



# TOD AND THE PURPLE LINE

LYTTONSVILLE, ADELPHI ROAD-UMGC-UMD AND EAST RIVERDALE

CREATING PLACE AT THREE NEW PURPLE LINE STATIONS



ARCH 700  
GRADUATE URBAN DESIGN STUDIO  
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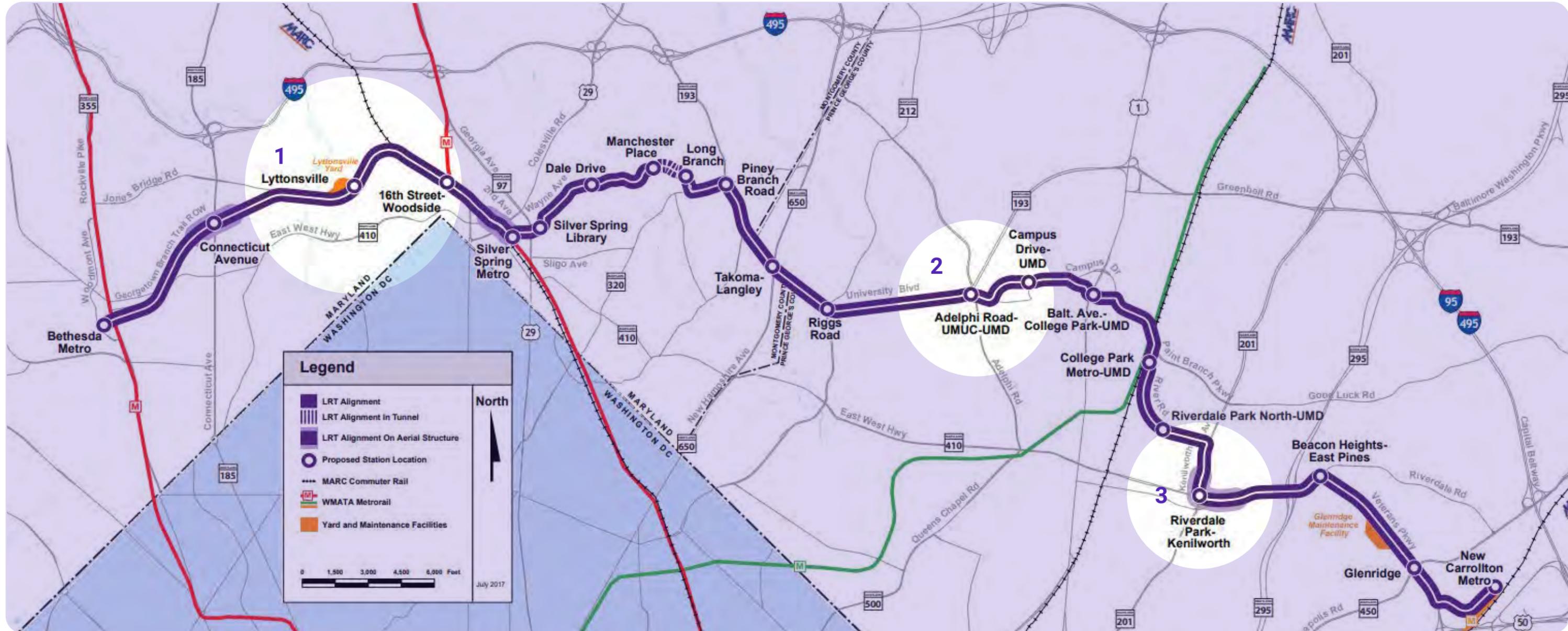
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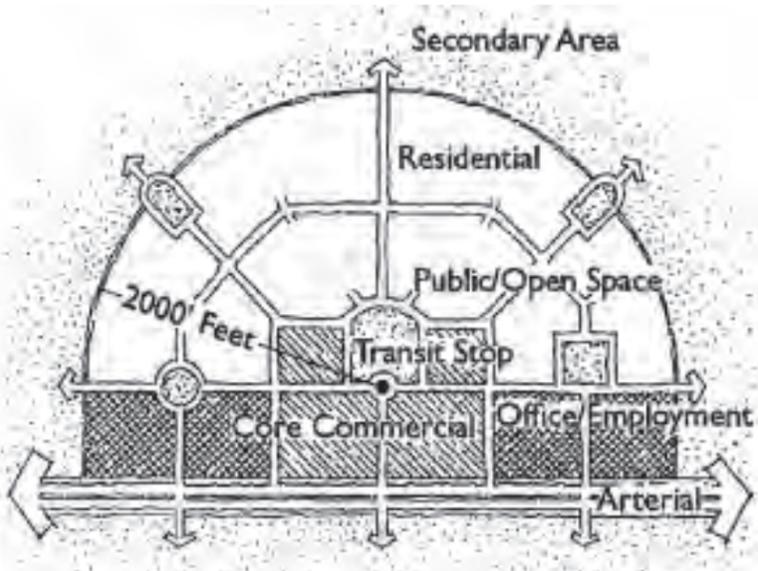
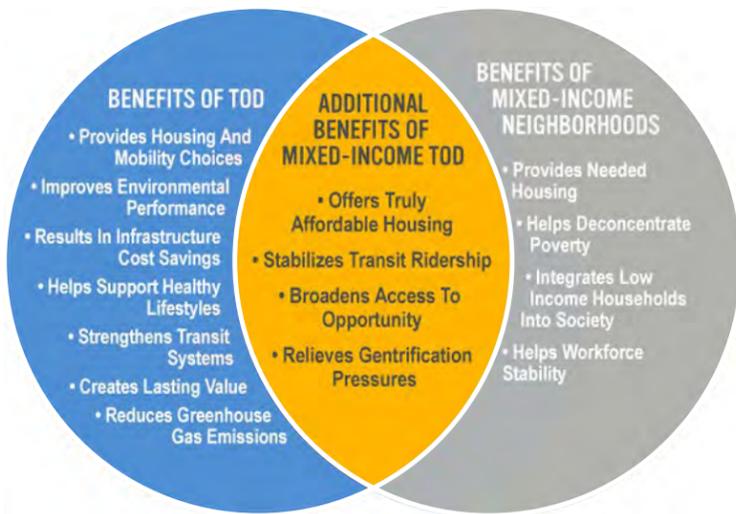
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<https://arch.umd.edu/programs/architecture>  
<https://www.umdsmartgrowth.org>



- 1. Lyttonville Station
- 2. Adelphi Road-UMGC-UMD Station
- 3. Riverdale Park-Kenilworth (East Riverdale) Station



Transit-oriented development (TOD) is a viable answer to the unsustainable and car dependent urban sprawl that characterizes many of areas around the new Purple Line stations. Through the cultivation of walkable and easily accessible places, these developments actively support the use of the local public transit.

Successful TOD depends primarily on access and density around the transit station, and the core concepts for a TOD as seen on this page are typically best applied within a half-mile of rail stop or a quarter mile of a bus stop. This convenient access to transit fosters further development and investment, while increased density and a mix of commercial, residential, office, public, and entertainment uses help to attract people and add to vibrant and connected communities.

**Top Right: Key Principles of TOD Development**  
 These 8 Key Principles are the primary focus points of any TOD development. A focus on multi-modal transportation and increased density typify these projects.  
 Source: idtp.org

**Top Left: Benefits of Mixed-Income TODs**  
 TOD development provides a more equitable and attainable approach to generating an truly affordable community.  
 Source: Center for Transit-Oriented Development

**Bottom Left: Conceptual Framework of a TOD**  
 Much like the 15 minute city concept, TODs focus on providing a mix of uses and a rich experience all within a walkable radius.  
 Source: tcrpc-pa.org



**1. Office, Retail and Residential and Public Space near Transit**

A mixed-use community engages with the adjacent subway and bus stations greeting the station with generous public space and artwork for a new urban experience.

North Hollywood Joint Development, Gensler

**4. Public Park with High Density Housing**

Public space like this lawn provide residents with places to play and exercise and connect as a community while maintaining a high level of density for housing.

Chevy Chase Lake, Cooper Carry

**2. Affordable Housing in a TOD Development**

Affordable housing constructed within easy walking distance of the station, improving access to jobs and education for residents.

Casa Arabella, PYATOK

**5. Public Space at the Station**

High density mixed-use and retail located under the rail line adjacent to public spaces for cultural events allowing for vibrant use and activity at all hours.

Fruitvale Village, PGA Design

**3. Public Space at the Station**

A public plaza adjacent to public transit, helps to manage the volume of pedestrians and connect them to a variety of shops and food options.

Bayfront Redevelopment, Jersey City

**6. Pedestrian Friendly Light Rail Station**

A mix of materiality and transit types create an approachable light rail station. Street trees provide shade for pedestrian and also help to calm traffic near the stop.

Light Rail Station, Design Collective



**01** CAMPBELL & PINEDA

**02** ARCHER & GILDAY

**03** FARIETA & RIVERA

CHAPTER 01

# LYTTONSVILLE

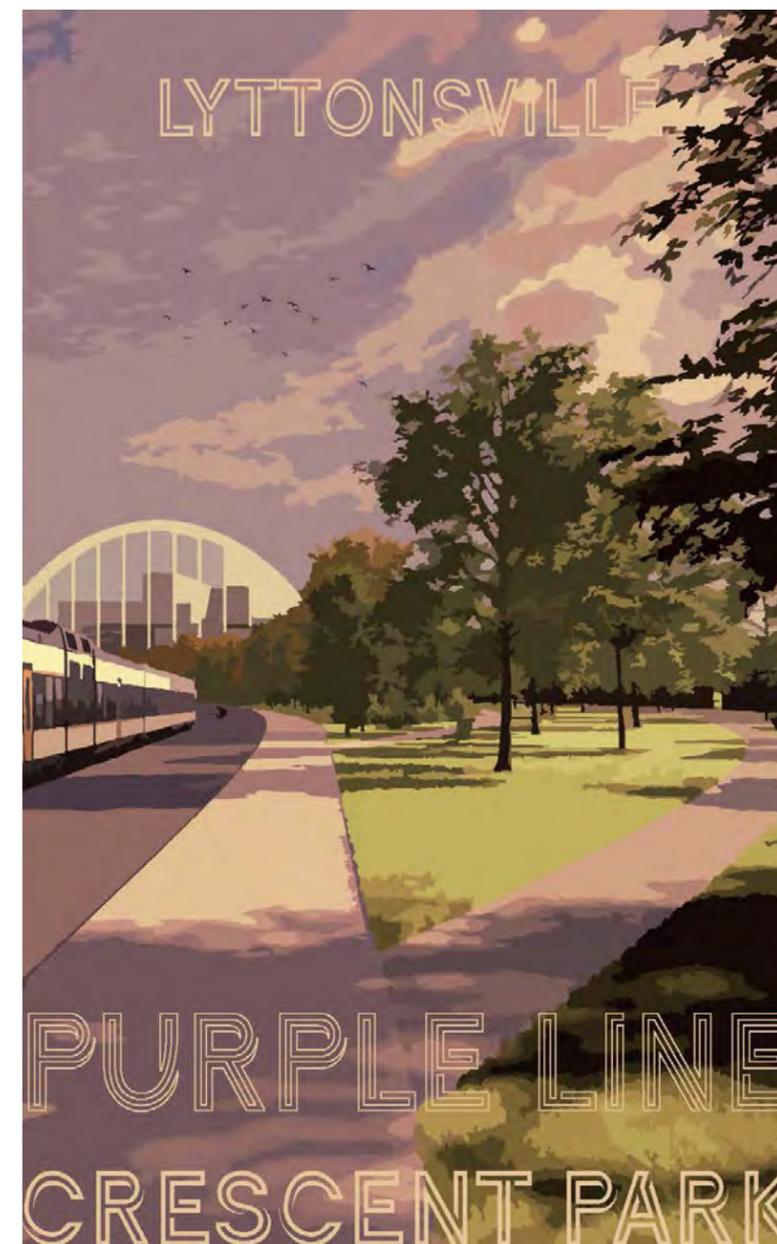
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**LYTTONSVILLE AT A GLANCE**

Transit Oriented Development (TOD) sites thrive the most when the opportunities around the transit stations appeal to many of the demographics in the area. For the case of Lyttonsville, a town in the greater Silver Spring, Maryland area, there is a range of median household income levels for many of the residents. Where TOD can make its long-lasting and positive impact though comes from not only offering transportation, but amenities in the site that both appeal to and serve the community that's there and also visitors.

The development around new transit sites should not gentrify the existing neighborhood, and thus, income levels, existing housing stock, employment opportunities, and community spaces and amenities all need to be ones that can benefit current residents.

As the current plan is being depicted, the Purple Line will be placed directly in the center of Lyttonsville, splitting up the site into retail and industrial buildings on one side of the tracks and neighborhood buildings and homes on the other. Fortunately, Lyttonsville Place is an elevated road that connects these two sides, yet currently it is the only street that does that. There is an importance to the economy of the town to remain industrial, but the introduction of a transit station fosters opportunity for further development and financial growth.

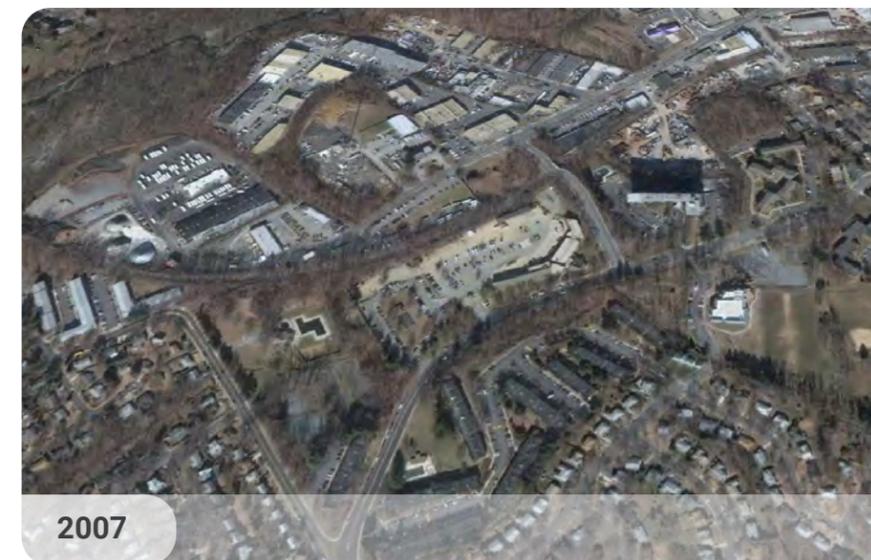
In order to foster a complete and unified neighborhood, the project teams on the Lyttonsville Purple Line site focused on connecting the existing environment and neighborhood to the transit line while introducing housing typologies that can better serve the residents and resist gentrification.



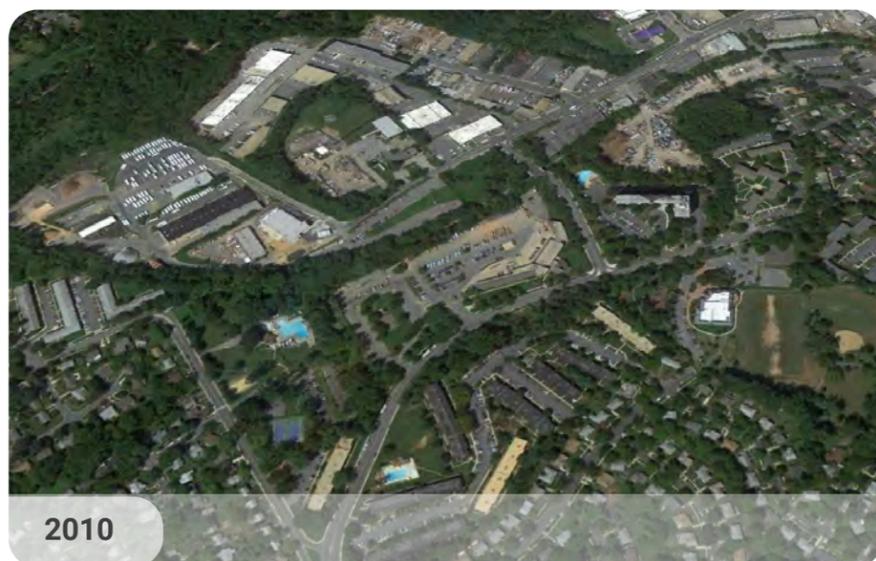
1853



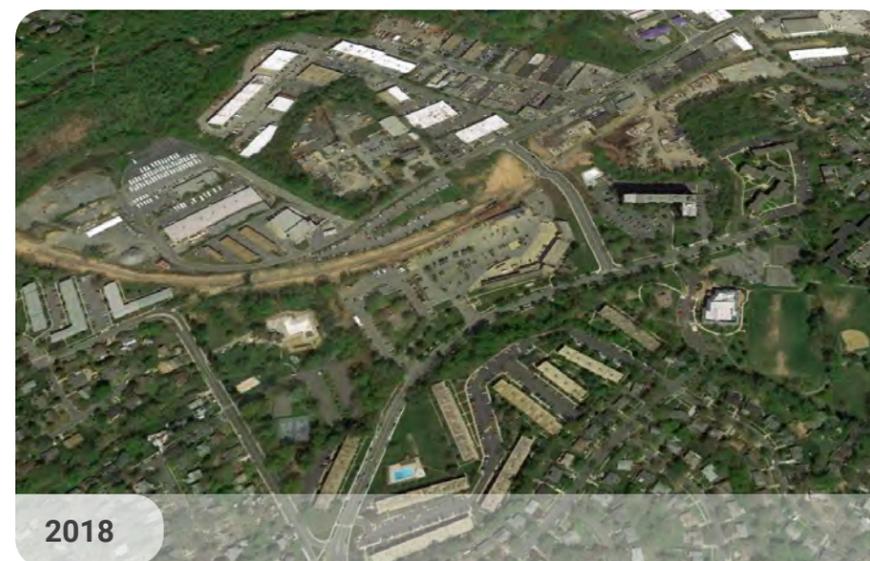
1988



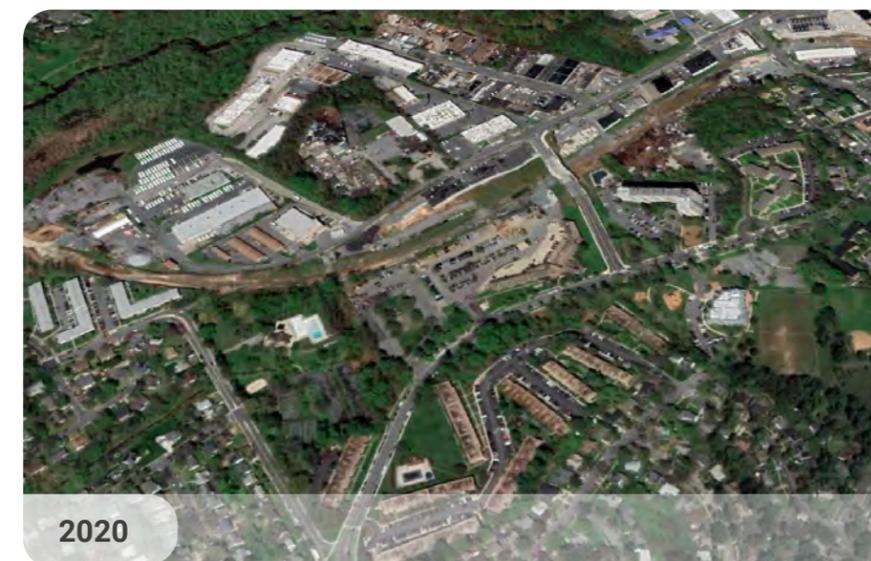
2007



2010



2018



2020

**Beginnings**

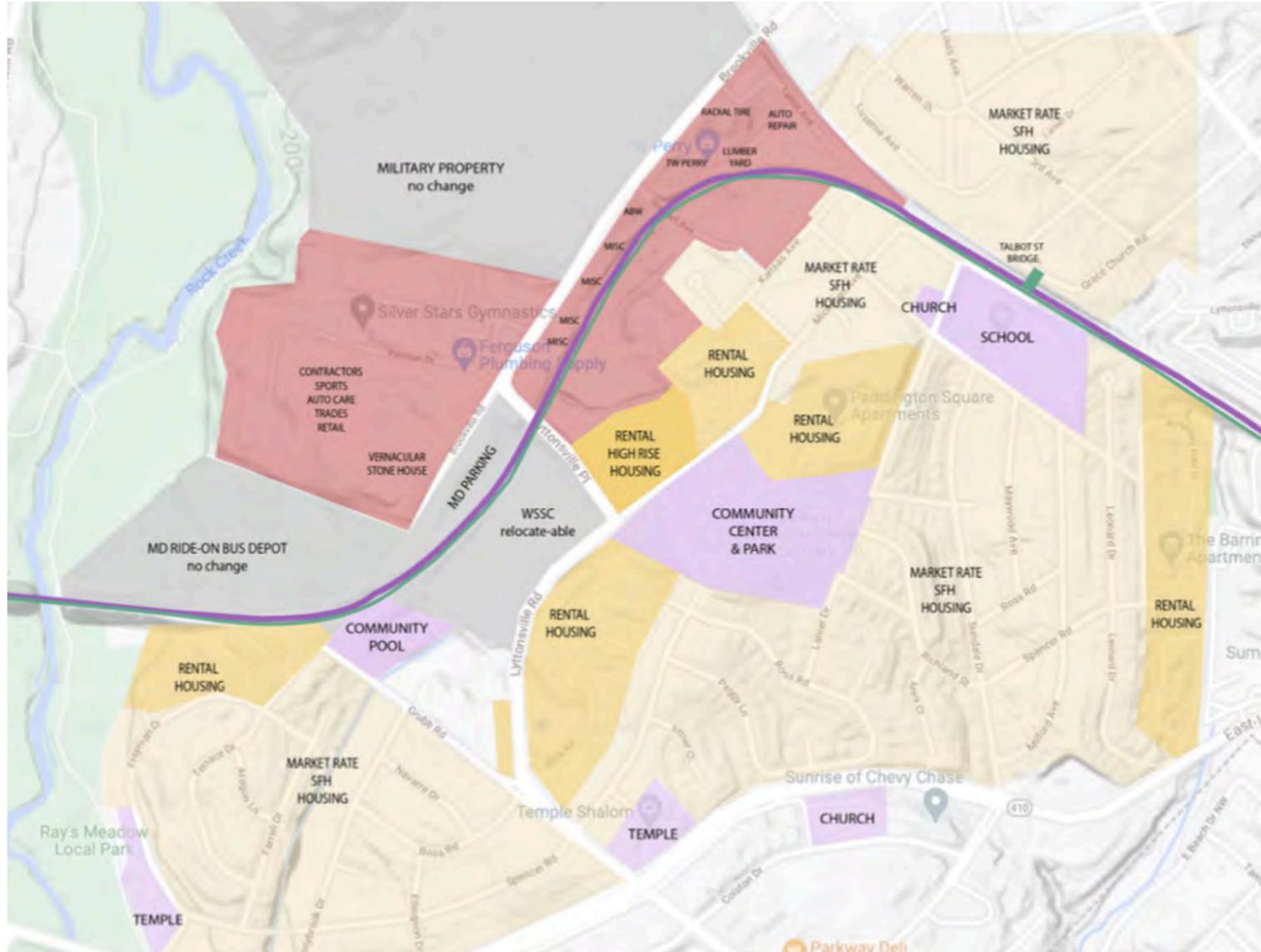
Samuel Lytton, a free Black, purchased five acres of land to farm in 1853. Then, a railroad divided Lytton's farm in 1889. The three acres South of rail line became Lyttonsville.

**Lack of Growth**

The site has not changed much in the last several decades. The introduction of the Purple Line may pose a shock to the neighborhood.

**Track Placement**

What was once a forested trail is now being paved and replaced with train tracks as of 2018.



Lyttonsville began as a small farm town when Samuel Lytton, a free Black, purchased five acres of land. The three acres of land south of his purchase became Lyttonsville. Right from its inception, the town was divided by a railroad. Still to this day, it is isolated from Silver Spring except for Talbot Street Bridge. Lyttonsville was almost exclusively a Black community until the mid-20th century. In the 1970's, Montgomery County seized much of Lyttonsville, replacing it with an industrial park, a Ride-On bus depot, a Washington Suburban Sanitary Commission service center, and a bridge to connect Brookville Road and Lyttonsville Road.

With many business unable to survive and the county viewing Lyttonsville as a dumping ground for maintenance vehicles, the town is somewhat uninspiring and in need of some redevelopment before the Purple Line station gets placed. The diagram above highlights the stark difference in land use on the east and west sides of the proposed rail line. There is an opportunity to unify the neighborhood at the center of the site where the station will be placed.

**Land Use**

Key cultural and civic locations are scattered throughout the site, with commercial and industrial buildings to the west of the proposed rail line and residential buildings to the East.



**Water and Topography**

There are high points on the site both on the east and west of the proposed line. The rails are in somewhat of a valley and run-off is directed towards the Southern end of the site or towards Rock Creek Park.



**Green Space Connections**

Rock Creek Park is the major forested area just west of the site, yet there are areas of open green space near the community center. The goal of many student proposals is to connect these parks together to complete the neighborhood.



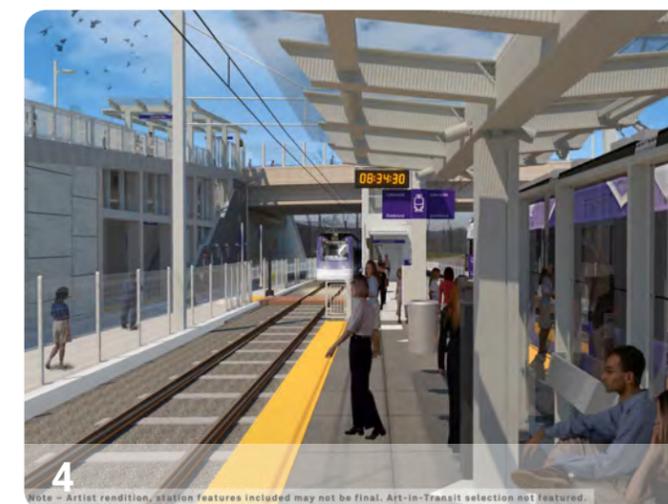
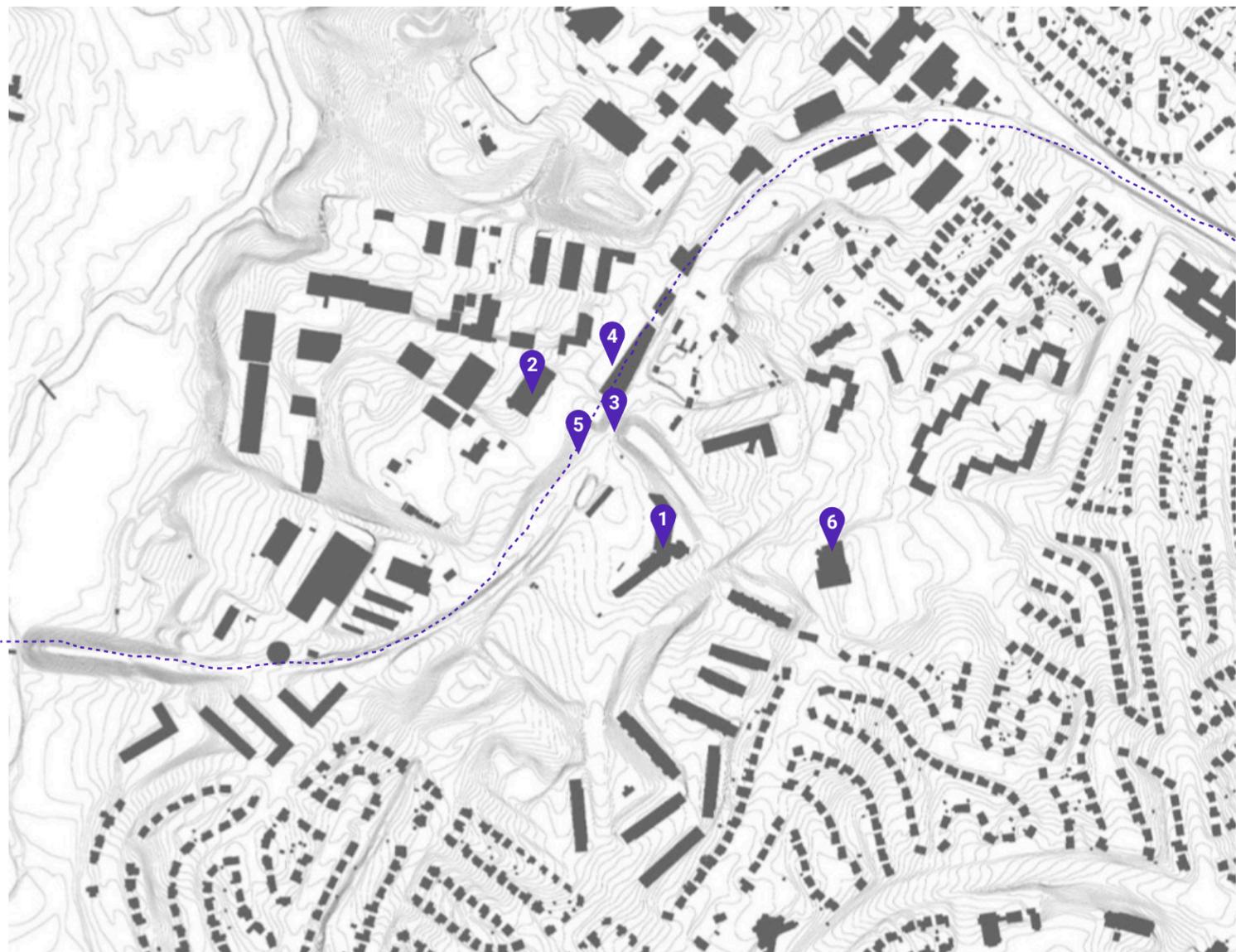
**Urban Program Opportunities**

Bridging the gap between commercial and industrial buildings with single- and multi-family housing is possible through Mixed-Use TOD development. Zoning around the Lyttonsville station will most likely want to serve as a "downtown" for the neighborhood and seamlessly fit within the existing context.



