

# National Committee on Uniform Traffic Control Devices

13236 North 7th Street, Suite 4-259, Phoenix, Arizona 85022  
Phone/Text: 231-4-NCUTCD (231-462-8823)  
E-mail: secretary@ncutcd.org Website: <https://ncutcd.org>

## National Committee on Uniform Traffic Control Devices (NCUTCD) Recommended Changes to Proposed Text for 11<sup>th</sup> Edition of the MUTCD Docket Number: FHWA-2020-0001

**Federal Register Item Number:** 354-358

**NPA MUTCD Section Number:** Sections 3D.01-3D.07

**Legend:** Base text shown in proposal is the NPA “clean” proposed text.

- [NCUTCD recommendation for text to be added in final rule.](#)
- ~~NCUTCD recommendation for text to be deleted in final rule.~~
- [NCUTCD recommendation for text to be moved/relocated in final rule.](#)
- NPA text that was not previously approved by NCUTCD but is now approved.
- Explanatory note: [\[Note that explains purpose of recommended change.\]](#)

The following pages present NCUTCD recommendations for changes to the MUTCD NPA proposed text, tables, and figures for Chapter 3D. Below is a short summary of the NCUTCD position for each section of this chapter. A more detailed summary is provided at the beginning of each section.

- NPA #354, Section 3D: Changes recommended based on Council action in spring 2021.
- NPA #355, Section 3D.01: NCUTCD agrees with NPA content (no changes recommended).
- NPA #356, Section 3D.02: Changes recommended based on Council action in spring 2021.
- Section 3D.03: Changes recommended based on Council action in spring 2021.
- NPA #357, Section 3D.04: Changes recommended based on Council action in spring 2021.
- Section 3D.05: NCUTCD agrees with NPA content (no changes recommended).
- NPA #358, Section 3D.06: Changes recommended based on Council action in spring 2021.
- Section 3D.07: NCUTCD agrees with NPA content (no changes recommended).

**Chapter 3D Comments:** NCUTCD recommends changing the Chapter 3D title to “Roundabout Markings”.

## CHAPTER 3D. ~~CIRCULAR INTERSECTION~~ ROUNDABOUT MARKINGS

**Section 3D.01 Comments:** NCUTCD agrees with 3D.01 as presented in the NPA.

### Section 3D.01 General

#### Guidance:

*Pavement markings and signing for a roundabout should be integrally designed to correspond to the geometric design and intended lane use of a roundabout.*

*Markings on the approaches to a roundabout and on the circulatory roadway should be compatible with each other to provide a consistent message to road users. The markings should supplement the signing, both conveying the optional and mandatory movements such that road users will know to choose the proper lane in the approach to the roundabout and remain in that lane throughout departure from the circulatory roadway.*

#### Support:

Figure 3D-1 provides an example of the pavement markings for approach and circulatory roadways at a roundabout. Figures 3D-2 through 3D-8 illustrate examples of markings for roundabouts of various geometric and lane-use configurations.

Traffic control signals, pedestrian hybrid beacons, and rectangular rapid flashing beacons (see Part 4) are sometimes used at roundabouts to facilitate the crossing of pedestrians.

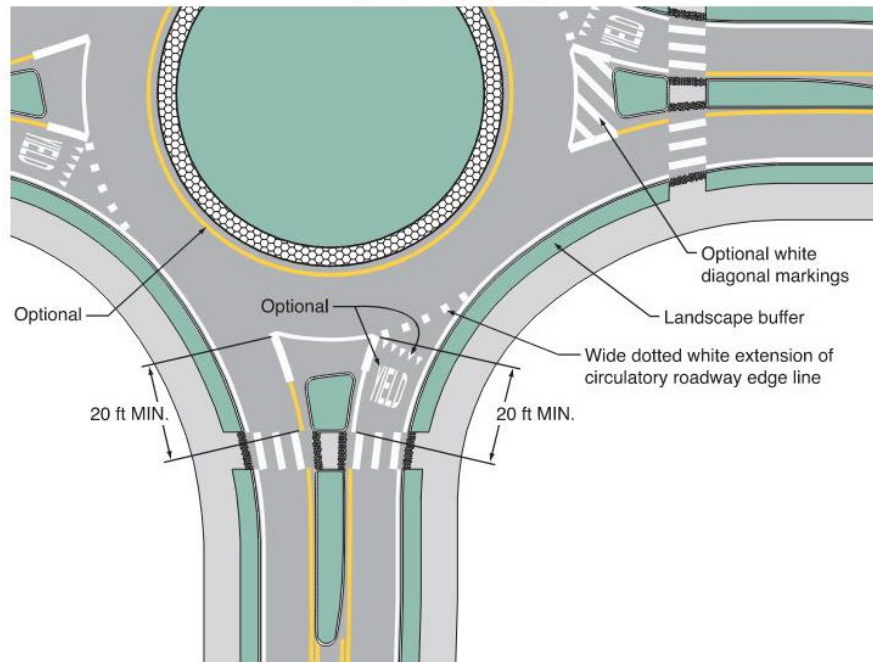
Section 8A.12 contains information about roundabouts that contain or are in close proximity to grade crossings.

Section 9E.05 contains information regarding bicycle lane markings at roundabouts.

