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**Montana Department of Transportation**

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Michael T. Tooley, Director

Steve Bullock, Governor

To: Marcee Allen, P.E., Safety/Traffic/Design Engineer, FHWA - Montana Division  
From: Dustin Rouse, P.E., Preconstruction Engineer *original initialed by  
Dustin Rouse*  
Date: May 9, 2018  
Subject: Roundabout Design Exceptions

MDT is seeking concurrence from FHWA, Montana Division, for a programmatic exception to certain design criteria for roundabouts. Section 2.9 of the MDT Road Design Manual describes the criteria for which design exceptions are required and were established with linear roadway elements in mind. Due to the unique purpose and design of roundabouts, it is not practical to apply certain criteria to roundabout design. In example, it is not practical for the circulatory roadway of a roundabout to meet mainline design speed standards because the very purpose of roundabouts is to control speeds through the intersection.

With your concurrence, MDT will programmatically modify the requirement to seek formal project-specific design exceptions for each of the criteria described below. This applies to elements within the exterior nose of the raised splitter islands.

Criteria	Modification	Justification
1. Minimum design speed	Design exception not needed.	Not an applicable design criterion for roundabout features.
2. Minimum lane and shoulder widths	No modification for lane widths. Design exception not needed for shoulder widths.	Reduced shoulder width is instrumental in controlling speeds through roundabouts.
3. Cross slopes on travel lanes	Design exception not needed for cross slopes less than 2%. Cross slopes steeper than 2% requires design exception.	Drainage of roundabout is critical and may require modification from the standard 2%.
4. Side slopes	Standard cut/fill tables do not apply to the raised center island. The slopes within the raised center island must be traversable (3:1 or flatter). No modification to other requirements.	An appropriately raised center island is instrumental in making the roundabout visible to approaching traffic, and this often cannot be achieved using slopes restricted by the standard cut/fill tables.

5. Horizontal alignment elements	Design exception not needed.	Modified horizontal curvature is instrumental in controlling speeds through roundabouts.
6. Superelevation rates	Design exception not needed.	Not practical to meet full superelevation rates for horizontal curvature in roundabouts.
7. Vertical alignment elements	No modification to requirements.	N/A
8. Vertical clearances	No modification to requirements.	N/A
9. Roadside clear zones	No modification to requirements.	N/A
10. Intersection sight distance	Design exception not needed.	A raised center island is instrumental in making the roundabout visible to approaching traffic.
11. Structural capacity	No modification to requirements.	N/A

### Summary

As stated earlier, MDT is seeking concurrence from FHWA, Montana Division, for a programmatic exception to certain design criteria for roundabouts. With your concurrence, MDT will programmatically modify the requirement to seek formal project-specific design exceptions for roundabouts as described herein.

Concur: original signed by Marcee Allen Date: 6/1/2018  
 Marcee Allen, P.E.  
 Safety/Traffic/Design Engineer  
 Federal Highways Administration, Montana Division

### Electronic distribution:

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