

# Evaluating Temporary Accommodations for Pedestrians During Construction

Project Development and  
Environmental Analysis Branch



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## **Purpose**

The purpose of this procedure is to guide NCDOT Engineers in evaluating the need for Temporary Pedestrian Accommodations during construction. The need to evaluate the impact of pedestrian traffic in work zones can be identified at any time during the life of the project. However, the goal is identification and assessment early in the planning phases of the project.

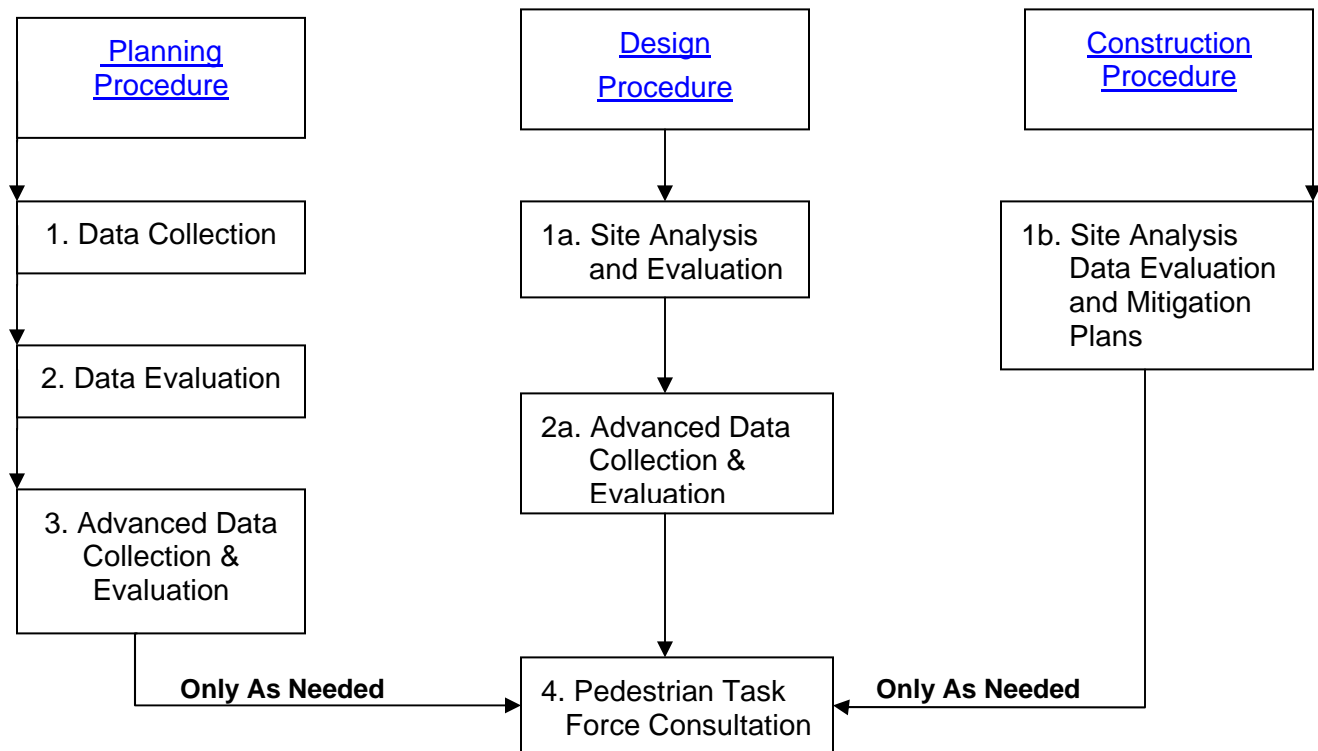
## **Responsibility**

The PDEA Project Planning Engineer and the Human Environment Unit, Community Studies (HEU, CS) Project Manager have the main responsibility for identifying the need for potential pedestrian accommodations during construction. The Roadway Design Project Engineer, Structure Design Project Engineer, Division Construction Engineer, and Work Zone Traffic Control Project Engineer are also responsible for reviewing projects in terms of constructability and construction phasing. Coordination with the NCDOT Division of Bicycle and Pedestrian Transportation is required throughout this procedure.

## **Scheduling and Time Constraints**

Assessing project sites for the potential need for pedestrian accommodations should begin at the Scoping Meeting for the project. PDEA Project Engineers should follow the Scoping Process in order to request input from the appropriate NCDOT personnel in a timely manner. After the planning document has been completed, it is the responsibility of the person who has identified a potential problem to contact the Tri Project Managers in a timely manner to resolve any issues.

