

NEWTOWN BOROUGH SAFETY AND WALKABILITY REVIEW



Acknowledgements

Newtown Borough would like to acknowledge the contributions of the following individuals to this report:

- Tara Grunde McLaughlin
- Dennis O'Brien
- Chief James Sabath
- Amy Lustig
- Don Hayden
- Courtney Lang

Disclaimer

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Introduction

Newtown Borough is a 0.6 square mile community located in lower Bucks County, Pennsylvania (Figure 1). This residential borough is characterized by a street grid of predominantly single-family homes, as well as a restaurant and retail corridor along State Street on the western edge of the borough. Established in 1683 by William Penn, the Borough's connectivity to community resources remains strong despite the advent of vehicles. While the Borough has had a stable population of between 2,000 and 2,500 residents for many decades, the surrounding area has experienced significant growth due to the Borough's convenient location near major transportation routes and employment centers, including Bucks and Montgomery Counties, Philadelphia, New Jersey, and even New York City. Nearly 20,000 Newtown Township residents rely on the Borough as a regional downtown as well. This increased growth has put further stress on existing transportation infrastructure.

A long-standing goal of Newtown Borough is to have a safe and entirely multimodal, connected transportation network. Providing better multimodal infrastructure directly benefits the wide variety of the people who visit the Borough and call it home, including:

- Residents over the age of 65, who choose to age in place. This age group—that is less likely to drive—makes up almost a quarter of the Borough and its surroundings.
- Younger children attending Goodnoe Elementary School, which is directly adjacent to the northeast corner of the Borough and serves the Borough's elementary school-aged population.
- Visitors enjoying the Borough's attractions, especially the State Street corridor with its many shops and restaurants.
- Residents and visitors using public transportation. SEPTA Route 130 provides bus service to destinations such as Bucks County Community College and connects to the SEPTA West Trenton Line via Langhorne Station.
- Residents who want to enjoy their community on foot, by bike, or with the help of a mobility device. Safe and efficient multimodal transportation options can make it more attractive and feasible for residents to complete some of their trips without a vehicle.

Following a pedestrian fatality within the Borough on October 13, 2021, and another just outside the Borough limits in Newtown Township, on December 23, 2021, the Borough pursued a borough-wide multimodal transportation study to create a priority listing for pedestrian and bicycle safety improvements.

In 2022, Newtown Borough was awarded a \$65,000 grant by the Delaware Valley Regional Planning Commission through the Transportation and Community Development Initiative (TCDI) grant. The purpose of the grant was to explore ways to improve pedestrian and bicycle safety through a safety and walkability review of the Borough. This document—*The Newtown Borough Safety and Walkability Review for Multimodal Improvements* (the Review)—is the result.

In 2022, McCormick Taylor was hired to complete the Review. McCormick Taylor completed the following steps to determine the prioritized list of recommendations:

- Opportunities and Constraints Analysis
 - The project team conducted a site visit and reviewed relevant past plans to identify opportunities within the Borough that could be included in the Review.
- Gap Analysis
 - Findings from the Opportunities and Constraints Analysis helped to inform the Gap Analysis. McCormick Taylor worked with the Borough to determine analysis inputs to assist with the identification of gaps within the bicycle and pedestrian network.

- Qualitative Multimodal Assessment
 - Community engagement was held to identify where residents face safety issues when walking and biking.



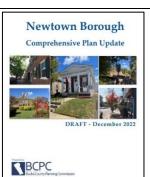
Figure 1: Newtown Borough in Bucks County, PA

Opportunities & Constraints

The project team reviewed existing data to identify the opportunities and constraints that affect the safety of people who walk and bike within Newtown Borough. Reviewing these opportunities and constraints helped to inform the list of recommendations. Data reviewed included crash data, roadway ownership data, demographic data, community facilities, traffic counts, land use and zoning, proposed developments (like the forthcoming Steeple View development), public transit routes, sidewalks, Bicycle Level of Stress, trails, and historic district boundaries.

Borough, County, and Regional Plans Review

In addition to the data mentioned above, the project team reviewed Newtown Borough and Bucks County plans from the past 10 years to gauge past and recent priorities for multimodal infrastructure improvements, document the progress of the Borough and County for implementing the improvements, and to ensure consistency between local and regional efforts.



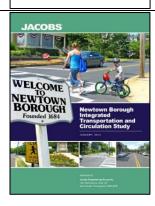
Newtown Borough Comprehensive Plan Update Draft 2022

The Newtown Borough Comprehensive Plan is a policy guide to decision making about physical development in the community. The Transportation and Circulation chapter cites the five priority locations for roadway improvements from the 2012 Newtown Borough Integrated Transportation and Circulation Study as having a significant impact on pedestrian safety.



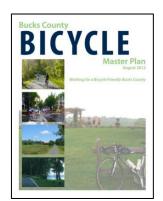
Newtown Borough Open Space and Connectivity Plan 2022

The purpose of the *Newtown Borough Open Space and Connectivity Plan* is to identify and preserve the important, but scarce, open spaces and multi-modal connections that advance public health and recreation, protect natural resources, and enhance the uniquely rich historical and aesthetic context of the community. Among the Borough's most fundamental open space needs is the improvement of pedestrian and multi-modal accessibility to connect residents and businesses to destinations within municipal borders and beyond.



Newtown Borough Integrated Transportation and Circulation Study 2012

The Newtown Borough Traffic Committee commissioned this study to enhance pedestrian, bicycle and vehicle safety and mobility by identifying potential improvements and recommendations at specific areas. Recommendations were prioritized to expedite implementation and allocation of resources. While many of the recommendations were sound, the study lacked clear costs, potential funding sources, and a champion to spearhead implementation.



Bucks County Bicycle Master Plan 2012

The purpose of the *Bucks County Bicycle Plan* is to inventory existing conditions, advance opportunities for the improvement and expansion of a broader network of multimodal routes serving existing residential and business areas of the County, enhance the outreach and education of bicycle safety and leverage the existing recreational resources in the communities at large. The vision for the Countywide Bicycle Network is comprised of varying levels of bicycle facility recommendations to create a network of major spines and spokes throughout the County. The Plan identifies a major spine that will connect Cornwells Heights to Newtown Borough. The intent of the major spines are to provide "connections" between transit centers, activity centers, tourist destinations, central business districts, recreation destinations and municipalities.



Bucks County Open Space and Greenway Plan 2011

The purpose of the Bucks County Open Space and Greenway Plan is to provide a decision making. implementation and management tool designed to protect and create linkages between the County's vast natural resources, open space and farmland, recreational facilities, and historic and cultural resources. The Hough's-Newtown Creek Greenway is listed as a greenway that would connect where the Newtown Creek joins the Neshaminy Creek in Middletown to the Hough's Creek confluence with the Delaware River, just south of Washington Crossing Historic Park Township, by following the Newtown Creek through Newtown Borough. The Bucks County Pedestrian Safety Study 2022 was reviewed as well. Its recommendations for infrastructure improvements and strategic planning strategies for vulnerable roadway users and people using mass transit were outside of Newtown Borough. Once adopted, the Bucks2040 Comprehensive Plan will identify multimodal infrastructure improvements that overlap with those identified by the Borough as well as those that will need coordination between the County and

Highest Priority Projects

The Newtown Borough Open Space and Connectivity Plan and Newtown Borough Integrated Transportation and Circulation Study ranked the recommended projects from lowest to highest priority. Below is a list of the highest priority projects. The full list can be found in Appendix A.

the Borough.

Newtown Borough Integrated Transportation & Circulation Study 2012

<u>Highest Priority Definition</u>: The highest priority recommendations are ones that can be implemented quickly for a relatively low cost, but will make a significant impact on safety or congestion. These locations were chosen based on their high crash rates and high number of vehicles. Addressing the safety concerns at these locations will have the biggest impact on the most users.

- Washington Avenue Intersection with Lincoln Avenue: Revised Signal Timing
- Washington Avenue Intersection with Lincoln Avenue: Textured Asphalt Crosswalk
- Washington Avenue: White Edge Lines
- Washington Avenue: Pedestrian Crossing Signs
- Washington Avenue: Painted Crosswalks Where Missing
- Washington Avenue Intersection with Congress Street: Raid Flashing Beacons
- Lincoln Avenue: Bike Lanes the Entire Length
- State Street Intersection With Centre Avenue: Revised Signal Timings, Textured Asphalt Intersection
- State Street, from Penn Street to Lincoln Avenue: Add Pedestrian Crossing Signs
- State Street, from Penn Street to Lincoln Avenue: Install Pedestrian Crosswalks
- State Street: Add On-street Parking Where Feasible

Newtown Borough Open Space & Connectivity Plan 2022

Highest Priority Definition: The Borough should actively pursue funding and/or partnership opportunities in the short-term to accomplish this recommendation.

- Lincoln Avenue Intersection with Penn Street: Proposed Newtown Rail Trail Terminus (Newtown Rail Station Site)
- Pickering Field: Implement Walkway Around Park Perimeter That Connects to Lincoln Avenue Sidewalk
- Lincoln Avenue-Elm Avenue Connector: Use Artesian Water Property Easement for Pedestrian Walkway
- Elm Avenue: 1,130-foot sidewalk along Newtown Cemetery
- Frost Lane, between N. Lincoln Avenue and Edgeboro Drive: 1,250-foot long sidewalk

Site Visit

In addition to reviewing documents and data, the project team conducted an in-person site visit on January 27, 2023. The detailed notes from the site visit can be found in Appendix B. The attendees for the site visit included Borough Council members, Walk Friendly Newtown committee members, Police Chief Sabath, and McCormick Taylor project team members (**Figure 2**). The walking route for the site visit is shown in **Figure 3**.

Name Tara Grunde-McLaughlin Amy Lustig Don Hayden, Jr. Courtney Lang Chief Sabath Christina Arlt, AICP Collin Hodges	Title President of Council Council Member Walk Friendly Newtown Walk Friendly Newtown Police Chief Project Manager Deputy Project Manager	Municipality/Company Newtown Borough Newtown Borough Newtown Borough Newtown Borough Newtown Borough McCormick Taylor McCormick Taylor
Collin Hodges	Deputy Project Manager	McCormick Taylor
Erika Morgan	Planner	McCormick Taylor



Figure 2: Site Visit Participants



Figure 3 Site Visit Walking Route

Gap Analysis

After gathering background data, the project team analyzed the road segments in Newtown Borough through five lenses. Each criterion was scored on a 1-4 scale and the results illustrated in a series of maps. Road segments with higher scores (shown in red) indicate higher priority or need. The methodology is explained in greater detail in the Gap Analysis Methodology table.

Safety

 For the safety category, the team analyzed crash data. Past crashes can indicate safety issues, especially if there are numerous serious or fatal crashes in a similar location. The team paid particular attention to crashes that involved pedestrians or cyclists, particularly if they were serious or fatal.

Sidewalk Availability

- Many streets in Newtown have sidewalks on both sides of the street. Many additional streets have sidewalks on at least one side of the street. There are approximately 5 road segments that have incomplete sidewalks, where there were some sidewalks but there were also gaps on one or both sides of the street. Three segments are short cul-de-sacs or deadends where there is likely to be limited traffic:
 - Jefferson Court
 - Federal Lane
 - Brynwood Lane
- o Of particular concern are the roadway segments that don't have sidewalks on either side the street (highlighted in red on the Sidewalk Availability Map).
 - Edgeboro Dr
 - Frost Ln
 - N State Street (north of Jefferson)
 - Greene Street
 - Maple Ave
 - S Elm Street
 - E Penn Street
 - S Chancellor Street

Connectivity

While it is relatively easy for someone driving a car to go a few blocks out of their way because it requires little extra effort, pedestrians and cyclists often prefer to take the most direct path to their destination. Pedestrians generally benefit from shorter blocks lengths and more frequent, well-marked intersections because it gives them more choices to get to their destination.

Traffic Exposure

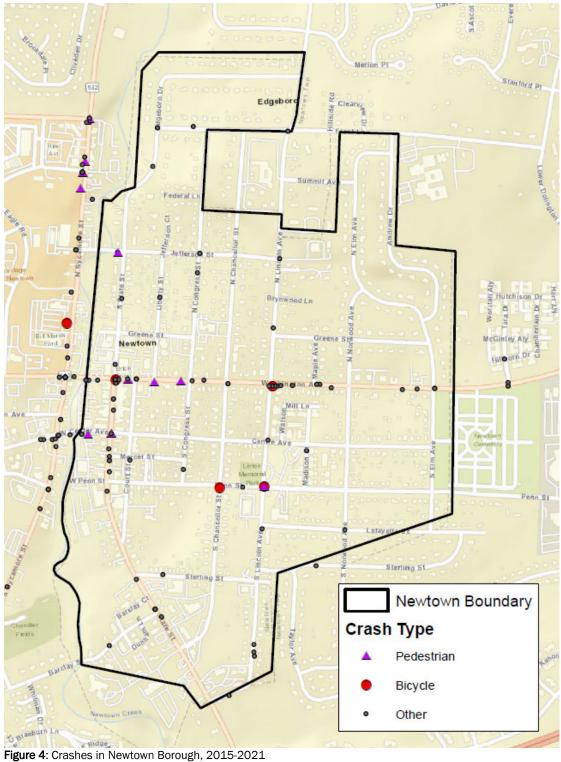
Generally, the more vehicles there are on a particular street, the greater the chances for crashes. For this reason, we looked at the Average Annual Daily Traffic (AADT) counts for roadways in Newtown. Washington Avenue had the highest AADT, followed by South State Street, and North State Street. Counts were not available for the remaining streets, which were primarily residential, so they were given a score of 1 in the ranking system.

Land Use

 Pedestrian attractions, such as offices, restaurants, retail stores, and community facilities like libraries, can translate into more people on foot nearby. Roads in mixed use, office, and commercial/institutional zoning districts were scored higher than streets in residential zoning districts.

Total

The Total Map (Figure 10) combines Figures 5 through 9 into a single map where each road segment is given a score based on the combined safety, sidewalk availability, connectivity, traffic exposure, and land use scores.



Gap Analysis Methodology

Category	Why?	Input	Attribute	Score	Weight
Safety Data	Past incidents suggest safety issues, especially serious or fatal crashes.	Pedestrian and bicycle crashes (killed, suspected serious injury, suspected minor/possible injury) Pedestrian injury or fatality	Number of crashes	1-4	20%
Sidewalk Availability	Available separated facilities significantly influence safety.	Full = 1 (continuous on both sides) Partial = 2 (continuous on one side only) Incomplete = 3 (non-continuous on one/both sides) None = 4	Presence of sidewalk	1-4	20%
Connectivity	Shorter blocks are better for pedestrian connectivity.	Intersection density	Segment length (quartiles)	1-4	20%
Connectivity Marked crossings r crossings safer	Marked crossings make pedestrian crossings safer	Marked crossing frequency	Marked crossings	1-4	2076
Traffic Exposure	Exposure to vehicle traffic along segments and/or at crossings impacts safety.	AADT (Average Annual Daily Traffic), four categories	Number of vehicles per day (quartiles)	1-4	20%
Land Use	Common pedestrian generators can translate to more people on foot.	Community facilities: bank, restaurant, retail, graveyard, park/playground (within .25 miles)	Present within a certain distance (quartiles)	1-4	20%
		Residential = 1, mixed use = 2, office = 3, commercial/institutional = 4	Mixed-use zoning	1-4	

Result: A series of maps showing scored road segments with higher scores indicating higher priority/need.

