



# Concrete Roundabouts

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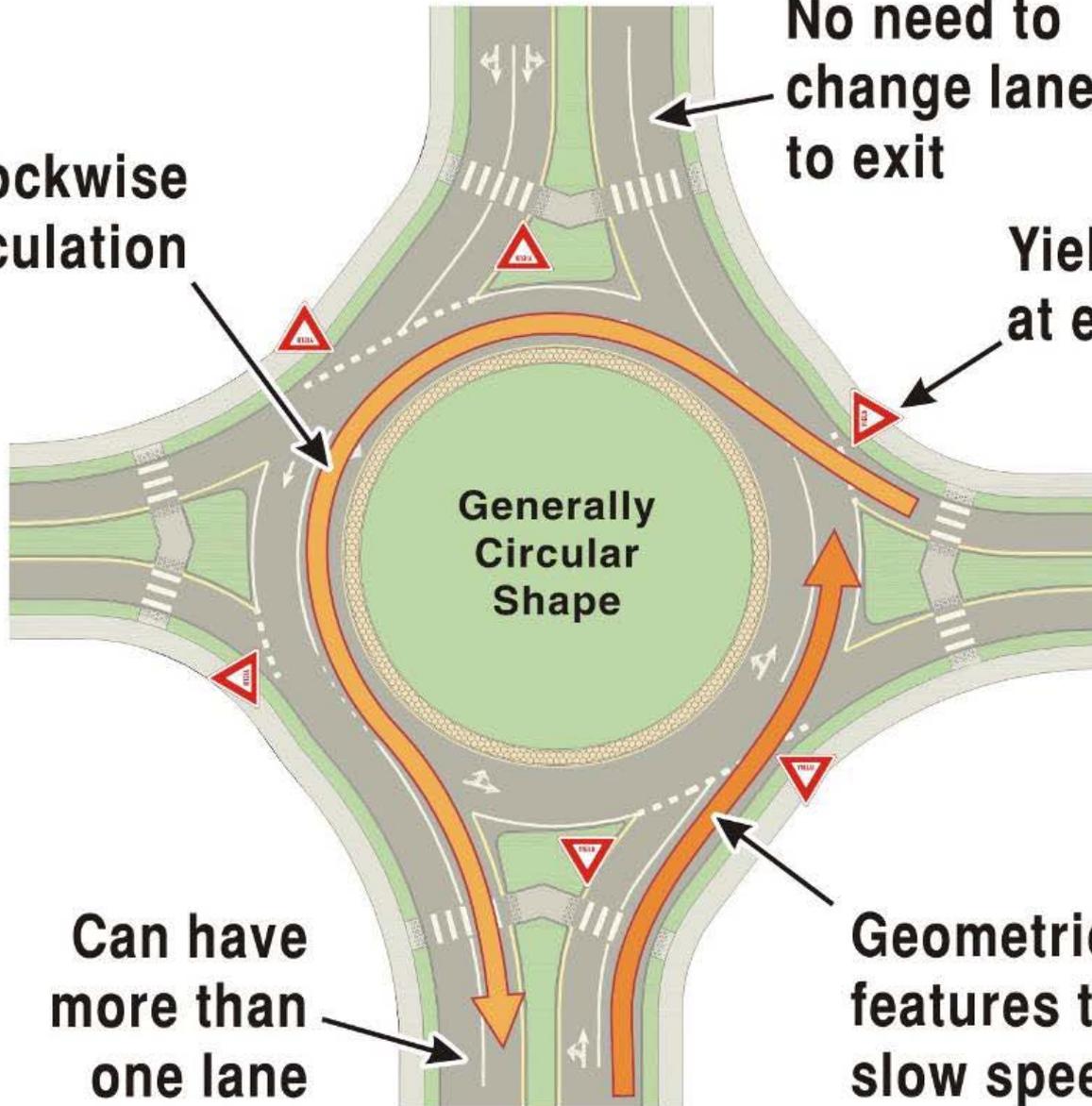
RIGHT TURN CLYDE



**Counterclockwise circulation**

**No need to change lanes to exit**

**Yield signs at entries**



**Generally  
Circular  
Shape**

**Can have  
more than  
one lane**

**Geometric and physical  
features that force  
slow speeds**

# Roundabout Category Comparison

<b>Design Element</b>	<b>Mini-Roundabout</b>	<b>Single-Lane Roundabout</b>	<b>Multilane Roundabout</b>
Desirable maximum entry design speed	15 to 20 mph (25 to 30 km/h)	20 to 25 mph (30 to 40 km/h)	25 to 30 mph (40 to 50 km/h)
Maximum number of entering lanes per approach	1	1	2+
Typical inscribed circle diameter	45 to 90 ft (13 to 27 m)	90 to 180 ft (27 to 55 m)	150 to 300 ft (46 to 91 m)

<b>Design Element</b>	<b>Mini Roundabout</b>	<b>Single-Lane Roundabout</b>	<b>Multilane Roundabout</b>
Central island treatment	Fully traversable	Raised (may have traversable apron)	Raised (may have traversable apron)
Typical daily service volumes on 4-leg roundabout below which may be expected to operate without requiring a detailed capacity analysis (veh/day)*	Up to approximately 15,000	Up to approximately 25,000	Up to approximately 45,000 for two-lane roundabout

\*Operational analysis needed to verify upper limit for specific applications.

