

SOUTH JERSEY TRANSPORTATION PLANNING ORGANIZATION

ITEM 1711-37: Approving the Selection of Urban Engineers, Inc. as the Consultant for the Cumberland County Bicycle and Pedestrian Safety Action Plan

PROPOSAL

At its November 13, 2017 meeting, the Technical Advisory Committee recommended that the Policy Board approve the selection of Urban Engineers, Inc. in association with Fitzgerald & Halliday, Inc. (DBE), Civic Eye Collaborative, LLC (DBE), and NV5, Inc. for the Cumberland County Bicycle and Pedestrian Safety Action Plan.

BACKGROUND

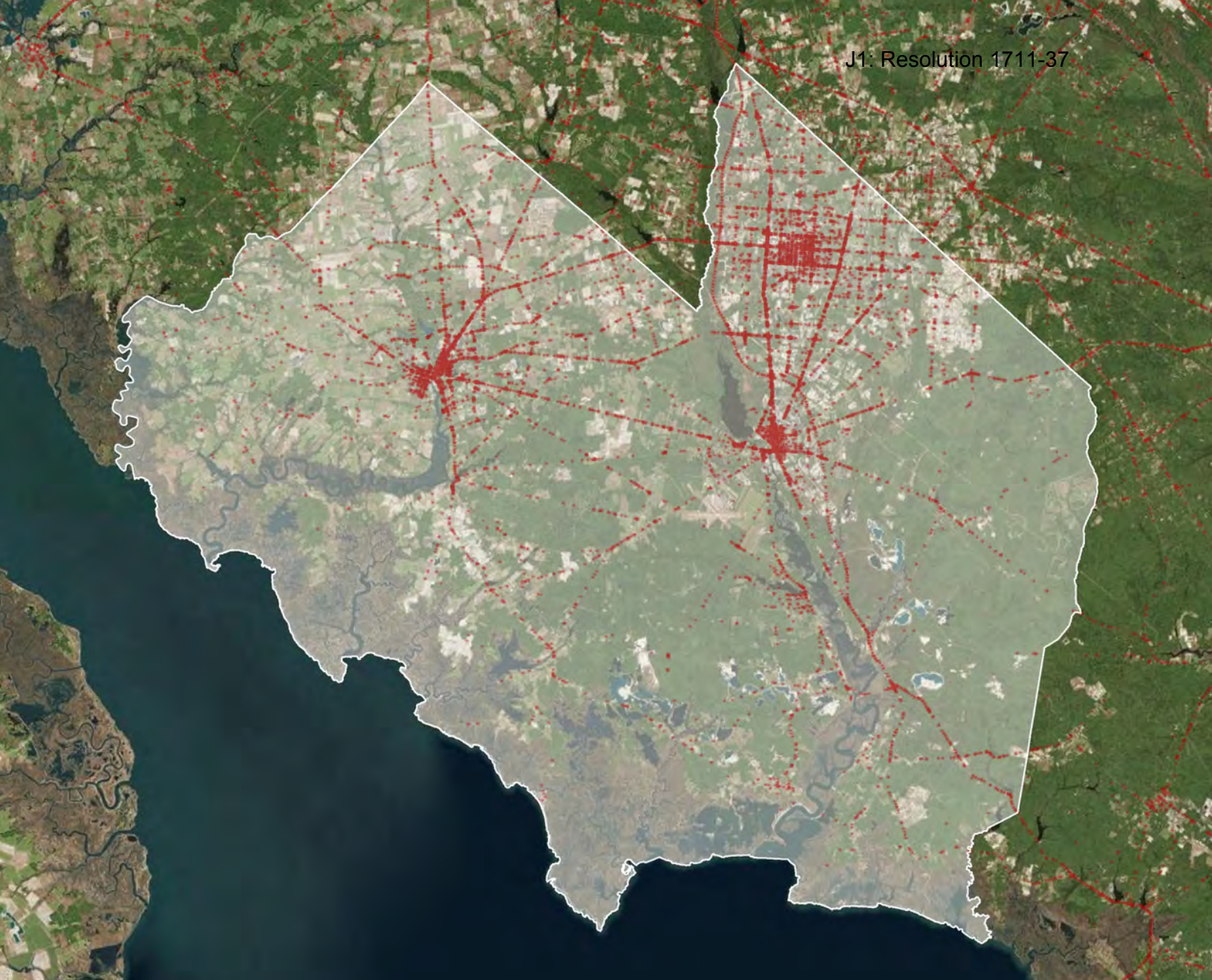
The Request for Proposal (RFP) for the technical study was issued on Wednesday, September 13, 2017. With the request, SJTPO was seeking qualified firm(s) to develop a Bicycle and Pedestrian Safety Action Plan for Cumberland County and the municipalities therein. The Plan will document a number of action-oriented tasks geared towards advancing data-driven bicycle and pedestrian projects via New Jersey's Local Safety Program funded through the federal Highway Safety Improvement Program (HSIP). The Notice of Availability for this Request for Proposals was sent to 208 contacts.

A total of seven (7) proposals were received on Tuesday, October 10, 2017. Proposals were reviewed and scored by the TAC-designated Consultant Selection Committee with representatives from Cumberland County, City of Vineland, NJDOT, and SJTPO. Proposals were evaluated cost-blind, based on the technical approach, firm and staff qualifications, and DBE participation. Scores for each reviewer was converted to a rank, which was then averaged amongst all reviewers with **Urban Engineers, Inc.** emerging as the top-ranked firm. For this technical study, Urban Engineers, Inc. is partnering with Fitzgerald & Halliday, Inc. (DBE), Civic Eye Collaborative, LLC (DBE), and NV5, Inc.

The scope of work and associated project cost was reviewed and negotiated. Therefore, the proposed cost is **\$344,780.64**, with 39.6% DBE participation. This technical study is a two-year effort with an anticipated contract end date of June 28, 2019.

If this contract is awarded, the SJTPO DBE/ESBE participation rate for FY 2018 would be 18.0% (including other previously approved consultant efforts). The attached resolution authorizes the Executive Director to negotiate minor revisions to the scope of work and fee to best advance the goals and intent of the project.

This study is to be funded directly through NJDOT using Highway Safety Improvement Program (HSIP) funds. While this effort is identified in the FY 2018 UPWP under Task 18/407, indicating a budget of \$152,400, HSIP funds will be authorized for the technical study based upon the winning consultants cost proposal. NJDOT Bureau of Traffic Data and Safety will evaluate the consultant Scope and Cost and authorize funds appropriately. A separate Task Order will be executed for the technical study, above and beyond funding that is within the FY 2018 UPWP.



Proposal | **November 2017**

Cumberland County Bicycle and Pedestrian Safety Action Plan

SUBMITTED TO:

Alan Huff, Senior Transportation Planner
South Jersey Transportation Planning Organization
782 South Brewster Road, Unit B6
Vineland, NJ 08361

SUBMITTED BY:

Urban Engineers, Inc.
220 Lake Drive E #300
Cherry Hill, NJ 08002

REVISED





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1. Cover Letter



November 15, 2017

Alan Huff
Senior Transportation Planner
South Jersey Transportation Planning Organization
782 South Brewster Road, Unit B6
Vineland, New Jersey 08361

Re: Cumberland County Bicycle and Pedestrian Safety Action Plan

Dear Mr. Huff:

Improving bicycle and pedestrian safety at a County-wide level requires a strategic, data-driven, and community-driven approach to project identification and advancement. Through the Cumberland County Bicycle and Pedestrian Safety Action Plan, the South Jersey Transportation Planning Organization (SJTPPO) intends to advance priority bicycle and pedestrian improvement projects with measurable safety benefits via New Jersey's Local Safety Program.

Urban Engineers, Inc. (Urban) brings the expertise, experience, and dedication needed to make this plan a success. We recently completed two projects that are very similar to this effort: the ***NJDOT Road Diet Pilot Study*** and the ***PennDOT District-Wide Roundabout Program***. Both projects employed a data-driven, GIS-based analysis to prioritizing corridors and intersections for Highway Safety Improvement Program (HSIP) funding. Through these projects and others, we have gained tremendous experience with SJTPPO's Network Screening Lists, FHWA's Proven Safety Countermeasures, and Highway Safety Manual (HSM) methodology.

Our local knowledge and experience is an asset to this assignment. Through two open-end contracts with ***NJDOT's Office of Bicycle and Pedestrian Programs*** and ***SJTPPO's FY 2015 Local Safety & CMAQ Project Development*** project, we have advanced bicycle and pedestrian improvements in communities throughout southern New Jersey. Project locations have ranged from urban areas (Cape May City) to rural townships (Downe Township). These efforts required close coordination with local officials – and in the case of Downe, coordination with Cumberland County staff – to achieve consensus on proposed improvements.

Having the right Project Manager is crucial to a project's success. Our proposed Project Manager, **John Federico, PE, PP, AICP**, has over 18 years of experience managing and completing transportation projects throughout the region. Through the NJDOT open-end contracts, he managed a Pedestrian Route Safety Audit along Route 30 in Camden County, developed bicycle and pedestrian circulation plans for communities in southern New Jersey (Downe, Northfield, Ventnor, and Margate), and completed numerous bicycle/pedestrian safety studies throughout New Jersey. John has a keen understanding of the safety-related issues that bicyclists and pedestrians face every day, and understands how to address community concerns about potential safety countermeasures. He will be supported by a team of individuals with the necessary expertise and availability to make this project a success, including technical expertise from **Jay Etzel, PE** and **David Cox, PE**, and quality assurance from Urban's Planning Director, **Erika Rush, PP, AICP**.

We are pleased to be joined by three accomplished firms who share our expertise and dedication to improving bicycle and pedestrian safety:

- **Fitzgerald & Halliday, Inc. (FHI)**, is a transportation planning, design, and public involvement firm based in Hartford, CT with a proven track record of developing and implementing innovative approaches to public involvement. They will lead the public involvement tasks from their Cherry Hill, NJ office. We believe that a robust public engagement processes will be needed to achieve consensus on the safety improvement locations and their associated countermeasures. To accomplish this, our proposal includes several innovative methods that we have found to be very effective in engaging populations that are typically underrepresented in the planning process. We are currently teamed with FHI on the **Roosevelt Boulevard Multimodal Corridor Improvement Program**, where they are leading the public involvement program in a study area with over 45 languages.
- **Civic Eye Collaborative, LLC (Civic Eye)**, is a New Jersey-based community planning and communications firm that utilizes the latest technology to enhance public participation and improve understanding of the planning process. Civic Eye will lead development of a Bicycle and Pedestrian Safety Toolbox and contribute to the public outreach tasks. Urban recently collaborated with Civic Eye to develop an educational video on road diet operations and benefits using case studies of successful projects in New Jersey.
- **NV5, Inc. (NV5)**, is a nationwide professional and technical engineering consulting firm with a local office in Parsippany, New Jersey. They will provide data collection assistance by conducting the traffic counts needed for HSM analysis and countermeasure evaluation.

We are committed to SJTPO's DBE goal of 12.44% for this project. Two of our team members are DBE-certified in New Jersey, which will enable us to meet or exceed SJTPO's goal.

Urban has reviewed SJTPO's Standard Contract Agreement and accepts the agreement with no changes.

We are confident that the Urban Team has the expertise, experience and dedication to accomplish SJTPO's goals for this project. We are committed to offering high-quality, cost-effective, and timely services. If you have any questions or clarifications about this proposal, please contact our proposed Project Manager, **John Federico, PE, PP, AICP**, by phone at (215) 922-8080 x1358, or by email at jefederico@urbanengineers.com

Very truly yours,
URBAN ENGINEERS, INC.