**Street Hierarchy**

The three major streets on the site are Brookville Road, Lyttonsville Road, and those two streets are connected by a short elevated street called Lyttonsville Place. Currently, the latter street is the only access across the Purple Line since it is elevated.



1. WSC Building

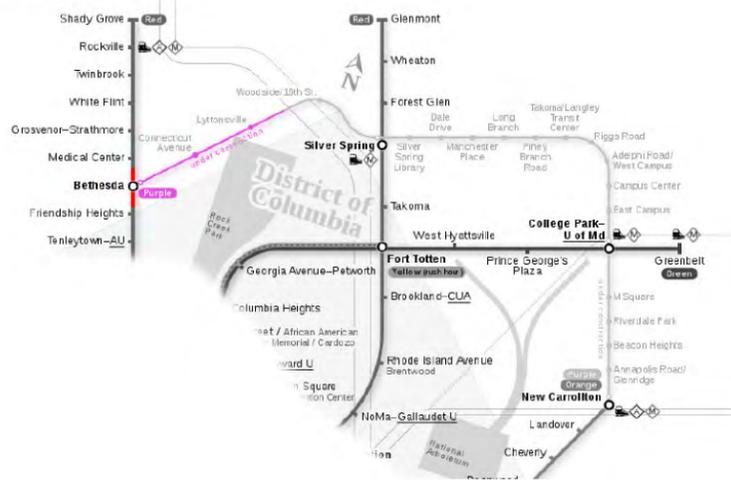
2. Brookville Road Retail

3. Lyttonsville Place Bridge

4. Future Purple Line Station rendering

5. Future Purple Line underpass location

6. Gwendolyn E. Coffield Community Center



**Lyttoville Station** Connections to:  
- Capital Crescent Trail



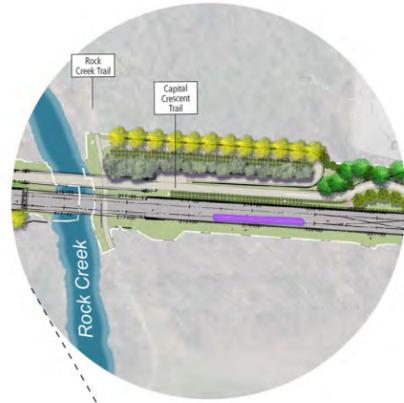
**Lyttoville Road Capital Crescent Trail Connection**



**16th Street Capital Crescent Trail Connection**



**Rock Creek Trail**



**New Talbot Avenue Bridge**



**Lyttoville Operation and Maintenance Facility**



**Woodside Station**



To Silver Spring Transit Center

To Connecticut Avenue

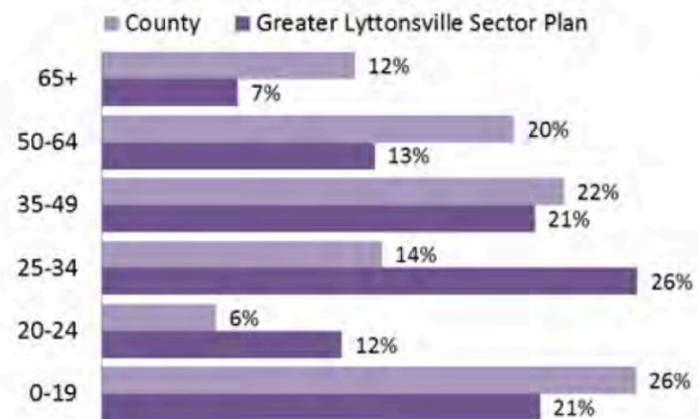
**Proposed Station Master Plan**  
Because the Purple Line tracks will create a division in the master plan, connections such as overhead bridges are planned to be implemented. There is a pull-off area just south of the proposed station to house many of the light-rail trains in this part of the master plan.



**Proposed Station Area Plan**

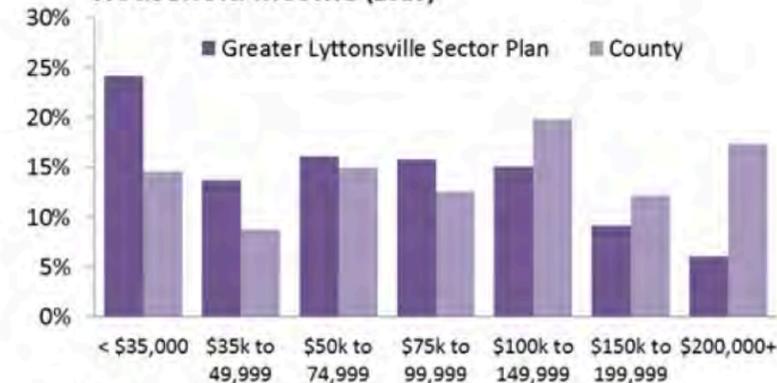
The station will be located just North of the elevated Lyttonsville Place street, with Capital Crescent Trail continuing beneath the underpass as well and traversing south towards Rock Creek Park.

**Age Distribution (2010)**



2010 U.S. Decennial Census, U.S. Census Bureau.

**Household Income (2013)**



2009-2013 American Community Survey, 5-year estimates, U.S. Census Bureau.

**Race and Hispanic Origin (2010)**



2010 U.S. Decennial Census, U.S. Census Bureau.

**Lyttonsville Development Goals**

Develop a pedestrian friendly and walkable neighborhood

Establish a civic center/downtown

Revitalize the community connection to Rock Creek Park

Introduce housing types that better serve the area and will reduce gentrification tendencies as seen in other TOD sites.

**Demographics**

- Almost exclusively Black community until the mid-20th century.
- Currently a very diverse community
- 70% residents earn lower than the county's median income of \$100,352
- 60% of residents rent their homes
- Inequities: No indoor toilets nor faucets, nor paved roads nor street lights until 1960s.
- Concerns: Affordability and gentrification

# 01

## Lyttonsville Master Plan

*Julia Campbell  
Jennifer Pineda*



The overall design concept on this project is to centralize the community amenities in a new, revitalized downtown core adjacent to the proposed Lyttonsville station location.

Recycling, reconstruction, and repurposing certain areas through phasing will help create different areas of the plan that will serve the community in many ways: a dense anchor point in the center of the scheme with mixed-use buildings, residential neighborhood pods at either end of the site, and shared community spaces to tie this neighborhood back in to the greater Rock Creek Park green space network. Placemaking through the architecture and urban design around residents' homes is important in reestablishing and showcasing the beauty of Lyttonsville.

A socially, financially, and ecologically sustainable TOD neighborhood in Lyttonsville will make this place not only a great one to live in, but also to visit. Employment opportunities, community engagement, and walkable and multi-modal paths, are all important elements of the scheme that come together to foster a neighborhood that supports diversity and choice.

The travel poster shows the pedestrian experience near Crescent Park Trail and the rail line near one of the typologies available for residents - townhouses.





Demolition



Proposed Plan



Intervention





Zones of Intervention



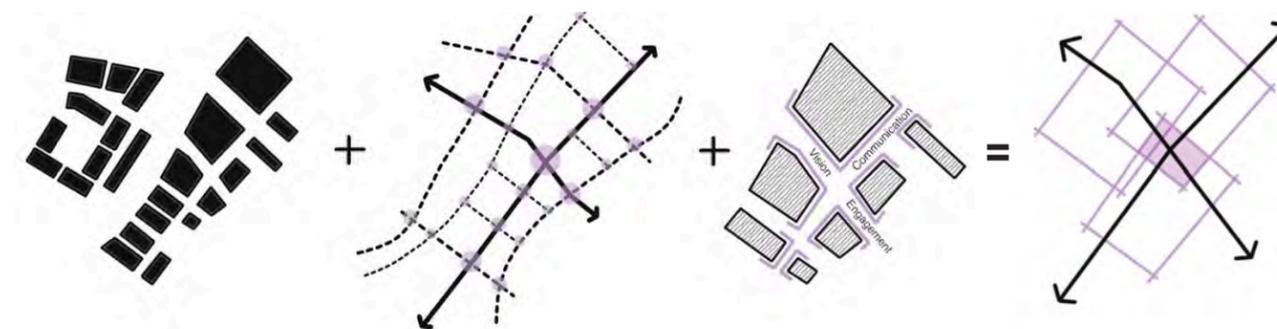
Building Typologies



Walkability



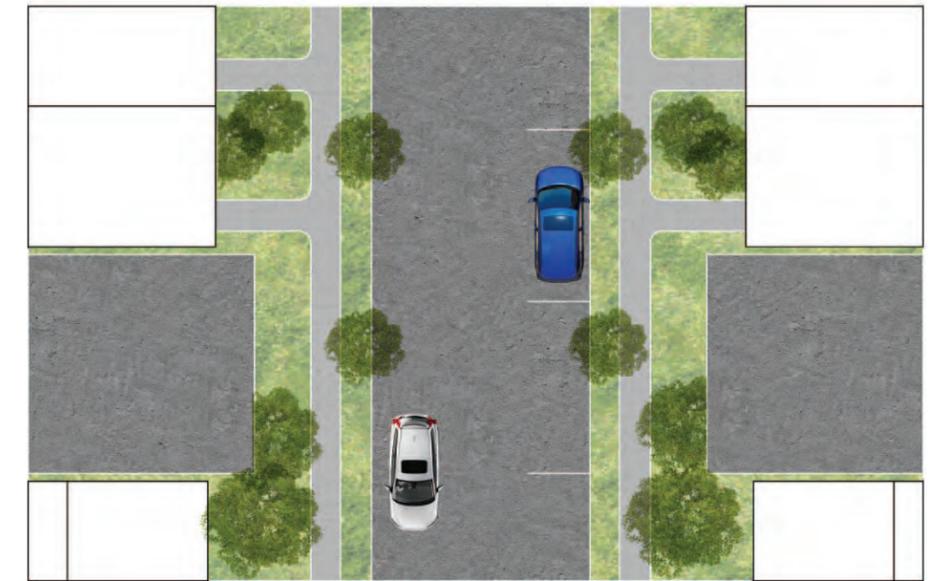
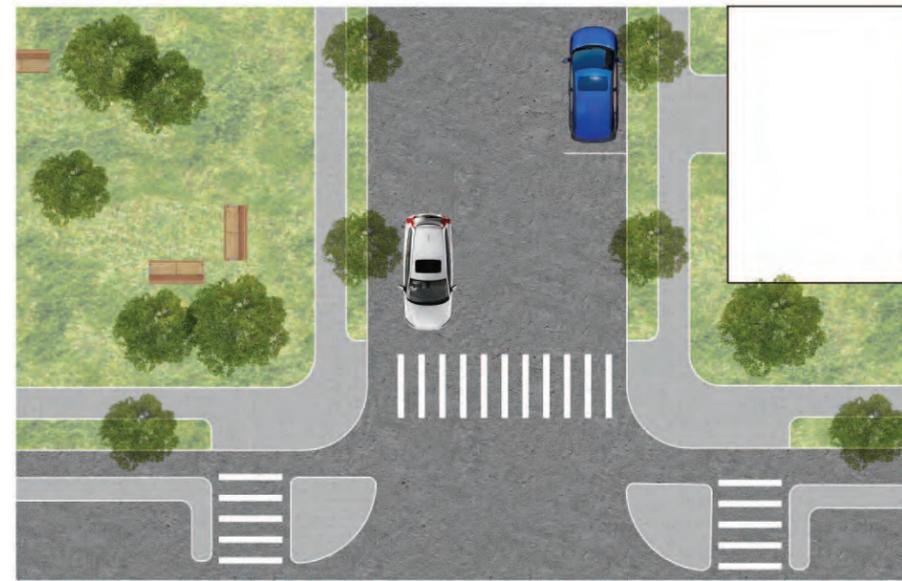
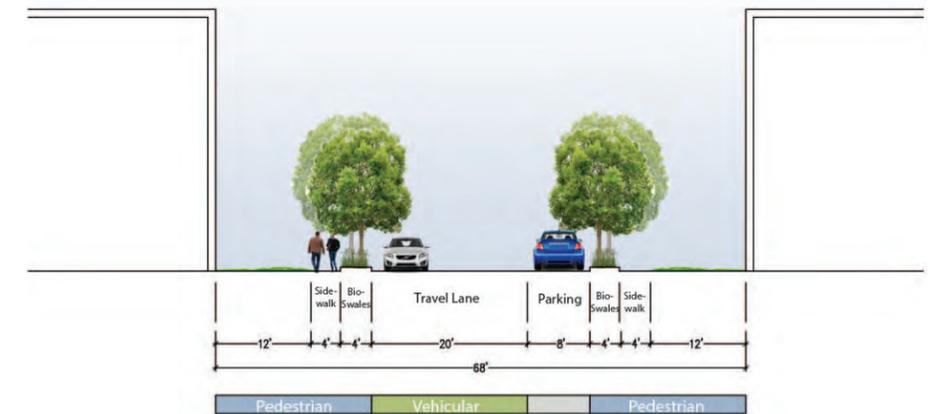
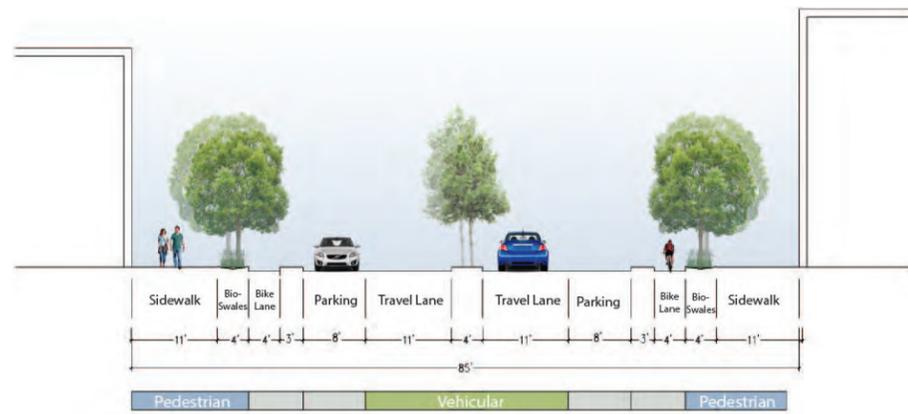
Green Spaces  
0 200 400 600ft



Site Strategy Parti

**Site Strategy**

By parceling the site into different zones of intervention, many different building typologies were able to be introduced, and the site began to foster a downtown and connect the commercial edge to the residential neighborhood. The social equity strategy was to offer residents a diversity of choice in their home by introducing a more affordable variety of options.



**Primary Street Section**

Has parking, bicycle lanes, and street trees to reduce speed

**Secondary Street Section**

Some parking, two total driving lanes

**Tertiary Street Section**

Slimmer roads, some acting as alleys.



**Street Hierarchy**

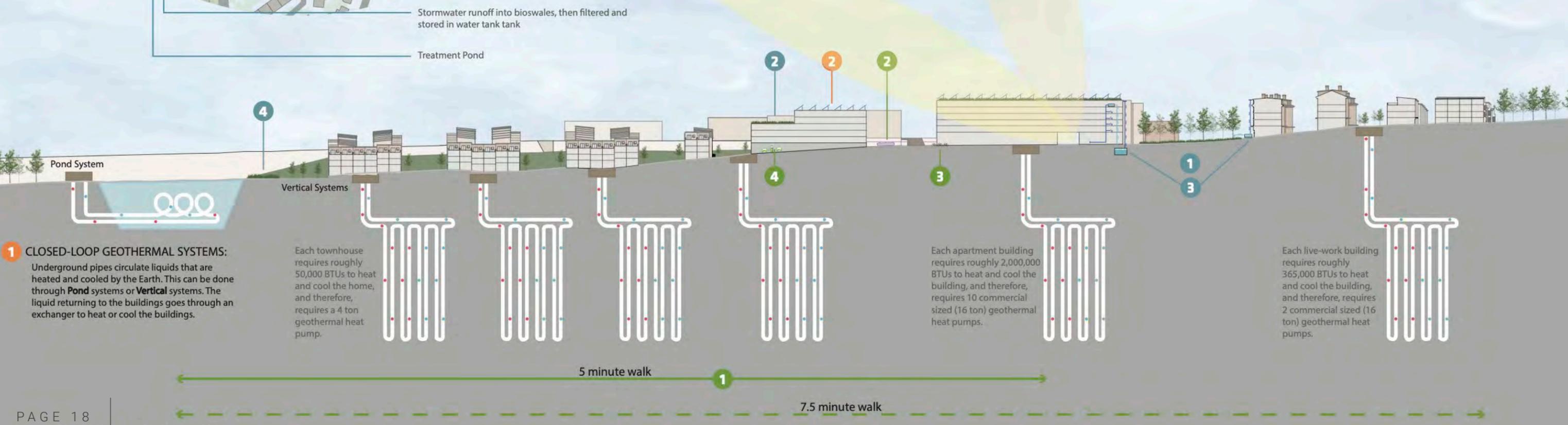
The main north-south street of the scheme, called Main Street, has the greatest hierarchy and is the only street designed in this typology. The secondary streets are placed in areas to connect Brookville Road with Lyttonsville Road. The tertiary streets are integrated in the neighborhood blocks to provide a way for residents to reach their homes.



**Sustainability Plan**  
0' 100' 200' 400'



- ## SUSTAINABLE SYSTEMS
- |   |  |  |
|---|--|--|
| <p><b>SITE</b></p> <ol style="list-style-type: none"> <li><b>1 Community Connectivity:</b><br/>Access to nearby resources, activities, and the larger community through connectivity and walkability</li> <li><b>2 Public Transit Access:</b><br/>Access to high-quality public transportation options within a short walking distance of the site</li> <li><b>3 Bicycle Facilities:</b><br/>Bike storage and stations to promote health and efficiency in transportation</li> <li><b>4 Green Vehicles:</b><br/>EV charging stations and allocated priority parking spaces for alternative fuel vehicles</li> </ol> | <p><b>ENERGY AND GEOTHERMAL</b></p> <ol style="list-style-type: none"> <li><b>1 Geothermal Wells:</b><br/>Renewable energy source continually generating heat underground to serve building temperatures and electricity</li> <li><b>2 Solar Photovoltaics:</b><br/>Generate on-site renewable energy with solar thermal and electric systems on rooftops and in green spaces</li> </ol> | <p><b>WATER</b></p> <ol style="list-style-type: none"> <li><b>1 Landscape Design:</b><br/>Permeable pavement and plant species selection that minimizes outdoor water use in a water-conserving landscape</li> <li><b>2 Green Roofs:</b><br/>Reduce stormwater runoff by capturing rainwater for irrigation in green roofs</li> <li><b>3 Rainwater Harvesting:</b><br/>Harvesting and filtration to reuse rainwater for landscape irrigation</li> <li><b>4 Bioswales:</b><br/>Captures and treats runoff from the site prior to discharge back into the environment</li> </ol> |
|---|--|--|





**Site Perspectives**

With many green spaces, buildings, and active means of transportation in the scheme, the neighborhood is fostering a more eco-friendly lifestyle. The dense core downtown serves residents and visitors with mixed-use buildings near the metro stop, with the density gradient decreasing nearing the existing single-family neighborhoods.

# 02

## Lyttonsville Master Plan

Rachel Archer  
Kathleen Gilday



Transit oriented development in up-and-coming neighborhoods are successful when the architecture and urban design can both serve the current community and also those who will come to visit. The key principles of this scheme are as follows:

- 1) Offer many different housing typologies that will be inherently more affordable in its design
- 2) Introduce more shared green spaces to connect Rock Creek Park to the existing neighborhood
- 3) Create a revitalized commercial core adjacent to the station
- 4) Celebrate the industrial character of the buildings west of the proposed line

Hierarchy of streets and paths are prevalent at all levels - car, bicycle, and walking. The network of travel is carefully planned so that the community can safely and effectively traverse the site and explore all that it has to offer. Different building typologies are introduced in unique ways to not disrupt the nature of the topography so drastically; buildings have carefully planned access points in the front and rear of them to better organize the master plan. The changes in elevation create a dynamic site.





Existing



First Phase of Demolition



Second Phase of Demolition



Third Phase of Demolition



Proposed Figure Ground





TOWNHOUSE WITH REAR ALLEY

SIDEWALK PLUS PLANTING STRIP

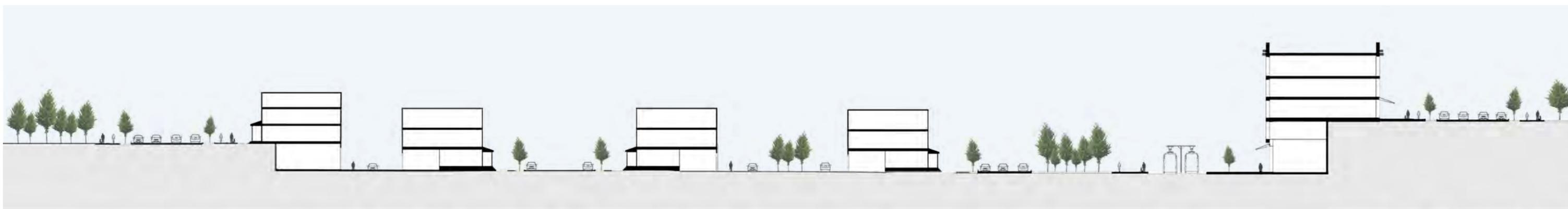
STREET 2 WAY PLUS ONE LANE PARKING

GREEN BUFFER

CRESCENT TRAIL

PURPLE LINE

LIVE WORK



SIDEWALK PLANTING STRIP BIKE LANE

STREET 2 WAY PARKING TWO SIDES

SIDEWALK PLANTING STRIP BIKE LANE

TOWNHOUSE

ALLEY

TOWNHOUSE

STREET 2 WAY PARKING TWO SIDES

TOWNHOUSE

ALLEY

COMMUNITY GREEN

ALLEY

TOWNHOUSE

SIDEWALK PLUS PLANTING STRIP

STREET 2 WAY PLUS ONE LANE PARKING

GREEN BUFFER

CRESCENT TRAIL

PURPLE LINE

LIVE WORK

SIDEWALK PLANTING STRIP BIKE LANE

STREET 2 WAY PARKING TWO SIDES

SIDEWALK PLANTING STRIP BIKE LANE



**Urban Design near the Station**  
 Above shows the condition of the Purple Line station and tracks beneath the elevated Lyttonsville PI road.

**Typography influencing Design**

Solving the issues of typography by introducing new and innovative building typologies to the site was one of the driving factors of this project. Buildings with multiple access points on various levels creates spaces that respond to how the site currently operates. Near the station and Brookville Rd, pedestrians are able to access Live-Work buildings from either the raised sidewalk spaces or below the Lyttonsville PI elevated street. On the East end of the site, townhouse typologies are arranged so that parking in the rear is placed at a lower elevation than the front doors of the homes just one story above. The typography influenced the major building typologies and the urban design, with areas of Live-Work buildings, townhouse and other multi-family typologies, and mixed-use buildings planned in particular areas.

**Travel Poster**

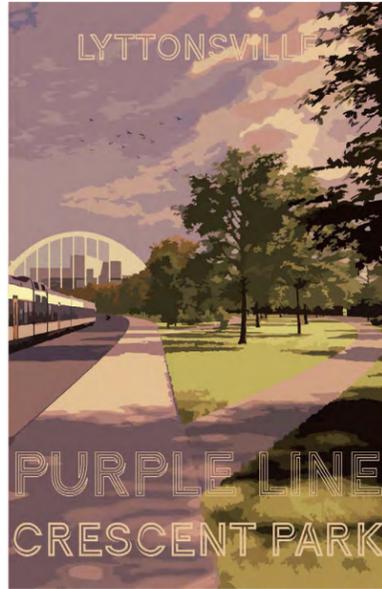
This view shows the elevation changes around the station and how design moves around placemaking can enhance the pedestrian experience on the site.



# 03

## Lyttonsville Master Plan

*Maria Farieta  
Jessica Rivera*



Continuing green space from Rock Creek Park and into the existing Lyttonsville communities was an important driver of the concept of this scheme. The park space surrounding the station location as well as the train yard for parking unused trains creates a buffer between the site and the transportation, which can be seen in the travel poster above. This is advantageous in many ways. Any residual noise from the train will be minimized by the distance as well as the foliage. The park space is also a great transition zone between public and private environments. The park is carefully designed to offer bicycle lanes, open green space, planned pedestrian paths and walkways, and other amenities.

The housing created just east of the buffer offers a diversity of choice to the existing and future residents of Lyttonsville; these Missing Middle Housing typologies are at a scale between high-rise apartments and single-family homes, which offers options to residents based on their household size and income. Transit Oriented Design also thrives through employment opportunities and community amenities, which are apparent in the scheme. Placemaking, sustainability, and connectivity are integrated together to create a new design for Lyttonsville that will be able to best serve the residents when the Purple Line station impacts the dynamic of the town.