**Figure 3D-1 Comments:** NCUTCD agrees with Figure 3D-1 as presented in the NPA.

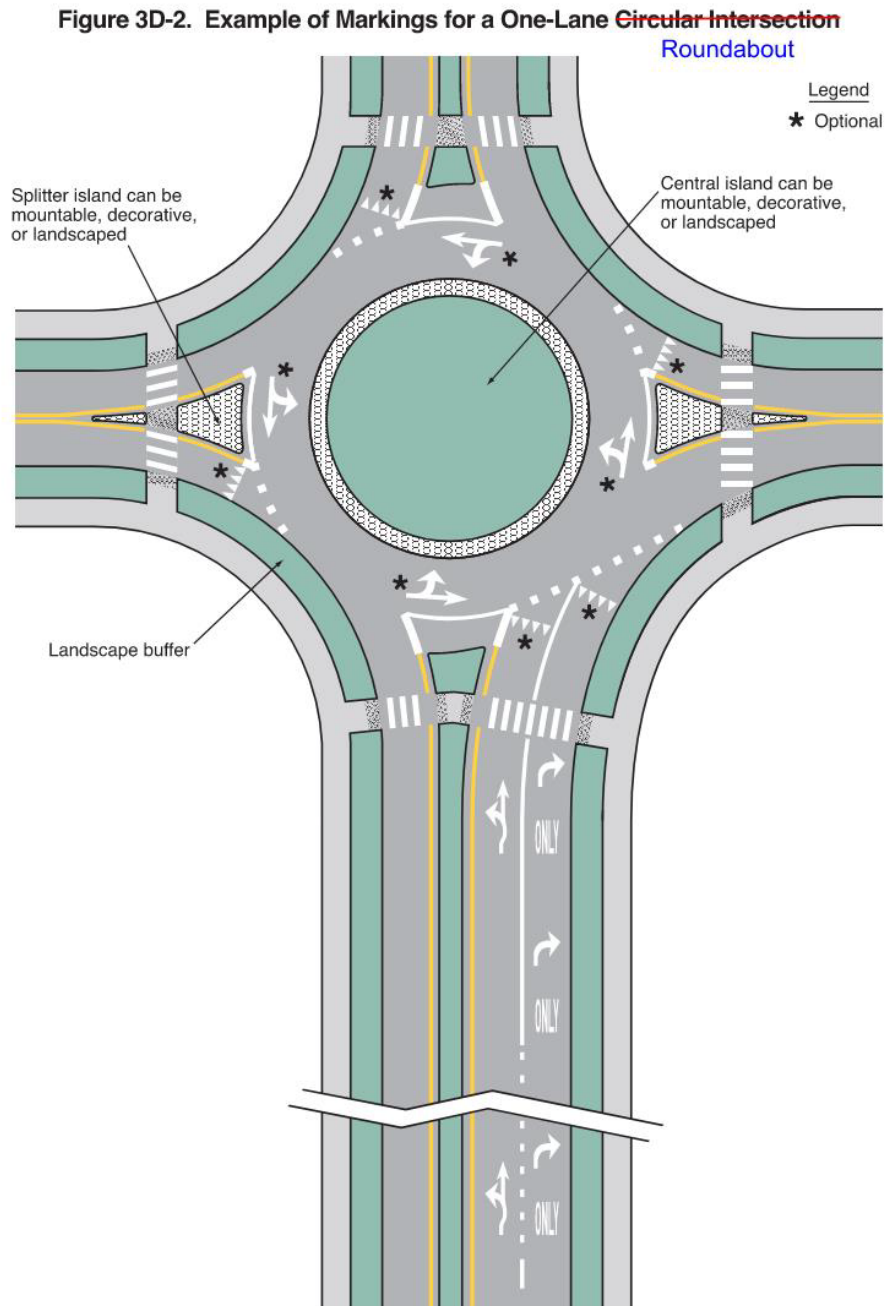
**Figure 3D-1. Example of Markings for Approach and Circulatory Roadways at a Roundabout**

**Figure 3D-1. Example of Markings for Approach and Circulatory Roadways at a Roundabout**



**Figure 3D-2 Comments:** NCUTCD agrees with Figure 3D-2 as presented in the NPA, but recommends changing the title from Circular Intersection to Roundabout.

