



Ada County Highway District Roadways to Bikeways Master Plan

Open House #1
August 9, 2007

Bicycle Facilities



A bikeway is created when a road has the appropriate design treatment to accommodate bicyclists, based on motor vehicle traffic volumes and speed

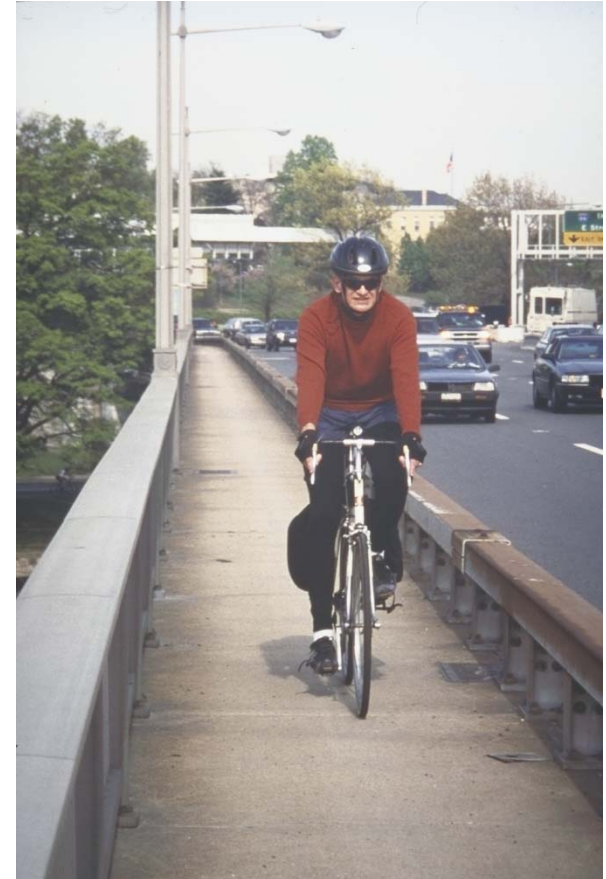
- Bike Lanes
- Bike Route
 - Wide outside lane
 - Bicycle boulevard

Bicycle Facilities

- Bicyclist



Bicyclist Operating Space:
two feet wide handle
bars, 1 ft operating
shoulder each side =
minimum width of 1.2m /
4 feet for many bicycle
facilities



Bicycle Facilities

– Bicyclist Types



Advanced,
experienced

Basic or less confident
adult

Children



Bicycle Facilities

– How to Select?



- Numerous factors to consider
- Federal Highway Administration's (FHWA) *Selecting Roadway Design Treatments for Bicyclists*
- Factors include:
 - Road type (arterial, collector, local street, etc...)
 - Traffic volume
 - Speed
 - Traffic mix (e.g. truck %)
 - Expected users - skill, age, volume, destinations
 - Road conditions, space, intersections, parking demand

Bicycle Facilities

– Bike Lanes



Options for providing bike lanes:

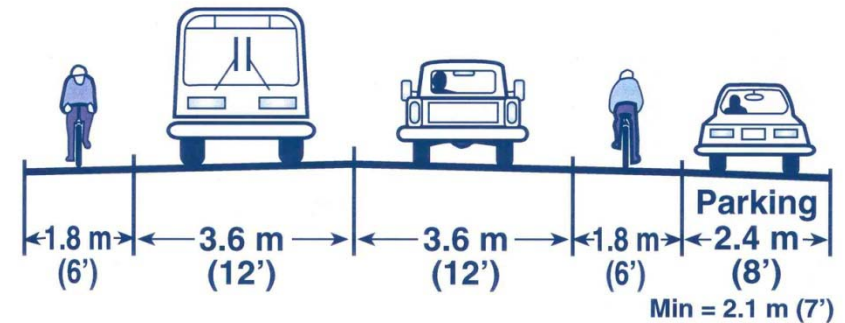
- Install with new roadway
- Pave shoulder/widen road
- Reduce travel & parking lane widths
- Remove travel lanes
- Remove parking