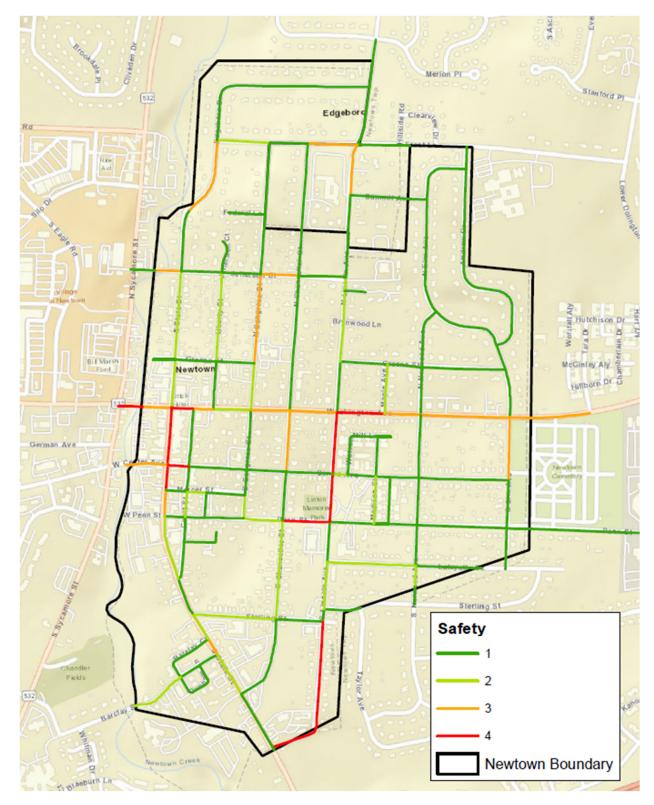


Figure 5: Road segments scored by Safety

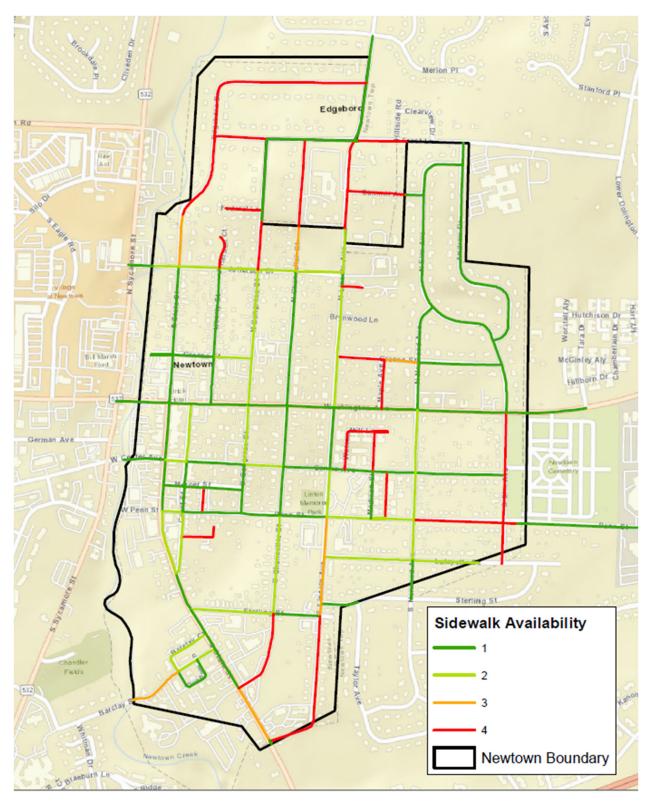
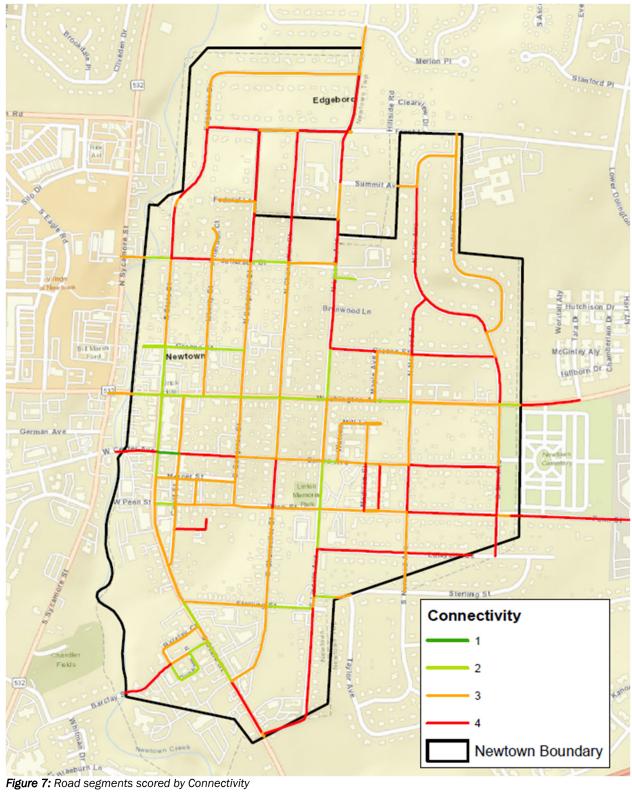


Figure 6: Road segments scored by Sidewalk Availability



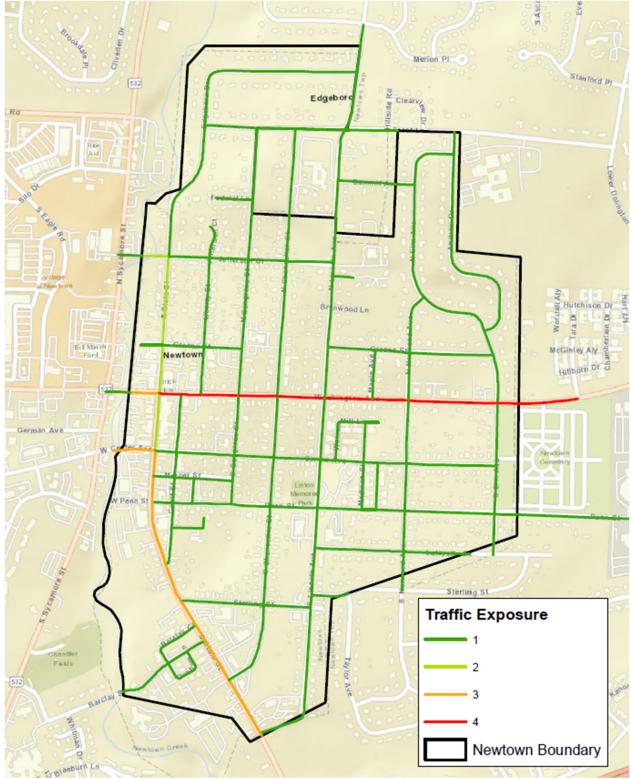


Figure 8: Road segments scored by Traffic Exposure

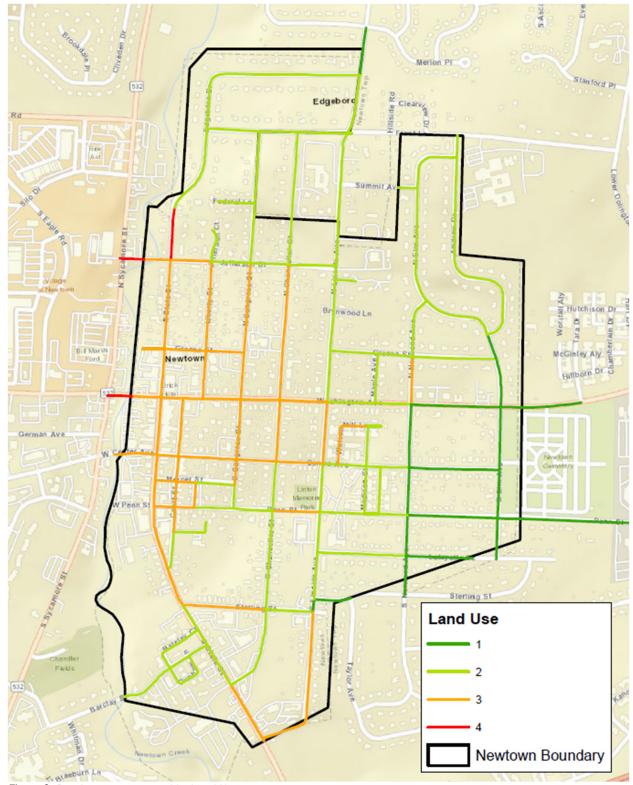


Figure 9: Road segments scored by Land Use

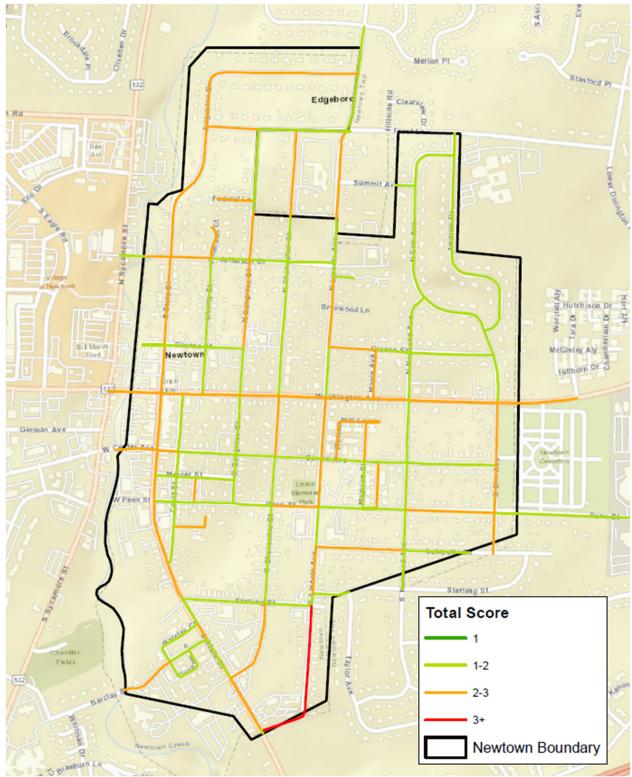


Figure 10: Road Segments Scored by Total Score

Public Engagement

Online Survey

In collaboration with Newtown Borough and Walk Friendly Newtown, the project team developed an online survey, which was available online from May 2023 through June 2023. The survey received 232 responses, which is equivalent to approximately 10% of the borough's population. A flyer and several social media posts were created to advertise the survey (Appendix C). Walk Friendly Newtown distributed the flyers to local businesses. The survey was also advertised on the borough website, in the printed borough newsletter that is mailed to every household in Newtown, via houses of worship, at the Recreation Board's Movie Night event, and via the Police Department, Fire Department, and Library's social media accounts.

The survey consisted of 17 questions, as well as an online web-map where participants gave feedback on locations they felt would benefit from pedestrian and bicycle improvements. Examples of the types of questions that were asked included:

- What are your top three reasons for walking in Newtown Borough?
- How much do you agree with the statement: I feel safe as a pedestrian in Newtown Borough.
- What are your top three concerns about walking in Newtown Borough?
- Please rank the type of pedestrian safety improvements you would like to see, with 1 being most important and 8 being least important:
- Are you a parent or childcare worker?
- If you are a parent or childcare worker, what are your concerns about children walking or biking independently in Newtown?
- What are your top three reasons for BIKING in Newtown Borough?
- How much do you agree with the statement: I feel safe as a bicyclist in Newtown Borough.
- What are your primary concerns about BIKING in Newtown Borough?
- Referring to the map above, which part of Newtown do you live in?
- What is your age?
- Do you normally use a support device or mobility equipment of any kind (such as a wheelchair, walker, cane, crutches, etc.) when traveling?
- Would you like to hear about the final report? Please provide your email address.

The online survey results are provided in Appendix D. The summarized results of the open-ended survey questions are provided in Appendix E. The top reported concerns from the survey's web-map are shown in the table below.

Top Concerns Mentioned in Open-Ended Comments on Survey Web-Map	Number of Mentions
Speeding	28
Lack of Sidewalks/Lack of Contiguous Sidewalks	16
Drivers not Yielding to Pedestrians in Crosswalk	14
Drivers not Stopping at Stop Signs/Traffic Signals	13
Blocked Sidewalks	6
Lack of Crosswalks	4
Lack of ADA Accessibility Road Features	3
Lack of Lighting	3
Dangerous Road Design	2
Car Congestion	2

A heat map of the locations of comments from the web-map is shown below.

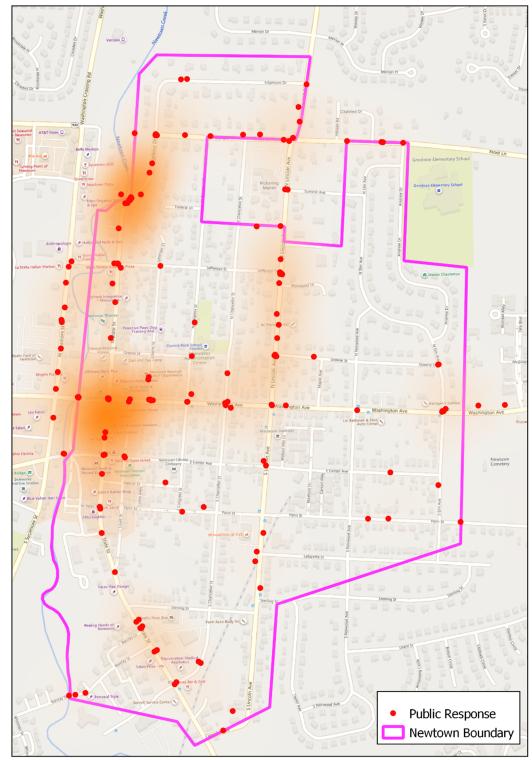


Figure 11: Heat Map of Public Comments from the Online Survey

In-person Engagement

The online survey was supplemented with two inperson public engagement events, referred to as pop-up events, in order to offer residents the opportunity to express their issues and ideas concerning pedestrian and cyclist safety directly to the project team. By engaging people where they are, pop-up events are a quick way of hearing from community members. They are typically held within the study area at convenient and heavily-trafficked, public locations or pre-organized events.



Pop-up Events

<u> </u>			
Date	Time	Location	Number of Interactions
Sunday, May 21, 2023	9:30 - 11:30 AM	16 S. State Street	30
Sunday, June 11, 2023 (Welcome Day)	1:30 - 3:30 PM	156 N. State Street	32

Pop-up Events Boards

At the pop-up events, there were two interactive boards. Attendees were asked to identify locations of pedestrian or bicycle issues on a map with dot stickers (see *Figure 12 and 13*). Additional issues or ideas were written on sticky notes and placed on a second board (see **Tables 1 and 2**). A handout with a QR code to the online survey was provided to passersby.



Figure 12: May 21, 2023 Interactive Map Results



Figure 13: June 11, 2023 Interactive Map Results

Pop-up Event Results

There were 62 total interactions, including the number of people who interacted with the boards and the number of people who received the QR code hand out. A total of 57 dot stickers were placed on the *Interactive Map* board. Of those, 47 were for pedestrian issues or ideas and 10 were for bike issues or ideas.

On the *Additional Feedback* board, there were 57 comments. Of those, 43 sticky notes were related to walking and 14 sticky notes were related to biking. *Table 1* summarizes the *Additional Feedback* topics from both pop-up events. The most prominent topic was sidewalks, with a total of 21 mentions. Fourteen of those mentions were related to lack of sidewalks and seven were related to the poor condition of sidewalks. With 20 mentions, driver behavior was a close second. Of those mentions, 12 were related to drivers not yielding to pedestrians in crosswalks and 8 were related to speeding or aggressive driving.

Table 1: Additional Feedback Topics

Topics	Number of Sticky Note Mentions
Lack of sidewalks	14
Drivers not yielding to pedestrians in crosswalks	12
Other: overall safety	12
Speeding or aggressive drivers	8
Condition of sidewalks (cracks, uplift from tree roots, etc.)	7
Lack of traffic signal or stop sign	7
Lack of marked crosswalks	3
Lack of pedestrian signals	3
Lack of curb ramps at intersections	1
Long distance to cross street	1
Lack of lighting/Low lighting	1

Table 2 summarizes the locations of issues or ideas that were provided on the *Additional Feedback* board from both pop-up events. Comments about Newtown Borough overall received the most mentions, with 20 sticky notes discussing various issues without specifying a specific location. State Street, Washington Avenue, and Lincoln Avenue were the top three cited streets.

Table 2: Additional Feedback Location of Comments

Location	Number of Sticky Note Mentions
Borough overall	20
State Street	13
Washington Avenue	8
Lincoln Avenue	7
Centre Avenue	6
Jefferson Street	6
Frost Lane	4
Penn Steet	4
Elm Street	3
Chancellor Street	2
Greene Street	2
Sycamore Street	2
Barclay Street	1
Edgeboro Drive	1
Liberty Street	1

Additional Feedback Comments

Overall themes from the Additional Feedback include a desire for safer pedestrian and bike connections, like sidewalks and bike lanes, within Newtown Borough and between Newtown Borough and Newtown Township as well as concerns about dangerous driver behavior, such as speeding, failing to yield to pedestrians in crosswalks, and rolling through stop signs. Below are the overarching topics and themes for the top eight cited locations for pedestrian and bike issues. State Street

- On State Street, drivers speed, roll through stop signs, and, when turning on Washington Avenue and Centre Street, do not yield to pedestrians in the crosswalks. To roll through a stop sign is when a driver fails to stop completely at a stop sign or drives through a stop sign without stopping at all.
- On State Street, sidewalks and curb ramps are missing. Sidewalk is uneven and, at night, the lights are not bright enough to see the uneven sidewalks.
- On N. State Street, the curve between Jefferson Street and Frost Lane is dangerous for pedestrians because it lacks a sidewalk.

Washington Avenue

- On Washington Avenue, drivers speed, roll through stop signs, and when turning on State Street, do not yield to pedestrians in crosswalks.
- On the Washington Avenue/Swamp Road Bridge between the Borough and Township, only one side of the bridge has a sidewalk, and it is in poor condition. Teens use this bridge to walk and bike to Council Rock North High School.
- At Washington Avenue and S. Elm Street, bike and pedestrian connections are missing.

Lincoln Avenue

- On Lincoln Avenue, drivers speed and roll through stop signs.
- Lincoln Avenue and Jefferson should have a three-way stop. Many children and families walk to Pickering Field, located at this intersection.

Frost Lane

Need for sidewalk on Frost Lane between Edgeboro Drive and Lincoln Avenue. Frost Lane is
used by children and families to walk to Goodnoe Elementary School as well as to
destinations to the east in Newtown Township.

Center Avenue

• On the Centre Avenue/Richboro Bridge between the Borough and Township, only one side of the bridge has a sidewalk. The sidewalk is in poor condition. Teens use this bridge to walk and bike to Council Rock North High School.

Penn Street

- On Penn Street, drivers speed between Elm Street and Lincoln Avenue.
- There is no sidewalk on Penn Street.
- Need better pedestrian and bike connection between residences on Penn Street to businesses on Penn Street to the east in Newtown Township.

Overall Borough

- No safe space on the street for kids to bike.
- Make it easier and safer to bike from Newtown Borough to Tyler State Park, Newtown Shopping Center, and Council Rock North High School.

Safety Improvements and Traffic Calming Measures

This section describes traffic calming and safety improvements, as well as their benefits and approximate costs. This background information is provided so that the recommendations in the following section can be more easily understood. Additionally, several of these traffic calming and safety measures are recommended in multiple locations throughout the borough, so describing them here prevents repetition in the Recommendations section.