Existing



Demolition



Proposed Plan





Crescent Extension



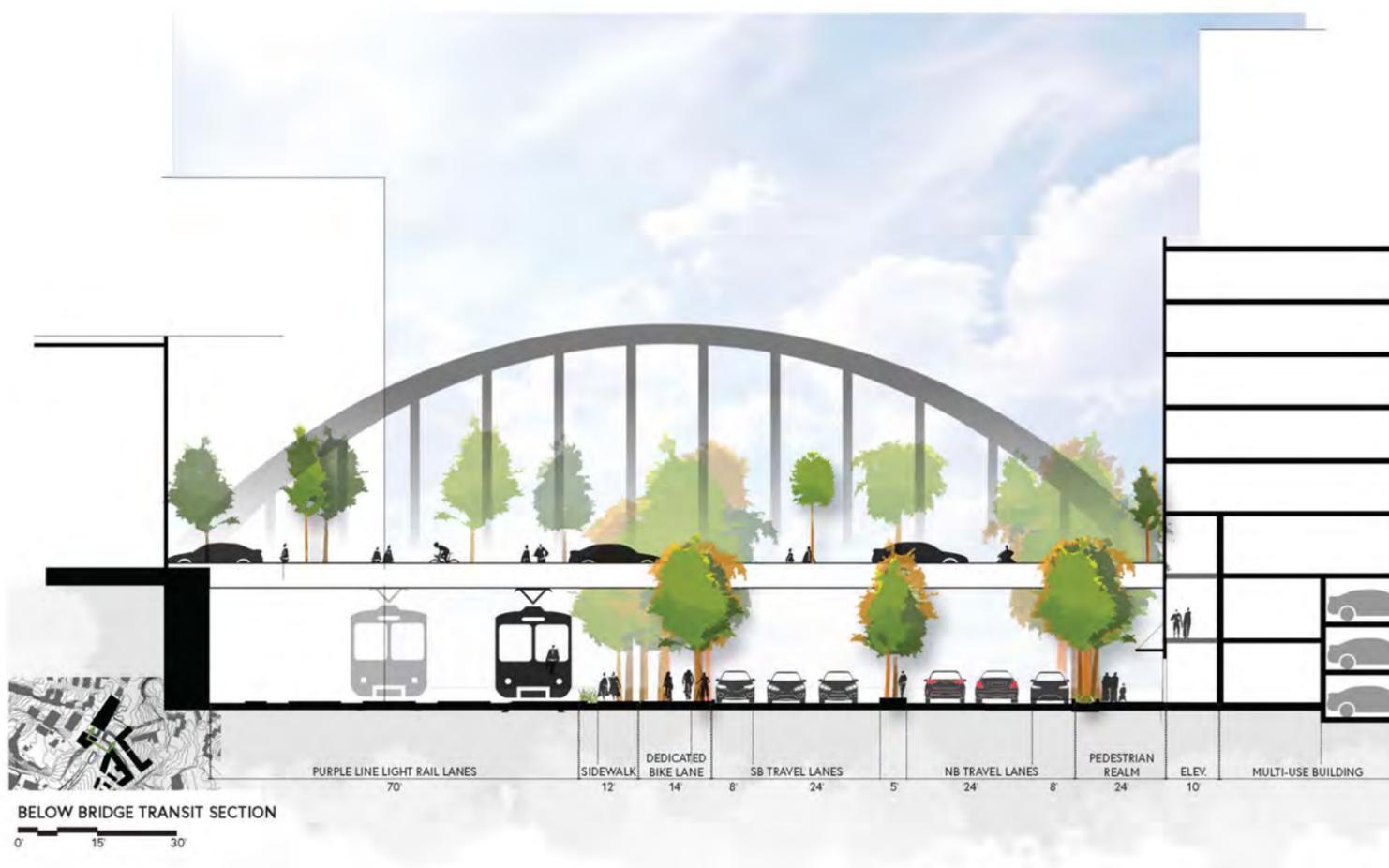
Expanding the Crescent

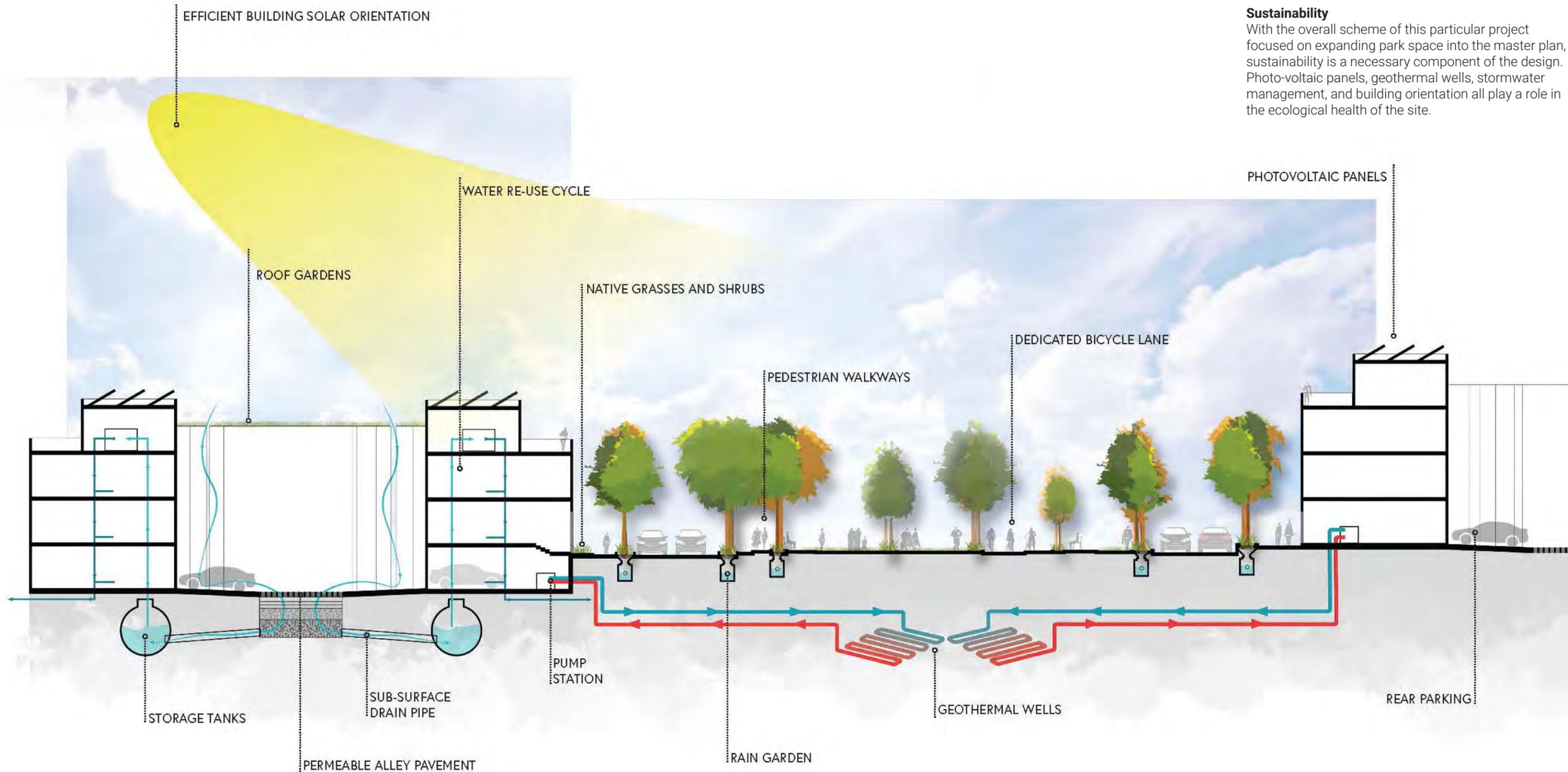


Pedestrian-Friendly Pathways



Building Types





**Sustainability**

With the overall scheme of this particular project focused on expanding park space into the master plan, sustainability is a necessary component of the design. Photo-voltaic panels, geothermal wells, stormwater management, and building orientation all play a role in the ecological health of the site.



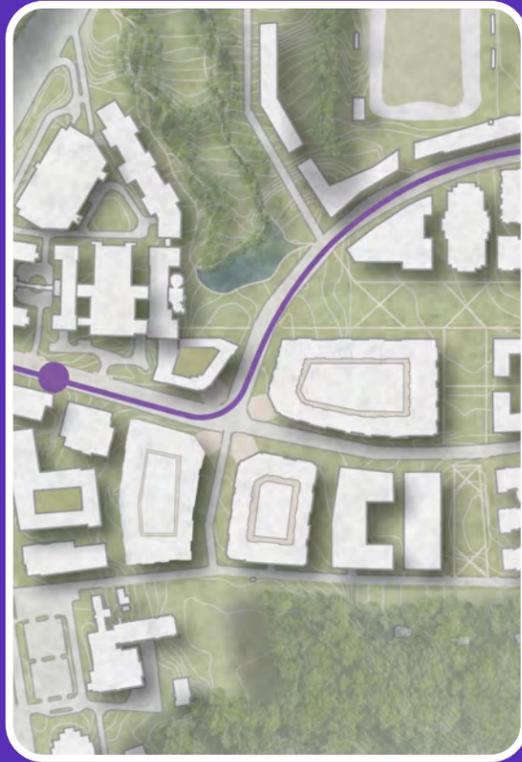
**Crescent Park Experience**

Ample green space in the lowest elevated areas of the site create views of the housing and parks that make this town have a wonderful pedestrian experience.



**Crescent Trail Transit**

The experience adjacent to the rail line reinforces the focus on walkability and bicycle-friendliness in the master plan.



**01** BERNARDO & DEVON



**02** ABE, ECKARD, & TOTH

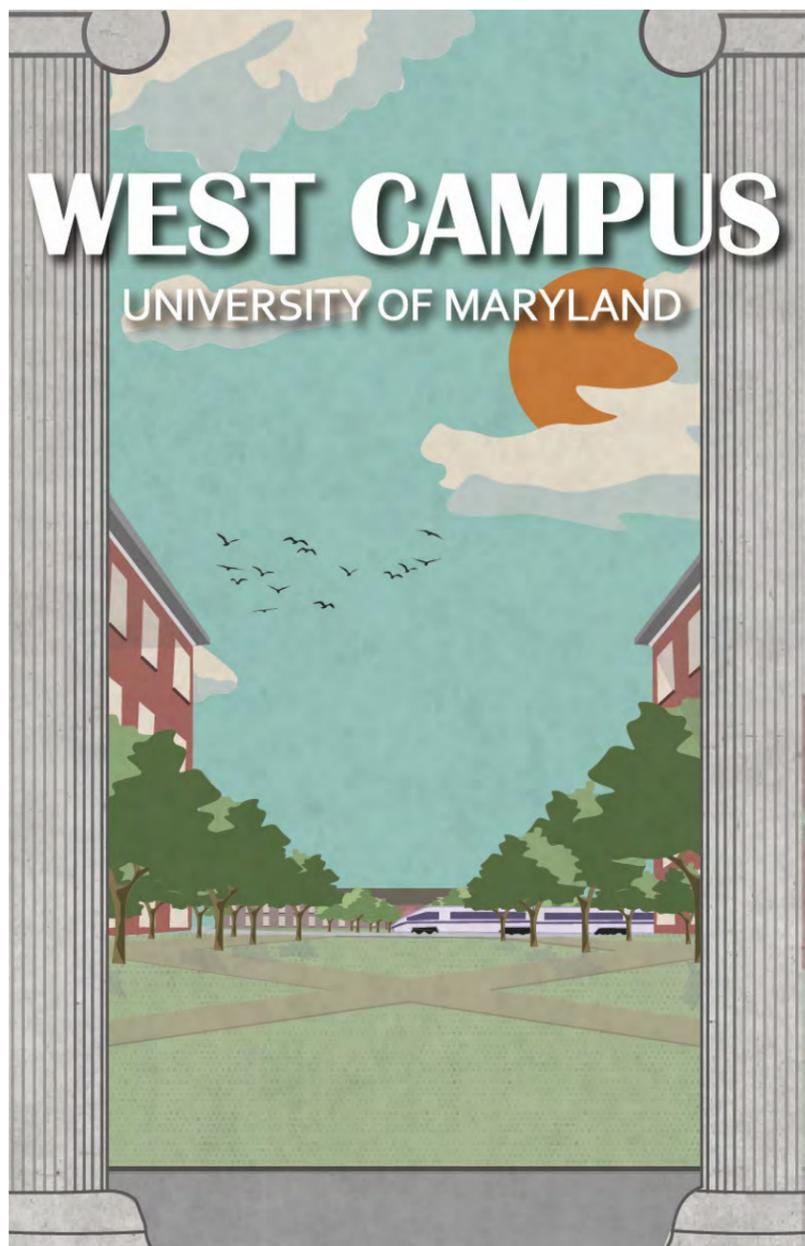


**03** ABE, ECKARD, & TOTH

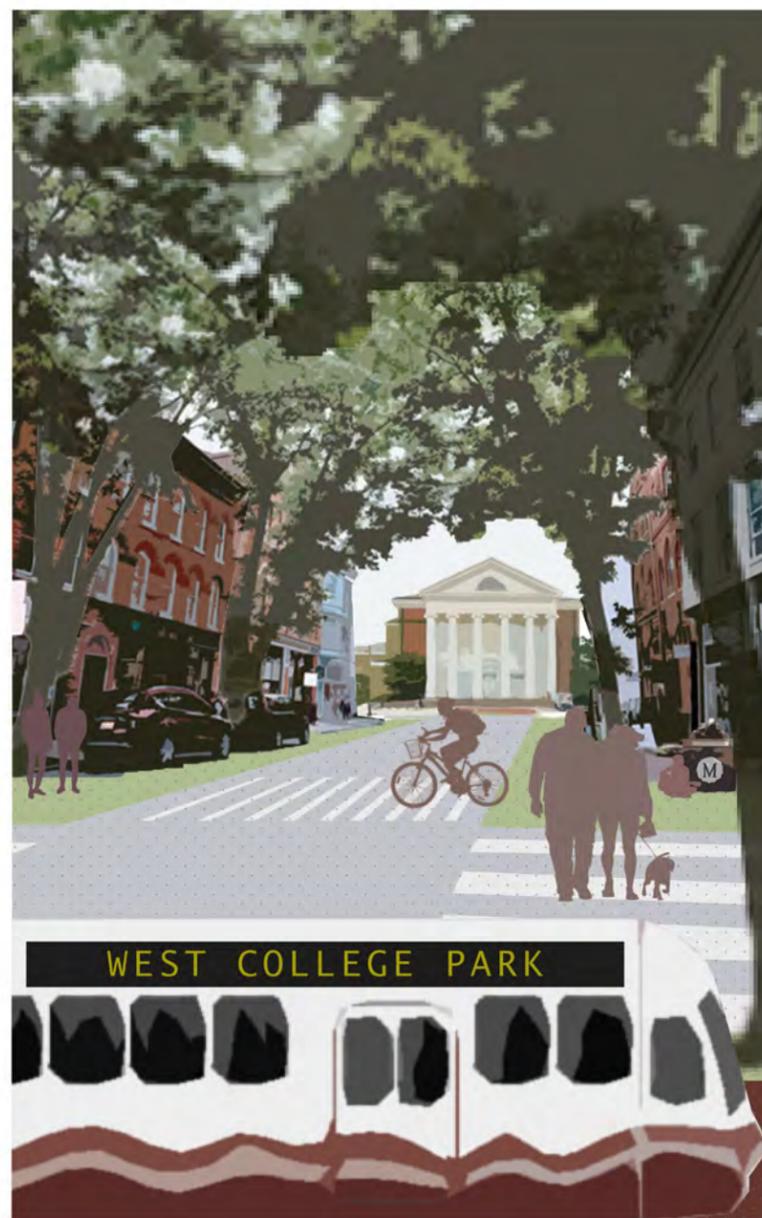
CHAPTER 02

# ADELPHI ROAD- UMGC - UMD

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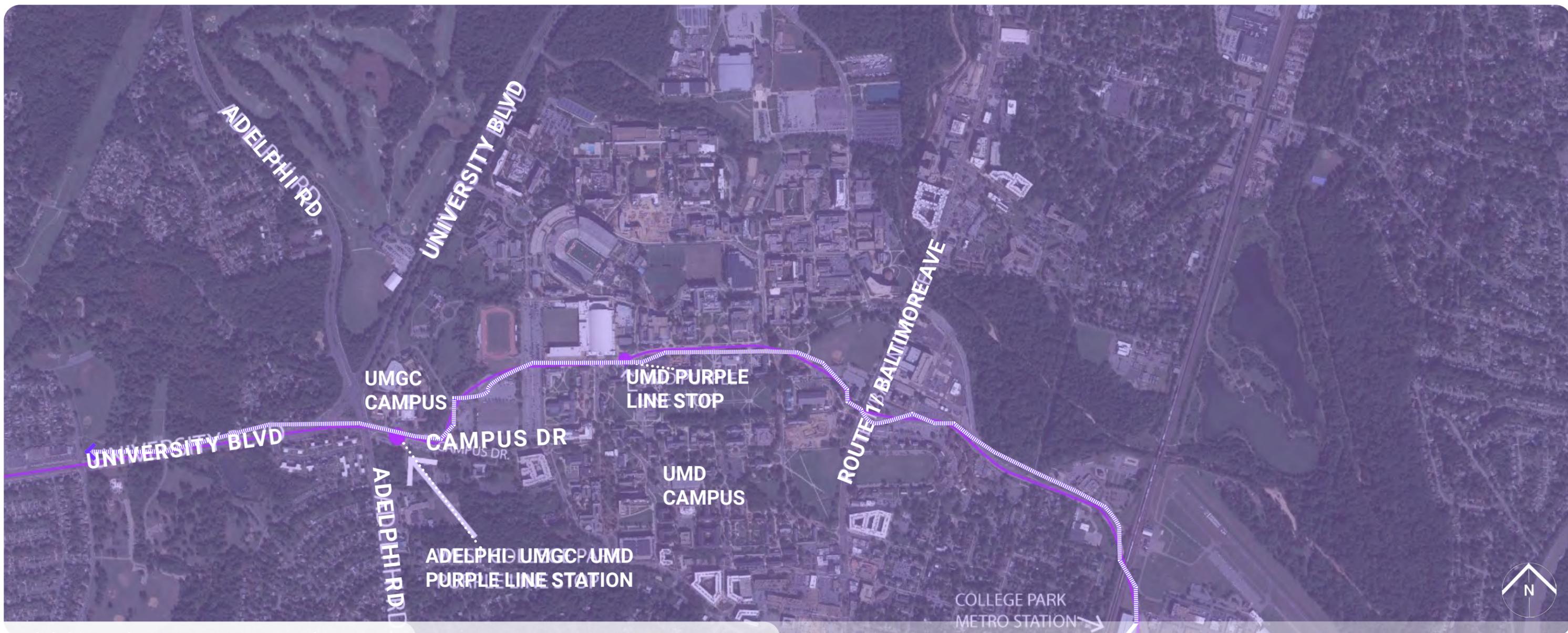
01 BERNARDO & DEVON



02 ABE, ECKARD, & TOTH



03 ABE, ECKARD, & TOTH



**Adelphi Road- UMGC-UMD At A Glance**

The surrounding town consists of working class families and a 40,000 student population on campus, College Park is a community with an opportunity for growth. With various major roads located in College Park, the access to this site is vehicular friendly while it struggles with pedestrian and transit access.

The addition of these two Purple Line Stations on the University of Maryland, College Park campus will allow for easier access for students, faculty, and visitors while also allowing community members to access resources outside of the neighborhood.

Purple Line stations are introduced on Campus Drive. These stations sit between major corridors; Adelphi Road, Route 1/ Baltimore Avenue, and University Boulevard. The introduction of these stations allow for easy access to the University of Maryland, College Park campus and gives accessibility to the neighborhoods of College Park.



**Impervious Surfaces**

The Adelphi-UMGC- UMD proposed station area contains an excessive amount of impervious surface such as roads, parking lots, and roof tops. These impervious surfaces create a heat island effect and increased storm water runoff.



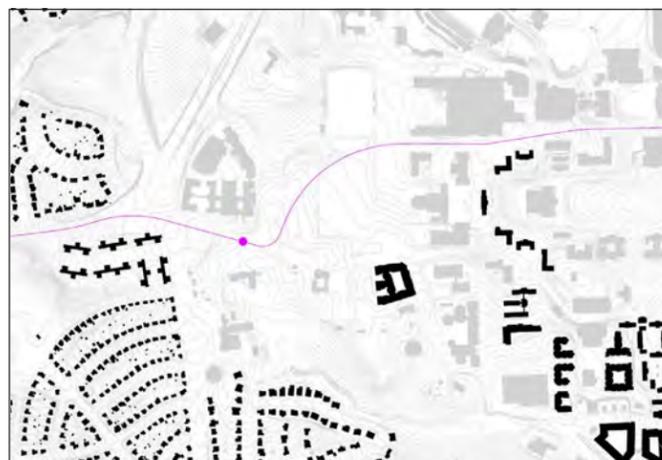
**Existing Retail**

The existing retail is minimal. While there are some retail spots on the University of Maryland, College Park campus, there is no main retail corridor around the Adelphi-UMGC-UMD purple line station.



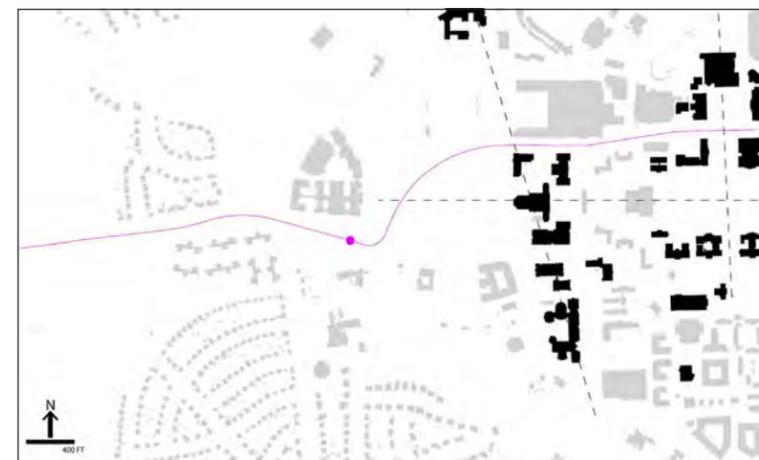
**Existing Tree Canopies**

Tree canopies surround the site, as the site itself is lacking. This void in tree canopies highlights the vast amount of existing impervious surfaces.



**Existing Residential**

There are residences in neighboring communities west and south of site, as well as campus residences east of the site. There is a clear divide between where community housing exists and campus housing exists. There is no connection between the two.



**Existing Academic Buildings**

University of Maryland, College Park academic buildings. This large campus creates a hard academic barrier between the campus and the existing community. The Adelphi-UMGC-UMD Purple Line station lies in that barrier.



Existing Conditions

1. University of Maryland Parking Lot 1

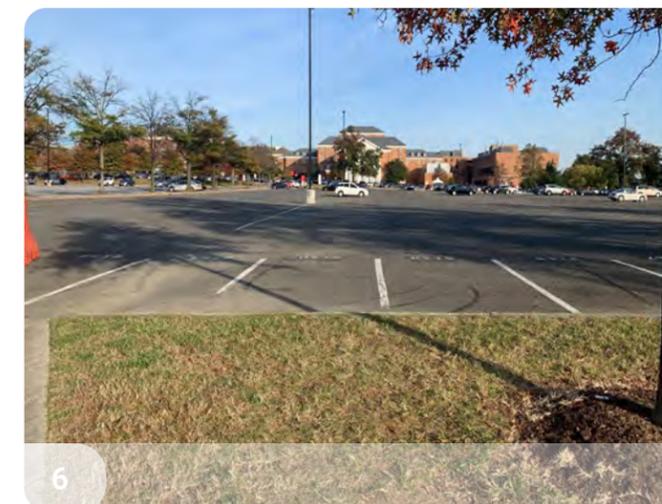
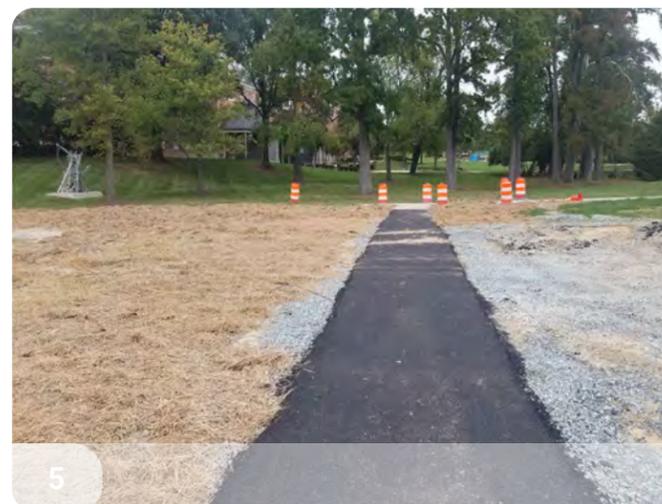
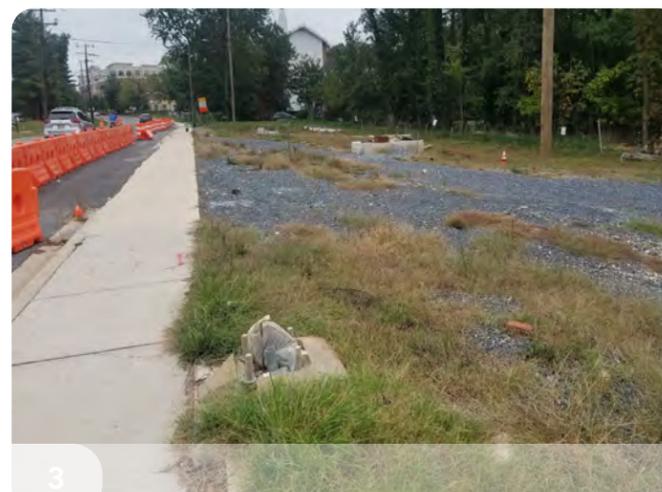
3. Campus Drive East Bound

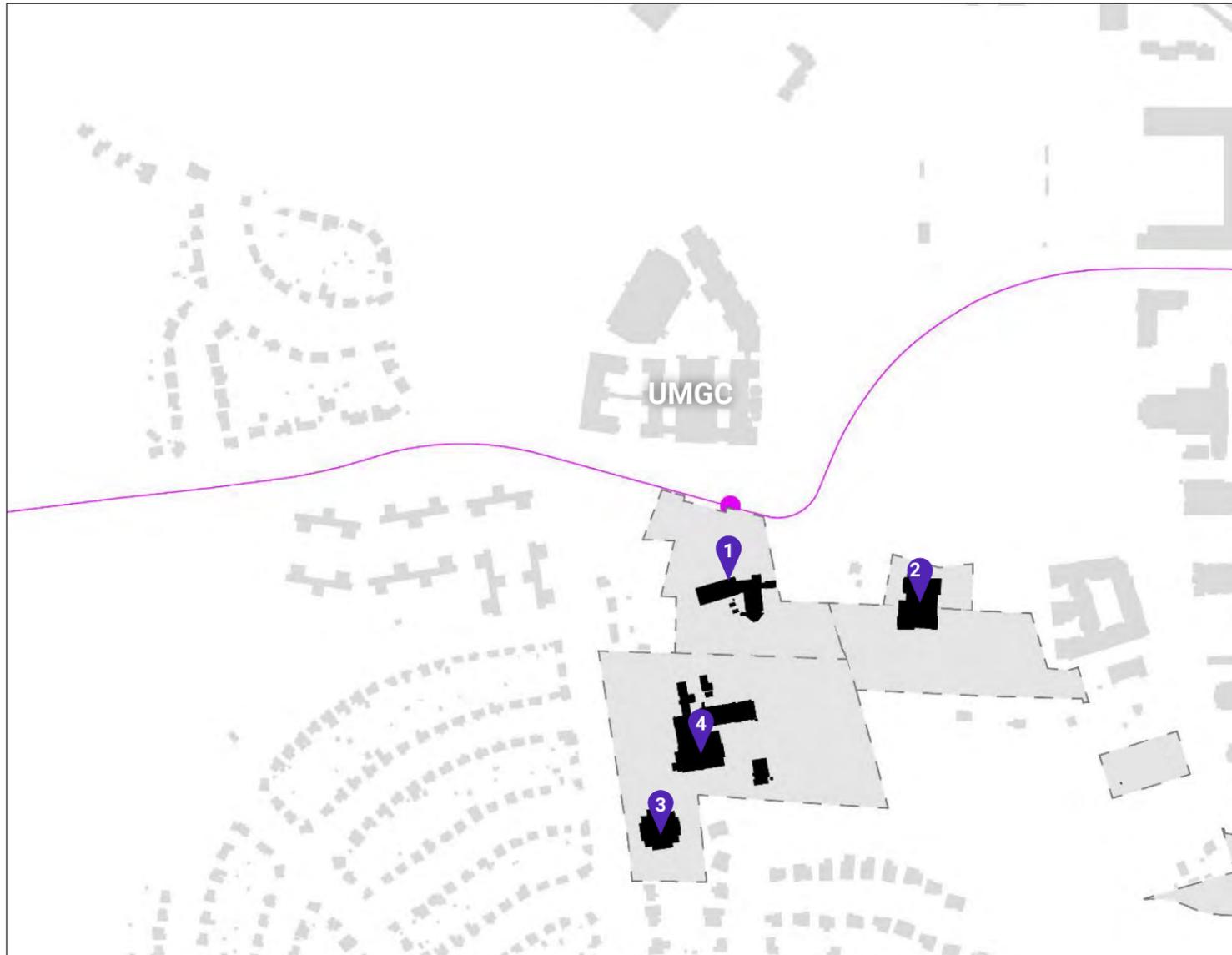
5. Campus Drive to UMGC

2. Campus Drive West Bound road work

4. Campus Drive Entrance to University United Methodist Church

6. University of Maryland Parking Lot 1 East Facing





1 University Baptist Church



2 University United Methodist Church



3 St. Marks Catholic Church



4 St. Francis International School

The existing religious institutions create a unique opportunity for the community and the University of Maryland, College Park campus. With the addition of these sites, a direct street edge connection from Adelphi Rd to the campus can be made with development on both sides of the street. With the uncertainty of whether the institutions will sell their property and relocate, sell their property and remain in place, or not sell at all it creates a challenge within this TOD master plan designs.

