

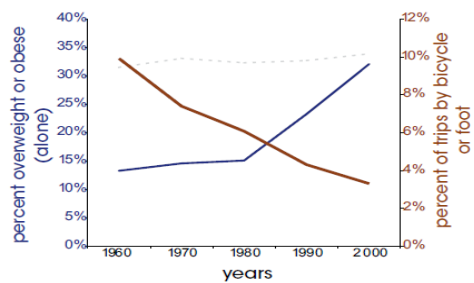
Bicycling in Tucson: What should Tucson be in 20 years?



Presented by Tom Thivener, City of Tucson, Transportation Department

Are we prepared for the future?

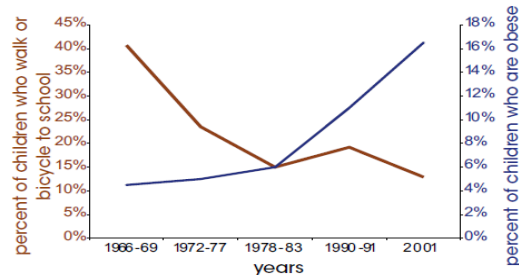
Change in Bicycling and Walking Rates vs. Adult Obesity and Overweight Rates



Legend:
 — = % of trips to work by bicycle or foot
 - - - = % obese
 — = % overweight alone

Sources: National Center for Health Statistics 2006, Census 1960, 1970, 1980, 1990, 2000; $r = -0.86$ (bicycle + walk/overweight) $r = -0.79$ (bicycle + walk/obesity)

Trend in Obese Children vs. Rate of Bicycling and Walking to School



Legend:
 — = % of kids who bicycle or walk to school
 - - - = % of kids who are obese

Sources: CDC, NHANES, McDonal

Individual cost of driving

\$7,823 per year

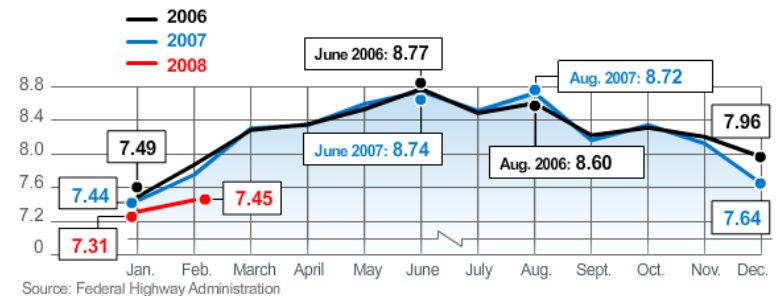
(AAA estimate for annual cost of operating a compact car for 15,000 miles/year)

Americans are driving less

February was the fourth straight month in which miles driven in the USA fell compared to the previous year.

- ▶ Estimated annual miles traveled
- ▶ Average daily miles traveled

Average daily miles driven in the USA (in billions)



Source: Federal Highway Administration

Updated 5/9/2008 11:16 AM | Comments [2,546](#) | Recommend [149](#) | E-mail | Save | Print | Reprints & Permissions | [RSS](#)

Gas prices rattle Americans

By **Judy Keen** and **Paul Overberg**, USA TODAY



Enlarge By Marcio Jose Sanchez, AP

Record high gas prices are prompting Americans to drive less for the first time in nearly three decades, squeezing family budgets and causing major shifts in driving habits, federal data and a USA TODAY/Gallup Poll show.

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“We know we need to get ready for a world in which energy will only be more expensive.”

--CEO of Wal-Mart

What does the Tucson region have?

γ Tucson has over 800 miles of bikeways!

- ♣ 610 miles of shoulder/bike lane

- ♣ 110 miles of shared use path

- ♣ 96 miles of routes on residential streets

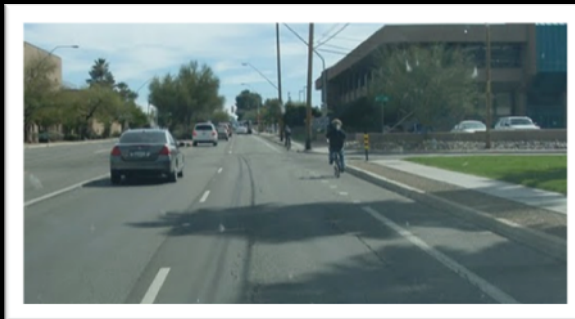
What does the Tucson region have?

