ADA PROWAG TRAINING

PRESENTED BY:

JESSE A. JONAS - MO/KS ACPA

JESSE@MOKSACPA.COM

JACKIE SPOOR - WCPA

JSPOOR@WISCONCRETE.ORG

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- Today is part 2 of a 2-part series on ADA Guidance and Compliance in the Public Rights-of-Way
- Today's presentation will focus on how states are implementing PROWAG - Design and Construction
- Please mute your microphones and use the dialog box to communicate your questions. Questions will be responded to via email after the presentation

THE WISCONSIN APPROACH

DISCLAIMER:

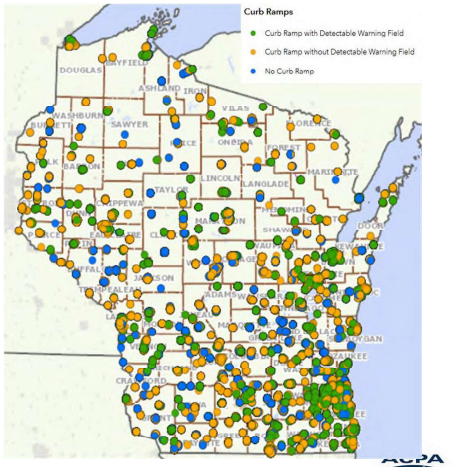
The teachings contained here within this presentation are derived from guidance published by the United States of America Access Board, and can be found within the document title "Public Rights-of-Way Accessibilities Guidelines" (PROWAG) version 2011. As current, the proposed guidelines are currently waiting official legislation to enact them as 'Law'. The American Concrete Pavement Association offers this presentation as our view and understanding of the proposed guidelines, but disclaims any, and all, liability regarding the application of these thoughts. PROWAG is a federal publication, and as such, is generally created to express the 'minimum' for compliance. Agencies throughout the country may at any time chose to propose their own set of rules that meet, or exceed, those established by the federal government. The material, thoughts, and opinions contained here within are only thoughts and opinions of the presenters themselves, and in no way should be construed as legal absolutions.

CIVIL RIGHTS & COMPLIANCE

- WisDOT ADA Program
  - Equal access to programs, activities, services, buildings and public rights-of-way.
- Projects and Ongoing Work
  - Scheduled construction or maintenance

State Hwy Curb Ramps & Sidewalk ADA Inventory Database

- Interactive Map
- Zoom in on areas throughout the state highway system
- Sidewalks and Curb Ramps
- Curb Ramps
  - Detectable Warning Fields
  - Without Detectable Warning Fields
  - No Curb Ramps



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ADA Transition Plan

2019 Transition Plan

- WisDOT's 2019 ADA Transition Plan helps to provide information on plans for continued improvements throughout the state of Wisconsin.
- Six-Year Program
  - $15 million for construction costs – not ROW
- Stand-Alone Program
  - Safety
  - Existing Conditions
  - Complaints
  - Pedestrian Generations

Title II of Americans with Disabilities Act (ADA)

- A civil rights law
- Prohibits discrimination against people with disabilities in all aspects of life, including transportation
- Compliance not dependent on funding source
- Covers State and Local Governments and their agencies

…whenever streets, roadways, or highways are *altered* to provide curb ramps where street level pedestrian walkways cross curbs

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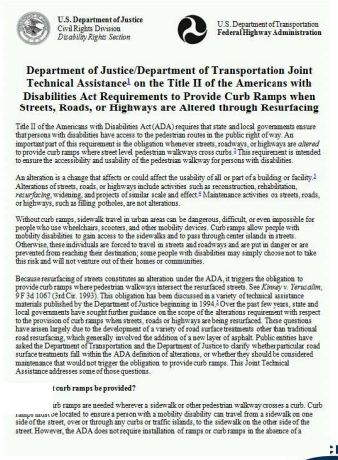
DOJ & DOT Tech. Assistance

- 'Alteration' vs 'Maintenance'
- Adding or replacing asphalt vs coating the asphalt surface to preserve the road surface
- Alteration projects must include curb ramps within the scope of the project

www.fhwa.dot.gov/civilrights/programs/doj_fhwa_ta.cfm



U.S. Department of Justice
Civil Rights Division
Disability Rights Section

U.S. Department of Transportation
Federal Highway Administration

Department of Justice/Department of Transportation Joint Technical Assistance[1] on the Title II of the Americans with Disabilities Act Requirements to Provide Curb Ramps when Streets, Roads, or Highways are Altered through Resurfacing

Title II of the Americans with Disabilities Act (ADA) requires that state and local governments ensure that persons with disabilities have access to the pedestrian routes in the public right of way. An important part of this requirement is the obligation whenever streets, roadways, or highways are *altered* to provide curb ramps where street level pedestrian walkways cross curbs.[2] This requirement is intended to ensure the accessibility and usability of the pedestrian walkway for persons with disabilities.

An alteration is a change that affects or could affect the usability of all or part of a building or facility.[3] Alterations of streets, roads, or highways include activities such as reconstruction, rehabilitation, *resurfacing*, widening, and projects of similar scale and effect.[4] Maintenance activities on streets, roads, or highways, such as filling potholes, are not alterations.

Without curb ramps, sidewalk travel in urban areas can be dangerous, difficult, or even impossible for people who use wheelchairs, scooters, and other mobility devices. Curb ramps allow people with mobility disabilities to gain access to the sidewalks and to pass through center islands in streets. Otherwise, these individuals are forced to travel in streets and roadways and are put in danger or are prevented from reaching their destination; some people with disabilities may simply choose not to take this risk and will not venture out of their homes or communities.

Because resurfacing of streets constitutes an alteration under the ADA, it triggers the obligation to provide curb ramps where pedestrian walkways intersect the resurfaced streets. See *Kinney v. Yerusalim*, 9 F.3d 1067 (3rd Cir. 1993). This obligation has been discussed in a variety of technical assistance materials published by the Department of Justice beginning in 1994.[5] Over the past few years, state and local governments have sought further guidance on the scope of the alterations requirement with respect to the provision of curb ramps when streets, roads or highways are being resurfaced. These questions have arisen largely due to the development of a variety of road surface treatments other than traditional road resurfacing, which generally involved the addition of a new layer of asphalt. Public entities have asked the Department of Transportation and the Department of Justice to clarify whether particular road surface treatments fall within the ADA definition of alterations, or whether they should be considered maintenance that would not trigger the obligation to provide curb ramps. This Joint Technical Assistance addresses some of those questions.

