

PEDESTRIAN SAFETY IN THE TOWN OF PELHAM

NYMTC COMMUNITY PLANNING WORKSHOP

AUGUST 2025



COMMUNITY
PLANNING WORKSHOP

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Rutgers-POET

Miriam Salerno, Managing Director, Public Outreach and Engagement Team (POET)
Jacob Thompson, Research Project Coordinator
Jesika Tixi, Research Project Coordinator
Fatima Oliva, Research Project Coordinator
Cate Heady, Research Project Coordinator

NYMTC

David Drita, Project Manager for the Community Planning Workshop Program
Amaury Medina, Transportation Analyst

Jacob Thompson, Research Project Coordinator at the Alan M. Voorhees Transportation Center (VTC), served as project manager for this planning effort and led the preparation of this report. Cate Heady, Research Project Coordinator; Bonnie Kennedy, Marketing Assistant; and Kiara Ryan, Research Project Coordinator, also prepared visual design, layout, and graphics. Caroline Grant, Graduate Student Research Assistant at VTC, made invaluable contributions to the project's outreach efforts and data analysis.

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ABOUT NYMTC

The New York Metropolitan Transportation Council (NYMTC) is the Metropolitan Planning Organization (MPO) for New York City, Long Island, and the Lower Hudson Valley region. NYMTC's planning area includes 2,440 square miles and a 2020 population of 13.17 million, approximately 65% of New York State's population and 4% of the nation's population. As an MPO, NYMTC provides a collaborative planning forum to address transportation-related issues, develop regional plans, and make decisions using federal transportation funds for its jurisdiction. As a follow-up to their recent long-range regional transportation plan, *Moving Forward*, NYMTC has partnered with The Public Outreach and Engagement Team at the Voorhees Transportation Center at Rutgers University (Rutgers-POET) to plan and execute Community Planning Workshops in municipalities throughout the NYMTC region. These workshops will serve as informative catalysts and aid in advising future infrastructure projects in the participating municipalities. This report will outline the Community Planning Workshop results and recommendations for one of the communities in this series: The City of Mount Vernon, The Village of Pelham, and The Village of Pelham Manor.



ABOUT *MOVING FORWARD*

Moving Forward is the long-range regional transportation plan for fiscal years 2022-2050 for the NYMTC planning area; it is one of the four planning products NYMTC is federally required to produce as part of the metropolitan transportation planning process to secure federal funding for the region. The Plan currently fulfills federal planning requirements and maintains NYMTC's eligibility for federal funding for transportation planning and improvement projects. *Moving Forward* is a blueprint to help support sustainable growth and guide transportation investment in the region; it includes forecasts for future conditions and needs and potential transportation improvements and outlines a shared strategic vision for transportation and development within the NYMTC planning area. *Moving Forward* has outlined six Coordinated Development Emphasis Areas (CDEAs) as a targeting mechanism to guide the planning process in communities seeking transportation planning assistance from NYMTC.

- ♦ Encourage development in centers and downtowns to reinforce walkable, aesthetically pleasing, and transit-accessible environments.
- ♦ Include local transportation issues in comprehensive/master planning and community visioning processes.
- ♦ Make walking safer and more convenient through safety and streetscape improvements.
- ♦ Support downtown development/redevelopment.
- ♦ Encourage walkability, Complete Streets, and remote parking in targeted centers.
- ♦ Complete and distribute the MTA First Mile/Last Mile Station Access Toolkit.

ABOUT COMMUNITY PLANNING WORKSHOPS

The Community Planning Workshops Program provides technical assistance to municipalities in line with the *Moving Forward* regional transportation plan. The workshops target municipalities and New York City community boards in the NYMTC planning area. Workshop topics and locations are established through NYMTC's member agencies using the Coordinated Development Emphasis Areas (CDEAs) identified in NYMTC's Regional Transportation Plan and the congested roadway corridors and bottleneck locations in NYMTC's 2021 Congestion Management Process (CMP) Status Report as targeting mechanisms. Workshop topics can cover various issues, including expanding non-motorized transportation, transit-oriented development, parking management, safety audits, reduced traffic congestion, and improved access to public transit.

**Grounded in Community.
Focused on the Future.**



TABLE OF CONTENTS

COMMUNITY PROFILE: THE STUDY AREA.....	6
Geographic Context of the Study Area	6
Community Stakeholders	7
Pelham Public Schools	7
Existing Conditions and Trip Patterns	10
Current Safety Conditions: Data Review	11
PROBLEM STATEMENT AND CURRENT CONDITIONS	12
Colonial Avenue and Wolfs Lane.....	14
Hutchinson River Parkway Underpass	15
Highland Avenue and East Sanford Boulevard	16
Crossing the Hutchinson River Parkway Ramps and Glover Field Entrance	17
PLANNING PROCESS AND PUBLIC ENGAGEMENT	18
Traffic Microsimulation Analysis using PTV VISSIM	18
Stakeholder Meetings	19
Community Planning Workshop	19
StoryMap and Community Questionnaire.....	20
StoryMap: Pedestrian Safety in Pelham and Mt. Vernon	20
Community Questionnaires	20
RECOMMENDATIONS AND COMMUNITY FEEDBACK	21
Summary of Recommendations	21
Recommendations that Span the Entire Corridor	25
Intersection Specific: Colonial Avenue and Wolfs Lane Intersection.....	27
Intersection Specific: Hutchinson River Parkway Underpass	30
Intersection Specific: East Sanford Boulevard and Highland Avenue	32
Intersection Specific: East Sanford Boulevard and Parkway On/Off Ramp and Glover Field Entrance	35
Reimagining and Redesign of the Corridor (with a roundabout).....	38
NEXT STEPS	40
Formal Studies	40
Outreach, Engagement, and Education	40
Cooperation Among Municipalities and Counties	40
Implementation	40
Cost Estimates	41



Tactical Urbanism.....	42
Temporary Demonstration and Pilot Projects.....	43
Safe Routes to School	45
Implementation Example: Installing New Crosswalks.....	46
FUNDING OPPORTUNITIES	48
Transportation Alternative Program	48
Other Opportunities	49
APPENDICES	50
Appendix A: Community Survey Summary	51
Appendix B: Outreach Materials.....	59
Appendix C: Stakeholder Meetings and Feedback	62
Appendix D: Community Planning Workshop Summary of Feedback	64
Appendix E: Pedestrian Bridges Memo	66
Appendix F: Pedestrian and Bicycle Funding Opportunities: US Department of Transportation Transit, Safety, and Highway Funds	69



COMMUNITY PROFILE: THE STUDY AREA

Colonial Avenue in Pelham, NY, reflects the charm and historical depth of a suburban enclave shaped by late 19th-century development. Nestled within the Village of Pelham, this street is lined with early 20th-century homes, mature trees, and civic landmarks like the Pelham Public Library, contributing to a cohesive and residential character. The area is governed by a local zoning code that emphasizes low-density residential use, and the Village's Building Department actively oversees architectural review and planning to preserve the neighborhood's historic charm.

In contrast, East Sanford Boulevard in Mount Vernon, NY, is zoned for commercial and industrial use, forming part of Mount Vernon's non-residential corridor. The area includes large-scale retail and industrial properties. Anchored by the recently renovated 250 East Sanford Boulevard property—a four-story, 110,000-square-foot industrial/flex facility—the area serves as a hub for logistics and research operations, with modern infrastructure including loading docks, drive-in access, and proximity to major transit routes. The built environment is auto-oriented, with limited pedestrian amenities compared to Pelham.

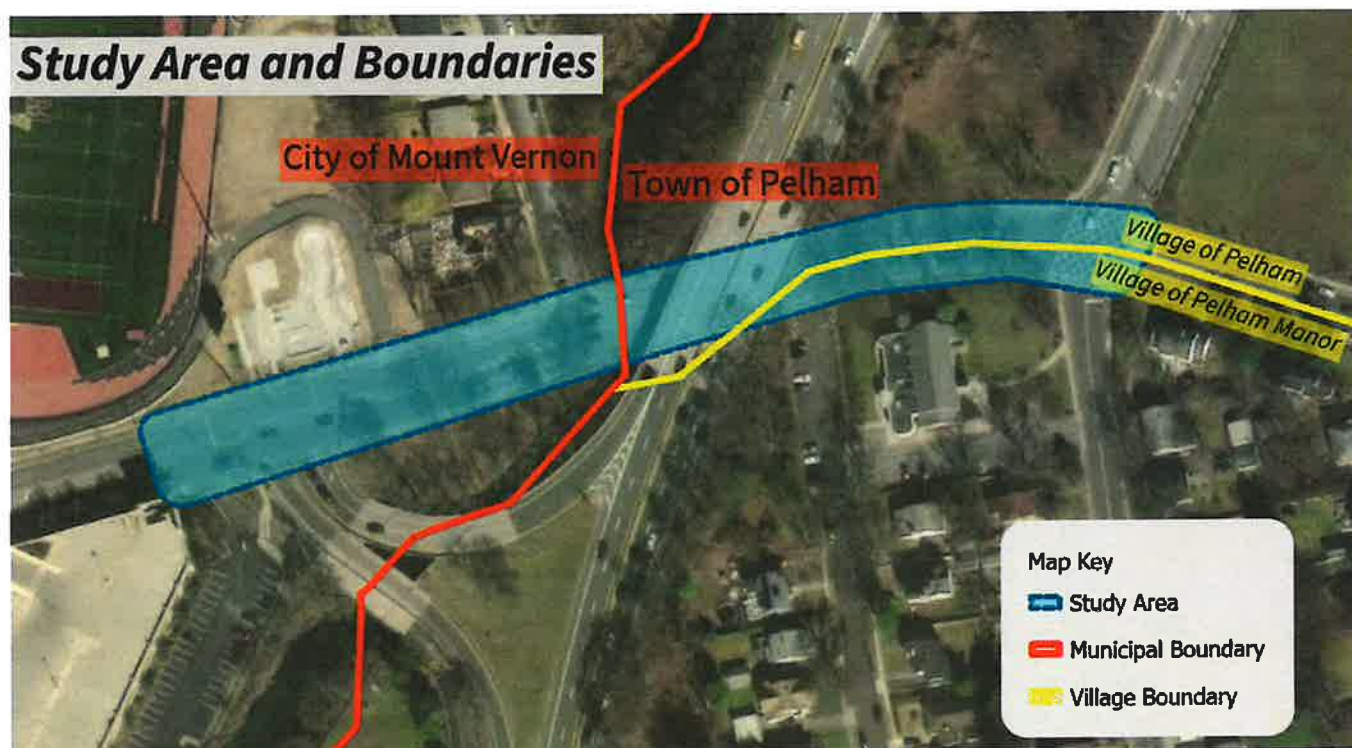


Figure 1: The Study Area contains two municipalities, Pelham (the Village of Pelham and Pelham Manor), and Mount Vernon, both located in Westchester County, New York.

GEOGRAPHIC CONTEXT OF THE STUDY AREA

The Study Area is a segment of Colonial Avenue/East Sanford Boulevard, extending from the Pelham Middle and High Schools complex in the east to the entrance of Glover Field in the west. This stretch is a former county road near the southern border of Westchester County and overlaps two municipalities, the Town of Pelham and the City of Mount Vernon. These

municipalities are divided by the Hutchinson River Parkway. Further, the Town of Pelham is itself divided into two villages: the Village of Pelham on the northern side of the Study Area and the Village of Pelham Manor on the southern edge.

The Study Area includes two busy intersections which Pelham students must traverse to access Glover Field, their athletic complex, for after-school sports:

- ♦ Colonial Avenue and Wolfs Lane in Pelham;
- ♦ East Sanford Boulevard and the Hutchinson River Parkway on/off ramps in Mount Vernon.

COMMUNITY STAKEHOLDERS

Pelham Public Schools

The principal point of contact for the project was the Pelham Public School District, which serves the entire Town of Pelham with four elementary schools, one middle school, and one high school. The Pelham Public School District identified two dangerous intersections along their Middle/High School students' walking route to the Glover Athletic Complex (Glover Field), which is approximately one-quarter mile from school grounds: Both intersections involve traffic coming from and going to the Hutchinson River Parkway, which is a major regional thoroughfare and contributes to a large share of local traffic. Subsequently, the Town of Pelham Board and School District contacted the County requesting a they conduct a study to determine the best solution for the pedestrian safety risks.

The Town of Pelham

Pelham is a suburban town of about 13,000 residents in Westchester County; it is located approximately 10 miles north of Manhattan. It is composed of the Village of Pelham and the Village of Pelham Manor. The distinction between the two villages is of particular importance to this project, as Colonial Avenue and its northern edge sidewalk are wholly under the Village of Pelham's jurisdiction, while the sidewalk on the southern edge is under Pelham Manor's jurisdiction. The boundaries are displayed in Figure 1.

The Village of Pelham

The northern half of the Town of Pelham is the Village of Pelham, which contains slightly over half the Town's population. The Village contains the district's high school, middle school, and two of its elementary schools. When considering the study area east of the Hutchinson River Parkway, the Village of Pelham is the area north of Colonial Avenue, and the roadway is under the Village's jurisdiction.

The Village of Pelham Manor

The Village of Pelham Manor comprises the lower portion of the Town of Pelham, and is the lower half of the study area, east of the Hutchinson River Parkway. While Pelham Manor contains about half the Town's population, it is significantly less dense than its northern counterpart. While similar in most aspects to the Village of Pelham, Pelham Manor has a much higher homeownership rate (92% to 71%), and has a smaller rate of participation in the labor force. The Glover Field Athletic Complex, which is the primary focus area, is located in Pelham Manor, west of the Hutchinson River Parkway.

The City of Mount Vernon

The City of Mount Vernon neighbors the Town of Pelham to the west, with the Hutchinson River Parkway defining most of the municipal boundaries. Mount Vernon has nearly six times the population of Pelham and is three times more densely populated. Its population is 62 percent Black or African American, while the Town of Pelham is 63 percent non-Hispanic white. Homeownership rate and median home values in Mount Vernon are about half of those in the Town of Pelham; 14 percent of its population lives in poverty compared to three percent in Pelham, and median household income is about three times lower. Both municipalities' populations increased over five percent between 2010 and 2020, each with dramatic population spikes in 2020. Table I illustrates the different characteristics between the municipalities.

Table I: Demographic Characteristics of Pelham Village, Pelham Manor, and Mount Vernon, NY. Source: United States 2020 Census.

	Pelham Village	Pelham Manor	Mount Vernon
Total Population	7,261	5,682	72,817
Median Income	\$172,692	\$250,000+	\$75,511
Total Number of Households	2,244	1,977	28,778
Median Age	38	41	42
Population 65 and over	12.4%	14.4%	15.2%
Race			
White only (non-Hispanic)	63.3%	76.3%	12.3%
Black or African American	8%	2.9%	62.4%
American Indian or Alaska Native	>1%	>1%	>1%
Asian	7.3%	5.5%	2%
Native Hawaiian or Other Pacific Islander	>1%	0%	>1%
Other Race	6.9%	2.9%	11.3%
Two or More Races	11.3%	10%	9.6%
Hispanic or Latino	14.9%	9.8%	19%

Westchester County

The Westchester County Transportation Board “advises the county executive and commissioner of transportation on public surface transportation matters... and is instrumental in preparing the annual department budget and capital project requests” (Westchester County, n.d.). The Westchester County Department of Public Works and Transportation manages the Bee-Line System, which is a transit network spanning Westchester County, Bronx, Manhattan, and Putnam County and serves over 27 million passengers annually.

The Community Planning Workshop Program (CPW) team always includes the counties in individual projects, not only because these projects often contain County Routes, but also because the Counties have helped play instrumental roles in mediating and coordinating efforts to get projects funded and approved following the workshops. In this case of the Pelham and Mount Vernon CPW, Westchester County helped coordinate efforts between the various jurisdictions and provided critical information about past and ongoing projects in the study area, as well as providing invaluable feedback on the CPW team's recommendations. Of note, the study area corridor was previously a County Route, but jurisdiction was handed over to the individual municipalities several years ago. However, given their previous ownership of the road (shown in Figure 2), the County's involvement helped set the background context for the project.

New York State Department of Transportation

The New York State Department of Transportation (NYSDOT)'s mission is to "provide a safe, reliable, equitable, and resilient transportation system that connects communities, enhances quality of life, protects the environment, and supports the economic well-being of New York State" (NYSDOT, n.d.). However, the study area corridor in Pelham and Mount Vernon is a major regional thoroughfare with direct access to and from the Hutchinson River Parkway, which is under NYSDOT's jurisdiction. As a result, NYSDOT was brought in early on to ensure they were satisfied with the proposed recommendations, as changes in the study area could directly impact traffic on the Hutchinson River Parkway.