Kenneth R. Fulmer, PE
President & CEO



2. Technical Proposal

Narrative

PROJECT UNDERSTANDING

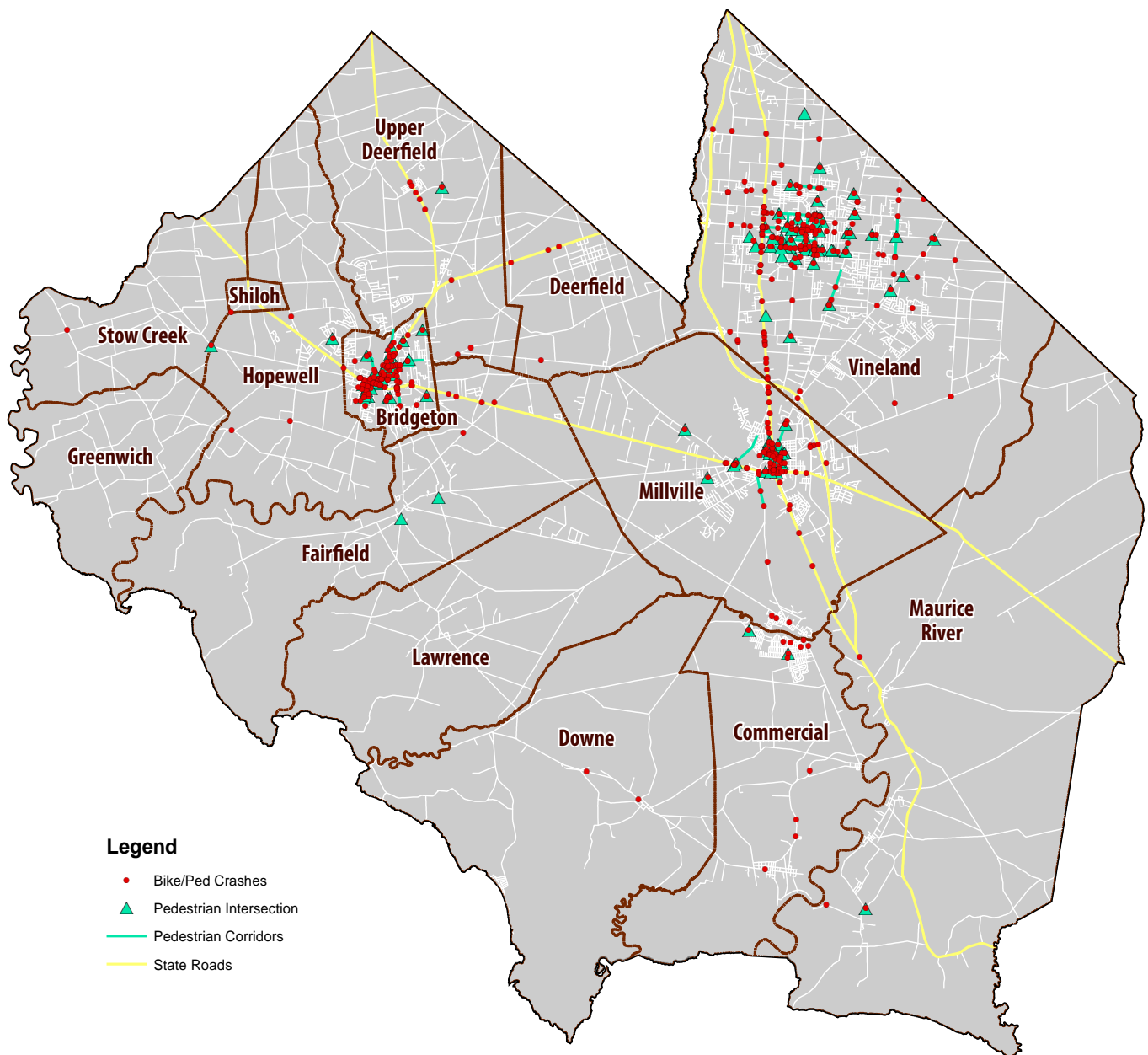
The purpose of this project is to develop a Bicycle and Pedestrian Safety Action Plan for Cumberland County. The plan is intended to document a number of action-oriented tasks geared towards advancing data-driven bicycle and pedestrian projects via New Jersey's Local Safety Program and the federal Highway Safety Improvement Program (HSIP). The plan will use a strategic, data-driven approach to prioritize locations with the greatest bicycle and pedestrian safety needs, identify implementable countermeasures with demonstrated safety benefits for these locations, and prepare selected bicycle and pedestrian projects for New Jersey's Local Safety Program applications. Additional tasks for the project include developing a toolbox of bicycle and pedestrian countermeasures, conducting a series of Pedestrian Road Safety Audits, and engaging key stakeholders and members of the local community throughout the process.

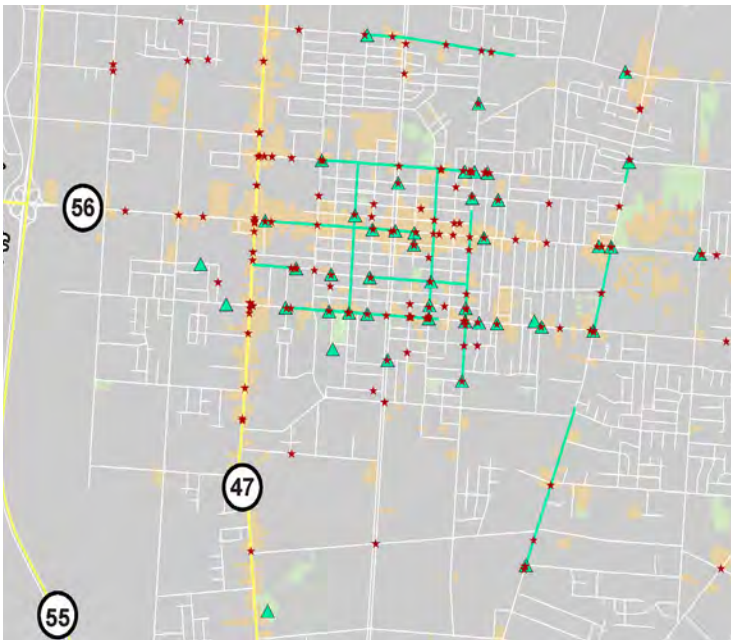
Understanding the defining characteristics of the project study area is essential to tailoring solutions to the area's needs. Cumberland County is a rural county in the SJTPO region with three distinct urban centers – Vineland, Millville, and Bridgeton. These three cities contain over two-thirds of the County's 157,000 residents, with the remainder of the county dominated by farmland, woodlands, preserved open space, and small villages. The rural nature of the County, combined with an abundance of natural resources and preserved land, tends to concentrate walking and biking trips within the three urban centers.



In the 2010 Census, 15% of the County’s population had disabilities. Just under 10% of households did not have access to a vehicle – with higher percentages of zero-vehicle households in Millville (11%) and Bridgeton (20%) – and nearly 18% of residents were living in poverty. These demographics highlight the importance of biking and walking as a necessary and equitable mode of travel for large segments of the population.

When crash data is viewed within this demographic content, it is evident that bicycle and pedestrian safety is a pressing issue in Cumberland County. Crash data obtained from NJDOT Voyager for the period stated in the RFP (2009-2016) shows that 839 bicycle and pedestrian crashes occurred during that period, with 93% of these crashes concentrated in the County’s three cities. These crash patterns are highlighted on the map below and insets on the following pages.





Vineland

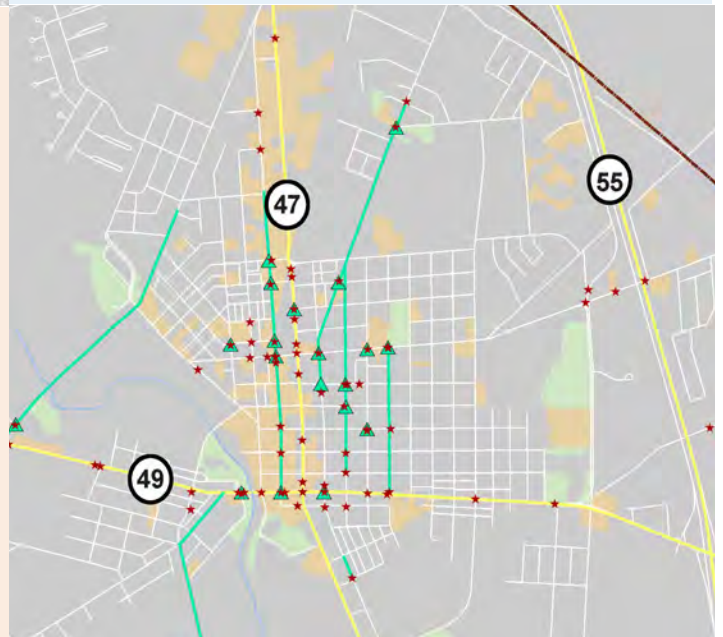
Nearly half (46%) of the County's bicycle/pedestrian crashes between 2009 and 2016 occurred within Vineland. Most of these crashes were concentrated along high-traffic vehicular travel corridors including Delsea Drive (NJ 47), Park Avenue (CR 540), Landis Avenue, and Chestnut Avenue. Locations in Vineland ranking high on SJTPO's Network Screening Lists (NSL) include:

- West Chestnut Avenue and Park Avenue (CR 540) rank within the Top 5 Corridors
- Four intersections along Chestnut Avenue rank within the Top 10 Intersections

Millville

Nearly 25% of the total bicycle/pedestrian crashes occurred within Millville. Most of these crashes were clustered in the downtown area – along High Street, Broad Street, and Main Street – where pedestrian activity is highest. Locations in Millville ranking high on SJTPO's Network Screening Lists include:

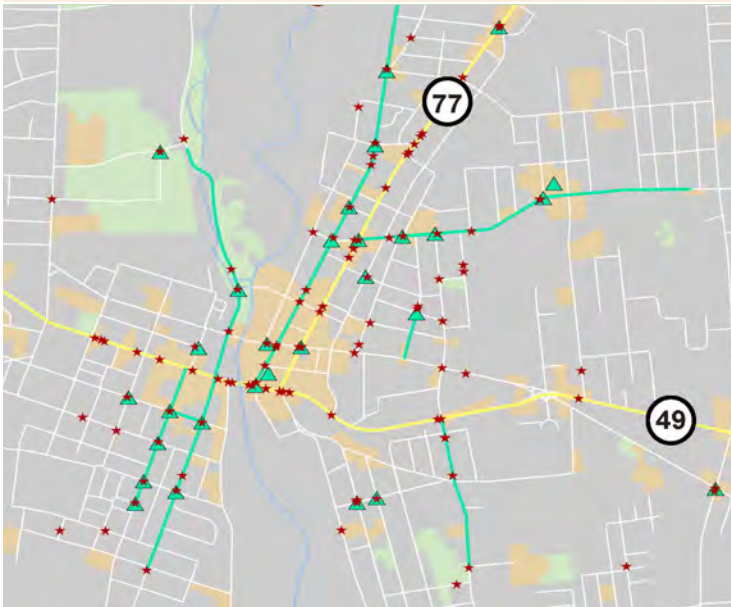
- The High Street and Silver Run Road (CR 555) corridors rank in the Top 10 corridors
- Two intersections – High/Broad and Broad/6th – rank in the Top 10 intersections



Bridgeton

Similar to Millville, approx. 25% of the total bicycle/pedestrian crashes occurred within Bridgeton. Most of these crashes are clustered in or near the downtown area, and along the State-owned routes through Bridgeton (NJ 49/Broad Street & NJ 77/Pearl Street). Locations in Bridgeton ranking high on SJTPO's Network Screening Lists include:

- Six of the Top 10 corridors are located in Bridgeton, including Irving Ave, Church Street, North Laurel Street, Laurel Street, Fayette Street, and Atlantic Street
- Two intersections – Irving/Walnut and Church/Elmer – rank in the Top 10 intersections
-



Outside of the County’s three cities, most crashes are located along a few major state and county roads – including SR49, SR77, and County Route 553 - or clustered within a section of Commercial Township near Millville. Comparing detailed crash statistics from Cumberland County to NJ state-wide averages shows that crashes related to lighting conditions, alcohol involvement, severity, and contributing circumstances have similar distributions at a county level to the state statistics; i.e. no significant over or underrepresented categories.