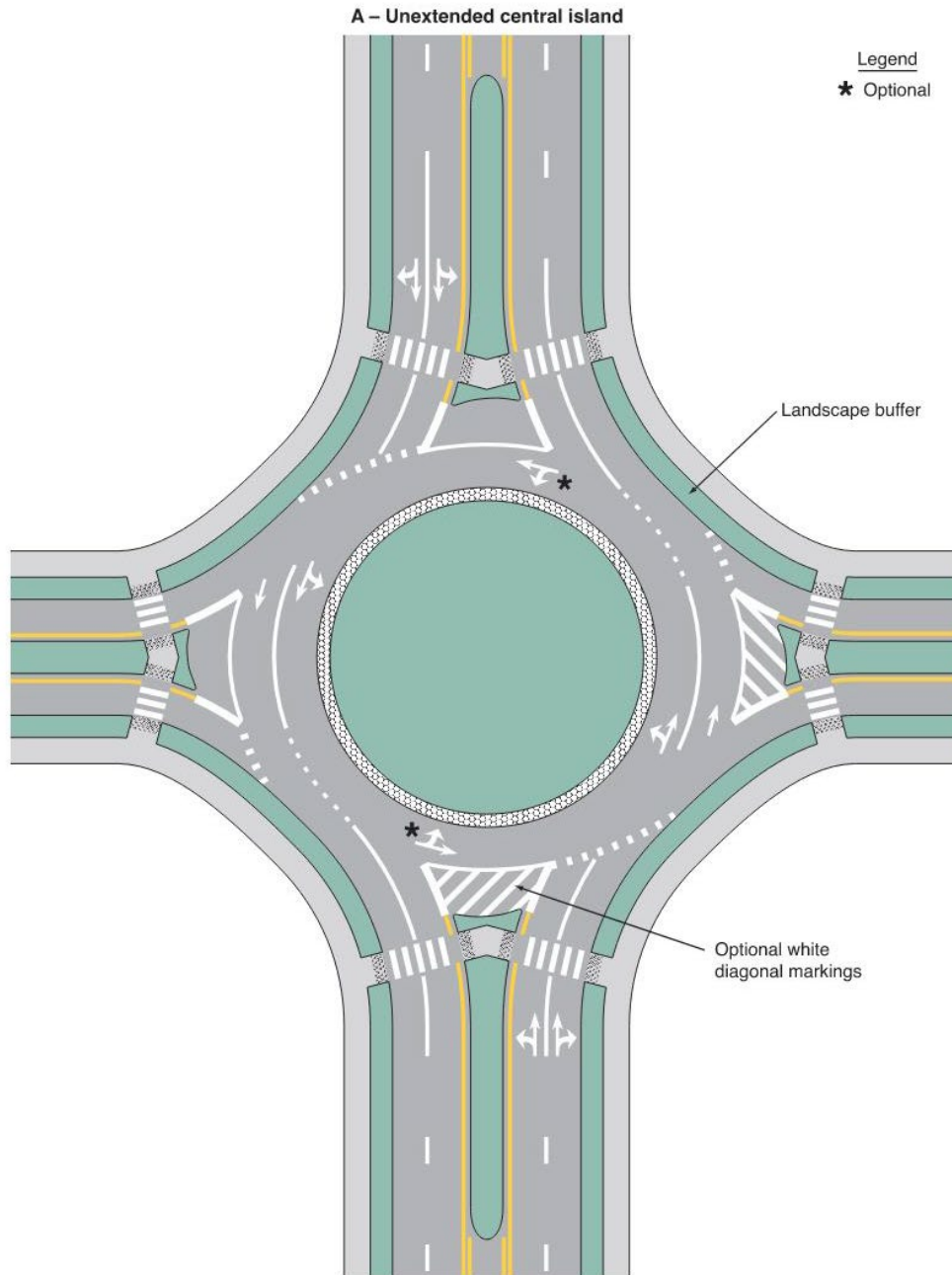
**Figure 3D-2. Example of Markings for a One-Lane Roundabout**



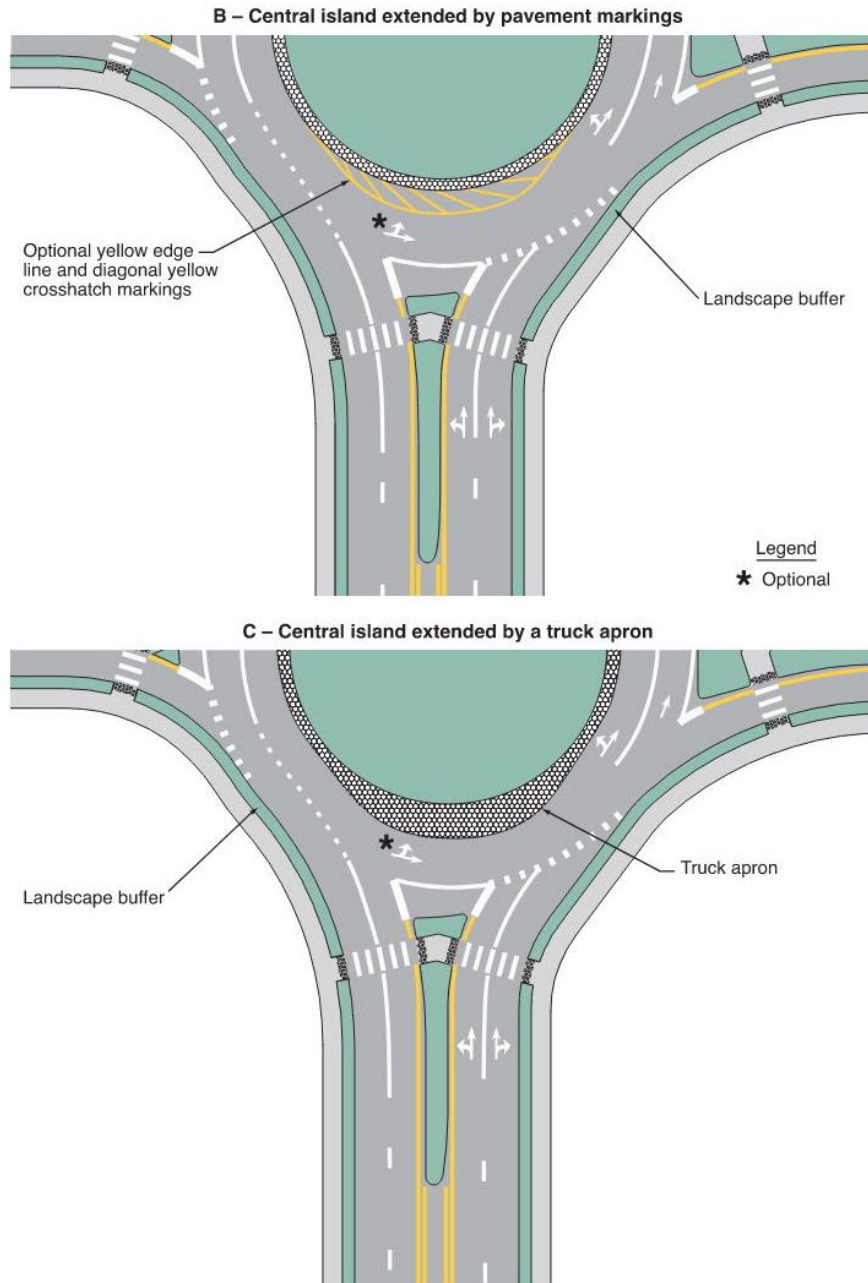
70 **Figure 3D-3 Comments: NCUTCD agrees with Figure 3D-3 as presented in the NPA.**

