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Complete Streets in the City of Trenton: Existing Conditions Analysis

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The Trenton Health Team



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About

This report was prepared by the Alan M. Voorhees Transportation Center (VTC) at Rutgers, The State University of New Jersey.

The Alan M. Voorhees Transportation Center (VTC) is a national leader in the research and development of innovative transportation policy. Located within the Edward J. Bloustein School of Planning and Public Policy at Rutgers University, VTC has the full array of resources from a major research university on transportation issues of regional and national significance.

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Executive Summary

The Trenton Health Team is an innovative partnership dedicated to improving health outcomes for the residents of Trenton, New Jersey. As part of their Transforming Communities Initiative, the Trenton Health Team is using evidence-based solutions to address the physical environment, economic revitalization, housing, and other social determinants of health. The Team has identified Complete Streets as a necessary intervention in order to achieve these goals.

Complete Streets are streets designed in a manner that allow everyone to use them in a safe and inclusive way. That means balancing the needs of pedestrians, bicyclists, motorists, transit, and freight, so that all users can reach their destination comfortably and safely. Complete Streets work as a health intervention because many roadways have previously been designed to only facilitate the movement of motor vehicles, hindering the use of active forms of transportation, such as walking and bicycling. By redesigning a corridor to welcome all users, residents are more likely to walk and bicycle. Aside from the immediate health benefits of a more active lifestyle, Trenton residents without access to a car will have increased access to medical services, social services, and healthy food once Complete Streets remove the barriers to walking and bicycling.

In order to implement Complete Streets in Trenton, the Trenton Health Team engaged the Voorhees Transportation Center (VTC) at Rutgers University to audit seven important transportation corridors. The purpose of this audit was to catalog the existing conditions that pedestrians, bicyclists, transit users, and motorists encounter every day. The seven corridors were selected after VTC compiled previous studies and existing information and presented the findings to stakeholders. The appendix of this report contains maps used in the selection of the corridors.

The corridors selected touch on every part of Trenton and offer convenient access to the Downtown District and across the city. The corridors are Brunswick Avenue, Calhoun Street, East State Street, Hamilton Avenue, North Olden Avenue, Pennington Avenue, and South Broad Street.

This report begins by reviewing the benefits of Complete Streets. It then takes a deep dive into the seven corridors. A map of each corridor provides an at-a-glance summary of the conditions of crosswalks and curb ramps. The text covers the findings from the audit on a block-by-block basis, reviewing the conditions of the sidewalks, the roadway, the intersections, the bus stops, and the comfort and appeal of each corridor. At the end of each section, there is a visual collection of common issues. These issues are also cataloged by exact address in the appendix. The report ends with general recommendations that address the most common issues found on each corridor. These recommendations take into account proven best practices in building Complete Streets.



Figure 1. Trenton, New Jersey.

Introduction

The Trenton Health Team, a community health improvement collaborative serving Trenton, NJ, is an innovative partnership among St. Francis Medical Center, Capital Health, Henry J. Austin Health Center, and the Department of Health and Human Services of the City of Trenton. The Trenton Health Team is dedicated to forming a committed partnership with the community to expand access to high quality, coordinated, cost-effective healthcare that will make Trenton the healthiest city in the state. As a participant in national efforts addressing population health and healthcare transformation, the Trenton Health Team is recognized as a national model for a holistic approach to improving the wellness and healthcare of underserved populations.

The Trenton Health Team is implementing the Transforming Communities Initiative (TCI), a multi-million dollar, four-year population health effort funded by Trinity Health to address policy, systems, and environmental (PSE) change and promote healthy behaviors. This effort supports innovative and evidence-based solutions to address tobacco use, childhood obesity, and community building to address the physical environment, economic revitalization, housing and other social determinants of health. Six key initiatives are prioritized as change strategies that will be drivers to improving community health. Complete Streets has been identified as one of these key community changing strategies, with the goal of making Trenton's streets accessible to everyone.

Recognizing a shared history of collaboration in support of building a culture of health and safety across Trenton and neighboring communities, the Trenton Health Team engaged the Alan M. Voorhees Transportation center to support implementation of the Complete Streets intervention. The two objectives of this effort were: 1) research and compile existing city plans and maps that inventory or discuss existing conditions related to the City of Trenton's



Figure 2. A Complete Street with bicycle lanes and curb bump-outs in Trenton, New Jersey.

sidewalks, road conditions and pedestrian safety and 2) build upon this existing knowledge by conducting a field survey and assessment along target priority corridors to determine opportunities for Complete Streets projects.

What is a “Complete Street?”

Complete Streets are streets that are designed for everyone; streets where the needs of all people have been considered in design, construction, operation and maintenance. A Complete Street is safe and accessible for people of all ages, abilities, races, and ethnicities using all modes of transportation, including pedestrians, bicyclists, freight operators, motorists, and public transit riders.¹ To be complete, streets must reflect the character of the neighborhoods in which they are located and connect

to larger transportation networks including rail and bus systems, bicycle routes, and local highways.²

There isn't one universally accepted way to complete the streets; as the concept must be applied contextually and reflect the unique needs of the individual community. Complete streets will vary significantly both between and within communities. For example, Complete Streets in school zones may require reduced speed limits, narrower travel lanes, wider sidewalks, and better crossings to increase students' safety. Streets along transit routes may need benches, shelters, and enhanced lighting and signage for the comfort and safety of transit passengers. While a Complete Street in a rural area will likely look different from a Complete Street in a denser, more urbanized area, the Complete Streets concept approaches these roadways

1 <https://smartgrowthamerica.org/program/national-complete-streets-coalition/>

2 Nelson Nygaard, Complete Streets Handbook (Mid-America Regional Council, 2012), <http://nelsonnygaard.com/wp-content/uploads/2014/04/MARC-Complete-Streets-Handbook.pdf>.

with a similar outcome in mind: evaluating the needs of the community to balance safety and convenience for all users of these roadways.

Whatever the context, many studies have demonstrated how Complete Streets can improve safety for our most vulnerable road users, including seniors, people with disabilities, pedestrians, and bicyclists. Roadway features that slow vehicular traffic, such as lowered speed limits, narrowed lanes, raised medians, speed humps, and corner bulb-outs put in place on existing roads help to reduce traffic speed which leads to a reduction in motor-vehicle collisions and improved safety for pedestrians and cyclists.³ Reducing automobile speeds by even 10 mph greatly decreases pedestrian fatalities; 80 percent of pedestrians will die when hit by a car going 40 mph, 40 percent at 30 mph – and just five percent at 20 mph.⁴ Complete Streets recognizes that users of all transportation modes, whether it be car, bus, train, or taxi, at some point during their journey become a pedestrian. Creating a safer street environment benefits everyone.

Benefits of Complete Streets

While improved safety for all roadway users is one of the primary benefits of Complete Streets, numerous other benefits help to make communities better places to live, work, and do business.⁵ These other benefits include mobility, equity, health, quality of life, economic vitality,

and environmental health.

Mobility

Enhancing or creating multi-modal transportation options and networks provides improved mobility for all users, including non-drivers, youth, older citizens, and other mobility challenged users, and improves access to jobs, services, and recreation. This improved mobility is especially important for those who cannot afford, or choose not to own, a car as well as those who are unable to drive, such as the elderly, children, and those with disabilities.

Equity

Complete Streets help to ensure that mobility and access to opportunity are not dependent on owning an automobile. Transportation costs are a significant portion of an American household's budget, averaging approximately 20 percent nationwide. Those living in communities with better street connectivity and pedestrian, bicycle, and public transit facilities, spend on average just nine percent of their income on transportation.⁶ Connected communities allow residents to use less energy and spend less money to get around, allowing for fewer car trips and the use of other less expensive modes of transportation like bicycling, walking, or transit. Providing a variety of transportation choices across different price points frees

3 USDOT Traffic Calming to Slow Vehicle Speeds, <https://www.transportation.gov/mission/health/Traffic-Calming-to-Slow-Vehicle-Speeds>

4 Leaf, William A., and David F. Preusser. 1999. Literature review on vehicle travel speeds and pedestrian injuries. DOT HS 809 021. Washington, DC: U.S. Department of Transportation. <http://www.nhtsa.dot.gov/people/injury/research/pub/HS809012.html>.

5 NJDOT - Parsons Brinkerhoff, "Making Complete Streets a Reality: A Guide to Implementation." <http://www.state.nj.us/transportation/eng/completestreets/pdf/cspolicydevelopmentguide2012.pdf>

6 U.S. Department of Transportation (January 3, 2014), "Transportation and Housing Costs," Livability Initiative, https://www.fhwa.dot.gov/livability/fact_sheets/transandhousing.cfm#foot1.



Figure 3. South Warren Street Complete Streets improvements in Trenton, New Jersey.



Figure 4. Jackson Street Bridge in Mill Hill Park, Trenton, New Jersey.

up a significant portion of a family's budget, allowing more money for housing or other family needs.

Health

Complete Streets enhance opportunities for increased walking and bicycling and the numerous health benefits associated with increased physical activity. The Center for Disease Control and Prevention (CDC) supports Complete Streets as a means to prevent obesity.

Quality of Life

Complete Streets support livable, walkable communities that allow people to rely less on automobiles to get around. Walking or bicycling through town provides more opportunities to interact with neighbors and can lead to a better quality of life as well as increased community involvement and pride.

Economic Vitality

Improved streetscapes can help revitalize business districts, generate more foot traffic, and attract customers. Complete Streets help to create the types of places where people want to be, places where people like to walk and meet with family, friends or clients. Having exciting places where people want to walk encourages both residents and visitors to spend more money at local shops and restaurants that they may simply have driven past before, attracting new businesses and generating significant economic development in the form of increased property values and tax ratables. Such is the experience in Somerville, New Jersey, where a pedestrian plaza was

created along Division Street and the area witnessed a sharp decline in vacant commercial properties; vacancy dropped from 50 percent to zero after the plaza was developed.⁷

Environmental Health

Complete Streets also help the environment by reducing automobile use, which translates to cleaner air, reduced greenhouse gas emissions, and less dependence on non-renewable resources. Sustainable design elements, reducing the roadway width, or improving landscaping can also reduce impervious cover, manage stormwater runoff, and improve water quality.

Complete Streets in New Jersey and Trenton

New Jersey is a leader in the Complete Streets movement. In 2009, the New Jersey Department of Transportation was among the first state DOTs to adopt an internal Complete Streets policy. In 2010, the National Complete Streets Coalition ranked NJDOT's Complete Streets policy #1 out of over 210 state, regional, county, and municipal policies nationwide. Communities of all sizes throughout the state have joined NJDOT. Eight out of New Jersey's 21 counties have enacted resolutions and a total of 141 municipal Complete Streets policies have been adopted. Thus far, 3,670,746 New Jersey residents (41.8% of the state's population) live in municipalities with a Complete Streets policy and 4,563,353 New Jersey residents (51.9% of the state's population) live in counties with a Complete Streets policy.⁸ In 2015, Mercer County became the first

7 "Complete Streets Case Study: Somerville, New Jersey," Alan M. Voorhees Transportation Center, 2016.

8 New Jersey Bicycle and Pedestrian Resource Center, "NJ Complete Streets Policy Atlas," 2018. <http://njbikeped.org/complete-streets-2/>.

and only county in the state where 100 percent of the municipalities have passed Complete Streets policies.

Trenton benefits from a rich and historic existing transportation network, including rail lines, bus service, trails, a mostly complete sidewalk network, and bicycle lanes. There are existing bike lanes in the downtown district on New Warren Street, Market Street, Lafayette Street, and Broad Street. Trails in Trenton along the Delaware and Raritan Canal are part of the Delaware River Heritage Trail, providing connections to Lambertville to the northwest, and Bordentown to the southeast. The D&R Canal Trail also extends through North Trenton

to reach New Brunswick, and is part of the East Coast Greenway.

In 2012, the City of Trenton officially became a part of the Complete Streets movement by adopting a Complete Streets Policy. The city's Complete Streets policy was named one of the top 10 policies in the country by the National Complete Streets Coalition, a Washington-based organization dedicated to Complete Streets advocacy. The policy, unanimously approved and adopted by the City Council, was the result of a collaborative effort championed by a broad cross-section of community members. Trenton's exemplary Complete Streets



Figure 5. Downtown Trenton, New Jersey.

policy and existing transportation network provides opportunities to design sidewalk and on-road bicycle and pedestrian improvements to make walking and cycling within the city safer and easier while providing improved connections to existing trails and recreation opportunities.

Methodology

Background Research

Many previous studies documenting existing roadway conditions in the City of Trenton have been completed. To inform this project and ensure that efforts are not duplicated our first goal was to identify past plans and studies conducted in Trenton to see what is already known about physical conditions within the City and whether the information gathered was relevant to this project. The project team identified 42 previous plans and studies covering various sections of Trenton. For each of these 42 plans and studies, the project team prepared a summary of the information presented including the date the study was completed, the identification of the project team and funder, the geographic coverage area of the study, and a description of data presented in the study that could be useful for this project.

After compiling the summaries for each plan or study found, the project team mapped the areas of the city that have been previously studied in relation to existing conditions. The project team started by mapping the

planning districts identified in the Trenton 250 plan to serve as a guide for this project. These districts were created in the Trenton 250 plan in order to coordinate how improvements or proposals could interact with other initiatives, thus avoiding redundancies and improving synergy in planning. The districts can be seen in Figure 8.

The geographic coverage areas of the relevant past studies were mapped within the Trenton 250 District boundaries, and the locations of traffic collisions and fatalities from the years 2003- 2016 were added to the map. Additionally, the team mapped the proposed and potential Complete Streets identified in the Trenton 250 plan.

To start the screening process for identifying target Complete Streets Corridors for existing conditions assessments, the project team reviewed the mapped data for each district looking for areas not well studied, areas with crash fatalities, and areas with bicycle/pedestrian traffic generators such as parks, schools, major businesses, or other community attractions. The project team then prioritized streets meeting the above conditions that were identified as proposed or potential Complete Streets in the Trenton 250 plan.

The most studied area of Trenton has been the Downtown District. One of the most recent plans that we found for Trenton was the Downtown Trenton Bicycle & Pedestrian Plan completed in June 2016 by DVRPC. This plan is very extensive and includes a detailed look at the Downtown District. The plan contains an inventory of crosswalk and curb ramp conditions and recommendations for



Figure 6. Trenton 250 Plan: Circulation Report.



Figure 7. Downtown Trenton Bicycle and Pedestrian Plan, DVRPC.

on-road bicycle network improvements throughout the downtown district. These recommendations are well presented, specific, and also contain renderings to aid with a vision for future projects. Because the Downtown Trenton Bicycle & Pedestrian Plan is so comprehensive, and some improvements have already been made in the Downtown District, the project team recommended to the Trenton Health Team that this project focus on Trenton's other Districts to maximize the use of resources.

Selected Corridors

Priority corridors were chosen for each of the remaining Trenton 250 Districts, focusing on significant corridors that connect each district to the Downtown area.

East District:

The only plan that the project team encountered that had significant built environment inventory information related to the East District was the Hedgepeth-Williams School Travel Plan which focused on walking routes in the school neighborhood. The team identified the East State Street Corridor, approximately 0.67 miles, as a corridor for further study. East State Street was chosen because it is a Trenton 250 Proposed Corridor that provides a connection into the Downtown District. There was also a bicycle fatality along this corridor, and the corridor serves as a transit route. The corridor is adjacent to P.J. Hill Elementary School and a limited number of marked crosswalks were noticed during initial observation.

Hamilton Avenue, which is also County Route 606, was also chosen in the East District. Hamilton Avenue was chosen because it is a Trenton 250 Potential Complete Street that connects the East District to both the Downtown and South Districts. This corridor serves as a transit route and was the location of a pedestrian fatality. The corridor is also adjacent to Trenton Central High School and St. Francis Medical Center which are both considered bicycle and pedestrian traffic generators. The corridor study area length is approximately 1.4 miles long.

North District:

In the North District, the Mercer Crossings Study and the Woodrow Wilson School Travel Plan were the only plans to contain significant built environment inventory information. While these plans contained some useful information, the project team determined that more study was needed within the District. The project team identified North Olden Avenue as one of these corridors where more study was necessary. North Olden Avenue, which is also County Route 622, was identified as a priority corridor because it is a Trenton 250 Proposed Complete Street and is one of few options to cross Route 1 in the North District. This corridor, approximately .95

miles long, also provides connection to the East District.

Brunswick Avenue was also identified as an East District priority corridor. Brunswick Avenue was chosen because it is a Trenton 250 Potential Complete Street and provides connection to Downtown. The corridor also serves as a transit route and is adjacent to significant bicycle and pedestrian traffic generators such as Martin Luther King Jr. Park, MLK Jr. School, and Capital Health Regional Medical Center. This corridor is approximately 1.2 miles.

West District:

In the West District, the Joyce Kilmer Elementary School Travel Plan covered a significant part of Stuyvesant Avenue with an existing conditions survey. Recognizing the availability of this existing data, Stuyvesant Avenue was not chosen as a priority corridor. Instead, Pennington Avenue, which is also NJ 31, was chosen because it is a Trenton 250 Proposed Complete Street that provides connections to both the North and Downtown Districts. The corridor also serves as a Transit route and is adjacent to Monument Elementary School. Vehicle and pedestrian crash fatalities were also found to have occurred along the corridor. The Corridor study area length is approximately .87 miles long.

Calhoun Street, in the West District, was also identified as a priority corridor. In 2008, DVRPC completed a Road Safety Audit for a segment of Calhoun Street. While this information is helpful, the project team chose to expand the corridor studied and to update the conditions inventory recorded in 2008. Calhoun Street, which is also County 653, was identified as a priority because it is a Trenton 250 Proposed Complete Street located at the border of the West, North, and Downtown Districts. The corridor is adjacent to Monument Elementary School and a vehicle crash fatality was located along the corridor. The corridor serves as a transit route and also intersects the D&R Canal Trail. The Corridor study area length is approximately .81 miles long.

South District:

The "Riverline: Development Opportunities at the Cass Street Station Plan" and the "Grace A. Dunn School Travel Plan" provided significant built environment inventory data in the South District. South Broad Street, which is also US 206 was not included in these plans, but was identified as a target corridor because it is a Trenton 250 Potential Complete Street that connects into both the Downtown and North Districts. The corridor serves as a transit route and is also the location of many businesses which would be bicycle and pedestrian traffic generators. The South Broad Street Corridor study area, approximately 1.55 miles long, also presents varying roadway characteristics and changes road width significantly.

Existing Conditions Report

This section highlights the existing conditions of the seven study corridors, and is the basis for this project (Figure 8). Each section begins with a general description of the corridor, including the common street design, urban character, and availability of transit. After this introduction there is a street-section diagram, which shows the common makeup of the street in terms of overall width, numbers of lanes, and availability of parking.

The Corridor Summary then summarizes the existing conditions of the sidewalks, intersections, crosswalks, safety, comfort, and appeal throughout the corridor. A map showing the study area, from north to south or from west to east, is included in each section. The map includes all intersecting streets, traffic control devices, and major points of interest along the corridor. Additionally, the map notes the conditions of the crosswalks and curb ramps. Crosswalks are marked in white if they are in good condition, in yellow if they are painted but the paint is faded, and in dark gray if they have not been painted at all. Street corners are highlighted in orange if they have a curb ramp, but likely are not fully ADA compliant. Street corners are marked in red if there is no curb ramp at all.

Each corridor ends with images depicting common issues along the corridor. Appendix A provides additional details regarding these common issues, including the location of broken sidewalks, missing curb ramps, faded crosswalks, and inadequate bus stops are listed along with the nearest intersection or address.

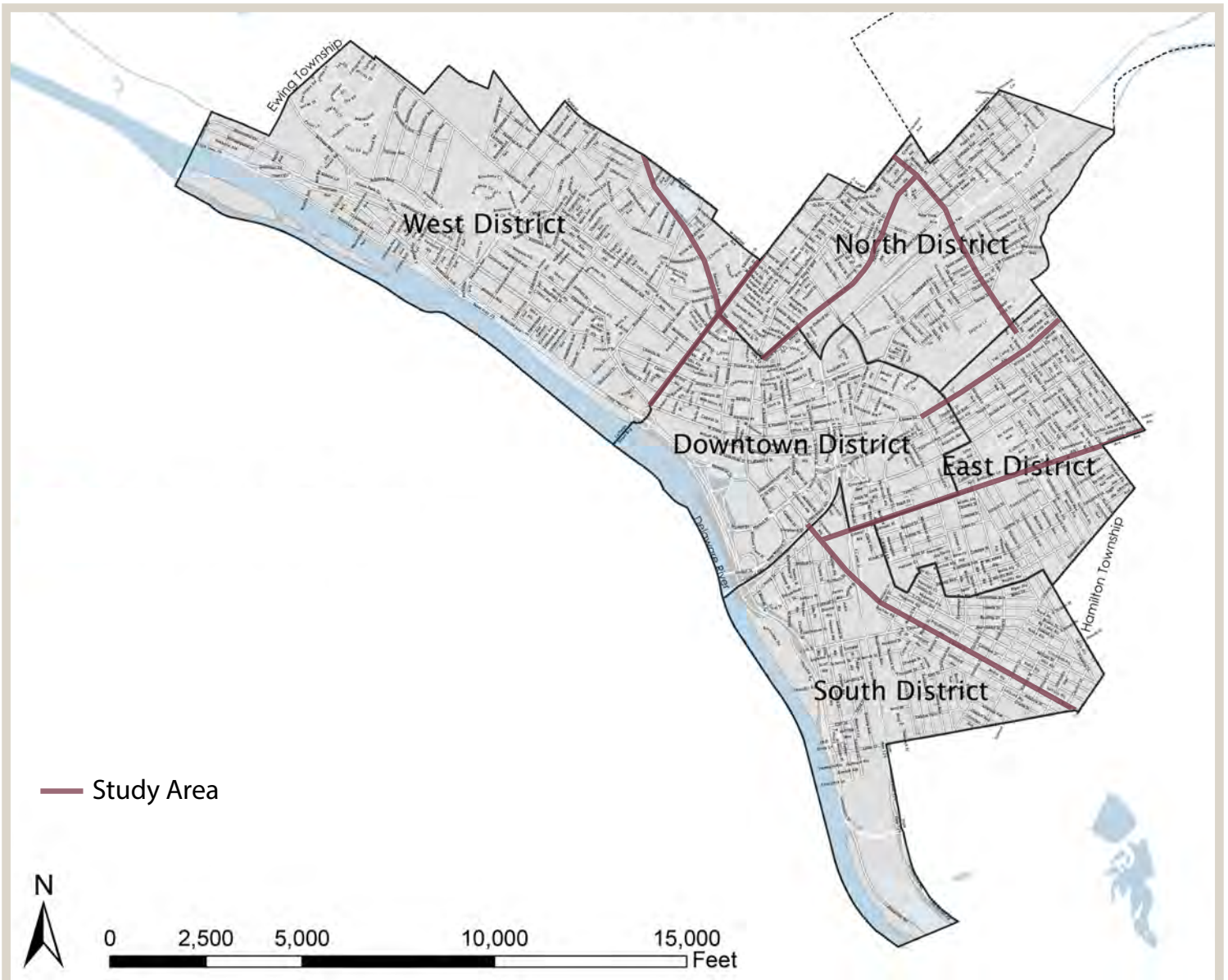


Figure 8. Map showing the location of the study corridors.

Brunswick Avenue

The Brunswick Avenue corridor runs for 1.2 miles across Trenton’s North District, from North Olden Avenue to the Trenton Battle Monument, which is surrounded by the complicated intersection of Pennington Avenue (CR-31), Martin Luther King Jr. Boulevard (SR-206), and North Broad Street (SR-206) (Figure 10). The corridor features a mixture of residential, commercial, and civic uses. The adjacent properties are mostly all developed, with buildings ranging from one to three stories. There are also some open spaces and parking lots along the roadway, and a few vacant lots at the southern end of the corridor. Large properties located on Brunswick Avenue include the Capital Health Regional Medical Center, a solar power farm, and the Martin Luther King Jr. Elementary School.

The roadway generally consists of one travel lane in each direction, with parking allowed on each side (Figure 9). Brunswick Avenue generally has the right-of-way over intersecting streets, with few traffic signals along the route. The southernmost block of the corridor is one-way, running northbound, with a sidewalk extension in place to direct southbound traffic onto North Montgomery Street. New Jersey Transit runs two bus lines, routes 603 and 613, on the northern half of the corridor.

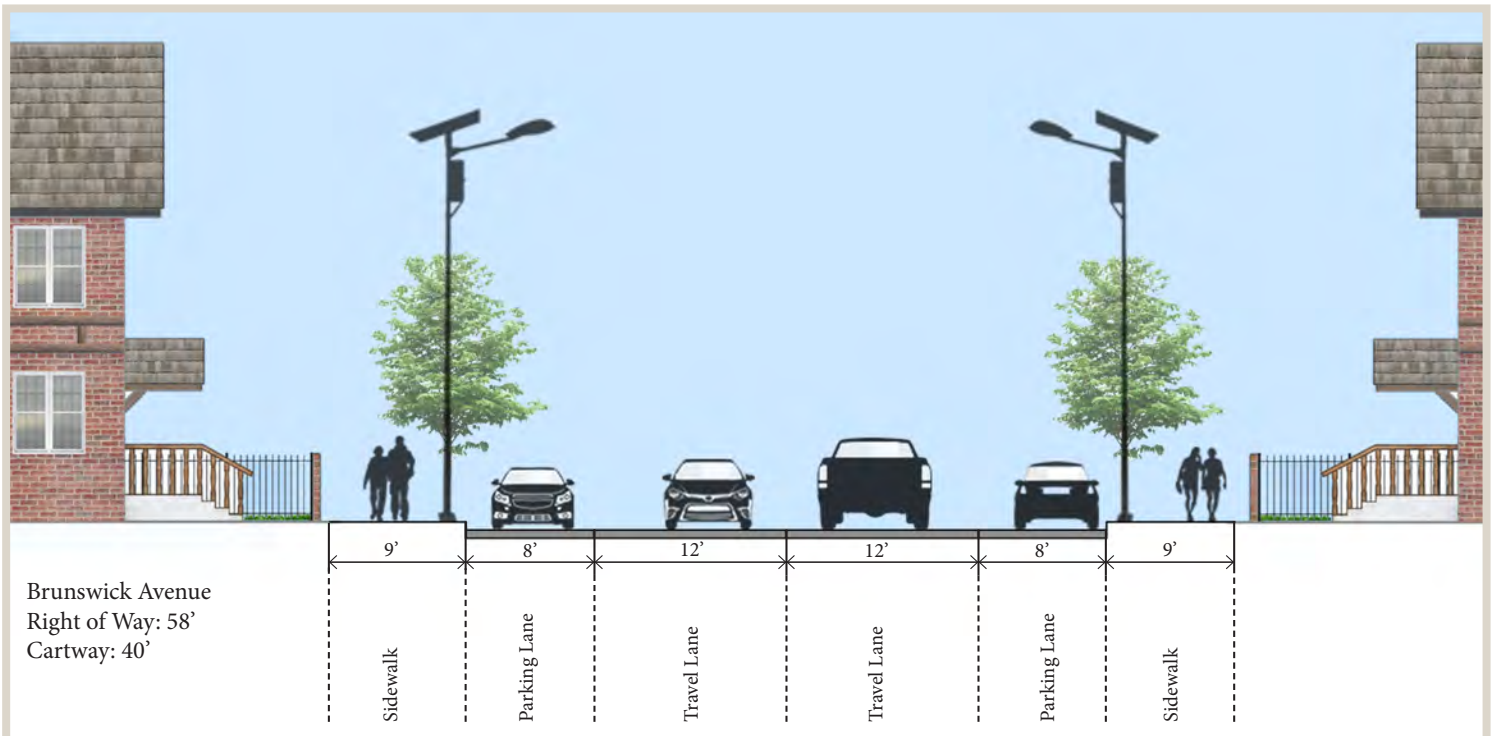


Figure 9. Typical Brunswick Avenue Street Section.

