

# **ADA Transition Plan for Public Rights-of-Way**

**Section 504 of the Rehabilitation Act  
of 1973 (29 USC 794 (a))  
Americans with Disabilities Act (ADA)  
of 1990 (42 USC 12111)**

**Town of Avilla**

Adam Dunlap  
Avilla Town Manager  
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Americans With Disabilities Act (ADA) Transition Plan for Public Rights-of-Ways  
Town of Avilla October 2012, October 2018, October 2021, September 2024

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## **INTRODUCTION**

The Americans with Disabilities Act (ADA) was enacted on July 26, 1990, and later amended effective January 1, 2009. As written and implemented, the ADA provides comprehensive civil rights protections to persons with disabilities in the areas of employment, state and local government services, access to public accommodations, transportation and telecommunication. The ADA is a companion civil rights legislation to the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973. In order to be protected by the ADA, one must have disability or have a relationship or association with an individual with a disability. An individual with a disability is defined by the ADA as a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such impairment, or a person who is perceived by others as having such impairment. The ADA, however, does not specifically name all of the impairments that are covered.

The ADA is divided into five sections covering the following topics:

Title I: Employment

Title II: Public Services (and Transportation)

Title III: Public Accommodations (and Commercial Facilities)

Title IV: Miscellaneous Provisions.

Title II specifically prohibits state and local governments from discrimination against persons with disabilities or from excluding participation in or denying benefits of programs, services or activities to persons with disabilities. It is under this title that this transition plan has been prepared. This transition plan is intended to outline the methods by which physical changes will be made to give effect to the non-discrimination policies described in Title II.

## **TRANSITION PLAN DEVELOPMENT**

To ensure program accessibility for people with disability in the community, the Town of Avilla has developed a Transition Plan, which is to be considered good practice. *This Transition Plan for Public Rights-of-Way considers the following:*

### **A. ADA COORDINATOR:**

Effective communication is essential to address all the complaints or concerns of all individuals. In order to keep maintaining the lines of communication open, and thereby ensuring effective communication between all parties, the Town of Avilla has designated the Town Manager as the ADA coordinator. The ADA Coordinator shall coordinate the Town's efforts to comply with and carry out its responsibilities under Title II of the ADA, including any investigation of any complaint communicated to the ADA coordinator. Such complaints may take the form of alleging noncompliance with ADA mandates or alleging any actions that would be prohibited under the ADA. The Town shall make available to all interested individuals the name, office address and telephone number of the employee(s) so designated and shall adopt and publish procedures for the prompt and equitable resolution of complaints. Every complaint must be directed in writing to the ADA Coordinator, in this case, the Town Manager.

### **B. GRIEVANCE PROCEDURE:**

The Grievance procedure established here is intended to adhere to the standards outlined in the ADA. The procedures must be used by anyone who wishes to file a complaint alleging discrimination on the basis of disability in the provisions of services, activities, programs or benefits provided by the Town of Avilla.

The complaint should be in writing and contain information about the alleged discrimination such as name, address, phone number or complainant and location, date, and description of the problem. Grievance Forms must be used to lodge a complaint. A Grievance Form can be found in Appendix A. Alternative means of filing complaints, such as personal interviews or recording of the complaint will be made available for persons with disabilities upon request. The complaint should be submitted by the grievant and/or his/her designee as soon as possible but no later than 180 calendar days after the alleged violation to:

Adam Dunlap, Town Manager  
PO Box 49  
108 S Main Street  
Avilla, Indiana 46710

Within 15 calendar days after receipt of the complaint, the ADA Coordinator or his/her designee will meet with the complainant to discuss the complaint and the possible resolutions. Within 15 calendar days of the meeting, the ADA Coordinator or his/her designee will respond in writing, and where appropriate, in a format accessible to the complainant, such as large print, Braille or audio tape. The response will explain the position of the Town of Avilla and offer options for substantive resolution of the complaint.

If the response by the ADA Coordinator or his designee does not satisfactorily resolve the issue, the complainant or his/her designee may appeal the decision within 15 calendar days after receipt of the response to the ADA Coordinator or his designee. Within 15 calendar days after receipt of the appeal, the ADA Coordinator or his/her designee will meet again with the complainant to discuss the appeal and possible resolutions. Within 15 calendar days after the meeting, the ADA Coordinator or his/her designee will respond in writing, and, where appropriate, in one of the formats described above that is accessible to the complainant, with a final resolution of the complaint.

All written complaints received by the ADA Coordinator or his/her designee, appeals to the ADA Coordinator or his designee, and responses from the ADA office will be retained by the Town of Avilla for at least three years.

### **C. SELF EVALUATION /COMMITMENT**

The Town of Avilla has conducted an inventory and a visual evaluation of curb ramps and sidewalks by driving by each intersection in Town. Many have been updated but some do not meet ADA requirements. The general public is encouraged to participate in identifying needs o barriers to accessibility. This may be done by contacting the ADA coordinator and/or submittal of a completed grievance form as outline in this plan.

The Town is committed to making all sidewalk and curb ramp areas accessible to all pedestrians including those with disabilities. This will be accomplished through the following means:

- All new street construction, reconstruction, resurfacing or any other alterations, including federal projects under the control and/or inspection of the Town of Avilla will include curb ramp upgrades in compliance with the ADA;
- The Town will have in place a sidewalk repair program annually.
- The missing or non-compliant curb ramps shall be prioritized.
- Using a conservative estimate of \$1,800 per curb ramp installation or reconstruction, the Town of Avilla is committing \$10,000 each year for the next 20 years from the Local Road Street Fund. The Town of Avilla will complete this work with its own forces or will obtain bids to complete this work for the purpose of installing new curb ramps and reconstructing existing curb ramps to meet ADA standards.
- Missing or non-compliant sidewalk areas beyond the public right-of-way that connect building and facility entrances to public streets and sidewalks may fall under other ADA guidelines. As such, these are outside the scope of this document.

- The Indiana Department of Transportation will be responsible and will cover all crosswalks and curb ramps on all corners directly adjacent to the state roads, including those curb ramps and crosswalks running parallel to a state road, for the purposes of this inventory.

#### Inventory of Sidewalks, curbs:

In an effort to remove barriers to streets and sidewalks, the Town of Avilla has inventoried all curbs and sidewalks within the town. The inventory procedure includes identifying a comprehensive list of all curbs and sidewalks in town and then to assess via field evaluation those that are not ADA compliant.

### **D. ADA STANDARDS/GUIDELINES:**

The standards are intended to apply to all construction undertaken within the Town of Avilla Rights-of-Way. The Town of Avilla's standards and specifications together with the Indiana Department of Transportation design guidelines, standard drawings, and standard specifications will provide the key standards and guidelines for this plan. Other standards, if necessary, will be applied at the discretion of the ADA Coordinator.

Copies of the latest INDOT Standards for curb, curb ramp and sidewalk construction are included in **Appendix B**.

### **IMPLEMENTATION**

The Town of Avilla intends to implement this Transition Plan effective immediately upon approval by the Avilla Town Council. Not only does the Town of Avilla commit to following the guidelines set forth in this Transition Plan but it also commits to actively revising and amending this document as new information is discovered. As a matter of policy, this document will be updated at least every five years. A copy of this document will also be placed on the Town of Avilla's website.

## ADA & TITLE VI GOALS AND ACCOMPLISHMENTS

### Title VI

Accomplishments	Completion Date
Update all Title VI documents	October 2024
Place Title VI statement and complaint forms on website	October 2024
Goals	Target Completion Date
Create a Title VI compliance review checklist	1 <sup>st</sup> quarter 2025
Insert Title VI info into new hire materials	1 <sup>st</sup> quarter 2025
Create a new Title VI voluntary public survey	1 <sup>st</sup> quarter 2025
Research other LEP language translators	2 <sup>nd</sup> quarter 2025
Publish Title VI statement annually in newspaper	4 <sup>th</sup> quarter 2025
Identify procedure for including Title VI language in subrecipient contracts	4 <sup>th</sup> quarter 2025

### ADA

Accomplishments	Completion Date
Update all ADA documents	October 2024
Place ADA Transition Plan and compliance forms on website	October 2024
New Manager attended Indiana ADA seminar	August 2024
Paved First St, Second St, Meadow Parkway, and new ADA compliant walks/intersections	Summer 2023
Paved Ley St from E Albion to Sammy Dr and new ADA compliant walks/intersections	Summer 2022
Paved E Albion St. to highway added ADA accessible sidewalks	Summer 2021
Paved W Albion St. and new sidewalks at park, created safer ADA compliant crosswalk	Summer 2020
Reconstructed downtown sidewalks on E Albion St. to Ley St. all ADA compliant	Summer 2019
Goals	Target Completion Date
Update ADA documents as needed	4 <sup>th</sup> quarter 2025
Pave and/or build new/reconstruct new ADA compliant walks and intersections on Sammy Dr, Jim Dandy Ct, Autumn Hill Dr, Hillside Dr, Royal Crest Run, Prairie Cove, Lillian St, West Wind Tr, Sycamore Way, Ley St(north)	Spring 2025
Pave and/or build new/reconstruct new ADA compliant walks and intersections on N Main, Progress Way, Dekko Dr, Fourth St	Fall 2026



**Appendix A: Complaint/Grievance Form**

Grievant Information:

Please Print

Grievant Name: _____
Address: _____ City: _____ State: _____ Zip: _____
Phone: _____ E-mail: _____
Alternative Phone: _____

Person Preparing Complaint Relationship to Grievant (if different from Grievant)

Name: _____
Address: _____ City: _____ State: _____ Zip: _____
Phone: _____ E-mail: _____
Alternative Phone: _____

Please specify any location(s) related to the complaint or grievance (if applicable):

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Please provide a complete description of the specific complaint or grievance:

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Please state what you think should be done to resolve the complaint or grievance:

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Please attach additional pages as needed.

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Return this form to: Avilla Town Manager, PO Box 49, Avilla, Indiana 46710-0049 or deliver to 108 South Main Street, Avilla, Indiana. Forms may also be sent via fax to (260) 897-2605 or email [adunlap@townofavilla.com](mailto:adunlap@townofavilla.com).

Upon request, reasonable accommodation will be provided in completing this form or copies of the form will be provided in alternative formats. Contact the ADA Coordinator at the address listed above or via telephone (260) 897-2781.

**APPENDIX B – INDOT STANDARDS FOR SIDEWALKS & CURBS**

## SECTION 22 – ADA COMPLIANCE FOR SIDEWALK, CURB RAMPS, BLENDED TRANSITIONS, AND PEDESTRIAN FACILITIES

### 22.1 SIDEWALKS AND CURB RAMPS *(Rev. 09-01-24)*

#### 22.1.1 Regulations

When constructing pedestrian facilities (sidewalk, trail, non-vehicular use facility), the requirements of the Americans with Disabilities Act (ADA) must be met regardless of the contract's funding source. Exceptions to these requirements require a determination of technical infeasibility, issued by the Highway Engineering Division in conjunction with the Department's Title VI Program and FHWA. The intent is that technical infeasibility is determined prior to construction.

If the plans do not accurately reflect the field conditions encountered, particularly when curb ramps are involved, the PEMS should discuss the situations with the AE and the Designer to examine alternative solutions. "Doing the best you can" is not sufficient for ADA compliance. The Department's ADA Technical Advisory Committee, TAC, can provide technical assistance ([ADA@indot.in.gov](mailto:ADA@indot.in.gov)). During the contract, if an alternative that meets the ADA requirements cannot be found, the PEMS should have the Designer document the alternatives considered and request a determination of technical infeasibility from the TAC. The Indiana Design Manual, IDM, describes this process. Work should not continue until a determination has been made.

#### Indiana Design Manual

IDM Chapter 51 contains information on ADA, curb ramp, sidewalk, and pedestrian pushbutton requirements. IDM Chapter 17 contains information on curb ramp quantities.

Note: Effective with September 2016 lettings, curb ramps are no longer paid for by a type. Designers should be detailing all curb ramps on contract's construction plans.

#### INDOT Standard Specifications

- 604 Sidewalks, Curb Ramps, Steps, and Handrails
- 805 Traffic Signals
- 905.05 Detectable Warning Surfaces.

#### INDOT Standard Drawings

- 604-SWCR Sidewalk Curb Ramps
- 604-SDWK Sidewalk Details
- 801-TPAR Temporary Pedestrian Access Routes
- 805-PPBA Pedestrian Pushbutton Assembly.

#### ADAAG vs. PROWAG

The 2010 ADA Standards for Accessible Design (2010 Standards) is the current standard for providing facilities that are readily accessible and usable by persons with disabilities.

However, the guidelines were developed primarily for buildings and facilities outside the right of way. Pedestrian facilities within the public right of way contain elements to which the 2010 Standards cannot be readily applied. For this reason, the U.S. Access Board proposed guidelines specifically for pedestrian facilities in the public right of way denoted as the Public Rights-of-Way Accessibility Guidelines, PROWAG. These guidelines are recommended as best practice by FHWA and are currently being evaluated as part of the federal rulemaking process. Once adopted as a regulation, with or without modifications, the guidelines will be mandatory. The PROWAG was used to develop the Department's ADA transition plan and should be used as the basis for identifying the required curb ramp, landing (turning space), and sidewalk dimensions and slopes (running slopes and transverse slopes).