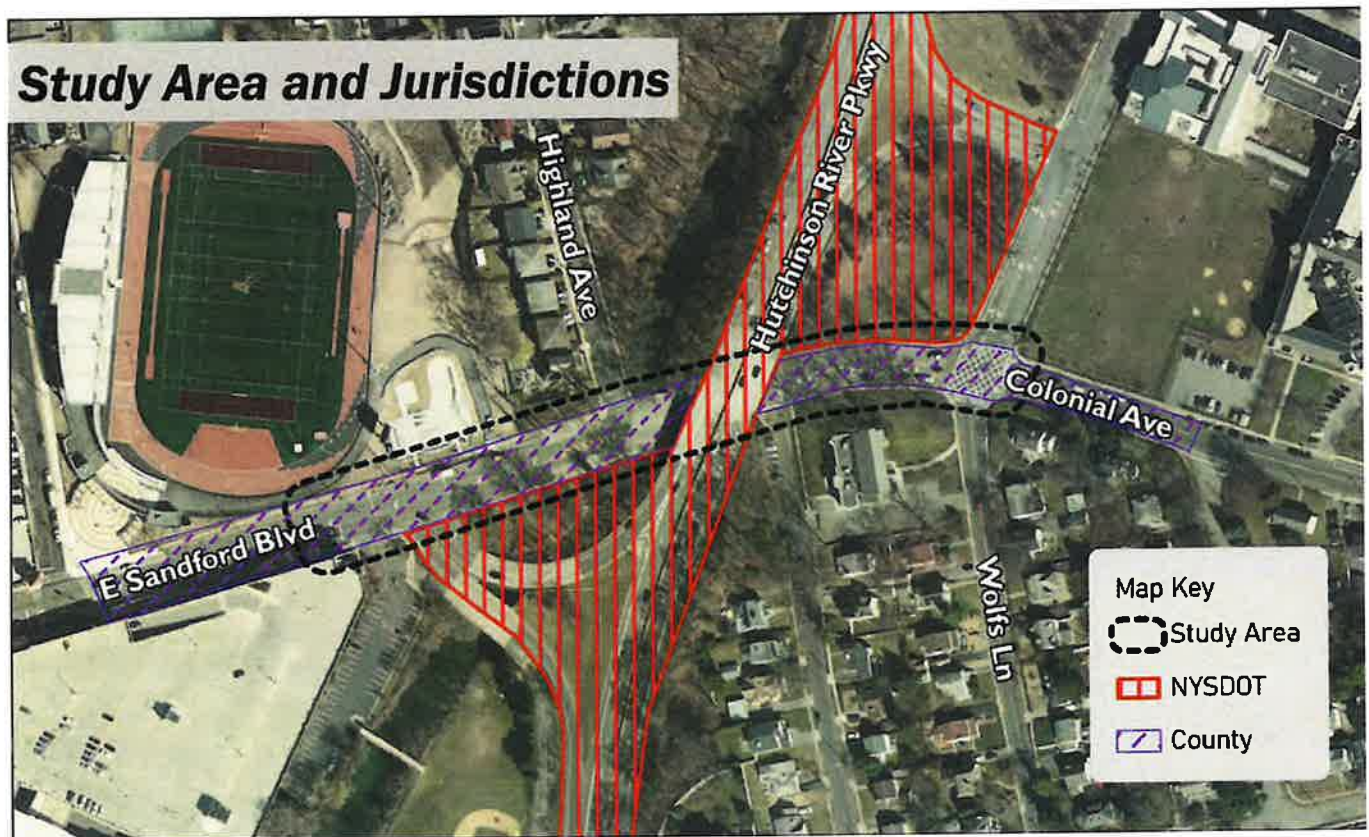


Figure 2: Map showing the multiple jurisdictions present within the study area; the Hutchinson River Parkway and its access ramps are owned by NYSDOT, and the study area is under local jurisdiction (formerly County), split between Mt Vernon, Pelham Manor, and the Village of Pelham.

EXISTING CONDITIONS AND TRIP PATTERNS

The primary travel mode in the study area is private auto alone at 62%, with private auto carpooling as the second-most with 32% of all trips. Walking and public transit account for 1.8% and 1.3% while biking accounts for about 0.6%.

Forty-nine percent (49%) of all trips are people returning home; of the remaining 51% of trips, shopping and working are the primary trip purposes at 42% and 19% respectively, while dining and social trips make up about 10% each. Most trips in the region are long-distance trips, with about 58% of all trips being 16 miles or longer, while 41% of all trips are over 32 miles. This is reflected in the trip duration, with 59% of all trips being 40 minutes or longer.



Figure 3: Traffic volume during a Fall weekday in 2023. Source: ReplicaHQ

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CURRENT SAFETY CONDITIONS: DATA REVIEW

Crash data¹ from the New York State Department of Transportation (NYSDOT) for the Study Area shows that there were 20 crashes along Colonial Avenue/East Sanford Boulevard from 2019 and 2022. Approximately two-thirds or 66 percent of those crashes occurred at the intersection of Colonial Avenue and Wolfs Lane, which is a key route for traffic to and from the Hutchinson River Parkway and happens to be the intersection where the students begin their route to Glover Field.

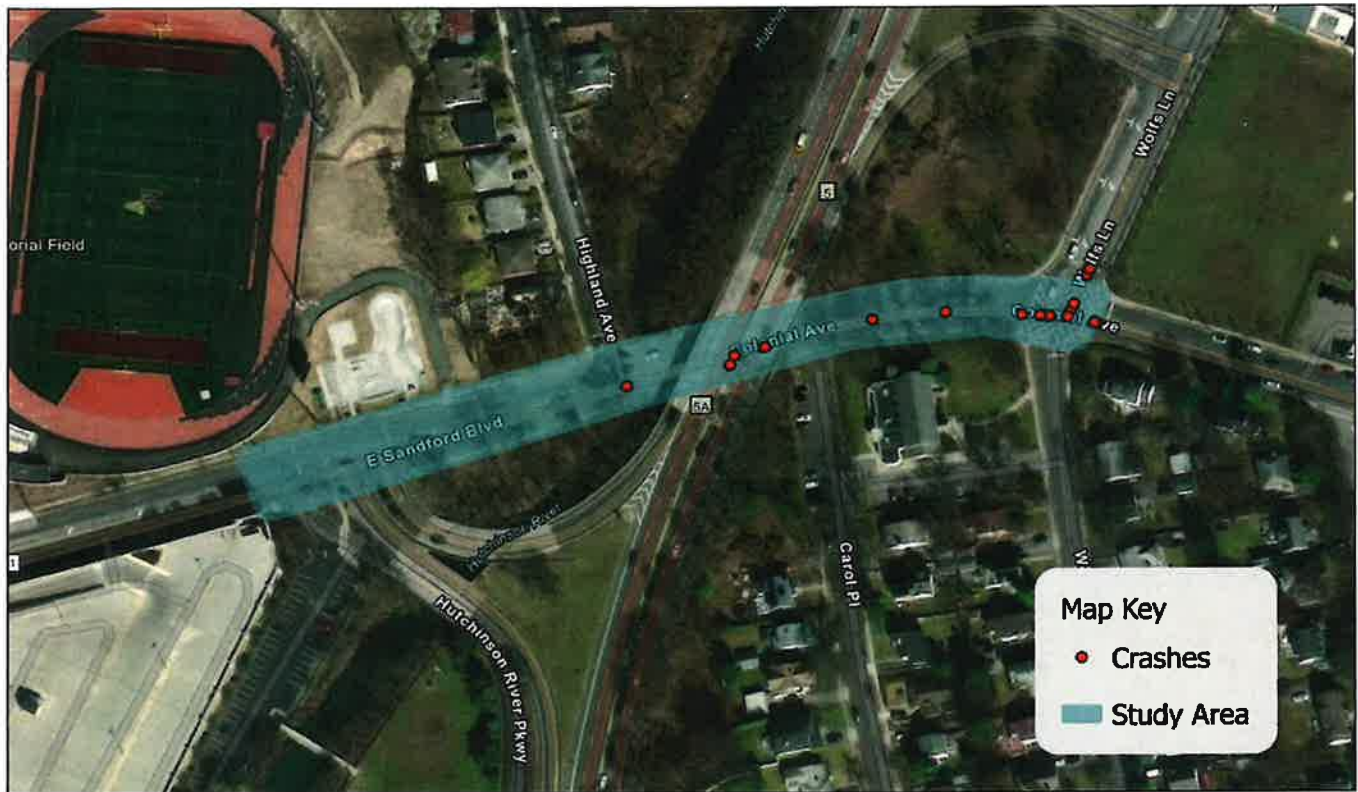


Figure 4: Map showing crashes in the Study Area between 2019-2022. Source: NYSDOT, CLEAR.

¹New York State Traffic Data Viewer. (2024). The Traffic Data Viewer. <https://nysdottrafficdata.drakewell.com/publicmultinodemap.asp>



PROBLEM STATEMENT AND CURRENT CONDITIONS

The Pelham Public School District, the Town of Pelham, The Village of Pelham, The Village of Pelham Man-or, the City of Mount Vernon, and Westchester County participated in the Community Planning Workshop Program to seek feasible solutions to improve pedestrian safety on the route connecting Pelham Memorial High School and the Glover Field Athletic Complex. The goal is to create a safer pedestrian experience along the corridor.

While the route is only approximately one-quarter mile, students must cross two dangerous intersections with most vehicles getting on or off a busy regional connector during peak hours. Students frequently walk this route after school to attend sports practices and events at Glover Field. The route is illustrated in Figure 5.

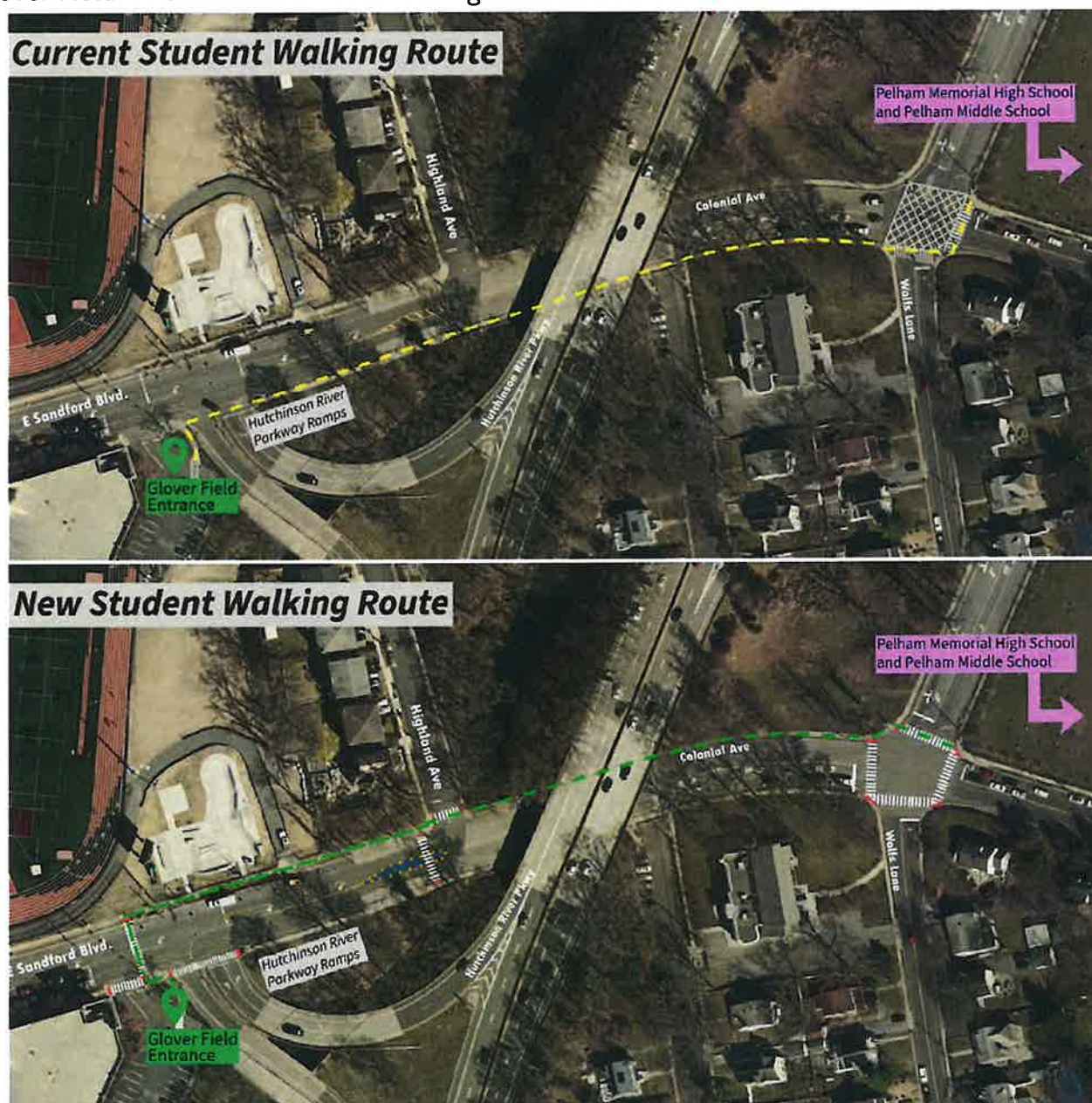


Figure 5: The current route students walk from the Pelham schools to Glover Field and the suggested new route..



Figure 6: Four locations of interest within the Study Area.

Furthermore, the route traverses three different jurisdictions, with one intersection being in Mount Vernon. Consequently, any improvements undertaken within the Study Area will require collaboration to come to a mutually beneficial agreement.

The project team segmented the Study Area into four key locations of interest, as illustrated in Figure 6:

- ♦ Colonial Avenue and Wolfs Lane in Pelham;
- ♦ The Hutchinson River Parkway Underpass;
- ♦ East Sandford Boulevard and the Hutchinson River Parkway ramps; and
- ♦ East Sandford Boulevard and the Glover Field Complex Access Road.

The current conditions of each of the four areas of interest are discussed in the following sections.

COLONIAL AVENUE AND WOLFS LANE

The crossing is directly in front of Pelham Memorial High School and Pelham Middle School. The entire intersection is hatched, presumably to alert drivers to not block the intersection; however, the hatching compromises the visibility of the crosswalks. This is displayed in Figure 7.



Figure 7: The intersection of Colonial Avenue and Wolfs Lane, at the corner of the middle and high schools.

Furthermore, there are only crosswalks on two of the four sides of the intersection, though the hatching might make it appear as though one could cross at any corner. There is no pedestrian scale lighting and there are no ADA warning pads at the curb cuts. There are also faded stop line pavement markings on certain legs of the intersections.

In conversations with stakeholders, the project team learned that due to jurisdictional boundaries, crossing guards must remain in the Village of Pelham and cannot escort students across Colonial Avenue.

HUTCHINSON RIVER PARKWAY UNDERPASS

The Hutchinson River Parkway is congruent with the border between Pelham and Mount Vernon; the municipal boundary also corresponds with the name change from Colonial Avenue to East Sanford Boulevard. The sidewalk under the overpass can be narrow and is relatively low to the ground, meaning there is little separation between pedestrians and moving vehicles. Lighting is present, but only over the roadway, none illuminating the sidewalk. This is displayed in Figure 8.



Figure 8: *The Hutchinson River Parkway Underpass.*

HIGHLAND AVENUE AND EAST SANDFORD BOULEVARD

This three-way intersection is just west of the Hutchinson River Parkway underpass and has no crosswalks. The only implied crossing movement for pedestrians is across Highland Avenue, parallel to East Sandford Boulevard. As a primary arterial, East Sandford Boulevard does not have any traffic controls at this intersection, while traffic coming from Highland Avenue is controlled by a stop sign. This is displayed in Figure 9.

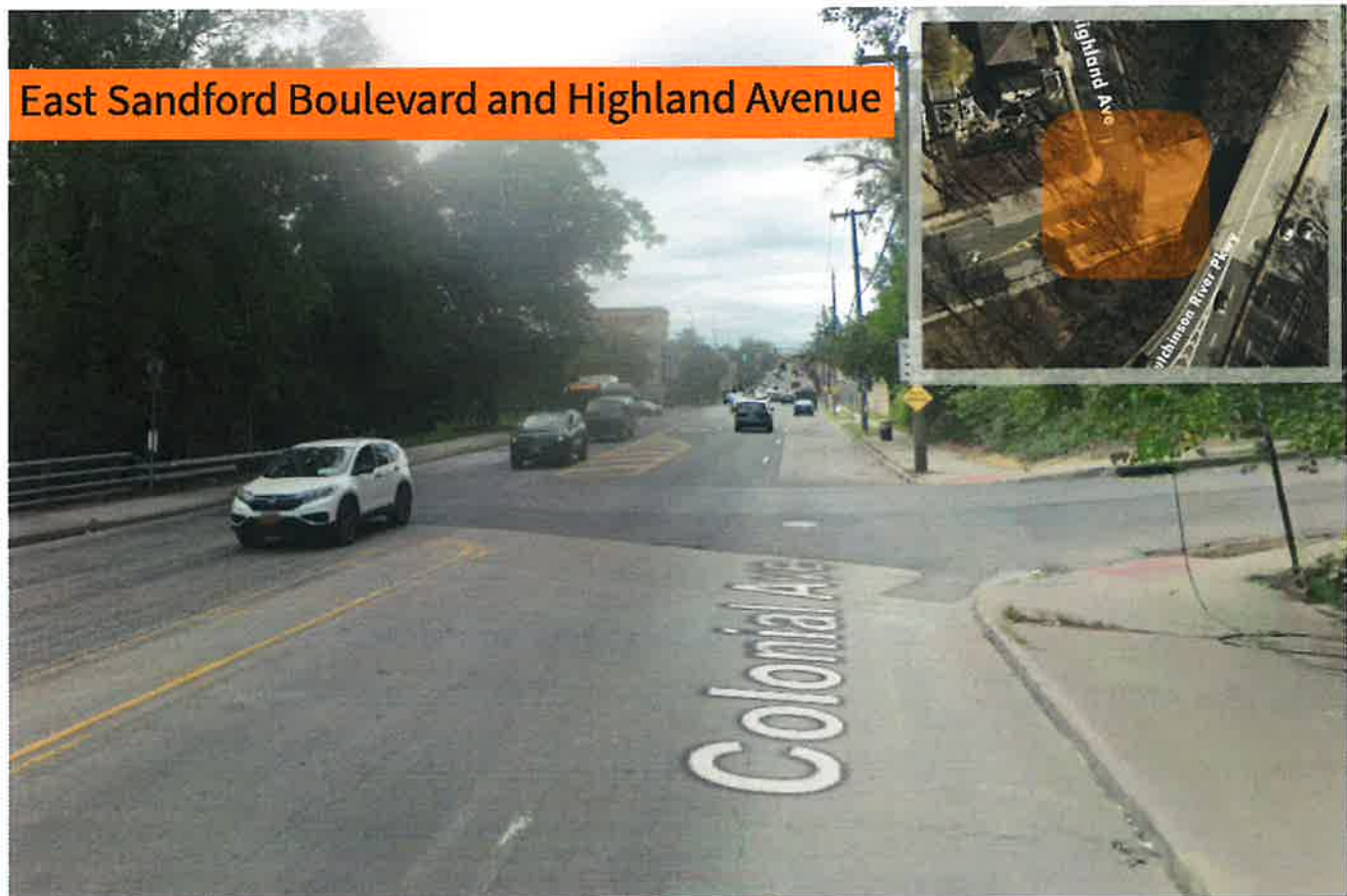


Figure 9: The intersection of East Sandford Boulevard and Highland Avenue, in Mt Vernon, NY.