Corridor Summary

Sidewalks

The southernmost section of the corridor includes a handful of sidewalk segments that are in good condition, notably the segment from North Montgomery Street to Violet Street. Additionally, the sidewalks in front of the Capital Health Medical Center are in great condition. Otherwise, the sidewalks are typically cracked and overgrown. Sidewalks are frequently wide, although there are multiple instances where either the presence of front steps or overgrown landscaping have caused the sidewalk to narrow down to a width of less than two feet. Driveways can create sloped sections that can be difficult to navigate in a wheelchair.

Intersections and Crosswalks

Crosswalks along the entire length of the Brunswick Avenue corridor are either in poor condition or non-existent. A notable exception is in front of the Capital Health Regional Medical Center, where ample signage has been installed. Otherwise, the only painted crosswalks on Brunswick Avenue are located at signalized intersections and are mostly faded.

Brunswick Avenue has many t-intersections, three-way intersections where one road terminates, with minor streets. At these locations, the crosswalks across the secondary street are usually faded, and there is rarely a crosswalk marked to cross Brunswick Avenue. Although most intersections have curb ramps, they are usually in poor condition.



Figure 10. Map of Brunswick Avenue Study Corridor.

Safety

When the corridor was audited, both vehicular and pedestrian traffic was light. However, the corridor did not feel isolated, as there are regular pedestrian traffic generators located along the corridor, such as the many bodegas located mid-block or on street corners. Additionally, MLK Jr. Elementary School and the Capital Health complex both provide an increased sense of security. The only location along the corridor that felt isolated was the intersection of Sanford Street and Brunswick Avenue, where the presence of two large vacant corner lots, multiple abandoned properties, and poor maintenance has left the area unkempt. Although the corridor was not observed at night, many crosswalks lacked overhead street lighting in the immediate area. The entire corridor has cobra-style lighting on power poles (see Figure 9 for an example of cobra-style lighting), with additional frequent sidewalk lighting at the northern end of the corridor.

In regards to traffic safety, most of the side streets have faded stop bars. The intersection with North Montgomery Street is particularly notable, as the stop sign is obscured by a tree. As such, multiple vehicles were observed failing to stop at the intersection. Although the posted speed limit is 25 miles per hour (mph), drivers likely proceed much faster when no cars are parked along the roadway. The lack of crosswalks across Brunswick Avenue may encourage unsafe crossings by pedestrians. There is no bicycle infrastructure along the route.

Comfort and Appeal

Litter was observed along the entire corridor, with greater amounts observed in locations with especially poor sidewalk conditions. High amounts of litter were especially noted around the intersection of Sanford Street and Brunswick Avenue, and litter was observed at a much higher density on and around vacant lots.

Although half the corridor is serviced by NJ Transit buses, only one stop includes a bus shelter and bench. Other stops are only marked with a small sign, and many do not have a proper passenger landing pad. Additional pedestrian amenities along this corridor are few and far between, with an occasional trash can located outside some businesses and no benches present. In addition to a lack of on-road bicycle infrastructure, no bicycle racks exist in locations visible from the roadway.

Detailed Conditions Report

North Olden Avenue to Fuld Street

Brunswick Avenue and North Olden Avenue is a major intersection controlled by a traffic light. Although not delineated with multiple lanes, vehicles were observed forming two lanes at the signal. Crosswalks and stop bars are extremely faded (Figure 12). Although curb ramps exist, they do not meet ADA standards. Additionally, the ramps are oriented towards the center of the intersection,



Figure 11. Trenton Battle Monument, as seen from Brunswick Avenue.

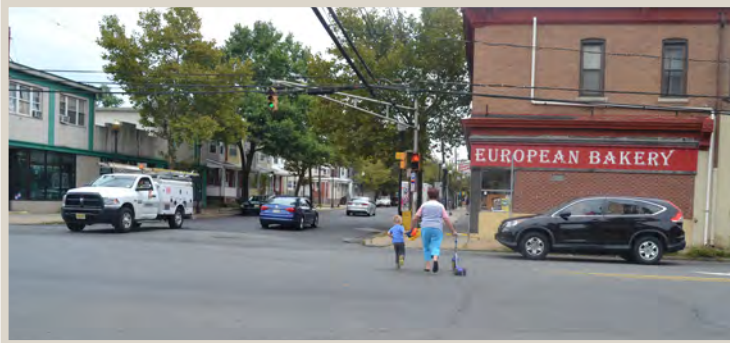


Figure 12. Pedestrians crossing N. Olden Avenue, crosswalk not painted.

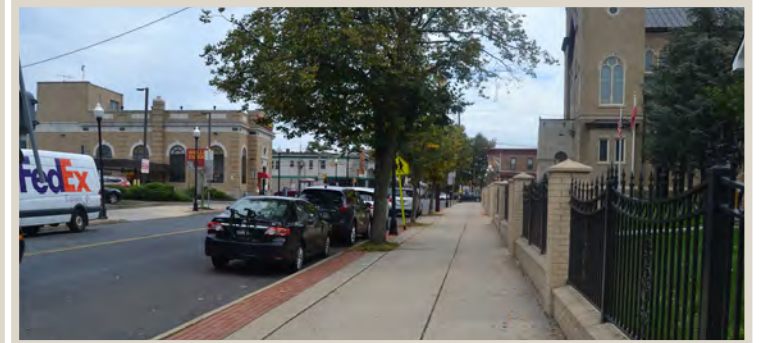


Figure 13. St. Hedwig Roman Catholic Church and Wells Fargo Bank.

rather than into the crosswalks. The pedestrian signal head on the west side is dim, making it hard to see.

The St. Hedwig Roman Catholic Church is located on one corner of this intersection, which builds a strong street wall and keeps the sidewalk maintained (Figure 13). The other corner has a Wells Fargo Bank. Although the bank has a large sidewalk and a walk-up ATM, a three-lane drive-thru and an additional parking lot entrance interrupts the sidewalk. There is a bus shelter, bench, and trash can directly in front of the bank.

Outside the intersection, Brunswick Avenue has one lane of traffic in each direction, with parallel parking at the curb. Sidewalks are present and generally in good condition on both sides of the street. There are decorative brick pavers located adjacent to the curb. There are many attractive trees, but some have raised the sidewalk and created a tripping hazard. Lighting is provided both by overhead "cobra" fixtures and additional historic-style fixtures along the sidewalk. Adjacent properties are well-kept. Although many driveways are present, most are narrow.

Brunswick Avenue and Heil Avenue is a four-way intersection, with stop signs for Heil Avenue. Standard crosswalks are painted on all four crossings, but the paint is faded and there is no additional signage. Three of the four corners have a single curb ramp oriented towards the center of the intersection, while the fourth corner has two ramps properly oriented into the crosswalk. None

of the curb ramps have truncated domes. There are bus stops at two corners with no amenities for passengers. The northbound bus stop has a grass strip between the sidewalk and the curb, blocking direct ADA access to a bus.

South of the intersection, the sidewalk loses the decorative brick pavers. Instead, the area adjacent to the curb has grass. Additionally, the historic-style street lights do not exist south of this intersection. Approaching the Capital Health Regional Medical Center there is a sign stating "Hospital Zone," a sign noting the 25 mph speed limit, and a sign warning of pedestrian crossings (Figure 14).

Parking is not allowed in the area adjacent to the hospital, and a turning lane exists so vehicles can turn left into the parking lot (northbound) or into the emergency drop-off (southbound). There are two crosswalks across Brunswick Avenue in front of the hospital at the parking lot entrance. The northernmost crosswalk is built with brick pavers, while the southern crosswalk consists of very faded striping. Only the southern crosswalk has an overhead light. "Stop for pedestrians" signage is located in the roadway centerline at both crosswalks, and there is a large overhead mast with flashing yellow lights and crosswalk signage. Sidewalks remain in good condition until the next intersection.

East Miller Street is a minor one-way street that begins at Brunswick Avenue and moves west. It is located only 100 feet before the intersection with Fuld Street.



Figure 14. Crosswalk and pedestrian crossings signs by Capital Health Regional Medical Center.



Figure 15. Building at corner of Brunswick and Hillside blocks sight lines for vehicles arriving at the stop sign.



Figure 16. Bus stop with grass strip between sidewalk and curb.

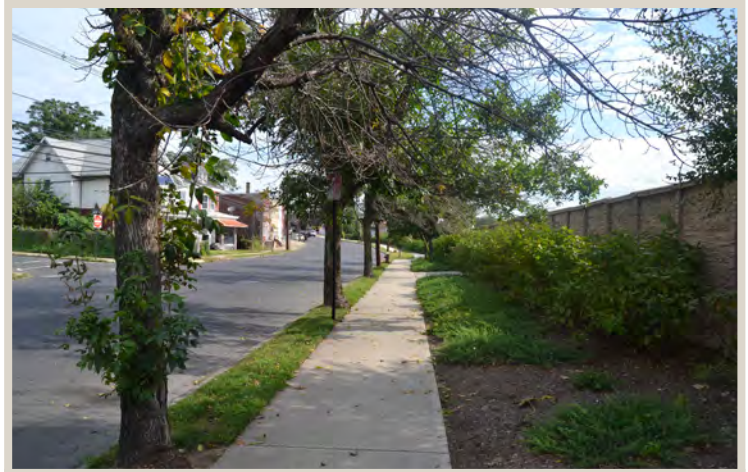


Figure 17. Solar power plant is shielded from street by a wall and vegetation.

Fuld Street to Southard Street

Fuld Street meets Brunswick Avenue at a signalized intersection. The traffic signal is old and does not have pedestrian signal heads. Crosswalks are painted in all directions, but they are very faded, and the southern crosswalk does not have a ramp on the west side. There is a utility pole where the ramp should be. Truncated domes are present on three of the corners although they are faded and overgrown with weeds. Drivers were observed to be speeding at this intersection.

Continuing south, Brunswick Avenue has the right-of-way over Phillips Street, which runs in one direction from west to east. Crosswalks are painted in all directions, but they are faded. The sidewalk at the intersection is in good condition, with ramps oriented into the crosswalks at all corners. Truncated domes are present, but faded. South of the intersection, the quality of the sidewalk varies from property to property. For some properties, the sidewalk extends to the curb, while there is a grass strip in front of others. Trees on the western side appear to be in better condition.

Hillside Avenue is a very minor street which resembles an alley more than an avenue. It terminates at Brunswick Avenue with a stop sign. Due to the presence of a building, there is almost no visibility of the sidewalk and roadway for vehicles arriving at the stop sign (Figure 15).

East Paul Avenue and Sylvester Street both terminate at Brunswick Avenue within 50 feet, creating the appearance of a large intersection. Sylvester is one-way westbound, while East Paul is bidirectional. Once again, there are no crosswalks across Brunswick, and faded crosswalks across those secondary streets. There are NJ Transit bus stops just north of the intersection, and both have a strip of grass separating the sidewalk from the curb, creating a challenge for passengers with mobility devices (Figure 16).

South of these intersections, there are no trees along Brunswick Avenue. On the west side, three-story townhouses are built right to the sidewalk. On the east side, there is a parking lot. This changes south of Chase Court, a minor one-way street running west from Brunswick Avenue. On the east side of Brunswick Avenue there is a solar-power plant. It is not visible from the street due to a stucco fence, but the fence is shielded by vegetation which appears to be well maintained (Figure 17). The sidewalk is also in excellent condition adjacent to this property, in contrast to the west side. This continues past the next minor intersection of Vine Street. There are two additional minor intersections, Race Street and Evans Avenue, before the character of Brunswick Avenue changes in front of Dr. Martin Luther King Jr. School.

The sidewalk in front of Dr. Martin Luther King Jr. School widens significantly, and is in excellent condition (Figure 18). Additionally, there are additional historical-style street lights along the sidewalk. The school is separated from the sidewalk by a well-maintained lawn. However, the lack of parked cars and the separation of the building from the street made the roadway feel designed for higher speeds, even though the width is consistent with the rest of the corridor.

The sidewalk and the homes on the east side of the street are in poor condition. There is a narrow sidewalk in front of homes with vegetation that is overgrown (Figure 19). South of the homes, there are two auto-oriented businesses which have various driveways across the sidewalk. The business at the corner of Brunswick Avenue and Southard Street is a gas station with a continuous driveway.

Southard Street to Middle Rose Street

Southard Street meets Brunswick Avenue at a four-way signalized intersection. The signals are old and do not have pedestrian signals. There are parallel crosswalks



Figure 18. Dr. Martin Luther King Jr. School.



Figure 19. Overgrown vegetation on sidewalk.

with paint in good condition, and truncated domes and curb cuts present at all corners. However, the alignment of the curb ramps are inconsistent. The intersection has poor signage, making it very difficult to discern the street names.

South of the intersection, the east side of the street has dense rowhome style developments, with steps occupying half the sidewalks, instead of greenery. The west side has a large sidewalk fronting Martin Luther King Jr. Park. Although the sidewalk is wide, the concrete pavers are not level. South of the park, Bond Street runs one-way from Brunswick Avenue westward. The intersection has faded crosswalks across Bond Street, and no marked crossing across Brunswick Avenue. Across the street, the conditions of the sidewalk are especially poor in front of 334 to 342 Brunswick Avenue. Additionally, this street segment had large amounts of litter and abandoned properties. Although Owens Alley appears on maps, it appears to currently be impassable.

Middle Rose Street to Violet Street

Middle Rose Street and Old Rose Street meet Brunswick Avenue within 40 feet, creating a large offset intersection. Middle Rose Street runs one-way to the east, terminating at Brunswick Avenue, while Old Rose Street is two-way. Middle Rose Street only has a single “Do Not Enter” sign, which is not visible for southbound traffic on Brunswick Avenue. Both streets have curb ramps with truncated domes and faded parallel crosswalks, but there is no marked crosswalk across Brunswick Avenue.

The sidewalk is in especially poor shape on the southeast corner, in front of Santana Minimarket. The sidewalk is sloped as a continuous driveway and is broken up with large cracks. Sandford Street is the next minor intersection and is a one-way street running west from Brunswick Avenue. Once again, there are curb ramps and a faded crosswalk to cross the minor street, but not Brunswick Avenue. The sidewalk on the west side, just south of the intersection across from 200 Brunswick

Avenue, is in especially poor condition with a section that has deteriorated into gravel (Figure 20). Across the street, the sidewalk conditions briefly become excellent in front of what appears to be more recently constructed townhomes. The sidewalk is wide with a brick trim and well maintained trees. Two additional minor streets, Cavell Street and Violet Street, terminate at Brunswick Avenue in close proximity.

No transit stops are present along this segment of Brunswick Ave. No pedestrian amenities aside from one garbage can are present and there is a high volume of litter around the Sanford Street intersection (Figure 21). Additionally, the eastern section of this segment near the Sanford Street intersection has a high number of vacant properties.

Violet Street to North Montgomery Street

Violet Street terminates at Brunswick Avenue from the east. The intersection of Violet Street and Brunswick Avenue is poorly delineated for pedestrians. A faded parallel crosswalk, truncated domes, and curb ramps exist to cross Violet Street, but there is no marked crossing across Brunswick Avenue. Violet Street has a stop sign, but the stop bar is badly faded.

Sidewalks are generally in good condition along this segment of the study area. Sidewalks are approximately 10 feet wide with a four-foot wide planting strip that houses occasional trees, fire hydrants, and utility poles. Private landscaping was very well maintained on the east side of the street. Sidewalk conditions on the west side are not as nice, but better than most of Brunswick Avenue.

No transit stops are present along this segment of Brunswick Avenue, and while some people were around, a large vacant lot at the intersection of North Montgomery and Brunswick Avenue makes the area feel slightly more isolated than other segments. There are three additional sidewalk streetlights in front of a more recently constructed townhome development.



Figure 20. Brunswick Avenue and Sanford Street. Sidewalk in front of vacant property is in especially poor condition.



Figure 21. A garbage can, a rare pedestrian amenity, near 217 Brunswick Avenue.

North Montgomery Street to North Broad Street

Between North Broad Street and North Montgomery Street, Brunswick Avenue runs one-way in a northbound direction. As such, the intersection of Montgomery and Brunswick is unique because it is built to ensure that traffic does not continue southbound. To accomplish this, there is a large sidewalk extension on the western side of the street, where the southbound lane would usually be (Figure 11).

However, the presence of the large sidewalk extension has not made conditions for pedestrians excellent. Faded parallel crosswalks are present to cross Montgomery Street and Brunswick Avenue in the east. Single angled ramps are provided on each corner, but truncated domes are missing. The ramp on the corner of Montgomery Street and Brunswick Avenue is particularly poorly oriented such that it does not serve pedestrians crossing Montgomery Street. There is a pedestrian crossing sign visible on Brunswick Avenue southbound and on Montgomery Street.

The intersection is controlled by a stop sign on Montgomery Street with a highly visible stop bar, but

the stop sign is partially hidden by a tree. Additionally, Montgomery Street meets Brunswick Avenue at an angle. The combination of an angle and a blocked stop sign meant that observed driver behavior was worse at this intersection than anywhere else on the corridor, due to many drivers ignoring the stop sign. Interestingly, the drivers traveling south on Brunswick Avenue frequently stopped at the intersection despite having the right-of-way. Northbound traffic on Brunswick Avenue is also controlled with a stop sign.

Due to the presence of more recently constructed townhomes, there are additional streetlights along the sidewalk. These streetlights continue on the east side to the end of Brunswick Avenue. Additionally, the east side has a decorative brick sidewalk lining and well-kept street trees. In contrast, the west side is barren with a narrow sidewalk in poor condition (Figure 23).

The Brunswick Avenue corridor ends at North Broad Street, adjacent to the Trenton Battle Monument. Drivers entering Brunswick Avenue do so at a curved angle, designed for higher speeds (Figure 22). There is a marked crosswalk across Brunswick Avenue, but none available for pedestrians to reach the monument.



Figure 22. Entrance to Brunswick Avenue corridor.



Figure 23. Trenton Battle Monument, as seen from Brunswick Ave.

Common Issues Along Brunswick Avenue

Crosswalks



Sidewalks



Bus Stops



Curb Cuts/Ramps



*See Appendix A for locations

Calhoun Street

The Calhoun Street corridor runs for 0.9 miles from West Ingham Avenue to West State Street (Figure 25). Calhoun Street marks the eastern border of Trenton’s West District, with a portion of the corridor marking the western border of the Downtown and North Districts. At the southern end of the corridor, past West State Street, Calhoun Street intersects with Route 29 and continues as a bridge to Pennsylvania. North of Ingham Avenue, Calhoun continues for half a mile before ending at Route 206 (Princeton Avenue).

Calhoun Street features a mix of residential, commercial, and industrial properties, with many vacant lots. There are also civic uses, such as Monument Elementary School and the Shiloh Baptist Church. New Jersey Transit Route 606 runs the length of the corridor, connecting Princeton, Downtown Trenton, and Hamilton every 45 minutes on weekdays.

The roadway generally consists of one travel lane in each direction with parking allowed on each side. Calhoun Street generally has the right-of-way over adjacent streets, with traffic signals at Pennington Avenue, Bellevue Avenue, Spring Street, Passaic Street, West Hanover Street, and West State Street. The corridor crosses above the D&R Canal State Park Trail and has a separate bridge over the actual canal near the southern end of the route.

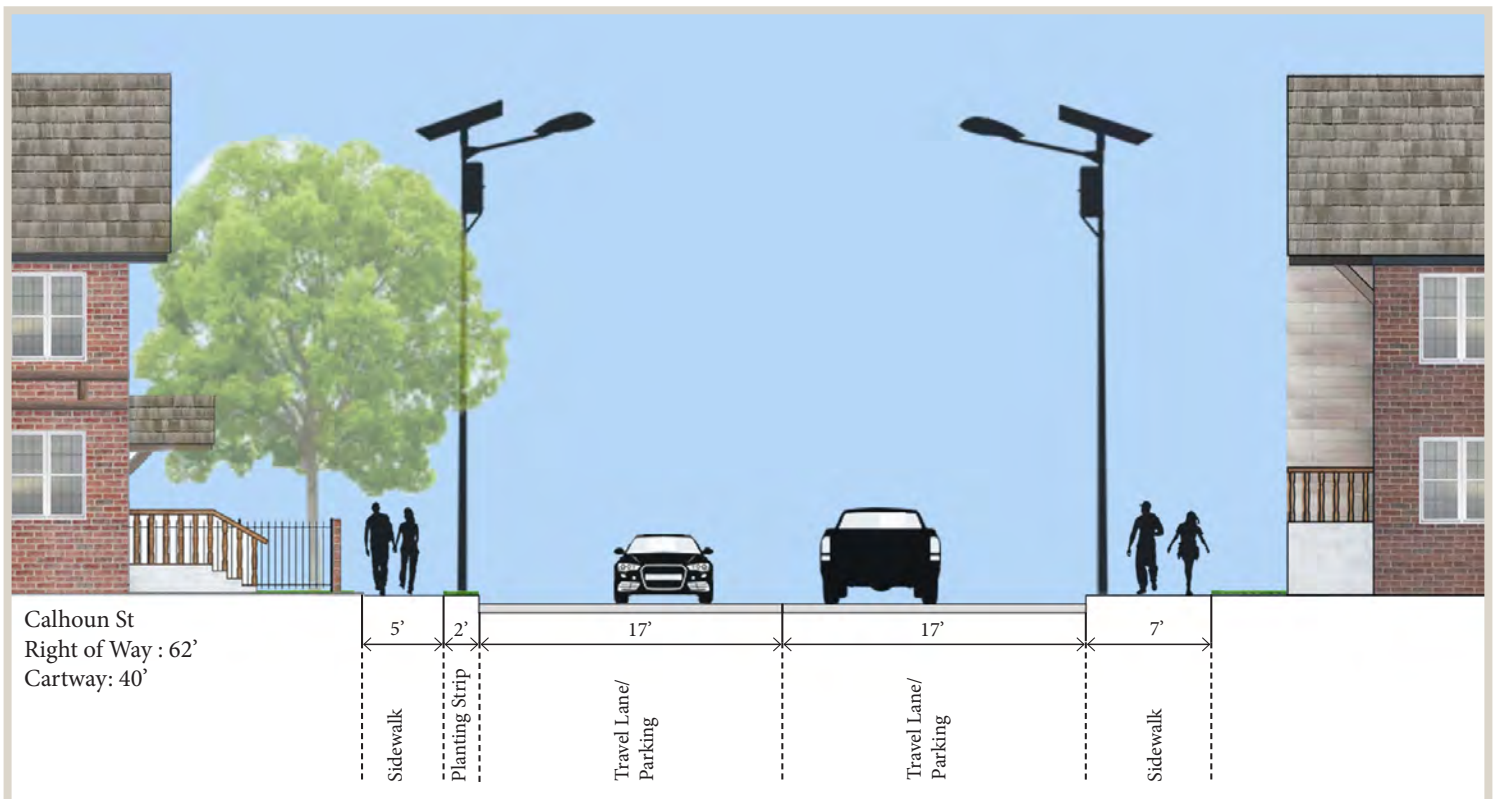


Figure 24. Typical Calhoun Street Section.

Corridor Summary

Sidewalks

Sidewalks along the corridor vary in width from four to seven feet. However, some areas have less than two feet of passable space due to the presence of overgrown vegetation and utility poles. Sections of the corridor feature a grassy landscape strip between the curb in the sidewalk, while other sections have their landscape strip paved over in asphalt. The southern section is comprised of a concrete sidewalk for the entire width. In some areas,

such as near Dunham Street, the sidewalk conditions are excellent, but many sections feature uneven and cracked sidewalks. Some sections of the sidewalk are in extremely poor condition, riddled with cracks and upheaval due to tree roots. Other sections are in poor condition due to the presence of multiple driveways serving industrial complexes – the wear and tear of truck traffic has broken up the sidewalk. Additionally, the sidewalk is usually sloped along the driveways. A small section of the sidewalk on the west side of Calhoun Street, just north of West State Street, is paved with brick, in contrast to the concrete found along the rest of the corridor.



Intersections and Crosswalks

The northern half of the corridor features many one-way streets that terminate on Calhoun Street. Many of the sidewalks at the intersections have been rebuilt in recent years with ADA-compliant curb ramps and bright red truncated domes. However, in some cases, only a single ramp and crosswalk was built across the secondary street, with no marked crosswalk across Calhoun Street. The southern half of the corridor includes more four-way intersections controlled by traffic signals. These intersections have not been updated, with the majority lacking pedestrian signal heads and featuring non-compliant ramps.

While many of the smaller intersections fail in ADA compliance, their size makes them manageable for pedestrians. This is not the case at the West State Street intersection. Although this intersection has pedestrian signals, striped crosswalks, and sidewalks in decent shape, the vast width of the intersection encourages high speeds and dangerous behaviors.

Safety

Due to low traffic volumes and infrequent signage, vehicles were observed driving in excess of the 25 mph speed limit throughout the corridor. Additionally, there are few pedestrian generators along the route. Many of the businesses are closed or vacant, and the businesses that are open cater to drivers (gas stations, tires, repairs). The few pedestrian-oriented businesses, like the corner markets, have mostly covered their windows with

signage, limiting their visibility of the street. This gave the corridor a feeling of isolation, especially along many segments with vacant properties on both sides of the street. Lighting along the corridor varies from standard overhead cobras, to a historical design found on some utility poles. There is no pedestrian-oriented lighting on the corridor.

Comfort and Appeal

Litter was observed throughout the corridor, especially adjacent to the many vacant properties. Additionally, the sidewalks near the vacant properties are filled with gravel, vegetation, and other debris. There is a lack of street trees along this corridor, and the few tree wells that exist are empty. There are no pedestrian amenities along the corridor, with the only trash can found inside a small park. Bus stops are not marked, and do not have benches or shelters. There are no bicycle facilities on the corridor.

Detailed Conditions Report

West Ingham Avenue to Wayne Avenue

The intersection of Calhoun Street and West Ingham Avenue is controlled by a traffic signal. Automatic pedestrian signal heads exist in all directions, but they are outdated, displaying “walk” and “don’t walk” text instead of symbols. Standard crosswalks are painted on all four sides, but the paint is very faded. Three of the



Figure 26. Intersection of Blane Alley and Calhoun Street.



Figure 27. Steps making part of the sidewalk unusable.



Figure 28. Poor sidewalk conditions north of Blane Alley.



Figure 29. A sloping, uneven sidewalk.

corners feature a single ramp oriented towards the center of the intersection, while the southeast corner has two ramps, each oriented into the crosswalk (Figure 26).

South of the intersection, there is a seven-foot sidewalk adjacent to a vacant three-story building, although only half of it is fully usable due to steps leading into the building (Figure 27). Immediately after the building ends, the sidewalk narrows to about four feet with a one-foot planting strip, followed by a section where the sidewalk is immediately adjacent to the curb. The following property is a vacant detached home, and the sidewalk is in very poor condition. There is a driveway which is overgrown. Due to the presence of the corner building, vehicles exiting the driveway have no visibility of oncoming pedestrians.

The west side of this block features an asphalt parking lot and an auto business with a parking lot filled with old cars. An alley is located between the parking lot and the business. The sidewalk is in very poor condition, and a portion of it is cracked and sloped. Sidewalk conditions improve south of this section, aside from where Calhoun Street crosses Blane Alley (Figure 28).

This section of Calhoun Street had no transit stops nor any pedestrian amenities. The only lighting is provided by a few overhead cobra lights, which likely do not provide sufficient light at night. Litter was present along the corridor and there are no street trees. There were very few drivers observed at the time of the audit but those observed appeared to be speeding. There is no visibly posted speed limit in this section. Street parking is not allowed on the west side of the street.

