.

opposite bottom: A view of an underutilized parcel adjacent to the Interbake Site.

Transit

Greater Richmond Transit Company operates eight bus lines in the study area on the Blue, Orange, and Black routes. Broad Street facilitates seven of the routes that use the Robinson Street stop on the east side of the study area near the Science Museum.

These routes connect downtown, to the Fan district, Church Hill, and parts of the West End that are north of Broad Street. GRTC schedules provide detailed information with the routes operating during peak hours every 15 to 20 minutes and off-peak hours every 30 to 60 minutes from 5:00 am to 11:00 pm on weekdays. These eight routes accounted for 3,026,096 riders in 2010, accounting for 32 percent of the total GRTC bus riders.

Parking

Available parking in the study area includes both on street and off-street parking totaling over 10,000 parking spaces. On street parking accounts for slightly less than half of the available parking, totaling 4,620 spaces. The majority of on street parking is along the Boulevard, Scott's Addition, and Monument Avenue. The off-street parking totals 5,635 spaces and is located at key locations spread throughout the study area. The off-street parking accommodates business and public spaces.

Bridge

The existing bridge on the Boulevard over the CSX railroad tracks was built in 1943 and reconstructed in 1986. The existing structure is 251 feet long and 70 feet wide with two lanes in each direction. The bridge was last inspected in 2011 and assessed as a deck and superstructure condition 5, which is "Fair Condition." The fair condition indicates that all primary structural elements are sound but may have some minor section loss (due to corrosion), cracking, spalling (deterioration) of concrete, or scour.

Existing Conditions

Connectivity

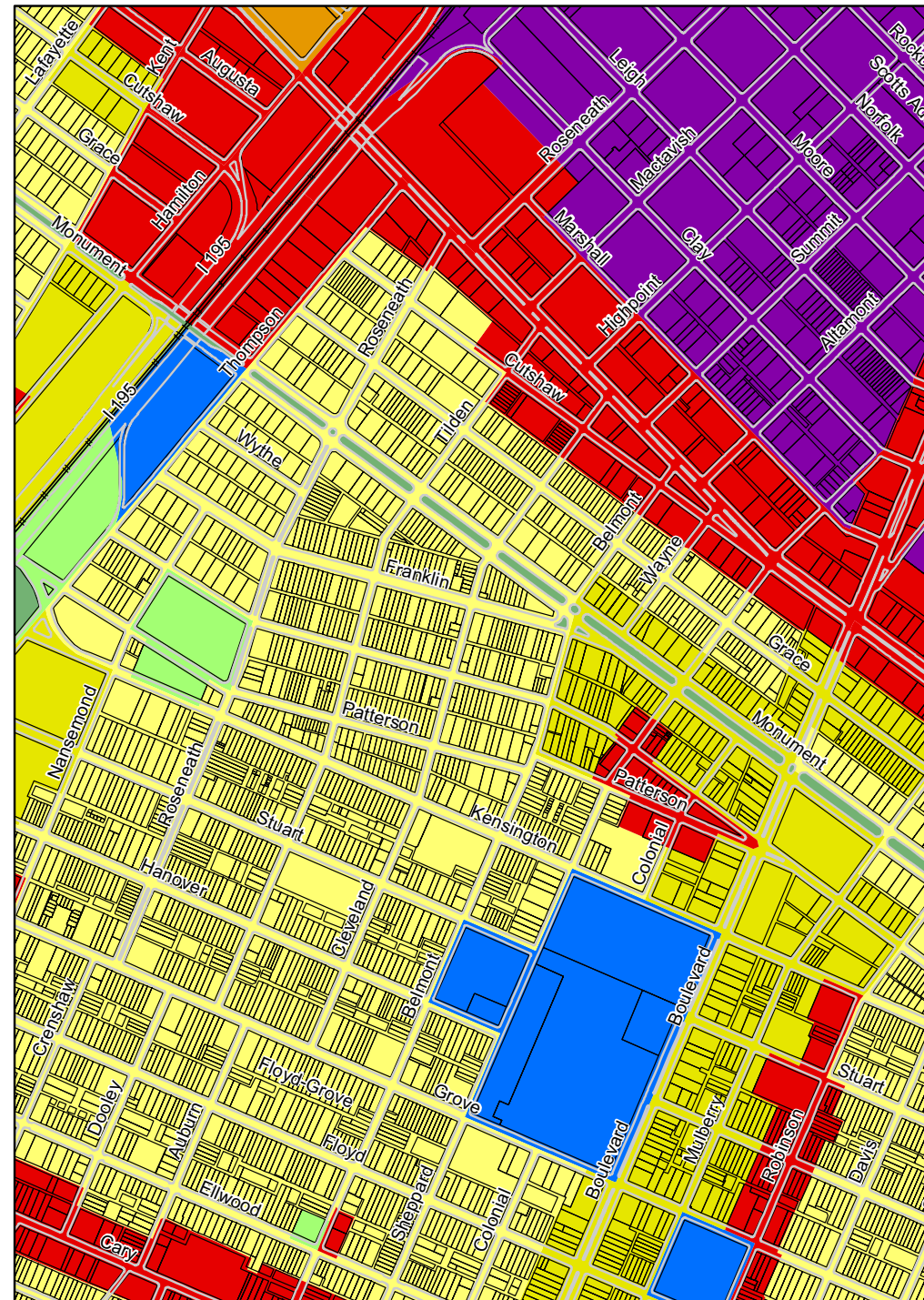
The study area and surrounding areas are fragmented from each other and do not allow for easy mobility between neighborhoods and thoroughfares whether one is in a car or not. Although it has been historically auto-centric for the past half century, traffic signals and signage are not conducive to moving any type of traffic efficiently, be it vehicle, pedestrian or bicycle.

For example, when a motorist is travelling east on Broad Street, that driver is not permitted to turn left (north) on Boulevard. This requires one to drive a further distance only to make a U-turn in order to access the Boulevard corridor. The large intersection consists of two major, six-lane-wide roads. A pedestrian may find it discouraging to cross at such an intersection given a very thin median is the only relief between the two large roads. This does not allow a pedestrian to walk, but forces a pedestrian to rush uncomfortably to the other side.

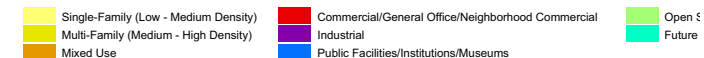
From the perspective of the bicyclist, the roads do not allow any designated space for travel. Although the addition of “sharrows” along Leigh Street may alert motorists to share the road, bicyclists do not have the safety of a defined bike lane, which would strengthen the division between the two transportation modes.

The surrounding amenities such as The Diamond, the Arthur Ashe Jr. Athletic Complex and the Washington Redskins training camp site provide destinations for residents and tourists alike. The infrastructure currently in existence is inadequate and does not provide bicyclists and pedestrians easily accessible routes to and from such amenities.

The study area is highly visible and very well positioned for travelers utilizing the interstate highway system. The location of the study area is at the nexus of two major interstate highway systems: a major East-West corridor for the state of Virginia and a major North-South corridor for the entire East coast. Boulevard connects the study area to the highway and sets itself up as a gateway into the city.



Existing Land Use



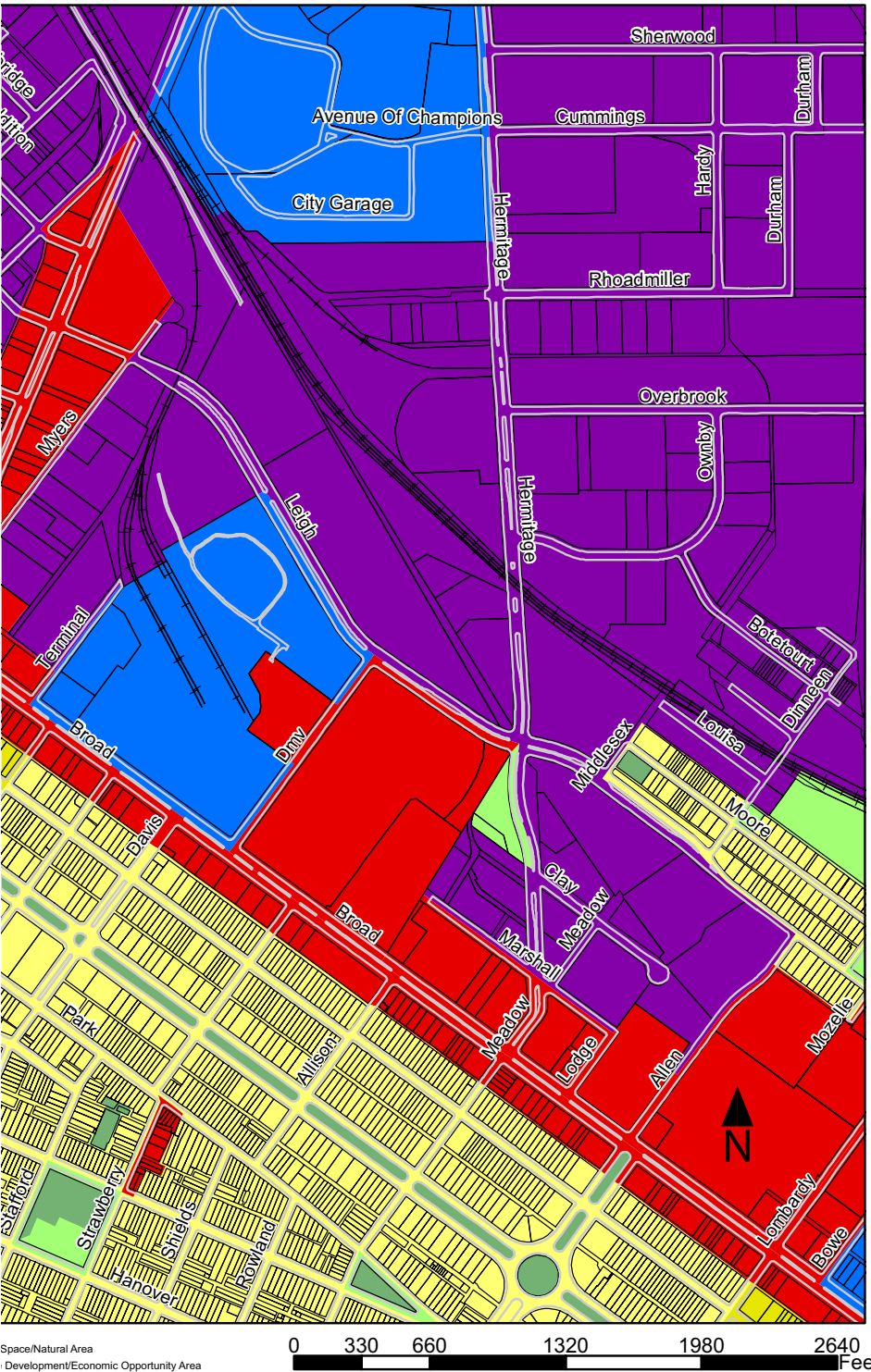
Existing Conditions Landuse

The parcels on Broad Street and the Boulevard are zoned for commercial use and are sparsely populated with low-density commercial tenants. Among the commercial developments, most are one story with occasional two-story structures. The large swaths of asphalt lots and vacant parcels in between these buildings have given way for larger, more automobile-centric uses such as parking lots and automotive repair shops. Much of the land in the northwestern part of the study area consists of industrial uses surrounded by commercial and public facilities and institutions.

The land surrounding the manufacturing and other industrial properties is used for the shipping and transportation of goods. Throughout this area, however, there are some residential streets containing row houses with sidewalks and short setbacks. These residential uses are located further back in Scott's Addition, not in a central location. Loft conversion projects and new food establishments continue to emerge in Scott's Addition and serve to increase pedestrian traffic in the neighborhood.

The northeastern segment of the study area consists largely of commercial and public institution zones with substantial impervious surfaces used for auto-centric activities such as parking. The area currently houses the Bow-Tie Movieland complex along with The Diamond and other sports-related facilities such as the Arthur Ashe Jr. Athletic Complex and the new Washington Redskins training camp site. During certain periods, these areas become very congested with vehicular traffic due to activities taking place at these facilities.

The southern portion of the study area consists of mostly residential zoning with commercial along Broad Street and an institutional segment along the Boulevard in the Museum District. Although the distance between the northern and southern parts of the Boulevard is small, the built environment is vastly different. Once south of Broad Street on the Boulevard, the scale of the street and sidewalks are more in line with a pedestrian experience. Trees and green space surround the eponymous institutions in the Museum District, and parking occurs in a manner that provides a higher utility of the land for more passive recreation.



Space/Natural Area
Development/Economic Opportunity Area
0 330 660 1320 1980 2640 Feet