Improving bicycle and pedestrian safety at a County-wide level requires a thoughtful, strategic, and data-driven approach to project identification and advancement. Our team has employed such an approach on similar projects in the region. We recently completed two projects – the **NJDOT Road Diet Pilot Study** and the **PennDOT District-wide Roundabout Program** – that used a data-driven, GIS-based analysis of crash

data to identify and prioritize candidate locations as the first step in pursuing federal HSIP funding for safety improvements.

Equally important is developing projects that are supported by the local community, both members of the public and key decision-makers. Through our experience working on safety projects in southern New Jersey, we understand that some countermeasures can be controversial within communities, especially if they have a perceived or real impact on traffic operations. We understand the importance of engaging stakeholders early and often so that they understand the need for the project and have a chance to provide meaningful input. Our team also has significant experience developing targeted educational efforts to explain how countermeasures are intended to function and address common misconceptions.



Improved Shoulders along CR 553

SCOPE OF WORK

Our proposed team for this project consists of Urban Engineers, Inc. (Urban), Civic Eye Collaborative, LLC (Civic Eye), Fitzgerald & Halliday, Inc. (FHI), and NV5, Inc. (NV5).

Our team’s proposed scope of work consists of the ten tasks outlined in the RFP. Urban will manage the project, coordinate work for all tasks, and lead the tasks related to Steering Committee formation (Task 2), crash analysis (Tasks 3 & 4), Pedestrian Road Safety Audits (Task 7), preparation of Local Safety Program applications (Task 9), and development of the final report (Task 10). FHI will lead the public outreach activities (Tasks 6 & 8), while Civic Eye will lead development of the Bicycle and Pedestrian Safety Toolbox (Task 5) and support public outreach. NV5 will conduct traffic counts for use in the HSM analysis (Task 9).

We have developed a schedule to accomplish this project within 12 months of Notice to Proceed. The Project Schedule presented later in this proposal goes hand-in-hand with the narrative below:

Task 1 – Coordination

Urban’s Project Manager, John Federico, will coordinate regularly with SJTPO’s Project Manager and other stakeholders, including Cumberland County. As requested in the RFP, we will provide brief status updates every two weeks to SJTPO in the form of an email listing tasks completed in the past two weeks, upcoming tasks for the next four weeks, any delays that could affect the project schedule, and any upcoming assistance from SJTPO or other stakeholders that is anticipated.

Following Notice to Proceed, our team will attend a kickoff meeting with SJTPO and other invited participants to review and confirm the project’s scope, schedule, data methodology, and deliverables. Productive meetings fundamentally rely on thorough planning, execution, and follow-up. For all project meetings, including Steering Committee meetings, Urban will prepare detailed meeting agendas and supporting meeting materials, which we will submit to SJTPO for review prior to distributing to meeting attendees. Following each meeting, we will prepare concise and accurate meeting minutes that serve to document the meeting’s discussion, conclusions, and action items resulting from

the meeting. For phone calls, we will summarize talking points and key decisions with a follow-up email. Draft minutes and phone summaries will be provided to SJTPO within three business days.

Urban uses the Deltek Vision project management system, which provides real-time information to monitor budget and cost for all of our projects. Deltek provides customized project setup using stage item numbers for each work task, and allows costs to be tracked by task, by individual, and by subconsultant. Having a reliable method to share information and products electronically among team members is also important for quality control and ease of communication. Urban uses our self-developed Project Share application as a knowledge handling platform and file management system for projects with external parties. Project Share allows password-enabled access for two-way file access (uploading and downloading) among Urban, clients, and other invited parties. We also have a File Share system that allows us to send individual files (up to 1 GB) via a downloadable link.

Deliverables
<ul style="list-style-type: none">1a. Bi-weekly Progress Emails1b. Meeting Agendas, Minutes, and Discussion Summaries

Task 2 – Creation of a Bicycle and Pedestrian Steering Committee

Urban will work with SJTPO to establish a county-wide Bicycle and Pedestrian Steering Committee that will serve to guide key decisions throughout the process, and help to coordinate and advise on the public outreach component. At a minimum, the Steering Committee will consist of representatives from SJTPO, NJDOT Bureau of Safety, Cumberland County Planning & Engineering Departments, CCCTMA, and organizations with an interest in bicycle and pedestrian issues. The Steering Committee will also include representatives from the City of Bridgeton, City of Millville, City of Vineland, and any other municipalities that have the potential for Top 10 crash locations within their jurisdictions. Our initial review of the 2009-2016 crash data indicates that Commercial and Maurice River Townships may be included; however, this will be confirmed when the Top 100 crash locations are identified in Task 3.



Below is a description of the purpose and timing of the six anticipated Steering Committee meetings. Refer to the Project Schedule for a graphic depiction of how meetings interact with tasks.

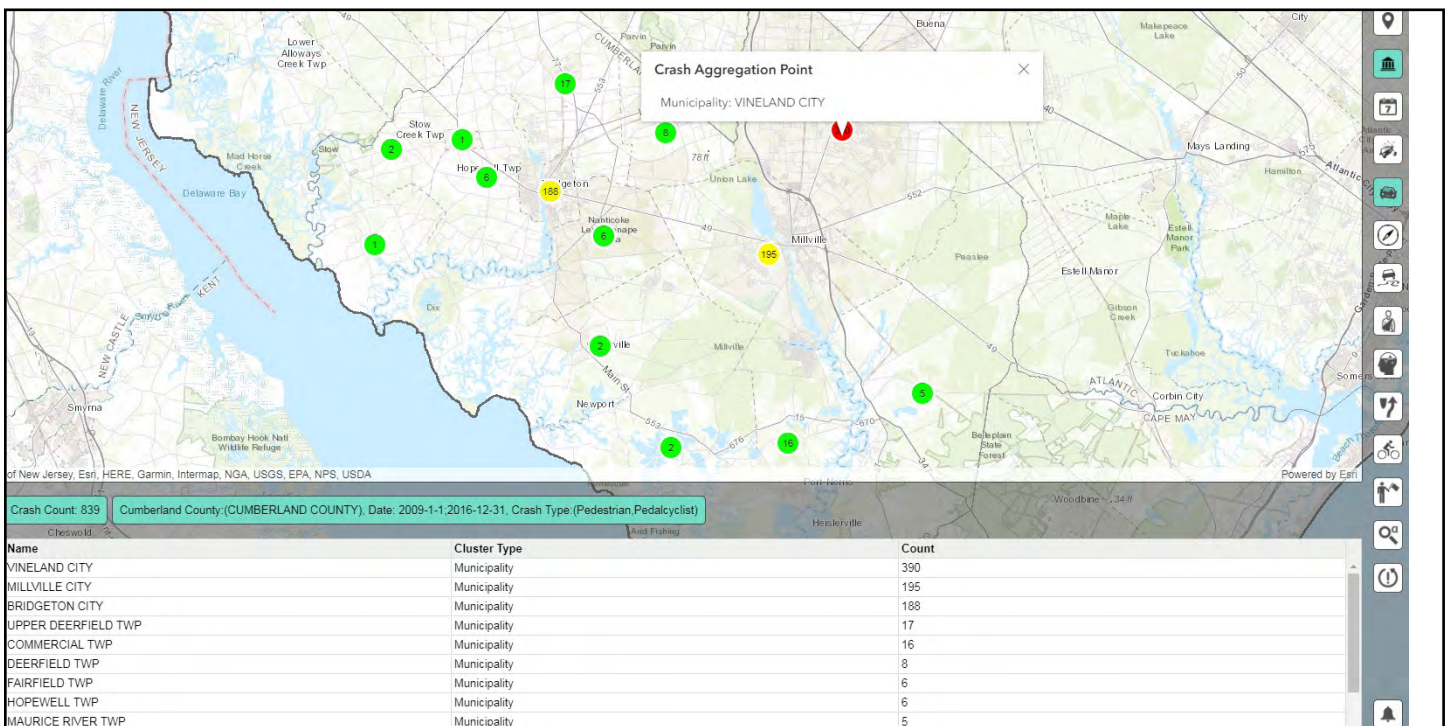
- **Meeting #1:** Initial meeting to review the study's scope, schedule, and methodology; present results from the screening analysis; and narrow the list of Top 100 locations to 25 locations.
- **Meeting #2:** Discuss and agree on a public outreach strategy for the project, including timing and location of public meetings, and present findings from Task 4 (Identification of Crash Problems). It is important that this meeting occurs early enough to provide adequate preparation and advertisement time for the public meetings.
- **Meeting #3:** Review input from the first round of public meetings (Task 6) and decide on the Top 10 locations. This will allow SJTPO to formally request approval from elected officials for the Top 10 locations, prior to conducting the PRSAs.
- **Meeting #4:** Urban will present the draft toolbox (Task 5) and draft PRSA report (Task 7) for SC feedback. Consensus on both items will be needed to prepare for the second round of public meetings.
- **Meeting #5:** Review input from the 2nd round of public meetings (Task 8) and decide on potential countermeasures. This will allow SJTPO to formally request approval from elected officials for countermeasures, prior to initiating the LSP applications.
- **Meeting #6:** Urban will present the Final Plan at this meeting, once all other tasks are substantially complete.

Deliverables

- 2a. Steering Committee Meeting Agendas
- 2b. Steering Committee Meeting Minutes

Task 3 – Retrieve and Process Crash Data

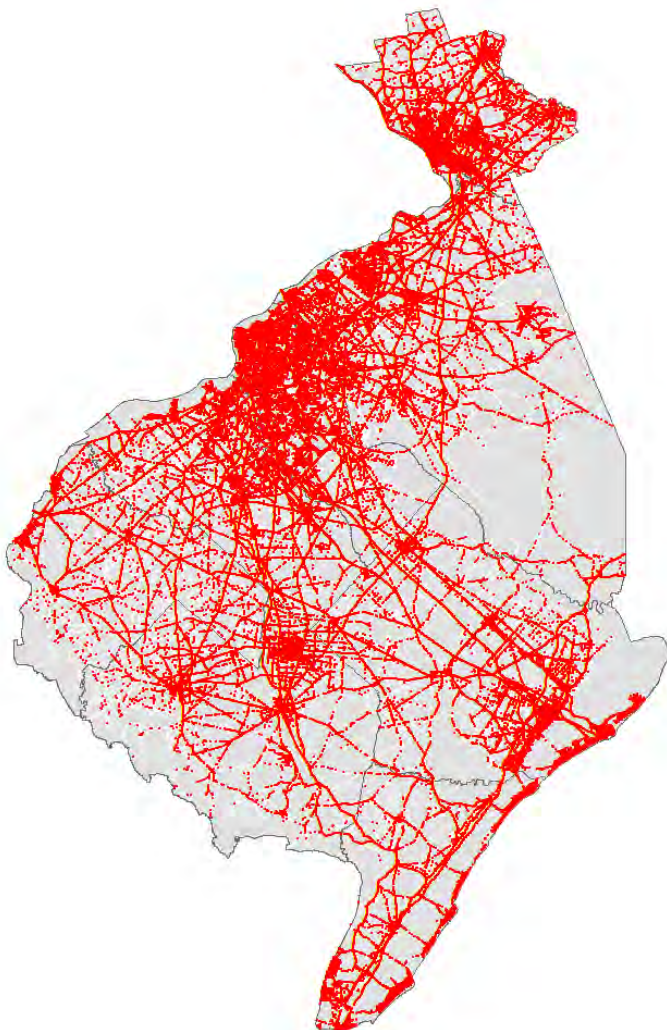
The objective of this task is to identify locations (both corridors and intersections) with the highest pedestrian and bicycle crash rankings in Cumberland County. Subtasks include obtaining raw crash data, analyzing the data to identify the full set of locations, and ranking these locations using HSM approved methodologies.



Screenshot from NJDOT Voyager Analysis of Cumberland County

Obtain Crash Data

We intend to use NJDOT's Voyager application to obtain raw crash data for all crashes (vehicles, bicyclists, and pedestrians) that occurred within Cumberland County between 2009 and 2016. We understand this period was chosen to incorporate SJTPO's existing Network Screening Lists (2009-2013) while expanding to include the most recent set of data. We also recognize that the new dataset will differ from the Networking Screening Lists due to the addition of bicycle crash data and crashes along state-owned roads. In addition to our recent experience with the Voyager application, we have extensive experience analyzing and obtaining crash data from its predecessor, Plan4Safety, if needed.