#### **Changes from ADAAG to the PROWAG**

Very little has changed from the Americans with Disabilities Act Accessibility Guidance, ADAAG, to the PROWAG. The items listed below represent notable differences.

1. The minimum clear width of a curb ramp, turning space, or sidewalk, is 4 feet. A 3-ft pinch point is not acceptable. For sidewalks – where the width is less than 5 ft, a 5 ft by 5 ft passing space is required every 200 ft.
2. The grade (running slope) of the sidewalk shall not exceed the adjacent roadway profile grade.
3. A curb ramp running slope of 10% for a 6-in. rise is not acceptable.
4. A sidewalk adjacent to a roadway does not require a landing or handrail, regardless of the roadway grade.
5. Detectable warning elements must extend the full width of the ramp. Where forming is required, a 2-in. maximum border width may be provided. Only the clarification where a border is necessary is new.

#### **Changes from previous Department practice**

Much has changed from previous Department practice. The items listed below represent notable differences.

1. Designers have been directed to fully detail curb ramps on contract construction plans. Simply calling out a ramp by type, e.g. Type A, is not acceptable. Spot elevations, widths, and slopes should be shown or tabulated.
2. **There is no construction tolerance for cross slope.** The maximum cross slope is 2.00%. The PROWAG contains exceptions to cross slope requirements for ramps and turning spaces when matching the grade of the adjacent roadway. Designers have been directed to use no more than

1.5% as a design value. The IDM now states this explicitly. A 2-ft level is also identified for checking compliance. *Note: A 2-ft level is not required by PROWAG but was included so that the expectation was clear. Forms should be checked prior to pour to ensure maximum slopes are not exceeded and minimum dimensions are met.*

3. **There is no construction tolerance for running slope.** The maximum ramp running slope is 8.33%. Designers have been directed to use no more than 8.0% as a design value. The IDM now states this explicitly. *Note: A 2-ft level is not required by PROWAG but was included so that the expectation was clear. Forms should be checked prior to pour to ensure maximum slopes are not exceeded and minimum dimensions are met.*
4. The Standard Drawings identify curb ramps as either perpendicular or parallel.
5. All curb ramps are paid for as a single pay item Curb Ramp, Concrete.
6. Detectable Warning Surfaces, DWS, (truncated domes) are paid for separately. The area of DWS is not subtracted from the Curb Ramp, Concrete quantity.

#### 22.1.2 General Construction Notes

1. Sidewalks are usually replaced when they are disturbed or removed during construction. Sidewalks beyond the construction limits, which are damaged by the Contractor's equipment, must be replaced at no cost to the Department. Sidewalks built adjacent to curbs should be constructed 1/2 in. above the curbs to reduce the potential for ponding on the sidewalk along the top of the curb.
2. Pedestrian accessibility is required to be provided and maintained during the construction of the contract where facilities currently exist. Accessibility consists of signed pedestrian detours utilizing existing and temporary features including curb ramps, DWS, pedestrian signals, pavement markings, pedestrian phasing, or sidewalks effected by the work zone. The PEMS should review the contract plans to identify the methods to be used for pedestrian access.
3. Sidewalks placed at drives shall be 6 in. thick or the same depth as the existing drive, whichever is greater.
4. When reconstructing portions of sidewalk, the joint pattern of new sidewalk should be similar to sidewalk intended to remain in place.

5. The height of a single two-by-four (3 1/2 in.) is not acceptable as a form.
6. Forms should be checked prior to a pour to ensure maximum slopes are not exceeded and minimum dimensions are met.
7. Construct sidewalks only where indicated on the plans unless a change is authorized.

## 22.2 CURB RAMP BASICS *(Rev. 09-01-24)*

Curb ramps and turning spaces are part of the Pedestrian Access Route (PAR) and must meet ADA standards. INDOT separates curb ramps into component and design elements.

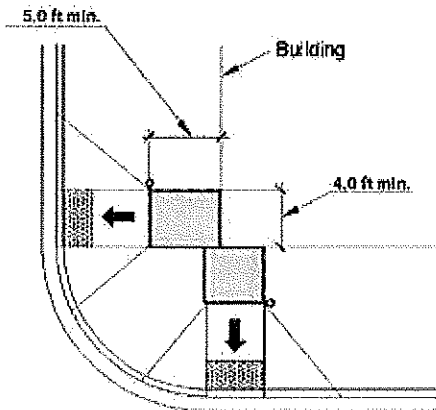
### 22.2.1 Components

The PROWAG section reference is shown in brackets adjacent the component description below.

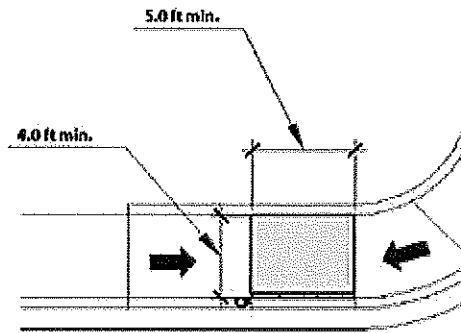
1. Ramp or Blended Transition [R304.1]. The ramp or blended transition is the portion of a curb ramp that facilitates the change in elevation from the sidewalk to street level. Typically, the curb ramp cuts through or is built adjacent to the curb. Although similar, ramps leading to or within buildings are subject to separate requirements [R407].
2. Turning Space [R304.2.1]. A turning space or landing area must be provided at the top of a perpendicular curb ramp, the bottom of a parallel curb ramp, and where the pedestrian access route changes direction. It is acceptable for two perpendicular curb ramps to share a common landing.

Minimum dimensions: 4 ft by 4 ft. Where the turning space is constrained by a curb, building, or other feature at the back of the sidewalk, the minimum required dimensions are 4 ft by 5 ft, with the 5-ft dimension in the direction of the ramp run.

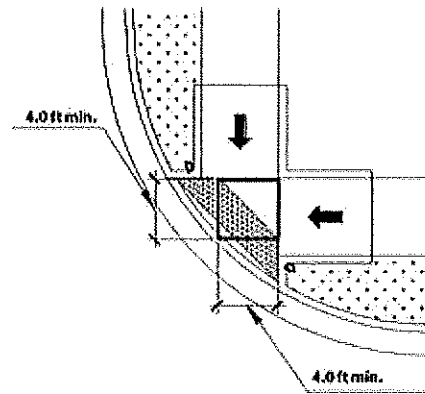
Quantities: The turning space is included in the SYS cost of the concrete curb ramp. Where turning spaces overlap, the area should only be included once.



Perpendicular Ramp Turning Space



Parallel Ramp Turning Space



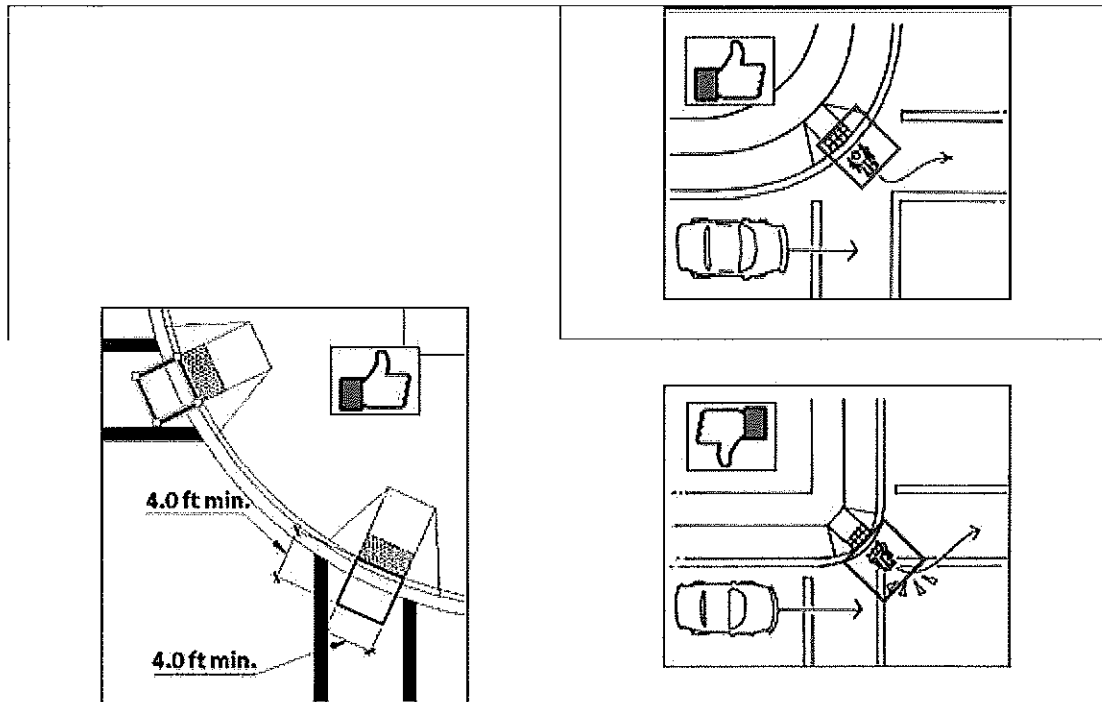
Overlapping Turning Space

3. Clear Space [R304.5.5]. The clear space is provided beyond the grade break at the bottom of a ramp to allow a wheelchair user to maneuver and align with the crosswalk. The clear space requirement requires particular attention at diagonal ramps and other locations where the ramp run is not in line with the direction of pedestrian travel.

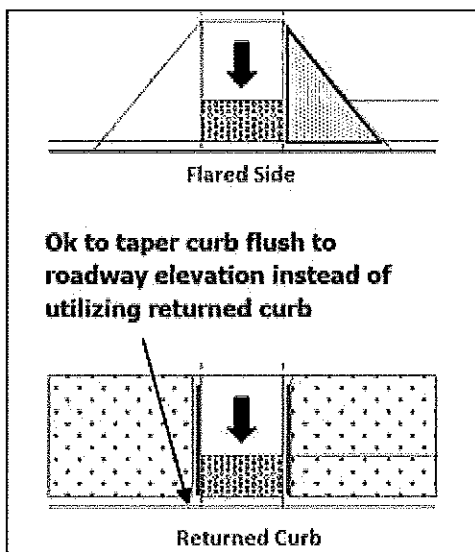
Minimum dimensions: The minimum required dimensions are 4 ft by 4 ft. The clear space should be within the width of the pedestrian crossing and wholly outside the parallel vehicle travel lane. The parallel vehicle travel lane is the lane where traffic is traveling parallel to the crosswalk.

Quantities: The clear space is not quantified separately.





4. Flared Sides and Returned Curbs [R304.2.3].



a. Flared Sides. Required where the curb ramp intersects a sidewalk or other walkable surface. The maximum allowable slope is 10.0%

b. Returned Curbs. May be used instead of flared sides where the curb ramp intersects a buffer, sodded area, or other non-walkable surface or where protected from cross travel by landscaping, street furniture, fencing, or railing. Return curbs assist pedestrians with low vision find their way.

Quantities: Both flared sides and returned curbs are included in the SYS cost of the concrete ramp.

5. Detectable Warning Surfaces, DWS [R305.1]. DWS consist of truncated domes aligned in a square or radial grid pattern and must extend the full width of the curb ramp. The Designer must show the

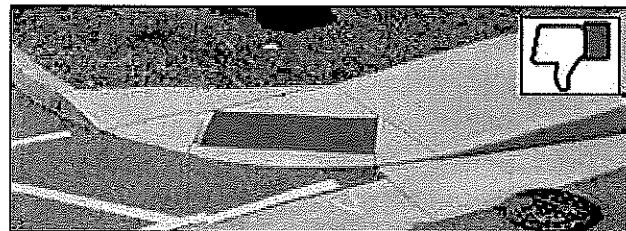
DWS the full width of the ramp. The Contractor chooses the DWS from the Department's Qualified Products List. Brick DWS will require some type of forming. A 2-in concrete border can encroach into the ramp width, but any additional width must be outside the ramp. An L-bracket or other means of restraint is also acceptable.

DWS must contrast visually with the adjacent gutter, street, or pedestrian access surface. Each curb ramp must contain a detectable warning surface except as follows.

Where the cut through pedestrian refuge island is less than 6 ft in the direction of pedestrian travel, detectable warning surfaces should not be placed as there is not sufficient distance between surfaces to distinguish the boundary between pedestrian and vehicular routes.



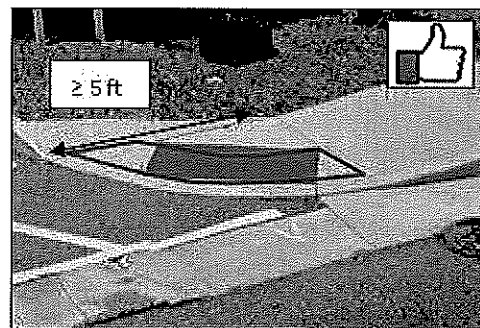
Detectable Warning Surface is the full width of the ramp.