## Procedures



### Planning Procedure

The PDEA Project Planning Engineer should follow the series of procedures below to identify and assess projects that may need pedestrian accommodations during construction and to document any decisions or project commitments made with regards to these accommodations. While, ideally, the discussion should take place during the Scoping Meeting, these procedures can be followed at any time during the planning process once the need arises.

#### Procedure 1: Data Collection

- Step 1.** Conduct a site visit. Fill out the [Community Impact Assessment Checklist](#) during the visit. The form will prompt you to look at several aspects of the project. Reference [Planning a Project Engineer's Field Trip](#) for further directions on organizing the trip. Some indicators to look for are:
- Worn paths
  - Existing sidewalks
  - Schools
  - Residences in close proximity to community services
  - Parks, stadiums, community ballparks in close proximity to the project study area
- Step 2.** Obtain data from other NCDOT units as needed. Reference the [Scoping Process for R, U, and I Projects](#) for additional information on requests. At a

minimum, the following information is needed to help identify pedestrian needs during construction:

- Community Characteristics Report from HEU, Community Studies
- Accident Report from Traffic Engineering Branch

**Step 3.** Compile the information concerning pedestrians and include on the initial scoping information sheets. Continue to [Procedure 2](#).

## **Procedure 2: Data Evaluation**

**Step 1.** Evaluate pedestrian needs during construction at the scoping meeting. If pedestrian needs during construction are identified, proceed to Step 2. If not, then document the decision in the Scoping Meeting Minutes. No further action is required at this time. However, the decision will be re-evaluated again during the Right of Way Consultation and the Construction Consultation.

**Step 2.** Evaluate whether pedestrian traffic can be safely maintained onsite during construction without significant increases in the cost and duration of the project or increases in environmental impacts. If yes, then document the decision in the Scoping Meeting Minutes, discuss in the planning document, and place any required project commitments on the Green Sheet. During the final design phase, pedestrian maintenance will be incorporated into the traffic control plans. If no, proceed to step 3.

**Step 3.** Identify potential offsite detours for pedestrian traffic during construction. Is an acceptable offsite detour available? Items to consider when looking at pedestrian detours are:

- ADA Compliance
- Detour length
- Public Safety and Security
- Terrain

This is not an all inclusive list and all aspects of the project area should be taken into account.

If an acceptable offsite detour is available, then document the proposed pedestrian detour route in the Scoping Meeting Minutes. Proceed to Step 4.

If there is not an obvious acceptable offsite detour, then additional guidance will be required. Document the need for additional guidance in the Scoping Meeting Minutes. Continue to [Procedure 3](#).

**Step 4.** Request the Division Construction Engineer and Division Traffic Engineer to field verify that the proposed pedestrian detour route is acceptable. Discuss the offsite detour in the planning document and place any required project commitments on the Green Sheet. During the final design phase, pedestrian maintenance will be incorporated into the traffic control plans.

If the proposed pedestrian detour route is found to be unacceptable, then additional guidance will be required. Document the need for additional guidance in the Scoping Meeting Minutes. Continue to [Procedure 3](#).

### **Procedure 3: Advanced Data Collection and Evaluation**

The PDEA Project Planning Engineer will follow these steps after the Scoping Meeting has been held and it has been determined that additional guidance and study is required with regard to pedestrian maintenance during construction.

**Step 1.** Consult with the HEU, Community Studies Group to determine the most effective manner for collecting and evaluating additional pedestrian data. Additional data collection may include:

- Field Visits
- Discussions with the local planner
- Pedestrian Counts
- Pedestrian Surveys

The HEU, Community Studies Group will coordinate the data collection efforts.

**Step 2.** Compile the additional data and schedule a meeting to discuss the results. Invite, as a minimum, the following:

- Roadway Project Design Engineer
- Structure Project Design Engineer (as applicable)
- Division Construction Engineer
- Division Traffic Engineer
- Bicycle and Pedestrian Transportation Project Manager
- Work Zone Traffic Control Project Engineer
- Community Studies Project Planner

Based on the data and discussion, is the need for pedestrian accommodations during construction critical? If yes, then proceed to Step 3. If not, then document the decision in the meeting minutes. The decision will be reassessed and discussed in the Right of Way Consultation and/or Construction Consultation.