♣ 610 miles of shoulder/bike lane

- **Arterial Roadways**

- Lots of cars, driveways, higher speeds, large intersections
- Typically most direct route to destination
- Often only way past barriers in bike system

6th Ave
–Posted 35mph
–ADT: 32,000
–5' bike lane



Alvernon
–Posted 35mph
–ADT: 39,000
–5' bike lane



St. Mary's Rd.
–Posted 35mph
–ADT: 29,000
–5' bike lane



Speedway
–Posted 35mph
–ADT: 48,000
–5' bike lane



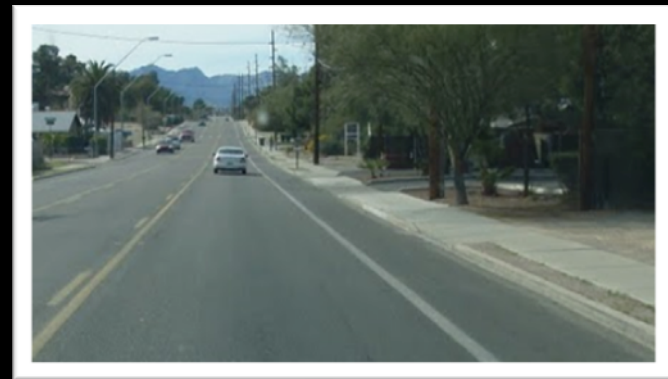
What does the Tucson region have?

♣ 610 miles of shoulder/bike lane

- **Collector Roadways**

- Fewer cars, slower speeds
- Direct way to many destinations

Glenn Ave
-Posted 30mph
-ADT: 9,000
-5' bike lane



Mountain Ave
-Posted 30mph
-ADT: 11,000
-6' plus 3' buffer bike lane

Tucson Blvd
-Posted 30mph
-ADT: 15,000
-5' bike lane



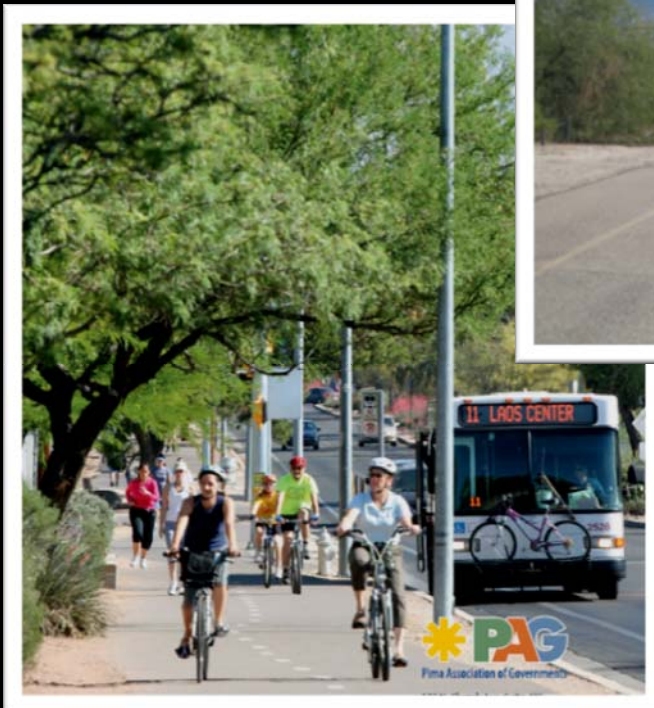
What does the Tucson region have?

