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Pedestrian Safety Corridor Evaluation Guidelines





**Department of
Transportation**

Pedestrian Safety Corridor Evaluation Guidelines

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STEPS

Step 1: Form a Diverse Team

Step 2: Gather Data & Perform Analysis

Step 3: Conduct Field Inventories & Studies

Step 4: Develop Recommendations

Step 5: Implement Safety Action Plan



The goal of the pedestrian safety corridor evaluation is to reduce the frequency and severity of pedestrian crashes and develop safer walkable environments. The evaluation process empowers stakeholders to take leadership roles by working collaboratively with a team to evaluate needs and identify measures to improve safety. The guidelines identify steps in a process involving the collection and evaluation of data to develop engineering, enforcement and education solutions (the “3-E Approach”). The pedestrian safety corridor evaluation is optimal when all steps and all stakeholders are involved, but is flexible enough to be partially used, depending on local conditions and resources.

There are five steps to the pedestrian safety corridor evaluation:

1. Form a Diverse Team
2. Gather Data & Perform Analysis
3. Conduct Field Inventories & Studies
4. Develop Recommendations
5. Implement Safety Action Plan



Step 1: Form a Diverse Team

Assemble a team that represents the diverse perspectives of engineering, enforcement and education stakeholders in the community. Establish a subcommittee for each of the 3-Es. Include Key Partners from the following agencies and/or organizations: Department of Transportation, Local Department of Public Works, Local Planning Department, County Traffic Safety Board, Local Health Department, Law Enforcement, Governor’s Traffic Safety Committee, Metropolitan Planning Organization, Local Transit Authority, Local Schools or Universities, etc. Other local partners such as Business Improvement Districts, Chambers of Commerce and large employers should also be included as appropriate.

The team should establish pedestrian crash reduction goals for the selected corridor, and designate subcommittee leaders to identify and evaluate engineering, enforcement, and education issues.

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Step 2: Gather Data & Perform Analysis

Gather readily available data and develop a plan to collect any additional data before detailed analysis begins. Team members will provide vital, local insight that will help analysts better understand conditions when collecting and analyzing crash, transportation and land use data. This step of project scoping should engage various team members.

Crash History

Crash Data – Obtain most recent five years of crash data (MV-104) for the corridor being studied. Specific focus will be on pedestrian related crashes along and crossing the corridor. If available, include public health or hospital emergency room data.

Crash Analysis – For pedestrian crashes, extract pertinent information from MV-104 reports such as date, location, time of day, accident type, severity, traffic control, light condition, road character, surface condition, weather, contributing factors, vehicle travel directions, etc. Use this information and develop a crash diagram (see sample diagram on Page 6), plotting all the crashes along the study corridor. This will be useful in determining crash patterns and focus areas to be further evaluated and remedied.

Data charts and tables should be prepared for all pedestrian related crashes. Category breakdowns should include those indicated above as well as others related to specific local patterns.

Traffic & Other Data

Demographics – Identify and summarize pedestrian origins and destinations on or contributing to activity on the corridor. Identify the presence of special populations such as senior housing developments, school zones, after school destinations and environmental justice communities.

Pedestrian Travel Ways – Identify and summarize existing pedestrian travel paths and crossing locations. Also assess the potential need for mid-block pedestrian crossing locations such as when intersections are spaced far apart and/or where neighborhood pedestrian generators exist or are planned.



LAKE AVENUE IN ROCHESTER



Vehicle & Pedestrian Traffic Volumes – Review available historical vehicular and pedestrian count data. If historic data is older than three years, collect and summarize results of vehicular and pedestrian counts performed during peak periods and periods that coincide with nearby generators (dense housing developments, commercial areas, transit nodes, local schools and universities, community centers, large employers, houses of worship, parks and recreation areas, etc.).

Travel Speeds – Conduct and summarize results of spot speed studies at selected locations along the corridor during free flow traffic conditions when/where speed may be a factor in pedestrian crashes, also making note of posted speeds and design speeds.

Bus/Transit Ridership Data – Obtain and summarize activity logs for each transit stop either from the transit agency or by conducting field observations.

Land Use – Look at existing local land use plans and zoning requirements or other previous studies to understand existing and potential future issues related to street connectivity, site design, or development patterns.