Statewide Crashes 2009-2013
Vehicles, Bicyclists, and Pedestrians

Analyze and Map Bicycle/Pedestrian Related Crashes

Urban will analyze the full set of crash data to determine crash attributes and patterns related to: location (intersection vs. non-intersection); demographics (age, gender, sex); roadway conditions (lighting, geometry, surface, posted speed limit); severity (EPDO); contributing factors; and any other fields as needed. We will use both maps and tables to characterize the data. We will develop a map showing the full set of bicycle and pedestrian-related crashes, heat maps for both modes, and up to eight additional maps that may depict crashes by location, by attributes, or a combination of both. We recommend including activity generators such as schools, transit facilities, parks/recreational opportunities, commercial areas, and major employers on these maps to provide information on how activity generators may be influencing crash locations. Urban has extensive experience creating accurate, visually compelling crash maps for study areas of all sizes, ranging from a single municipality to statewide coverage.

Identify Top 100 Crash Locations

We will work with SJTPO's Project Manager and the Steering Committee to structure a data-driven analysis process that is consistent with SJTPO's Pedestrian Corridor and Pedestrian Spot Networking Screening Lists and can arrive at a shortlist of candidate locations early in the project. Similar to our analysis for the NJDOT Road Diet Pilot Study, we will use the HSM-approved crash weighting from the network screening lists ($K=A$) to identify the Top 100 bicycle and pedestrian crash locations in Cumberland County. For locations not on the screening lists, we will indicate the rank each location would have on these lists.

We understand that the Top 100 locations will include a mix of spot locations and one-mile corridors, along with a mix of state, county, and municipal roadways. Based on these parameters, we anticipate the following key items will need to be decided early in the analysis:

- We will begin by analyzing and updating the data using the 1-mile corridor milepost limits established for the Network Screening Lists. If the results shows that these limits are no longer appropriate given the addition of new data (bicycle crashes and additional

- years), we will work with SJTPO, Rutgers/CAIT, and NJDOT to determine an appropriate method for establishing the new limits.
- Since the screening lists do not include state-owned roads, we will work with SJTPO, Rutgers/CAIT, and NJDOT to determine the appropriate limits for state corridors. **To maximize efficiency, our suggested approach would be to begin with the 2-mile limits established for use in NJDOT's Pedestrian Safety Management System (PSMS) lists, and divide them into multiple 1-mile segments.**
- The RFP states that the Top 100/25/10 lists will consist of both intersections and corridors. Based on our review of the Network Screening Lists, we anticipate that corridors will likely dominate the Top 100/25/10 lists based on having higher weighted crash values. Since many of the high-ranking intersections on the current screening lists are located along high-ranking corridors, a methodology will be needed to prevent them from being addressed twice in later tasks (for instance the PRSAs). **We recommend tracking intersections and corridors separately for the purpose of the analysis, as done with other studies (including the City of Newark Pedestrian and Bicycle Action Plan) and only combining these lists to was done with other studies (including the City of Newark Pedestrian and Bicycle Action Plan) and then combining these lists to determine the Top 100, Top 25, Top 10 lists.**
- Throughout the screening process, **we recommend retaining bicycle and pedestrian crashes as distinct columns, and then applying a combined weighted crash value to prioritize locations.** Understanding the distribution between bicycle and pedestrian crashes will help in later tasks; for instance, when conducting PRSAs or developing countermeasures.
- Crashes related to intersection conditions may occur directly at an intersection, or a short distance away. Therefore, the analysis will need to establish an appropriate offset distance from intersection center points for capturing crashes at both spot intersections and side-street intersections along corridors.

As noted earlier, we will work closely with SJTPO's Project Manager and the Steering Committee to resolve these items and any others that arise during the data analysis process.

Identify Top 25 Crash Locations

We understand that SJTPO will lead this subtask, which includes reviewing the Top 100 crash location list with Cumberland County, the Cities of Bridgeton, Millville, and Vineland, and any other relevant jurisdictions to determine if any locations are not appropriate for advancement. Potential reasons for exclusion may be if recent projects have changed the geometry or traffic control, if locations have pending improvements planned, or if locations are otherwise deemed not viable for other reasons. Based on these exclusions and the weighted crash data, SJTPO will coordinate with the County and municipalities to create a Top 25 crash location list (we understand this list will include county and local roadways, but not state roadways). Urban will provide SJTPO with technical assistance during this process and will create a map showing the Top 25 locations.

Deliverables

- 3a. Raw Crash Data
- 3b. Analysis, Reporting, and Mapping of Crash Data
- 3c. List of Top 100 Bicycle and Pedestrian Crash Locations
- 3d. List of Top 25 Bicycle and Pedestrian Crash Locations

Task 4 – Identification of Crash Problems

Urban will obtain crash reports from SJTPO/NJDOT for the most recent 5-year period for all crashes (bicycle, pedestrian, and vehicle) at the Top 25 crash locations. We will review these reports to develop crash diagrams for each location, with crashes placed spatially based on a detailed review of the narratives and diagrams. In addition to the diagrams, we will provide tables for each location summarizing the total number of crashes, the severity of crashes, crash types, and any other information (geometric conditions, control at intersections, time-of-day/lighting, on-street parking, etc.) that would aid in the development of safety countermeasures. We will present the results from this task at Steering Committee Meeting #2 so that the findings incorporate – and do not conflict with – local knowledge.

Our extensive experience working with crash data has given us a keen understanding of the need to critically review crash reports when determining contributing circumstances. Not only are the narratives and diagrams important, but particularly with bicycle and pedestrian crashes, an understanding of the physical environment – including existing infrastructure, transit service, and adjacent land uses – is equally important. Many crashes result from deficiencies in the surrounding infrastructure – for example, a bicyclist getting hit while riding on the sidewalk next to a high-speed roadway with no bicycle facilities. Legal fault in crash reports may also be misinterpreted by local police. For example, we have found instances of pedestrians deemed at fault for crossing in a legal, unmarked crosswalk at an uncontrolled location.

Deliverables

- 4a. Crash Diagrams for Top 25 Crash Locations

Task 5 – Toolbox of Bicycle & Pedestrian Safety Strategies

Our team will develop a toolbox of potential bicycle and pedestrian safety strategies with guidance from SJTPO and the Steering Committee. The purpose of the toolbox will be to clearly present the array of available countermeasures so that informed decisions can be made regarding their appropriateness in a variety of contexts. Prior to developing the toolbox, we will meet with SJTPO to discuss and decide on which countermeasures should be included in the toolbox. Once developed, we will submit the draft toolbox to SJTPO for two rounds of edits, and will present the final draft toolbox at Steering Committee Meeting #4 (prior to the 2nd round of public meetings). This will allow us time to incorporate their feedback and make any edits before it is viewed by the public.

Toolbox Content

The toolbox will present a Rating System, Images, Description, Applicability, Challenges, Triggers, Cost, Timeframe, and Data for each countermeasure. So as to not reinvent the wheel, we believe a good starting point will be to review the bicycle and pedestrian countermeasures developed by FHWA through their **BIKESAFE** and **PEDSAFE** countermeasure selection system and potentially adapt them for use in Cumberland County. Recent NJDOT-published plans including the **NJ Pedestrian Safety Action Plan (2014)** and the **State of New Jersey Complete Streets Design Guide (2017)** contain toolboxes that may also inform the effort. To enhance relevance to local stakeholders and decision-makers, and where available, images and cost data will be from local New Jersey examples.

We understand the need to quantify the demonstrated safety benefits of each countermeasure in the HSM analysis and will focus on including data that is directly related to the reduction of crashes, injuries, and fatalities. If such data is not available, we will coordinate with SJTPO to determine the applicability of including other benefits of the countermeasure. Data sources will include applicable Crash Modification Factors (CMFs) from the CMF Clearinghouse, along with any supplemental data from relevant studies/data collection efforts.



Toolbox Format

In addition to the long-form version, countermeasures will be presented using single page summaries and a presentation that can be used as needed by SJTPO and the County.

We also propose two innovative formats for the toolbox, both of which have a proven ability to engage and educate the public:

- **Short Films:** Video is a powerful medium, and in our experience communicates information in ways static images cannot. We therefore recommend developing short, succinct, and graphically engaging “short films” (30 to 60 seconds long) for selected countermeasures, in particular those that are more complicated and/or controversial. These dynamic films will be extremely useful for educating the public on the benefits and appropriate use of potential countermeasures, and can also serve as a resource for future transportation education efforts by SJTPO and Cumberland County. We found this to be the case for the NJDOT Road Diet Video, which we developed in collaboration with Civic Eye. We have included the development of up to 6 of these films in our cost proposal, with Spanish translation provided via either voiceover or captioning (to be determined based on the content).
- **Online Survey Tool:** Countermeasure information will be provided as content in an electronic survey tool that can be posted on SJTPO’s website, which will help broaden the reach of the toolbox by providing people with access at all times and from all locations. The survey questions could potentially assess respondents’ views on the appropriateness and/or support for the intervention. The survey will contain both traditional survey questions as well as image or film based questions that will engage and resonate with respondents. The project team will work with the Steering Committee and SJTPO to distribute an electronic link to the online survey and to encourage participation.

Deliverables

- 5a. Bicycle & Pedestrian Toolbox
- 5b. Toolbox Summary Sheet and Presentation Format
- 5c. Up to six (6) Short Films about Countermeasures
- 5d. Online Survey Tool

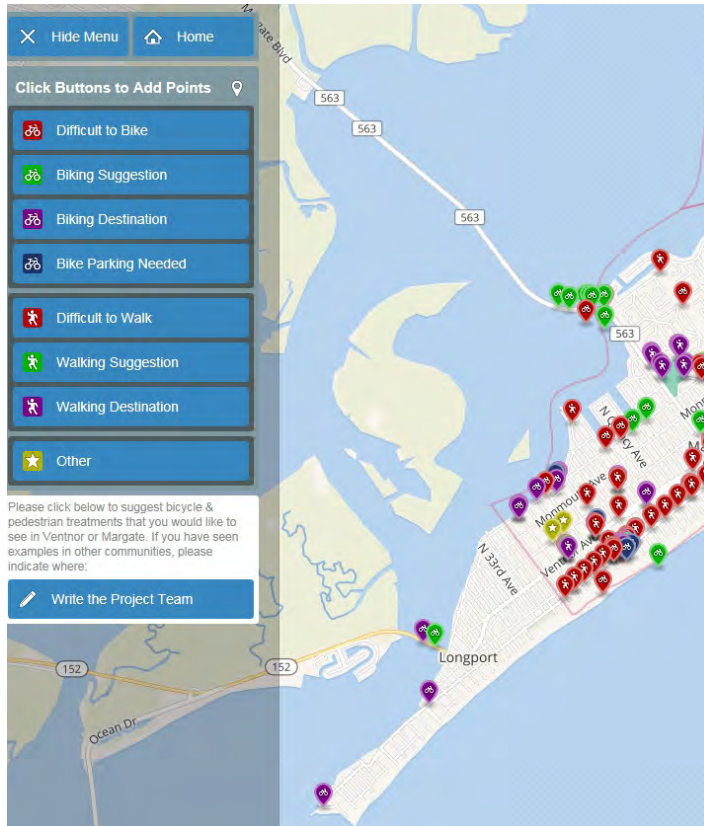
Task 6 – Public Meetings, Round 1

Develop Outreach Strategy

Prior to commencing any public outreach activities, our team will develop a Public Outreach Strategy in collaboration with SJTPO. This plan will include a list of activities, deliverables, and a proposed outreach schedule. The goal of the outreach strategy will be to educate the public and facilitate proactive public participation, with the objective of achieving consensus among a diverse group of stakeholders on bicycle and pedestrian safety and priority bicycle/pedestrian safety issue locations in Cumberland County. Achieving broad participation from the over 157,000 people that reside in Cumberland County will be challenging, therefore the outreach strategy will need to be innovative to capture the widest representation of the County’s population, and flexible to account for changing project needs.