Existing Conditions

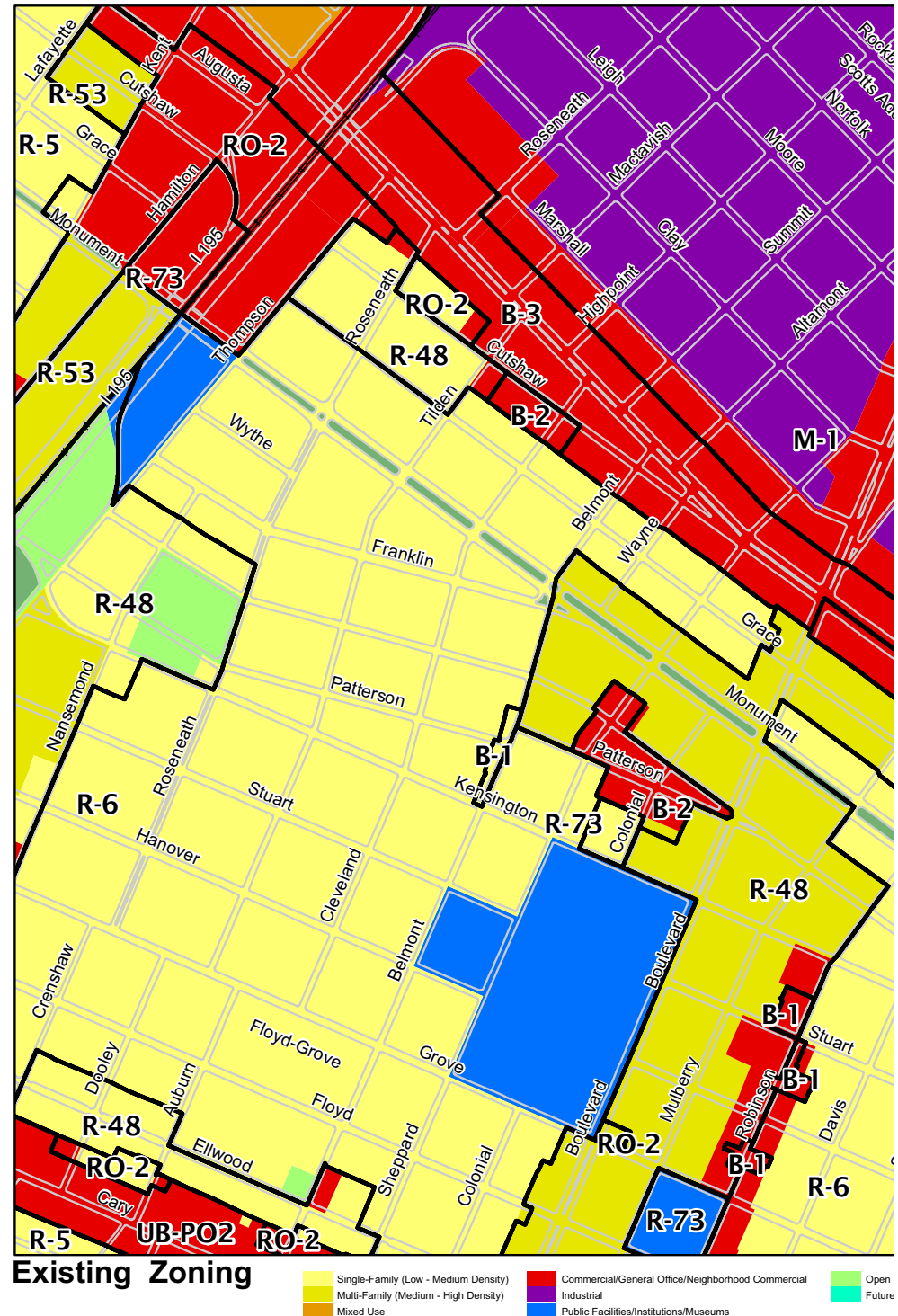
Zoning

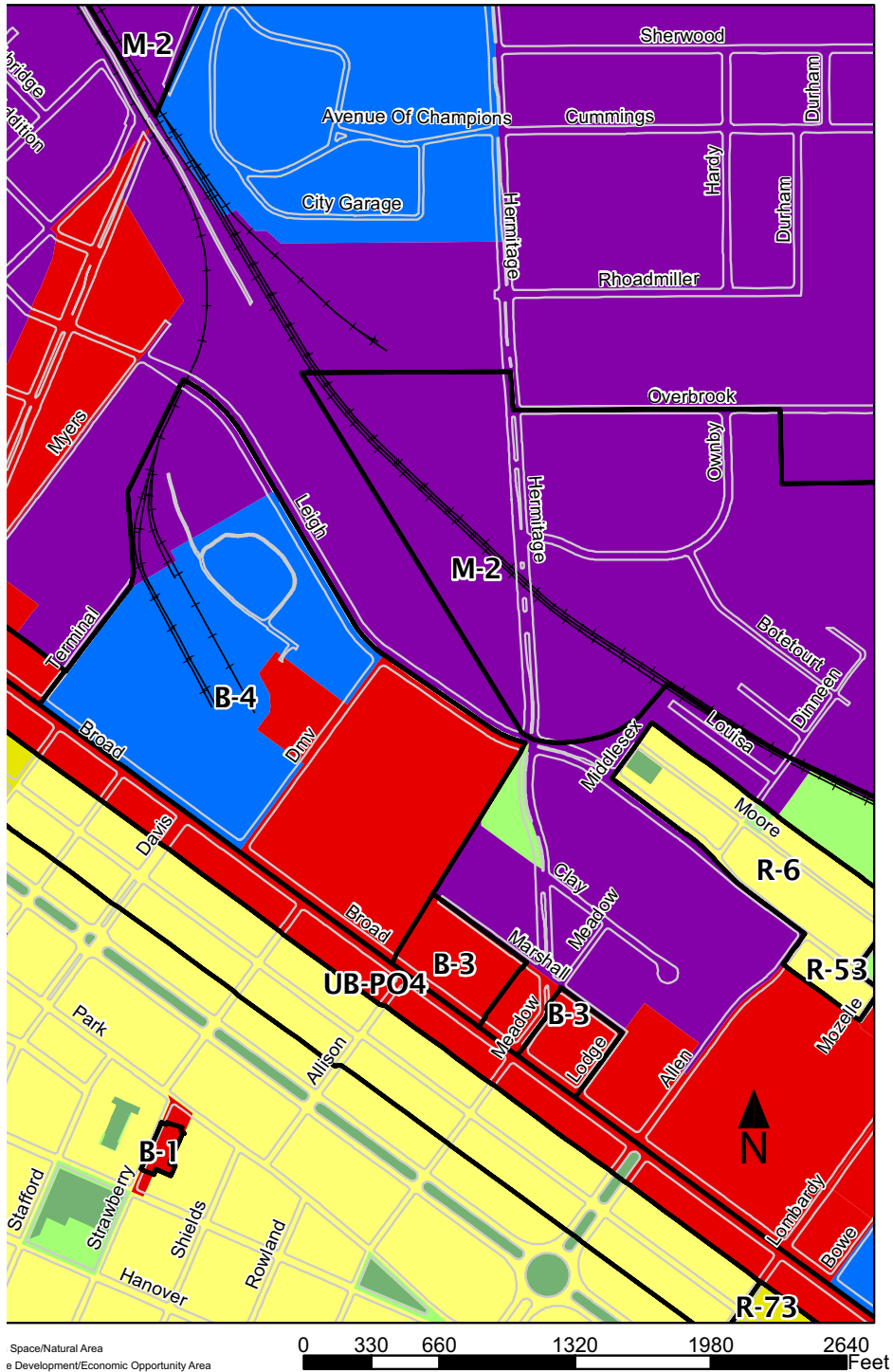
The intent of Richmond's zoning is to implement the comprehensive plan by guiding and controlling land and building uses. Zoning controls property owners' uses of their parcels, ensuring lawful use as long as such uses are not incompatible or detrimental to contiguous properties. The city regulates zoning through the Zoning Ordinance and communicates permitted uses in zoning maps. Zoning separates land uses into three main categories - residential, commercial, and industrial. Each property within the city is mapped and contained in a specific zoning classification. Included in the definition of each zoning classification are rules and regulations that dictate the allowed uses for each district (e.g. density, signage, types of businesses and physical layout). Richmond's Office of Planning and Development Review regulates and enforces the zoning ordinance through the Zoning Administration.

The study area for this plan is contained within the city's Near West Planning District. The study area predominantly consists of pedestrian-scale residential and commercial districts, except the area north of Broad Street, which contains both light and heavy industry. South of the Boulevard - within the Museum and Fan districts - current zonings are primarily Single-family Attached Residential (R-6) zoning and Multifamily Residential (R-53) zoning, with some blocks designated as Business District around the intersections of Patterson Avenue and N. Sheppard Street.

In the section of Broad Street east of the Boulevard, zoning is designated as Urban Business (UB). This purpose of this zoning is to encourage business uses with a densely developed pedestrian-oriented urban shopping character, which are compatible to residential neighborhoods within the vicinity. The section of Broad Street that runs west of the Boulevard carries a zoning of Community Business (B-2). This zoning also allows for dwelling units as long as they are contained with the same building and are above the ground floor of the building.

Scott's Addition, which currently contains some residential uses, is zoned Light Industrial (M-1). This zoning designation prohibits any constructing any building for residential use or converting a building to any residential





use unless allowed by the Board of Zoning Appeals. Light Industrial uses are defined as uses that depend on raw materials refined somewhere else, but may be manufactured, compounded, processed, packaged, treated, and distributed from properties in the district. The Zoning Ordinance also allows the retail sales of liquor with a Conditional Use Permit.

Although there are no front, side, or rear setback requirements for this zoning, there are screening and height regulations. Screening for the district requires for there to be a continuous evergreen vegetative screen or opaque structural fence or wall not less than six feet in height erected along lots that adjoin a property in an R (residential) zoning district. Height regulations for M-1 zoning do not allow for any building or structure to go beyond 45 feet, unless additional height is permitted. Further, “when all portions of a building or structure over 45 feet in height are set back from side and rear lot lines a minimum of one foot for each two feet in height in excess of 45 feet and provided, further, that no portion of a building or structure shall penetrate an inclined plane originating at the centerline of an abutting street and extending over the lot at an inclination of one foot horizontal for each three feet vertical.”

Heavy Industrial (M-2) zoning exists in two sections of the study area. The first is immediately behind the Science Museum, and is bounded by W. Leigh Street, Overbrook Rd. and Interstate-95. The second is across the bridge that carries the Boulevard over the train tracks on the opposite side of The Diamond. All uses allowed under the Light Industrial zoning (M-1) are permitted within Heavy Industrial zoning (M-2).

All other uses that are not allowed in any other districts are permitted, with several exceptions requiring the approval of City Council. Examples include curing, smoking or storing of fish, as well as incinerating, reducing, dumping or storing, including transfer facilities, of offal, dead animals, and garbage or refuse compensation and not as a governmental function. Other examples include the manufacturing or refining of ammonia, and explosive or flammable products and the establishment of medical waste management facilities, which the State of Virginia Department of Environmental Quality... regulates and requires a permit to operate. There are no front, side or rear setback requirements, but the same screening and height requirements that are in M-1 zoning are in place for M-2.

Existing Conditions

Streetscapes

The existing streetscape of the Boulevard and Broad Street corridors leaves much room for improvement in the realm of pedestrian friendliness and multi-modal transportation capabilities. There is significant room for improvement that can occur incrementally, and facilitate that improvement by rethinking how the public rights-of-way are utilized. These recommendations focus on the section of the Boulevard north of Broad Street (“North Boulevard”), and on Broad Street itself. The section of the Boulevard that is south of Broad Street already uses many of the recommendations suggested in this plan, and therefore has no need of a major redevelopment.

Existing Transportation Uses

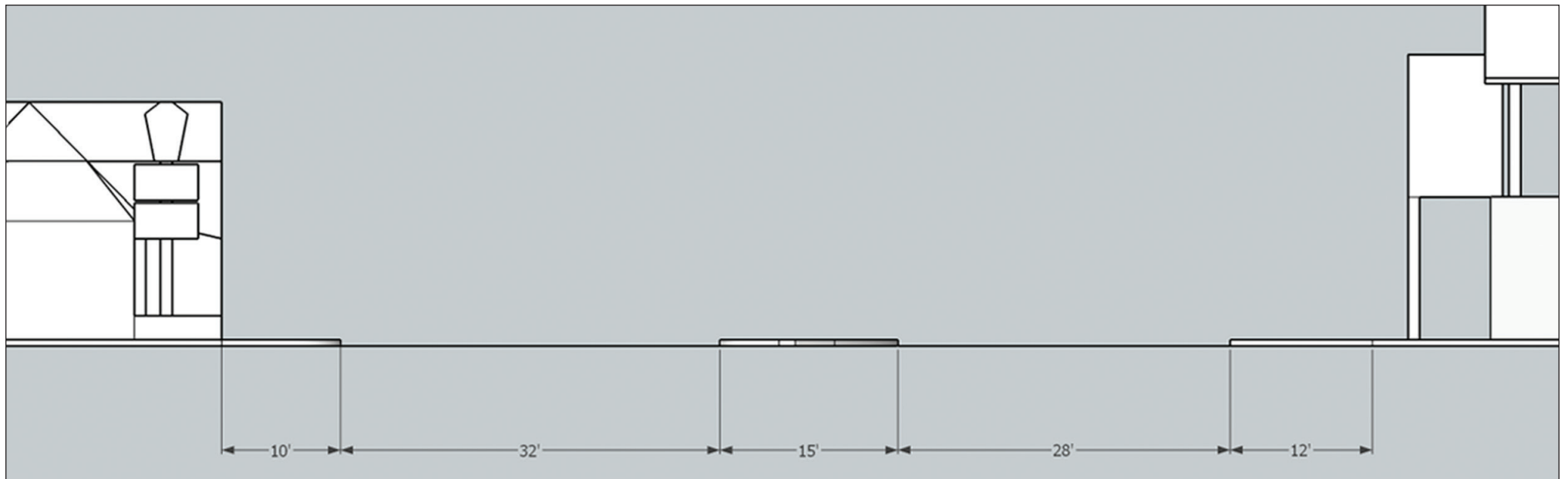
The average public right-of-way for North Boulevard is approximately 97 feet in width. The typical uses along North Boulevard include two northbound lanes, two southbound lanes, one median which alternatively serves as a left turn lane, one northbound on-street parking lane, one southbound on-street parking lane, and sidewalks on either side that vary in width from approximately seven to ten feet. A local bus line of GRTC also services North Boulevard. In theory, one lane in both directions on North Boulevard is wide enough to serve as a dual automobile/bike lane. In practice, however, cyclers are hesitant to travel on North Boulevard due to the high traffic volume and proximity to automobile traffic.

The average existing public right of way for Broad Street is approximately 117 feet in width. The average existing uses include six lanes of divided traffic, travelling in both directions; on-street parking lanes for each side of the road; a center median; and sidewalks of varying width. Broad Street also benefits from extensive bus service from GRTC.

Existing Design Features

North Boulevard and Broad Street currently share almost identical streetscape design conditions. Both suffer from a general lack of canopy coverage, unifying themes, meaningful separation of pedestrian, cyclists, and automobile traffic, and a general lack of opportunities for outdoor use.





above: This cross section at Boulevard and Marshall gives existing dimensions across Boulevard looking north.

top: The intersection of Boulevard and Broad looking eastbound on Broad Street.

opposite top: Meyer Street is currently used for service vehicles and serves as a bypass for local traffic.

opposite bottom: Wide sidewalks with young trees currently exist on the west side of North Boulevard.