I curb ramps be provided?

urb ramps are needed wherever a sidewalk or other pedestrian walkway crosses a curb. Curb ramps must be located to ensure a person with a mobility disability can travel from a sidewalk on one side of the street, over or through any curbs or traffic islands, to the sidewalk on the other side of the street. However, the ADA does not require installation of ramps or curb ramps in the absence of a

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Major Issues to Guidance

Alterations to Existing Facilities

- Each altered element, space, or facility within the scope of a new project must comply with the applicable requirements for new construction (see R202.3)

Existing Facilities That Are Not Altered

- The guidelines clarify that the guidelines do not address existing facilities unless they are included within the scope of an alteration undertaken at the discretion of a covered entity (see R101.2)

Pedestrian Access Route (PAR) Requirements

- Min 4-ft wide Pedestrian Access Route (PAR).
  - 5-ft typical - Wisconsin
- If 4-ft PAR then 5-ft x 5-ft passing spaces required at a max. spacing of 200'
- Cross Slope: Max. 2%
  - WisDOT Typ. 1.5%
    - Min. 1% for drainage
- Vertical discontinuities less than ¼-inch
- All grade breaks constructed perpendicular to path of travel

Landings/Turning Space

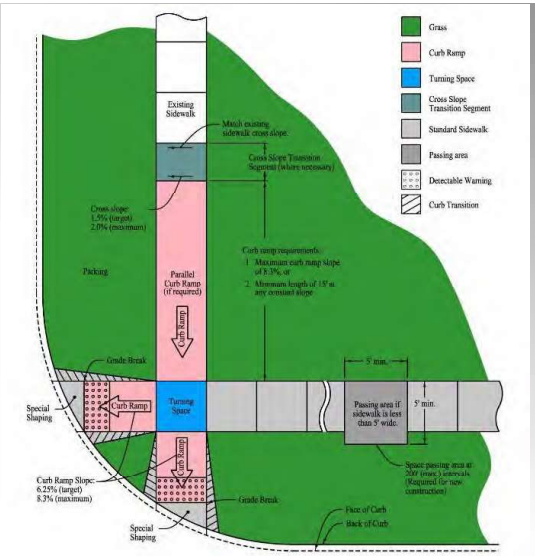
- Landings are part of the PAR
- Required at all locations where the PAR changes directions
- Max slope of 2% in all directions
- Min 4 feet by 4 feet

Landing/Turning

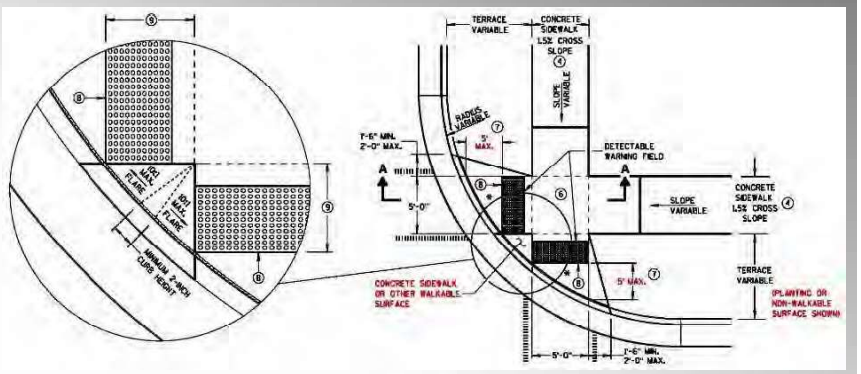
Provide 5' x 5' flat landing at top of the ramps

- Construct max 1.5% cross slope at intersecting sidewalks

Sidewalk & Curb Ramp Elements

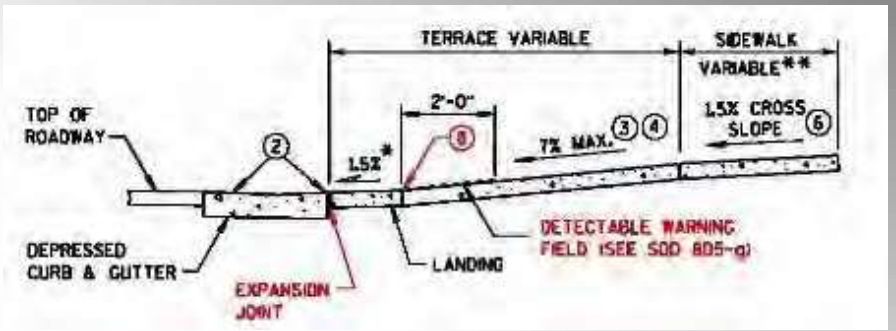


Type 2 Ramp SDD



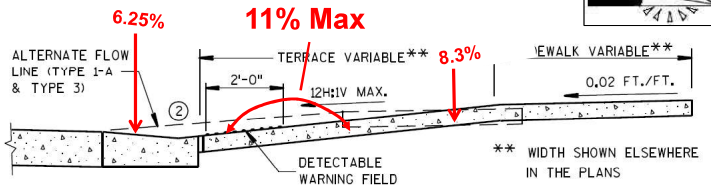
- Max 10:1 Flare
- Minimum 2-inch Curb Height Between Ramps
- Max 5-foot grade break distance
- Max 2% slope in all directions in grade break area

Type 2 Ramp SDD



- Max 5-foot grade break distance
- Max 2% slope in all directions in grade break area

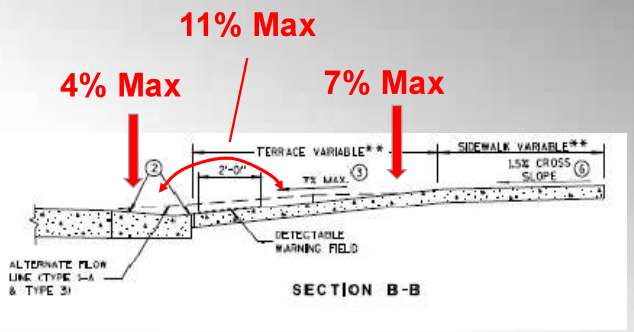
11% Max Slope Differential Between Ramp and Gutter



Note: 1.5% sidewalk cross slope required

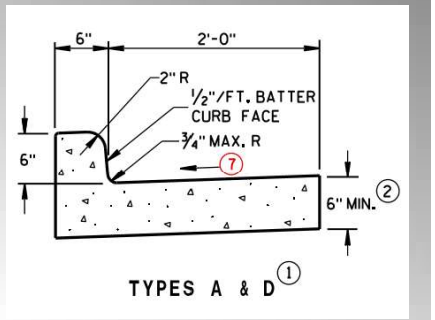
But 6.25%+8.3%= 14.55% > 11%

Max Curb Ramp Slope--Updated FDM & SDD



WisDOT Curb and Gutter

- Revision of the cross slope from 6.25% to 4%
- SDD Note 7:
  - USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS






