Lessons from San Francisco
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SFMTA
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
SF State of Cycling Report identified top 3 barriers to more cycling

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

Bicycle Traffic Signal at Fell/Masonic
Survey of ITE and APBP Members

How important a role do you think separated bikeways have or could have in making cycling more mainstream and popular?
Cycle Track Advantages

- Cyclists physically separated from moving vehicles
- Buffer between bikeway and parking reduces risk of “dooring”
- Vehicles do not have to cross bikeway to park
- Reduced motorists blocking of bike space
Roadway Obstructions of Traditional Bike Lanes in Urban Areas
Cyclist Comfort on Busy Roadways

From London Cycling Design Standards

<table>
<thead>
<tr>
<th>85%ile Speed</th>
<th>&lt;20mph</th>
<th>20-30mph</th>
<th>30-40mph</th>
<th>&gt;40mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Low</td>
<td>Lanes</td>
<td>Lanes</td>
<td>Lanes</td>
<td>Tracks/paths</td>
</tr>
<tr>
<td>High</td>
<td>Lanes</td>
<td>Lanes</td>
<td>Lanes</td>
<td>Tracks/paths</td>
</tr>
<tr>
<td>Medium</td>
<td>Lanes or combined use with cycle symbols</td>
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<td>Lanes or Tracks/paths</td>
<td>Tracks/paths</td>
</tr>
<tr>
<td>Very Low</td>
<td>Combined use with cycle symbols</td>
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<td>Lanes or Tracks/paths</td>
</tr>
</tbody>
</table>

Notes:
1. Each route will need to be judged in the light of its specific situation
2. Cycle lanes or tracks will not normally be required in traffic calmed areas
3. Congested traffic conditions may benefit from cycle lanes or tracks
4. Designs should tend to either calm traffic or segregate cyclists
Separated Bikeways/Cycletracks in SF

Alemany Boulevard

Division Street

Laguna Honda Boulevard
Market Street

Separated bikeway, diversion of traffic, color
JFK Drive
(draft proposals)
Masonic Avenue
Complete Street and Raised Cycletracks proposed

Key Challenge: Cost
$20 Million to Construct
Colored Bicycle Facilities

- Higher Visibility
- Marketing/Branding
- However, cost is 5x to 10x cost of regular bike lane/marking
Designing for Peak Motor Vehicle Flow
Extra Roadway Capacity is Common

Level of Service “F”

Unused Capacity

# of vehicles per hour

Peak Period

Unused Capacity

0:00 2:00 4:00 6:00 8:00 10:00 12:00 14:00 16:00 18:00 20:00 22:00

vehicles per hour
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
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
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
Mode Split in SF

Means of Travel to Work

<table>
<thead>
<tr>
<th>Means of Travel to Work</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drove Alone</td>
<td>36.0%</td>
</tr>
<tr>
<td>Carpoled</td>
<td>7.9%</td>
</tr>
<tr>
<td>Public Transit</td>
<td>34.1%</td>
</tr>
<tr>
<td>Walk</td>
<td>9.4%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>3.5%</td>
</tr>
<tr>
<td>Other*</td>
<td>2.4%</td>
</tr>
<tr>
<td>Worked at home</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

* "Other" is taxi, motorcycle, misc

Source: US Census American Community Survey
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 awareness of cyclists

More safety → More people riding

MORE PEOPLE RIDING
Thank you!