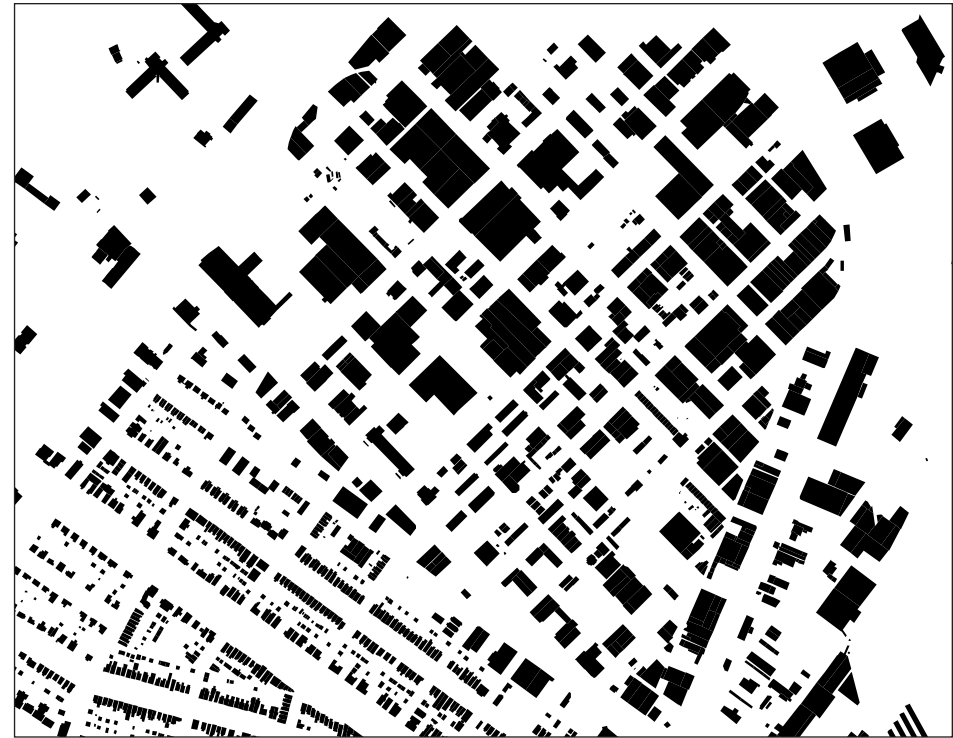
Existing Conditions

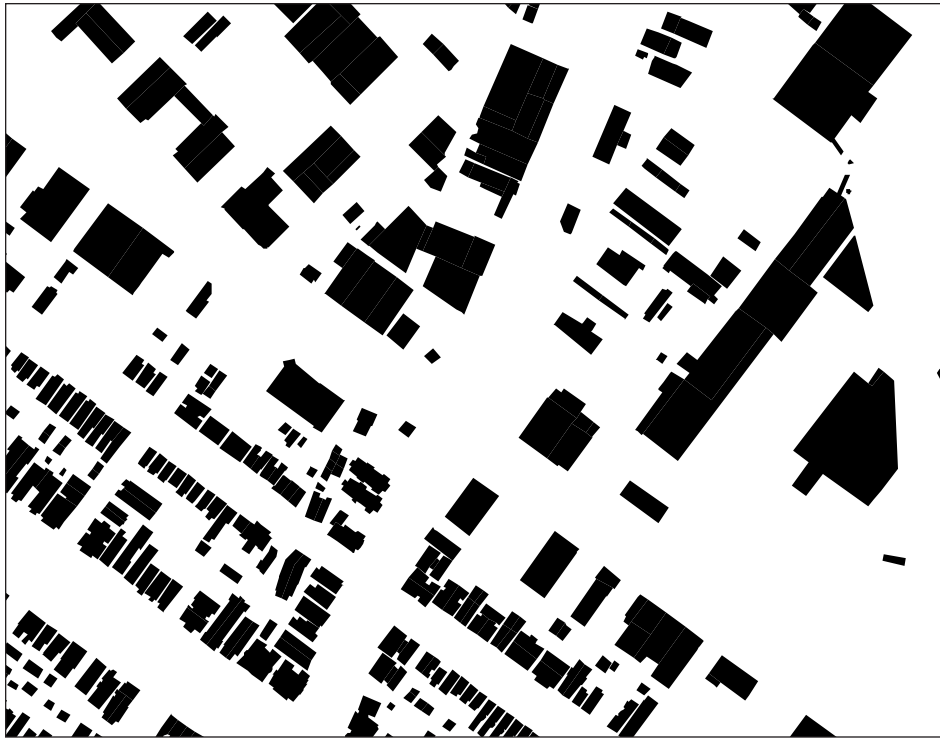
Figure Ground

As the figure ground shows, there is a high density of residential buildings south of Broad Street in the Fan and Museum District. In particular, Monument Avenue stands out for its defined edges and emerges on the map as a distinct corridor. When looking at the figure ground, the eye is naturally drawn to the Monument/Boulevard intersection. This is the most well-defined “X” on in the image.

There is a clear difference between the areas that are north and south of Broad Street, with small, dense city blocks to the south in the Museum District and the Fan in contrast with the large industrial buildings in Scott’s Addition and large amount of open space in the northwest quadrant of the study area.

Zooming in to the intersection of Boulevard and Broad itself, a lack of density is immediately apparent. Streets are not as well defined in this image as in the previous one. Much of the white space is surface parking as four stand-alone buildings (including two gas stations) anchor the intersection. There is abundant opportunity for infill development.





top: Buildings appear scattered at the intersection of Boulevard and Broad.

bottom: South of Broad, buildings appear to form uniform blocks defined by primary and secondary streets.

opposite top: Larger industrial building footprints are prevalent in the northern part of the study area known as Scott's Addition. The footprints gradually decrease in size when approaching the southern boundary of the study area located in the Fan District.

opposite bottom: Boulevard and Monument Avenue clearly define the boundaries of the Fan and Museum Districts.

Existing Conditions Vegetation

The base maps show the tree canopy coverage and curbs of the overall study area. From this view, it is apparent that development can be both dense and green. The Fan and Museum District consist of dense housing structures, but are still engulfed by canopy coverage. In contrast, north of Broad Street has less dense development, but still less tree canopy coverage. Additionally, the railroad lines are noted on this map.

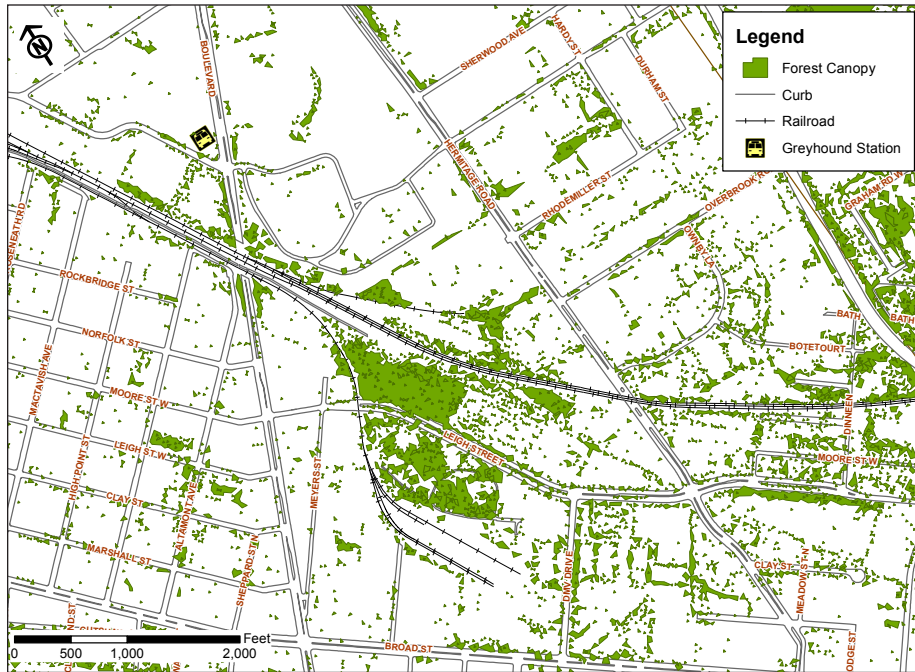
Northwest



Southwest



Northeast



Northwest

This map focuses on the northwestern portion of the Boulevard and Broad study area. The densest regions of canopy coverage in this portion of the site are the undeveloped regions between the train tracks. Otherwise, canopy coverage is rather sparse.

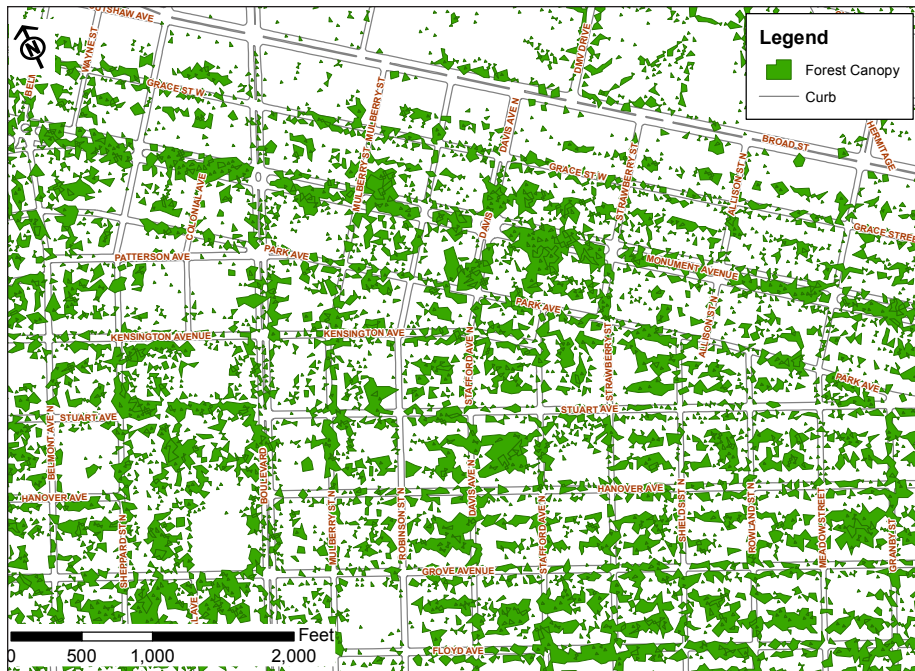
Southwest

The portion of the study area south of Broad Street and primarily to the west of Boulevard shows dense canopy coverage. The densest portion of canopy coverage, between Roseneath Road and N. Thompson Street, is actually among an area of town homes and single family homes showing that areas can be both green and dense.

Northeast

This northeast portion of the site is sparse in canopy coverage except where development has not occurred. This map also shows transportation that is alternative to the automobile with the train track lines and the Greyhound Station.

Southeast



Southeast

South of Broad Street and east of Boulevard it is apparent that the Fan and Museum District have an abundance of canopy coverage along with a high density of structures.

Existing Conditions

SWO Analysis

Strengths

This greatest strength of this study area is its abundance of attractions, including, but not limited to the four museums, Bow-Tie Cinemas, the Redskins training camp site, and The Diamond, which is adjacent to the study area to the north. This cluster of attractions lends itself to the potential for a destination neighborhood. The study area is accessible by foot from The Fan and the Museum District, residential districts that have populations with disposable income. The study area is immediately accessible from two interstate highways (I-95/I-64 from the north and I-195 from the west). Finally, the grid system in the study area itself permits a strong permeability.

Weaknesses

The intersection of Broad Street and the Boulevard is the most significant weakness in the entire study area. Surface parking dominates all four corners of the intersection, with two gas stations, a CVS and a Subway occupying the parcels. Of the four, only the Subway comes all the way up the right-of-way and it leaves a huge amount of parking space on either side of it. There is also a problem with the adjacency of incompatible uses affecting residential districts. The lack of vegetation in Scott's Addition and near the Children's Museum and Science Museum creates a heat island effect.

Opportunities

The principal opportunity is to create a place at Broad Street and the Boulevard. The northeast quadrant presents the most opportunities for improvement, specifically for adaptive re-use and infill development along the Boulevard, and along what is now Myers Street, but which has the potential for transformation into a pedestrian mall. The area's other great opportunity is its visibility, especially from I-95. The area is a gateway even if someone does not drive directly through it. This is the first part of the City of Richmond that a traveler sees driving in from the north or west. It should be a sight that takes full advantage of that visibility.





top: The new Redskins training facility will drive more people to the study area.

bottom: Scott's Addition houses a mix of light industrial and residential uses.

opposite top: The current condition of the Boulevard and Broad intersection currently houses a auto-centric convenient store.

opposite bottom: To the east of the intersection a fast food restaurant caters to automobiles with its drive-thru service.

Goals & Objectives

An implementation strategy was developed for the goals and objectives broken into ranges to support resource constraints. The ranges are defined as short range (1-5 years), medium range (5-15 years), and long range (15-40 years) to allow implementation with planning and resources over time. A key aspect of implementing this plan is coordinating development with the existing neighborhood, City of Richmond, and private developers to provide a common vision for the area to maximize resources available from different revenue streams.

The implementation strategy reviews the Goals listed below with the associated objectives supporting each goal.

Goal 1: Create a place

Craft a walkable environment that will foster people's human instinct to explore their surroundings

Goal 2: Create a walkable environment

Create visually stimulating open spaces where people will feel like they are part of an urban social fabric

Goal 3: Adaptive reuse & infill development

Fashion Infill development and adaptive reuse that blends treasured historical buildings with vibrant, modern uses

Goal 4: Multimodal transportation

Install a multi-modal transportation network that balances the safety, beauty and convenience of a pedestrian-friendly public realm with the need to efficiently move automobiles into and out of the neighborhood

Goal 5: Cultural enhancement

Foster the cultural evolution of an emerging neighborhood

Goal 6: Gateways

Create a series of gateways into the neighborhood that celebrates the nexus of cultural, retail, and unique living and working environments reflected in this area, while establishing the neighborhood as a greater gateway into the City of Richmond

The implementation strategy on the next page depicts the objectives in each goal spread over the time ranges with some carryover to another range allowing time for implementation with strategic goals.



Goal 1: Create a place (Craft a walkable environment that will foster people’s human instinct to explore their surroundings)

Objective 1.1: Provide sites for new destinations such as a grocery store, museum, retail corridor, professional suites, music venue, specialty dining, and others

The Interbake site is approved to be used as a multi-family dwelling with up to one hundred seventy-eight (178) dwelling units. Also considered by the developer is a grocery store near the Interbake site.

An anchor for Boulevard and Myers is a Flat Iron style building between Boulevard and Myers with retail, professional suites, specialty dining, and residential. Another component of the plan is to develop a Flat Iron style building along Broad and Cutshaw Avenue with music theme.

The resources to develop this objective are private development with guidance and direction from the City of Richmond to encompass the vision of this plan in the 1-15 year timeframe.

Objective 1.2: Create a beautiful, safe, walkable place that meets the needs of visitors, residents, and workers

Myers Street is proposed for transition to a walkable pedestrian mall and requires City of Richmond approval to change from an automobile centric street to pedestrian with limited crossings for automotive traffic. This objective is projected for the 1-5 year timeline.

Goal 2: Create a walkable environment (Create visually stimulating open spaces where people will feel like they are part of an urban social fabric)

Objective 2.1: Create a pedestrian mall that is not only a walkable area with its own sense of place, but that also has connectivity with all other adjacent neighborhoods

top: Jamison Square, located in Portland, Oregon, was the first of three parks planned to help re-develop the Pearl District which once resembled Scott’s Addition.

bottom: A walkable, vibrant street such as State Street in Madison, Wisconsin serves as an ideal streetscape.

Goals & Objectives

Upon transition from automobile to pedestrian centric Myers Street can develop as a pedestrian Mall with public art, music venues, retail, and dining.

The resources to develop this objective are private development with guidance and direction from the City of Richmond to encompass the vision of this plan in the 1-15 year timeframe.

Objective 2.2: Enhance existing streetscapes to create a beautiful and interesting walkable environment and accommodates multi-modal transportation that is appropriate for the scale of the neighborhood

Integrate bicycle, pedestrian, and transit into a transit stop on Boulevard that connects to the pedestrian mall
Integrate the tram transit connection into the existing Robinson stop on Broad to connect to downtown
Recalibrate The Boulevard slowing it down with circulation and pedestrian improvements
Add public art, mural sculptures, lighting, fountains, and installations

The resources to develop this objective are private development with guidance and direction from the City of Richmond to encompass the vision of this plan in the 1-15 year timeframe. The tram element is projected for the 15-40 year timeline.

Goal 3: Adaptive reuse & infill development (Fashion Infill development and adaptive reuse that blends treasured historical buildings with vibrant, modern uses)

Objective 3.1: Provide sites for new public institutions. A key component to this plan is the relocation of the Children's Museum to the northeast corner of the intersection of the Boulevard and Broad. The new Children's Museum will create a major regional attraction at the southern gateway on an under-utilized corner.

The sale of the current Children's Museum property could provide part of the funding for purchase of the new location on the corner of Boulevard and Broad along with endowments and fundraising. With key resources and funding this is projected for the 1-15 year timeline.

Objective 3.2: Embrace the historical significance of preserved buildings and find them appropriate contemporary uses, such as adapting the Interbake site for residential and retail use

There are numerous opportunities for infill development as we seek to increase the population and density of the area to support the emerging commercial activity and public attractions. The former location of the Children's Museum is ideal for redevelopment as a bowling alley. In addition to the newly relocated Children's Museum, the other three corners at the intersection are prime locations for infill development.