Wayne Avenue to Sweets Avenue

Wayne Avenue is a residential road that runs in different one-way directions on each side of Calhoun Street. In both cases, Wayne Avenue ends at Calhoun Street with a stop sign and a large “Do Not Enter” sign that is visible in both directions. There are marked crosswalks in all four directions, and three of the corners have ramps with

truncated domes correctly placed. The northwest corner has a utility pole where a ramp would be, so a single ramp was installed serving both crossings.

South of Wayne Avenue, the sidewalk is in better condition on the east side. There is some vegetation, but it is generally passable and flat. On the west side, the sidewalk is very narrow and vegetation is overgrown. Additionally, there is some litter. Shortly before reaching New Rose Street, the sidewalk is broken up by frequent driveways. The sidewalk in this area also has many cracks, a slope, and an uneven manhole (Figure 29).

New Rose Street is a narrow road that runs one-way to the east from Calhoun Street. The sidewalk at the intersections has recently been rebuilt with a curb ramp and truncated domes. A crosswalk is painted across New Rose Street, but there is none painted across Calhoun Street. South of New Rose Street, the sidewalks are in poor condition, with large cracks and a slope at driveways.

Fountain Avenue is similar to New Rose Street, except that it runs one-way away from Calhoun. Likewise, the corner ramps have recently been reconstructed and feature ADA-compliant ramps and truncated domes. However, this intersection also lacks marked crosswalks across Calhoun. South of Fountain, on the east side, the sidewalk is in especially poor condition with large

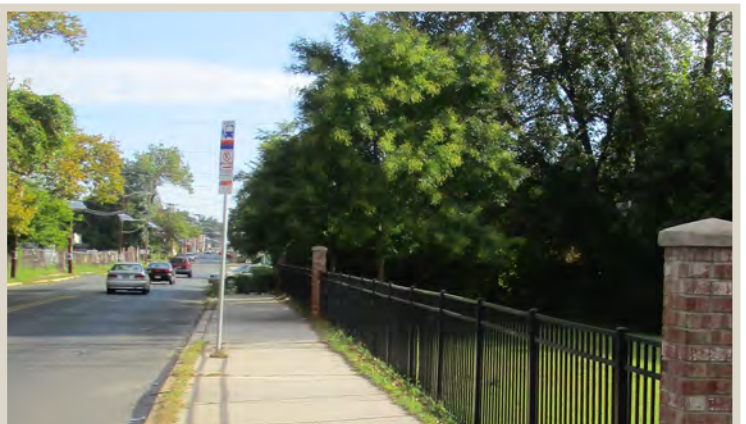


Figure 30. NJ Transit bus stop which lacks rider amenities.



Figure 31. Fallen fence, litter and overgrown vegetation.



Figure 32. Island diverting traffic from Humboldt Street, a one-way street that runs in the opposite direction.

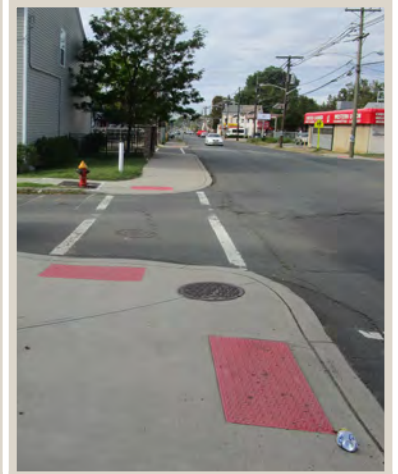


Figure 33. Recently updated truncated domes.

amounts of litter and overgrown vegetation. Fortunately, at the next property, the sidewalk expands to double the width and is very well maintained. This segment includes an NJ Transit bus stop that is accessible, but lacks rider amenities (Figure 30).

The west side sidewalk is in especially poor condition, with a fallen fence blocking most of the walkway. There is also a large amount of litter and vegetation (Figure 31).

Sweets Avenue to Pennington Avenue

The intersection of Calhoun Street and Sweets Avenue is complicated due to the presence of Humboldt Street, which cuts diagonally across Calhoun Street just to the south. Sweets Avenue runs one-way to the east from Calhoun Street, but is two-way to the west. Traffic approaching Calhoun Street is diverted onto Humboldt Street via a traffic island (Figure 32). However, traffic cannot continue onto Humboldt Street because it runs one-way in the opposite direction.

As with the previous intersections, the sidewalks have all been recently rebuilt with ramps and bright red truncated domes facing all crosswalks (Figure 33). This includes the

traffic island, which was fully upgraded. Additionally, two crosswalks exist to cross Calhoun Street (Figure 32).

However, south of the intersection, sidewalks return to poor condition. An automotive business on the east side was observed blocking the sidewalk with their parked vehicles (Figure 34), a behavior that is likely frequent, as it was also confirmed using aerial imagery.

This section of the corridor does not have any amenities such as benches, bicycle racks, or trash cans. There is also no pedestrian oriented lighting, only overhead cobra lights. There is a southbound NJ Transit bus stop on the west side of Calhoun Street, just north of Pennington Avenue, adjacent to a gas station. The sign is at the corner, and any bus stopping there would discharge onto the gas station driveway. However, there is a sidewalk in good condition prior to the driveway where bus drivers could stop instead (Figure 35).

Pennington Avenue to Pashley Avenue

Pennington Avenue intersects with Calhoun Street at an intersection controlled by a traffic signal. There are no dedicated turn phases. Pedestrian signals exist in all four



Figure 34. Parked car blocking sidewalk along Calhoun Street.



Figure 35. NJ Transit bus stop located at entrance to gas station.



Figure 36. No ramps or crosswalks.



Figure 37. Improper white center striping along Dunham Street indicates that this roadway may be privately owned and maintained.



Figure 38. Intersection of Pashley Avenue and Calhoun Street.

locations, although they are of the old text-based variety (showing “walk” and “do not walk”). The pedestrian signals are button operated to cross Pennington Avenue, and automatic to cross Calhoun Street. The amount of time given to cross appears to be sufficient. Parallel, faded crosswalks are present at the intersection. Each corner has a single ramp oriented towards the center of the intersection, but none of the ramps have truncated domes, and the ramp on the southwest corner appears to be too steep for ADA standards.

Two of the corners have auto-oriented businesses, the third is a parking lot for an elementary school, and the fourth is a mixed-use building with a grocery store/deli. There is a northbound bus stop on the east side that lacks amenities but is located along a sidewalk that is in good condition.

South of Pennington Avenue, sidewalk conditions are generally in better shape than the previous segment, although there is vegetation in the sidewalk cracks in front of a vacant property. A segment in front of Trenton Public School’s 9th Grade Academy appears to be new. There are no school-zone related signs along this stretch of roadway to warn drivers of the presence of children.

Wilson Street sits on the west side of Calhoun Street, running in one direction to the west. The sidewalks adjacent to this corner are in poor condition due to various vacant rowhomes. The corners lack ramps and there are no crosswalks painted in any direction (Figure 36).

South of Wilson Street, sidewalks are in better condition on the east side, next to the 9th Grade Academy. There is litter and vegetation on the west side. Dunham Street sits on the west side, and appears to be privately maintained due to non-standard road striping; it is two-ways, but the center striping is white rather than yellow (Figure 37). The corner features ramps oriented across Dunham Street, with truncated domes and a striped crosswalk.

Traffic coming from Dunham Street has a stop sign and the word “stop” stenciled on the pavement. There is no marked crosswalk across Calhoun Street.

Pashley Avenue to Bellevue Avenue

Just south of Dunham Street, Calhoun Street intersects with Pashley Avenue, which meets Calhoun St. from the east (Figure 38). The corner ramps appear to be recently installed with a proper slope and truncated domes. However, they are oriented only across Pashley Avenue. There is a marked crosswalk across Calhoun Street on the southern leg of this intersection, but there is no ramp on the west side of Calhoun Street.

South of Pashley Avenue, the sidewalk is in good condition on the west side and in fair condition on the east side, except for in front of the firehouse where the sidewalk is sloped for a long driveway. Across from the firehouse is Louise Lane, and like Dunham Street, Louise Lane appears to be privately maintained. The corner ramps are in good condition and there is a marked crosswalk across Louise Lane, but not on Calhoun Street, although faded paint indicates that at one point there may have been one. The properties fronting Louise Lane all appear to be recent construction, and the properties are well maintained.

Fairway Drive is another privately maintained roadway that terminates at Calhoun Street, but it is narrower than the previous streets. There is a faded crosswalk and ramps, although they are not ADA compliant (Figure 39). There are NJ Transit bus stops on



Figure 39. Non-compliant ramps.



Figure 40. Electronic cabinet blocking pedestrians from drivers' sight.



Figure 41. Dilapidated payphone.



Figure 42. Continental crosswalk with faded ramps.

both sides of Calhoun Street without any amenities. The southbound stop is by a sidewalk in good condition. The northbound stop has a strip of grass between the curb and the sidewalk.

Circular Fairway Drive meets Calhoun Street again with the same issues present in the previous intersection. Bernard Street is across from Fairway Drive, but they are slightly offset. On the northwest corner, there is a single ramp pointing across Calhoun Street, but the painted crosswalk is missing. There is a sewer drain filled with garbage where the second ramp would be. The southwest corner has a ramp aligned with the crosswalk, but it does not have truncated domes and has grass at the bottom of the ramp. A supermarket/deli occupies the southwest corner. Across the street is a large grassy area behind a metal fence.

The speed limit is posted at 25 miles per hour along this section of the corridor. Drivers observed during the audit appeared to be traveling above the speed limit.

Bellevue Avenue to Spring Street

Bellevue Avenue intersects with Calhoun Street at an intersection controlled by a traffic signal. There are no dedicated turn phases, and there are no pedestrian signals. All four corners have two ramps oriented into the crosswalks, which are painted but badly faded. The northwest corner has a wide turning radius, which may invite speeding. The northeast corner has an electronic cabinet next to the sidewalk ramp which blocks the view of pedestrians from turning vehicles (Figure 40). The same corner has a payphone, but it is not in working order (Figure 41).

South of the intersection, the sidewalk is in good condition on the east side and in poor condition on the west side. Google Maps notes a NJ Transit bus stop on the east side, but no signage was found indicating this stop. At the

location of where the bus stop should be there is a sign reminding drivers of pedestrians, and an empty tree well.

Further south, the street widens in front of the Shiloh Baptist Church to create a drop-off area. The sidewalk in front of the church is in excellent condition. South of the church, Belvidere Street runs one-way into Calhoun Street. There is a brightly painted continental crosswalk across Calhoun Street at this intersection, but the crosswalk does not lead to compliant sidewalk ramps (Figure 42). There is also crosswalk signage directed at drivers facing both directions. To the west, this crosswalk leads into the D&R Canal trail which crosses under Calhoun Street just south of Belvidere Street and north of Summer Street. The latter runs one-way to the east, away from Calhoun Street, and is across from Church Street, which runs one-way in the opposite direction (Figure 43).

South of these intersections, the character of the corridor becomes more urban with three-story buildings built up to the sidewalk. While many of these buildings are vacant and in poor condition, the sidewalk is in fair condition. The overhead lighting changes from a standard cobra to a historic replica, although these lights are supported by the same wooden utility poles.



Figure 43. Missing crosswalks and faded ramps at the Church Street intersection.



Figure 44. Updated ADA curb ramps, but missing pedestrian signals at Spring Street.



Figure 45. Uneven asphalt.



Figure 46. Small brick alley may create challenges for wheeled mobility devices.

Spring Street to West State Street

Spring Street is a standard four-way signal controlled intersection without dedicated turning phases. The traffic signals are old and do not have pedestrian signals. However, the corners have recently been rebuilt with ADA-compliant curb ramps leading into traditional parallel marked crosswalks (Figure 44). Due to the position of the traffic signal support, the southwest corner only has a single ramp. Although the crosswalk paint is in decent condition, the asphalt is not; the eastern crosswalk is especially full of potholes (Figure 45).

South of Spring Street, the sidewalk continues in better condition on the east side of Calhoun Street than on the west side. The exception is at a small brick alley. While the sidewalk has modern ramps with truncated domes, the brick may present difficulty for those in wheelchairs (Figure 46). Additionally, the area around the alley had large amounts of litter during the audit. Past the alley, sidewalk conditions deteriorate significantly in front of a vacant building (Figure 47), leading to the next intersection.

The intersection of Calhoun Street and Passaic Street is controlled with a traffic signal that lacks pedestrian signals. There are four painted crosswalks that are extremely faded, with the west crosswalk being barely visible. Each corner has a single ramp facing into the intersection, but none are ADA compliant. Only the southeast corner has a functioning business, a liquor store. The northeast corner has a closed market, while the southwest corner has a series of damaged buildings. The northwest corner has a park that is in active use, but does not look welcoming due to the chain-link fencing (Figure 48).

Moving south from the Passaic Street intersection, the eastern side of Calhoun Street is in better condition than the western side. While litter was observed on both sides, the sidewalk in front of the vacant buildings on the west side is broken, with vegetation growing between the cracks (Figure 49). This poor condition is further compounded by a driveway, which results in the entire sidewalk being sloped. Google Maps notes an NJ Transit bus stop on the east side of the street, but there is no signage indicating this at that location. Although the



Figure 47. Significantly deteriorated sidewalk conditions.



Figure 48. Uninviting park entrance.

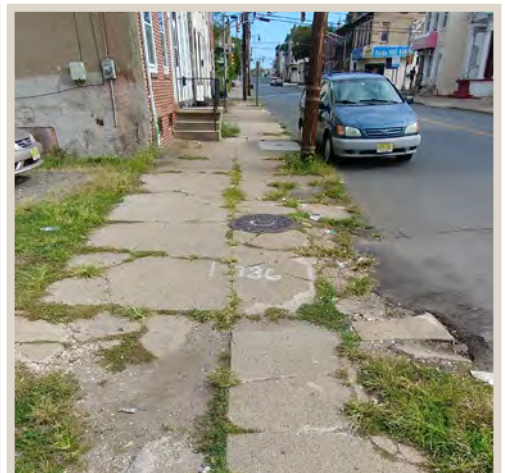


Figure 49. Vegetation growing along large cracks in the sidewalk.



Figure 50. Intersection lacks pedestrian signals and ADA ramps.



Figure 51. Asphalt-covered pavers along crosswalk.

sidewalk is cluttered with gravel at that location, it is an accessible place for a bus to stop.

Calhoun Street intersects with Hanover Street at a signalized intersection lacking pedestrian signals and ADA-compliant curb ramps (Figure 50). There are four painted crosswalks in decent condition. The intersection feels especially wide, as two corners contain gas stations, and a third is a parking lot. The fourth corner contains an attractive but boarded up three-story building.

On the final segment towards West State Street, Calhoun Street crosses over the D&R canal. The sidewalks are in good condition here, with the exception of the corner of Capitol Street, which terminates on Calhoun Street from the east. There are no curb ramps at this crossing. There is however, a crosswalk with curb ramps and faded striping across Calhoun Street, as a branch of the canal trail crosses Calhoun at this location. Aside from faded paint, the crosswalk is marked with stone pavers, although many have been covered with asphalt (Figure 51).

The corridor terminates at West State Street, which is a very wide intersection (Figure 52). Southbound, Calhoun Street widens suddenly from one lane to three lanes, of which two are for turning vehicles. These lanes are divided from northbound traffic by an island. The northbound lane is marked for one, but is wide enough for two vehicles. On the other side of the intersection, Calhoun St. has two southbound lanes and an opening for an on-ramp to NJ-29. Northbound, Calhoun Street is

wide enough for four lanes, but is striped as two.

The intersection is controlled by traffic signals, all of which have modern pedestrian signals. There are also standard crosswalks painted in all directions, with the paint on the southern leg being in especially good shape (Figure 53), and the western leg having faded striping. However, very wide turning radii and many lanes make for lengthy crossings for pedestrians, with the southern crossing being over 100-feet long. Additionally, there is no crosswalk painted across the entrance to the NJ-29 on-ramp. Due to the presence of the Mercer County Clerk office tower on the northeast corner and Thomas Edison State University on the southwest corner, this intersection probably sees the most pedestrians of any along the corridor. However, this intersection appears to have been designed as an extension of the highway, and so is the most hostile to pedestrians along the corridor.

The sidewalk on the northwest corner is unique as it is paved with brick (Figure 54). Although the brick is attractive and historical, it poses a hazard to pedestrians, especially those in wheelchairs. The other corners feature newer sidewalks with ramps, although only the ramps on the southwest corner are fully compliant. There are two bus stops on West State Street on the east corners of the intersection. These bus stops include shelters for waiting riders. There are multiple cobra-style lights pointed towards this intersection, but due to the width, the lighting may not be adequate.



Figure 52. Large intersection at West State Street.



Figure 53. Well-maintained crosswalk.

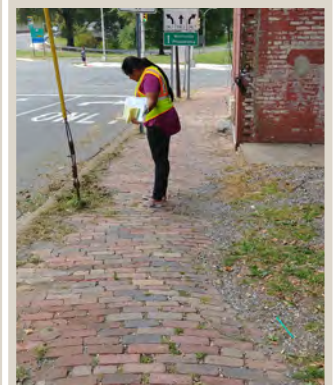


Figure 54. Brick sidewalk.

Common Issues Along Calhoun Street

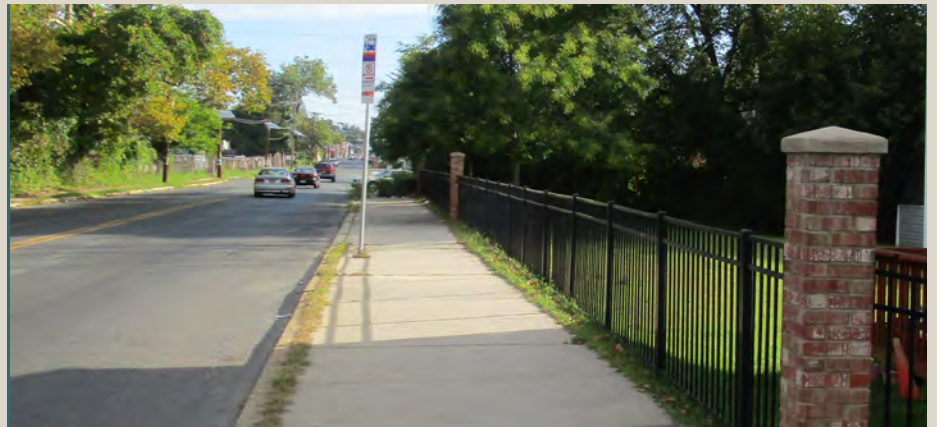
Crosswalks



Sidewalks



Bus Stops



Curb Cuts/Ramps



*See Appendix A for locations

East State Street

The East State Street corridor runs for 0.7 miles from South Logan Avenue to Chambers Street (Figure 56). The corridor exists within the East District, from the Trenton municipal border to the Downtown District. As a Trenton 250 Proposed Complete Street, East State Street is an important corridor due to the connections it allows through and out of Trenton. North of Logan Avenue, the corridor continues into Hamilton, where it eventually intersects with US-1 and then terminates at a new roundabout on Brunswick Avenue. South of the study corridor, East State Street crosses the Northeast Corridor railroad tracks, passes over US-1, and through the Downtown District, eventually terminating in the West District. East State Street features a mixture of residential and commercial properties, along with some civic uses, including P.J. Hill Elementary School, Greg Grant Park, and churches.

New Jersey Transit Route 608 begins at the Hamilton rail station and serves Grounds for Sculpture, running the entire length of East State Street on the way to the Trenton Transit Center and onwards across the city to the West Trenton rail station in Ewing. During rush hour, buses come every 20 minutes, with service every 40 minutes on Saturdays, and hourly on Sundays. The roadway generally consists of one travel lane in each direction, with parking allowed on each side (Figure 55). East State Street generally has the right-of-way over adjacent streets with traffic signals only at Olden Avenue and Chambers Street.

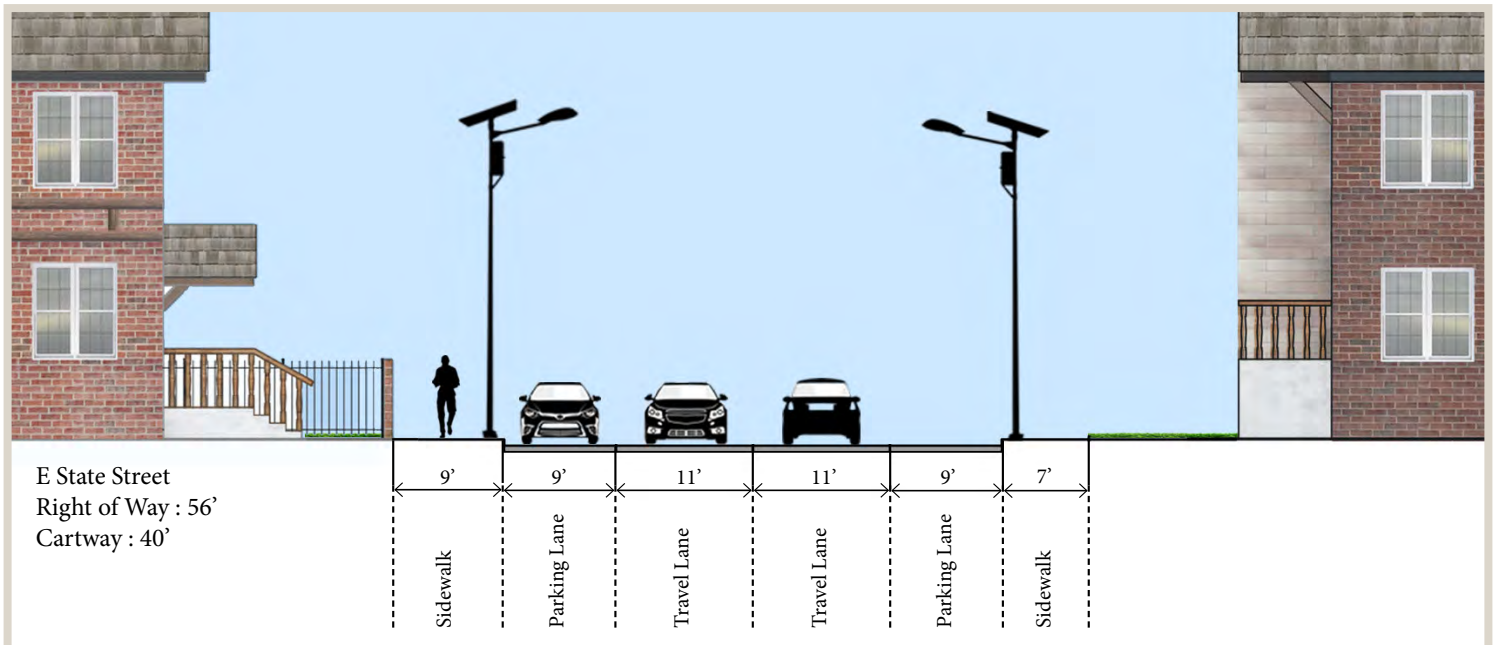


Figure 55. Typical East State Street Section.

Corridor Summary

Sidewalks

Sidewalks along the corridor vary in quality, ranging from excellent in front of Greg Grant Park, to almost non-existent in front of an empty lot across from P.J. Hill Elementary School. Generally, sidewalks are in poor condition in front of vacant properties, which exist throughout the corridor. While most of the corridor sidewalks are concrete, there are small sections paved with brick or stone that may be difficult to navigate with a wheelchair. There are especially large gaps where the different sidewalk materials meet. Near South Olden Avenue, a makeshift piece of plywood and cardboard has been placed over a large segment of missing pavement, creating a hazard (see Figure 66 on page 32).

The sidewalk width is generally consistent, except in front of commercial properties, where width varies from five feet to ten feet. However, there are a couple of pinch points along the corridor due to the presence of utility poles that narrow the sidewalk to forty inches or less. Vegetation along the sidewalk also varies. In some segments, there is a planting strip between the sidewalk and roadway with large trees and in other segments, the entire sidewalk area is paved except for street-tree wells. Finally, some segments are fully paved with no trees at all. Unfortunately, some of the trees have lifted the sidewalk, creating an uneven surface condition that presents a tripping hazard. In a few instances, bushes from residential properties are overgrown, obstructing portions of the sidewalk.



Figure 56. Map of East State Street Corridor.

Intersections and Crosswalks:

Aside from the signalized intersections and a couple of exceptions, there are few marked crosswalks across East State Street. The crosswalks that do exist are basic parallel lines rather than high visibility markings. Curb ramp conditions vary along the corridor, from completely not compliant with ADA standards, to mostly compliant aside from the color of the truncated domes (badly faded, and thus lacking contrast). The two signalized intersections, Olden Avenue and Chambers Street, have curb ramps that appear to have been rebuilt within the past five years. However, the design hinders rather than helps travel. The ramps were retrofitted around existing utility poles, electrical infrastructure, and drains in such a manner that they simultaneously endanger passersby and create an obstacle for those in wheelchairs. Pedestrian signals at the signalized intersections are dim and hard to read in the daylight. Additionally, they are of the outdated walk/don't walk text variety.

Safety

East State Street is signed for 25 mph but vehicles appear to travel faster than the speed limit. The lack of crosswalks and crosswalk signage along the corridor may also give drivers the impression that they can safely speed. Some dangerous driver behavior was observed in this location near P.J. Hill Elementary School, where a driver was seen making an illegal U-turn while on her cell phone.

The frequency and severity of cracks on the sidewalk may cause injury to pedestrians, especially the elderly, children, and those in a wheelchair. On the west side of East State Street, near Hampton Avenue, an old cellar access hole sits next to the sidewalk, but the wood covering it does not appear secure. Low-hanging tree branches were observed intermittently along the corridor, and these unpruned branches can present a hazard for vision-impaired pedestrians because low branches cannot be sensed with a white cane. There is no dedicated bicycle infrastructure or signage along this corridor.

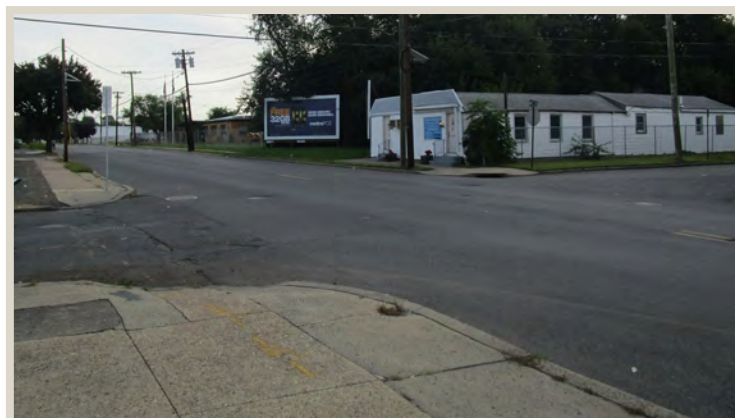


Figure 57. Yellow lines switch with entrance into Trenton.

Comfort and Appeal

There is a vibrant mixed-use commercial and residential corridor along East State Street near the intersection with Olden Avenue. Aside from this, most other segments are quiet with many vacant homes on both the east and west sides of the street, increasing the feeling of seclusion. This is especially true near Cuyler Avenue. On the other hand, the block near Chambers Street is densely built, with most apartments showing signs of active use, including a grill and workout equipment adjacent to the sidewalk. However, this segment is also home to a lot of litter.

There are almost no pedestrian amenities along the corridor. None of the bus stops have a shelter, bench, or trash can. Two payphones were observed, but their condition was not tested.

Detailed Conditions Report

Logan Avenue to Garfield Avenue

North of Logan Avenue, outside of Trenton, East State Street's traffic is divided by a single dashed yellow line (Figure 57). Upon entering Trenton, the striping switches to a solid double yellow line, possibly to indicate a change in urban character. However, there are no other signs or indications that travelers have entered Trenton aside from a 25 mph sign in the southbound direction (Figure 58).