Americans with Disabilities Act (ADA) Accessibility

Curb Ramps

In Newtown Borough, there are some pedestrian crossings with no curb ramps or curb ramps that do not appear to meet current ADA standards. ADA curb ramps are required at all intersections and other locations where a pedestrian crossing exists. They provide a seamless transition between the sidewalk and roadway for people using wheelchairs, canes, pushing strollers, etc. ADA curb ramps also have a detectable warning surface (DWS) near the edge of the vehicular travel way. The DWS has a raised dome pattern and a color that contrasts with the surrounding sidewalk. These features help alert people with vision impairments that they are about to leave the sidewalk and enter the roadway. DWS should also be provided where sidewalk crosses a commercial driveway that operates with yield or stop control. States and local governments that install curb ramps are required to maintain them in operable working condition. An ADA compliant curb ramp typically consists of the following:

- Ramp area with a maximum running slope of 1:12
- A maximum cross slope of 1:48
- A landing area with a maximum slope in any direction of 1:50
- Ad detectable warning surface
- A depressed curb (where curb is present).

Safety Benefits:

Pedestrian Safety

 Allows people with mobility impairments to travel freely and safely through their communities.

Approximate Cost: On average, one ADA curb ramp costs \$5,500.

SEPTA Bus Stops

SEPTA currently serves Newtown Borough with SEPTA Suburban Bus Route 130, which connects Bucks County Community College and Frankford Avenue and Knights Road in Northeast Philadelphia. In Newtown Borough, the SEPTA bus stops are not ADA-accessible. At a minimum, an ADA-accessible bus stop shall include an ADA-loading pad and a pedestrian accessible route to the adjacent sidewalk, path, or public right-of-way. Beyond the minimum requirements, there are several desirable elements, including a clear zone for rear door access and parking restrictions, if applicable. Bus shelters, benches, and other amenities are optional, but can significantly improve the passenger waiting experience and help increase the visibility of bus stops. Having an accessible and well-designed bus stop with appropriate amenities can also help to promote the use of public transportation. Municipalities should work to complete the pedestrian network where there are bus stops. SEPTA is an advocate for direct, paved, ADA-compliant pedestrian connections to their stops.

Planning for, building, and maintaining bus stops can be challenging due to the cost in staff or consultant time and dollars. Working with or creating a group that has shared interests along a corridor could aid in enhancing bus stops and applying for grants and local funds to design a better built environment for bus passengers.

Additional ADA-accessible bus stop design resources:

- SEPTA Bus Stop Design Guidelines (December 2019, second edition)
 https://planning.septa.org/wp-content/uploads/2021/02/SEPTA-Bus-Stop-Design-Guidelines-2019.pdf
- Pennsylvania Public Transportation Association's Building Better Bus Stops http://ppta.net/pages/betterbusstops/

Changes to Street Direction

In areas where there is constrained roadway right of way, either due to historic buildings or mature trees, it is possible to convert two-way street to a one-way operation and reallocate the other travel lane to a walking and biking path, or multi-use trail.

Safety Benefits:

Driver Behavior

- May reduce cut-through traffic.
- May increase predictability.

Pedestrian and Bicyclist Safety

- Simplifies crossings for pedestrians and bicyclists, who must look for traffic in only one direction.
- Reduces conflicts between pedestrians/bicyclists and vehicles.

Considerations:

- May impact access to surrounding streets.
- May create speeding problems where a two-way is changed to a one-way because drivers don't have to look for oncoming traffic. Redesign or traffic calming measures may be required to address this.

Approximate Cost: \$20,000-\$200,000 depending on length of treatment and if the conversion requires modification to signals.

Curb Extension/Curb Bump Out

A curb extension is a horizontal extension of the sidewalk into the street resulting in a narrower roadway section (see **Figure 14**). They are appropriate for all street classifications (local roads, collectors, and arterials) and work well in downtown areas.

Safety Benefits:

Driver Behavior

- Potential to reduce speeds by up to 5 mph when significantly narrowing the travel lanes.
- Shorter curb radius can slow turning vehicles.
- Can prevent illegal parking close to intersections.
- Because corner extension is elevated above the vehicle travel lanes, pedestrians are more visible to oncoming motorist.

Pedestrian and Bicyclist Safety

- Shortens intersection crossing distance for pedestrians.
- Shorter crossing distance reduces the potential for pedestrian-vehicle conflict and improves pedestrian safety.
- Because curb extension is elevated above the vehicle travel lanes, improves line-of-sight for pedestrian at the corner and enables pedestrian to stand at edge of parked vehicles, further increasing visibility.

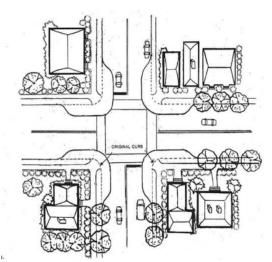


Figure 14: Curb Extension Schematic (Source: Pennsylvania Department of Transportation)

Considerations:

- Can result in the loss of one on-street parking space on each side of the road, though at intersections this is unlikely given statutory prohibitions of parking close to intersections.
- May prevent right turns at intersection when another vehicle is stopped at the stop line.
- May make it difficult to accommodate full bicycle lanes.
- Provisions should be made for snow and ice removal.
- Shortened curb radius may require emergency vehicle turning at intersection to swing across centerline.
- Roadway drainage must be addressed.
- Can be used as a landscaping opportunity; many cities use bioswale curb extensions to capture stormwater.

Approximate Cost: Each pair may cost \$7,000 to \$10,000.

Gateway Treatments

Gateways are special entrance treatments that provide identity to a neighborhood by using a combination of physical and textural changes (see Figure 15). A gateway treatment is intended to emphasize a change in environment from an arterial to a residential street. It is usually followed by a series of other measures repeated throughout the community to encourage drivers to maintain appropriate speeds. Gateway treatments could include landscaping, signing, pavement treatments, and traffic calming measures such as curb extensions, textured pavement treatments, and median islands.

Signage could include overhead pedestrian crossing signage, as shown in **Figure 16**. For example, this overhead sign in New Jersey indicates that there are eight pedestrian crossings within the next 0.3 miles.

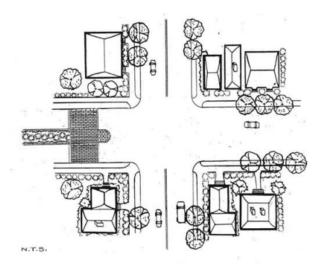


Figure 15: Gateway Treatment Example (Source: Pennsylvania Department of Transportation)

The exact configuration of a gateway will vary based on the location of the gateway, available funding, and any conflicts such as driveways. Gateways are appropriate for local roads and entrances to residential communities.

In addition to the recommended gateway treatment locations found later in the Recommendations chapter, it is recommended to locate a gateway treatment on West Centre Avenue at the western Borough boundary, if it can be negotiated on private property with Steeple View developers. Safety Benefits:

Driver Behavior

 May reduce entry speed, depending on the inclusion of other measures such as curb extensions.

Pedestrian and Bicyclist Safety

 A modest reduction in average vehicle speed can result in significantly fewer and less severe bicyclist and pedestrian crashes.

Considerations: If landscaping is included, consider plants that are drought tolerant and can withstand roadway salts.

Approximate Cost: Cost varies widely (\$5,000 to \$20,000) depending on the design and extent of physical elements used.



Figure 16: Overhead Signage Example in Collingswood, New Jersey (Source: McCormick Taylor)

Leading Pedestrian Signal

A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left. Safety Benefits:

Driver Behavior

Increased likelihood of motorists yielding to pedestrians.

Pedestrian and Bicyclist Safety

- Increased visibility of crossing pedestrians.
- Reduced conflicts between pedestrians and vehicles.
- Enhanced safety for pedestrians who may be slower to start into the intersection.

Considerations: LPIs typically require adjustments to existing signal timing that are relatively low cost compared to other countermeasures.

Approximate Cost: LPI installation requires reprogramming the traffic signal to accommodate the advance pedestrian interval. In rare cases, agencies may need to upgrade signal controllers. The cost associated with LPI can range from \$200 (controller setting changes only) to \$1200 each (pedestrian/vehicle study, retiming analyses, incorporating the formers setting changes).

Pedestrian Mall Treatment

Pedestrian Mall Treatments involve painting patterns on the roadway to give drivers a visual indication that they are entering a new environment. For example, Figure 17 is an example of a Pedestrian Mall Treatment along a PennDOT road in Ohiopyle State Park, where pedestrians frequently cross the road to get to the river for outdoor recreation.

Safety Benefits:

Driver Behavior

Decreased driver speed

Considerations: Since the markings are paint, they

would need to be repainted on a regular basis to remain effective.

Approximate Cost: Varies depending on the length and width of the area chosen and how intricate the design is.



Figure 17: Pedestrian Mall Treatment Example on Route 381 in Ohiopyle State Park (Source: McCormick Taylor)

Crosswalk Pavement Markings

Uniformity in crosswalk markings allows pedestrians and motorists alike to recognize, react, and comply while crossing public roads. Additional information about crosswalks and pavement markings can be found in PennDOT Local Technical Assistance Program (LTAP) <u>Tech Sheet #193</u>. Safety Benefits:

Driver Behavior

Decreased driver speed

Pedestrian Safety

• According to the Federal Highway Administration (FHWA), high visibility crosswalks <u>can</u> reduce pedestrian injury crashes up to 40%.

Considerations: Since the markings are paint, they would need to be repainted on a regular basis to remain effective.

Approximate Cost: Varies depending on roadway width.

Raised Midblock Crosswalks

Raised midblock crosswalks are ramped speed tables spanning the entire width of the roadway placed at midblock crossing locations (see **Figure 18**). It is assumed that pedestrians will cross roadways at established intersections. Observation of pedestrian behavior clearly indicates that

people routinely cross at mid-block locations. Raised midblock crosswalks are generally installed on a residential local street or a collector street (or on a low-speed arterial street through a commercial district). They can be used on a single-lane one-way or two-lane two-way street.

Safety Benefits:

Driver Behavior

Reduces driver speeds.

Pedestrian and Bicyclist Safety

- A pedestrian in a raised crosswalk is more visible to an oncoming motorist.
- Pedestrian has an elevated view of oncoming traffic.
- Bicyclist safety should not be affected.



Figure 18: Raised Midblock Crossing Example (Source: Federal Highway Administration)

Considerations:

- A raised crosswalk requires incorporation of all the standard crosswalk design elements. The markings must be visible to motorists, especially at night.
- Extends from curb to curb and therefore affects surface drainage on the roadway.
- May result in the removal of on-street parking adjacent to raised crosswalk, on both sides of the street.

Approximate Cost: The cost associated with a raised crosswalk ranges from \$7,110 to \$30,880 each, with the average cost estimated of \$8,170.

Rectangular Rapid Flashing Beacon

Rectangular rapid flashing beacons (RRFB) are pedestrianactivated enhancements used in combination with a pedestrian, school, or trail crossing warning sign to improve safety at uncontrolled, marked crosswalks. The device includes two rectangular shaped yellow indications, each with an LED-arraybased light source, that flash with high frequency when activated (see **Figure 19**). The purpose is to enhance pedestrian conspicuity and increase driver awareness.

Safety Benefits:

Driver Behavior

• Increase motorist yielding rates up to 98% (varies by speed limit, number of lanes, crossing distance, and time of day).

Pedestrian and Bicyclist Safety

• Reduce pedestrian crashes by 47%.

Considerations:

 The Federal Highway Administration (FHWA) has issued interim approval for the use of the RRFB (IA-21). State and local agencies must request and receive permission to use this interim approval before they can use the RRFB. In PennDOT District 6, a permit is required so costs are generally higher.



Figure 19: Rectangular Rapid Flashing Beacon Example (Source: Federal Highway Administration)

Approximate Cost: Cost ranges from \$30,000 to \$52,000 each. Overhead RRFBs can cost as much as \$150,000. Costs could be on the lower end if a solar-powered RRFB that doesn't require electrical hookup is selected. These costs include the complete system installation with labor and materials.

Roadway Narrowing with Edge Lines

Many residential streets have been constructed to such a width that getting motorists to obey a 25 or 30 MPH posting is extremely difficult. The edge line pavement marking defines or delineates the edge of a roadway. It provides a visual reference to guide motorists and provides the added benefit of guidance away from the glare of oncoming headlights. By having edge lines, drivers may feel the need to drive closer to the centerline because of the narrowing feeling. Mixing this feeling with the fact that drivers are closer to oncoming traffic should slow drivers. This pavement marking application is appropriate on local streets and low-volume minor collectors, but should not be used on major collector or arterial streets.

Safety Benefits:

Driver Behavior

- Road user drives closer to the center of the lane.
- Increased alertness to road conditions from perceived narrowing.

Pedestrian and Bicyclist Safety

• A modest reduction in average vehicle speed can result in significantly fewer and less severe bicyclist and pedestrian crashes.

Considerations: Requires regular repainting Approximate Cost: Varies based on length

Shared-use Path (on- and off-road)

Shared-use paths, also known as multi use paths, are separated from motorized vehicle traffic. They can be built within a highway right-of-way or within an independent right-of-way. Shared-use paths may be used by bicyclists, pedestrians, skaters, wheelchair users, joggers, and other non-motorized users and should be designed to accommodate them. For on-road shared-use paths, it is recommended to consider physical separation of the bicycle lane from motorized traffic lanes through the use of vertical elements like posts, curbs, or vegetation.

Safety Benefits:

Driver Behavior

• On-road shared-use path may narrow roadway causing drivers to reduce speeds.

Pedestrian and Bicyclist Safety

• Reduces conflicts between pedestrians and bicyclists with drivers.

Considerations:

- Shared-use paths must meet accessibility guidelines for walkways and curb transitions.
- Shared-use paths are required to be accessible by all users, including those with mobility devices and vision disabilities.

Approximate Cost: Shared use paths vary in cost depending on the materials used, right-of-way purchased, and other factors. Average construction costs for paved shared use paths can range from \$250,000 to \$5,000,000 per mile depending on terrain, structures (e.g., bridges, sound barriers, etc.), environmental impact mitigation, number and type of road crossings, amenities, and other design criteria. Unpaved shared use paths can be constructed for as little as \$30,000 per mile.

Speed Radar Signs/Speed Readers

Speed radar signs measure the speed of drivers by radar and display the speed of vehicles passing by. The purpose is to reduce traffic speeds by making drivers aware of how fast they are moving relative to the speed limit and inducing them to adjust their speed accordingly. Speed radar signs are typically mobile (trailer-based) units or are permanent pole/post-mounted digital display boards. Smaller portable pole/post-mounted displays intended for brief deployments have recently become available.

Safety Benefits:

Driver Behavior

May reduce speed.

Pedestrian and Bicyclist Safety

• A modest reduction in average vehicle speed can result in significantly fewer and less severe bicyclist and pedestrian crashes.

Considerations: Location, power source, speed display options, customization options, and maintenance requirements.

Approximate Cost: Speed radar sign trailers are \$1,500 to \$7,500 to deploy and permanent speed radar signs are approximately \$25,000 to install.

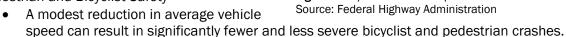
Speed Tables

A speed table is a raised area placed across the roadway and is designed to physically limit the speed at which a vehicle can traverse it. Like a speed hump, it extends across the travelway. Unlike a speed hump, a speed table has a long enough flat top (typically, 10 feet) to accommodate the entire wheelbase of most passenger cars. The longer longitudinal depth in the direction of travel enables comfortable and safe vehicle operating speeds that are faster than for a speed hump. Figure 20 illustrates a typical application. Can be installed on a local street, collector street, and in certain circumstances, an arterial street.

Safety Benefits:

Driver Behavior

 Reduces driver speeds Pedestrian and Bicyclist Safety



Bicyclist safety should not be affected.

Considerations:

A speed table should be clearly marked, so all roadway users are able to anticipate it and reduce their speeds appropriately.

Approximate Cost: Speed tables are \$5,000-\$15,000, depending on drainage conditions and materials used.



Figure 20: Speed Table Example

Recommended Site Improvements

This section describes a variety of recommended site improvements. The recommendations are grouped by geography. Some can be implemented in less than a year, while others require coordination with PennDOT or other property owners and might take three to five years to implement. Implementation might also depend on funding availability; several potential funding sources are identified in the next section.

It is recommended that the Walk Friendly Newtown Committee works with Newtown Borough Council to provide annual updates on the status of the recommendations in this report. The Walk Friendly Newtown Committee is a standing committee, established to address concerns related to traffic and pedestrian safety within Newtown Borough. Its mission is to improve the quality of life in Newtown Borough for residents and visitors by ensuring the ability to safely walk and drive throughout the Borough. An annual report can help to maintain transparency and accountability as well as assess progress, engage with stakeholders, and make informed decisions for next steps.

North Lincoln Avenue

North Lincoln Avenue is a two-way (one lane in each direction), minor collector road that is maintained by Newtown Borough. It is used by both local and through traffic. The speed limit is 25 miles per hour (MPH). It is one of the primary north-south streets in Newtown. North of the Borough boundary, Lincoln Avenue becomes Linton Hill Road and the speed limit is 35 MPH. Pickering Field, a popular athletic field for children and their families, and Pickering Manor, a senior living community, are located on Lincoln Avenue. Children and families cross Lincoln Avenue to reach Goodnoe Elementary School. Between 2015 and 2021, there were three crashes reported on Lincoln Avenue north of Washington Avenue. One occurred at the intersection with Frost Lane, one occurred near the Greene Street



Figure 21: Looking North on North Lincoln Avenue from Jefferson Street (Source: McCormick Taylor)

intersection, and one occurred at the Jefferson Street intersection.