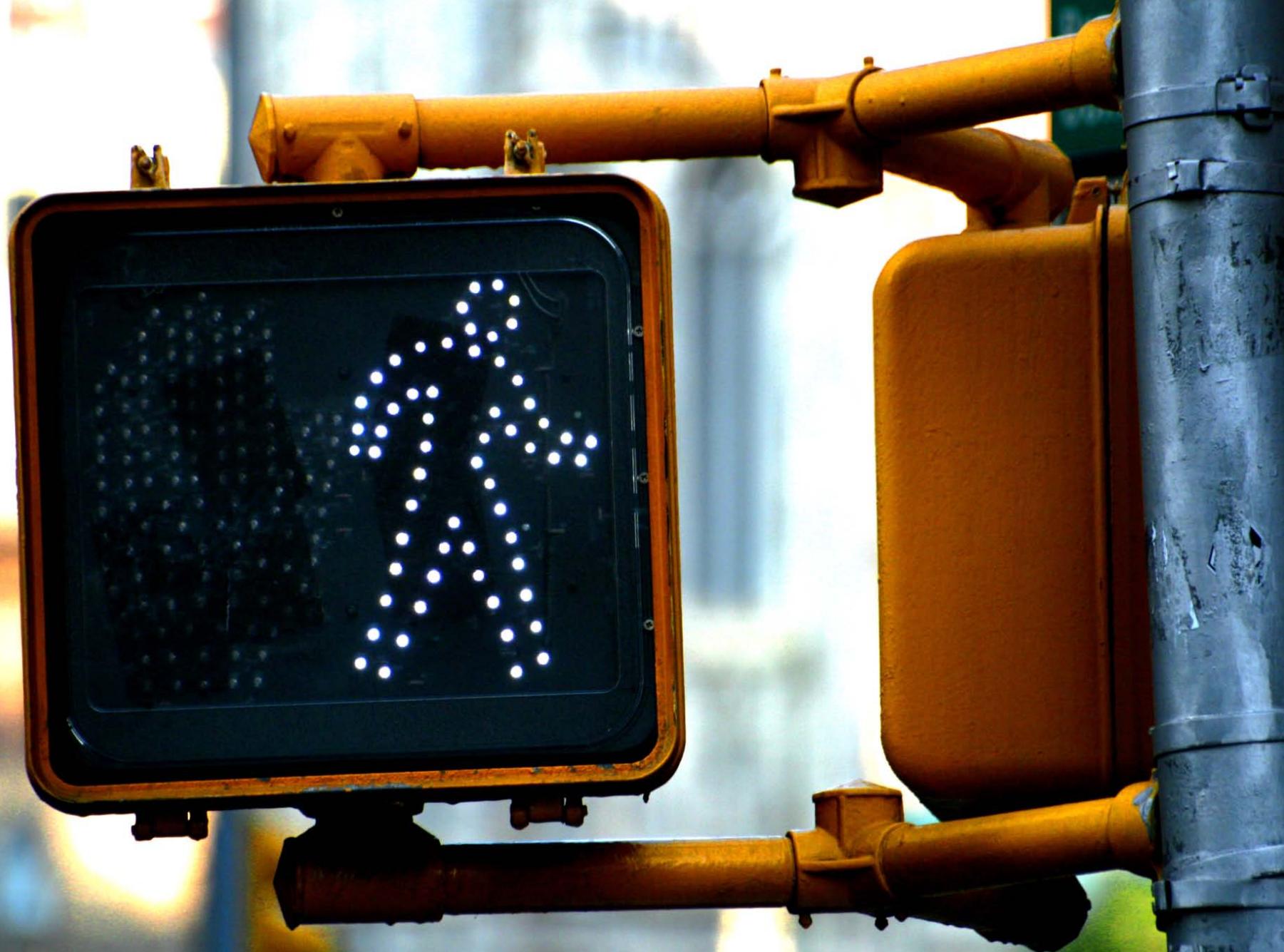


GOOD LUCK

45  
M.P.H.











***How Concrete Roads Create Wealth***



A photograph of a power substation at sunset. The scene is dominated by the silhouettes of several high-voltage transmission towers and a complex network of power lines. The sun is low on the horizon to the left, creating a bright, glowing orb and casting a warm, orange-red light across the entire scene. The sky is a gradient of orange and red. In the upper right corner, the text '24%' is displayed in a large, bold, light blue font with a slight gradient and a drop shadow.