Bicycle Facilities

– Bike Lanes



- Width: 4-6 feet
- Bike lane marked with 6-8" solid line and markings
- Dashed line used at transition areas



Min: 1.5 m (5') against curb, parking or guardrail; 1.2 m (4') open shoulder

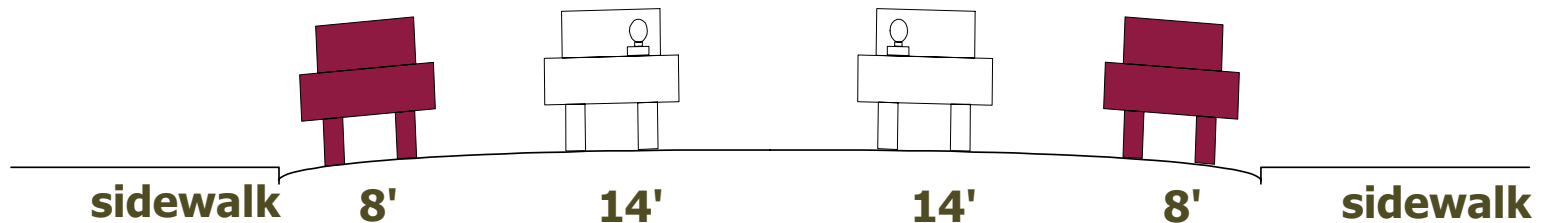
Bicycle Facilities