This intersection on East Sandford Boulevard currently has no marked crosswalk for Highland Avenue, which is especially dangerous given the lack of pedestrian scale lighting along this stretch of road. Vehicles also travel at high speeds and crossing is virtually impossible without a crosswalk or any traffic signals. Vehicles turning from Highland Avenue onto Sandford Boulevard may be prone to high speed and acceleration to match traffic flow on Sandford Boulevard. There are also no ADA warnings or curb cuts at this location.

CROSSING THE HUTCHINSON RIVER PARKWAY RAMPS AND GLOVER FIELD ENTRANCE

Currently, pedestrians must cross in front of the Hutchinson River Parkway entrance and exit ramps to access Glover Field (Figure 10). The Town of Pelham pays a police constable to assist pedestrians with the difficult crossing. This crossing is shown in Figure 11. These crossings are extremely dangerous for pedestrians. Vehicles travel at high speeds along Sanford Boulevard and coming on or off the Hutchinson River Parkway. Drivers are also unclear about the turn movements differentiating the entrance to the Parkway from the entrance to Glover field.



Figure 10: The intersection of East Sanford Boulevard, the Hutchinson River Parkway Access Ramp, and the entrance to Glover Field; view from the northern edge of East Sanford Boulevard.



Figure 11: View of the crosswalk to cross the Hutchinson River Parkway Access Ramp.

PLANNING PROCESS AND PUBLIC ENGAGEMENT

Identifying potential solutions for this corridor involved extensive stakeholder engagement with local officials and decision-makers. The project team held several meetings with officials from Pelham and Mount Vernon, both separately and together, serving as a venue to convene local officials in the same room to agree on identifying common issues with Rutgers-POET serving as a mediator and proposing potential solutions. The public workshop of the project focused on relaying the preliminary recommendations from the stakeholder meetings and collecting feedback from community members. In addition, POET conducted specialized outreach to students from the Pelham Middle and High Schools to gather their feedback as users of the route. Following the public workshop, the project StoryMap was circulated along with a questionnaire to provide feedback. The planning process is described in detail below. Note that many of these steps ran concurrently throughout the project period.

TRAFFIC MICROSIMULATION ANALYSIS USING PTV VISSIM

This Community Planning Workshop (CPW) project relied on a traffic simulation software, PTV VISSIM, for the team to perform a generalized traffic analysis within the study area to provide a baseline of existing conditions and to provide an approximation of the impact the proposed solutions. Using travel data from ReplicaHQ, the CPW team performed four distinct simulations; the first was to collect baseline data for the current roadway conditions and was used to compare the impact of the recommendations on the following:

- ♦ Average travel delay per vehicle (seconds)
- ♦ Average number of stops per vehicle
- ♦ Average speed (MPH)
- ♦ Level of Service (A to F, based on overall delays)

The traffic simulations suggest that the proposed recommendations would not cause any network failures, and some may improve travel conditions. However, these analyses were only a basic, cursory examination to identify any glaring issues that may be caused by the proposed recommendations. Should Westchester County or municipalities in the study area wish to pursue any of the recommendations provided in this report, a formal engineering analysis or study would be needed to fully understand the feasibility and impact of these changes.

STAKEHOLDER MEETINGS

Given the complexity of the project area for this study, the CPW team held multiple meetings with stakeholders, including Westchester County, NY State Department of Transportation, the City of Mount Vernon, the Town of Pelham, Pelham Manor and the Village of Pelham. Initial, separate meetings were held with each stakeholder group, followed by two full stakeholder convenings via Zoom. In addition, the project team held short, 30-minute meetings with a smaller group of representatives from Pelham Village, Pelham Manor, Pelham School District, and Pelham Township on a bi-weekly basis to keep the project moving on track by providing an opportunity to discuss any questions or issues that had arisen. A full list of stakeholder meetings along with meeting summaries for the two full stakeholder convenings is provided in Appendix C.

COMMUNITY PLANNING WORKSHOP

On January 30, 2025, the project team hosted the official Community Planning Workshop for the Pelham and Mount Vernon communities. The workshop was held virtually and hosted on Zoom. Information about the workshop was distributed to community members via the stakeholder group, both via email and social media. The project team provided informational flyers, social media graphics, and draft text for the stakeholders to share with their constituents to encourage participation.

The workshop was attended by 39 people, and included a plenary session and two breakout sessions for discussion and feedback. The agenda included an introduction to NYMTC and the Community Planning Workshop Program from NYMTC's David Dritz, an overview of the project and proposed solutions from Miriam Salerno of the Voorhees Transportation Center, and then discussion breakouts led by the Rutgers and NYMTC Teams. The PowerPoint slide deck and the notes from the breakdown discussion sessions are provided in Appendix C.

The purpose of this workshop was to introduce the community members to the proposed solutions to address safety along the corridor and provide an opportunity for questions and discussion. The project team received feedback in real time during the meeting, but also informed the participants that there would be a community survey that would allow them to provide more detailed feedback on each set of recommendations. Participants were encouraged to reflect on what was presented and share additional thoughts to the project team in writing through the survey.

Relevant highlights from the feedback received from both the workshop and the survey are provided in the sections below along with the proposed improvements.

STORYMAP AND COMMUNITY QUESTIONNAIRE

As a supplement to the Community Planning Workshop, the project team developed online engagement tools, including an informational StoryMap and an online community questionnaire. Initially, as with other workshops in the CPWP, the project team had planned to distribute the StoryMap and the questionnaire publicly prior to the Community Planning Workshop. However, given complexity of the safety issues and potential solutions, the stakeholders requested that these materials only be made public after the workshop. This allowed the project team to offer explanation and context to the workshop attendees or those who viewed the recording (and have the workshop video posted on the website for further guidance as needed). The StoryMap and the survey were made public on March 1, 2025.

STORYMAP: PEDESTRIAN SAFETY IN PELHAM AND MT. VERNON

The project team published the Pedestrian Safety in Pelham and Mt. Vernon StoryMap on March 1, 2025. As stated above, the StoryMap was actually developed months earlier but the release was held until after the public workshop was completed. ArcGIS StoryMaps™ is an Esri product that combines maps, visuals, and narratives in an interactive form to share information. This StoryMap served to prime community members by providing context and background information about the workshop's areas of focus and walked through all three sets of recommended improvements to the corridor. The purpose of the StoryMap was to enhance understanding of project goals before taking the community survey. In addition to the recommendations, the StoryMap includes comprehensive project information, updates, and timelines in one centralized location and will continue to be updated as the project progresses, essentially serving as a project website.

COMMUNITY QUESTIONNAIRES

Public Questionnaire

At the request of the project stakeholders, the community questionnaire was designed to capture feedback on the proposed improvements rather than collect baseline information from the community on issues and challenges (as has been done with previous CPW projects). Based on conversations with stakeholders, it was clear that the community was already in agreement on the safety issues and challenges of the corridor, and that any public-facing engagement should be focus on solutions. To that end, the public questionnaire was distributed following the community planning workshop as an opportunity to collect additional feedback capture feedback on the recommendations presented during the workshop and provide guidance on the final improvements within this report.

Student Informational Video and Questionnaire

Given the importance of this corridor to the students accessing Glover Field, the CPW team created separate questionnaires to collect feedback from the general population and a second to collect feedback from the student population. The project team also produced an informational video for students that was shown in classrooms throughout the district. District Superintendent Cheryl Champ coordinated with the schools to have the video and survey activity done during the school day so that the majority of the student body could participate.

The detailed summaries for each questionnaire can be found in Appendix A. Highlights from the findings relevant to recommendation are provided in the sections following.

RECOMMENDATIONS AND COMMUNITY FEEDBACK

SUMMARY OF RECOMMENDATIONS

NYMTC and Rutgers-POET worked with local, county, and state officials, and taking into account feedback and insights from the public, to identify potential strategies for improving the corridor. The main goal in the recommended improvements would allow student pedestrian traffic to be rerouted to avoid crossing in front of the Hutchinson River Parkway exit ramp.

Improvements can range from relatively simple upgrades to the existing infrastructure to a complete redesign of major intersections in the corridor. For purposes of the study, the project team has categorized these improvements into three levels, from least to most invasive. This framework was also used to describe these potential improvements in both the workshop and the StoryMap.

LEVEL ONE: UPDATE PEDESTRIAN INFRASTRUCTURE FOR A SAFER PEDESTRIAN EXPERIENCE

The first level of improvements focuses on enhancing existing pedestrian infrastructure to quickly and effectively improve safety. This includes repainting faded crosswalks, adding new ones where none exist, and upgrading signage and lighting to increase visibility. Tactile warning surfaces are proposed to aid visually impaired pedestrians, and guardrails are suggested to separate foot traffic from vehicles, especially near the Hutchinson River Parkway ramps. These changes aim to create a safer, more navigable environment for students and residents without requiring major construction.



Figure 12: The recommendations proposed in Level One seen overlaid on an aerial photo of the study area

These proposed improvements are described in detail in the section below, but the important point to note here is that the collective changes at Level I would, at a minimum, allow for students to be able to walk on the north side of Sanford Boulevard and avoid the dangerous intersection where motor vehicles exit the Hutchinson River Parkway.



Figure 13: The new proposed student walking route.

The traffic simulation analysis estimated the changes from the Level I recommendations to reduce delay time and stops compared to the baseline simulations, albeit marginally. Given these results, shown in Table 1, the project team is confident these recommendations would not lead to failures in the road network.

Table 2: VISSIM Analysis Results for Level One Recommendations.

	Level 1 Network		
	Baseline	Change	Percent Change
Average Delay	67.99	-0.24	-0.35%
Average Stops	1.98	-0.31	-15.50%
Average Speed	5.99	0.07	1.25%

LEVEL TWO: IMPLEMENT STREET CALMING MEASURES ALONG THE CORRIDOR

The second level introduces physical design elements to slow down traffic and make the corridor more pedestrian-friendly. This can be done through "traffic calming," which involves changes to the physical space to make the road safer for pedestrians, cyclists, and drivers.

These interventions include painted intersection murals—such as the example featured here with the school mascot—to visually signal to drivers that they are entering a pedestrian-priority zone. Raised medians and narrowed travel lanes are proposed to reduce vehicle speeds and provide a buffer between pedestrians and traffic. A raised crosswalk is also suggested to elevate pedestrians in the driver's line of sight, further enhancing safety.

These improvements not only make the corridor more walkable but also contribute to a more attractive and community-oriented streetscape. By slowing traffic and increasing driver attentiveness, these measures create a more comfortable and secure environment for all road users, particularly for students traveling to and from Glover Field.



Figure 14: The Level Two recommendations seen overlaid on an aerial photograph of the study area.

Table 2 shows the results from the traffic simulation analysis for the Level Two recommendations; while they do estimate average delay time and stops will increase, this should not be considered a significant increase because the overall level of service in the baseline analysis was already low. Further details on the analysis results can be found in Appendix XX.

Table 2: VISSIM Analysis Results for Level Two Recommendations.

Level 2 Network			
	Baseline	Change	Percent Change
Average Delay	67.99	7.65	11.26%
Average Stops	1.98	0.21	10.59%
Average Speed	5.99	-1.02	-17.01%

LEVEL THREE: REIMAGINING AND REDESIGN OF THE CORRIDOR

The third and most transformative level involves a complete redesign of the intersections at East Sandford Boulevard and the Hutchinson River Parkway ramps. A “peanut roundabout” is proposed to streamline traffic flow, eliminate hazardous left turns, and reduce vehicle speeds.

For pedestrians, the redesign introduces safer, segmented crossings with refuge islands and flashing beacons, significantly improving access to Glover Field and nearby amenities. This comprehensive solution addresses the complex geometry of the area and aims to balance the needs of both drivers and pedestrians through thoughtful, long-term infrastructure planning.



Figure 15: The Level Three recommendations seen overlaid on an aerial photograph of the study

Level One, Level Two, and Level Three strategies for improvements are detailed for each section of the study area in the sections below.

RECOMMENDATIONS THAT SPAN THE ENTIRE CORRIDOR

There are several safety and traffic calming improvements that can be applied to the entire corridor of the study area. Generally speaking, there are fairly low-cost improvements that can be made (Level One), crosswalks and road marking can be repainted to improve visibility, accessibility upgrade can be made to crosswalks, and pedestrian scale lighting can be improved throughout the entire area. In addition, a median could offer traffic calming and improve aesthetics (Level Two) and speed limit signs can be added to increase motorist awareness of speed and encourage mindful driving. These suggestions are detailed below, broken down by Level One and Level Two improvements:

LEVEL ONE

- ♦ **Replace existing crosswalks with high visibility treatments:** Instead of traditional restriping, the Village should consider larger, more visible patterns (such as continental, zebra, or ladder striping) or replace painted crosswalks with preformed thermoplastic markings, which are highly reflective, more durable than paint, and can be more cost-effective in the long run.
- ♦ **Restripe roadway markings:** The stop bars and crosswalks at this intersection would benefit from increased maintenance to retain their vital visibility, as described in the recommendations above. One tool the Village can consider increasing safety and promote lower turning speeds is to extend the turn lane pavement markings as dashed lines to the correct lane on Wolfs Lane.
- ♦ **Install ADA warning pads leading into each crosswalk:** Currently, there are no ADA warning pads present at any of the curb cuts at this intersection. When upgrading the crosswalks and considering any improvements, the Village should install ADA-compliant warning pads at every curb cut for each crossing movement. This means avoid placing one single warning pad for pedestrians crossing Wolfs Lane and Colonial Avenue, since a diagonally-placed warning pad might cause blind or visually-impaired people to walk directly into the middle of the intersection, rather than onto the crosswalk.
- ♦ **Install pedestrian-scale lighting:** Most urban roads have lights that are designed to illuminate the entire road between sidewalks to increase visibility for drivers. However, these lights typically don't shine on the sidewalks, making visibility of pedestrians difficult at nighttime. Furthermore, it is hard for drivers' eyes to adjust to the difference in lighting between the road and the sidewalk, which can present conflicts at intersections. Pedestrian scale lighting can improve safety and encourage more people to walk by:
 - Increasing sense of safety by reducing dark/shadowy areas.
 - Helping pedestrians orient themselves by highlighting landmarks, street signs, and entryways.
 - Improving visibility of pedestrians at crossings and intersections
 - Improving streetscape aesthetics by selecting a design that improves the character of the street.

LEVEL TWO

- ♦ **Adding speed limit feedback signs:** Speed limit feedback signs are electronic signs that display a driver's speed if they are traveling five MPH over the speed limit. The Village can place these strategically to encourage drivers to slow down in certain areas.
- ♦ **Raised median on Colonial Avenue westbound:** Level Two improvements suggest raising the existing painted median to serve a dual functions: first, this would require narrower travel lanes along Colonial Avenue/ East Sanford Boulevard, which can prevent speeding; secondly, a raised median allows for the addition of green space, whether it be a simple grass strip or increasingly intensive improvements, such as shrubs or even street trees. The height element provided by shrubs or trees would encourage even slower speeds by making the roadway appear even narrower to drivers, leading to increased focus on their surroundings.

HIGHLIGHTS FROM COMMUNITY SURVEY ABOUT THE ENTIRE CORRIDOR:

General Public

- ♦ Some raised concerns about the median, including the impact it would have on traffic flow and increased traffic congestion from narrowing lanes. There were also concerns that the greenery may not be well-maintained over time and one respondent suggested using “native” and “hardy” plants to reduce maintenance.
- ♦ Others noted that they were strongly in favor of the median. They liked that it would slow down traffic and increase safety for pedestrians. Many also liked the greenery and the aesthetics that the median would add.
- ♦ Respondents also commented about the need for additional crossing guards along the entire corridor, even if the students are walking on the north side of the Boulevard. They also mentioned the need for better signal timing, longer pedestrian phase or an “pedestrian only” phase at the intersection.

Student Feedback

- ♦ Students who said they would use the new route commented that it seemed very helpful for getting to sports practices, that it seemed safer and more convenient for pedestrians. Students who said they would sometimes use the new route commented that it seemed a little unnecessary, but they would sometimes use it even if it seemed slower.
- ♦ Students who said they would NOT use the new route commented that it seemed like a waste of money, and that it was still very dangerous and seemed like it would take longer to get to the field. The change seemed unnecessary to them.