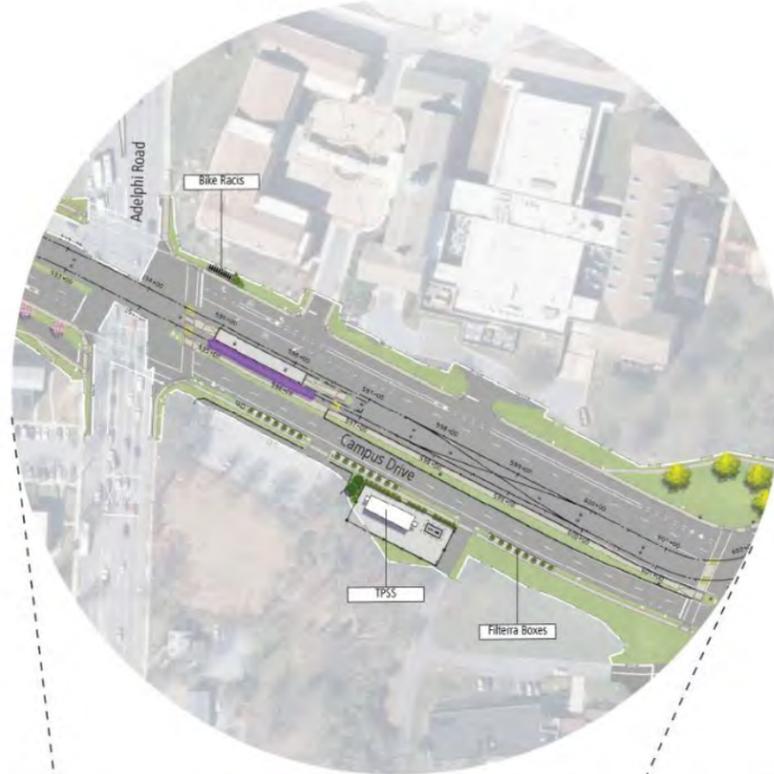
**Institutional Opportunities**

Cultural locations that sit adjacent to the station. These institutions hold a combined 20.3 acres of land that provide opportunity for development

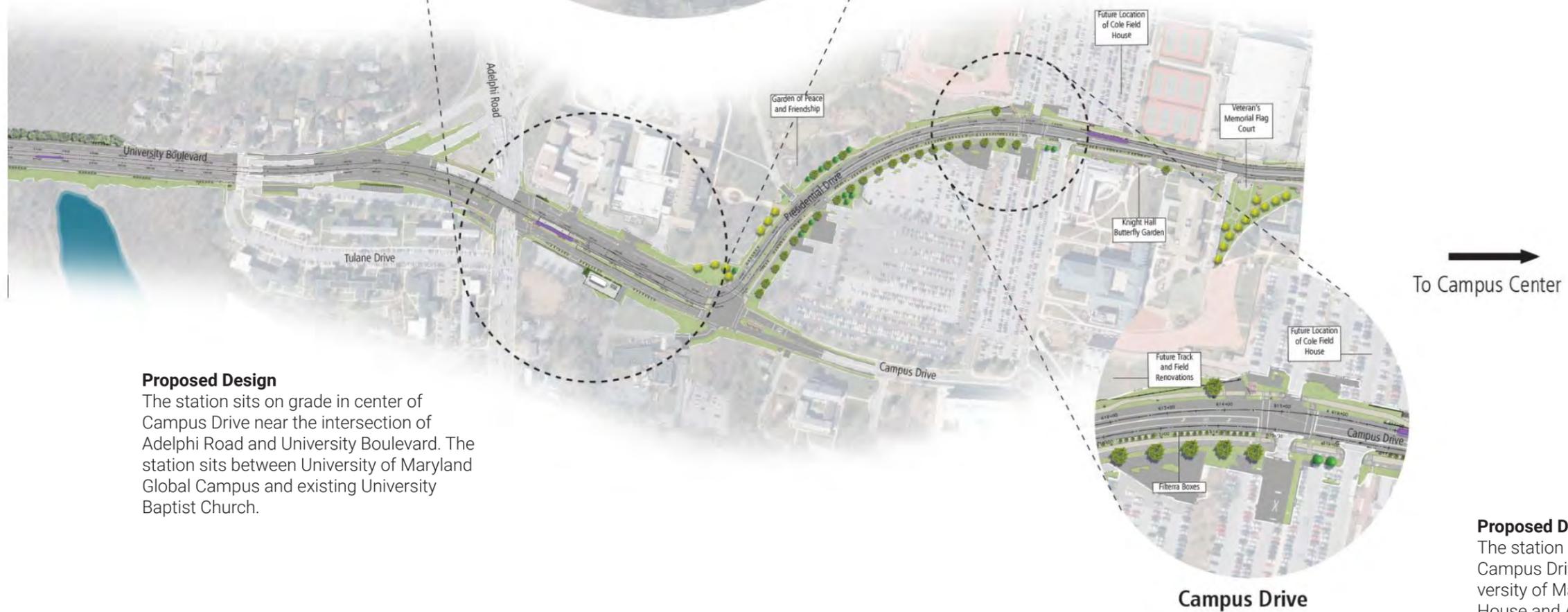
Adelphi Road / West Campus



Filterra Box Stormwater Management System



Proposed Art in Transit for Adelphi / West Campus Station



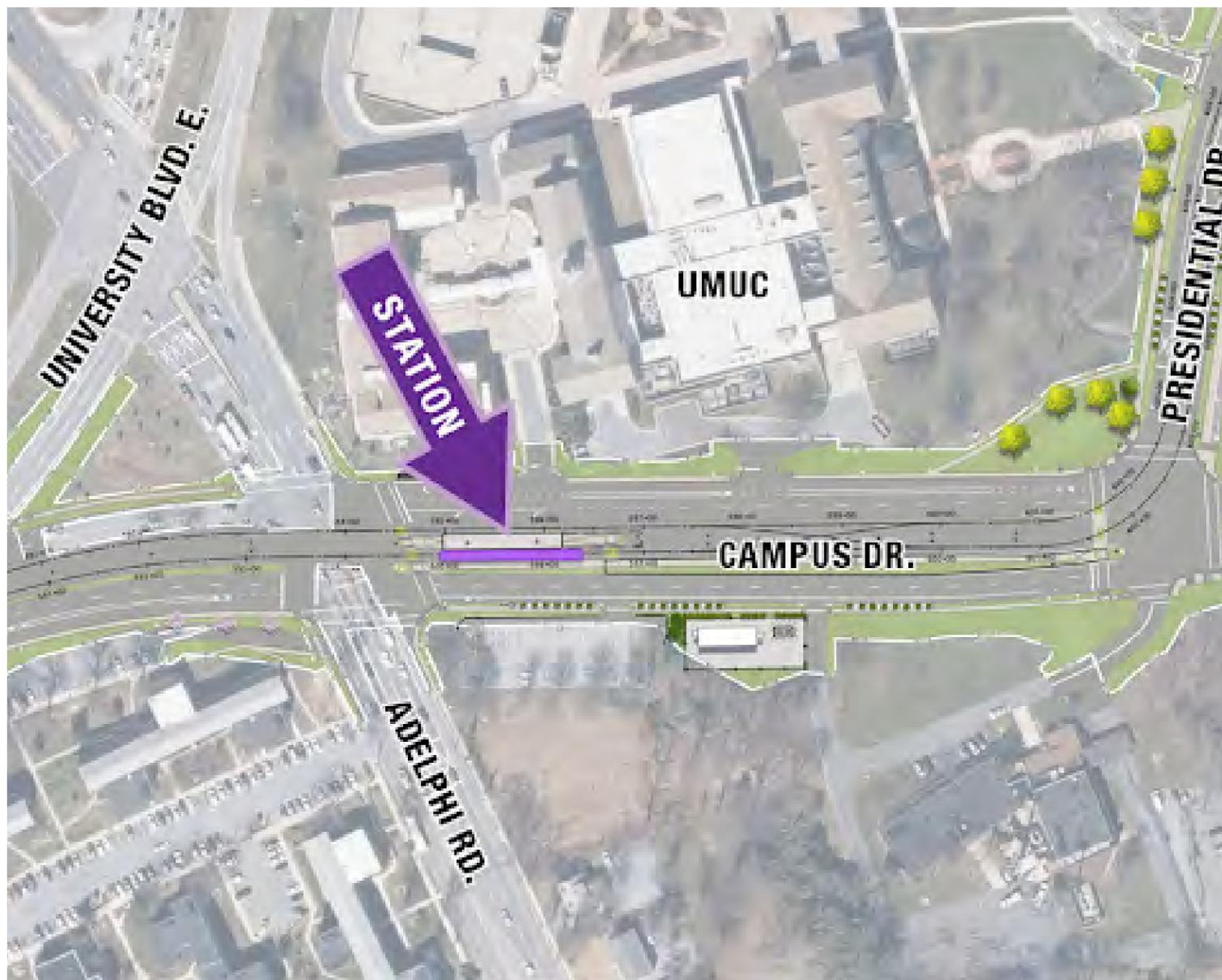
**Proposed Design**

The station sits on grade in center of Campus Drive near the intersection of Adelphi Road and University Boulevard. The station sits between University of Maryland Global Campus and existing University Baptist Church.

**Proposed Design**

The station sits on grade on each side of Campus Drive. The station sits between University of Maryland, College Park Cole Field House and Adele Stamp Student Union.

Source: purplelinemd.com



Proposed Station Area Plan

**Strengths:**

- Diverse population
- Academic accessibility
- Variety of religious institutions

**Weaknesses:**

- Car-centric design
- Lack of retail

**Opportunities:**

- Affordable housing
- Multi-modal design
- Retail streets

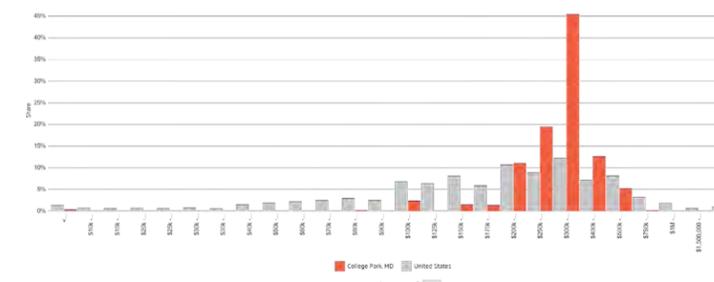
## Adelphi - UMGC-UMD Team Development Goals

- Reduce impervious surface
- Establish a main street
- Connect the community and the university

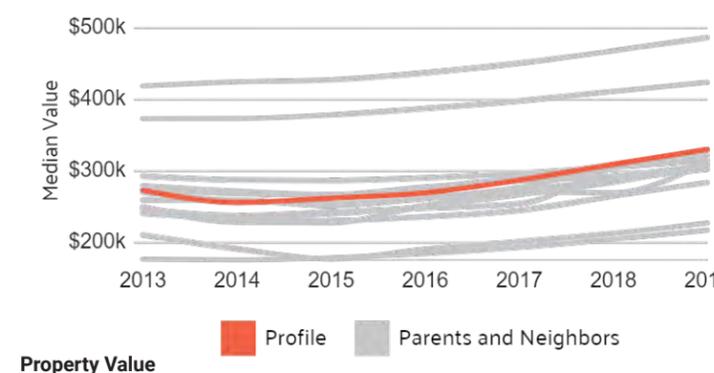
AVERAGE HOUSEHOLD INCOME....  
\$66,679

PEOPLE IN COLLEGE PARK ARE....  
22% FOREIGN BORN CITIZENS

HIGHEST POPULATION CONCENTRATION IS SEEN IN....  
between the ages of 18-24



Property Value



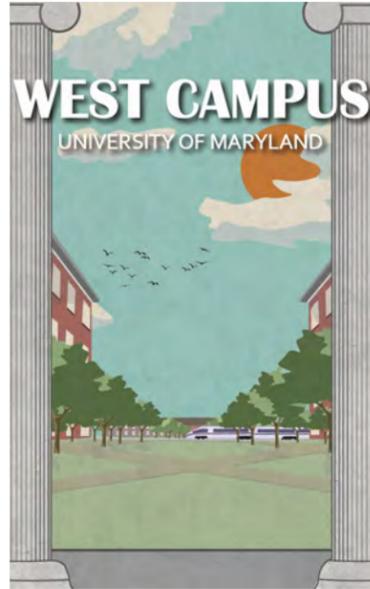
Property Value

Source: [https://datausa.io/profile/geo/college-park-md/#category\\_housing](https://datausa.io/profile/geo/college-park-md/#category_housing)

# 01

## Adelphi Road- UMGC-UMD Master Plan

*Christina Bernardo  
Angela Devon*



The goal of this master plan was to reinvigorate the West portion of the University of Maryland, College Park campus. With the addition of retail, student and community housing, academic buildings, and public green spaces, the community and campus can be activated. This master plan sought to link the existing adjacent communities to the campus through a main street that enhances placemaking and development close to the Purple Line station. The main street consists of affordable community housing, affordable student housing, and mixed-use housing and retail.

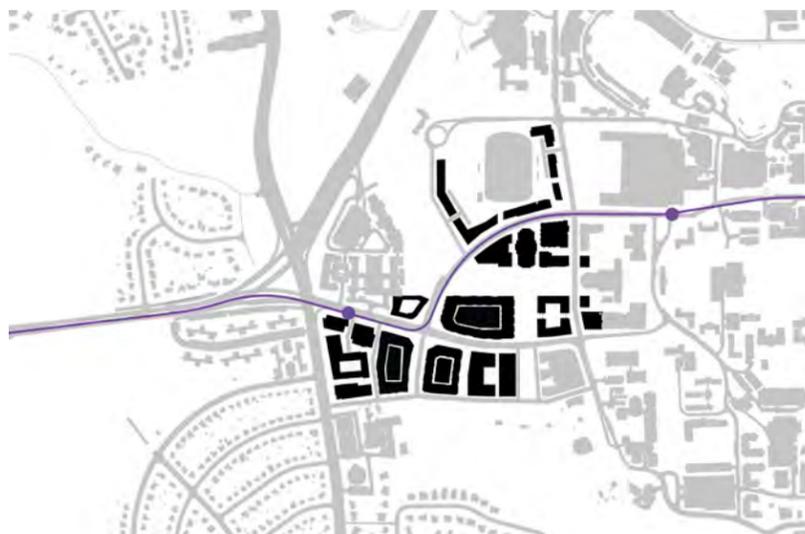
The strategy transformed the area from a sea of impervious surfaces into green spaces. There are existing forested areas located South and Northwest of the site. In order to bridge these two green spaces together and make a connection, an axis that runs East/West through the site was enhanced with a green promenade strip and is open to the Purple Line users, and the university community.

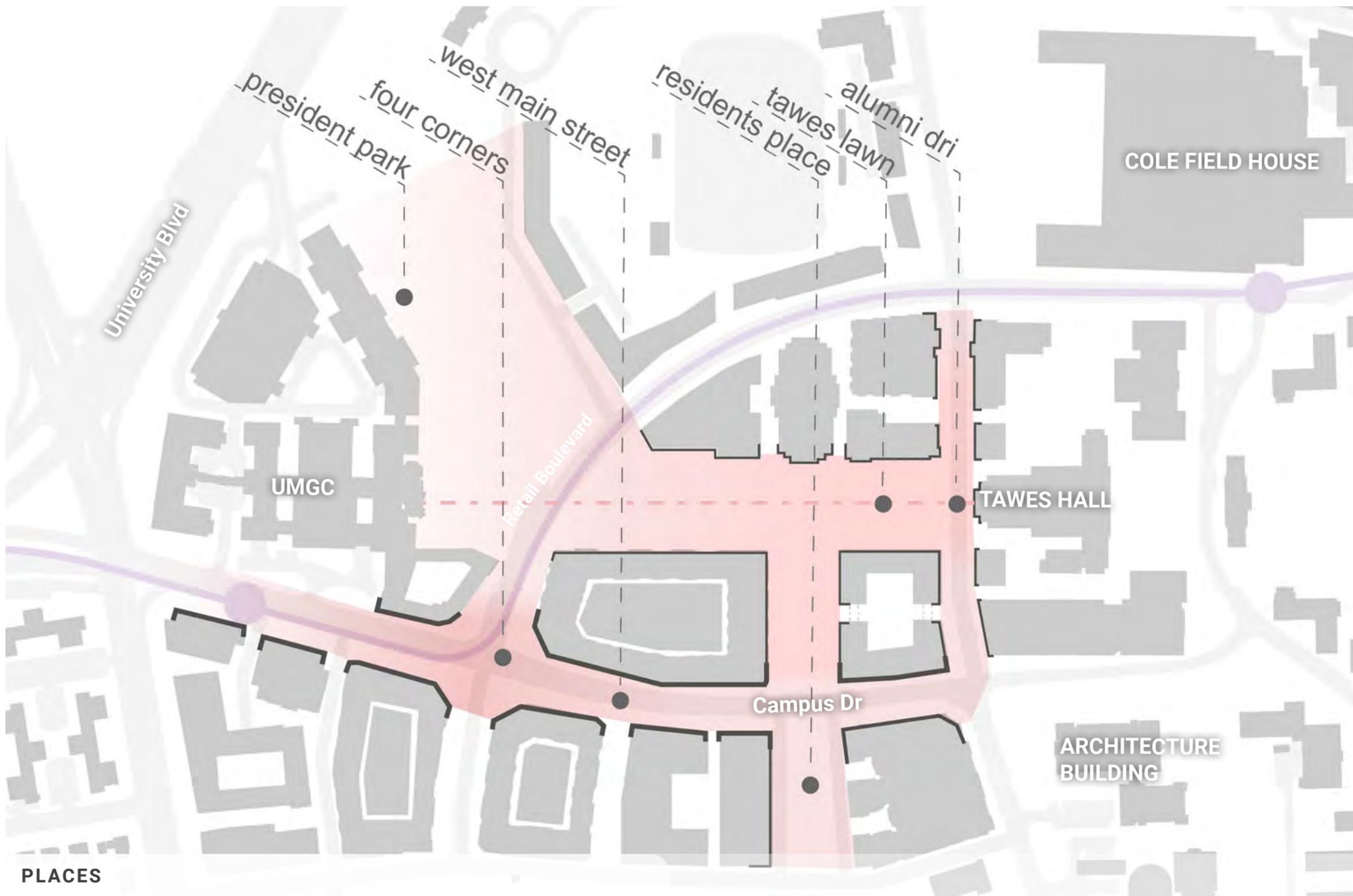




**Existing & Proposed Figure Ground**

The new plan seeks to transform the large amount of hardscape at the site by transforming it into green space and new university facility buildings.





PLACES

RESIDENT HALLS
481,650 sqft 2,674 units at 180 sqft
ACADEMIC
1,118,992 sqft
RESIDENTIAL
2,511,219 sqft 2,506 units at 1,000 sqft
PARKING
removed 2,456 spots adding 1,621 spots



Program

The program consists of resident halls, academic buildings, residential buildings, and parking.



Street Type

The street types consist of multi-modal, avenues, pedestrian, typical one-way, and service.



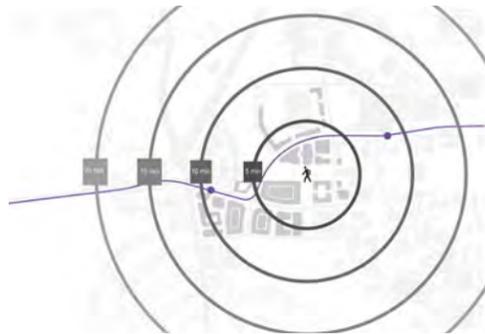
**Phasing**  
The phasing strategy is based on the cooperation of the existing churches located near the site.



**Social Strategies**  
The goal was to create spaces for all. This includes affordable housing for the community and for students. This includes green space for all to enjoy. Lastly, it includes a safe space for religious institutions.



**Geothermal Wells**  
With the introduction of green space, it allows for the use of geothermal wells. The geothermal wells can be used to provide heating and cooling to the buildings surrounding the site.



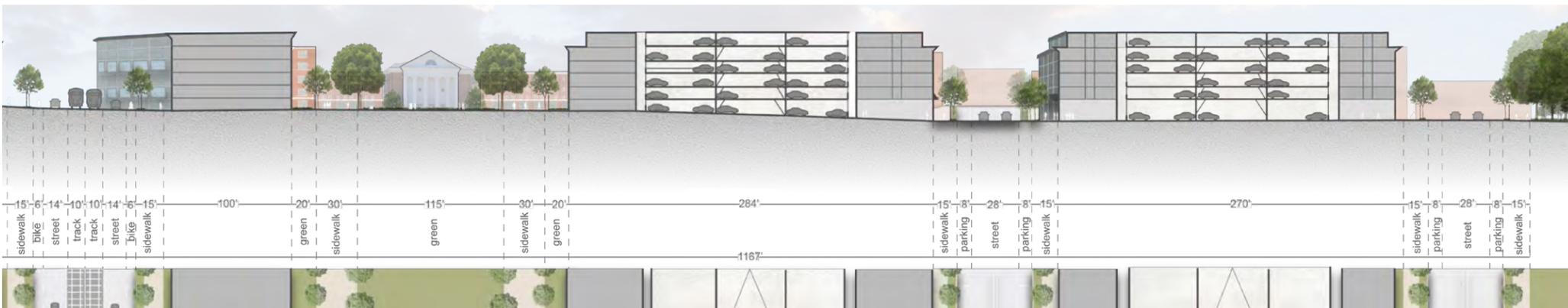
**Walking Radius**  
The closest Purple Line stations on the university owned property is within a 10 minute walk from the center of the University of Maryland, College Park campus.



RESIDENTS PLACE



FOUR CORNERS



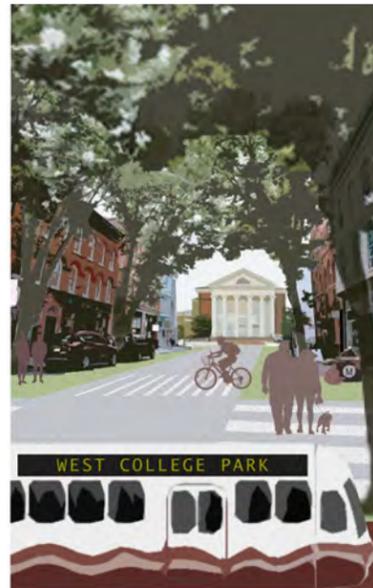
**Site Section**  
Cut from North to south through the site, the section shows different street types, building types, and green space.



# 02

## Adelphi Road- UMGC-UMD Master Plan

*Danielle Abe  
William Eckard  
Austin Toth*



The goal of this master plan is to connect the existing conditions around the West portion of the University of Maryland, College Park campus to the campus core itself. The strategy to do so is to create a more dense urban grid within the campus rather than an open campus plan. This is done by introducing affordable housing, defining a new street edge, bringing new food and retail opportunities, and designing away from a car-centric concept to greater walkability and multi-modal systems.

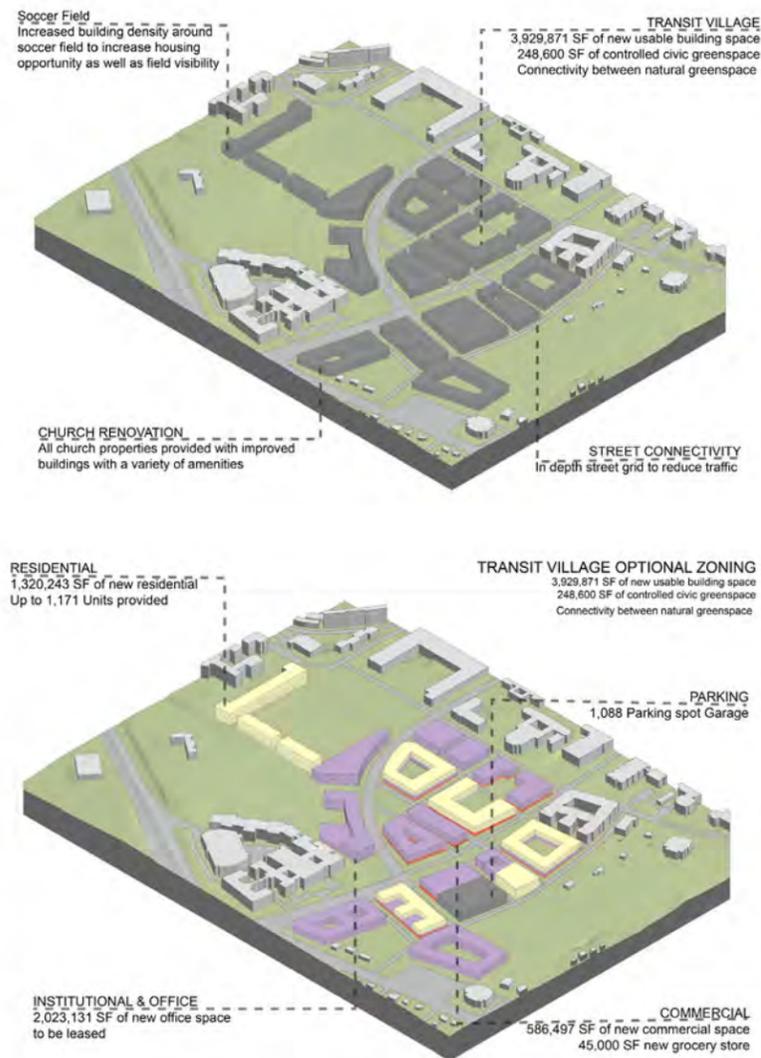
To increase these connections and address the needs of the community, new residential buildings, institutional spaces, office spaces, commercial spaces, and mixed-use buildings that include relocated parking are introduced in the scheme. There will be focused attention on what will happen to the existing religious institutions are included to meet their future needs, and demonstrate how these sites can support private development.





**Program**

The new program seeks to utilize West Campus in an attempt to connect to the surrounding communities. This is done with TOD zoning, residential spaces, parking, institutional spaces, office spaces, commercial spaces, a soccer field, and renovations to the churches adjacent to campus property.



**Phasing**

There are three potential phasing options. The first option where the church is included would be the case if the religious institutions sell all of their property and relocate on the site. The second option of the partial inclusion of the church is if the various religious institutions sell their property but their existing building remains in place. The third and final option where the church is not included in the proposed new master plan is if the various religious institutions do not sell any of their property and the existing conditions remain.