The public's major concerns are drivers speeding (especially as drivers enter from Newtown Township), drivers not stopping or yielding for pedestrians in crosswalks, and lack of safe crossings for pedestrians. The recommendations for North Lincoln Avenue seek to reduce driver speeds, shorten crossing distances for pedestrians, and improve overall pedestrian and bicycle safety. *Recommendations:*

- Gateway: Lincoln Avenue and the northern Borough boundary
- Curb Extension: Lincoln Avenue and Jefferson Street
- Rectangular Rapid Flashing Beacon: Lincoln Avenue and Jefferson Street
- Speed Radar Signs/Speed Readers: One north of Jefferson Street on Lincoln Avenue and one south of Jefferson Street on Lincoln Avenue
- Speed Tables: One north of Jefferson Street on Lincoln Avenue, one south of Jefferson Street on Lincoln Avenue

Washington Avenue

Washington Avenue is a two-way (one lane in each direction), minor arterial road with a speed limit of 25 MPH. It is a State Route used by both local and through traffic. While most of Washington Avenue is residential, the western end is part of Newtown Borough's downtown shopping and dining area. Many children and families cross Washington Avenue on Elm Avenue and Norwood Avenue to reach the elementary school and parks on the north side of the Borough. There is on-street parking on one side and sidewalks on both sides. There are two signalized intersections and five intersections where drivers are required to yield to pedestrians crossing Lincoln Avenue. SEPTA bus route 130 has stops along Washington Avenue west of Lincoln Avenue.

Between 2015 and 2021, there were 24 reported crashes along Washington Avenue within the Borough. Two crashes involved bicyclists who were not seriously injured or killed. One pedestrian died as the result of a car crash on Washington Avenue between State Street and Court Street. Two additional pedestrians were hit by drivers on Washington Avenue by Liberty Street and North Congress Street. These crashes did not result in serious injury or death.

Major resident concerns for Washington Avenue are drivers speeding, drivers not stopping or yielding to pedestrians in crosswalks, and the safety of children crossing Washington Avenue.

The recommendations for Washington Avenue are intended to reduce driver speeds, shorten crossing distances for pedestrians, improve ADA-accessibility, and improve overall pedestrian and bicycling safety.

Recommendations:

- Roadway Narrowing with Edge Lines: Entire length of Washington Avenue
- Gateway Treatment with Pedestrian-crossing Sign:
 - Washington Avenue at the western Borough boundary
 - Washington Avenue and Elm Avenue
- Overhead Signage:
 - Washington Avenue at the western Borough boundary
 - Washington Avenue and Elm Avenue
- **Leading Pedestrian Signal:** Washington Avenue and State Street (in coordination with signal retiming study)
- Crosswalk: North side of Washington Avenue, on North Elm Avenue
- Curb Extensions:
 - Washington Avenue and North State Street
 - South side of Washington Avenue and Court Street
 - South side of Washington Avenue and Congress Street
 - South side of Washington Avenue and Chancellor Street
 - South side of Washington Avenue and South Elm Avenue
- ADA curb ramps with DWS:
 - Washington Avenue and Court Street
 - Washington Avenue and Congress Street
 - Washington Avenue and Lincoln Avenue
 - Washington Avenue and Norwood Street
 - Washington Avenue and South Elm Street

State Street Commercial District

The entire length of State Street is a two-way (one lane in each direction) State Route. From the southern Borough Boundary to Washington Avenue, State Street is a minor arterial. From Jefferson Street to Washington Avenue. State Street is a major collector. The speed limit is 25 MPH along the entire length. It is considered to be the Borough's "main street" and is used by both local and through traffic. The downtown shopping and dining area is primarily concentrated between Washington Street and Penn Street. There is on-street parking



Figure 22: State Street is lined with shops and restaurants

and high pedestrian activity. There are parking lots behind the shops on the west side of State Street. Shoppers, visitors, and workers often cross in the middle of State Street between Washington Avenue and Centre Avenue. South of Court Street, State Street becomes less dense and continues with a mix of residential and commercial.

Between 2015 and 2021, there were 17 reported crashes on State Street, with most occurring between Washington Ave and South Lincoln Avenue. None resulted in serious injury or death of a pedestrian or cyclist. Additional issues on State Street include drivers not obeying the speed limit, drivers not stopping or yielding for pedestrians in crosswalks, and drivers not stopping at red lights. The purpose of these recommendations is to slow down drivers, make crossing the street safer, shorten crossing distances, and make overall walking and biking safer. *Recommendations:*

- Leading Pedestrian Signal: State Street and Washington Avenue (in coordination with signal retiming study)
- Curb Extensions: State Street and Washington Avenue
- Mid-block Pedestrian Crossing: Between Washington Avenue and Centre Avenue
 - Option 1: Raised Mid-block Crosswalk with Curb Extension
 - Option 2: Pedestrian Mall Treatment
- ADA Curb Ramps with DWS: State Street and Centre Avenue
- Gateway Treatment: State Street at the southern Borough boundary

Curve on North State Street between Frost Lane and Jefferson Street

Between Frost Lane and Jefferson Street, there is a curve on State Street where drivers cannot see approaching traffic. Additionally, there are no sidewalks on this portion of State Street, which makes it dangerous for pedestrians. The sidewalk begins south of the curve. Residents who live north of the curve use State Street to walk to downtown Newtown Borough. North of the North State Street curve, a pedestrian bridge over Newtown Creek will be constructed to connect Newtown Borough and Newtown Township.

Recommendations:

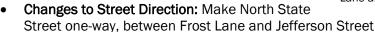






Figure 23: Curve on North State Street between Frost Lane and Jefferson Street (Source: McCormick Taylor)

Given the residential nature of the street, it is likely that the traffic volumes are on the low side so a conversion from two-way to one-way should be achievable without major impacts to the surrounding road network and intersections. Engagement with the community and dialogue with the nearby State Street neighbors as well as formal traffic study should be performed prior to implementation. The engagement will emphasize that a two-way to one-way conversion with an on-road shared use path will increase the safety of pedestrians and cyclists. The traffic study will determine the amount of traffic driving in each direction and help to determine the direction of the one-way road.

It could include the following elements:

- Data Collection
 - o Obtain traffic volumes from a traffic count for the road to convert.
 - Obtain traffic volumes for the roads and/or intersections that would be affected by the conversion.
- Redistribute the traffic volumes to the new route vehicles would take because of the one-way conversion.
- Evaluate the intersections along the new route to determine if any changes in traffic control need to be made. Examples of possible changes to control:
 - o A two-way stop-controlled intersection may need to become an All-Way stop.
 - An All-Way stop could become a traffic signal. (This would only be in higher volume situations)
- Create a memo or report summarizing the findings and provide recommendations on implementation.

North State Street, Edgeboro Drive, and Frost Lane will be used by pedestrians and cyclists to access the bridge. It is important for pedestrians and cyclists to be safe from conflict with drivers as they travel to and from the bridge.

¹ Newtown Borough recently received a Department of Community & Economic Development (DCED) grant to install 1,230 linear feet of five-foot-wide sidewalk along the entire north side of Frost Lane, as well as ADA ramps and crosswalks at the intersections with Linton Hill Road and Edgeboro Drive. The westbound cartway will be marked with bicycle sharrow markings to alert drivers of cyclist activity and posted for "No Parking" to support cyclists.

Frost Lane

Frost Lane is an east-west street in the northern part of Newtown Borough that connects Newtown Creek on the west with Goodnoe Elementary School and Roberts Ridge Park on the eastern end. It is the only east-west connection to Newtown Township north of Washington Avenue. Frost Lane has long blocks and no sidewalks. Residents indicate that motor vehicles routinely exceed the speed limit. In April 2023, Newtown Borough received a grant of more than \$170,000 to construct sidewalks on the north side of Frost Lane from Lincoln Ave to Edgeboro Drive. In October 2023, the Borough, in partnership with Newtown Township, submitted a \$878,000 grant application to construct a pedestrian bridge over Newtown Creek and a trail between Sycamore Street and Edgeboro Drive. The two primary pedestrian routes to access this bridge will be via North State Street (near the curve described in the previous section) and from the western end of Frost Lane. Multiple comments from the survey and the in-person engagement expressed a desire for better connections to the Newtown Township businesses along Sycamore Street, just west of the borough. While the southern half of the borough has multiple streets that provide east-west connectivity from one side of the borough to the other. Frost Lane is the only end-to-end east-west connection north of Washington Avenue. Utilizing the sidewalk grant funds before they expire will advance pedestrian and cyclist safety.

Penn Street

Penn Street is a local road maintained by the Borough. The speed limit is 25 MPH. It is currently one lane in each direction between South Chancellor Street and South Elm Street, Between South State Street and South Chancellor Street, Penn Street is one-way eastbound. Between 2015 and 2021, there were three reported crashes on Penn Street. One occurred at the intersection with South Chancellor Street, one occurred between South Chancellor Street and South Lincoln Avenue, and one occurred at the intersection with South Lincoln Avenue. Two of the crashes involved bicyclists who were not seriously injured or killed. A major concern on Penn Street is the lack of sidewalks. Sidewalks intermittently exist on both sides of Penn Street between State Street and South Congress Street. There is a sidewalk only on the



Figure 24: Penn Street Looking West (Source: McCormick Taylor)

northside of Penn Street between Lincoln Avenue and South Norwood Avenue. Between South Norwood Avenue and South Elm Street, Penn Street lacks sidewalks on both sides. Drivers not obeying the speed limit and drivers who fail to notice the one-way and drive the wrong way down Penn Street are additional concerns for residents who live nearby. The purpose of these recommendations is to make walking and biking along Penn Street safer and to reduce driver speeds.

Recommendations:

- Changes to Street Direction: Make entire length of Penn Street one-way, eastbound
- On-street, Shared-use Path: Add an on-street, shared-use path the entire length of Penn Street for cyclists and pedestrians
- Gateway Treatment: Penn Street and South Elm Street (eastern Borough boundary)

Engagement with the community and dialogue with the nearby Penn Street neighbors that emphasizes the safety improvements for pedestrians and cyclists should be performed prior to implementation.



Figure 25: An example of a curb bumpout at the end of a one-way street in State College to prevent drivers from going the wrong way down a one-way street. This could be combined with a gateway treatment, such as landscaping or a sign.

Students walking and biking to Goodnoe Elementary School

Goodnoe Elementary School is located northeast of Newtown Borough. Families and children have limited east-west walking and biking connections to the school, with Summit Avenue and Greene Street most commonly used. Summit Avenue is local road located within Newtown Township. It is owned and maintained by the Township. The speed limit is 25 MPH. There are no sidewalks on Summit Avenue. On the south side of Summit Avenue, single family homes and driveways front the street. The north side primarily consists of back and side yards of homes fronting other streets. Greene Street is a local road owned and maintained by the Borough. The speed limit is 25 MPH. Greene Street has no sidewalks between North Maple and North Lincoln Avenue. It is also a more circuitous route to the school than Summit Avenue. The goal is to create a safe and direct west to east walking and biking route for school children to access their elementary school. It will provide an additional benefit for anyone walking and biking between east and west Newtown Borough. There are three options to achieve this goal.

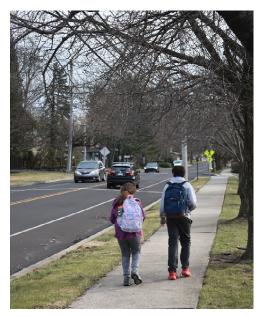


Figure 26: Children Walking Home from Goodnoe Elementary School south on North Lincoln Avenue. (Source: McCormick Taylor)

Recommended order:

Option 1: Newtown Artesian Water Company

O Shared-use Path: The one-acre
Newtown Artesian Water Company
property is located on North Lincoln
Avenue, across the street from
Pickering Field. The property
includes an undeveloped lawn
between North Lincoln Avenue and
North Elm Street. It is recommended
for Newtown Borough to coordinate
with Newtown Artesian Water
Company and adjacent property
owners to obtain an easement for a
five feet wide, shared-use path
between North Lincoln Avenue and
North Elm Avenue. The shared-use



Figure 27: Location of the Recommended Shared-Use Path on Newtown Artesian Water Company Property fronting North Elm Street. (Source: McCormick Taylor)

path could include fencing or vegetation to provide privacy to adjacent property owners. The location of this shared-use path would connect to North Lincoln Avenue at Jefferson Street. Here, there is a crosswalk across Lincoln Avenue and a stop sign on Jefferson Street. Additional safety improvements, such as a Rectangular Rapid Flashing Beacon, Speed Readers, and Speed Tables, are suggested for North Lincoln Avenue to coordinate with this recommendation. This option is included in the Newtown Borough 2022 Open Space and Connectivity Plan.

• Option 2: Greene Street

- Changes to Street Direction: Make entire length of Greene Street one-way. Consider a
 curb bumpout at the end to prevent cars from accidentally turning the wrong way
 down the one-way street.
- On-street, Shared-use Path: Add an on-street, shared-use path the entire length of Greene Street. This option would safely accommodate pedestrians and cyclists within the existing borough-owned right-of-way, which would require less coordination than negotiating sidewalk easements with individual property owners.

• Option 3: Summit Avenue

Sidewalk and Crosswalk: Despite the lack of sidewalk, many children are already using Summit Avenue to walk to and from Goodnoe Elementary School. A sidewalk could be built along properties located on the north side of Summit Avenue, between North Lincoln Avenue and North Elm Avenue. Because this option is not within Newtown Borough's jurisdiction, it would require coordination with Newtown Township and Newtown Township property owners. Right-of-way acquisition can be complicated if federal funds are involved.

The recommendations are summarized in *Table 3* on the next page, which also describes approximately how long each recommendation will take to implement. Some are short-term recommendations, which could be completed by the Borough in under a year, while some are medium-term recommendations that will take approximately one to three years to implement. Long-term recommendations could take approximately three to five years to implement as they might involve coordination with PennDOT for projects on state roads, like State Street or Washington Avenue. Easement or right-of-way negotiations could also increase the time needed.

Table 3: Recommendations Organized by Geography

Location	Treatment	Timeframe	Notes
North Lincoln Avenue	Gateway	Long	Planning, design, and construction
	Curb Extension	Medium	Planning, design, and construction
	Rectangular Rapid Flashing Beacon (RRFB)	Medium	Will require submisison to and approval from PennDOT to receive Traffic Signal Permit.
	Speed Radar Signs/Speed Readers	Short	Planning, design, and construction
	Speed Tables	Short	Planning, design, and construction
Washington Avenue (SR 6332)	Roadway Narrowing with Edge Lines	Short	Basic pavement markings
, , , , , , , , , , , , , , , , , , , ,	Gateway Treatment with Pedestrian-crossing Sign	Long	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
	Overhead Signage	Medium	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
	Leading Pedestrian Signal (LPI)	Short	Requires coordination with PennDOT to modify the Traffic Signal Permit.
	Crosswalk: North side of Washington Avenue, on North Elm Avenue	Short	Basic pavement markings
	Curb Extensions	Long	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
	ADA Curb Ramps with DWS	Long	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
State Street Commercial District (SR			
2048)	Leading Pedestrian Signal (LPI)	Short	Requires coordination with PennDOT to modify the Traffic Signal Permit.
	Curb Extension	Long	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
	Mid-block Pedestrian Crossing	Long	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
	Option 1: Raised Mid-block Crosswalk with Curb Extension	Long	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
	Option 2: Pedestrian Mall Treatment	Long	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
	ADA Curb Ramps with DWS: State Street and Centre Avenue	Medium	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
	Gateway Treatment	Long	Planning, design, and construction. Requires a HOP since its on a PennDOT road.
Curve on North State Street between	Changes to Street Direction	Short	Traffic Study to determine the impacts to other streets would be ideal.
Frost Lane and Jefferson Street	On-street Shared Use Path	Short	A basic signing and pavement marking plan or scheme would be needed.
	Curve Signage and Markings	Short	A basic signing and pavement marking plan or scheme would be needed.
Daniel Olivert			A basic signing and pavement marking plan or scheme would be needed. Traffic Study to
Penn Street	Changes to Street Direction	Short	determine the impacts to other streets would be ideal.
	On-street Shared-use Path	Medium	A basic signing and pavement marking plan or scheme would be needed.
	Gateway Treament	Medium	Planning, design, and construction
	dateway fredifferit	Mediam	Frankling, design, and construction
Students walking and biking to Goodnoe Elementary School	Option 1: Newtown Artesian Water Company Shared-use Path	Long	Planning, design, and construction plus coodination needed with Water Company.
	Option 2: Greene Street		
	Changes to Street Direction	Medium	Bump out requires design and construction. Traffic Study to determine the impacts to other streets would be ideal.
	On-street Shared Use Path	Short	A basic signing and pavement marking plan or scheme would be needed.
	Option 3: Summit Avenue		
	Sidewalk and Crosswalk	Long	Coordination with Newtown Township and/or Right-of-Way

Short	Less than 1 year	
Medium	1 to 3 years	
Long	Long 3 to 5 years	

Funding Sources

The following provides information on a variety of state funding sources that may be available to support the development of candidate projects and/or suggested improvements. Most of these sources are competitive programs based on needs and selection criteria that vary from program to program. The availability of funds from any of these sources, along with eligibility requirements, can and do change. Some of these funding sources may not be available every year, however, the intent of this section of this report is to provide information on the types of funding that may be available and that are typically used for development of concepts such as those proposed by this study. In addition to traditional transportation funding sources, Newtown Borough should consider other funding sources, such as health-related programs, that could be used to fund walking and biking improvements. For example, a non-profit hospital must complete a Community Health Needs Assessment (CHNA) every three years and adopt an implementation strategy to meet the community health needs identified through the CHNA, so local hospitals might have funding to address obesity and other health conditions that can be improved through walking and biking.² To learn more about public health funding sources, consider attending DVRPC's quarterly Healthy Communities Task Force meetings.

Pennsylvania Department of Transportation (PennDOT)

Transportation Alternatives Set-Aside Program (TASA)

Purpose: The TASA Program provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities; infrastructure projects for improving non-driver access to public transportation and enhanced mobility; environmental mitigation; recreational trail program projects; and safe routes to school projects. Key criterion in the review of applications will be readiness for implementation and delivery, safety, consistency with local or regional plans; collaboration with stakeholders; and statewide or regional significance.