Special emphasis will be geared towards populations within Cumberland County that have been challenging to engage in the past, such as low income or limited-English proficient residents, as well as the disabled and elderly. For example, 2010 census data indicates that over 27% of the population in Bridgeton does not speak English. Members of our team have led several large outreach efforts in other cities and counties throughout New Jersey geared specifically towards obtaining input and participation from underrepresented populations. Our experience on those projects includes a) having a presence at ethnic or cultural events; b) visiting key facilities, like senior centers and churches; c) crafting information and messaging tailored to the specific audiences with whom we are engaging; d) providing project outreach materials in multiple languages; and e) providing specific, project-related activities for children at outreach events to accommodate parents who would like to attend but cannot afford childcare. This vast experience can be directly applied to the Cumberland

experience can be directly applied to the Cumberland County Bicycle and Pedestrian Safety Action Plan outreach efforts and will provide opportunities to reach county residents who typically do not participate in planning processes.



Web-Based Public Input Map from The Ventnor-Margate Bicycle & Pedestrian Plan

We have found that using an array of conventional communication techniques, as well as online/virtual and social media applications, offer the broadest level of outreach possible and has been highly successful on our prior projects. Key outreach tools, techniques, and applications that are included in the outreach strategy are:

- **Project Branding:** Branding project materials will be especially important; having an easily-identifiable look and/or logo that translates well across languages will help to build the awareness about this effort. Additionally, it should be noted that reaching underrepresented populations may require different messaging and visual cues to encourage participation; the FHI Team's experience in non-English speaking communities has shown us that sometimes words and phrases do not translate with the same meaning.

- **Press Kit:** Public relations are an important component of any project that has a significant outreach component. To this end, Urban will develop a press kit that includes an overview of SJTPO and its function, an overview of SJTPO's Local Safety Program / FHWA's HSIP Program, an overview of the project itself, and information at key milestones of the project. Our cost proposal includes developing an initial press kit that in both English and Spanish can be updated prior to each round of public meetings. Products will be developed as standalone documents so that they can be given out to others as needed, and PDFs will be provided to SJTPO for posting on their website.

- **Project Overview Video:** In conjunction with the press kit, Civic Eye will develop a 3-4 minute video providing an overview of both the local safety process and the project itself. The purpose of this video will be to communicate basic information about the project in a manner that key stakeholders and members of the public find interesting and can easily understand. The video will build on existing materials available from FHWA, NJDOT, and SJTPO to be cost-effective and consistent, and will include Spanish translation via either voiceover or captioning (to be determined based on the content).

- **In-Person Outreach:** Successful, meaningful, and effective design and orchestration of public outreach events require skills and experience in a wide range of public involvement techniques, from logistics to meeting design to meeting facilitation, in order to ensure these events inform the planning process. The outreach strategy developed for this project will reflect our team's knowledge and experience in carrying out in-person outreach and will include strategies and tools needed for larger public meetings as well as interactive "pop-up" community outreach events.

- **Social Media:** Social media continues to be one of the most common ways people learn about projects and stay engaged. Our Team has maintained the Facebook, Twitter, Instagram, and other social media platforms for numerous projects. All three platforms have survey applications that can reach audiences who would not fill out longer surveys. Experience shows that social media is utilized by underrepresented groups as well, including low income and elderly persons.

- **Virtual Workshops:** Virtual workshops describe a wide variety of online events that recreate the participation opportunities available at in-person meetings. Typically, these events are posted online for a set duration and allow participants to engage with the site at their convenience any time of day or night. The virtual workshops for this project will use SJTPO's website to host materials from the public meetings such as display boards, activities, surveys, and presentations. Presentations that are posted online will include an audio narrative and Spanish captioning, as needed. If applicable, our team can also build interactive tools that would recreate visual preference boards or voting-with-dots exercises employed at in-person meetings.
- **Project Website:** These can be used to provide general information, findings, and recommendations, as well as announce the dates and times of upcoming meetings and post materials from those meetings. We understand that SJTPO will use their existing website to host this project. Our team will coordinate with SJTPO and the Steering Committee on a schedule for preparing regular project-related updates on the website, and will provide materials for the website to SJTPO in PDF format. We anticipate that online surveys, videos, and materials developing in other tasks will also be posted to the project website to inform the planning process.
- **Flyers:** These can be developed with brief information about the study, project contact information, the SJTPO website address, and upcoming meeting dates/announcements. Flyers will be provided in English and Spanish and can be distributed via email, by traditional mail, or posted on public community boards throughout the county.

Coordinate & Host Public Meetings

The purpose of this round of meetings will be to educate the public on bicycle and pedestrian safety measures and also to obtain meaningful feedback to narrow the Top 25 safety issue locations in the County to 10 priority locations. This first round will consist of up to three meetings; therefore, our team proposes that one meeting each be held at convenient, preferably transit-accessible locations in Vineland, Bridgeton, and Millville. Our team will collaborate with SJTPO and the

Steering Committee on the meeting agenda. However, we propose that the educational materials be presented on boards in an open house-style format, followed by an interactive PowerPoint presentation that could utilize a keypad or other polling software to obtain real-time feedback on the Top 25 locations. The presentation could be conducted at various time intervals over the course of the meeting to maximize participation and feedback.



Public Meeting for the Ventnor-Margate Bicycle & Pedestrian Plan

It will be important to make sure that these public meetings are accessible to all who would like to participate, as well as those who have other commitments. We understand that SJTPO will coordinate with the Steering Committee to identify and secure ADA-accessible meeting locations with transit access that are familiar to the public. FHI will provide translators at the meetings to assist the Spanish-speaking population share information and provide feedback on the materials being presented. Our technical and cost proposals are based on the assumption that SJTPO can supply two staff at events, and may be able to supply two additional, as needed.

To promote this round of meetings, the Project Team will prepare a flyer announcing the date, time, and location of all three meetings. The flyer will be translated into Spanish and will be provided to SJTPO in PDF format so that it can be easily distributed via email to relevant stakeholder, mailing lists, or contacts informed by the

SJTPO Citizens Advisory Committee (CAC), as well as other special interest and advocacy groups including the South Jersey Wheelmen, New Jersey Bike Walk Coalition, Cross County Connection TMA, the Mexican American Association of South Jersey, Spanish Community Center, and Cumberland County Parent-Teacher Organizations. Flyers can also be posted in key locations throughout the County prior to the meetings as well as uploaded to the SJTPO, Cumberland County, and municipal websites, as well as added to local event calendars in communities throughout the county.

Our team will coordinate with SJTPO to advertise the meetings via social media outlets – including SJTPO’s Facebook and Twitter accounts – and will develop and arrange for paid social media ads via Facebook prior to both rounds of public meetings. These ads will be targeted to specific zip codes within the County. In addition, we have included developing and printing up to 20 yard signs to further advertise the project.

Pop-up Outreach Events

In our experience, traditional public meetings only capture so much of the intended audience. Therefore, we propose supplementing the first round of meetings with up to three additional pop-up/community outreach events. “Pop-up” outreach can be conducted at community fairs and festivals, farmers’ markets, cultural events, museums, large community events and have been very effective at engaging populations that are typically underrepresented in the planning process.

We will work collaboratively with SJTPO and the Steering Committee to identify the appropriate community events in Cumberland County. A pop-up outreach event is usually set up as a booth or kiosk at community or cultural events. Reflecting the materials presented at the public meetings, a brief, interactive engagement activity would be conducted to obtain feedback or input from the public; the Project Team could conduct a brief paper and/or electronic tablet survey about bicycle and pedestrian safety or have participants “pin” safety issue locations for bicycle and pedestrians on an interactive map (also on tablets). Overview materials such as advertisements and welcome boards will be translated into Spanish, and at least one team member attending the event will be fluent in Spanish.

Summarize Public Feedback

All outreach efforts and feedback received from both the public meetings and pop-up events will be summarized for presentation at Steering Committee Meeting #3. At this meeting, Steering Committee members will provide feedback and ultimately endorse the final Top 10 list. SJTPO staff will then present the findings to the Cumberland County Board of Chosen Freeholders, and relevant municipalities, for a formal resolution of support to begin the public process to develop recommended countermeasures.

Deliverables

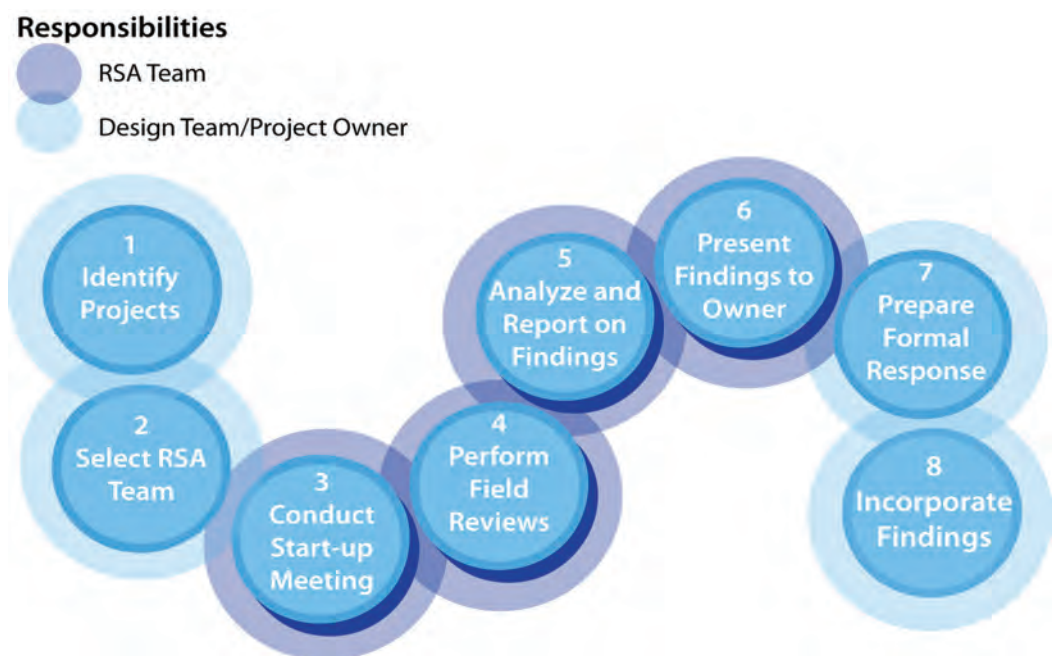
- 6a. Public Outreach Strategy
- 6b. Public Meetings (up to three including logistics, presentations, meeting materials)
- 6c. Other Outreach Tools including:
 - Development of project branding;
 - Press kit in English and Spanish with up to three (3) updates;
 - Project overview video;
 - Online survey/public input tool;
 - Project flyer/meeting announcement in English and Spanish; and
 - Up to three (3) pop-up outreach events including logistics and design of engagement activity.
- 6d. Summary of the Round 1 outreach process and results

Task 7 – Pedestrian Road Safety Audits

A Pedestrian Route Safety Audit (PRSA) brings together a multi-disciplinary team of local, county, state, and regional agencies and subject matter experts to a) conduct a first-hand evaluation of existing conditions along specific corridors/intersections, and b) work together to develop improvement recommendations in a group setting. Urban will conduct PRSAs for the Top 10 crash locations based on guidance in the FHWA publication, “Pedestrian Road Safety Audit Guidelines and Prompt Lists” (2007). Subtasks will include working with SJTPO and the Steering Committee to identify participants, planning and coordinating the PRSA workshops, and documenting the process in a formal PRSA report.