The need for increased residential density will be addressed by the construction of five to eight story multi-use buildings throughout the project area as well as the inclusion of single-family and multi-family residences along Myers Street, Grace Street, and the Boulevard. Multiple blocks along the south side of Broad Street are conducive for infill development to replace the scattered surface lots and stand-alone fast food restaurants.

The infill property development is a critical piece of this plan and dependent upon private development resources to create the vision created in this plan. Projections are for the 1-15 year timeline.

Goal 4: Multimodal transportation

Install a multi-modal transportation network that balances the safety, beauty and convenience of a pedestrian-friendly public realm with the need to efficiently move automobiles into and out of the neighborhood.

Objective 4.1: Create a roundabout at Boulevard



and Broad that will enhance safety and accommodate left turns while moving vehicles more efficiently through the intersection

Design, plan, and construct a roundabout at the intersection of Boulevard and Broad that features architectural elements for a gateway into the neighborhood. The key aspect of the design feature is a raised waterfall type element that creates a destination space. Once you have arrived at Boulevard and Broad the features draw you into the neighborhood and make you want to stay for shopping, dining, or to become a part of the neighborhood.

The roundabout can be implemented as part of the City of Richmond's revenue sharing funds integrated into the Virginia Transportation Six Year Plan over the next 6-15 years.

Objective 4.2: Integrate a tram and Bus Rapid Transit into the Boulevard and Broad streetscape

Bus Rapid Transit (BRT) is proposed for Broad Street providing high quality transit service through the city. The station proposed near the Boulevard and Broad intersection is a center bus lane with a station in the center of Broad Street. The BRT plan is primed for funding through the Virginia Department of Rail and Public Transportation (DPRRT). The Broad Street Rapid Transit Study was conducted as a Regional Project and developed the current plans to request the grants to implement the study in Richmond. The Boulevard and Broad plan is poised to support transit-oriented development with the interconnectivity of a tram line.

This plan proposes a tram connecting the great walkable neighborhoods of Richmond to the Boulevard and Broad streetscape. The tram will pick up riders at Robinson Street bus and BRT transit stops and connect them to Boulevard and the pedestrian mall on Myers Street.

The Bus Rapid Transit can be implemented as part of the City of Richmond's revenue sharing funds integrated into the Virginia Transportation Six Year Plan over the next



top: Originally a warehouse used to hold coffee pre-exportation in the early 1900s, the building is now home to Republic New Orleans. At night, the space transforms into an artistically inclined, sophisticated entertainment venue.

bottom: The multimodal transportation system in Bahnstrasse, Switzerland served as a model for the study area.

Recommendations

Goals & Objectives

6-15 years while the tram service would be in the 15-40 year timeframe.

Goal 5: Cultural enhancement (Foster the cultural evolution of an emerging neighborhood)

Objective 5.1: Add public art to appropriate locations within the neighborhood

Commission the VCU School of Arts to develop and create art pieces for key places along the neighborhood. The sponsorship can be funded through donations and creation of a neighborhood beautification commission. To develop the key piece for the Children's Museum commission a renowned artist to develop a key public art piece that is visible from the intersection of Boulevard and Broad.

Implementation is projected for the 1-15 years with numerous art pieces in various public spaces.

Objective 5.2: Maximize the potential for supporting activities of the existing museums, sports venues, and entertainment destinations in the neighborhood

Create an integrated Boulevard and Broad District through a collaborative effort of museums, entertainment destinations and other stakeholders to maximize use of the artistic, scientific and educational resourced of Richmond's institutions. Recommendation includes the formation of an Association of current institutions to assist in the promotion and planning of events.

Development of an association is projected for 1-5 years while the development of entertainment destinations develops from the 6-15 year timeline.

Goal 6: Gateways (Create a series of gateways into the neighborhood that celebrates the nexus of culture, retail, and unique living and working environments, while establishing the neighborhood as a greater gateway into the City of Richmond)



	Short Range 1-5 Years	Medium Range 5-15 Years	Long Range 15-40 Years
Goal 1: Create a place	Objective 1.1: Provide sites for new destinations Objective 1.2: Create a beautiful, safe, walkable place	Objective 1.1: Provide sites for new destinations	
Goal 2: Create a walkable environment	Objective 2.1: Create a pedestrian mall that is not only a walkable area with its own sense of place Objective 2.2: Enhance existing streetscapes to create a beautiful and interesting walkable environment	Objective 2.1: Create a pedestrian mall that is not only a walkable area with its own sense of place Objective 2.2: Enhance existing streetscapes to create a beautiful and interesting walkable environment	
Goal 3: Adaptive reuse & infill development		Objective 3.1: Provide sites for new public institutions Objective 3.2: Embrace the historical significance of preserved buildings	
Goal 4: Multimodal transportation		Objective 4.1: Create a traffic circle at Broad and Boulevard Objective 4.2: Integrate a tram and Bus Rapid Transit into the Broad and Boulevard streetscape	Objective 4.2: Integrate a tram and Bus Rapid Transit into the Broad and Boulevard streetscape
Goal 5: Cultural enhancement	Objective 5.1: Add public art to appropriate locations Objective 5.2: Maximize the potential for supporting activities of the existing museums, sports venues, and entertainment destinations in the neighborhood	Objective 5.1: Add public art to appropriate locations Objective 5.2: Maximize the potential for supporting activities of the existing museums, sports venues, and entertainment destinations in the neighborhood	
Goal 6: Gateways		Objective 6.1: Transform the bridge over the railroad tracks on Boulevard into a unique gateway element Objective 6.2: Design the circle at the intersection of Broad and Boulevard	Objective 6.1: Transform the bridge over the railroad tracks on Boulevard into a unique gateway element Objective 6.2: Design the circle at the intersection of Broad and Boulevard

Objective 6.1: Transform the bridge over the railroad tracks on Boulevard into a unique gateway element that defines and enhances a sense of arrival for the neighborhood

The first five-year phase calls for installing decorative lighting elements situated on posts that continue the streetscape from the Boulevard up over the bridge. In addition, the deteriorating concrete railing will be replaced with an artistically designed iron railing that meets safety standards while also allowing a line of sight through the railing.

The next phase covers a 15-year time frame and involves the replacement of the deck. In order to continue allowing traffic to flow during replacement, the deck will be constructed in sections. Initially the eastern side of the deck will be removed and replaced, leaving the western side open for traffic, albeit at a decreased capacity. Once the eastern side is finished, it will be opened up to traffic and construction on the western side will begin. At the completion of the 15-year phase the deck will be finished in its entirety. By the end of the 40-year phase the bridge will be finished with a series of three large arches that run the length of the deck while crisscrossing over surface. The arches will be 190

feet tall and 330 feet wide at their base. Additional features added by the end of this phase include illuminate light features on the undersides of the arches and a semi-circle pedestal on each veranda for visitors to rest and relax. This will create the iconic gateway, visible from the highway, which represents the plan area as a unique destination. Moreover, but the bridge itself will serve as destination feature, not just a utilitarian structure designed to move automobiles. Objective 6.2: Design the circle at the intersection of Boulevard and Broad in such a way that unifies the diverse neighborhoods that surround the area and establishes a gateway to all those areas.

Design, plan, and construct a roundabout at the intersection of Boulevard and Broad that features architectural elements for a gateway into the neighborhood. The key aspect of the design feature is a raised waterfall type element that creates a destination space. Once you have arrived at Boulevard and Broad the features draw you into the neighborhood and make you want to stay for shopping, dining, or to become a part of the neighborhood.

The roundabout can be implemented as part of the City of Richmond's revenue sharing funds integrated into the Virginia Transportation Six Year Plan over the next 6-15 years.

opposite top: Daley Plaza in Chicago serves as a prime example for cultural enhancement through public art.

opposite bottom: A prime example of a gateway bridge is Melbourne, Australia's Seafarers Bridge

Recommendations

Placemaking

At its heart, placemaking is about providing an experience. How does the environment, or the place you are experiencing, affect you and why? Most of the time, people do not even think about the reasons why they like or dislike a given place. Their focus is on the reason they are there or the people with whom they are there. While they want the experience to be a positive one, most are unaware of the innumerable little things that they subconsciously compile to create what they are experiencing.

This plan will make the corridor along the Boulevard between Broad Street and the Diamond a place that people in Richmond and beyond will want to experience. This will become possible by magnifying the present strengths of the area and designing an urban infrastructure to match the area's potential.

One of the greatest determinants for how one experiences a place is how they encounter it. Times Square is much different on foot than it is on a bicycle or in a car. This plan improves the experience for all transportation modes. It improves the pedestrian experience by enhancing the streetscape and making the sidewalks safer and more pleasant. This plan includes traffic-calming measures that make it safer pedestrian and bicycle traffic. The proposed density increases and improved architectural and urban design features will make it more visually appealing to motorists passing through.

All of these improvements will expand the connectivity of these corridors with the surrounding neighborhoods. The Fan, The Museum District and Carytown are all walkable communities whose amenities attract patrons from other parts of the city and the rest of the Richmond region. By creating an experience equal to these adjacent neighborhoods, the Broad/Boulevard area will unify this part of the West End and offer comfortable transitions between all these places.



This is a view from the Juliet Balcony restaurant on the Triangle building. From this vantage point many landmarks can be seen such as the clock tower, the rooftop park, the Interbake building and downtown.



The area's proximity to I-64 and I-95 will make it a destination for people from beyond the City of Richmond. This confluence of people from different places in the Richmond region will provide its own reason for people to want to be there. People can go anywhere and see the same people they always see, but in a destination, the diversity is part of the allure.

Yet the diversity of this area does not end with the people who will live, work, and play there. Rather, the multiple uses of the area will be a draw. This will be a place that an individual or a family could spend a day visiting and never have to move their car. This diversity of land use will be another defining aspect of the experience at Broad Street and the Boulevard.

There are places that transcend the city they are located in to the point that they define that city's image. The French Quarter in New Orleans and the River Walk in San Antonio are examples of relatively small places within a larger urban context that serve as the face of those cities. However, those are not the first things or the only things that visitors see when they visit. This area will have a sense of place and serve as the gateway to the City of Richmond.

Recommendations

Pedestrian Mall

One of the signature facets of this plan is to convert Myers Street from a narrow auto-centric street into one that focuses on the pedestrian. However, while this proposal eliminates through traffic on Myers, it allows cars to cross Myers Street by extending Clay Street and Leigh Street past Myers Street and connecting it with an extension of Terminal Place.

The Myers Street Pedestrian Mall will have several anchors, including the new residential lofts at the Interbake site, the new Children's Museum and seasonally by the Washington Redskins training camp and Richmond Flying Squirrels home baseball games, which would be across the pedestrian bridge that forms the mall's northern terminus.

This diversity of uses is important because one of the keys for a successful pedestrian mall is the consistent presence of people at different times of the day and for those people to have reasons to be there other than the mall. A pedestrian mall works if there are already people at its proposed site. It seldom works when built as a cure-all in an abandoned area.

The independent shops planned for this street and the attraction of new development will draw pedestrian visits from the current walkable surrounding neighborhoods. The mix of restaurants, a music venue, grocery store, gym, and the local artisanal businesses that will line the street will create an experience, when combined with the other surrounding attractions, unlike anywhere else in Richmond. The Myers Street Pedestrian Mall will not have to rely solely on its own intrigue to attract people.



Converting Myers Street into a pedestrian mall would establish a viable economic corridor replete with small businesses bustling with activity.



Recommendations

Grocery Retail

A proposed grocery store will re-use 44,370 square feet, which is the size of the current the Interbake Foods warehouse. This plan proposes adding two stories to the existing structure and incorporating relevant uses like a Crate and Barrel or Sur La Table. The grocery store could also use this space as a café/restaurant. The roof of the grocery store structure will also serve a purpose. It could provide space for a farmer's market or a place to sell more grocery store products. The rooftop space itself will attract people to the grocery store since it will offer views of the Broad/Boulevard area as well as downtown Richmond.

A signature clock tower makes the store visible from Broad Street, the roundabout and West Clay Street, which are key points in the area. A plaza in front of the store will serve as an additional place to display goods like plants and produce or as a location for outdoor dining for those purchasing prepared meals from the grocery store. Though the plaza is across the street, the plaza connects to the grocery store through a design element that stretches it across that street. This will reinforce to pedestrians that they are the focus of this area and require automobiles to slow down.

Roads surround the grocery store, which will provide easy access for delivery trucks and patrons. Nearby are several parking decks that can meet the parking demands of customers.

The planned store attract many customers from the neighborhoods north of I-95/I-64 due to a lack of full-service grocery stores in that area. The Studio I team found that areas supporting successful stores similar to what is planned should have at least 15 to 20 people per acre in mixed use areas.

The Fan currently has approximately 18 people per acre while the Museum District/Carytown has approximately 15 people per acre. With some exceptions, the housing in these neighborhoods typically does not exceed three floors. Both are primarily residential. This is in stark contrast to the Broad/Boulevard study area. The industrial nature of the study area will require more vertical development to ensure the necessary density.



These three images depict the grocery store amongst the commotion and excitement of the pedestrian mall. After people dine, play putt putt, visit specialty store, or stop at the children's museum, then can quickly stop for groceries before walking, driving or taking public transportation back home.



The following are some relevant statistics on density for precedent locales:

The Pearl District, Portland, OR – Similar to the Boulevard and Broad study area, this district developed in a light industrial area. However, the last 15 years have seen a revitalization built on mixed-use development, the arts, and walkability. The density for the area is 17.2 people per acre.

Clarendon, Arlington, VA – Clarendon is an area that historically served as a retail center for the inner suburbs of Washington D.C. Like this plan's study area, it is surrounded by dense residential development. Although it only has 7.6 people per acre (due to its focus on retail) the surrounding residential areas easily support the local Whole Foods Market.

The Downtown Mall, Charlottesville, VA – The most visible example of a successful pedestrian mall to most Virginians, The Mall stands out as an anomaly to the density requirements for a pedestrian mall. Its burgeoning success without much surrounding density alludes to the importance of creating a “place.” With less than one person per acre, there is clearly something else that is special that draws people to this space.

Recommendations

Parking

A previous review of the parking area for the proposed model indicated that there is limited on-and-off-street parking within the study area. The total parking capacity for the area was approximately 10,000 spaces. Of the 10,000 spaces, 50 percent is on-street parking and 50 percent is off street parking. The off-street parking consisted mostly of the VMFA parking garage, Department of Motor Vehicles, the Science and Children's museums, and the Comfort Inn.

Presently, this amount of parking within the study area is inadequate. This problem would increase with the proposed development on the site. Because of this dilemma, this plan recommends constructing a series of parking garages to provide additional parking and to enhance the overall appeal to the area. Additionally, the use of porous pavers will help to reduce storm water run-off and will decrease the ecological footprint of future parking.

