







OHIO DEPARTMENT OF
TRANSPORTATION

ROADWAY ENGINEERING

Office of Roadway Engineering

Adam Koenig
Administrator

Roadway

Jennifer Alford
Roadway Section Head

- **Preliminary Engineering**
  - Preliminary Design Assistance
- **Geometrics**
  - Design Exceptions Plan Reviews
- **Studies**
  - Traffic Studies Access Management
- **Standards**
  - Barrier & MASH ADA Value Engineering

Traffic Control

Jonathan Young
Traffic Control Section Head

- **Maintenance Of Traffic**
  - Plan Reviews, MOTAA Permitted Lane Closures MOTEC, Standards
- **Lighting & Signals**
  - Plan Reviews LDRP, Standards PPR & SERF
- **Signing & Striping**
  - Standards Pavement Marking Improvement Committee
- **Standards**
  - Manuals, Standards & SCD's

- **Manuals:** Location and Design Volume 1, ODOT Analysis and Traffic Simulation (OATS) Manual & State Highway Access Management Manual
- **Roadway** SCDs, PISs & Approved Products List
- **Policies:** Curb Ramps Required in Resurfacing Plans & Design Value Engineering Policy

- **Manuals:** Ohio Manual of Uniform Traffic Control Devices (MUTCD), Traffic Engineering Manual (TEM), Multimodal Design Guide (MDG) Sign Designs and Markings Manual (SDMM), Temporary Traffic Control Manual
- **Traffic** SCDs, PISs, Qualified Products List (QPL) & Traffic Authorized Products (TAP) List
- **Policy:** Traffic Management in Work Zones

Available Training:

- LTAP Traffic Academy Courses: Highway Lighting, Interchange Studies, Maintenance of Traffic & Signing and Markings, WTS Prequal Training, Traffic Signals, ITS
- Geometric Review and Design (GRAD) Training Videos
- OATS Training Videos
- ADA Curb Ramp Design Training Videos
- Standards Updates Webcasts

MANUAL UPDATE SCHEDULE

- All standards are updated at the end of January and July of each year
- Requests for revisions/ updates are accepted anytime
- Revisions are primarily based on new publications/ information, specific project experiences, new materials, FHWA and other organization guidance
- Standards are reviewed by ODOT staff, FHWA, OCA, Contractors, ITE, & ACEC.

RECENT UPDATES/PUBLICATIONS

- MUTCD (11th edition) published 12/19/2023
  - States must adopt the 11th edition or have a state MUTCD or supplement by January 18, 2026.
  - Ohio will be developing a **Supplement** instead of an OMUTCD as we have done previously.
  - Between now and the future release of the Ohio Supplement to the MUTCD, practitioners may utilize either the current 2012 OMUTCD or the new 11th Edition of the MUTCD as long as the new guidance does not conflict with the ORC or the current OMUTCD. Before implementing new design guidance that does not exist in the current OMUTCD, please contact Jonathan Young for approval until the Ohio Supplement to the MUTCD is released. (Jonathan Young, Traffic Control Section Head 614-752-9967 or email at Jonathan.young@dot.ohio.gov)
  - ORC may be revised to match the MUTCD Shoulder definition

RECENT UPDATES/PUBLICATIONS

- PROWAG
  - U.S. Access Board has published its final rule in the Federal Register on August 8, 2023. However, this still needs to be reviewed and adopted by the Department of Transportation (which may not adopt it fully) and the Department of Justice.
  - Until we have further direction from FHWA, ODOT will continue to use the adopted Draft 2011 PROWAG as the governing document for accessible design within ODOT's public right-of-way.
- NCHRP Report 1043, Guide for Roundabouts
  - Replaced NCHRP Report 672 (Roundabouts: An Informational Guide)

L&D VOL 1 & ROADWAY STANDARD CONST DRAWINGS
(JANUARY 2024 UPDATE)

Mike Cronebach
Don Fisher
Chris Yount

L&D VOL 1: 102.2 TRAFFIC DATA CONTENT

102.2 Traffic Data Content

The design criteria tables in this manual require basic traffic data for the design year. The traffic design year is generally considered to be the following:

Project Type	Traffic Design Year (After Opening Day)
New Construction	20 years hence
Reconstruction	20 years hence
Major Pavement Rehabilitation	20 years hence
Minor Pavement Rehabilitation	12 years hence
Two-Lane Resurfacing	12 years hence

Except for Minor Pavement Rehabilitation (maintenance resurfacing), all project types on the Interstate require 20-year design traffic (Title 23 – HIGHWAYS).

