Engineering Services

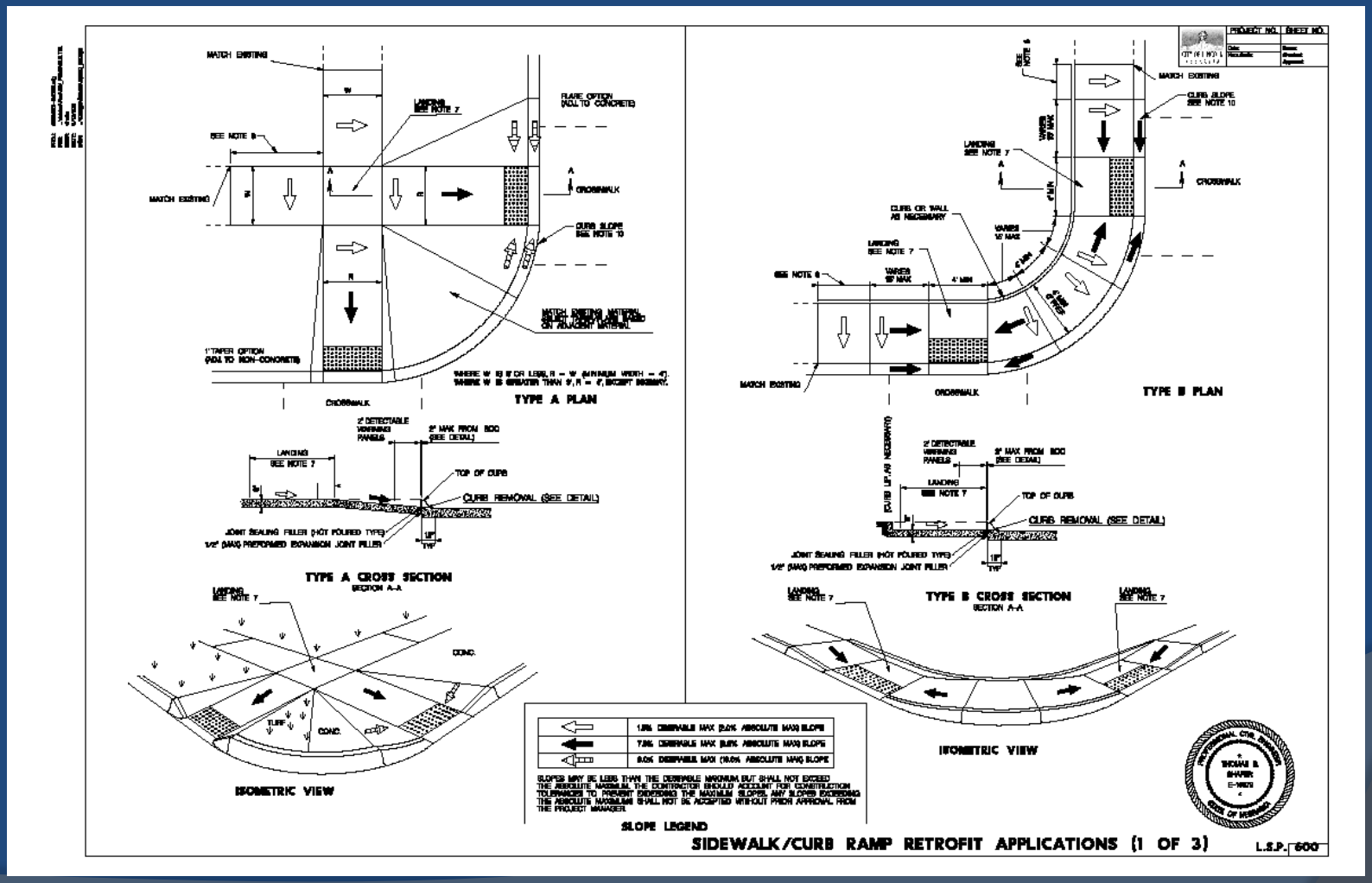
2011 Spring Meeting

ADA COMPLIANT SIDEWALKS AND RAMPS

ADA COMPLIANT SIDEWALKS AND RAMPS

- **LSP 600**
  - **Retrofit vs. New Construction**
  - **Plan view, Cross Section view and Isometric view**
  - **Position of Detectable Warning Panel**
    - Must cover the entire width of the ramp opening
    - Near Corner – Maximum of **2”** from the Back of Curb
    - Far Corner – Maximum of **5’** from the Face of Curb
  - **Curb Lip**
    - Maximum slope of the curb lip is **8.3%** or the slope of the adjacent ramp or landing area, whichever is **less**
  - **Level Landings**
    - Absolute minimum of **4’ x 4’**, absolute maximum slope of **2%** in all directions
  - **Smart Levels**