24%

17%



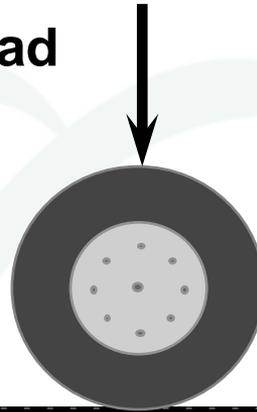
# Longevity



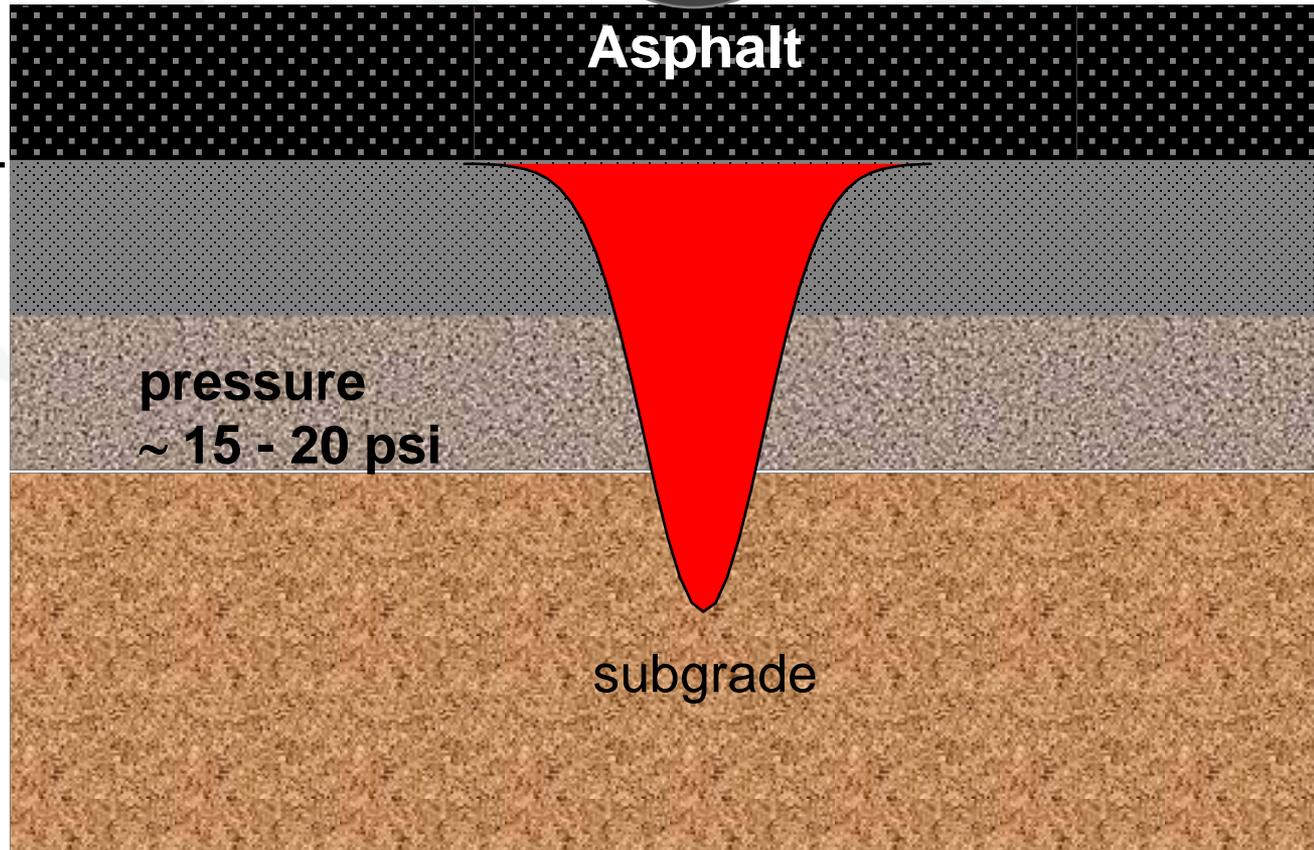
# Durability



7000 lbs load



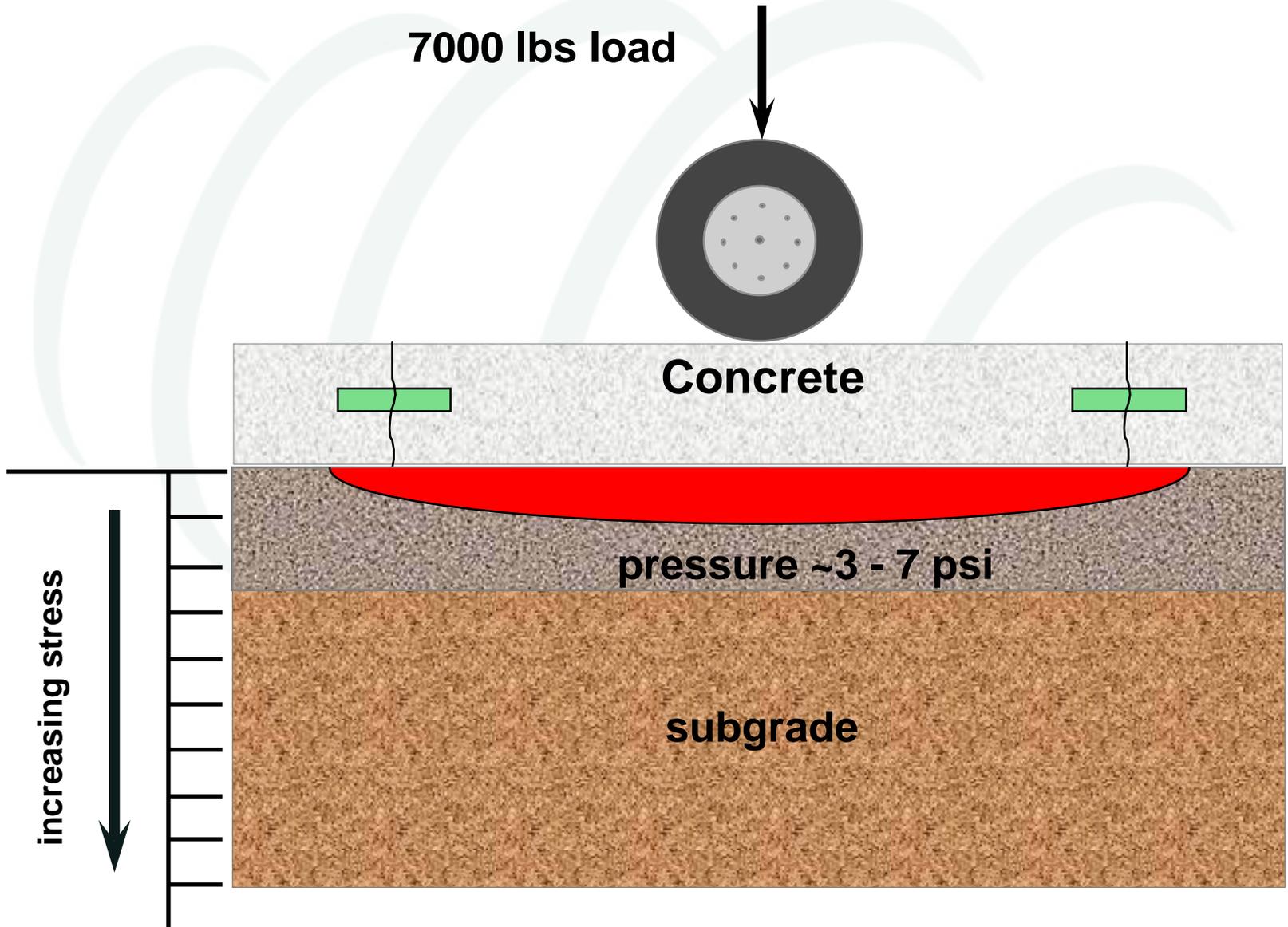
Asphalt



pressure  
~ 15 - 20 psi

subgrade

increasing stress



“Perpetual Payment”



91%

# Bellefontaine, OH

- Placed 1891
- Guaranteed for 5 years
- 120+ years old and still in service!