**Step 3.** Identify possible alternate plans for accommodating pedestrians. Some options are:

- Temporary pedestrian bridge
- Public Transportation/Transportation Services (Coordinate with NCDOT Public Transportation Division).
- Stage construction

If there are potential alternatives, proceed to Step 4. If not, proceed to [Procedure 4](#).

**Step 4.** Obtain preliminary construction costs for each alternate plan and the impact of each alternate on the duration of construction and on environmental resources.

**Step 5.** Send the information to the meeting attendees in Step 2 for evaluation.

**Step 6.** Meet to discuss the impact of the potential alternates on cost, duration of the project construction, and environmental impacts and determine if there are significant impacts to the overall project cost. If there is a feasible alternate that does not significantly impact the project, then document the decision process in

the planning document and place any required project commitments on the Green Sheet. Pedestrian maintenance will be incorporated into the traffic control plans during the final design phase. If the affect on the project is significant, continue to [Procedure 4](#).

#### **Procedure 4. Pedestrian Task Force Consultation**

The PDEA Project Planning Engineer will follow the steps below to elevate projects to the Pedestrian Task Force for consultation.

**Step 1.** Schedule a meeting with the Tri-Project Managers to review and summarize the data that has been collected and the areas where direction is needed. The Tri-Project Managers consist of the following:

- Roadway Design Project Engineer
- PDEA Project Group Leader
- Division Construction Engineer

The purpose of this meeting is to verify that all alternates have been explored and documented thoroughly and to verify that temporarily accommodating pedestrian needs during construction will have significant impacts on project schedule or costs or the environment that will require authorization to proceed.

**Step 2.** Schedule a meeting with the Pedestrian Task Force. The meeting should be scheduled at least 4 weeks in advance. The Task Force is comprised of the following:

- State Work Zone Traffic Engineer
- State Roadway Design Engineer
- Division Construction Engineer
- PDEA Staff Engineer
- Division of Bicycle and Pedestrian Transportation Representative
- State Roadway Construction Engineer

NOTE: If the need is identified during construction, schedule the meeting immediately. Do not wait 4-6 weeks.

**Step 3.** Compile an executive summary of the evaluation process to date. Provide supporting documentation in appendices for decisions that were made. This packet of information should be received by the members of the Task Force at least two weeks before the scheduled meeting.

NOTE: If the need is identified during construction, produce and send the summary immediately, even if the Task Force members have only a day for review.

**Step 4.** At the meeting, the Task Force will review the documentation and consider the items outlined in the Guide for Temporary Pedestrian Accommodations.

**Step 5.** The Task Force will either recommend a course of action to mitigate the impacts to pedestrians or authorize the maintenance plan proposed by the Tri-Project Managers.

## Design Procedure

These series of procedures should be used when a need for pedestrian accommodations during construction is identified after the planning document has been completed, but before the project is let to construction. The unit that identifies the need is responsible for initiating the process.

### Procedure 1a.: Site Analysis

- Step 1.** Define the need and the circumstances that have caused the concern.
- Step 2.** Elevate the issues to the Tri-Project Managers.
- Step 3.** The Tri-Project Managers and the Work Zone Traffic Control Project Engineer will hold a field meeting to determine the magnitude of the issue. During the field meeting, If it is decided that pedestrian accommodations are needed during construction, the project managers should evaluate the following:
  - Can pedestrian traffic be safely maintained onsite during construction without significant increases in the cost and duration of the project or increases in environmental impacts?
  - Identify acceptable offsite detours for pedestrians if traffic cannot be safely maintained onsite. Items to consider on offsite detours are:
    - ADA Compliance
    - Detour length
    - Public Safety and Security
    - Terrain
  - Identify if additional information on pedestrian traffic is needed in order to make a more informed decision.
  - Identify other potential alternates for accommodating pedestrian traffic during construction such as:
    - Temporary pedestrian bridge
    - Public Transportation/Transportation Services (Coordinate with NCDOT Public Transportation Division).
    - Stage construction
- Step 4.** If acceptable accommodations can be made without significant impacts to the project as defined in Step 3, then document the decision in the meeting minutes. Discuss the changes in the Right of Way and/or Construction Consultation and revise the Green Sheet accordingly. If a decision cannot be reached in the field or additional information is needed before pursuing mitigation alternates, go to Procedure 2a.

## Procedure 2a: Advanced Data Collection and Evaluation

**Step 1.** Consult with the HEU, Community Studies Group to determine the most effective manner for collecting and evaluating additional pedestrian data. Additional data collection may include:

- Field Visits
- Discussions with the local planner
- Pedestrian Counts
- Pedestrian Surveys

The HEU, Community Studies Group will coordinate the data collection efforts.