71 **Figure 3D-3. Example of Markings for a Two-Lane Roundabout with One- and Two-**  
72 **Lane Approaches (2 sheets)**

73 **Figure 3D-3. Example of Markings for a Two-Lane Roundabout with**  
**One- and Two-Lane Approaches (Sheet 1 of 2)**



**Figure 3D-3. Example of Markings for a Two-Lane Roundabout with One- and Two-Lane Approaches (Sheet 2 of 2)**



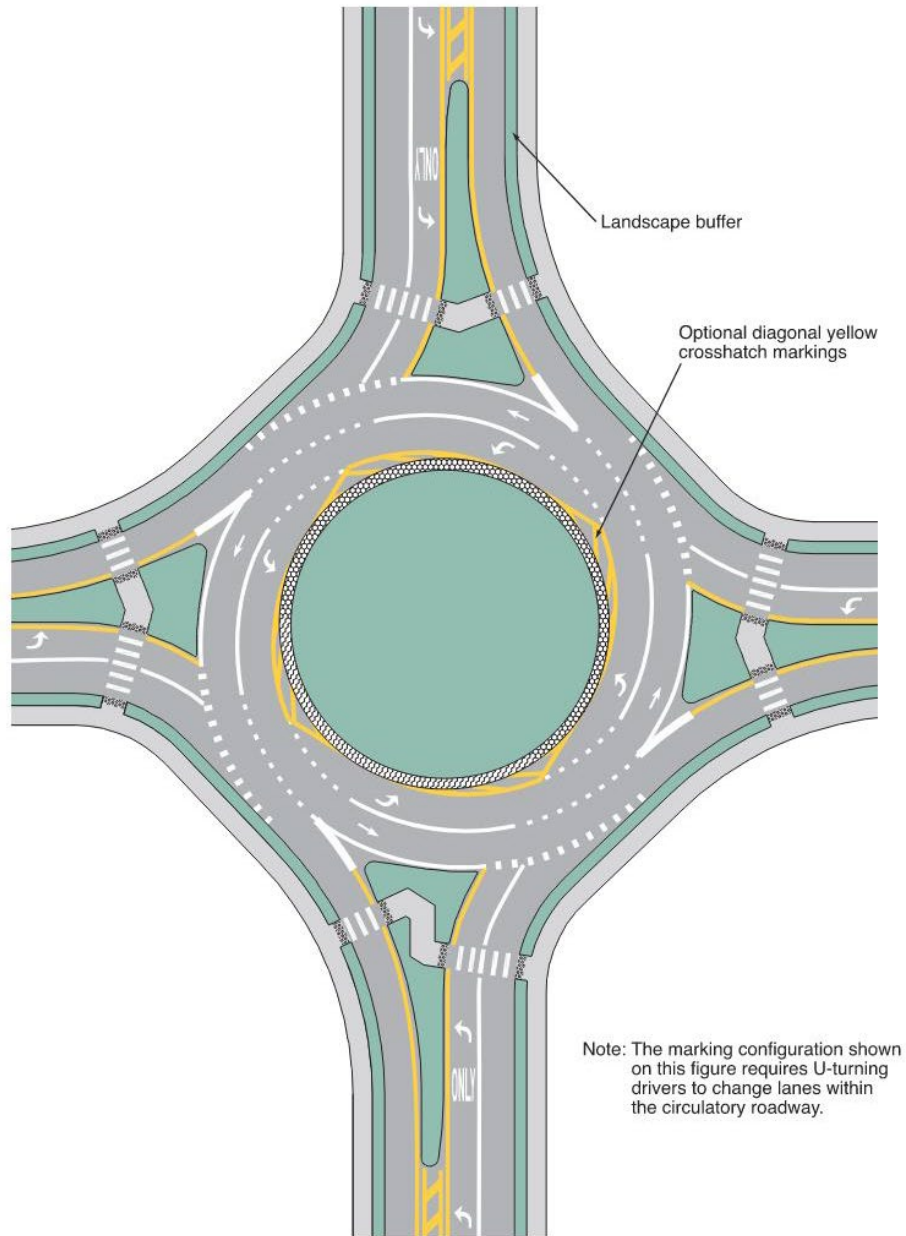
75  
76



**Figure 3D-4 Comments:** NCUTCD agrees with Figure 3D-4 as presented in the NPA.

**Figure 3D-4. Example of Markings for a Two-Lane Roundabout with One-Lane Exits**

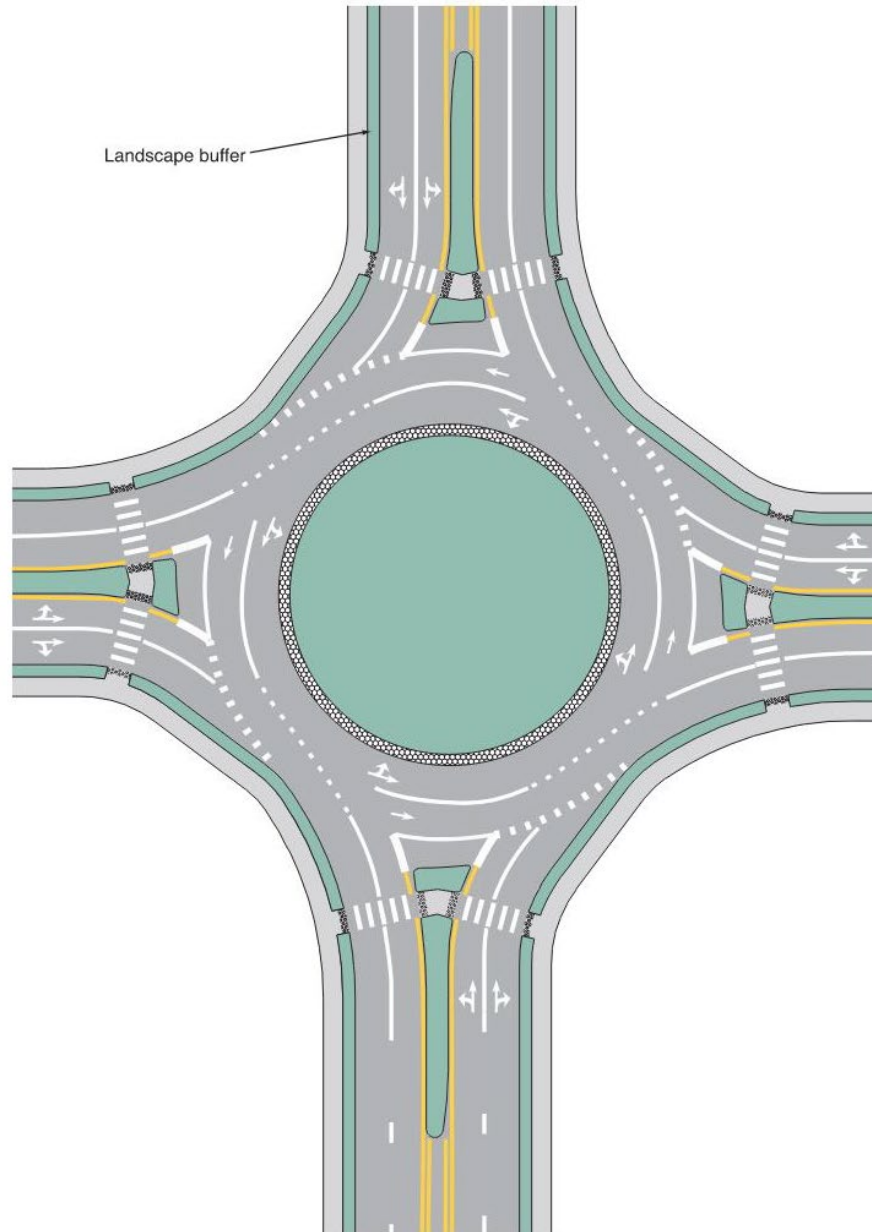
Figure 3D-4. Example of Markings for a Two-Lane Roundabout with One-Lane Exits



