



BRIDGETON SOUTHEAST GATEWAY MULTI-MODAL COMMUNITY TRANSPORTATION ANALYSIS

June 30, 2023



With funding from



South Jersey
Transportation
Planning Organization



CONTENTS

INTRODUCTION	4
EXISTING CONDITIONS	6
OPPORTUNITIES & CHALLENGES	18
ALTERNATIVES	23
ALTERNATIVES EVALUATION	37
RECOMMENDATIONS & FUNDING	38
APPENDIX A: PLANNING-LEVEL COST ESTIMATES	40

Figures

Figure 1.	Study Area Map	7
Figure 2.	Zoning Map with Churches	11
Figure 3.	Contours Map	12
Figure 4.	Floodplain Map	12
Figure 5.	Parcel Map	13
Figure 6.	Pedestrian Fatalities by Race/Ethnicity	15
Figure 7.	Pedestrian Fatalities by Median Household Income	15
Figure 8.	South Ave at Hentry St Two-Way Concept Plan	25
Figure 9.	South Ave at Grove St Two-Way Concept Plan	26
Figure 10.	South Ave at MLK Jr. Way Two-Way Concept Plan	27
Figure 11.	Grove St at Pearl St and South Ave Two-Way Concept Plan	28
Figure 12.	South Ave at Henry St One-Way Couplet Concept Plan	30
Figure 13.	South Ave at MLK Jr. Way One-Way Couplet Concept Plan	31
Figure 14.	Grove St at S Pearl St And South Ave One-Way Couplet Concept Plan	32
Figure 15.	South Ave at MLK Jr. Way Minor Realignment Concept Plan	34
Figure 16.	Grove St at South Ave and S Pearl St Minor Realignment Concept Plan	35

Tables

Table 1.	Traffic Counts in the Study Area	9
Table 2.	Posted Speeds Limits on South Avenue and Grove Street	9
Table 3.	Selected Demographic Characteristics by Geography	14
Table 4.	Means of Transportation to Work by Geography	14
Table 5.	Evaluation of Alternatives	37

INTRODUCTION

Cumberland County, with funding from the South Jersey Transportation Planning Organization, led the Multi-Modal Community Transportation Analysis for the Southeast Gateway Neighborhood of Bridgeton. Through community and stakeholder engagement and a technical analysis of existing conditions, this study provides recommendations to improve the walking and biking environment in the neighborhood. A high-level analysis of the potential for a trail along the Cohansey River is also provided. This three-month study took place from April 2023 to June 2023 and incorporated feedback from local stakeholders and community members.

This study considers a variety of ways to address stakeholder and community concerns pertaining to walking and biking in the community. The primary challenges and opportunities this study addresses are:

- High vehicle speeds
- Limited visibility at intersections
- Lack of sidewalks and pedestrian crossings
- Lack of safe biking infrastructure
- Need for space for on-street parking
- Vehicle circulation



This project looked for ways to improve walking and biking in the Southeast Gateway neighborhood.

Based on community and stakeholder feedback and the technical analysis, the project team developed three alternatives to improve safety. **All alternatives shared in this study assume the culvert on South Avenue will be rebuilt as planned.**

- **Alternative 1: Two-way Grove Street with South Avenue Redesign.** This alternative would allow South Avenue to have local traffic only. Grove Avenue would serve bidirectional through traffic.
- **Alternative 2: One-way Couplet with South Avenue Redesign.** This alternative maintains current travel patterns but reduces vehicle travel lanes on South Avenue to one. This would allow room for a buffered bike lane and additional space for on-street parking.
- **Alternative 3: One-way Couplet with South Avenue Modifications.** This alternative maintains two lanes northbound on South Avenue and two lanes southbound on Grove Street but adds many of the pedestrian safety features included in Alternatives 1 and 2.

Each of the alternatives also developed curb extensions and the sidewalk network throughout the neighborhood to improve pedestrian safety and comfort. Additionally, the segment of South Avenue between S. Pearl Street and Martin Luther King, Jr. Way is proposed to be bidirectional to reduce the deviation to Henry Street.

Based off current feedback from stakeholders and the community, the current preference is Alternative 3. Curb extensions at intersections in this alternative would improve visibility at intersections and shorten pedestrian crossing distances. The project team recommends additional engagement with the community to further explore each alternative.

Regarding the potential for a trail, the project team recommends that a multi-use path continue to be studied; a path has community support and could offer recreational and ecotourism opportunities, especially if it becomes part of a larger trail network connecting to Downtown Bridgeton and municipalities to the south.



Some of the walking tour participants discussing opportunities for South Avenue.

EXISTING CONDITIONS

The Southeast Gateway neighborhood is bounded by State Route 49/Broad Street to the north, Rocap's Run to the south, to the east by East Avenue, and to the west by the Cohansey River. Rocap's Run also marks the municipal line between Bridgeton and Fairfield Township.

The neighborhood's two primary north-south corridors are South Avenue and Grove Street, both of which are County roads. Grove street is one-way south and South Avenue is one-way north. South Avenue is about 30 feet wide, which provides space for two travel lanes and room for parking. It has faint white dashes demarcating the two lanes but no shoulder markings. Grove Street has a similar width but with clear dash markings and shoulders clearly identified.



South Avenue has a 29-foot cross section. A faint dashed centerline identifies the two northbound travel lanes.

Figure 1. Study Area Map

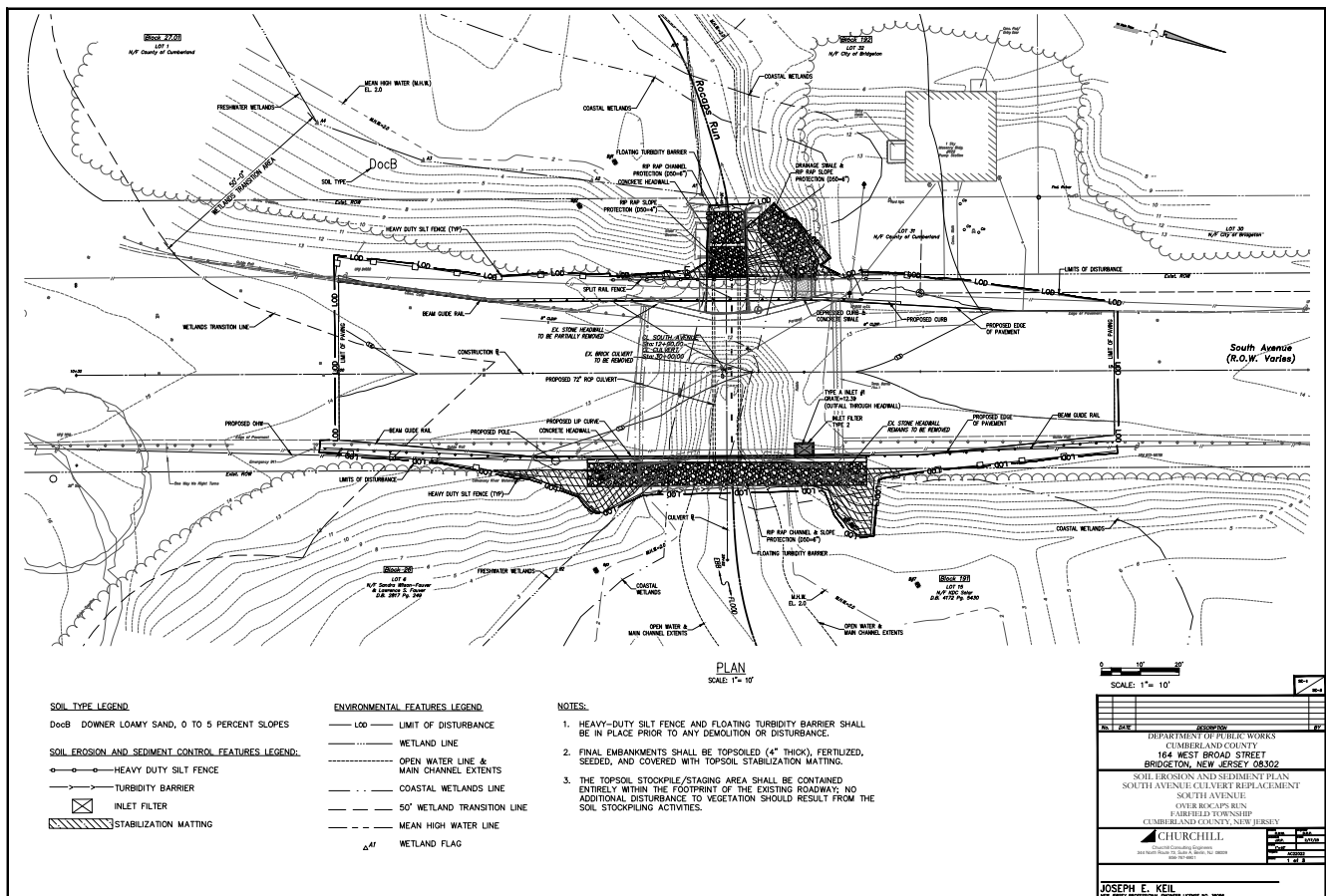


The culvert on South Avenue crossing Rocap's Run partially collapsed in 2020, at which point it was closed to traffic. Initially, passenger cars were detoured along East Avenue and truck traffic directed further east on Burlington Road. In response to community recommendations, Grove Street was converted to two-way from Rocap's Run to Baltimore Street in early 2023; at Baltimore Street northbound traffic turn left and head north on South Avenue.