ADA COMPLIANT SIDEWALKS AND RAMPS



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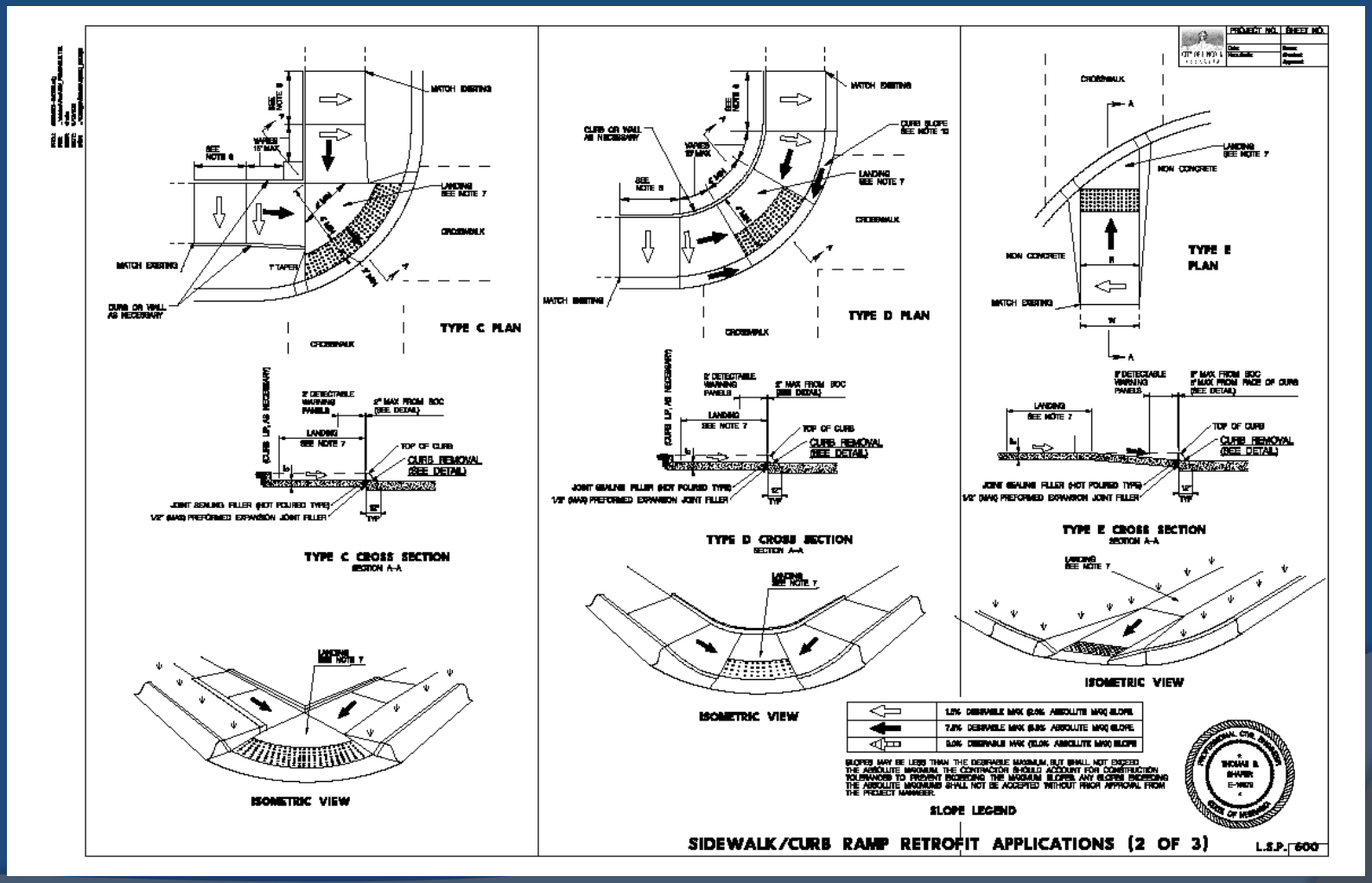