**Figure 3D-5 Comments:** NCUTCD agrees with Figure 3D-5 as presented in the NPA.

**Figure 3D-5. Example of Markings for a Two-Lane Roundabout with Two-Lane Exits**

Figure 3D-5. Example of Markings for a Two-Lane Roundabout with Two-Lane Exits

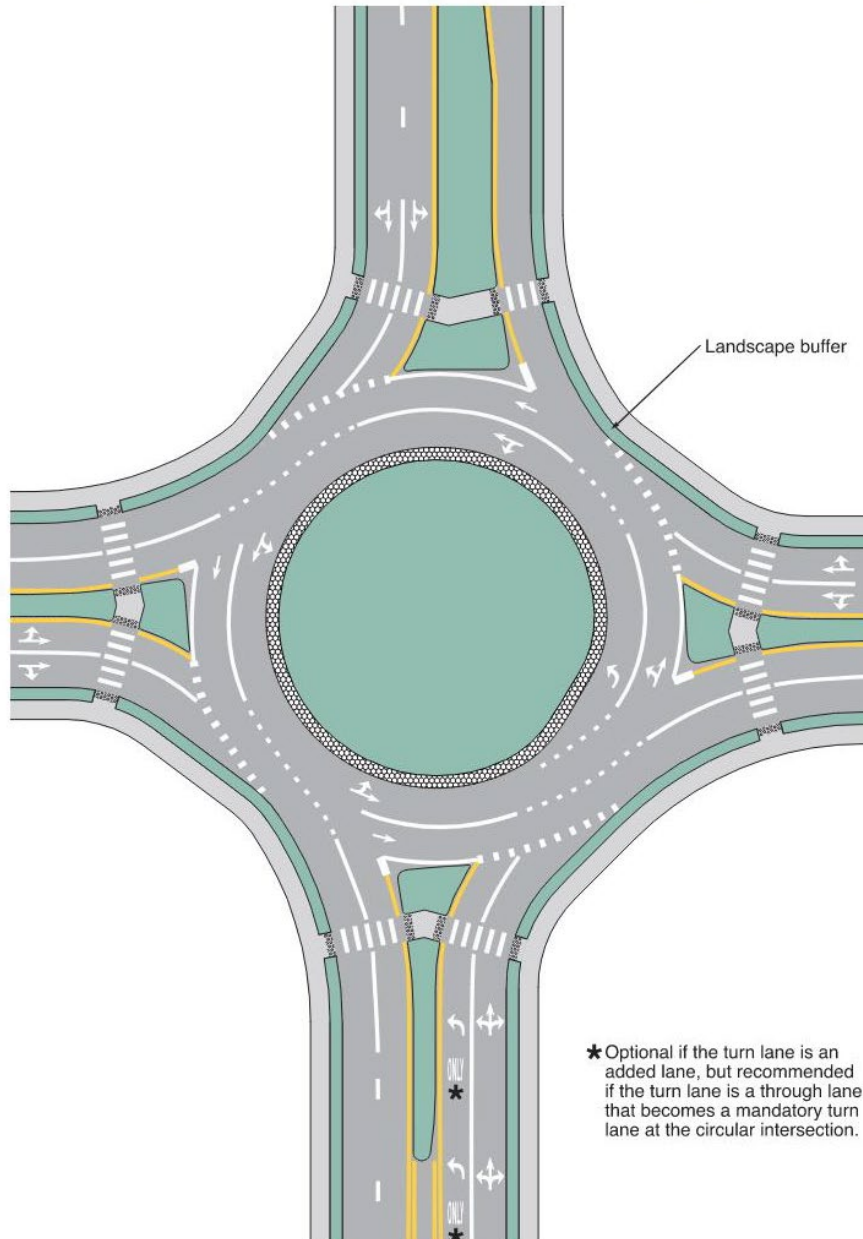




**Figure 3D-6 Comments:** NCUTCD agrees with Figure 3D-6 as presented in the NPA, but recommends changing the title from Circular Intersection to Roundabout.