- ♣ 110 miles of shared use path
 - Off-street, minimal car conflicts
 - Currently more of a peripheral pathway system

El Paso & Southwestern Greenway

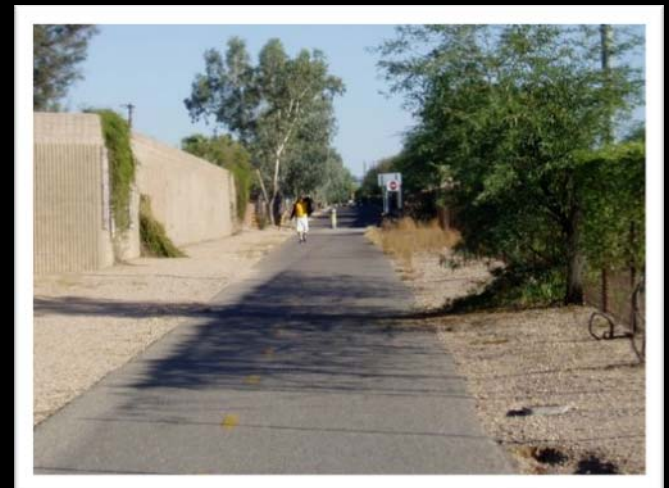


David Bell Pathway



Rillito River Park

Aviation Bikeway



What does the Tucson region have?



♣ 100 miles of routes on residential streets

- Typically:
 - Posted 25mph
 - Low ADT: 500-3,000
 - Bike route signs every ¼ mile
 - Some traffic calming
 - Limited help crossing busy roads
 - Shared roadway, no striped lane
 - Too many stop signs



Unsignalized crossing Treat/Broadway

9th St/ Park



3rd St/Miramonte



What does the Tucson region have?

- ♣ 100 miles of routes on residential streets
 - Good candidates to become Bicycle Boulevards
 - Posted 25mph
 - Reduce amount of car traffic
 - Frequent wayfinding signage
 - Add traffic calming devices
 - Provide help crossing busy roads
 - Add pavement markings to emphasize bikes
 - Remove unnecessary stop signs/switch to yields



3rd Street/Alvernon



University/10th Ave





Tucson, a “Cycling Mecca”?

What does the Tucson region have?



- Υ 1.9% are biking to work in Tucson
- ♣ Has risen from 1.3% in 2000
- ♣ Top 5 for medium to large size US cities

Υ “the biggest single thing to focus on is to increase bicycle use in the region”

--League of American Bicyclists 2008 critique of Tucson's Platinum effort

Cycling to Work

- 1 Portland, OR
- 2 Minneapolis
- 3 San Francisco
- 4 Seattle
- 5 Tucson
- 6 Sacramento
- 7 Washington, DC
- 8 New Orleans
- 9 Denver
- 10 Mesa

- 11 Oakland
- 12 Chicago
- 13 Honolulu
- 14 Philadelphia
- 15 Boston
- 16 Austin
- 17 Long Beach
- 18 San Diego
- 19 Albuquerque
- 20 Columbus
- 21 New York
- 22 San Jose
- 23 Fresno
- 24 Atlanta
- 25 Milwaukee
- 26 Las Vegas
- 27 Los Angeles
- 28 Phoenix
- 29 Cleveland
- 30 Colorado Springs
- 31 Raleigh
- 32 Detroit
- 33 Memphis
- 34 Houston
- 35 Baltimore
- 36 Jacksonville
- 37 Louisville
- 38 Kansas City, MO
- 39 Omaha
- 40 Virginia Beach
- 41 Nashville
- 42 Dallas
- 43 Fort Worth
- 44 Indianapolis
- 45 San Antonio
- 46 Arlington, TX
- 47 El Paso
- 48 Miami
- 49 Tulsa
- 50 Oklahoma City
- 51 Charlotte