Eligibility:

- Local governments
- Regional transportation authorities
- Transit agencies
- Natural resource or public land agencies, including federal agencies
- School districts, local education agencies, or schools
- Tribal governments
- A nonprofit entity responsible for the administration of local transportation

safety programs

• Any other governmental entity with responsibility for oversight of transportation or recreational trails

Eligible Uses:

- Bicycle and pedestrian facilities
- Safe routes for non-drivers
- Conversion of abandoned railway corridors to trails
- Historic preservation of transportation facilities
- Construction of turn-outs, overlooks and viewing areas

² Internal Revenue Service. "Community Health Needs Assessment for Charitable Hospital Organizations - Section 501(r)(3)." https://www.irs.gov/charities-non-profits/community-health-needs-assessment-for-charitable-hospital-organizations-section-501r3 (Accessed October 10, 2023).

- Outdoor advertising management
- Environmental mitigation (including stormwater and vegetation management)

Deadline: Varies; 2023 deadline was July 21, 2023.

Type: Reimbursement; must be consistent regional long-range transportation plan.

Local Match Requirement: There is no match requirement; however, local sponsors pay all costs for pre-construction activities (design, environmental clearance, right of way, utilities, etc.) and PennDOT provides 100 percent cost reimbursement for the construction phase (including construction inspection).

Available Funding: \$18 million per year statewide. Projects are selected by a competitive application process every 2 years.

Website:

https://www.penndot.pa.gov/ProjectAndPrograms/Planning/Pages/Transportation%20Alternatives% 20Set-Aside%20-%20Surface%20Trans.%20Block%20Grant%20Program.aspx

2022 TASA Awards are listed on the website. Announcement of the 2023 awards is anticipated in late winter 2023/early spring 2024.

Pennsylvania Infrastructure Bank (PIB)

Purpose: The PIB provides low-interest loans to accelerate priority transportation projects, spur economic development and assist local governments with their transportation needs.

Eligibility: Local Governments; Counties; Transportation Authorities; Economic Development Agencies; Non-Profit Organizations; and Private Corporations

Eligible Uses: Design, engineering, right-of-way, repair, and construction of public transportation facilities, highways, bridges and private airports, railroads, and rail freight facilities.

Deadline: Always accepting applications.

Type: Loan; interest rates vary.

Website: https://www.penndot.pa.gov/ProjectAndPrograms/Planning/Pages/PA-Infrastructure-Bank.aspx

PIB funded projects are listed on the website.

Multimodal Transportation Fund (MTF)

Purpose: The MTF provides grants to ensure that a safe and reliable system of transportation is available to the residents of the Commonwealth of Pennsylvania. The program is intended to provide financial assistance to improve transportation assets that enhance communities, pedestrian safety, and transit revitalization.

Eligibility: Municipalities (any county, city, borough, school district, incorporated town, township, or home rule municipality); Councils of Governments; businesses/non-profits (including privately owned airport - must be open to the public); economic development organizations; public transportation agencies; and ports or rail / freight entities.

Eligible Uses:

- Projects which coordinate local land use with transportation assets to enhance existing communities
- Streetscapes, lighting, and pedestrian safety
- Projects improving connectivity or the utilization of existing transportation assets
- Projects related to the development of transit-oriented development

Deadline: Varies; see website.

Type: Reimbursement: on a monthly basis, based on invoices; project cost of \$100,000 or more; grants normally will not exceed \$3 million.

Local Match Requirement: 30 percent of requested amount; other state or federal agency grant cannot be used as match.

Available Funding: Approximately \$77 million per year is available statewide. Projects are selected through a competitive application process, usually during fall/winter every year.

Website: https://www.penndot.gov/ProjectAndPrograms/MultimodalProgram

MTF awards from 2014 through 2023 are listed on the website.

Green Light-Go: Pennsylvania's Municipal Signal Partnership Program

Purpose: The "Green Light-Go Program" is designed to improve the efficiency and operation of existing traffic signals.

Eligibility: Municipalities, counties, and planning organizations.

Eligible Uses:

- Study and removal of unwarranted signals
- Traffic signal timing
- LED replacements
- Asset management
- Traffic signal operations and maintenance
- Innovative technologies
- Communications
- Detection and controller upgrades
- Modernization upgrades

Deadline: Varies, based on available funding.

Type: Reimbursement; projects are completed on existing signals on state and local highways.

Local Match Requirement: 20 percent local

Available Funding: Up to \$40 million per cycle, statewide. Projects are usually selected annually through a competitive application process.

Website: http://www.dot.state.pa.us/GLG

2023 GLG awards can be viewed here: https://www.governor.pa.gov/newsroom/governor-shapiro-announces-nearly-36-million-in-green-light-go-grant-funds-to-communities-across-the-commonwealth-to-improve-traffic-safety/. Previous award winners can be viewed on the website.

Automated Red-Light Enforcement (ARLE) Funding Program

Purpose: The ARLE Funding Program uses the net revenue of fines collected through automated enforcement systems to fund worthwhile safety and mobility projects that can be completed at a relatively low cost. Projects improving multiple transportation modes are encouraged.

Eligibility: Local authorities (counties, municipalities, and other local boards or bodies having authority to enact laws relating to traffic); Metropolitan Planning Organizations (MPOs); Rural Planning Organizations (RPOs); county planning organizations; and Commonwealth agencies.

Eligible Uses:

- Study and removal of unwarranted signals
- Traffic signal timing
- LED replacements
- Construction of turn lanes
- Signage, roadway re-striping, guiderails, and center line rumble strips
- Traffic signal operations and maintenance
- Innovative signal technologies
- Communications
- Detection and controller upgrades
- Modernization and safety upgrades
- Drainage improvements

Deadline: Typically, late spring/early summer.

Type: Reimbursement

Local Match Requirement: N/A; however, limited funds available and cost sharing is encouraged

Available Funding: Historically, between \$3 million and \$8.8 million per year, statewide. Projects are selected through a competitive application process every year.

Website: http://www.dot.state.pa.us/ARLE

Transportation Improvement Program (TIP) Roadway Funds

Purpose: The TIP identifies the region's highest priority transportation projects, develops a multi-year program of implementation, and coordinates available funding for identified projects. The TIP is updated every two years through a cooperative effort of local, state, and federal agencies with opportunity for the general public to submit input and comments on the planning process. The TIP is not a funding source, but rather a mechanism to program funds. Funding on the TIP comes from a variety of sources, including many of those previously mentioned.

Eligibility: Municipalities must work with their county planning departments and the regional MPO for a project to be considered and deemed eligible for TIP funding.

Eligible Uses:

- Road and bridge funding
- Public transit funding

Deadline: TIP update cycle

Type: Reimbursement; the TIP is consistent with the regional long-range plan to focus on the maintenance and preservation of exiting transportation assets.

Local Match Requirement: Varies

Available Funding: Varies by source

Website: https://gis.penndot.gov/paprojects/TIP.aspx

Safe Routes to School (SRTS)

Purpose: The SRTS program encourages students to walk, bike, and roll to school, helping to reverse an alarming decrease in students' physical activity and an associated increase in obesity and other health conditions. Funding is provided for infrastructure improvements, safety education, and incentives to encourage walking and bicycling.

Eligibility: School districts, local education agencies, or schools; local governments; regional transportation authorities; transit agencies; natural resource or public land agencies, including Federal agencies; tribal governments; MPO that serve an urbanized area with a population of 200,000 or fewer; a nonprofit entity; any other local or regional governmental entity with responsibility for oversight of transportation or recreational trails (other than an RPO, an MPO with a population over 200,000, or a state agency); county recreational trails authorities; county recreational authorities; urban redevelopment authorities; transportation management associations; universities and colleges (public and private, however, improvements must be in public right-of-way); municipal authorities (when the authority's establishing document specifically cites transportation or recreation as a stated purpose); and a state, at the request of an eligible entity listed above.

Eligible Uses:

Infrastructure projects that are improvements that can be made to allow students to safely walk or bicycle to school. Examples:

- Sidewalk construction
- Curb ramps
- Crosswalks
- Upgrading traffic signals to facilitate pedestrian crossing
- Bicycle parking facilities
- On-road bicycle lanes or bicycle pathways separated from vehicle traffic

Non-infrastructure projects help educate and train students and bring awareness to community members about student safe bicycling and walking and show how enjoyable these modes of transportation to and from school can be.

Examples:

- Student sessions on bicycle and pedestrian safety, health, and environment
- Funding for training, volunteers, and managers of SRTS programs for a city, school district, or region
- Public awareness campaigns and outreach to press and community leaders; and traffic education and enforcement near schools

Deadline: Typically, summer. Applicants apply for SRTS funding via PennDOT's TASA grant application.

Type: Grant

Local Match Requirement: No state or local matching funds are required.

Available Funding: There is a minimum award of \$50,000 for infrastructure projects. The maximum award is \$1,500,000, although higher awards can be justified on a case-by-case basis for "exceptional" projects. There is no minimum for non-infrastructure projects.

Website: https://www.penndot.pa.gov/ProjectAndPrograms/Planning/Pages/Safe-Routes-to-School.aspx

Pennsylvania Department of Conservation & Natural Resources (DCNR)

Communities Conservation Partnerships Program (C2P2)

Purpose: DCNR's Bureau of Recreation and Conservation provides a single point of contact for communities and non-profit conservation agencies seeking state assistance through the C2P2 Program in support of local recreation and conservation initiatives and those that implement Pennsylvania's Comprehensive Outdoor Recreation Plan. This assistance can take the form of grants, technical assistance, information exchange and training. DCNR's funding sources are combined into one annual application cycle and there is a single application format and process with one set of requirements and guidelines.

Eligibility: Awarded to municipalities and authorized non-profit organizations.

Eligible Uses: Planning, land acquisition, new development and rehabilitation for:

- Recreation, park and conservation facilities
- Watersheds and rivers corridors
- Greenways and trails
- Heritage areas and facilities
- Critical habitat, natural areas and open space

Deadline: Typically, early spring.

Type: Grant

Local Match Requirement: 50 percent, which can include a combination of cash and, at times, inhouse services, donated services, equipment use, and volunteer labor.

Available Funding: Opens annually (winter-spring), awarded amounts vary based on project.

Website: https://www.dcnr.pa.gov/Communities/Grants/pages/default.aspx

Pennsylvania Department of Community and Economic Development (PA DCED)

Multimodal Transportation Fund (MTF)

Purpose: MTF provides grants to encourage economic development and ensure that a safe and reliable system of transportation is available to Pennsylvania residents. The program is intended to provide financial assistance to improve transportation assets that enhance communities, pedestrian safety, and transit revitalization. The program is under the direction of the Commonwealth Financing Authority (CFA).

Eligibility: Local governments; counties; Councils of Governments; businesses and non-profits; economic development organizations; public transportation agencies (including but not limited to an airport authority, public airport, port authority, or similar public entity); and, rail and freight ports.

Eligible Uses:

- Projects which coordinate local land use with transportation assets to enhance existing communities, ensure a reliable transportation system, and encourage economic development
- Streetscapes, lighting, and pedestrian safety
- Projects improving connectivity or the utilization of existing transportation assets
- Projects related to the development of transit-oriented development

Deadline: Round opens annually, summer

Type: Reimbursement - CFA will release funds to the applicant at 30-day intervals; projects must have a total cost of \$100 thousand; generally, requests do not exceed \$3 million.

Local Match Requirement: 30 percent match of requested amount (state/federal grants do not count as match).

Available Funding: Varies

Website: http://community.newpa.com/programs/multimodal-transportation-fund/

2007 through 2023 DCNR Community Conservation Partnerships Program Grant Announcement Lists can viewed here:

http://elibrary.dcnr.pa.gov/GetDocument?docId=4077164&DocName=2007_2020_pdf_ofgrantannouncments.pdf.

Greenways, Trails, and Recreation Program

Purpose: The Greenways, Trails, and Recreation program provides funding for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks and beautification projects. Projects can involve development, rehabilitation and improvements to public parks, recreation areas, greenways, trails, and river conservation.

Eligibility: Municipalities; Councils of Governments; authorized organizations; institutions of higher education; watershed organizations; and for-profit businesses.

Eligible Uses:

- Projects: public park and recreation areas, greenways and trails, rivers conservation
- Activities: Development, rehabilitation, improvement, planning, and acquisition

Deadline: Opens annually (winter-spring)

Type: Reimbursement - CFA will release funds to the applicant at 30-day intervals

Local Match Requirement: 15 percent match of the total project cost; grants do not exceed \$250 thousand

Available Funding: Varies

Website: https://dced.pa.gov/programs/greenways-trails-and-recreation-program-gtrp/

Pennsylvania Office of the Budget

Community Development Block Grant Program (CDBG)

Purpose: Grants and technical assistance for eligible municipalities as identified under Pennsylvania Act 179 of 1984 as amended, for any eligible community development activities.

Eligibility:

- Competitive Set-Aside Program: Available to all municipalities that are not direct federal recipients of CDBG funds and state Act 179 entitlement municipalities with a population less than 10,000.
- Entitlement Program: Provides annual funding to designated municipalities.

Eligible Uses:

- Infrastructure improvement
- Development
- Planning
- Housing rehabilitation
- Public services
- Community facilities

Deadline: Applications may be submitted at any time after the applicant has met its Citizen Participation requirements and the unit of local government has approved the submission of the application to DCED. Applications are due as follows:

- Competitive Set-Aside Program Submission Due Date: Friday, February 2, 2024
- Entitlement Program Submission Due Date: Friday, October 20, 2023

Type: Grant

Local Match Requirement: There is no match requirement.

Available Funding:

Competitive Set-Aside Program: Up to twelve percent (12%) of the annual CDBG allocation
will be set-aside for the Competitive Program for projects in smaller municipalities that are
eligible under Act 179. Competitive Program has a minimum request of \$100,000 and has
no ceiling limit.

 Entitlement Program: Entitlement funding is set by Act 179 formula. Seventy percent of each entitlement grant must be used for activities that benefit low- and moderate-income persons. Refer to program guidelines.

Website: https://dced.pa.gov/programs/community-development-block-grant-cdbg/

Redevelopment Assistance Capital Program (RACP)

Purpose: The Redevelopment Assistance Capital Program (RACP) is a Commonwealth grant program administered by the Office of the Budget for the acquisition and construction of regional economic, cultural, civic, recreational, and historical improvement projects. RACP projects are state-funded projects that cannot obtain primary funding under other state programs.

Eligibility: General-purpose form of local government units (city, borough, township, county), public authorities, federal designated Local Development Districts, and industrial development agencies.

Eligible Uses: A project is eligible for a RACP grant if it has a cultural, civic, historical, regional or multi-jurisdictional impact and generates substantial increases in employment, tax revenues or other measures of economic activity.

Deadline: Usually summer; 2022 deadline was August 19, 2022.

Type: Grant. Redevelopment Assistance Capital Program grants must be eligible for tax-exempt bond funding under existing federal law requirements.

To qualify for RACP funding, a project must be included in the PA Capital Budget Project Itemization Acts, cannot be included in a City Revitalization and Improvement Zone (CRIZ), and have a total cost greater than \$1 million. If a RACP project includes and requires improvements to housing, roads, bridges, tunnels, infrastructure, and/or drinking water/waste/disposal/wastewater/stormwater systems, these improvements must not be the primary focus of the project. Per Act 77 of 2013, they must be associated with a project that is part of an economic development project, and in the case of housing, must be part of a community revitalization plan and in accordance with RACP program requirements. (These additional requirements for housing projects are not required if the funding is from a designated special allocation for housing.)

Local Match Requirement: At least 50% of the project cost must be match (non-state) participation.

Available Funding: A RACP project must have a total cost of at least \$1,000,000. Sources of match funds can be local, private, land or building as-is appraised value, and/or federal funds.

Website: https://www.budget.pa.gov/Programs/RACP/Pages/Main%20Page.aspx

Pennsylvania Department of Health

WalkWorks Active Transportation Plans

Purpose: WalkWorks provides funding to assist municipal entities with the development of active transportation plans and policies. These plans and policies are essential to the efforts to establish activity-friendly routes that connect people to everyday destinations, thereby expanding opportunities for physical activity. Funding could be used in future to update existing active transportation plans.

Eligibility: Municipalities, counties, MPOs, and RPOs.

Eligible Uses:

- Active transportation plans
- Complete streets policies
- Vision zero policies

Deadline: Annually, in May.

Type: Grant

Local Match Requirement: No match is required.

Available Funding: Unknown

Website: https://www.health.pa.gov/topics/programs/WalkWorks/Pages/WalkWorks.aspx

WalkWorks awards can be viewed on the website.

America Walks

Community Change Grants

Purpose: The Community Change Grants program supports the growing network of advocates, organizations, and agencies working to advance walkability. Grants are awarded to innovative, engaging, and inclusive programs and projects that create change and opportunity for walking and movement at the community level.

Eligibility:

- Advocates
- Local organizations
- Agencies

Eligible Uses: Projects related to creating healthy, active, and engaged places to live, work and play.

Deadline: Fall

Type: Grant

Local Match Requirement: There is no match requirement.

Available Funding: \$1,500

Website: https://americawalks.org/programs/community-change-grants/

America Walks Community Change Grant awards can be viewed on the website.