All the alternatives developed in this study assume the culvert on South Avenue will be rebuilt as planned.



The culvert on South Avenue crossing Rocap's Run partially collapsed in 2020.



Planning and design for the reconstruction of the South Avenue Culvert is underway. All alternatives in this study assume this culvert will be replaced as planned.

Traffic Data and Posted Speed Limits

To understand the potential options for safety infrastructure, the project team reviewed available traffic data and speed limit information. The New Jersey Department of Transportation’s (NJDOT) Traffic Monitoring Program provides available traffic counts in the study area.

Grove Street and South Avenue are both Urban Minor Arterials. In February 2020, they had Average Annual Daily Traffic (AADT) of about 2,500 and 2,100, respectively. Considering both streets have two travel lanes in each direction, these traffic counts suggest that Grove Street and South Avenue are potential candidates for lane reduction. According to the Federal Highway Administration (FHWA), roadways with less than 20,000 AADT are candidates for lane reductions.¹ Stakeholders noted that Grove Street and South Avenue see increased traffic in the summer months when people use the roads to access the shore.

Table 1. Traffic Counts in the Study Area

Roadway	Cross Streets	Collection Date	Average Annual Daily Traffic
Grove Street	River Street and Garfield Avenue	Feb. 2020	2,512
South Avenue	Sharp Avenue and Morris Avenue	Feb. 2020	2,059
Pamphylia Avenue	South Pine Street and Spruce Street	July 2020	405
East Avenue	Cone Street and Shoemaker Lane	Aug. 2019	1,130

Source: NJDOT Traffic Monitoring Program



The speed limit drops to 25 mph on South Avenue.

Posted speed limits vary in the study area. The east-west cross streets are posted at 25 mph. South Avenue and Grove Street have lower speed limits in the northern segments of the study area (Table 2). No speed studies were available, however, many residents and project team members reported high vehicle speeds on both roadways.

Table 2. Posted Speeds Limits on South Avenue and Grove Street

Roadway	Cross Streets	Posted Speed Limit
South Avenue	Rocap’s Run to Garfield Avenue	35 mph
	Garfield Avenue to S. Pearl Street	25 mph
Grove Street	Rocap’s Run to Henry/River Streets	40 mph
	Henry/River Streets to S. Pearl Street	30 mph

¹ Federal Highway Administration. Road Diet Informational Guide, 2014. https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/rdig.pdf

Crash History

Recent crash data helps identify needs and appropriate safety infrastructure. The project team analyzed crash data available through NJDOT's Safety Voyager. The South Avenue-Henry Street intersection had at least 14 reported crashes since 2013, making it the highest crash location in the neighborhood. Of these, 8 crashes were right-angle crashes, which indicate diminished sightlines and/or speed may be factors. Another factor may be driver frustration due to inconvenient one-way traffic patterns. Because S. Pearl Street is one-way between Grove Street and South Avenue, eastbound vehicles must head south on Grove Street then turn on Henry Street to connect to Martin Luther King, Jr. Way and points eastward.

Fortunately, right angle crashes are less common in other neighborhood locations. Struck parked cars and fixed object crashes are more common crash types along South Avenue. The project team noted the presence of cars parked on top of the curbs and sidewalks, which further indicates an awareness that vehicles parked on-street are sometimes hit by moving traffic.



Crash data available on NJDOT's Safety Voyager site indicated that the intersection of Henry Street and South Avenue was the highest crash location in the neighborhood.



Because South Avenue between Grove Street and S. Pearl Street is one-way, drivers must head south on Grove Street and turn on Henry Street to head east.

Zoning, Topography, and Floodplains

The project team considered the land use and geographic context of the Southeast Gateway neighborhood to familiarize the study team with key destinations, potential for development, and other considerations that impact infrastructure (e.g., slopes and floodplains).

Zoning and Key Destinations

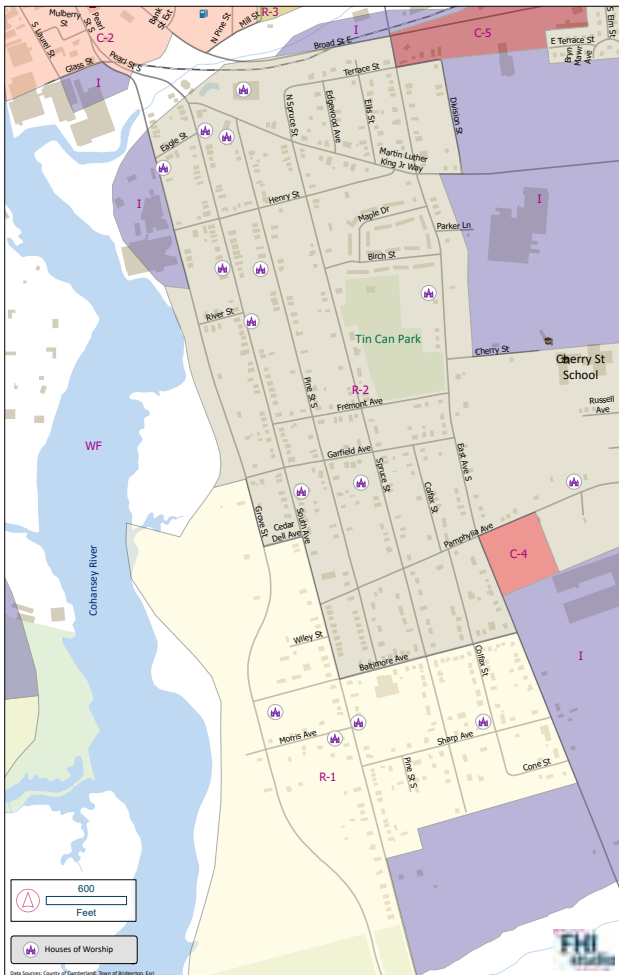
More than 70% of the parcels are zoned residential, either R-1 or R-2 zoning. R-1 zoning is for low-density residential districts and only allows for single-family detached dwellings and municipal uses. R-2 zoning is for medium density residential districts, which allows for both single- and two-family dwellings. Houses of worship are permitted as conditional uses for both zones. Parcels to the north of Cedardell Avenue/

Baltimore Avenue are generally R-2 zoning, and parcels to the south are R-1 zoning. Parcels along South Avenue between Garfield Avenue and S. Pearl Street are a historic district. Recent new developments have added housing and included upgrades to adjacent sidewalks and intersections.

Additionally, the City of Bridgeton is seeking to redevelop parcels along the Cohansey River through the new Waterfront zoning district. This district permits recreation and ecotourism uses.

In addition to several houses of worship found throughout the neighborhood, there are several other community destinations. A playground is located at Eagle Street and South Avenue. The Greater Bridgeton Family Success Center is on Spruce Street south of Henry Street. This community center is located just north of an open space commonly called Tin Can Park. Last, the Cherry Street School is located on East Avenue at Cherry Street; neighborhood children attend this school.

Figure 2. Zoning Map with Churches



South Avenue has a playground at Eagle Street.

Topography and Floodplains

Topography and floodplains play a role in determining infrastructure. Locations with steep topography can create challenging walking and biking environment and can also cause visibility issues. Moreover, locations that frequently flood from rising waters or major rain events need to be considered.

Fortunately, most of the Southeast Gateway neighborhood is characterized by gentle slopes. South Avenue and Grove Street gain less than 20 feet of elevation from Rocap's Run to Cedardell Avenue, which is a grade of less than 1%. This grade is relatively flat, which will benefit many pedestrians but especially people using wheelchairs, walkers, or strollers. The banks of the Cohanse River, however, are steep, rising to 30 feet in elevation within 200 feet of the bank. This equates to a 15% grade or more in some locations. After a steep elevation gain, the land adjacent to the Cohanse River remains relatively flat. If a trail were pursued in this location, maximum grades of less than five percent are likely feasible according to available data; this would allow the trail to meet requirements of the Americans with Disabilities Act (ADA).

The State of New Jersey recently adopted the Inland Flood Protection Rule to better protect communities from flooding and stormwater runoff. According to recent floodplain data, most of the neighborhood has minimal flood hazard. Some of the parcels adjacent to the Cohanse River, Rocap's Run, where Grove Street merges with S. Pearl Street, and a small stream north of Rocap's Run, are within a 100-year floodplain. This means that these areas have a 1% annual chance of flooding. These parcels could also be potentially affected by climate-induced flooding. Sea level rise of up to five feet would induce flooding at higher elevations on these parcels. Any infrastructure built in these locations should give special consideration to drainage and flood mitigation measures.

