



Yield Roadway

Yield roadways can effectively serve local travel needs, maintain aesthetic preferences, and is a common form for low-volume local rural roads. When operating at very-low volumes and at low speeds, pedestrians and bicyclists are comfortable walking within the travel area of the roadway.^(v) Yield roadways are designed with narrow roadway dimensions to prioritize local access and community livability.

For more information on related roadway types, refer to sections on **Slow Streets** and **Shared Streets** in *FHWA Achieving Multimodal Networks 2016*.

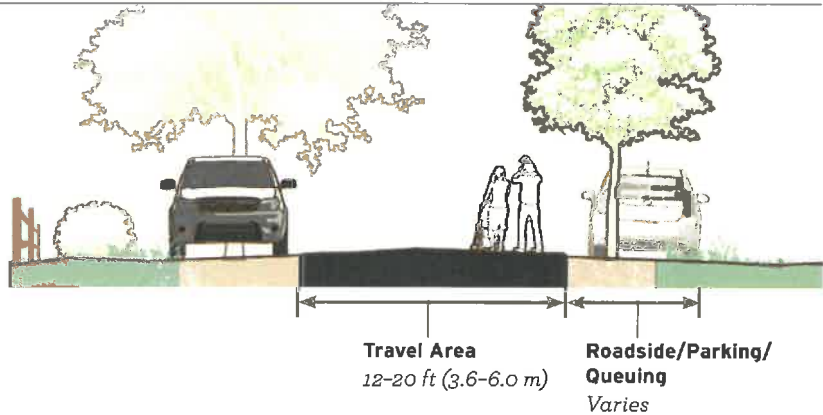


Figure 2-1. When vehicles travelling in opposite directions meet, the two vehicles may not have enough room to pass within the travel area. One vehicle may need to pull into a parking lane, pull-out, or driveway area to let the other pass.

GEOMETRIC DESIGN

TWO-WAY TRAVEL LANE

The paved two-way travel lane should be narrow to encourage slow travel speeds and require courtesy yielding when vehicles traveling in opposite directions meet.

- Total traveled way width may vary from 12 ft (3.6 m)–20 ft (6.0 m).^(vi)
- Traveled way width below 15 ft (4.5 m) or below function as a two-way single-lane roadway and should follow the guidance of the *AASHTO Low Volume Roads 2001*.

- A** When width is 15 ft (4.5 m) or narrower, provide pull-out areas every 200–300 ft to allow for infrequent meeting and passing events between motor vehicles. Pull-out areas may be established in the parking lane or roadside area.^(vi)
- Access for emergency vehicles should be provided.^(vi) There is no single fire code standard for local roads; however, a range of clear widths for parking and deploying fire department apparatus is between

16–20 ft (5.0–6.0 m). Designers should provide an opening of this width every 200–300 ft (600–91 m).^v

ROADSIDE

If desired, parking may be located on the paved roadway surface or on gravel or soil shoulders outside of the paved roadway. The parking lane may also serve as a pull-out area while yielding.

- When possible, the parking lane should be constructed with a contrasting material to differentiate the lane from the travel area. Bituminous, crushed stone, gravel, and turf shoulders can be used as contrasting materials to the travel area (*AASHTO Green Book 2011*, p. 4-13).
- Trees may be planted within the roadside area at regular intervals to visually and physically narrow the corridor, add to the aesthetic environment, and encourage slow speeds.

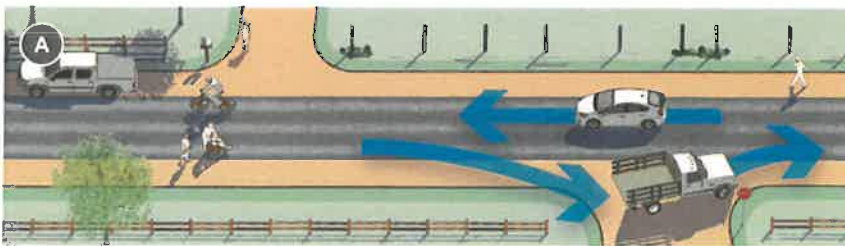


Figure 2-2. A travel area width of 16–18 ft (4.8–5.5 m) is appropriate for low volumes of two-way traffic and may require slowing when vehicles traveling in opposite directions meet. A travel area of 12–15 ft (3.6–4.5 m) is too narrow for two motor vehicles to pass, and one vehicle may need to pull into a parking lane, pull-out, or driveway area to let the other proceed.



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MARKINGS

No markings are necessary to implement a yield roadway.

- Do not mark a center line within the travel area. The single two-way lane introduces helpful traffic friction and ambiguity, contributing to a slow-speed operating environment.^(vi)

SIGNS

Use signs to warn road users of the special characteristics of the street. Potential signs include:

- A PEDESTRIAN (W11-2) warning sign with ON ROADWAY legend plaque.
- Use a Two-Way Traffic warning sign (W6-3) to clarify two-way operation of the road if any confusion exists.



Figure 2-3. Pair a W11-1, W1-2, or W11-15 warning sign with a custom legend plaque to inform road users that shared use by pedestrians and/or bicyclists might occur.