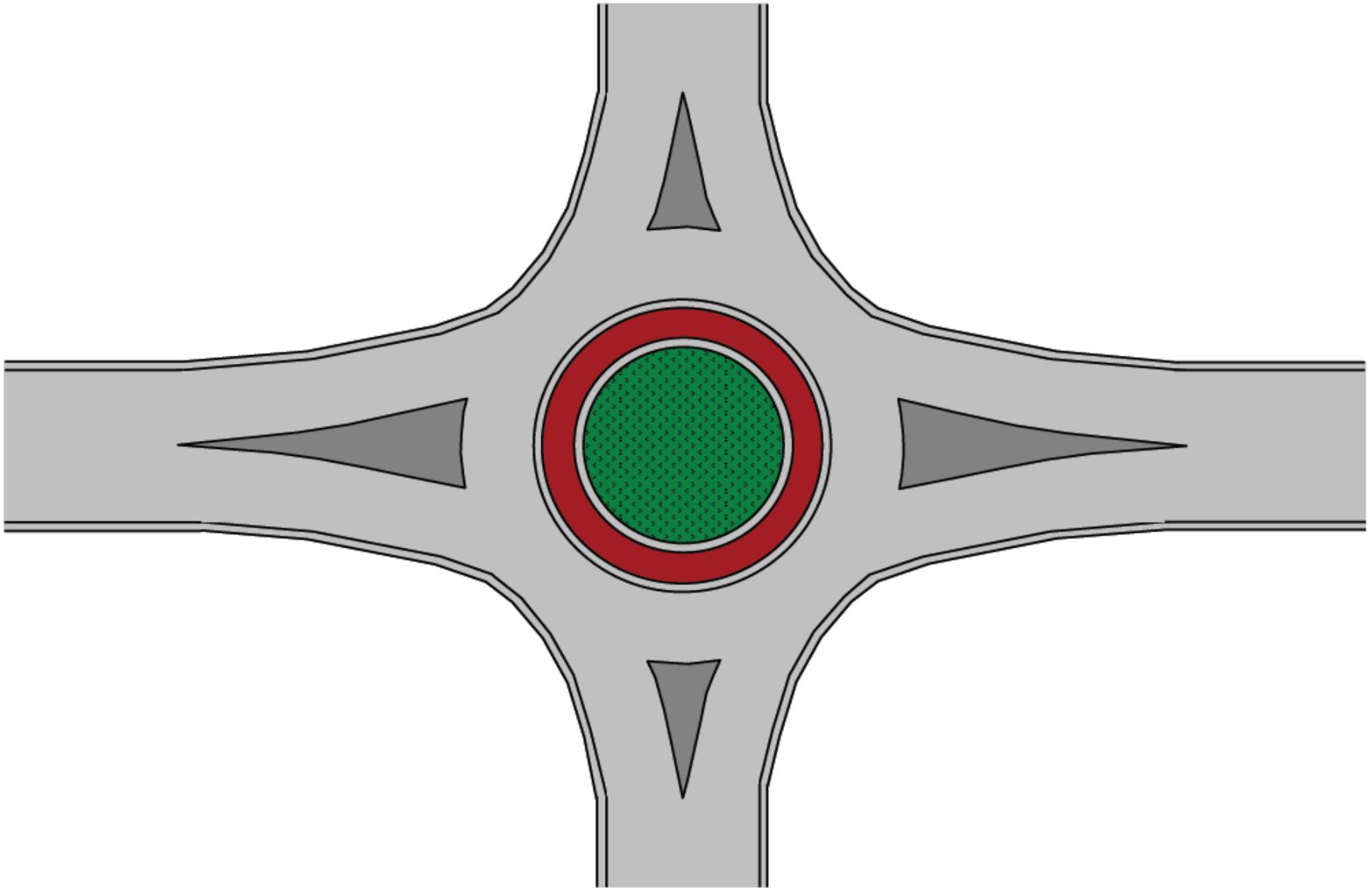


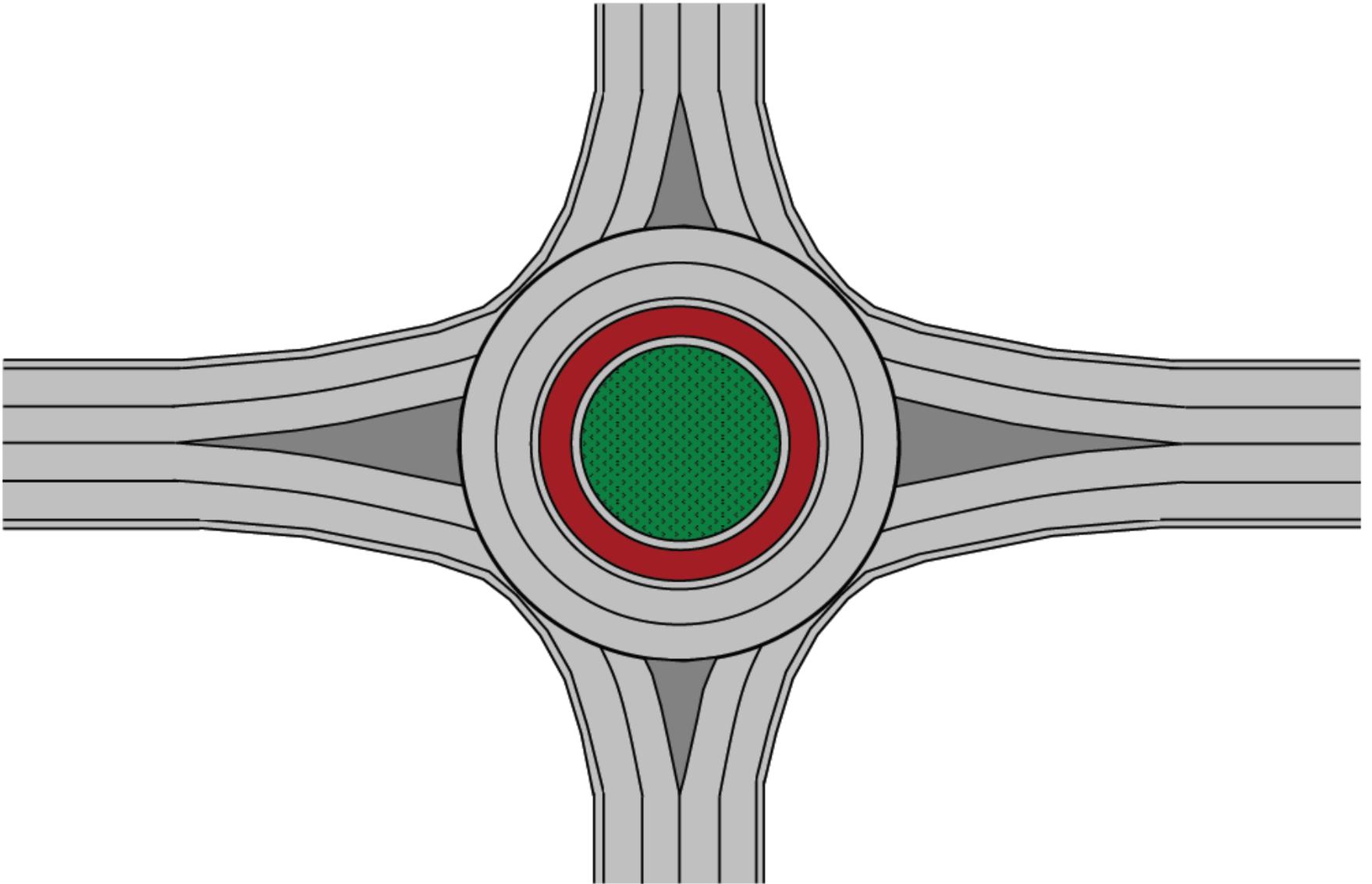


