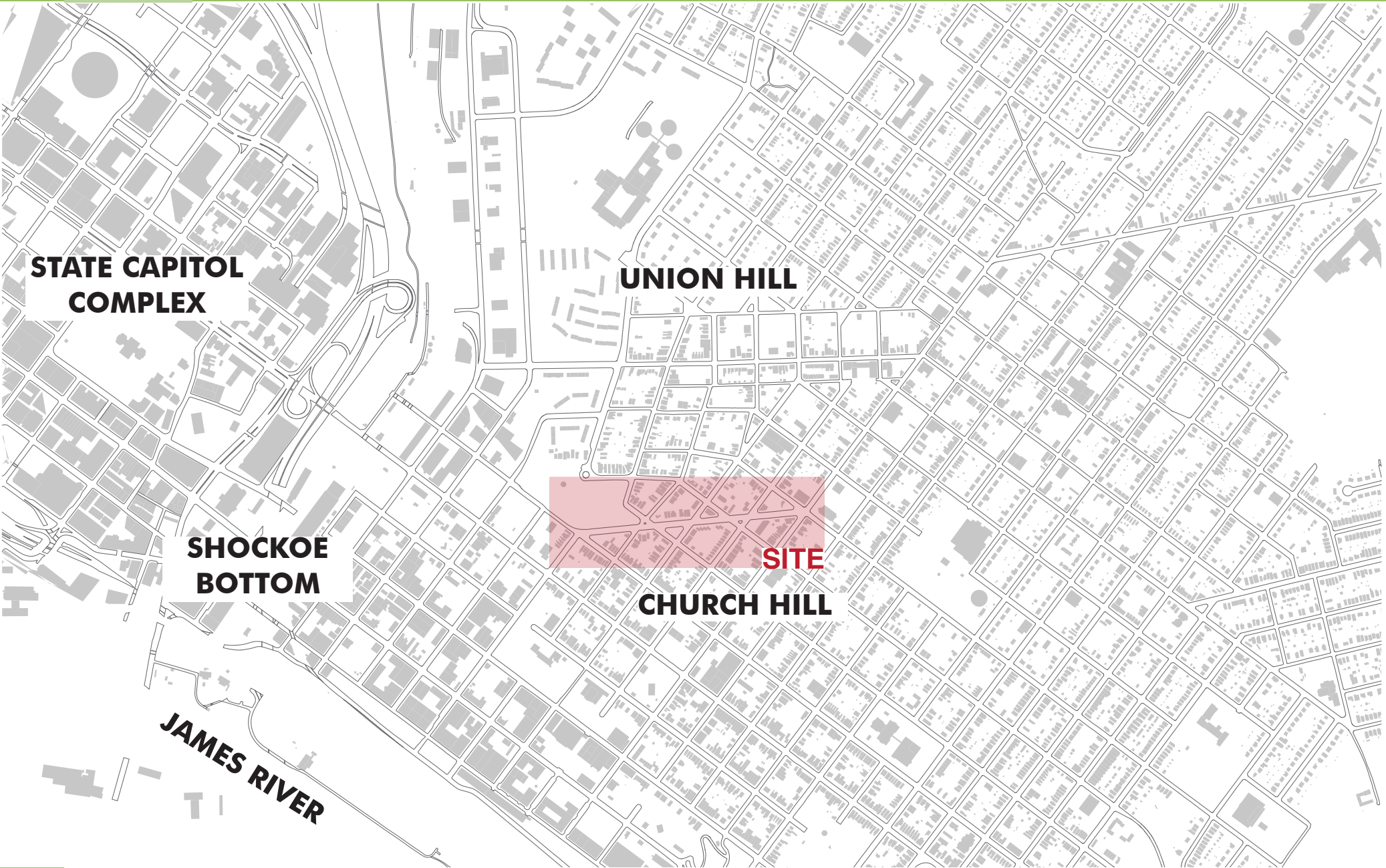


SITE CONTEXT



**STATE CAPITOL
COMPLEX**

UNION HILL

**SHOCKOE
BOTTOM**

SITE

CHURCH HILL

JAMES RIVER

0 500' 1000' 2000'

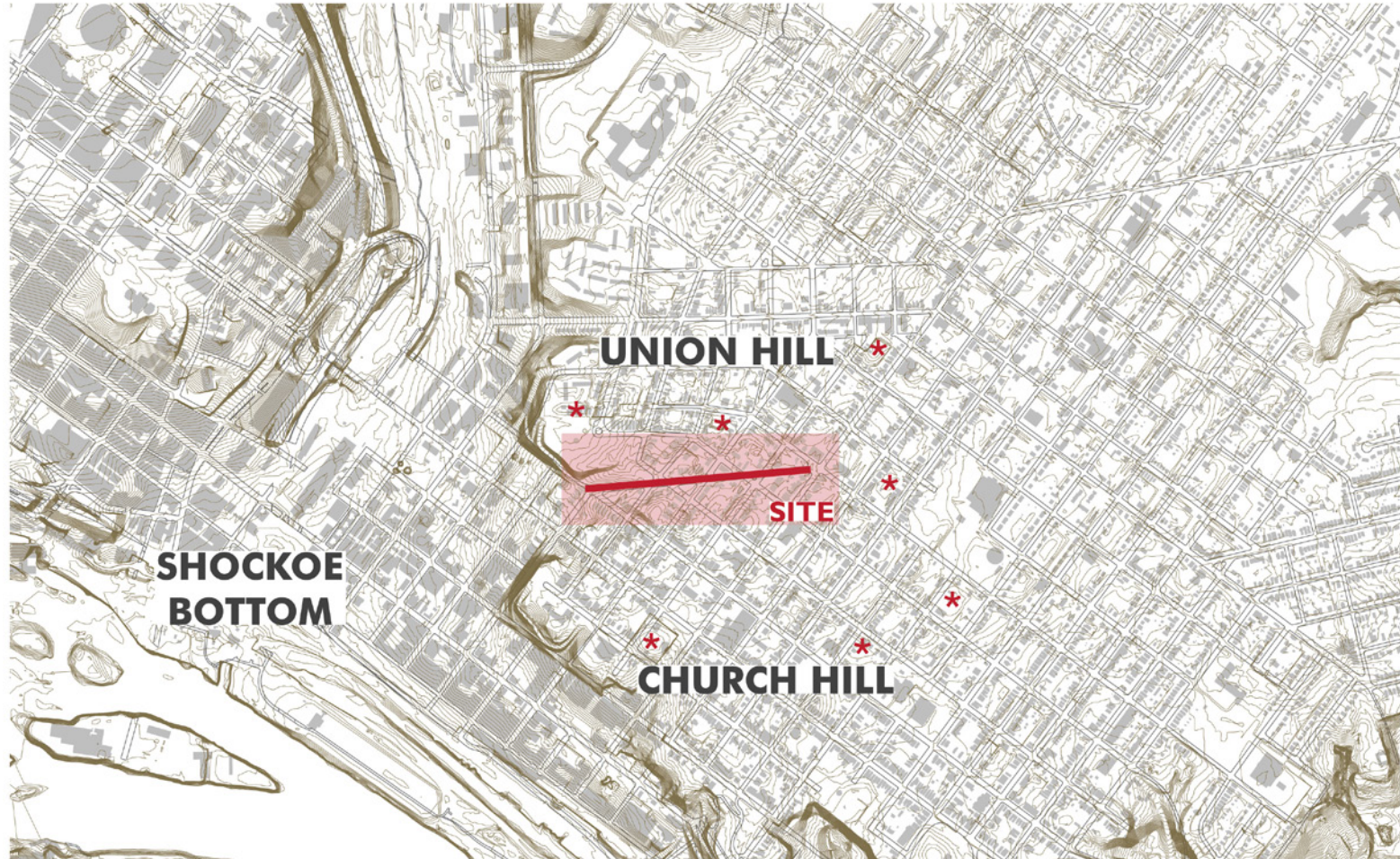


- **Improving pedestrian and bicyclist mobility and safety along the corridor.**
- **Improving pedestrian and bicyclist connections between the corridor and adjacent neighborhoods, the James River, and regional amenities such as the Shockoe Bottom commercial district, the central business district, Virginia Commonwealth University's medical campus, the Virginia Capital Trail, and the Cannon Creek Greenway.**
- **Encouraging investment in the vacant and underutilized parcels immediately surrounding and near to the project area.**
- **Using green infrastructure, including urban food gardens, to address stormwater pollution.**
- **Improving the aesthetic appearance of the corridor, including through public art and community green space that reflects the neighborhood history and character.**
- **Coordinating this effort with ongoing projects in the area, including a streetscape concept plan developed by the Union Hill Civic Association, proposed traffic calming, and a design competition for the pocket park bounded by Jefferson Avenue, 23rd Street, and Clay Street.**
- **Defining the corridor as a gateway to the community and incorporating "placemaking" elements that also reduce the perception of the street as merely a cut-through route.**

SITE AERIAL



- **Jefferson Avenue is a swale between the hills of Richmond, receiving significant stormwater runoff as a consequence.**
- **Stormwater is directed toward Shockoe Bottom, which has historically flooded.**



LEGEND:

- 2-foot contours
- * High point
- Jefferson Avenue



- **Jefferson Avenue acts as a sink for stormwater for Union Hill & Church Hill.**
- **Stormwater is conveyed to Shockoe Bottom, exacerbating its history of flooding.**
- **Floodwall on James River acts to impound stormwater runoff.**



LEGEND:

 Floodplain
 Floodwall

 Watershed

 Water flow

 Jefferson Avenue



- In the 1700's, the site where Jefferson Avenue now sits was north of the original town grid in a wooded ravine.
- The City of Richmond grew around ravine, as both Union Hill and Church Hill emerged as neighborhoods.
- Jefferson Avenue first appears in 1901 plan as ravine is filled in.



1700's



1865



1901

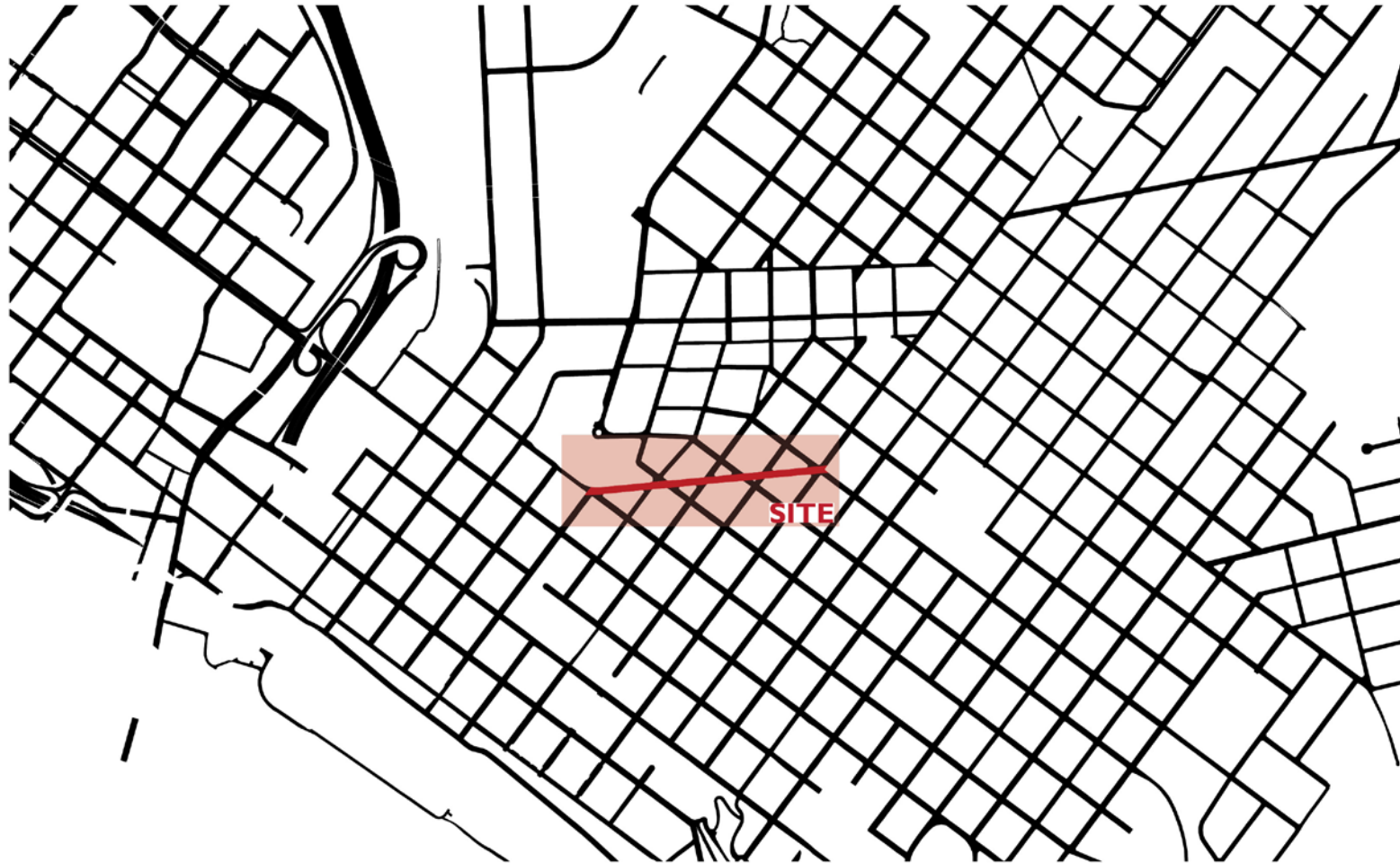


2015

LEGEND:

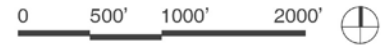
— Jefferson Avenue

- **Jefferson Avenue is one of few diagonal streets in the street grid, creating unique but inefficient intersections.**
- **Vehicle speeds increase on diagonal streets & pedestrian safety is compromised by eccentric intersections.**



LEGEND:

— Jefferson Avenue



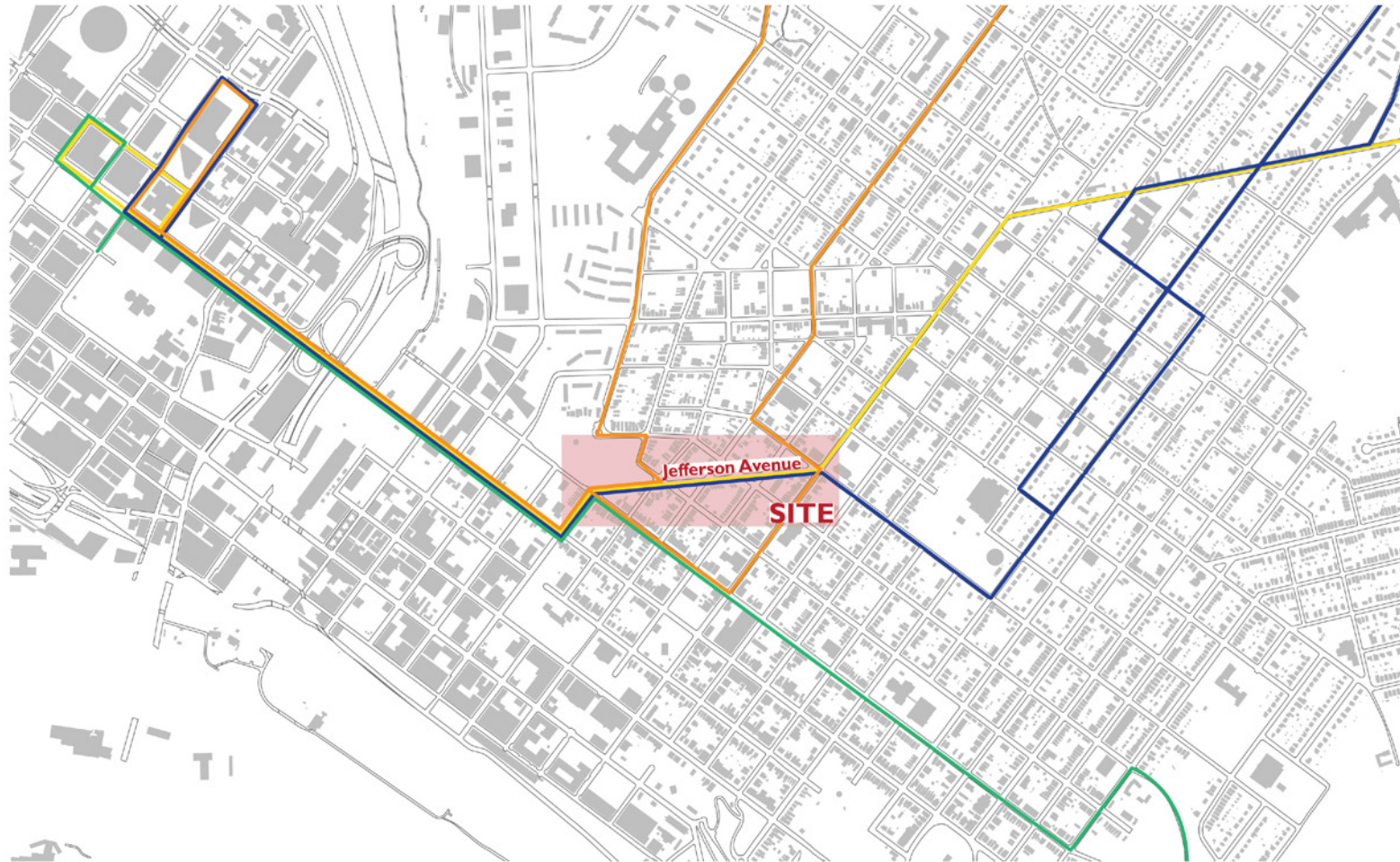
- **Bicycle Master Plan was completed by the City of Richmond in May 2015.**
- **Jefferson Avenue is proposed as a buffered bicycle lane.**
- **In addition, bike-walk streets are proposed for Clay Street and 23rd Street at Jefferson Avenue.**



LEGEND:

- | | | |
|--------------------------|-----------------------------|---------------------------|
| Existing shared lane | Proposed future facility | Proposed bike lane |
| Existing greenway | Proposed cycle track | Proposed bike-walk street |
| Existing shared use path | Proposed buffered bike lane | |

- The study area is served by four bus routes.

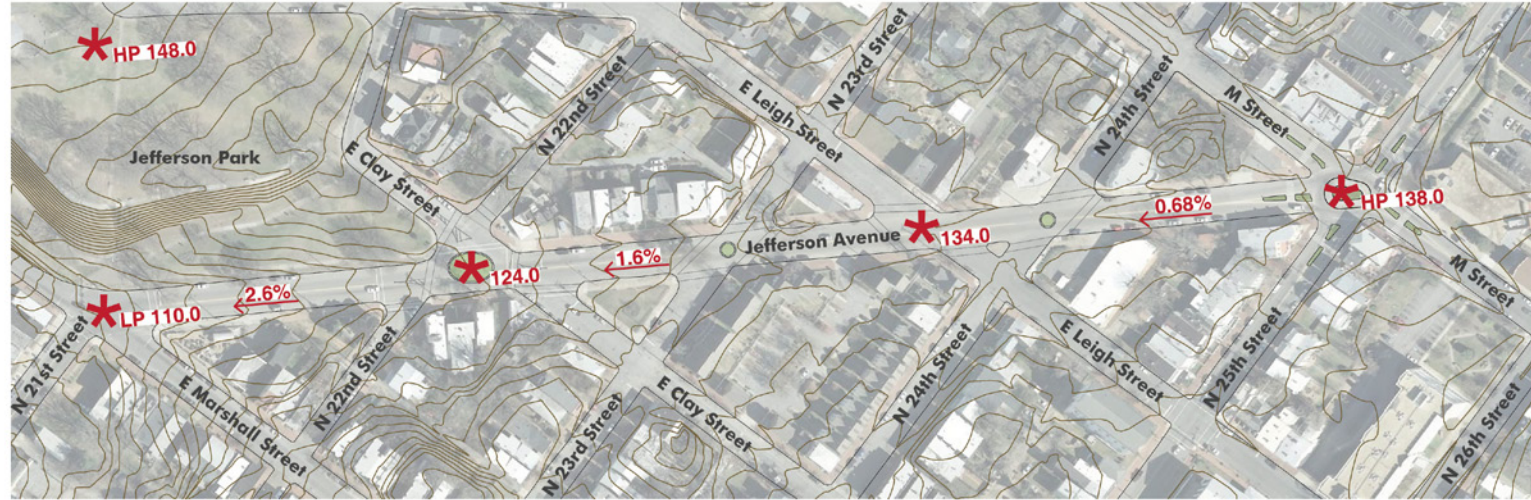


LEGEND:

- | | |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|  Route 7 - Seven Pines |  Route 43-44 - Whitcomb/Fairfield |
|  Route 45 - Jefferson |  Route 56 - South Laburnum |



- **Jefferson Avenue crests at 25th Street, coursing downhill to 21st Street.**
- **All side streets drain down toward Jefferson Avenue from both North & South.**
- **Most of Jefferson Park is 38' above Jefferson Avenue.**
- **Degree of slope gradient accelerates along Jefferson Avenue from East to West, increasing stormwater velocity & scouring.**



LEGEND:

- 2-foot contours
- HP High point
- LP Low point



- Storm drains feed into a combined sewer system of both storm and sanitary lines and during major rain events, sewage can overflow into storm drains.
- There is a critical need to reduce downstream flooding impacts.



LEGEND:

- Storm drain
- ← Direction of flow



- Intermittent tree canopy along Jefferson Avenue provides limited shade & discourages pedestrian use.
- Existing power lines on both sides of Jefferson Avenue have been cause of severe tree pruning.
- Jefferson Park has ample trees & shade.



LEGEND:

- Tree canopy
- Telephone pole



- **Significant portion of Jefferson Avenue frontage is currently used for residential buildings.**
- **Vacant lots along Jefferson Avenue offer infill opportunities for businesses.**

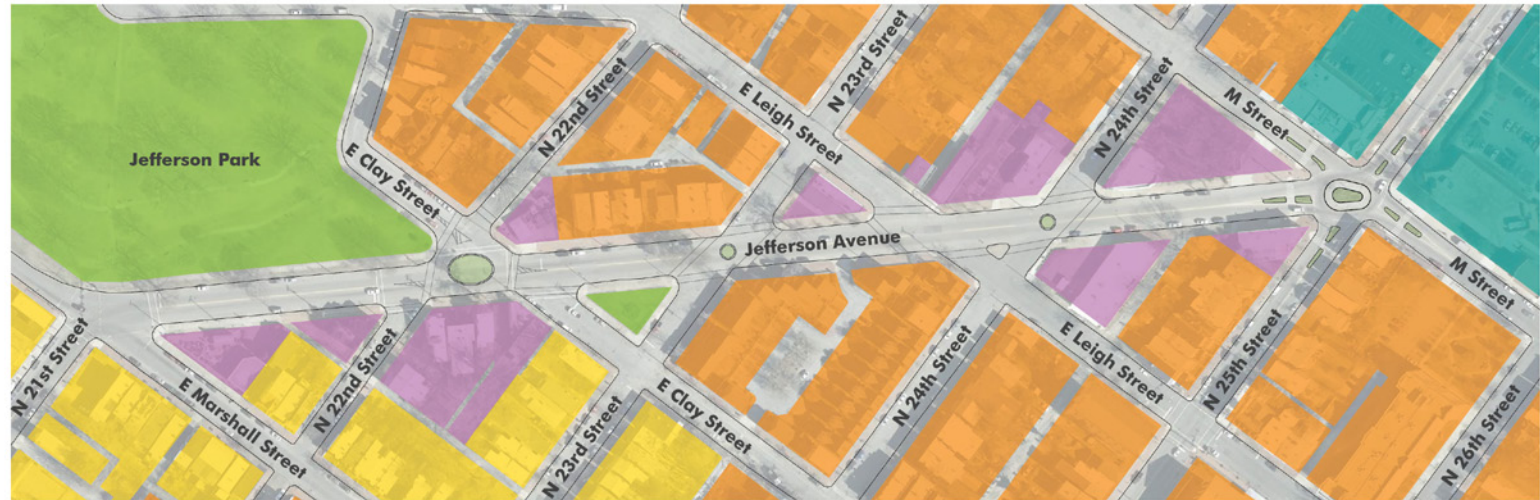


LEGEND:

- Residential
- Primary commercial/industrial land
- Parks and recreation
- Vacant lot



- **Majority of Jefferson Avenue is zoned for urban business.**
- **Majority of adjacent blocks are residential.**
- **Jefferson Park anchors west end of study area.**
- **East end of study area is anchored by Linwood Robinson Senior Center.**



LEGEND:

- Urban residential district
- Multifamily urban residential district
- Urban business district
- Residential-office district
- Parks and recreation



- **Majority of parcels at the study site are privately owned, so streetscape provides a key opportunity for public improvements.**
- **Jefferson Park is the major recreational & open space for the neighborhood.**
- **The pocket park (Two Hills Park) is centrally located to provide social & recreational neighborhood meeting place.**
- **No open spaces or public lands on or near east end of study area.**



LEGEND:

-  Public land
-  Private land



- **Incomplete street wall with many buildings facing side streets instead of Jefferson Avenue.**
- **Only one pair of buildings, at 24th Street, face each other across street to create street wall effect.**
- **Buildings opposite Jefferson Park generally face away from park.**
- **Vacant lots offer infill opportunities.**



LEGEND:





- Building footprint
- Street wall edge



- **Study area has extensive pervious areas within blocks, reducing runoff.**
- **Most of public right-of-way on Jefferson Avenue is impervious.**
- **Inefficient street intersections create excessive impervious areas.**
- **Jefferson Park offers opportunity to capture stormwater runoff from adjacent streets.**