INTERSECTION SPECIFIC: COLONIAL AVENUE AND WOLFS LANE INTERSECTION



LEVEL ONE

- ♦ **Remove hatch lines:** While the purpose of the hatch lines appears to be to warn drivers to not block the intersection, the Manual on Uniform Traffic Control Devices (MUTCD) suggests that any intersection markings should be paired with appropriate street signs warning drivers before approaching the intersection. As a result, the hatch marks may be doing little to prevent blocking the intersection as currently applied; however, the hatch marks do diminish the visibility of the existing crosswalks, which could pose risks to pedestrians, if drivers are not expecting a pedestrian crossing. The Village should remove the extensive hatch lines from the intersection to enhance the current crosswalks and any future pedestrian improvements.
- ♦ **Add crosswalks at all legs of the intersection:** While School District officials reached out specifically to improve safety for students, infrastructure improvements must consider long-term solutions and solutions that benefit all road users. Therefore, adding marked crosswalks at all legs of the intersection can be an effective tool to facilitate safe crossing by most pedestrians. Research suggests that most people will take the most direct path to their destination whenever possible, even if this means crossing at unmarked locations. This is especially true at intersections where the only marked path for pedestrians would require them to go out of their way to cross the street multiple times to get to their destination, which increases the number of potential conflicts with vehicles for each crossing event.

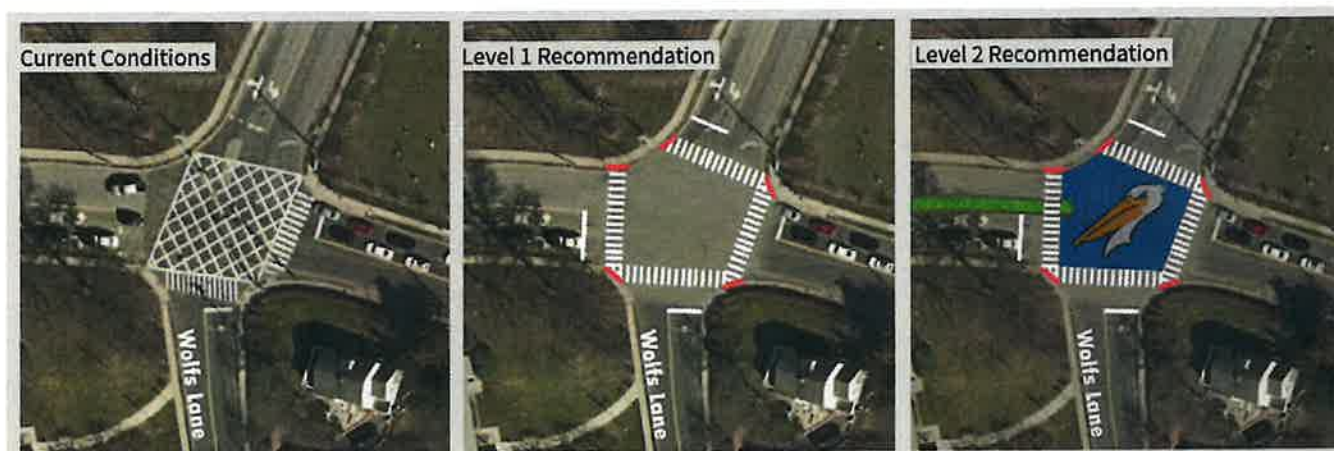


Figure 16: Proposed intersection improvements at Colonial Avenue and Wolfs Lane.

LEVEL TWO

- ♦ **Painted intersection or intersection mural:** Given this intersection's central location on the corridor, the Village can consider an intersection mural that is reflective of the spirit and culture of the community. By doing so, the intersection can also become a symbolic or reflective piece, depending on the context. Given the large traffic volume at this intersection and its proximity to the schools, a colorful mural could help alert drivers to the change in road intensity and that they should expect lower speeds and potential pedestrian crossings.



Figure 17: Street level view of the proposed intersection improvements at Colonial Avenue and Wolfs Lane.

HIGHLIGHTS FROM THE COMMUNITY SURVEY ABOUT COLONIAL AND WOLF INTERSECTION IMPROVEMENTS

General Public

- ♦ Opinions about the intersection mural were mixed. Many people liked the idea of the mural, but did not like the specific rendering (pelican) provided in the survey. Others did not like the aesthetics of the mural or thought it was unnecessary or distracting. Others were concerned that the mural would not be well-maintained, and the paint would fade over time. On the other hand, others thought it was a good idea and liked the look of it.
- ♦ Many respondents raised concerns or left comments about the “right on red” at this intersection. Many felt eliminating the right turn on red would improve safety for pedestrians and students. Others requested dedicated turning lanes to improve traffic flow.
- ♦ There are concerns about both pedestrian and driver behavior at this intersection, respondents noted that they feared students would continue to cross diagonally and that drivers do not pay adequate attention to pedestrians. Many also voiced concern that students would not use the new walking route. Many feel that they would continue to walk on the southbound side of Sandford Boulevard, crossing in front of the Hutchinson, because kids may perceive it as “shorter.” Respondents requested some way of preventing students from using the “old” route, either by removing the crosswalks or some other plan to make it preferable to use the North side of the street.
- ♦ Regarding the additional crosswalks, most respondents who left comments were in favor of this change, but there were concerns about traffic flow and a request to add flashing lights to all crosswalks to alert drivers. Enforcement, such as a red-light camera, was also raised as an issue to reduce poor driver behavior, as well as the need for improved pedestrian scale lighting.

Student Feedback

- ♦ Students who gave this an unfavorable rating did not like the aesthetics of the painted intersection or were concerned that with time it would fade and look worn out.
- ♦ Students who rated it favorably liked the aesthetics of it, the school pride, and that it would provide safety benefits. They also liked the additional crosswalks that give more options on how to navigate the intersection and the lights provide improved visibility.

INTERSECTION SPECIFIC: HUTCHINSON RIVER PARKWAY UNDERPASS



Students and pedestrians must traverse through an underpass located along Colonial Avenue/ Sanford Boulevard. Currently, as described above, conditions are dark and feel unsafe for pedestrians, especially kids and teens. Improvements can be made to improve safety and visibility, including:

LEVEL ONE

- ♦ **Pedestrian-scale lighting/illuminate sidewalks:** As recommended for the entire study area, adding pedestrian-scale lighting along with upgraded roadway lighting can be a very effective tool to increase pedestrian safety in the underpass. This is especially true when accounting for the darker winter and fall months.
- ♦ **Upgrade roadway overhead lighting:** Upgraded lighting to the underpass can improve visibility for all road users of any potential hazards in the roadway. Municipal officials can explore lighting options appropriate for their needs, such as specific lumens or color hues to account for common weather hazards, such as fog or snow given the proximity to the river and low-lying roadway.

LEVEL TWO

- ♦ **Guardrails or handrails to separate roadway from sidewalk:** The existing sidewalk in the Hutchinson River Parkway underpass is fairly low compared to the paved roadway. When coupled with the high traffic speeds along this stretch of road, which connects drivers to either direction of the Hutchinson River Parkway, these high speeds can be dangerous for large groups of kids walking along here. Adding guardrails would create an extra layer of separation between vehicles and pedestrians and should prevent any pedestrians accidentally stepping onto the roadway.

Current Conditions



Recommendation



Figure 18: Rendering of guardrails installed next to the sidewalk in the underpass along Colonial Avenue.

HIGHLIGHTS FROM COMMUNITY SURVEY ON THE UNDERPASS IMPROVEMENTS

General Public

- ♦ Once again, respondents raised concerns in comments about the median and that narrowing the driving lanes in the underpass might cause congestion and traffic issues.
- ♦ Respondents in favor of these changes liked the safety improvements and protection that the railing provides, they also were favorable towards the improved lighting and visibility for both motorists and pedestrians. There were also a number of respondents who were favorable towards the median and appreciated the aesthetic improvement. A couple of respondents also suggested a mural to brighten up the underpass.

♦

Student Feedback

- ♦ Most student commenters were in favor of the railing and the lighting for safety reasons. They said it would help them feel safer walking through the underpass, especially at night.
- ♦ A few students rated this suggestion low and thought that it was unnecessary, rather than problematic in anyway. A couple of commenters were concerned about the median slowing down traffic.

INTERSECTION SPECIFIC: EAST SANDFORD BOULEVARD AND HIGHLAND AVENUE



As stated above, there is currently no crosswalk at the intersection of Highland Avenue and Sandford Boulevard. In order for students to use the new walking route described above, one would need to be added. In addition, there is an opportunity to add a midblock crossing at this location to reduce the distance between crossings across Sandford Boulevard. These recommendations are described in detail below:

LEVEL ONE

- ♦ **Install a new midblock crosswalk on western edge across East Sandford Boulevard:** Currently, the only pedestrian crossings on Colonial Avenue/East Sandford Boulevard are at the school intersection with Wolfs Lane at the eastern end of the study area, and at the intersection with Garden Avenue, which is just west outside the study area. The distance between these crossings is about one-quarter mile, a distance which is often considered the lower limit of distances people are willing to walk to comfortably reach a destination for utilitarian purposes. Providing additional marked crosswalks could lead to a small increase in number of pedestrian trips that could replace short vehicle trips.
- ♦ **Button-activated flashing beacon or HAWK Beacon at new crosswalk:** Since there is no traffic light at this intersection, an RRFB/HAWK beacon is an essential safety feature for pedestrians. A RRFB/HAWK beacon is similar to a traffic light, but rather than activating on a fixed cycle, the light is activated only when pedestrians push the pedestrian call button.



Figure 19: Aerial imagery of proposed improvements at the intersection of East Sandford Boulevard and Highland Avenue.

LEVEL ONE (CONTINUED)

- ♦ **Delineate painted median with plastic traffic pylons:** Slightly more expensive than pavement markings, but more effective would be to add physical barriers to prevent vehicles from encroaching on the marked crossing and median. Plastic pylons come in a variety of sizes and colors, and can be a cost-effective option for municipal officials to test what a raised median could potentially look like at this intersection.
- ♦ **ADA warning pads at Highland Avenue crosswalk:** As recommended with all other marked crossings in the study area, providing ADA warning pads leading into the crosswalk can help alert pedestrians of the upcoming crossing and to be alert to moving traffic.

LEVEL TWO

- ♦ **The raised median creates a pedestrian refuge:** The proposed raised median along the entire study area corridor would create an opportunity to create a pedestrian refuge island at the pedestrian crossing proposed in Level One at this intersection. Providing the raised median on both sides of the crosswalk prevents drivers from taking fast and tight turns onto Highland Avenue, forcing them to slow down at the approach with the crosswalk.

Current Conditions



Recommendation



Figure 20: The raised median creates a pedestrian refuge island, which would work in tandem with the flashing pedestrian signal.

HIGHLIGHTS FROM COMMUNITY SURVEY ON EAST SANDFORD BOULEVARD AND HIGHLAND AVENUE IMPROVEMENTS

General Public

- ♦ The midblock crossing across Sandford Boulevard at Highland Avenue raised several safety concerns from respondents. Many of them felt that there should not be a midblock crossing without a traffic light due to high-speed traffic and aggressive driving. Many felt that the flashing pedestrian signs would not provide adequate safety for pedestrians crossing this busy road.
- ♦ The crosswalk across Highland Avenue was viewed as a very positive addition to the roadway.

Student Feedback

- ♦ Students that rated this unfavorably were concerned about traffic or found the addition of the crosswalk confusing. Some students liked the crosswalk but did not like the median because cars might hit it or it would cause too much traffic.
- ♦ Students who were in favor of it liked having more crosswalk options, believed the changes here would make walking safer and easier, especially because of the traffic calming effect of the median. A couple of students requested a traffic light or crossing guard to make it even safer.

INTERSECTION SPECIFIC: EAST SANDFORD BOULEVARD AND PARKWAY ON/OFF RAMP AND GLOVER FIELD ENTRANCE



This is the most complex intersection in the study area. Rerouting students to the north side of Sandford Boulevard will require the addition of a crosswalk at this location so that students and pedestrians can safely cross and access Glover field.

In the Level One recommendation, this is a flat crosswalk (though implemented with high visibility designs and materials), in Level Two the crosswalk is raised to add additional safety measures and additional traffic calming features. This is the only intersection in the study area with a Level Three recommendation, the redesign of the intersection into a “peanut” roundabout. These options are detailed below:

LEVEL ONE

- ♦ **Turn lane pavement marking extensions:** Feedback from the site visit, the stakeholder meetings, and survey responses indicate that the turning movements at this intersection are a constant challenge, and drivers routinely turn from the incorrect lane or onto the incorrect road. One low-cost solution to aid drivers can be to paint dashed lines on the roadway extending the turn lanes into the intersection to guide drivers to the correct destination. Slightly costlier and more permanent than turn lane extensions, adding traffic pylons between the left turn lane and through traffic lane can help prevent vehicles from making illegal left turns from the middle lanes. The traffic pylons can also serve to guide vehicles through the intersection into the next one and clarifying the upcoming left-turn lane to enter Glover Field.

LEVEL ONE (CONTINUED)

- ♦ **Install a new crosswalk across East Sandford Boulevard:** One of the most significant recommendations is the addition of a new crosswalk from the northern edge of East Colonial Boulevard to the pedestrian island on the southern edge, between the entrances to the Hutchinson River Parkway and the Glover Field parking lot. Adding this crosswalk, is a critical step in rerouting the students to travel along the northern edge of the road. In addition:
 - ♦ Given the length of the crosswalk, this pedestrian signal would be an exclusive pedestrian phase, meaning that no vehicle movements would be permitted, including no turns on red. By doing so, any conflicts between vehicles and pedestrians would be eliminated during the new signal cycle.
 - ♦ As an added safety improvement, the new crosswalk should be constructed with high-visibility materials and thermoplastics, which provide the highest visibility to the crosswalk as well as being one of the most durable options, which should reduce the maintenance costs associated with restriping.

LEVEL TWO

- ♦ **Add a raised crosswalk:** Raised crosswalks are particularly effective for a midblock crossing such as this one. Raised crosswalks combine the benefits of speed bumps, humps, or tables to encourage drivers to slow down, which is essential given the volume of student crossings at this mid-block location. In addition, using thermoplastic tape is highly reflective and more durable than paint and can be more cost-effective in the long run.



Figure 21: Aerial imagery of proposed improvements at the intersection of East Sandford Boulevard, the Hutchinson River Parkway Access Ramp, and the entrance to Glover Field.

Current Conditions



Recommendation



Figure 22: Rendering of a raised crosswalk across Sanford Boulevard.

HIGHLIGHTS FROM COMMUNITY SURVEY ABOUT THE HUTCHINSON RAMP CROSSING/NEW CROSSWALK ACROSS SANDFORD BOULEVARD

General Public

- Many respondents left positive comments about the addition of this crosswalk to reroute pedestrian traffic away from the Hutchinson exit, including positive statements like “amazing,” “so smart,” “GREAT IDEA,” and “Yes!!!” and many were particularly in favor of the raised crosswalk as an added safety measure. However, a few commenters noted that the crosswalk might be better placed closer to Target after the entrance to Glover Field.
- Commenters also voiced safety concerns about crossing Sanford Boulevard at this location. There is concern about driver behavior, including speeding, and the need for improved enforcement of speed limits and illegal turns. There were a significant number of comments that expressed support for this change only with the addition of an all-pedestrian phase at the light or an increased amount of time for pedestrian crossing to avoid potential conflict with those turning left onto Sanford off of the Hutchinson.
- A large number of commenters on the survey expressed a preference for a pedestrian bridge or a tunnel that would completely eliminate the need for any crosswalk or interaction with motorists.

HIGHLIGHTS FROM COMMUNITY SURVEY ABOUT THE HUTCHINSON RAMP CROSSING/NEW CROSSWALK ACROSS SANDFORD BOULEVARD

Student Feedback

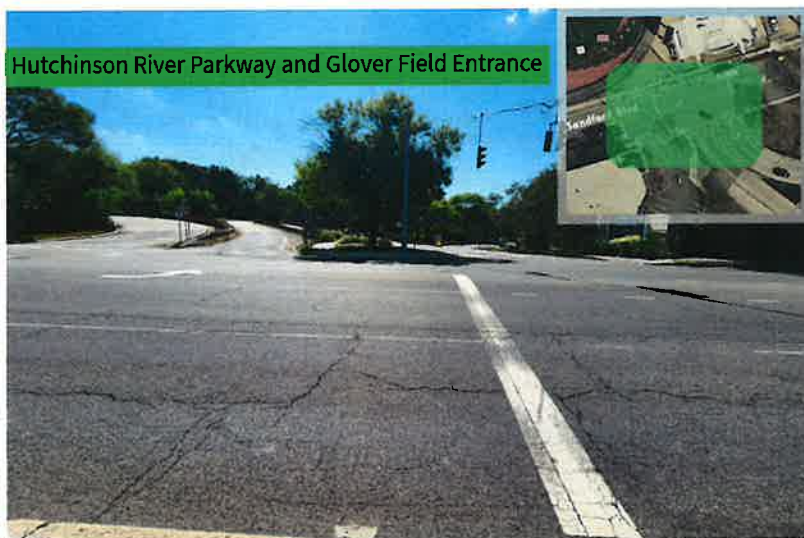
- Students that rated this unfavorably were concerned about traffic or found the addition of the crosswalk confusing. Some students liked the crosswalk but did not like the median because cars might hit it or it would cause too much traffic.
- Students who were in favor of it liked having more crosswalk options, believed the changes here would make walking safer and easier, especially because of the traffic calming effect of the median. A couple of students requested a traffic light or crossing guard to make it even safer.

REIMAGINING AND REDESIGN OF THE CORRIDOR (WITH A ROUNDABOUT)

A third level of improvement includes a significant change to the intersections on Sanford Boulevard and the Hutchinson River Parkway Ramps, and the entrance to Glover Field. The idea is to create a roundabout that would improve pedestrian safety, decrease the number of stops and delays for drivers, and reduce crashes.