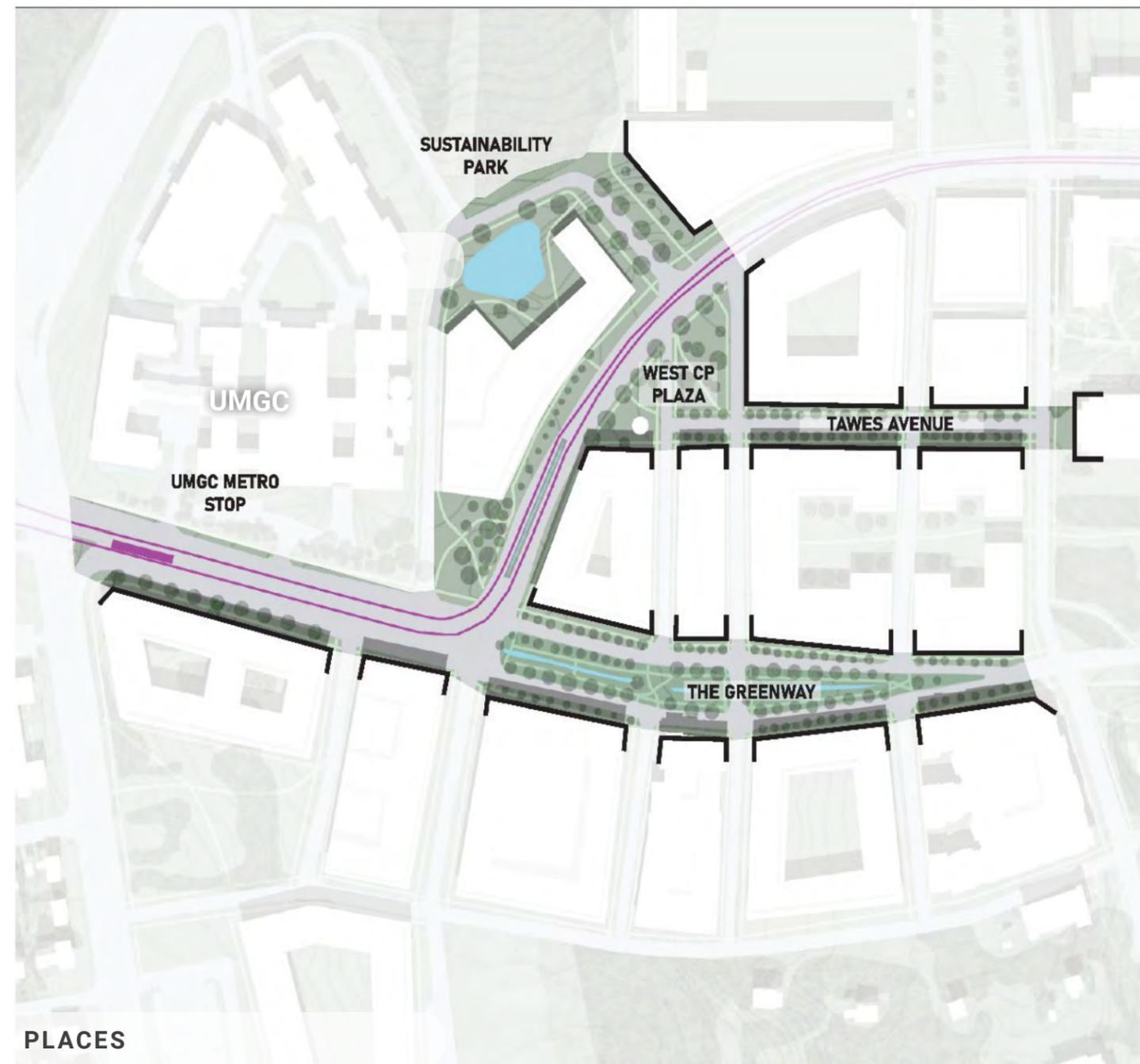
**Inclusion of Church in Scheme**



**Partial Inclusion of Church in Scheme**



**Church is Not Included in Scheme**

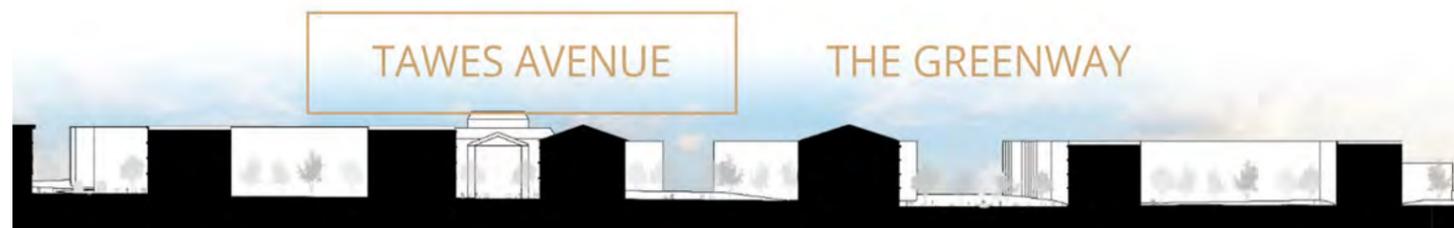




**The Greenway**  
The connecting retail street between campus and community



**Tawes Avenue**  
The connecting green space between Tawes Hall and the Purple Line.





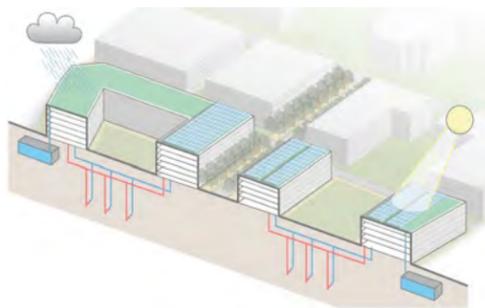
**Purple Line Station**  
Location of main Purple Line station in relationship to the proposed master plan.



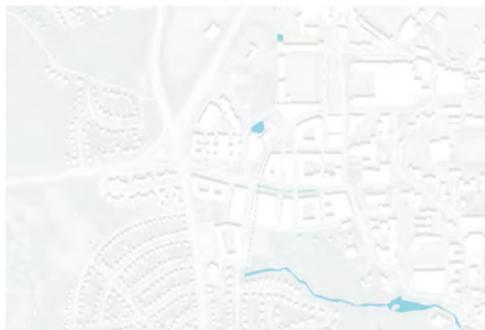
**Phasing**  
Three phases of construction



**TAWES AVENUE & THE GREENWAY**



**Sustainability Strategies**  
These strategies include geothermal wells located in the open green space, photo-voltaic panels, and green roofs.



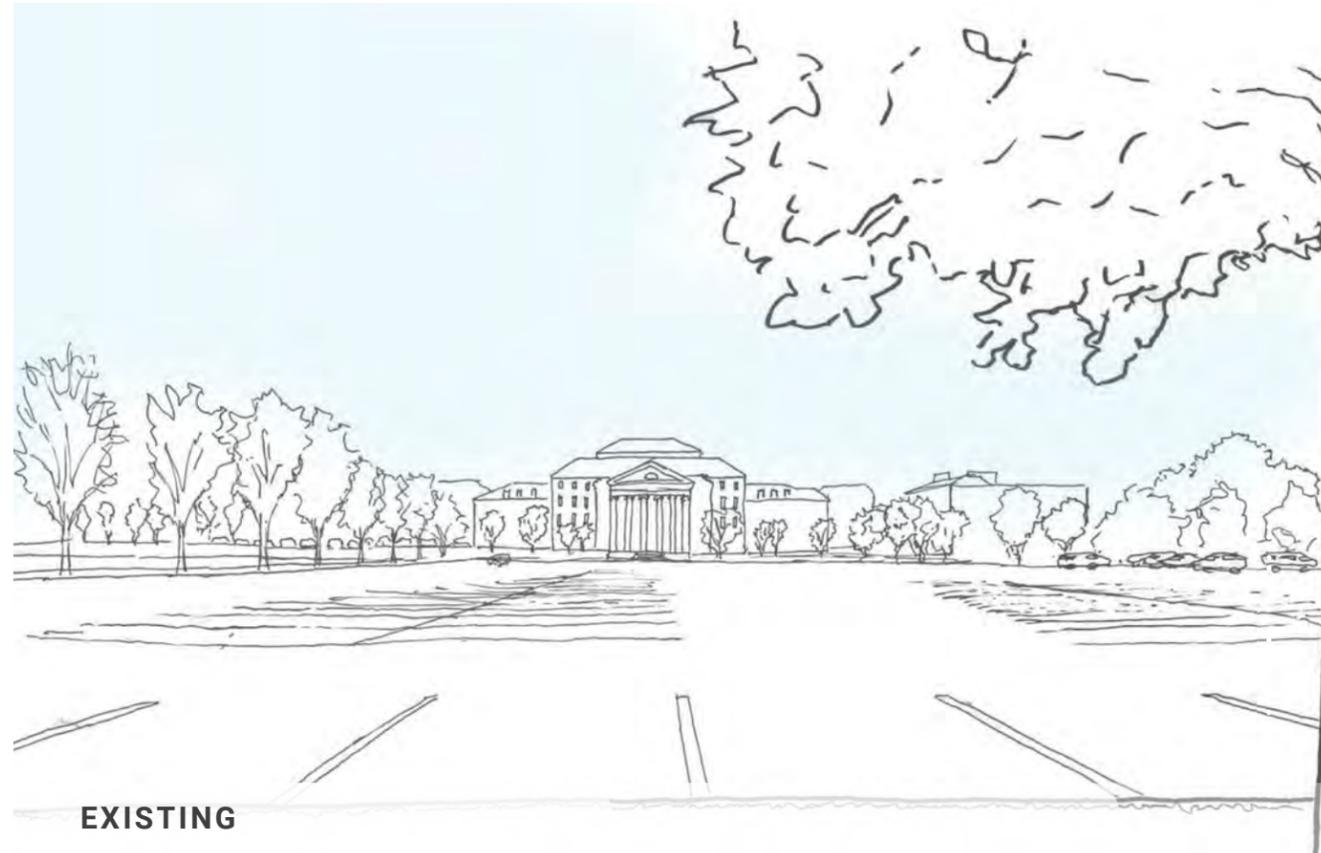
**Hydrology and Retention Ponds**  
Possible locations and utilization of retention ponds throughout the site.



**EXISTING**



**PROPOSED**



EXISTING



PROPOSED

# 03

## Adelphi Road- UMGC-UMD Master Plan

*Danielle Abe  
William Eckard  
Austin Toth*



The goal of this master plan scheme is to bridge a connection between the two universities: University of Maryland Global Campus, and University of Maryland, College Park. This connection not only accommodates the desires of new academic buildings for both universities, but also increased mixed-use living and retail spaces, offices, and affordable housing for students of the universities and the residents of College Park.

To increase these connections and address these needs, the existing campus sequence will be extended from the center of campus to the west portion of campus. The organization around a central green space mirrors the organization of institutional buildings around the existing Mckeldin Mall. This allows for a seamless and direct expansion of the surrounding campus context. These campus connections enhance the mobility and experiences on the streets, which create better walking conditions for the community members.

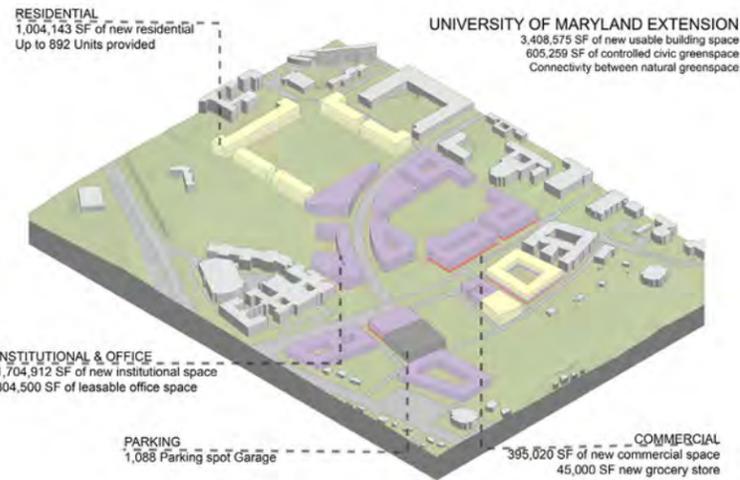




**Green Connection & Program**

Through this design, the existing green spaces north and south of the site are able to be connected by extending the existing campus green sequence.

The new program seeks to utilize West Campus in an attempt to connect to the surrounding communities. This is done with TOD zoning, residential, parking, institutional space, office space, commercial space, a soccer field, and church renovations.



**Green Connections & Program**

**Phasing**

There are three potential phasing options. The first option where the church is included would be the case if the religious institutions sell all of their property and relocate on the site. The second option of the partial inclusion of the church is if the various religious institutions sell their property but their existing building remains in place. The third and final option where the church is not included in the proposed new master plan is if the various religious institutions do not sell any of their property and the existing conditions remain.



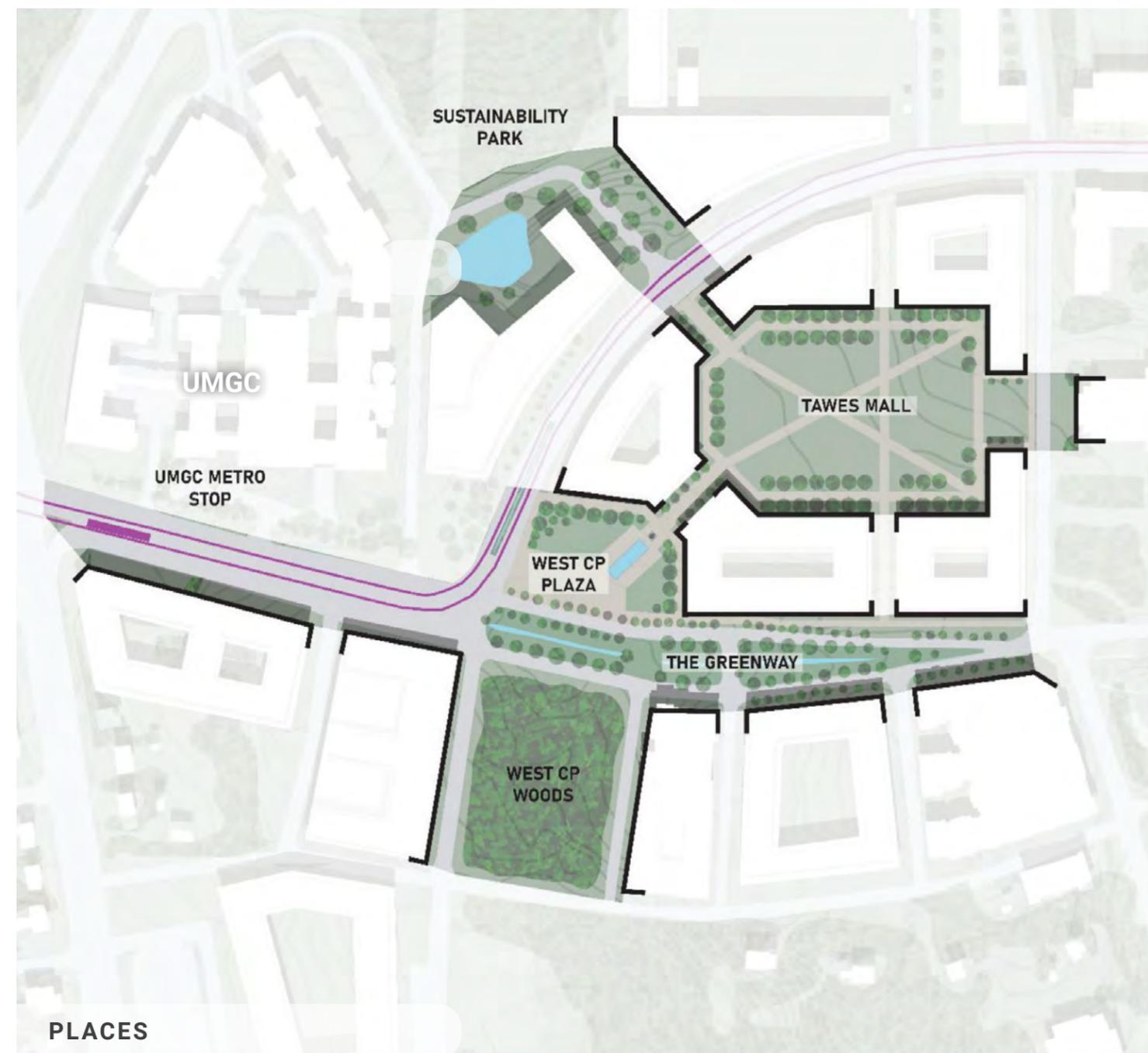
**Inclusion of Church in Scheme**



**Partial Inclusion of Church in Scheme**



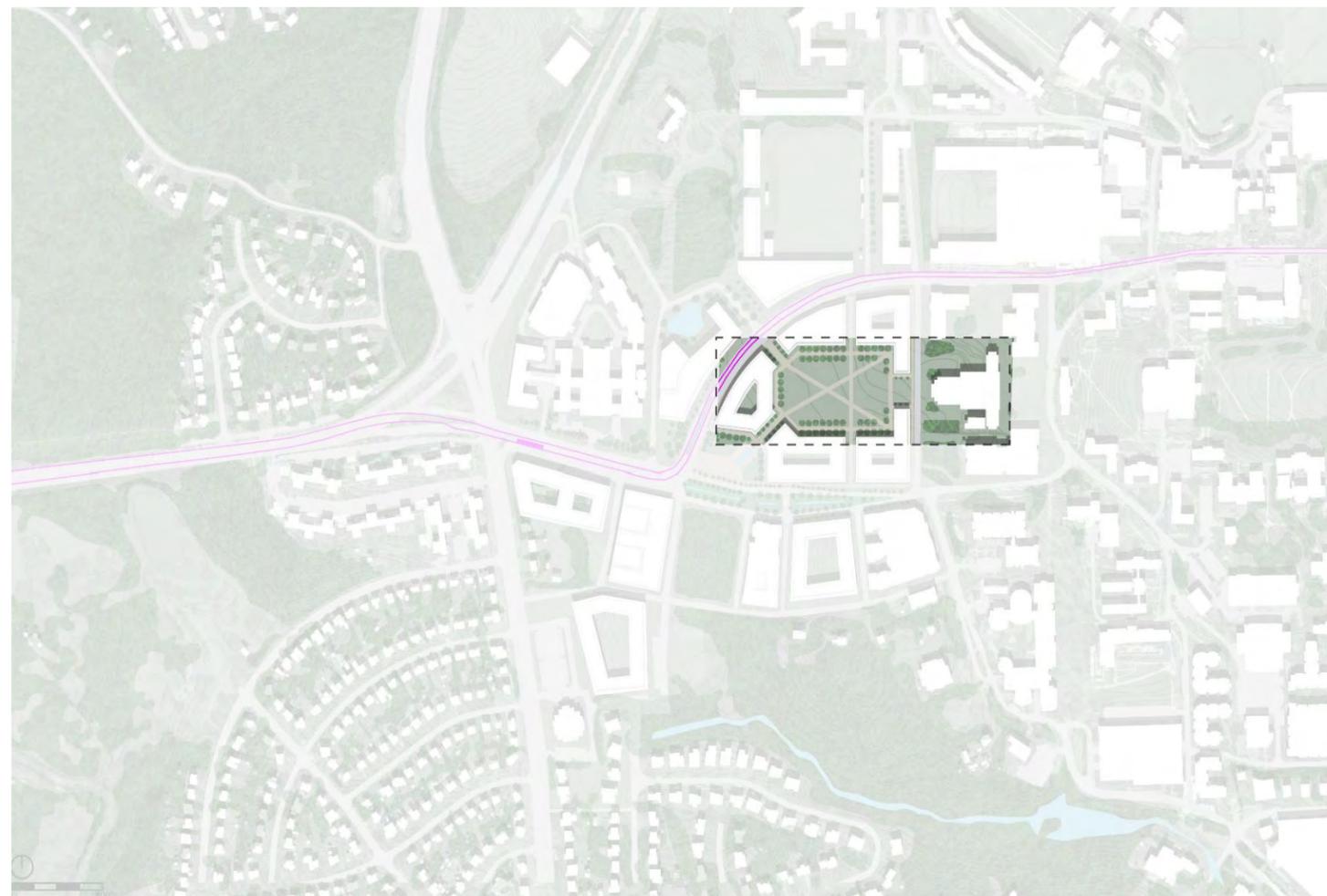
**Church is Not Included in Scheme**



**PLACES**



**The Greenway**  
The connecting retail street between campus and community



**Tawes Mall**  
A new green space that is created by extending the green space of existing Mckeldin mall

TAWES MALL

GREENWAY



TAWES MALL

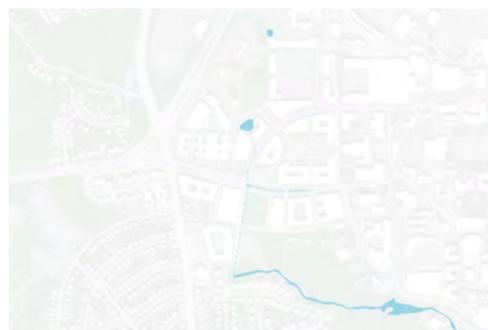
GREENWAY





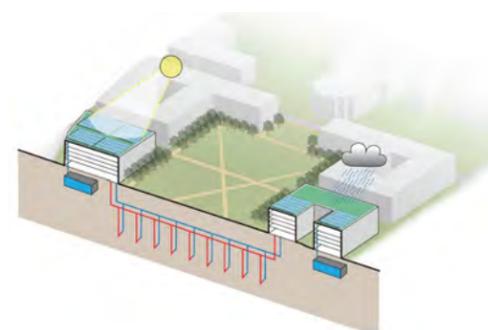
**Runoff Water**

The existing conditions of runoff led to the introduction of retention ponds.



**Hydrology and Retention Ponds**

Possible locations and utilization of retention ponds throughout the site.



**Sustainability Strategies**

These strategies include geothermal wells located in the open green space, photo-voltaic panels, and green roofs.



**Phasing**

Three phases of construction

- PHASE 1 
- PHASE 2 
- PHASE 3 



Tawes Mall





**01** MACEK & PENA



**02** ALAJATI & OKUBADEJO

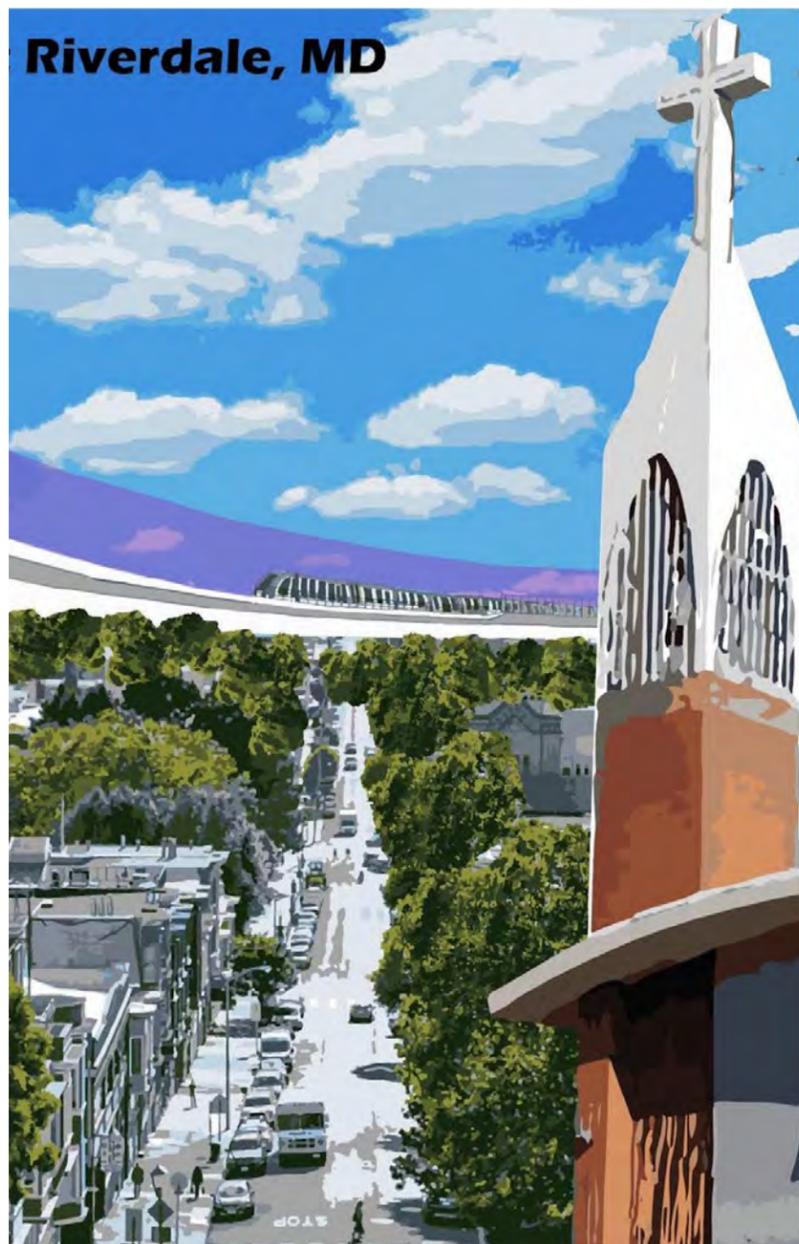


**03** RIPLEY & MUIR

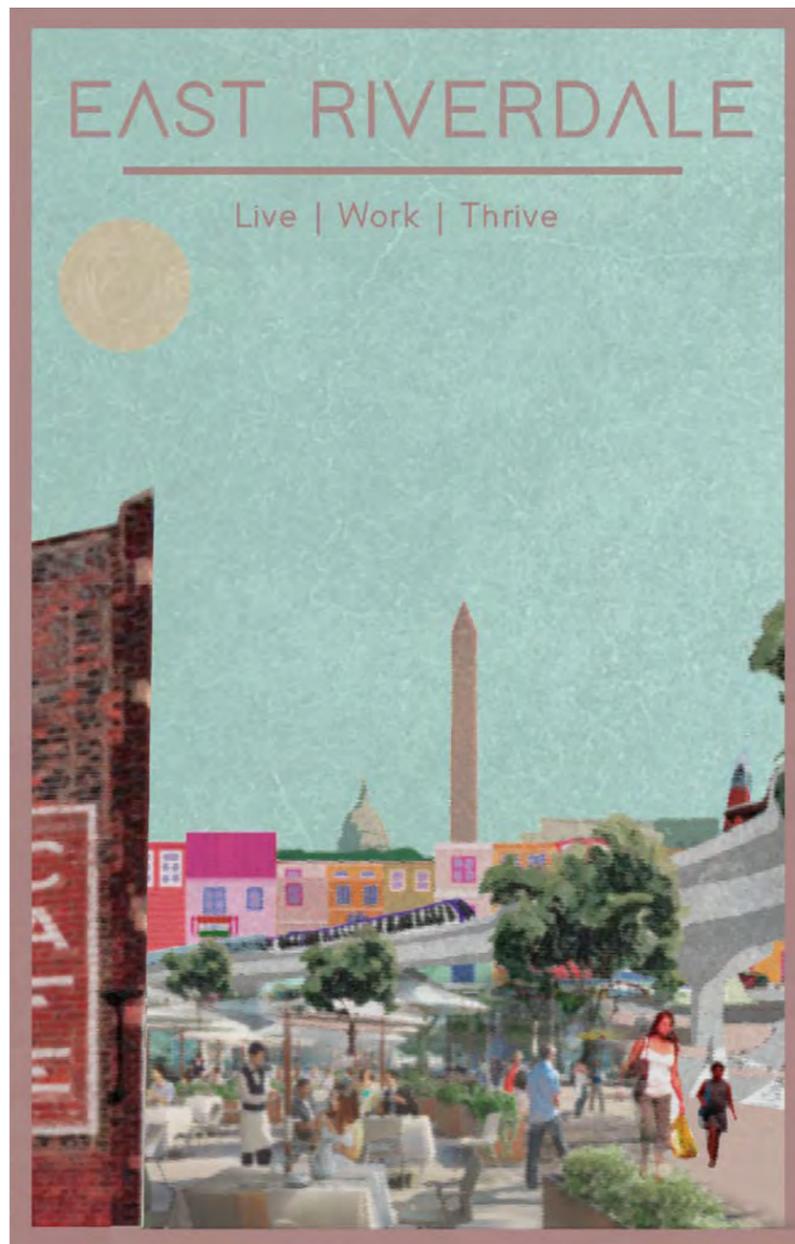
CHAPTER 03

# EAST RIVERDALE

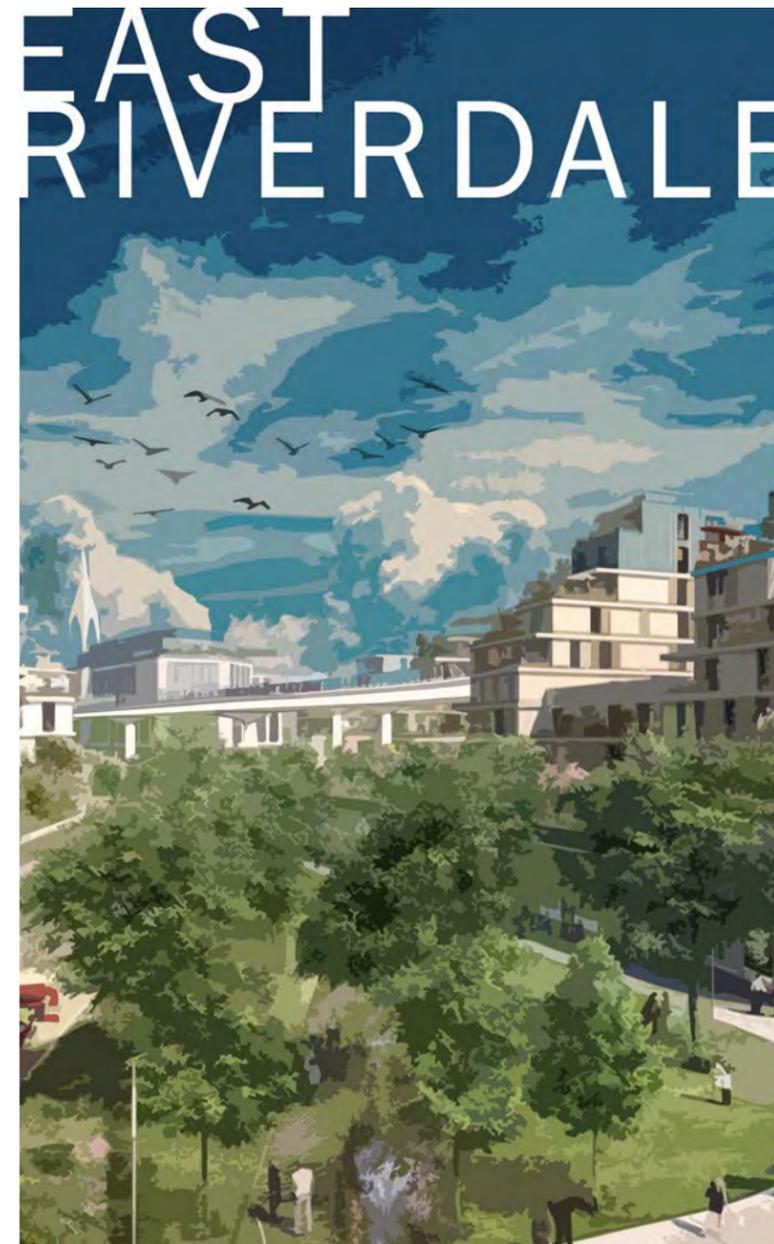
56	Site Introduction
64	Project One
68	Project Two
74	Project Three