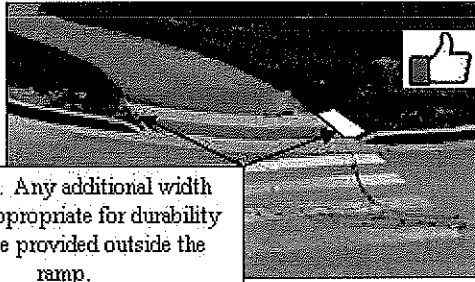
Detectable Warning Surface is not the full width of the ramp. See below for possible solutions.



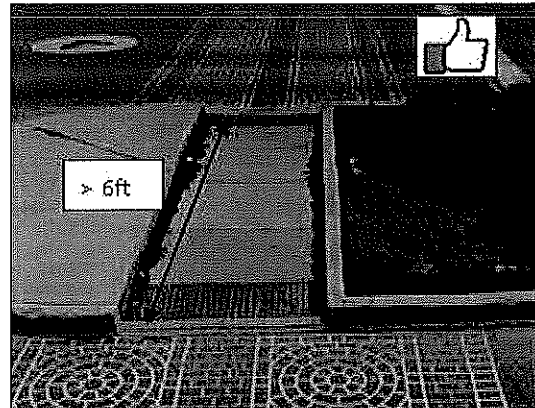
Solution 1. DWS may be located at the bottom of the ramp when located less than 5 ft from back of curb.



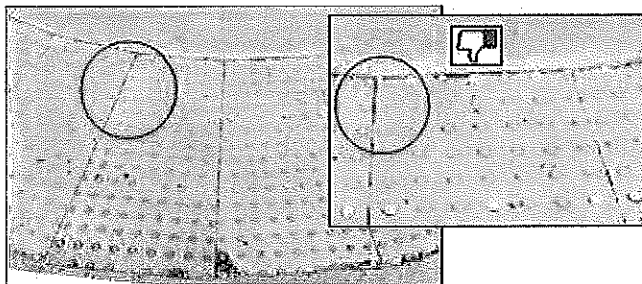
Solution 2. DWS should be in a radial pattern beyond the ramp when the bottom of the ramp is greater than or equal to 5 ft from the back of curb.



For a shared-use path, the DWS should extend the full width of the path, regardless of the inclusion of a ramp.



Use DWS in a median cut-through only when median width is 6 ft or greater. Do not use DWS when width is less than 6 ft. When the width is < 6 ft, there is not enough space between each DWS to distinguish the boundary between pedestrian and vehicular routes.



Where DWS are field cut, particular attention must be paid to ensure the dome spacing is within the allowable range shown on the Standard Drawings.

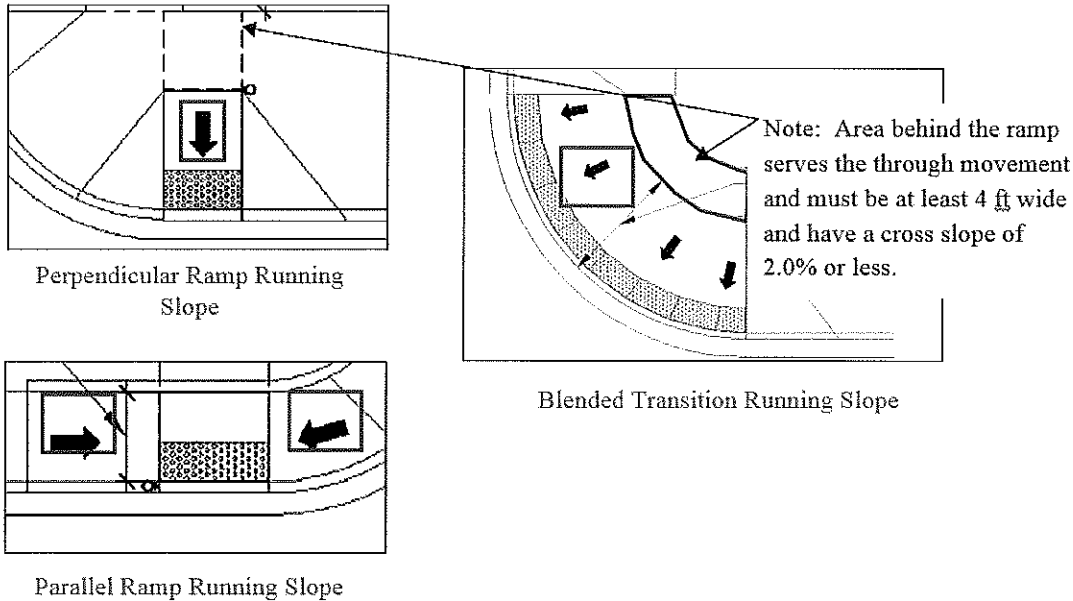
**Design Elements.** Design elements are characteristics of the various components. The PROWAG section reference is shown in brackets adjacent to the component description below.

6. **Width [R304.5.1].** The minimum clear width of a curb ramp (excluding flared sides) or blended transition is 4 ft. The minimum width for a cut through in the median is 5 ft.

When ramp or blended transition is used with a shared-use path, it is the width shall match that of the shared-use path.

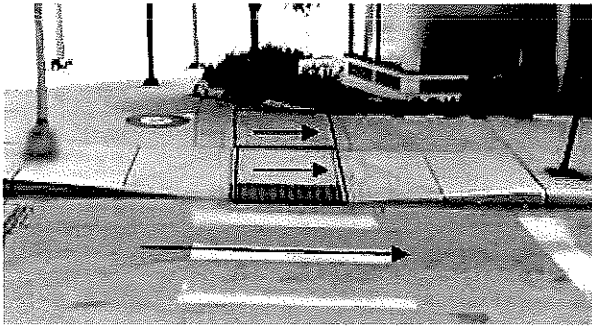
7. **Running Slope [R304.2.2 and R304.3.2].** The running slope of a ramp is measured parallel to the direction of pedestrian travel. Providing the least slope possible is preferred, and there is no construction tolerance.
  - Curb Ramp. Running slope of 8.33% maximum. 8% should be used for design.

- Blended Transition. Running slope of 5.00% maximum.
- Running slope of 2.00% or less.



8. Grade Break [R304.5.2]. The grade break at the top and bottom of a curb ramp must be perpendicular to the direction of the ramp run. It may be necessary at corner with a larger radius to indent the grade break from the back of the curb meet this requirement. Grade breaks are not permitted on the surface of the ramp run or within the landing area.
9. Cross Slope [R304.5.3]. Cross slope measured perpendicular to the direction of pedestrian travel. The maximum allowable cross slope of a curb ramp, turning space, or clear space is 2.0% with the exceptions below permitted at crosswalks. 1.5% should be used for design purposes.

At a crosswalk, it may be acceptable for the cross slope to exceed 2.0% without a determination of technical infeasibility. See Sidewalk and Crosswalk Basics cross slope information.



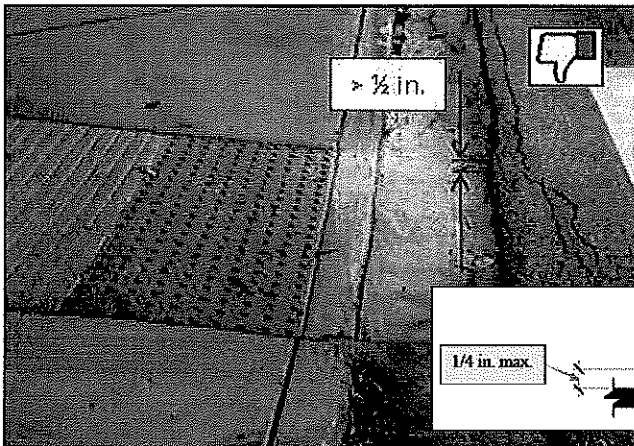
Roadway grade >2%

\*At a street crossing, cross slope of ramp and turning space may be >2% to meet roadway grade. If crossing is signalized or has no traffic control, max is 5%. If crossing is stopped condition, max is 2%. If crossing is a midblock crossing, max is the roadway grade.

10. Counter Slope [R304.5.4]. The counter slope is a slope opposite to the general running slope of the ramp or sidewalk, typically the cross slope of the gutter or roadway at the foot of the curb ramp or blended transition. The counter slope must not exceed 5%. This maximum allows the rate of grade change not to exceed 13% when the maximum ramp running slope is used. Excessive rate of grade change compromise the ground clearance of a wheelchair footrest and may cause a wheelchair to tip.

Where the rate of grade change exceeds 11% but less than 13.33%, a 2-ft level area (equal to or less than 2.00% slope) should be provided on the ramp, adjacent to the counter slope.

11. Vertical Surface Discontinuities [R302.7.2]. Where a curb ramp meets the roadway, the surface should be flush. Along the Pedestrian Access Route (PAR), surface discontinuities greater than 1/2 in. are not acceptable. Discontinuities of 1/4 in. and less are acceptable with no additional modifications. Discontinuities greater than 1/4 in. to 1/2 in. must be beveled.

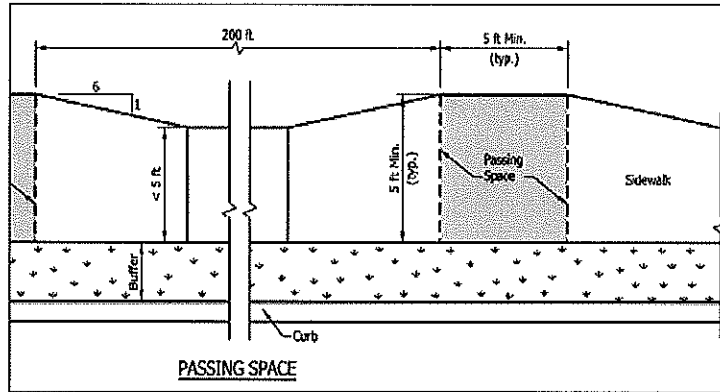


This curb ramp is flush at the curb line, but an overlay has created a vertical discontinuity which is greater than acceptable limits as shown below.

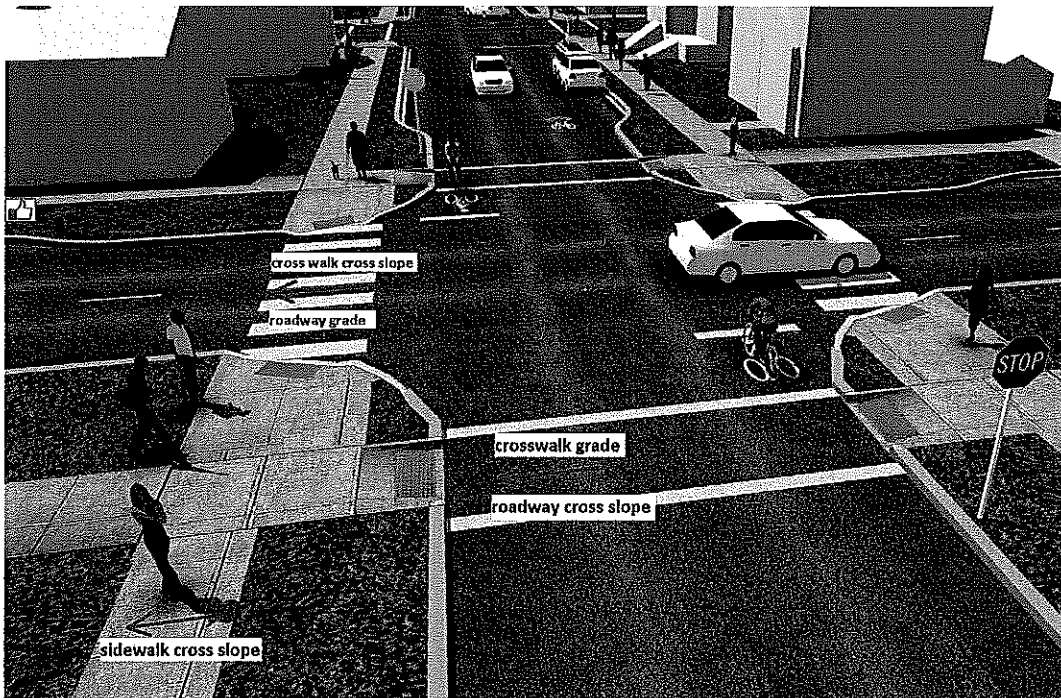
**22.3 SIDEWALK AND CROSSWALK BASICS** (Rev. 03-01-22)

Sidewalks and crosswalks are part of the Pedestrian Access Route (PAR) and must meet ADA standards.

1. Width. Minimum clear width of 5 ft. Where a 5-ft clear width is not provided, passing spaces of a minimum of 5 ft by 5 ft must be provided every 200 ft.



Where street furniture, utilities, or other obstructions are present on the sidewalk, a clear width (measured between obstructions or from the obstruction to the back of curb or sidewalk) can be 4 ft. The minimum 4 ft dimension is for pinch points only and should not be used as a continuous width.