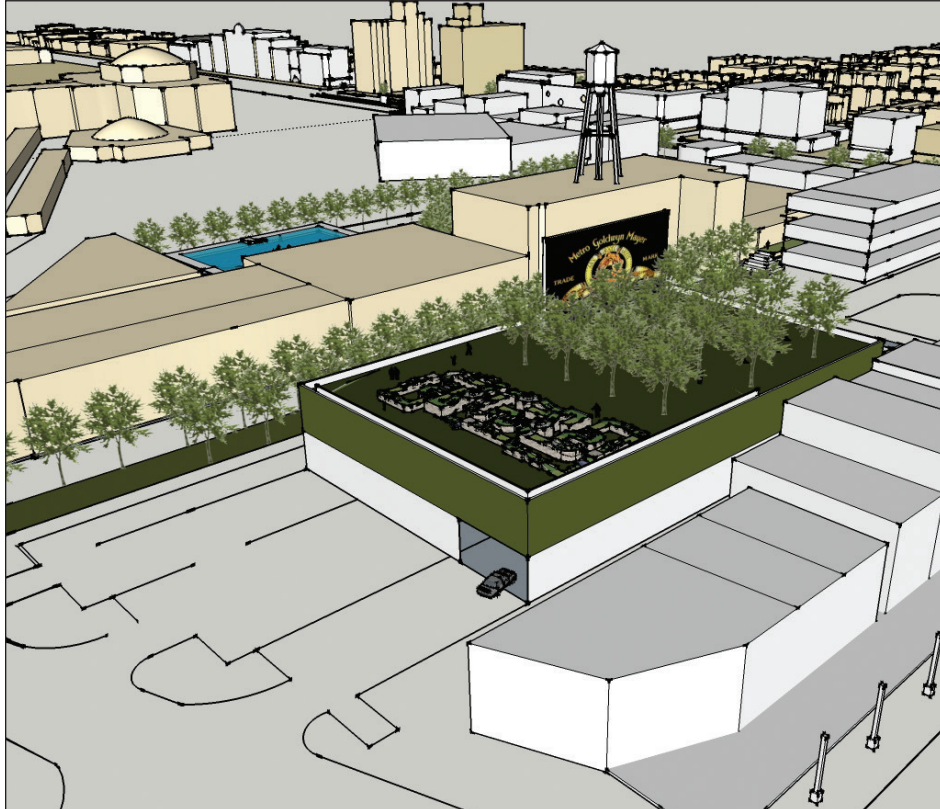
The recommended locations for the garages are at the following sites:

- Interbake Apartments (garage in the rear of the site.)
- Grocery store site (two garages to accommodate the patrons and other surrounding buildings)
- Scott's Addition (at least four garages located in the residential area)

These garages will feature alternative uses and recreational amenities. One has a baseball field and movie screen on top, another will have a pool, and yet another is architecturally engaging.



above: A Miami, Florida parking deck that doubles as an event venue, designed by architecture firm Herzog and De Meuron, serves as a model for a proposed parking structures in the study area.



top: The use of porous pavers in lieu of asphalt will help to decrease stormwater runoff from future surface parking.

bottom: A swimming pool, an outdoor theater and recreational space help to maximize the utility of proposed parking decks in the study area.

Recommendations

Adaptive Reuse & Infill

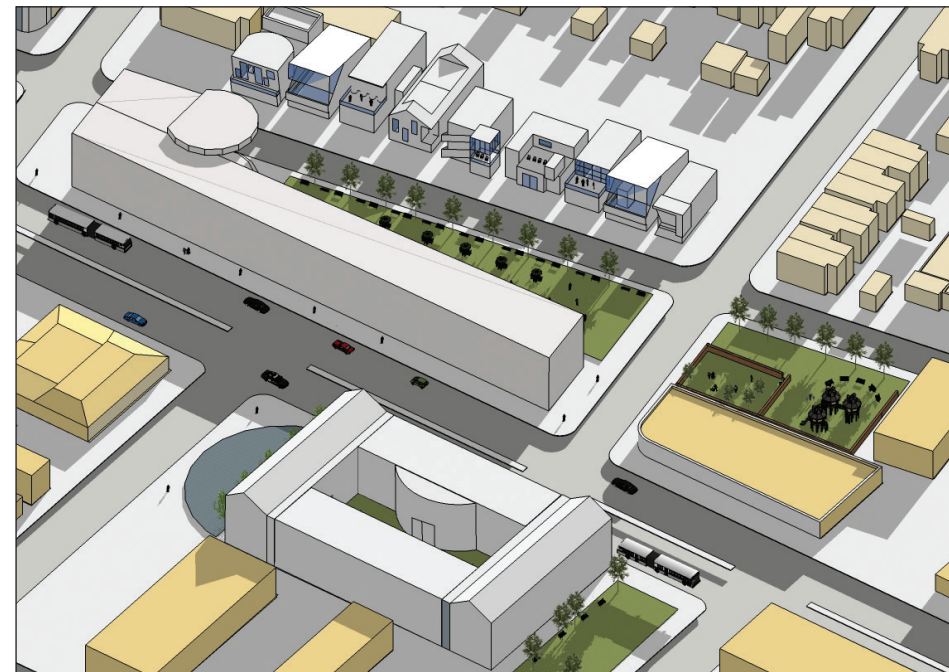
One of the goals for the redesign of this study area is to fashion infill development and employ adaptive reuse processes that will preserve architecturally significant structures while creating a modern place to live, play, and conduct business. Adaptive reuse and infill development encourages investment in underutilized structures, promotes historic preservation, and creates economic development opportunities.

The preservation and adaptive reuse of historic buildings to host contemporary functions such as commercial, residential, and retail uses is a responsible development practice. New infill development on vacant lots will be respectful to the historic architecture and scale, as well as modern and innovative. They will also take advantage of increased set backs allowing for sidewalk cafes. While much of the study area is under-utilized and should consist of infill development and new construction, there are a number of buildings deemed architecturally significant that help to create an identity for the Boulevard and Broad.

There are numerous opportunities for infill development as this plan seeks to increase the population and density of the area to support the emerging commercial activity and public attractions. A key component to this plan is the relocation of the Children's Museum to the northeast corner of the intersection of Broad Street and the Boulevard. The new Children's Museum will create a major regional attraction at the southern gateway on an under-developed corner. The former location of the Children's Museum is ideal for redevelopment as a bowling alley.

In addition to the newly relocated Children's Museum, the other three corners at the intersection are prime locations for infill development. The increase in attractions will necessitate an increase in available parking and this is possible with the addition of a few conveniently located parking garages. The parking garages will account for the number of surface lots and vacant lots planned for redevelopment.

This plan will address the need for increased residential density with the construction of multi-use buildings, about five-to-eight stories in height, throughout





top: Through creative adaptive reuse the architecturally significant facades along Boulevard will be preserved. Building on top of the existing structures will help to increase density in the study area.

bottom: There are many opportunities for adaptive reuse and creative infill development along the blocks on Broad Street west of the roundabout. Contemporary residential infill across from an outdoor music venue, and a new library (bottom) will attract visitors and promote density.

the project area as well as the inclusion of single-family and multi-family residences along Myers Street, Grace Street, and the Boulevard. Multiple blocks along the south side of Broad Street are conducive for infill development to replace scattered surface lots and stand-alone fast food restaurants.

This plan embraces the historical and architectural significance of certain structures and seeks to preserve them through adaptive reuse. To achieve the necessary density to support the evolving commercial area, the Studio I team recommends removing many of the existing structures over time to allow for vertical development. One exception is the Interbake site, which is a prominent example of adaptive reuse. The main building is one of historical and architectural significance and it is ideal for residential development. The larger site has the potential to include a grocery store and a gym, supported by smaller stores along the periphery of the property.

The Studio I team has identified the 1200 block of the Boulevard as a block that possesses preservation-worthy architecture. Many of the buildings along the western side of the Boulevard are suited for adaptive reuse. This block has the potential to retain some unique architectural features while helping the environment by conserving natural resources.

Similarly, the Studio I team has identified the buildings on the 2800 block of West Broad Street for their unique architecture and recommends that the rooflines be replicated along the roofline of the adjacent infill development that comprises the northwest quadrant of the intersection of Broad Street and the Boulevard.

Many of the older buildings have outlived their original purpose; however, there are a few that are historically or architecturally significant to the area. These unique buildings will be adapted for new uses while retaining their architectural integrity and character. The remainder of the buildings, surface lots, and vacant lots will be replaced over time with appropriate infill development. This infill development will allow for the population and density necessary for the emerging commercial activity and attractions.

Cultural Improvements

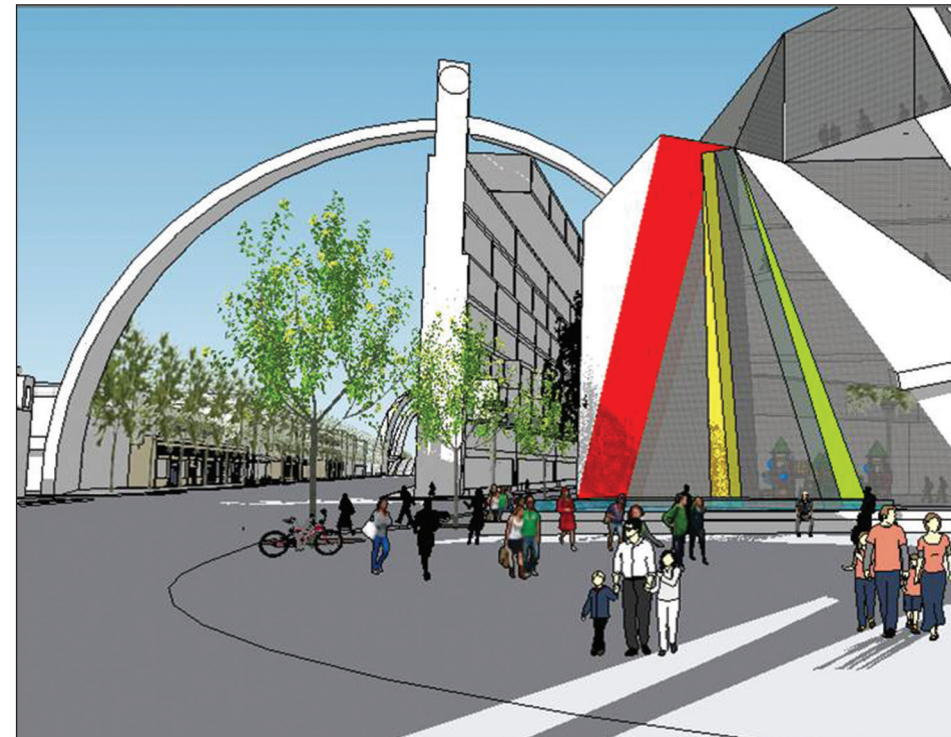
Vibrant Museum and Entertainment Hub

For visitors to Richmond and residents alike, having a central pedestrian-friendly hub that contains a collection of landmark destinations affords a convenient and exciting experience for all. With The Museum District, Richmond has the potential to create a true interconnected hub of some of its greatest assets, namely its museums and entertainment centers, which are located all within a walkable distance from each other, as long as the urban design allows for walkability.

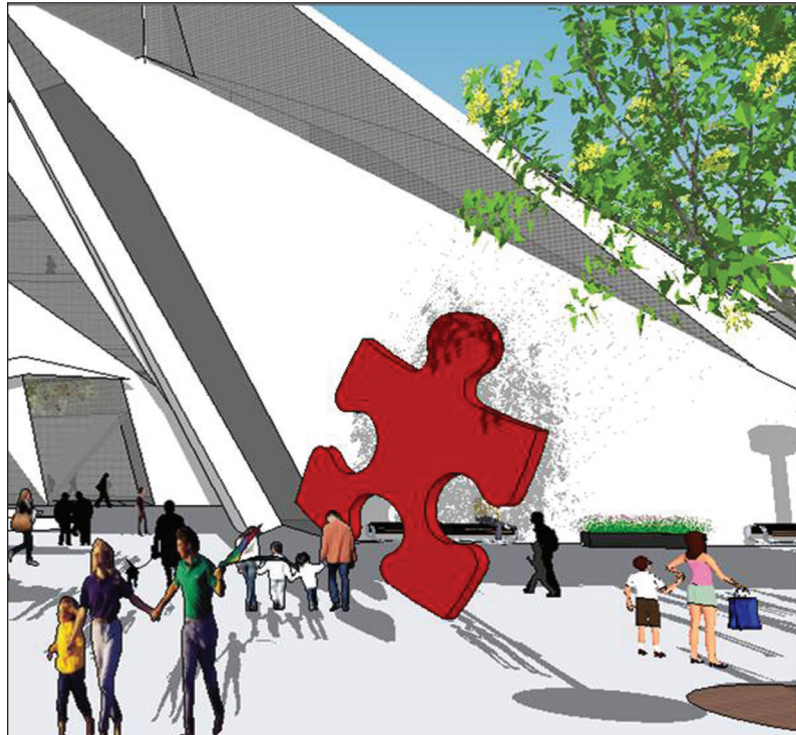
Anchored by the VMFA, the Museum District is only a few minutes' walk from both the Children's Museum of Richmond and the Science Museum, both of which are located on Broad Street. These museums are also in walkable proximity to the Bow-Tie Movieland and the planned Washington Redskins training camp site. Together, these destinations already have the potential to create a truly dynamic, exciting and convenient hub for sports, arts and entertainment. What the area currently lacks is any kind of safe, walkable connectivity, linking all these destinations to each other.

Houston Museum District

The Houston Museum District (HMD) began with the formation of an association of 11 museums in 1997. Today, there are close to 20 member institutions, all within an approximate 1.5-mile radius of the Mecom Fountain in Hermann Park. Among these institutions are the Contemporary Arts Museum of Houston, the Houston Museum of Houston, the Houston Museum of Natural Science, the Children's Museum of Houston, the Museum of Fine Arts, the Houston Museum of African American Culture and The John C. Freeman Weather Museum. The HMD Association promotes daily and monthly events through its Web site. The Web site also provides links to member institutions' own Web sites, making it a one-stop information center for visitors to the city and citizens.



The newly constructed and strategically placed Children's Museum of Richmond will entice families to visit and explore.



Create an integrated Boulevard and Broad District

This is possible through a collaborative effort of museums, entertainment destinations and other stakeholders to maximize use of the artistic, scientific and educational resources of Richmond's institutions. Recommendations include the formation of an association of current institutions to assist in the promotion and planning of events. Richmond's First Friday Arts Walk, which promotes the arts through participating galleries and artists once a month, has been a successful event for several years. This recommendation will be a further extension of the growing arts and entertainment scene that the city has to offer for its citizens and visitors alike.

Allow for a safe walkable path linking institutions on both sides of Broad Street.

On the south side of Broad Street are the historic, well-groomed streets of the Boulevard and Monument Avenue. Destinations on their own right, these streets offer safe and exciting pedestrian connections from the museums and entertainment centers on Broad Street to other destinations. With a BRT stop planned on Broad Street at intersection with Robinson Street, the Studio I team recommends using Robinson Street to create a safe, territorially reinforced crosswalk connecting the south and north sides of Broad Street.

New site for the Children's Museum of Richmond
The Children's Museum should relocate at the northeast corner of Broad Street and the Boulevard (at the current CVS site). This will give the museum a much more prominent location than its current site. The new location will also allow for an expansion of the museum from its current size of 44,000 square feet. This plan recommends converting the current museum facility into a bowling alley, adding another family-friendly entertainment destination in the neighborhood. As the new location will be a prime site, the development contract should go to the winner of a design competition focusing on modern architecture.