Figure 3. Contours Map

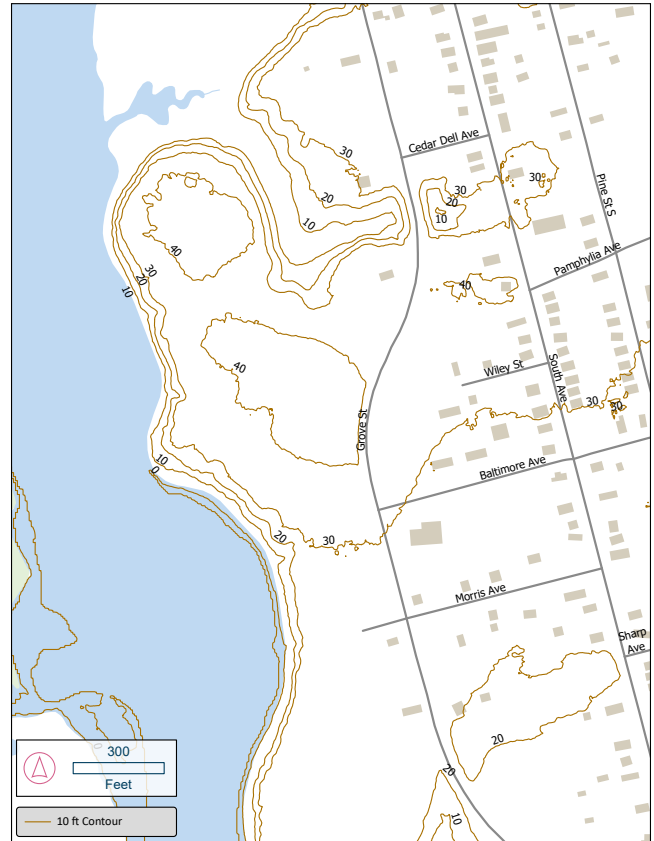
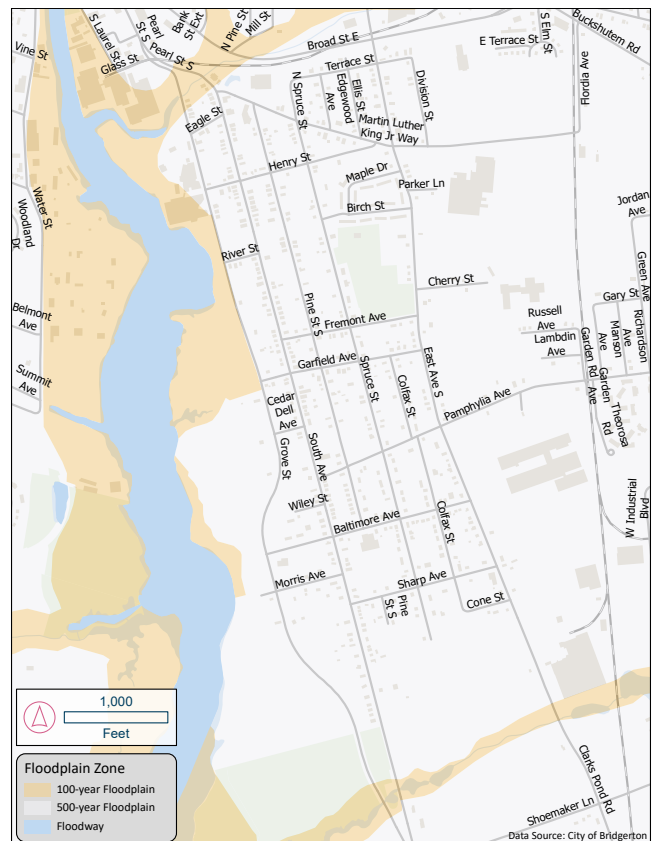


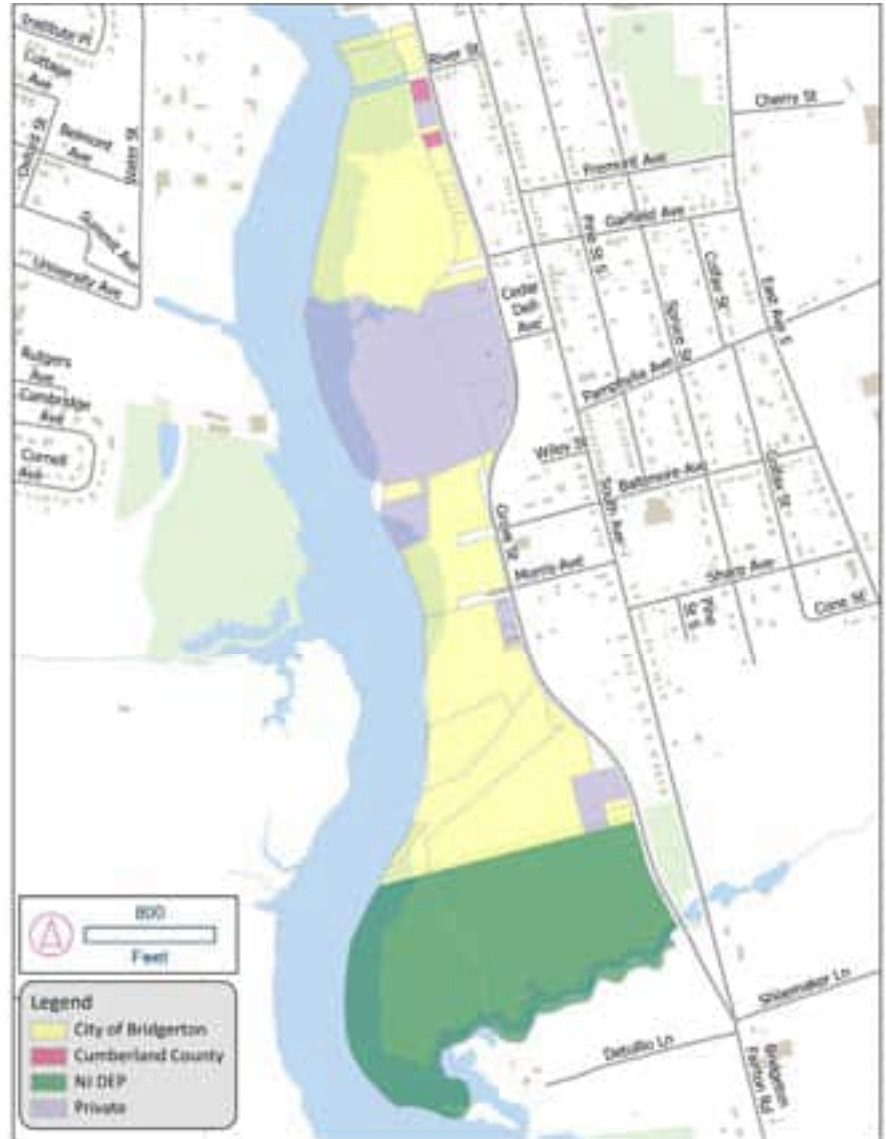
Figure 4. Floodplain Map



Property Ownership Along the Cohansey River and Grove Street

To further explore the potential for trails along the Cohansey River, the project team considered the ownership of parcels between Grove Street and the river. Most of the parcels are publicly-owned. The southernmost parcel is owned by New Jersey Department of Environmental Protection (NJDEP) and is set aside for wildlife protection. The City of Bridgeton and private property owners own the remaining parcels. Additionally, the Grove Street right-of-way is owned by Cumberland County. At the narrowest point just north of Baltimore Avenue, the right-of-way is 50 feet according to existing County data. The right-of-way expands to 65 feet or wider at other locations. A land survey would be needed to confirm exact right-of-way widths.

Figure 5. Parcel Map



Demographics & Travel Patterns

To gain a fuller understanding of residents and their travel patterns, the project team analyzed data from the 2021 American Community Survey (ACS) Five-Year Estimates.

Demographics

Results from the 2021 ACS indicate that the Southeast Gateway neighborhood has a higher concentration of Black/African American residents relative to Bridgeton, Cumberland County, and the state. Additionally, 33% of residents are Hispanic/Latino.

Nearly half of Southeast Gateway households have incomes below the poverty line, and 21% of households do not have access to a vehicle. Both these figures are higher than Bridgeton, countywide, and statewide estimates. This suggests a need for affordable transportation options, such as walking, biking, and transit.

Travel Patterns

The ACS also collects information on how employed people travel to work. Despite fewer households having access to a vehicle relative to Bridgeton, the neighborhood has a higher drive alone rate. Walking and biking are uncommon commute modes, and 3% of employed residents commute via public transit. The closest fixed-route bus route is NJ TRANSIT Route 553. It operates on Broad Street and connects to Millville, Vineland, and Atlantic City.

Table 3. Selected Demographic Characteristics by Geography

Demographic Characteristics	Southeast Gateway ¹	Bridgeton	Cumberland County	New Jersey
Black or African American	61%	33%	18%	12%
Hispanic/Latino	33%	51%	33%	21%
Below Poverty	49%	35%	13%	10%
Zero Vehicle Household	21%	18%	10%	11%

Source: American Community Survey 2021 Five-Year Estimates

Table 4. Means of Transportation to Work by Geography

Commute Mode	Southeast Gateway ¹	Bridgeton	Cumberland County	New Jersey
Drove Alone	72%	62%	79%	60%
Carpooled	22%	28%	13%	7%
Public Transit	3%	2%	1%	6%
Walking	0%	2%	0%	2%
Biking	0%	0%	1%	0%

Source: American Community Survey 2021 Five-Year Estimates

¹ Census Tract 205.03

Equity and Transportation Safety

According to a 2022 study conducted by Smart Growth America called “Dangerous by Design,” pedestrian fatalities are more common among people who are Black or African American (Figure 6) or living in low-income neighborhoods (Figure 7) than the public at large. To mitigate the inequities caused by historic infrastructure choices, the federal infrastructure bill (Infrastructure Investment and Jobs Act) encourages investments in communities with historically disadvantaged populations for many of the grant programs. According to the U.S. Department of Transportation’s Climate & Economic Justice Screening Tool, the Southeast Gateway neighborhood meets the socioeconomic thresholds to qualify for disadvantaged community status.¹

¹ U.S. Department of Transportation. Federal Tools to Determine Disadvantaged Community Status. <https://www.transportation.gov/grants/dot-navigator/federal-tools-determine-disadvantaged-community-status>

Figure 6. Pedestrian Fatalities by Race/Ethnicity

According to nationwide data collected by Smart Growth America, Black or African Americans and Hispanic/Latino populations are more likely to die while walking relative to non-Hispanic whites.