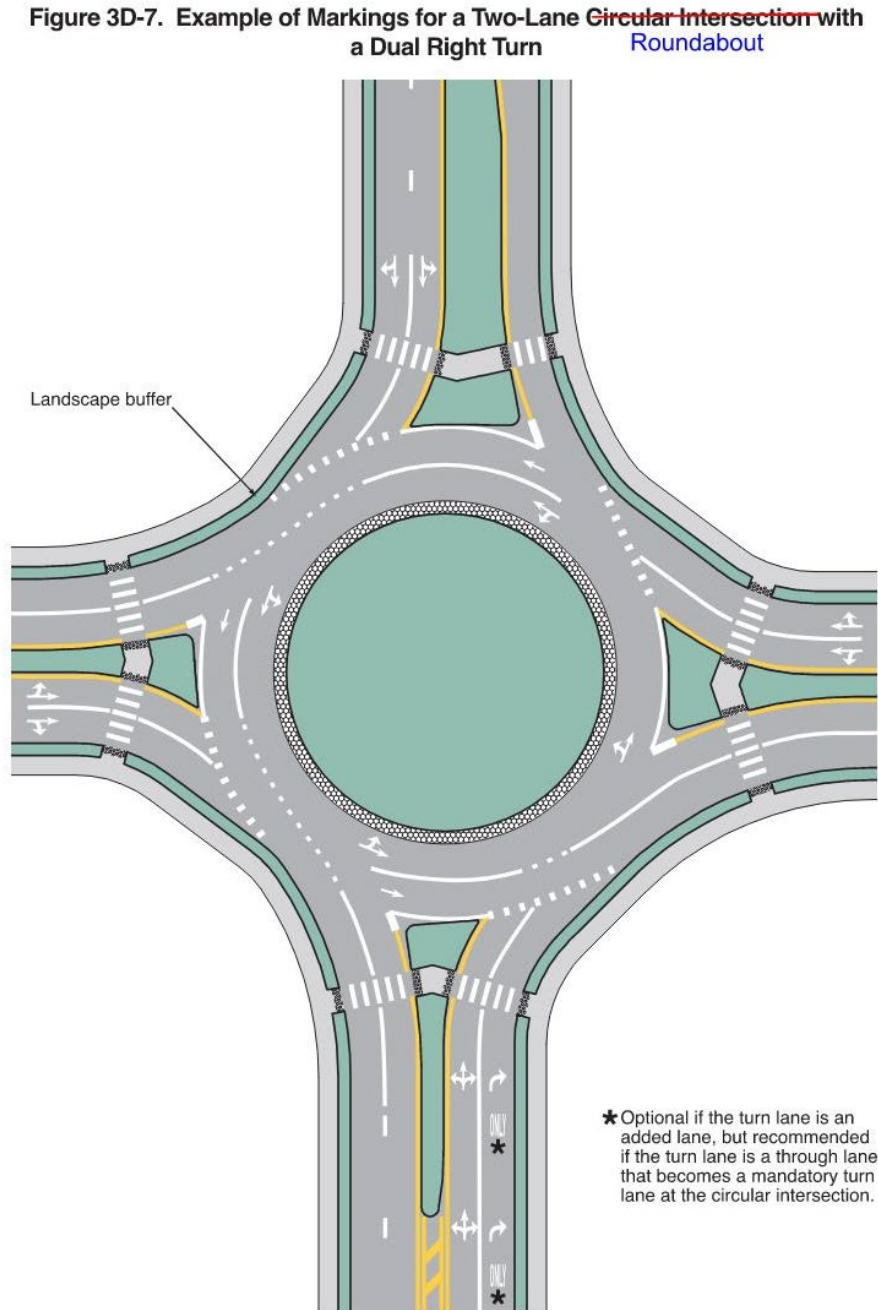
**Figure 3D-6. Example of Markings for a Two-Lane Roundabout with a Double Left Turn**

Figure 3D-6. Example of Markings for a Two-Lane ~~Circular Intersection~~ with a Dual Left Turn Roundabout



**Figure 3D-7 Comments:** NCUTCD agrees with Figure 3D-7 as presented in the NPA, but recommends changing the title from Circular Intersection to Roundabout.