Recommendations

Transportation

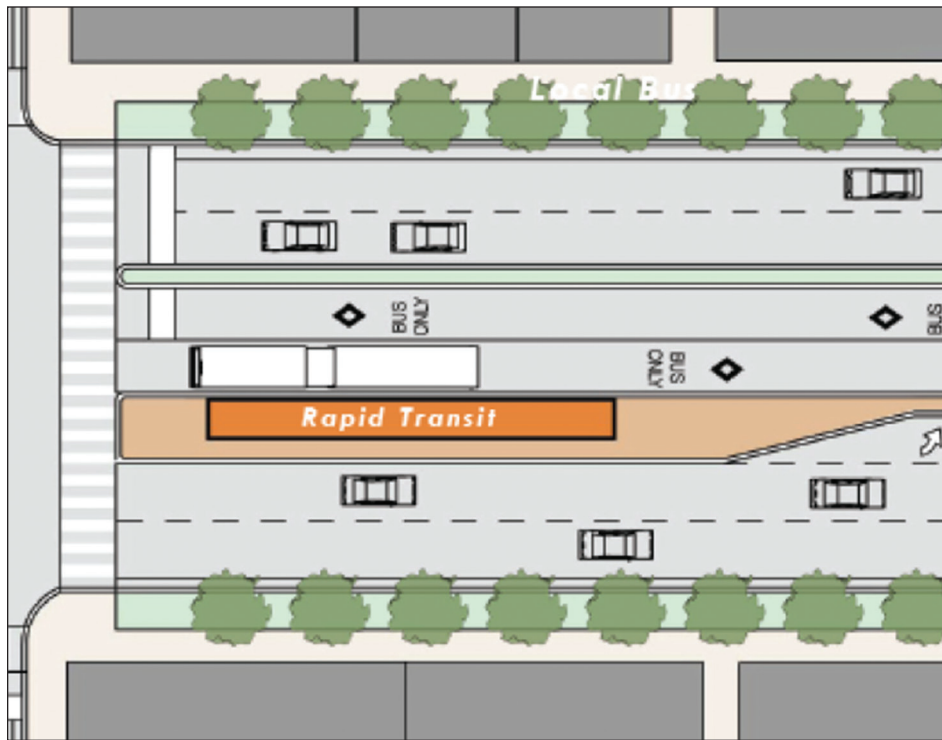
This plan recommends redevelopment for North Boulevard in a manner that better utilizes the limited right of way in order to maximize its positive influence on surrounding private development and all scales of traffic, from pedestrian to mass-transit. Under this plan's proposals, North Boulevard would be transformed to include two automobile traffic lanes, travelling in both directions; two dedicated bike lanes, travelling in both directions; a planting strip, dividing the bike lanes from the general traffic lanes; and a variable width sidewalk, which will allow for planters, ample pedestrian space, and on-street parking. Furthermore, this report suggests that a tram line travel down North Boulevard, in both directions, sharing a lane with general automobile traffic. While the number of uses seems large for a relatively narrow right of way with a high volume of traffic, a careful composition of each piece allows each use to work together effectively to create a greater whole.

The recommended treatment of Broad Street is almost identical to that proposed for North Boulevard. The primary difference can be found in dedicated Bus Rapid Transit ("BRT") lanes, which are proposed for the center of Broad Street. As mentioned, these BRT lanes would be dedicated to bus use and be closed to general traffic. The lanes, on average, would occupy approximately twenty-five feet of the existing 117 feet right of way on Broad Street. In certain segments, the BRT lanes would expand to approximately thirty-five feet in width in order to accommodate bus stops and shelters in the center of Broad Street.

Automobile

Although Boulevard and Broad remained consistent the intersection does not allow left turns from Broad onto Boulevard toward Monument. A solution to this is construct a roundabout at the Boulevard and Broad intersection providing a smooth transition for vehicles to enter and exit safely.





above: The Broad Street BRT Plan View, Robinson Street Stop.

opposite bottom: The connectivity of the study area will be enhanced by a tram system similar to that of the Pearl District in Portland, Oregon.

Pedestrian

The creation of a pedestrian mall on the former Myers Street location increases the pedestrian friendly atmosphere of the Boulevard. The idea is to create a location that draws the car into the neighborhood and the people out of the car to experience the walkability of the neighborhood.

Bicycle

The proposed bicycle connections increase the bike-ability of the Boulevard and the neighborhood. These connections are in the 2004 Regional Bicycle and Pedestrian Plan at http://www.richmondregional.org/MPO/MPO_Div_Cats/bikeped.htm.

Transit

Bus Rapid Transit (BRT) is proposed for Broad Street providing high quality transit service through the city. The station proposed near the Boulevard and Broad intersection is a center bus lane with a station in the center of Broad Street.

Parking

There is an increase in parking to accommodate the development of residential, commercial, and entertainment elements in the neighborhood. Parking is critical to moving the occupants from the vehicle onto the pedestrian environment.

Bridge

Create an entrance for the neighborhood that serves as a gateway into the City and area. One way to accomplish this in the short term is to create an architectural element over the bridge but not connected to the bridge creating the gateway element. Long term is with the reconstruction of the bridge in approximately 2026 expand the bridge to 84 feet wide with 4 traffic lanes (12 feet each), two 4 foot bikes lanes, two 10 foot sidewalks, and a center tram line of 8 feet. In addition construct an observation platform at the apex of the bridge that provides sightlines of the City of Richmond skyline.

Recommendations

Roundabout

This plan recommends creating a roundabout at the intersection of Broad Street and the Boulevard that will enhance safety and accommodate left turns while moving vehicles more efficiently through the intersection. This roundabout will also feature architectural elements for a gateway into the neighborhood. The key aspect of the design feature is a raised fountain element.

The current intersection at Broad Street and the Boulevard does not allow left turns from Broad onto Boulevard toward Monument Avenue. A roundabout provides a smooth, safe transition for vehicles to enter and exit safely from and to every part of the intersection. According to the Richmond City Public Works Web site, “modern roundabouts can reduce fatal crashes by as much as 90 percent. These safe, efficient traffic structures are proven to reduce the number and severity of vehicle and pedestrian accidents.” Other features key to this plan are the integration of pedestrian and bicycle traffic that a roundabout encourages while increasing safety by slowing vehicular traffic.

Although roundabouts slow traffic speed, there is a 50 percent increase in traffic flow due to less stopping at red lights while queuing at the roundabout. Another added benefit is less gas consumption and reduced emissions from waiting at red lights, further reducing the air pollution affecting Richmond.

Roundabouts are an essential element of this plan to provide a safe and efficient cultural centerpiece for the Broad/Boulevard area.



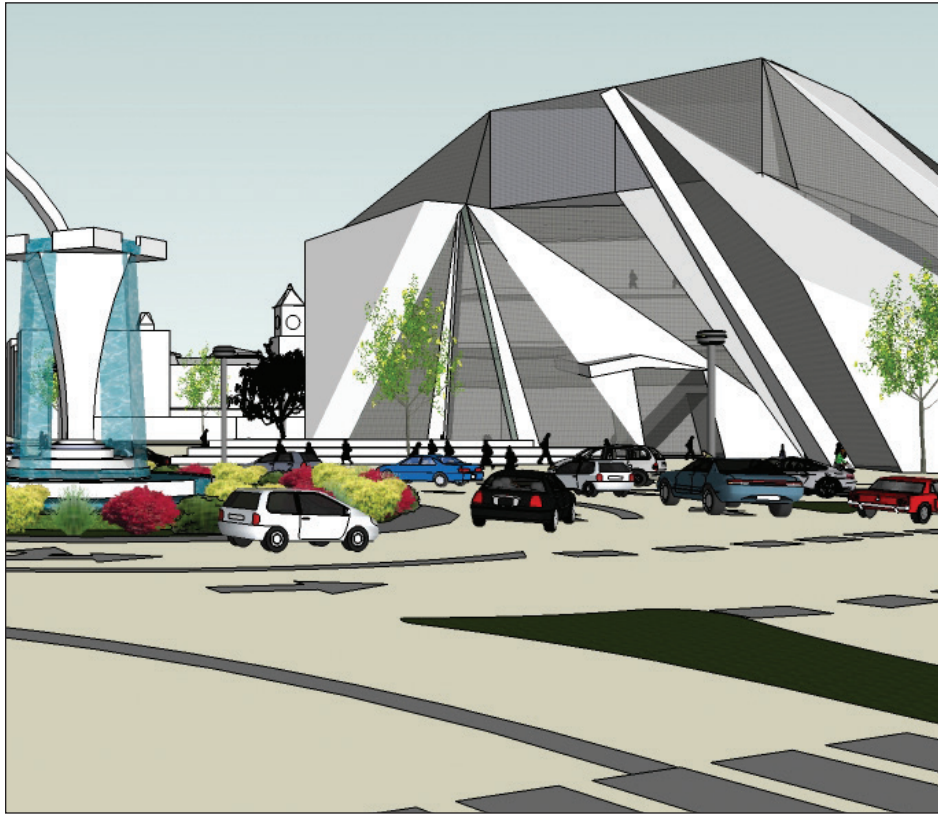
above: The proposed roundabout will create a more walkable environment for pedestrians. Anchored by the water fountain, the roundabout will enhance the experience for pedestrians, bicyclists and automobile drivers.

opposite bottom: The proposed Bus Rapid Transit system will have a mid-street station at Robinson Street.

Recommendations Tram & BRT

Bus Rapid Transit (BRT), currently planned for Broad Street, will provide high quality transit service through the city. The nearest planned station to the Broad/Boulevard intersection is a center bus lane with a station in the center of Broad Street at the intersection with Robinson Street. BRT is a rapid transportation mode that provides the sleekness of rail transit with the flexibility of buses. Speed, reliability and a passenger-friendly design are the characteristics of BRT that provide the rider friendly atmosphere for the Richmond area. The BRT plan will receive its funding primarily through the Virginia Department of Rail and Public Transportation (DPRT). The Broad Street Rapid Transit Study was conducted as a regional project. One of the key goals of the study was to serve existing patterns of transit-oriented land use and support local plans to generate new transit-oriented development. This plan is poised to support transit-oriented development with the interconnectivity of a tramline.

This plan recommends a tram connecting the other walkable neighborhoods of Richmond to the Broad/Boulevard area. This tram will pick up riders at the Robinson Street bus and BRT transit stops and connect them to Boulevard and the proposed pedestrian mall on Myers Street. It would then reverse course and travel south on the Boulevard again after stopping at The Diamond. The route will make a right turn at the proposed roundabout and then make a left turn off Broad Street, and connect with stops in the Museum District, Carytown, Shockoe Slip and Manchester. This interconnectivity promotes walking within these districts and using the tram for walks beyond a half-mile radius.



Recommendations

Gateways

The final goal in the urban design plan for Broad Street and the Boulevard is to create a series of gateways into the plan area that celebrates a live-work-play environment. This plan aims to establish the study area as a greater gateway into the City of Richmond.

The first objective is to transform the existing bridge that carries the Boulevard over the CSX train tracks into an iconic structure that represents a true sense of arrival. The existing bridge was built in 1943 and reconstructed in 1986. The current structure is 251 feet long and 70 feet wide with two lanes running in each direction. Following its last inspection in 2011, inspectors assessed the bridge as a deck and superstructure condition 5, which is fair condition.

The fair condition indicates that all primary structural elements are sound but may have some minor section loss due to corrosion, cracking, deterioration of concrete, or scour. Despite the fair condition rating, the bridge's replacement will be necessary by the end of the 40-year timeframe provided in this plan.

This plan proposes a replacement bridge that not only serves a functional purpose, but memorable and recognizable. Research has provided a number of examples of localities that have taken this approach when designing bridges within their jurisdictions. According to an article in Richmond Magazine, half of America's population lives within a day's drive of Richmond. In addition, with I-95 being one of the busiest highways along the east coast, the location of the bridge places it in prime view to many people passing through the Richmond region or coming to visit.

The proposed bridge design incorporates a single arch deck that is 1,000 feet long. The existing deck is 251 feet, but does not include the land grading that leads up to the deck on either side. The deck will be 84 feet wide and consist of two 12-foot-wide automobile lanes in each direction, a four-foot-wide bicycle lane in each direction, a ten-foot-wide sidewalk on each side and a continuation of the tramline running down the center. Finally, a veranda will exist on either side at the apex of the arch to allow pedestrians and cyclists the chance to stop, step out, and take in a full 180-degree view of the city.



The current condition of the bridge

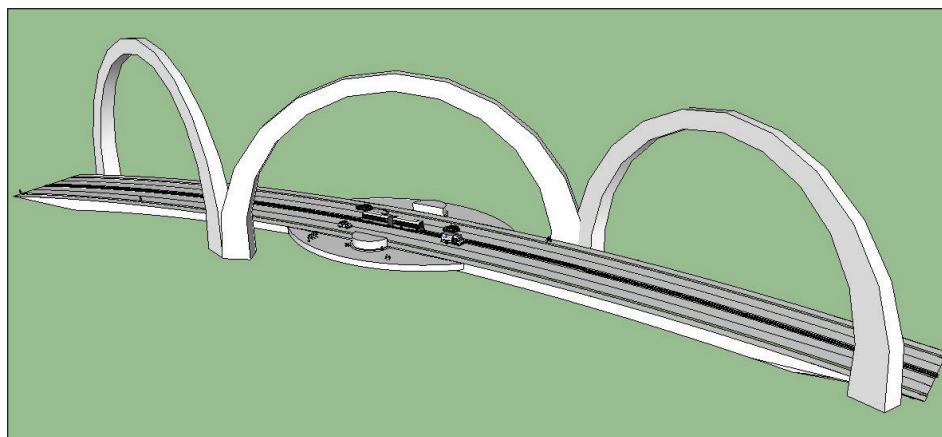
opposite bottom: A gateway bridge would welcome visitors into the City of Richmond and the neighborhood.



The first five-year phase calls for installing decorative lighting elements situated on posts that continue the streetscape from the Boulevard up over the bridge. In addition, this plan recommends installing an artistically designed iron railing that meets safety standards while also allowing a line of sight through the railing. This will replace the current, deteriorating concrete railing.

The next phase involves the replacement of the deck in a 15-year timeframe. In order to continue allowing traffic to flow during replacement, construction on the deck must occur in sections. Initially, the construction will occur on eastern side of the deck, leaving the western side open for traffic, albeit at a decreased capacity. Once the eastern side is finished, it will open up to traffic and construction on the western side can begin. At the completion of the 15-year phase, the deck will be finished in its entirety with the dimensions and features mentioned above.

The final recommendation is to build a series of three large arches that run the length of the deck while crisscrossing over surface. These arches will be a 40-year goal. This will create a final structure similar to the precedent image of the J.K. Bridge in Brasilia, Brazil. The arches will be 190 feet tall and 330 feet wide at their base. Additional features added by the end of this phase include illuminated light fixtures on the undersides of the arches and a semi-circle pedestal on each veranda for visitors to rest and relax. This will create an iconic gateway, visible from I-95, which presents the plan area as a unique destination. Moreover, the bridge itself will serve as destination feature, not just a utilitarian structure designed to move automobiles.



Recommendations

Streetscapes

Proposals for Streetscape Design

The primary driving goals behind the design proposals are first to create an aesthetic, unified streetscape and second to provide a meaningful separation between uses in the transportation hierarchy. These goals are implementable through the creation of a double alley of trees along both roads. These trees will not only provide a unifying force to the streetscape but also divide pedestrians, from cyclists, from traffic, creating a safer environment for all three uses.