Pedestrian deaths per 100,000 by race & ethnicity (2016–2020)

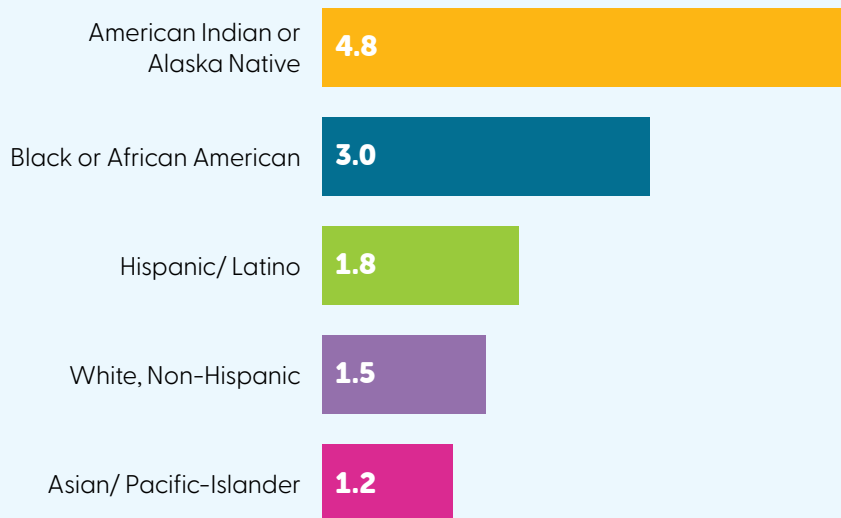
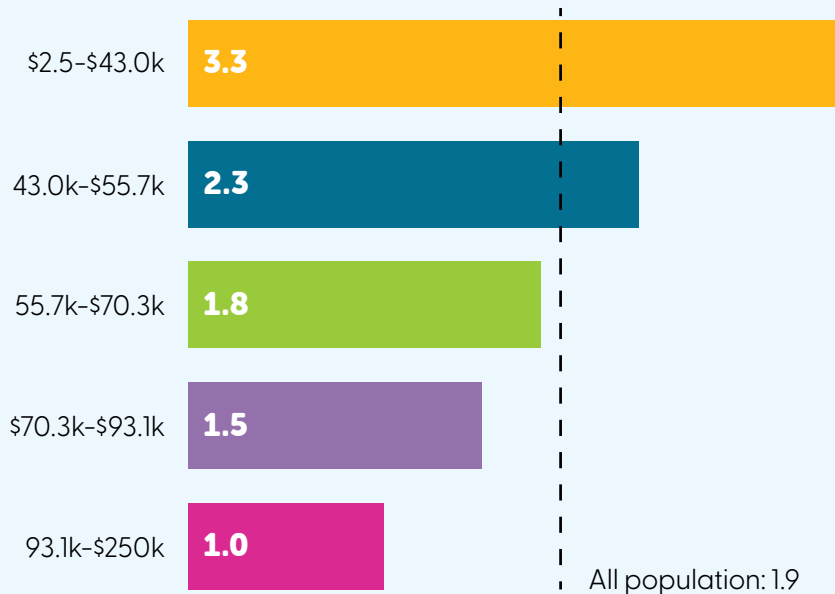


Figure 7. Pedestrian Fatalities by Median Household Income

The Smart Growth America study also notes that people walking in lower-income communities have a higher pedestrian fatality rate.

Pedestrian fatalities per 100k people by census tract income



Source: Smart Growth America’s “Dangerous by Design”

Infrastructure and Bike Rates

Many communities are seeking to increase bicycling to offer additional transportation choices for their residents. Biking offers an affordable, environmentally friendly option for residents to access jobs, schools, parks, and other destinations. Yet, there are a variety of barriers to increasing biking rates. Evidence from academic researchers suggests that safety concerns are the most frequently mentioned barrier to increased biking.¹ To address safety concerns, municipalities are implementing bike lanes, multi-use paths, and low-speed streets. These actions are supported by research that suggest protected bike lanes increase safety,² and a greater density of bike lanes relate to higher bike rates.³

1 Stephanie L. Fowler, David Berrigan, Keshia M. Pollack. Perceived barriers to bicycling in an urban U.S. environment. *Journal of Transport & Health*, Volume 6, 2017, Pages 474-480, ISSN 2214-1405, <https://doi.org/10.1016/j.jth.2017.04.003>.

2 Elijah Steven Chataway, Sigal Kaplan, Thomas Alexander Sick Nielsen, and Carlo Giacomo Prato. Safety perceptions and reported behavior related to cycling in mixed traffic: A comparison between Brisbane and Copenhagen, *Transportation Research Part F: Traffic Psychology and Behaviour*, Volume 23, 2014, Pages 32-43, ISSN 1369-8478, <https://doi.org/10.1016/j.trf.2013.12.021>.

3 Liang Ma and Jennifer Dill. Associations between the objective and perceived built environment and bicycling for transportation, *Journal of Transport & Health*, Volume 2, Issue 2, 2015, Pages 248-255, ISSN 2214-1405, <https://doi.org/10.1016/j.jth.2015.03.002>.

Planning Context

This study builds on recommendations from previous planning efforts to enhance mobility and safety for active transportation modes and invest in improving the physical infrastructure of the neighborhood to spur revitalization. The **Southeast Gateway Neighborhood Strategic Plan (2018)** highlighted the need to enhance public safety through reconstruction of streets and sidewalks and rerouting of truck traffic away from neighborhood streets. The plan noted that the perception of safety is tied to the physical conditions of streets, crumbling sidewalks, lighting, and public space. The plan mentions that speed designations and traffic have a negative effect on the neighborhood and that residents would like to see improved parking and reduced speeding. This built on a previous neighborhood plan from 2005, which also recommended traffic calming, speed reduction, and commercial traffic rerouting.

The Action Plan placed an emphasis on safe routes to schools, recommending, among other improvements, bus shelters for four priority locations along South Street and two along Grove Street. It also suggested rerouting truck traffic (traveling to and from Route 49) from South Street via Burlington Road and Pamphyllia Avenue. Moreover, South Avenue and Grove



2018 Southeast Gateway Neighborhood Strategic Plan

Street were ranked third in the neighborhood for cartway reconstruction (including streets, curbs, and sidewalks). Sidewalks were prioritized especially at the northern edge of the neighborhood. The plan also suggested the potential for new transit connections for residents seeking local and regional employment. Additional amenities such as improved street lighting were also recommended.

The foundation for this study is also set by a number of regional planning efforts. The **Cumberland County Bike and Ped Safety Action Plan** (2022) identified six behaviors most contributing to bike and pedestrian crashes including speed; distraction/ inattention; failure to stop; lack of facilities for biking, walking, and crossing; improper turning maneuvers; and failure to yield. The plan used a network screening methodology to determine the 25 highest-ranked bike-ped crash severity corridors/intersections (not including state routes). Grove Street from Morris Street to Eagle Street ranked 11th in this list. The '**Cumberland County Bike Trail Study**, lists Grove Street as a published bike route, though suggests it is not bike compatible based on an assessment of posted speed, lane and shoulder width, traffic volumes and parking restrictions.

The **Cumberland County Transportation Plan** (2013) noted the New Jersey Department of Transportation (NJDOT) and federal support for complete streets in rural and urban area enhancements. It recommended complete streets as a means of engaging the community in health, economic development, and safety benefits and suggested pursuing funding opportunities such as Safe Routes to Schools as a demonstration of change and infrastructure investment in the rural, economically challenged area, since bicycling improvements can be low-cost relative to their benefit. Overall, the plan suggested County support for municipal shift to a complete streets approach to multimodal transportation investment.

Lastly, **Moving South Jersey Forward**, the Regional Transportation Plan 2050's vision and goals support the actions detailed in other efforts. The plan's recently released goals include promoting transportation alternatives, improving truck routes, reducing barriers to job access, improving the regional economy, and improving the reliability of the transportation infrastructure, particularly around the Atlantic and Delaware Bay shorelines.

OPPORTUNITIES & CHALLENGES

The project team developed the list of opportunities and challenges through a technical analysis of the existing conditions and through a stakeholder and community engagement process. The engagement process included the following:

- A **Walking Tour** of the Southeast Gateway neighborhood with Cumberland County planners and engineers and the Gateway Community Action Partnership
- **Stakeholder Interviews** with County Commissioner Douglas A. Albrecht and the New Jersey Department of Environmental Protection (NJDEP)
- Two **Public Meetings** organized by the Gateway Community Action Partnership

Information about the project was posted to Cumberland County’s social media, and project team members collected comments via email. The comments received throughout the engagement process are incorporated in the sections below.