2. Cross Slope (measured perpendicular to the direction of pedestrian travel).

Sidewalk. Maximum 2.0%. 1.5% should be used for design. The

cross slope requirements still apply where the sidewalk crosses a driveway. The sidewalk cross slope takes precedence over the driveway grade. The driveway approach can be built on a varying grade to ensure the sidewalk cross slope does not exceed 2.0%.

Crosswalk

- Pedestrian street crossings (crosswalks) with stop sign or yield sign = 2.0% maximum.
- Pedestrian street crossings (crosswalks) without yield or stop control, e.g. signalized = 5% maximum.
- Midblock crossing only = Maximum of grade of street or highway being crossed.

3. Grade (measured parallel to the direction of pedestrian travel).

Sidewalk. Maximum grade cannot exceed the grade of the adjacent roadway.

Crosswalk. Matches the cross slope of the roadway.

**22.4 PEDESTRIAN PUSHBUTTON BASICS** (Rev. 09-01-24)

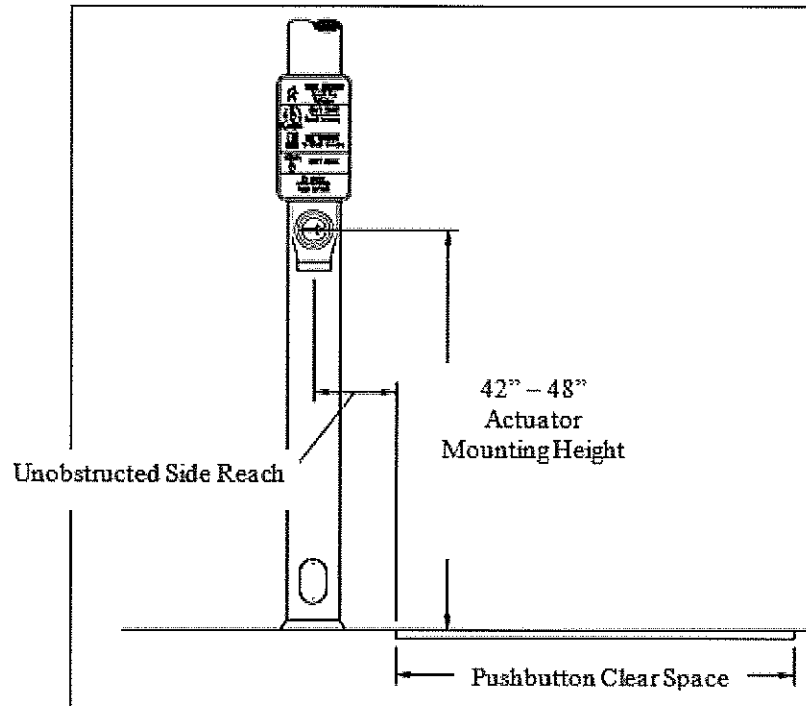
The placement and configuration of the pedestrian pushbutton assembly is critical to proper function. Criteria for pushbutton placement are listed below. If these criteria cannot be met, a Technical Inquiry must be sent to the ADA Technical Advisory Committee for review. Variations in curb radius, available right of way, presence of a buffer or curb ramp, and existing infrastructure make each crossing unique.

1. Placement. The MUTCD 4E.10 provides guidance on the location of pedestrian pushbuttons. The distance from the nearest face of a pushbutton assembly to face of the curb or edge of pavement should be between 1.5 ft and 6 ft and should not be greater than 10 ft. Placement that falls outside these guidelines should be documented as a Technical Inquiry with the ADA TAC. Placement of push buttons should be adjacent to the clear space and within reach requirements discussed below.

Where two APS pushbutton assemblies are closer than 10 ft., special features must be included in accordance with IMUTCD 4E.10 and sections 805 and 922.04(b) of the SS.

2. Side Reach. The maximum unobstructed side reach distance is 10 in. Designers should be mindful of guardrail, curb, or other obstructions that may affect the available side reach. Pushbutton extensions up to 12 in. may be used to meet the side reach requirements.
3. Mounting Height. The actuator must be mounted between 42 and 48

inches above the Pedestrian Access Route.



4. Pushbutton Clear Space. A clear space, similar to a curb ramp turning space must be provided adjacent the pushbutton assembly.

Minimum dimensions are 4 ft by 4 ft. The pushbutton clear space may overlap a curb ramp turning space. *Look for obstructions such as curb, slopes, guardrail, or unimproved surfaces that may obstruct access to the pushbutton assembly. Both photos below are examples of non-compliant push button installation.*





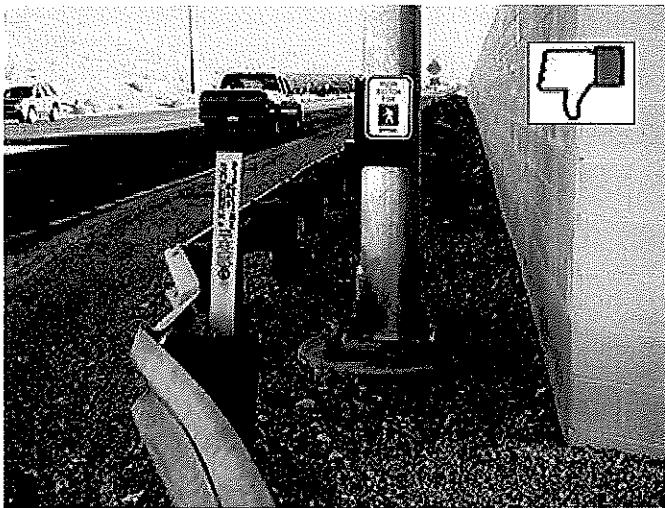
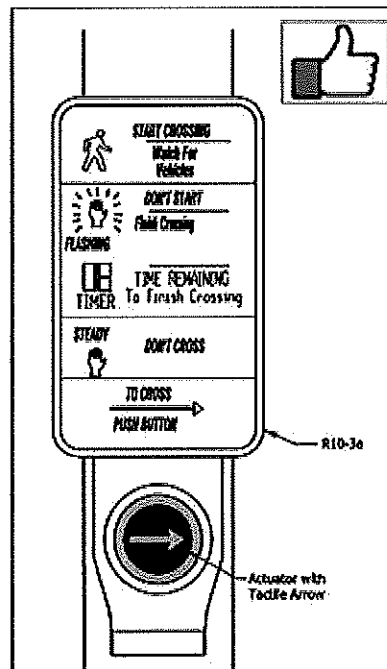


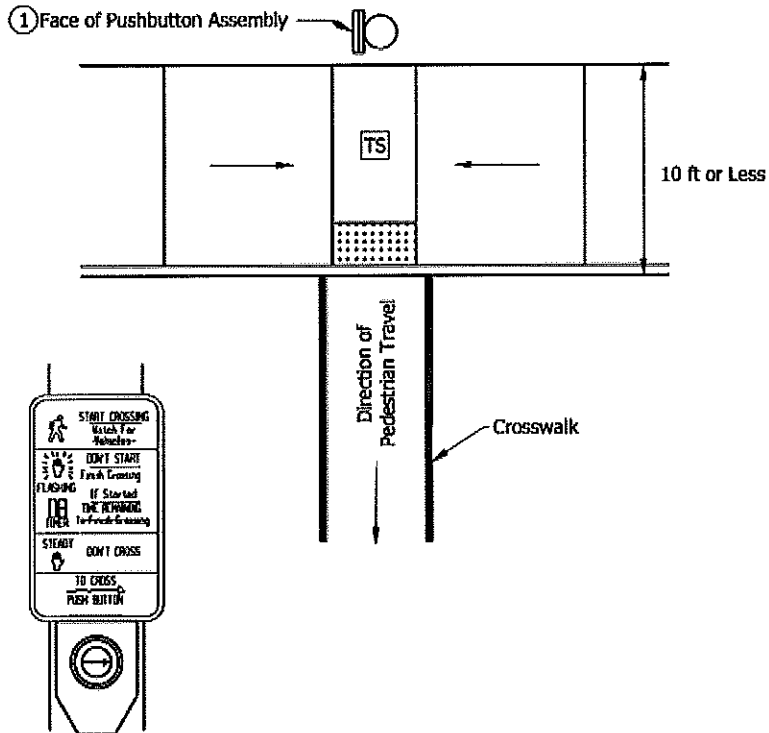
Photo: ADOT

Photo: FHWA

5. Actuator. The actuator must be at least 2 in. in diameter with a tactile arrow and contrast with the housing. Fingertip pushbuttons are not acceptable.







6. Orientation of Pushbutton. The face of a pedestrian pushbutton assembly must be aligned parallel to the direction of pedestrian travel on the associated crosswalk or as close as practical.



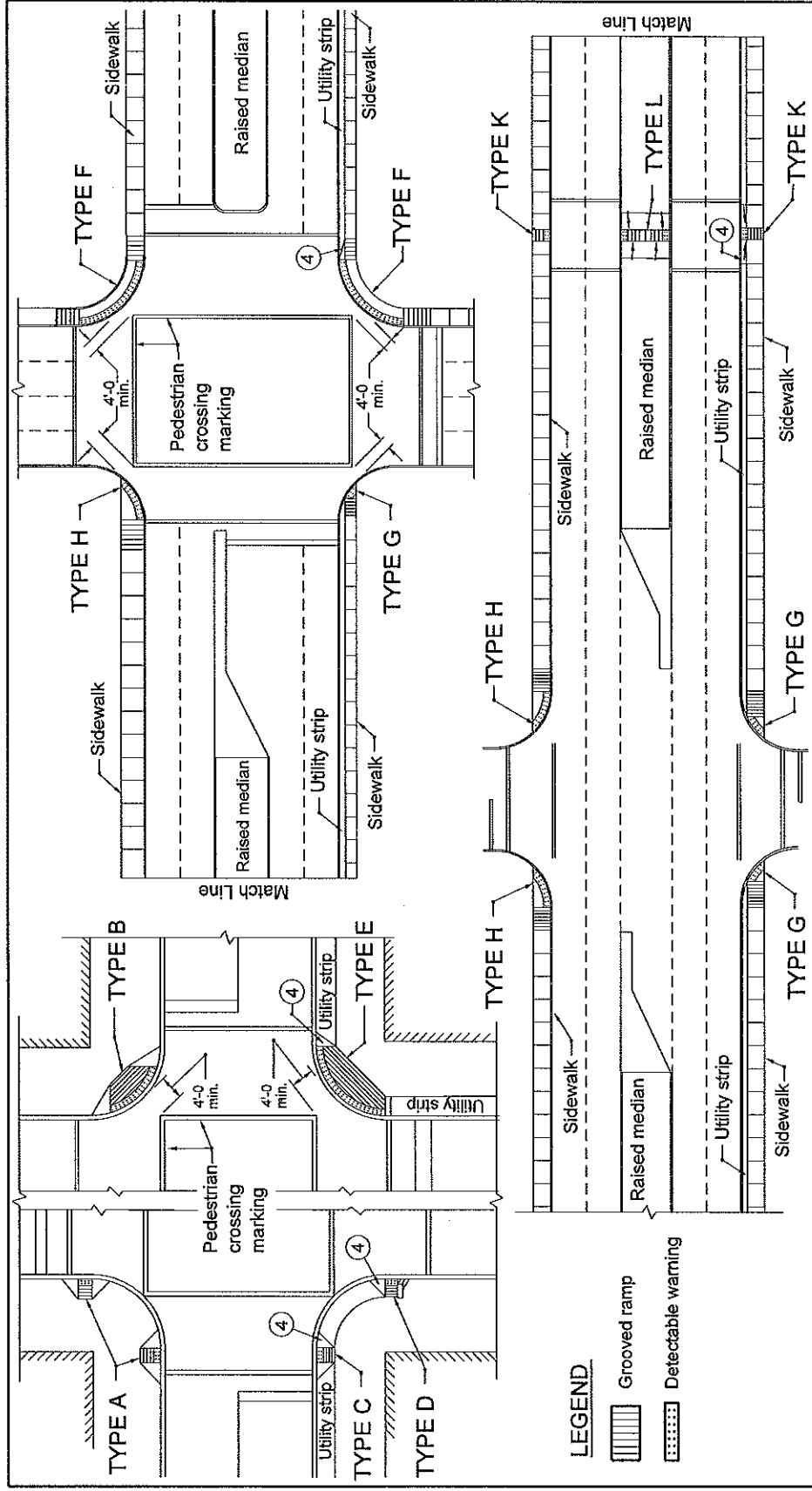
**FACE OF PEDESTRIAN  
PUSHBUTTON**

**LEGEND:**

-  Detectable Warning Surface
-  Ramp
-  Pedestrian Pushbutton Assembly
-  Turning Space

- ① The face of a pedestrian pushbutton assembly must be aligned parallel to the direction of pedestrian travel on the associated crosswalk.