INTERSECTIONS

At uncontrolled crossings of local streets, no special treatment is necessary. The additional space within the intersection area offers queuing opportunities when vehicles traveling in opposite directions meet.

- Consider parking prohibitions of 20–50 ft (6.0–15.0 m) in advance of intersections. This is particularly helpful to accommodate large vehicle turning movements.
- Provide adequate stopping sight distance around curves and at uncontrolled intersections. Values of stopping sight distance for two-way single-lane roads should be twice the stopping sight distance for a comparable two-lane road.

Sisters, OR—Population 2,170



IMPLEMENTATION

In rural communities with a disconnected street network, local streets are the only viable connection to a scene of an emergency. Implementing agencies should work closely with emergency response stakeholders.

ACCESSIBILITY

Yield roadways allow motor vehicles, bicyclists, and pedestrians to share the same space. On very low-volume and low-speed streets, pedestrians and bicyclists may be comfortable using the roadway with the occasional vehicle. If this facility is intended for use by pedestrians, it must meet accessibility guidelines for walkways.



CASE STUDY | YIELD ROADWAY

Manzanita, Oregon

PROJECT DESCRIPTION

The residents of Manzanita cherish their small town and have outlined ways to maintain this character. One of the goals identified in the town's Comprehensive Plan is "to maintain and create residential living areas which are safe and convenient, which make a positive contribution to the quality of life, and which are harmonious with the coastal environment." Toward this end they have a network of local streets that create peaceful conditions for people walking, bicycling, and driving.

In addition, there is a recognition that even on collector streets bicycle and pedestrian travel should be safe. The plan states that "Sufficient pavement width should be included on all major streets or roads to accommodate bicycle traffic."

Where a visually or physically separated facility is not provided, speeds will be slowed to create bicycle-friendly conditions. The plan states, "Efforts to reduce speeding on Laneda Avenue should be carried out by the city. This should take the form of maintaining a low speed (20 Mi/h), requesting that the City police and Tillamook County Sheriff's Department maintain a high level of enforcement and installing appropriate warning signs." Efforts such as these enable Manzanita's local streets to be shared roadways where people driving, walking, and biking can all safely share the street.

DETAILS**COMMUNITY CONTEXT**

Manzanita is a quiet, peaceful village surrounded by the natural beauty of the Pacific Ocean, Neah-Kah-Nie Mountain, and State and private forests. The Manzanita area is home to 725 full time residents. In the summer the population swells to 2,500 to 3,000.

KEY DESIGN ELEMENTS

The standard City residential street is 20 ft wide paved with asphalt and with a concrete gutter along one side.

ROLE IN THE NETWORK

Manzanita's local streets connect residences with the ocean, parks, and downtown. The ability to use these shared local streets allow people walking or on bikes to access all parts of the community.

FUNDING

The key aspect of this treatment is that it requires funding beyond what is currently used to maintain the local streets. The City maintains the streets that have been brought up to city standards. Graveled streets that have not been brought up to City standards are maintained by the adjacent property owners. There are some roads within the City that are County roads maintained by Tillamook County.

For more information refer to the City of Manzanita website:
<http://ci.manzanita.or.us/>



Yield Roadway

Ennis, MT—Population 850



FOOTNOTES

- i Very low-volume local roads are typically used by people who are familiar with the roads. These roads are used by such low volumes of traffic that crashes are rare, as vehicles hardly encounter other vehicles. AASHTO defines a very low-volume street as one that is functionally classified as a local road and has 400 cars per day or less (AASHTO Green Book 2011, p. 5-34).

On local streets with less than 400 vehicles per day, no separated pedestrian infrastructure may be necessary (AASHTO Pedestrian Guide 2004).
- ii The AASHTO Green Book notes that, on narrow, unlaned roads, “random intermittent parking on both sides of the street usually results in areas where two-way movement can be accommodated” (2011, p. 4-74). Additionally, “The level of user inconvenience occasioned by the lack of two moving lanes is remarkably low in areas where single-family units prevail” (2011, p. 5-13).
- iii When two vehicles do encounter one another on a narrow, unlaned street, “opposing conflicting traffic will yield and pause on the parking lane area until there is sufficient width to pass” (AASHTO Green Book 2011, p. 5-13).
- iv On the subject of emergency response, the AASHTO Green Book states that a “curb face-to-curb face width of 8 m [26 ft] provides a 3.6-m [12-ft] center travel lane that provides for the passage of fire trucks and two 2.2-m [7-ft] parking lanes” (2011, p.5-13).
- v The Oregon DOT Neighborhood Street Design Guidelines support local street configurations with a clear travel area of 14 ft (2000, p.20). Dan Burden’s *Emergency Response Handbook* calls for an “operations area for emergency responders every 200–300 ft” (Burden 2000, p.32).
- vi The FHWA MUTCD does not recommend center line markings on paved two-way streets that are narrower than 16 ft wide, or operating below 3,000 ADT (2009, p.349).

- vi The FHWA MUTCD permits local highway agencies to “develop special word message signs in situations where roadway conditions make it necessary to provide road users with additional regulatory, warning, or guidance information...” These “new word message signs may be used without the need for experimentation.” (2009, p.28).

WORKS CITED

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PHOTO CREDIT

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