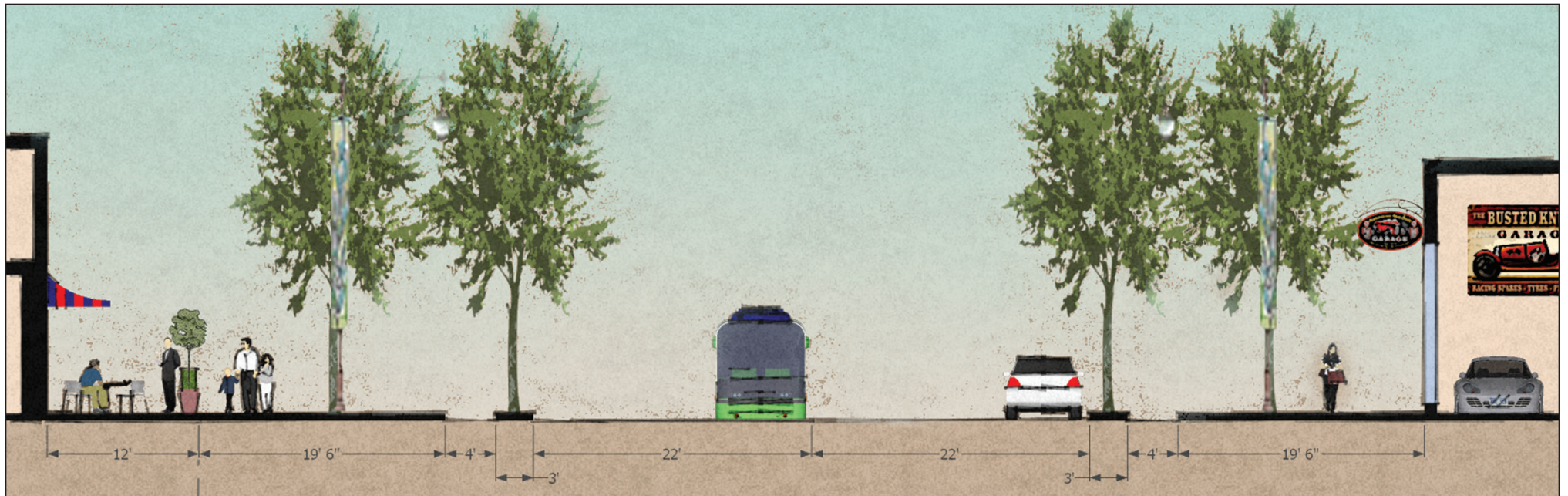
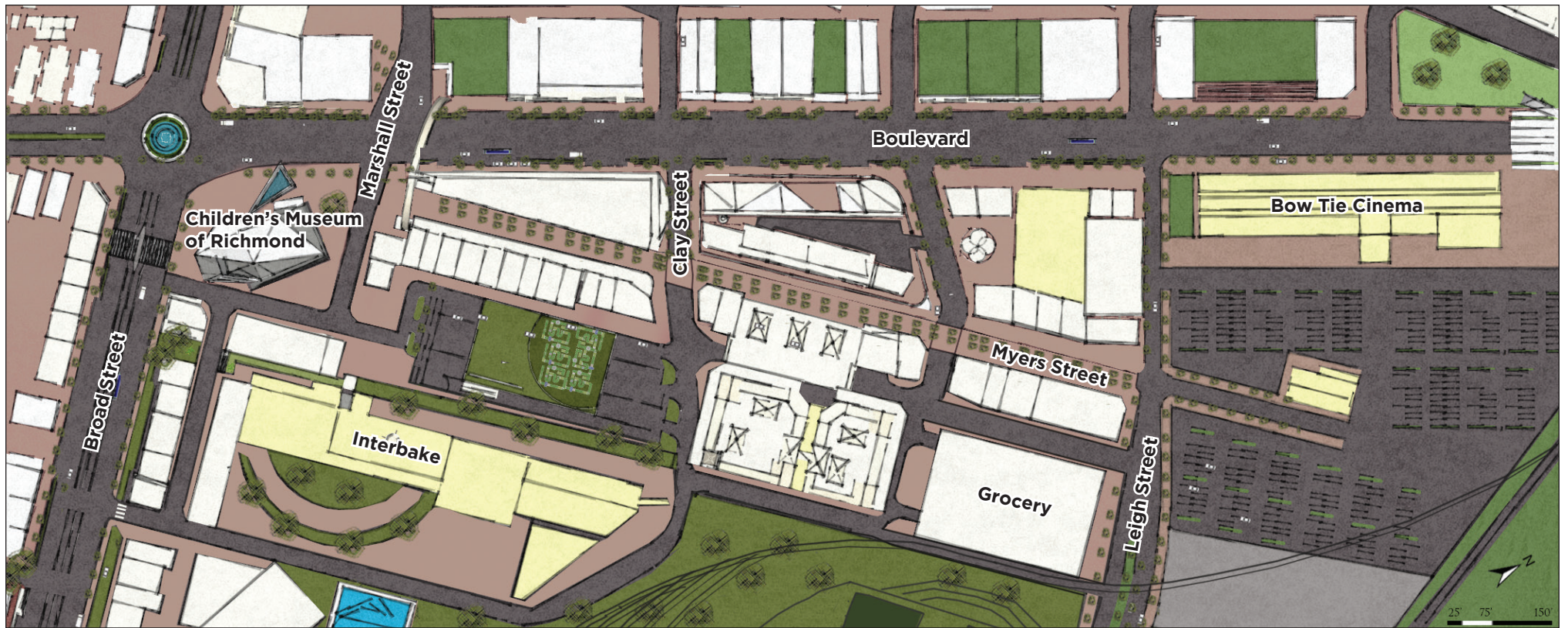
Lighting also plays a crucial role in the creation of a beautiful and unified streetscape. Street lamps need not be limited to utilitarian “cobra lamps” hanging high above the heads of pedestrians. While this type of lighting is crucial for motorists, it can be combined with human scaled lamps to create an integrated lighting system that is pleasant and useful for both pedestrians and motorists alike. Moreover, lamps are exploitable as a space for further design features, such as banners. Banners are not only aesthetically pleasing, but can also be used to reinforce civic pride through showcasing local attractions and even to convey information on the district in which a passerby is travelling.



A landscaped roundabout with the addition of trees and shade create a more pedestrian intersection at Boulevard and Broad.

opposite top: A plan view of the of north boulevard and the new Myers Street pedestrian mall.

opposite bottom: Cross section of Boulevard, looking north at the intersection of Leigh Street.



Recommendations

Streetscapes

Anticipated Ancillary Effects

Recognizing that successful redevelopment is a joint venture between the City government, private enterprises and property owners, this plan anticipates that the City redeveloping the public right-of-way will spur private investment in the Boulevard and Broad Street corridors. As good design principles improve the public realm, it is likely that existing property owners will adapt their uses to cater to the conditions brought on by a pleasant streetscape. As pedestrians become more comfortable travelling down these roads, commercial and dining uses may begin to spring up, reinforced by amplified foot traffic. Businesses may then begin to compete with each other through designs and features that will ultimately improve the study area and the City of Richmond as a whole.

For example, one owner may choose to create a unique building design that capitalizes on Scott's Addition's history of service stations. A restaurant owner may voluntarily choose to set back his new café in order to create ample space for al fresco dining. A flower shop may create ornate outdoor displays that compel passersby to stop in, while complementing the overall design scheme created by the City. Ultimately, these uses and more may spring from the simple beginnings of a safe, unified, and aesthetic streetscape.



Cross section of Boulevard, looking north at the intersection of Marshall Street.



Conclusion

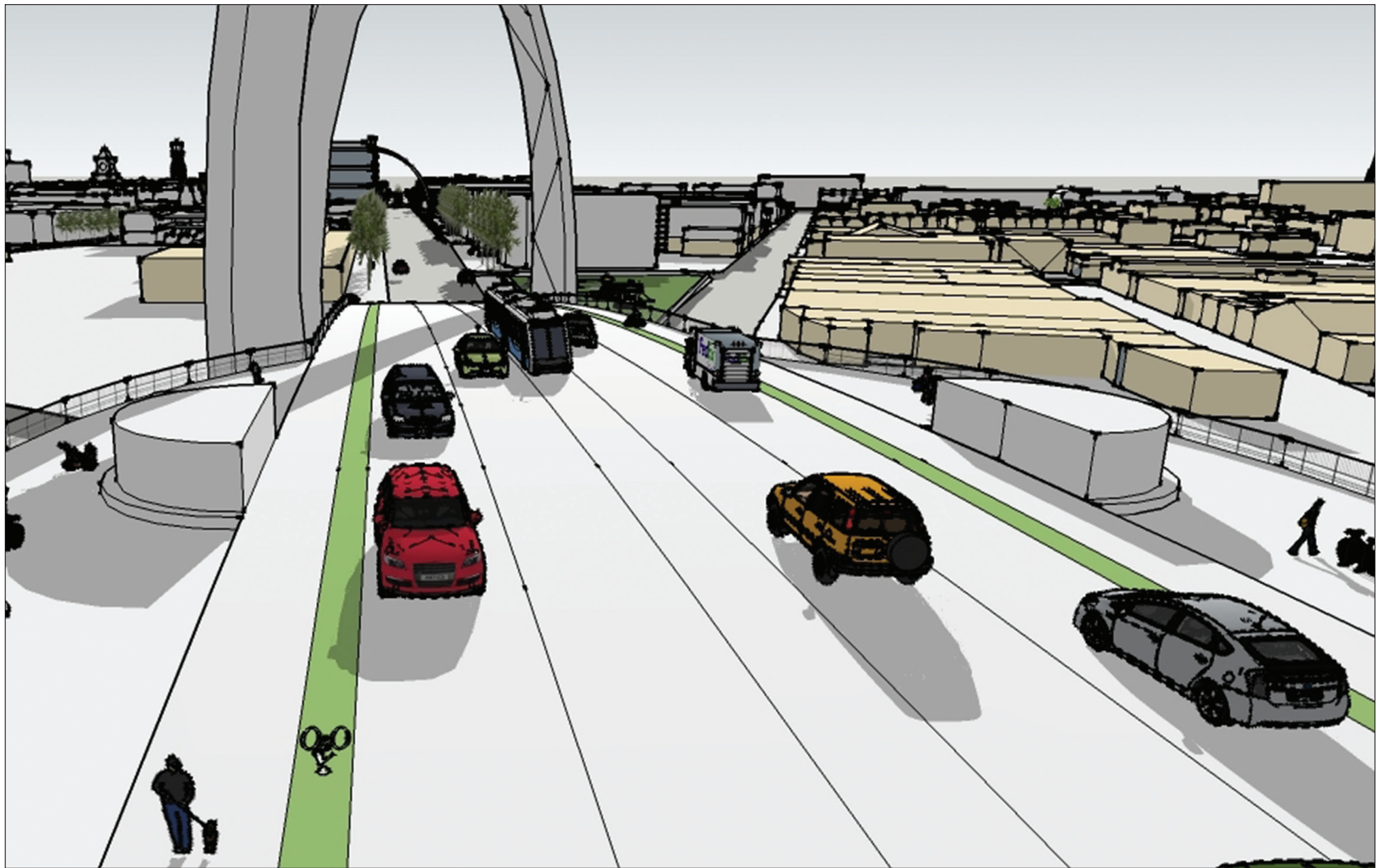
The neighborhood radiating out from the intersection of Broad Street and the Boulevard is full of potential, but is at present a missed opportunity. Only the southern end of this study area, the Boulevard corridor from Monument Avenue to the VMFA, is meeting its potential at present. The recommendations in this plan represent a path for the northern sections of this study area to not only meet, but also exceed their current potential.

These recommendations range from moderate to dramatic and the cooperation of developers and other stakeholders will be crucial. However, this plan embodies an unconstrained vision of what is possible for the Broad Street and the Boulevard. What is possible is a signature district for the city.

In a client meeting during the production of this plan, a client referenced a Washington Post travel article that alluded to this study area in its lead sentence, which read, "In an otherwise blighted area of Richmond..." In 40 years, with the implementation of this plan, a similar travel article will talk about the Broad/Boulevard district and lead by saying, "In one of the most attractive areas in Richmond..."



The gateway bridge provides a commanding view into the city.



Appendix

Table 1: Population

Year	Study Area	City of Richmond	State of Virginia
2000	25,165	197,790	7,078,515
2010	29,625	204,214	8,001,024
% Change	(+1.7)% (estimate)	(+1.03)% (estimate)	(+1.10)% (estimate)

Table 2: Population Density

	Museum District/ Carytown	The Fan	Ginter Park	Northside
Total Population	4,611	7,545	2,390	35,130
Population Density (people per square mile)	9,511	11,916	4,423	3,861
Population by Acre (people per acre)	15	18	7	6

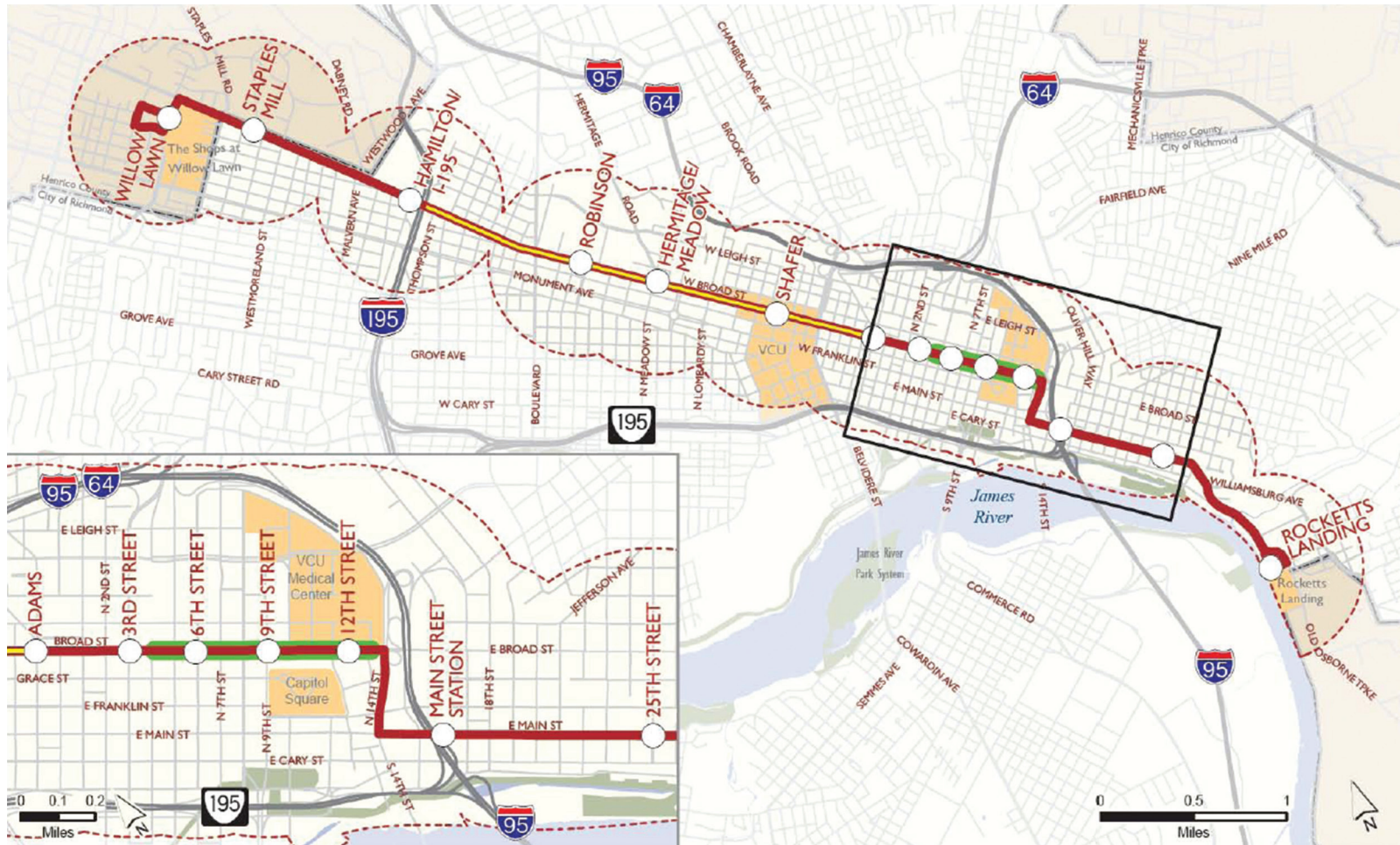
Table 3: Income

Annual Income	Study Area	MSA
Less than \$10,000	9.7%	5.6%
\$10,000 to \$14,999	6.4%	4.5%
\$15,000 to \$24,999	11.3%	8.6%
\$25,000 to \$34,999	13.4%	9.5%
\$35,000 to \$49,999	16.2%	14.3%
\$50,000 to \$74,999	14.7%	19.2%
\$75,000 to \$99,999	9.1%	14.0%
\$100,000 to \$149,999	9.0%	14.3%
\$150,000 to \$199,999	3.4%	5.4%
\$200,000 or more	6.7%	4.7%

