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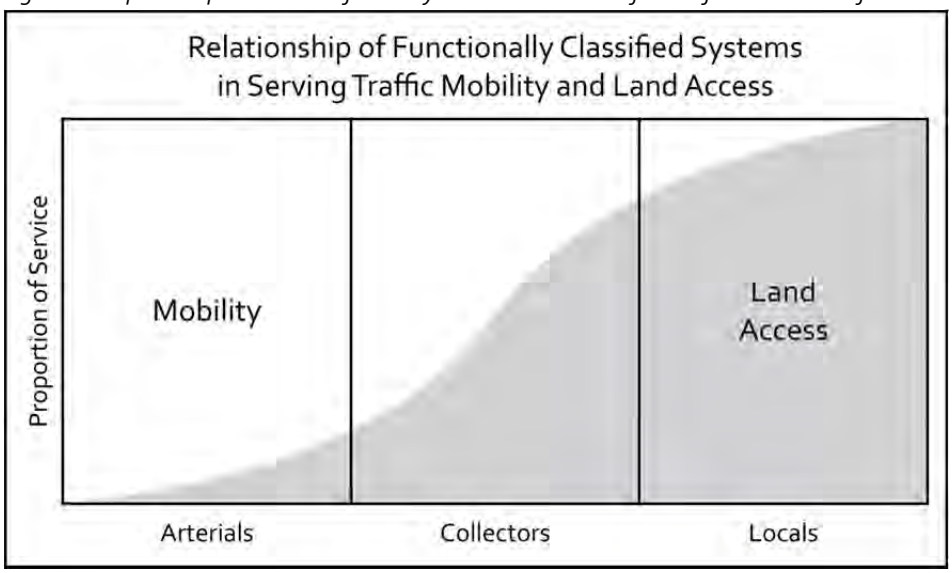
MEMORANDUM

Date:	May 7, 2014
To:	David Trowbridge
From:	Tom Huber, Kevin Luecke
Project:	Sustainable Madison Transportation Master Plan
Re:	Functional Classification for Bikeways (DRAFT)

This memo provides an overview of draft definitions and criteria for a functional classification of bikeways in the greater Madison area.

Traditionally, functional classification is the process by which streets are grouped according to the service they are intended to provide and how these roads then fit then into a circulation pattern or network. A well-known hierarchy is established with streets classified into arterials, collectors and local streets. Arterial streets provide the most mobility, but offer very little land access. Conversely, local streets offer excellent access, but little mobility. Figure 1 displays the tradeoff between mobility and land access graphically. There has been value in developing this classification system for streets for funding and traffic management purposes. Over the past decade there has been increased interest and several attempts to apply a functional classification system to bikeways.

Figure 1: Graphical representation of mobility versus land access of street functional classifications



Using a functional classification system for bikeways, similar to that provided to roadway classification, is of value, but it is important not to confuse roadway functional classification with bicycle functional classification on the same roadway. For example, Primary Bikeways are often located on collector streets (not arterials) and some Secondary Bikeways are located along minor arterials. For this reason, different terms were used for bikeway as opposed to roadway functional classifications in this hierarchy, but the bikeway hierarchy still has three levels like the roadway classification system. Some of the expected uses of the bikeway classification are for funding and system prioritization as well as facility design standards, maintenance priorities, and wayfinding tools like maps, signs and trip planning. A functional classification system can also assist in planning and determining spacing of bikeways across the city or region. For example, criteria could require that Primary Bikeways be located no more than two miles apart and that Secondary Bikeways be provided every mile and feed into the Primary Bikeways.

The following is a proposed classification for use for by the City of Madison and is purposely devised with urban area bikeways in mind.

Primary Bikeways

These bikeways provide the backbone to an urban or suburban bike network. These bikeways are designed primarily for mobility and not necessarily access to every local destination.