The Level Three improvement proposes a transformative redesign of the intersection at East Sanford Boulevard and the Hutchinson River Parkway ramps through the implementation of a “peanut roundabout.” This uniquely shaped traffic circle is specifically designed to manage complex and irregular intersection geometries, making it ideal for this location where two closely spaced intersections currently create confusion and safety hazards. The roundabout would streamline vehicle movement by eliminating left turns and stoplights, replacing them with continuous, low-speed circulation. This design reduces conflict points between vehicles and pedestrians, significantly lowering the risk of crashes.

For pedestrians, the roundabout introduces several safety enhancements: raised refuge islands allow them to cross one direction of traffic at a time, and button-activated flashing beacons alert drivers to their presence. These features are especially beneficial for students walking to Glover Field, as they provide safer, more predictable crossing opportunities. Additionally, the roundabout’s geometry naturally slows vehicle speeds, which is a critical factor in reducing the severity of any potential collisions.



HIGHLIGHTS FROM COMMUNITY SURVEY* ABOUT THE HUTCHINSON RAMP CROSSING/NEW CROSSWALK ACROSS SANDFORD BOULEVARD

General Public

- By far the most frequent comment from respondents who rated the roundabout unfavorably were concerned that the roundabout was too complicated or would cause confusion for drivers and pedestrians, leading to more crashes and unsafe conditions. Some of these commenters stated specifically that drivers are unfamiliar with roundabouts, especially in this area where they are uncommon.
- Many respondents also were concerned that the roundabout would increase traffic congestion or that traffic volume was too high to accommodate this configuration.
- Those that rated the roundabout positively were in favor of it as a solution to slow down drivers and improve overall safety of the area.
- There were also a significant number of comments from individuals who felt that they did not have adequate information to rate this as a potential solution and wanted more information.

**This question was not asked in the student questionnaire.*



Figure 22: Conceptual rendering of roundabout.

NEXT STEPS

FORMAL STUDIES

While numerous recommended improvements are enumerated in this report, municipal officials should seek assistance to conduct an official engineering or other feasibility study if they are considering any improvements from Levels Two and Three. While this report offers suggestions that are appropriate for the scope and scale of the existing conditions and the desired outcomes of improving pedestrian safety, particularly for students, any infrastructure improvements shall meet the standards required by the State, which would likely require engineering and traffic studies.

OUTREACH, ENGAGEMENT, AND EDUCATION

Additionally, public feedback from the questionnaire efforts was not positive across the board among all community members. Depending on the intensity/scale of any improvements to be undertaken, officials should undergo outreach and educational efforts to shape the final product and to inform whether said improvement is appropriate in a certain location and/or at a certain time. Meaningful outreach efforts can help reach compromises on specific projects, whether in design or final design, or they can help determine an appropriate phasing of projects to slowly incorporate new elements over time and make drastic changes more palatable.

COOPERATION AMONG MUNICIPALITIES AND COUNTIES

The successful implementation of any of the proposed recommendations will depend on the degree of cooperation among the various jurisdictions. From the outset of this project, one of the main goals was to coordinate the neighboring municipalities and seek input from their officials. All of the proposed recommendations herein align with the stated goals in their respective Master Plans, and the project team is encouraged by the the degree of participation thus far. Westchester County can also play a role in ensuring continued cooperation and technical assistance where possible.

IMPLEMENTATION

Furthermore, public demonstrations and pilot projects can be effective tools in letting the community “test drive” certain changes and allow for meaningful feedback before deciding whether to move forward with full-scale implementation.

COST ESTIMATES

LEVEL ONE

IMPROVEMENT	AVERAGE COST	ITEMIZED LIST
Crosswalk		
Paint	\$3.50/LF	Two 50-foot crosswalks
Thermoplastics	\$6.50/LF	
Pavement marking (words or symbols)		
Paint	\$7.00/SF	“Do not block intersection” in front of stop bars at two areas approximately 10’x12’
Thermoplastics	12.50/SF	
Colored pavement in intersection	30-50% more than standard asphalt	
Road signs		
Standard regulatory "Pedestrian Crossing"	\$50.00/SF	Four - one for each travel direction approaching intersection.
Flashing beacon "School Zone"	\$7,500 each	
Retroflective backplates	\$35 for existing signs. \$56-100 new	
Curb cuts	\$1,500	
ADA pads	\$325	
Street lighting	\$5,000/unit	
Total		

LEVEL TWO

Improvements to consider in addition to LEVEL ONE.

IMPROVEMENT	AVERAGE COST	ITEMIZED LIST
Pedestrian signals		
Lane markings		
Intersection extension		
Lane narrowing		
Raised median		
Midblock crossing		
Raised crosswalk		
Bollards		
Total		

TACTICAL URBANISM

Tactical urbanism is an approach to city-building that involves short-term, low-cost, and temporary interventions in the urban environment to inspire long-term change. Often described as “urban prototyping” or “planning-by-doing,” these small-scale projects allow municipalities and citizens to test new ideas and improve public spaces quickly and inexpensively. The core idea is to experiment in real life – using paint, planters, furniture, and creativity – and gather feedback before making permanent investments.

Tactical urbanism is guided by several fundamental principles that distinguish it from traditional top-down urban planning. The concept was popularized around 2010 by planner Mike Lydon and the Street Plans Collaborative, who defined five hallmark characteristics of tactical urbanism:

- ♦ **Iterative and Phased Approach:** Changes are implemented in deliberate phases. Small interventions serve as first steps toward larger transformations, allowing cities to adjust and build on success over time. For example, a temporary bike lane or plaza can be the initial phase before a permanent reconstruction.
- ♦ **Local Solutions for Local Challenges:** Projects address specific community needs at the neighborhood scale. Rather than one-size-fits-all, tactical urbanism empowers local residents to shape solutions for safety, mobility, or public space issues on their own blocks.
- ♦ **Short-Term Commitment, Long-Term Vision:** Interventions are meant to be temporary – lasting days, weeks, or months – but they are conceived with an eye toward longer-term change. A pilot project is essentially a proof of concept for what could become permanent if it succeeds.
- ♦ **Low-Risk, High-Potential Rewards:** Because these projects use inexpensive materials (paint, planters, cones, pallets, etc.), the financial risk is minimal. This lowers the barrier to trying bold ideas. If an idea fails or needs tweaking, it’s easy to remove or revise; if it succeeds, the rewards in safety, vibrancy, or economic activity can be significant.
- ♦ **Building Social Capital and Partnerships:** Tactical projects often rely on community involvement and cross-sector collaboration, which helps strengthen relationships. By engaging residents, local businesses, nonprofits, and city agencies in hands-on change, they build trust and capacity for larger efforts. Communities feel ownership of the improvements, and public-private partnerships often emerge to support and maintain the projects.

One very apt example for the intersection near the schools comes from Portland, Oregon, where residents took the initiative to paint a large, colorful mural in the middle of a local intersection – without city permission – as a traffic-calming device and community gathering spot. The result in Portland’s case was noteworthy: not only did drivers slow down, but neighbors began using the space to socialize safely. Seeing the safety benefits, the City of Portland eventually passed an “Intersection Repair” ordinance that legalized community street murals (with a permit process) so residents could continue such projects citywide. What started as a rogue tactical intervention became an official program to add public art and slow traffic on residential streets.



Figure 23: Intersection mural in Oregon neighborhood; an example of Tactical Urbanism.

TEMPORARY DEMONSTRATION AND PILOT PROJECTS

Urban pilot projects are small-scale, temporary initiatives implemented by cities to test new ideas, policies, or designs in real-world conditions before committing to full-scale programs. They function as experiments within the urban environment – for example, converting a street to a pedestrian plaza for a few months, or piloting a green infrastructure feature in one neighborhood – with the goal of evaluating feasibility, impact, and public response. By operating within a limited scope and duration, pilot projects allow municipalities to innovate carefully, gathering data and lessons that inform broader urban planning decisions. In essence, they bridge the gap between planning and implementation: a “trial run” that exposes any issues and refines solutions before citywide rollout. The following sections detail the purpose of urban pilot projects, their benefits and challenges, best practices for executing them, and examples of successful pilots that have helped cities address various urban challenges.

In city planning, pilot projects serve as practical testbeds to validate new approaches. Rather than launching a large-scale initiative untested, a city can implement a pilot to observe real-world outcomes and verify that the concept works as intended. The primary purposes include:

- ♦ **Risk Mitigation:** Pilots are designed to identify potential problems or unintended consequences early. By testing on a small scale, cities can spot design flaws or community concerns before they become costly mistakes in a full project. This helps manage risks and adjust plans with minimal fallout.

- ♦ **Feasibility Assessment:** A pilot helps determine if an idea is technically and operationally feasible in the local context. Cities can evaluate whether necessary infrastructure, technology, or behaviors function as expected under real conditions.
- ♦ **Data Collection for Decisions:** Pilot projects generate valuable data on outcomes, costs, usage patterns, and community feedback. This evidence base supports data-driven decision-making, allowing officials to decide whether to scale up, modify, or halt the initiative based on empirical results.
- ♦ **Demonstration and Learning:** Pilots create a live demonstration of a proposal, which can illustrate benefits to the public and politicians. They function as a learning process for all stakeholders – city staff, residents, and partners – building knowledge and capacity for future projects. For example, a pilot can show how a new bike lane configuration might improve safety, helping skeptics see the potential.
- ♦ **Adaptive Policy Development:** By trying new policies or designs at a small scale, cities can refine regulations and implementation strategies. The pilot's outcomes might prompt changes in policy or design standards before codifying them citywide. This ensures that broader plans (e.g. a master plan or new ordinance) are informed by on-the-ground lessons.
- ♦ **Building Support:** A well-executed pilot can build public and political support if it visibly improves conditions. Conversely, if the idea is unpopular or ineffective, the city can revert easily. In this way, pilots serve as a consensus-building tool, showing stakeholders what works (or doesn't) and earning trust through tangible results.

SAFE ROUTES TO SCHOOL

Safe Routes to School (SRTS) is an FHWA-endorsed framework that combines engineering, education, enforcement, encouragement, and evaluation — known as the “5 E’s.”

Integrating SRTS doesn’t just build sidewalks; it changes behavior through a coordinated program that:

- Educates students on safe travel habits;
- Engages parents, school staff, and local police;
- Reinforces correct routes through consistent communication and visual cues;
- Evaluates progress annually.

EXAMPLE APPLICATION OF SAFE ROUTES TO SCHOOL (SRTS) IN STUDY AREA

SRTS “E”	Example for Pelham / Mount Vernon Corridor
Education	Conduct assemblies or classroom videos explaining why the north-side route is safer.
Encouragement	Student “walk teams” or reward systems for using the new route.
Enforcement	Coordinate with Pelham Manor Police and NYSDOT to monitor crossings during dismissal hours.
Engineering	Ensure physical cues (barriers, signage) make the preferred path obvious.
Evaluation	Track compliance via school surveys or crossing guard counts each semester.

IMPLEMENTATION EXAMPLE: INSTALLING NEW CROSSWALKS

1. Site Selection & Evaluation

- ♦ Identify locations with high pedestrian activity or crash history.
- ♦ Assess traffic volume, speed, visibility, and proximity to transit stops or schools.
- ♦ Consult Department of Transportation regulations

2. Design & Countermeasure Selection

- ♦ Choose appropriate crosswalk type: standard markings, raised crosswalks, or midblock crossings.
- ♦ Consider enhancements like:
 - ♦ Rectangular Rapid Flashing Beacons (RRFBs)
 - ♦ Pedestrian refuge islands
 - ♦ High-visibility markings
 - ♦ Advance yield lines and signage

3. Engineering & Installation

- ♦ Remove existing sidewalk sections and pour new concrete bases.
- ♦ Install steel poles, electrical systems, and LED beacons if applicable.
- ♦ Ensure ADA compliance with curb ramps and tactile surfaces

4. Regulatory & Community Coordination

- ♦ Coordinate with local DOT or municipal engineering departments.
- ♦ Engage community stakeholders for feedback and support.
- ♦ Secure permits and ensure alignment with MUTCD and FHWA guidelines.

5. Maintenance & Monitoring

- ♦ Repaint markings regularly (2–4 times/year at ~\$340–\$770 per repainting)
- ♦ Monitor pedestrian and driver behavior post-installation.
- ♦ Adjust signal timing or add enhancements as needed.

When considering an uncontrolled crosswalk, such as the midblock crosswalk proposed at the intersection of East Sanford Boulevard and Highland Avenue, Rectangular Rapid Flashing Beacons (RRFBs) are strongly encouraged to increase pedestrian safety. RRFBs are LED-enhanced devices that dramatically improve driver yielding rates up to 96% at uncontrolled crossings and are especially effective in high-traffic urban areas and midblock locations.

EXAMPLE MATERIALS

A good start might begin by consulting local public works departments to enquire about any extra materials they might have to get started or how to initiate procurement. There are several guides available that offer ideas, examples, and guidelines on temporary projects and how to implement them in a given community.

- ♦ Acrylic Traffic Paint
- ♦ Traffic signs
- ♦ Stencils for pavement markings
- ♦ Flexible delineator post
- ♦ Freestanding delineator post with base
- ♦ Heavy duty outdoor push broom
- ♦ Measuring wheel
- ♦ Parking stops – can be used to delineate bike lanes or even mock roundabouts

The North Jersey Transportation Planning Authority (NJTPA), the Metropolitan Planning Organization for Northern New Jersey, has built a robust Complete Streets Demonstration Library, which can be used as an example of what items might be needed to implement temporary projects in the municipalities. In addition to materials, NJTPA has also compiled various resources with example projects.

FUNDING OPPORTUNITIES

This section presents funding opportunities, identified by Rutgers-POET, that could be utilized by the Pelham School District and other stakeholders to implement changes along the corridor.

TRANSPORTATION ALTERNATIVE PROGRAM

The most common federally funded improvement program used by local municipalities to correct and beautify a corridor traveled on by pedestrians and bicyclists is the Transportation Alternatives Program (TAP). TAP provides funding for programs and projects that include:

- ♦ On/off-road pedestrian and bicycle facilities.
- ♦ Infrastructure projects for improving non-driver access to public transportation and enhanced mobility.
- ♦ Community improvement activities and environmental mitigation.
- ♦ Recreational trail program projects.
- ♦ Safe routes to school projects.
- ♦ Projects for planning, designing, or constructing boulevards.
- ♦ Other roadways, primarily in the right-of-way of former Interstate System routes or other divided highways.

To apply for TAP, the local government will have to demonstrate the following in their application:

Projects must have an eligible Sponsor.

Sponsors must provide a minimum of 20% local match and first-instance project costs.

Projects must fit into one of the selected program eligibility categories and meet the specific program requirements detailed in NYSDOT's Application Process.

Project costs must meet the Minimum/Maximum Award criteria.

Completed Applications must be submitted through Grants Gateway by the deadline.

Sponsors must attend the Informational Workshop.

The project must relate to surface transportation and cannot be exclusively recreational.

The criteria by which the state measures and ranks projects are structured, and application completeness is critical for project selection. While the FFY 2024 TAP solicitation has recently been concluded, local officials should monitor the NYSDOT website for the next solicitation.

OTHER OPPORTUNITIES

In addition to TAP, the municipal officials can seek federal aid from various formula and discretionary federal fund sources. The Federal Highway Administration (FHWA) compiled a comprehensive listing of federal aid programs for improving pedestrian and bicycle facilities, which is included in Appendix C. The listing identifies the criteria, timing, and eligibility that project sponsors must consider when applying for funding. They have also compiled an upcoming schedule with Key Notices of Funding Opportunities and their deadlines. Lastly, they have organized a checklist to help local communities prepare themselves for soliciting funds through the federal process, which the three municipalities should use when developing their project.

APPENDICES

Appendix A: Community Survey Summary

Appendix B: Outreach Materials

Appendix C: Stakeholder Meetings and Feedback

Appendix D: Community Planning Workshop Summary of Feedback

Appendix E: Pedestrian Bridges Memo

Appendix F: Pedestrian and Bicycle Funding Opportunities: US Department of Transportation Transit, Safety, and Highway Funds

APPENDIX A: COMMUNITY SURVEY SUMMARY

BACKGROUND

To collect community input, POET created two surveys to accompany the Community Planning Workshop. The first survey was open to the general public and conducted virtually from February through March of 2025. The second survey was open to students at Pelham High School and Middle School to share their ideas about the suggestions for improving the study area corridor. The student survey was presented in classes from March to April 2025; students watched a short video, created by POET, explaining the purpose of the improvements, and then completed the survey. The public survey received 456 responses, and the student survey received 499 responses.

Survey-takers were shown visuals of the suggested improvements. They were asked to rate the improvements on a scale of one to five stars, and had an open-ended text box to provide more detailed feedback.

KEY FINDINGS

Overall Response to Suggested Improvements

Many respondents generally support the suggested improvements; all suggestions were rated above 4 out of 5 stars, the lowest being 4.1 and the highest being 4.5. Some believe that there are more changes that could be implemented to further improve safety, such as ensuring signals and traffic lights are in working condition and properly timed. Participants generally support improvements to lighting at the underpass and throughout the corridor. Other suggested improvements received more critical feedback, including the median, the mural, the roundabout, and some of the additional crosswalks. The following is an overview of key topics from survey responses.

Safety concerns

For many, safety remains a concern; there are questions and suggestions about continuing to have a constable or crossing guard at the intersection by Glover Field, and there are questions about how the changes will be enforced. Many are worried that pedestrian and driver behaviors will not change despite the improvements to the built environment.