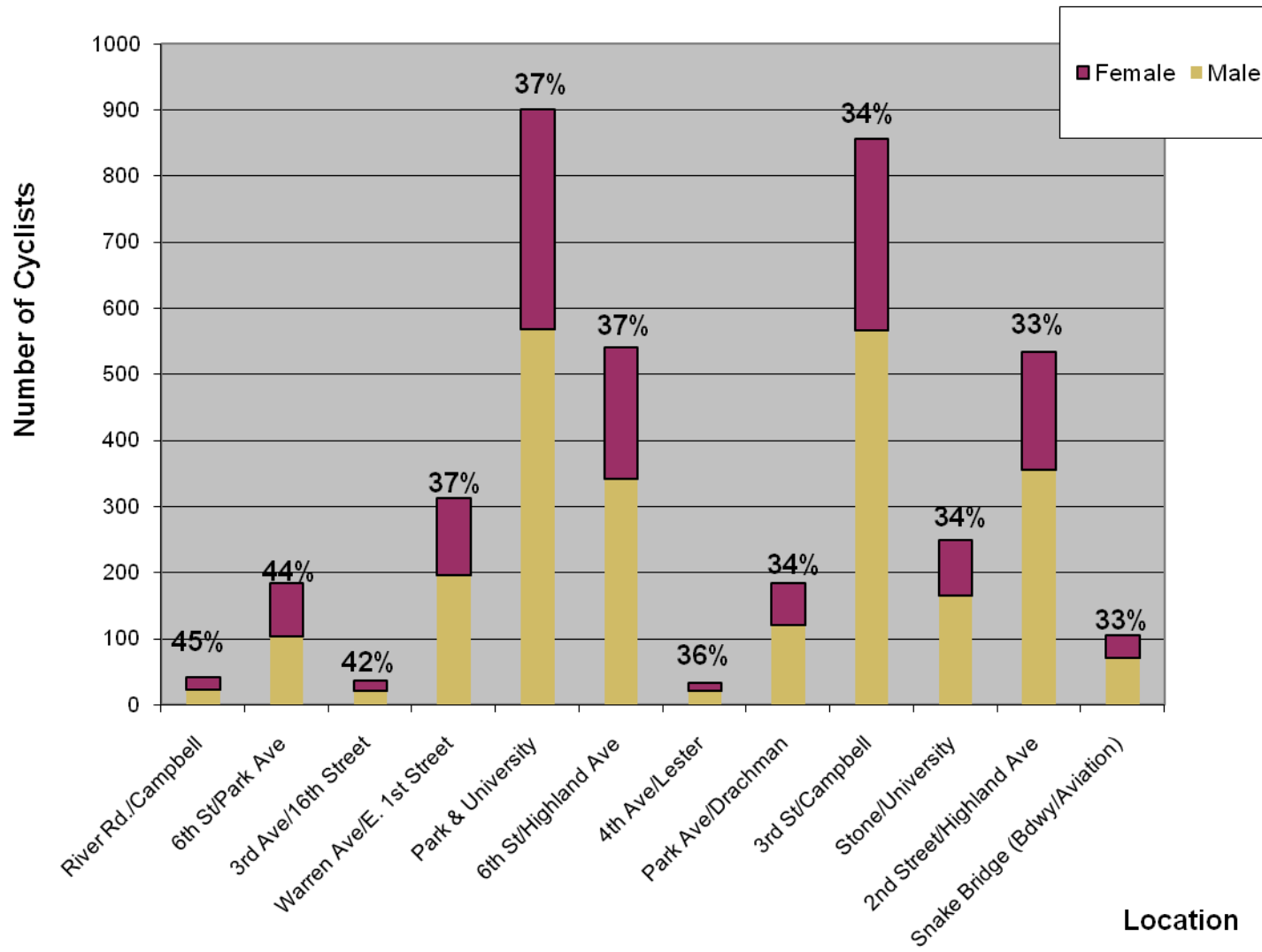
Are women riding?

- ♣ Women serve as “**indicator species**” for bike friendliness
 - “Women were less likely than men to try on-street bike lanes and more likely to go out of their way to use bike boulevards”
 - “if a city wants to substantially increase the number of people riding bikes on a regular basis, it needs to reach out to young women and older people”
- ♣ Netherlands: bikes used for 27% of all trips (55% women)
- ♣ Germany: bikes used for 12% of all trips (49% women)
- ♣ US: bikes used for 0.5% of trips to work (23% women)
- ♣ **Tucson**: bikes used for 1.9% of trips to work (24% women-though 27% during PAG bike count)