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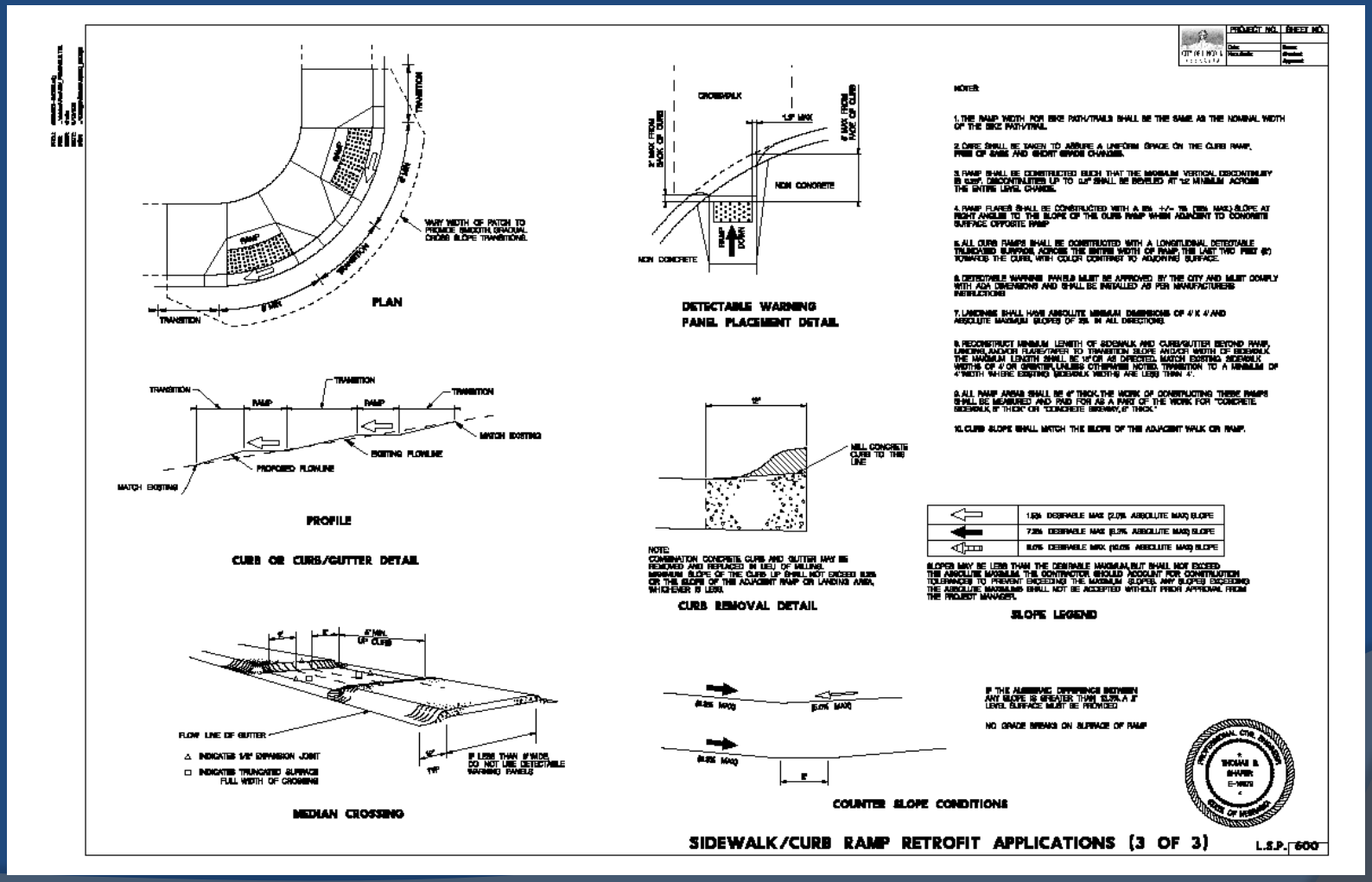