**ORIENTATION OF PEDESTRIAN PUSHBUTTON  
ASSEMBLY**



INDIANA DEPARTMENT OF TRANSPORTATION

LOCATION PLAN FOR  
SIDEWALK CURB RAMP

SEPTEMBER 2005

STANDARD DRAWING NO. E 604-SWCR-01

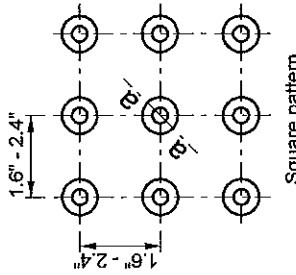
DESIGNED BY Richard L. VanCleave	SCALE AS SHOWN
CHECKED BY Richard L. VanCleave	DATE
DESIGNED BY Richard L. VanCleave	DATE
CHECKED BY Richard L. VanCleave	DATE
DESIGNED BY Richard L. VanCleave	DATE
CHECKED BY Richard L. VanCleave	DATE

PROFESSIONAL ENGINEER  
STATE OF INDIANA  
NO. 9750  
RICHARD L. VANCELEAVE

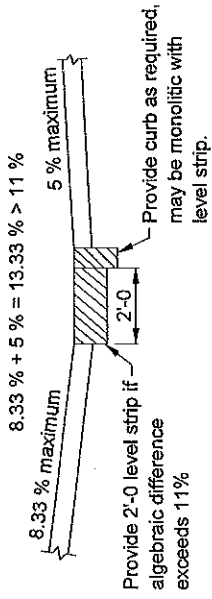
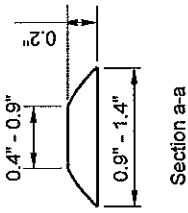
- The curb ramp type includes the ramp and flared sides as indicated on the details. A level landing shall be provided at the high end of every curb ramp.
- For details of sidewalk curb ramp types see Standard Drawings E 604-SWCR-03 to -11.
- The curb ramps shall be placed within the marked crosswalk area.
- Flared side of sidewalk curb ramp next to utility strip shall be sodded.
- See Standard Drawing E 604-SWCR-02 for General Notes.

**GENERAL NOTES:**

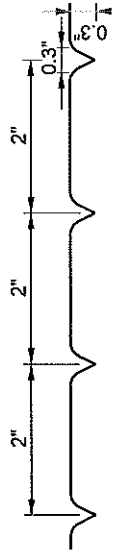
1. These dimensions are based on a 6 in. curb height. They shall be proportionally adjusted for other curb heights.
2. Where site infeasibility precludes construction to the width shown, such width may be decreased to a minimum of 3'-0".
3. The bottom edge of the curb ramp shall be flush with the edge of adjacent pavement and gutter line.
4. Landing areas at the top of curb ramps shall have maximum cross slope of 50 : 1 in any direction. When site infeasibility precludes a landing slope of 50 : 1 in any direction, the slope perpendicular to the curb face shall not exceed 50 : 1.
5. If site infeasibility precludes construction to the width shown, the landing width may be decreased to 3'-0" minimum. The running slope of the curb ramp may be steepened to a maximum of 10 : 1 for a maximum 6 in. rise.
6. Drainage inlets should be located uphill from curb ramps to prevent puddles at the path of travel.
7. See Standard Drawing E 604-SWCR-12 for improved access on narrow sidewalks.
8. Algebraic difference in grade between the base of curb ramp and the gutter shall be limited to less than 11%. If it is not practical, a 2'-0" wide level strip shall be provided. See detail sketch.
9. Minimum recommended width of curb ramp is 4'-0".



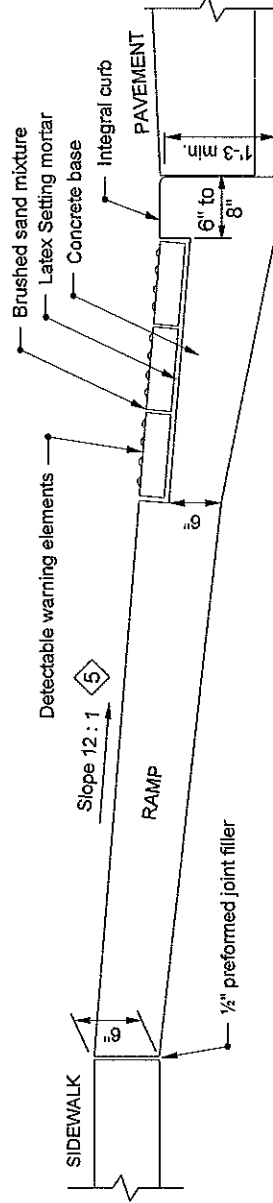
**TRUNCATED DOMES USED IN DETECTABLE WARNINGS**



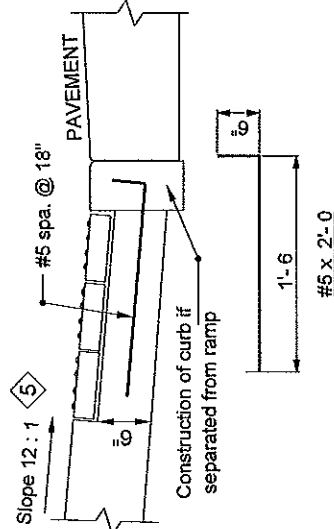
**CHANGE OF GRADE**



**DETAIL OF RAMP GROOVES**



**RAMP AND BRICK SURFACE CONSTRUCTION DETAIL**



**ALTERNATE CURB CONSTRUCTION**

INDIANA DEPARTMENT OF TRANSPORTATION

**SIDEWALK CURB RAMPS**

**GENERAL NOTES & DETAILS**

SEPTEMBER 2005

STANDARD DRAWING NO. E 604-SWCR-02

DESIGN ENGINEER	DATE
DESIGN ENGINEER	DATE
CHIEF HIGHWAY ENGINEER	DATE

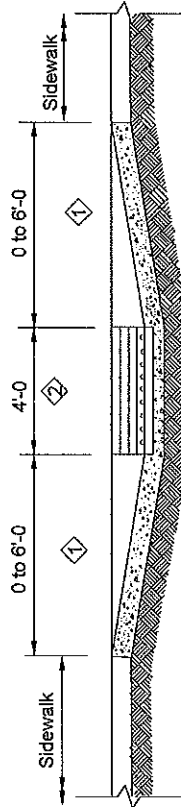
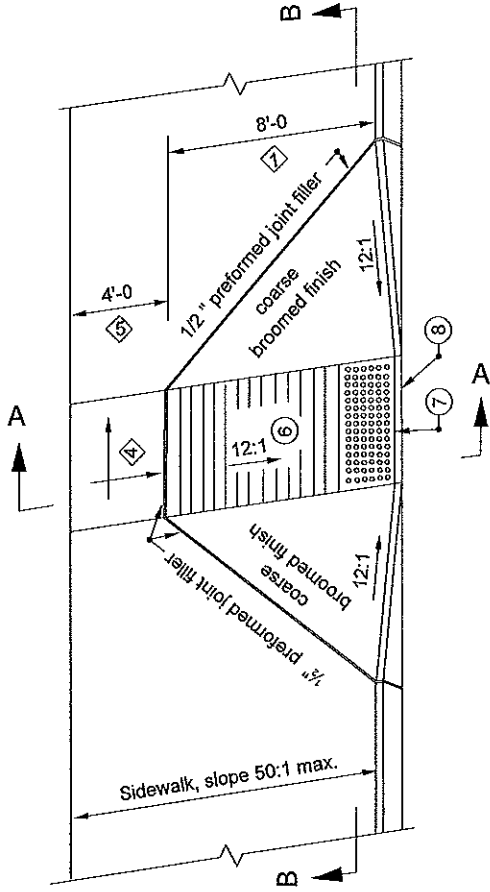
REGISTERED PROFESSIONAL ENGINEER  
NO. 9750  
STATE OF INDIANA  
RICHARD W. CHICHAU  
DESIGN ENGINEER

REGISTERED PROFESSIONAL ENGINEER  
NO. 92025  
STATE OF INDIANA  
RICHARD W. CHICHAU  
CHIEF HIGHWAY ENGINEER

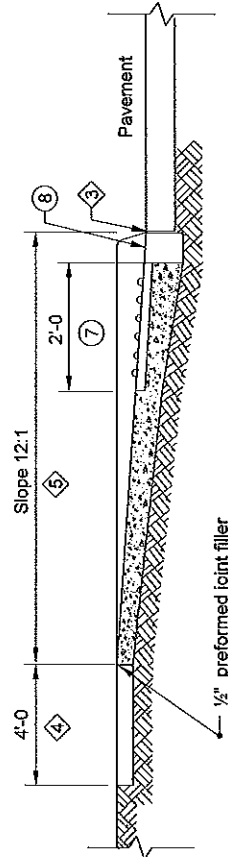
DESIGN STANDARDS ENGINEER

**NOTES:**

- ⑥ See Standard Drawing E 604-SWCR-02 for groove details.
- ⑦ See Standard Drawing E 604-SWCR-02 for details of the detectable warning.
- ⑧ See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- 10. See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.
- 11. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.



**SECTION B-B**

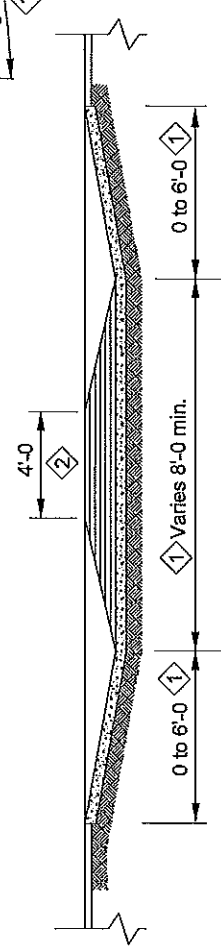
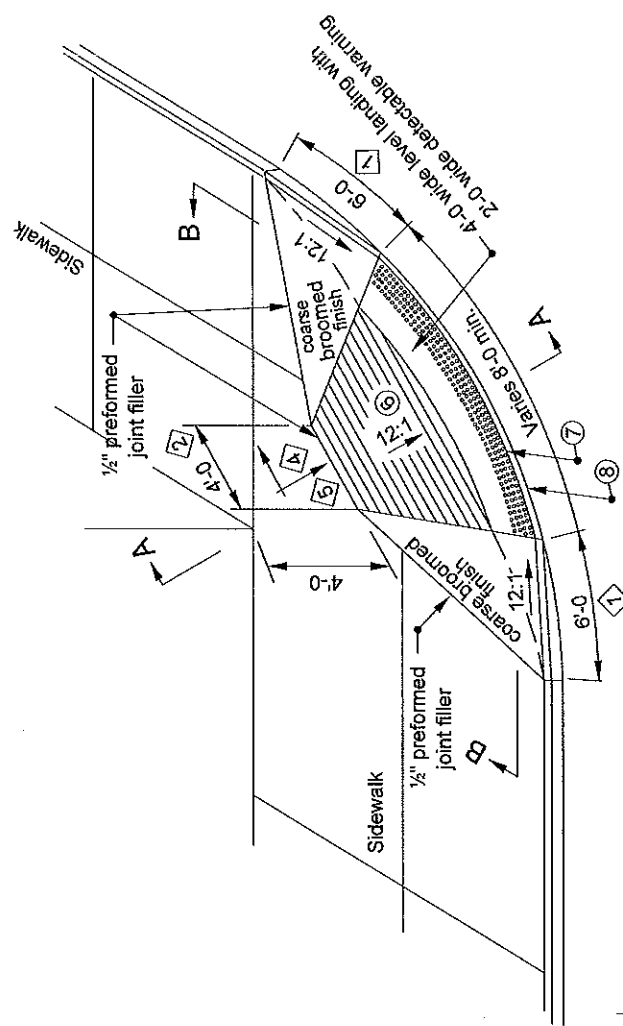


**SECTION A-A**

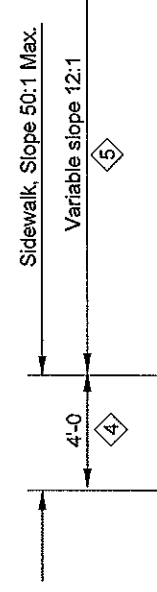
INDIANA DEPARTMENT OF TRANSPORTATION	
<b>SIDEWALK CURB RAMP TYPE A</b>	
SEPTEMBER 2005	
STANDARD DRAWING NO. E 604-SWCR-03	
	RICHARD L. VANCELEAVE DESIGN STANDARDS ENGINEER DATE
DESIGN STANDARDS ENGINEER RICHARD L. VANCELEAVE NO. 9750 STATE OF INDIANA PROFESSIONAL ENGINEER	
RICHARD L. VANCELEAVE DESIGN STANDARDS ENGINEER DATE	
RICHARD L. VANCELEAVE CHIEF HIGHWAY ENGINEER DATE	

**NOTES:**

- ⑥ See Standard Drawing E 604-SWCR-02 for groove details.
- ⑦ See Standard Drawing E 604-SWCR-02 for details of the detectable warnings.
- ⑧ See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- 9. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
- 10. See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.



