



Photo by Christine Rucker Photography.

appendix e

Downtown Facilities

E.1 Introduction

The recommendations section of the Plan described the main types of bicycle facilities that should be provided by the City of Winston-Salem in the downtown area. This appendix goes into greater detail, including descriptions of the bicycle facilities that should accommodate bicyclists on each block and on the bridges across Business Interstate 40.

E.2 Detailed Downtown Bicycle Facility Recommendations

Bike lanes should be provided on several downtown streets by restriping the travel lanes. Narrowing the existing travel lanes to 10 feet would make it possible to stripe a five-foot-wide bike lane on the right side of the following one-way streets:

- Main Street (throughout the downtown area, from Brookstown Ave. to 8th Street)
- Liberty Street (throughout the downtown area, from 8th Street to Brookstown Ave.)
- Cherry Street (from Brookstown Ave. to 4th Street)
- Marshall Street (from 5th Street to Brookstown Ave.)
- 5th Street (from Old Greensboro Rd. to Main St.)
- 4th Street (from Patterson Ave. to Martin Luther King Jr. Dr.)
- 3rd Street (from Church St. to Martin Luther King Jr. Dr.)

There are several blocks that would require removing one of the motor vehicle turning lanes to accommodate a bicycle lane. This will require a motor vehicle Level of Service analysis in order to determine feasibility.



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- Main Street between Brookstown Ave. and 1st St. (3 lanes to 2)
- Main Street between 2nd St. and 3rd St. (4 lanes to 3)
- Marshall Street between 1st St. and High St. (4 lanes to 3—though the high traffic volumes at this location may require the bike lane to be dropped for this block)
- Cherry Street between 1st St. and 2nd St. (4 lanes to 3)
- Cherry Street between 2nd St. and 3rd St. (3 lanes to 2—this would also make it possible to add on-street parking on left side of street)

On all of these blocks, the turning traffic would be combined with the through traffic. Note that it would be important to take advantage of easier roadway restriping opportunities to build support for bicycle lanes before choosing to remove turning lanes.

There are also several intersections where it will be difficult to provide space for the bicycle lane. The bicycle lane may need to be dropped briefly and continued beyond the intersection (e.g., Liberty St. & 5th St.; Liberty St. & 2nd St). More detailed site analyses will be needed in order to determine if this is possible.

On street segments where there is not enough space for bike lanes, signed bike routes could be maintained



Main Street (between 2nd and 3rd) is now 4 lanes. This plan recommends it be changed to 3 lanes to accommodate bicycle traffic.

to provide connectivity between the downtown area and surrounding neighborhoods (e.g., 4th Street and 5th Street between Main Street and the West End neighborhood; Trade St. between 4th Street and Northwest Blvd.). In addition, the downtown core area between 5th Street on the north, 2nd Street on the south, Main Street on the east, and Marshall Street on the west could be marked with signs reminding people to drive slowly and share the road with bikes, regardless of the presence of bike lanes.

E.3 Bridges over Business Interstate 40 in the Downtown Area

This section includes recommendations for the roadway bridges over Business Interstate 40 in Downtown Winston-Salem (from west of Fourth Street to east of Church Street). Federal Law related to bicycle facilities on bridges is provided as background for the recommendations.

Federal Law

The bridges over Business Interstate 40 are required by law to provide safe and convenient access for bicyclists and pedestrians. Federal law, as established in the Transportation Equity Act for the 21st Century (TEA-21), makes the following statements with respect to bridges:

“In any case where a highway bridge deck is being replaced or rehabilitated with Federal financial participation, and bicyclists are permitted on facilities at or near each end of such bridge, and the safe accommodation of bicyclists can be provided at reasonable cost as part of such replacement or rehabilitation, then such bridge shall be so replaced or rehabilitated as to provide such safe accommodations.” (23 U.S.C. Section 217)

TEA-21 directed the Federal Highway Administration to draft policy guidance that would better define the level of accommodation that was required. In 1999, the Federal Highway Administrator issued the following guidance with regards to bicycle and



pedestrian accommodations:

“While these sections stop short of requiring specific bicycle and pedestrian accommodation in every transportation project, Congress clearly intends for bicyclists and pedestrians to have safe, convenient access to the transportation system and sees every transportation improvement as an opportunity to enhance the safety and convenience of the two modes. “Due consideration” of bicycle and pedestrian needs should include, at a minimum, a presumption that bicyclists and pedestrians will be accommodated in the design of new and improved transportation facilities. In the planning, design, and operation of transportation facilities, bicyclists and pedestrians should be included as a matter of routine, and the decision to not accommodate them should be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access either by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling.”

In the FHWA’s subsequent Design Guidance issued in 2000 (entitled Accommodating Bicycle and Pedestrian Travel: A Recommended Approach), the following statement is made:

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas unless one or more of three conditions are met:

- *bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.*
- *the cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the larger transportation project.*
- *where sparsity of population or other factors indicate an absence of need. For example,*

the Portland Pedestrian Guide requires “all construction of new public streets” to include sidewalk improvements on both sides, unless the street is a cul-de-sac with four or fewer dwellings or the street has severe topographic or natural resource constraints.

2. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day, as in States such as Wisconsin. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate.

Specific Recommendations for Business Interstate 40 Bridges

4th Street

No new bicycle facilities will be recommended on this roadway. The bridge should have wide sidewalks (6-foot minimum) on both sides.

Reconstructing this part of Business Interstate 40 may be an opportunity to provide an underpass for a future shared-use path (greenway trail). This path would follow the undeveloped land adjacent to Peters Creek to connect the Salem Creek Path to West End and Downtown. Access under Business Interstate 40 is critical for this connection.

Peters Creek Parkway

Though bike lanes will not be recommended on this bridge, wide outside lanes or a striped shoulder should be provided (see Figure 1 on the following page). These accommodations will benefit both motorists and bicyclists using the bridge. Wide sidewalks (10-foot minimum) should also be provided on both sides of the bridge structure. These sidewalks will connect with wide sidewalks that will be recommended on both sides of Peters Creek Parkway. Special attention should also be given to the freeway ramp crossings. Advance warning signs and high-visibility crosswalk pavement markings should alert drivers so that they



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yield to pedestrians and bicyclists crossing the ramps. Adequate sight distance must also be provided at these crossings.

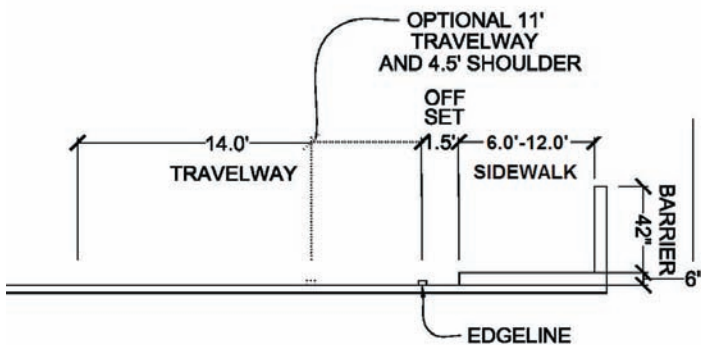


Figure 1: Bridge Cross-Section (curb section) for roadway not designated as a bike route. The edgeline can be striped to provide either a 14-foot travelway with a 1.5 foot shoulder or an 11-foot travelway with a 4.5 foot shoulder. Note: Not to scale.

Green Street

No new bicycle facilities will be recommended on this roadway. The bridge should have wide sidewalks (6-foot minimum) on both sides.

Broad Street

An on-road bike facility, potentially bike lanes, will be provided on Broad Street south of the Business Interstate 40 interchange. Therefore, bike lanes should also be provided through the interchange. Wide sidewalks (10-foot minimum) should also be provided on both sides of the bridge structure to connect with the wide sidewalks that will be recommended on Broad Street north of the interchange.

Spruce Street

No new bicycle facilities will be recommended on this roadway. The bridge should have wide sidewalks (6-foot minimum) on both sides.

Marshall Street

A one-way bike lane should be provided on the west side of the Marshall Street bridge when it is replaced (since it is a one-way street). Wide sidewalks (10-foot

minimum) should also be provided on both sides of the bridge. This bridge replacement is an excellent opportunity for providing bicycle connectivity. The current bridge structure makes it very difficult to provide bike lanes through the interchange, but a wider structure with space for bike lanes makes it possible to connect the bike lanes that are recommended on Marshall Street north and south of the interchange.

Cherry Street

A one-way bike lane should be provided on the east side of the new Cherry Street bridge when it is replaced (since it is a one-way street). Wide sidewalks (10-foot minimum) should also be provided on both sides of the bridge. A bike lane should also be provided on the current bridge by striping the travel lanes to a 10-foot width. This section of bike lane will be a part of a continuous bike lane along Cherry Street.

It will also be critical to maintain the access for the Scrollway path underneath Business Interstate 40 during and after this construction project.

Liberty Street

A one-way bike lane should be provided on the west side of Liberty Street (since it is a one-way street) where it passes under the Business I-40 Bridge. Sidewalks (6-foot minimum) should also be provided



Liberty Street should have a continuous bike lane.



on both sides of the street. This section of bike lane will be a part of a continuous bike lane along Liberty Street.

Main Street

A one-way bike lane should be provided on the east side of the new Main Street bridge when it is replaced (since it is a one-way street). Wide sidewalks (10-foot minimum) should also be provided on both sides of the bridge. This section of bike lane will be a part of a continuous bike lane along Main Street.

Church Street

No new bicycle facilities will be recommended on this roadway. The bridge should have wide sidewalks (10-foot minimum) on both sides because of its proximity to Downtown and Old Salem.

