Study for Pedestrian Crossings at Uncontrolled Approaches

SMART SCALE Application Information

Application Name: _____

Application ID: _____

Applicant: _____

VDOT District: _____

Study Information

This study template is designed to fulfill the requirements of IIM-TE-384.1, revised August 12, 2022 to include conditions under which an engineering study is required to justify a marked pedestrian crossing, including additional safety countermeasures, at an uncontrolled approach. In order to ensure consistency within the SMART SCALE program, this template is required for use in all applications proposing the installation or improvement of a pedestrian crossing at an uncontrolled approach, including mid-block crossings, unless other documentation is provided which satisfies IIM-TE-384.1. **This study is NOT required for proposed new or improved pedestrian crossings at signalized approaches, or at stop-controlled approaches.**

Study Location Description

Locality: _____

Crossing Type: ☐ Uncontrolled Intersection Approach ☐ Mid-block

Traffic Control: ☐ Stop/Yield Sign ☐ Uncontrolled

If the crossing is at an unsignalized intersection, define intersecting streets. If the crossing is at a mid-block location, define the location on the major street:

Major Street

Street Name or Mid-Block Location: _____

Posted Speed Limit: _____

AADT: _____

Minor Street

Street Name: _____

Posted Speed Limit: _____

AADT: _____

Describe existing nearby pedestrian-oriented land uses and destinations:

Describe presence of existing pedestrian facilities and access routes, including worn paths, traversable shoulder, and presence of bus stops along the roadway and in the area:

Step 1: Screen for Minimum Requirements

Conduct a safety screening for the study location consistent with Step 1 of IIM-TE-384.1. Adjacent sections of the corridor should also be reviewed to ensure that the best location for the potential crosswalk(s) is selected. If all three requirements are not met, the location is NOT eligible for a marked crosswalk.

	Requirement
☐	The center of the area considered for a proposed crosswalk is at least 300 feet from the center of the closest marked crosswalk or signalized intersection stop bar.
☐	Drivers have an unrestricted view of the entire proposed crosswalk and entry points to the crosswalk, based on Stopping Sight Distance requirements.
☐	If the location falls into Tier 3 or Tier 4 (see Tables 3 and 4 of IIM-TE-384.1), other pedestrian safety countermeasures must already exist or must be provided at the time of the crosswalk installation.

Pedestrian Count Information

If the proposed crossing satisfies the Step 1 screening, attach a document to this study containing vehicle and pedestrian counts for the proposed crossing. **At a minimum, the counts should attempt to capture the peak period of pedestrian traffic** specific to the location's context. The pedestrian counts should also cover a section of corridor 200 to 300 feet in either direction from the location being reviewed. If the proposed crossing is at an unsignalized intersection, include turning movement counts for the vehicle peak period.

Step 2: Evaluate Criteria for Marked Crosswalks

The number of crosswalk installation criteria met after evaluation determines the requirements for installation of the crosswalk, as described below:

- **Crosswalks SHALL be installed** when all crosswalk evaluation criteria are met *or* the location has 20 pedestrians or more per hour counted crossing between pedestrian-oriented land uses.
- **Crosswalks SHOULD be installed** where three or more of the crosswalk installation criteria are met.
- **Crosswalks MAY be installed** where one or two crosswalk installation criteria are met.

Review IIM-TE-384.1 for more information about each criterion. Select the applicable criteria in the table below and include a justification for each. If there are safety concerns or other reasons why the crosswalk is not feasible, these should be documented in the Additional Information or Recommendations section and a crosswalk is not required.

Crosswalk Installation Criteria		Supporting Information
☐	Criteria A: Proposed crossing is located between two pedestrian-oriented land uses or destinations.	
☐	Criteria B: Candidate location connects to at least one pedestrian facility or pedestrian access route.	
☐	Criteria C: Proposed crossing is on a road with a posted speed limit equal to or greater than 30 mph OR on a road with more than 1,500 vehicles per day.	
☐	Criteria D: Candidate location is more than 600 feet in urban contexts, or more than 1,000 feet in suburban or rural contexts, to the nearest crosswalk.	
☐	Criteria E: Candidate location is on an identified PSAP priority corridor or within the functional area of an intersection within a PSAP crash cluster.	

Step 3: Select Additional Countermeasures

Select additional countermeasures recommended by this study from the table below. Tables 3 and 4 of IIM-TE-384.1 identify required, recommended and optional countermeasures according to four (4) tier categories.

Crossing Treatment		Treatment Details
☐	Advance yield markings and R1-5 signs (ADV). Advance yield markings and signs shall be used as per the MUTCD (3B.16).	
☐	Pedestrian Hybrid Beacon (PHB), should be installed with Refuge Island on 4- or 6-lane divided roads or 5-lane roads.	
☐	Roadway Reconfiguration to 3-lane or 2-lane divided roads, should be installed with Refuge Island on Tier 3 or 4 roads.	
☐	Refuge Island should be installed with In Street Signs on 2-lane divided roads.	
☐	Rectangular Rapid Flashing Beacon (RRFB), should be installed with Refuge Island, where applied to Tier 3 or 4 roads.	
☐	Traffic Calming measures, including raised crosswalks for roads with posted speed limit lower than 35 mph.	
☐	Visibility Enhancements, including but not limited to in-street signs, parking restriction, or curb extensions.	

Step 4: Select Crosswalk Marking Pattern

Select the proposed marking pattern for the crossing. Crosswalks must use a high-visibility (continental or bar-pair) marking pattern to receive safety credit within SMART SCALE. Per IIM-TE-384.1, high-visibility patterns shall be used at all unsignalized crossings except stop-controlled approaches.

Crosswalk Installation Criteria		Class
☐	Transverse lines (two parallel lines)	Standard
☐	Longitudinal Lines ("continental")	High-Visibility
☐	Bar Pairs	High-Visibility

Additional Information or Recommendations

If the study recommends any treatments which are permitted by IIM-TE-384.1 but are not included in the forms above, provide a description of the additional recommended treatment below. If there are safety concerns or other reasons why the studied crosswalk is not feasible, document these below and a crosswalk is not required.

Approvals

Engineer performing study	
Notes:	
Name:	
Signature:	
Date:	
VDOT District Traffic Engineer	
☐ Concur ☐ Do Not Concur	
Notes:	
Name:	
Signature:	
Date:	