**SECTION B-B**

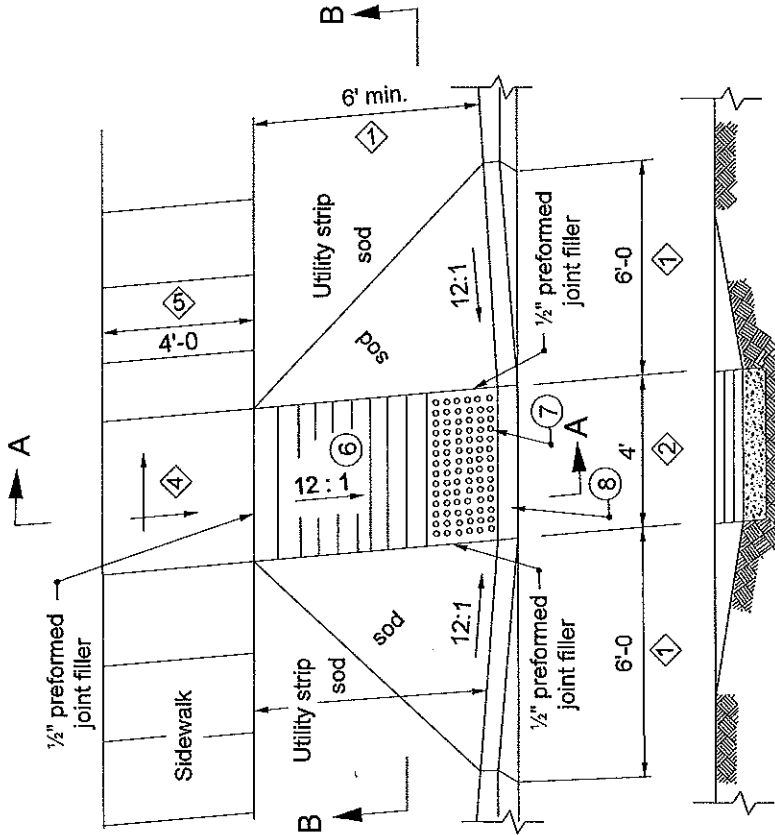


**SECTION A-A**

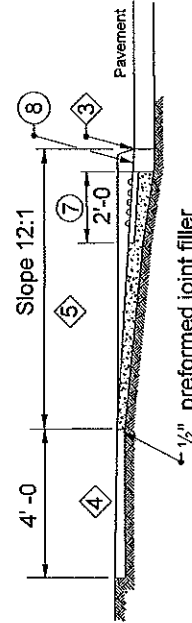
INDIANA DEPARTMENT OF TRANSPORTATION	
<b>SIDEWALK CURB RAMP TYPE B</b>	
SEPTEMBER 2005	
STANDARD DRAWING NO. E 604-SWCR-04	
	P-0-02 DATE DESIGN STANDARDS ENGINEER
	S-0-05 DATE CHIEF HIGHWAY ENGINEER
DESIGN STANDARDS ENGINEER	

**NOTES:**

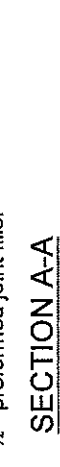
- ⑥ See Standard Drawing E 604-SWCR-02 for groove details.
- ⑦ See Standard Drawing E 604-SWCR-02 for details of the detectable warning surface.
- ⑧ See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- 9. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
- 10. See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.



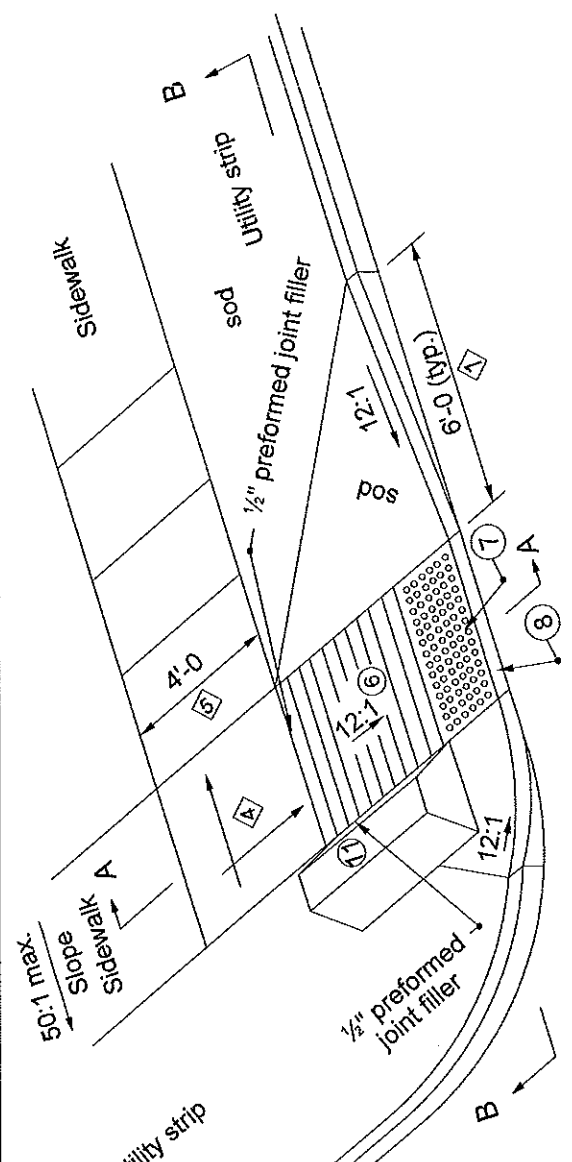
**SECTION B-B**



**SECTION A-A**

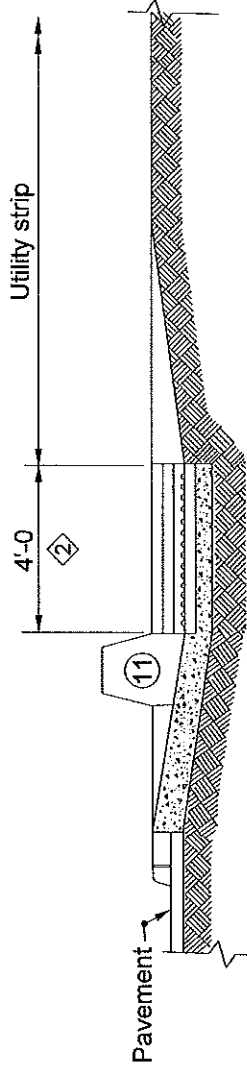


INDIANA DEPARTMENT OF TRANSPORTATION	
SIDEWALK CURB RAMPS TYPE C	
SEPTEMBER 2005	
STANDARD DRAWING NO. E 604-SWCR-05	
	RLV Richard L. Vancampen DESIGNATING ENGINEER 9-09-05 DATE
	RKS Richard K. Sturzer CHIEF HIGHWAY ENGINEER 9-09-05 DATE
DESIGN STANDARDS ENGINEER	

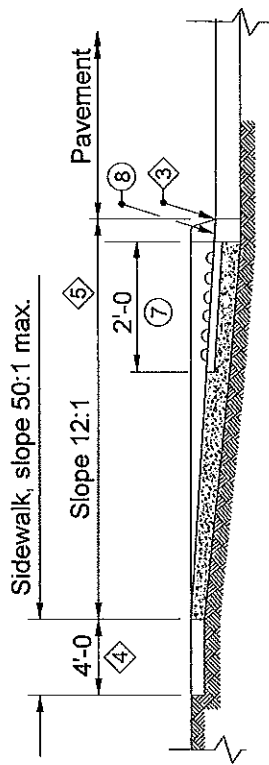


**NOTES:**

- ⑥ See Standard Drawing E 604-SWCR-02 for groove details.
- ⑦ See Standard Drawing E 604-SWCR-02 for details of the detectable warnings.
- ⑧ See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- 9. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
- 10. See Standard Drawing E 604-SWCR-01 and -02 for Plan Location and General Notes respectively.
- ⑪ Street furnishing such as planter, signal base, etc.



**SECTION B-B**



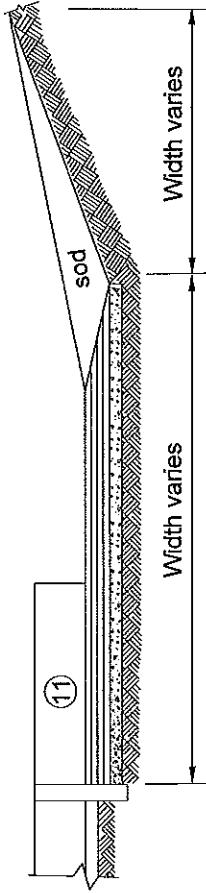
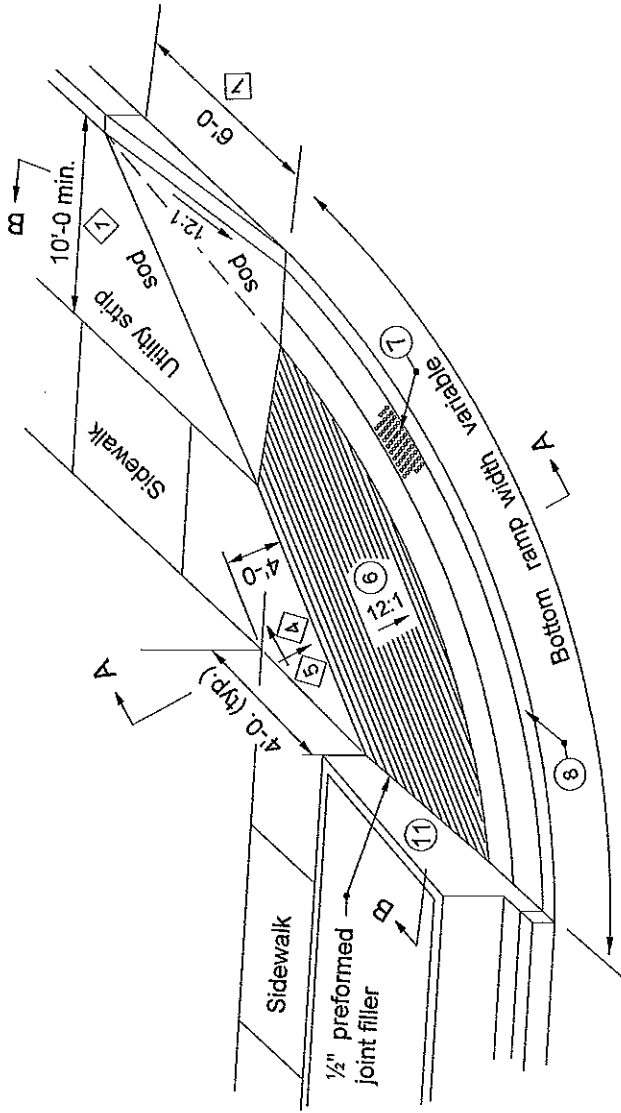
**SECTION A-A**

INDIANA DEPARTMENT OF TRANSPORTATION	
SIDEWALK RAMP CURB TYPE D	
SEPTEMBER 2005	
STANDARD DRAWING NO. E 604-SWCR-06	
	<i>/s/ Richard L. VanCleave</i> DESIGN STANDARDS ENGINEER DATE 9-01-05
	<i>/s/ Richard A. Smutzer</i> CHIEF HIGHWAY ENGINEER DATE 9-01-05

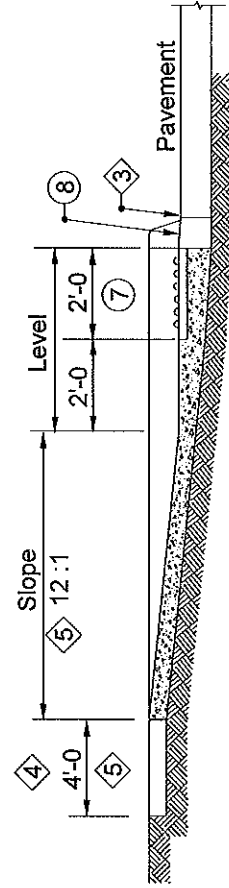


**NOTES:**

- ⑥ See Standard Drawing E 604-SWCR-02 for groove details.
- ⑦ See Standard Drawing E 604-SWCR-02 for details of detectable warning surface.
- ⑧ See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- 9. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
- 10. See Standard Drawing E 604-SWCR-01 and -02 for Plan Location and General Notes respectively.
- ⑪ Street furnishing such as planter, signal base, etc.