Opportunities and Challenges

This section documents the key opportunities and challenges found throughout the study area. South Avenue, Grove Street, and the potential for an off-street trail between Grove Street and the Cohansey River are discussed, as well as general feedback pertaining to transportation in the Southeast Gateway neighborhood.



Project team members discussed options for South Avenue with residents during the walking tour.

Safety Countermeasures

The participants and project team shared ideas for improving safety on the corridor and suggested a variety of safety countermeasures. Some of these are defined below.

Curb Extensions

Curb extensions, also called bump outs, provide additional space for pedestrians at crossing locations. In addition to promoting pedestrian visibility, curb extensions also reduce the crossing distance in the vehicle travel lanes.



Source: Minnesota Department of Transportation

Bike Lanes

Bike lanes offer dedicated space for cyclists who would otherwise share lanes with vehicles. According to the FHWA¹, the addition of bike lanes can reduce crashes by as much as 30% on two-lane local roads. Painted buffers to bike lane can increase level of comfort for some cyclists; where possible, physical buffers can offer additional safety benefits.



Source: Alex Baca, Washington Area Bicyclist Association (WABA)

High-visibility Crosswalk

To help increase the visibility of pedestrians, continental style high-visibility crosswalks can be installed at intersections. Improved lighting at these locations can further increase visibility.



Rectangular Rapid-Flashing Beacon (RRFB)

A Rectangular Rapid-Flashing Beacon (RRFB) is a pedestrian-actuated crossing warning sign designed to improve safety at locations that otherwise do not have a signal. They include a device that has flashing LED lights that flash when activated. RRFBs are only appropriate at marked crosswalks. They have been shown to reduce pedestrian crashes by as much as 47%.



Additional resources can be found on the Federal Highway Administration's [Proven Safety Countermeasures](#) website.

¹ Avelar et al. Development of Crash Modification Factors for Bicycle Lane Additions While Reducing Lane and Shoulder Widths. FHWA, (2021).

South Avenue

Challenges

- Speeding and aggressive driving is common.
- Poor visibility at intersections results in drivers turning without seeing oncoming traffic.
- South Avenue lacks sidewalks; many areas that have sidewalks are poorly maintained, which causes people to walk in the street.
- There are no crosswalks crossing South Avenue.
- The culvert collapse resulted in some streets seeing increased traffic, such as Baltimore Avenue.
- Drainage is an issue near Garfield Avenue.
- Vegetation is overgrown in some locations.
- Parked cars are frequently hit on the corridor, so people park on top of the curbs and sidewalks to avoid crashes.
- There is a dirt path to the bus stop on Broad Street.



South Avenue, which has two lanes in each direction, is about 29 feet wide

Opportunities

- Traffic diversion was initially a challenge, but people have gotten used to the change and enjoy having a lower traffic street. One commenter noted that people use their porches more, kids play in their yards, and pedestrians are more easily able to cross the street.
- Residents requested bike lanes and noted that they may help provide an additional buffer from speeding cars.
- Residents commented that speed bumps may help slow traffic.
- Traffic volumes are low enough that it might be possible to reduce South Avenue to one lane. This could optimize the roadway for bike lanes, wider parking areas, curb extensions, or other safety features.
- There is room to T the intersection at Martin Luther King Jr. Way.
- Creating a two-way segment between S. Pearl Street and Martin Luther King Jr. Way could reduce traffic on Henry Street and mitigate crash risk at South Avenue and Henry Street intersection.
- Sidewalks are found throughout the neighborhood; with maintenance and some additional sidewalks, the neighborhood could have a complete sidewalk network.



Sidewalk conditions vary along South Avenue



Pedestrians have created an informal path connecting South Avenue to Broad Street. Bus stop shelter on Broad Street is shown.

Grove Street

Challenges

- Grove Street has some curves that limit visibility; overgrown vegetation further hinders visibility at these curves.
- Community members said they have noticed some confusion over the two-way Grove Street, especially with the turning lane to Baltimore Avenue.
- Speeding is common.



The culvert collapse on South Avenue has diverted traffic onto Grove Street, which was converted into a two-way street between Rocap's Run and Baltimore Avenue.

Opportunities

- Traffic volumes are low enough that it would be possible to create a two-way street. This could reduce traffic on South Avenue.
- The shoulder and additional right-of-way could allow for bike infrastructure.



Between S. Pearl Street and Baltimore Avenue, Grove Street is two lanes southbound.

ALTERNATIVES

This section develops potential roadway alternatives and documents potential trail considerations along the Cohansey River.

Roadway Alternatives

The project team developed three planning-level concepts that address community concerns:

- High vehicle speeds
- Limited visibility at intersections
- Lack of sidewalks and pedestrian crossings
- Lack of safe biking infrastructure
- Need for space for on-street parking
- Vehicle circulation

All alternatives shared in this study assume the culvert on South Avenue will be rebuilt as planned.

ALTERNATIVE 1: TWO-WAY GROVE STREET WITH SOUTH AVENUE REDESIGN

Alternative 1 considers a potential option for South Avenue if Grove Street were two-way. With Grove Street as the arterial, South Avenue could be reclassified as a more local, neighborhood street. It should be noted that reclassifying a roadway and changing directionality is a challenging process that requires significant effort. To consider the full range of options, the project team considered how South Avenue could be converted to a two-way street if reclassification were pursued. In this scenario, there would be ample room for on-street parking on both sides of the street. Curb extensions at every intersection paired with crosswalks would promote visibility and shorten crossing distance. As a local street, the volumes would be low enough that a double centerline and bike lanes would not be necessary. If desired, speed bumps could be added to reduce speeding if it occurred.