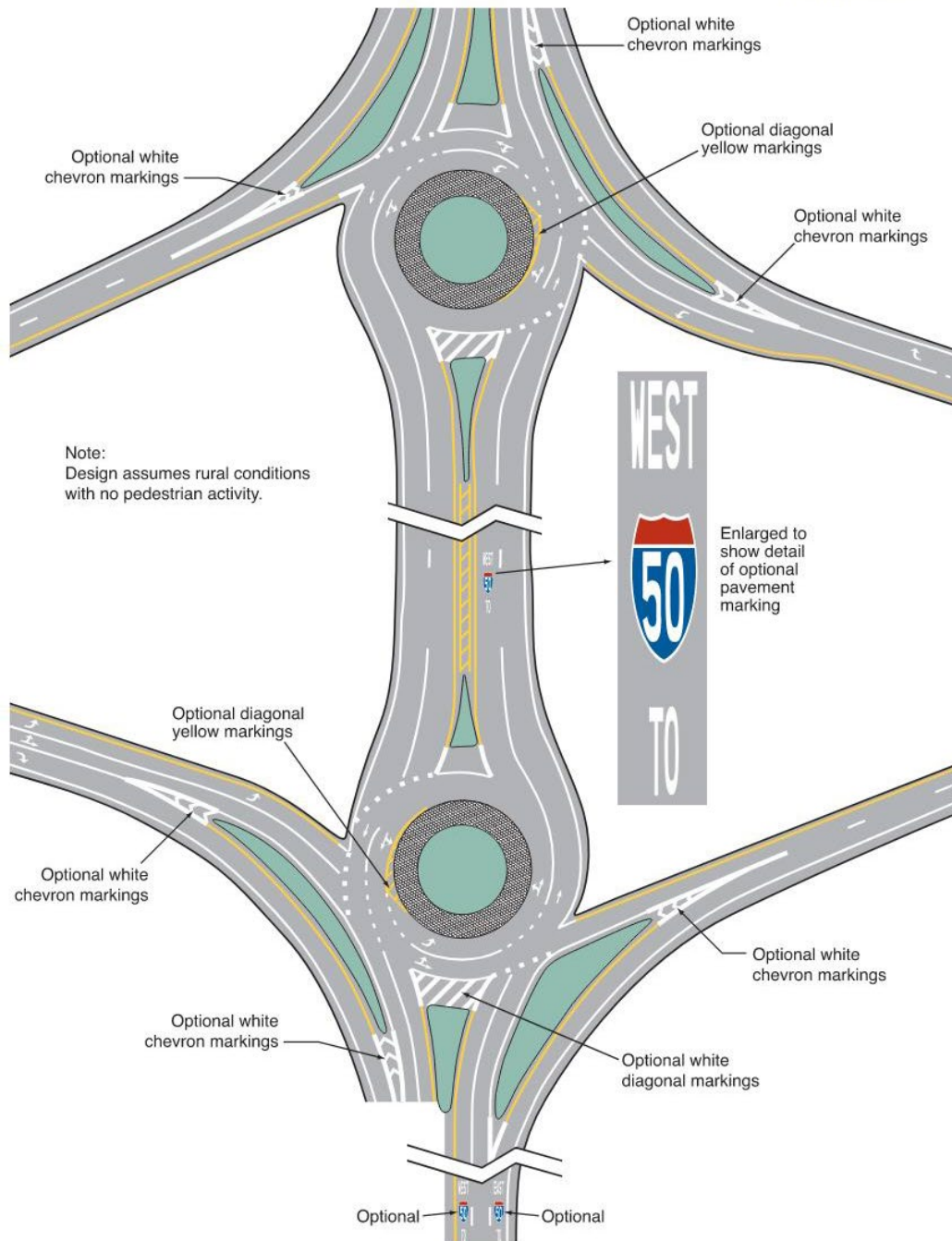
**Figure 3D-7. Example of Markings for a Two-Lane Roundabout with a Double Right Turn**



101 **Figure 3D-8 Comments:** NCUTCD agrees with Figure 3D-8 as presented in the NPA, but  
102 recommends changing the title from Circular Intersection to Roundabout.

103 **Figure 3D-8. Example of Markings for a Diamond Interchange with Two Circular-**  
104 **Shaped Roundabout Ramp Terminals**  
105

Figure 3D-8. Example of Markings for a Diamond Interchange Using Two ~~Circular Intersections~~  
Roundabout



**Section 3D.02 Comments:** NCUTCD generally agrees with 3D.02 as presented in the NPA, but recommends revising broken lane line length and gap spacing to 6-9 foot line segments with 3 foot gaps to match what practitioners and agencies are installing at roundabouts, and recommends an editorial change to remove garbled text.

### **Section 3D.02 White Lane Line Pavement Markings for Roundabouts**

**Standard:**

**Multi-lane approaches to roundabouts shall have lane lines.**

**A through lane on a roadway that becomes a dropped lane (mandatory left-turn or right-turn lane) at a roundabout shall be marked with a dotted white lane line in accordance with Section 3B.07.**

*Guidance:*

*Multi-lane roundabouts should have lane line markings within the circulatory roadway to continuously channelize traffic in the circulatory roadway and through the departure movement.*

**Standard:**

**Continuous concentric lane lines shall not be used within the circulatory roadway of roundabouts.**

Option:

If broken lane line markings are used in the circulatory roadway of multi-lane roundabouts, the spacing of a broken lane line may be altered to reduce the gap between ~~10-ft lane lines (down to a 10-ft space~~ 6-9 foot line segments with a 3 foot gap between lines).