**SECTION B-B**

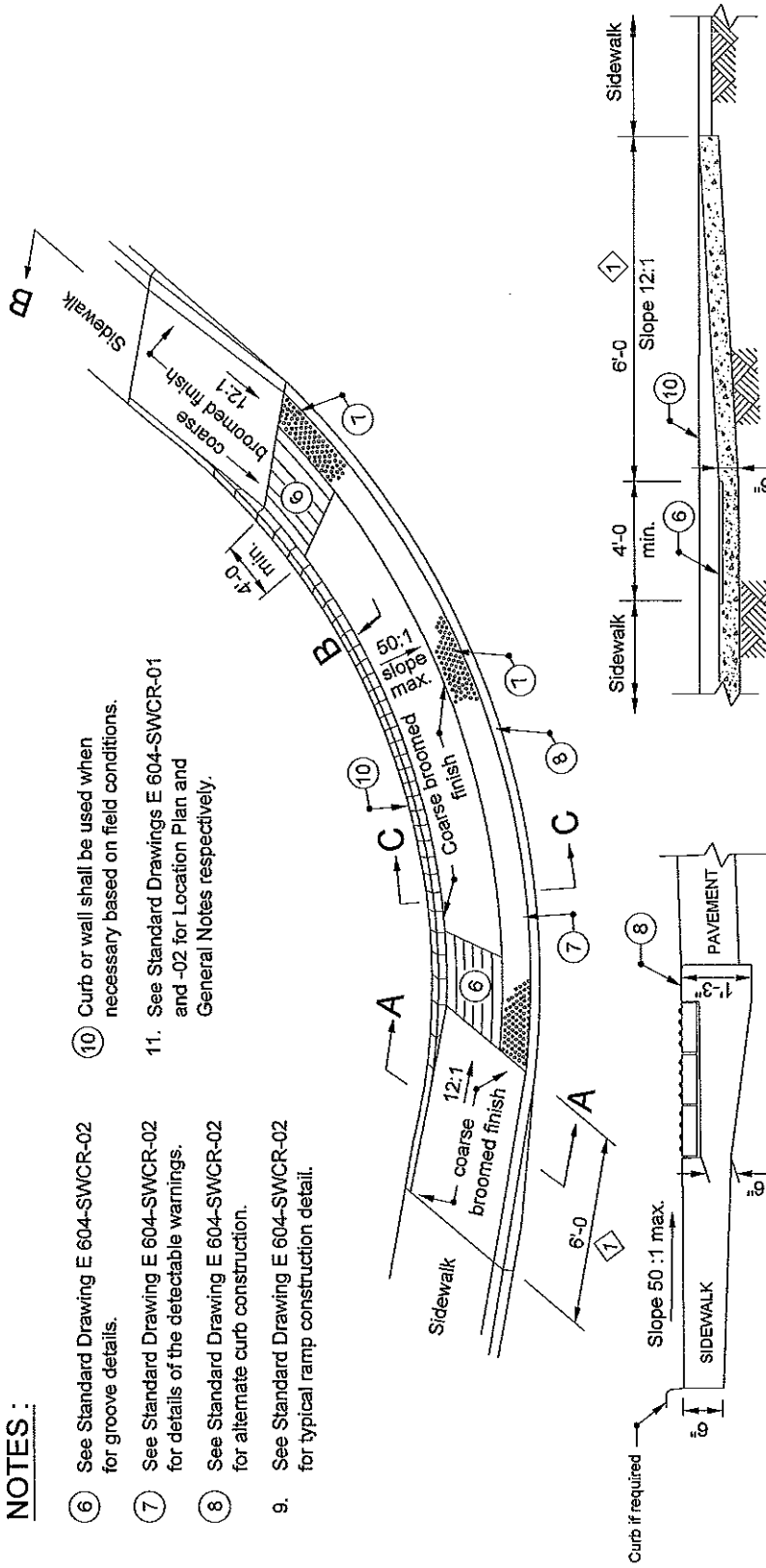


**SECTION A-A**

INDIANA DEPARTMENT OF TRANSPORTATION	
<b>SIDEWALK CURB RAMPS TYPE E</b>	
SEPTEMBER 2005	
STANDARD DRAWING NO. E 604-SWCR-07	
	<small>9-0-05</small> DATE <small>DESIGN STANDARDS ENGINEER</small>
	<small>9-0-05</small> DATE <small>CHIEF HIGHWAY ENGINEER</small>
<small>DESIGN STANDARDS ENGINEER</small>	

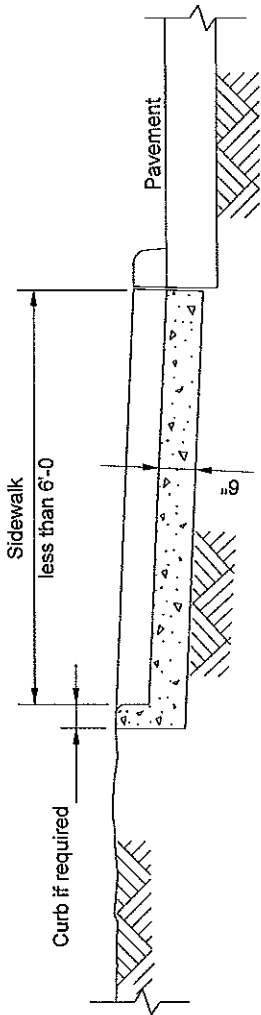
**NOTES :**

- ⑥ See Standard Drawing E 604-SWCR-02 for groove details.
- ⑦ See Standard Drawing E 604-SWCR-02 for details of the detectable warnings.
- ⑧ See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- 9. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
- ⑩ Curb or wall shall be used when necessary based on field conditions.
- 11. See Standard Drawings E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.



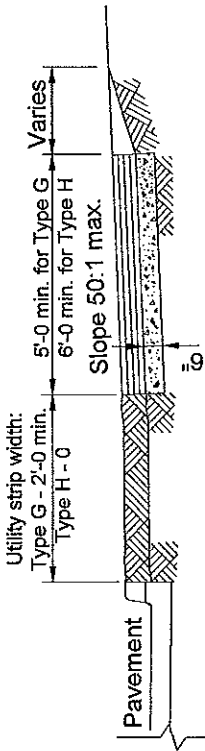
**SECTION C-C**

**SECTION B-B**

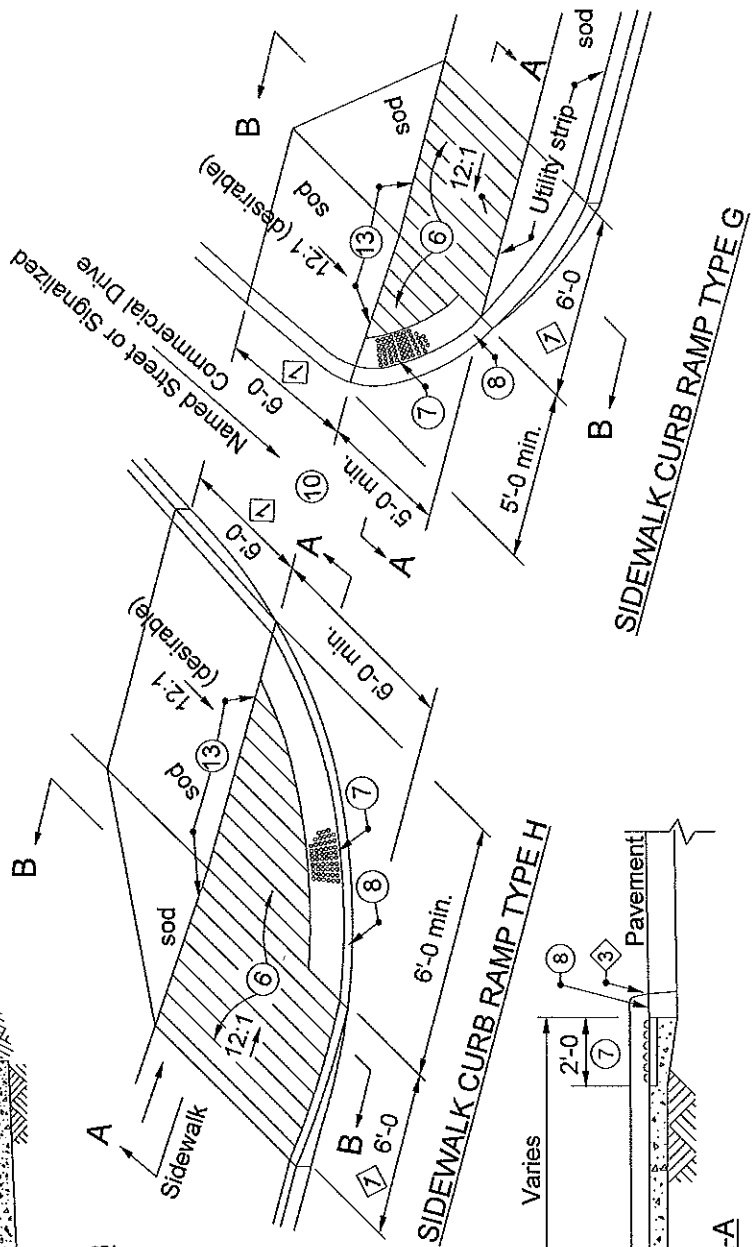


**SECTION A-A**

INDIANA DEPARTMENT OF TRANSPORTATION	
<b>SIDEWALK CURB RAMP TYPE F</b>	
SEPTEMBER 2005	
STANDARD DRAWING NO. E 604-SWCR-08	
	/s/ Richard L. Lutzko DESIGN STANDARDS ENGINEER DATE
	/s/ Richard A. Spitzer CHIEF HIGHWAY ENGINEER DATE
DESIGN STANDARDS ENGINEER	

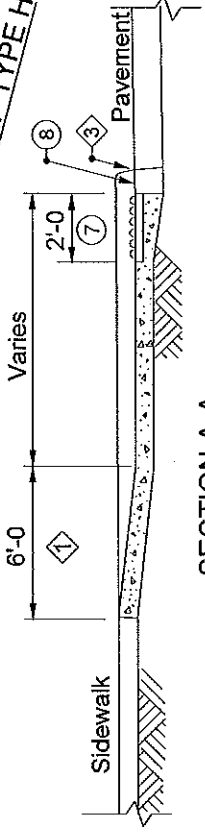


SECTION B-B



SIDEWALK CURB RAMP TYPE H

SIDEWALK CURB RAMP TYPE G

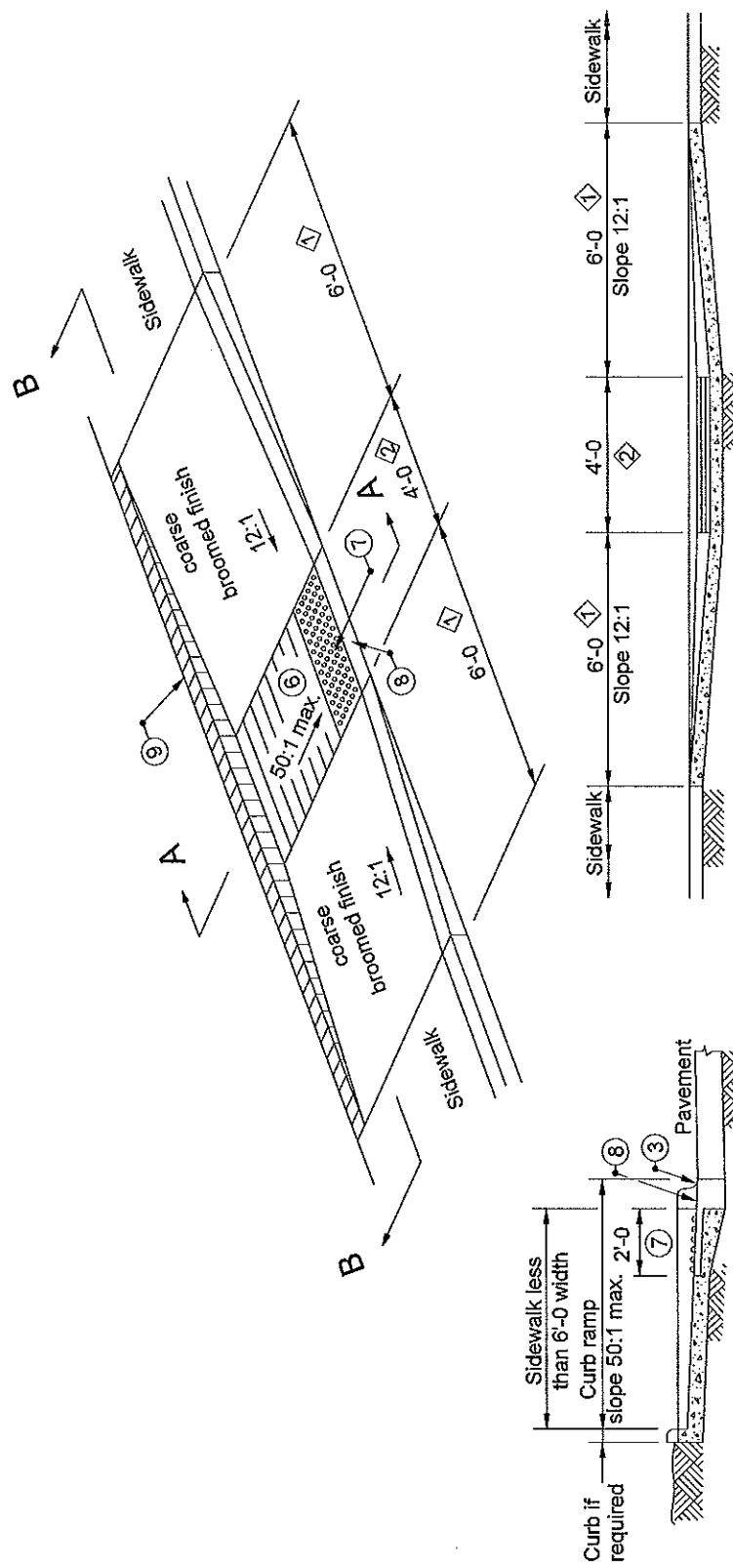


SECTION A-A

**NOTES:**

- ⑥ See Standard Drawing E 604-SWCR-02 for groove details.
- ⑦ See Standard Drawings E 604-SWCR-02 for details of the detectable warning surface.
- ⑧ See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- ⑩ Sidewalk across approach shall be sloped at 50:1 maximum transversely. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
- ⑪ See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.
- ⑬ Vertical face curb optional.