Roadway Engineering Oct 2023 and Jan 2024 Update

L&D VOL 1: 401.6.1 LEFT TURN LANES

- At a minimum, left turn lanes should be placed opposite each other on opposing approaches (zero offset) to enhance sight distance. A positive offset of left turn lanes increases visibility by providing improved sightlines. The safety benefits of a positive left turn lane offset is a proven safety measure especially at locations with higher speeds, or where free-flow or permissive movements are possible.

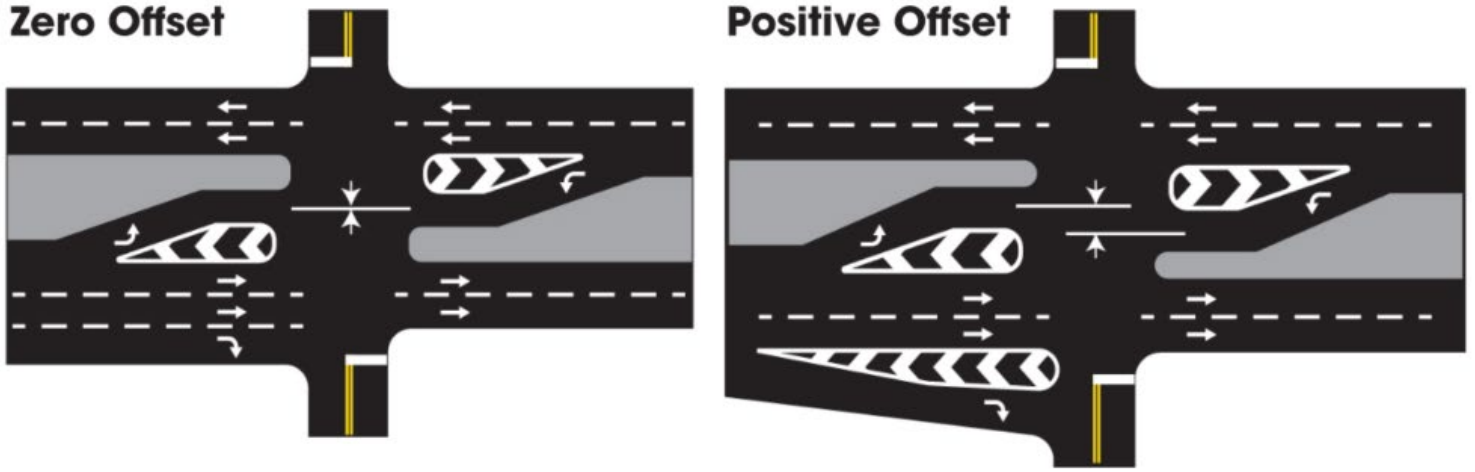


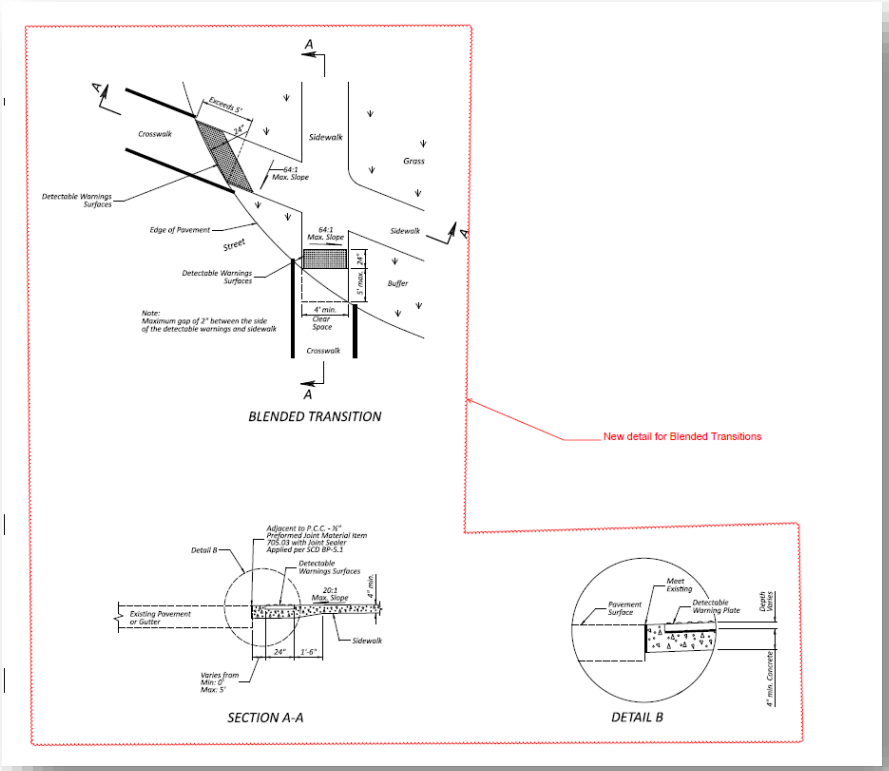
Illustration comparing zero offset to positive offset of left- and right-turn lanes. Source: FHWA