– Bike Lanes

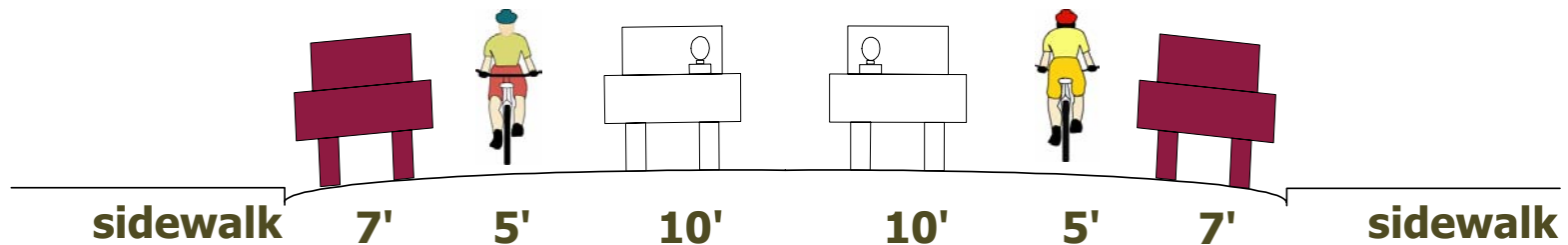


- Retrofitting 44' Wide Roadway

before



after

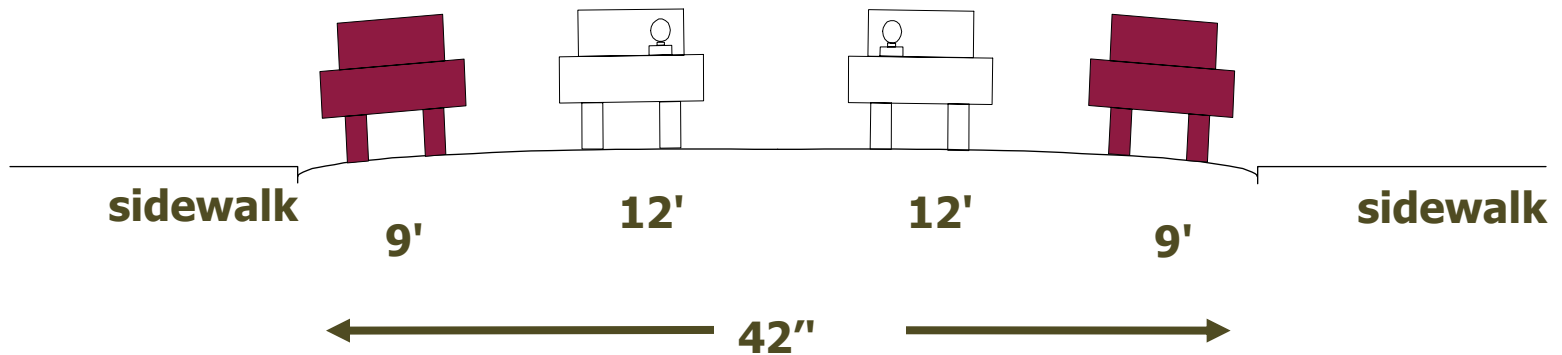


Bicycle Facilities

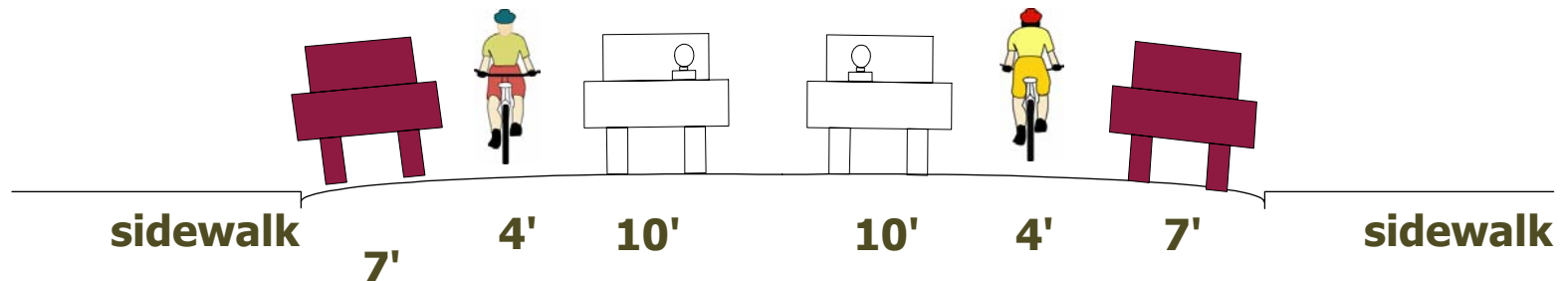
– Bike Lanes



- Retrofitting 42' Wide Roadway
before



after (42')