Figure 8. South Ave at Hentry St Two-Way Concept Plan

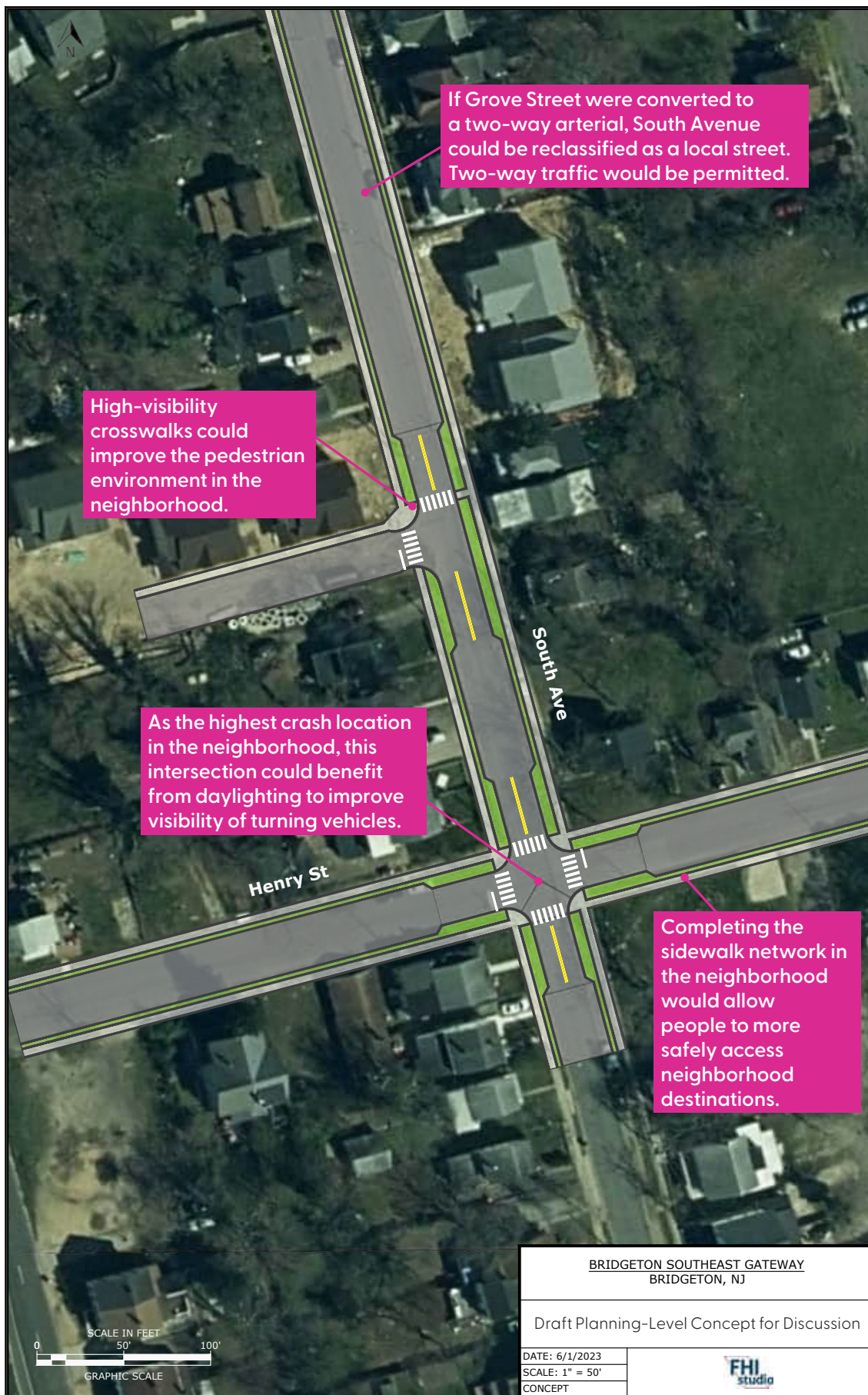


Figure 9. South Ave at Grove St Two-Way Concept Plan



Figure 10. South Ave at MLK Jr. Way Two-Way Concept Plan

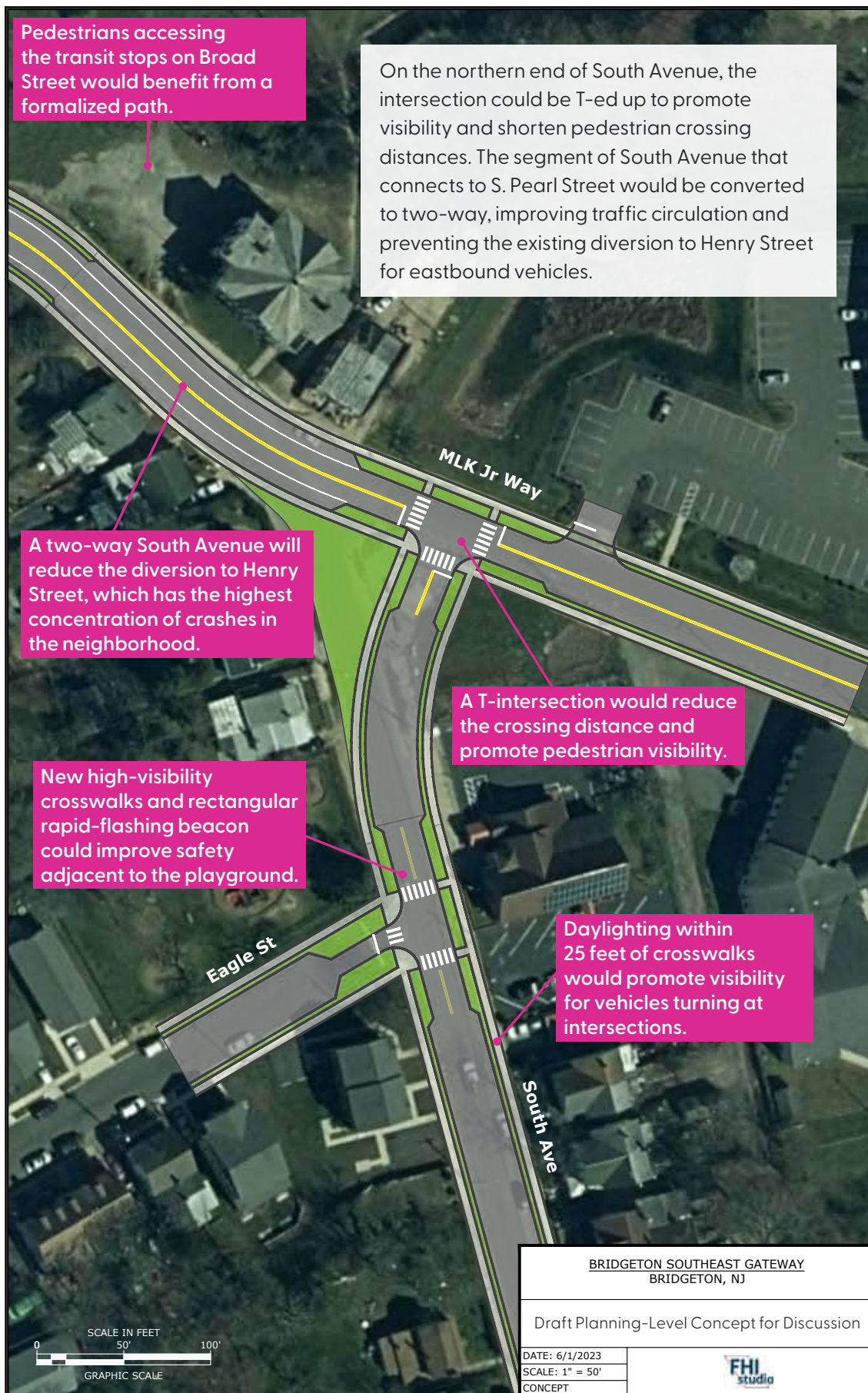


Figure 11. Grove St at Pearl St and South Ave Two-Way Concept Plan



ALTERNATIVE 2: ONE-WAY COUPLET WITH SOUTH AVENUE REDESIGN

Alternative 2 assumes that Grove Street will remain two lanes southbound. This alternative, however, reduces South Avenue to a single lane northbound. This allows room for a parking lane, bike lane, and curb extensions throughout the corridor. Southbound bike traffic could be directed to S. Pine Street or Spruce Street, which are both local roads.

Figure 12. South Ave at Henry St One-Way Couplet Concept Plan



Figure 13. South Ave at MLK Jr. Way One-Way Couplet Concept Plan

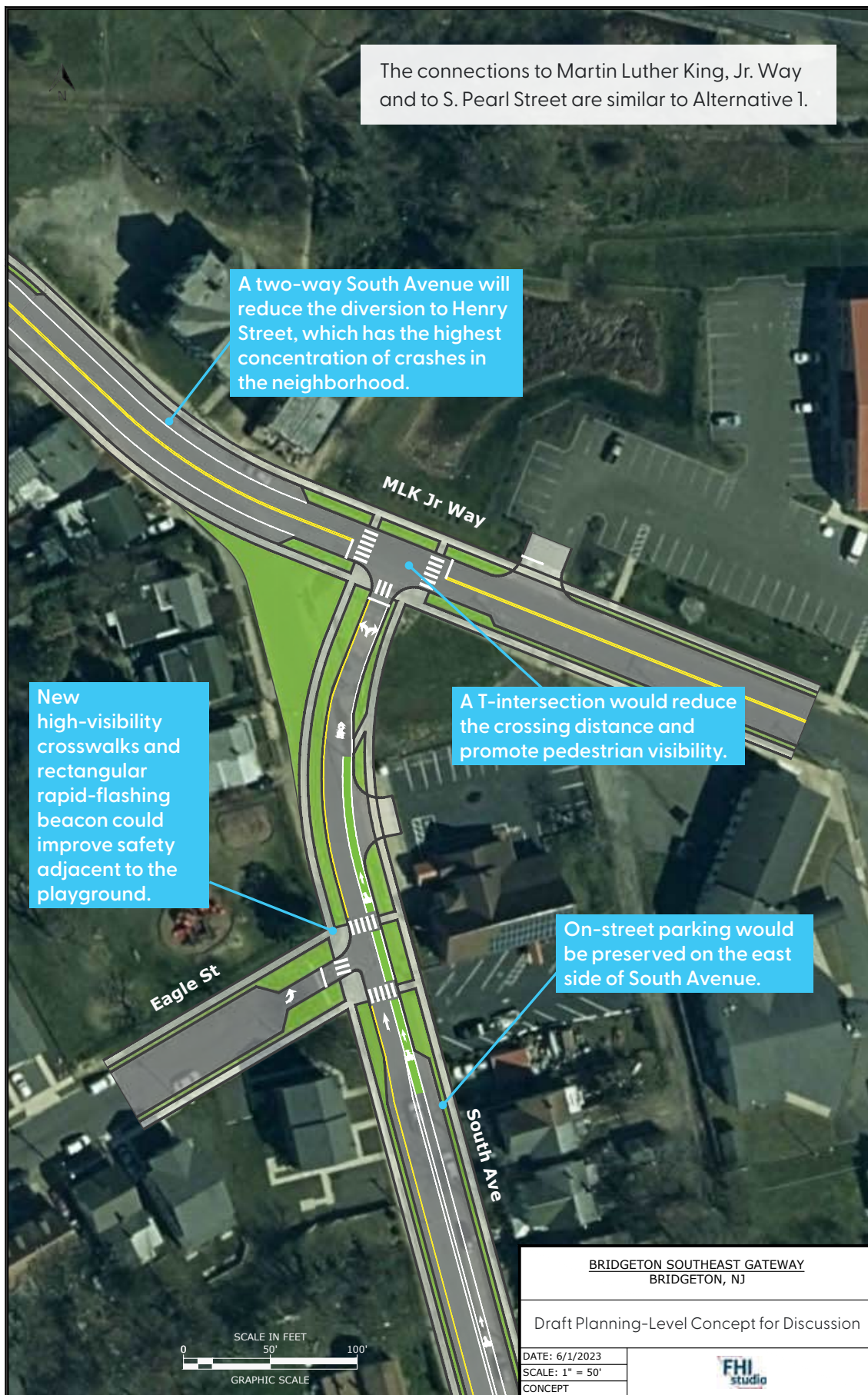
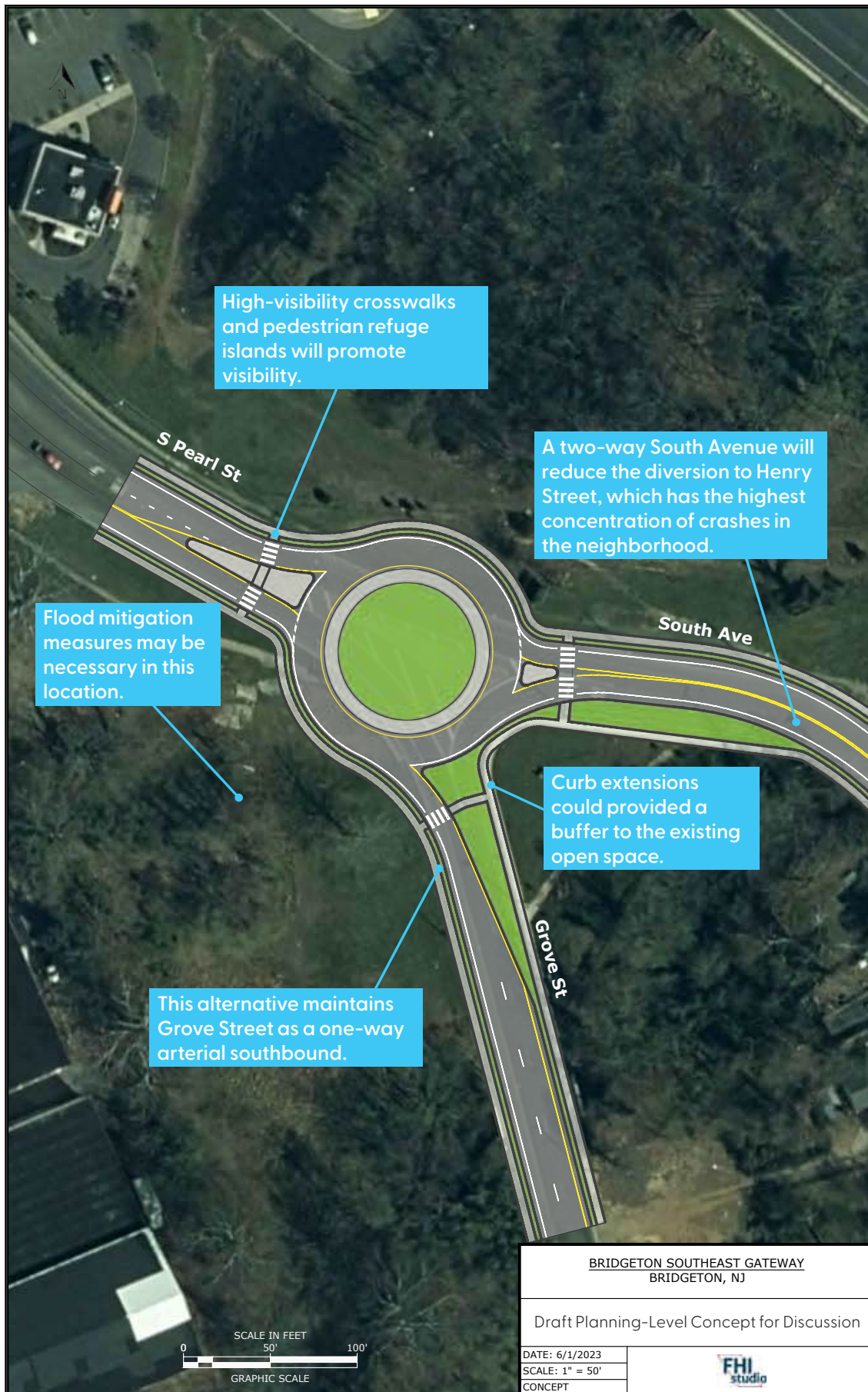