Additional Funding Resources

U.S. Department of Transportation (USDOT) Pedestrian and Bicycle Funding OpportunitiesFederal surface transportation law provides flexibility to fund pedestrian and bicycle projects and activities from several transportation funding programs. Learn more: https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/

Delaware Valley Regional Planning Commission (DVRPC) Municipal Funding Guide

This guide is intended to assist local and county governments, community groups and nonprofit organizations in the Delaware Valley Region to identify federal, state, county, and private sources of funding for locally initiated planning and development projects. Funding opportunities are listed by program, category, and eligibility requirements. Learn more: https://www2.dvrpc.org/asp/MunicipalResources

Intersections Initiative

The Intersections Initiative is a partnership between America Walks, the League of American Bicyclists, and the Safe Routes Partnership supported in part by the Centers for Disease Control and Prevention (CDC). The Intersections Initiative connects community leaders, organizations, and local government agencies to technical assistance and funding that make our streets safer and more accessible for people to walk, roll, and bike. Learn more: https://intersections-initiative.org/

Educational Resources

National Association of Chronic Disease Director's (NACDD) Walkability Action Institute
The Walkability Action Institute is a program of the Center for Advancing Healthy Communities.
NACDD believes all states and communities should be designed to support physical activity and non-motorized forms of transportation so that people can have the policy, system, and environmental (PSE) supports needed to engage in active lifestyles, whether recreationally or through essential daily functions like community to and from work, to community destinations, and/or places of interest (community events, schools, shopping, etc.).

NACDD collaborates and receives financial support from the CDC Division of Nutrition Physical Activity and Obesity (DNPAO) to plan, implement, and evaluate a Walkability Action Institute (WAI) as a multi-day "course" for interdisciplinary teams. Each year, interdisciplinary four-to-six-member teams, comprised of public health, transportation, planning, elected officials, and other disciplines apply to receive travel assistance to attend the course, develop team action plans, and implement PSE outcomes to make their communities, regions, and states more walkable over the long term.

Learn more: https://chronicdisease.org/page/WAI/

America Walks' Walking College

The Walking College is an online educational program geared toward early-to-middle-stage advocates eager to organize in communities to expand access to walkable, vibrant, safe, and accessible places. Fellows hone in on a problem in their community they wish to address, develop the knowledge and skills they need to help bring about positive change, with feedback from mentors and peers create a plan for getting the work done, and in the process become some of America Walks' most valuable grassroots partners.

Learn more: https://americawalks.org/programs/walking-college/

References

U.S. Department of Transportation, Federal Highway Administration, Bicycle Safety Guide and Countermeasure Selection System, http://pedbikesafe.org/BIKESAFE/

U.S. Department of Transportation, Federal Highway Administration, Pedestrian Safety Guide and Countermeasure Selection System, http://pedbikesafe.org/PEDSAFE/

Appendices

Appendix A: Borough, County, and Regional Plans Review

Appendix B: Site Visit Notes

Appendix C: Social Media Posts and Flyer

Appendix D: Online Survey Results

Appendix E: Online Survey Open-Ended Results

Appendix A: Borough, County, and Regional Plans Review

Street Name	Street Type	Safety Improvements	Priority	Implemented	Plan
		Intersection with Lincoln Ave*: Revised Signal Timing	High Priority	Implementing	Newtown Borough Integrated Transportation & Circulation Study, Comprehensive Plan
		Intersection with Lincoln Ave*: Textured Asphalt Crosswalk	High Priority	No	Newtown Borough Integrated Transportation & Circulation Study, Comprehensive Plan
		White Edge Lines	High Priority	No	Newtown Borough Integrated Transportation & Circulation Study, Comprehensive Plan
		Pedestrian Crossing Signs	High Priority	Yes	Newtown Borough Integrated Transportation & Circulation Study, Comprehensive Plan
	State Route - Minor Arterial	Painted Crosswalks Where Missing: Court St, Maple Ave, Liberty St, Elm Ave	High Priority		Newtown Borough Integrated Transportation & Circulation Study, Comprehensive Plan
Washington Avenue		Intersection with Congress Street: Rapid Flashing Beacons	High Priority	No	Newtown Borough Integrated Transportation & Circulation Study, Comprehensive Plan
Washington Avenue	(entire length)	Add Signage for Newtown Trail	Recommended	No	Newtown Borough Integrated Transportation and Circulation Study
		Intersection with Lincoln Ave: Peform Traffic Signal Analysis	Recommended	Yes	Newtown Borough Integrated Transportation and Circulation Study
		Add Gateway Treatment at Eastern End	Recommended	No; some research done to no conclusion	Newtown Borough Integrated Transportation and Circulation Study
		Install Pedestrian Lights Where Missing	Recommended	No	Newtown Borough Integrated Transportation and Circulation Study
		Utilize Speed Display Sign and Enforcement	Recommended	Yes	Newtown Borough Integrated Transportation and Circulation Study
		Bike Route	Ongoing	No	Newtown Borough Open Space & Connectivity Plan
		Rapid Flashing Beacons Entire Length	Recommended	No	Comprehensive Plan

Street Name	Street Type	Safety Improvements	Priority	Implemented	Plan
		Bike Lanes: Entire Length	High Priority	No	Newtown Borough Integrated Transportation & Circulation Study
		Intersection With Jefferson St: Add Crosswalk	Recommended		Newtown Borough Integrated Transportation & Circulation Study
		Intersection With Jefferson St: Add Crossing Signs	Recommended	Yes	Newtown Borough Integrated Transportation & Circulation Study
		Add Sidewalks on One Side of the Street, Where Feasible (Between State St and Sterling St)	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
		Install Pedestrian Lighting (Between Greene St and Jefferson St)	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
		Utilize Speed Display Sign and Enforcement	Recommended	in the past; Awaiting	Newtown Borough Integrated Transportation & Circulation Study
		Intersection With Centre Ave: Conduct Intersection Analysis	Recommended	added as a result	Newtown Borough Integrated Transportation & Circulation Study
		Add On-street Parking Where Feasible	Recommended	Yes	Newtown Borough Integrated Transportation & Circulation Study
Lincoln Avenue	Borough Street - Minor Collector	Intersection with Penn St: Proposed Newtown Rail Trail Terminus (Newtown Rail Station Site)	Highest Priority	stop has been added	Newtown Borough Open Space & Connectivity Plan
		Pickering Field: Implement Walkway Around Park Perimeter That Connects to Lincoln Ave Sidewalk	Highest Priority	No	Newtown Borough Open Space & Connectivity Plan
		Acquire Newtown Artesian Water, Implement Pedestrian Connection to Pickering Field	Recommended	No	Newtown Borough Open Space & Connectivity Plan
		Lincoln Ave-Elm Ave Connector: Use Artesian Water Property Easement for Pedestrian Walkway	Highest Priority	No	Newtown Borough Open Space & Connectivity Plan
		Bike Route	Ongoing		Newtown Borough Open Space & Connectivity Plan
		At the Historic Fabian Mill Property, Extend a 5-foot Pedestrian Walkway from South Lincoln Ave across to the NRT	Lower Priority		Newtown Borough Open Space & Connectivity Plan
		Install Bike Lanes Along Lincoln Ave North of Washington Ave	Priority	No	Newtown Borough Comprehensive Plar

Street Section	Street Type	Safety Improvements	Priority	Implemented	Plan
		Intersection With Centre Ave: Revised Signal Timings, Textured Asphalt Intersection	High Priority	Revised Signal Timings - attempts have been made; Textured Asphalt - No	Newtown Borough Integrated Transportation & Circulation Study, Comprehensive Plan
		Intersection With Centre Ave: Add Pedestrian Phase to Signal Timing	Priority	No	Newtown Borough Comprehensive Plan
		From Penn St to Lincoln Ave: Add Pedestrian Crossing Signs	High Priority	Only at some intersections	Newtown Borough Integrated Transportation & Circulation Study
		Entire Length of South State St: Install Pedestrian Crossing Signs	Priority	Only at some intersections	Newtown Borough Comprehensive Plan
		From Penn St to Lincoln Ave: Install Pedestrian Crosswalks	High Priority	Installed at Court and State but not at all locations	Newtown Borough Integrated Transportation & Circulation Study
		Entire length of South State St: Install Pedestrian Crosswalks	Priority	Installed at Court and State but not at all locations	Newtown Borough Comprehensive Plan
South State Street (Southern Borough line to Washington	State Route -	Add On-street Parking Where Feasible	High Priority	No; attempts have been made	Newtown Borough Integrated Transportation & Circulation Study, Comprehensive Plan
Avenue)	Minor Arterial	Intersection With Centre Ave: Perform Traffic Analysis	Recommended	No - HIGH PRIORITY	Newtown Borough Integrated Transportation & Circulation Study
		Add Bike Racks Along Street	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
		Install Gateway Treatment at Southern End	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
		Utilize Speed Sign Display	Recommended	Yes	Newtown Borough Integrated Transportation & Circulation Study
		Install Rapid Flash Beacons	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
		Add Edge Line Striping	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
		Major Spine (On-road Bicycle Facility): SR 0513/0413 (Hulmeville Rd/Bellevue Ave/Pine St/Newtown-Langhorne Rd) - Cornwells Heights to Newtown Borough	Recommended	No	Bucks County Master Plan 2012
		Add Bike Racks Along Street	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
		Install Pedestrian Lighting	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
State Street (Washington	State Route -	Intersection With Green St: Install Bulb Outs/Curb Extensions	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
Avenue to Jefferson Street)	Major Collector	Intersection With Jefferson St: Install Bulb Outs/Curb Extensions	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
		Utilize Speed Display Sign	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
		Utilize Speed Display Sign	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study
State Street (Jefferson Street to Frost Lane)		Install Sidewalk Extensions on Eastside of North State St, North of Jefferson St	Medium Priority		Newtown Borough Open Space & Connectivity Plan

Street Name	Street Section	Street Type	Safety Improvements	Priority	Implemented	Plan
	Western Borough Line to State Street	State Route - Major Collector	Install Pedestrian Lighting	Recommended		Newtown Borough Integrated Transportation & Circulation Study
Jefferson Street			Install Center and Edge Line Pavement markings	Recommended		Newtown Borough Integrated Transportation & Circulation Study
	State Street to Lincoln Avenue	Borough Street - Minor Collector	Install Sidewalks	Recommended	south side of	Newtown Borough Integrated Transportation & Circulation Study

Street Name	Safety Improvements	Priority	Implemented	Plan	High Community Support (Newtown Borough Integrated Transportation and Circulation Study)
	Install Sidewalks	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	
	Jefferson St to Frost Ln: Install Centerline and Edge Line Pavement Markings	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	Y
Edgeboro Drive (Newtown Borough Integrated	Install Curve Warning Signs and Striping	Recommended	In parts; no striping	Newtown Borough Integrated Transportation & Circulation Study	
Transportation and Circulation Study may be refering to State Street Between Jefferson Street	Install Roadway Lighting at the Curve	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	Y
and Frost Lane)	Intersection at Frost Ln: Perform Intersection Analysis	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	
	Enforcement	Recommended	Ongoing	Newtown Borough Integrated Transportation & Circulation Study	
	Temporary Speed Humps	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	Υ
Linton Hill Road	Install Sidewalks	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	
	Install Sidewalks	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	Υ
	Study Converting into One-way	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	Y
	Install Curb Extensions	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	
	Utilize Speed Display Sign and Enforcement	Recommended	Yes, temporarily	Newtown Borough Integrated Transportation & Circulation Study	
	Install Crosswalks	Recommended		Newtown Borough Integrated Transportation & Circulation Study	

Street Name	Safety Improvements	Priority	Implemented	Plan	High Community Support (Newtown Borough Integrated Transportation and Circulation Study)
Penn Street	Install Temporary Speed Humps	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	Υ
	Intersection With Norwood Ave: Install Stop Bars	Recommended	Yes, at Penn and Norwood. Existing at Penn and Lincoln.	Newtown Borough Integrated Transportation & Circulation Study	Υ
	Intersection With Norwood Ave: Install Crosswalks	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	Υ
	Intersection With Elm Ave: Install Stop Bars	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	Y
	Intersection With Elm Ave: Install Crosswalks	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	Y
	1,130-foot sidewalk is proposed along Newtown Cemetery	Highest Priority	Along Elm? No	Newtown Borough Open Space & Connectivity Plan	
	Install Sidewalks	Recommended	Existing already on North Elm but no sidewalks on South Elm	Newtown Borough Integrated Transportation & Circulation Study	
Elm Avenue	Utilize Speed Display Sign	Recommended	Temporarily on Washington Ave east of Elm	Newtown Borough Integrated Transportation & Circulation Study	
	1,130-foot sidewalk is proposed along Newtown Cemetery	Highest Priority	No	Newtown Borough Open Space & Connectivity Plan	
Court Street	Intersection with Centre Ave: Perform Intersection Analysis	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	
Court Street	Install Curb Extensions/Bulb-outs	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	
Mercer Street	Install Sidewalks	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	

Street Name	Safety Improvements	Priority	Implemented	Plan	High Community Support (Newtown Borough Integrated Transportation and Circulation Study)
Norwood Avenue	Intersection With Lafayette Street: Perform Intersection Analysis	Recommended	No	Newtown Borough Integrated Transportation & Circulation Study	
	Frost Ln, between N. Lincoln Ave and Edgeboro Dr: 1,250-foot long sidewalk	Highest Priority	Pending decision from grant application	Newtown Borough Open Space & Connectivity Plan	
	Bike Route	Medium Priority	No	Newtown Borough Open Space & Connectivity Plan	
Frost Lane	Frost Lane Multi Use Trail: 8-foot Minimum Width Multi-use Trail and Bridge Connection Between Intersection of North State St/Frost Ln and North Sycamore	Medium Priority	Conversation currently resuming with Township	Newtown Borough Open Space & Connectivity Plan	
	Frost Lane Bicycle Route: Extend a proposed bicycle route along Frost Lane to its continuation along Durham Rd	Medium Priority	Conversation currently resuming with Township	Newtown Borough Open Space & Connectivity Plan	
	Pedestrian Bridge Restoration	Medium Priority	No	Newtown Borough Open Space & Connectivity Plan	

Appendix B: Site Visit Notes

Newtown Borough Safety and Walkability Review for Multimodal Improvements Site Visit Notes

Date: January 27, 2023 **Time:** 2:30 – 5:30 PM

Attendees:

Name	Title	Municipality/Company
Tara Grunde-McLaughlin	President of Council	Newtown Borough
Amy Lustig	Council Member	Newtown Borough
Don Hayden, Jr.	Walk Friendly Newtown	Newtown Borough
Courtney Lang	Walk Friendly Newtown	Newtown Borough
Chief Sabath	Police Chief	Newtown Borough
Christina Arlt	Project Manager	McCormick Taylor
Collin Hodges	Deputy Project Manager	McCormick Taylor
Erika Morgan	Planner	McCormick Taylor

Highlights:

- Don noted that the project needs to recommend implementable improvements.
- Courtney brought up the importance of phasing/prioritization and pairing with funding mechanisms.
- Coordination with PennDOT will be important in ensuring some design/calming recommendations on state roadways can be implemented.
- An incomplete sidewalk network can be an issue in various places throughout the Borough.
- The one pedestrian fatality in recent years occurred near the intersection of Washington Avenue and Court Street (just west of State St).
 - This crosswalk is heavily used.
- Aesthetics has been a contentious issue in some road safety improvements.
- The curve to the north of State Street is space-constrained and a challenge for pedestrians to navigate.
- New traffic signal with leading pedestrian interval will be installed at Washington Ave & Lincoln Ave in Spring 2023.
 - Many car crashes and near misses at this intersection.
 - o Improper right on red turning behavior due to excess roadway space at intersection.
 - SEPTA Route 130 stop.
- Traffic signal timing may have an impact on driver behavior/frustration on Washington Ave.
 - o Possible to add exclusive pedestrian phase?
- Lincoln Avenue is a wide street with many vehicles speeding.
 - Few pedestrian crossings, parking lanes on both sides that are underutilized.
 - Question: how much does it cost to maintain green paint on bike lanes?

This depends upon the type of material used. Green paint on bike lanes is usually only recommended at intersections and conflict points, which reduces upkeep (i.e., lower cost than a full bike lane corridor marked with green paint).

• Some resources:

- https://nacto.org/publication/urban-bikeway-designguide/bikeway-signing-marking/colored-pavement-materialguidance/
- http://pedbikesafe.org/bikesafe/countermeasures_detail.cfm?C
 M NUM=38
- No pedestrian crossing markings or stop controls at Lincoln Ave & Summit Ave, however many schoolchildren from Goodnoe Elementary use this crossing.
 - Summit Avenue, the street schoolchildren walk to access this intersection, has no sidewalks.
 - Potential solution: connection could be made to N Lincoln Ave from N Elm Ave via existing public right-of-way between 202 N Elm and 186 N Elm. This right-of-way ends at the Newtown Artesian Water Co property, so McCormick Taylor has contacted Bucks County Planning Commission for details regarding any easements on the Newtown Water Co property that could allow a walking path to make this connection.
- There is a crosswalk at N Elm and Washington Ave at the edge of Newtown Borough with higher-speed vehicles and driver yielding compliance can be poor.
 - Newtown Township recently reduced speed limit at this gateway from 35mph to 25mph in an attempt to help with this issue.
- The proposed Newtown Rail Trail terminus is at E Penn Street and S Lincoln Ave.
- Question: do "Park Zones" or "Playground Zones" exist the same way that Safe Routes to School Zones exist?
 - McCormick Taylor is not aware of anything like this, however the team will research further.
- E Penn Street west of S Chancellor St switches from two-way traffic east of S Chancellor to one-way traffic west of S Chancellor. There are "Do Not Enter" signs on both sides of the street, but there is no physical barrier (curb bulb out; flexible bollards) in the street to indicate that traffic is now one way.
- State Street is a very busy, pedestrian-oriented commercial corridor with pedestrian safety issues. Lots of pedestrian traffic crossing from restaurants and stores on one side of street to the other. The corridor also has low lighting levels that can result in poor nighttime visibility.
 - There is a desire for a mid-block crosswalk near 21 S State Street.
- <u>Steepleview Phase II</u> on State Street needs to be considered in this project, particularly new/modified access points.