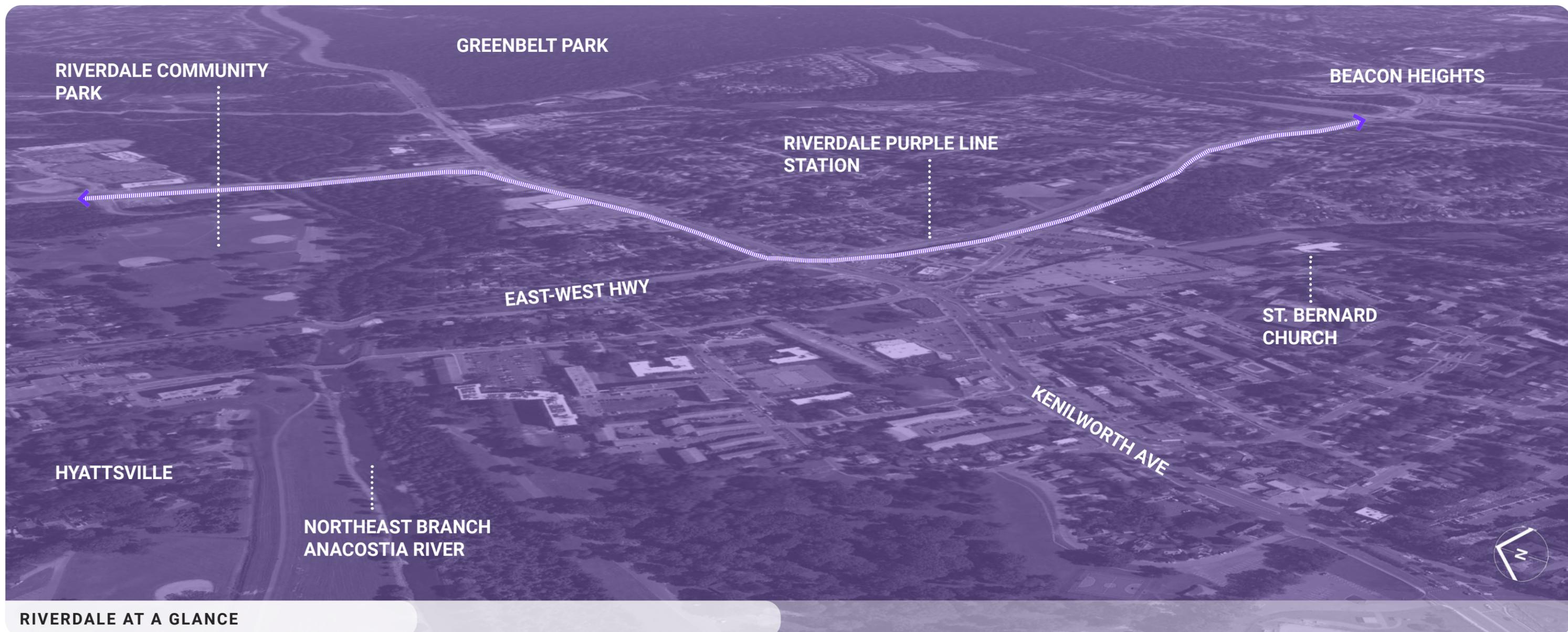
01 MACEK & PENA



02 ALAJATI & OKUBADEJO



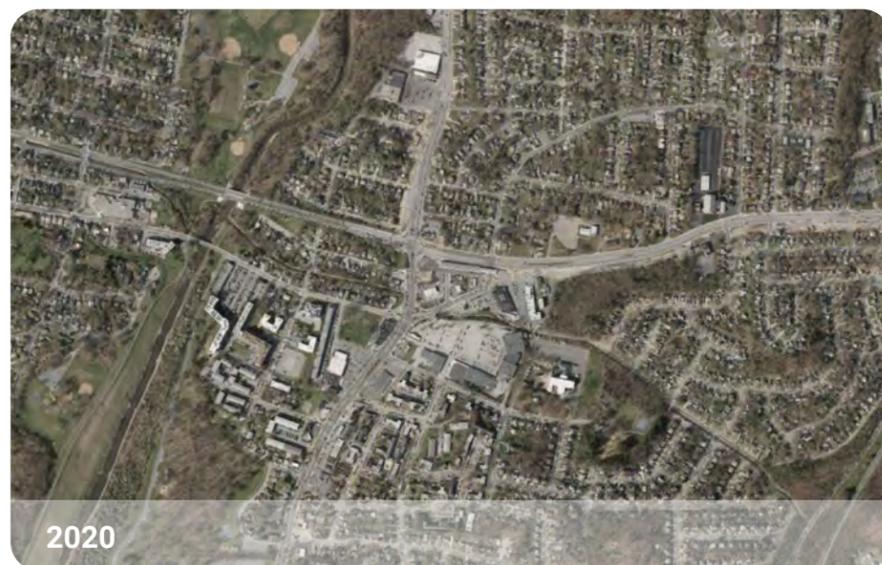
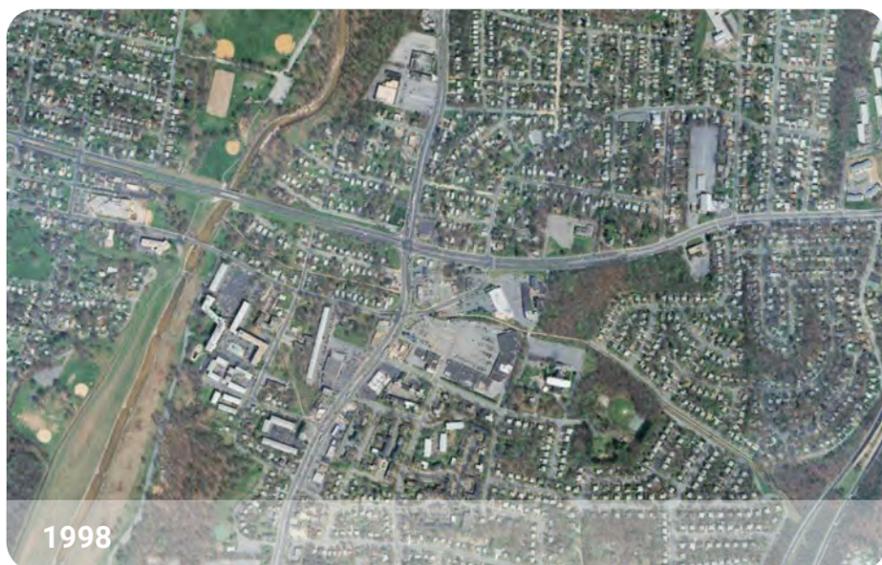
03 RIPLEY & MUIR



### RIVERDALE AT A GLANCE

Riverdale is a typical case of American suburban sprawl, with the area being comprised of a combination of detached single family housing, mid-rise apartments and car-oriented retail with large parking lots. Two large state highways, Kenilworth Ave and East-West Hwy, cut through the center of town, operating as harsh divisions and barriers that limit walkability and connectivity with the adjacent communities of College Park, Hyattsville and Beacon Heights.

With the new Purple Line Light-Rail station being located at the intersection of these two main roads, East Riverdale looks forward to a more walkable and less car dependent future. However, Riverdale currently lacks the density, pedestrian friendliness and attractions it will need to be a successful transit-oriented development.



**Historical Review**

Riverdale began as a plantation, established by a George and Rosalie Calvert under the name Riversdale. In 1887, the land was sold to investors out of NY and the family farmlands became the site for what is known today as the town of Riverdale Park.

**Stagnant**

Much of the urban fabric and development present in 1965 has not seen major change. While some buildings have been well cared for over the years, a large portion of the buildings in the area have fallen into disrepair.

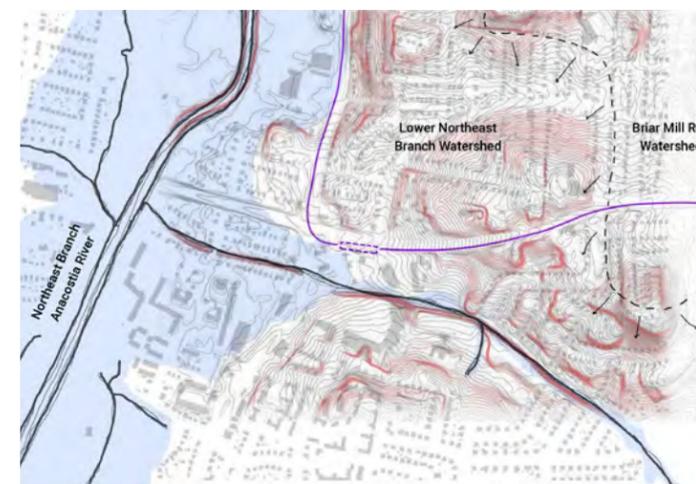


Through an analysis of the area around the new Riverdale Purple Line station, our teams observed a fragmented urban fabric and a lack of accessibility. The two primary parks located within a 1/2 mile of the station are each quite isolated, and while those in the directly adjacent neighborhoods were able to reach them, they could be having a larger impact.

Additionally, as the Purple Line comes to East Riverdale, it is a great opportunity to establish a new type of civic downtown that can help to revitalize the area and connect the community better with the surrounding neighborhoods and places that will now be linked into Riverdale through the Purple Line. With a poverty rate of 13.2%, this new development also will provide economic opportunities for the residents and should provide enhanced job opportunities and avenues for economic success.

**Landmarks**

Key cultural locations identified by the team. Spaces for gathering, education and worship.



**Water & Topographical Divisions**

Steep topography, and an approaching 100 year floodplain cause divisions between residences and inhibit walkability and overall connectivity



**Street Grid & Blocks**

The main streets bisect the area into four distinct zones, with the streets within those zones responding directly to the scale of building and topographical change existing



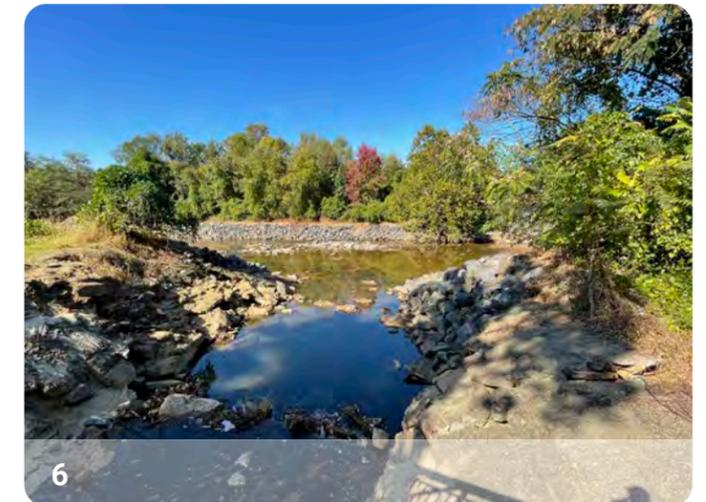
**Existing Land Use**

Existing commercial retail uses are located in a fragmented center among a sea of single family detached housing.



**Impervious Surfaces**

Large amounts of impervious surface dissolve any sense of the urban street wall and contribute to other key environmental concerns such as stormwater runoff and heat island.



- 1. St. Bernard Catholic Church
- 2. Proposed Station
- 3. Megamart Grocery Store
- 4. Shopping Center in Disrepair
- 5. Culvert alongside Browning Park
- 6. Culvert feeding the Anacostia

Source: Purple Line Transit Partners

To College Park Metro Station



To Annapolis Road / Glenridge



**Proposed Design**  
 Station is elevated 40' in above East-West highway, dwarfing the context. A simple staircase and elevator is used for vertical circulation at each end of the station.

Images source: <https://www.purplelinemd.com>



Proposed Station Area Plan

**Strengths:**

- Rich, diverse culture
- Proximity to the Anacostia

**Weaknesses:**

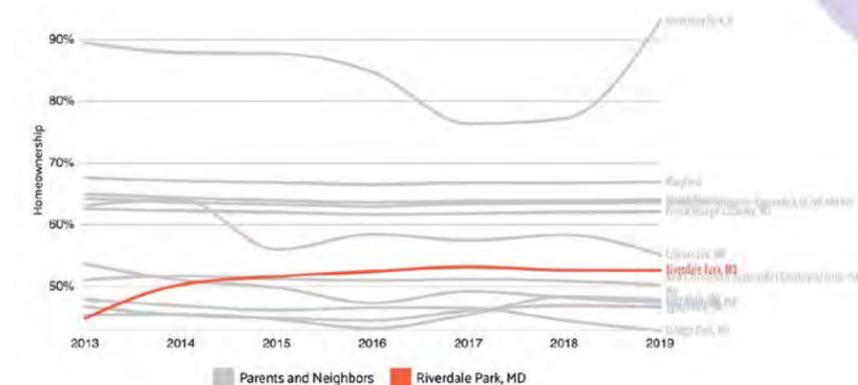
- Lack of or slow development of retail areas
- Streets are not geared towards pedestrians

**Opportunities:**

- Create spaces dedicated to gathering
- Develop and beautify run-down areas
- Diversify modes of transportation
- Engage environmental context

**Threats:**

- Uncontrolled, rapid population growth
- Rising land costs and development put current residents at risk



sources: datausa.io/profile/gco/riverdale-park-md/#housing, worldpopulationreview.com/us-cities/riverdale-park-md-population

## Riverdale Park Team Development Goals

- Develop a pedestrian friendly neighborhood
- Establish civic center/downtown
- Revitalize community connection to the river

PEOPLE IN RIVERDALE ARE...  
**25% SPANISH SPEAKERS**

PEOPLE IN RIVERDALE ARE...  
**44% FOREIGN BORN CITIZENS**

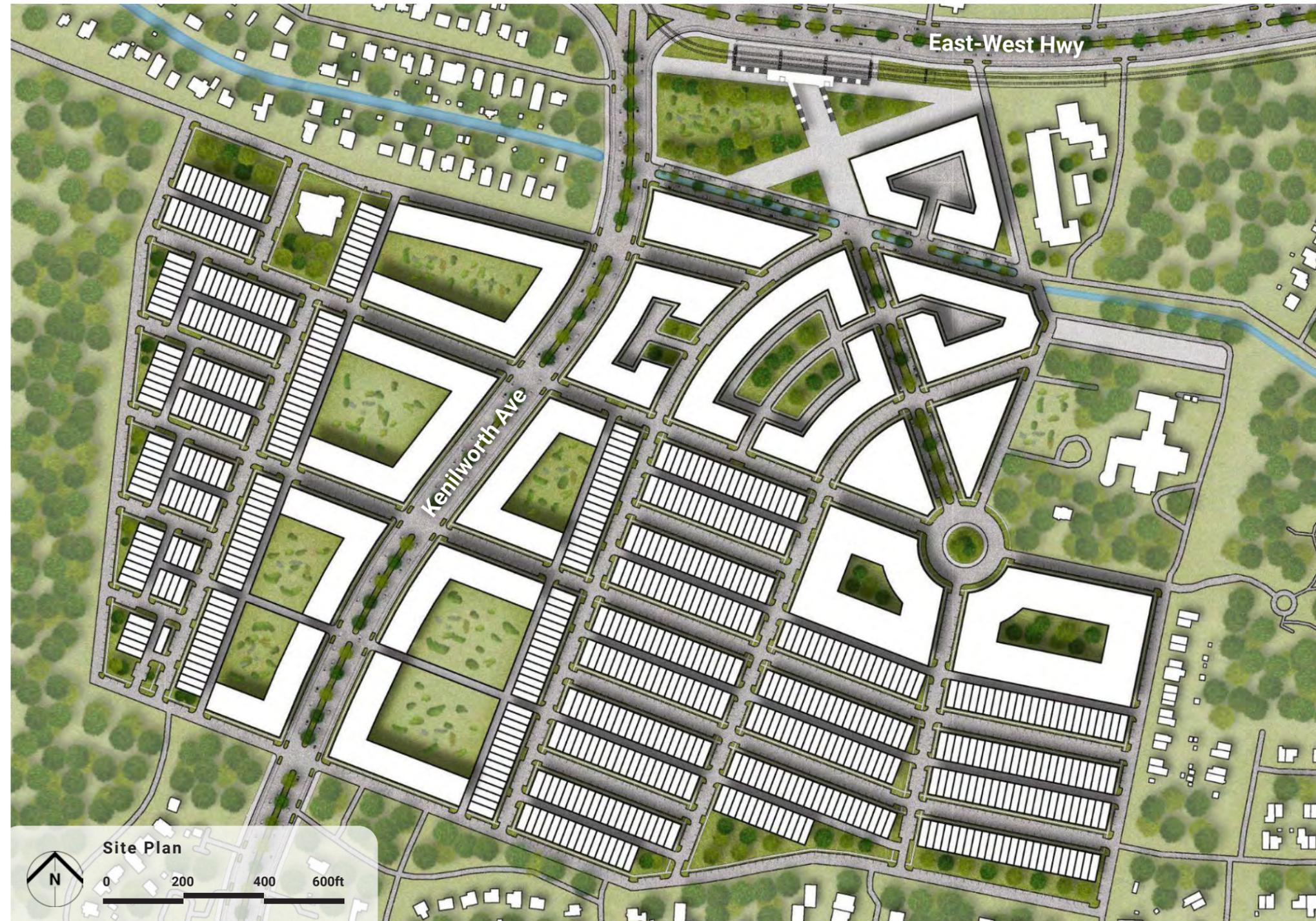
HIGHEST POPULATION CONCENTRATION IS SEEN IN...  
**KIDS 0-14  
 ADULTS 25-44**

## 01

**East Riverdale  
Master Plan***Andrew Macek  
Alex Pena*

Seeking to create a more walkable and sustainable site, the master plan focuses around a re-conceived Keniworth Avenue design that incorporates a boulevard/retail street on the west side of the plan. The addition of street trees and other elements calm the traffic making the new streets much more pedestrian friendly. The development around the Purple Line station proposes a dense community around the station enhancing East Riverdale with specific focuses in three areas: topography, walk-ability and place-making along the new boulevard.

In order to mediate the intense topographical divisions that exist on site, this scheme takes care to allow the street grid to be influenced by the topography. An axial connection is established from the new Purple Line station directly up a geographic high point where a public circle is located. Streets extend radially outward from this point. Buildings with a variety of public and civic programming surround this space, including St. Bernard's Church, further establishing it as a public space, for anyone in the community.





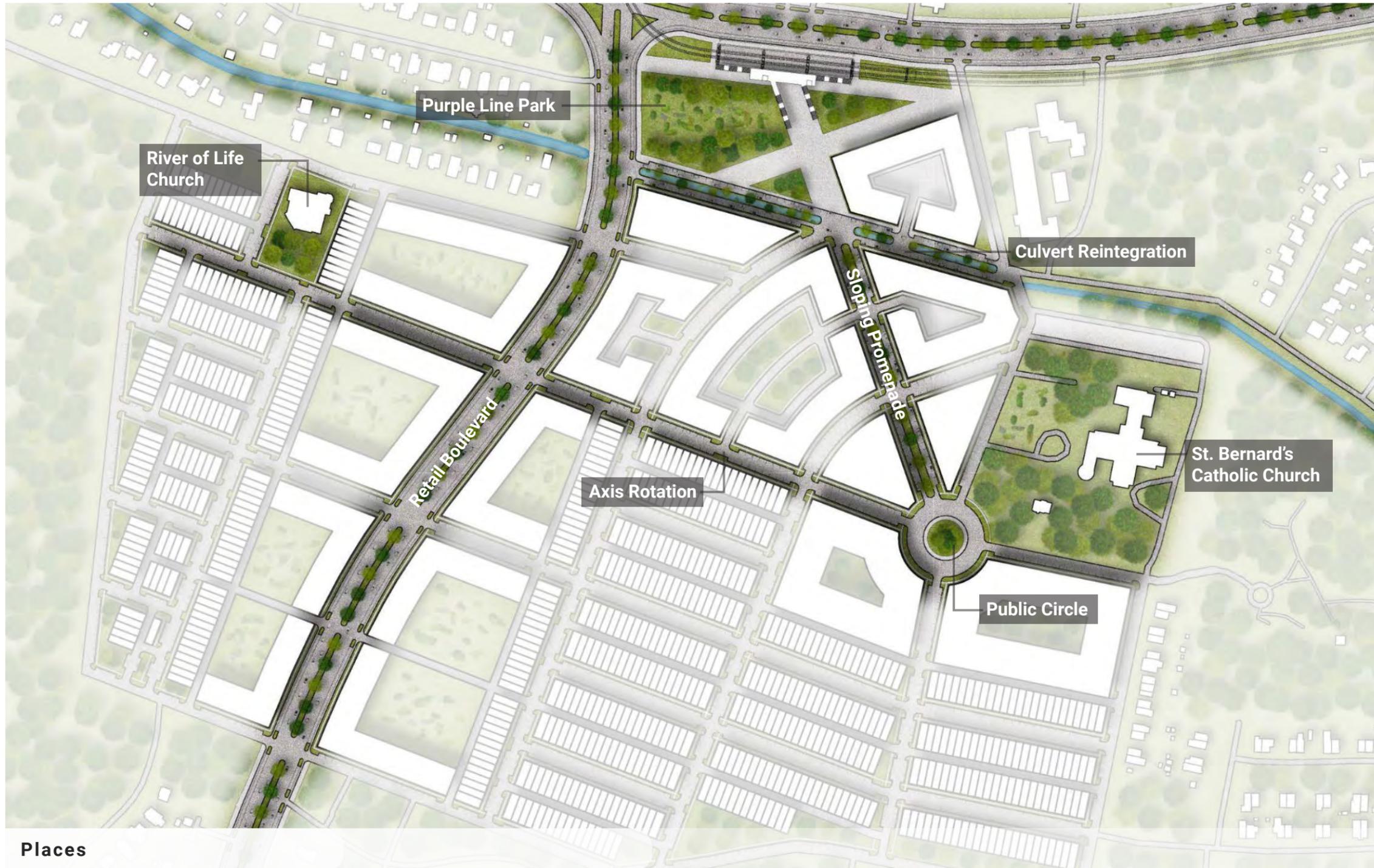
**Right: Phasing**

High-density development is first focused directly adjacent to the new station and then expanded to incorporate the enhancements to the boulevards and housing that borders the Anacostia River to the west.

**Below: Existing & Proposed Landscape**

To address the existing conditions of limited and disconnected green space in the area, a new park was established at the station as a way of introducing sustainability and nature to the experience. Green roofs and green spaces in the mixed-use buildings to help control stormwater runoff and heat island.





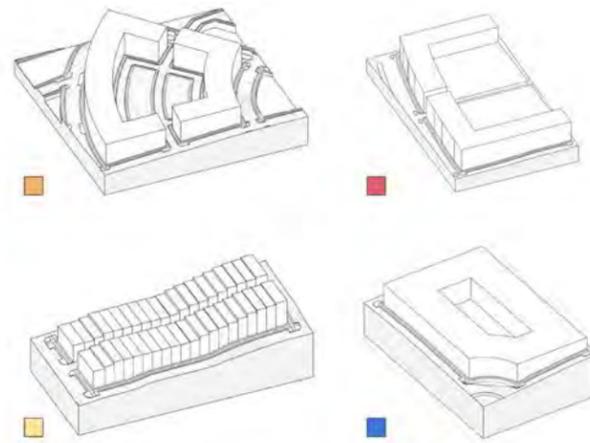
Places



**Walkability**  
 New development is focused entirely within a 10 min walk radius to increase walkability and accessibility for all.



**Circulation**  
 The upgraded boulevards and Purple Line station are the primary means of access to the site. A small scale street grid helps to increase walkability in an area where steep changes in topography make walking more challenging.



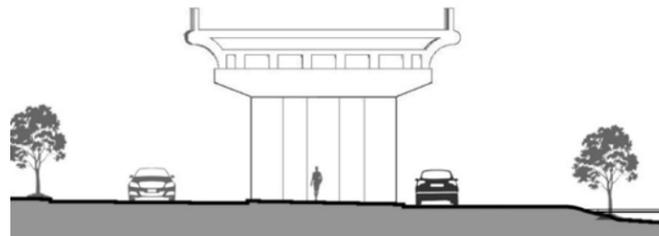
**Program**  
There is a diverse mix of building uses on the site.