Step 3: Conduct Field Inventories & Studies

Review results of crash analysis, transportation data and land use data with the team and invite them on field trips to perform a walk-through of crash locations and corridors. This may also be a good time for speed studies to reevaluate posted speed limits. Before conducting the field trips, teams should familiarize themselves with [FHWA’s Pedestrian Road Safety Audit Guidelines/Prompt List](#) as an on-site “primer” to identify and assess conditions for resolving safety needs. Team members will be familiar with locations, potential causes, local conditions, and previous efforts or audits that may have been done to reduce pedestrian crashes.

Field Inventory & Mapping

Field Inventory – Conduct a field inventory to assess existing features including, at a minimum, (1) roadway geometry (vertical and horizontal curves), (2) pavement markings, (3) number and type of travel lanes, driveways, traffic control devices and pedestrian signage, (4) parking restrictions,

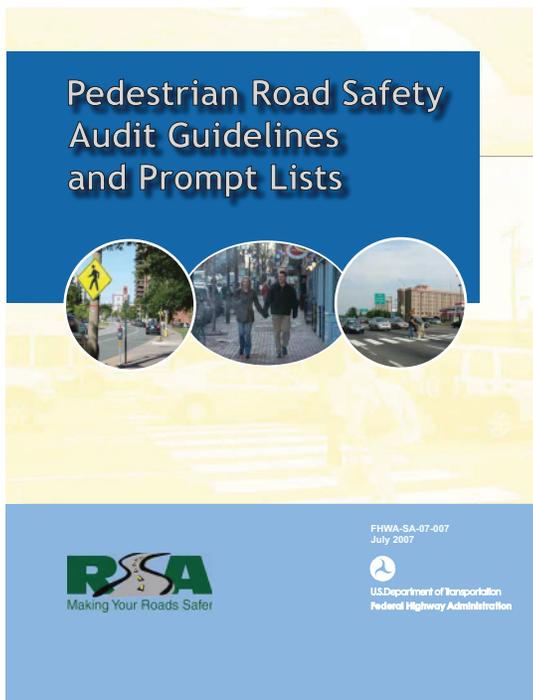


SAMPLE OF A NYSDOT CRASH DIAGRAM

(5) transit stops, (6) traffic and pedestrian signals (including pedestrian signal size and type), (7) pedestrian pushbuttons and whether they are accessible and operational, (8) sidewalks, crosswalks, (9) pedestrian ramps and whether they are accessible, (10) roadway and pedestrian lighting, (11) roadside features, etc. This information can most effectively be collected using a field inventory and observation form. Develop a Conditions Diagram to graphically present this information.

Pedestrian Signal Features - Obtain and summarize information related to any existing traffic and pedestrian signal equipment and operation such as signal timing plans, pedestrian phases as per MUTCD, leading pedestrian intervals, latching pushbuttons, etc.

Traffic Signal Configuration – Document general information about each signal in the corridor such as the controller type, presence of backplates, No Turn on Red signs, automated enforcement devices, etc.



Field Studies

Pedestrian Focused Road Safety Audit (RSA) – For select study locations that possess heightened pedestrian safety, mobility and access concerns, as determined by the Pedestrian Safety Corridor Team, a pedestrian focused road safety audit will be performed. This assessment should include participation of Key Partners to evaluate and promote the 3-E approach. The pedestrian focused Road Safety Audit will involve a review of existing data prior to a scheduled workshop with the attendees to describe conditions and identify problem areas to be investigated. A field visit will follow the data review, which must include a walking tour and a driving tour to encompass pedestrian and driver perspectives. Following the field visit, a debriefing meeting will be held to determine what the participants noted to be predominant factors causing pedestrian crashes and what potential improvements participants believe would help to reduce pedestrian crashes. The FHWA Pedestrian RSA Guide should be used as a reference.

Additional studies not conducted in Step 2 should be conducted in this step, if necessary. Examples include pedestrian level of service analysis, stopping sight distance, intersection sight distance, and origin-destination surveys.

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Step 4 – Develop Recommendations as a Team

Reviewing the information, analysis and results from the previous steps, develop a list of short and long term actions that will provide a comprehensive 3-E approach to improve pedestrian safety. An incremental approach is encouraged to be able to implement simple/short term improvements first while more complex improvements are being considered and developed.