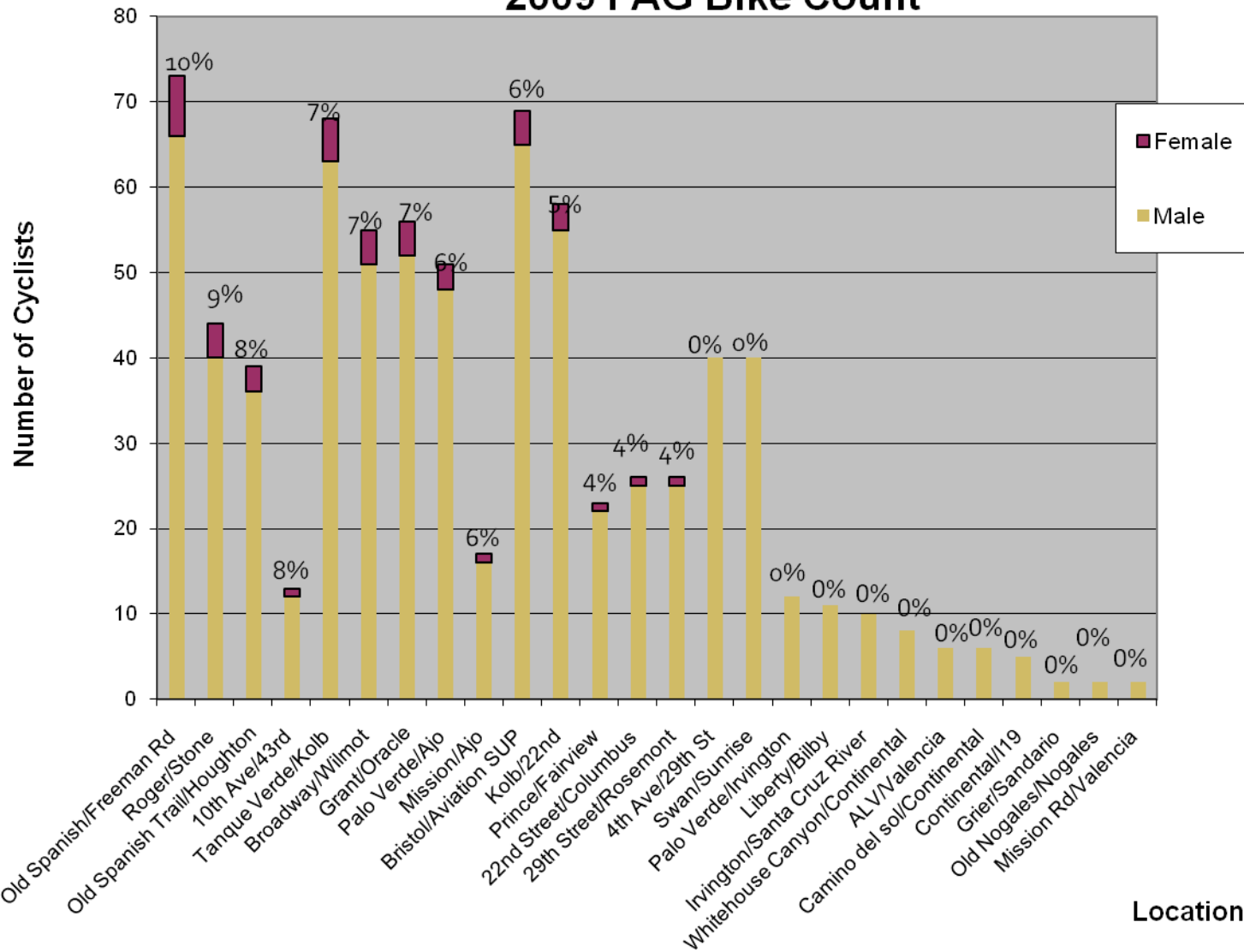
Top 12 Female Ridership Locations

2009 PAG Bike Count

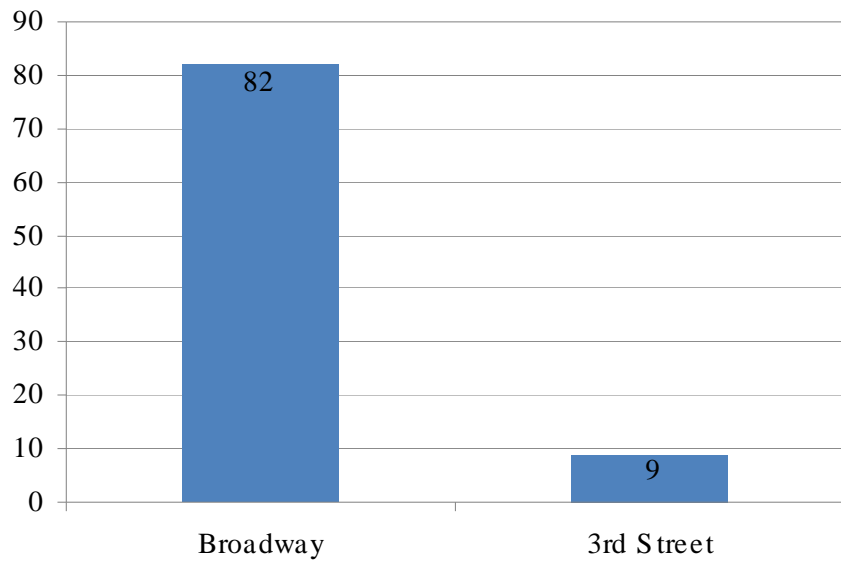


Bottom 26 Female Ridership Locations

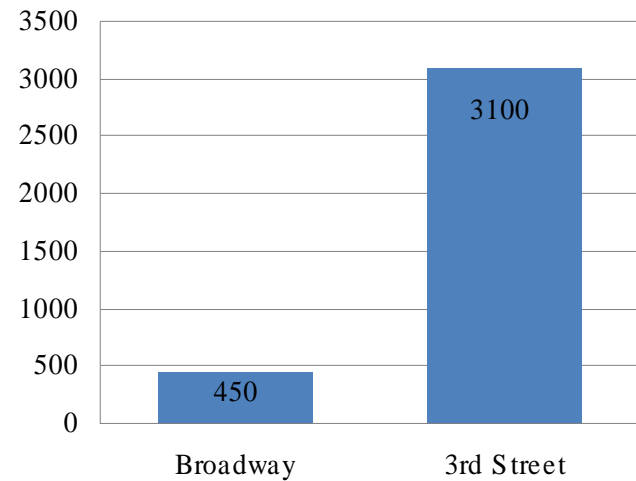
2009 PAG Bike Count



**Number of bike crashes
between Wilmot and Campbell
from 2001 to 2008**

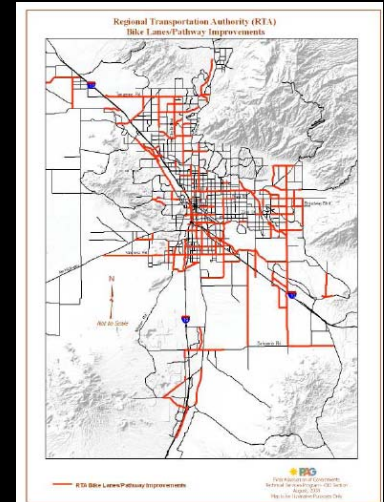


**Daily Bike Traffic
(estimates from 2008
bike count)**



RTA main source of funds for bike improvements

- ♣ Roughly \$60 million for bikeways, sidewalks, and greenways
 - 16 shared use path segments identified
 - El Paso Greenway, Rillito River Path, Canyon Del Oro River Path, Pantano River Path
 - 105 bike lane projects recommended by the BAC
 - Adding bike lanes
 - Fill gaps along arterial roadways
 - Within the City, about 20 projects underway—“low hanging fruit”
 - Remaining projects complex and costly



RTA-Tucson Bike Package 1
Bike Lanes via slurry seal over lane markings
= \$80,000 per mile (average)



Campbell

RTA-Tucson Bike Package 1
Bike Lanes via pavement microsurface
= \$200,000 per mile



Campbell

RTA-Tucson Bike Package 1
Bike Lanes via slurry seal over lane markings
= \$80,000 per mile (average)



South 6th Ave

RTA-Tucson Bike Package 1
Bike Lanes via slurry seal over lane markings
= \$80,000 per mile (average)



South Park Ave

RTA-Tucson Bike Package 1
Bike Lanes via partial pavement Slurry Seal
= \$80,000 per mile (average)



