

Section 217 of Title 23 of the United States Code encourages the development and improvement of pedestrian walkways and bicycle transportation.

Section 217 (I) of Title 23 provides that no bicycle project may be carried out under this section unless it is determined that such project will be principally for transportation, rather than recreation purposes.

Section 217 (g) of Title 23 provides, in general, that bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each metropolitan planning organization and state. It further provides that bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted.

Section 217 refers to the Design Guidance called for in Section 1202 of Public Law 105-178 (TEA 21) which identified issues that are to be addressed as follows:

- Level and nature of the demand.
- Volume and speed of motor vehicle traffic
- Safety
- Terrain
- Cost
- Sight distance

III-07.01 Pedestrian Facilities (Sidewalks)

- The need for sidewalks shall be considered on new or reconstructed projects.
- The sidewalks must meet accessibility guidelines.
- When constructing a bridge, sidewalks shall be considered.
- If a sidewalk is placed on the bridge, a canopy over the sidewalk should be considered.
- Separated crossings should be considered where the pedestrian volume, traffic volume and intersection capacity favor their use. The Planning and Programming Division will normally recommend it if warranted.
- For design details for sidewalks refer to Standard Drawing D-750-2.

- If the city already uses reinforcing steel in their sidewalks, it may be installed as a project cost. A plan note should state that the cost of the reinforcing steel should be included in the price bid for the cost of the sidewalk concrete. A detail drawing or plan note should be included in the plans to show the spacing of the reinforcing steel.
- Where a highway abuts or enters a town, curb ramps should be installed or the existing ramps upgraded through the business district.
- Where the highway is on the Urban Regional System, the City should include curb ramps at all intersections where sidewalk is present and update existing curb ramps to current ADA requirements. See Standard Drawing D-750-3.
- For design details, refer to AASHTO's "Guide for the Planning, Design, and Operation of Pedestrian Facilities."

III-07.02 Bicycle Facilities

- The need for bicycle transportation facilities shall be considered on new or reconstructed projects.
- Bicycle facilities could be stand alone projects.
- When considering a bike facility, it should be consistent with the respective city's bike plan, if they have one.
- The bicycle facilities could be located on the roadway.
- The bicycle facility could be a separate facility located away from the roadway.
- This lane could be a shared path, which would allow bicyclists, pedestrians, wheelchair users, in-line and roller skaters, etc. to use the facility.
- The separate bicycle facility must meet accessibility guidelines.
- For design details, refer to AASHTO'S "A Guide for The Development of Bicycle Facilities."
- If the city already uses reinforcing steel in their bikeways, it may be installed as a part of the project. A plan note should state that the cost of the reinforcing steel should be included in the price bid for the cost of the bikeway concrete. A detail drawing or plan note should be included in the plans to show the spacing of the reinforcing steel.

III-07.03 Concrete Paving Colored with Brick Pattern

- If the city already uses reinforcing steel in their brick patterned colored concrete, it may be installed as a part of the project. A plan note should state that the cost of the reinforcing steel should be included in the price bid for the cost of the brick patterned colored concrete. A detail drawing or plan note should be included in the plans to show the spacing of the reinforcing steel.

III-07.04 ADAAG Detectable Warnings (Truncated Domes)

Truncated domes are the standard design requirement for detectable warnings for determining the boundary between the sidewalk and street by visually impaired people. They have a unique design that can be detected underfoot and with a cane. Truncated domes are the only detectable warnings allowed by the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Grooves, exposed aggregate and other designs intended for use as detectable warnings are too similar to pavement textures, cracks, and joints.

To comply with the American with Disabilities Act (ADA), all state and local agencies are required to utilize truncated domes on new and existing curb ramps, as follows:

1. Types of work that are considered to be new construction or reconstruction projects:¹
 - Grade and Surfacing
 - Structures: new, replacement and rehabilitation
 - Widening or realignment or a roadway/shoulders
 - Traffic Control Devices: Signalization
 - Rest Area projects
2. Major and Minor Rehabilitation and Structural Improvement Projects such as:
 - Bituminous or concrete overlays and/or milling projects that improve the structural components of the roadway (greater than 2 inches overlay, excluding rut filling).
 - Major Concrete Pavement Repair/Dowel Bar Retrofit
 - Intersection improvements: adding turn lanes
 - Safety improvements and/or enhancements
3. Preventive Maintenance projects such as:
 - Overlays less than 2 inches
 - Minor Concrete Pavement Repair (less than 10% of the pavement surface area per mile)

¹ Department of Justice Joint Final Rule on Detectable warnings and suspensions, Nov. 1998.
<http://www.access-board.gov> pick Publications, under Facilities pick Detectable Warnings: Final Rule.

4. All projects where constructing or altering curb ramps or otherwise affecting the mobility of pedestrians.

Some Preventive Maintenance Projects; such as crack sealing and re-striping, do not require modifications of curb ramps and/or truncated domes.

Specifications:²

Dome Alignment – Domes shall be aligned on a square grid in the predominant direction of travel.

Size – Detectable warning surfaces shall extend 24 inches in the direction of travel and the full width of the curb ramp landing.

Location (see Standard Drawing D-750-3):

1. Curb Ramps and Blended Transitions: The detectable warning surface shall be located so that the nearest edge is 6” minimum and 8” maximum from the face of the curb.
2. Median and Pedestrian Refuge Islands: Medians and refuge islands shall have detectable warnings. Detectable warnings at cut-through islands shall be separated by 24-in minimum length of walkway without detectable warnings. Exceptions: Detectable warnings shall not be required on cut-through islands where the crossing is controlled by signals and is timed for full crossing.
3. Railroad Crossing: Detectable warning surfaces shall be located at the outside of each group of tracks that cross a pedestrian access route. The detectable warning surface shall be located so that the edge nearest the rail crossing is 6’ minimum and 8’ maximum from the vehicle dynamic envelope (the clearance required for a rail vehicle and its cargo overhand due to any combination of lading, lateral motion, or suspension failure). Where the pedestrian access route crosses the rail system at grade, the surface of the pedestrian access route shall be level and flush with the top of the rail at the outer edge and between rails.

²Guidelines for Accessible Public Rights of Way, <http://www.access-board.gov> pick Publications, under Public Right of Way pick Building a True Community: Accessible Public Rights of Way, pick Part III.