INCORRECT

Detectible Warning Fields

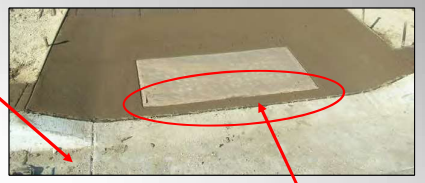



CORRECT

Detectible Warning Fields

Lay Out Curb Ramp Cuts Prior to Ramp Installation

- The curb ramp layout must occur prior to curb installation

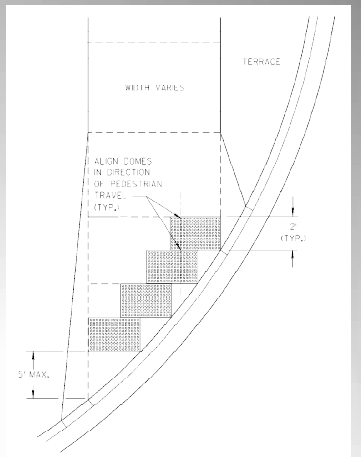


Curb was installed prior to curb ramp installation

Note: Place DWF panel at back of curb per SDD

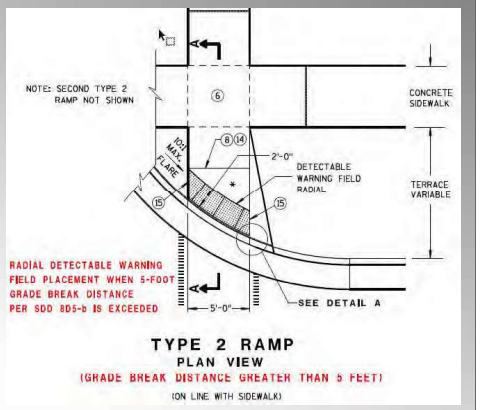
Staggered Detectible Warning Fields

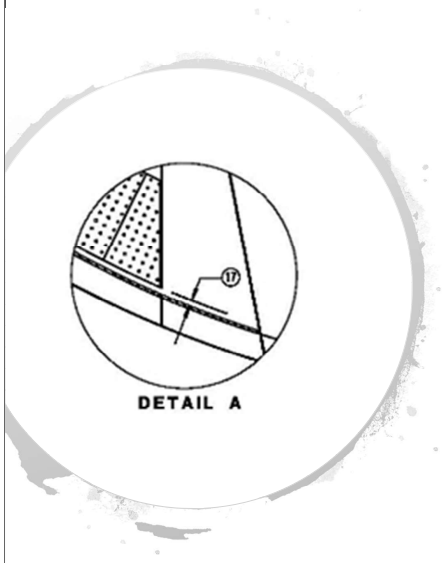
- No Longer Allowed in Wisconsin



Radial DWF Panels

- Radial plates per manufacturer's recommendations (WisDOT approved list)
- Field cutting outside edges will be necessary
- Avoid cutting through domes. Cut true to line +/- 1/8 inch
- Intermediate joints within warning field must not be field cut





Radial DWF Panels

- Plan to provide curb radius, panel long chord and area.
- Final DWF layout determined by contractor
- Max 3-inch concrete border is allowable between BOC and radial DWF for constructability purposes, with the concrete border width variable up to 1 inch

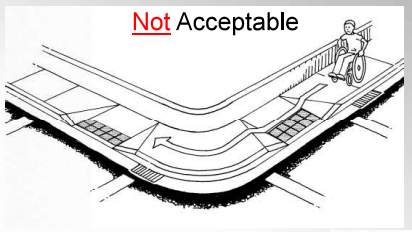
SDD - Key Items

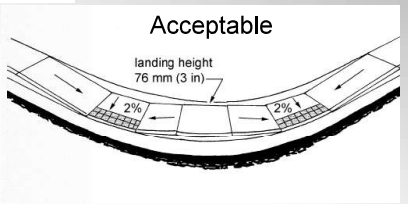
- Grade change between gutter flag slope and the curb ramp slope shall not exceed 11%
- Maximum gutter flag slope is 4%
- Provide longitudinal drainage around curb and away from curb ramp
- No vertical lips or discontinuities greater than ¼-inch are allowed
- Slope of curb head opening shall not exceed 7% (Also, ramp running slope max of 7% per SDD)

SDD – Key Items (cont.)

- Max 10:1 flares adjacent to walkable surface
- Minimum 2-inch curb head height between Type 2 ramps
- Detectable warning field (DWF) placement
  - Plates across entire curb ramp
  - Radial Plates may be necessary
    - Staggered plate application when grade break distance greater than 5 feet—Not acceptable for Wisconsin

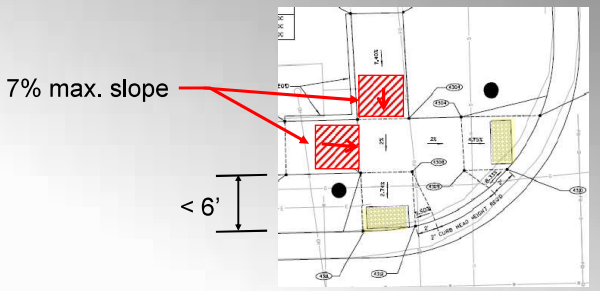
Grades in Wheelchair Path



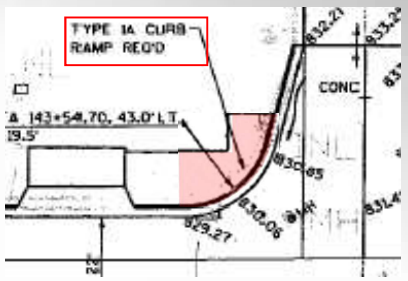


Max Curb Ramp Slope

- If the terrace is less than 6 feet wide, then it is likely that the ramp slope will exceed 7% unless the sidewalk is lowered



Curb Ramp Design and Construction



Curb Ramp Type Identified on Plans

Doesn't Work in the Field

Field Adjustments often required to bridge the gap

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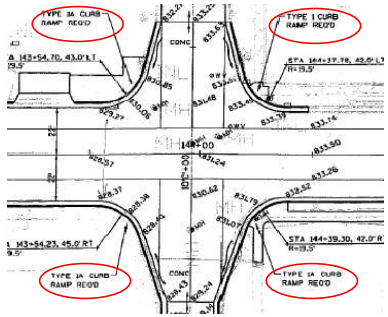
Construction Plans Insufficient Layout Example

- Shifts design work onto contractor and field engineer
- Inefficient
- Increase risk of being improperly constructed
- Additional construction staff time



Curb Ramp Staking Bid Item

- Effective December 2017 lets
- Paid as EACH per curb ramp
- Set and maintain stakes as necessary
- Staking for curb ramp and adjacent sidewalk

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Recommended Plan Details

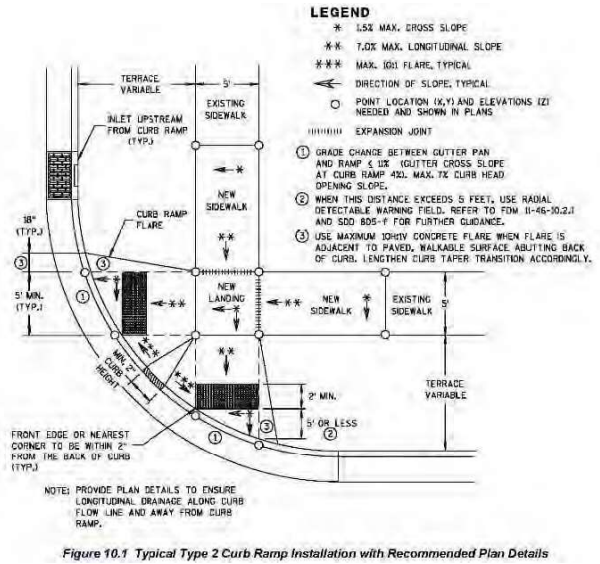

Figure 10.1 Typical Type 2 Curb Ramp Installation with Recommended Plan Details

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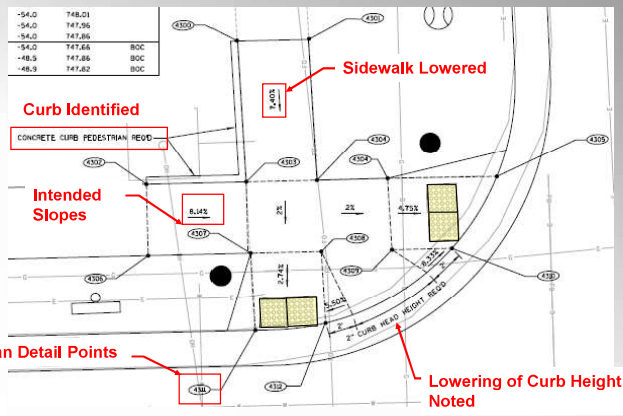
Design Details – Curb Ramps