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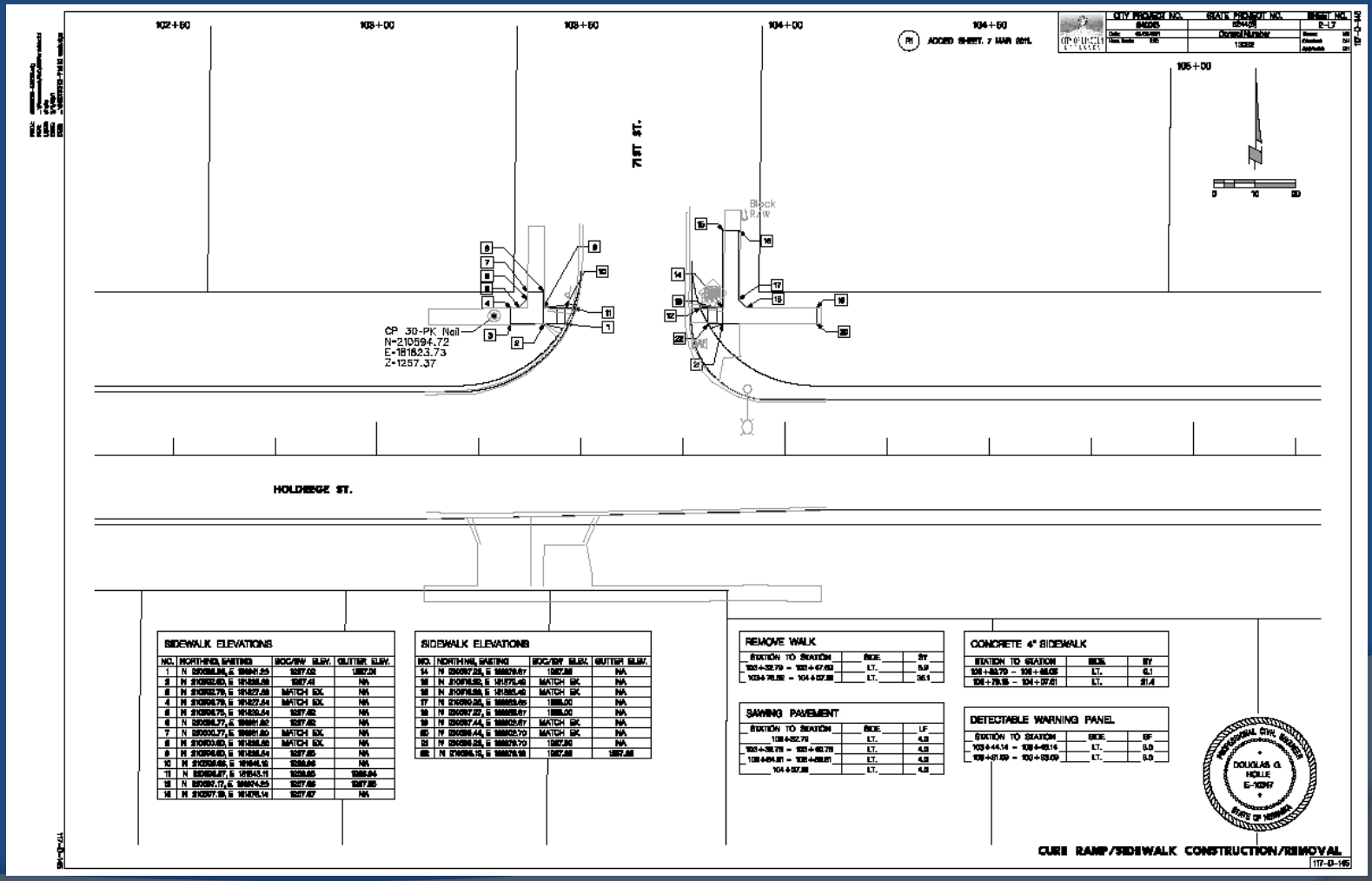


