BICYCLE SAFETY PLANNING

Executive Advisory Committee
May 21, 2019

BICYCLE SAFETY

- Average of 312 bicycle crashes per year from 2011-2015
  - ~10% serious injury
  - ~1% fatality
- The top 2 known causes of bicycle crashes:
  - Failure to yield
  - Distracted or inattentive driving
- 83% of crashes were on local roads
- 100% of bike fatalities were males
- 15-19 year old age group had the highest number of fatalities

LEVEL OF TRAFFIC STRESS

TYPES OF BICYCLISTS

LTS 1 – Lowest Stress

LTS 2 – Low Stress

LTS 3 – Medium Stress

LTS 4 – High Stress

GATEWAY BIKE PLAN

- Developed in 2011; endorsed by EWG Board of Directors January 2012
- Identifies over 1,000 miles of bicycle facilities (St. Louis City, St. Louis County, St. Charles County)
- Also includes strategies for education, encouragement, and enforcement
- Implementation
  - Strategic performance measures
  - EWG BPAC Gateway Bike Plan – Working Group
  - Annual Report Card
- New metrics and goals
  - Address shifting national planning and design standards and adopt new bikeway design guidance
  - Network changes - Incorporate network recommendations from new plans and studies

DOWNTOWN ST. LOUIS TRANSPORTATION STUDY (enhancing multimodal options)

ST. LOUIS COUNTY ACTION PLAN

Separated Bike Lanes

Separated bike lanes (also known as protected bike lanes or cycle tracks) are bike lanes that have a physical and/or vertical buffer between the bicycle lane and motor vehicle lane, in addition to pavement markings. Bollards, raised medians, curbs, and even on-street parking can be used as a buffer to further separate lanes of travel. This type of bicycle facility can be used on any road where space allows, but is strongly recommended for use on higher-speed, higher-volume roads, or roads with multiple lanes of travel.

Benefits

- Appeals to a wide variety of bicyclist skill levels due to the high level of separation, which reduces level of stress.
- Typically also separated from pedestrian traffic, minimizing congestion in pedestrian-heavy locations.

Limitations

- Physical separation or protection often ends at intersections, which may require additional treatments to ensure safe, comfortable crossings and turning movements for people bicycling.

Other Considerations

- If available, on-street parking can be considered as a physical buffer.
- Separated bike lanes can be one-way or two-way. For two-way cycle tracks, consider surrounding land use and connecting facilities to determine which side of the street is most appropriate for placement, and use pavement markings to indicate the direction of travel on both sides of the cycle track.

Connectivity

- Serves essential, primary connections on major roads through and across communities.

Level of Separation: High

Figure 12: Separated Bike Lanes

EAST-WEST GATEWAY BICYCLE PLANNING GUIDE

- Released June 2018
- Developed to help assist Local Public Agencies as they develop projects for TIP funding consideration.
- The Guide enables LPAs to:
  - Understand how various user groups respond to different types of bicycle facilities.
  - Determine the recommended type of bicycle facility to be developed based on the vehicle speed and traffic volume.
- Defines level of stress, types of bicyclists, and network connectivity
- Outlines different types of bicycle facilities
- Bicycle facility selection guide
- Design resource index: FHWA, FTA, NACTO, AASHTO, ITE

NACTO BICYCLE PLANNING WORKSHOP

- May 15 at the MODOT Traffic Management Center
- 50 attendees from across the region
- Certified NACTO trainers lead local training on national bikeway design best practices
- Educational workshops to be hosted annually

USDOT POLICY STATEMENT ON BICYCLE AND PEDESTRIAN ACCOMMODATION

- "The DOT policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide – including health, safety, environmental, transportation, and quality of life – transportation agencies are encouraged to go beyond minimum standards to provide safe and convenient facilities for these modes." *(March 2010)*

USDOT MEMO: BICYCLE AND PEDESTRIAN DESIGN FLEXIBILITY

- "This memorandum expresses the FHWA support for taking a flexible approach to bicycle and pedestrian facility design." *(August 2013)*
- FHWA supports the use of the following resources to further develop nonmotorized transportation networks, particularly in urban areas:
  - AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
  - AASHTO Guide for the Development of Bicycle Facilities
  - NACTO Urban Bikeway Design Guide
  - ITE Designing Urban Walkable Thoroughfares

FHWA RESOURCES

- Separated Bike Lane Planning and Design Guide (May 2015)
- Case Studies in Delivering Safe, Comfortable, and Connected Pedestrian and Bicycle Networks (Dec 2015)
- Incorporating On-Road Bicycle Networks into Resurfacing Projects (Dec 2015)
- Guidebook for Developing Pedestrian and Bicycle Performance Measures (Mar 2016)
- Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts (Aug 2016)
- Small Town and Rural Multimodal Networks (Dec 2016)
- Guidebook for Measuring Multimodal Network Connectivity (Feb 2018)
- Strategies for Accelerating Multimodal Project Delivery (Oct 2018)
- Bikeway Selection Guide (Feb 2019)

Note: not an exhaustive list.

QUESTIONS?

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