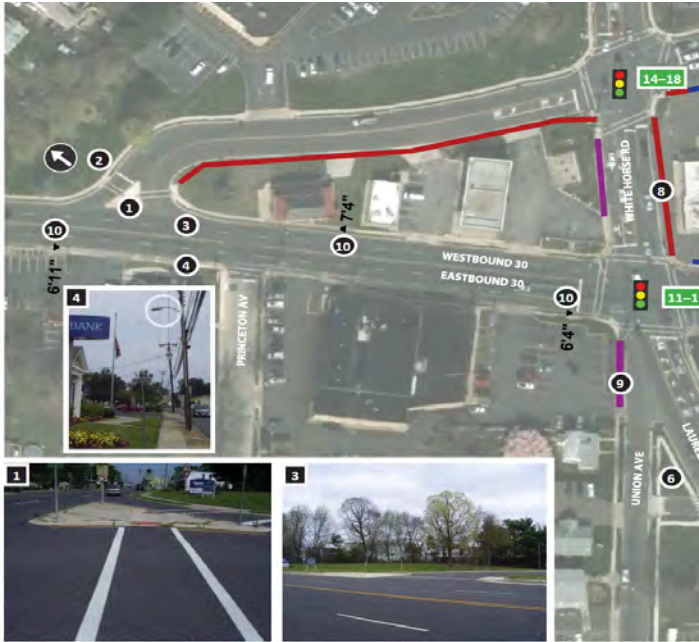
Coordinate and Prepare for PRSAs

Prior to conducting the audits, Urban will develop GIS and aerial base mapping for the Top 10 locations, obtain any proposed plans for these areas, and summarize data from earlier tasks including crash summaries and diagrams by location. Our experience with the Route 30 PRSA suggests that SJTPO may want to revisit the exact limits of the 1-mile corridors so as not to exclude adjacent segments that may influence the crash history, or have similar needs that would benefit from proposed countermeasures (for example consideration of a road diet, determining logical sidewalk termini, etc.).



Eight-Step RSA Process (FHWA RSA Guidelines)





Graphics From Route 30 PRSA



Workshop From Route 30 PRSA

Conduct PRSAs

Based on the County’s crash patterns described in the Project Understanding, we expect that most (if not all) of the Top 10 locations will be located in Vineland, Millville, and Bridgeton. We therefore propose structuring the PRSAs as three full-day workshops; one in each city covering the corridors/intersections located within that city’s limits. An advantage to this approach is that local participants such as elected officials, police, emergency personnel, or public works staff would only need to attend their particular workshop. We have budgeted for four separate workshops to account for the possibility of one location outside of these three cities, or alternatively, the need for two days to cover the city with the most locations.

Per the audit guidelines, each of the PRSA workshops will begin with a brief meeting to review site conditions and best practices prior to the walking audit. At these meetings, our team will present background information for each location – including crash history – and review selected best practices from the prompt lists. Our staff will then lead a walking audit of the individual locations, followed by a facilitated work session aimed at identifying safety countermeasures for each location.

Develop PRSA Report

Following the workshops, Urban will document the PRSA process for the Top 10 Locations in one comprehensive Road Safety Audit report. The report will be structured to begin with an overview of the project background and PRSA process, followed by detailed chapters for each location. We will submit the draft PRSA report to SJTPO for two rounds of edits, and to NJDOT and the local roadway owners during the first round of edits. We will present the final PRSA report at the Steering Committee Meeting #4 (which occurs prior to the second round of public meetings), and results from the report will be used to inform the discussion of countermeasures in Tasks 8 and 9.

Deliverables

- 7a. Pedestrian Road Safety Audits (10 Locations)
- 7b. Pedestrian RSA Report (1 report covering 10 locations)

Task 8 – Public Meetings, Round 2

The second round of public meetings will be used to obtain feedback from the public on the bicycle and pedestrian safety countermeasures that could be implemented at the Top 10 safety issue locations in Cumberland County. Through our experience working on numerous safety projects in southern New Jersey, we understand that some proven countermeasures can be controversial within communities, especially if they have a perceived or real impact on traffic operations (roundabouts and road diets are two examples). In these cases, targeted educational efforts are needed that clearly explain how countermeasures are intended to function and address common misconceptions (for example the difference between a roundabout and a traffic signal, or emergency access related to road diets). The multi-media toolbox developed in Task 5 will thus be a crucial component of this task.

Coordinate & Host Public Meetings

For this round of meetings, up five (5) public meetings will be conducted: one meeting each in Vineland, Bridgeton, and Millville, and the other two reserved for other communities with high-safety issue locations. Similar to Round 1, we understand that SJTPO will coordinate with the Steering Committee to secure meeting locations; we will then collaborate with SJTPO and the Steering Committee to develop a meeting agenda and format. Our suggested format would begin with an open house component, where project activities are summarized and bicycle and pedestrian safety information is displayed in a graphically-rich, easy to understand format. The remainder of the meeting would then be set up as a workshop with each safety issue location having its own “station” where meeting attendees can provide feedback on their preferred bicycle and pedestrian safety countermeasures. Similar to Round 1, primary meeting materials will be displayed in Spanish, and a Spanish-language interpreter will be on-hand at all meetings to provide translation assistance to those who need it.

To advertise the meeting, our team will prepare one flyer announcing the date, time, and location of all five meetings. The flyer will be translated into Spanish and will be provided to SJTPO in PDF format so that it can be easily distributed via email and posted at community locations and on social media.

Pop-up Outreach Events

Similar to Round 1, we will supplement the second round of meetings with up to three additional pop-up/community outreach events, some or all of which may be targeted at reaching populations that are often underrepresented in the planning process. As an example, one of these events could involve attending a local ESL class, making a brief project presentation, and then having a facilitated discussion with attendees about the project; another example would be doing the same at a local senior housing complex. We will work collaboratively with SJTPO and the Steering Committee to identify appropriate events in Cumberland County for this round. Primary materials such as advertisements and welcome boards will be translated into Spanish, and at least one team member attending the event will be fluent in Spanish.

Summarize Public Feedback

The feedback received from the public meetings will be summarized for presentation at Steering Committee Meeting #5. At this meeting, Steering Committee members will provide feedback and ultimately endorse the selected list of countermeasures. SJTPO staff will then present these findings to the Cumberland County Board of Chosen Freeholders, and relevant municipalities, for a formal resolution of support to begin the public process to begin the development of Local Safety Program applications. **This is an essential step in ensuring that project applications are developed based on countermeasures that have local support.**

Deliverables

- 8a. Public meetings – up to five (5) including logistics, presentations, meeting materials
- 8b. Other outreach tools:
 - One project flyer/meeting announcement in English and Spanish
 - Up to three (3) pop-up outreach events including logistics and design of engagement activity.
- 8c. Summary of the Round 2 outreach process and results



Task 9 – Local Safety Program Project Applications

Collect and Analyze Traffic Count Data

Traffic count data will be needed at the Top 10 locations for the purposes of (a) completing the HSM analysis, and (b) informing the evaluation of potential countermeasures such as signal timing, road diets, roundabouts, bike lanes, and other treatments that have the potential to influence traffic operations. We have included NV5 as part of our team to conduct traffic counts at the Top 10 ranking locations. NV5 will use a combination of Miovision cameras and Automatic Traffic Recorders (ATRs) to collect traffic data. Benefits from using cameras include their ability to capture bicycle/pedestrian activity and behavior, as well as the ability to process data at a later point if needed. Benefits from using ATRs include lower processing costs and the ability to collect data on operating speeds, which may help to inform the selection of countermeasures where speeding is a critical issue.

Traffic count data from the NJDOT Straight-Line Diagrams GIS database shows that recent AADT information is available for 7 of the Top 10 ranking corridors and 3 of the Top 10 ranking intersections on the current Network Screening Lists. Based on this data, we anticipate that main line counts may not be needed at all of the Top 10 locations. However, to satisfy HSM input requirements, some corridors may need multiple ADT counts along the main line (where roadway conditions change) as well as counts at major/high-crash intersections to determine side street ADTs.

Based on our review of high-ranking corridors on the Networking Screening Lists, we estimate that count data may be needed at up to 15 intersections and 10 midblock locations, and have budgeted accordingly. Our cost proposal includes using ATRs to obtain 7-day ADT volumes and operating speed data at up to 10 midblock locations, using Miovision cameras to obtain 6-hours of peak turning movement count (TMC) data at up to 10 intersections, and using Miovision cameras to obtain bi-directional, 3-day ADT volumes data at up to 15 intersections. Once the Top 10 locations have been determined, our team will develop a detailed count program that satisfies the traffic data needs of the project, and will obtain approval of the program from SJTPO before initiating any counts.

Evaluate and Select Countermeasures

The selection of appropriate countermeasures is a key step in readying projects for Local Safety Program applications. Ultimately, the selection of countermeasures will be influenced by many factors including results from the Pedestrian Road Safety Audits, input from the public meetings, potential to maximize the B/C ratio, and most importantly, consensus and approval from local stakeholders. Obtaining local support at this juncture is a crucial element in ensuring that projects can realistically be implemented.

FHWA's Office of Safety has developed a list of "Proven Safety Countermeasures" (updated to 20 in 2017) that are statistically proven to address specific crash types in the focus areas of intersections, pedestrians, and roadway departure. In addition, FHWA lists over 60 engineering, education, and enforcement countermeasures on the **PEDSAFE/BIKESAFE** website. A number of recent studies at the state, county, and municipal level are also available to inform the countermeasure selection process. The **NJ Pedestrian Safety Action Plan (2014)** analyzed crash statistics at a state-wide level and includes a toolbox of engineering and programmatic countermeasures. Detailed municipal-wide plans completed for Downe Township (2015), Millville (2013), and Vineland (2009) will inform the development of any countermeasures in these municipalities.

Urban has planned and designed bicycle and pedestrian improvements in communities throughout southern New Jersey, ranging from urban areas (Cape May City) to rural townships (Downe Township). Through this work, we have coordinated closely with local officials, including Cumberland County Engineering Department staff, to achieve consensus on proposed improvements. Below are selected treatments from FHWA's Proven Safety Countermeasures list that we expect would relate well to the study area:

- **Pedestrian Crossing Islands:** Raised pedestrian crossing islands have been shown to reduce pedestrian crashes by up to 56% at midblock crossings and un-signalized intersections. This treatment could be applied to a variety of roads in Cumberland County, ranging from multi-lanestreets in urban areas to high-speed, two-lane state and county roads in suburban/rural areas.



- **Pedestrian Hybrid Beacons:** Many arterial corridors in New Jersey are dangerous to cross due to high speeds/volumes combined with a lack of protected crossing opportunities. PHB's have been shown to significantly reduce bicycle/pedestrian crashes at midblock crossings and un-signalized intersections. Urban has evaluated the applicability of PHB's in several NJ locations through our on-call bicycle and pedestrian contract with NJDOT-OBPP.
- **Road Diets:** Road diets have been shown to provide safety benefits for all roadway users – bicyclists, pedestrians, and motorists – and may be a consideration for multi-lane roads in Cumberland County. ***Through the NJDOT Road Diet Pilot Study, Urban has already analyzed and mapped the highest-ranking road diet locations in Cumberland County.***
- **Lead Pedestrian Interval (LPI):** Signal timing is an important but often overlooked component of pedestrian safety. Properly timed signals should consider the crossing needs of pedestrians and bicyclists, such as providing adequate crossing time and reducing conflicts with left and right turning vehicles. LPI has been shown to reduce crashes by up to 60% by giving pedestrians a heads start on vehicles. ***Urban has provided signal retiming and optimization services for numerous traffic signals in the SJTPO region, including 39 signals in Cumberland County through the FY 2015 Local Safety & CMAQ Project Development contract.***
- **Access Management:** Commercial/arterial corridors in Cumberland County such as Route 47 are inhospitable for bicyclists and pedestrians due to an excessive number of curb cuts, uncurbed frontages with no defined sidewalk corridor, wide driveways, and other factors that increase their exposure to vehicles. Access management is a proven strategy to comprehensively reduce all types of crashes by limiting the number of driveways, creating defined driveway openings, and providing a defined space for walking.

Develop Concept Plans and Cost Estimates

Urban will develop concept plans showing the approved countermeasures at each of the Top 10 locations. Conceptual designs will be developed at 50-scale using a combination of aerial photography and GIS for base mapping, and where applicable, will depict lane configurations, on-street parking, bike facilities, sidewalk and streetscape enhancements, and any other changes to the existing roadway/intersection. Throughout this process, we will coordinate with roadway owners and other decision-makers (e.g. municipal engineers, County Engineer, elected officials) to ensure that the concept plans have broad support. The concept plans will then be used to develop preliminary cost estimates for use in the Local Safety Program applications. Costs will be broken down using the categories in the applications.