Detailed Notes:

- Introductions
- The site visit opened with a half hour discussion inside Newtown Borough Hall. All participants explained what they are hoping to get out of the study.
 - o Don is concerned about what can actually be implemented. Focus on this.
 - Prioritize projects and define how prioritized.
 - o Funding:
 - Identify funding sources.
 - Look at main/major funds are available and see how they fit into this study.
 - Newtown Twp lowered the speed limit from 35mph to 25mph approaching the Borough from the east on Washington Avenue.
 - Many people walk and run in the borough or walk their dogs—some people even drive from other communities to walk their dogs in Newtown.
 - Passionate about community safety.
 - Courtney is concerned about the order that Newtown gets things done (prioritization/phasing). It's important to understand why things should be done in a certain order.
 - Funding mechanisms are also important.
 - Don: there are improvements that can and should be made on State & Washington, which now as a speed limit of 25 mph.
 - Concern about state roads and PennDOT not being willing to accept certain traffic calming measures on roads they own.
 - Courtney: adding changes in one area might have spillover effects in other areas. For example, if improvements are made near the school, other streets might see more traffic.
 - Don: importance of aesthetically attractive improvements (aesthetics AND safety). For example, there was discussion about the new traffic signal at Lincoln & Washington neighbors were concerned about the aesthetics of the new traffic light.
 - Sidewalks on Frost Lane.
 - Lighting important, however residents don't want bright streetlights shining into their yards.
- Washington Ave, east of State Street
 - Site of only pedestrian fatality in recent years.
 - Chief Sabath explained that the older gentleman was walking NW from the church parking lot from the Court Street intersection towards Rocco's in the dark. Police estimate the driver who struck him was traveling westbound at approximately 32 mph. Headlight glare from eastbound traffic may have contributed.
 - The group discussed intersections in town that are missing crosswalks on all legs of the intersection. One participant mentioned Green & Penn only has crosswalks on 3 sides.
 - The light that controls the intersection at Washington & State is controlled by the light in Newtown Twp at Sycamore & Washington.
 - State & Washington backs ups and cars drive quickly because of frustration at having to wait through multiple light cycles.

- Crosswalk at Court Street and Washington is heavily used. Cars are often stopped westbound and people think it is safe to cross, but eastbound traffic is still coming quickly.
- o Parents with strollers complain about sidewalk width.
- In-road traffic sentinels are deployed seasonally along Washington Avenue (also on State Street).
- Washington Ave & Chancellor St
 - Chancellor Street is wide, encourages speeding.
- Lincoln & Washington
 - Drivers speed through light.
 - Many car crashes and near misses at this intersection.
 - New traffic signal with leading pedestrian interval will be installed in Spring 2023.
 - Currently, yellow light is short.
 - Existing leading pedestrian interval is turned off because "no one uses it".
 - Sequencing of this Borough light controlled by Newtown Township and has no bearing on build of traffic at Washington Ave and State St. Look into revising light sequencing.
 - o Route 130 SEPTA bus stop.
 - o No sidewalk on east side of Lincoln Ave until about 27 N Lincoln Ave.
 - o Lincoln is long, broad, and wide. Goes downhill southbound.
 - Incentivizes speeding.
 - o Light at this intersection also controlled by Newtown Township.
 - Current ped buttons "don't do anything."
 - People use excess space at the intersection that results from on-street parking areas as a "turn lane" from Washington onto Lincoln, even though none are striped.
 - There is no "No Turn on Red" sign at State Street
 - On-street parking space is infrequently used. However, there are several funeral homes on Lincoln that don't have parking on the parcel; need to retain parking for funeral mourners.
 - o Lincoln might be wide enough for a bike lane.
 - Bus might interfere with curb bump outs unless
 - O Question: how much does it cost to maintain green paint on bike lanes?

This depends upon the type of material used. Green paint on bike lanes is usually only recommended at intersections and conflict points, which reduces upkeep (i.e., lower cost than a full bike lane corridor marked with green paint).

- Some resources:
 - https://nacto.org/publication/urban-bikeway-designguide/bikeway-signing-marking/colored-pavement-materialguidance/
 - http://pedbikesafe.org/bikesafe/countermeasures_detail.cfm?C
 M NUM=38
- Lincoln & Greene
 - o Greene Street does not have sidewalks east of Lincoln; people walk in the street.
- Newtown Borough is a "Tree City USA" and doesn't want to cut down mature trees.

- Most homes in Newtown have driveways or garages
- Brynwood Lane might take issue with a pedestrian path between N Elm and N Lincoln Ave
- Lincoln & Jefferson
 - Three-way intersection, with one stop sign at Jefferson St.
 - There is a ballfield (Pickering Field)—there is a seasonal need for parking in this area during baseball season.
 - Children walk from west of Lincoln Ave along Jefferson St to Goodnoe Elementary School. No direct safe route to school.
 - Consider adding a 4-way or a 3-way stop because of kids walking to/from school.
 - o Drivers reach peak speed near Jefferson on Lincoln; need to break the flow of traffic.
 - There are white "Accutrack" lines north of Jefferson on Lincoln that the police use for measuring speed.
 - The hedge at the north end of Pickering Field is the dividing line between Newtown Twp and Newtown Borough.
 - Borough may like to use an easement on the Newtown Artesian Water to make pedestrian walkway between Lincoln Ave and Elm Ave. This would create a safer and more direct route from residential area and park west of Lincoln Ave with to the school and residential area east of Lincoln Ave.
 - Jefferson is a narrow, two-way street causing drivers to drive slowly and "car jockey" stop to let oncoming driver continue to drive. Concerns about car jockeying hitting parked cars.
 - Parking on both sides.
 - Can parking be limited to limit "car jockeying"?
 - Parked cars can be a way to calm traffic, this situation may be resulting in lower speeds than otherwise would occur.

• Lincoln & Summit

- o Pickering Manor Assisted Living facility is on west side of intersection.
- Students walk westbound on N Elm and westbound on Summit Ave to get home from Elementary School.
- There are no sidewalks on Summit Ave.
- No crosswalk at this intersection.
- Summit Ave is a Newtown Township roadway, but most of the students who are walking home are Newtown Borough students.
- Suggested alternative: add walking path through Newtown Artesian Water Co property and then between 202 and 186 N Elm Ave.
 - There is existing public right-of-way between 202 N Elm and 186 N Elm that ends at the Newtown Artesian Water Co property.
 - McCormick Taylor has contacted Bucks County Planning Commission for details regarding any easements on the Newtown Water Co property.

Andrew Drive and N Elm Ave

- Cars park on both sides of N Elm Avenue west of Andrew Drive as parents wait to pick up children from school.
- o The crosswalk across Andrew Drive encourages students to walk but then the sidewalk ends at the border of Newtown Twp & Newtown Borough on Summit Ave.

- N Norwood Ave and E Washington Ave
 - Not as many children crossing here now as during the pandemic when school district had tremendous issues with their bus company. They have since hired a new company.
- Norwood Ave & Penn St
 - School bus stop located here.
- Norwood Ave & Lafayette St
 - Stop sign on Norwood Ave.
 - Suggestion to add stop signs on Lafayette St to make four-way stop intersection.
- Norwood Ave & Sterling St
 - Stop sign on Norwood Ave.
 - Suggestion to add stop signs on Sterling St to make four-way stop intersection.
- S Elm Ave between Washington & E Penn St
 - People walk their dogs in the cemetery and along the grassy strip next to the cemetery on the east side of S Elm Ave.
 - o Participant mentioned drivers running stop signs in this area.
 - Utility line is a possible conflict for excavations for sidewalks.
- E Penn Street
 - Residents complain about lots of through traffic going to the industrial park and the bypass.
 - o No sidewalks on E Penn Street between S Elm Ave and S Norwood Ave.
 - Participants mentioned that cars sometimes go too fast near school buses.
- E Penn Street and S Lincoln Ave
 - High complaint area.
 - o Former SEPTA station was located here.
 - o Proposed Newtown Rail Trail start/terminus.
- E Centre Ave and S Lincoln Ave
 - High complaint area
- E Centre Ave and S Congress Ave
 - High complaint area
- State & Jefferson
 - High complaint area
- Question: do "Park Zones" or "Playground Zones" exist the same way that Safe Routes to School Zones exist?
 - McCormick Taylor is not aware of anything like this, however the team will research further
- There is a graphic designer who is willing to design new "Slow Down for Newtown" yard signs—they were extremely popular years ago when they were given out.
- E Penn Street west of S Chancellor St
 - Switches from two-way traffic east of S Chancellor to one-way traffic west of S
 Chancellor. There are "Do Not Enter" signs on both sides of the street but there is no
 physical barrier (curb bulb out; flexible bollards) in the street to indicate that traffic is
 now one way.
- S Congress Street north of Penn has the library and Friend Village senior housing.
- Newtown's grant writing is done by RVE since February 2022.

- Penn & State
 - Can't add a crosswalk because of drainage issues.
- Steepleview Phase II
 - West side of South State Street near E Penn St.
 - Overflow parking from Steepleview will be 2 blocks south of the development (near S State Street and Sterling).
- South of Newtown Borough
 - o George School has a pedestrian bridge over the bypass.
 - Lots of residential and day students.
 - Students walk north on State Street to get Starbucks, bubble tea, etc.
- Development on east side of 200 block of S State street is separate from Steepleview.
- State St & Centre Ave
 - Two crashes involving pedestrians:
 - From Centre Ave, driver turned left on to State St and hit pedestrian in crosswalk.
 - From State St, driver turned left on to Centre St and hit pedestrian in crosswalk.
- State Street between Centre Ave and Washington Ave
 - Lots of pedestrian traffic crossing from restaurants and stores on one side of street to the other.
 - o There is a desire for a mid-block crosswalk near 21 S State Street:
 - Would need to be lined up with sidewalk between businesses on west side of street that leads to parking area behind buildings on the west side of the street.
 - Would need to be a raised crosswalk to deal with grade issues (east sidewalk requires step down to road).

Appendix C: Social Media Posts and Flyers

Example social media posts from the survey campaign



How can we improve walking and biking in Newtown Borough?

WE WANT TO HEAR FROM YOU!

TAKE OUR ONLINE SURVEY

bit.ly/NewtownSurvey







SURVEY ENDS JUNE 30

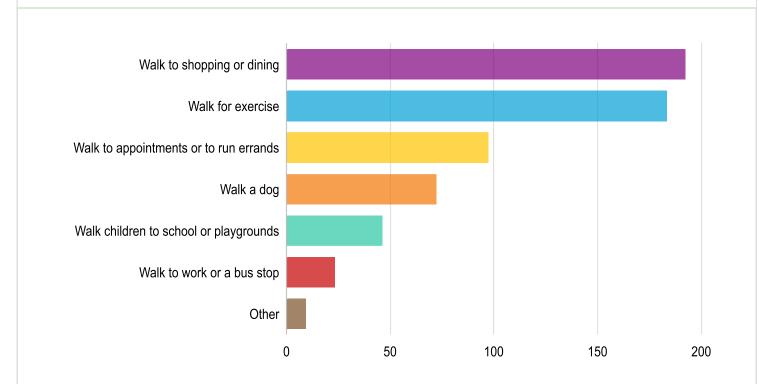


Help Newtown Borough and Walk Friendly Newtown spread the word!

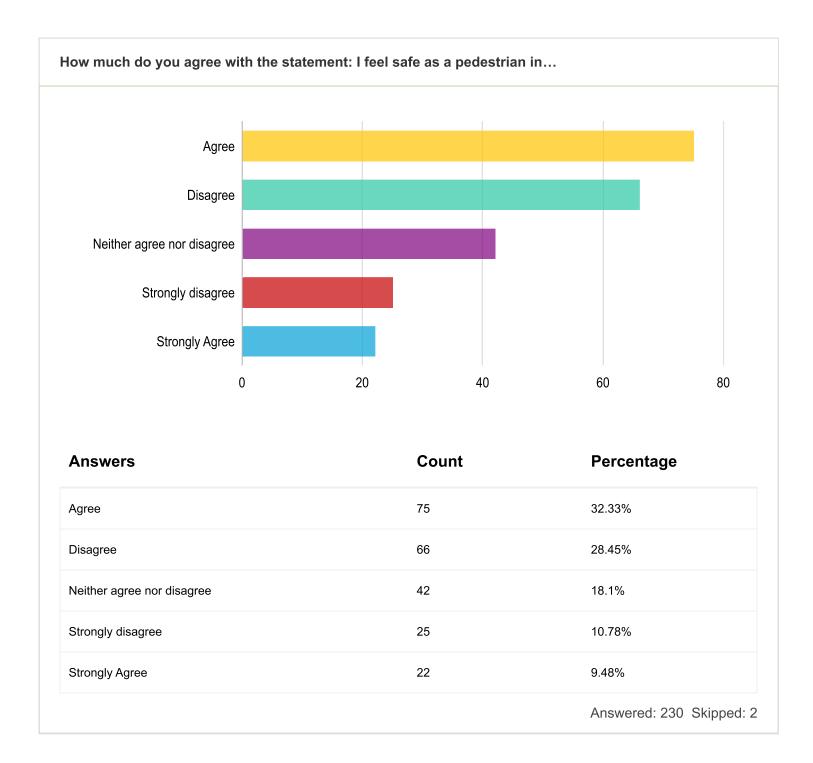
Share the link with your neighbors!

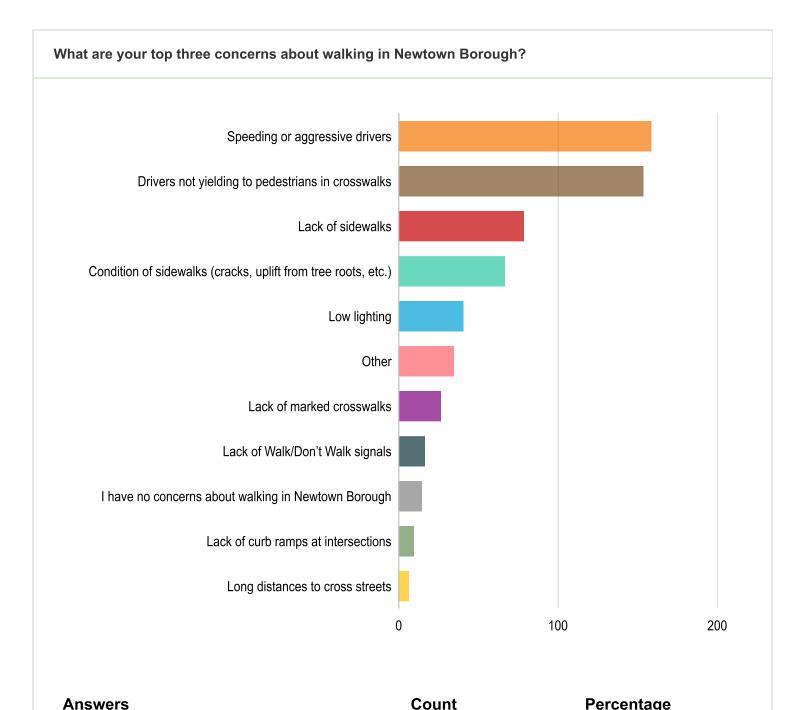
Appendix D: Online Survey Results

What are your top three reasons for walking in Newtown Borough?