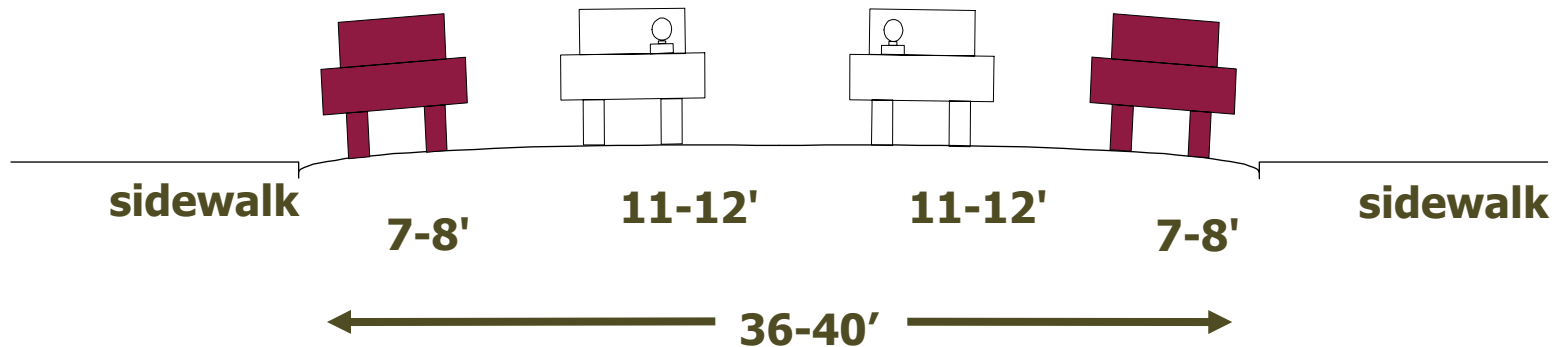
Bicycle Facilities

– Bike Lanes

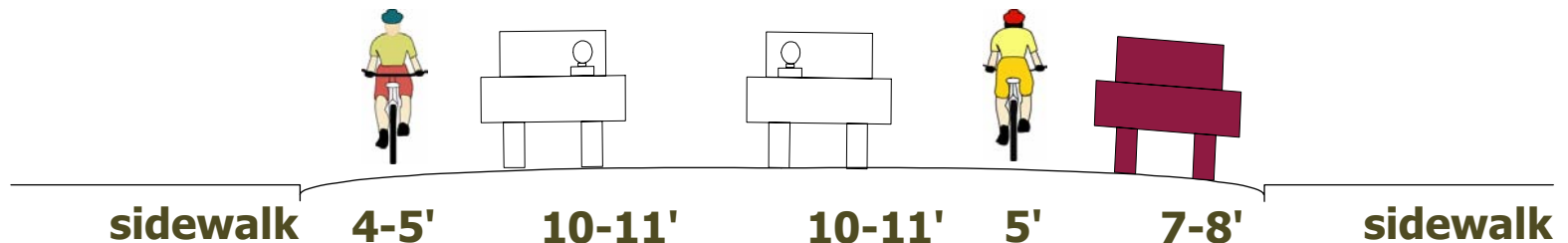


- Retrofitting 36-40' Wide Roadway

before



after

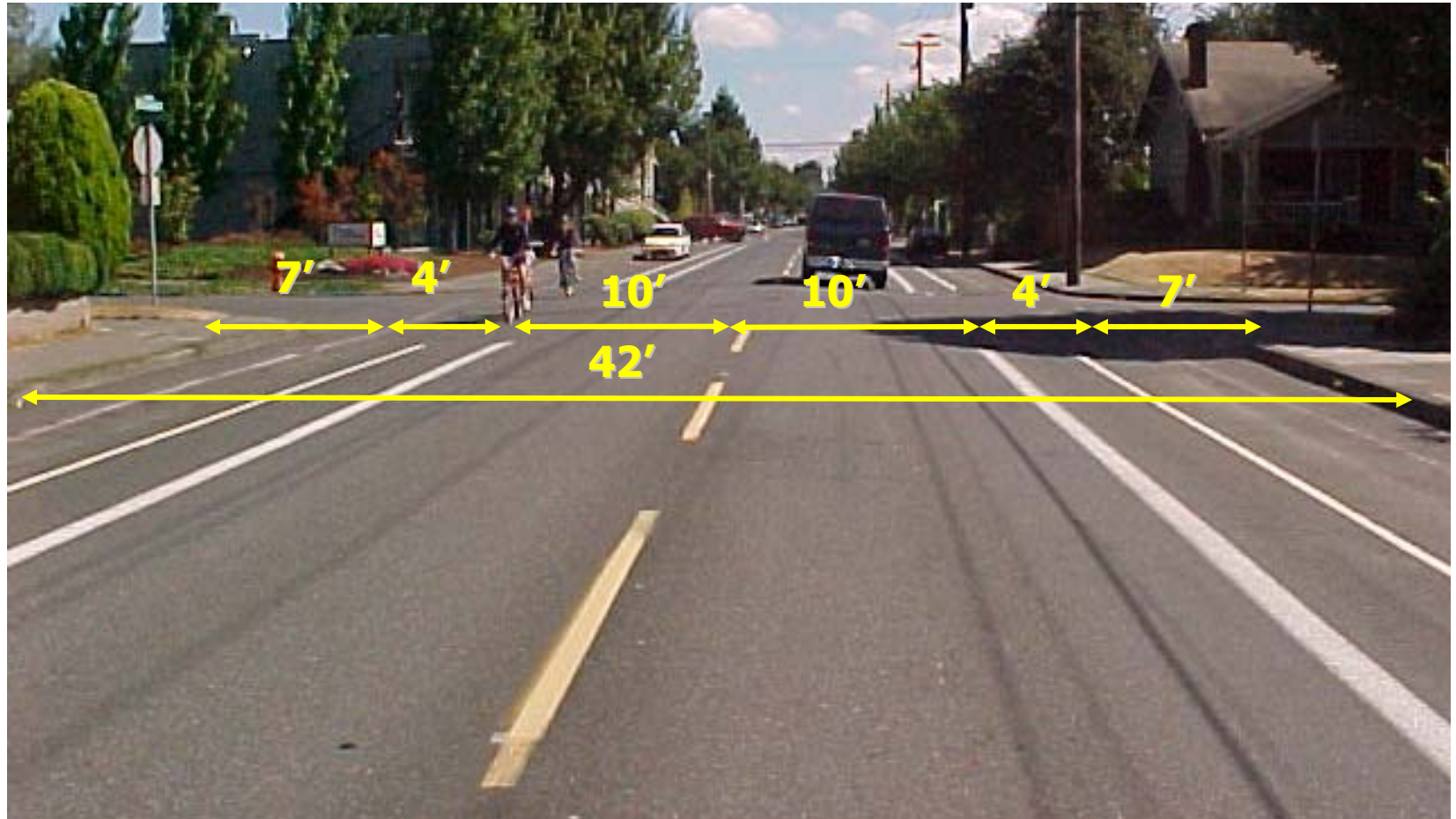


Bicycle Facilities

– Bike Lanes



- 42' wide street after bike lanes



Bicycle Facilities

– Bike Lanes



- Intersections should:
 - Be direct and logical
 - Avoid unusual conflicts
 - Remove as many conflicts as possible
 - Have signals timed appropriately
 - Be compact, avoid free-flowing movements
 - Have simple right angle intersections
 - Bicyclists should be visible, movements predictable
 - Bicyclists should rarely behave as pedestrian