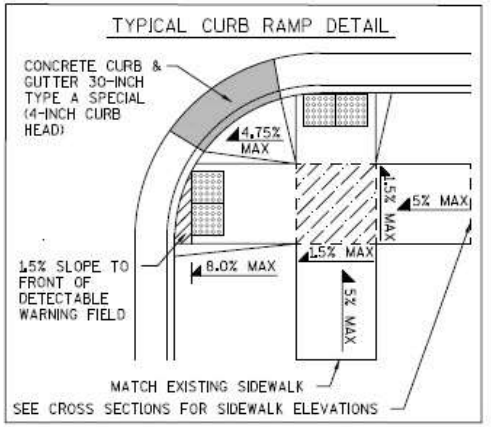
Included in construction plans:

- Curb ramp layout type for reference (i.e. Type 2, Type 1)
- Detectable warning field alignment
- Intended ADA slopes not to be exceeded (i.e. 2%, 5%, 8.33%)
- Curb head height variations between curb ramps
- Intended direction for drainage
- Low points identified
- Layout (Station, Offset, Elev.)

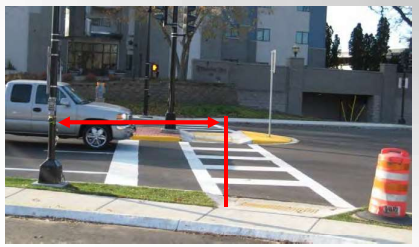
Design – Sufficient Layout Information



Example Plan Layout



Push Button Placement in Relation to Curb Ramp

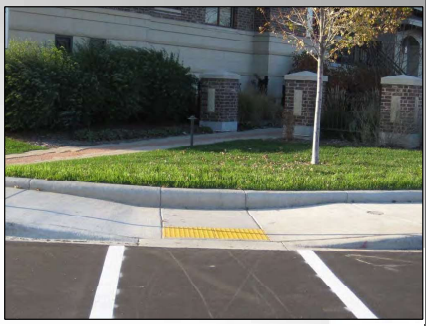


Improper Placement

Improper Placement

Application of Curb Behind Sidewalk

- Lowering of sidewalk near curb ramp may require curb behind sidewalk
- Good application of 12:1 (8.33%) max flare slopes with walkable surface abutting back of curb



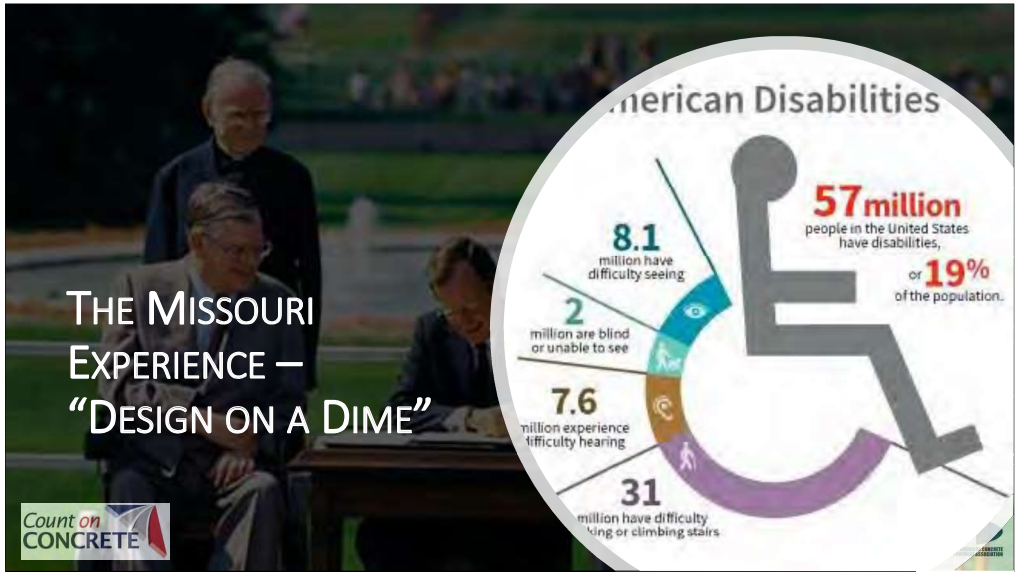
Median/Pork-chop Island Pedestrian Refuge

Desirable – vertical edge

Undesirable – sloped edge

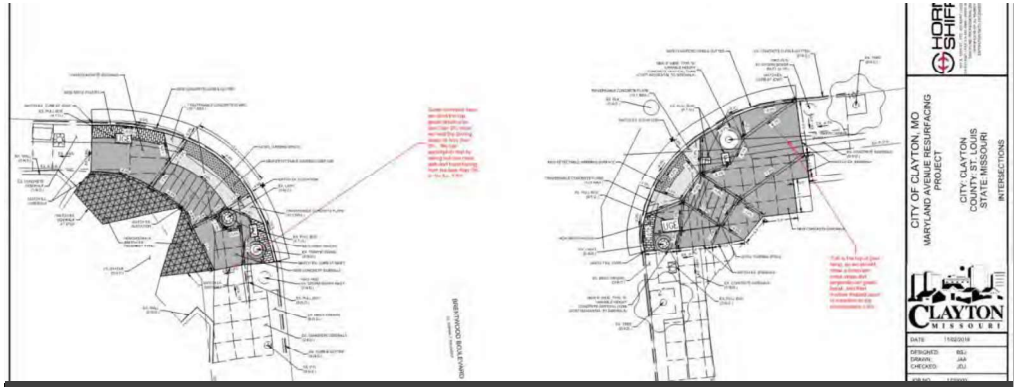
Additional Resource Materials

- WisDOT FDM Pedestrian Facilities – Chapter 11-46-5
  - http://roadwaystandards.dot.wi.gov/standards/fdm/index.htm
- WisDOT FDM Curb Ramps – Chapter 11-46-10
  - http://roadwaystandards.dot.wi.gov/standards/fdm/index.htm
- WisDOT FDM Bicycle Facilities – Chapter 11-46-15
  - http://roadwaystandards.dot.wi.gov/standards/fdm/index.htm
- Wisconsin Guide to Pedestrian Best Practices
  - http://www.dot.wisconsin.gov/projects/state/ped-guide.htm
- WisDOT FDM
  http://roadwaystandards.dot.wi.gov/standards/fdm/index.htm



Taking a Closer Look at the Challenge

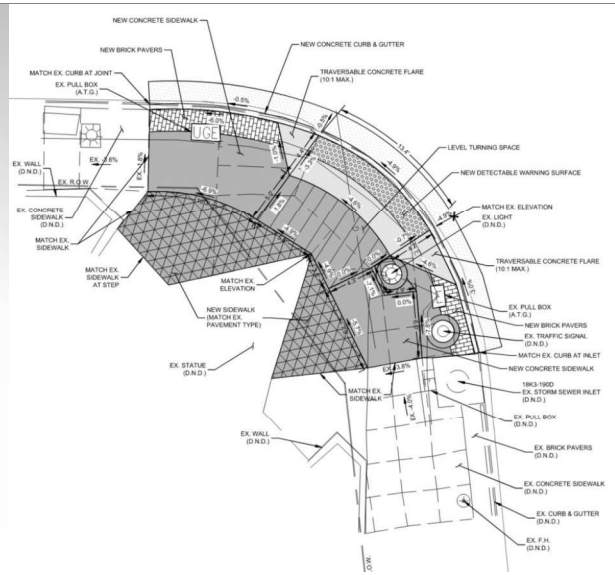
- We did not get "New" money to solve this problem
- Our Transition Plans require a 'Completion' date
- We probably need to be doing two, to three times our current production to achieve accessibility in the next DECADE!!!
- If we don't come up with Solutions, the Legal System will……..?
- If the Legal System dictates, compliance will be required in a 'FEW' years – reallocating our limited road funds to sidewalks
- We cannot lose ground on our already deteriorating road network.