Answers	Count	Percentage
Walk to shopping or dining	192	82.76%
Walk for exercise	183	78.88%
Walk to appointments or to run errands	97	41.81%
Walk a dog	72	31.03%
Walk children to school or playgrounds	46	19.83%
Walk to work or a bus stop	23	9.91%
Other	9	3.88%
		Answered: 231 Skipped: 1

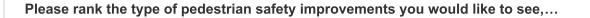


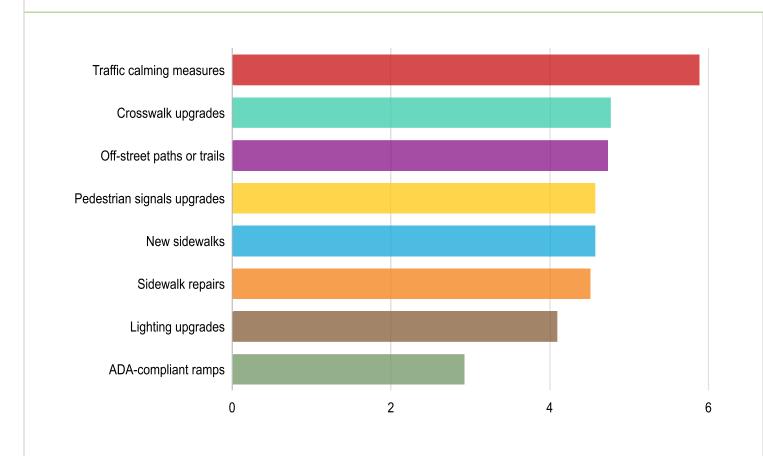


7.110.11010		r oroomago
Speeding or aggressive drivers	158	68.1%
Drivers not yielding to pedestrians in crosswalks	153	65.95%
Lack of sidewalks	78	33.62%
Condition of sidewalks (cracks, uplift from tree roots, etc.)	66	28.45%

Low lighting	40	17.24%
Other	34	14.66%
Lack of marked crosswalks	26	11.21%
Lack of Walk/Don't Walk signals	16	6.9%
I have no concerns about walking in Newtown Borough	14	6.03%
Lack of curb ramps at intersections	9	3.88%
Long distances to cross streets	6	2.59%

Answered: 231 Skipped: 1





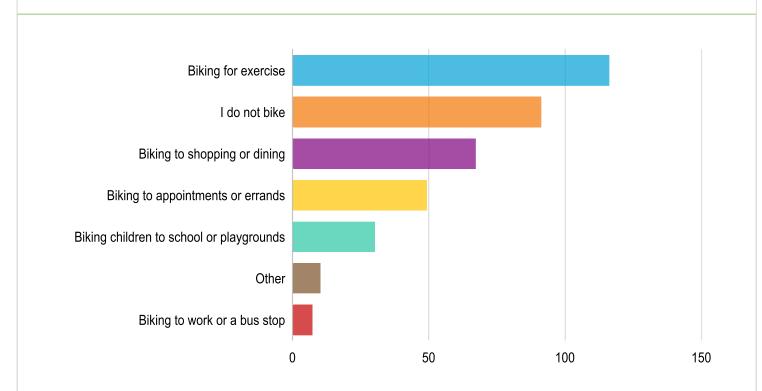
Rank	Answers	1	2	3	4	5		Average score
1	Traffic calming measures	37.27%	15.45%	11.82%	10%	5%	7.27%	5.45% 5.88
'	Traine callling measures	82	34	26	22	11	16	
2	Crosswalk upgrades	7.73%	12.73%	19.55%	16.82%	15.45%	13.18	4.76
2	Crosswaik upgrades	17	28	43	37	34		4.70
3	Off-street paths or trails	14.09%	16.36%	12.27%	15.45%	7.27%	6.82%	16.82% 4.72
3	On-street patris or trails	31	36	27	34	16	15	
4	Pedestrian signals	6.82%	13.64%	15.91%	14.55%	16.36%	15	4.57
4	upgrades	15	30	35	32	36		4.57
5	New sidewalks	18.64%	10.45%	10.45%	7.27%	15%	12.27%	12.27% 4.56
J	ivew sidewains	41	23	23	16	33	.27	27

6	Sidewalk repairs	9.09%	15% 33	13.18% 29	10.45% 23	15.45% 34	14.09	4.50

Answered: 220 Skipped: 12

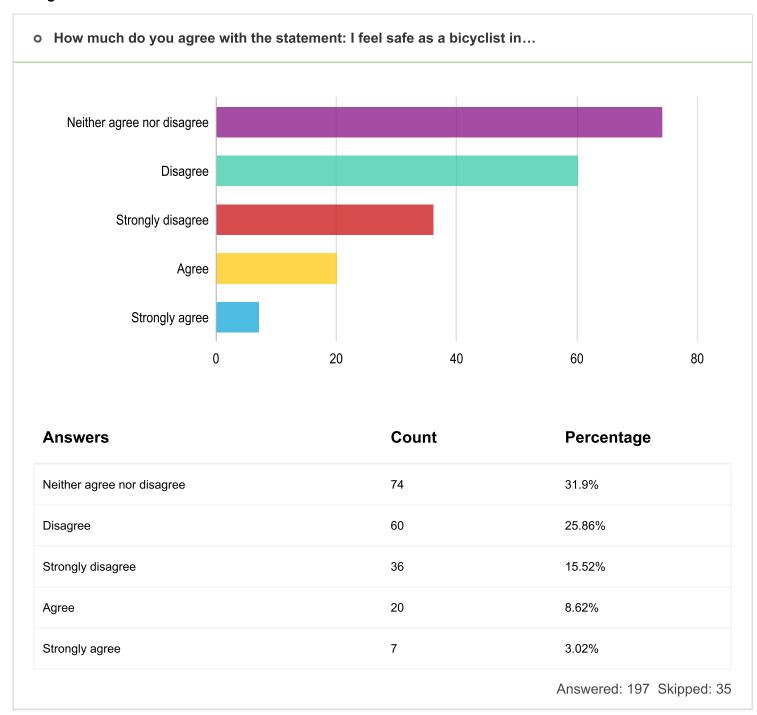
Biking





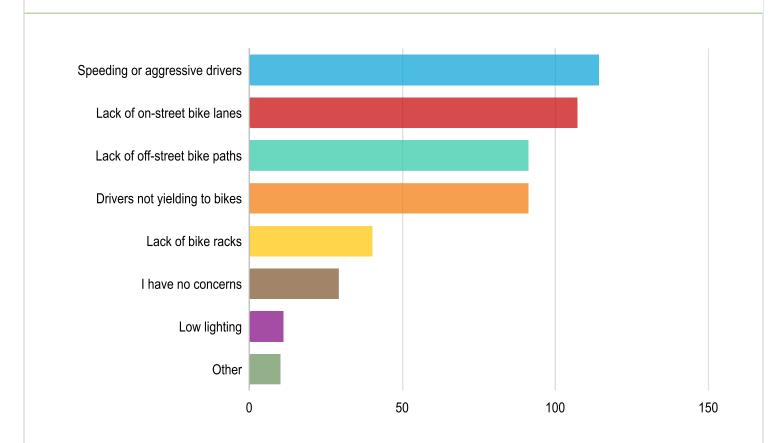
Answers	Count	Percentage
Biking for exercise	116	50%
I do not bike	91	39.22%
Biking to shopping or dining	67	28.88%
Biking to appointments or errands	49	21.12%
Biking children to school or playgrounds	30	12.93%
Other	10	4.31%
Biking to work or a bus stop	7	3.02%
		Answered: 224 Skipped: 8

Biking



Biking

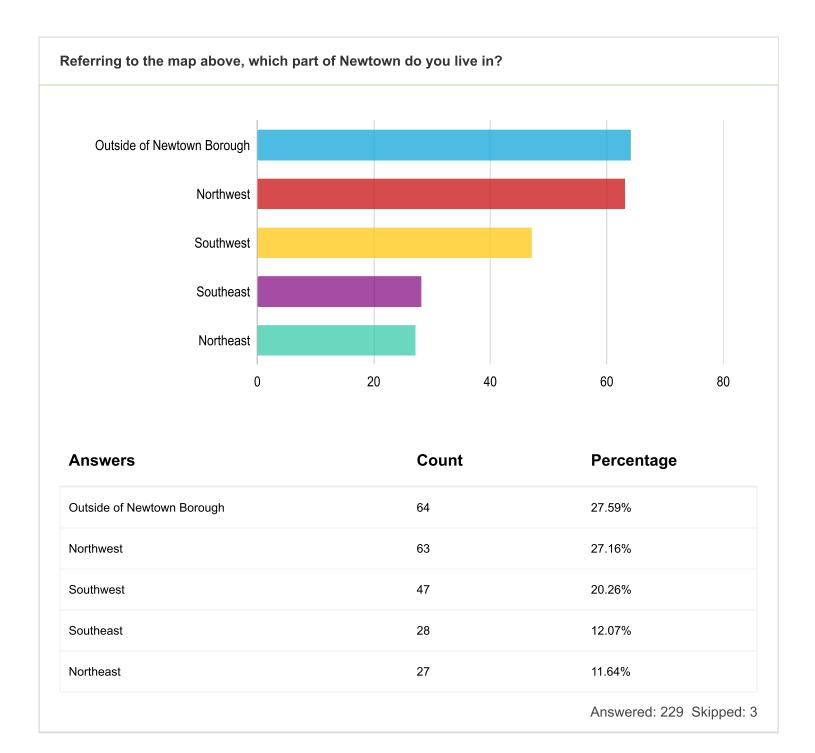
o What are your primary concerns about BIKING in Newtown Borough?

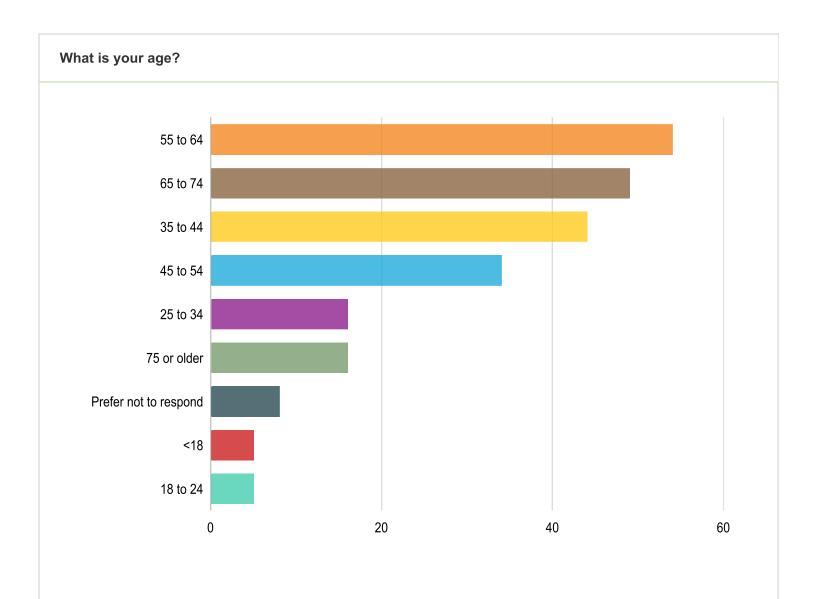


Answers	Count	Percentage
Speeding or aggressive drivers	114	49.14%
Lack of on-street bike lanes	107	46.12%
Lack of off-street bike paths	91	39.22%
Drivers not yielding to bikes	91	39.22%
Lack of bike racks	40	17.24%
I have no concerns	29	12.5%
Low lighting	11	4.74%

Other 10 4.31%

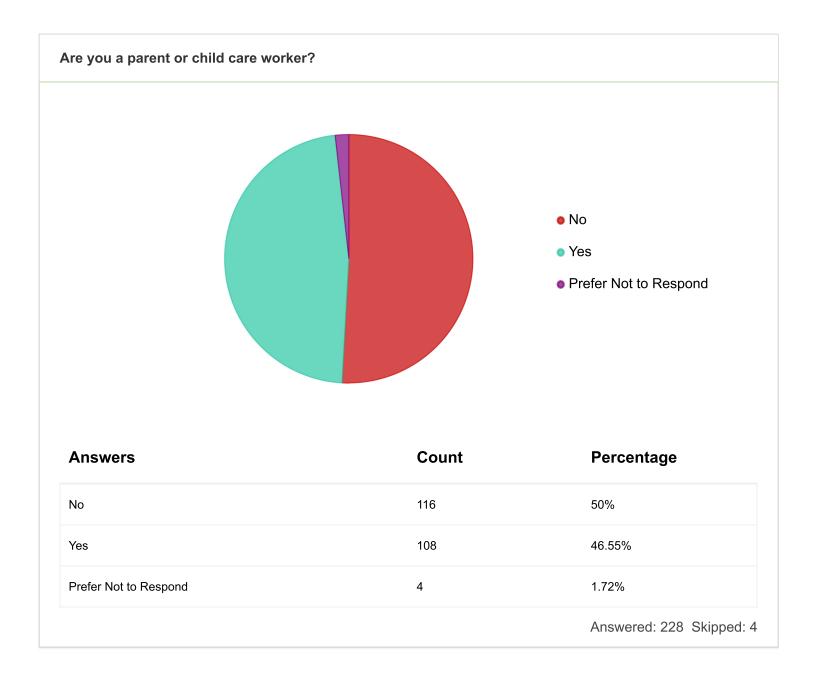
Answered: 193 Skipped: 39

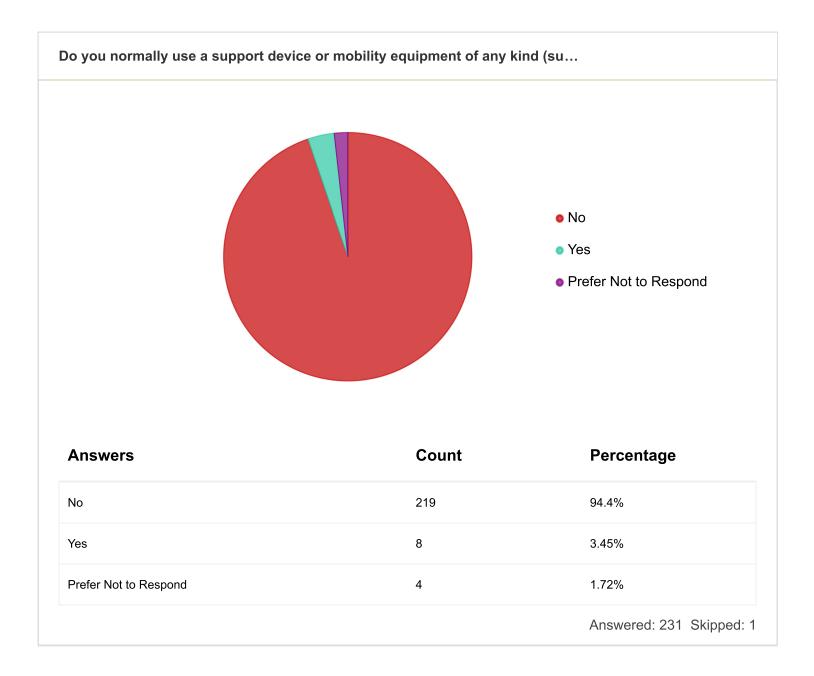




Answers	Count	Percentage
55 to 64	54	23.28%
65 to 74	49	21.12%
35 to 44	44	18.97%
45 to 54	34	14.66%
25 to 34	16	6.9%
75 or older	16	6.9%

Prefer not to respond	8	3.45%
<18	5	2.16%
18 to 24	5	2.16%
		Answered: 231 Skipped: 1





Appendix E: Online Survey Open-Ended Results

Walking			
Other - What are your top three concerns about walking in Newtown Borough? (multiple choice fill in)			
Number	of Comments: 17		
Drivers Not Stopping at Stop Signs/Red Lights	7		
Speeding	3		
Lack of Sidewalks/Lack of Contiguous Sidewalks	2		
Drivers Not Yielding to Pedestrians in Crosswalks	2		
Lack of Enforcement	2		
Distracted Driving	2		
Dangerous Road Design	2		
Other	2		
noperable Pedestrian Signals 1			
Lack of Accessible Pedestrian Signals	1		

If you answered "Other" for top walking concerns, please provide more detail on your concern. (open ended)				
Number of Comments: 35				
Drivers Not Stopping at Stop Signs/Red Lights	10			
Lack of Enforcement	6			
Other	5			
Blocked Sidewalks	4			
Speeding	4			
Lack of Safe Pedestrian/Bike Connections Between Borough and				
Township	3			
Drivers Not Yielding to Pedestrians in Crosswalks	3			
Road Safety Education Needed	3			
Distracted Driving	3			
Lack of Sidewalks/Lack of Contiguous Sidewalks	2			
Lack of Marked Crosswalks	2			
Blocking the Box	2			
Aggressive Driving	2			
Cut-through Drivers	2			
Lack of Curb Ramps at Intersections	1			
Condition of sidewalks (cracks, uplift from tree roots, etc.)	1			
Roads Unsafe for Cyclists	1			
Car Congestion	1			

If you answered "Other" for top walking concerns, please provide more detail Streets Mentioned (open ended)			
Number of C	Comments: 20		
State Street	5		
Newtown Borough Bypass	4		
Buck Road	3		
Washington Avenue	3		
Congress Street	2		
Jefferson Street	1		
Lincoln Street	1		
Center Avenue	1		
Sycamore Street	1		
Maple Avenue	1		
Norwood Street	1		
Frost Lane	1		
Liberty Street	1		
Newtown Pike	1		
Main Drive	1		
Richardboro Road	1		
Penn Street	1		
Greene Street	1		
Eagle Road	1		

Chi	ildren	
If you are a parent or child care worker, what are your o	oncerns about children walking or biking independently in	
Newtown? (open ended)		
Number of Comments: 76		
Speeding	24	
Roads Unsafe for Cyclists	23	
Drivers Not Yielding to Pedestrians in Crosswalks	19	
Drivers Not Stopping at Stop Signs/Red Lights	14	
Distracted Driving	12	
Lack of Sidewalks/Lack of Contiguous Sidewalks	11	
Road Safety Education Needed	8	
Lack of Stop Signs	7	
Aggressive Driving	7	
Car Congestion	7	
Lack of Pedestrian Signals	6	
Lack of Enforcement	6	
Lack of Marked Crosswalks	5	
Condition of sidewalks (cracks, uplift from tree roots, etc.)	2	
Low lighting/Need Street Light	2	
Dangerous Road Design	2	
Cut-through Drivers	2	
Lack of Curb Ramps at Intersections	1	
Mid-block Crossing		
IVIII - DIOCK CI 033III g	1	
Wrong Way Drivers	1	

If you are a parent or child care worker, what are your concerns about children walking or biking independently in Newtown? -- Streets Mentioned (open ended)

Number of Comments: 21		
Washington Ave	9	
State St	7	
Edgeboro Rd	5	
Lincoln St	4	
Jefferson St	3	
Frost Ln	3	
Chancellor St	3	
Congress St	2	
Linton Hill	2	
Center Ave	1	
Penn St	1	
Goodnoe St	1	
Court St	1	
Terry Drive	1	
Pheasant Run	1	
Friends Lane	1	
Penns Trail	1	

Biking

What are your primary concerns about BIKING in Newtown Borough? (multiple choice -- fill in)

Number of Comments: 7		
Not Enough Space on Road for Cyclists	2	
Lack of Bike Lanes	1	
Lack of Signage	1	
Visibility of Road Paint	1	
Lack of Enforcement	1	
Drivers Don't Yield to Cyclists	1	
Traffic Congestion	1	

What are your primary concerns about BIKING in Newtown Borough? Streets Mentioned (multiple		
Number of Comments: 1		
Edgeboro Road	1	
State Street	1	

Web Map Where in Newtown Borough can improvements be made to make walking and bicycling safe? **Number of Comments: 65** 28 Speeding Lack of Sidewalks/Lack of Contiguous Sidewalks 16 Drivers not yielding to Pedestrians in Crosswalk 14 Drivers not stopping at Stop Signs/Red Lights 13 6 **Blocked Sidewalks** 4 **Lack of Marked Crosswalks Lack of Curb Ramps at Intersections** Low lighting/Need Street Light Dangerous Road Design

Car Congestion

2