Bicycle Facilities



- Reasons why bike lanes won't fit:
 - Cannot further squeeze travel lanes
 - Travel lanes needed for automotive capacity
 - On-Street Parking needed in Commercial Areas
 - Cost of widening prohibitive

Bicycle Facilities



Options:

- Provide one bike lane/wide outside lanes/other unique solution
- Calm traffic
- Seek alternate route
- Provide alternative bicycle facility

Bicycle Facilities

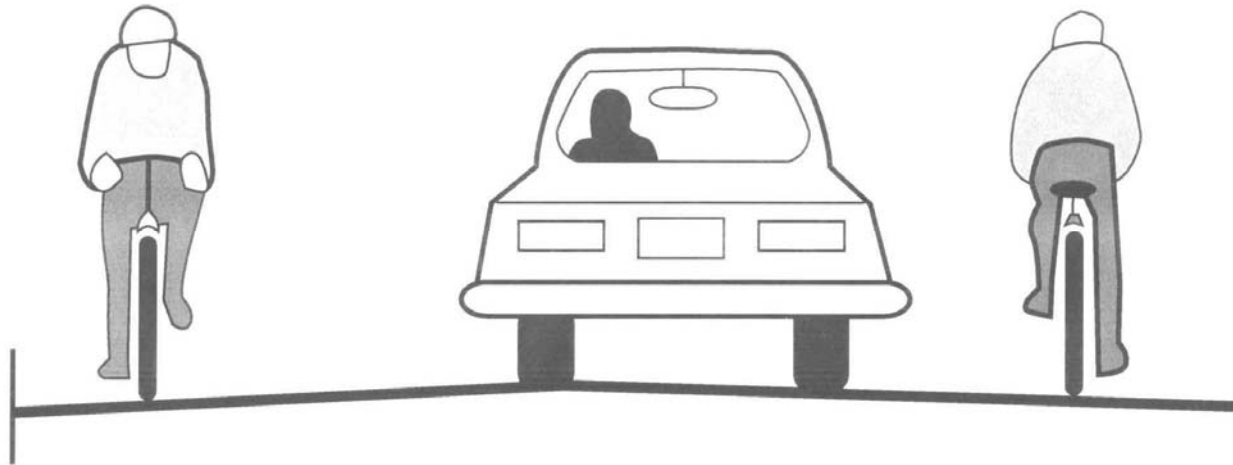
– Bike Route



- Wide outside lanes
- Boulevards
- Emerging concept: shared lane markings

Bicycle Facilities

– Bike Route



Most common type of bikeway:

- Roads as they are - no specific dimensions
- Appropriate on low-volume or low-speed streets - 85% or more of streets in a city

Bicycle Facilities

– Bike Route

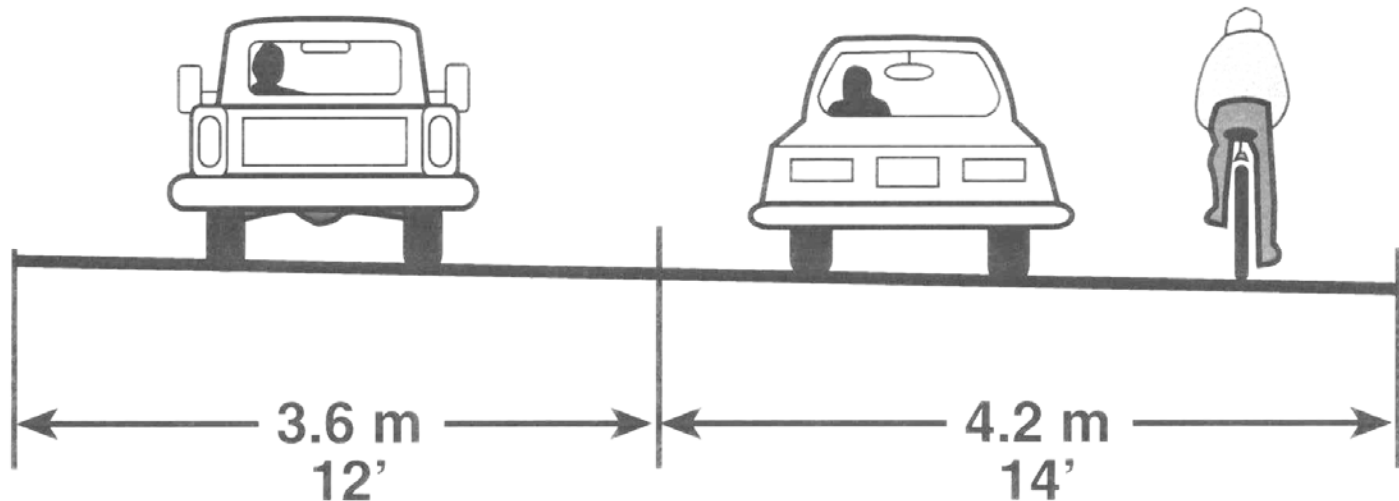


- Appropriate on 85% of streets in a city
- Great for getting around neighborhoods
- Not as practical for longer distances
- Intersections stop controlled the “wrong way”



Bicycle Facilities

– Wide Outside Lane



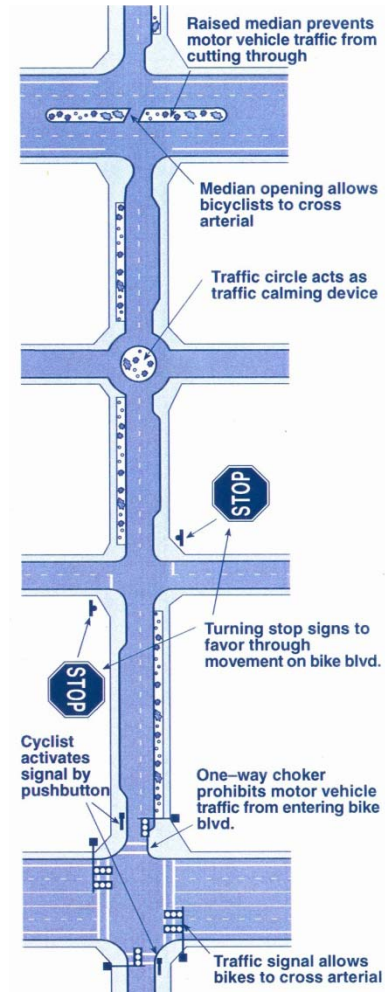
- Used primarily on busy (arterial) streets with insufficient room for bike lanes
- 14' desirable
- Any wider should be striped - wide lanes don't improve safety: *anti-traffic-calming?*