ADA Challenges

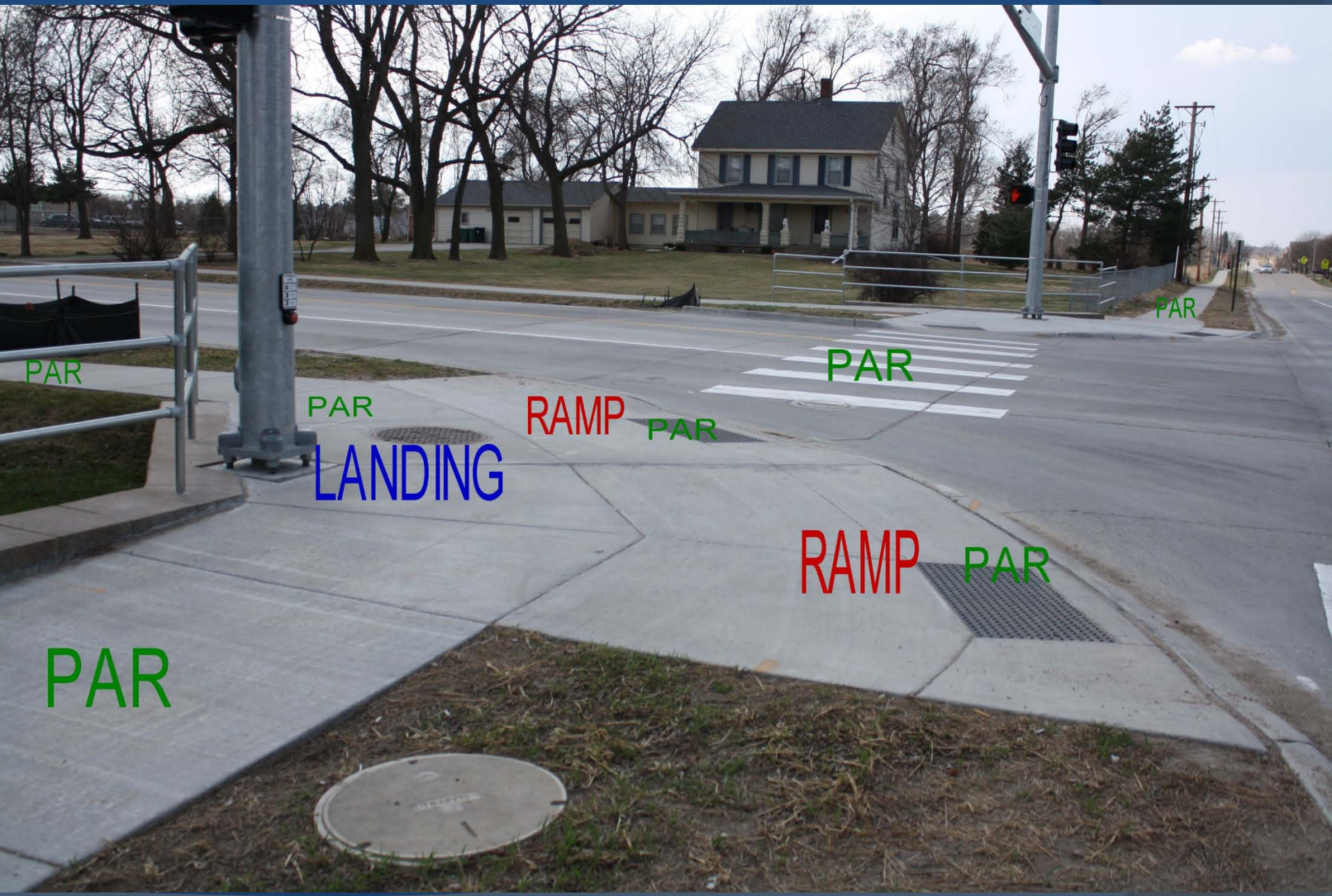
As construction professionals, it is our duty, as detailed by ADA Law, to meet the mobility needs of all users of the public sidewalk system. ADA was implemented in response to the need for accessible pedestrian systems for all users.

ADA Practices

- 30 percent of the adult population does not have automobiles for transportation
- In 2004 there were an estimated 2 million users of wheelchairs
- In 2010 there are an estimated 4 million users of wheelchairs
- It is estimated that 17% use powered wheelchairs
- 2004 Report on “Space Requirements for Wheeled Mobility”

PAR, Pedestrian Access Route

- The pedestrian access route includes all elements for pedestrian access
- This includes sidewalks, curb ramps and cross walks through the street cross section
- Cross walks are an extension of the sidewalk and curb ramps across the street