South Alvernon

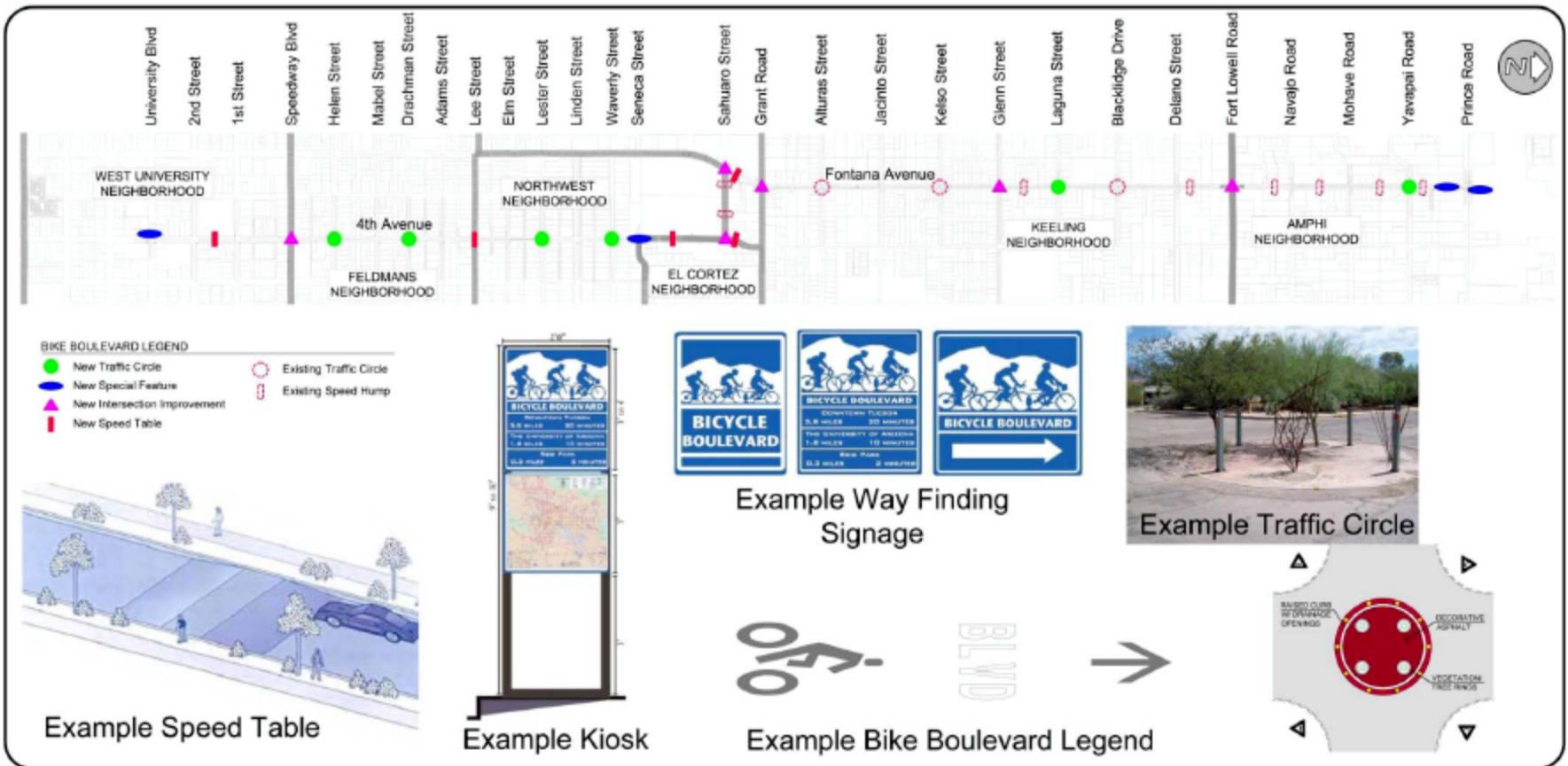
RTA–Tucson Bike Package 2
Bike Lanes via add pavement (upcoming)
= \$400,000 per mile



