CITY OF Vermillion SOUTH DAKOTA **BICYCLE MASTER PLAN**

BICYCLE FACILITY TYPES

SEPARATED BICYCLE LANES

Cambridge, MA

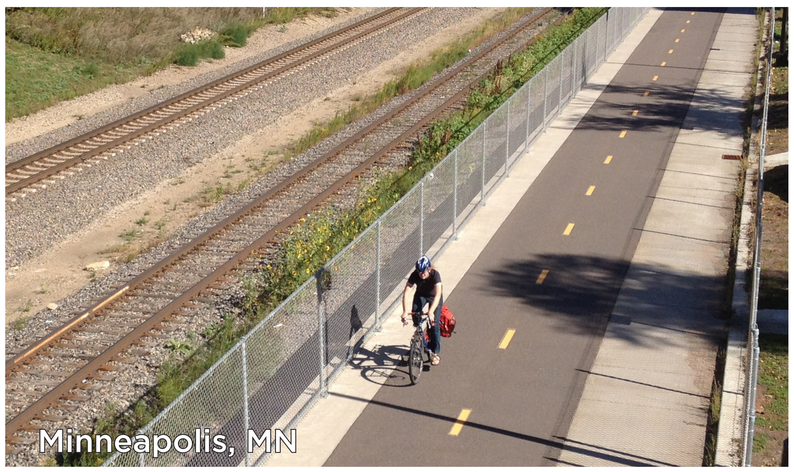
- A bike lane physically separated from motor vehicle traffic by parking, landscaping, curb, or other vertical element.
- Separate sidewalk is provided for pedestrians.
- May be at sidewalk level, street level, or intermediate height.
- May be one-way or two-way configuration.
- Can provide a low-stress bicycling environment along busier corridors (greater than 6,000 vehicles per day or speeds above 30 mph).

Saint Paul, MN

SHARED-USE PATHS

West Fargo, ND

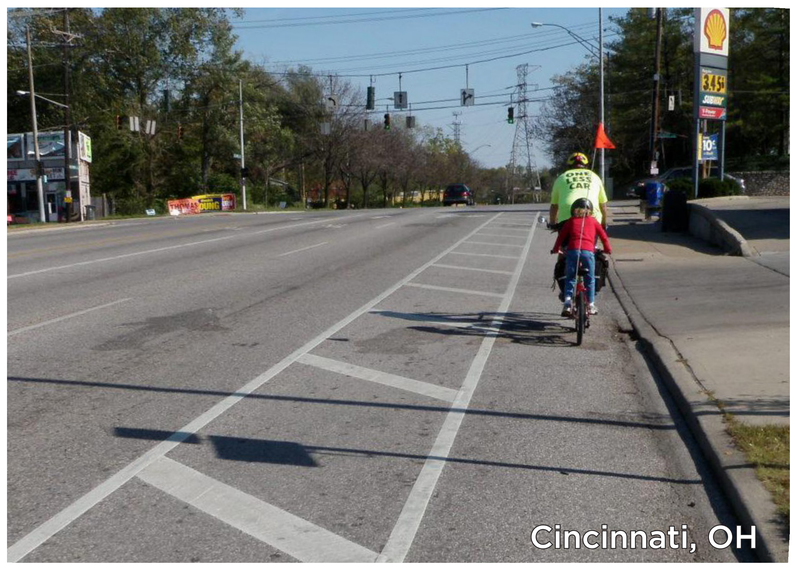
- A bicycle facility physically separated from traffic, but intended for shared use by a variety of users, including pedestrians, bicyclists, and joggers.
- Can have separate pedestrian space or jogging surface.
- Major road crossings may have signals, crossing beacons, refuge islands, or bridges and underpasses.
- Can provide a low-stress bicycling environment along busier corridors (greater than 6,000 vehicles per day or speeds above 30 mph).
- Can provide connections along non-roadway corridors (e.g. rivers and railways).


Minneapolis, MN

BUFFERED BICYCLE LANES


Seattle, WA

- Typically used on streets with moderate traffic volumes (1,500 to 6,000 vehicles per day) and low speeds (20 to 30 mph typical speeds).
- Typically used on streets with excess width but without high enough vehicle speeds or volumes to warrant physical separation.
- Painted buffer increases lateral separation between bicyclists and hazards such as passing motor vehicles and car doors.