Logan Avenue is a minor roadway that runs one-way from the east to State Street, and then two-ways to the west. There are no striped crosswalks at this crossing in any direction. The ramps on each corner are cracked and truncated domes are missing. The corners on the east side have two ramps each, but the corners on the west side only have ramps leading across Logan Avenue. This intersection is a partial stop, with stop signs on South Logan Avenue. There is a single streetlight over the



Figure 58. No signage signifying entrance into Trenton.



Figure 59. Cracked sidewalks and overgrown weeds.



Figure 60. Missing curb ramps.

intersection.

Five-foot sidewalks are present on both sides of East State Street. The sidewalk conditions are generally better on the east side of the street, in front of Las Estrellas Bar and Lounge and a Trenton Police property. On the west side, the sidewalks are cracked in many places with weeds growing up through the cracks (Figure 59).

There is a southbound NJ Transit bus stop on the northwest corner of the intersection, and it is positioned at a closed driveway. The driveway has a slope that may make it difficult for the bus to deploy its ramp. There is no shelter or any other amenities at this stop. The northbound stop is halfway down the block, in front of the Trenton Police K-9 training area. The sidewalk here is in excellent condition, but there are also no amenities for waiting passengers. Additionally, the presence of the K-9 training area may cause some discomfort to waiting passengers.

South of the training area, Cleveland Avenue runs one-way to the east. There are no crosswalks painted in any direction. There are non-compliant curb ramps to cross Cleveland Avenue, but none to cross East State Street. There is a payphone on the southeast corner.

South of the intersection, there is a large increase in the number of mature trees. North of Cleveland Avenue, the sidewalk extends up until the curb, but south of the intersection, there is a grassy planting strip holding these mature trees. The large canopy the trees create provides for shade on the sidewalk, and may assist in deterring speeding by decreasing the visible width of the roadway. However, the trees can also block lighting from the overhead streetlights.

Garfield Avenue is another minor roadway that terminates on East State Street. There are no striped crosswalks in any direction. The only curb ramps are oriented across Garfield Avenue, and they are not compliant (Figure 60). The ramp surfaces are in poor condition as there is cracking, unevenness, and weed growth. There is one

overhead light at this intersection but it is obscured by the tree canopy. A small store, Bienvenido Market, activates this intersection, but it sits adjacent to a vacant home.

Garfield Avenue to Walter Avenue

South of Garfield Avenue, the east side of the corridor becomes commercial in nature. The sidewalk extends to the curb, so there are no trees. A tire business surrounded by chain-link fencing creates visibility, but is not particularly pedestrian friendly (Figure 61). South of that business, there is a large barren asphalt parking lot for a Santander Bank. While the bank extends to the sidewalk and creates an attractive street wall, the parking lot has two very wide driveways and lacks trees. A bus stop is positioned so that any bus stopping will block the bank driveway.

The west side of the street is residential. There are vacant properties along this stretch, with litter in front of these properties. Nearly all homes have a front chain-link gate leading into a courtyard. Sidewalks are in poor condition as they have been uprooted by the trees. Street lighting seems adequate, with cobra lighting spaced roughly every



Figure 61. This highly visible sidewalk is not pedestrian friendly.



Figure 62. Dim and outdated pedestrian crossing signals.



Figure 63. Missing crosswalk at North Olden Avenue intersection.

forty feet along East State Street. Natural surveillance is sufficient in the area due to clear sightlines from adjacent commercial and residential buildings to the street.

There are multiple signs aimed at drivers approaching the North Olden Avenue intersection. The first is a visible sign for a hospital. The second is a badly faded County Route 622 sign, along with a “drug-free school zone” sign. No turn on red is posted before the intersection for southbound traffic, with no accompanying sign on the other side.

The intersection of East State Street and North Olden Avenue is controlled by a traffic signal. There are no left turn lanes or signals in any direction. There are automated (no button) crosswalk signals in the older ‘Walk/Don’t Walk’ style, but they are dim and difficult to read (Figure 62). Although the signals face all four directions, there are only painted crosswalks and ramps for three of the four legs. The northern leg is missing a crosswalk (Figure 63).

The northeast corner has a modern crosswalk ramp oriented south across North Olden Avenue. The ramp appears compliant and has truncated domes. The southeast corner has two modern ramps oriented into

the crosswalks in both directions. However, access to the corner is highly unusual and may not be compliant. The ramps appear to have been retrofitted into the corner in a manner that would not disturb the existing drainage or traffic signal. As such, they do not fully fit and the odd design has created a sudden step to the ramp area from one direction, which is an unexpected tripping hazard.

The southwest corner has two ramps that are oriented and installed correctly. However, immediately after the ramp, the sidewalk on North Olden Avenue narrows to just twelve inches due to a utility pole, making it non-compliant (Figure 64). The northwest corner has a single ramp, which feeds into a very narrow sidewalk. The design of the corner may make navigation in a wheelchair very difficult (Figure 65).

Three of the four corners at the intersection have businesses, which help to activate the intersection with pedestrian activity. Additionally, the east side of State Street has a series of businesses south of the intersection. The fourth corner has a parking lot, but it is well shielded with greenery.

South of North Olden Avenue, the sidewalks widen

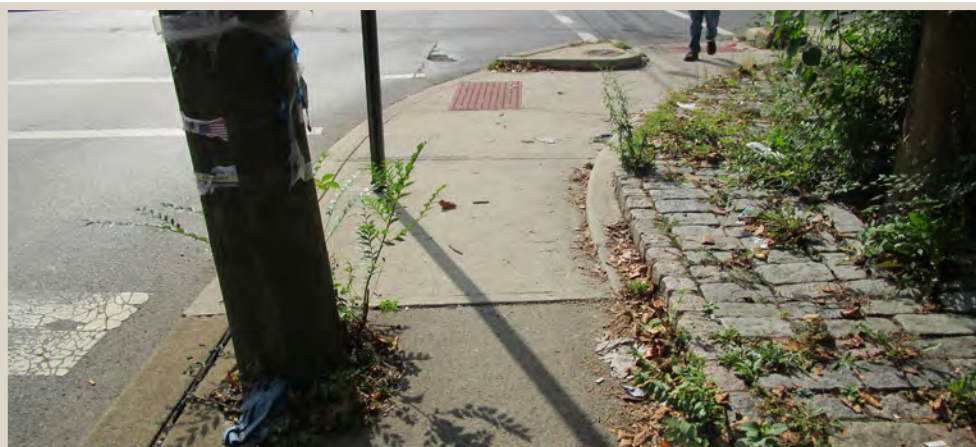


Figure 64. Utility pole drastically minimizes available walking space for pedestrians.



Figure 65. Challenging curb design.



Figure 66. Missing sidewalk with makeshift bridge.



Figure 67. Mid-block crosswalk sign covered by overgrown tree.

on both sides of East State Street. A couple of vacant residences are tagged with graffiti, and have broken windows, but the sidewalk conditions are fair, with the exception of one strip where the sidewalk is missing and has been covered with a makeshift “bridge” (Figure 66). There are tree wells with smaller trees than the previous block. Litter was observed primarily in front of the properties.

North Walter and South Walter Avenues meet at an offset intersection. Both streets are bi-directional, with stop signs at East State Street. Marked crosswalks with ADA compliant ramps and truncated domes exist on both sides of Walter Avenue. A single crosswalk across East State Street is positioned in the middle of the two streets. A pedestrian crossing sign is posted in the southbound direction, but it is obscured by the leaves from a tree, making it almost impossible to see (Figure 67). There is no overhead lighting at the intersection.

Walter Avenue to Cook Avenue

South of Walter Avenue, sidewalks are present on both sides of the street and are very wide, averaging around ten feet on the west side, and around eight feet on the east side of State Street. As in previous segments, pavement

quality varies, with the worst conditions being in front of vacant properties. On the west side, the sidewalk in front of Hutchinson Industries becomes a very long sidewalk paved with bricks. The inconsistent layout of the brickwork may make it difficult to traverse this area in a wheelchair (Figure 68).

For southbound traffic, there is a clearly visible 25 mph speed sign on the side of the roadway and an overhead mast with a pedestrian crossing warning. The placement of this sign is consistent with the approach to an upcoming elementary school. South of the overhead mast, there is an NJ Transit bus stop on the east side. The stop is positioned precisely along the only segment of the block with a landscape strip, meaning that there is no concrete landing pad in front of where the bus doors would open. Additionally, the bus stop is in front of an empty parcel with litter and an uneven sidewalk.

This block has a large cluster of vacant homes, which make the segment feel more isolated than the previous ones (Figure 69).

Cuyler Avenue is a small two-way roadway that terminates at East State Street from the east with a stop sign. There is a crosswalk across Cuyler Avenue, and



Figure 68. Uneven brickwork along East State Street.

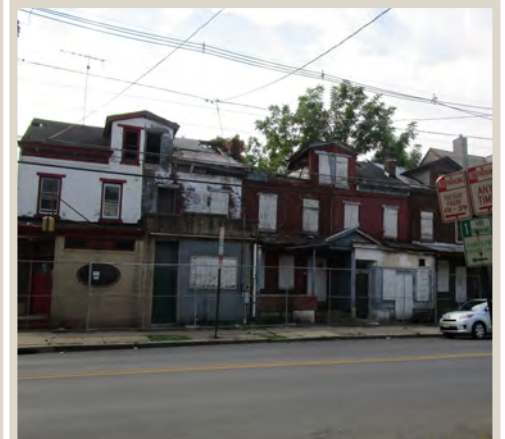


Figure 69. Abandoned homes.



Figure 70. Visible crosswalk signage along East State Street.

a single crosswalk painted to cross East State Street on the southern leg of the intersection (Figure 70). There is crosswalk signage visible in both directions and each of the crosswalks has a ramp with truncated domes. However, the domes are very faded and barely visible. There is an overhead light at the intersection.

South of Cuyler Avenue, the sidewalk is in better condition on the west side along P.J. Hill Elementary School. The school is set back behind a large lawn and the sidewalk is separated from the campus with a fence and landscaping. The sidewalk is interrupted by a driveway to a small parking area and the curb ramps to cross the driveway are lacking truncated domes. Additionally, the sidewalk immediately before the driveway has been lifted by a tree. Vegetation blocks view of the sidewalk for motorists exiting the parking area (Figure 71).

On the east side, there are a series of rowhomes. The sidewalk condition in front of these homes is poor, as the concrete blocks are separated by large gaps. Additionally, the sidewalk almost completely disappears in front of a vacant property, which is hosting a billboard (Figure 72). The property south of the vacant lot has parking fronting



Figure 71. Shrubbery blocking driver's visibility of sidewalk.

the sidewalk, so the entire stretch of sidewalk is sloped towards the roadway.

North Cook Avenue is a minor roadway that terminates at East State Street from the west. Cook Avenue primarily exists to provide access to a drop-off area for the school, as the road ends at a fence after just 400 feet. There is a painted crosswalk across East State Street on the north side of this intersection, which is paired with signage in both directions. Like the previous intersection, there are ramps with truncated domes, but they are badly faded. The ramp on the northeast corner has vegetation and debris at the bottom of the ramp, making it non-compliant. There is an overhead light over the crosswalk.

Cook Avenue to Chambers Street

South of Cook Avenue, on the west side of East State Street, there are four residential properties and a small church. The sidewalk is in poor condition due to vegetation growing in the large gaps between the concrete sidewalk panels (Figure 73). Past these properties, the sidewalk is in excellent condition in front of Greg Grant Park (Figure 74). However, while the wide entrance to



Figure 72. Sidewalk narrows and nearly disappears.



Figure 73. Vegetation growing between sidewalk panels.



Figure 74. Entrance to Greg Grant Park.



Figure 75. Gaps between varying sidewalk materials.

the park seems like a natural location to cross East State Street, no crosswalk is provided. South of the park, the sidewalk alternates between brick and concrete, with gaps between the different paving types (Figure 75).

On the east side of the street, the sidewalks alternate between concrete and brick. There is an NJ Transit bus stop without any amenities, but located along a good stretch of sidewalk. A small roadway, Hampton Avenue, terminates from the east. There is a badly faded crosswalk with compliant ramps to cross Hampton Avenue, but no crosswalk across East State Street. North of this intersection, the sidewalks in front of a relatively recent housing development are in great condition. The sidewalk is around ten feet wide with tree wells (Figure 76).

The next block has denser housing development than the previous stretches, with multiple three-story brick apartment buildings. The housing stock appears to be in poor condition, but most appear to be inhabited. Litter was observed throughout this stretch. On both sides of the street, the sidewalk is in decent condition, except for where it changes from concrete to another material such as brick or stone. Additionally, there is a driveway that interrupts the sidewalk on the west side (Figure 77).

Towards the end of the block, a northbound NJ Transit bus stop is on the east side. It is situated in front of a motor repair business along a long driveway. On both sides of the street, the sidewalk widens approaching the intersection with Chambers Street (Figure 78).

There is a traffic signal where Chambers Street intersects



Figure 76. Wide sidewalks with tree wells.



Figure 77. Driveway interrupts sidewalk.



Figure 78. Sidewalk widens as pedestrians approach Chambers Street.

with East State Street. Chambers Street has left turn lanes and an exclusive left turn phase in both directions. There are no pedestrian signals at this intersection, which can create conflict with the turn phase.

All four corners have curb ramps which appear relatively new. However, these ramps were retrofitted into an intersection with existing utility poles, drains, and electrical substations. As such, the ramps may not be ADA compliant because they feature odd slopes and lack the appropriately sized landing pads for wheelchair users (Figure 79). All four corners have significant features

that narrow the sidewalks. Any improvements would likely require completely replacing the traffic signals and widening sections of the sidewalk into the parking lane. Standard crosswalks are painted in all directions that match the orientation of the ramps.

South of the intersection, the sidewalk is in excellent condition on the west side of the street. There is an NJ Transit bus stop that lacks amenities but has a suitable stopping area. The east side sidewalk is in poor condition due to the vacant residences, and also has a lot of litter.



Figure 79. Retrofitted curb ramps at the Chambers Street intersection.

Common Issues Along East State Street

Crosswalks



Sidewalks



Bus Stops



Curb Cuts/Ramps



*See Appendix A for locations

Hamilton Avenue

The Hamilton Avenue corridor runs for 1.4 miles from South Olden Avenue to Route 129 (Figure 81). The corridor runs through Trenton's West District, with the southern segment of the corridor marking the eastern border of the Downtown District. South Olden Avenue marks the border between Trenton and Hamilton. North of Olden Avenue, Hamilton Avenue continues for two miles before terminating just past I-295. South of the study area, Hamilton Avenue continues for 750 feet before ending at South Broad Street.

Hamilton Avenue features a mixture of residential, commercial, and industrial properties, with some vacant lots. Civic uses include the United States Postal Service, Trenton Central High School, St. Francis Medical Center, Columbus Park, and various churches. The High School in particular occupies an extended frontage on the corridor.

New Jersey Transit bus routes 609 and 619 run the length of the corridor. Route 609 begins at the Quaker Bridge Mall in Lawrence Township, crosses Hamilton Township, continues down Hamilton Avenue, serves the Trenton Transit Center and then proceeds west to Ewing Township. Route 619 follows a similar route, except it serves Mercer County Community College in West Windsor instead of Quaker Bridge Mall. Combined, the two routes serve the Hamilton Avenue corridor every 20 minutes on weekdays, 30 minutes on Saturdays, and hourly on Sundays. The southern terminus to the corridor, on Route 129, is adjacent to the NJ Transit River Line, which connects Trenton to Camden. The roadway generally consists of one travel lane in each direction, with parking allowed on each side (Figure 80). Hamilton Avenue generally has the right-of-way over adjacent streets, with traffic signals at Chambers Street, Chestnut Avenue, and Route 129.

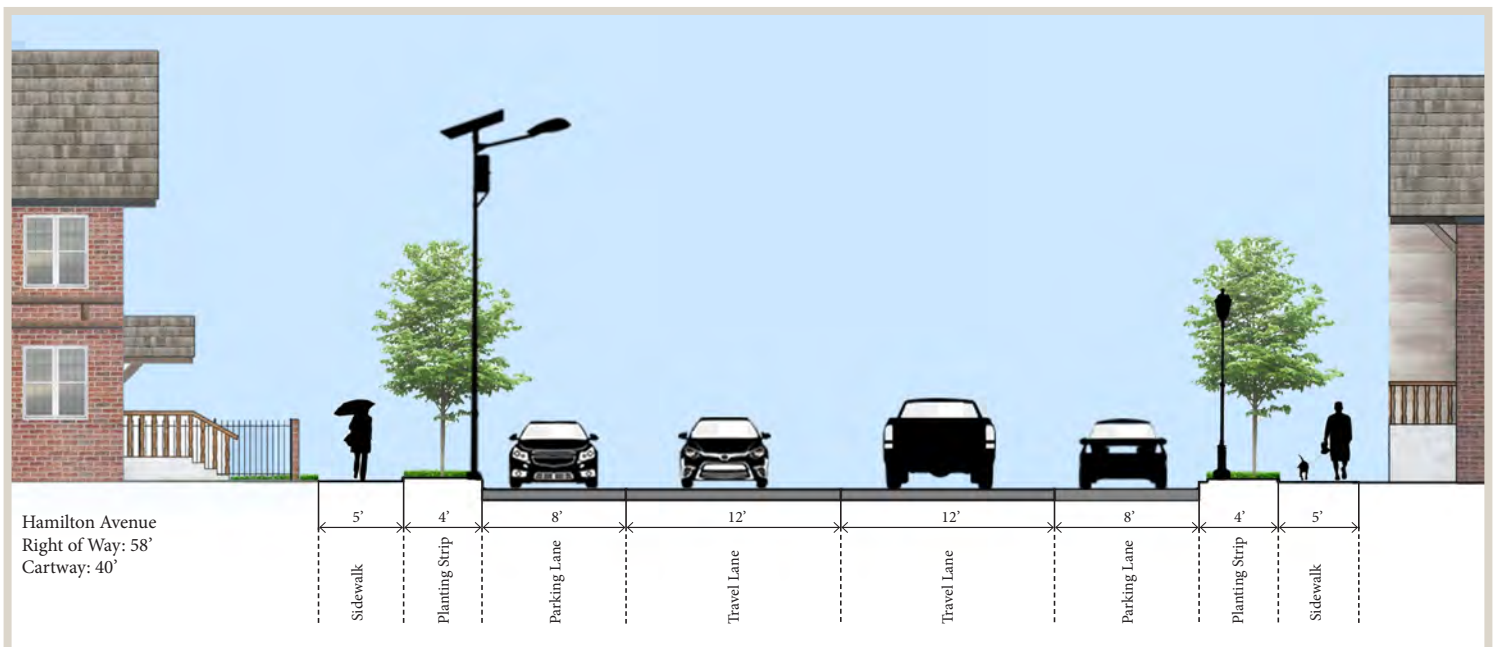


Figure 80. Typical Hamilton Avenue Section.

Corridor Summary

Sidewalks

For most of the corridor, the sidewalk is in generally good condition. On the eastern end of the corridor, the sidewalk is well paved, but there are multiple areas where mature trees have lifted segments, creating tripping hazards. To the west, sidewalk conditions deteriorate. Many of the tree wells are empty. There are sections of sidewalk with cracks and multiple occasions where the sidewalk has deteriorated into gravel. There are a few locations

where utility poles or signs have narrowed the width of the sidewalk below allowed minimums. Just before South Clinton Avenue, a utility pole narrows the sidewalk to only twenty-two inches.

There are two sections where active businesses are set back from the street, with car parking allowed between the curb and the business. This creates a hazard for pedestrians, as cars are entering the sidewalk and reversing out along a continuous stretch. Additionally, many of the cars are too long and fully block the sidewalk.



Figure 81. Map of Hamilton Avenue Corridor.

Intersections and Crosswalks

There are few opportunities to cross Hamilton Avenue in a marked crosswalk along this corridor outside of the signalized intersections. The few marked crosswalks that do exist are not well signed, and lack appropriate curb ramps. ADA compliance is best on the eastern end of the corridor, where many of the corners appear to have been recently rebuilt. Towards the western end of the corridor, none of the curb ramps are compliant. At Chestnut Avenue, which is signalized, none of the pedestrian push buttons were installed correctly, as they all face the wrong way.

Safety

Although the Trenton Central High School and St. Francis Medical Center occupy large parcels in the center of the corridor, there is no special infrastructure to accommodate the increased pedestrian traffic. There is a lack of signage warning drivers about these uses, and the only marked crosswalk across Hamilton Avenue is not well striped.

At Whittaker Avenue, there was a steady stream of vehicle traffic turning onto Hamilton Avenue and blocking the crosswalk, which make it difficult to cross this street. At the intersection of Franklin Street, there was a lot of chaos observed, such as drivers honking and near collisions. Bicycle infrastructure is not provided along this corridor.

Most of the corridor feels safe for walking, as most of the properties are inhabited and in good condition. Additionally, there are many active businesses along the route. The only exception is at the very western end of the corridor, where two abandoned industrial buildings sit across from each other.

Comfort and Appeal

The eastern half of the corridor is very attractive, with many well-maintained properties and lively businesses.

Additionally, the majority of the corridor has historic-style streetlights which add both lighting and style. Trashcans are common throughout the length of Hamilton Avenue, although there are few other pedestrian amenities such as benches. The western end of the corridor is less appealing, with more vacant properties and a corresponding increase in litter in front of those parcels. Although the entire corridor has NJ Transit bus service, the only shelter is in front of the St. Francis Medical Center.

Detailed Conditions Report

South Olden Avenue to Quinton Avenue

Hamilton Avenue and South Olden Avenue meet at a signalized intersection at the start of the study corridor. There are no turning lanes or dedicated turn signals. Westbound traffic on Hamilton Avenue has a “no turn on red” sign placed before the intersection. Eastbound traffic on Hamilton Avenue and southbound traffic on Olden Avenue are not allowed to turn right on red between 7am and 7pm.

Automatic pedestrian signals exist on all four sides, but they are a mixture of older text based (walk/don't walk) and new symbol based designs. At the time of observation, the pedestrian signal on the northeast corner was not functional (Figure 82). All four legs of the intersection have parallel crosswalks that are in good condition. The corner ramps at this intersection all appear to have been redone recently; they are ADA compliant and have truncated domes. The ramps on the southeast corner do not directly orient pedestrians into the crosswalk, which can be a problem for pedestrians with visual impairments (Figure 83).

Street lighting is provided by both overhead cobra lighting and historic-style sidewalk lighting. A trash



Figure 82. Faded crosswalks near hospital.



Figure 83. Non-functioning pedestrian signal

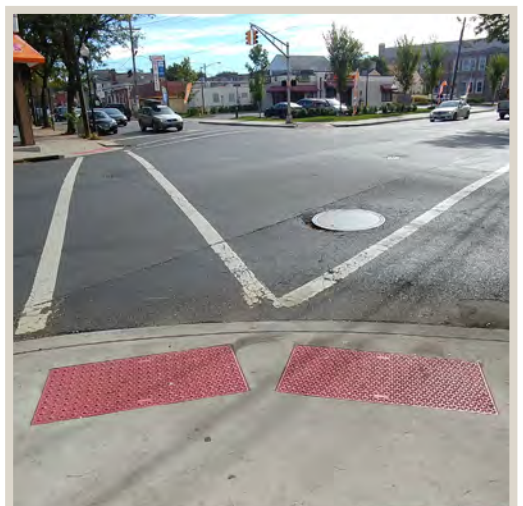


Figure 84. Non-functioning pedestrian signal.



Figure 85. Five-foot wide sidewalks in generally good condition.



Figure 86. Faded crosswalk at Cuyler Avenue intersection.

can be placed for pedestrians near a Dunkin Donuts on the northeast corner. The intersection is generally built up, with active businesses on all corners. However, the businesses on the southeast corner are set back from the roadway with a parking lot in front. The westbound NJ Transit bus stop is located in front of those businesses, where there is a wide, high quality sidewalk. However, there are no amenities for bus riders. The eastbound NJ Transit stop is on the other side of the intersection. While the sidewalk there is not as new, it is perfectly suitable for a bus stop.

West of the intersection, a 25 mph speed sign is posted for drivers. Sidewalks are in generally good shape, although large mature trees have raised some concrete panels, creating a tripping hazard. The main section of the sidewalks are five feet wide, although many properties have additional paving up to the building line. Historical-style streetlights are placed on both sides of the corridor in close proximity. Combined with the many active businesses, this section of the corridor is likely comfortable to use at all hours.

Continuing west, South Walter Avenue terminates on Hamilton Avenue from the north, across from the US Post Office. South Walter Avenue is a very minor roadway, which extends only 150 feet before ending at an alley. Despite its minimal use, the roadway is relatively wide, with a crossing distance of forty feet. Modern curb ramps have been installed to cross Walter Avenue, but there is no crosswalk across Hamilton Avenue.

West of this intersection, Hamilton Avenue is lined with well-kept residences, some with professional services on the first floor. The sidewalk continues to be five feet wide and in generally good condition except where a tree has raised a concrete block (Figure 85).

Cuyler Avenue arrives from the north, terminating on Hamilton Avenue. There is a crosswalk across Cuyler, and also a single crosswalk across Hamilton Avenue, on the eastern leg (Figure 86). The crosswalk is accompanied by recently installed curb ramps that appear to be fully ADA compliant. An overhead light sits directly above the crosswalk; however, the crosswalk striping is faded and there are no crosswalk signs in either direction. NJ Transit bus stops are located on both sides of this intersection and have suitable sidewalks for boarding passengers.

Park Avenue meets Hamilton Avenue just 125 feet to the west of the Cuyler Avenue intersection. The intersection has one parallel crosswalk to cross Park Avenue but no marked crosswalk across Hamilton Avenue. The southeast corner has a recently built ADA compliant ramp with correctly positioned truncated domes. The southwest corner has no sidewalk at all, but instead a continuous asphalt surface from an auto repair business parking lot. While pedestrians can use the parking lot to walk, it is likely that cars are frequently parked in the way (Figure 87).

Another 150 feet west, Ardmore Avenue terminates at Hamilton Avenue from the north. The intersection has no



Figure 87. Missing sidewalks along Hamilton Avenue.



Figure 88. ADA compliant ramps, but missing crosswalks.



Figure 89. Tree-lifted sidewalk creates a barrier for some pedestrians.

marked crosswalks. The ramps on the north side of the intersection have been redone and are ADA compliant with a proper slope and truncated domes (Figure 88). There are no ramps on the south side of Hamilton Avenue to allow crossing at the unmarked crosswalks. Lighting continues to be frequent, with both overhead cobra lights and historic-style pedestrian lights on the sidewalk.

West of the Ardmore Avenue intersection, a pedestrian crossing sign is placed in the westbound direction. This is despite the fact that neither of the next two intersections have a marked crosswalk across Hamilton Avenue. There continues to be a healthy mix of residential, commercial, and office properties on both sides of Hamilton Avenue, all of which appear to be in good condition. On the north side of the street, every tree well is filled with a mature tree, but some have shifted the sidewalk (Figure 89).

Fairmount Avenue (one-way northbound) and Lyndale Avenue (one-way southbound) meet at a wide intersection with Hamilton Avenue. This one-way pair of streets is separated by an attractive park and plaza; however, the center median does not extend fully to Hamilton Avenue. This results in a 70-foot crosswalk for pedestrians that has faded paint. As with the previous intersections, there is no marked crosswalk or curb ramp to cross Hamilton Avenue.

