Crosswalks
City of Des Moines Council Work Session
December 16, 2019

What are crosswalks?

- The City’s Municipal Code defines a crosswalk as “that portion of a roadway ordinarily included within the prolongation or connection of the lateral lines of sidewalks at intersections, or any portion of a street distinctly indicated for pedestrian crossing by lines or other markings on the surface.”

![Unmarked Crosswalk E 13th & Cleveland](image)

![Marked Crosswalk E Grand & Penn](image)

![Midblock Crosswalk E 42nd @ Brubaker School](image)

Design Standards and Guidance

- Manual on Uniform Traffic Control Devices (MUTCD), as adopted by the State of Iowa
- Institute of Transportation Engineers (ITE)
- Federal Highway Administration (FHWA)

How does the City of Des Moines determine when a crosswalk is painted/marked?

Crosswalks are painted/marked:

- At midblock locations with active control - signal, High Intensity Activated Crosswalk (HAWK), Rectangular Rapid Flashing Beacon (RRFB).
- Along designated school walk routes, in coordination with the Des Moines Public School District.
- At stop-controlled intersections within the central business district.
- At signalized locations where there are high volumes of pedestrian and traffic.
- At signalized locations within a defined streetscape area.

Crosswalks should not be painted/marked (unless they fit the criteria above):

- At uncontrolled locations
- Crossing two-lane, local roadways (neighborhood streets) - motorists should be aware of the presence of pedestrians on neighborhood streets and the potential for pedestrians crossing at intersections.
Why paint (or mark) crosswalks?

- Crosswalk markings provide guidance for pedestrians who are crossing roadways by defining and delineating paths on approaches to and within signalized intersections, and on approaches to other intersections where traffic stops.
- In conjunction with traffic signs and other measures, crosswalk markings help to alert road users of a designated pedestrian crossing point across roadways at locations that are not controlled by traffic control signals or STOP or YIELD signs.
- At non-intersection locations, crosswalk markings legally establish the crosswalk.

Why not paint crosswalks?

- An increased crash frequency can be created through a false sense of security for both pedestrians and drivers.
- A pedestrian may falsely think drivers will yield.
- Create a lack of credibility for all traffic control devices.
- An unnecessary installation increases operations and maintenance costs that may divert resources from other necessary maintenance activities and functions.
- An increase in the potential for rear-end crashes between vehicles, due to drivers stopping for pedestrians not waiting for adequate gaps in traffic.
- According to a study done by University of North Carolina and the Federal Highway Administration (FHWA) on two-lane roadways, crosswalks were not found to have any positive or negative impact on pedestrian crash rates.

What the City paints now

- 800 crosswalks
- 750 stop bars
- 2,000 arrows
- 900 bike symbols
- 400 parking stalls
- 460 median “noses”
- 2 Million linear feet (380 miles) of long line markings (double yellow, channelization, edge line, etc.) – This is equivalent to painting a line from Des Moines to Milwaukee.
- The City’s goal is to repaint all long line markings, crosswalks, stop bars, and arrows annually. The goal for all other markings is to repaint every two years.

Who installs pavement markings?

- City staff installs/maintains all pavement markings*
  - Five - Traffic Device Maintenance Workers (TDMW), Four - 120-day seasonal employees
    - Two TDMW operate the long line machine, with two 120-day employees in follow safety trucks
    - Arrow/symbol crew includes one TDMW and one 120-day employee
    - Crosswalk crew includes one TDMW and two 120-day employees
  - Paint season is typically May 1st through November 1st
  - TDMWs also do ALL traffic sign maintenance; therefore, staff are not completely devoted to installing pavement markings.
  - $80,000 annual pavement markings paint budget to purchase materials (paint/beads)

*In 2019, due to the current quantity of painted pavement markings city-wide, a contractor was hired to repaint crosswalks and stop bars along E 14th Street.

- Contractor installs pavement markings on resurfacing and roadway reconstruction projects.
What about colored or art crosswalks?

- Painted crosswalk murals do not conform to the Manual on Uniform Traffic Control Devices (MUTCD) requirements for crosswalk markings and therefore, cannot be considered a designated marked crosswalk.
- Painted crosswalk murals where white transverse crosswalk lines do not exist could give pedestrians a false sense of security.
- Painted crosswalk murals could be a risk of attempting to communicate with roadway users; therefore, deterring from other traffic control devices or distracting users.
- The Federal Highway Administration (FHWA) has issued an official ruling on crosswalk art stating that only aesthetic treatments that simulate paving are allowed (such as the brick or stamped asphalt/concrete).
- The FHWA has also stated that the use of crosswalk art is actually contrary to the goal of increased safety and most likely could be a contributing factor to a false sense of security for both motorists and pedestrians. The FHWA most recently states that the use of 3-D crosswalks that have been shown in the media has been studied and have shown “unintended – and potentially dangerous-effects” such as drivers swerving and braking abruptly.
- FHWA staff met with City staff about concerns with existing art route crosswalks.
Potential Considerations for Street/Sidewalk Art

- Create a street painting program for low volume, residential streets similar to Portland, Oregon.
- Administered through the existing Street Use Permit program.
- Artwork would be installed and maintained by the applicant (neighborhood, community group, school, etc.)
- Artwork would not be considered a traffic control device and would not be placed near a traffic control devices (median, crosswalk, etc.). As a result, it would not be in violation of the MUTCD and FHWA ruling.
- Requirements would likely include:
  - Art Foundation approval
  - Approval by impacted departments (Engineering, Public Works, etc.)
  - Petition from directly adjacent property owners