A buffer space, also referred to as striped islands, may be used on the approaches to multilane roundabouts including the circulatory roadway to separate traffic lanes, discourage lane changing, and/or compensate for off-tracking of larger trucks and vehicles. ~~roundabouts.~~ [editorial]

Support:

Reducing the spacing between lines of a broken lane line allows better delineation of the lower radius curves typically found in circular intersections.

**Section 3D.03 Comments:** NCUTCD generally agrees with 3D.03 as presented in the NPA, but recommends adding an Option statement to define dimensions for wide dotted edge line markings installed at roundabouts.

### **Section 3D.03 Edge Line Pavement Markings for Roundabout Circulatory Roadways**

*Guidance:*

*A white edge line should be used on the outer (right-hand) side of the circulatory roadway.*

*Where a white edge line is used for the circulatory roadway, it should be as follows (see Figure 3D-1):*

*A. A solid line adjacent to the splitter island, and*

*B. A wide dotted line across the lane(s) entering the roundabout.*

**Standard:**

**Edge lines and edge line extensions shall not be placed across the exits from the circulatory roadway at roundabouts.**

Option:

A yellow edge line may be placed around the inner (left-hand) edge of the circulatory roadway (see Figure 3D-1) and may be used to channelize traffic (see Drawing B of Figure 3D-3).

Wide dotted white edge line may be 18 to 24 inches wide and 2-3 feet line with 2 feet gap.  
[add Option]

---

**Section 3D.04 Comments:** NCUTCD generally agrees with 3D.04 as presented in the NPA, but recommends removing the Standard statement requiring yield lines at roundabout entries, as research has not shown the yield lines as effective for multilane roundabouts. NCUTCD recommends revising the Option statement to allow yield lines at all roundabouts, and add references to appropriate figures.

#### **Section 3D.04 Yield Lines for Roundabouts**

##### **Standard:**

~~A yield line (see Section 3B.19) shall be used at multilane roundabout entries to indicate the point in each entry lane behind which vehicles are required to yield to all circulating lanes at the entrance to a roundabout (see Figure 3D-2).~~ [remove Standard]

##### **Support:**

See Section 2B.09 regarding the TO ALL LANES (R1-2bP) plaque use beneath the YIELD sign.

##### **Option:**

A yield line (see Section 3B.19) may be used ~~at single-lane roundabout entries~~ to indicate the point behind which vehicles are required to yield at the entrance to a roundabout (see Figures 3D-1 and 3D-2). [revise Option]

---

**Section 3D.05 Comments:** NCUTCD agrees with 3D.05 as presented in the NPA.

#### **Section 3D.05 Word, and Symbol Pavement Markings for Roundabouts**

##### **Option:**

YIELD (word) and YIELD AHEAD (symbol or word) pavement markings (see Figure 3D-1) may be used on approaches to roundabouts.

Word and/or route shield pavement markings may be used on an approach to or within the circulatory roadway of a roundabout to provide route and/or destination guidance information to road users (see Figure 3D-8).

---



**Section 3D.06 Comments:** NCUTCD generally agrees with 3D.06 as presented in the NPA, but recommends removing the Guidance statement discouraging lane use arrows in the right lane for two-lane approaches, as research does not support this position. NCUTCD recommends removing the oval symbol from lane use arrows within the circulatory roadway as it is not common practice, and recommends an editorial change to the reference to the Standard Highway Signs publication.

### **Section 3D.06 Arrow Pavement Markings for Roundabouts**

*Guidance:*

*Lane-use arrow pavement markings should not be used on single-lane approaches to circular intersections.*

~~*On two-lane approaches to circular intersections, where the left-hand lane on the approach is for left turns, and the right-hand lane contains an optional movement for through- and right-turns, lane-use arrow pavement markings should not be used in the right-hand lane containing the optional movement.*~~ [remove Guidance]

*Lane-use arrows should be used on approaches to circular intersections with dual left or dual right turns.*

**Standard:**

**Lane-use arrow pavement markings shall not be provided between a crosswalk and a wide dotted line across the lane(s) entering the circular roadway.**

*Option:*

Where lane-use arrows are used on the approaches to a roundabout, they may be either normal or elongated arrows, with an oval symbolizing the central island.

*Guidance:*

*If lane-use arrows are used on the approaches to a roundabout, the style used should match the style of lane-use arrows (normal or elongated) used on the regulatory lane-use signs on the approach.*

*If lane-use arrow pavement markings are used within the circulatory roadway of multi-lane roundabouts, normal lane-use arrows (see Section 3B.23 and Figure 3B.21) should be used, ~~with an oval symbolizing the central island.~~* [remove reference to oval]

*Support:*

Details and sizes of the standard and elongated arrows that can be used for circular intersections are contained in the “Standard Highway Signs ~~and Markings~~” ~~book~~ [publication](#). [editorial]

---

**Section 3D.07 Comments:** NCUTCD agrees with 3D.07 as presented in the NPA.

### **Section 3D.07 Markings for Other Circular Intersections**

*Option:*

The markings shown in this Chapter may be used at other circular intersections, such as rotaries, traffic circles, and residential traffic calming designs, if engineering judgment indicates that their presence will benefit drivers, pedestrians, or other road users.