Just west of the intersection, there is an eastbound stop for NJ Transit buses. There is a grass strip between the curb and the sidewalk, preventing ADA access onto the buses. There are no amenities at this stop for riders, but

there is a sidewalk light directly at the front of the stop. South Cook Avenue, a quiet residential street, terminates at Hamilton Avenue from the north. As with the previous intersections, there are modern curb ramps to cross the roadway, along with a faded crosswalk. However, there is no marked crosswalk across Hamilton Ave. The westbound bus stop is located right after this intersection, and the sidewalk does extend fully to the curb. Although there are no pedestrian amenities, there is a UPS drop box adjacent to the bus stop.

Another minor one-way roadway, Melrose Avenue, terminates at Hamilton Avenue from the south. Again, the curb ramps to cross Melrose have recently been rebuilt to be ADA compliant. However, they were not built with ramps or marked crosswalks across Hamilton Avenue. Large homes on the north side of Hamilton Avenue with well-kept lawns continue to give the corridor an attractive aesthetic, although this block does not have street trees.

Quinton Avenue to Chambers Street

Quinton Avenue intersects with Hamilton Avenue at a four-way intersection, although only Quinton has stop signs. North of Hamilton Avenue, Quinton Avenue is a two-way street, and south of Hamilton Avenue, it runs one-way in the southbound direction. Tony's Deli, which sits on the southwest corner, activates the intersection with a small pedestrian plaza that has a trash can. All four corners have recently rebuilt ramps, but none of them are oriented to allow crossing Hamilton Avenue. Painted

crosswalk exist across Quinton Avenue, but the paint is badly faded. On Quinton Avenue, there is a crosswalk sign, but there is nothing on Hamilton Avenue to mark the intersection or the upcoming school.

NJ Transit bus stops for both directions are located west of the intersection. The westbound bus stop has a concrete landing area, a trash can, and grass has grown between the concrete blocks. The eastbound stop has an appropriate landing area, but no amenities.

The north side of Hamilton Avenue is home to the very large Trenton Central High School property. A five-foot sidewalk runs between two grass strips, and is separated from the school property by a metal fence. There are trees between the sidewalk and the roadway, along with historical style lights. However, the long expanse of fence and lack of other amenities makes the sidewalk feel exposed and unattractive. At the time of the audit, the school was undergoing major renovations, which also decreased the amount of activity in the area. The south side of Hamilton continues to have homes.

Revere Avenue terminates at Hamilton Avenue from the south. The curb ramps have recently been rebuilt in a manner that does not encourage one to cross Hamilton Avenue. There is no striping for the crosswalk across Revere Avenue.

Further west, the homes on the south side of Hamilton give way to a parking lot for the St. Francis Medical Center. In combination with the high school athletic fields, the road appears to be wider and emptier as there are no buildings on either side. Across from the parking lot there is an alley that separates the school grounds in two, although it is fenced. The sidewalk at this alley is uneven (Figure 90).

The hospital parking lot is separated from the main complex by Bert Avenue, which runs one-way southbound. Unlike the previous intersections, the curb ramps have not been rebuilt and are not compliant with ADA, due to their slope and lack of truncated domes



Figure 90. Uneven driveway.

(Figure 91). A faded crosswalk is painted across Bart Avenue, and there is a single faded crosswalk across Hamilton. The crosswalk for Hamilton does not have a curb ramp on the northern side (Figure 92). Additionally, there are no signs noting this presence of pedestrians. There is a sign stating that parking is not allowed due to a bus stop, but there is no corresponding sign noting which bus route stops here, if any.

On the southern side, there is an NJ Transit bus stop with a shelter and a bench (Figure 93). The bus stop is well lit, and has an appropriate sidewalk up to the curb. West of the bus stop, the sidewalk continues across two hospital driveways. On the northern side of Hamilton, the sidewalk continues along the fence for the school, except there are now also parking meters located in the planting strip, along with a school crossing sign for westbound traffic.

Chambers Street to Chestnut Avenue

Chambers Street intersects with Hamilton Avenue at a standard four-way intersection controlled by a traffic signal. Although Hamilton Avenue continues to be marked as having one lane in each direction, drivers were



Figure 91. Non-compliant ADA ramps.



Figure 92. Faded crosswalk.



Figure 93. Sheltered bus stop.

observed forming two lanes at the traffic light. Southbound traffic on Chambers Street has a left turn lane with a left turn signal while northbound traffic on Chambers Street has two through lanes before the intersection, but only one receiving lane after the intersection.

Older text based pedestrian signals exist on all four corners and automatically activate for each cycle. Crosswalks are striped with standard parallel lines, although the paint is faded in parts. All four corners have a single curb ramp oriented diagonally into the center of the intersection, and only the ramp on the northwest corner meets ADA standards (Figure 94). There are signs in all directions pointing at the crosswalks, but they do not highlight the presence of the high school.

The northwest corner of the intersection has a suburban-style McDonald's that is set back from the street by a double-lane drive-thru. To mitigate the effects of the drive-thru, there is a brick pedestrian plaza in the corner with two trash cans and bicycle racks, but no seating or shade. The driveway entrance is marked with a continental crosswalk and appropriate curb ramps. It is oriented so only westbound traffic can use it. Two "no left turn" signs are posted for eastbound traffic looking to access the driveway. Just past the McDonald's are a series



Figure 94. Only one ramp at intersection meets ADA standards.

of small businesses that have parking spaces between the sidewalk and the building. Although the sidewalk is appropriately sloped, vehicles that do not pull in all the way block the walkway (Figure 95). The south side of Hamilton has mixed-use buildings with small shops on the first floor. The sidewalk is slightly wider, and the landscape area has been paved with brick.

Franklin Street meets Hamilton Avenue from the south. There are curb ramps in decent shape, but they are not ADA-compliant due to their slope and lack of truncated domes. A crosswalk at this location is extremely faded, with no crosswalk over Hamilton Avenue. Across the street, Franklin Street appears to continue as a private driveway into a parking area (Figure 96). The curb ramps are set back around 20-feet, and are not ADA compliant.

The next intersection is slightly offset, and is called North Anderson Street on the north side and a combination of Washington Street and Anderson Street on the south side. This odd combination results in a standard 25-foot crosswalk on the north side, and a 50-foot crosswalk on the south side. Additionally, the direction of traffic within Washington Street is not well defined. The intersection has two parallel crosswalks, on the north and south sides of the intersection. The paint quality of both crosswalks



Figure 95. Parking between sidewalk and storefronts.



Figure 96. Franklin Street intersection.



Figure 97. Curb ramp with a steep slope and missing truncated domes.



Figure 98. Missing crosswalk and non-compliant curb ramps.

is poor. The ramps are not ADA compliant, with a sharp slope, a lack of truncated domes, and broken pavement at the ends of the ramps (Figure 97). At this intersection there are no crosswalks to cross Hamilton Avenue.

Bus stops are located to the west of this intersection and eastbound buses stop at a very wide sidewalk in front of a bank. Although there is no shelter, there is a trash can, mailbox, and newspaper boxes. The westbound bus stop is by a sidewalk that is in very poor condition, with large cracks and vegetation. Continuing west, the sidewalk on the south side of Hamilton Avenue continues in better condition than the sidewalk on the north side, which is in poor shape in front of some properties. The historic-style lights, which were frequent in earlier sections of the corridor, do not exist past this point.

Monmouth Street meets Hamilton Avenue from the north. There are no marked crosswalks at this intersection, nor are there any curb ramps. There is a “no parking” sign on account of a bus stop, but there is no corresponding signage indicating that any bus actually stops here. Slightly further west, Division Street ends at Hamilton Avenue from the south. This intersection also lacks crosswalks, and while there are curb ramps, they are not

ADA compliant (Figure 98). The southwest corner has a brick sidewalk to mark the entrance to Columbus Park, and the concrete sidewalk running along the park is in good shape. Additionally, there is a wide asphalt multi-use trail inside the park. Across from the park, Hanford Place begins as a one-way northbound street. There is a faded crosswalk across Hanford Place, but no crosswalk across Hamilton Avenue. The intersection has no curb ramps (Figure 99).

To the west, the sidewalk widens in front of a church, but the condition of the concrete is poor. There is an NJ transit bus stop for westbound traffic that fronts the wide sidewalk (Figure 100). There is a trash can, but no additional amenities. Across the street, the eastbound bus stop is not accessible due to a grass landscape strip. Additionally, the sign for the bus stop is adjacent to a utility pole, trash can, newspaper box, and hospital sign, which may hinder access to the bus door (Figure 101). There is a 25 mph speed limit sign visible to traffic.

Chestnut Avenue to South Clinton Avenue

Chestnut Avenue intersects with Hamilton Avenue at a signal controlled intersection. The traffic signals were



Figure 99. Missing curb ramps.

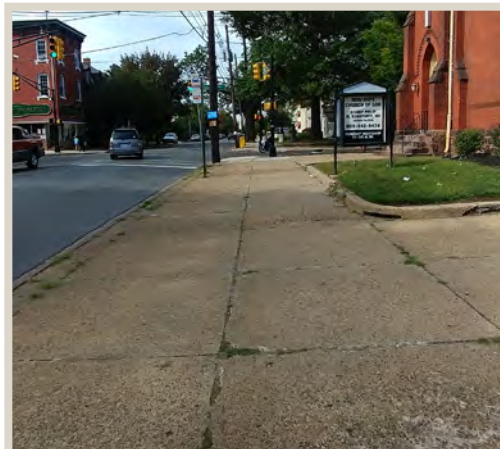


Figure 100. Wide sidewalks along Hamilton Ave.



Figure 101. Bus stop with challenging access.



Figure 102. Drivers often block the crosswalk at this intersection.



Figure 103. Missing curb ramps.

installed within the last decade and feature modern pedestrian signal heads. Unfortunately, the buttons to activate the pedestrian crossings were all installed incorrectly as they face into the roadway rather than towards the sidewalk. ADA compliant curb ramps are properly located on all four corners, facing into the sidewalk, but the southeast corner has a brick landing pad, which may challenge wheelchair users. Crosswalks are painted in all directions, but the paint has faded.

Past the intersection, the historic-style streetlights return to the corridor. Additionally, the landscape strip is replaced with a brick trim. The sidewalk is in excellent condition on the north side, in front of a Bank of America, but in poor shape on the south side. The sidewalk is especially uneven along various residential driveways. A pedestrian crossing sign is visible to westbound traffic, but there is no corresponding marked crosswalk.

Whittaker Avenue arrives from the south, carrying traffic one way. There are curb ramps in good condition, but they are not fully ADA compliant. A badly faded crosswalk is marked across Whittaker Avenue, but not Hamilton Avenue. Poor driver behavior was observed

here, as most drivers completely blocked the crosswalk while they waited for a chance to turn onto Hamilton Avenue (Figure 102). A westbound NJ Transit stop sits on the north side of Hamilton. Although the sidewalk does extend to the curb, there are two empty tree wells that may present a tripping hazard. There is no corresponding eastbound bus stop.

Just 125 feet to the west, Benton Street begins on the northern side of Hamilton Avenue. Here there is a single marked crosswalk across Hamilton Avenue, but it does not have curb ramps on either end (Figure 103). There are two signs marking the traffic, but they are only visible to eastbound traffic. Additionally, one of the signs is almost completely enveloped by a tree canopy, and a driver was parked illegally, further blocking the view of the crosswalk (Figure 104). At the time of the audit, a crossing guard was posted.

Continuing west, sidewalk conditions are generally acceptable on both sides of Hamilton, with the exception of a stone section that has been lifted up. The corridor starts to become denser, with three-story apartment blocks lining both sides of the street. The Victory

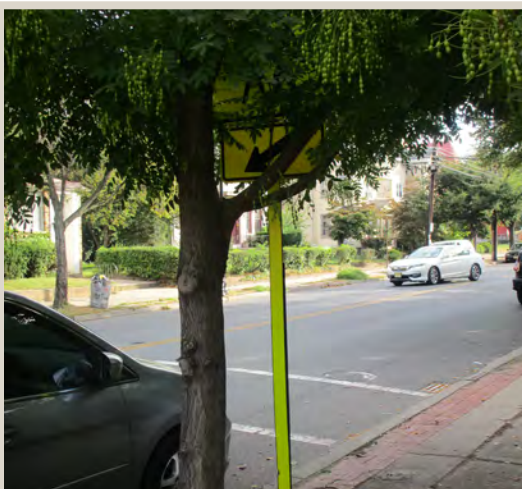


Figure 104. Poorly placed crosswalk sign.



Figure 105. Compromised curb ramp.

Tabernacle Church of God, on the south side of Hamilton, is set back from the street with a wide sidewalk.

Adjacent to the church, Hudson Street runs one-way south from Hamilton Avenue. There are curb ramps across Hudson Street that are in good condition, but lack truncated domes. The curb ramp on the southwest corner is further compromised by asphalt that has eroded, exposing brick (Figure 105). The pavement



Figure 106. Faded crosswalks and non-compliant ramps.



Figure 107. Sidewalk cluttered with litter and overgrown shrubbery.

quality on Hudson Street is very poor, and that is true throughout the crosswalk, which is full of potholes. Additionally, the crosswalk lines are faded (Figure 106). Across the street on the north side, the sidewalk is in poor condition and all the tree wells are empty. There is a sign stating that parking is not allowed due to a bus stop, but there is no additional information on what bus might stop there. One hundred and twenty feet to the west, Hudson Street meets Hamilton Avenue on the north side as a two-way street. It has non-compliant curb ramps and is missing crosswalk striping, though the pavement quality is very good. There is an auto-repair business on the northwest corner where the sidewalk is cracked and there are signs that they park cars on the sidewalk. Past this business, the sidewalk has a lot of litter (Figure 107).

On the south side of Hamilton, there is a small section where the concrete sidewalk has been reduced to gravel. Just past this section, there are a series of businesses that are set back from the street, but use the sidewalk as parking. This results in blockage of the entire sidewalk (Figure 108). Further down the block, a couple of vacant properties have large quantities of litter in their vicinity.

South Clinton Avenue to Route 129

Hamilton Avenue widens approaching South Clinton Avenue in order to fit a dedicated left turn lane. The widening is at the expense of the landscape strip, which in turn means there is a utility pole and sign blocking portions of the sidewalk on the north side, adjacent to an empty lot. On the south side of Hamilton Avenue, the sidewalk remains wide as the buildings are set back from the street.

The intersection with South Clinton Avenue is controlled by a traffic signal. All four directions have a left turn lane with a dedicated left turn signal. Additionally, large street name signs are suspended on the traffic signal, making navigation easy at this intersection. All four directions have modern pedestrian signal heads. The buttons to activate the signals on the southeast corner were installed facing the wrong direction. The crosswalk striping is in very poor condition in all directions and is entirely missing on the southern leg. The southeast corner has two curb ramps with truncated domes, but the concrete is cracked. The northeast corner has only a single ramp and a very wide turning radius (Figure 109). The northwest corner has a single curb ramp, and the southwest corner



Figure 108. Cars fully blocking sidewalk.



Figure 109. Wide turning radius.



Figure 110. Non-compliant ramps.



Figure 111. Sidewalk reduced to gravel.



Figure 112. Vacant buildings are common in this section.

has two, none of which are compliant (Figure 110).

There is an eastbound NJ Transit bus stop on the southeast corner of the intersection. The sidewalk is in good shape, with the exception of an empty tree well. The only amenity for passengers is a trash can. There is no bus stop in the westbound direction. On South Clinton Avenue, there is a bus stop for southbound buses just before the intersection. The sidewalk is crowded at that location, with a utility pole, tree, streetlight, and four different signs. There is no northbound bus stop. Sign clutter in particular appears to be an issue on South Clinton Avenue. In the northbound direction, there are seven different sign supports holding ten different signs, many of which are not visible due to a tree canopy. For eastbound traffic on Hamilton Avenue, there are directional signs pointing towards the train station and other points of interest.

West of South Clinton Avenue, the sidewalk is in poor shape on both sides of the roadway. Some sections of concrete have been patched with asphalt, while others have been reduced to gravel (Figure 111). Clark Street

terminates at Hamilton Avenue from the south. There are curb ramps to cross Clark Street, but they are not compliant. There are no crosswalks painted in any direction. A vacant warehouse with many broken windows sits on the corner, with a boarded up industrial building across the street (Figure 112). East Canal Street ends at Hamilton Avenue from the north. The curb ramp on the northeast corner is in very poor shape. The ramp on the northwest corner is in better shape, but still not ADA-compliant. Again, there are no painted crosswalks. Striping on the roadway warns of an upcoming railroad crossing.

The Hamilton Avenue study corridor ends at a signalized intersection with Route 129. The westbound stop bar is set back from Route 129 due to the presence of two railroad tracks that carry the River Line. There is a left turn lane with a dedicated signal. There are very well marked crosswalks in all directions, with modern signal heads. Although this is the access point for the Hamilton Avenue Light Rail Station, there are no bus stops.

Common Issues Along Hamilton Avenue



*See Appendix A for locations

North Olden Avenue

The North Olden Avenue corridor cuts across Trenton's North District for .95 miles from Princeton Avenue to Parker Avenue (Figure 114). Aside from being a Trenton 250 Potential Complete Street, it is an important corridor because it presents one of the few options to cross Route 1. North of Princeton Avenue, North Olden Avenue crosses into Ewing Township where it continues for just over two miles before ending at Parkway Avenue. South of Parker Avenue, the corridor enters Trenton's East District, where it intersects with East State Street and Hamilton Avenue, before continuing into Hamilton Township for another two miles.

The corridor hosts a mixture of residential, commercial, and industrial uses. Additionally, North Olden Avenue is home to the Paul Robeson Charter School, George Page Park, and various churches. No New Jersey Transit bus lines operate along the corridor, although six different routes do cross it on the way to downtown Trenton.

The roadway generally consists of one travel lane in each direction, with a 25 mph speed limit. The roadway is mostly 32-feet wide, with some variation approaching major intersections (Figure 113). This narrow width presents complications with street parking, especially because the roadway sees an annual average daily traffic volume of 18,830 (2014) on the southern end, and almost 30,000 at the northern end (2016). North Olden Avenue generally has the right of way over adjacent streets, except at the signalized intersections where the corridor crosses Brunswick Avenue, New York Avenue, and North Clinton Avenue.

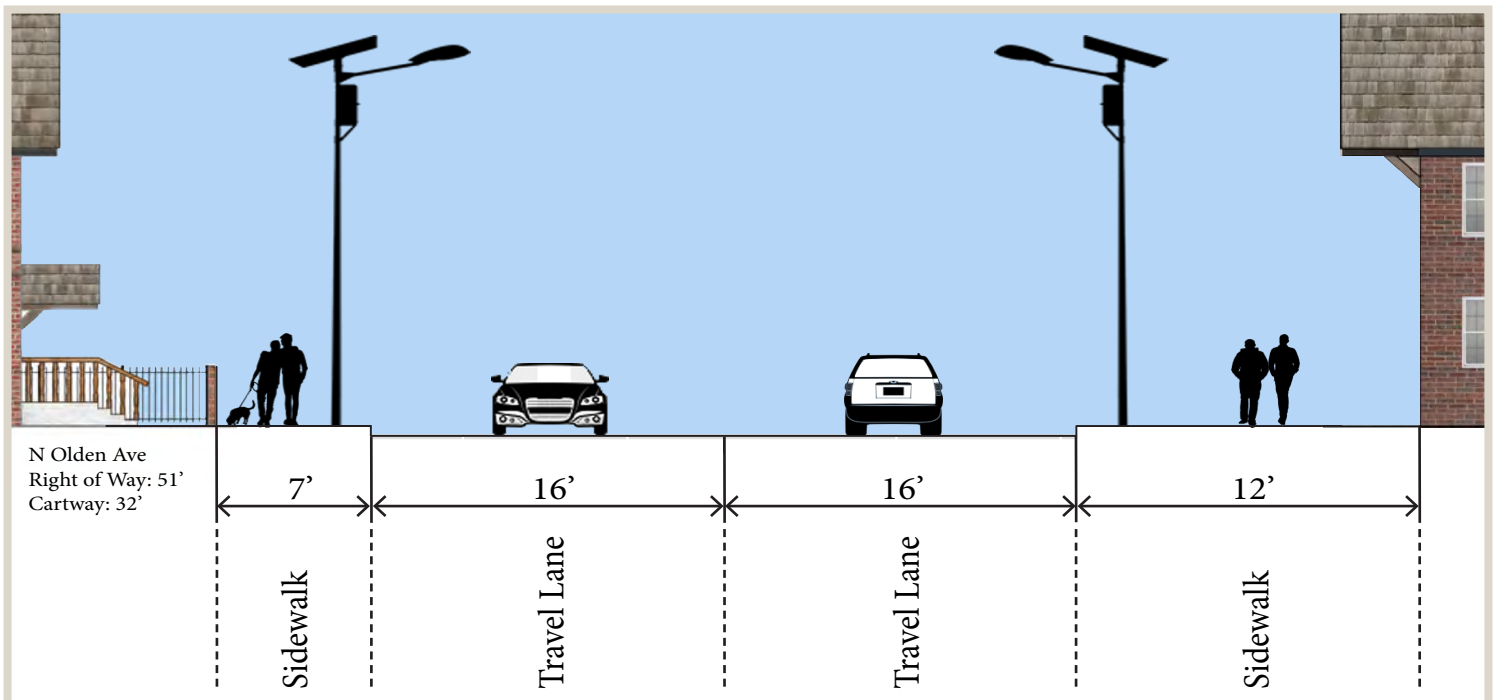


Figure 113. Typical North Olden Avenue Section.

Corridor Summary

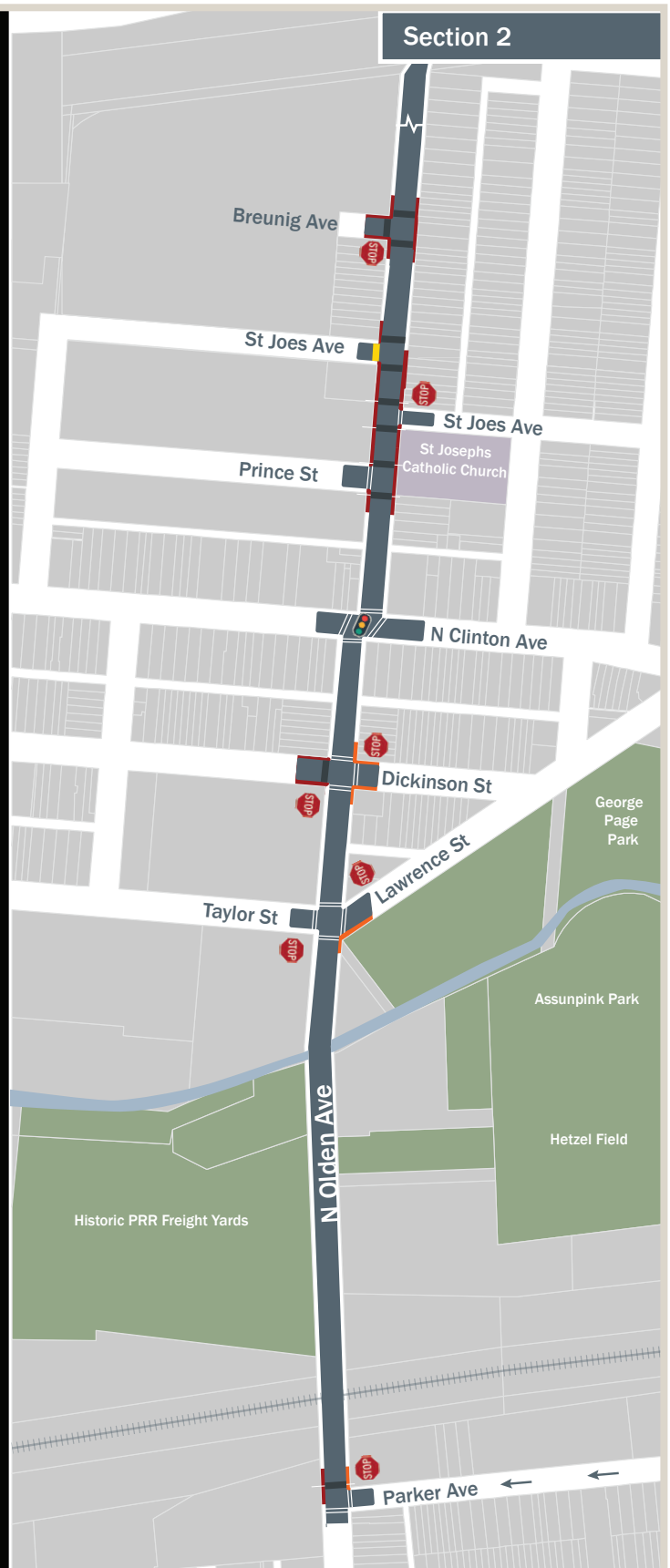
Sidewalks

Sidewalks along this corridor are mostly in poor condition. With only a couple of exceptions in front of churches, the sidewalks are usually five feet wide, with some narrower sections. In many sections, the sidewalks are cracked, overgrown with shrubbery, and buckled due to tree root growth – although there are very few mature trees left. The sidewalk conditions generally improve near major intersections such as New York Avenue, and Brunswick Avenue, and in front of George Page Park. There are many instances where electrical boxes, sign posts, and

utility poles have created an obstruction on the sidewalk by limiting the passable width. There are some instances where the sidewalk paving has eroded into gravel. Due to the narrow width of the roadway, vehicles were observed parking partially on the sidewalk. Aside from further narrowing the width of the usable pedestrian space, the weight of the cars has been responsible for much of the damage.

Intersections and Crosswalks:

Many of the curb ramps along the route have been redone and are ADA-compliant, although some have accumulated gravel at the base. There are a few locations



N Olden Ave Corridor

- Good Crosswalk
- Faded Crosswalk
- Missing Crosswalk
- Likely non-compliant ADA ramp
- Missing ADA ramp
- STOP Stop Sign
- 🚦 Traffic Signal
- Study Area
- Civic Institutions
- Parks

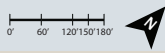


Figure 114. Map of North Olden Avenue Corridor.

with no curb ramps at all, which makes navigating the entire corridor impossible for someone in a wheelchair. Additionally, many of the alleys have modern curb ramps, but the surface of the alley is in such poor condition that the crosswalk is not accessible.

The signalized intersections lack a uniform application of pedestrian crossing signals, and some major crossings, such as New York Avenue, completely lack pedestrian signals. North Clinton Avenue manages to have a modern pedestrian signal, an old pedestrian signal, and a corner with no signal at all at the same intersection. Clinton Avenue is notable for having the only high visibility continental crosswalks on the corridor.

There are only a couple of opportunities to cross North Olden in a marked crosswalk outside the signalized intersections. The location of these crosswalks seems somewhat random, and there is no signage informing drivers of the crosswalks.

Safety

The thirty-two foot width of the corridor has created a situation where the road is too wide in areas where there are no parked vehicles (two 16-foot lanes), and too narrow in areas where vehicles are parked. Additionally, the corridor has ample signage related to not parking during street cleaning hours, but very little signage related to where one can safely park. For example, it is unclear if drivers can park on both sides of the street, which would reduce the passable driving space to around 16-feet. As this appears to be too narrow, many drivers place parts of their vehicle on the sidewalk. Vehicles were also observed illegally parked too close to crosswalks and intersections resulting in sightlines being blocked.

At the start of the corridor, North Olden Avenue immediately transitions from a suburban-style highway to a local urban road, but there is no signage or other visual cues of this transition. Additionally, the New York Avenue intersection, which serves as an on- and off-ramp to Route 1, is very wide and encourages fast speeds to the detriment of pedestrians. In other sections of the corridor, crosswalks across North Olden Avenue are poorly marked and signed.

Lighting does not appear to be adequate for an urban area, and the corridor feels desolate and abandoned, even in areas with populated residences. The southern end feels especially isolated due to the large abandoned industrial buildings with broken windows and litter. Litter is a problem along the entire corridor with higher amounts often corresponding with areas in need of maintenance where the sidewalk is also in poor condition.