Traffic concerns

Numerous comments were made about the potential impact that modifying the roadways and crosswalks would have on the flow of traffic throughout the area. Many respondents expressed concern about the potentially negative impact that these improvements will have on traffic conditions; a traffic study should be conducted to address these questions and concerns.

Pedestrian bridge

Many respondents believe a pedestrian bridge or tunnel between the school and the field is the best solution; further analysis, including cost, is needed.

Maintenance and aesthetics

There is concern about the maintenance of the corridor, especially the proposed median. Respondents would like the area to be clean and well-maintained, and suggest this would be

easier with hardy, native plant species. There is also interest in placemaking elements, such as the materials of the railings and adding murals to the underpass walls.

Other road users

Many respondents call to consider users of the corridor other than students and drivers, including parents with strollers and cyclists. There were also several mentions of adding bike lanes and extended walkways to provide easier and safer pedestrian access.

More suggestions

In addition to making suggestions for the proposed improvements, respondents provided additional suggestions to improve the corridor including flashing beams at crosswalks, increased surveillance, and more roadway signage.

Responses to Suggested Improvements: New Route

Pros

Many respondents from the student and general surveys shared positive reactions to the new route, and that the new route makes the commute between home, school, and practice safer for pedestrians. Those who frequent Glover Field found that the new route would allow for a more convenient commute that would help regulate traffic in the area.

In the student survey, 154 students said they would always use the new route; 265 said they would sometimes use the new route; 72 said they would never use the new route.

Cons

In the general survey, respondents expressed concerns about the impact of driver behavior and student and pedestrian behavior. In addition, they expressed concerns about drivers turning right onto Colonial Avenue.

Although the new route seems like a more convenient option for some respondents, others raised concerns were also raised about the effectiveness of the median as well as rerouting traffic to improve pedestrian safety. One respondent expressed their doubts on how effective the concept would be given the crossing guards already posted at the intersections. Some student respondents believed the new route would be more time-consuming than taking the current route.

Suggestions

Some comments that criticized the new route for being slower than the old route suggested further exploration of alternatives that would make the commute to school faster. Additional elements that were also proposed included another crosswalk connecting to Glover Field, more natural design features, crossing guards at the crosswalks, and a pedestrian bridge.

In addition to implementing pedestrian-friendly features, respondents have proposed modifying the intersection to allow for safer right-hand turns. Rather than having combined lanes, the town should consider designating a right-turn only lane from Wolfs Lane to Colonial Avenue. On school days, the intersection could also include signs that prohibit right turns on red to allow for safer pedestrian access.

Fourteen (14) respondents of the general survey expressed interest in building pedestrian

bridges or underground tunnels to create a safer commute for pedestrians, the feasibility of which would require a cost analysis. Some respondents also brought up the necessity of factoring in other modes of transport including cyclists, buses, and emergency vehicles.

Questions

The following questions were raised by respondents across both surveys:

- ♦ “Why not make it on the other side? It requires less work and makes it safer and faster by not having to cross the road.”
- ♦ “Do we have enough road space for this? this problem is more central outside the school?”
- ♦ “What will keep students from using the old route?”
- ♦ “There will still be a large group of students who cross over to the library. Will there be a crossing guard or other way to keep students safe?”
- ♦ “How will the crossing in front of the skate park be controlled?”
- ♦ “Can something be constructed from the library?”
- ♦ “What does the addition of 2 crosswalks do to traffic flow at Wolfs and Colonial?”
- ♦ “How do you get the kids to stay on the new walking route unless you eliminate sidewalk of current?”
- ♦ “Why is the current route bad?”
- ♦ “How will you prevent respondents from crossing the road?”
- ♦ “Crosswalks? It's a busy road off the hutch. Bridge? Tunnel?”
- ♦ “Are the constables going to be there to cross students across Sandford Blvd like they currently are for when students cross the Hutch entrance/exit?”



Responses to Suggested Improvements: Colonial Avenue and Wolfs Lane

Pros

Respondents were interested in adding streetlights to help increase road visibility as well as pedestrian safety in the general area. The mural was also met with some positive responses, with one mentioning that it would be a great way to promote school pride. Additionally, the versatility of the multiple proposed routes was well liked among respondents.

Cons

In the general survey, more respondents were against (17) than in support of (7) the mural. Several responses from both surveys were critical of the effectiveness of mural, with some expressing concerns about it potentially distracting drivers and attracting vandalism upon

completion. Another concern was the budget for maintenance of the mural. Despite some liking it from an aesthetic standpoint, they generally found additional signage to be a more effective means of promoting safer driving.

Respondents were also concerned about signal timing and turning lanes. Some suggested the right-hand turns made at the intersection are dangerous for pedestrians. In addition to the limited time given for pedestrians to cross the intersection, some respondents are concerned that it will remain a consistent issue with the new proposals. Finally, respondents were concerned about how safer driving can be enforced.

Suggestions

Additional suggestions for improvement included mini speed bumps, flashing pedestrian lights, and placing more signage in the area. Regarding the intersection mural, one respondent proposed for it to be more community based, potentially as a public project or a student mural. A few respondents wish to see more surveillance in the area, particularly in the form of security cameras and law enforcement. Some suggested ideas for improving pedestrian safety at the intersection included making a right turn lane, implementing rules for turning right on red, installing flashing beams, and raising the crosswalks.

Questions

The following questions were raised by respondents across both surveys:

- ♦ “How will the paint slow down drivers?”
- ♦ “If the paint design was to be a pelican like it is shown in the picture, how would drivers know to be more cautious?”
- ♦ “Will you be allowed to make right on red from wolfs to E. Sandford?”
- ♦ “Will this add a lot of maintenance cost for upkeep?”
- ♦ “Would the traffic light timing or configuration be changed at all?”
- ♦ “Assuming streetlamps would blend into the environment as much as possible?”
- ♦ “I don't know if I love the paint. Is it reflective?”

Responses to Suggested Improvements: Underpass on Colonial Avenue

Pros

The additional lighting and guardrails were met with positive comments, with residents stating that it would help improve driver visibility, making the commute to Glover Field safer for students, and reducing unsafe crossing. Some respondents also liked the medians with greenery, finding that they would add a visually appealing touch to the area. They could help regulate the flooding in the area, specifically with the implementation of native plants.



Cons

Concerns were made about the railing and whether it would be enough to protect pedestrians from oncoming traffic. A few respondents expressed their concerns over the tunnel potentially being a hotspot for littering and graffiti if the railings are installed.

There were some mentions of the left-turn lanes heading towards the Hutch and Glover Field respectively. Respondents found the lanes to be confusing and possibly hazardous for pedestrians.

Several respondents also noted that narrowing the lanes in the tunnel with a median may be potentially hazardous and cause more traffic congestion at busier time intervals. The lack of direct sunlight in the tunnel may also be unsuitable for the greenery, making maintenance more difficult than necessary. Many respondents were against the idea of a median, but support implementing railing and lighting

Many respondents voiced their concerns about how traffic would be affected by narrowing the lanes. The high volume of traffic that typically occurs during peak rush hours may potentially worsen if drivers are given less room to move through the tunnel.

Suggestions

Respondents made suggestions to the plan addressing concerns about placemaking and aesthetics, the characteristics of the built environment and suggested improvements, the issue of traffic, and the maintenance of the median.

Respondents who were fond of the median emphasized the use of hardy native plants to insure low-maintenance and environmentally consciousness. A few mentioned using shrubs with some height to separate it from the roads and walkways.

Some respondents suggested additional lighting to be added to the tunnel as well as the area leading to the underpass, with one reporting that it is poorly lit at night. One respondent proposed for the interior of the bridge to be painted a lighter color to increase driver visibility through reflective lighting.

Several respondents also want to see more room for pedestrians to pass through the tunnel, either through widening the sidewalk or installing a pedestrian bridge within the general area. Additionally, a few respondents proposed adding bike lanes for the children and delivery workers who frequent the tunnel.

Questions

The following questions were raised by respondents across both surveys:

- “Could the railings be wood railing with reflective bands similar to ones that are used on Pelham Parkway? Otherwise, the underpass feels utilitarian and industrial.”
- “Is there any way to make this path cleaner? There is always a lot of trash on the sidewalk.”
- “Who is responsible for upkeep on the median?”
- “It's not a bad idea and I wouldn't mind having somewhere to stop while crossing the street illegally, just wonder if it will encourage that behavior?”
- “I feel like kids will still cross the median.”

- ♦ “Students tend to walk in packs along the sidewalk, so question is, is there room for them to do that?”
- ♦ “Which of these areas is the most unsafe or the biggest chokepoint traffic-wise. Is there any data outlining this? If so, I think that should be used to guide where the money is spent.”
- ♦ “Should this be a railing or a fence?”
- ♦ (Concerning guardrails) “It is a good idea, but would they be sturdy enough if a car accidentally hits the railing?”
- ♦ “What about a bike/walk lane?!”
- ♦ “Plus what's happening in the field to the right of the woman walking?”
- ♦ “Is this Pelham or Mount Vernon property?”
- ♦ “What would the impact of the median on traffic be?”

Responses to Suggested Improvements: Highland Avenue and East Sandford Boulevard

Pros

Several respondents supported the additional crosswalks, mentioning how this improvement would make left turns easier for drivers coming from side streets and generally promoting safer driving. The greenery included with the medians also resonated with respondents as a livelier addition to the space.



Cons

Concerns were raised about the impact of the median on traffic flow, with some worried that drivers will be more likely to crash into it. There were also some concerns about whether the median could be properly maintained given its placement. Students that use the current route regularly feel that the new one will be more inconvenient given how short the commute already is, especially when walking to Glover Field.

There were some mixed opinions on the placements of the proposed crosswalks, with some finding it confusing and potentially dangerous, especially for those crossing Sandford Boulevard at that location. Like the underpass, concerns were also shared about the drawbacks that reducing the lanes will have on traffic.

Suggestions

Suggestions were made to add more crossing guards in the area as well as another stoplight to help reduce speeding. There were also mentions of adding more surveillance in the area to monitor driver behavior and help reinforce pedestrian safety. In addition to the raised crosswalks, respondents suggested installing railings and flashing beams to improve visibility within the area. Another suggestion included the benefit of including a bike lane.

Questions

The following questions were raised by respondents across both surveys:

- “Why are they crossing in the middle of E. Sanford? is it necessary?”
- “Will a left turn from Highland be allowed? The picture indicates that would be tough.”
- “I worry about cars turning left onto Highland Ave off Colonial Ave, can we make that street one way?”
- “This is great but would students cross before the Hutch as indicated here or only after when coming from School property? That is would there be two crosswalks before Memorial Field?”
- “Is there a crossing guard?”
- “Is this a flashing crosswalk sign?”

Responses to Suggested Improvements: Hutchinson River Parkway & East Sanford Boulevard

Pros

Respondents who have some familiarity with roundabouts in other areas expressed their fondness of the concept, believing that the roundabout will be successful at maintaining a steady traffic flow while also slowing it down. The raised crosswalk and all-pedestrian phase were also well-liked among respondents.

Cons

Some common criticisms shared among respondents concerned the confusing nature of the roundabout. Several respondents expressed doubts about the feasibility of the project based on estimated costs and the time it would take to complete. A few have also mentioned the size of the intersection itself and the many limitations that would come with redesigning it. Concerns were also raised about how the current flow of traffic would be affected.

Suggestions

Several respondents want to see a change in traffic signals at the intersections, such as removing the green arrow at the Hutchinson off-ramp and enforcing no turns on red from every direction. They would also like to see more surveillance in the area, either through red light cameras or frequent police patrolling. Some mentioned improving the walk signals by extending the time allotted to pedestrians crossing the intersections.

There were multiple mentions of relocating the new crosswalk on Sanford, specifically towards the local Target store in the area to improve pedestrian commutes. Other proposals for improving the crosswalks include extending the curbs, adding more signage, and including protected bike lanes. Suggestions were also made for a pedestrian bridge to be built over the roundabout in lieu of a crosswalk.



Questions

The following questions were raised by respondents across both surveys:

- ♦ "This would be extremely beneficial for the road, but would it affect traffic and increase it?"
- ♦ "Do the raised areas cause any issues for vehicles?"
- ♦ "Will the crosswalk signals indicate how much time pedestrians have to cross?"
- ♦ "To clarify there will be a dedicated traffic light to stop cars when pedestrians cross? This is vital."
- ♦ "How do emergency vehicles move through if in walk stage?"
- ♦ "Respondents coming off the hutch. are going too fast. - would they have a red light?"
- ♦ "Appears that the crosswalk is raised which is key. Is there an existing light right there? Would there be a pedestrian control (button) on that light?"
- ♦ "Still unsure how it would work with all the different signals. does this increase or decrease safety? We should be using the mt Vernon field"
- ♦ "Have you seen how the traffic behaves? All the different directions respondents go?"
- ♦ "Is there any possible way to cross under the exit ramps so you avoid this intersection all together? I know there is a path along the creek/river there. Just curious."
- ♦ "If funneling traffic to other side of street, why is there still a crosswalk on Hutch entrance/exit? Does that still allow students to cross there, or would this then be blocked to pedestrian traffic?"

APPENDIX B: OUTREACH MATERIALS

WORKSHOP PROMOTIONAL TEXT AND GRAPHIC

"Over the past few months, Pelham Manor has worked collaboratively with the Town of Pelham, Village of Pelham, Pelham Public Schools, City of Mount Vernon, and Westchester County to improve pedestrian and traffic safety in the vicinity of the Glover Field Complex. A planning initiative has been facilitated through the New York Metropolitan Transportation Council (NYMTC).

We're excited to invite you to a virtual Community Planning Workshop to discuss improvements to the roadways between Glover Field and Pelham High School. This includes the intersection of Colonial Avenue and Wolfs Lane, and Sandford Boulevard and the Hutchinson Parkway. This is a unique opportunity to share your ideas and help shape plans that prioritize safety, accessibility, and ease of travel for our community. The workshop will be held virtually on Thursday, January 30 at 7:00 pm. Please register in advance to attend."



The graphic is a promotional poster for a Community Planning Workshop. At the top, there is a photograph of a street scene with pedestrians and cars. Below this, a map of the Glover Field area is shown, with labels for 'PELHAM HIGH SCHOOL', 'SANDFORD BLVD AND THE HUTCHINSON PARKWAY', and 'COLONIAL AVENUE AND WOLFS LANE'. The NYMTC logo is in the top left corner. A yellow speech bubble on the left says 'We want to hear from YOU!'. To the right of the speech bubble, there are icons for a pedestrian, a car, and a bicycle, followed by the text 'Let's make this area safer for pedestrians and drivers.' Below this, it says 'Join the virtual workshop on January 30th, 7 p.m.' At the bottom left, there is a 'REGISTER HERE' button with the URL 'bit.ly/GloverCPW'. To the right of the button is a QR code. At the bottom right, there are five circular logos representing the participating organizations: Pelham Manor, Village of Pelham, Pelham Public Schools, City of Mount Vernon, and Westchester County.

Community Planning Workshop

PELHAM HIGH SCHOOL

SANDFORD BLVD AND THE HUTCHINSON PARKWAY

COLONIAL AVENUE AND WOLFS LANE

GLOVER FIELD

NYMTC

We want to hear from YOU!

Let's make this area safer for pedestrians and drivers.

Join the virtual workshop on **January 30th, 7 p.m.**

REGISTER HERE
bit.ly/GloverCPW

PELHAM MANOR
VILLAGE OF PELHAM
PELHAM PUBLIC SCHOOLS
CITY OF MOUNT VERNON
WESTCHESTER COUNTY

PUBLIC QUESTIONNAIRE PROMOTIONAL GRAPHIC

Community Planning Workshop

NYMTC

PELHAM HIGH SCHOOL

SANDFORD BLVD AND THE HUTCHINSON PARKWAY

GLOVER FIELD

COLONIAL AVENUE AND WOLFS LANE

We want to hear from YOU!

Let's make this area safer for pedestrians and drivers.

Visit the project website to take the community survey.

go.rutgers.edu/GloverCPW

Logos for NJMTC, NJ Office of Transportation Planning, NJ Office of Planning, NJ Office of Public Works, NJ Office of State Police, NJ Office of State Police, NJ Office of State Police, NJ Office of State Police, NJ Office of State Police.