Enforcement and education campaigns and programs should complement any engineering solutions that are proposed. This will result in a multi-dimensional discussion of immediate, short-term and long-term improvements separated into engineering, enforcement and education focuses.

The team must consider how to balance the needs of pedestrians, motorists and other users. Safety is the priority, but mobility for all modes of travel should be carefully evaluated before implementation.



Engineering Recommendations

Develop corridor-wide, systemic improvements that focus on pedestrian crash reduction at intersection and mid-block locations.

Develop site-specific countermeasures for identified focus areas in the corridor, using traditional methods of analysis, problem identification and recommended improvements.

Develop a consistent approach among all jurisdictions/owners for implementing engineering measures such as countdown timers, push buttons and signal timing. Consider lighting maintenance agreements if lighting improvements are proposed.

Recommendations should include immediate, short and long term measures and funding options.



RIVERFRONT PARK, CANAJOHARIE

Prioritization Plan

Identify focus areas and corridor-wide elements that could be addressed to improve pedestrian safety. Begin to divide these into easy, medium or difficult problems to solve, and identify solutions. Discuss why measures are easy, medium or difficult to implement based on costs or other factors (additional analysis required, SEQRA, permits, right of way, etc.)

Identify and summarize immediate-action improvements, i.e., that can be fast-tracked through Work Orders or requirement contracts and use local maintenance forces to implement. Determine when and where enforcement and education will play a role. Easy to implement improvements might include crosswalk or sidewalk repair, signal retiming, countdown timers or other pedestrian signage. Enforcement activities and public education and outreach may also be included at this stage.

Identify and summarize short-term improvements. Short-term improvements may require design efforts, but without major capital improvement costs, right-of-way takings and/or environmental impact studies. Determine when and where enforcement and education will play a role.

Identify and summarize long-term improvements. These may require design efforts with major capital improvement cost, right-of-way considerations and/or SEQRA processing. Determine when and where enforcement and education will play a role. Street connectivity, bulb-outs, pedestrian refuge islands, and zoning ordinance reform are examples of some improvements that might be more long term in nature depending on the status of the evaluation process.



SOUTH LEXINGTON AVENUE AND MAIN STREET, WHITE PLAINS

Enforcement Strategies

Active Enforcement of Drivers and Pedestrians

Use available resources from the Governor's Traffic Safety Committee and the NYS Department of Health.

Identify enforcement training needs and programs based on experiences and data.

“ The NY 24/Hempstead Turnpike project recommended metering traffic signals during off-peak periods to reduce traffic speeds ”



Education Campaigns

Review best practices from NY resources and campaigns.

Use available resources from the Governor's Traffic Safety Committee and the NYS Department of Health.

Identify needs and use available resources to implement education campaigns or recommendations.

“ The Governor's Traffic Safety Committee and Department of Health put See! And Be Seen! Flyers in storefronts on NY 5/Central Avenue ”





Step 5 – Implement Safety Action Plan

Implementation is the most critical step of the pedestrian safety corridor improvement process. Cooperation among planning, engineering, maintenance, enforcement, education and elected officials will need to be carefully orchestrated to ensure success. Implementation should be “incremental,” i.e., take action on measures that can be done immediately or in the short term, but continue to plan for longer term solutions in the corridor. Including all stakeholders in this process will ensure that when funding opportunities arise, the team will be ready to implement the safety improvements that have been recommended.

Engineering, Enforcement and Education Implementation Plans

Each subcommittee should develop an implementation plan that will be joined into a master implementation plan in the final step.

Master Implementation Plan

Develop a work plan and timeline for the implementation of immediate, short and long term countermeasures joining forces with engineering, enforcement and education resources.



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ADDITIONAL RESOURCES

[How to Develop a Pedestrian Safety Action Plan, FHWA, NHTSA](#)

[Pedestrian Road Safety Audit Guidelines and Prompt Lists](#)

[Non-Motorized User Safety-A Manual for Local Rural Road Owners](#)

[Pedestrian Safety Guide for Transit Agencies, FHWA](#)

[Pedestrian Safety Guide, FHWA](#)

[Highway Design Manual, NYSDOT](#)



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