There is no dedicated bicycle infrastructure or signage along this corridor.

Comfort and Appeal

Pedestrian amenities along this corridor are rare, with only a couple of trash cans located along the route. The corridor lacks greenery, which means there is little shade. There are many empty tree wells, and most of the trees that are alive along the corridor are small. As almost every building extends to the lot line, there is no additional greenery on the adjacent properties. Much of the greenery that does exist along the corridor is in the form of overgrown bushes and shrubs.

The segment south of New York Avenue is uncomfortable for pedestrians. There is heavy traffic with many trucks. Additionally, the bridge over Route 1 is very long, the sidewalk is narrow, and there is a high level of noise.

Detailed Conditions Report

Princeton Avenue to Brunswick Avenue

Princeton Avenue, which marks the northern end of the North Olden Avenue study corridor, is also the boundary between Ewing Township and Trenton. In Ewing Township, Olden Avenue is a wide suburban highway bordered by expansive strip-mall developments. In Ewing, the corridor has four lanes, 60-feet of roadway, and a 35 mph speed limit. Upon crossing into Trenton, the character of Olden Avenue shifts drastically into a narrow urban roadway lined with residential and commercial developments that are built up to the lot boundary.

The intersection with Princeton Avenue is controlled by a traffic signal. On the north side of the intersection, North Olden Avenue has a left turn lane with an exclusive signal phase, and two through lanes. However, across the intersection, there is only a single receiving lane for traffic and no signage indicating the merge. For northbound traffic, Olden Avenue widens from one lane to three – at least in theory. Google Streetview confirms that at one point, there was striping for three northbound lanes, but at the time of the audit, only the faded double-yellow centerlines were visible. There is a completely blank white sign hanging from the traffic signal, which Google Streetview suggests at one point read “delayed green.”

The northern leg of the intersection has no infrastructure for pedestrians. There is no painted crosswalk, no curb ramps, and no pedestrian signal heads. A small traffic island, where pedestrians could theoretically wait, is instead filled with a utility pole, a traffic signal pole, and an electrical control box. The western leg of the intersection does have pedestrian signals and curb ramps, but no striped crosswalk. When built, the curb ramps were likely ADA-compliant, but a lack of maintenance means they are no longer fully accessible.



Figure 115. Non-compliant ramp with a bush blocking visibility.

The southern leg of the intersection has a painted crosswalk, but the paint is extremely faded. There is a curb ramp on the eastern side, but the slope does not appear to be compliant. There is no ramp on the western side. Pedestrians crossing the eastern leg of the intersection have pedestrian signals but the crosswalk paint is faded. The curb ramps on both sides have truncated domes but do not appear to be ADA compliant. There is also a large bush on the northern corner that blocks visibility and encroaches on the sidewalk (Figure 115). After crossing Princeton Avenue, pedestrians must navigate a traffic island that cannot fully contain a wheelchair. The island exists to allow vehicles on Princeton Avenue to make a free right turn. The intersection sees a large amount of traffic, including many trucks, making it feel uncomfortable to use as a pedestrian.

South of Princeton Avenue, North Olden Avenue quickly narrows to just 32-feet wide, striped as two sixteen foot lanes. This width is not adequate to support street parking on both sides, but that does not appear to deter residents who were observed parking halfway in the street and halfway on the sidewalk. Google Streetview confirms that the behavior observed during the audit is common.

This section of the corridor is predominantly residential. Usable sidewalk width is generally 5-feet, with a sporadically placed two and a half foot planting strip. The sidewalk is mostly in poor condition with some



Figure 116. Missing sidewalk with litter.

sections completely missing on the west side (Figure 116). Additionally, plants from an inhabited home have been allowed to completely overgrow the sidewalk on the east side (Figure 117). Lighting is provided by standard overhead cobra fixtures.

Green Alley intersects from the west, and terminates on North Olden Avenue. The sidewalk has been recently rebuilt to provide proper curb ramps, but the surface of the alley has potholes where the unmarked crosswalk is. Further south, Ellis Avenue intersects with North Olden Avenue at a four-way intersection, but only Ellis Avenue has stop signs. There are marked crosswalks with adequate curb ramps to cross Ellis Avenue, but no crosswalks across North Olden Avenue. South of Ellis, the sidewalk conditions continue to be poor, with grass growing in large cracks.

Piedmont Alley terminates at North Olden Avenue from the west. There is a marked crosswalk across the alley, with suitable curb ramps. There is no crossing infrastructure across North Olden Avenue. Immediately after the alley, there is a driveway to access the Wells Fargo Bank drive-thru. This driveway is completely redundant with the adjacent alley, and the sidewalk is improperly sloped for the length of the driveway. Approaching the intersection with Brunswick Avenue, the sidewalk is in good condition in front of the bank.

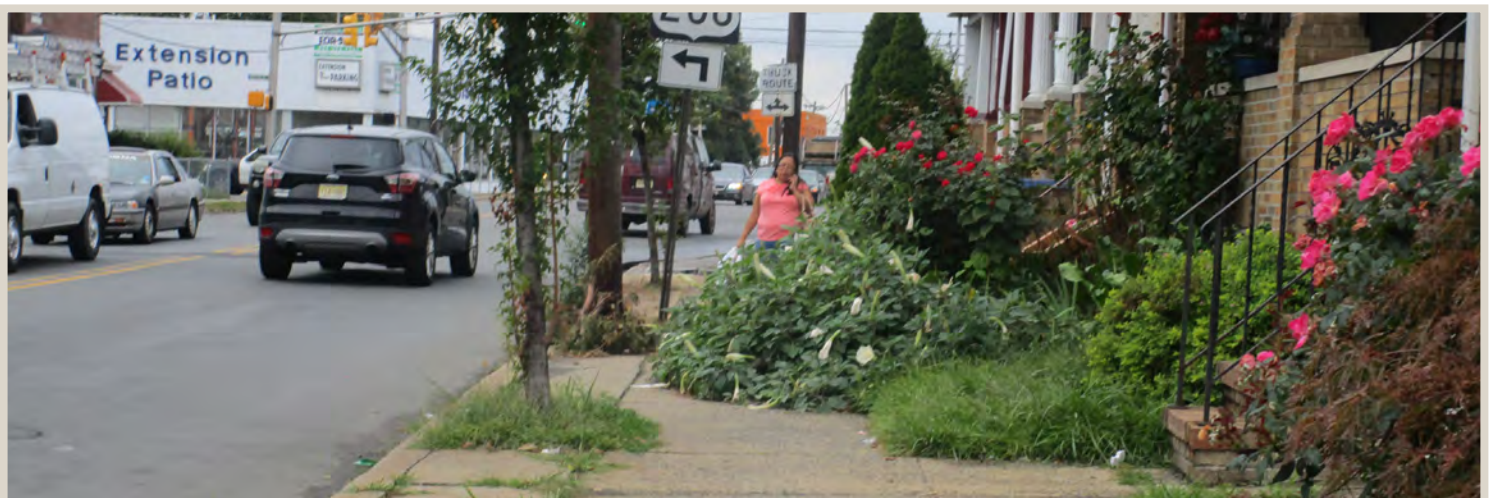


Figure 117. Overgrown plantings block entire sidewalk.



Figure 118. Severely faded crosswalk and stop lines.



Figure 119. Sidewalk in good condition in front of St. Hedwig's Church.

Brunswick Avenue to New York Avenue

Brunswick Avenue intersects with North Olden Avenue at a signal controlled intersection. Olden Avenue has a left turn lane in each direction, but no turn arrows. Both directions of traffic have a no turn on red restriction from 7am until 7pm. Each corner of the intersection has a single diagonal curb ramp that is not compliant with ADA regulations. The crosswalk lines and stop bars are all severely faded (Figure 118). Pedestrian signals face all directions, although they are of the older text based variety. The crosswalk signals are all button actuated. This intersection is further discussed in the Brunswick Avenue section of this report.

East of the intersection, the sidewalk is in good condition on the south side of North Olden Avenue, alongside the St. Hedwig Roman Catholic Church (Figure 119). The sidewalk on the north side is in fair condition, with some vegetation growing where the concrete blocks meet. A small alley, Pagas Alley, runs to the east, and serves as the entrance to the parking lot for the Polish and Slavic Credit Union. The alley has appropriate curb ramps and a painted crosswalk. The sidewalk in front of the credit union is in excellent shape.

Indiana Avenue meets North Olden Avenue at a four-way intersection where North Olden Avenue has the right of way. Crosswalks are painted across Indiana Avenue, with a single marked crosswalk across North Olden Avenue. There is crosswalk signage on both sides of the roadway, although there is no lighting overhead. All corners have appropriate curb ramps but the northeast corner has a single diagonal ramp instead of the preferred two ramps. Paul Robeson Charter School is on the northwest corner, but there is no school-zone signage to inform motorists about this.

One hundred and forty feet south, Stokes Alley appears on both sides of the corridor. Both sides have appropriate curb ramps and painted crosswalks. The sidewalks continue in

decent condition, with the exception of visible litter. Ohio Avenue creates another four-way intersection where North Olden Avenue has the right of way. Crosswalks are only painted across Ohio Avenue, along with corresponding curb ramps. There is a sign warning of crossing pedestrians in the northbound direction, even though there is no marked crosswalk across North Olden Avenue.

Although the width of the roadway has not changed, parking is legal in some sections, but signage is very inconsistent as to where it is allowed. Because of the sub-standard roadway width, drivers continue to park partially on the sidewalk so their car does not get hit by other vehicles (Figure 120). Another alley, Burgner Alley, crosses North Olden Avenue. On the east side, there are curb ramps and a crosswalk, while on the west side, the sidewalk continues across the alley. There is no signage indicating if the alley is one-way or bi-directional.

Pennsylvania Avenue meets North Olden Avenue at a four-way intersection. North Olden Avenue widens at the intersection resulting in the western crosswalk being angled. There is one marked crosswalk crossing North Olden Avenue. The crossing is located on the wider southern leg of the intersection resulting in a 62-foot



Figure 120. Cars regularly park on the sidewalk.



Figure 121. Faded and low-set signage.



Figure 122. Busy intersection lacks pedestrian signals.

crossing. If the marked crossing was on the northern leg, the crossing would be a much shorter 34-foot long. Additionally, the overhead lighting is located over the northern leg of the crossing, not the southern leg with the marked crosswalk.

The three crosswalks are marked with standard parallel lines and have modern curb ramps. There is a buildup of sediment and debris on the truncated domes and at the base of the ramps where the ramp meets the road. There is no crosswalk signage.

Visually, the corridor widens as well, as the east side is occupied by a strip-center set back with a parking lot, and the west side is a gas station. North Olden Avenue continues to widen approaching New York Avenue, and expands to 82-feet before the intersection.

New York Avenue to North Clinton Avenue

The intersection of North Olden Avenue and New York Avenue is very wide and lacks the dense urban neighborhood feel of previous intersections along the corridor. For southbound traffic, North Olden Avenue widens to three lanes: a left turn lane, a through lane, and a right turn lane. Additionally, northbound traffic is only striped as one lane, but is three lanes wide, thanks to a right-turn slip lane from New York Avenue. All four directions of traffic have dedicated left turn signals. The New York Avenue slip lane is not signalized, and is yield controlled. To the west, New York Avenue has an on-ramp to southbound Route 1, and an off-ramp from northbound Route 1. To the east, there is an off-ramp for traffic going southbound on Route 1. As such, it is likely that this intersection sees heavy traffic. A sign placed before the intersection directs drivers towards the Trenton Transit Station, via Route 1 (Figure 121). A “no parking” sign on the same post is badly faded.

All four directions have faded parallel crosswalks, but there are no pedestrian signals. However, there is a push

button that says it will provide a green light (Figure 122). Each crosswalk has a curb ramp, but none of them are ADA compliant (Figure 123). The turning radius on all corners is wide, encouraging higher speeds. Overhead lighting is not adequate for the width of this intersection.

The northwest corner has an electrical control box on the sidewalk that narrows passage. Additionally, the box blocks the view of pedestrians to drivers turning into the gas station. The gas station itself has four wide driveways. The small commercial center across the street has five separate driveways.

South of the intersection, North Olden Avenue begins to slope upwards onto a bridge over Route 1. The sidewalks narrow and rest against a chain-link fence atop a small concrete wall. The bridge is striped with two 12-foot lanes and 6-foot shoulders. Although the speed limit continues to be 25 mph, drivers were observed going much faster. After passing over Route 1, the bridge continues over the Delaware and Raritan Canal State Park Trail, but no access point to this trail is provided. Standing directly over the trail, a pedestrian would have to walk exactly one mile to the nearest access point. The bridge structure is about 850-foot long, and is mostly an unpleasant walk due to the high speeds, small sidewalk, and noise from



Figure 123. Non-compliant ramps and a turning radius that encourages high speed turns.



Figure 124. Missing crosswalk and non-compliant ramps.



Figure 125. Sidewalk reduced to dirt and gravel.

the highway. At the southern end of the bridge, there are 25 mph signs in both directions.

Breunig Ave, a very short alley, rests on the western side of North Olden Avenue and feeds into an industrial parcel. There is no curb ramp on the northern side, nor is there a crosswalk. The southern side has a ramp that does not meet standards (Figure 124). South of this alley, rowhomes line both sides of the street. They sit very close to the sidewalk, with stoops further narrowing the usable space. A school crossing sign is posted for southbound traffic. Towards the next corner, there is a segment of sidewalk that has been reduced to gravel (Figure 125).

Another minor street, St Joes Avenue, terminates at North Olden Avenue from the west. There is a faded marked crosswalk across this avenue, along with modern curb ramps. The pavement quality of the roadway is poor within the crosswalk. There are no ramps or marked crosswalk to cross North Olden Avenue. The small avenue sits next to a vacant industrial property, and the sidewalk is in very poor condition in front of the building. Just 120-feet away, St Joes Avenue continues on the east side. The street had been very recently repaved, resulting in a very smooth crosswalk, a well-defined stop bar, and

fresh double-yellow lines. Compliant curb ramps sit on either side, but there is no crossing provided on North Olden. South of this intersection, St Joseph's Catholic Church is set back with a large and well-maintained sidewalk with mature trees.

Prince Street, while not as freshly paved as St Joes Avenue, has a suitable road surface, a painted crosswalk, and appropriate curb ramps. South of the intersection, a school crossing sign is posted for southbound traffic next to an empty lot. There is overgrown brush blocking parts of the sidewalk from this same lot (Figure 126). Past this lot, Agnes Avenue, an alley, arrives on both sides of North Olden Avenue. Instead of a painted crosswalk, the end of this alley is paved in a bright red brick, in contrast to cobblestone used further down the alley (which is mostly covered in asphalt patches). While the brick is visible, there are no curb ramps for pedestrians (Figure 127).

North Clinton Avenue to Parker Avenue

North Clinton Avenue intersects with North Olden Avenue at a signal-controlled intersection. The northeast corner has modern pedestrian signals, the southeast and southwest corners have old text-based pedestrian signals,



Figure 126. Overgrown brush blocking portions of the sidewalk.



Figure 127. Missing curb ramps.



Figure 128. Curved ergonomic crosswalk (Source: Bing Maps).



Figure 129. Signage and stairs create a narrow walkway.

and the northwest corner has no pedestrian signal at all. Crosswalks are painted in all directions. Although the paint has faded, the design of the crosswalks is very interesting: not only are they painted in the continental style, the lines actually curve in an ergonomic manner, which is meant to replicate the way in which pedestrians actually navigate corners (Figure 128). This is an excellent design choice that should be replicated elsewhere. A “stop for pedestrians” sign is on the sidewalk, although it was likely originally placed on the centerline. All four corner ramps appear to be compliant.

South of North Clinton Avenue, North Olden Avenue appears to be a couple of feet wider than the previous segments. The sidewalks are also in good condition. Covert Alley has newly installed curb ramps on all corners, and painted crosswalks. As with previous alleys, the quality of the pavement within the crosswalk is poor. South of the alley, the sidewalk on the east side becomes very narrow due to steps leading to homes, utility poles, signs, and tree wells (Figure 129). One of the signs is a school crossing sign. The sidewalk on the west side is a standard five-foot wide, although there is intrusion from vegetation.

Dickinson Street crosses North Olden Avenue at a four-way intersection where North Olden Avenue has the right of way. The northern leg has a crosswalk across North Olden Avenue, with appropriate curb ramps on either side. The eastern leg has a painted crosswalk, but only a ramp on the northern side. Additionally, the ramp has vegetation and gravel at the bottom. The southern leg has a marked crosswalk across North Olden Avenue, along with properly built ramps. The western leg has no ramps or marked crosswalk, even though there appears to be more than enough room for them, and all the ramps look somewhat recent (Figure 130). The southeast corner is an empty lot, and aside from the one curb ramp, there is no sidewalk at all (Figure 131). The entire block is in poor condition on the eastern side, as there is a vacant building, a badly maintained alley, and another empty lot with remnants of the sidewalk. Additionally, a vehicle was parked on the sidewalk even though both empty lots had ample parking space and street parking appears to be legal (Figure 132). Although sidewalk conditions are better on the west side, another alley creates issues with poor paving and a lack of curb ramps.

Lawrence Street/Taylor Street intersects with North



Figure 130. Missing curb ramps.



Figure 131. Missing sidewalk.



Figure 132. Cars regularly park on the sidewalk.



Figure 133. Grass clippings cover truncated dome across from abandoned building.



Figure 134. Sidewalks in extremely poor condition.

Olden Avenue at a four-way intersection, where North Olden Avenue has the right of way. There are crosswalks with modern curb ramps in all four directions, although gravel has reduced the accessibility of the ramps. The west side of the intersection has a massive vacant industrial complex that has bridges over Taylor Street (Figure 133). The pavement quality on Taylor Street is in terrible condition, although it is slightly better where the crosswalk is. There is only a single overhead light at this intersection. There is a park on the southeast corner with an attractive entrance, but there are no lights or pedestrian amenities. The sidewalk adjacent to the park is in excellent condition.

North Olden Avenue crosses over a small waterway, Assumpink Creek. On the east side, the sidewalk is in excellent condition. On the west side, there is a missing curb ramp at a driveway. South of the creek, there are empty lots on both sides of the roadway, and the sidewalk condition is very poor. There are additional driveways

without curb ramps and with large cracks, vegetation, litter, and steep slopes (Figure 134). The roadway crosses over the Northeast Corridor Railroad on a bridge, where the sidewalk becomes narrow. To access the bridge, there is a very steep slope (Figure 135). The bridge roadway is narrower than the rest of the avenue, which acts as a visual speed deterrent. Additionally, the bridge is paved with brick. South of the bridge, the sidewalk conditions improve.

Parker Avenue is a one-way road that arrives from the east. There is a crosswalk across Parker Avenue and a single crosswalk across North Olden Avenue. Both have suitable curb ramps, and there is a light directly above the crosswalk. Beyond the intersection, sidewalk quality decreases again, with many cracks, grass, and litter (Figure 136). The intersection with East State Street is discussed in that section.



Figure 135. Steep incline along cracked sidewalks.



Figure 136. Missing sidewalk.

Common Issues Along North Olden Avenue

Crosswalks



Sidewalks



Bus Stops



Curb Cuts/Ramps



*See Appendix A for locations

Pennington Avenue

The Pennington Avenue corridor cuts across the northeast corner of Trenton's West District for .87 miles (Figure 138). It is an important corridor because it feeds into the North and Downtown Districts, and is a Trenton 250 Proposed Complete Street. The corridor begins at Parkway Avenue, which is also the border between Trenton and Ewing Township, and then runs southeast until reaching Calhoun Street. North of the study corridor, Pennington Avenue continues across Ewing Township, intersects with I-95, and enters the Borough of Pennington, where it is renamed Main Street. South of the study area, Pennington continues for .3 miles before ending at the Trenton Battle Monument.

The corridor is mostly residential, although there are some commercial properties, especially towards the southern end. Civic uses along the route include the Courtney Temple of God, Union Baptist Church, and Monument Elementary School.

New Jersey Transit Route 624 (previously 602) operates along the entire length of the corridor, and Route 607 runs along the southern half. Route 624 operates from the Borough of Pennington to East Trenton, via the Trenton Transit Center every 70 minutes on weekdays and every 2 hours on Saturdays. Route 607 operates from Ewing Township to Hamilton through downtown Trenton every 30 minutes on weekdays and every 90 minutes on weekends.

The roadway generally consists of one travel lane in each direction, with a 25 mph speed limit. The roadway is mostly 40-foot wide, with a section that is 30-foot wide (Figure 137). Pennington Avenue is not a highly trafficked corridor, with an annual average daily traffic volume of 7,875 recorded in 2015 at the northern end of the study area, and 10,942 counted in the center of the study area. Pennington Avenue generally has the right of way over intersecting streets, except at the signal-controlled intersections with Parkway Avenue, Prospect Street, and Calhoun Street.

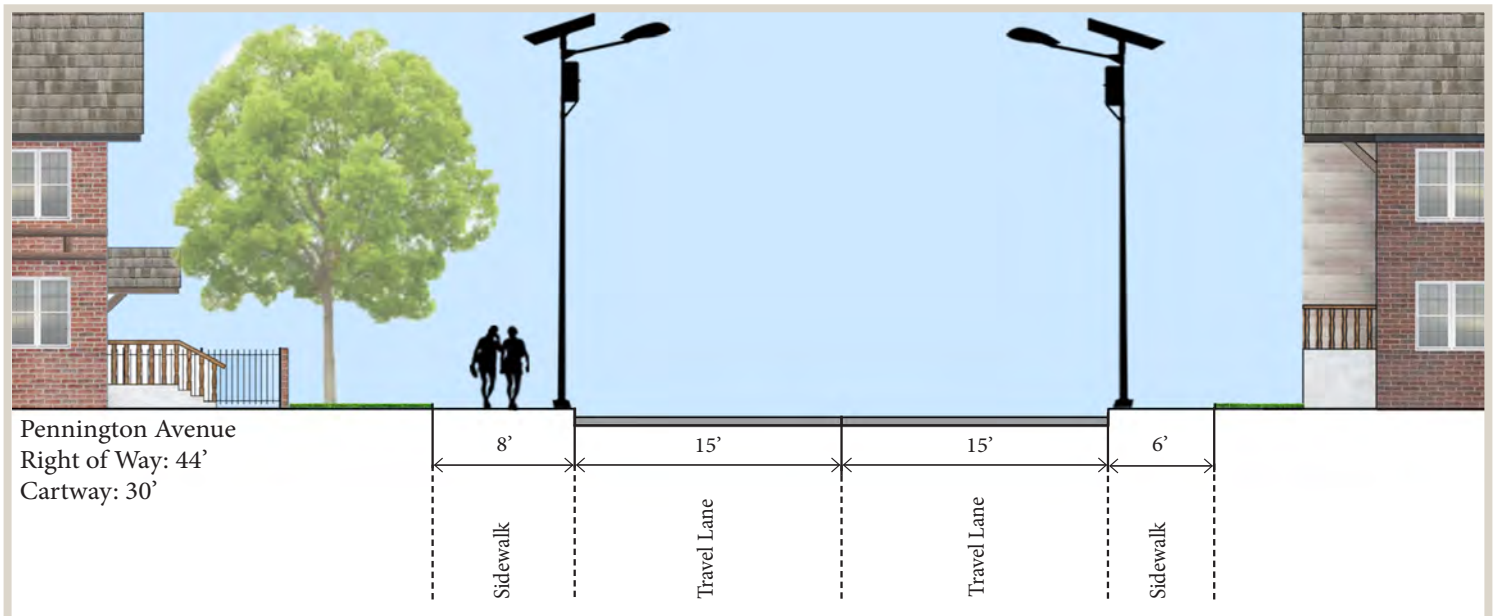


Figure 137. Typical Pennington Avenue Section.

Corridor Summary

Sidewalks

Sidewalks along Pennington Avenue are generally five-foot wide with a 1-2 foot planting strip. Many sections are cracked, overgrown with shrubbery, or buckled around tree roots. The sidewalks are in noticeably better condition along the water retention facility and in front of the commercial center by Independence Lane. Throughout the corridor, there are both residential and commercial driveways that create gaps or slopes along the sidewalk.

Intersections and Crosswalks

There is not a single marked crosswalk across Pennington Avenue outside of the signalized intersections and the crosswalks at the signalized intersections are all badly faded. The intersection of Pennington Avenue and Parkway Avenue is notable because it is a signalized intersection with no pedestrian infrastructure at all.

Each side street that intersects with Pennington Avenue has a faded or non-existent crosswalk. Additionally, almost none of the curb ramps are ADA-compliant, with some intersections lacking curb ramps of any kind. Pedestrian signage is also lacking along the corridor and overhead lighting is inadequate.

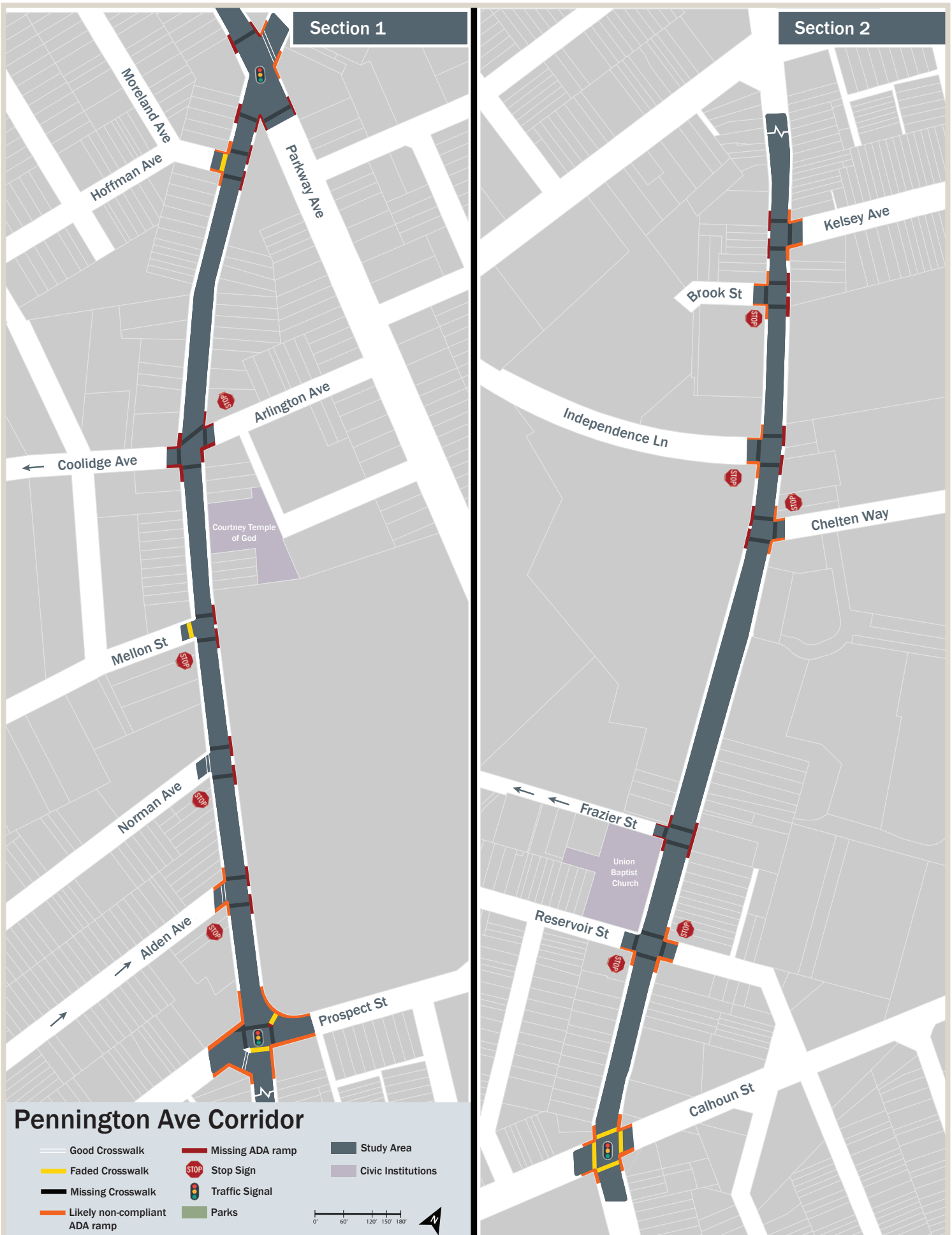


Figure 138. Map of Pennington Avenue Corridor.