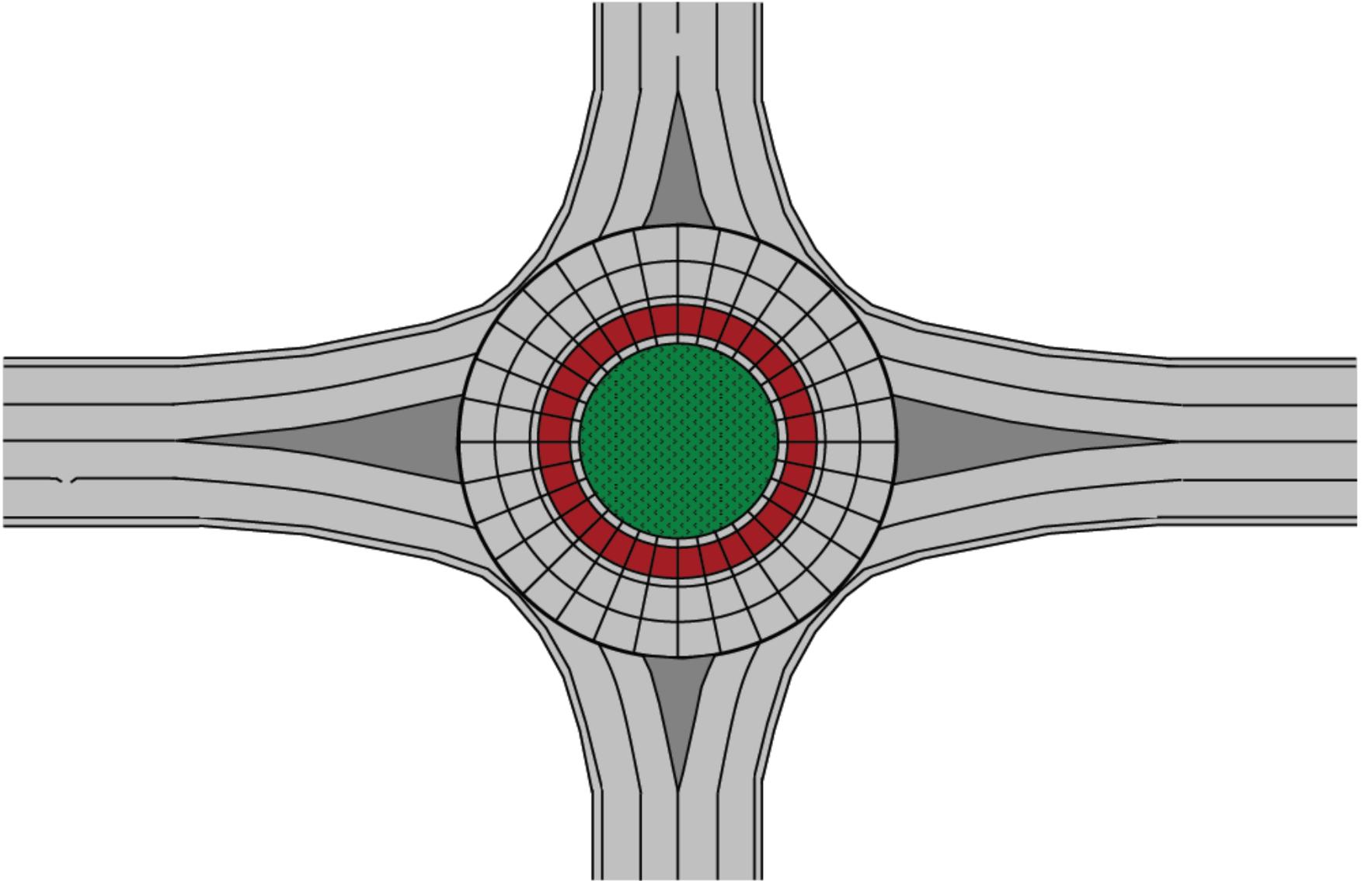