PAR
PAR
PAR
LANDING
RAMP
PAR
PAR
PAR
RAMP
PAR
PAR

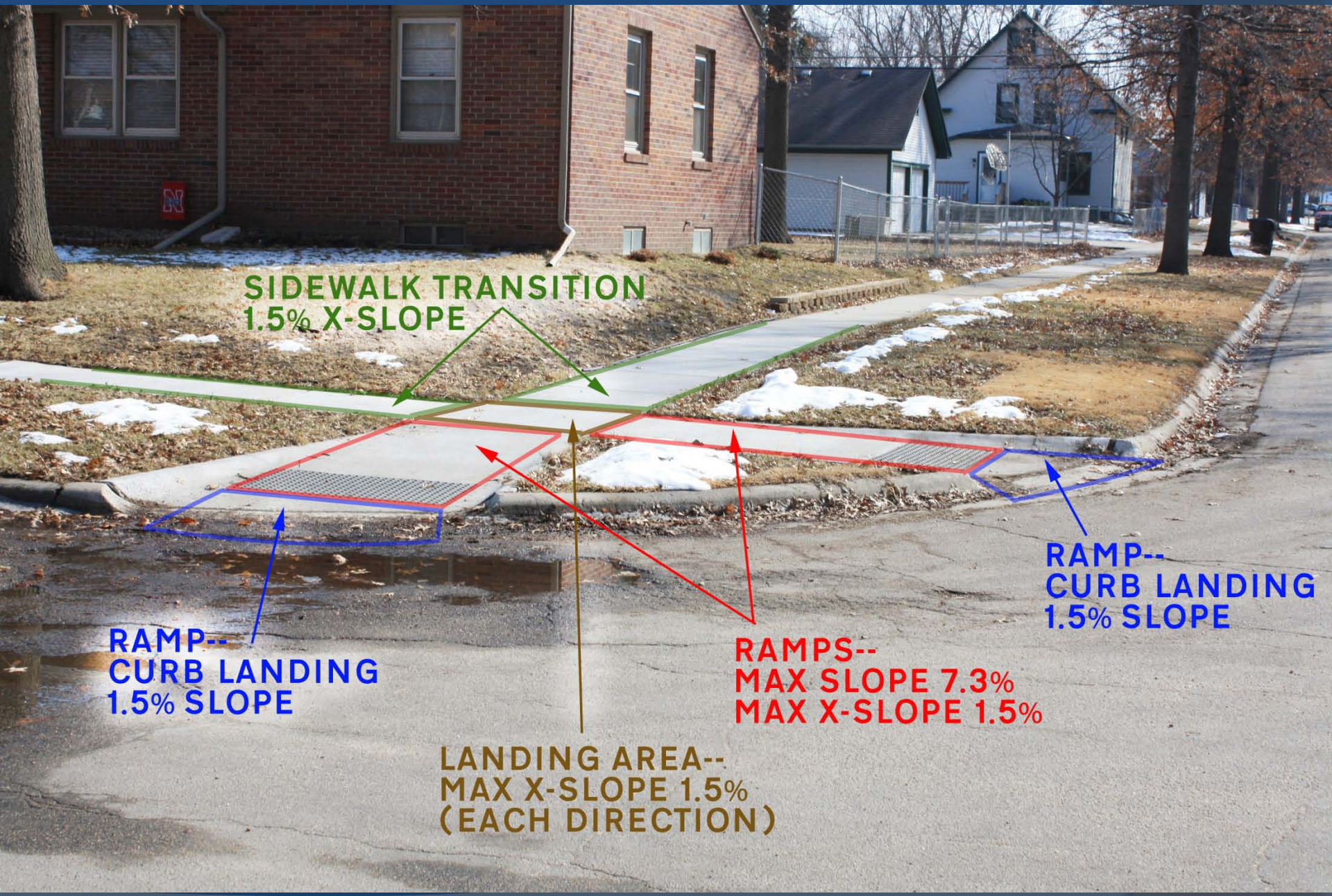
PEDESTRIAN TRAVEL
DIRECTIONS

PEDESTRIAN TRAVEL
DIRECTIONS

Critical construction criteria for a PAR

- 2% Cross slope throughout the PAR, this includes paving, curbs, ramps and sidewalk
- 8.3% for all ramps
- 5% running slope or adjoining street slope
- Minimum sidewalk and ramp width is 4 feet
- Detectible warnings required with ramps

CURB RAMP AND PAR EXAMPLES


SIDEWALK TRANSITION
1.5% X-SLOPE
RAMP--
CURB LANDING
1.5% SLOPE
RAMPS--
MAX SLOPE 7.3%
MAX X-SLOPE 1.5%
RAMP--
CURB LANDING
1.5% SLOPE
LANDING AREA--
MAX X-SLOPE 1.5%
(EACH DIRECTION)

