

3. ADA Compliance. When an element of a pedestrian access route (PAR) cannot be constructed in full compliance with the ADA standards, one of the following must be submitted.:

- a. Technical Infeasibility Request: A technical infeasibility request should be submitted when an element of the PAR cannot fully comply due to an existing constraint that cannot be removed or adjusted, e.g. a building. This type of request should be rare for new and reconstruction projects, but may be applicable to a resurface or other alteration project

Technical Infeasibility Request Example: As part of a resurface project, a non-compliant curb ramp is located at an intersection that is constrained by a building designated as historic. The existing curb ramp does not contain a turning space and the running slope of the ramp is greater than 8.33%. The building location is such that only a non-compliant turning space can be constructed and the running slope cannot be reduced without impacting the building. A technical infeasibility requested should be submitted for review.

In this case, compliance is technically infeasible. Compliance is only required to the extent that it does not threaten or destroy the historic feature. The approved technical infeasibility request should be filed with the project coordination files and with the Level One computations. The element will be removed from the owner's transition plan inventory list.

- b. Technical Inquiry: A technical inquiry should be submitted when an existing physical constraint makes it impractical, within the scope of work, for an element of the PAR to fully comply. This type of request is most commonly associated with resurface or other alteration projects where constructing the element to full compliance falls outside the scope of work.

For all projects, a technical inquiry may be submitted for an ADA question, clarification on an ADA policy, or best practice proposal.

Technical Inquiry Example: As part of a resurface project, a non-compliant curb ramp is located at an intersection that is constrained by right of way and utilities. The existing curb ramp does not contain a turning space and the grade of the ramp is greater than 8.33%. The right of way limits and utility locations are such that only a non-compliant turning space can be constructed and the ramp running slope can be lessened but not made fully compliant. Full compliance would require the acquisition of right of way and the relocation of utilities, which are not

part of the scope of work. A technical inquiry request should be submitted for review.

The curb ramp should be made compliant to the maximum extent practical. The approved technical inquiry should be filed with the project coordination files and with the Level One computations. The element will remain on the owner's transition plan inventory list to be addressed by a future project.

A determination of technical infeasibility and technical inquiry does not constitute a waiver of the ADA requirements, but rather serves as a process of sufficiently documenting alternatives considered, existing constraints, and costs associated with compliance for later use, if necessary, as the basis for a defense regarding a complaint or litigation.

The Department's ADA Committee will review requests in accordance with the *Technical Infeasibility Policy*. The Committee will review requests for determination of technical infeasibility and inquiry for projects that contain federal-aid funds or are 100% State-funded. The determination of technical infeasibility and technical inquiries are the responsibility of the Local Public Agency (LPA) for 100% locally-funded projects.

A request for determination of technical infeasibility or inquiry should be sent to the Director of Highway Design & Technical Services. In addition, the Title VI/ADA Program Manager must receive a copy of the request. The request submission should include the following:

- a. DES Number, if available;
- b. project location and description of the scope of the project;
- c. a detailed explanation of the element and ADA standard that cannot be met.
- d. a detailed explanation of why the standard cannot be met;
- e. (For technical infeasibility requests only) a detailed explanation of at least two options considered before requesting a determination of technical infeasibility and why these options were not pursued further;
- f. a recommendation for a proposed solution. This should include an explanation why the proposed solution is the best fit for the given circumstances and how it provides accessibility to the maximum extent feasible;
- g. an itemization of the costs to construct the element compliantly and comparison to the overall project cost; and
- h. pictures and/or drawings of the actual project location and proposed solutions.

45-1.06(02) Sidewalk Design Criteria [Rev. Mar. 2016]

A sidewalk within the public right of way must be in accordance with the Public Right of Way Accessibility Guidelines (PROWAG). See Section 51-1.03 for sidewalk accessibility requirements. Designers should also consider the following:

1. Width. A typical sidewalk is 5 ft wide with a 5-ft buffer area between the roadway and sidewalk. If there is no buffer area provided, the sidewalk should be 6 ft wide to accommodate any appurtenances which may be included in the sidewalk (see Item 4 below).

A high pedestrian volume may warrant a greater width in, for example, a commercial area or school zone. The designer may conduct a detailed capacity analysis to determine the sidewalk width. *Highway Capacity Manual* Chapter 13 should be reviewed for this analysis.

2. Urban Area. In a central business district, the entire area between a curb and a building is used as a paved sidewalk.
3. Appurtenance. The designer should consider the impacts of a roadside appurtenance within the sidewalk, e.g., street furniture, fire hydrant, parking meter, utility pole, signs. These elements reduce the clear width and may interfere with pedestrian activity. If such an appurtenance is placed within the sidewalk, the sidewalk clear width must be at least 4 feet or the sidewalk should be widened accordingly.
4. Cross Slope. The maximum cross slope is 2.00%. For design purposes the cross slope should be set at 1.5% to reduce the likelihood of the maximum being exceeded during construction.
5. Buffer Area. If the available right of way is sufficient, a buffer area between the curb and sidewalk is desirable. This area provides space for snow storage and allows for a greater separation between vehicle and pedestrian. The buffer area should be at least 5 ft wide to be effective and should desirably be wider. Although occasionally unavoidable, placing roadside appurtenances within the buffer area is undesirable. The proximity to the traveled way increases the likelihood of a vehicle/fixed-object crash.
6. Sidewalk on Bridge. Section 404-4.02(03) provides criteria for the selection and location of bridge and pedestrian railing where a sidewalk is present. Section 49-9.02 provides information for shielding the end of a bridge railing.

46-11.02(04) Drive Grade [Rev. Mar. 2016]

For a class I, III, VI, or VII drive, the maximum algebraic difference in drive grades should not exceed 8% for a crest vertical curve, or 12% for a sag vertical curve. For a class II, IV, or V drive, the maximum algebraic difference in drive grades should not exceed 11% for a crest vertical curve, or 14% for a sag vertical curve.

If it is known that a large emergency vehicle or other large vehicle will be using a drive, or if the algebraic differences exceed those noted above, the fit of the drive grade should be checked against the vehicle templates.

Drive grades should be shown and drive PVI's should be identified on the cross-sections sheets.

Where a drive is intersected by a sidewalk, the maximum drive grade is 2% for a minimum 4-ft width of the sidewalk. The preferred grade is 1.50% and should be used as a design practice to reduce the likelihood of exceeding the maximum during construction. See Section 46-11.02(07) for additional information.

46-11.02(07) Sidewalk-Driveway Crossings [Rev. Mar. 2016]

1. Where a sidewalk intersects a commercial drive that contains stop or yield control, a curb ramp should be used.
2. Where a sidewalk intersects a residential drive or commercial drive that does not contain stop or yield control, a sidewalk transition should be used.

In general, the difference between a sidewalk transition and a curb ramp is the need for a detectable warning surface. INDOT *Standard Drawings* Series E 604-SWCR and 604-SWDK contain curb ramp details and sidewalk-driveway crossing details, respectively.