Develop Local Safety Program Application Materials

Urban will prepare and assemble the materials needed to submit a complete project application package for Highway Safety Improvement Program (HSIP) funding, including Crash Diagrams, Traffic Count Data, Project Schedule, Concept Plans, Cost Estimates, and the Summary Memo. We will submit these materials to SJTPO for review and update as necessary to meet documentation requirements of the NJ Local Safety Program.

Materials will include the HSM input spreadsheets, which will be completed based on an evaluation of all crash types. We have recent experience completing similar spreadsheets for PennDOT District 6-0 for the use in their HSIP-funding applications. We understand that SJTPO will conduct the HSM and Benefit-Cost Analyses based on the HSM input spreadsheets; and that formal submission of materials to NJDOT will be completed by SJTPO.

Deliverables

- 9a. Traffic Count Data
- 9b. Completed SJTPO Local Safety Applications
- 9c. Completed HSM Input Spreadsheets
- 9d. Attachments for Local Safety Applications including: CMF Data, Project Schedule, Concept Plan, Cost Estimate, Crash Data/Diagram, SLDs, USGS Map, and Warrants (if required)
- 9e. Summary Memos

Task 10 – Plan Document

Urban will develop a written plan to formally document the work performed in Tasks 1 through 9. The plan will begin with a succinct narrative of bicycle and pedestrian safety issues in Cumberland County, including a description of the crash data. We understand the importance of accurately and concisely documenting both (a) the technical analysis and (b) the public outreach process and how input from local stakeholders influenced the decision-making process. The plan will include the lists of crash locations (Top 100, Top 25, and Top 10), summarize proposed improvements at each of the Top 10 locations in graphic and text format, and include the Bicycle and Pedestrian Toolkit as an appendix.

We have reviewed the ***City of Newark Pedestrian and Bicycle Safety Action Plan, along with FHWA's Guide for Developing Safety Action Plans (March, 2009)***, and will inform development of the Cumberland County plan. The electronic document will be developed in WORD format and will present all data clearly using maps, tables, and other visuals. Urban will submit a draft plan to SJTPO in electronic format for review, and update the draft plan based on SJTPO's comments. We will then present the draft final plan to the Steering Committee. We expect that SJTPO will coordinate any comments from the Steering Committee and provide them to Urban for a final round of updates.

Deliverables

- 10a. Draft Plan (PDF version)
- 10b. Final Plan (20 printed and bound color copies)



Staffing Plan

STAFFING PLAN



Staff Name	Title	Hours Per Task										Total Hours	% of Total Hours
		Coordination	Bike/Ped Steering Committee	Retrieve & Process Crash Data	Identification of Crash Problems	Toolbox of Safety Strategies	Public Meetings, Round 1	Pedestrian Road Safety Audits	Public Meetings, Round 2	Local Safety Program Apps	Plan Document		
		1	2	3	4	5	6	7	8	9	10		
Urban Engineers, Inc. (UEI)													
John Federico	Project Manager	64	40	16	4	48	60	72	76	32	80	492	52.6%
David Cox	Senior Engineer		8	8		12		8		4	8	48	
David Vodila	Transportation Planner		24	120			52		72	24	24	316	
Erika Rush	Director of Planning		4				32	2	12		4	54	
Jay Etzel	Sr. Traffic Engineer		4		20			72		16		112	
Alexandra Jahnle	Transportation Engineer									124		124	
Antonia Iaconelli	Traffic Engineer				80			144		24		248	
UEI Subtotal		64	80	144	104	60	144	298	160	224	116	1394	
Fitzgerald & Halliday, Inc. (FHI)													
Leslie Black	Senior Advisor					2	34		16			52	27.3%
Kristen Ahlfeld	Public Outreach Specialist		40			2	112		84			238	
Ryan Walsh	Transportation Planner							56				56	
Rachel Bright	Graphic Designer						36		12			48	
Jessica Ortiz	Community Planner					24	188		118			330	
FHI Subtotal (DBE *)		0	40	0	0	28	370	56	230	0	0	724	
Civic Eye Collaborative, LLC (CEC)													
Ranjit Walia	Principal		48			120	40		35			243	14.4%
Nick Pietroniro	Director of Photography					120	10		10			140	
CEC Subtotal (DBE *)		0	48	0	0	240	50	0	45	0	0	383	
NV5, Inc. (NV5)													
J. Jahr	Senior Technician									78		78	5.7%
A. Nazir	Assistant Engineer, Traffic									42		42	
K. Pizzaro	Engineer, Traffic									22		22	
J. Fishingier	Director, Traffic Engineering									9		9	
NV5 Subtotal		0	0	0	0	0	0	0	0	151	0	151	
Totals		64	168	144	104	328	564	354	435	375	116	2652	100.0%

* Combined DBE Percentage = 41.7% of Total Hours

Project Schedule

PROJECT SCHEDULE

	MONTHS	1	2	3	4	5	6	7	8	9	10	11	12	13
NOTICE TO PROCEED														
T1 - COORDINATION														
Project Kickoff Meeting		▲												
Bi-weekly Status Updates														
T2 - BICYCLE/PEDESTRIAN STEERING COMMITTEE														
Meeting #1 - Narrow Top 100 to Top 25			SC-1											
Meeting #2 - Discuss outreach strategy and coordinate PM #1				SC-2										
Meeting #3 - Discuss public input / decide on Top 10								SC-3						
Meeting #4 - Present draft toolbox										SC-4				
Meeting #5 - Discuss public input / decide on countermeasures												SC-5		
Meeting #6 - Present Final Plan														SC-6
T3 - RETRIEVE & PROCESS CRASH DATA														
Obtain crash data and map bicycle/pedestrian crashes														
Identify Top 100 Locations														
Identify Top 25 Locations (SJTPO Task)			SC-1	◆										
T4 - IDENTIFICATION OF CRASH PROBLEMS														
Develop Crash Diagrams & Summaries for Top 25 Locations				SC-2										
T5 - BICYCLE & PEDESTRIAN TOOLBOX														
Develop Draft Toolbox									◆	SC-4				
Finalize Toolbox & Develop Summary Sheets														
T6 - PUBLIC MEETINGS, ROUND 1														
Develop Outreach Strategy				SC-2										
Coordinate & Host Public Meetings (up to 3 meetings)							▲							
Summarize Public Feedback								SC-3						
Obtain Approval for Top 10 Locations (SJTPO Task)								◆						
T7 - PEDESTRIAN ROAD SAFETY AUDITS														
Coordinate & Prepare for PRSAs														
Attend/Facilitate PRSAs									▲					
Develop PRSA Report									◆	SC-4				
T8 - PUBLIC MEETINGS, ROUND 2														
Coordinate & Host Public Meetings (up to 5 meetings)											▲			
Summarize Public Feedback												SC-5		
Obtain Approval for Countermeasures (SJTPO Task)												◆		
T9 - LOCAL SAFETY PROGRAM APPLICATIONS														
Collect & Analyze Traffic Count Data (up to 10 locations)														
Develop Concept Plans, Cost Estimates, & HSM Spreadsheets												◆		
Complete Summary Memos & HSIP Applications														
T10 - PLAN DOCUMENT														
Develop Draft Plan Document													◆	SC-6
Finalize Plan														

LEGEND

Work in Progress
SJTPO/NJDOT Review



Meetings/Events
Submission
Milestone



Organizational Chart

URBAN TEAM

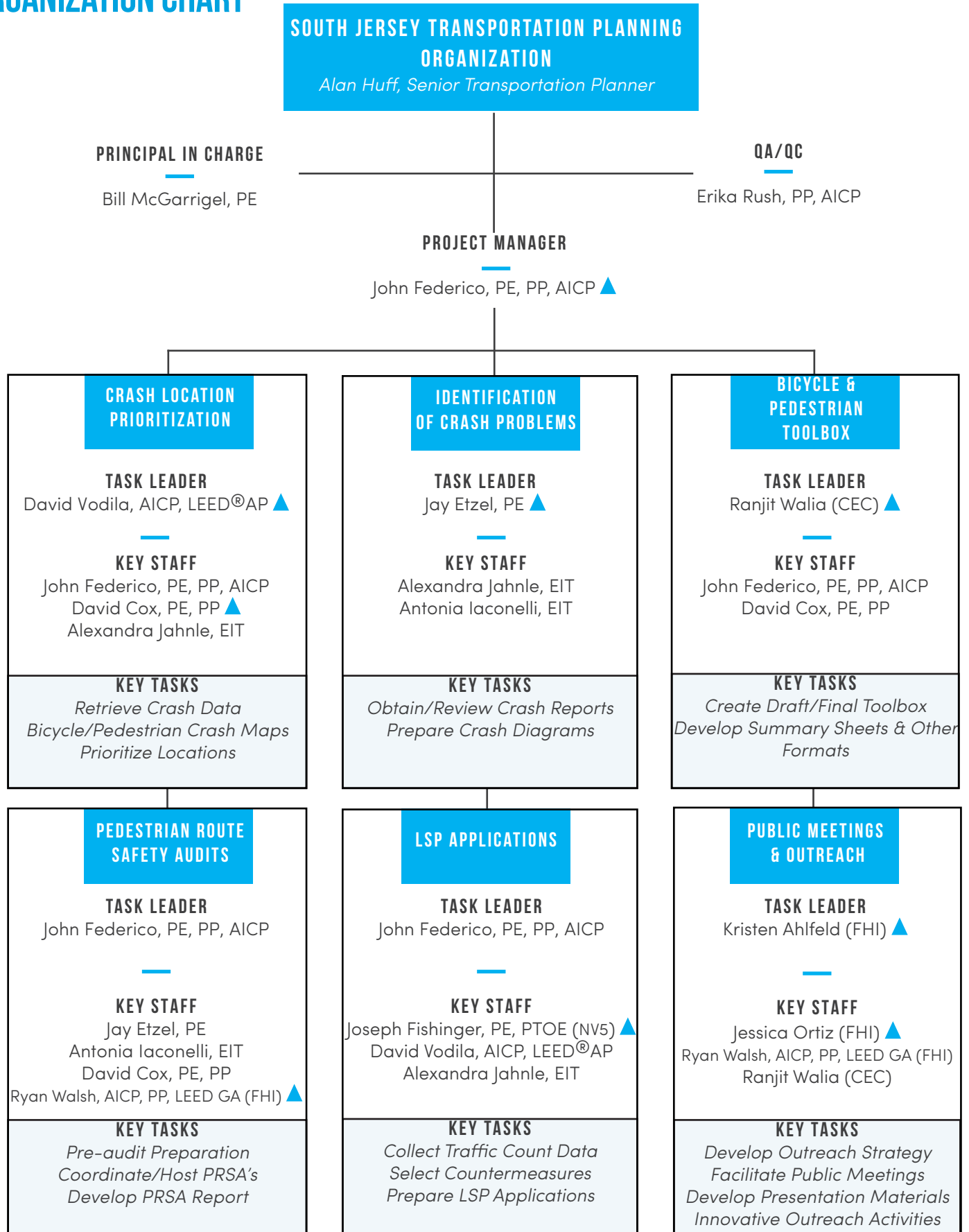
Our proposed team for this project consists of Urban Engineers, Inc. (Urban); Civic Eye Collaborative, LLC (Civic Eye); Fitzgerald & Halliday, Inc. (FHI); and NV5, Inc. (NV5). Urban will manage the project, coordinate work between the team members, and lead the tasks related to Steering Committee formation, crash analysis, Pedestrian Road Safety Audits, preparation of Local Safety Program applications, and development of the final plan. FHI will lead the public outreach activities, while Civic Eye will develop the Bicycle and Pedestrian Safety Toolbox and support the public outreach effort. NV5 will conduct traffic counts for use in the HSM analysis.