L&D VOL 1: 403 ROUNDABOUTS

- **403.4.4.2: Design vehicles at multilane roundabouts**
  - Guidance was added for how the design vehicles are handled at multi-lane roundabouts. The two options presented are “stay-in-lane” and straddle lanes.
- **403.4.4.3: Agricultural vehicles at rural locations**
  - Design guidance was added for accommodating agricultural equipment at roundabouts. Suggestions included offsetting vertical elements outside the swept path of agricultural vehicles and using traversable curbing at splitter islands, center islands and curbs along the outer perimeter of the roundabout.
- **403.6.3: Central island**
  - A new subset of roundabouts was introduced with the release of NCHRP 1043. Compact roundabouts were added. Compact roundabouts offer the best features of mini-roundabouts and single-lane roundabouts by offering traversable elements and using a smaller footprint.

STANDARD CONSTRUCTION DRAWINGS – BP-7.1

- **BP-7.1 New Curb Ramps**
  - Added a note and details for blended transitions



OHIO DEPARTMENT OF TRANSPORTATION

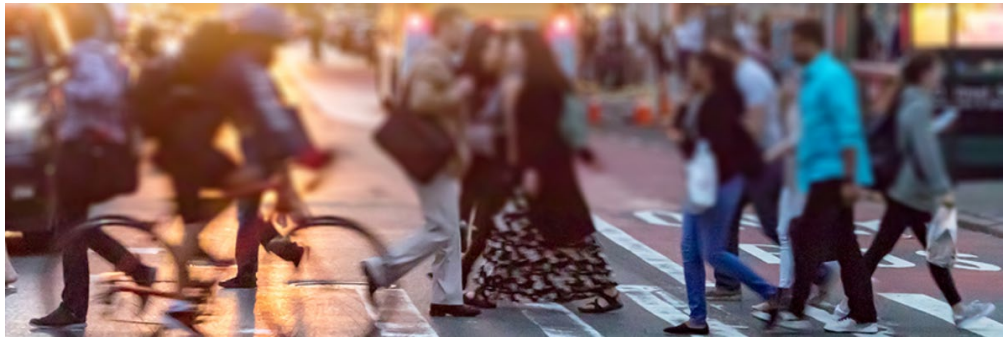
BIKE AND PEDESTRIAN UPDATES

Kevin Fiant

Jennifer Alford

MULTIMODAL DESIGN GUIDE (MDG)

- Revision History
  - For detailed Revision History see below link:
  - https://www.transportation.ohio.gov/working/engineering/roadway/manuals-standards/multimodal/revisions



MDG SIGNIFICANT UPDATES

- Table 4-1: Pedestrian Zone with Sidewalk Widths for Urban Core, Urban, Suburban, and Rural Town Areas
  - Added Note E indicating, “Curb width is not to be included in Pedestrian Through Zone/Sidewalk Width or Buffer Zone Width”

Table 4-1: Pedestrian Zone with Sidewalk Widths for Urban Core, Urban, Suburban, and Rural Town Areas

Land Use	Frontage Zone Minimum Width (FT) (A)	Pedestrian Through Zone Sidewalk Width (FT) (B) (E)	Buffer Zone Width (FT) (C) (D) (E)
Central Business District	2 – 6	8 - 14	4 – 8
Commercial	2 – 6	6 – 8	2 – 8
Residential	2	5 – 7	2 – 6

A. 2 ft. Frontage Zone is the minimum, and a 1 ft. Frontage Zone may be used in constrained environments. A 6 ft. Frontage Zone is the minimum width to accommodate sidewalk cafés.