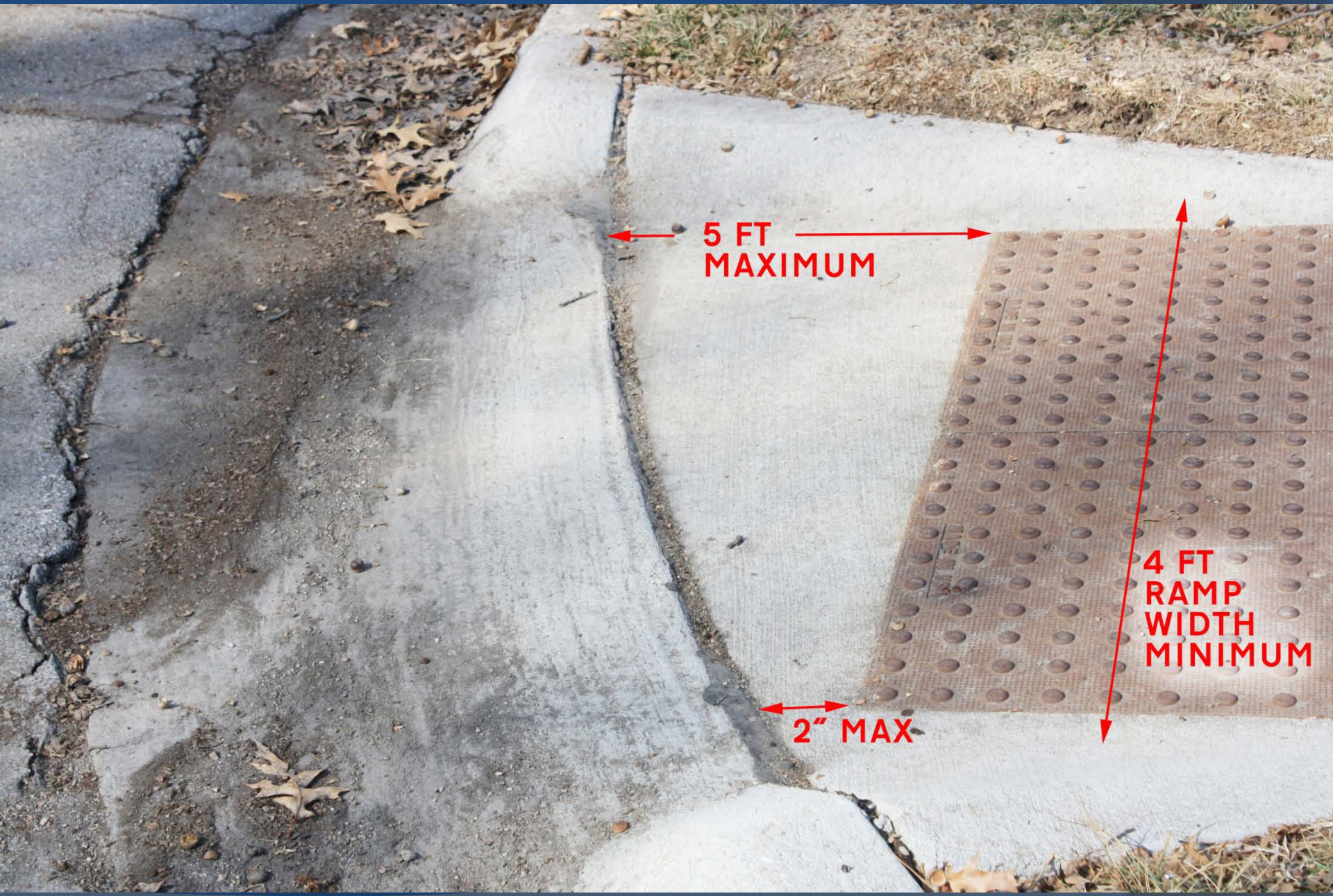
N 34th
ADAMS
RAMP AREAS
7.3%
LANDING--
1.5% SLOPES