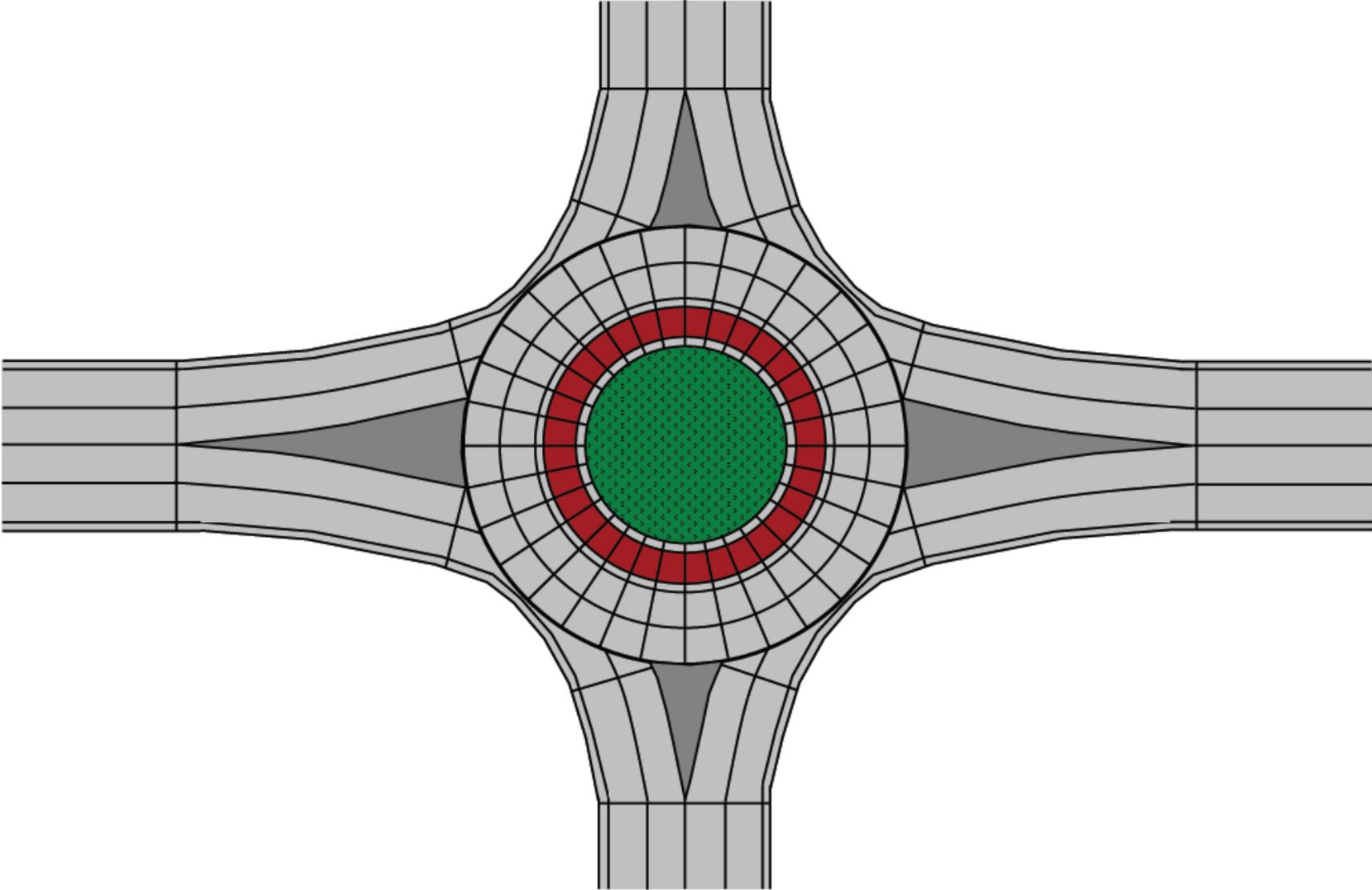
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