Safety

The lack of marked crosswalks across Pennington Avenue creates a safety hazard. Additionally, the only pedestrian-scale lighting on the corridor is located in front of the Patriot Village Apartments, while the rest of the corridor has inadequate lighting. While there aren't many vacant properties on this corridor, there are few shops or attractions to draw pedestrians. There are no bicycle facilities along this corridor.

Comfort and Appeal

Little litter was observed throughout this corridor, and there are few vacant properties. However, the corridor is not particularly attractive, with few mature street trees. The exception is in front of the Patriot Village Apartments, which has a wide sidewalk, attractive trees, and seating. The only other seating along this corridor is found across the street, for a bus stop serving a commercial center.

Detailed Conditions Report

Parkway Avenue to Prospect Street

Pennington Avenue and Parkway Avenue meet at an angle, resulting in a wide intersection controlled by a traffic signal. North of the intersection, Pennington Avenue is 44-feet wide and has four lanes of travel. South of the intersection, Pennington Avenue is 40-feet wide with two lanes. There is no signage to indicate that there is only one receiving lane and a merge is required in the intersection. For northbound traffic, Pennington Avenue has a wide right-turn lane separated from the through lane by a painted traffic island. The hatch lines in this island are painted yellow, although they should

be white since they divide traffic continuing in the same direction. Parkway Avenue is also striped as two lanes in each direction, but only one lane on the receiving side. Unlike Pennington Avenue, there is a much more gradual merging area, although there is also no signage about this merge.

The traffic signals do not have pedestrian signal heads in any direction. Only one crosswalk, on the north leg, is marked with parallel lines. This crosswalk has curb ramps, but they are not ADA-compliant. None of the other corners have any form of curb ramps. There are two overhead cobra streetlights at the intersection. There is a pedestrian crossing sign in the northbound direction, along with directional signage for vehicles. At the time of the audit, a crossing guard was posted at this intersection.

Three of the corners have large parking lots with retail set back from the roadway. Most of the sidewalk space in front of these parcels is built with continuous driveway access and the sidewalk is sloped and cracked (Figure 139). There is grass and weeds growing in the sidewalk cracks. New Jersey Transit stops are located on the south side of the intersection. The southbound stop is located along a decent sidewalk in front of a small restaurant. There is a trash can but no shelter or bench. A 25 mph sign is useful for traffic, but may block some access to the bus. The northbound stop is located next to a small section of sidewalk and a driveway. While passengers can wait on the sidewalk, the stopped bus will block the driveway. There are no amenities for passengers.

South of the bus stops, Moreland Avenue intersects from the west at a stop sign. There is a marked crosswalk across this small roadway. The corners have attempts at diagonal curb ramps, but there is a very large gap between the bottom of the concrete ramp and the asphalt, making them inaccessible (Figure 140).



Figure 139. Continuous driveway access across sidewalk.



Figure 140. Large gap between bottom of ramp and roadway.



Figure 141. Overgrown plants blocking sidewalk.



Figure 142. Roadway promotes lower vehicular speeds.

Continuing south, both sides of the street have residential duplex units. The sidewalk conditions vary from property to property and the design of the sidewalk is very inconsistent. In front of some properties, the sidewalk is set back with a planting strip. In other sections, it is next to the curb. Along with the poor pavement conditions and uplifted sections, plants have been allowed to cover much of the sidewalk space (Figure 141). However, there are no street trees in the planting strip. There is no centerline striping in the roadway, which gives the corridor a lower-speed feel (Figure 142).

A tenth of a mile to the south, Pennington Avenue intersects with Arlington Avenue on the east side and Coolidge Avenue on the west side at an offset intersection. There are no marked crosswalks in any direction. On the Arlington Avenue side, there are no curb ramps. There are two diagonal curb ramps on the west side that are ADA compliant except for large amounts of gravel at the base of the ramps. Sidewalk conditions improve south of the intersection, but are still inconsistent from property to property. Vehicles parked in residential driveways were observed blocking the sidewalk (Figure 143). The sidewalk is in excellent condition in front of the Courtney Temple.

Mellon Street terminates at Pennington Avenue from the west. The stop bar and the crosswalk on Mellon Street are badly faded and barely visible. There are two curb ramps on Mellon Street oriented in a diagonal fashion towards the center of the intersection. They are ADA-compliant

aside from gravel at the base. The east side of Pennington Avenue contains a large water storage facility. There is a stone and metal fence adjacent to the sidewalk to keep people out. The sidewalk itself is in excellent condition, but the lack of spacing between the sidewalk and the fence narrows the usable width. An NJ Transit bus stop sits across from Mellon Street. The sidewalk is wide and in good condition, but there is no shelter or other amenities.

The sidewalks on the west side are narrower, with frequent cracks and weeds. H.M. Royal, a chemicals distribution company, has a loading dock that fronts Pennington. The loading area is not long enough, resulting in trucks completely blocking the sidewalk.

Just south of that facility is Norman Avenue. As with Mellon Street, the intersection has two curb ramps only on the west side, with a faded crosswalk and stop bar. Entering Norman Avenue, the sidewalk is obstructed by overgrown bushes. Alden Avenue, the next street, is very similar, except that it runs one-way into Pennington. South of Alden Avenue, the sidewalk conditions deteriorate in front of a vacant parcel (Figure 144).

Prospect Street to Cheltenham Way

Pennington Avenue intersects with Prospect Street at a signalized intersection. The roadways intersect at an angle, creating a wide intersection. There are right-turn slip lanes with free movement from Prospect Street



Figure 143. Vehicles frequently park blocking the sidewalks.



Figure 144. Overgrown vegetation by vacant parcel.



Figure 145. Older, text-based pedestrian signals.



Figure 146. Missing ramps on pedestrian island.

onto Pennington Avenue in both directions. Automatic pedestrian signals are placed in three of the corners, with a mixture of older text based signals and newer models (Figure 145). The northeast corner does not have pedestrian signals and the amount of time given to cross in the other direction did not appear to be adequate.

The northeast and northwest corners have curb ramps, but they are not ADA compliant. There are no ramps in the traffic island on the northeast corner (Figure 146). The southwest corner has a single curb ramp, and the traffic island has curb ramps but only in one direction. The southeast corner also has just a single non-compliant curb ramp. The crosswalks were mostly faded, but had originally been painted in all directions. The amount of overhead lighting at the intersection does not appear to be adequate.

There is a northbound NJ Transit bus stop on the northeast corner. Although the sidewalk is in good condition, there is a planting strip, which makes it inaccessible. A westbound bus stop is located on the northeast corner on Prospect Street where the sidewalk is in good condition. The eastbound bus stop is placed in front of a driveway, where the sidewalk is cracked and sloped.

The southbound bus stop on Pennington Avenue is by a sidewalk in very poor condition. None of the bus stops have any amenities such as a shelter or bench.

South of the intersection, empty lots on each corner are being used for parking, including some vehicles that are blocking portions of the crosswalk. South of these lots, the sidewalk continues in poor condition due to cracks and sections uplifted by trees (Figure 147). Kelsey Avenue terminates at Pennington Avenue from the east. There are two curb ramps on the east side, but they are likely non-compliant. There are no marked crosswalks in any direction and the quality of the asphalt is poor (Figure 148). There is a small corner shop on the northeast corner of the intersection. A northbound bus stop is located just past the intersection, at a residential driveway.

One hundred and twenty feet to the south, Brook Street sits on the west side. This minor street acts as an access to the rear of a residential apartment building. There are again two diagonal curb ramps to cross the minor roadway, but nothing to cross Pennington Avenue. The curb ramps are not compliant, and there are no painted crosswalks. The southbound NJ Transit bus stop is south of this intersection, next to a YMCA building. The



Figure 147. Roots have lifted the sidewalk into stairs.



Figure 148. Asphalt near crosswalk in poor condition.



Figure 149. Haphazard utility pole work.



Figure 150. Excellent sidewalk conditions.

sidewalk is in decent condition, aside from grass growing between cracks. Sidewalk conditions are better on the east side, in front of the Hibbert Group office building, aside from a metal panel on the sidewalk, which is presumably only there temporarily, and the area where the sidewalk crosses the driveway entrance to the complex.

On the west side of Pennington Avenue, the character of the built environment suddenly changes. Independence Lane serves as the entrance to a commercial strip shopping center that includes a supermarket, among other stores. The lane is attractive, with a well-maintained center median. However, the curb ramps are not compliant, and there is no painted crosswalk in any direction. Additionally, the stop bar and left turn lane striping on Independence Lane is badly faded. In front of the complex, the sidewalk is in good shape, except where a utility pole was broken and is being secured to another pole in a haphazard manner (Figure 149).

Chelten Way to Calhoun Street

On the east side, Chelten Way terminates at Pennington Avenue. As with the previous intersections, there are non-compliant curb ramps on the side of the intersecting

street, and no painted crosswalks in any direction. An overhead light is located on the broken utility pole across the street. South of Chelten Way, the conditions on the sidewalk drastically improve on the east side of Pennington Avenue. There is a wider sidewalk in excellent condition, a planting strip with mature trees, and historic-style streetlights (Figure 150). Across the street, an NJ Transit bus stop is located along an expanded brick sidewalk, with two benches and a trash can (Figure 151). There is also a curb ramp, which can assist wheelchair customers in boarding a bus with a rear lift. A bicycle rack is located a few feet away.

Pennington Avenue narrows slightly where the driveway for the commercial center is located. There is a center median to block left turns both into and out of the center. A curb cut was built into the median to allow pedestrian crossing, even though no crosswalk was painted and the curb ramps are not compliant. However, there is a pedestrian crossing sign visible to northbound traffic. Just south of the median, the sidewalk on the west side is protected by bollards (Figure 152).

There is an NJ Transit bus stop in the northbound direction located across the street from the commercial

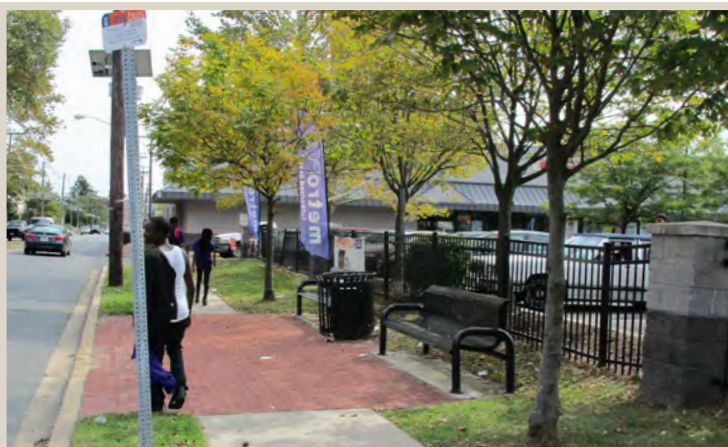


Figure 151. Bus stop with pedestrian amenities.



Figure 152. Sidewalk protected by bollards.



Figure 153. Bus stop amenities located away from the bus stop.

driveway. The sidewalk by the bus stop is wide and in excellent condition. Oddly, just south of this area, there are benches and a curb cut where transit riders would expect to wait (Figure 153). It is unclear if bus drivers stop by the sign or stop where the benches were built.

South of the building, there is a pseudo-intersection created by the driveway to the residential building on the east side, and a driveway to the rear of the commercial center on the west side. On the east side, the sidewalk continues across the driveway. On the west side, there are non-compliant curb ramps and an unmarked crosswalk. The historic-style sidewalk lighting does not continue beyond this corner.

Frazier Street begins on the west side of Pennington Avenue, running in one direction. There are no curb ramps or crosswalks in any direction. The overhead cobra-style streetlights are oriented away from the roadway and onto the parking areas of nearby properties. The property on the east side is a continuous parking lot for a small building. Although the sidewalk is in decent shape, it is likely frequently blocked by parked vehicles.

South of this intersection, the sidewalk is in excellent condition in front of the Union Baptist Church on the west side. On the east side, the sidewalk is in very poor condition and switches frequently between concrete and



Figure 154. Sidewalk in poor condition.

brick (Figure 154). A southbound bus stop is located by the church, where the sidewalk is in excellent shape. However, if the bus were to stop right at the sign, the front door would be blocked by a USPS mailbox.

Reservoir Street meets Pennington Avenue at a standard four-way intersection, where Pennington Avenue has the right of way. Only the northwest corner has a modern curb ramp, although it is oriented diagonally into the intersection (Figure 155). The other three corners have curb ramps, but they are not ADA-compliant. There is a faded crosswalk on the western leg, but the other crossings are unmarked. There is only a single overhead light and there is no crosswalk signage. The northbound bus stop is south of the intersection, adjacent to a sidewalk in good condition. The sidewalk along Reservoir Street, continuing east, is in very poor shape (Figure 156).

Heading south, the sidewalks are in good condition, except for excessive slope at some driveways. A pedestrian crosswalk sign is posted in the southbound direction, prior to the last intersection with Calhoun Street. On the west side, there is a gas station at the corner that results in most of the sidewalk being part of a driveway. Pennington Avenue intersects with Calhoun Street at an intersection controlled by a traffic signal. This intersection is covered in detail in the Calhoun Street section of the report.



Figure 155. Non-compliant ADA ramp is oriented diagonally into the intersection.



Figure 156. Sidewalk in poor condition.

Common Issues Along Pennington Avenue

Crosswalks



Sidewalks



Bus Stops



Curb Cuts/Ramps



*See Appendix A for locations

South Broad Street

South Broad Street, also known as Route 206, cuts across Trenton’s South District for 1.55 miles from Greenwood Avenue to Lalor Street (Figure 158). It is a bustling avenue, with a strong mixture of commercial and residential properties. Aside from being a Trenton 250 Potential Complete Street, it is an important corridor as it represents one of the easiest access points into downtown Trenton outside of Route 29. West of the study area, South Broad Street continues across the downtown area until becoming Pennington Avenue at the Trenton Battle Monument. East of the study area, the corridor continues into Hamilton Township, where it crosses over I-295, provides access to 195 at a roundabout, passes under 195, and then terminates 3.5 miles away, east of the New Jersey Turnpike.

Most of the commercial properties along the route are auto-oriented developments, set back with large parking lots. However, there are other destinations, primarily the CURE Insurance Arena and the Mercer County Administration Building Complex along the western edge of the corridor.

The roadway alternates between two and four lanes, although it maintains a 25 mph speed limit with Trenton. For most of the corridor the roadway is 40-feet wide, with one lane in each direction and parking (Figure 157). However, one section widens to 60-feet of pavement, with the extra space used for additional lanes (Figure 173). Even though the roadway is quite broad, the annual average daily traffic volume found in 2015 was just 13,157, decreasing to 6,071 upon entering downtown. There are frequent intersections along the corridor, of which nine are signalized.

New Jersey Transit bus routes 409, 603, and 613 operate throughout the length of the corridor. Route 409 offers service from Trenton to Philadelphia, via Bordentown, Willingboro, and Camden. Bus routes 603 and 613 run from the Mercer Mall in Lawrence Township, across Trenton, and then east through either Hamilton Square or Yardville to the Hamilton Marketplace.

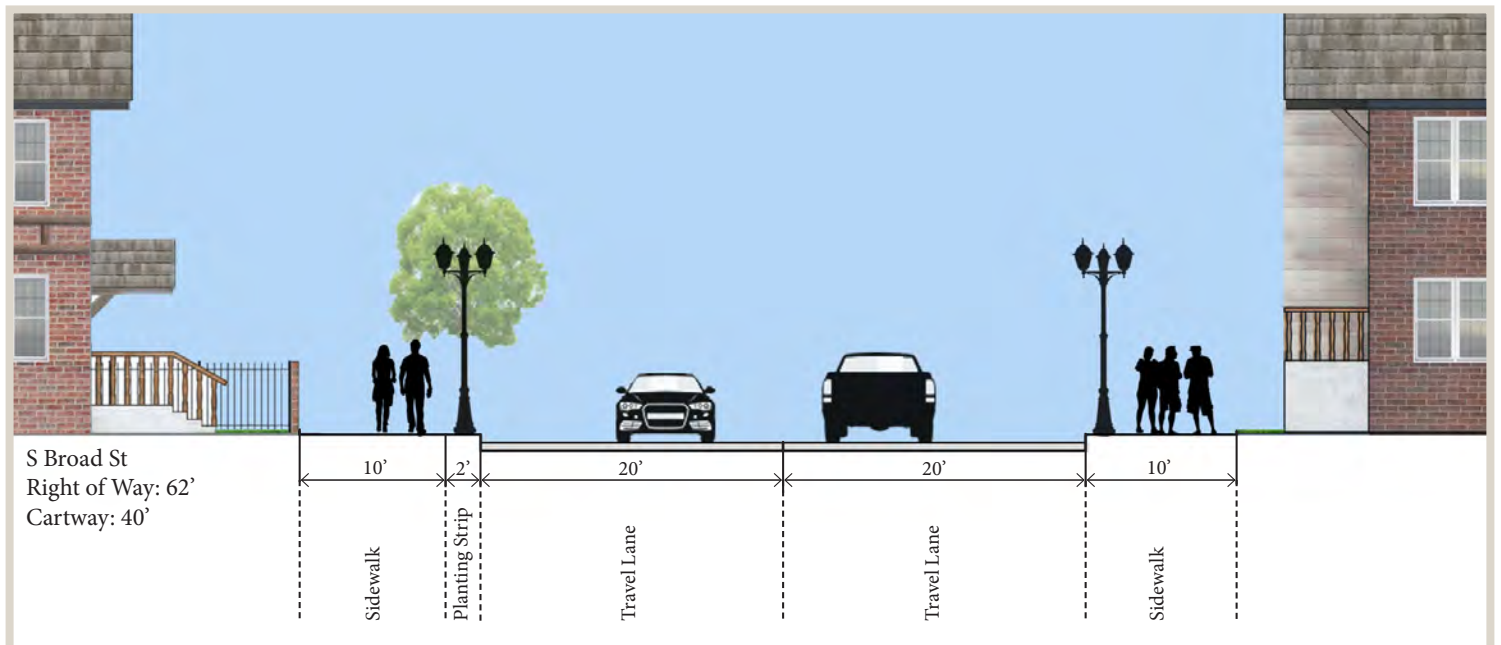


Figure 157. Typical South Broad Street section for western side of corridor.

Corridor Summary

Sidewalks

Compared to the other corridors, the sidewalks along South Broad Street are generally in good shape. The exception is along the commercial corridor from Dye Street to Liberty Street, where there are frequent cracks caused by tree roots and the sidewalk is narrowed to three-feet by steps leading into buildings. While this

section is attractive, it is in need of repair. West of the commercial district, there are some concerns with tree branches or overgrown bushes narrowing the sidewalk.

Intersections and Crosswalks

There are very few opportunities to cross South Broad Street in a marked crosswalk outside of the signalized intersections. The one notable exception is a very well signed crosswalk directly in front of the Mercer County Administration building. Curb ramps, pedestrian signals,

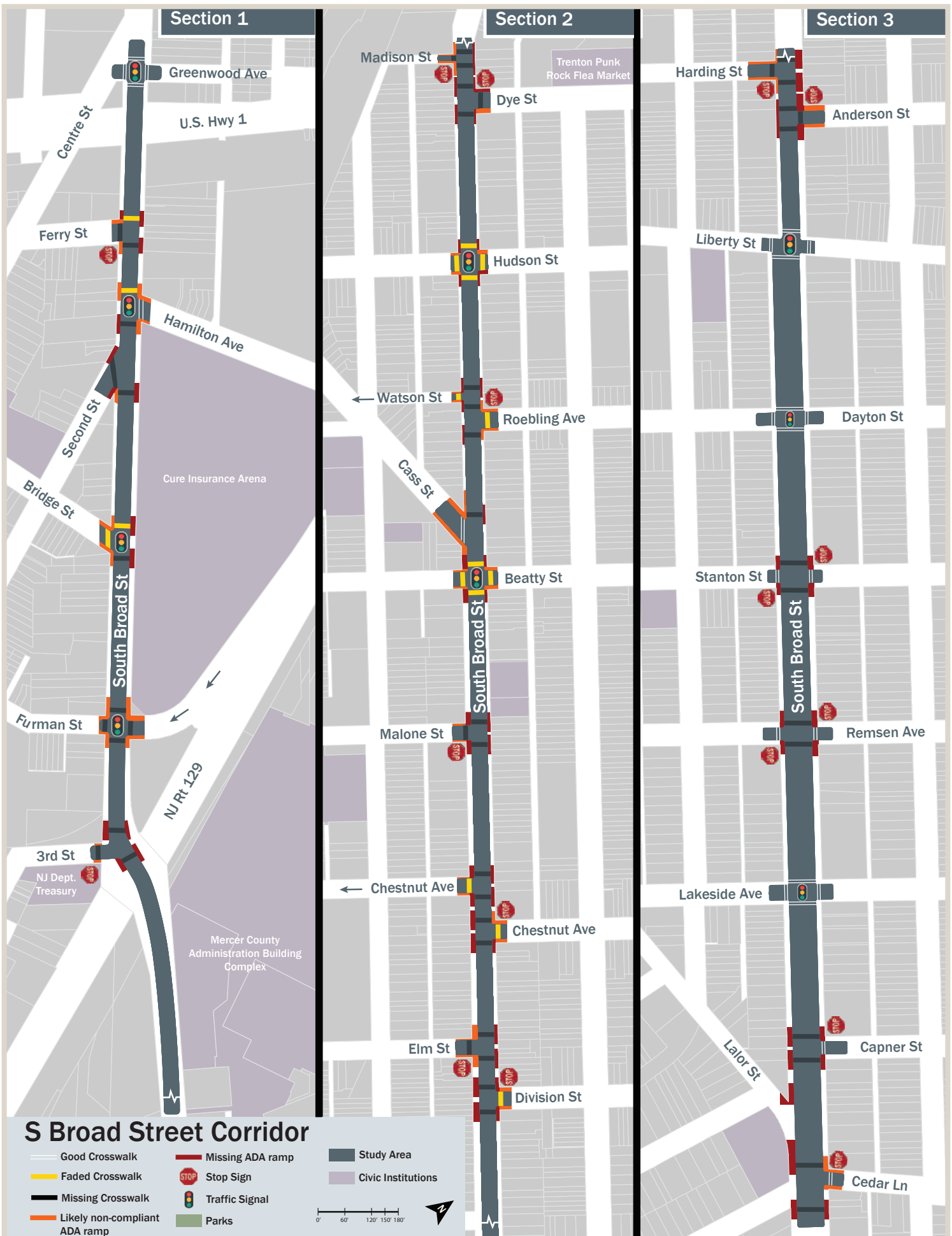


Figure 158. Map of South Broad Street Corridor.

and crosswalk striping are inconsistent throughout the corridor. Although there are a few intersections with brand new ramps, there are others with no ramps at all.

Safety

The entire corridor is posted at 25 mph, but this speed limit is not matched by the design. This is especially true on the eastern end, where the roadway is 60-feet across, encouraging much faster speeds. There are very few signs related to pedestrians, and no signs related to bicycles.

Street lighting is frequent throughout most of the corridor, with lights aimed at both the roadway and the sidewalk. There is a healthy mixture of commercial and residential properties attracting pedestrians and drivers to the area. Unlike the other corridors, almost every single building is in use, and there are few vacant lots.

There is no dedicated bicycle infrastructure or signage along this corridor.

Comfort and Appeal

Overall, South Broad Street is an attractive corridor, especially where it is 40-feet across with densely built commercial properties and large, mature trees. Many sections of sidewalk have a brick trim, and almost the entire corridor has attractive historic-style street lighting. While not every bus stop has a shelter, there are more shelters along this corridor than any other one that was audited. Trashcans are extraordinarily plentiful along South Broad Street, with one located almost every block. However, litter was still observed on the sidewalk.

Detailed Conditions Report

Greenwood Avenue to Furman Street

South Broad Street intersects with Greenwood Avenue at a standard four-way signalized intersection, marking the entrance to Trenton's Downtown District. West of the intersection, South Broad Street has two lanes of traffic, street parking, brick sidewalks, and historic-style lights that shine on both the roadway and the sidewalk (Figure 159). There are also additional lights on the sidewalk that appear to be lit with gas (Figure 160). East of the intersection, South Broad Street has four lanes of travel with no street parking and standard concrete sidewalks. There is no signage or lane marking at the intersection to indicate that one travel lane suddenly ends. To the north, Greenwood Avenue is a minor street with two lanes of travel and street parking. To the south, Greenwood Avenue is actually Centre Street, which terminates at this intersection.

There are well marked parallel crosswalks in all directions. The north corner has two ADA compliant ramps that are oriented into the crosswalk. The east corner has a single curb ramp oriented only across Greenwood Avenue. Likewise, the southern corner only has a single curb ramp oriented across Greenwood Avenue. The west corner has two brick curb ramps that are properly oriented, but are not fully ADA compliant.

Pedestrian signal heads exist in all directions, although



Figure 159. Street light oriented for cars and pedestrians.



Figure 160. Additional pedestrian lighting.



Figure 161. Tripping hazard along the sidewalk.

they are of the older text-based style, aside from the western corner that has been modernized. Greenwood Avenue has pavement sensors to activate the traffic signal for vehicles, and so the pedestrian signals require buttons. However, there is only one button per corner, so it is not clear to pedestrians as to which direction it is for.

NJ Transit bus stops are located on the far side of the intersection on South Broad Street. On the western side, the bus stop is located next to a brick sidewalk, and has a large shelter with a bench. The bus stop on the east side is on a concrete sidewalk with a brick trim, and also has a shelter and a light.

To the east of this intersection, South Broad Street passes over Route 1 and the Northeast Corridor Railroad. Sidewalks are in good condition, and of an adequate size, although the highway does create a lot of noise. Additionally, there is a support for a missing sign or light that is a tripping hazard (Figure 161). South of the bridge, there are more historic-style streetlights, although they are a different design than the ones found downtown. The character of the corridor changes quickly, as the south side has a vacant building, and the north side is a large parking lot.

Ferry Street terminates on South Broad Street from the south at a stop sign. The west corner has a single ADA-compliant curb ramp oriented diagonally into the intersection. The south corner has a single ADA-compliant ramp oriented directly across Ferry Street, however there is no painted crosswalk. There are indications that at no point a crosswalk existed with a brick pattern. On the western leg, there is half a marked crosswalk across Broad Street as the striping does not continue past the centerline.

The sidewalk on the north side is in excellent condition, adjacent to a new building hosting the New Jersey Realtors. The concrete sidewalk has a brick trim, and is lit by both a historic-style streetlight and exterior lighting on the new building. On the south side, the sidewalk is in good condition, aside from grass growing between the



Figure 162. Non-operational pedestrian signal.

concrete blocks and an empty tree well. There are bus stops on both sides of the street without any pedestrian amenities.

Hamilton Avenue terminates at South Broad Street from the north at a signalized intersection. Striping throughout the intersection is in poor condition. Westbound traffic on South Broad Street has a left turn signal, but no lane striping. A crosswalk is marked across Hamilton Avenue, but only partially across Broad Street on the eastern leg. There are no curb ramps or a marked crosswalk on the eastern leg, but there are pedestrian signals for all crossings. However, one of the signal heads is not operating (Figure 162). Only one of the three curb ramps, the one adjacent to the new building, is ADA-compliant.