PELHAM PUBLIC SCHOOL STUDENT QUESTIONNAIRE PROMOTIONAL GRAPHIC AND VIDEO

NYMTC

Glover Field Access and Pedestrian Safety

PELHAM HIGH SCHOOL

SANDFORD BLVD AND THE HUTCHINSON PARKWAY

GLOVER FIELD

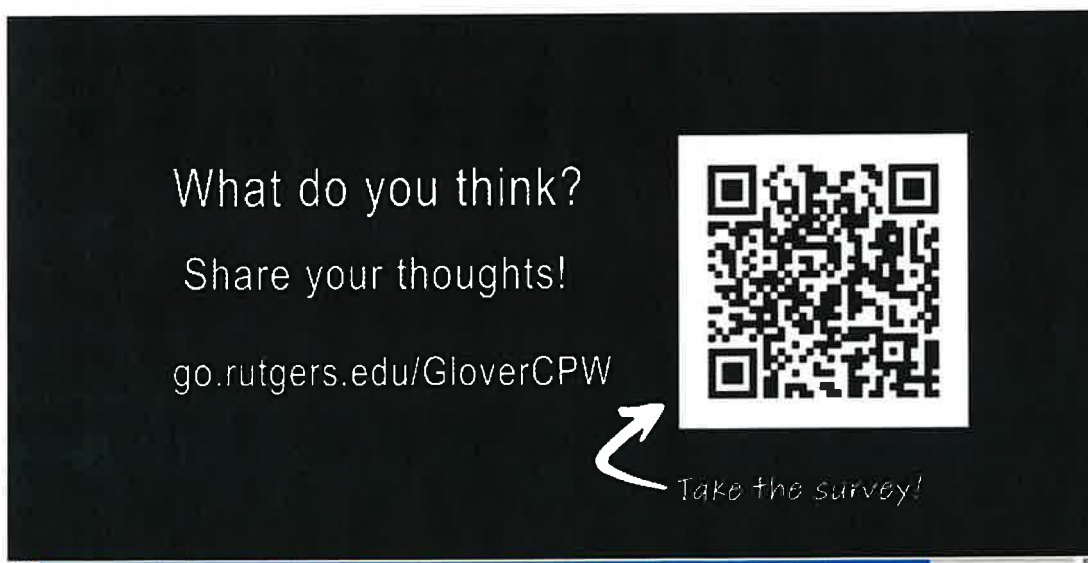
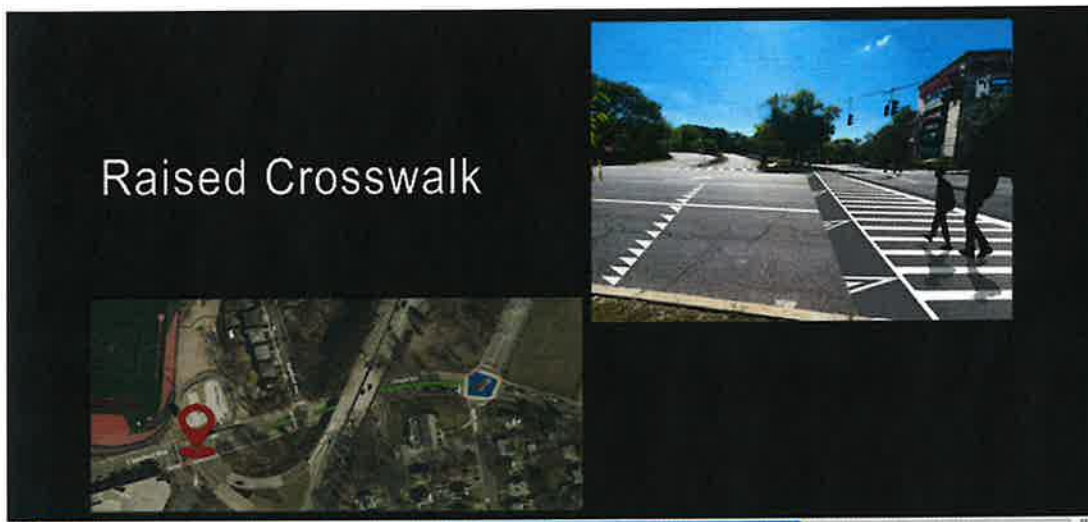
COLONIAL AVENUE AND WOLFS LANE

Students, we want to hear from YOU!

Let's make this area safer for pedestrians and drivers.

Scan the QR code to take the survey for Pelham Memorial High School and Middle School students.

Logos for NJMTC, NJ Office of Transportation Planning, NJ Office of Planning, NJ Office of Public Works, NJ Office of State Police, NJ Office of State Police, NJ Office of State Police, NJ Office of State Police, NJ Office of State Police.



APPENDIX C: STAKEHOLDER MEETINGS AND FEEDBACK

STAKEHOLDER MEETINGS Summary

Overview

In support of the Community Planning Workshop program in Pelham and Mt. Vernon, NYMTC and Rutgers-POET hosted two stakeholder meetings to discuss the team's recommendations for the target corridor of this project. These meetings were held on November 7, 2025, and December 5, 2025.

At the first stakeholder meeting, POET presented the project's website, a StoryMap to prime the public before attending the workshop. In addition, the team presented a summary overview of Vissim simulation results to anticipate concerns over increased traffic and delays. At the second stakeholder meeting, stakeholders reviewed revised recommendations and began coordinating the date and time of the workshop.

Represented Stakeholders

- ♦ Stakeholders with the following titles and/or affiliations were present at one or both meetings:
- ♦ Mt Vernon Planning Commissioner
- ♦ Mt Vernon GIS Administrator
- ♦ Pelham Public Schools Superintendent
- ♦ Pelham Town Supervisor
- ♦ Pelham Council/Board Member
- ♦ Pelham School Director of Facilities
- ♦ Pelham Assistant Superintendent for Business
- ♦ Westchester County

Summary of Stakeholder Feedback

Attendees were overall receptive to the presented recommendations. At the first stakeholder meeting, they provided that following feedback:

Signal timing

- ♦ Multiple stakeholders expressed concerns about the addition and timing of pedestrian signals, especially at recommended new crosswalks; new crosswalks should have pedestrian signals added as well.
- ♦ Signal timing at Glover Field needs to be addressed; currently, it is difficult for vehicles to exit the field. In addition, the signal needs to adapt to events at Glover and Memorial Fields.

Traffic flow

- ♦ Stakeholders were against a proposed "No left turn" from the Parkway to E. Sanford Blvd.

- ♦ There were some concerns about right turns on red at the intersection of Colonial Ave and Wolfs Ln near the school, especially during arrival and dismissal.

Crosswalks

- ♦ The proposed new marked crosswalk at Highland Avenue may undermine the new proposed walking route for students.

Cost

- ♦ After the second stakeholder meeting, when stakeholders were presented with revised recommendation, the primary concern was the cost of implementation.
- ♦ In addition, stakeholders provided feedback on the workshop event, including the inclusion of students and parents of Pelham Schools because their concerns are congruent with those voiced by the school district.

OUTCOMES OF STAKEHOLDER MEETINGS

After the first stakeholder meeting, POET adjusted their recommendations based on received feedback. This included removing recommendations, such as the “no left turn” off the parkway, and restructuring the presentation of the recommendation as “Level 1,” “Level 2,” and “Level 3.” POET also conducted research on the signal timings, safety measures for crosswalks, and Vissim simulations.

APPENDIX D: Community Planning Workshop Summary of Feedback

WORKSHOP Summary

Overview

On January 30, 2025, the project team hosted the official Community Planning Workshop for the Pelham and Mount Vernon communities. The workshop was held virtually and hosted on Zoom. Information about the workshop was distributed to community members via the stakeholder group, both via email and social media. The project team provided informational flyers, social media graphics, and draft text for the stakeholders to share with their constituents to encourage participation.

The workshop was attended by 39 people and included a plenary session with two breakout sessions for discussion and feedback. The agenda included an introduction to NYMTC and the Community Planning Workshop Program from NYMTC's David Drits, an overview of the project and proposed solutions from Miriam Salerno of the Voorhees Transportation Center, and then discussion breakouts led by the Rutgers and NYMTC Teams.

The purpose of this workshop was to introduce the community members to the proposed solutions to address safety along the corridor and provide an opportunity for questions and discussion. The project team received feedback in real time during the meeting, but also informed the participants that there would be a community survey that would allow them to provide more detailed feedback on each set of recommendations. Participants were encouraged to reflect on what was presented and share additional thoughts to the project team in writing through the survey.

Breakout Room Feedback

The breakout session provided constructive and largely positive feedback that reinforced themes from prior stakeholder meetings, helping to refine the CPW team's recommendations. Attendees revisited the recurring idea of a pedestrian bridge first proposed during the 1990s Target development project, questioning why it had not advanced given prior work. A suggestion for a pedestrian tunnel under the Hutchinson River Parkway was raised but deemed impractical due to flooding risks and costly stabilization requirements.

Traffic safety emerged as a major concern, particularly at Colonial Avenue and Wolfs Lane. Residents highlighted problematic driver behavior, such as illegal right turns from left-turn lanes, and expressed apprehension about how these issues might worsen with the addition of a new crosswalk for student routes. Several innovative ideas were proposed, including 3-D crosswalks that create an optical illusion of elevation, lead pedestrian intervals to give walkers a head start, and intersection murals featuring the school mascot to reinforce the school zone identity.

Lighting deficiencies were noted as a critical issue, especially after evening practices and games. While attendees generally supported traffic-calming measures like raised crosswalks, some worried about their impact on emergency vehicle access, citing past rejections for similar reasons. Feedback on the proposed roundabout was mostly favorable, with concerns limited to uncertainty about traffic flow rather than opposition. Finally, participants emphasized the need

for pedestrian signals at roundabout crossings to enhance safety.

Most of the public comments and feedback during the breakout session echoed those heard during the stakeholder meetings and was overall positive and constructive in helping solidify the CPW team's final recommendations:

- ♦ Several residents and other workshop attendees knew of the pedestrian bridge proposed in the 90s when Target was constructed. They asked why not move forward with it if there work was all already done.
- ♦ At least one mention of constructing a pedestrian tunnel underneath the Hutchinson River Parkway to go directly to Glover Field. One attendee was a municipal official who has local knowledge and informed us that the land around the Hutchinson River Parkway is susceptible to flooding. Additionally, the work required to stabilize the ground would be extensive (and expensive).
- ♦ One item that received a lot of attention was about the right turns on red at the intersection of Colonial Avenue and Wolfs Lane; attendees voiced their concerns over the current driver behavior at this intersection, and how some people have witnessed multiple instances of drivers turning right onto Colonial Avenue from the left-turn only lane. Their concerns were about how this problem could be handled if a new crosswalk was added, as proposed with the new student walking route.

Some other comments included exploring options that had not been previously discussed or considered during and following the stakeholder meetings:

- ♦ Implementing 3-D crosswalks at key intersections; specific examples mentioned were found in Iceland, where crosswalks have been installed and used materials that create an optical illusion that the crosswalk is raised, rather than installing an actual raised crosswalk.
- ♦ Implementing a lead pedestrian interval at the intersection of Colonial Avenue and Wolfs Lane, which would give students a head start before any cars begin moving through the intersection.
- ♦ Intersection mural at the school intersection was well-received by some attendees, particularly about how the school mascot would serve as a reminder/hint to drivers that they are entering a school zone.
- ♦ There was consensus on the need for more lighting in the entire area, as there is zero visibility when practice and late evening games finish.
- ♦ While some attendees reacted positively to the traffic calming measures and were not opposed to raised crosswalks or other raised elements, they expressed concern about the potential impact on emergency vehicles; one resident said that earlier measures in the area were denied for that reason.
- ♦ Reaction to the roundabout was overall positive, with any dissenting or neutral opinions stemming from confusion on how traffic would flow through it, but not necessarily opposed to the idea of trying something new.
 - ♦ Some comments addressed the need for pedestrian signals at the crossings in the roundabout.

APPENDIX E: PEDESTRIAN BRIDGES MEMO

OVERVIEW

Pedestrian bridges (footbridges) provide grade-separated crossings over roads, railways, or waterways. They can enhance safety, connectivity, and accessibility, but also raise concerns about cost-effectiveness, walkability, and long-term maintenance.

KEY ADVANTAGES

- **Safety from Traffic Conflicts** – Eliminates direct pedestrian–vehicle interaction at high-speed or high-volume crossings.
- **Connectivity & Access** – Links communities, trails, campuses, or parks; enables access to otherwise inaccessible areas.
- **Flood & Terrain Resilience** – Maintains year-round access over flood-prone or uneven terrain.
- **Universal Design Potential** – Can be built to ADA standards with ramps or elevators for accessibility.
- **Aesthetic & Placemaking Value** – Can serve as a landmark or public art element, enhancing urban design.
- **Longevity** – Properly designed bridges (steel, FRP) can last 75–100+ years with appropriate maintenance.

KEY DISADVANTAGES

- **High Capital Cost** – Significant upfront investment compared to at-grade crossings.
- **Potential to Reduce Walkability** – Long ramps/stairs increase travel distance; may discourage use.
- **Accessibility Challenges** – Steep grades or poorly designed ramps can exclude users with mobility impairments.
- **Safety Perception Issues** – Poor lighting or isolation can deter use, especially at night.
- **Maintenance Burden** – Wood requires frequent upkeep; steel needs periodic painting/coating; mechanical systems (elevators) add O&M costs.
- **Behavioral Non-Compliance** – Studies show many pedestrians still cross at-grade if the bridge is inconvenient.

COST ESTIMATES

(2024–2025 industry ranges; actual costs vary by site, design, and code requirements)

BRIDGE TYPE	TYPICAL COST RANGE (PER BRIDGE)
Trail or park bridge (wood/composite)	\$500K – \$2M
Basic steel span (urban setting)	\$1.5M – \$3M
Over highway or rail corridor	\$3M – \$10M+
Signature design (e.g., cable-stayed)	\$5M – \$15M+

Example: A 100-foot steel truss bridge could range from \$50,000 to \$200,000 for the superstructure alone, excluding abutments, approaches, lighting, or elevators.

Additional Cost Drivers

- Site Conditions: Terrain, geotechnical requirements, and environmental permitting can significantly affect cost.
- Width & Load Requirements: Wider decks (e.g., 12–16 ft) or vehicle load ratings (maintenance/emergency) increase costs by 20–40%.
- Urban vs. Remote: Urban sites may require longer ramps for ADA compliance; remote sites may have higher mobilization costs.
- Aesthetic Enhancements: Architectural finishes, lighting, and public art can add 10–30% to base

MAINTENANCE ACTIVITY	ESTIMATED ANNUAL COST (PER BRIDGE)
Routine inspections	\$5K – \$15K
Minor repairs (deck, railing)	\$10K – \$50K
Elevator/escalator servicing	\$20K – \$100K+
Major rehab (deck replacement, structural upgrades)	\$250K – \$1M+

PLANNING CONSIDERATIONS

- Conduct pedestrian demand analysis to ensure the bridge will be used.
- Compare life-cycle costs vs. at-grade safety improvements (e.g., signalized crossings, road diets).
- Engage stakeholders early to address accessibility, safety perception, and community integration.
- Evaluate funding sources: federal/state grants, local capital budgets, public-private partnerships.

EXAMPLES

MetLife Stadium Pedestrian Bridge (East Rutherford, NJ)

Project Overview	Purpose: To improve pedestrian flow between Meadowlands Parking Lot C and American Dream Parking Garage A ahead of the 2026 FIFA World Cup. Location: Adjacent to MetLife Stadium, crossing Route I20.
Cost Details	Total Estimated Cost: \$25 million Funding Source: New Jersey Transportation Department grant via the Local Transportation Projects Fund
Managing Entity	New Jersey Sports and Exposition Authority
Design Features	♦ Pile-driven foundation ♦ Concrete piers and steel superstructure ♦ Electrical infrastructure, lighting, and security systems
Rationale	Existing bridge serves ~15,000 pedestrians during events, with bottlenecks causing up to 90-minute delays.

Queensboro Bridge Reconfiguration (Manhattan–Queens)

Project Scope	Conversion of the south outer roadway into a dedicated pedestrian walkway; north outer roadway becomes a bike-only lane.
Daily Usage	Over 10,000 pedestrians and cyclists
Cost Details	While exact figures weren't disclosed, similar bridge reconfigurations (e.g., Brooklyn Bridge bike lane in 2021) ranged from \$5M–\$10M, depending on structural modifications and safety upgrades.
Key Features	♦ Concrete landings and medians ♦ Sidewalk extensions and bump-outs ♦ Signal adjustments and traffic calming
Timeline	Completion expected in late summer 2025

CONCLUSION

Pedestrian bridges can be transformative infrastructure when sited and designed to maximize accessibility, safety, and community value. However, they require careful cost-benefit analysis, as high capital and maintenance costs may outweigh benefits if pedestrian demand is low or if at-grade solutions can achieve similar safety outcomes.

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds

September 9, 2022

This table indicates potential eligibility for pedestrian and bicycle activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects need to meet program eligibility requirements. See notes and basic program requirements below, with links to program information. Project sponsors should integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects.

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds

Key: \$ = Activity may be eligible. Restrictions may apply, see program notes and guidance. ~\$ = Eligible, but not competitive unless part of a larger project.