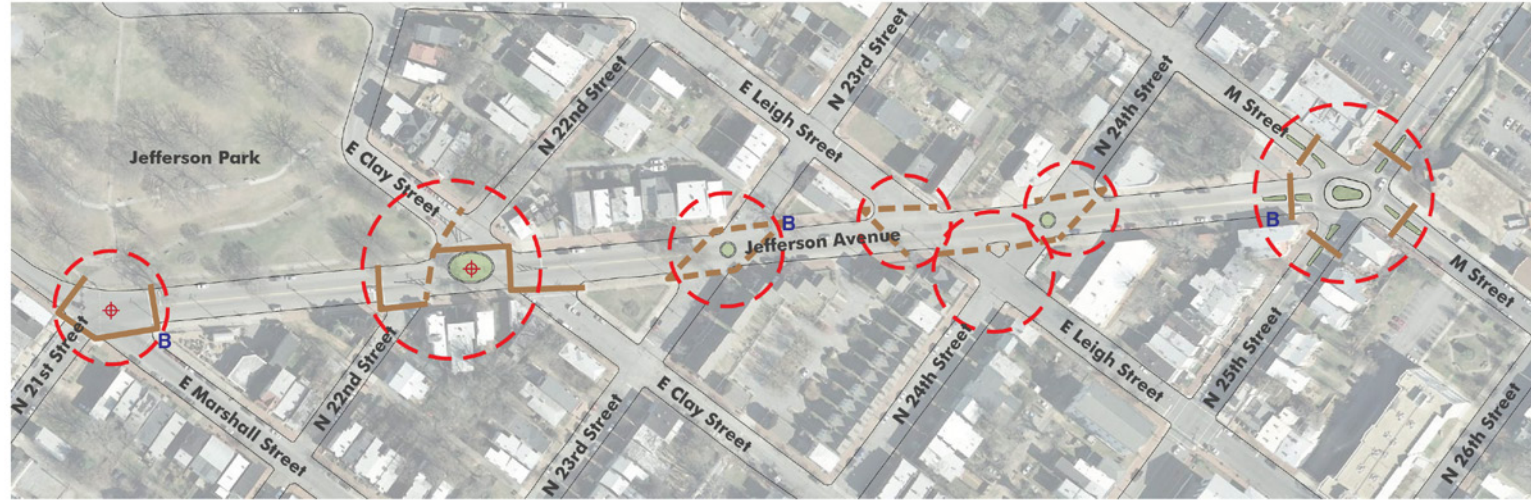
LEGEND:

	Impervious surface (roofs) - 16%
	Impervious surface (roads and parking) - 30%
	Impervious surface (sidewalks) - 12%
	Pervious surface (lawn and planting) - 42%

Impervious: 58% | Pervious: 42%



- **Planned set of traffic circles will improve pedestrian safety.**
- **Intersection of Jefferson/Leigh/24th exhibits long crosswalks with little refuge.**
- **Planned traffic circle at 22nd Street will require new crosswalk patterns.**
- **Jefferson Park entry at 21st Street is gateway opportunity.**



LEGEND:

- Existing crosswalk
- - - Planned crosswalk (construction scheduled for 2015)
- B Bus stop location
- ⊕ Signalized intersection
- ⊙ Potential pedestrian safety issues





On April 23rd the design team along with EPA, HUD, and DOT representatives met with City of Richmond staff, local stakeholders, and active community members to conduct a one-day site visit. At this visit the design team identified five study areas, within the project site, based on community members' needs and input.



STUDY AREAS

The Gateway
Jefferson Ave
at 21st St

The Ellipse
Jefferson Ave
at 22nd St

The Bowtie
Jefferson Ave
at 23rd St

**Leigh Street /
24th Street Parks**
Jefferson Ave
at 24th St

**The Northeast
Parcel**
Jefferson Ave
at 25th St



- **Gateway opportunity at 21st Street and Jefferson Avenue**
- **Low point of Jefferson Avenue at Jefferson Park best opportunity for stormwater impoundment and flood mitigation**
- **Diagonal avenue alignment creates crosswalks with excessive length**
- **Jefferson Avenue and side streets have excessive width**
- **On-street parking exacerbates the width of Jefferson Avenue and the side streets.**
- **Wide streets cause excessive speed by vehicles**
- **No bicycle lanes**
- **Ample green space at west end of Avenue with Jefferson Park, but no green space at east end**
- **Vacant lots erode townscape and hurt property values**
- **No stormwater impoundment areas, exacerbating downstream flooding**
- **Little shade on sidewalk and overhead power lines limit palette of trees to provide shade**

The opportunity exists to extend the green space of Jefferson Park and the proposed Two Hills Park into a comprehensive network of green spaces and pedestrian/bicycle paths throughout the length of Jefferson Avenue.



STUDY AREA I - Jefferson Avenue at 21st Street: THE GATEWAY AT JEFFERSON PARK



EXISTING CONDITIONS



GREEN SPACE
BIORETENTION

SIDEWALK
PERMEABLE PAVING

BICYCLE BUFFER
5' BIKE LANE



STUDY AREA I - Jefferson Avenue at 21st Street: THE GATEWAY AT JEFFERSON PARK









EXISTING CONDITIONS



ALTERNATIVE 1



- | | | | | | |
|-------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|----------------|
|  | GREEN SPACE |  | SIDEWALK |  | BICYCLE BUFFER |
|  | BIORETENTION |  | PERMEABLE PAVING |  | 5' BIKE LANE |



STUDY AREA I - Jefferson Avenue at 21st Street: THE GATEWAY AT JEFFERSON PARK



EXISTING CONDITIONS



ALTERNATIVE 1



ALTERNATIVE 2

- GREEN SPACE
- SIDEWALK
- BICYCLE BUFFER
- BIORETENTION
- PERMEABLE PAVING
- 5' BIKE LANE



STUDY AREA I - Jefferson Avenue at 21st Street: THE GATEWAY AT JEFFERSON PARK



EXISTING CONDITIONS

- **Main entry to Jefferson Park offers opportunity for neighborhood gateway and stormwater management in flat area at base of steps.**

STUDY AREA I - Jefferson Avenue at 21st Street: THE GATEWAY AT JEFFERSON PARK



EXISTING CONDITIONS



ALTERNATIVE 1

- **Main entry to Jefferson Park offers opportunity for neighborhood gateway and stormwater management in flat area at base of steps.**
- **Alternative 1 features a large bioretention basin with a pair of walkways through the plantings. The top of the steps is marked with a tempietto in homage to Jefferson.**

STUDY AREA I - Jefferson Avenue at 21st Street: THE GATEWAY AT JEFFERSON PARK

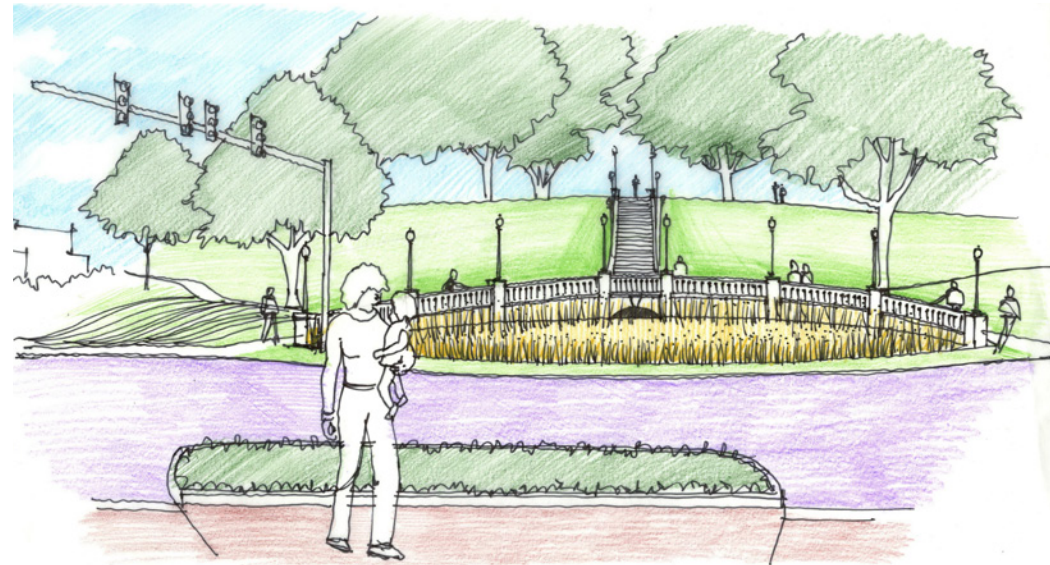


EXISTING CONDITIONS

- **Main entry to Jefferson Park offers opportunity for neighborhood gateway and stormwater management in flat area at base of steps.**
- **Alternative 1 features a large bioretention basin with a pair of walkways through the plantings. The top of the steps is marked with a tempietto in homage to Jefferson.**
- **Alternative 2 features a grand classical ramp up to the steps and a formal ellipse of sedges to make civic art of bioretention.**