Cincinnati, OH

South Dakota DOT Connecting South Dakota and the Nation

CITY OF Vermillion SOUTH DAKOTA

RDG PLANNING • DESIGN

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CITY OF Vermillion SOUTH DAKOTA **BICYCLE MASTER PLAN**

BICYCLE FACILITY TYPES

STANDARD BICYCLE LANES

- An on-street bicycle facility designated by striping, signing, and pavement markings.
- Bike lanes are separated from travel lanes by solid white lines.
- Reduces the need for people riding bicycles and people driving cars to negotiate for space on the roadway.
- Typically used on streets with moderate traffic volumes (1,500 to 6,000 vehicles per day) and low speeds (20 to 30 mph typical speeds).

ADVISORY BICYCLE LANES

- Bicycle lane designed to permit motor vehicles to enter while passing oncoming traffic.
- Typically used on streets with moderately low volumes (1,500 to 3,000 vehicles per day) and low speeds (20 to 25 mph typical speeds), but are too busy to be a bike boulevard.
- No centerline striping—motor vehicles drive outside of bike lane except when passing oncoming vehicles.
- Typically used where widths are not sufficient for standard bicycle lanes.

BICYCLE BOULEVARDS

- A street designated and designed to give bicyclists priority.
- Used on low-traffic side streets (fewer than 1,500 vehicles per day), usually with traffic calming to reduce speeds to between 10 and 25 mph.
- No centerline striping.
- Usually in residential neighborhoods.
- Usually no impact to parking.
- Stop signs may be moved to cross streets.
- Major road crossings may have signals, crossing beacons, or refuge islands.

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BICYCLE FACILITY TYPES

SHARED LANE MARKINGS

Fargo, ND

- Shared lane markings are placed within the motor vehicle travel lane to indicate where bicyclists should ride.
- Assist with rider positioning away from roadway edge or parked cars.
- Recommended only to fill short gaps in low-speed contexts, where drivers and bicyclists can safely and reasonably travel at the same speed.
- Provides a low-cost option in constrained situations where bicyclists and drivers must take turns using the same lane.


Washington, DC

SHOULDERS


Washington State

- Used along rural highways with speeds greater than 45 mph and more than 3,000 vehicles per day, to provide a separate space for bicyclists.
- Shoulders can be differentiated with contrasting pavement materials and/or surface coloring, wide solid white edge line markings, buffered white edge lines, and/or rumble strips.
- At intersections, shoulders may transition to standard or separated bicycle lanes. Shared use paths may also be used instead of shoulders, where destinations, bicycle traffic, motor vehicle speeds, and/or truck traffic become higher than average.
- As bicycle traffic increases on rural highways, there is a greater need for bicycle route signage to increase visibility of the bicycle facility.


USA

CITY OF Vermillion SOUTH DAKOTA **BICYCLE MASTER PLAN**

INTERSECTION TREATMENTS

GREEN COLORED PAVEMENT

- Used to draw attention to bicycle facilities, especially where motor vehicle traffic must yield to bicycle traffic before crossing.
- Can help raise awareness of conflict points at intersections, driveways, and bus stops.
- Typically applied using ground-in thermoplastic where regularly crossed by motor vehicle traffic.

BICYCLE SIGNALS

- Used to provide bicyclists a protected phase (conflicting motor vehicle movements stopped by red signals), leading interval (head start for bicyclists), and other situations where a separate signal indication is needed for bicycle movements.
- Can improve signal compliance.
- Provide an option at complex intersections where bicyclists must cross diagonally or where conflicts with turning motor vehicles cannot be adequately mitigated through other means.

CROSSING BEACONS

- Flashing lights may be mounted on crosswalk sign pedestal, on mast arm above roadway, within border of crosswalk sign, and/or embedded in the roadway.
- Warning beacons used at crossings should be activated by push button and/or other detection so lights are only activated when people are crossing.
- Hybrid beacons (known as HAWK signals, pictured below), which display solid red signal indications to drivers when activated, are recommended over warning beacons, which flash yellow, for crossing higher-speed, multi-lane streets.

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