INDIANA DEPARTMENT OF TRANSPORTATION	
SIDWALK CURB'S RAMPS TYPE G AND TYPE H	
SEPTEMBER 2005	
STANDARD DRAWING NO. E 604-SWCR-09	
/s/ Robert A. Switzer DESIGN STANDARDS ENGINEER	SOLOE DATE
/s/ Robert A. Switzer CHIEF HIGHWAY ENGINEER	9-0-05 DATE
DESIGN STANDARDS ENGINEER	



**SECTION A-A**

**NOTES:**

- ⑥ See Standard Drawing E 604-SWCR-02 for groove details.
- ⑦ See Standard Drawing E 604-SWCR-02 for details of detectable warnings surface.
- ⑧ See Standard Drawing E 604-SWCR-02 for alternate curb construction.

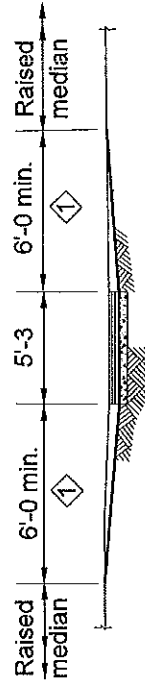
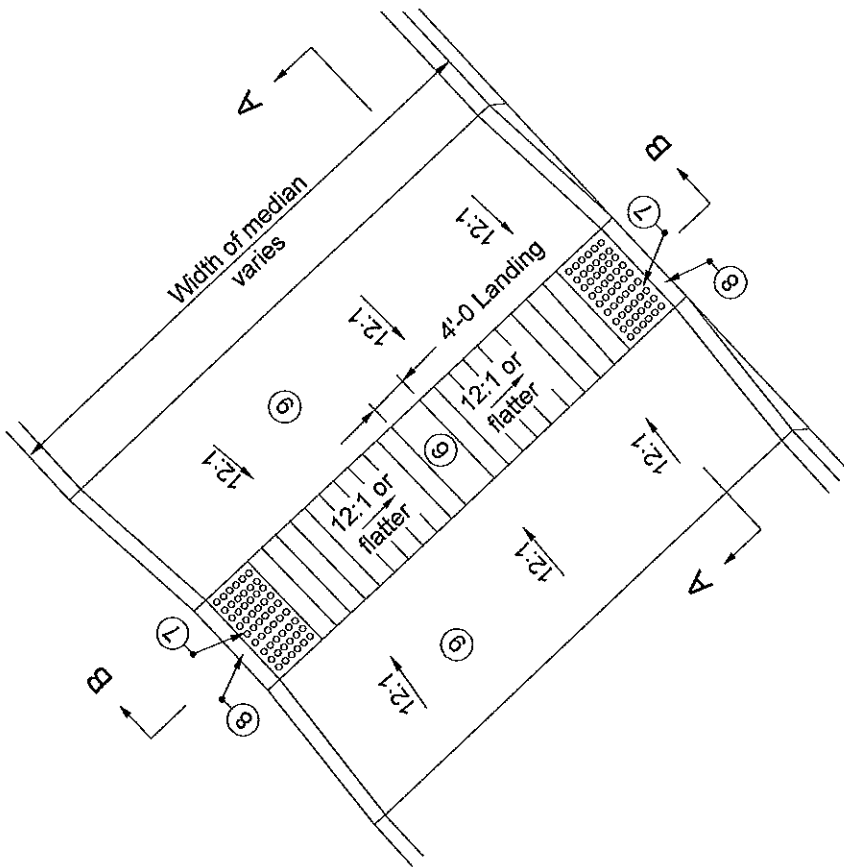
**SECTION B-B**

- ⑨ Curb optional. Shall be used when necessary based on field conditions.
- 10. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
- 11. See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.

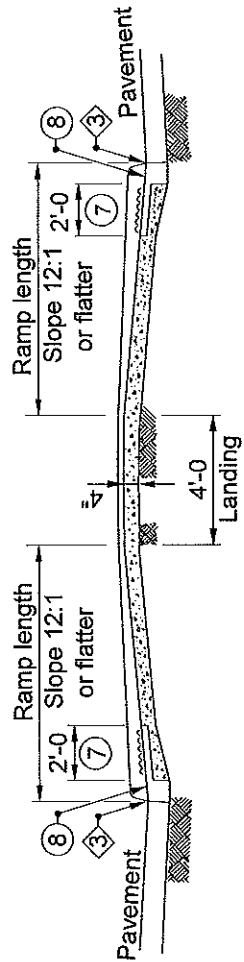
INDIANA DEPARTMENT OF TRANSPORTATION	
<b>SIDEWALK CURB RAMP TYPE K</b>	
SEPTEMBER 2005	
STANDARD DRAWING NO. E 604-SWCR-10	
	/s/ Richard L. Janczarski DESIGN STANDARDS ENGINEER DATE 9-0-05
/s/ Richard A. Spitzer CHIEF HIGHWAY ENGINEER DATE 9-0-05	

**NOTES:**

- ⑥ See Standard Drawing E 604-SWCR-02 for groove details.
- ⑦ See Standard Drawing E 604-SWCR-02 for details of the detectable warnings.
- ⑧ See Standard Drawing E 604-SWCR-02 for alternate curb construction.
- ⑨ Match material in place or in plans for median.
- 10. See Standard Drawing E 604-SWCR-02 for typical ramp construction details.
- 11. See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.
- 12. Ramp cross slope 50:1 desirable or match grade of roadway.
- 13. Detectable warnings are not required where the roadway crossing is controlled by traffic signals timed to provide full width street crossing by pedestrians.

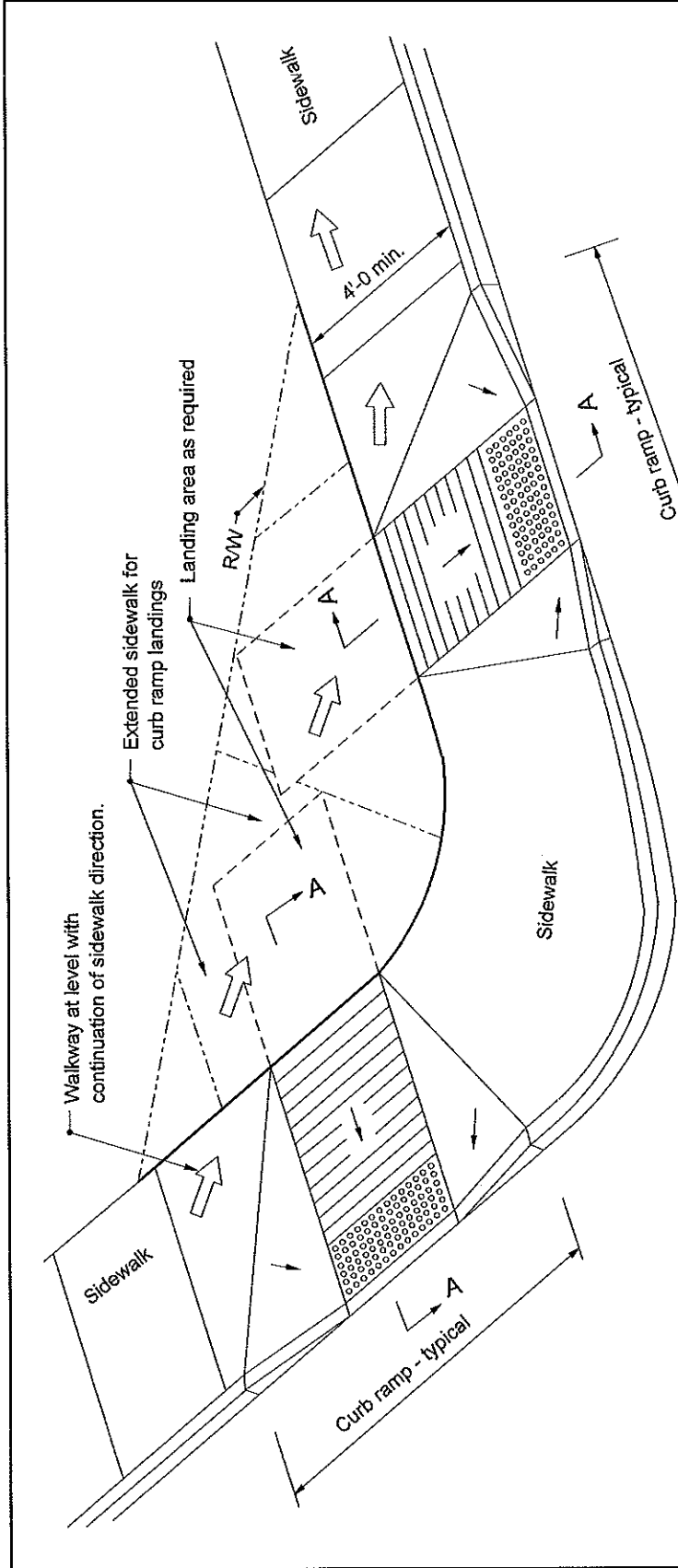


**SECTION A-A**



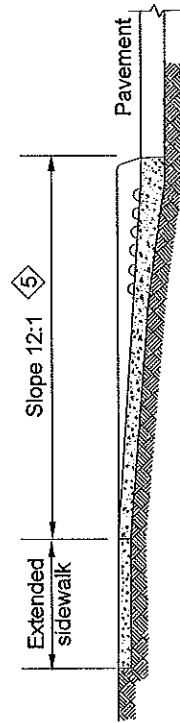
**SECTION B-B**

INDIANA DEPARTMENT OF TRANSPORTATION	
SIDEWALK CURB RAMP TYPE L	
SEPTEMBER 2005	
STANDARD DRAWING NO. E 604-SWCR-11	
	/s/ Richard J. McCreavey DESIGN STANDARDS ENGINEER DATE
	/s/ Richard A. Switzer CHIEF HIGHWAY ENGINEER DATE
DESIGN STANDARDS ENGINEER	



**NOTES:**

1. Additional right-of-way to widen sidewalks if applicable to improve accessibility on narrow sidewalks.
2. See Standard Drawing E 604-SWCR-02 and -03 to -11 for General Notes and typical curb ramps details respectively.



INDIANA DEPARTMENT OF TRANSPORTATION

**SIDEWALK CURB RAMP'S  
IMPROVED ACCESS**

SEPTEMBER 2005

STANDARD DRAWING NO. E 604-SWCR-12

	/s/ Richard L. Vancura	9-01-05
	DESIGN STANDARDS ENGINEER	DATE
	/s/ Richard A. Switzer	9-01-05
	CHIEF HIGHWAY ENGINEER	DATE

DESIGN STANDARDS ENGINEER

**QUANTITY ESTIMATE**

Curb Ramp Type	6" curb		8" curb		Pay limits diagram
	Assumptions for calculation purposes (top landing not included in area)	Area sq. yd	Assumptions for calculation purposes (top landing not included in area)	Area sq. yd	
A	10' sidewalk	7.0	12' sidewalk	11.1	
B	R = 10', 13' sidewalk	16.4	R = 10', 15' sidewalk	19.4	
	R = 26', 18' sidewalk	21.4	R = 25', 20' sidewalk	30.6	
C	6' utility strip	2.7	8' utility strip	3.5	
D	6' utility strip	2.7	8' utility strip	3.5	
E	10' utility strip on one side only, 10' radius	10.7	Not possible to construct on 10' utility strip	n / a	
F	R = 15', 4' sidewalk	14.3	R = 15', 4' sidewalk	16.1	
	R = 25', 4' sidewalk	21.6	R = 25', 4' sidewalk	23.3	
G	minimum dimensions	4.9	minimum dimensions	6.0	
H	minimum dimensions	6.3	minimum dimensions	7.7	
K	5' sidewalk	8.9	5' sidewalk	11.1	
L	16' grass median width	9.3	16' grass median width	9.3	

INDIANA DEPARTMENT OF TRANSPORTATION

**SIDEWALK CURB RAMPS  
QUANTITY ESTIMATE**

SEPTEMBER 2005

STANDARD DRAWING NO. E 604-SWCR-13

	/s/ Richard L. Vanclose DESIGN STANDARDS ENGINEER DATE 9-01-05
	/s/ Richard A. Switzer CHIEF HIGHWAY ENGINEER DATE 9-01-05

DESIGN STANDARDS ENGINEER