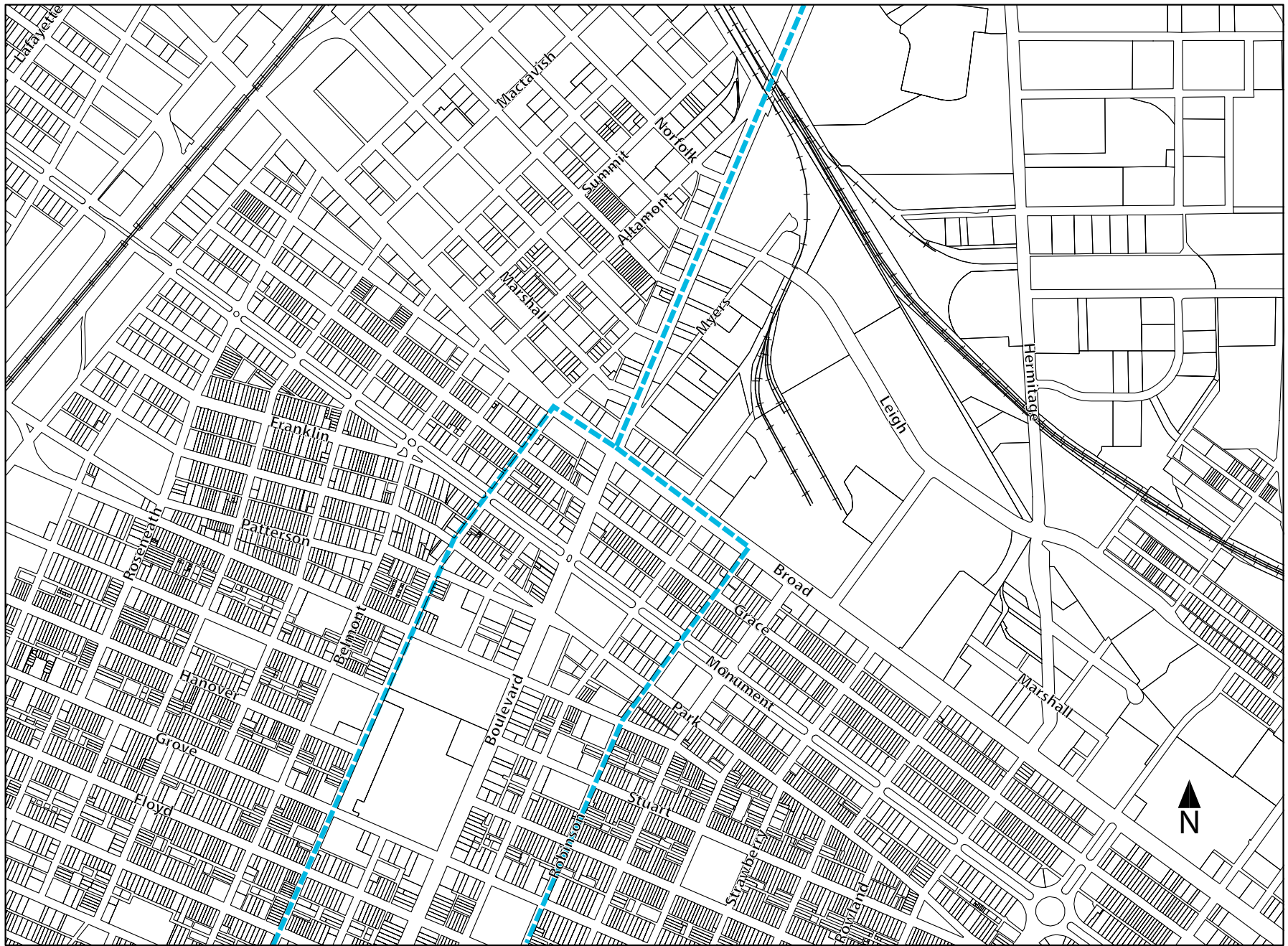
Table 4: Population Age

Age	Study Area	MSA
Under 5 years	2.9%	6.2%
5 to 9 years	2.0%	6.4%
10 to 14 years	1.7%	6.5%
15 to 19 years	4.4%	7.1%
20 to 24 years	26.4%	6.9%
25 to 29 years	17.7%	6.8%
30 to 34 years	8.1%	6.3%
35 to 39 years	5.6%	6.7%
40 to 44 years	4.8%	7.1%
45 to 49 years	4.9%	7.9%
50 to 54 years	4.8%	7.6%
55 to 59 years	5.1%	6.7%
60 to 64 years	4.3%	5.7%
65 to 69 years	2.6%	4.0%
70 to 74 years	1.6%	2.7%
75 to 79 years	1.1%	2.1%
80 to 84 years	0.9%	1.7%
85 years and over	1.2%	1.6%

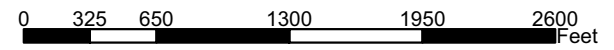
Proposed Bus Rapid Transit Route Courtesy of Virginia Department of Transportation



Appendix





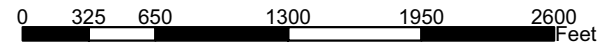
Proposed Tram Route — Proposed Tram Route



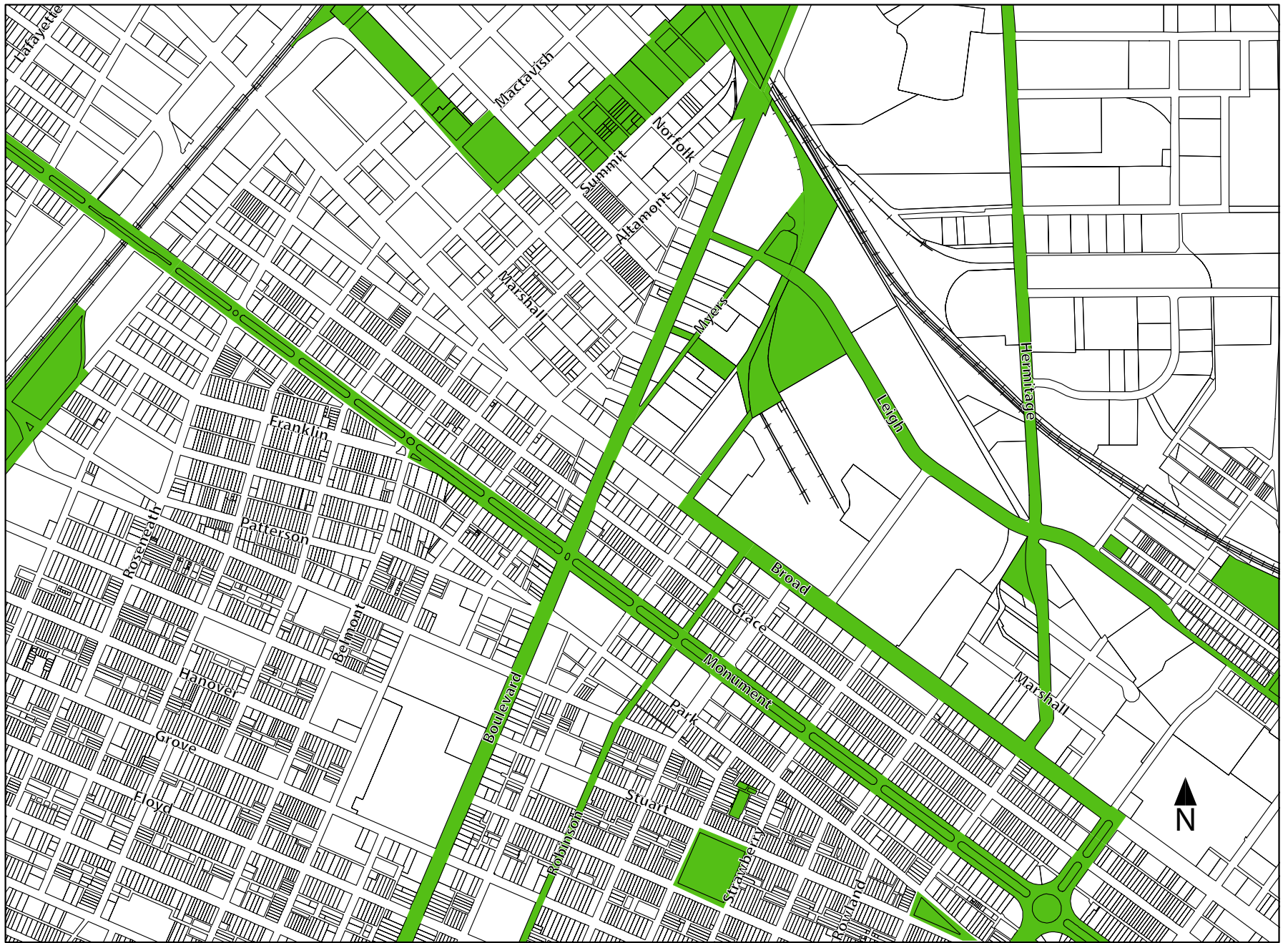


Landmarks

-  Existing Landmarks
-  Proposed Landmarks

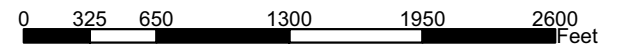


Appendix



Green Space

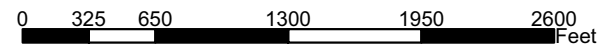
Proposed Green Space / Multi-use paths



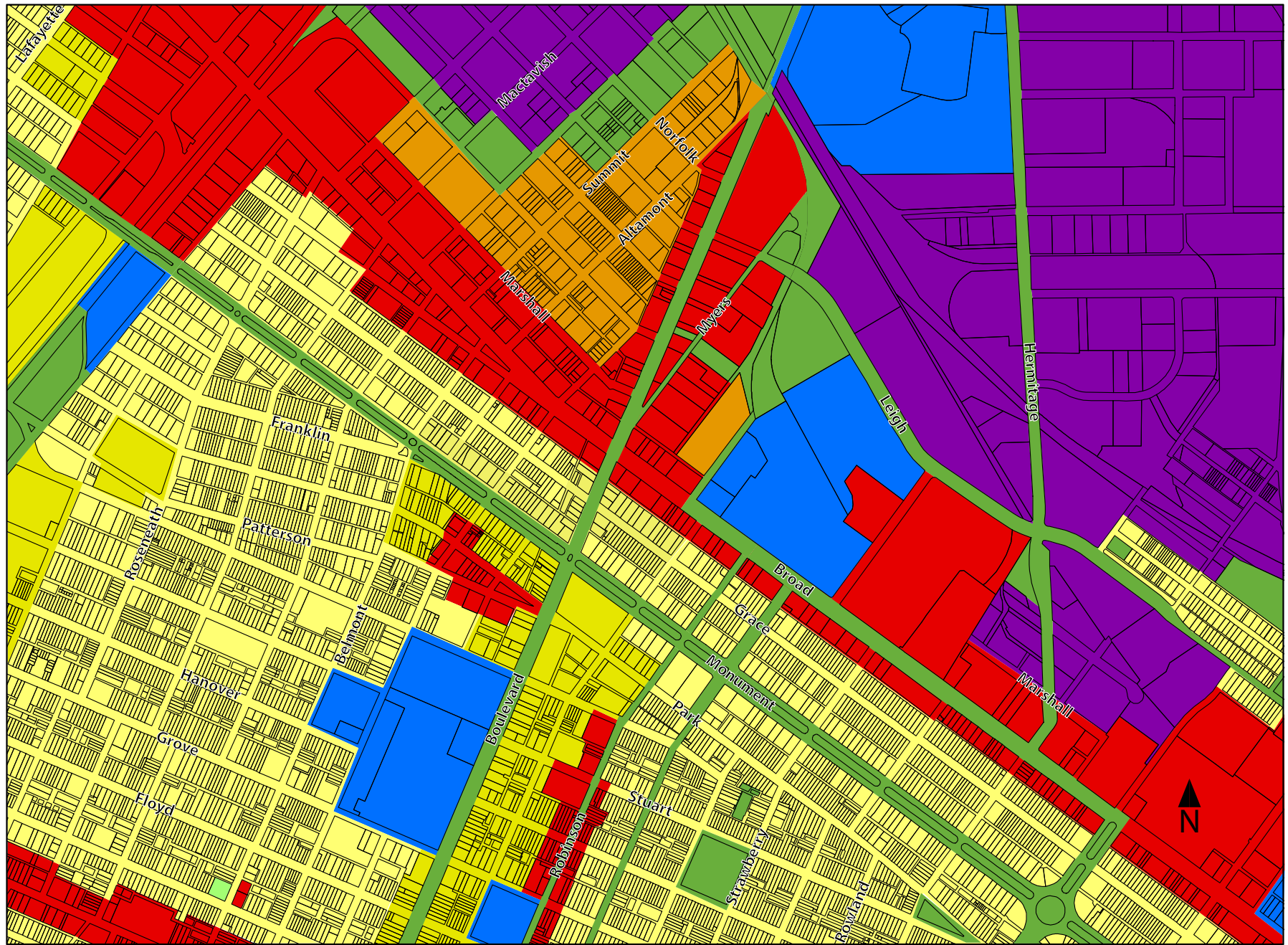


Proposed dedicated Bike Lanes

— Proposed Bike Lanes

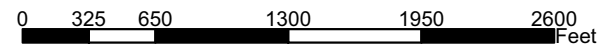


Appendix



Proposed Land Use

- Single-Family (Low - Medium Density)
- Commercial/General Office/Neighborhood Commercial
- Open Space / Natural Area / Green Way
- Multi-Family (Medium - High Density)
- Industrial
- Public Facilities/Institutions/Museums
- Mixed Use



Boulevard  Broad