Bikeways 101: Lessons from San Francisco
Mike Sallaberry
SFMTA

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NACTO Workshop - Chicago IL
Background

- 2nd Highest Density in the U.S.
- 47 square miles
- Mild Climate
- Population ~810,000
- Hilly (steepest hill 31.5%)
Space is a Limited Resource
Use it Wisely!
SF State of Cycling Report identified top three barriers to more cycling

- Need for more bike lanes
- Fear of cars
- Fear of crossing major streets

Bicycle Traffic Signal at Fell/Masonic
Road Diets

Excess capacity removed, extra space reallocated for other purposes:
- Bike Lanes
- Wider Sidewalks
- Median (raised/planted or street level/painted)

San Francisco has done more (40+) than any other North American city
Valencia Street

Road Diet in 1999
Road Diets

Implemented & Future Road Diets

Streets that have had general traffic lanes reduced in order to promote transit, bikes, pedestrians, and traffic calming since the adoption of the San Francisco Transit First Policy in 1973.

DRAFT

Road Diets
- Red: Removed Elevated Freeway
- Blue: Implemented Road Diets
- Purple: Implemented Full-Time Transit-Only Lanes
- Green: Future Road Diets

DISCLAIMER: The City and County of San Francisco does not guarantee the accuracy, adequacy, completeness or usefulness of any information.
Shared Lane Markings (sharrows)

“Dooring” collisions, wrong-way riding, sidewalk riding, motorists squeezing cyclists against curb or parked cars
Contraflow Bike Lanes
Scott Street Bike Box and Left Turn Lane

Other Bike Boxes: Market St and 14th/Folsom St
Other Left Turn Lanes: Howard St, 7th St, 16th St, Laguna Honda Blvd
Colored Bicycle Facilities

- Higher Visibility
- Marketing/Branding
- However, cost is 5x to 10x cost of regular bike lane/marking
Valencia Green Wave

- Signals timing set to 13 mph progression at 11 intersections
- One of SF’s highest-use bicycle corridors (700 cyclists during 1.5 hour count – up from 220)
- Parallel corridors ideal for transit (Mission) and automobile traffic (Guerrero)
- SF’s complex grid and topography limit where green waves can be implemented
Pavement to Parks - “Parklets”

Car parking spaces converted to ped/bike uses

A result of improved inter-agency coordination
On-Street Bike Parking/Corrals

1 car space = 10 to 12 bike spaces
Wider Bike Lanes

Buffered Bike Lane
Alemany Boulevard

Wider Bike + Parking Lane
Scott Street
Separated Bikeways/Cycletracks in SF

Alemany Boulevard

Division Street

Laguna Honda Boulevard
Market Street

Separated bikeway, diversion of traffic, color
JFK Drive
(draft proposals)
Cycle Tracks

- On-street exclusive bike facility physically separated from motor traffic
- Cyclists physically separated from moving vehicles, midblock (+)
- Buffer between bikeway and parking reduces risk of “dooring” (+)
- Vehicles do not have to cross bikeway to park (+)
- Reduced motorists blocking of bike space (+)
- More complex intersections (-)
- Reduced visibility of cyclists for motorists turning into driveways (-)
- Pedestrians must cross cycle track to get to parked vehicles (-)
- Cost (-)
- Maintenance (-)
Intersection Design Challenges
Masonic Avenue
Complete Street and Raised Cycletracks

Key Challenge: Cost
$20 Million to Construct
Road Diets – Complete Streets

50,000+veh/day – LOS F accepted
Designing for Peak Motor Vehicle Flow

Level of Service “F”

Unused Capacity

Peak Period

Unused Capacity

# of vehicles per hour
Bicycle Boulevards/Neighborhood Greenways

- Combination of Traffic Calming Elements

- For Shared Bicycle Routes and Neighborhood Greenways

- Slower Traffic = More Comfort/Safety for Cycling and Walking
Lower Speed Limits and Prevailing Speeds

Bike Routes, Home Zones, School Zones, Neighborhood Arterials

Recently done or underway:
Masonic Avenue
Folsom Street
Howard Street
King Street
The Embarcadero
John Muir Drive
Broadway Tunnel
Bicycle Sharing
Spring 2012
Automated Bike Counters

Month

Jan 2009 Data Unavailable 2010 Data Unavailable
Feb 53% 11%
Mar 28% 23%
Apr 23% 23%
May 17% 27%
Jun 20% 20%
Jul 14% 14%
Oct 8% 8%
Sunday Streets
Pedestrians and Bicycling are Good for Business
Gold Level Bike Friendly Community by League of American Bicyclists in 2006
Changes in Mode Share in SF

Source: US Census American Community Survey
Key Goal
Positive Feedback Loop

More accommodation → More people riding

More demand (for bicycle accommodation) → More safety

More awareness of cyclists → More accommodation
Thank you!

Q/A...