Activity or Project Type	OST Programs						Federal Transit				NHTSA		Federal Highway Administration																	
	RAISE	INFRA	RCP	SS4A	Thrive	RRIF	TIFIA	FTA	ATI	TOD	AoPP	402	405	BIP	CRP	CMAQ	HSIP	RHCP	NHPP	PRO	STBG	TA	RTP	SRTS	PLAN	NSBP	FL	TTP	TTPSF	
Access enhancements to public transportation (benches, bus pads)	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$			BIP	\$	\$				\$	\$	\$					\$	\$	\$	
					\$	TA				\$	\$			BRR	\$							\$						\$	\$	
Americans with Disabilities Act (ADA)/504 Self Evaluation / Transition Plan																						\$						\$	\$	
Barrier removal for ADA compliance	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$	\$			\$	\$						\$	\$	\$				\$	\$	\$	
Bicycle plans				~\$						\$	\$				\$						\$	\$	\$				\$	\$	\$	\$
Bicycle helmets (project or training related)												\$									\$	\$	\$				\$	\$	\$	\$
Bicycle helmets (safety promotion)																					\$	\$	\$				\$	\$	\$	\$
Bicycle lanes on road	~\$	~\$	\$	\$		~\$	~\$	\$	\$	~\$	\$				\$	\$	\$	\$	\$	\$	\$	\$					\$	\$	\$	\$
Bicycle parking (see Bicycle Parking Solutions)	~\$	~\$	\$	\$		~\$	~\$	\$	\$	~\$	\$				\$	\$					\$	\$	\$				\$	\$	\$	\$
Bike racks on transit	~\$		\$	~\$			~\$	\$	\$	~\$	\$				\$	\$					\$	\$	\$				\$	\$	\$	\$
Bicycle repair station (air pump, simple tools)	~\$		\$	~\$			~\$	\$	\$	~\$	\$				\$	\$					\$	\$	\$				\$	\$	\$	\$
Bicycle share (capital and equipment; not operations)	~\$		\$	~\$			~\$	\$	\$	~\$	\$				\$	\$					\$	\$	\$				\$	\$	\$	\$
Bicycle storage or service centers (example: at transit hubs)	~\$		\$	~\$			~\$	\$	\$	~\$	\$				\$	\$					\$	\$	\$				\$	\$	\$	\$
Bridges / overcrossings for pedestrians and/or bicyclists	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$	\$			\$	\$	\$	\$	\$	\$	\$	\$	\$					\$	\$	\$	\$
Bus shelters and benches	\$	\$	\$	~\$		~\$	~\$	\$	\$	~\$	\$				\$	\$					\$	\$	\$				\$	\$	\$	\$
Coordinator positions (State or local) (limits on CMAQ and STBG)			\$	\$						\$	\$				\$	\$					\$	\$	\$				\$	\$	\$	\$
Community Capacity Building (develop organizational skills/processes)				\$	TA					\$	\$												\$					\$	\$	\$
Crosswalks for pedestrians, pedestrian refuge islands (new or retrofit)	\$	\$	\$	\$		~\$	~\$	\$	\$		\$				\$	~\$	\$	\$	\$	\$	\$	\$				\$	\$	\$	\$	\$
Curb ramps	\$	\$	\$	\$		~\$	~\$	\$	\$		\$			\$	\$	~\$	\$	\$	\$	\$	\$	\$				\$	\$	\$	\$	\$
Counting equipment	\$	\$	\$	\$				\$	\$		\$				\$		\$				\$	\$	\$				\$	\$	\$	\$
Data collection and monitoring for pedestrians and/or bicyclists	\$	\$	\$	\$				\$	\$	~\$	\$				\$		\$				\$	\$	\$				\$	\$	\$	\$
Emergency and evacuation routes for pedestrians and/or bicyclists	\$	\$	\$	~\$				\$	\$	~\$	\$				\$		\$				\$	\$	\$				\$	\$	\$	\$
Historic preservation (pedestrian and bicycle and transit facilities)	~\$		~\$	~\$		~\$	~\$	\$	\$	~\$	\$				\$		\$				\$	\$	\$				\$	\$	\$	\$
Landscaping, streetscaping (pedestrian/bicycle route; transit access); related amenities (benches, water fountains); usually part of larger project	~\$	~\$	~\$	~\$		~\$	~\$	\$	\$	~\$	\$				\$				~\$		\$	\$	\$				\$	\$	\$	\$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$	\$				\$	~\$	\$	\$	\$	\$	\$	\$				\$	\$	\$	\$	\$
Maps (for pedestrians and/or bicyclists)				\$				\$	\$	~\$	\$				\$	\$					\$	\$	\$				\$	\$	\$	\$
Micromobility projects (including scooter share)	\$		\$	~\$		~\$	~\$			~\$	\$				\$	\$					\$	\$	\$				\$	\$	\$	\$
Paved shoulders for pedestrian and/or bicyclist use	\$	~\$	\$	\$		~\$	~\$							\$	\$	\$	\$	\$	\$	\$	\$	\$				\$	\$	\$	\$	\$
Pedestrian plans	\$	~\$	~\$	\$			\$	\$	\$	\$	\$				\$						\$	\$	\$				\$	\$	\$	\$
Rail at-grade crossings	\$	\$	\$	~\$		\$	\$	\$	\$		\$				\$			\$			\$	\$	\$				\$	\$	\$	\$
Recreational trails	\$		\$	~\$			~\$														\$	\$	\$				\$	\$	\$	\$
Resilience Improvements for pedestrians and bicyclists	\$	\$	\$	~\$		~\$	~\$			\$	~\$			~\$	~\$	~\$					\$	\$	\$				\$	\$	\$	\$
Road Diets (pedestrian and bicycle portions)	\$	\$	\$	\$		~\$	~\$	\$	\$		\$				\$	\$	\$	\$	\$	\$	\$	\$				\$	\$	\$	\$	\$

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds
Key: \$ = Activity may be eligible. Restrictions may apply, see program notes and guidance. ~\$ = Eligible, but not competitive unless part of a larger project.

Activity or Project Type	OST Programs										Federal Transit Administration										Federal Highway Administration									
	RAISE	INFRA	RCP	SS4A	Thrive	RRIF	IIIFA	FTA	ATI	TOD	AoPP	402	NHTSA	BFP	CRP	CMAQ	HSIP	RHCP	NHPP	PRO	TECI	STBG	TA	RTP	SRTS	PLAN	NSBP	FLTTP	TTP	TIPSF
Road Safety Assessment for pedestrians and bicyclists																														
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike traffic safety laws																														
Safety education positions																														
Safety enforcement (including police patrols)																														
Safety program technical assessment (for ped/bicyclists)																														
Separated bicycle lanes																														
Shared use paths / transportation trails																														
Sidewalks (new or retrofit)																														
Signs, signals, signal improvements (incl accessible pedestrian signals) see note																														
Signing for pedestrian or bicycle routes																														
Spot improvement programs (for pedestrian and bicycle facilities)																														
Stormwater impacts related to pedestrian and bicycle project impacts																														
Traffic calming																														
Trail bridges																														
Trail construction and maintenance equipment																														
Trail/highway crossings and intersections																														
Trailside/trailhead facilities (restrooms, water, not general park amenities)																														
Training																														
Training for law enforcement on ped/bicyclist safety laws																														
Tunnels / underpasses for pedestrians and/or bicyclists																														
Vulnerable Road User Safety Assessment																														

Abbreviations
 ADA/504: Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973
 RAISE: Rebuilding American Infrastructure with Sustainability and Equity
 INFRA: Infrastructure for Rebuilding America Discretionary Grant Program
 RCP: Reconnecting Communities Pilot Program
 SS4A: Safe Streets and Roads for All
 Thrive: Thriving Communities Initiative (TA: Technical Assistance)
 RRIF: Railroad Rehabilitation and Improvement Financing (loans)
 IIIFA: Transportation Infrastructure Finance and Innovation Act (loans)
 FTA: Federal Transit Administration Capital Funds
 ATI: Associated Transit Improvement (1% set-aside of FTA)
 TOD: Transit-Oriented Development
 AOP: Areas of Persistent Poverty Program
 NHTSA 402: National Highway Traffic Safety Administration State and Community Highway Safety Grant Program
 NHTSA 405: National Highway Traffic Safety Administration National Priority Safety Programs (Nonmotorized safety)
 BFP: Bridge Formula Program; BIP: Bridge Investment Program; BRR: Bridge Replacement and Rehabilitation Program
 CRP: Carbon Reduction Program

CMAQ: Congestion Mitigation and Air Quality Improvement Program
 HSIP: Highway Safety Improvement Program
 RHCP: Railway-Highway Crossings (Section 130) Program
 NHPP: National Highway Performance Program
 PROTECT: Promoting Resilient Operations for Transformative, Efficient, and Cost Saving Transportation
 STBG: Surface Transportation Block Grant Program
 TA: Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program, Transportation Enhancements)
 RTP: Recreational Trails Program
 SRTS: Safe Routes to School Program (and related activities)
 PLAN: Statewide Planning and Research (SPR) or Metropolitan Planning funds
 NSBP: National Scenic Byways Program
 FLTTP: Federal Lands and Tribal Transportation Programs: Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Federal Lands Planning Program and related programs for Federal and Tribal lands such as the Nationally Significant Federal Lands and Tribal Projects program.
 TTP: Tribal Transportation Program
 TIPSF: Tribal Transportation Program Safety Fund

Cross-cutting notes

This table indicates potential eligibility for pedestrian, bicycle, and micromobility activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects must meet program eligibility requirements. See notes and links to program information below. Although the primary focus of this table is stand-alone activities and projects, programs also fund pedestrian and bicycle facilities as part of larger projects. Project sponsors are encouraged to consider [Complete Streets](#) and Networks that routinely integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects. In these instances, the Federal-aid eligibility of the pedestrian and bicycle elements are considered under the eligibility criteria applicable to the larger highway project. Pedestrian and bicycle activities also may be characterized as environmental mitigation for larger highway projects, especially in response to impacts to a Section 4(f) property or work zone safety, mobility, and accessibility impacts on bicyclists and pedestrians.

- See [FHWA Bicycle and Pedestrian Planning, Program, and Project Development](#) (Guidance)
- **Bicycle Project Purpose:** 23 U.S.C. 217(i) requires that bicycle facilities “be principally for transportation, rather than recreation, purposes”. However, 23 U.S.C. 133(b)(7) and 133(h) authorize recreational trails under [STBG](#) and the [IA Set-Aside](#); therefore, 23 U.S.C. 217(i) does not apply to trail projects (including for bicycle use) using [STBG](#) or [IA Set-Aside](#) funds. Section 217(i) applies to bicycle facilities other than trail-related projects, and section 217(i) applies to bicycle facilities using other programs ([NHPP](#), [HSIP](#), [CMAQ](#)). The transportation requirement under section 217(i) only applies to bicycle projects, not to any other trail use or transportation mode.
- Signs, signals, signal improvements includes ensuring accessibility for persons with disabilities. See [Accessible Pedestrian Signals](#). See also [Proven Safety Countermeasures](#), such as [Crosswalk Visibility Enhancements](#), [Leading Pedestrian Interval signals](#), [Pedestrian Hybrid Beacons](#), and [Rectangular Rapid Flashing Beacons](#).
- Occasional DOT or agency incentive grants may be available for specific research or technical assistance purposes.
- Aspects of DOT initiatives may be eligible as individual projects. Activities above may benefit safe, comfortable, multimodal networks; environmental justice; and equity.
- The [DOT Navigator](#) is a resource to help communities understand the best ways to apply for grants, and to plan for and deliver transformative infrastructure projects and services.
- FHWA’s [Policy on Using Bipartisan Infrastructure Law Resources to Build a Better America](#).
- FHWA Links to [Technical Assistance and Local Support](#).

Program-specific notes

Federal-aid and other DOT funding programs have specific requirements that projects must meet, and eligibility must be determined on a case-by-case basis. See links to program guidance for more information.

- [RAISE](#) (Infrastructure Investment and Jobs Act (Pub. L. 117-58) (IIJA), also known as the Bipartisan Infrastructure Law (BIL), § 21202): Funds capital and planning grants.
- [INFRA](#) (IIJA § 11110): For projects that improve safety, generate economic benefits, reduce congestion, enhance resiliency, and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements.
- [RCP](#) (IIJA § 11509 and div. J, title VIII, Highway Infrastructure Programs, para. (7)): See [RCP Program Notice of Funding Opportunity](#) for full details. Planning grants and Capital Construction Grants must relate to a transportation facility that creates a barrier to community connectivity.
- [SS4A](#) (IIJA § 24112): Discretionary program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. Projects must be identified in a comprehensive safety action plan (§ 24112(a)(3)).
- [Thrive](#) (Department of Transportation Appropriations Act, 2022 (Pub. L. 117-103, div. L, title I): Technical assistance, planning, and capacity-building support in selected communities.
- [RRJF](#) (Chapter 224 of title 49 U.S.C.): Program offers direct loans and loan guarantees for capital projects related to rail facilities, stations, or crossings. Pedestrian and bicycle infrastructure components of “economic development” projects located within 1/4-mile of qualifying rail stations may be eligible. May be combined with other grant sources.
- [TIFIA](#) (Chapter 6 of title 23 U.S.C.): Program offers secured loans, loan guarantees, or standby lines of credit for capital projects. Minimum total project size is \$10 million; multiple surface transportation projects may be bundled to meet cost threshold, under the condition that all projects have a common repayment pledge. May be combined with other grant sources, subject to total Federal assistance limitations.
- [FTA / ATI](#) (49 U.S.C. 5307): Multimodal projects funded with FTA transit funds must provide access to transit. See [Bicycles and Transit](#), [Flex Funding for Transit Access](#), the FTA [Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law](#), and [FTA Program & Bicycle Related Funding Opportunities](#).
 - o Bicycle infrastructure plans and projects must be within a 3-mile radius of a transit stop or station. If more than 3 miles, within a distance that people could be expected to safely and conveniently bike to the particular stop or station.
 - o Pedestrian infrastructure plans and projects must be within a 1/2 mile radius of a transit stop or station. If more than 1/2 mile, within a distance that people could be expected to safely and conveniently walk to the particular stop or station.
 - o FTA funds cannot be used to purchase bicycles for bike share systems.
- [FTA TOD](#): Provides planning grants to support community efforts to improve safe access to public transportation for pedestrians and cyclists. The grants help organizations plan for transportation projects that connect communities and improve access to transit and affordable housing, not for capital purchases.
- [FTA AoPP](#) (Further Consolidated Appropriations Act, 2020 (Pub. L. 116-94); Consolidated Appropriations Act, 2021 (Pub. L. 116-260)): Promotes multimodal planning, engineering, and technical studies, or financial planning to improve transit services in areas experiencing long-term economic distress, not for capital purchases.
- [NHTSA 402](#) (23 U.S.C. 402): Project activity must be included in the State’s Highway Safety Plan. Contact the [State Highway Safety Office](#) for details.
- [NHTSA 405](#) (23 U.S.C. 405): Funds are subject to eligibility, application, and award. Project activity must be included in the State’s Highway Safety Plan. Contact the [State Highway Safety Office](#) for details. The [Bipartisan Infrastructure Law](#) expanded the eligible use of funds for a Section 405 Nonmotorized Safety grant beginning in FY 2024; however, for FY 2023 grants, FAST Act eligible uses remain in place.
- [BFP](#), (IIJA, Div. J, title VIII, para. (1)), [BIP](#) (23 U.S.C. 124), [BRR](#) (Department of Transportation Appropriations Act, 2022): For specific highway bridge projects and highway bridge projects that will replace or rehabilitate a bridge must consider pedestrian and bicycle access as part of the project and costs related to their inclusion are eligible under these programs.
- [CRP](#) (23 U.S.C. 175): Projects should support the reduction of carbon dioxide emissions from on-road highway sources.

- [CMAQ](#) (23 U.S.C. 149): Projects must demonstrate emissions reduction and benefit air quality. See the CMAQ guidance at www.fhwa.dot.gov/environment/air_quality/cmaq/ for a list of projects that may be eligible for CMAQ funds. CMAQ funds may be used for shared use paths, but not for trails that are primarily for recreational use.
- [HSIP](#) (23 U.S.C. 148): Projects must be consistent with a State's [Strategic Highway Safety Plan](#) and (1) correct or improve a hazardous road location or feature, or (2) address a highway safety problem. Certain non-infrastructure safety projects can also be funded using HSIP funds as specified safety projects.
- [RHCP](#) (23 U.S.C. 130): Projects at all public railroad crossings including roadways, bike trails, and pedestrian paths.
- [NHPP](#) (23 U.S.C. 119): Projects must benefit National Highway System (NHS) corridors and must be located on land adjacent to any highway on the National Highway System (23 U.S.C. 217(b)).
- [PROTECT](#) (23 U.S.C. 176): Funds can only be used for activities that are primarily for the purpose of resilience or inherently resilience related. With certain exceptions, the focus must be on supporting the incremental cost of making assets more resilient.
- [STBG](#) (23 U.S.C. 133) and [TA Set-Aside](#) (23 U.S.C. 133(h)): Activities marked “\$SRTS” means eligible only as an SRTS project benefiting schools for kindergarten through 12th grade. Bicycle transportation nonconstruction projects related to safe bicycle use are eligible under STBG, but not under TA (23 U.S.C. 217(a)). There is broad eligibility for projects under 23 U.S.C. 206, 208, and 217.
- [RTP](#) (23 U.S.C. 206): Projects for trails and trailside and trailhead facilities for any recreational trail use. RTP projects are eligible under TA Set-Aside and STBG.
- [SRTS](#) (23 U.S.C. 208): Projects for any SRTS activity. FY 2012 was the last year for dedicated - funds, but funds are available until expended. SRTS projects are eligible under TA Set-Aside and STBG.
- [PLAN](#) (23 U.S.C. 134 and 135): Funds must be used for planning purposes, for example: Maps: System maps and GIS; Safety education and awareness: for transportation safety planning; Safety program technical assessment: for transportation safety planning; Training: bicycle and pedestrian system planning training.
- [NSBP](#) (23 U.S.C. 162): Discretionary program subject to annual appropriations. Projects must directly benefit and be close to a designated scenic byway.
- [FLTPP](#) (23 U.S.C. 201-204): Projects must provide access to or within Federal or tribal lands. Programs include: Federal Lands and Tribal Transportation Programs ([Federal Lands Access Program](#), [Federal Lands Transportation Program](#), [Federal Lands Planning Program](#)) and related programs for Federal and Tribal lands such as the [Nationally Significant Federal Lands and Tribal Projects](#) (NSFLTP) program.
 - [Federal Lands Transportation Program](#) (23 U.S.C. 203): For Federal agencies for projects that provide access within Federal lands.
 - [Federal Lands Access Program](#) (FLAP) (23 U.S.C. 204): For State and local entities for projects that provide access to or within Federal or tribal lands.
- [TTP](#) (23 U.S.C. 202): For federally-recognized tribal governments for projects within tribal boundaries and public roads that access tribal lands.
- [TTPSF](#) (23 U.S.C. 202(e)(1) and 23 U.S.C. 148(a)(4)): Grants available to [federally recognized Indian tribes](#) through a competitive, discretionary program to plan and implement transportation safety projects.