Here is an example of a Fabulous ADA Design…..but – 'Is This What We Should "Always" Be Doing'

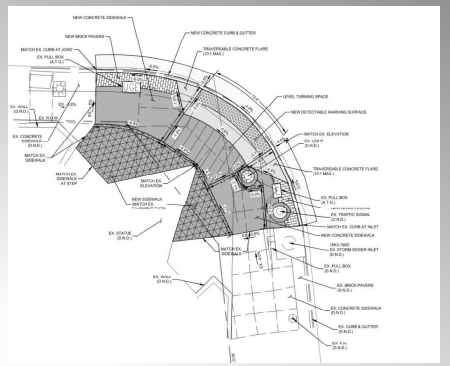
Sometimes Necessary, but could come with:

- High survey cost
- High PE cost
- Limited Bidder Ingenuity
- Higher Construction Cost
- Owner and Contractor Risk



Risk……? But Jesse, We Designed it to the Nth to Eliminate That?

- Did survey pick up 'everything'
- If one tiny little detail was overlooked, quite often the entire design is out the door
- What about things underground:
  - Conduits in the way
  - Utility lines
  - Pull Boxes
  - Vaults
  - Hoffa….?



Design Alternatives

DIFFERENT PROJECT DELIVERY METHODS

- Detail Survey with Specific & Detailed Design for Every Ramp
- Rough Survey with Standard Design and Per Each Special Provision for Project Limits
- Design Build ADA Project

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Per Each Ramp - ADA Special Provisions

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Example ADA Curb Ramp JSP

100.20.9 AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE AND FINAL ACCEPTANCE OF CONSTRUCTED FACILITIES

Description of Work

The contractor shall comply with all laws pertaining to the Americans with Disabilities Act during construction of pedestrian facilities on public rights of way for this project. In alteration projects, as defined by the Department of Justice, Saint Louis County will require segmental transitions to connect newly constructed ADA compliant features to the existing facilities. An ADA Post Construction Checklist is provided herein to be utilized by the contractor for verifying compliance with the ADA law. The contractor is expected to familiarize himself with the plans involving pedestrian facilities and the ADA Post Construction Checklist prior to performing the work.

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Example ADA Curb Ramp JSP

ADA Post Construction Checklist

A. The contractor can locate the ADA Inspection Checklist form on the Missouri Department of Transportation website: http://www.modot.mo.gov/business/contractor_resources/forms.htm

1. The checklist is intended to be a helpful tool for the contractor to use during the construction of the pedestrian facilities and a basis for Saint Louis County's acceptance of work. Prior to work being performed, the contractor shall bring to the engineer's attention any work that is in conflict with the design or with the requirements shown in the checklist. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with current ADA law using the following hierarchy of resources: 2011 Draft Public Rights of Way Accessibility Guidelines (PROWAG), Saint Louis County Standards and Specification, or a solution approved by the Access Board.

2. It is encouraged that the contractor monitor the completed sections of the newly constructed pedestrian facilities in attempts to minimize impacts that his equipment, subcontractors or general public may have on the tolerances as established in the checklist.

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EXAMPLE ADA CURB RAMP JSP

Segmental Transitions

A. When a new ADA compliant curb ramps is constructed adjacent to existing pavement a segmental transition must be constructed. A segmental transition is a warped area of pavement for the connection of the new ADA compliant curb ramp to the adjacent existing pavement and shall meet the following criteria:

1. Replacement of material in the segmental transitions shall match in kind the material removed. Asphalt transitions may be accomplished with a 2" depth mill and overlay or full depth replacement, as directed by the engineer. Concrete transitions must be full depth replacement.
2. Under most circumstances, the segmental transition length shall include an area equal to the size of the opening plus a distance of 5 feet in any direction to allow for connection to the grade of the adjacent pavement. Total size of the segmental transition may be altered as directed by the engineer.
3. The segmental transition shall be warped in a way which does not pond water or pose a hazard to motorists.
4. The segmental transition shall not exceed a cross slope transition of 1% per foot in the direction of pedestrian travel.
5. The segmental transition shall not exceed a running slope of 5% in the direction of pedestrian travel.
6. Where milling and/or overlay operations intersect the newly constructed ramp, no additional pay will be made for constructing a flush connection between the pedestrian access route and the roadway.

EXAMPLE ADA CURB RAMP JSP

Coordination of Construction

A. Prior to construction and/or closure on an existing pedestrian access route, the contractor shall submit a schedule of work to be constructed, which includes location of work performed, the duration of time the contractor expects to impact the facility and an accessible signed pedestrian detour during each stage of construction. This plan shall be submitted to the engineer for review and approval prior to any work being performed in the field.

B. The contractor shall use their own survey equipment to verify that the intended ramp design can be constructed to the full requirements as established in the PROWAG. When PROWAG does not give sufficient information to construct the contract work, the contractor shall reconstruct the ramp as instructed by the Engineer. It will be the responsibility of the contractor to determine removal limits based on achieving full ADA compliance.

EXAMPLE ADA CURB RAMP JSP

Acceptance of Work

The engineer will provide the completed ADA Post Construction Checklist to the contractor prior to scheduling the semi-final inspection. ADA improvements will be accepted upon final inspection and compliance with the ADA Post Construction Checklist. Each item listed in the checklist must receive either a "YES" or a "N/A" score. Any item receiving a "NO" will be deemed non-compliant and shall be corrected at the contractor's expense unless deemed otherwise by the engineer.

EXAMPLE ADA CURB RAMP JSP

Basis of Payment

A. ADA Ramps will be paid PER EACH. Plan sheets shall call out a standard ramp type for each location. When the details call for dual ramps or a blended transition that serves two pedestrian crossings at a single location, the contractor will be compensated for two ramps.

B. Per EACH ramp price shall include all cost associated with removal of existing materials required for new construction, as well as new construction of landings, ramps, flares, return curbs, additional curbing and/or gutter for grade control (final graded slopes of 3:1 or flatter), raised medians installed for directional delineation, truncated domes, excavation, aggregate base, backfilling, utility adjustments, up to 5 linear feet of sidewalk necessary to transition between newly constructed compliant ramps and adjacent non-compliant sidewalks, and any necessary segmental transitions to the surrounding concrete or asphalt pavement. The segmental transition length included in the lump sum price shall include an area equal to the size of the opening plus a distance of 5 feet in any direction to allow for connection to the grade of existing facilities. Where the transitions are in full depth pavement and the engineer requires a length greater than the 5 foot incidental section, compensation for the additional removal and replacement shall be paid for at the contingent unit price of $125.00 per Square Yard. Where milling and/or overlay operations intersect the newly constructed ramp, no additional pay will be made for constructing a flush connection between the pedestrian access route and the roadway.