**Step 2.** Compile the additional data and schedule a meeting to discuss the results. Invite, as a minimum, the following:

- Roadway Project Design Engineer
- Structure Project Design Engineer (as applicable)
- Division Construction Engineer
- Division Traffic Engineer
- Bicycle and Pedestrian Transportation Project Manager
- Work Zone Traffic Control Project Engineer
- Community Studies Project Planner

Based on the data and discussion, is the need for pedestrian accommodations during construction critical? If yes, then proceed to Step 3. If not, then document the decision in the meeting minutes. The decision will be reassessed and discussed during either the Right of Way Consultation or the Construction Consultation depending on when the need is identified.

**Step 3.** Obtain preliminary construction costs and impacts on the duration of construction and environmental resources for the alternate plan(s) identified at the field meeting. Send the information to the field meeting attendees for evaluation.

**Step 4.** Meet to discuss the impact of the potential alternates on cost, duration of the project Construction, and environmental impacts and determine if there are significant impacts to the overall project cost. If the impacts are not significant, then document the decision process in the meeting minutes and place any required project commitments on the Green Sheet. Pedestrian maintenance will be incorporated into the traffic control plans during the final design phase. If the affect on the project is significant, continue to [Procedure 4](#).

## Construction Procedure

This procedure should be used when a need for pedestrian accommodations during construction is identified after the project has been let to construction. The Work Zone Traffic Control Project Engineer or the Division Construction Engineer will be responsible for initiating the process.

## Procedure 1b: Site Analysis, Data Collection and Evaluation, Mitigation Plans

- Step 1.** Define the need and the circumstances that have caused the concern.
- Step 2.** Elevate the issue to the Division Construction Engineer immediately.
- Step 3.** The Division Construction Engineer will schedule a field meeting. At a minimum, the following staff should attend.
- Work Zone Traffic Control Project Engineer
  - Resident Engineer in charge of the project
  - Area Roadway Construction Engineer
  - Bicycle and Pedestrian Division Representative
- Step 4.** At the meeting, alternatives for providing temporary accommodations for pedestrians will be identified and evaluated. All alternatives must be ADA compliant and take into account the impacts on project costs, duration, and the environment.

If the temporary accommodations for pedestrians do not have a significant impact on the project, then document the field decision in meeting minutes and implement the maintenance plan. Send the meeting minutes to:

- All meeting attendees
- Tri-Project Managers
- Task Force Members

If the only feasible solution adds significant cost and duration to the project or increase environmental impacts that require permit modifications or a change in an effects call, then a mitigation plan for the impacts to pedestrian traffic should be formulated along with the proposed maintenance alternative. Go to [Procedure 4](#). NOTE: The timeframes presented in Procedure 4 are not applicable at this stage as a timely decision is required.

### **Background**

Pedestrian traffic in urban and suburban areas continues to increase. When temporary pedestrian needs were suddenly identified on several projects either under construction or in final design, NCDOT decided that guidance and a procedure should be established for resolving these issues. A committee comprised of a cross section of NCDOT staff was formed and the committee produced the Guide for Temporary Pedestrian Accommodations. These guidelines give a flowchart to help define the process for evaluating temporary pedestrian needs, sets up a Pedestrian Task Force for consultation when no feasible or practical alternative seems available, and defines areas in the Project Planning phase or Project Development phase where early identification of needs could be made.

However, it is also acknowledged that conditions within the project area can change rapidly and temporary pedestrian needs could be identified at any time during the life of the project. These procedures were developed to help NCDOT personnel work through the guidelines regardless of the phase of the project.

### **Policy, Regulatory, and Legal Requirements**

- [Guide for Temporary Pedestrian Accommodations](#)



- [23 CFR 630, Subpart J \(Work Zone Safety and Mobility\)](#)

## **Warnings and Precautions**

Failure to identify and provide temporary accommodations for pedestrians during construction where a need has been identified could result in schedule delays and increased construction costs for NCDOT, including the possibility of a lawsuit.

## **Resources and Tools**

- [Guide for Temporary Pedestrian Accommodations](#)
- Manual of Uniform Traffic Control Devices (MUTCD)
- Work Zone Impacts Assessment: An Approach to Assess and Manage Work Zone Safety and Mobility impacts of Road Projects.

## **Contacts**

- For suggestions to change this procedure or questions about performing this procedure contact:  
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## **User Access**

- Restricted NCDOT, FHWA, MPO, RPO, Consultants, etc.