LANDING AREA
1.5% SLOPE
RAMP 7.3%

LANDING
1.5%
RAMP
7.3% SLOPE
1.5% X-SLOPE
RAMP - CURB
TRANSITION - LANDING
SLOPE 1.5%

DETECTABLE WARNING PANELS

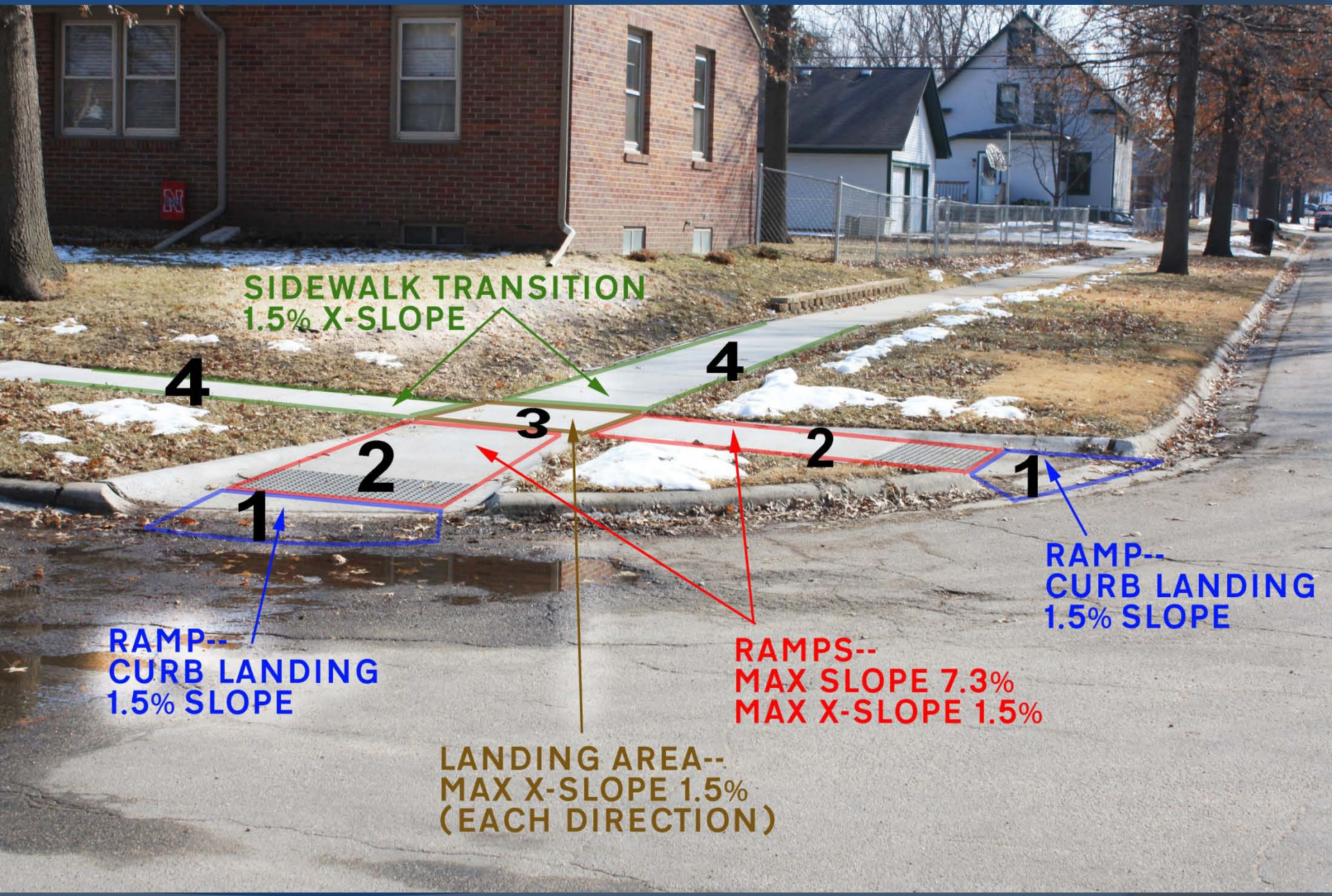
- Two inches from back of curb (8 inches from face of curb nearest edge
- Five feet from curb for farthest edge
- Detectable warning panel must be installed with max 2% cross slope
- Detectable warning panel must match width of curb ramp
- Width of curb ramp must be 4 ft minimum


5 FT
MAXIMUM
4 FT
RAMP
WIDTH
MINIMUM
2" MAX

LANDING
AREA
1.5 % SLOPE
ALL
DIRECTIONS

Construction Quality

- Contractor is responsible to insure all elements of curb ramp and sidewalk construction meet ramp tolerances
- Use of grades and digital smart levels is critical to insure quality compliant construction
- Smart level must be used during and after the placement of the concrete


SIDEWALK TRANSITION
1.5% X-SLOPE
4
4
3
2
2
1
1
RAMP--
CURB LANDING
1.5% SLOPE
RAMPS--
MAX SLOPE 7.3%
MAX X-SLOPE 1.5%
RAMP--
CURB LANDING
1.5% SLOPE
LANDING AREA--
MAX X-SLOPE 1.5%
(EACH DIRECTION)

9.4
%
ELECTRONIC

QUESTIONS?