We have the resources available to complete this project within the **Project Schedule**. Our proposed Project Manager, **John Federico, PE, PP, AICP** was selected for this project because of his bicycle/pedestrian planning and design expertise, his extensive experience with all types of planning projects, and his proficiency with project management. In this role, he will be the primary point of contact with SJTPO. John understands the importance of this initiative and is committed to meeting the needs of SJTPO throughout the project. He will be supported by a team of individuals with the necessary expertise and availability to make this project a success, including technical expertise from **Jay Etzel, PE** and **David Cox, PE** and quality assurance from Urban's Planning Director, **Erika Rush, PP, AICP**.



ORGANIZATION CHART

J1: Resolution 1711-37



Legend

▲ Resume Included

(CEC) Civic Eye Collaborative

(FHI) Fitzgerald & Halliday

(NV5) NV5, Inc.

Firm Profile

FIRM PROFILE

Urban is a privately-owned multidisciplinary consulting, planning, design, and construction management/ inspection firm formed in the United States. Headquartered in Philadelphia since its founding in 1960, Urban provides services for all modes of transportation including bicycle/pedestrian, roadways, public transit, freight, railroads, and airports. Starting with a seven-person staff, Urban has grown to more than 400 employees in 16 regional offices including:

<ul style="list-style-type: none"> Baltimore, MD (18) Boothwyn, PA (2) Buffalo, NY (32) Cherry Hill, NJ (32) Erie, PA (30) Fort Worth, TX (1) 	<ul style="list-style-type: none"> Hartford, CT (25) Irving, TX (5) Los Angeles, CA (3) Mechanicsburg, PA (56) New Castle, DE (5) 	<ul style="list-style-type: none"> New York, NY (30) Philadelphia, PA (236) San Jose, CA (1) State College, PA (2) Warrendale, PA (4)
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Urban holds **ISO 9001:2008 Certification**; the definitive quality standard for design/consulting firms. This certification verifies that Urban’s Quality Management System complies with the requirements of the International Organization for Standardization. Five of Urban’s offices are ISO certified.

Special Knowledge and Expertise

Key staff for this project will work from our Philadelphia, PA and Cherry Hill, NJ offices. Our assigned staff has the strong communication and presentation skills that are necessary for successful public outreach and consensus building, along with the technical expertise in GIS/data analysis, bicycle and pedestrian planning/design, roadway design, Highway Safety Manual (HSM) analysis, Pedestrian Road Safety Audits, and countermeasure selection to accomplish the tasks set forth in the RFP.

Urban has worked closely with SJTPO, NJDOT, and other local stakeholders to successfully complete numerous planning and engineering projects in southern New Jersey (reference our **Work History** for project details). Through multiple 3-year term agreements with NJDOT’s Office of Bicycle & Pedestrian Programs, we have gained an understanding of the safety-related issues that bicyclists and pedestrians experience in urban, suburban, and rural contexts throughout the state. In addition, our extensive design experience has given us first-hand knowledge of how the concept of “nominal safety” influences the design exception and decision-making process. Per FHWA, the “substantive safety performance of a roadway does not always directly correspond to its level of nominal safety. It is not uncommon for a roadway to be nominally safe (i.e., all design elements meet design criteria) but at the same time substantively unsafe (i.e., it demonstrates or reflects a high crash problem relative to expectations).” We understand this distinction, and have direct experience promoting substantive safety through the strategic use of proven safety countermeasures.

Urban will be joined by three additional firms on this assignment, all of which are registered DBEs in New Jersey:

- Civic Eye Collaborative, LLC
- Fitzgerald & Halliday, Inc.
- NV5, Inc.

Brief descriptions of each firm are provided on the following page.





Civic Eye Collaborative, LLC (Civic Eye) is a community planning and communications firm that focuses on developing and promoting sustainable and livable communities through the use of participatory planning, outreach, visioning, and training techniques. Civic Eye collaborates to communicate complex urban planning issues, utilizing the latest technology to enhance public participation and improve understanding of the planning process. Their multidisciplinary team leads training workshops and community outreach, produces educational films and multimedia projects, and develops transportation and land use plans. Civic Eye is certified as a DBE in New Jersey.



Fitzgerald & Halliday, Inc. (FHI) was founded in 1987 with the belief that planning should encompass all aspects of a community and it should be accomplished by integrating active and meaningful public engagement throughout the planning process. FHI is a firm of multidisciplinary and environmentally conscious planners, engineers, designers, scientists, and administrative personnel dedicated to innovative planning that creates better communities. Their services cover a broad spectrum including mobility planning, community planning, environmental services, and public involvement. FHI is certified as a disadvantaged business enterprise (DBE) and women owned business (WBE) in over 20 states, including New Jersey.



NV5, Inc. (NV5) is a nationwide professional and technical consulting firm and is ranked at 75 in the Engineering News Record listing of top 500 A/E design firms. The northeast infrastructure team has been in business for over 40 years (known formerly as The RBA Group) with offices in New York, New Jersey and Connecticut. Core specialties include traffic; structural/bridge design; highway design; utility; environmental permitting and processing services; hydraulics/hydrology; transportation planning; recreational planning and design; and bicycle/pedestrian planning.

Work History

WORK HISTORY

Urban has a wealth of experience working on roadway safety projects that are directly relevant to this project. We recently completed two projects – the NJDOT Road Diet Pilot Study and the PennDOT District-wide Roundabout Program – that are very similar to the scope enumerated in the RFP. Both projects used a data-driven, GIS-based analysis of crash data to identify and prioritize candidate locations for safety improvements, and both studies were aimed at advancing projects using federal HSIP funding.

Our Team also has significant experience in developing “Best Practices” toolboxes, conducting Pedestrian Road Safety Audits and other bicycle/pedestrian safety studies, developing bicycle/pedestrian safety countermeasures, performing Highway Safety Manual (HSM) analysis, and successfully engaging the public and key stakeholders. Through our extensive project experience in southern New Jersey, we are intimately familiar with SJTPO’s Hot Spot Approach/Networking Screening Lists and Local Safety Program.

The table shown below, which summarizes our recent experience on similar projects, is followed by details and contact information for each included project.

PROJECT NAME	FIRM	PROJECT TYPE				
		CRASH ANALYSIS	HSM/HSIP	PRSA	CONCEPT PLANS / ESTIMATES	PUBLIC OUTREACH
NJDOT Road Diet Pilot Study	Urban Engineers	X	X			X
PennDOT District-wide Roundabout Program	Urban Engineers	X	X		X	X
Route 30 Pedestrian Road Safety Audit	Urban Engineers	X		X		X
Roosevelt Blvd Multimodal Corridor Improvement Program	Urban Engineers	X			X	X
Route 40/322 Pedestrian Accessibility Plan	Urban Engineers	X	X		X	
Downe Township Bicycle & Pedestrian Plan	Urban Engineers				X	X
Route 33 Pedestrian/Bicycle Improvement Study	Urban Engineers	X			X	
NJDOT Road Diet Video	Urban Engineers					X
FY 2015/16 Local Safety & CMAQ Project Development	Urban Engineers		X		X	
Route 93 Pedestrian Road Safety Audit	Urban Engineers	X		X		X
SJTPO Outreach Films for 2040 RTP Update	Civic Eye Collaborative					X
NJ Complete Streets Educational Films	Civic Eye Collaborative					X
Princeton Visual Preference Survey	Civic Eye Collaborative					X
Jersey City Pedestrian Enhancement Plan	Fitzgerald & Halliday				X	X
Capitol Region Complete Streets Plan	Fitzgerald & Halliday				X	X
Innovative Outreach for NJTPA’s Plan 2045	Fitzgerald & Halliday					X



3. Cost Proposal

Total Cost
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CUMBERLAND COUNTY BICYCLE & PEDESTRIAN SAFETY ACTION PLAN

J1: Resolution 1711-37

CUMBERLAND COUNTY

DATE: November 13, 2017

CLIENT: South Jersey Transportation Planning Organization

TOTAL PROJECT COST

COMPANY	TOTAL FEE PERCENTAGE		TOTAL FEE
Urban Engineers, Inc.	52.44%	\$	180,812.31
Fitzgerald & Halliday, Inc. (DBE Firm)	25.38%	\$	87,506.31
Civic Eye Collaborative, LLC (DBE Firm)	13.10%	\$	45,175.83
NV5, Inc.	9.07%	\$	31,286.19
TOTALS	100.00%	\$	344,780.64

DBE Percentage = **38.48%**

RFP Required DBE Percentage = **12.44%**

TOTAL COST BY TASK



	Costs by Task										Total Cost by Firm
	Coordination	Bike/Ped Steering Committee	Retrieve & Process Crash Data	Identification of Crash Problems	Toolbox of Safety Strategies	Public Meetings, Round 1	Pedestrian Road Safety Audits	Public Meetings, Round 2	Local Safety Program Apps	Plan Document	
	1	2	3	4	5	6	7	8	9	10	
Urban Engineers, Inc.											
	\$8,811	\$13,191	\$19,121	\$10,493	\$8,372	\$20,680	\$35,946	\$22,008	\$25,014	\$17,178	\$ 180,812
Fitzgerald & Halliday, Inc.											
* DBE Firm	\$0	\$5,626	\$0	\$0	\$2,775	\$43,370	\$7,876	\$27,861	\$0	\$0	\$ 87,506
Civic Eye Collaborative, LLC											
* DBE Firm	\$0	\$7,486	\$0	\$0	\$24,953	\$6,758	\$0	\$5,978	\$0	\$0	\$ 45,176
NV5, Inc.											
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$31,286	\$0	\$ 31,286
Total Cost by Task	\$8,811	\$26,303	\$19,121	\$10,493	\$36,100	\$70,807	\$43,822	\$55,847	\$56,300	\$17,178	\$ 344,781

SOUTH JERSEY TRANSPORTATION PLANNING ORGANIZATION

RESOLUTION 1711-37: Approving the Selection of Urban Engineers, Inc. as the Consultant for the Cumberland County Bicycle and Pedestrian Safety Action Plan

WHEREAS, the South Jersey Transportation Planning Organization (SJTPO) is the Metropolitan Planning Organization (MPO) designated under Federal law for the southern region of New Jersey including Atlantic, Cape May, Cumberland, and Salem Counties; and

WHEREAS, the Fiscal Year 2018 SJTPO Unified Planning Work Program contemplated Federal Highway Administration Highway Safety Improvement Program (HSIP) funds for this project; and

WHEREAS, NJDOT Bureau of Traffic Data and Safety will authorize HSIP funds following a review of winning consultants technical scope and cost, and execute a separate Task Order for this technical study; and

WHEREAS, the Notice of Availability of Requests was sent to approximately 208 contacts on September 13, 2017; and

WHEREAS, the Request for Proposal (RFP) announcement and supplemental materials were also posted on the publicly accessible SJTPO website; and

WHEREAS, seven (7) proposals were received; and

WHEREAS, the SJTPO Technical Advisory Committee endorsed the consultant selection committee with representatives from Cumberland County, City of Vineland, NJDOT, and SJTPO, who reviewed and evaluated the proposals in accordance with SJTPO's published criteria; and

WHEREAS, the Consultant Selection Committee recommends Urban Engineers, Inc. in association with NV5, Inc. and Fitzgerald & Halliday, Inc. and Civic Eye Collaborative, LLC serving as the Disadvantaged Business Enterprise (DBE) firms; and

WHEREAS, the SJTPO TAC, at their November 13, 2017 meeting, endorsed the recommendation of the Consultant Selection Committee;

NOW THEREFORE BE IT RESOLVED, that the Policy Board of the South Jersey Transportation Planning Organization hereby approves the above selection for the Cumberland County Bicycle and Pedestrian Safety Action Plan, with a maximum fee of \$344,780.64 and 39.6% DBE participation; and

BE IT FURTHER RESOLVED, that the Policy Board authorizes the Executive Director to execute scope of work and cost modifications to the original contract amount, provided that funding is available.

BE IT FURTHER RESOLVED, that the Policy Board requests that the South Jersey Transportation Authority execute the appropriate contractual arrangements with the consultant on behalf of the SJTPO.

Certification

I hereby certify that the foregoing is a correct and true copy of a resolution adopted by the Policy Board of the South Jersey Transportation Planning Organization at its meeting of November 27, 2017.



John W. Risley, Secretary/Treasurer