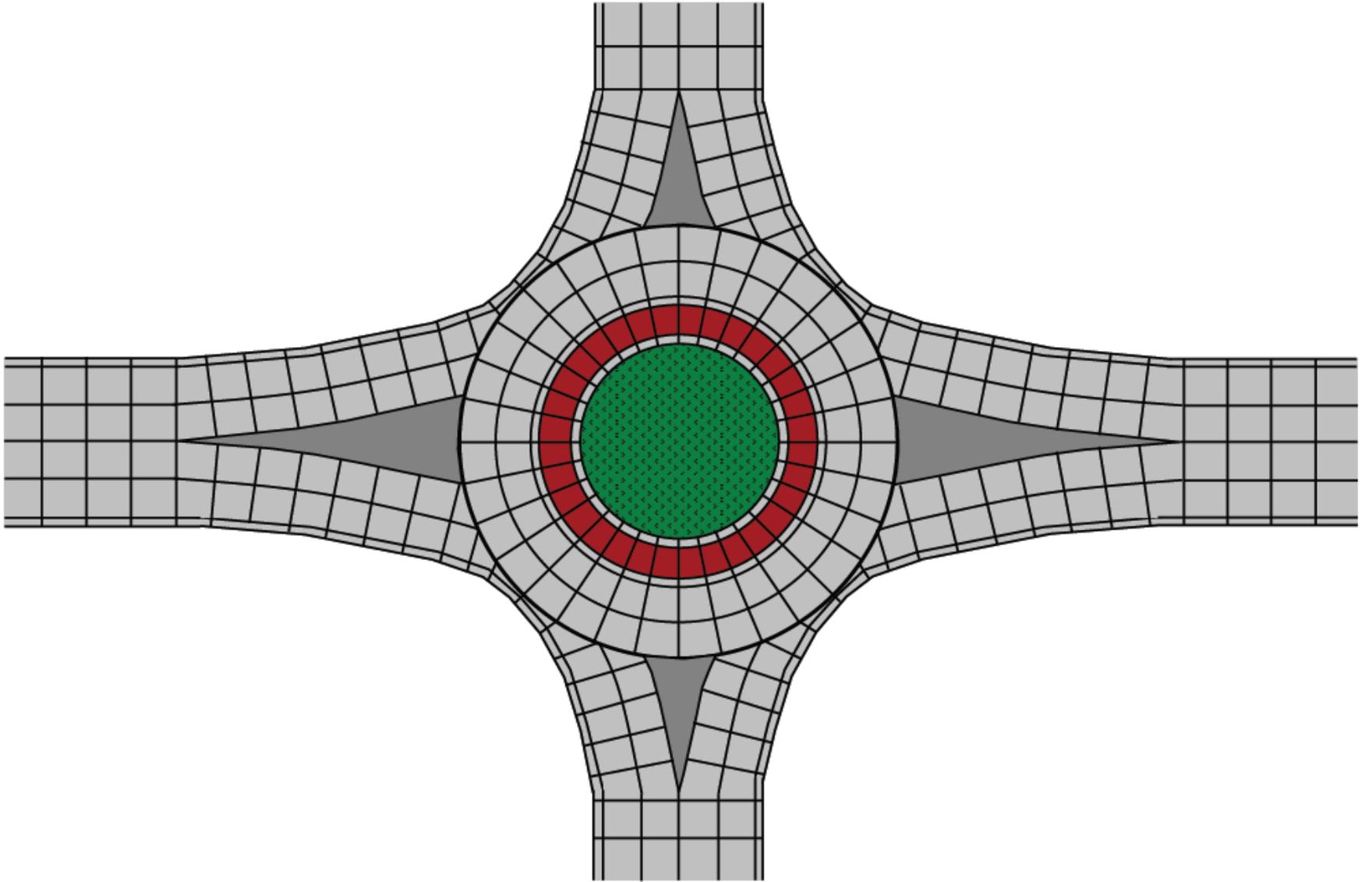