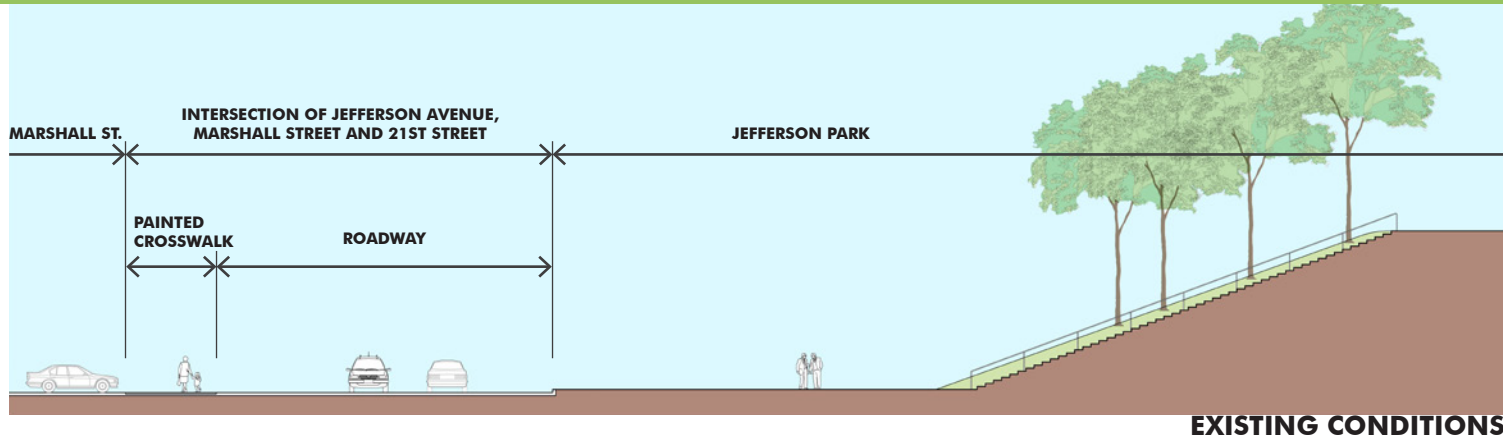


ALTERNATIVE 1

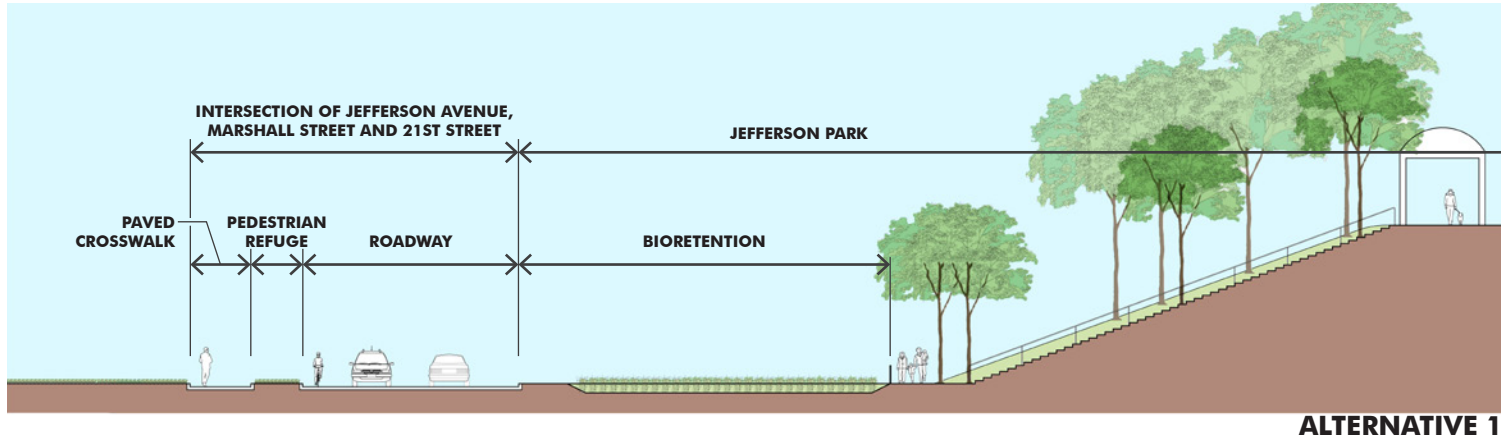
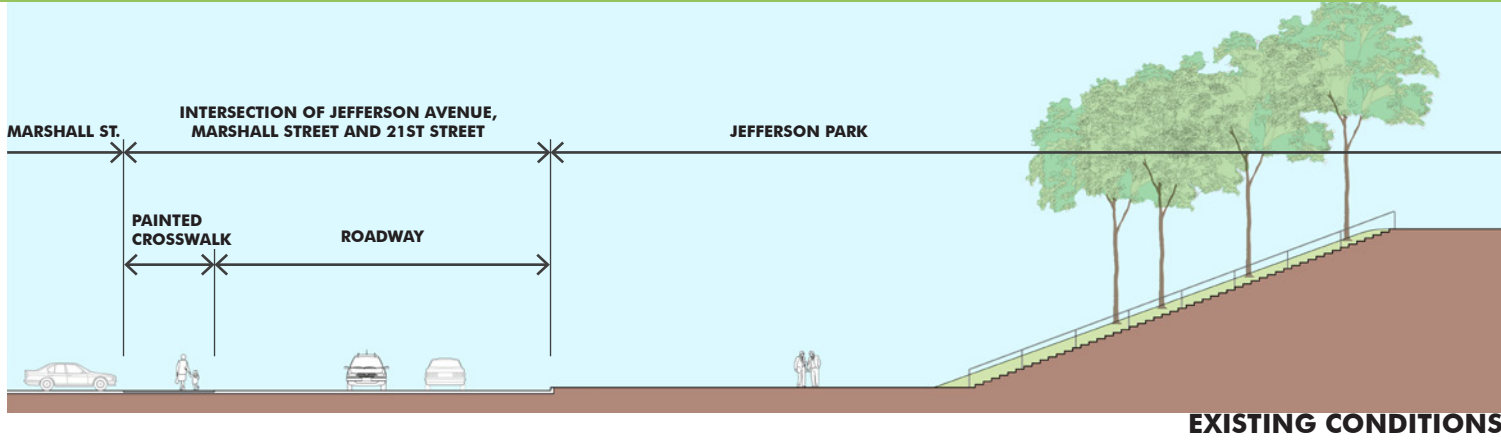


ALTERNATIVE 2

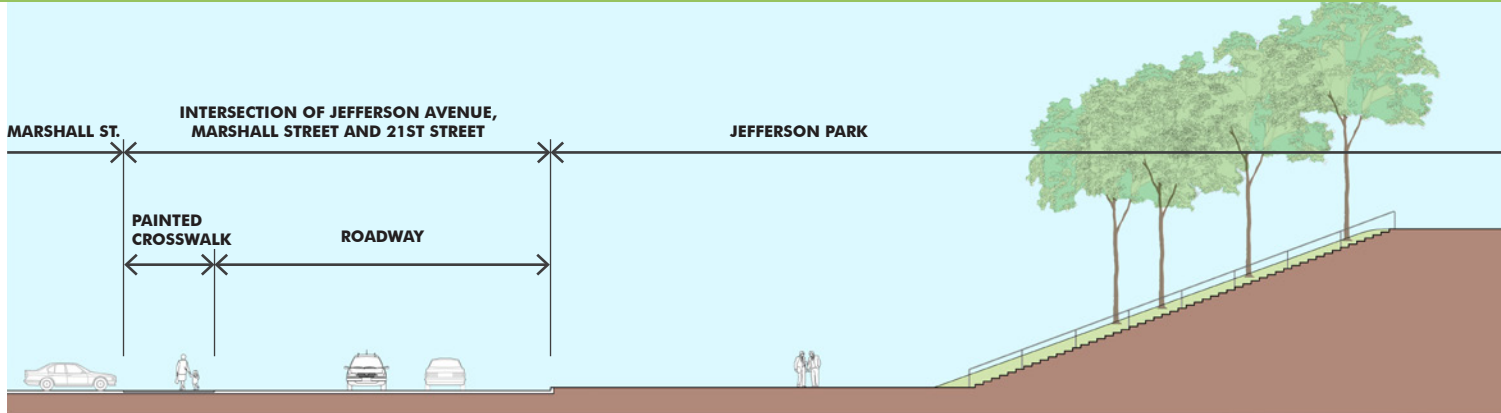
STUDY AREA I - Jefferson Avenue at 21st Street: THE GATEWAY AT JEFFERSON PARK



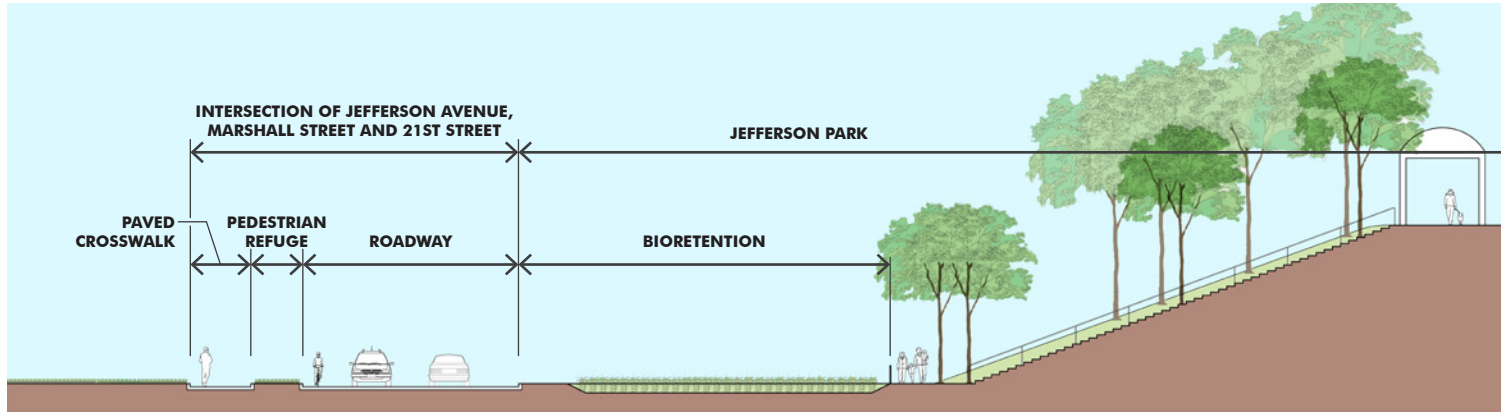
STUDY AREA I - Jefferson Avenue at 21st Street: THE GATEWAY AT JEFFERSON PARK



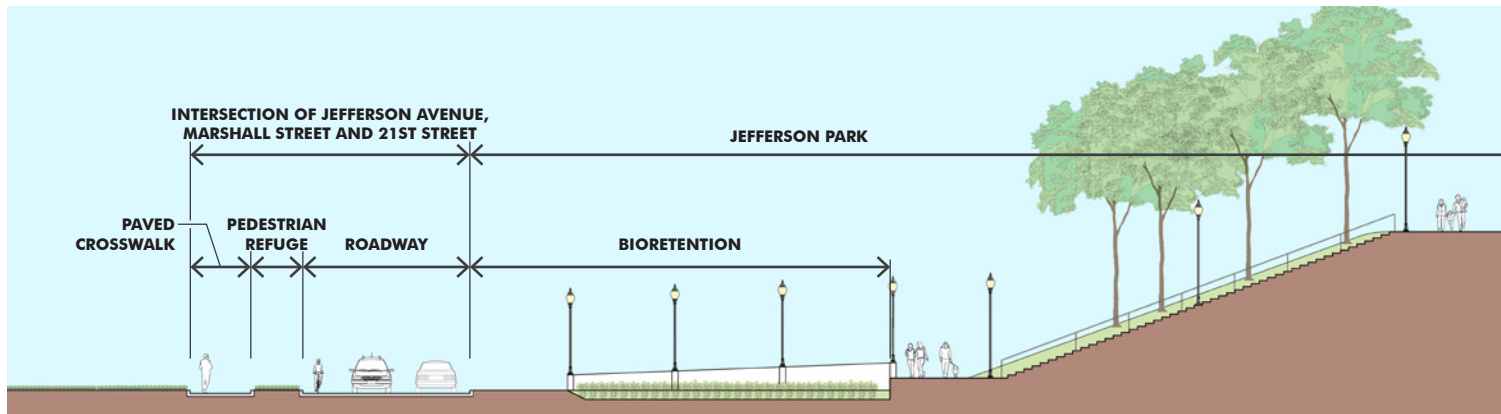
STUDY AREA I - Jefferson Avenue at 21st Street: THE GATEWAY AT JEFFERSON PARK



EXISTING CONDITIONS



ALTERNATIVE 1





ALTERNATIVE 2

STUDY AREA 2 - Jefferson Avenue at 22nd Street: THE ELLIPSE





EXISTING CONDITIONS



-  GREEN SPACE
-  BIORETENTION

-  SIDEWALK
-  PERMEABLE PAVING

-  BICYCLE BUFFER
-  5' BIKE LANE



STUDY AREA 2 - Jefferson Avenue at 22nd Street: THE ELLIPSE



EXISTING CONDITIONS



ALTERNATIVE 1

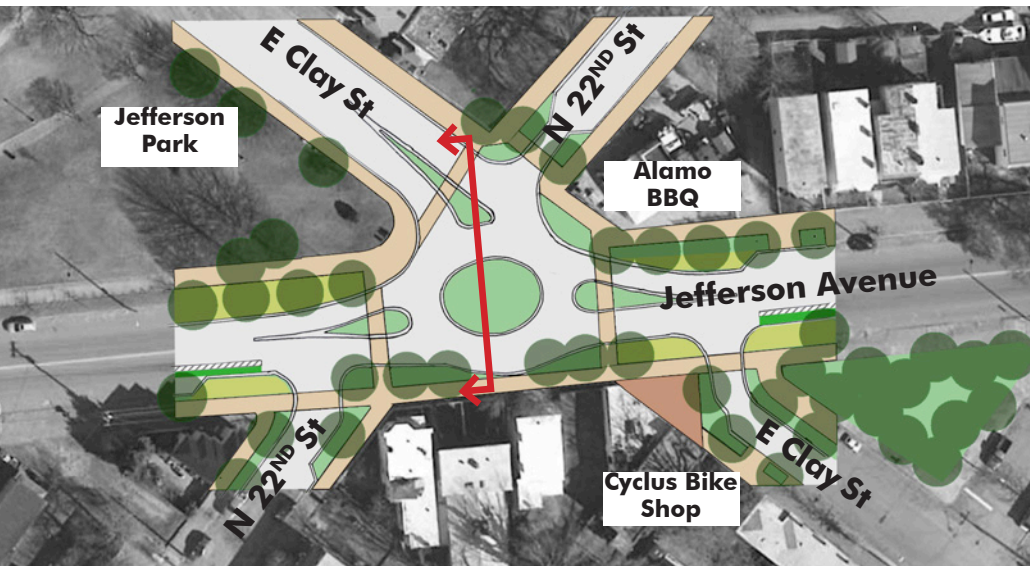
- GREEN SPACE
- BIORETENTION
- SIDEWALK
- PERMEABLE PAVING
- BICYCLE BUFFER
- 5' BIKE LANE



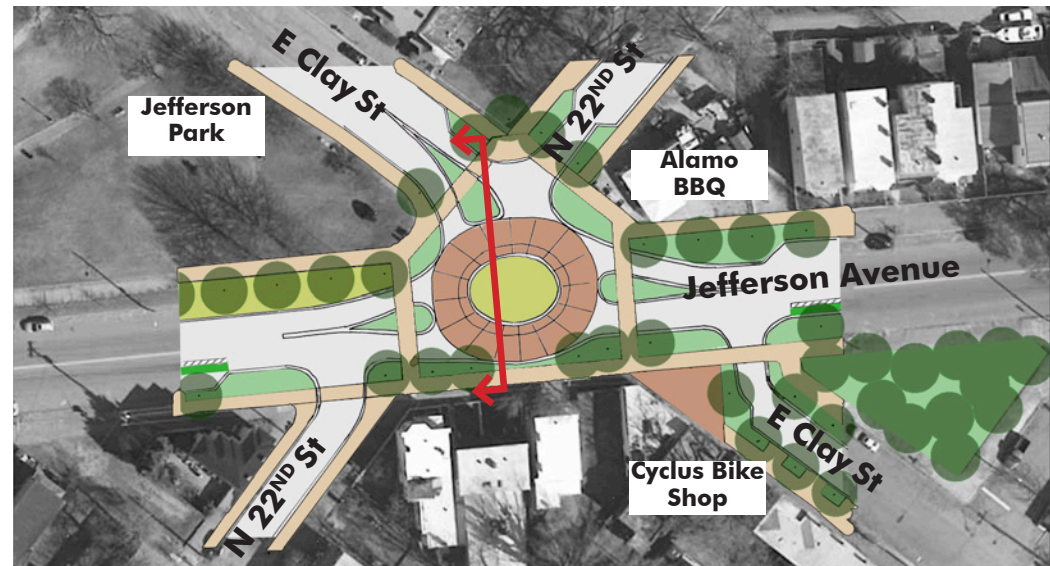
STUDY AREA 2 - Jefferson Avenue at 22nd Street: THE ELLIPSE









EXISTING CONDITIONS



ALTERNATIVE 1



ALTERNATIVE 2

- | | | | | | |
|-------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|----------------|
|  | GREEN SPACE |  | SIDEWALK |  | BICYCLE BUFFER |
|  | BIORETENTION |  | PERMEABLE PAVING |  | 5' BIKE LANE |



STUDY AREA 2 - Jefferson Avenue at 22nd Street: THE ELLIPSE



EXISTING CONDITIONS LOOKING NORTHEAST

- **The intersection features excessive pavement and daunting crosswalks, as well as accelerated vehicular speeds as the street increases gradient.**

STUDY AREA 2 - Jefferson Avenue at 22nd Street: THE ELLIPSE



EXISTING CONDITIONS LOOKING NORTHEAST



ALTERNATIVE 1

- The intersection features excessive pavement and daunting crosswalks, as well as accelerated vehicular speeds as the street increases gradient.
- Alternative 1 features the proposed elliptical roundabout with native plantings and crosswalks with pedestrian refuges.