Figure 14. Grove St at S Pearl St And South Ave One-Way Couplet Concept Plan



ALTERNATIVE 3: ONE-WAY COUPLET WITH SOUTH AVENUE MODIFICATIONS

Alternative 3 offers an option with minimal change to the roadway circulation. This alternative maintains two lanes of one-way traffic on South Avenue and Grove Street but adds features to improve visibility and shorten crossing distances. In this alternative does include the two-way connection from South Avenue to S. Pearl Street. Unlike Alternatives 1 and 2, the Grove Street/S. Pearl Street intersection is a simplified T intersection rather than a roundabout.

Figure 15. South Ave at MLK Jr. Way Minor Realignment Concept Plan

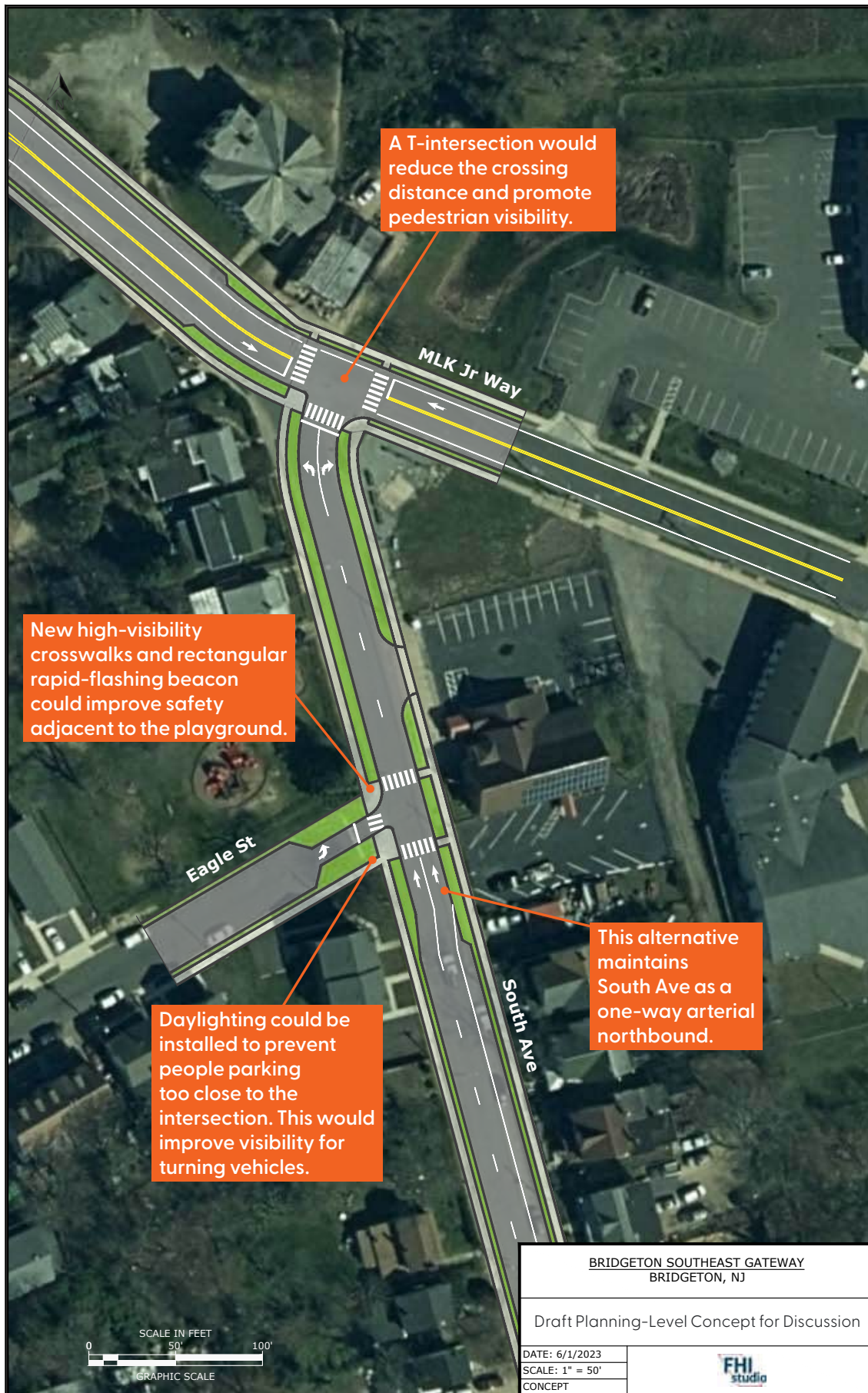


Figure 16. Grove St at South Ave and S Pearl St Minor Realignment Concept Plan



Trail Considerations

Community members and stakeholders expressed a strong interest in a trail adjacent to the Cohansey River. Some requested a short, local trail that would provide access to the river. Others envisioned a longer trail that would connect to destinations like the Cohanzick Zoo, downtown Bridgeton, and the former Cohanzick County Club. The project team conducted stakeholder interviews and assessed available data to consider approaches.

Consideration 1: Off-Street Trail Option

Most of the parcels are owned by public agencies (i.e., City of Bridgeton, Port Authority, and NJDEP). Cumberland County and/or the City of Bridgeton could pursue opportunities to develop an off-street trail in the area. The trail would likely need to avoid the NJDEP parcel due to the recreational use restrictions and wildlife habitat. If an off-street trail were pursued, a pedestrian crossing at Baltimore Avenue would provide neighborhood access benefits. A parking area may also be needed.

Consideration 2: Grove Street Cycle Track

Although a land survey would need to confirm the right-of-way width on Grove Street, it appears likely that Grove Street could accommodate a two-way cycle track. According to design guidance from the National Association of City Transportation Officials (NACTO), two-way cycle tracks should ideally be at least 12 feet wide, but can be as narrow as 8 feet in constrained environments.¹ Based off available data, the existing County right-of-way could accommodate two travel lanes (about 30 feet), room for utilities and snow shelf (10 feet), and a two-way cycle track (10-12 feet).