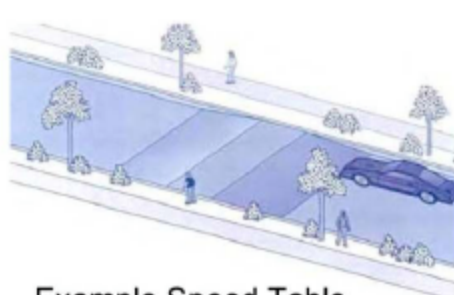
Add pavement
22nd (near Harrison)

RTA-Tucson 4th Ave/Fontana Bicycle Boulevard
 Bike Lanes via add pavement (upcoming)
 = \$150,000 per mile

4th Avenue-Fontana Avenue Bike Boulevard



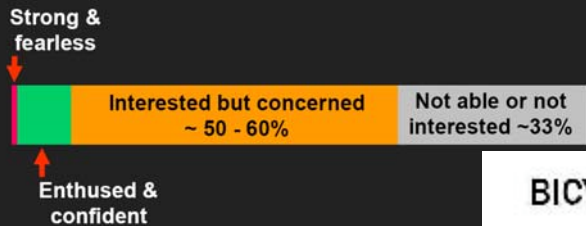
- BIKE BOULEVARD LEGEND**
- New Traffic Circle
 - New Special Feature
 - ▲ New Intersection Improvement
 - New Speed Table
 - Existing Traffic Circle
 - ▭ Existing Speed Hump



What is Portland doing right?

- 4.7% are biking to work in Portland
- Has risen from 1.7% in 2000

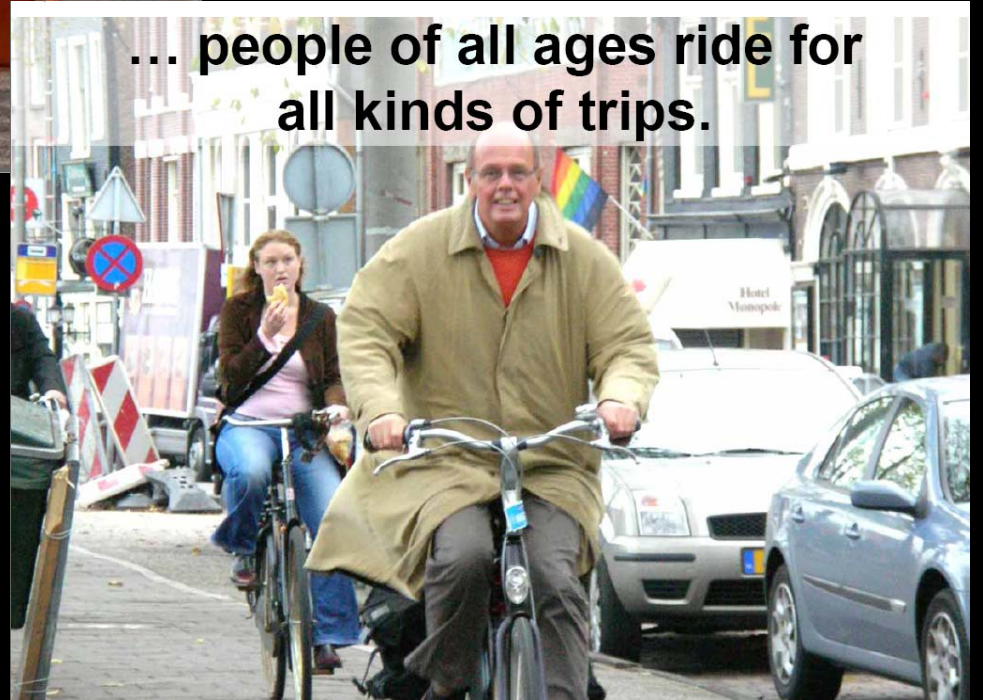
Understanding the market for bicycle transportation: THE FOUR TYPES



In the world's best bicycling cities...



... people of all ages ride for all kinds of trips.



City of Portland's presentation to Mayor and Council: 2030 Bike Plan

Where should Tucson's be in 20 years?

Potential network of bicycle boulevards in Tucson