Select Characteristics

- Defined bikeways such as paths, cycle tracks, bicycle lanes or bicycle boulevards
- Appealing to cyclists of varying skills and comfort levels
- Likely to be on lower-volume, lower-speed streets when functioning as on-street bikeways (sometimes parallel to a Secondary Bikeway on a busier street)
- Includes wayfinding signage
- More likely to be regional routes than local routes
- More likely to attract and carry higher bicycle volumes
- Allow for longer, continuous trips
- Relatively direct

Select Criteria

- Long or relatively long continuous distances
- Overcome barriers (for example, crossing a freeway with an overpass)
- More widely spaced than Secondary Bikeways
- Other bikeways connect and feed into it
- Designed to minimize delay (fewer stops, high quality intersections)
- Likely to serve major employment, entertainment or other destinations

Examples

- Primary paths (Southwest Path, Isthmus Path, Capital City Trail, Starkweather Creek Path)
- East Mifflin Street Bicycle Boulevard
- South Segoe Road (Buffered bike lanes)

Secondary Bikeways

These bikeways have proximity to and feed Minor Bikeways to the Primary Bikeway network. Secondary Bikeways also fill in network gaps between the more widely spaced Primary Bikeways.

Select Characteristics

- Likely to be defined bikeways such as paths, lanes or connecting local streets
- More likely to be local routes than regional routes
- Include neighborhood connector routes
- Typically carry moderate volumes of bicycle traffic
- May include higher-volume, higher-speed motor vehicle routes with bicycle facilities that parallel Primary Bikeways
- Provide direct access to more destinations than Primary Bikeways
- Likely to serve major destinations as well as neighborhood centers, local retail and other local attractions

Select Criteria

- Short to moderate distances
- Moderately direct (or most direct in the case of higher volume, higher speed motor vehicle routes)
- Overcome barriers (for example, with traffic signal treatments and/or pavement markings)
- More finely spaced than Primary Bikeways
- High proximity to both Primary and Minor Bikeways which it serves to connect
- Moderate number of intersections (a mix of mobility and land access)

Examples

- Secondary paths (Marshview Path, Brittingham Park Path)
- East Washington Ave (bicycle lanes)

Minor Bikeways

These bikeways encompass all other bikeways that are not classified as Primary or Secondary Bikeways

Select Characteristics

- Generally short bicycle paths connecting neighborhoods and activity centers to the bikeway network
- May include signed bike routes with no other bikeway treatments
- Typically carry low volumes of bicycle traffic for very short distances

Select Criteria

- Neighborhood or small area routes
- Most often indirect (as viewed as part of the entire system)
- High proximity to Secondary Bikeways; sometimes connect directly to Primary Bikeways
- High number of intersections and driveways (excellent land access)
- Finely spaced

Examples

- Minor paths (Neighborhood paths linking to the Cap City Trail)
- North Brearly Street (short signed bike route)

Sample Functional Classification Application

An initial assessment of bikeways in central Madison has been undertaken to begin to look at the utility of this rating system. Map 1 displays the existing bikeways in central Madison including paths, bike lanes/paved shoulders, bicycle boulevards and bike routes. Map 2 displays the draft bicycle functional classification rating of these bikeways (except the bike routes) and other streets without specific bicycle facilities or signs. The following should be noted about the draft classifications:

- Existing bicycle routes were not all classified
- Not all streets with bikeways on the University of Wisconsin campus were classified
- Campus Drive was not classified despite having wide paved shoulders
- Local streets were not rated as Minor Bikeways

The final classification will include streets that do not currently contain a bicycle facility, but may in the future.

Madison Transportation Plan

Existing Bikeways

DRAFT

Legend

Shared-Use Paths

- Existing Bike Path
- Bike Lanes/Paved Shoulders
- Bicycle Boulevards
- Bike Routes

Univ. of Wisconsin

Miles

0 0.125 0.25 0.5

CITY OF MADISON WISCONSIN

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Madison Transportation Plan

Bikeway Functional Class

DRAFT

Legend

Bicycle Functional Class

- Primary
- Secondary
- Local

Univ. of Wisconsin

Miles

0 0.125 0.25 0.5

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