C. No direct payment will be made to the contractor to recover the cost of the equipment, labor, materials, or time required to provide an accessible signed detour during the various stages and locations of construction.

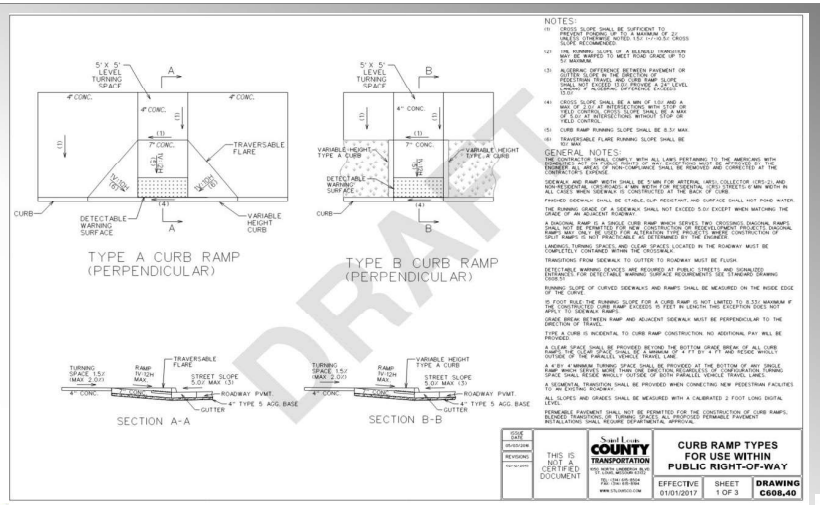
Per Each "Curb Ramps"

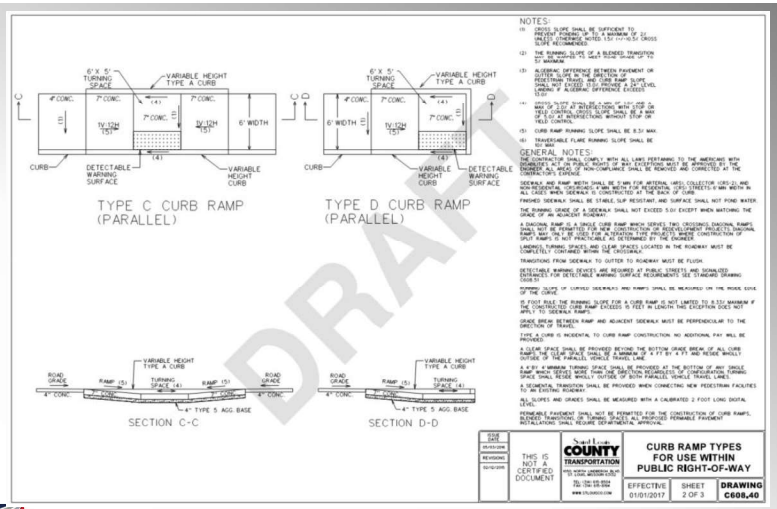
- **What's in it for agencies:**
  a) Fully Compliant Ramp
  b) Much Cheaper Design Cost (MUCH!!!)
  c) Grade and Restoration control
  d) Transitional Segments
  e) Pedestrian Detour
  f) Split or Dual Ramps – Pay 2 Each at these locations
  g) Less Pay Items to Track

ADA Job Special Provision

- **What's in it for contractors:**
  a) Layout and Innovative flexibility
  b) Get Paid Per Ramp
     - Dual ramp design at a quadrant = two ramps paid for
  c) Vertical Curb construction at back of sidewalk, optional if 3:1 slopes can be persevered in R/W
  d) Engineer proposes solutions if contractor deems compliance cannot be met
  e) Less 7" Concrete

St Louis County DOT Updated ADA Standard Drawings





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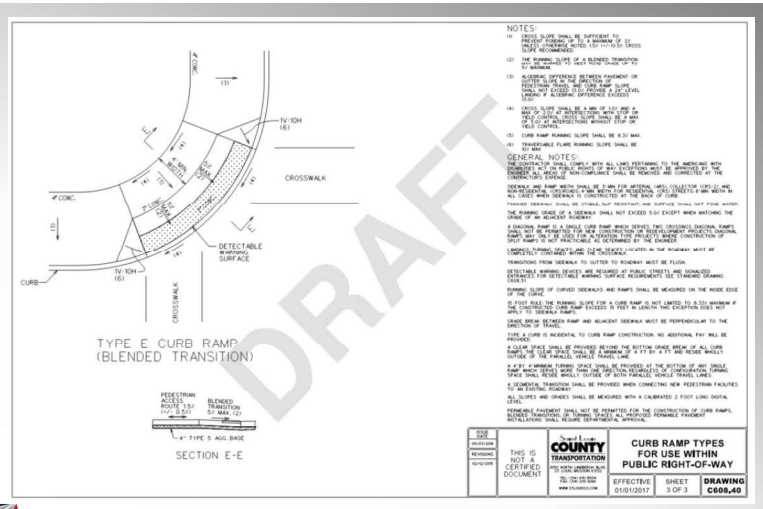

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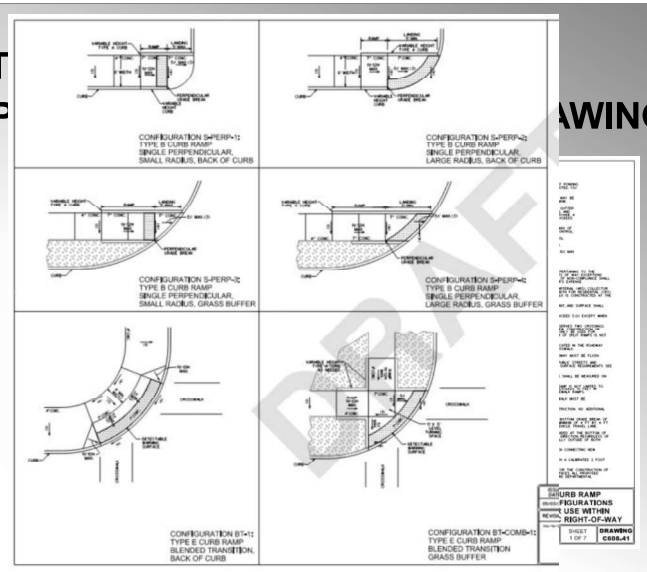

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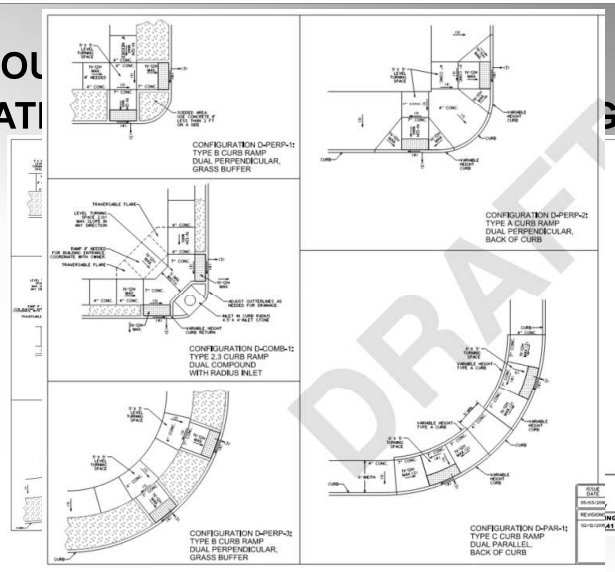