STUDY AREA 2 - Jefferson Avenue at 22nd Street: THE ELLIPSE



EXISTING CONDITIONS LOOKING NORTHEAST

- The intersection features excessive pavement and daunting crosswalks, as well as accelerated vehicular speeds as the street increases gradient.
- Alternative 1 features the proposed elliptical roundabout with native plantings and crosswalks with pedestrian refuges.
- Alternative 2 features an elliptical roundabout as bioretention, saucered instead of crowned, and surrounded by formal permeable paving to both calm vehicular speed and reduce stormwater runoff.



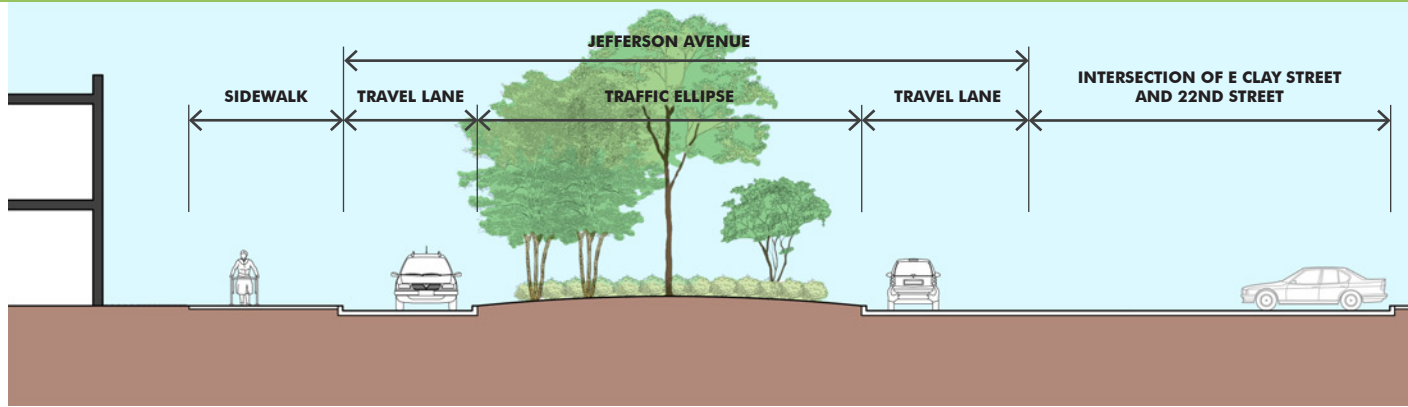
ALTERNATIVE 1



ALTERNATIVE 2

STUDY AREA 2 - Jefferson Avenue at 22nd Street:

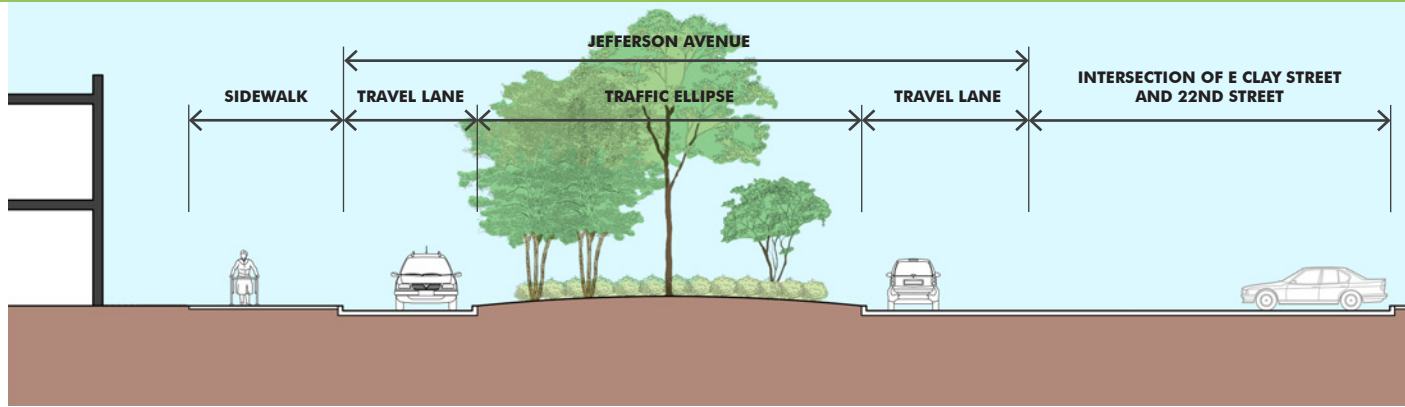
THE ELLIPSE



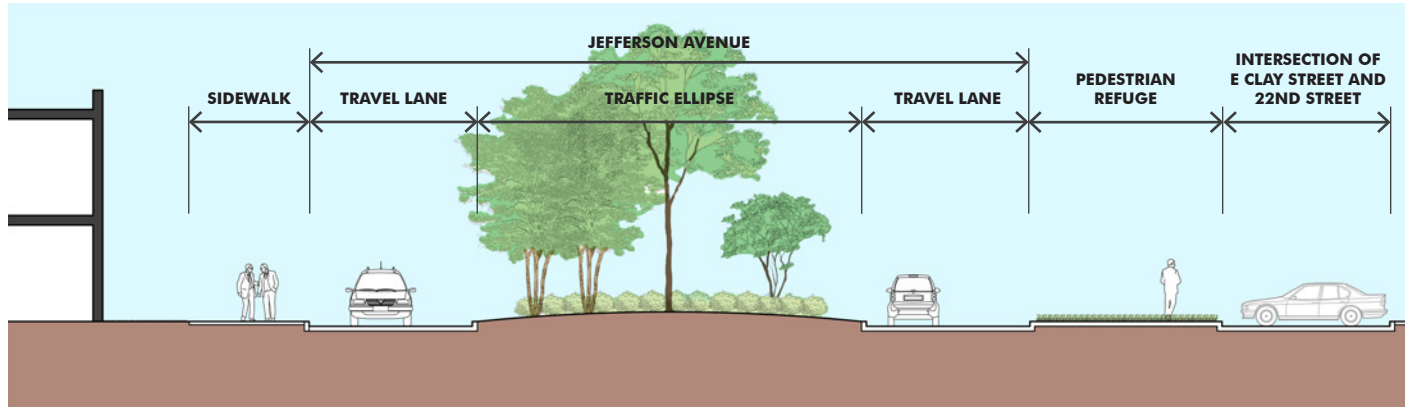
EXISTING CONDITIONS

STUDY AREA 2 - Jefferson Avenue at 22nd Street:

THE ELLIPSE



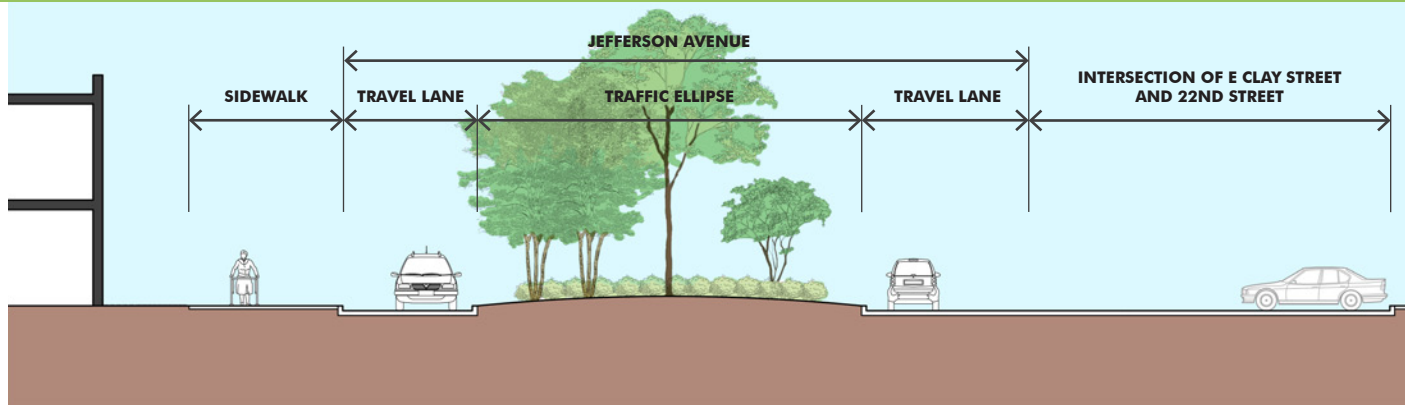
EXISTING CONDITIONS



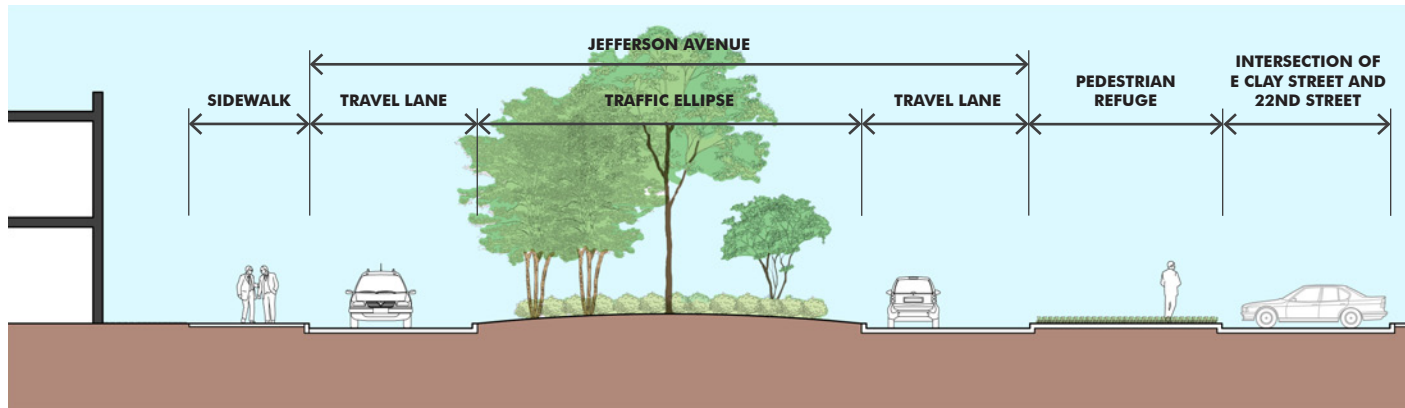
ALTERNATIVE 1

STUDY AREA 2 - Jefferson Avenue at 22nd Street:

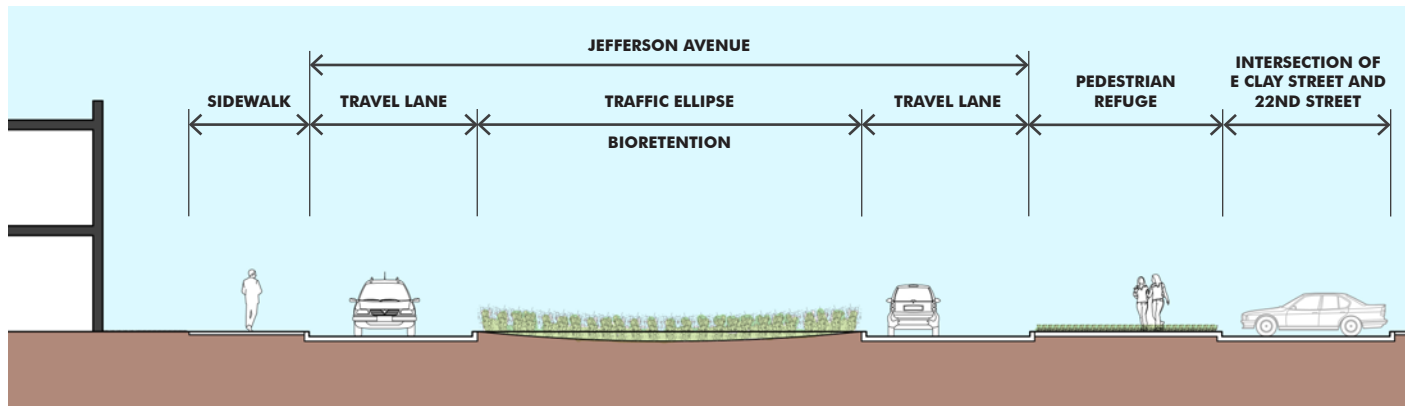
THE ELLIPSE



EXISTING CONDITIONS



ALTERNATIVE 1

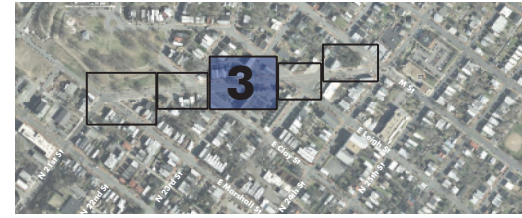




ALTERNATIVE 2

STUDY AREA 3 - Jefferson Avenue at 23rd Street: THE BOWTIE





EXISTING CONDITIONS



-  GREEN SPACE
-  BIORETENTION

-  SIDEWALK
-  PERMEABLE PAVING

-  BICYCLE BUFFER
-  5' BIKE LANE



STUDY AREA 3 - Jefferson Avenue at 23rd Street: THE BOWTIE

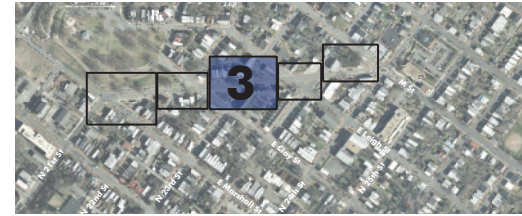


EXISTING CONDITIONS



ALTERNATIVE 1

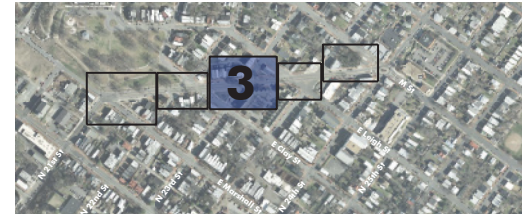
- GREEN SPACE
- BIORETENTION
- SIDEWALK
- PERMEABLE PAVING
- BICYCLE BUFFER
- 5' BIKE LANE



STUDY AREA 3 - Jefferson Avenue at 23rd Street: THE BOWTIE



EXISTING CONDITIONS



ALTERNATIVE 2



ALTERNATIVE 2

- GREEN SPACE
- SIDEWALK
- BICYCLE BUFFER
- BIORETENTION
- PERMEABLE PAVING
- 5' BIKE LANE



STUDY AREA 3 - Jefferson Avenue at 23rd Street: THE BOWTIE



EXISTING CONDITIONS LOOKING SOUTHWEST

- **The intersection features excessive pavement and daunting, unmarked crosswalks.**

STUDY AREA 3 - Jefferson Avenue at 23rd Street: THE BOWTIE



- The intersection features excessive pavement and daunting, unmarked crosswalks.
- Alternative 1 features the proposed traffic circle with native plantings, reduced crosswalk distances, and Class 3 bike lane southbound with Class 2 bike lane northbound.

EXISTING CONDITIONS LOOKING SOUTHWEST



ALTERNATIVE 1

STUDY AREA 3 - Jefferson Avenue at 23rd Street: THE BOWTIE



EXISTING CONDITIONS LOOKING SOUTHWEST



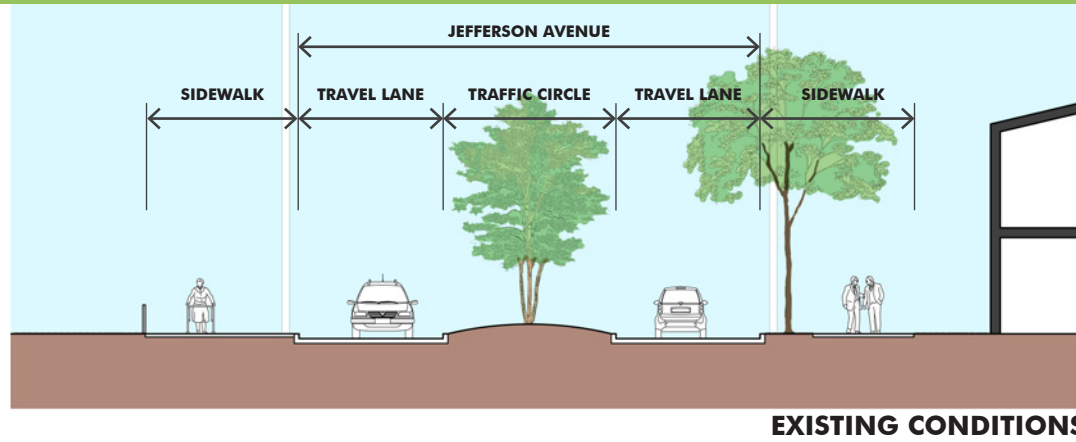
ALTERNATIVE 1

- The intersection features excessive pavement and daunting, unmarked crosswalks.
- Alternative 1 features the proposed traffic circle with native plantings, reduced crosswalk distances, and Class 3 bike lane southbound with Class 2 bike lane northbound.
- Alternative 2 features reduced crosswalk distances, a paved intersection area with permeable pavers, and similar bicycle lanes.



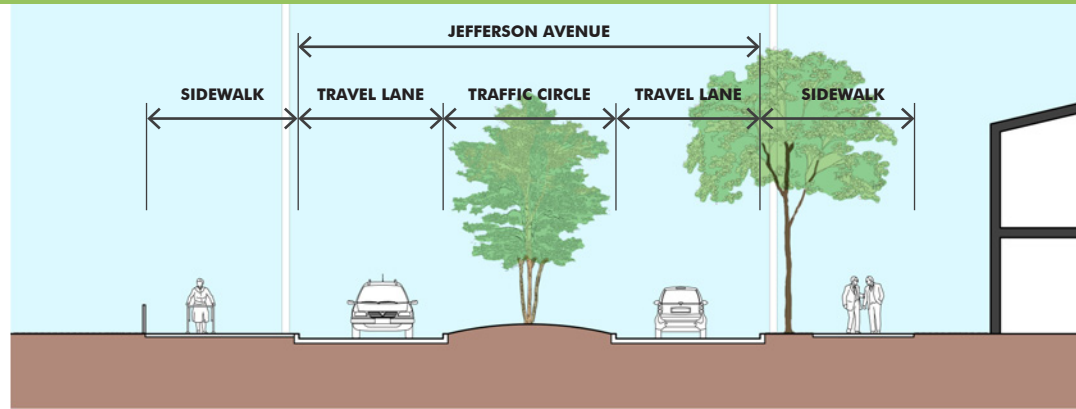
ALTERNATIVE 2

STUDY AREA 3 - Jefferson Avenue at 23rd Street: THE BOWTIE

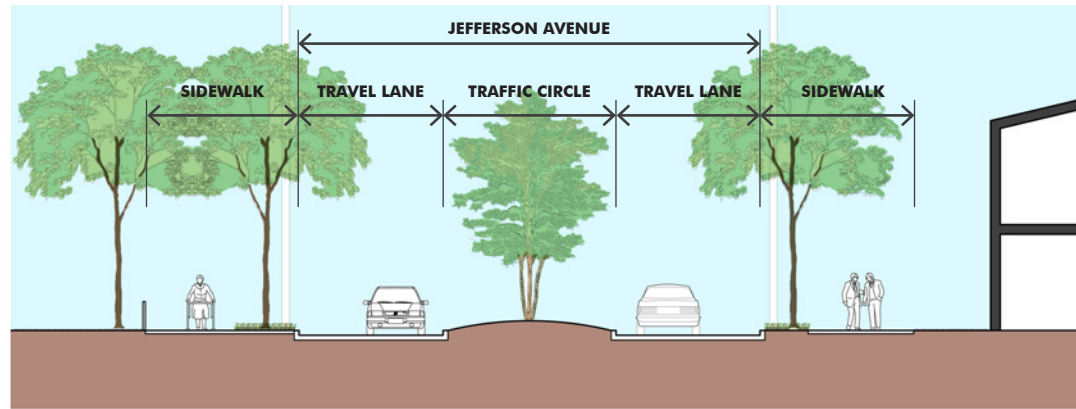


STUDY AREA 3 - Jefferson Avenue at 23rd Street:

THE BOWTIE

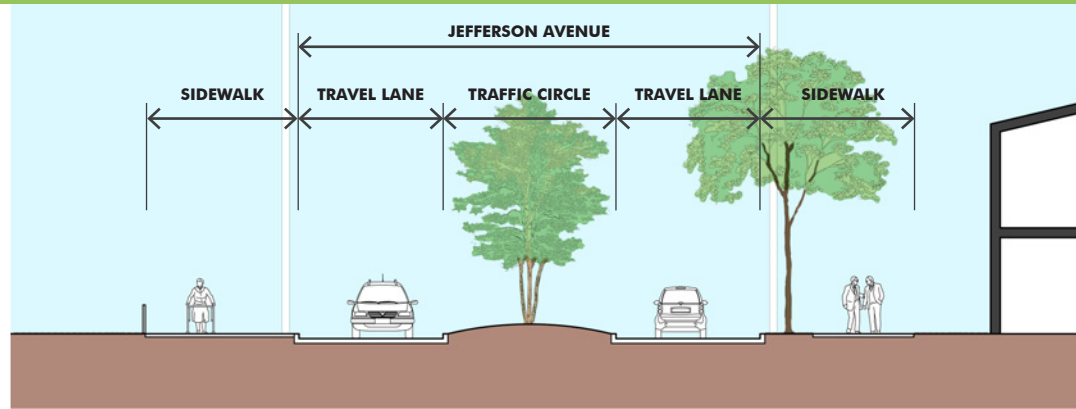


EXISTING CONDITIONS

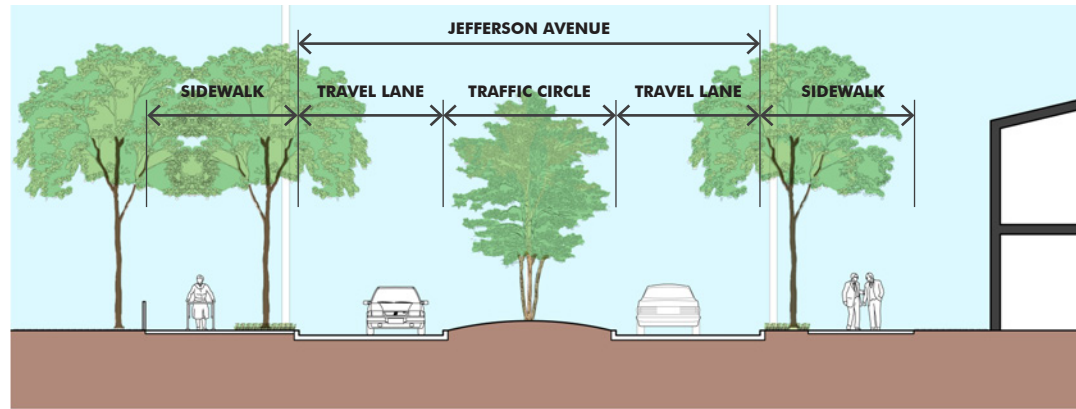


ALTERNATIVE 1

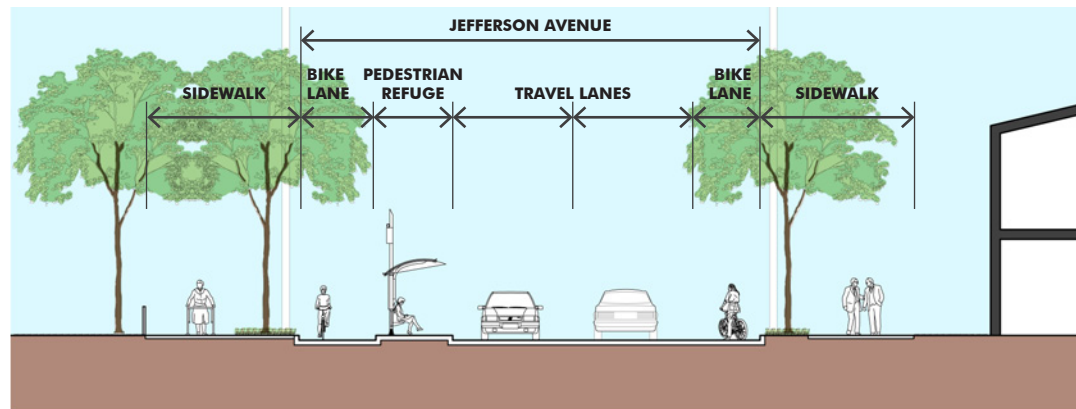
STUDY AREA 3 - Jefferson Avenue at 23rd Street: THE BOWTIE