Past the intersection, the CURE Insurance Center (previously Sun National Bank Arena) occupies the entire block on the north side. The sidewalk is a very generous 25-foot wide and in excellent condition, although there is an obvious lack of street trees. Across the street, one-way Second Street begins at an angle. Even though it is one-way, the entrance is extremely wide, creating a 100-foot crosswalk that is not marked and does not have a curb ramp on the eastern side. Past this intersection, the south side of the street has tree wells, but most are empty. Prior to the next intersection, there is a traffic signal to allow emergency vehicles to exit a firehouse that is now used by Trenton Police. Although the stop bar is missing, there is a “stop here on red” sign.

Bridge Street intersects with South Broad Street at a standard signalized intersection, where the north side is access to the parking lot for the arena. Both directions of traffic on South Broad Street have left turn signals, but the road striping has faded to the point that it is impossible to tell that there are two lanes. Crosswalks are striped on the northern, western, and southern legs. At some point, they featured a brick-paving overlay, but that paint has almost disappeared, leaving standard parallel lights. The eastern leg does not have a painted crosswalk or pedestrian signals, while the other three corners have modern signal



Figure 163. Missing sidewalks.



Figure 164. High quality crosswalk with bollards to shorten crosswalk length.

heads. None of the ramps are ADA-compliant.

East of the intersection, there are two commercial buildings with driveways on the south side. On the north side, there is a bus stop that does not have a shelter, but the sidewalk is in good shape. Further east, the sidewalk continues to be wider and in better condition on the north side, although the south side has retail. Street parking is allowed on the south side, but there is no indication that the travel lane has ended.

Furman Street and South Broad Street intersect at a standard four-way signalized intersection. To the north, Furman Street is an off-ramp to Route 129, so there are no sidewalks (Figure 163). To the south, it is a narrow and poorly maintained one-way road. There are no pedestrian signals or painted crosswalks in any direction at this intersection. Each corner has a single diagonal curb ramp, but none are ADA-compliant. Overhead lighting is attached to the traffic signals. There are trash cans located on both the eastern and western corners, but litter was still observed on the sidewalk.

After the intersection, a Taco Bell with drive-thru is on the north side and the sidewalk is in good condition. The driveway entrance has a concrete sidewalk across it, but no truncated domes. On the south side, there is an abandoned property and a gas station and the sidewalk has many cracks. Just past the gas station, there is an eastbound bus stop with a shelter. The sidewalk is in good condition, but large quantities of litter were observed. At this point, the roadway is striped with one lane in each direction, although it is not clear if parking is allowed. There continues to be a mixture of historic-style streetlights and highway style lighting.

Third Street terminates at South Broad Street from the south, just prior to a bridge over Route 129. This is a minor roadway with a stop sign. There is a badly faded crosswalk,

and the asphalt conditions are very poor. There are non-compliant ramps to cross Third Street, but no crossing provided over South Broad Street. After the intersection, the sidewalks continue in excellent condition on the bridge over the highway.

At the end of the bridge, there is a railroad crossing for the River Line. There are flashing lights and automated crossing gates, including smaller gates for the sidewalks. The tracks are at an angle, which may create a difficulty when crossing in a wheelchair. Immediately past the tracks, Elmer Street ends on the north side. It has a marked crosswalk, but the curb ramps are not ADA compliant. Additionally, there is not enough room to wait between Elmer Street and the train tracks if the gates start going down.

There are bus stops in both directions after Elmer Street, although only the eastbound stop has a shelter. The sidewalk is in excellent condition on both sides. There is a midblock crossing connecting the Mercer County Administration Building and its parking lot across South Broad Street. This crosswalk features continental striping, push-activated flashing lights, ample signage, and bollards that narrow the travel way and prevent illegal parking (Figure 164).

Past the parking lot, tiny Madison Street runs one-way from the south. The curb ramps are not compliant and there is no marked crosswalk. After this intersection, the sidewalk on the south side narrows to just four-feet. Although the sidewalk is wider on the north side, it is in very poor shape.

Dye Street to Beatty Street

Dye Street is only 110 feet to the east of Madison Street. It is much wider and supports two-way traffic. There are no crosswalks painted in any direction, and only a single non-compliant curb ramp exists on the eastern corner. There

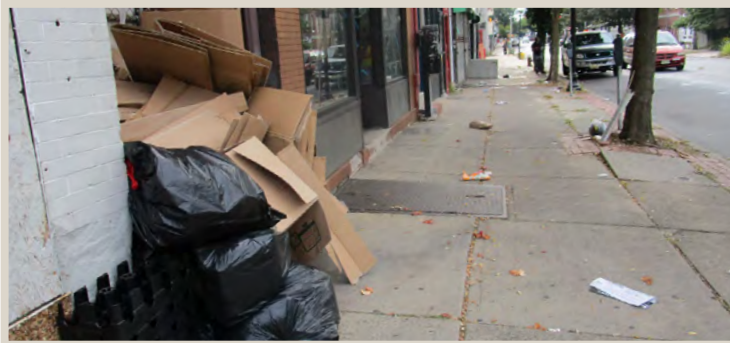


Figure 165. Despite trash cans, litter is found along sidewalk.

is a different style of historic streetlights in this section, although they are very frequent. The north side continues to have a wider sidewalk than the south side, but both are in average condition. Although there is a trash can, litter was observed (Figure 165).

South Broad Street develops the look of a local downtown street in this section. There is one lane in each direction, with street parking, and no centerline. Retail lines both sides of the street, although many of the buildings are in poor condition. The sidewalk has a brick trim, but many locations are cracked or raised (Figure 166). Trashcans are frequent, but litter is everywhere.

Hudson Street intersects with South Broad Street at a standard signalized intersection. There are pedestrian signal heads of the old text-based variety on each corner. Crosswalks are badly faded in all directions, and barely visible across South Broad Street. Each corner has a single curb ramp, but none are compliant. Bus stops are located on the near side of the intersection on each side. While the sidewalk is wide, there is a lot of gravel and debris in the way. There is also clutter in the form of newspaper boxes, trees, and streetlights blocking access to the bus. There is a trash can by the westbound stop.

The sidewalk continues in the same manner east of the intersection, although it is the same 5-foot width on each side. There are mature trees, but most tree wells are empty. In a few spots, the sidewalk narrows due to steps from buildings (Figure 167). Watson Street begins



Figure 167. Sidewalk narrows due to unmaintained tree well and stairs.



Figure 166. Raised sidewalk causes a tripping hazard.

on the south side, running one-way. There are curb ramps with truncated domes, but the slope is not compliant, and there is a single faded crosswalk. Sixty feet away, Roebling Avenue is on the north side. Instead of having painted crosswalk lines, this intersection has a crosswalk outlined in brick (Figure 168). There are non-compliant curb ramps on either side and no crosswalk is provided for crossing South Broad Street.

Beatty Street to Liberty Street

Cass Street meets South Broad Street from the south just before Beatty Street, but the intersections are signalized together with eight separate traffic signals. Cass Street is at an angle, resulting in a 76-foot crosswalk. The crosswalk and stop bars are all brightly painted, and there are modern pedestrian signals. There are curb ramps to cross Cass Street, but they are not compliant. There are no overhead streetlights at this intersection.

At Beatty Street, a second set of traffic signals is shielded for eastbound traffic so they are only visible after passing Cass Street. The Beatty Street intersection is standard, with painted crosswalks in all directions. Each corner has a single curb ramp, and none are compliant. All four corners have modern pedestrian signals. There is a single overhead streetlight on the western corner. East of the intersection, the overhead lighting changes to the style found in the downtown district. Bus stops for both directions are found east of the intersection. They are both located by an adequate sidewalk. There are no shelters,



Figure 168. Crosswalk outlined in brick.



Figure 169. Steep ramp with litter.

but there are trash cans. There is a bicycle rack on the north side, outside the Mercer County Catholic Youth Organization building.

The character of the street remains the same, with buildings built to the lot line on both sides of the street. There is less retail activity, but also a corresponding decrease in litter. More mature trees improve the look of the street, and create shade. Steps from the buildings narrow the sidewalk, but give the corridor charm.

Malone Street terminates from the south, and has curb ramps that are not compliant and no marked crosswalk. Just past the intersection, there are bicycle racks on the sidewalk. Further east, Chestnut Avenue begins on the south side running one-way to the south. There is a marked crosswalk and non-compliant curb ramp. One hundred and twenty feet to the east, Chestnut Avenue appears on the north side, running two-ways. As with the previous intersection, there is a single marked crosswalk and non-compliant curb ramps. An eastbound bus stop is on the south side, adjacent to a suitable sidewalk, but cars were observed illegally parked at the stop. There is no crosswalk across Broad Street.

The next two intersections, Elm Street on the south side, and Division Street on the north side repeat the pattern with non-compliant curb ramps. However, in both cases, the single crosswalk is severely faded. There are bus stops in both directions next to suitable sidewalks, but lacking a shelter or bench. As with the previous bus stop, cars were observed parked too close to the stop.

Harding Street lies on the south side of South Broad Street, with Anderson Street on the north side 120 feet to the east. Once again, there are non-compliant curb ramps and badly faded crosswalks with no crossing infrastructure on Broad Street. However, the slope of the ramp on Anderson Street was particularly steep, and had a lot of litter at the base (Figure 169). Starting at Anderson Street, the overhead streetlights switch from



Figure 170. Misaligned pedestrian signal.

historic-style, to standard cobra fixtures.

Liberty Street to Lalor Street

The character of the corridor changes drastically at Liberty Street, which is a signalized intersection. On the west side of the intersection, South Broad Street is 40-feet wide, with two travel lanes. On the east side, it is 60-feet wide, with four travel lanes. The transition is very sudden: traffic moving west is channelized into one lane through the use of a painted median, but there is no signage about a lane merge. Vehicles were observed still forming two lanes at the intersection, even though there is only one lane on the other side. Traffic moving east is greeted with a much wider roadway, and a “no turn on red” sign, but no speed limit sign.

Crosswalks are very well marked, and all four corners have modern ADA-compliant curb ramps. Additionally, there are modern pedestrian signals in all directions. An eastbound bus stop sits before the intersection, next to a Wells Fargo bank. The stop has a shelter, bench, and trash can, and is very well shaded by a mature tree. The westbound bus stop is a block away. Sidewalks remain in good condition on both sides.

The next intersection, Dayton Street, is also signalized. There are new curb ramps in all directions, although they are all oriented diagonally into the intersection. Crosswalks are all freshly marked, and South Broad Street has arrows in each lane showing the allowed turning movements, which includes a left-turn lane in either direction. The southern corners have modern pedestrian signal heads, while the northern corners have older text-based pedestrian signals. The pedestrian signal on the eastern corner is misaligned (Figure 170).

To the east, the center of the roadway alternates between a hatched median and a left turn lane at the intersections. Parking continues to be allowed on both sides, and the sidewalks maintain around five feet of passable space.



Figure 171. Water pooling at bottom of ramp.

Lighting is provided by overhead cobra fixtures. The dense construction of the previous blocks gives way to more suburban-style development, including a Popeye’s with a drive-thru. Although the speed limit is still 25 mph, vehicles were observed going faster.

Stanton Street and Remsen Avenue both intersect with South Broad Street at a standard four-way intersection where South Broad Street has the right of way. This means that traffic crossing Broad Street or turning onto it have to navigate five lanes of traffic that do not stop. For pedestrians, there are new ADA-compliant curb ramps and painted crosswalks to cross Stanton Street and Remsen Avenue, but no crossing provided over Broad Street. On the western corner of Stanton Street, an improperly built slope has resulted in pooled water at the base of the curb ramp (Figure 171).

East of Remsen Avenue, more developments make way for commercial properties set back from the street by a parking lot. This makes the corridor appear even wider, and encourages faster speeds.

Lakeside Avenue intersects with South Broad Street at a standard four-way signalized intersection. There are new curb ramps on every corner, all oriented correctly into



Figure 172. Overgrown bushes minimize usable sidewalk area.

the crosswalks. The crosswalks are striped with parallel lines that are in very good condition (Figure 174 on page 75). However, the intersection is lacking in pedestrian signals. There are left turn lanes for both directions on South Broad Street, but no left turn signal.

Bus stops in both directions are located west of the intersection. The westbound bus stop does not have a suitable landing area, as the sidewalk has a three-foot planting strip where the stop is. There is no shelter or bench, but there is a trash can. The eastbound bus stop does have a small concrete landing area, but the concrete is in very poor condition. There is also a trash can and newspaper box. A payphone is located across the street on the south corner.

Past the intersection, the sidewalk on the north side of the street is narrowed due to overgrown bushes (Figure 172). The sidewalk continues in decent shape after the intersection. Capner Street terminates on the north side, adjacent to an Investors Bank. The sidewalk in front of the bank is wide and in excellent shape. As with the previous intersections, the curb ramps have recently been rebuilt and are also in excellent shape. There is a crosswalk across Capner Street, but none across South Broad Street.

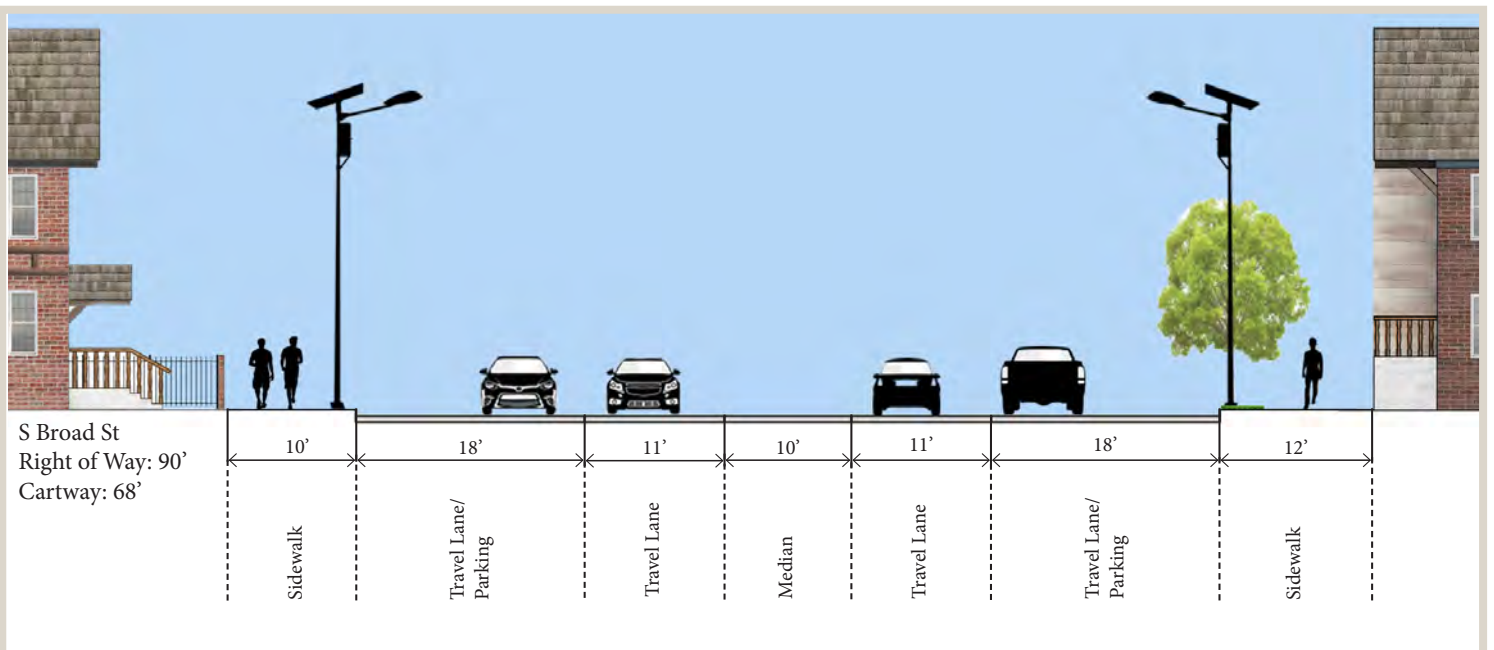


Figure 173. Typical S Broad Street Section (2).



Figure 174. Sidewalks and ramps in excellent condition.

Past Capner, the painted median on South Broad Street becomes a physical median, with brick and a planting strip. There is a break in the median so traffic from South Broad Street can turn left onto Lalor Street, but traffic from Lalor Street can only turn right after yielding. However, there is no sign prohibiting a left turn. There are no crosswalks painted in any direction at this intersection, and there are no curb ramps.

There is a bus stop on the south side just prior to Lalor

Street that has a planting strip between the curb and the sidewalk. There is no shelter, but there is a trash can. The bus stop on the north side of the street is also located adjacent to a planting strip, although there is a small concrete landing area. The signage is blocked by a tree, and there is another trash can. Vehicles were observed parking at the bus stop (Figure 175). Just east of the bus stop, a brand new utility pole has been installed in a way that completely blocks the “Welcome to Historic Trenton” sign (Figure 176).



Figure 175. Signage blocked by a tree.



Figure 176. Signage blocked by utility pole.

Common Issues Along South Broad Street

Crosswalks



Sidewalks



Signage



Curb Cuts/Ramps



*See Appendix A for locations

Recommendations

While the scope of this project included only the corridor audits and analysis, general best practices in a number of common problem areas are provided here. The following best practices highlight the most commonly witnessed challenges along the seven corridors. Each recommendation is supported by an image reflecting the challenge and an additional image highlighting an area in the city where the best practice has already been implemented. This section is intended to start a conversation regarding opportunities for improving and completing Trenton's streets while highlighting locations where the city has already excelled in such infrastructure improvements.

Complete Streets Best Practices

Crosswalks



Figure 177. A missing crosswalk at the long intersection of Brunswick Avenue and N Olden.



Figure 178. A pedestrian refuge located along S Warren Street.

Long crosswalks with faded markings create a particularly dangerous situation for pedestrians as they are more likely to get caught with a light change mid-cross and cars are less likely to see them (see Figure 177). This dangerous situation was commonly observed along each of the seven corridors audited. Highly visible crosswalks help pedestrians move safely, conveniently, and predictably across roadways. Additionally, they direct pedestrians to cross at appropriate locations where traffic controls, including traffic signals or school crossing guards, are provided. Continental crosswalks, also known as piano key crosswalks, are striped in a bar style that resembles large keys on a piano spread across the roadway. The striking visual of the continental crosswalk serves to ensure both the crosswalk's high visibility as well as its durability. If correctly aligned on the roadway, the stripes of the continental crosswalk are driven over less frequently by cars and therefore witness less fading over time.¹

Marked crosswalks should also be designed to minimize crossing distances. Curb extensions can help to narrow the roadway and decrease crossing distance by providing an extension of the sidewalk area into the parking lane of a street, thereby reducing the amount of street a pedestrian has to cross and limiting their exposure to motor vehicles. Curb extensions also help to bring pedestrians out from behind parked vehicles, increasing their visibility. On wider or multi-lane roads pedestrian refuge islands can help shorten crossing distance by providing refuge areas that are separated from the vehicle path of travel (see Figure 178). These refuge islands provide a protected spot within a crosswalk for pedestrians to wait should the light change while they are crossing the street. Refuge islands can be extremely helpful for pedestrians who walk more slowly, such as those with small children. Trenton should investigate opportunities to improve crossings by shortening pedestrian crossing distances and improving crosswalk markings throughout the study area.²

1 "New Jersey School Zone Design Guide" New Jersey Department of Transportation, 2014.

2 "New Jersey School Zone Design Guide" New Jersey Department of Transportation, 2014.

Sidewalks



Figure 179. Dangerously uneven sidewalks along Pennington Avenue.



Figure 180. Wide sidewalks in excellent condition in front of the Martin Luther King Jr. School on Brunswick Avenue.

Poor sidewalk conditions were the most common issue noted along the assessed corridors (Figure 179). Cracked, heaved, and broken sidewalks make the city less accessible, especially for parents with strollers, residents with visual impairments, and those who use wheelchairs, canes, or walkers. To encourage more walking, communities must have ADA compliant sidewalks that are level, continuous, free from cracks, and lack obstructions such as signs, garbage cans, cars, and overgrown shrubbery and trees.

Sidewalk width and construction materials are important considerations for improving sidewalk usability. Sidewalks can be surfaced with a variety of materials to accommodate varying budgets and contexts. Safe sidewalk surfaces should be firm, stable, and slip-resistant. Although brick pavers may appeal to some, they can require more maintenance, become slippery in inclement weather, and create tripping hazards. Pavers can also pose a problem to pedestrians in wheelchairs if they settle unevenly or become lifted. Concrete sidewalks last longer and require less maintenance. The Federal Highway Administration (FHWA) recommends a sidewalk width of five feet for two adult pedestrians to comfortably walk side-by-side; at a minimum, all sidewalks should be constructed to this width. In areas with heavier pedestrian traffic such as near parks, schools and centers of commerce, sidewalks should be eight to ten feet wide (Figure 180).³ All streetlights, utility poles, sign posts, mail boxes, benches, and other street furniture should be located out of pedestrian pathway along the sidewalk. When not possible, these obstructions should be located consistently so a clear travel zone is provided for pedestrians with vision impairments and other disabilities.

Curb Ramps



Figure 181. Ramps should direct pedestrian straight into the crosswalk as in this picture from South Broad Street.



Figure 182. A curb cut which allows water to pool at the bottom is not usable.

Curb ramps enable a smooth transition from the sidewalk to street level at intersections and mid-block crossings. This infrastructure is essential for pedestrians using wheelchairs, strollers, walkers, crutches, and pedestrians who have trouble stepping up. ADA guidelines require appropriately designed curb ramps at all pedestrian crossings. Trenton should investigate opportunities to provide or improve upon curb cuts at pedestrian crossings throughout the City. Curb ramp placement should reflect the desired pedestrian path, guiding pedestrians straight into the crosswalk.

³ "New Jersey Complete Streets Design Guide," New Jersey Department of Transportation, 2017.

ADA guidelines state that curb ramps should be directional wherever possible, where each corner has two ramps installed perpendicular to the face of the curb (vs. a single ramp facing diagonally into the intersection). In order to achieve ADA compliance, curbs cuts must provide a level maneuvering area or landing at the top of the curb ramp, provide a maximum ramp slope of 8.33 percent, and have a detectable warning surface to alert the visually impaired of the transition from the sidewalk to the roadway that extends across the full width of the curb ramp and includes a series of raised, truncated domes in a high contrast color relative to the surrounding sidewalk.⁴

Bicycle Infrastructure



Figure 183. Bicycle lane along South Warren Street near downtown.



Figure 184. Bicycle racks located near a bus stop on Pennington Avenue.

Well-designed and thoughtfully placed bicycle infrastructure can help to reduce conflict points between bicyclists, motorists, and pedestrians, improve the visibility between bicyclists and motorists, and designate a clear right-of-way through the intersection for bicyclists. Trenton should investigate opportunities for expanding the presence of bicycle facilities throughout the city.

Bicycle lanes allow bicyclists to ride along the roadway in a dedicated lane, offering a comfortable space for riding and signaling to riders to check for bicyclists. Bicycle lanes located next to vehicle parking should be at least five feet wide. The preferred width of bicycle lanes next to a curb is also five feet, although four feet, excluding the gutter pan, may be adequate.⁵ Shared Lane Markings, or “sharrows,” are placed within a vehicular travel lane to indicate that motorists and cyclists are sharing the road. Sharrows help to alert motorists to the potential presence of cyclists and assist cyclists by helping them to position themselves in the appropriate part of the travel lane, away from the curb and the doors of parked cars. Sharrows are used in instances where the roadway width is insufficient for a dedicated lane.

Bus Stops

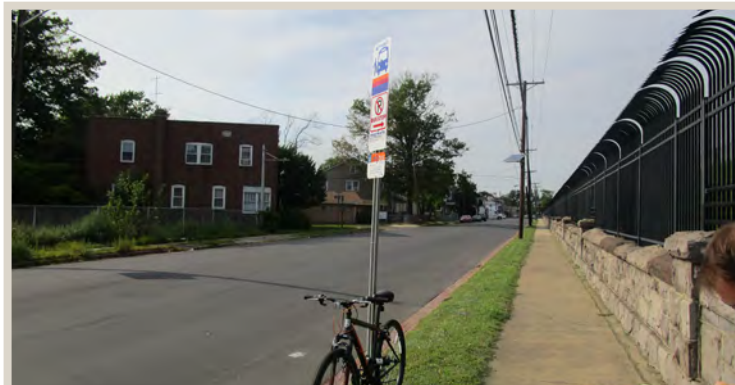


Figure 185. While this bus stop on Pennington Avenue is clearly marked, there are no facilities for bicyclists riding to the stop nor is there a shelter for passengers awaiting their bus.



Figure 186. A bus shelter along Pennington Avenue is used by a passenger awaiting a bus. The shelter is helpful for waiting passengers and also clearly marks the bus stop location.

Many of the bus stops along the studied corridors were marked with poor signage, lacked ADA compliance, and did not provide passenger amenities. Bus shelters not only provide a useful waiting area for passengers, they provide

⁴ “New Jersey Complete Streets Design Guide,” New Jersey Department of Transportation, 2017.

⁵ “New Jersey School Zone Design Guide” New Jersey Department of Transportation, 2014.

a highly visible demarcation of bus stop locations. Bus shelters encourage bus ridership by providing passengers with a place to wait and sit in comfort and security, protected from the elements. While bus shelters may not be necessary or appropriate at every bus stop, seating and route information should be considered at all stops along the observed corridors.

Bus stops should provide ample room for riders to gather and wait for the bus while still providing a clear path for pedestrians along the sidewalk. The availability of travel information greatly enhances the transit experience for riders. Information should include, at a minimum, route and schedule information and where possible real-time arrival and departure information should be included, as well as local area maps and wayfinding information.⁶

Street Lighting

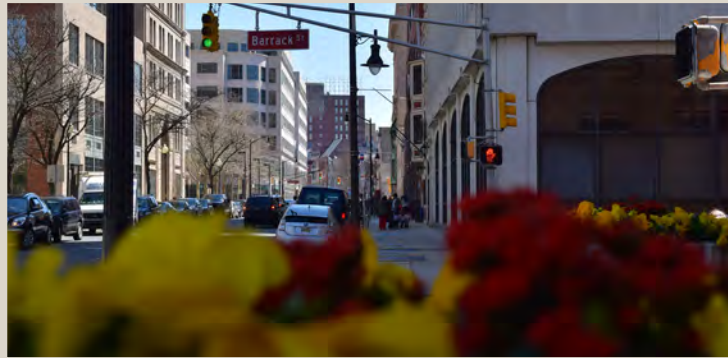


Figure 187. Street lights along Barracks street include both a car-oriented and pedestrian-oriented lamp.



Figure 188. Pedestrian oriented lamps like the one pictured above, are located throughout Trenton's capital complex area.

Pedestrian oriented lighting is essential for safety after dark as it improves the pedestrian's visibility as well as the ability for motorists to see oncoming pedestrians. Pedestrian-scale lighting is more human centered, located closer to the ground and spaced closely together to create even lighting of the sidewalk, but it is also essential to install lighting aimed at crosswalks. Pedestrian-scale lighting should also be provided near transit stops, commercial areas, or other locations where night-time pedestrian activity is likely. Pedestrian-scale lighting helps to illuminate a sidewalk and improve pedestrian safety, security, and comfort. Street lights should be energy efficient, evenly spaced, and focused downward to reduce light pollution. Lighting fixtures should reflect the character and urban design of the street type. Properly designed and installed pedestrian-scale lighting can also help to define a streetscape and create a sense-of-place in a community.⁷

6 "New Jersey Complete Streets Design Guide," New Jersey Department of Transportation, 2017.

7 "New Jersey Complete Streets Design Guide," New Jersey Department of Transportation, 2017.



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