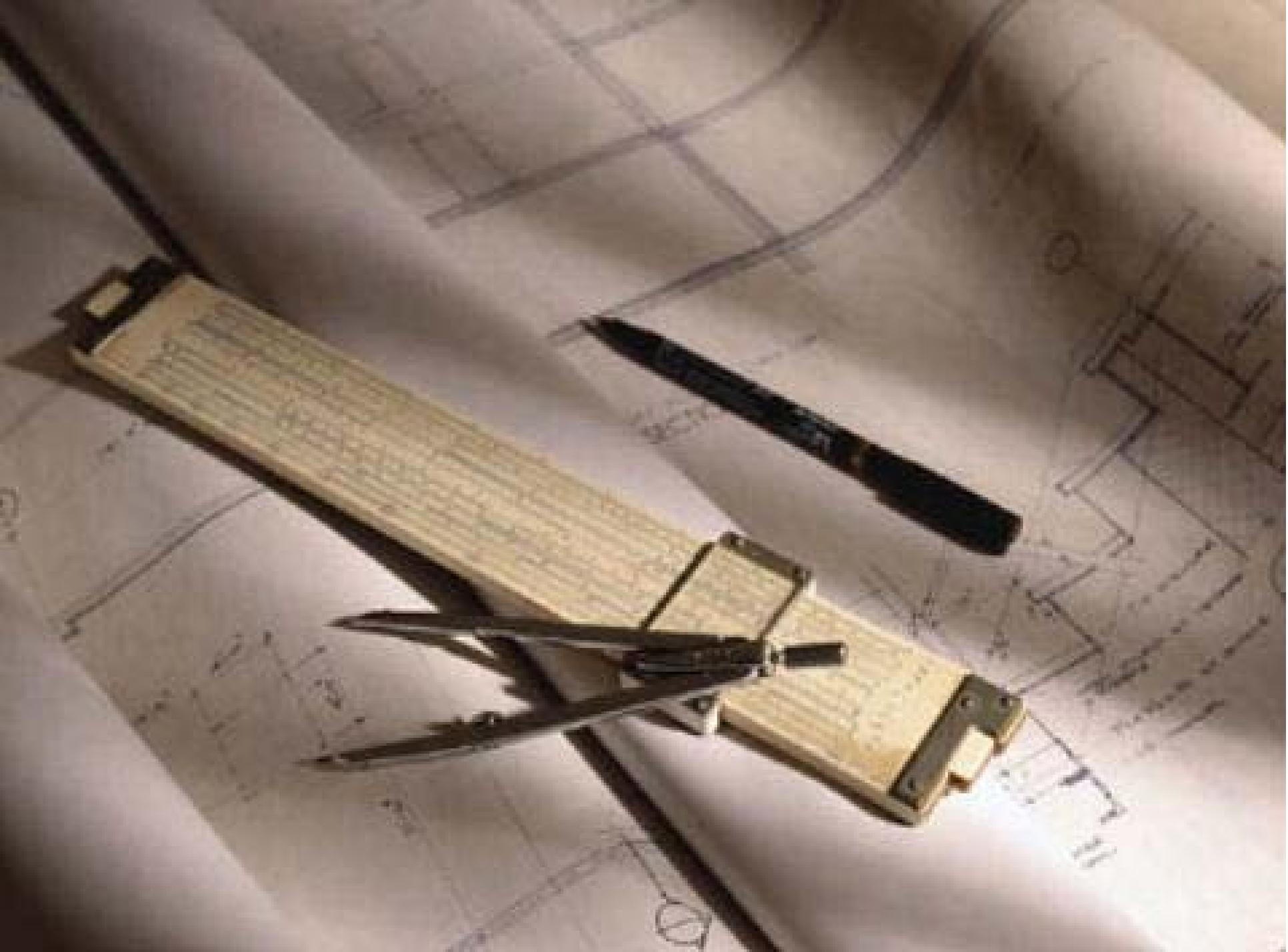


To Do:





Look! Kittens!



# ROUNDBABOUTS: AN INFORMATIONAL GUIDE

Although roundabouts have been in widespread use in other countries for a number of years, it is only during the past few years that their application in the United States has received increased attention by both the public and transportation professionals. A lack of sufficient information on roundabout operation and design under local U.S. conditions is one of the reasons why these roundabout intersections have seen only sporadic implementation. This national guide bridges this gap by providing a comprehensive source of information on modern roundabouts, from small mini-roundabouts to large freeway interchange roundabouts.

To make the information widely accessible, the guide has been structured and written to address the needs of a wide range of readers, including the general public, policy-makers, transportation planners, operations and safety analysts, and conceptual and detailed designers. Not only does the guide provide general information and planning-level analysis techniques, but it also includes evaluation procedures for assessing operational and safety performance, as well as design guidelines. Input from transportation practitioners and researchers from around the world was used in developing the guide. This book covers the needs of all travel modes and provides design guidance for incorporating these needs into final plans.

## SAFETY AND OPERATIONAL BENEFITS

Many international studies have found that one of the most significant benefits of a roundabout installation is the improvement in overall safety performance. Specifically, in the United States, it has been found that single-lane roundabouts operate more safely than two-

THE DEFINITIVE SOURCE OF  
INFORMATION RELATED TO THE PLANNING,  
OPERATION, DESIGN, AND CONFIGURATION OF  
MODERN ROUNDBABOUTS IN THE UNITED STATES.  
COMPREHENSIVE COVERAGE IS PROVIDED FOR ALL TRAVEL  
MODES THAT NEED TO BE CONSIDERED IN ROADWAY DESIGN.  
THE INFORMATION CONTAINED IN THIS GUIDE IS THE  
CULMINATION OF EXTENSIVE RESEARCH INTO BEST PRACTICES  
FROM AROUND THE WORLD, INTERPRETED IN THE LIGHT OF  
ACCEPTED U.S. DESIGN STANDARDS SUCH AS AASHTO'S GREEN  
BOOK AND THE MUTCD.



U.S. Department of Transportation  
Federal Highway Administration

# NCHRP

REPORT 672

## Roundabouts: An Informational Guide

*Second Edition*

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### **Crossing Solutions at Roundabouts and Channelized Turn Lanes for Pedestrians with Vision Disabilities**

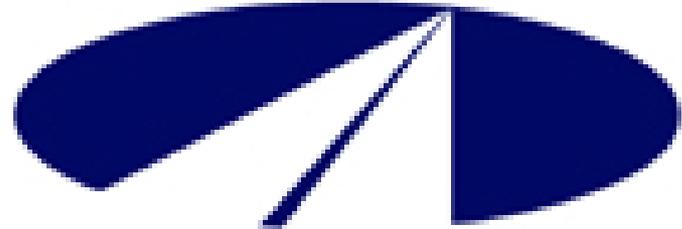


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