EXISTING CONDITIONS



ALTERNATIVE 1



ALTERNATIVE 2

STUDY AREA 4 - Jefferson Avenue at 24TH Street: LEIGH STREET / 24TH STREET PARKS



EXISTING CONDITIONS



- GREEN SPACE
- BIORETENTION

- SIDEWALK
- PERMEABLE PAVING

- BICYCLE BUFFER
- 5' BIKE LANE



STUDY AREA 4 - Jefferson Avenue at 24TH Street:

LEIGH STREET / 24TH STREET PARKS





EXISTING CONDITIONS





ALTERNATIVE 1



-  GREEN SPACE
-  BIORETENTION

-  SIDEWALK
-  PERMEABLE PAVING

-  BICYCLE BUFFER
-  5' BIKE LANE



STUDY AREA 4 - Jefferson Avenue at 24TH Street: LEIGH STREET / 24TH STREET PARKS



EXISTING CONDITIONS



ALTERNATIVE 1



ALTERNATIVE 2

- GREEN SPACE
- SIDEWALK
- BICYCLE BUFFER
- BIORETENTION
- PERMEABLE PAVING
- 5' BIKE LANE



STUDY AREA 4 - Jefferson Avenue at 24TH Street:

LEIGH STREET / 24TH STREET PARKS

- **Intersection features excessive pavement, daunting crosswalks, and tiny pedestrian refuge.**



EXISTING CONDITIONS LOOKING SOUTHWEST

STUDY AREA 4 - Jefferson Avenue at 24TH Street:

LEIGH STREET / 24TH STREET PARKS



EXISTING CONDITIONS LOOKING SOUTHWEST



ALTERNATIVE 1

- **Intersection features excessive pavement, daunting crosswalks, and tiny pedestrian refuge.**
- **Alternative 1 features the proposed traffic circle with native plantings, reduced crosswalk distances on both streets, and the closure of one block of E Leigh Street, transforming it into pocket park.**

STUDY AREA 4 - Jefferson Avenue at 24TH Street:

LEIGH STREET / 24TH STREET PARKS



EXISTING CONDITIONS LOOKING SOUTHWEST

- **Intersection features excessive pavement, daunting crosswalks, and tiny pedestrian refuge.**
- **Alternative 1 features the proposed traffic circle with native plantings, reduced crosswalk distances on both streets, and the closure of one block of E Leigh Street, transforming it into pocket park.**
- **Alternative 2 features a new, compact intersection with a pair of pocket parks flanking the street. The area in between the two crosswalks on Jefferson Avenue is paved with permeable pavers to both calm vehicular speed and reduce stormwater runoff.**

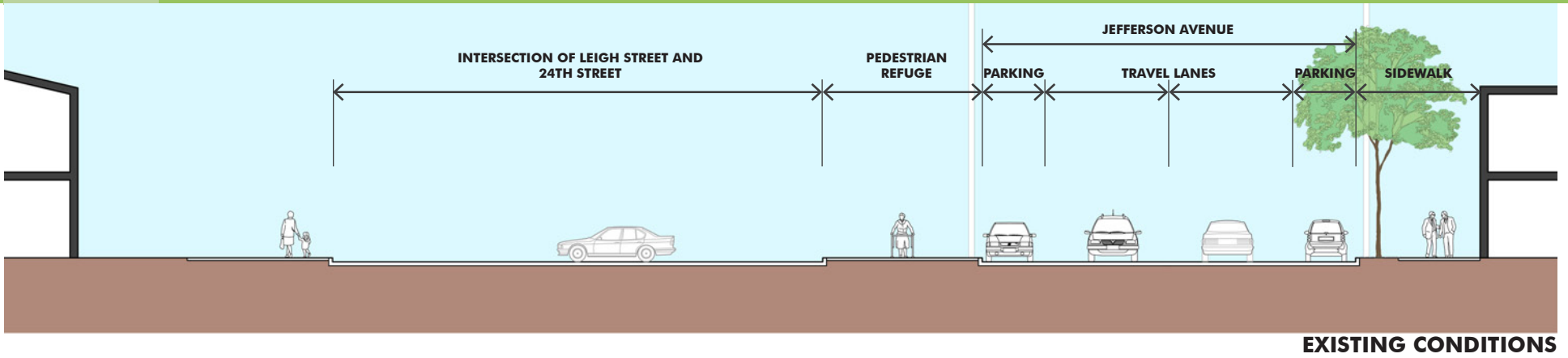


ALTERNATIVE 1

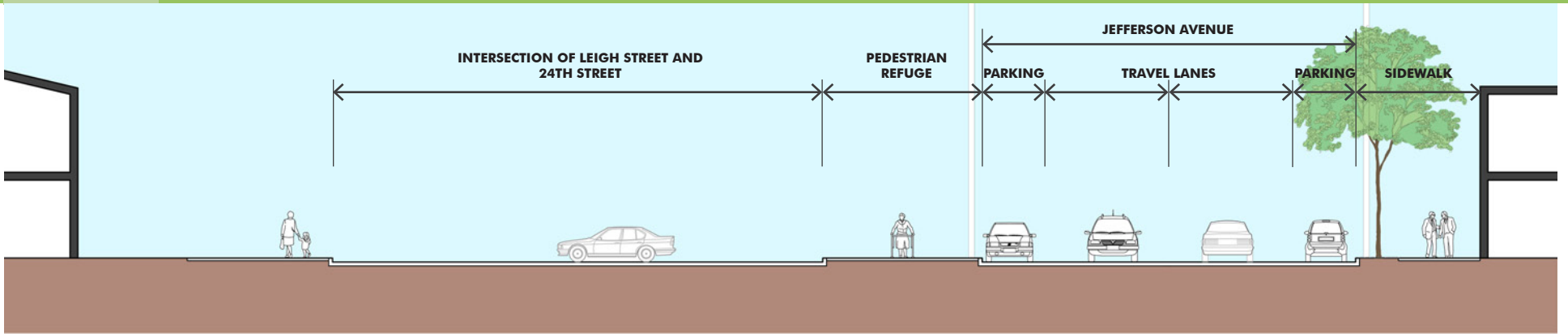


ALTERNATIVE 2

STUDY AREA 4 - Jefferson Avenue at 24TH Street: LEIGH STREET / 24TH STREET PARKS



STUDY AREA 4 - Jefferson Avenue at 24TH Street: LEIGH STREET / 24TH STREET PARKS



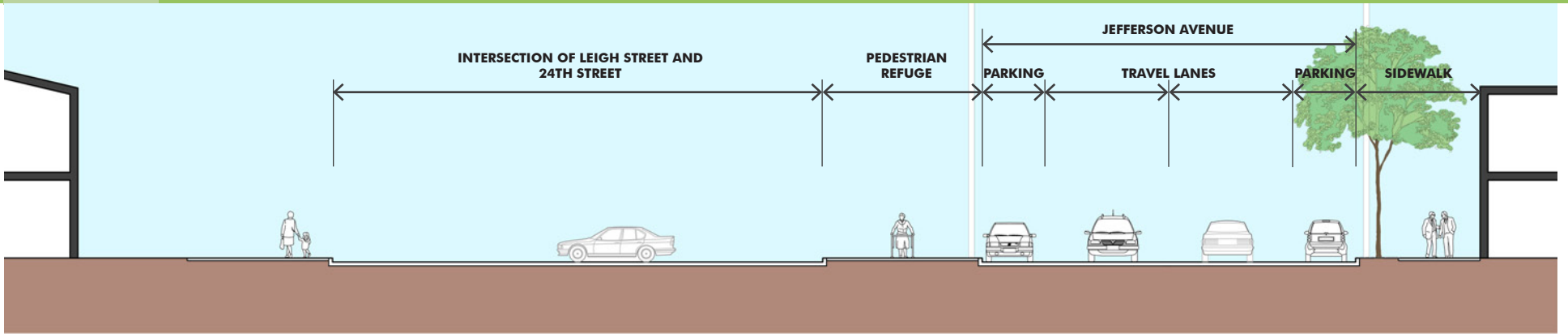
EXISTING CONDITIONS



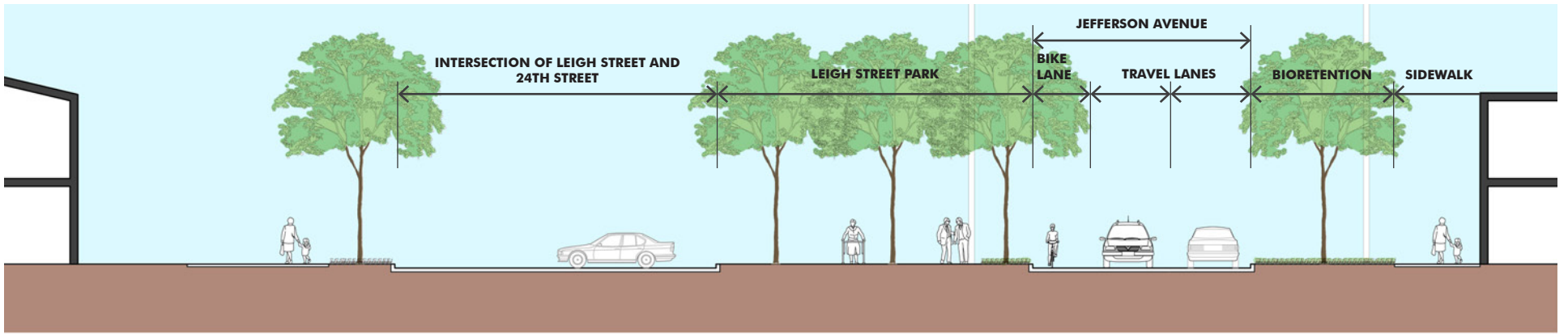
ALTERNATIVE 1

STUDY AREA 4 - Jefferson Avenue at 24TH Street:

LEIGH STREET / 24TH STREET PARKS



EXISTING CONDITIONS



ALTERNATIVE 1





ALTERNATIVE 2

STUDY AREA 5 - Jefferson Avenue at 25TH Street: THE NORTHEAST PARCEL





EXISTING CONDITIONS



 GREEN SPACE
 BIORETENTION

 SIDEWALK
 PERMEABLE PAVING

 BICYCLE BUFFER
 5' BIKE LANE









STUDY AREA 5 - Jefferson Avenue at 25TH Street: THE NORTHEAST PARCEL



EXISTING CONDITIONS



ALTERNATIVE 1

- | | | | | | |
|-------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|----------------|
|  | GREEN SPACE |  | SIDEWALK |  | BICYCLE BUFFER |
|  | BIORETENTION |  | PERMEABLE PAVING |  | 5' BIKE LANE |



STUDY AREA 5 - Jefferson Avenue at 25TH Street: THE NORTHEAST PARCEL



EXISTING CONDITIONS



ALTERNATIVE 1



ALTERNATIVE 2

- GREEN SPACE
- SIDEWALK
- BICYCLE BUFFER
- BIORETENTION
- PERMEABLE PAVING
- 5' BIKE LANE



STUDY AREA 5 - Jefferson Avenue at 25TH Street: THE NORTHEAST PARCEL



EXISTING CONDITIONS LOOKING NORTHWEST

- **The intersection features excessive pavement and daunting, unmarked crosswalks.**

STUDY AREA 5 - Jefferson Avenue at 25TH Street: THE NORTHEAST PARCEL



EXISTING CONDITIONS LOOKING NORTHWEST



ALTERNATIVE 1

- **The intersection features excessive pavement and daunting, unmarked crosswalks.**
- **Alternative 1 shows an infill development with seven townhouses and two retail establishments at either end of the site.**

STUDY AREA 5 - Jefferson Avenue at 25TH Street: THE NORTHEAST PARCEL



EXISTING CONDITIONS LOOKING NORTHWEST

- The intersection features excessive pavement and daunting, unmarked crosswalks.
- Alternative 1 shows an infill development with seven townhouses and two retail establishments at either end of the site.
- Alternative 2 shows an infill development with eighteen apartments above ground floor retail along Jefferson Avenue.