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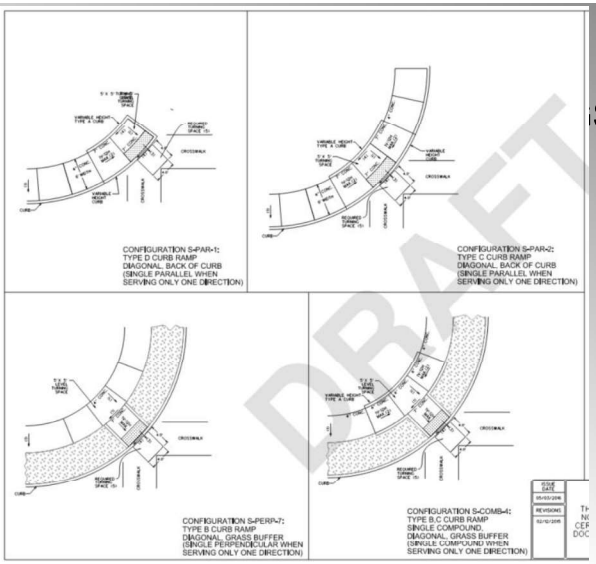

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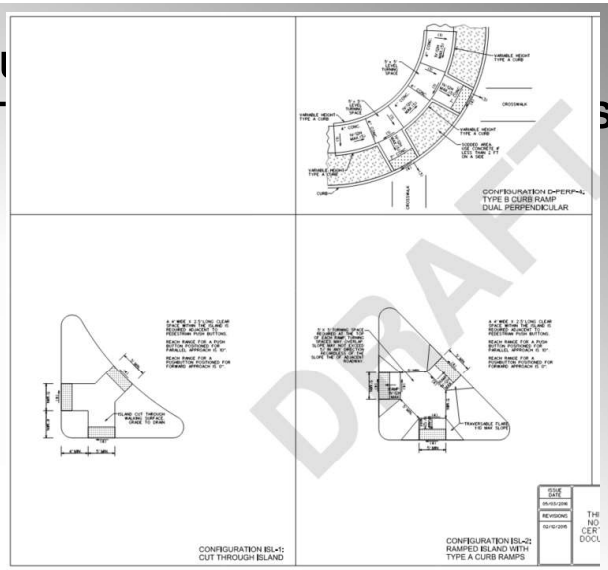

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PUTTING IT ALL TOGETHER

- You have your “Per Each ADA Ramp” JSP
- You Have Current Standard Drawings
  - Each unique ramp design has an easily identifiable name
- So…….What Level of Survey is Needed To Be “Reasonably” Sure Your Standard Ramp Will Fit……..?

Count on CONCRETE

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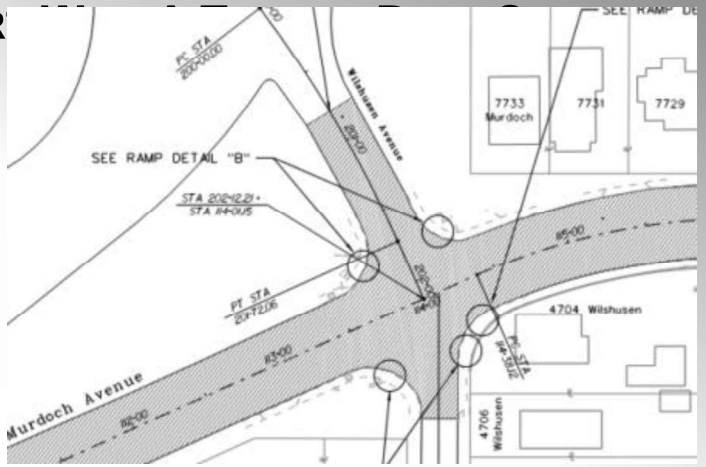

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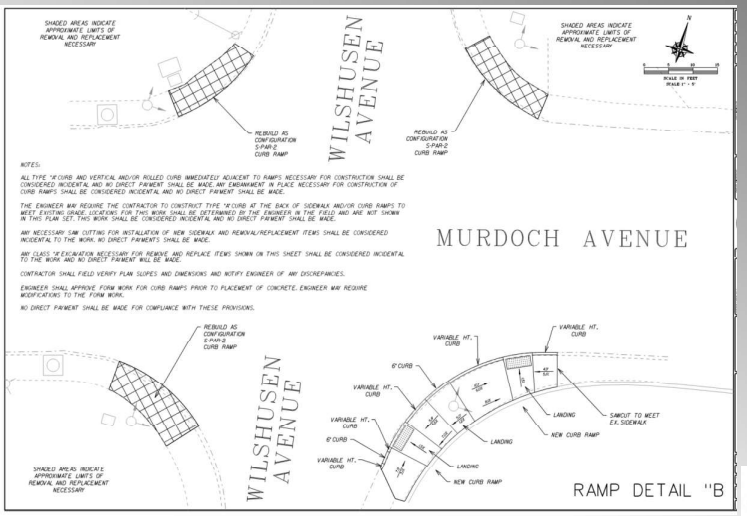

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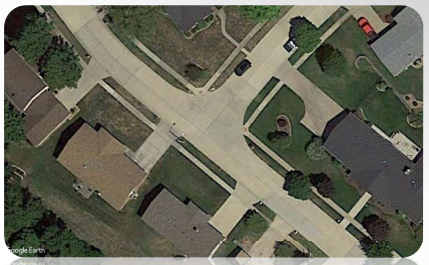
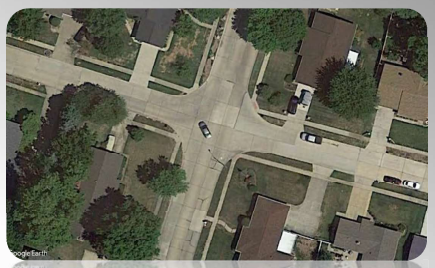
EXAMPLE OF TYPICAL SUBDIVISION RAMPS





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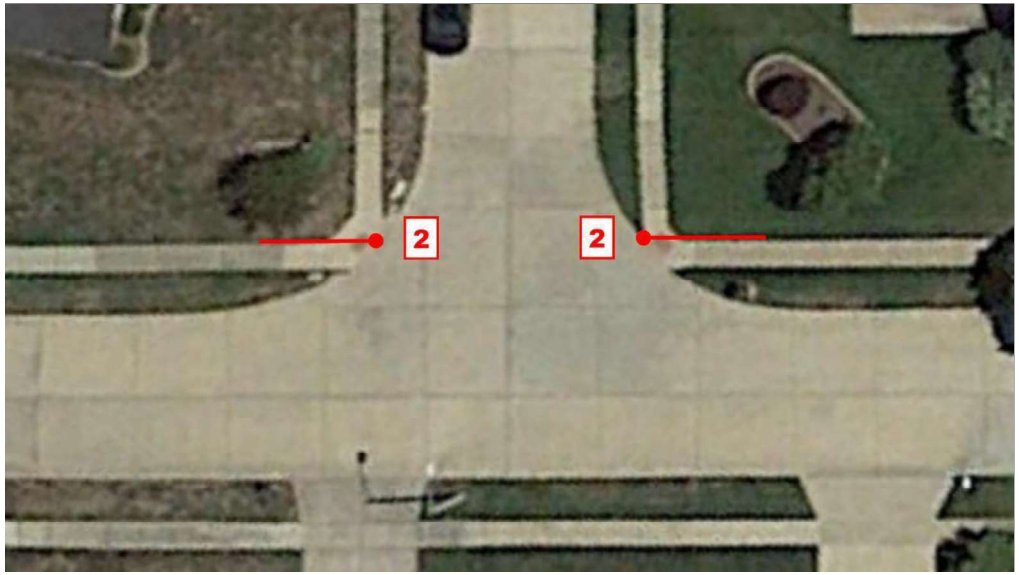