Multi-Family  
Mixed Use  
Townhomes  
Institutional

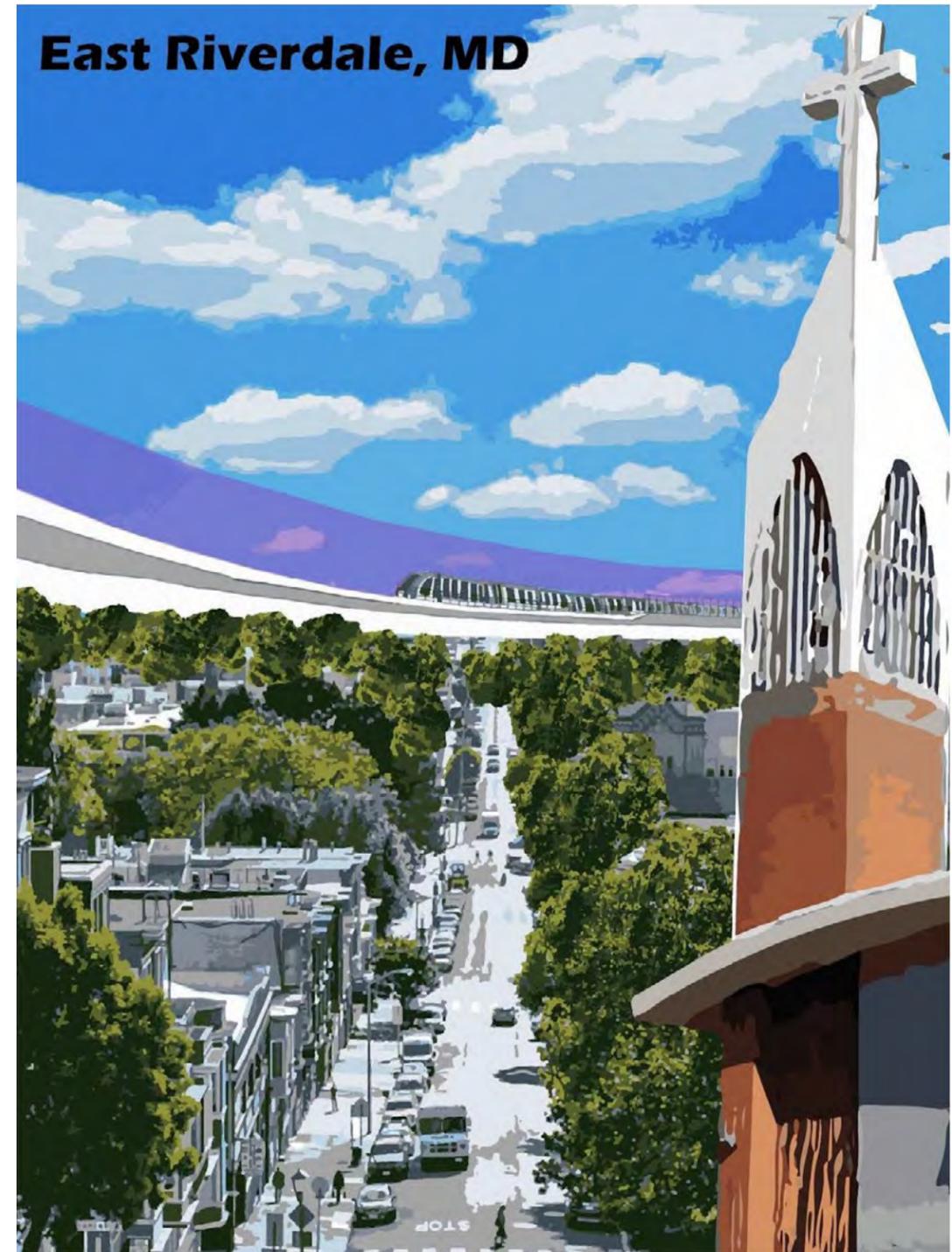
**Building Type Tabulation**  
Multi-Family Residential: 1,650 units, 1,486,000 GSF  
Mixed Use Retail: 591,000 GSF  
Mixed Use Residential: 1,720 units, 1,547,000 GSF  
Townhomes: 632 units, 2,250,000 GSF  
Institutional: 1,268,000 GSF  
Open Space: 18 Acres



**Edges**  
Buildings come right up to the streets forming a consistent present street edge.



**Street Section**  
There is multi-modal transportation and increased walkability around the proposed station.



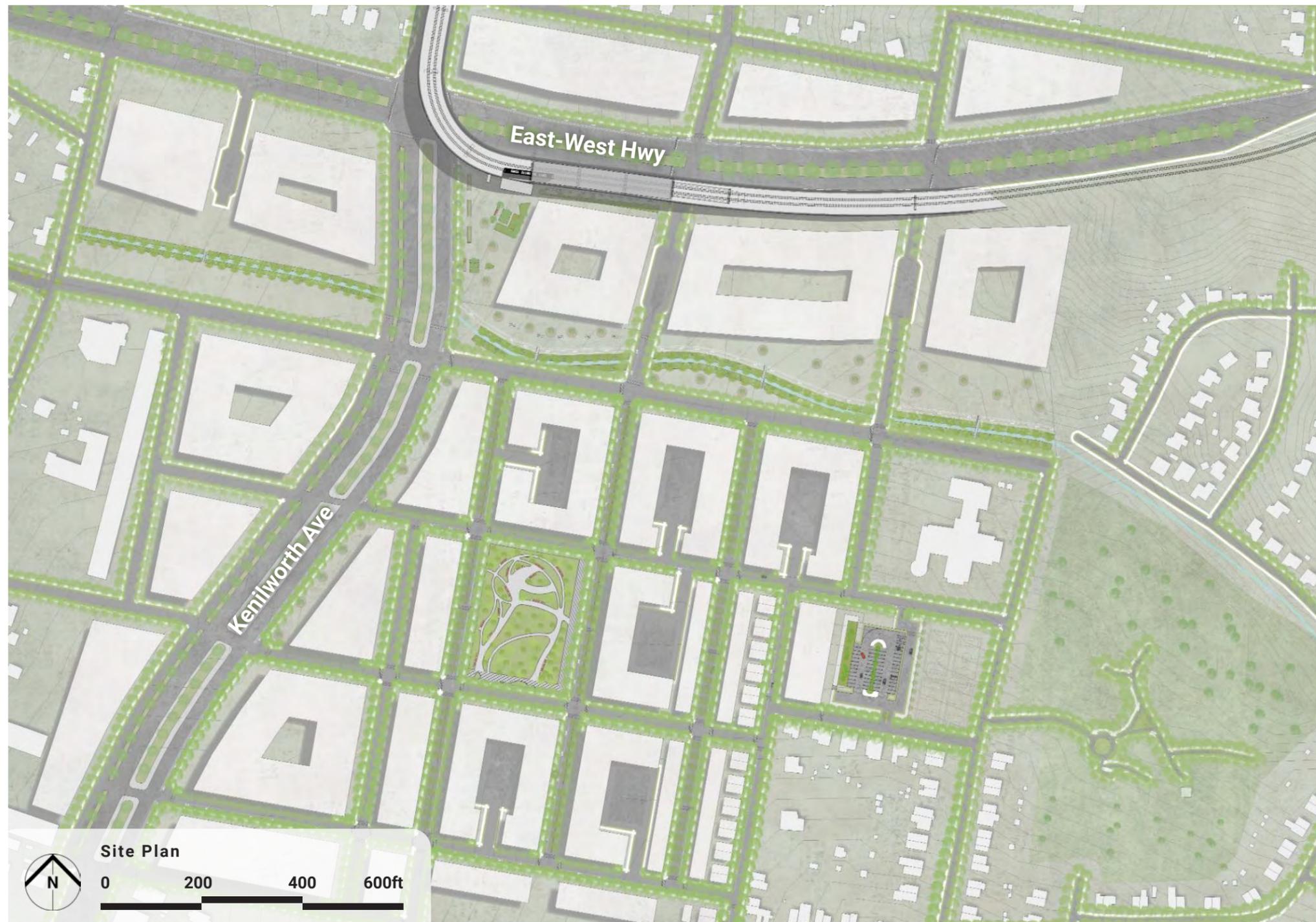
## 02

East Riverdale  
Master Plan*Fadi Alajati**Adeola Okubadejo*

This master plan takes the topography and natural elements of the site to develop public spaces and residential blocks that merge the context of East Riverdale together. The topography and landscape are designed to allow for the existing voids at the core of the community to be repurposed. The master plan also proposed to transform an existing nearby culvert into a contributing part of the start public space, and give order to the current haphazardness of the street edges around the existing public spaces.

A new social space links the north and south corridors with pedestrian and vehicular travel introducing a commercial street promenade and higher density residential buildings. New public space mix the diversity of land use, increasing density around the proposed transit stop, creating more public engagement in the site, and adding greenery to the site.

The project also proposes changes to the topography to redirect water and run-off to areas with enhanced stormwater management infrastructure. The area underneath Brownings Grove is repurposed for water storage and new streets are surfaced with permeable pavement. There are 3 foot wide bio-retention facilities within the courtyards to manage the site in a sustainable way.





**Phasing**

An extensive phasing strategy was developed to negotiate the dramatic changes that needed to be made to the existing site conditions. Underutilized soft sites were identified at the start to establish the zones of development opportunity. High density commercial development was then brought in around the main avenues through the site and mid to high density residential beyond to mediate the transition to the existing fabric.



1 - Soft Sites



2 - Development Opportunity



3 - Regrading Topography



Parti



4 - Parks & Open Space



5 - East-West Highway



6 - Kenilworth Avenue



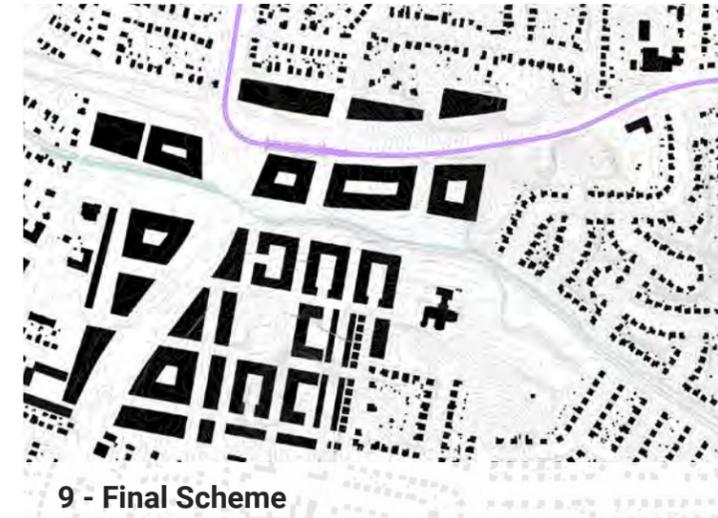
Massing



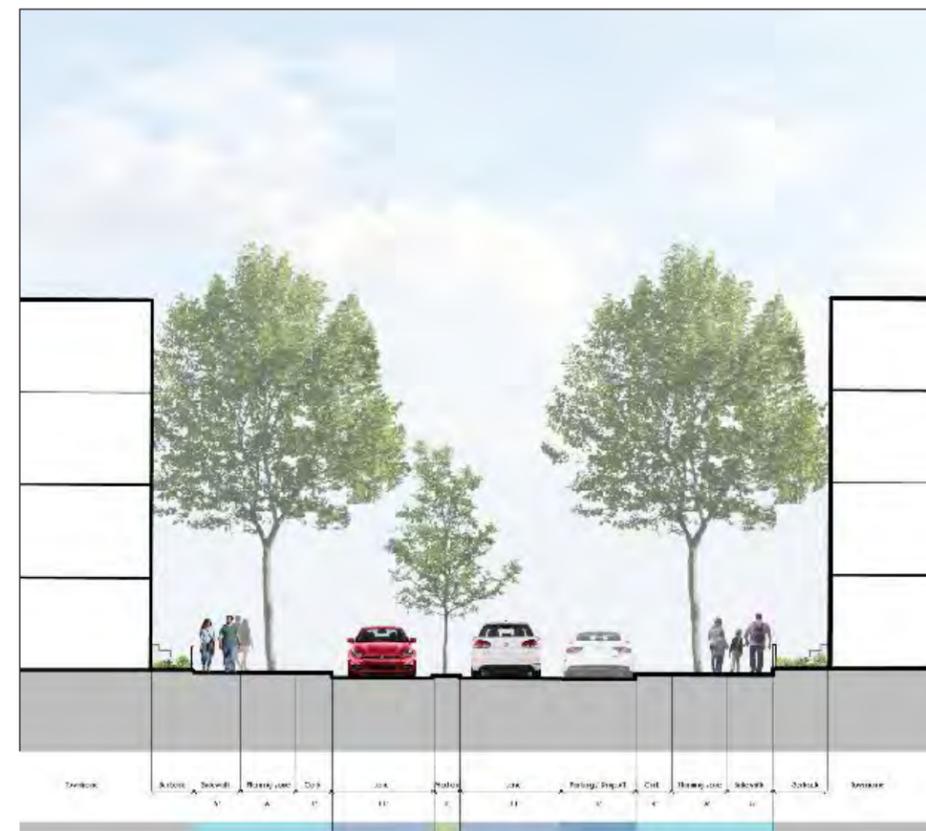
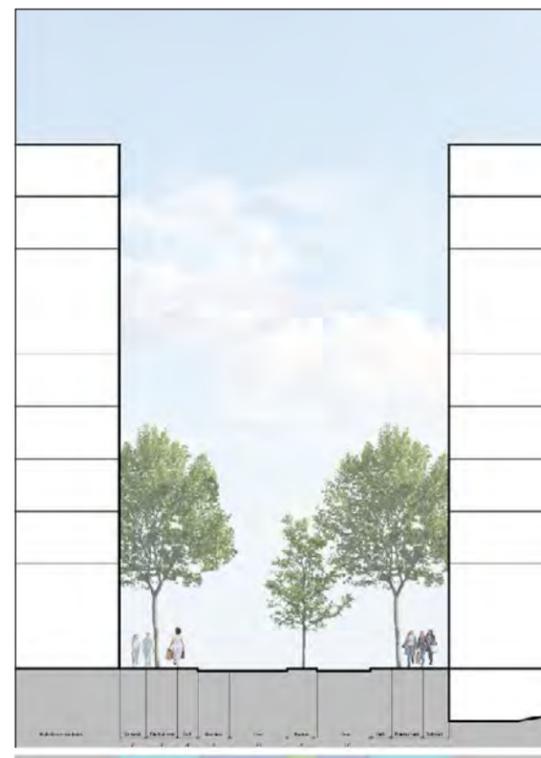
7 - Living District



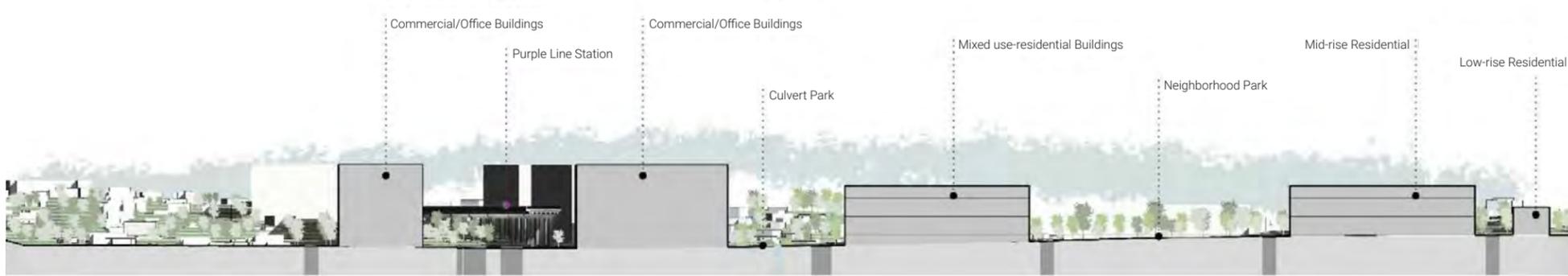
8 - Neighborhood Scale



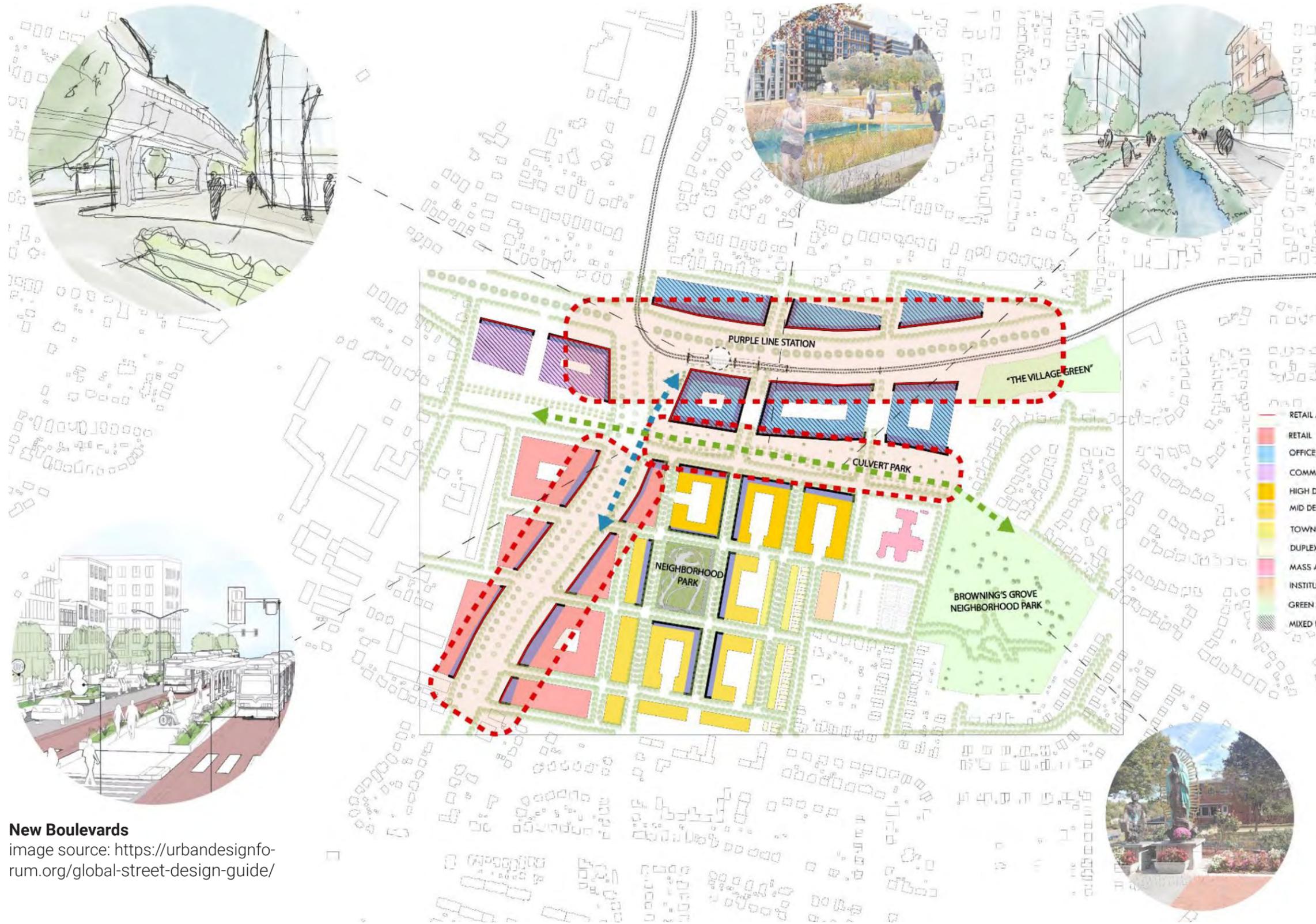
9 - Final Scheme



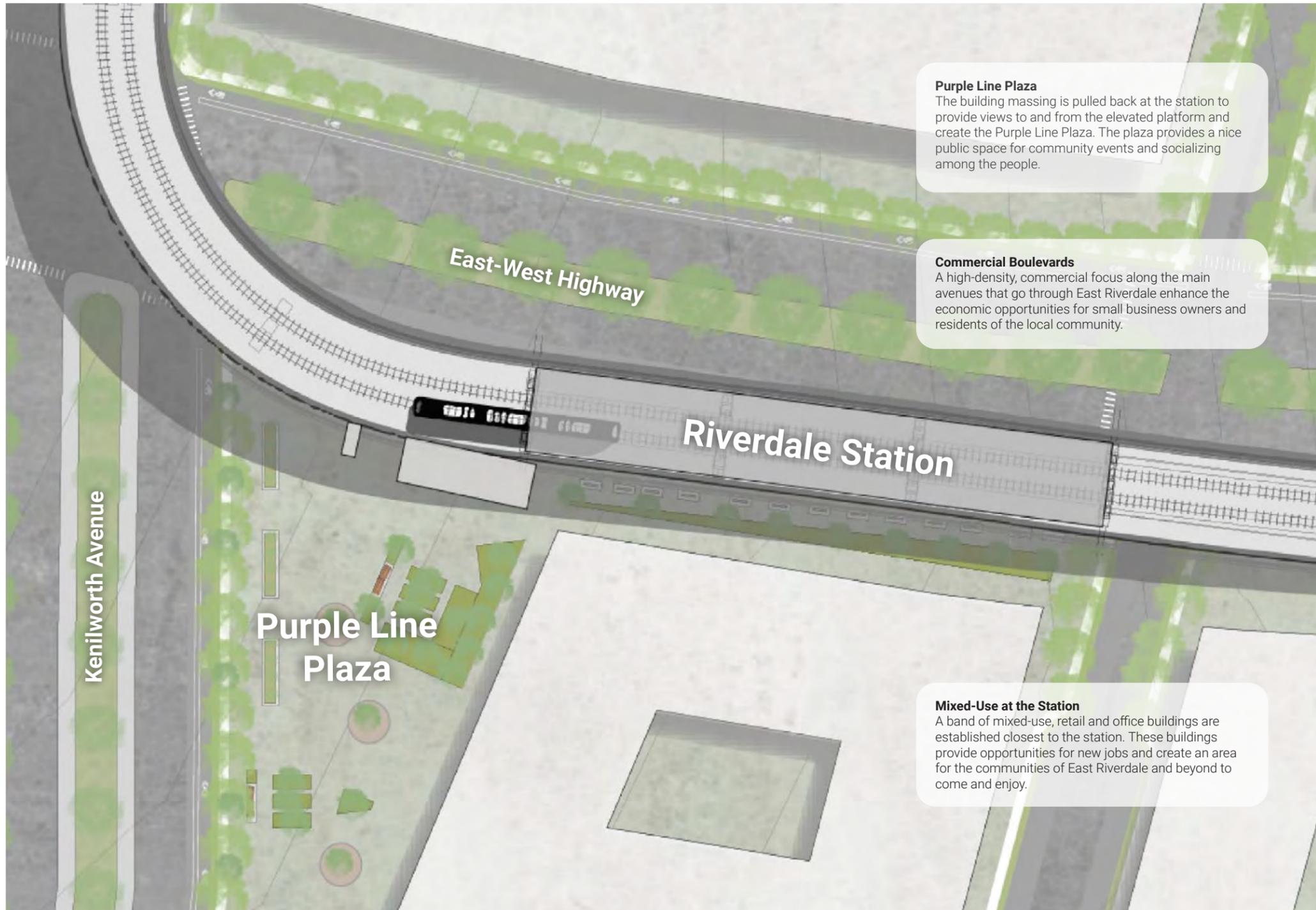
Commercial Corridor



Retail Street Vision



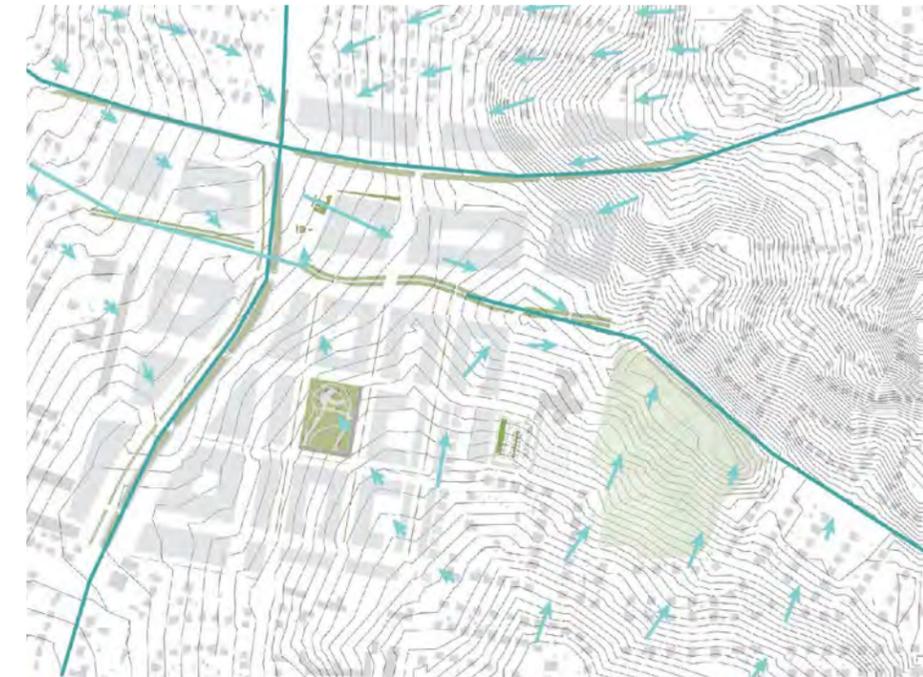
**New Boulevards**  
 image source: <https://urbandesignforum.org/global-street-design-guide/>

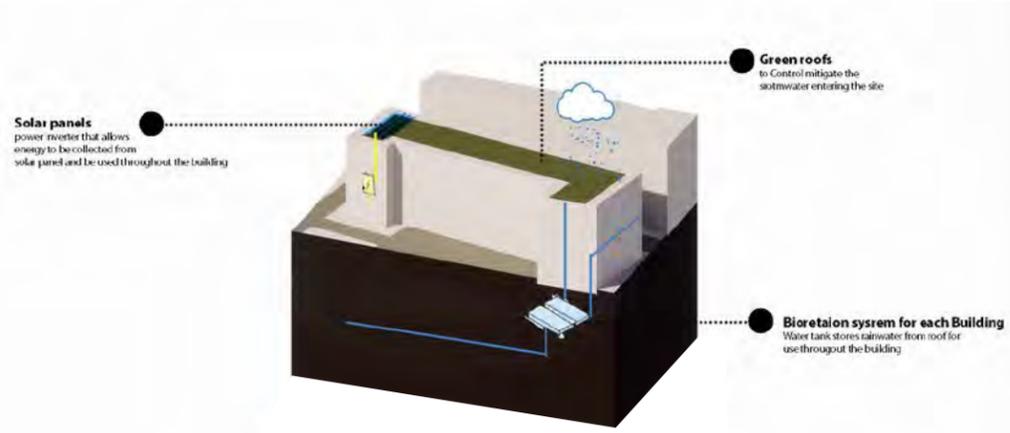


**Purple Line Plaza**  
 The building massing is pulled back at the station to provide views to and from the elevated platform and create the Purple Line Plaza. The plaza provides a nice public space for community events and socializing among the people.

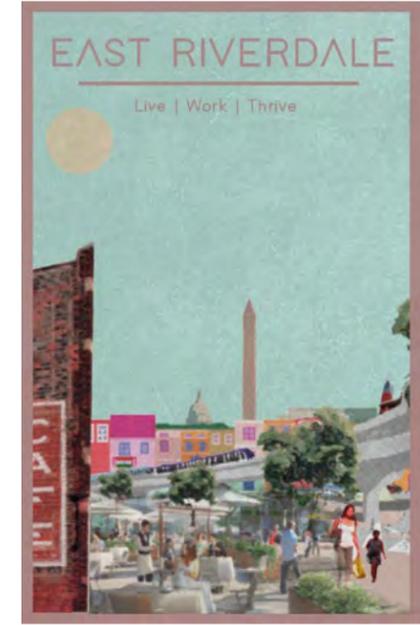
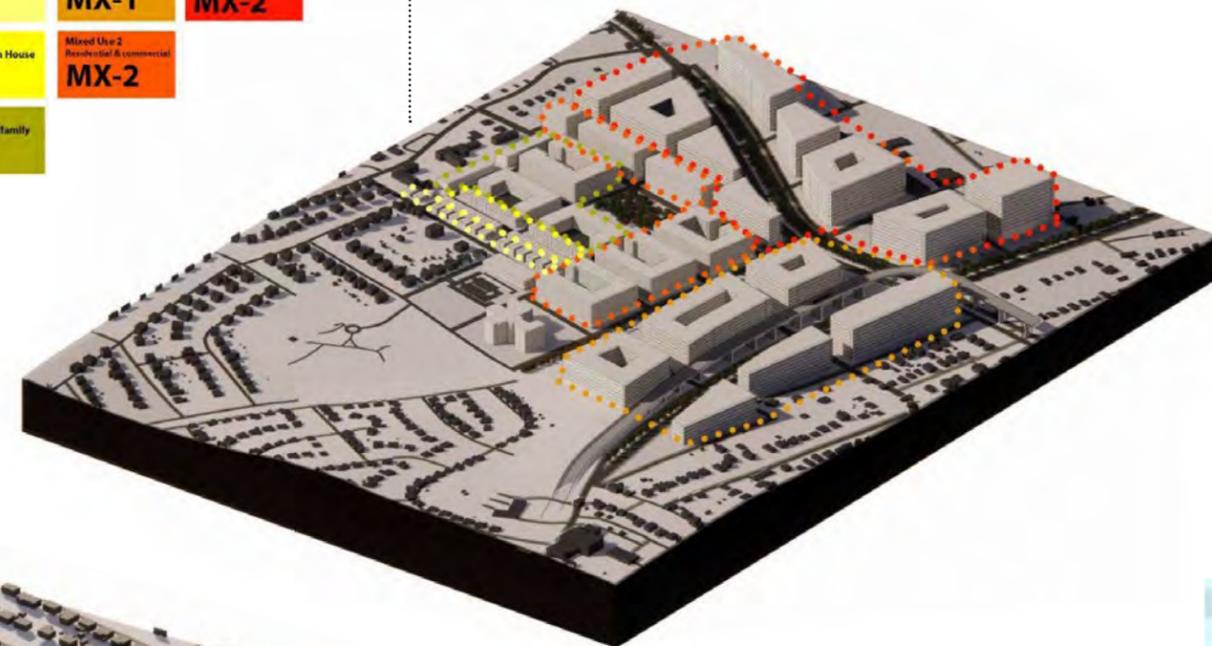
**Commercial Boulevards**  
 A high-density, commercial focus along the main avenues that go through East Riverdale enhance the economic opportunities for small business owners and residents of the local community.

**Mixed-Use at the Station**  
 A band of mixed-use, retail and office buildings are established closest to the station. These buildings provide opportunities for new jobs and create an area for the communities of East Riverdale and beyond to come and enjoy.