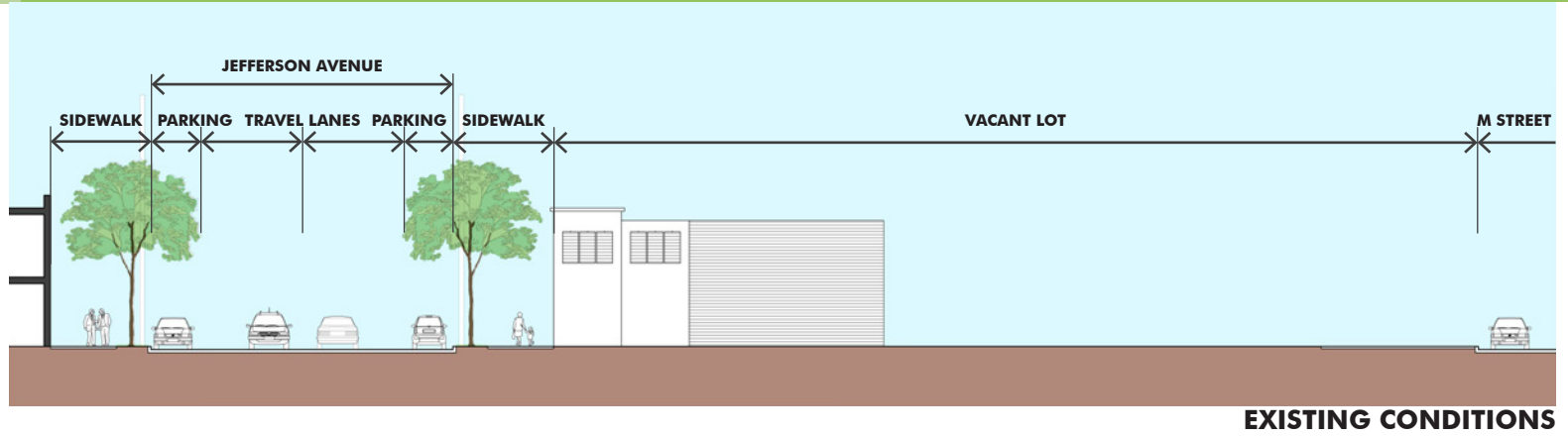


ALTERNATIVE 1



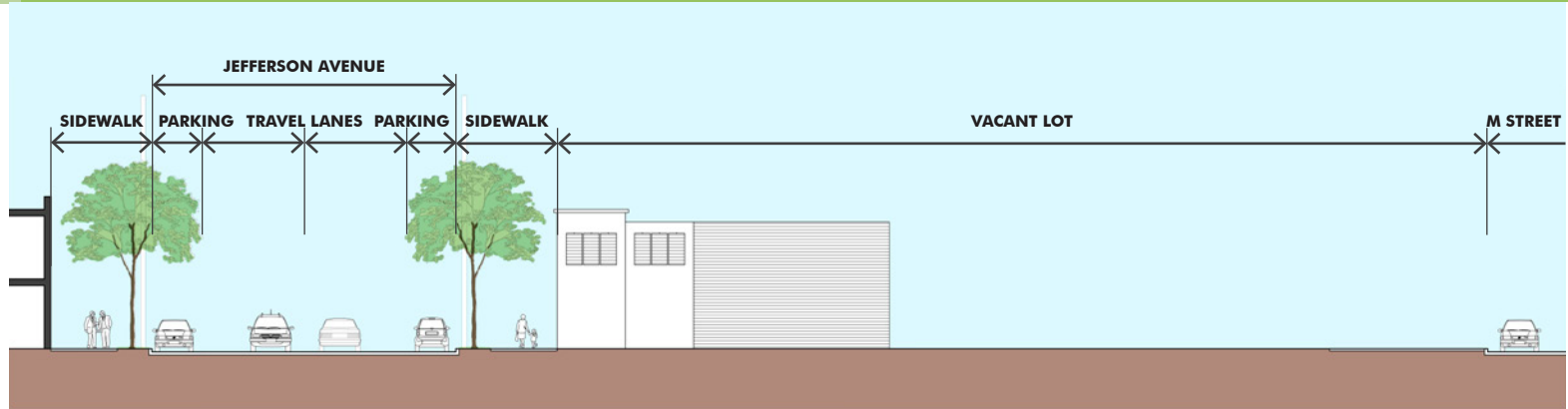
ALTERNATIVE 2

STUDY AREA 5 - Jefferson Avenue at 25TH Street: THE NORTHEAST PARCEL

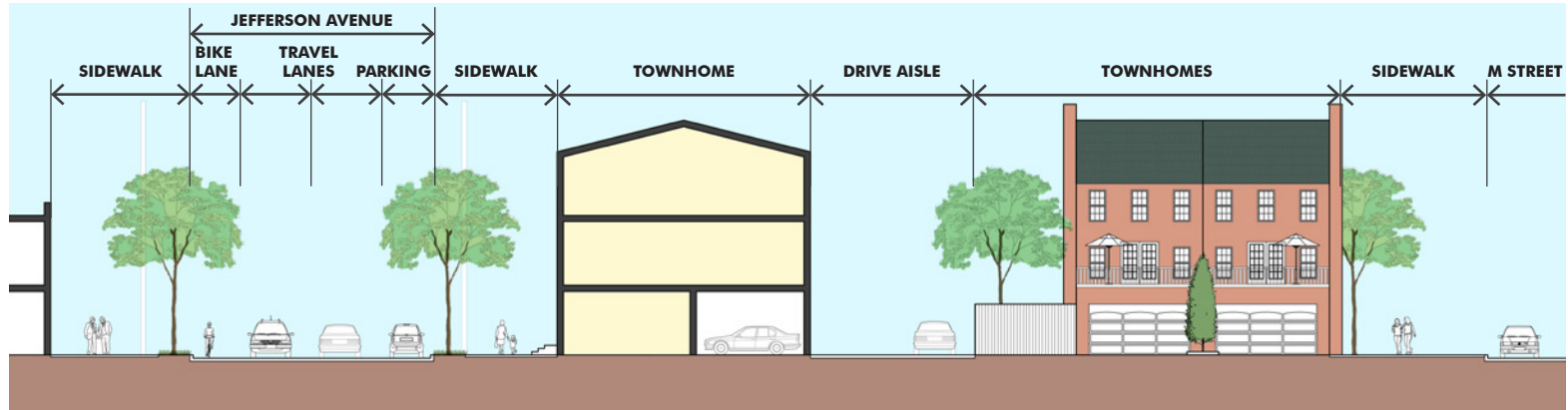


EXISTING CONDITIONS

STUDY AREA 5 - Jefferson Avenue at 25TH Street: THE NORTHEAST PARCEL

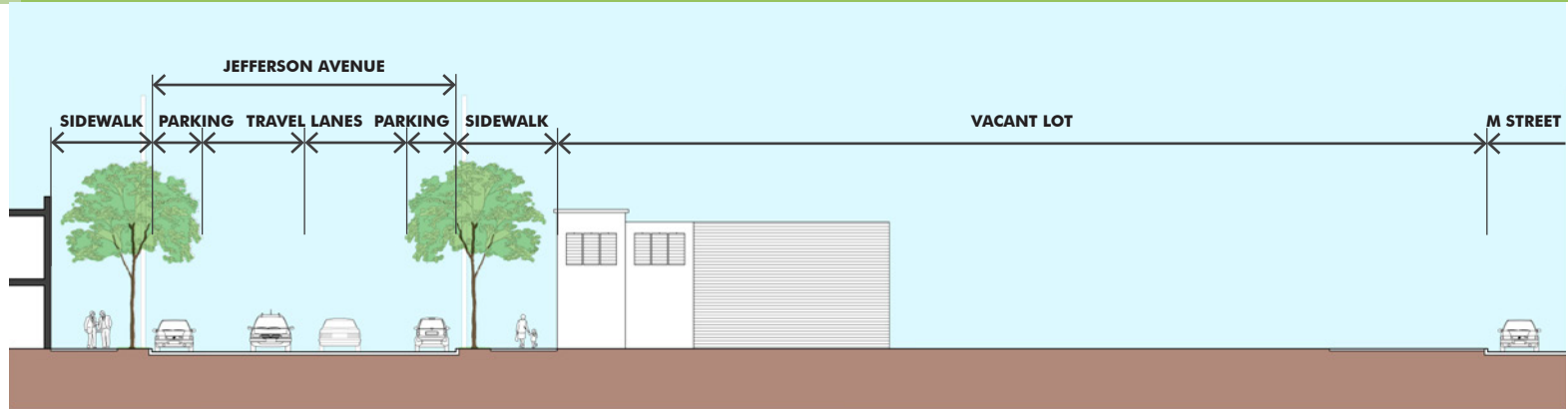


EXISTING CONDITIONS

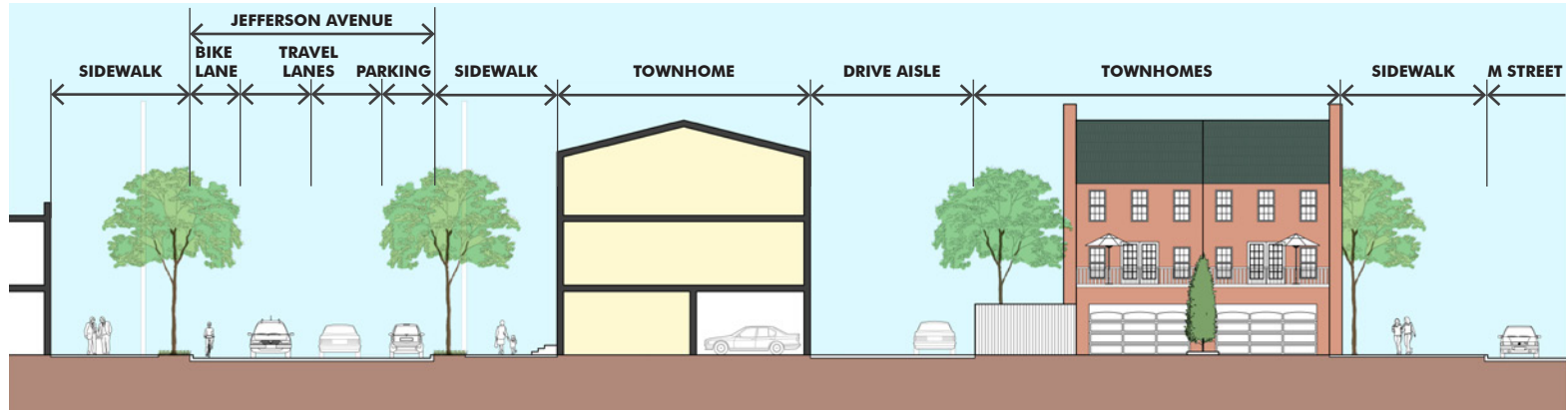


ALTERNATIVE 1

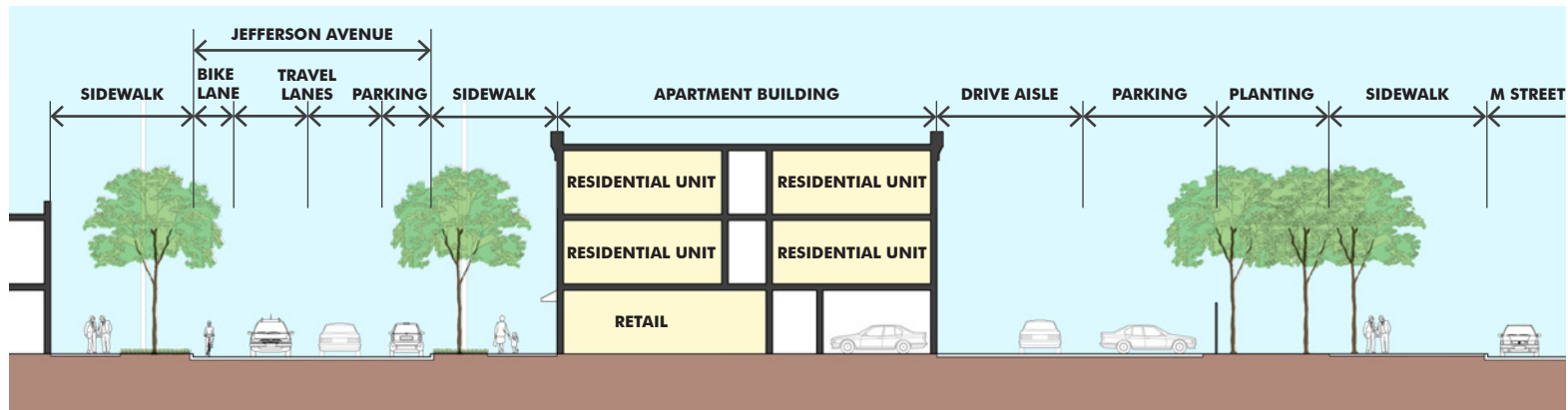
STUDY AREA 5 - Jefferson Avenue at 25TH Street: THE NORTHEAST PARCEL



EXISTING CONDITIONS



ALTERNATIVE 1



ALTERNATIVE 2

STUDY AREAS

The Gateway
Jefferson Ave
at 21st St

The Bowtie
Jefferson Ave
at 23rd St

**The Northeast
Parcel**
Jefferson Ave
at 25th St

The Ellipse
Jefferson Ave
at 22nd St

**Leigh Street /
24th Street Parks**
Jefferson Ave
at 24th St