Bicycle Facilities

– Bicycle Boulevards



- The operation of a local street is modified to act as through street for bicyclists
- Automobile access is primarily local traffic
- Traffic calming reduces speeds & through trips
- Traffic controls give priority to through bicycle movement
- Works best in a connected grid



Bicycle Facilities

– Bicycle Boulevards



Advantages

- Opportunity: local streets can be converted to bike boulevards
- Attract cyclists who don't feel comfortable on arterials & prefer low traffic streets
- Traffic calming is favored by residents who want slow traffic on their streets
- Improve conditions for pedestrians: reduced traffic and improved crossings

Bicycle Facilities

– Bicycle Boulevards



Disadvantages

- May be located on streets that do not provide direct access to destinations (cyclists have to ride on a hostile street to complete their trip)
- May be difficult to find long enough local street to provide continuity
- May cause traffic diversion onto other streets
- Arterial crossings can be difficult & expensive to retrofit to create safe conditions for bicyclists
- Turning stop signs and/or adding traffic signals may not be acceptable for the traffic conditions

Bicycle Facilities

– Bicycle Boulevards



- Traffic Calming



Bicycle Facilities – Bicycle Boulevards



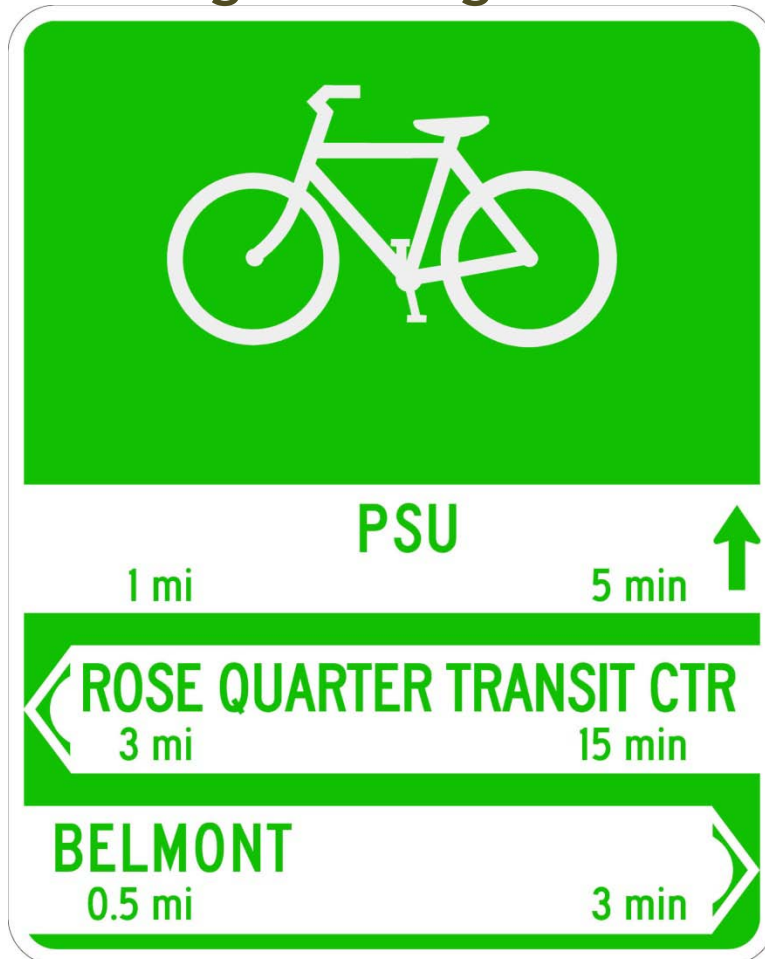
- Crossings



Bicycle Facilities – Bicycle Boulevards



- Markings and Signs



Bicycle Facilities – Shared Lane Markings



- Used in numerous cities worldwide
- Adopted as an optional marking in California, but not nationally
- Studies: Florida, San Francisco
- Various applications
 - Denver: sub for bike lanes
 - SF, others: get cyclists out of door zone on streets with narrow lanes