Residential 1-2 Family <b>R-2</b>	Mixed Use 1 Office & Commercial <b>MX-1</b>	Mixed Use 3 Community Commercial <b>MX-2</b>
Residential 1-3 Fam. Town House <b>R-3</b>	Mixed Use 2 Residential & Commercial <b>MX-2</b>	
Residential Mid rise Multifamily <b>R-5</b>		

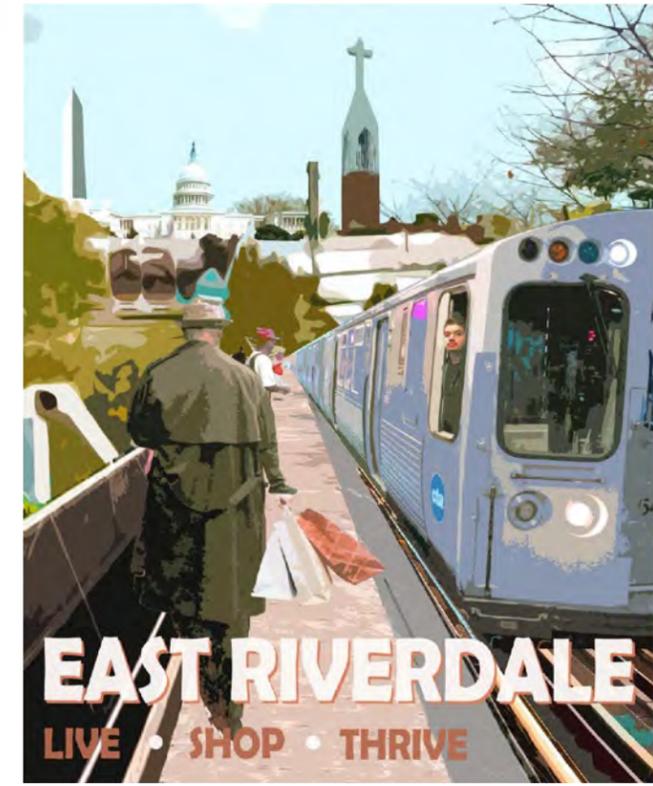


**Sustainability**  
Block-based bio-retention systems instead of site based: independent bio-retention systems for each building; Use green roofs to control and mitigate the stormwater runoff on site an along the culvert.



**Sustainability**  
Bio-retention system located within the courtyard blocks where parking is moved to a half-level below ground; Bio-retention facilities within the courtyards - 3 feet; Solar panels installed on the green roofs while maintaining a certain width between the panels.

**Travel Poster**  
These posters put forward the vision for the future of East Riverdale; a complete, affordable community that supports all aspects of an urban lifestyle, taking advantage of its adjacency to Washington DC and the new affordable linkage to the city through the Purple Line.



## 03

**East Riverdale  
Master Plan***Benjamin Ripley  
Ryan Muir*

This master plan sets links East Riverdale to the other nearby communities while generating a new one at the station area. By increasing housing density and diversity while maintaining an affordable community, East Riverdale is reestablished as an important location connected to its nearby natural assets. A new park is designed around the culvert that cuts through East Riverdale to transform it from a dividing element to a place where the communities in the area can all come together.

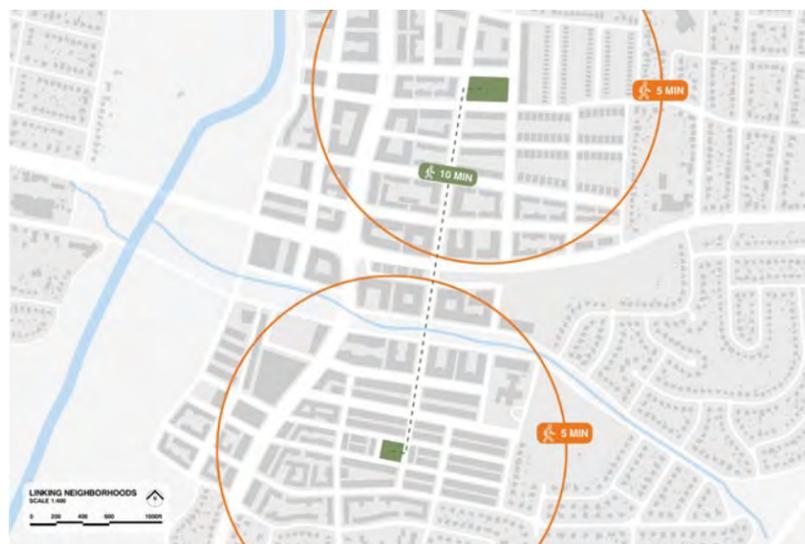
To address the lack of green space in East Riverdale, multiple new parks at a variety of scales are incorporated into the plan. One of the key ideas at the beginning of this project was to create a park along the northeast branch of the Anacostia River. Incorporating local elements and other stormwater management tactics pulls the edge of the floodplain away from new and existing buildings. Within that park-scape, social and environmental programming is included, such as spaces for social activity, education, wind power, geothermal, and other approaches with positive health and sustainability impacts.





**Framework & Organization**

The new street grid is knit into the existing street network and orients streets and circulation toward the new Anacostia River Park. A cross axis is established at the station, providing a direct connection between the two neighborhood squares.





**Phasing**

Phasing strategies introduced for immediate impact and additional interventions over time. Initial commercial soft sites identified in gray. Development is focused on bringing density around the station first and then additional uses later.

**Phase 1 Demo:**  
 14 Single Family Detached  
 50 Low-rise units  
 309,160 sf Retail/Industrial

**Phase 1 Construction:**  
 2,781 Housing Units (Low-High Rise)  
 340,000 sf Civic  
 900,000 sf Office  
 486,000 sf Retail



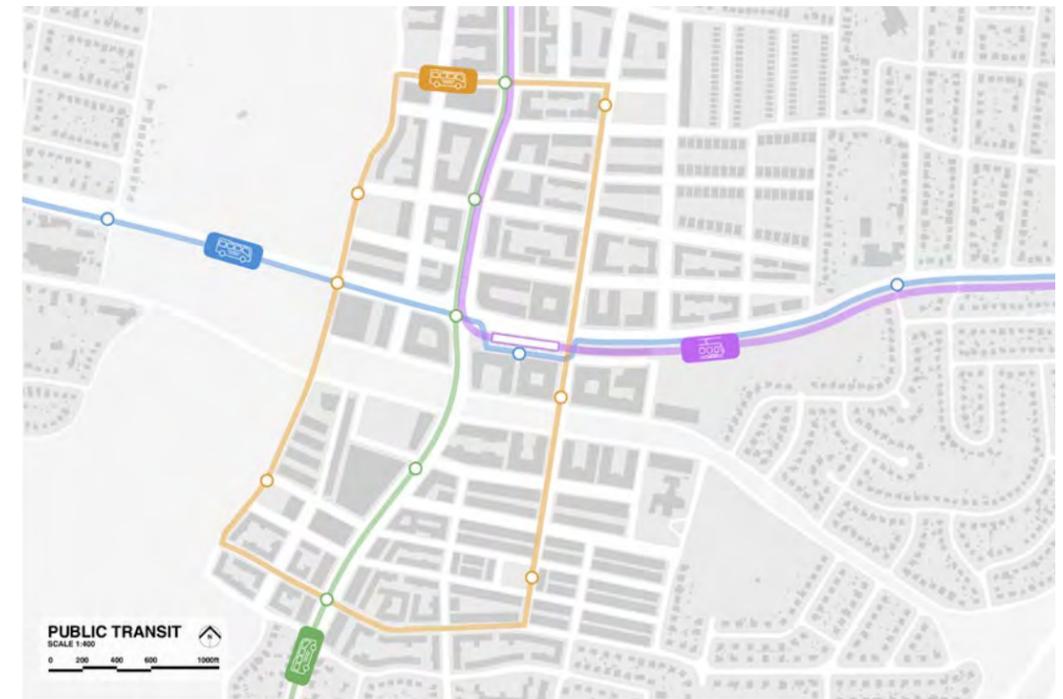
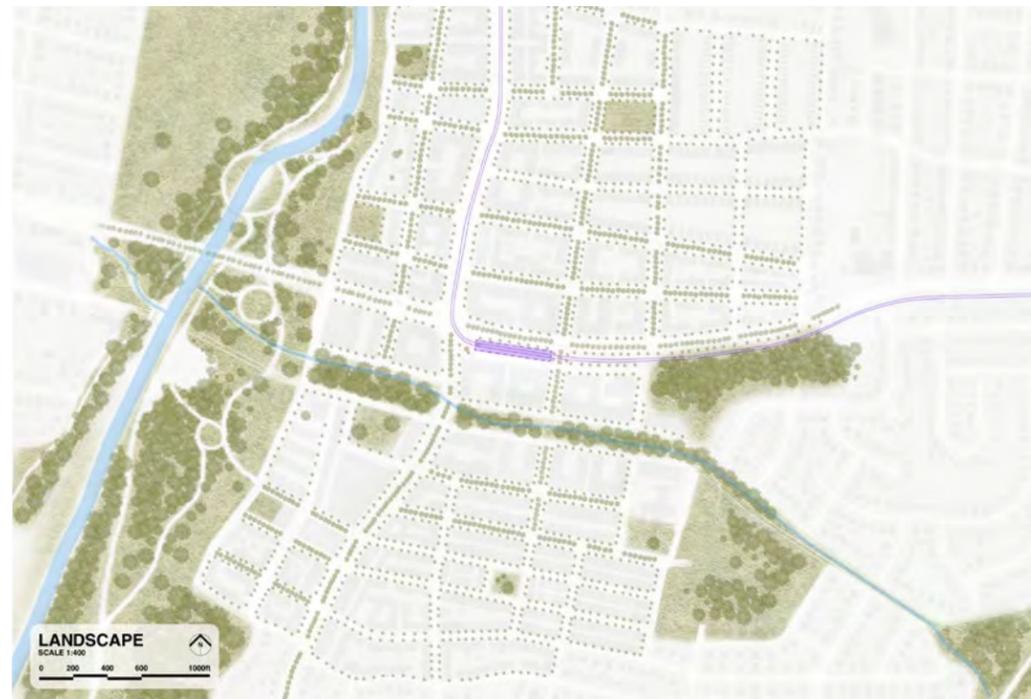
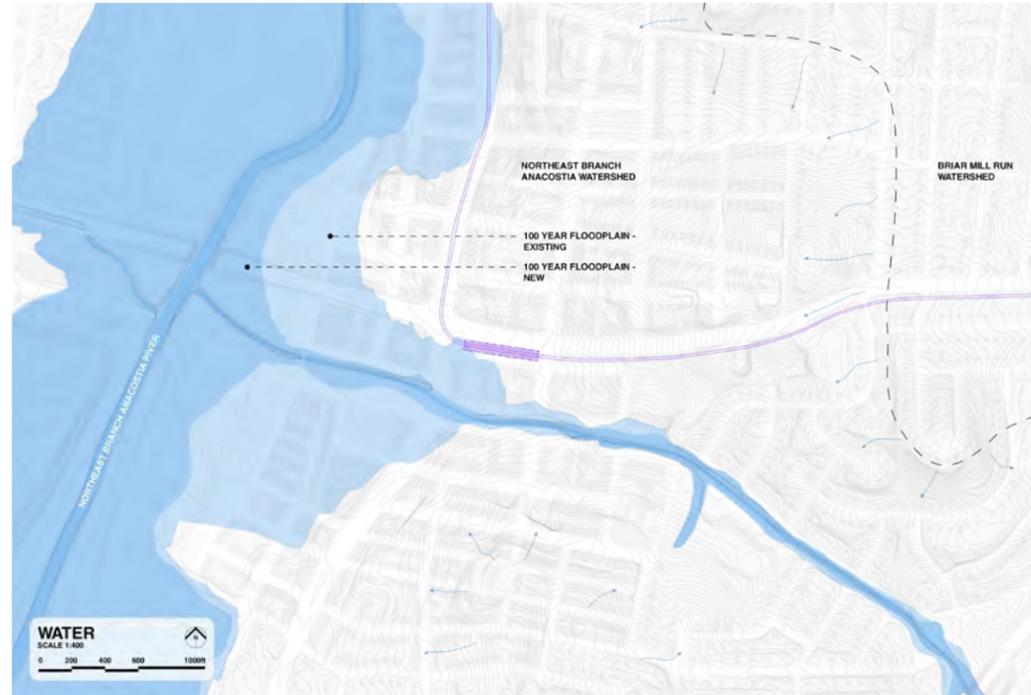
**Phase 2 Demo:**  
 241 Single Family Detached  
 7,300 sf civic - relocated

**Phase 2 Construction:**  
 3,351 Housing Units (Low-High Rise)  
 338,000sf Retail



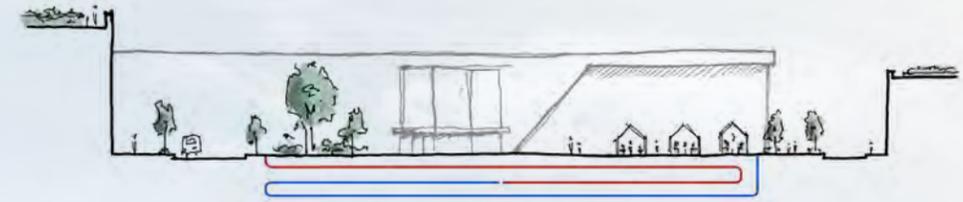
**Phase 3 Demo:**  
 244 Single Family Detached  
 1,084 Mid-rise units

**Phase 3 Construction:**  
 382 Townhomes  
 1,344 Mid-rise units (@800-1200 sf typ)  
 77 Duplex  
 58 Fourplex





**Anacostia River Park Section**



**Riverdale Community Center**

Geothermal and solar strategies are used for building heating and cooling. New greenhouses and upgraded spaces for farmers market help to maintain some of the cultural assets that were already in place.



**Riverside Amphitheater**

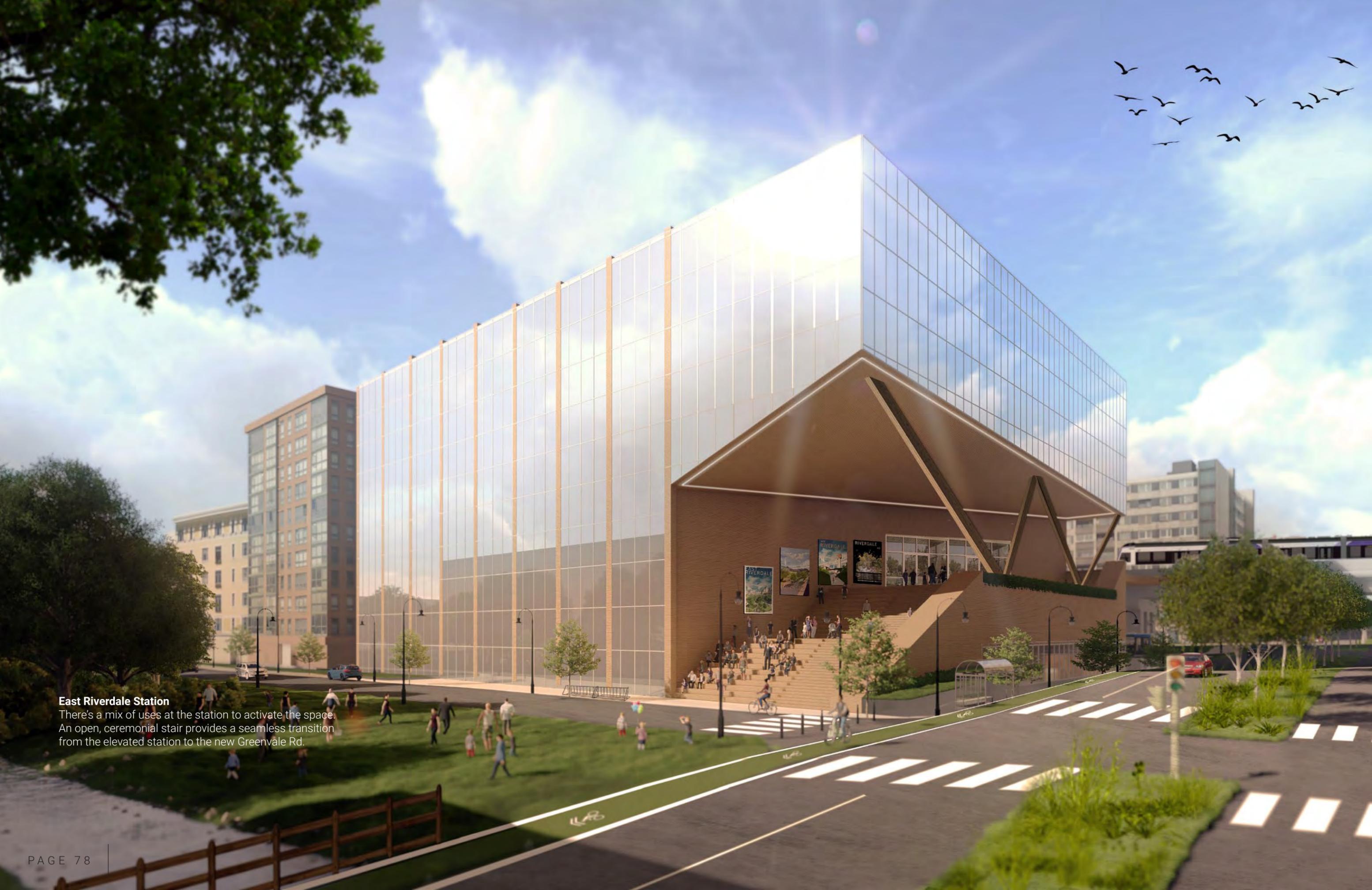
A terraced arena is designed to flood as water levels rise to take advantage of nature as an asset.

**Bio-retention**

Riverside bio-retention areas with enhanced permeability work together with the built-up berm to control stormwater and prevent flooding.

**Active Paths**

Physical activity is highly encouraged in the park, with a multitude of spaces for play and exercise. The new bike paths in the park connect with the existing paths on the other side of the river via the raised Bike Loop Bridge to tie in more seamlessly with the nearby communities.

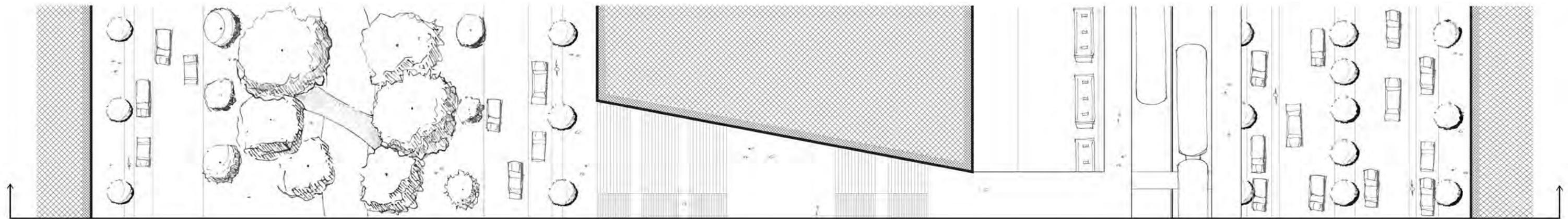
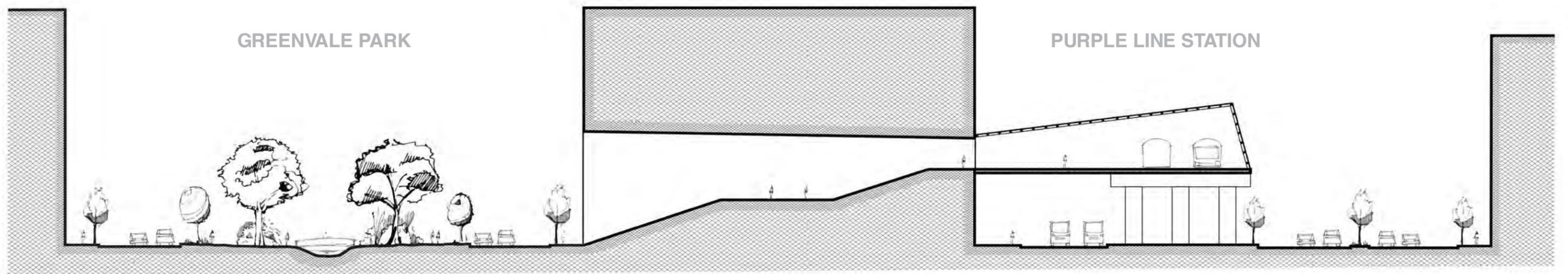


**East Riverdale Station**

There's a mix of uses at the station to activate the space. An open, ceremonial stair provides a seamless transition from the elevated station to the new Greenvale Rd.

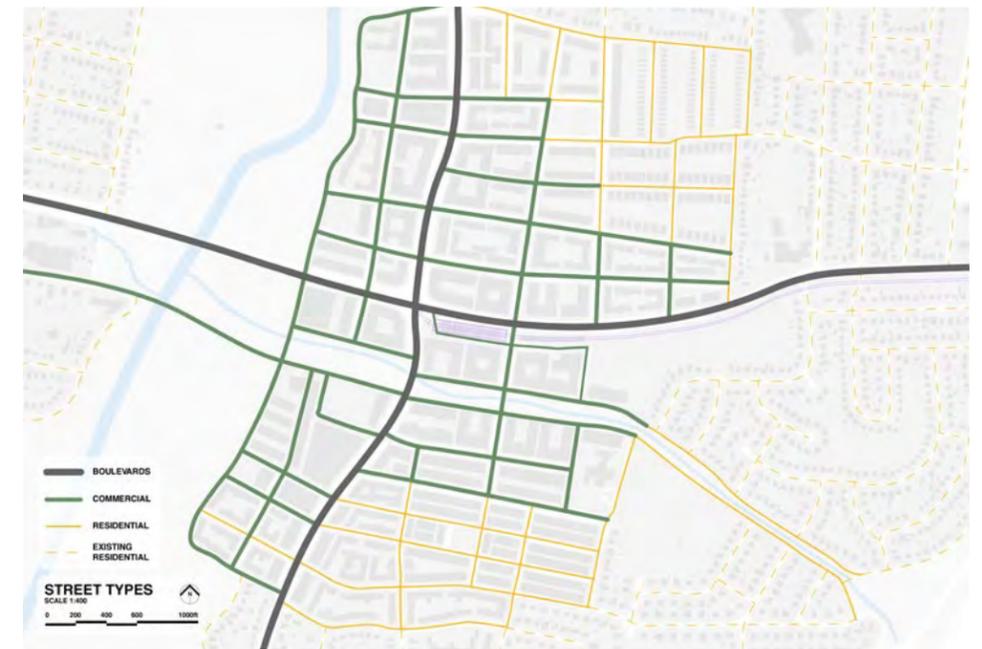
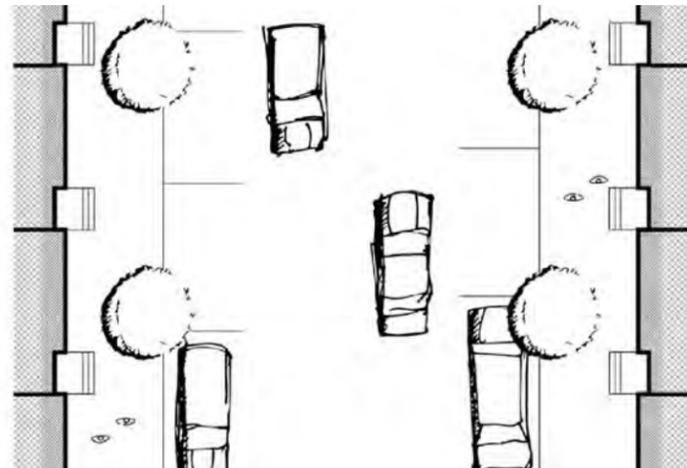
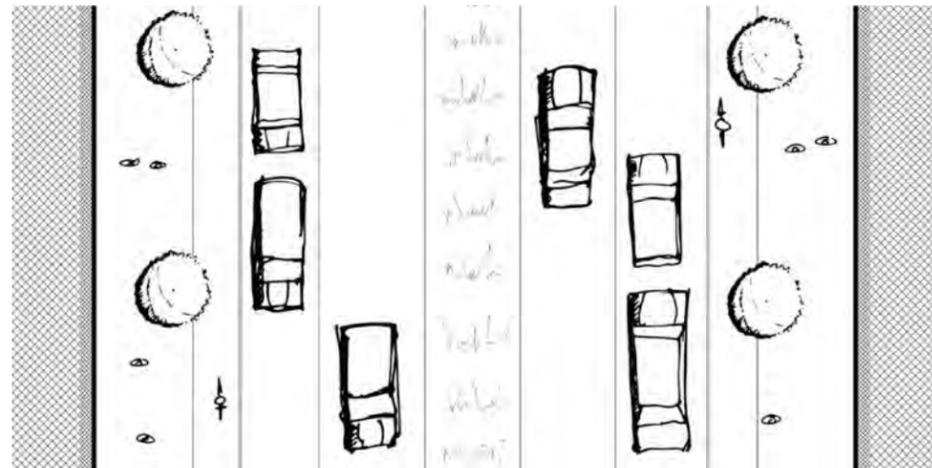
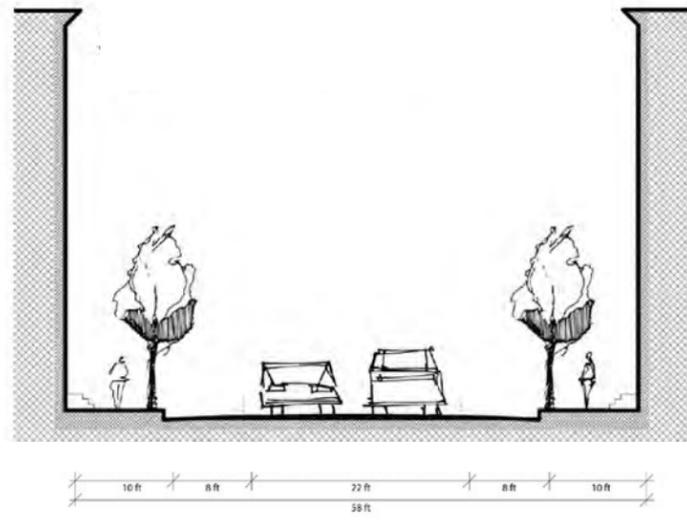
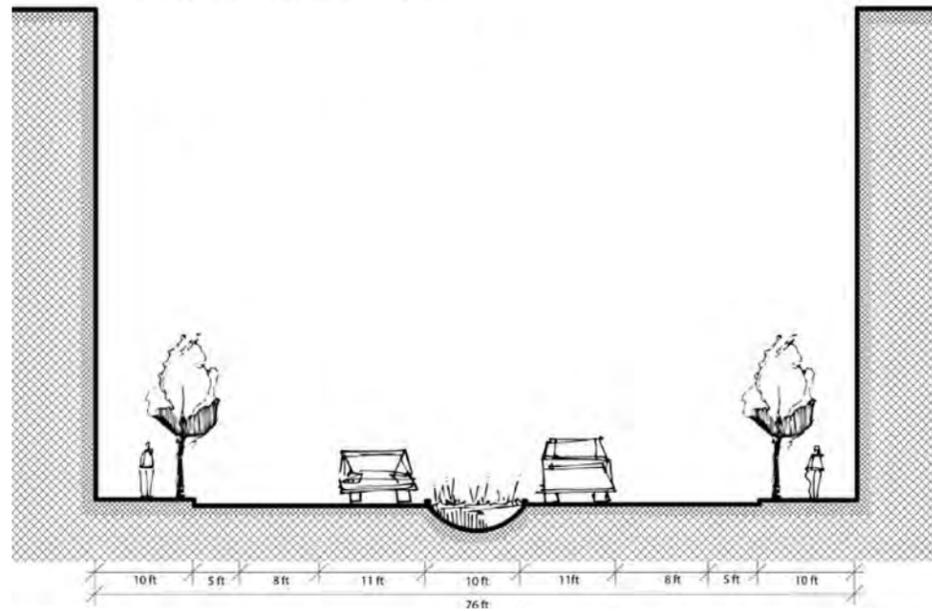


**Douglass Neighborhood Square**  
A combination of live-work and residential townhomes surround the park to provide space for community centered activities.



#### East Riverdale Station Area Plan & Section

There's a hybrid of solar and green roofs to mitigate heat island effect and gain energy. The station is tied directly into the architecture to mediate the transition from the street to the station, thus making it more approachable.



**Typical Commercial Street**

There's a 76' building face to building face, bioswale running down the middle to control stormwater runoff, bike lanes, and street parking on each side that can be converted to parklet space.

**Typical Residential Street**

There's a 58' building face to building face, street parking for residents and visitors, and stormwater is directed to the edges for drainage.