As opposed to Consideration 1, Consideration 2 would provide connectivity benefits to surrounding communities and potentially be part of a larger network in the future.

¹ NACTO, Urban Bikeway Design Guide. Two-Way Cycle Tracks. <https://nacto.org/publication/urban-bikeway-design-guide/cycle-tracks/two-way-cycle-tracks/>

ALTERNATIVES EVALUATION

Each alternative was evaluated based on study goals, potential benefits, and support/concerns raised in the community and stakeholder engagement effort. Some key considerations from the engagement effort:

- Community members raised safety concerns about the section of Grove Street that is currently two-way due to the detour, so shared that a fully two-way Grove Street was not preferred at this time.
- Although a bike lane was widely support by community members, several community members preferred the bike lane being installed on Grove Street rather than South Avenue.
- Several community members suggested that lane reduction would help reduce speeding on South Avenue.
- Community members expressed strong interest in trails in the community.

Table 5. Evaluation of Alternatives

Alternatives	Pedestrian & Bicycle Safety	Slow Vehicle Speeds	Potential for Economic Development Benefits	Recreation and Active Transportation Improvements	Community & Stakeholder Support
Roadway Alternatives					
Alternative 1: Two-way Grove Street with South Avenue Redesign	●	●	N/A	●	◐
Alternative 2: One-way Couplet with South Avenue Redesign	●	◐	N/A	●	◐
Alternative 3: One-way Couplet with South Avenue Modifications	◐	◐	N/A	◐	◐
Trail Considerations					
Consideration 1: Off-Street Trail Option	●	N/A	●	●	●
Consideration 2: Grove Street Cycle Track	●	N/A	◐	●	●

- Achieves Goal/Received Enthusiastic Community & Stakeholder Support
- ◐ Makes Significant Progress to Achieving Goal/Mostly Supported by Community Members & Stakeholders
- ◑ Partially Achieves Goal/Received Some Community & Stakeholder Support
- ◒ Provides Some Benefit in Achieving Goal/Supported by Few Community Members & Stakeholders

RECOMMENDATIONS & FUNDING

The project team encourages all three roadway alternatives receive consideration in future iterations of design. Due to the short-term need for pedestrian safety improvements, the project team recommends advancing Alternative 3 at this time. This alternative would not preclude the bike lanes (i.e., Alternative 2) from being added at a future date. Although Alternative 1 may be the best alternative for speed reduction on South Avenue, reclassifying South Avenue will require additional study, community engagement, and stakeholder buy-in than could be included in this study.

The trail considerations remain high-level. The project team sees value in each, but both will need further study. Consideration for wildlife habitat and potentially historic resources on the undeveloped parcels between Grove Street and the Cohansey River must be explored further. A land survey on Grove Street would help clarify the options for a two-way cycle track adjacent to the roadway. If a larger network of trails in Cumberland County were developed, Grove Street will be critical for a connection to downtown Bridgeton and points southward. The project team recommends both the cycle track and trail move forward for further study.

Additional recommendations pertaining to walking and biking in the Southeast Gateway Neighborhood include:

- Consider formalizing the unpaved path between South Avenue and the bus stops on Broad Street.
- Seek funding to improve sidewalk conditions throughout the neighborhood.
- Evaluate the potential for speed reduction measures on local streets (e.g., speed humps).

Funding

The planning level cost estimate for the South Avenue redesign in Alternative 1 is \$13.4 million (See Appendix A). This estimate includes new sidewalks, curb extensions, and repaving of South Avenue. Federal funding for safety project has increased in recent years with the latest infrastructure bill, the Infrastructure Investment and Jobs Act. Although not all federal grants require coordination with regional and/or state agencies, coordination with the South Jersey Transportation Planning Organization (SJTPO) is strongly encouraged. The most common and relevant federal funding sources for pedestrian and bicycle projects are shared below. A comprehensive list of all federal funding sources may be found on the Federal Highway Administration (FHWA) website.¹ The Southeast Gateway neighborhood meets the socioeconomic thresholds to qualify for disadvantaged community status,² which may make projects in the neighborhood more competitive for federal grants.

- **Safe Streets and Roads for All** is a discretionary grant program aimed at preventing deaths and serious injuries on roadways. Metropolitan planning organizations, counties, towns, and other subdivisions of a state may pursue these grants. Many of the recommendations of this report are eligible including: planning, design, and development activities that support roadway safety; quick-build street design changes informed

¹ Federal Highway Administration. Bicycle and Pedestrian Funding Opportunities. https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.cfm

² U.S. Department of Transportation. Federal Tools to Determine Disadvantaged Community Status. <https://www.transportation.gov/grants/dot-navigator/federal-tools-determine-disadvantaged-community-status>

by outreach and user input; development of a bike network; and installing pedestrian safety enhancements.

- The **Surface Transportation Block Grant program** is a funding opportunity for States and localities to improve the conditions on any public roads. This funding source is typically programmed by the New Jersey Department of Transportation (NJDOT) in cooperation with SJTPO. It is one of the most flexible federal funding categories. Use of these funds will require the support of both NJDOT and SJTPO.
- The **Transportation Alternatives Set-Aside program** is housed within the Surface Transportation Block Grant program and is intended for smaller-scale transportation projects like bicycle and pedestrian projects. There is funding dedicated for areas with a population between 5,000 and 49,999. Municipalities are encouraged to adopt and implement Complete Streets policies/ordinances to support grant applications. Projects that make walking and biking to school safer are highlighted as an eligible activity.
- The **Congestion Mitigation and Air Quality Improvement Program (CMAQ)** can fund many of the same safety projects as the Transportation Alternatives Set-Aside program funds. CMAQ is generally more focused on reducing congestion and emissions from commuting trips, and only communities that do not meet National Ambient Air Quality Standards qualify. To be eligible for this funding, an air quality impact analysis performed by SJTPO will be required, so coordination with their modeling staff is important, particularly to be sure their work plan includes that analysis.
- **Highway Safety Improvement Program (HSIP)** funds may be used on all public roads, including local roads. The funding can be used for bicycle and pedestrian safety projects and must be included in the State Highway Safety Plan.³ This program is data-driven and focused on reducing

crashes, fatalities, and injuries. It uses federal funding but is run through NJDOT.

- **RAISE (Rebuilding American Infrastructure with Sustainability and Equity)** discretionary grants are intended to address projects of local or regional significance that address key safety, mobility, connectivity, and sustainability goals. These funds are highly competitive, but bicycle/pedestrian projects are often selected based on their merit.

Disclaimer

This report documents the observations, discussions, and recommendations based off available data and discussions with stakeholders and community members. It provides Cumberland County and the City of Bridgeton with strategies to improve the transportation network for all users, with an emphasis on pedestrian and bicycle safety. Moving forward, Cumberland County and the City of Bridgeton may use this report to develop specific programs and project plans as well as to pursue funding for project implementation. The conclusions of this report are advisory and intended for general planning purposes to help identify transportation safety needs that encourage walking and bicycling. The contents of this report are not intended to be legally binding but rather offer recommendations to improve safety in the study area.



Walking tour participants considered improvements to the walking conditions.

³ New York Department of Transportation. New York State Strategic Highway Safety Plan. https://www.dot.ny.gov/divisions/operating/oss/highway-repository/NYS_SHSP_TotalReport.pdf

APPENDIX A

PLANNING-LEVEL COST ESTIMATES

Prep'd Date 6/30/23 By FHI Studio
 Town of Bridgeton, NJ
 Project No. 1975

Planning Cost Estimate for South Ave Roadway Improvements

Item	Unit	Quantity	Price	Amount
Concrete Curbing	LF	15,400	\$58.00	\$893,200
Concrete Sidewalk (South Ave)	SF	31,630	\$33.00	\$1,043,790
Concrete Sidewalk (Henry St)	SF	1,870	\$33.00	\$61,710
Concrete Sidewalk (Garfield Ave)	SF	3,470	\$33.00	\$114,510
Concrete Sidewalk (Cedardell Ave)	SF	2,600	\$33.00	\$85,800
Concrete Sidewalk (Pamphylia Ave)	SF	1,325	\$33.00	\$43,725
Concrete Sidewalk (Wiley St)	SF	3,000	\$33.00	\$99,000
Concrete Sidewalk (Baltimore Ave)	SF	6,170	\$33.00	\$203,610
Concrete Sidewalk (Morris Ave)	SF	6,260	\$33.00	\$206,580
Concrete Sidewalk (Sharp Ave)	SF	6,280	\$33.00	\$207,240
Grass Bump-Outs	Each	42	\$7,000.00	\$294,000
Repave and Install Pavement Markings	SF	231,000	\$9.60	\$2,217,600
Identified Items Subtotal				\$5,471,000
Minor Items (25%)				\$1,368,000
Items Subtotal				\$6,839,000
Lump Sum Items				
Survey (10%)				\$683,900
Design (\$10,000 + 10%)				\$693,900
Construction Inspection (15%)				\$1,025,900
Incidentals (20%)				\$1,386,000
Contingencies (30%)				\$2,773,000
Total				\$13,400,000

*NOTE - Estimates do not include ROW Impacts, drainage, traffic protection or potential utility relocation costs.