B. In rare, constrained conditions, the Pedestrian Through Zone width can be reduced to 4 ft, although this width does not provide adequate space for pedestrians passing in opposite directions and requires a minimum of a 5 ft. wide by 5 ft. long passing sections every 200 ft. (see PROWAG Section R302.4).

C. Where trees are desired and permitted within the buffer, the buffer width must sustain the long-term health and vitality of trees and accommodate the urban lateral offset or clear zone as appropriate.

D. When a buffer cannot be provided, then the minimum curb- attached sidewalk width is 7 ft. for residential areas and 8 ft. for all other contexts. All roadways with curb-attached sidewalks or buffers should be constructed with vertical curbing.

E. Curb width is not to be included in Pedestrian Through Zone/Sidewalk Width or Buffer Zone Width.

MDG SIGNIFICANT UPDATES

- MDG 4.7.2.1: Pedestrian Only Grade Separated Crossings - Guidelines
  - Added guidance for pedestrian bridge width

4.7.2.1 Guidelines

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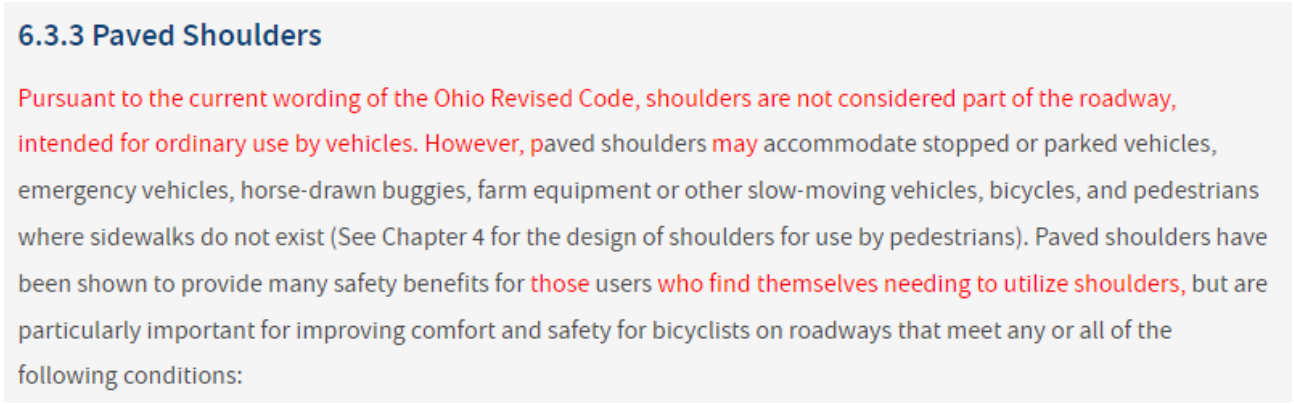
Cross section of new and reconstructed pedestrian bridges should be the width of connecting approach pedestrian walkway plus minimum 2 ft shy distance each side (1 ft shy distance each side in constrained conditions). A reconstructed bridge is any improvement to an existing bridge involving the replacement of the bridge deck or more.

- MDG 4.9: Additional Resources
  - Updated reference to Design Reference Resource Center to the new Publications Gateway in Section 4.9 and footnotes

MDG SIGNIFICANT UPDATES

- MDG 6.3.3: Paved Shoulders
  - Update language in 1st paragraph to clarify usage of shoulders and definition within ORC.



6.3.3 Paved Shoulders

Pursuant to the current wording of the Ohio Revised Code, shoulders are not considered part of the roadway, intended for ordinary use by vehicles. However, paved shoulders may accommodate stopped or parked vehicles, emergency vehicles, horse-drawn buggies, farm equipment or other slow-moving vehicles, bicycles, and pedestrians where sidewalks do not exist (See Chapter 4 for the design of shoulders for use by pedestrians). Paved shoulders have been shown to provide many safety benefits for those users who find themselves needing to utilize shoulders, but are particularly important for improving comfort and safety for bicyclists on roadways that meet any or all of the following conditions:

- MDG 8.8.1: Crossing and Conflict Signage - Yield Here to Pedestrians/Bicyclists Sign (R1-5)
  - Updated the second paragraph to indicate that R1-5 signs shall be used on all multi-lane approaches to be consistent with OMUTCD requirements

QUESTIONS

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Roadway Engineering Contacts | Ohio Department of Transportation

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