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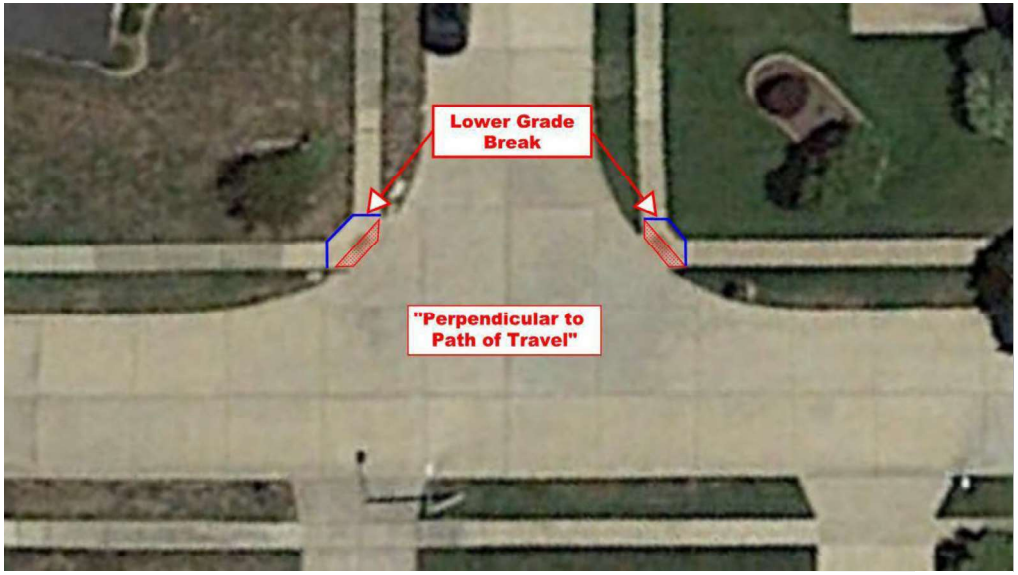
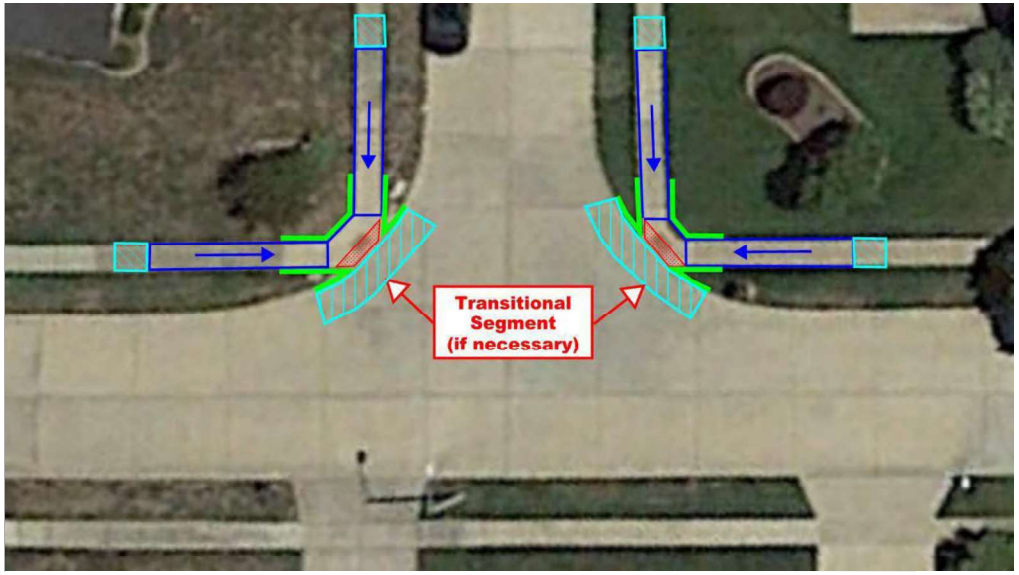
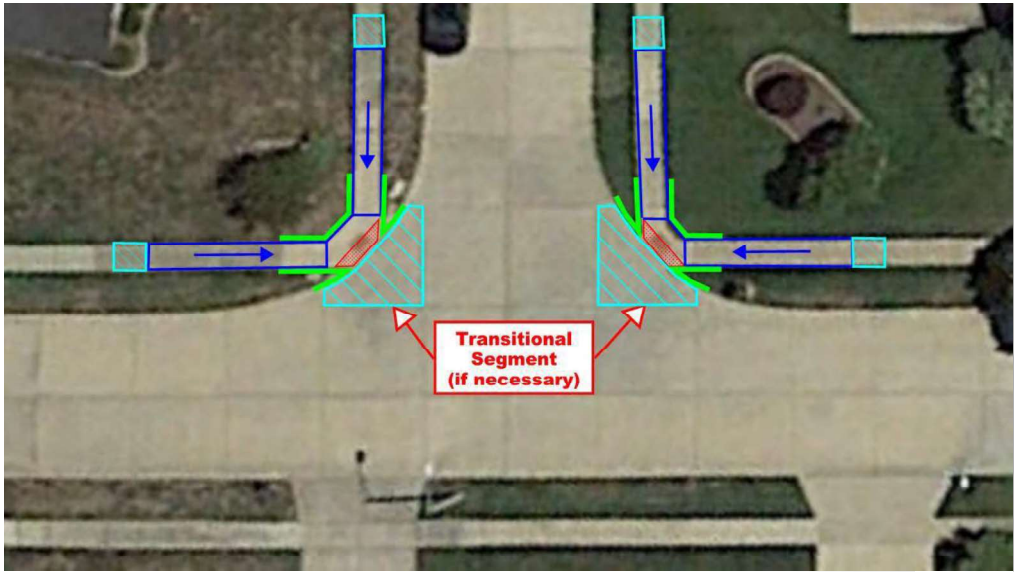

Lower Grade Break
"Perpendicular to Path of Travel"


"Entire area counts toward turning space requirement"


Curb for road and to hold yard grades
15' or 8.33% Ramp
15' or 8.33% Ramp
15' or 8.33% Ramp
15' or 8.33% Ramp
Upper grade break perpendicular to path of travel





THANK YOU VERY MUCH!!!

WE HOPE YOU ENJOYED THIS SERIES ON ADA PROWAG COMPLIANCE

Confucius Say, “Take Path Less Traveled, Don’t Build It”

Count on CONCRETE

ACPA