

ROAD DIETS

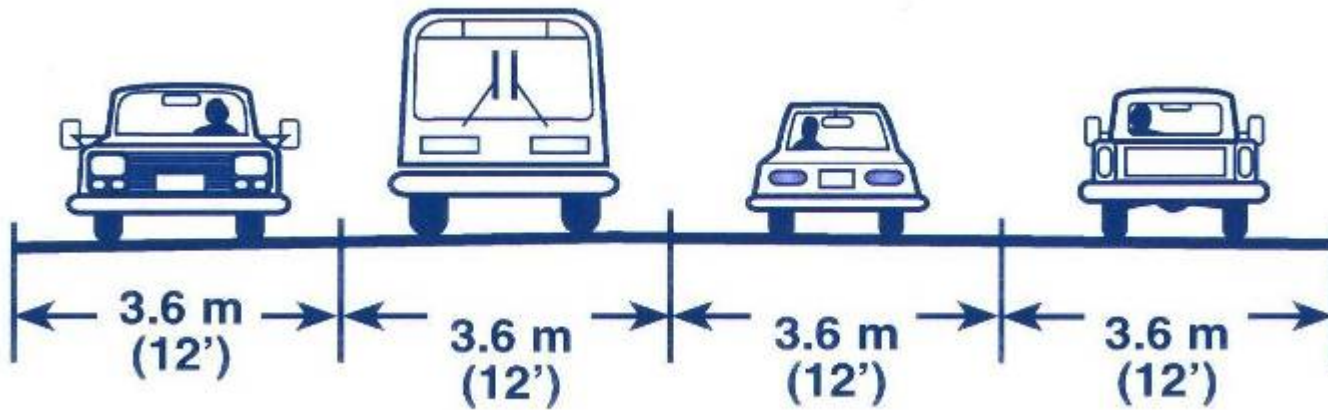
Michael Ronkin

Designing Streets for Pedestrians and Bicyclists

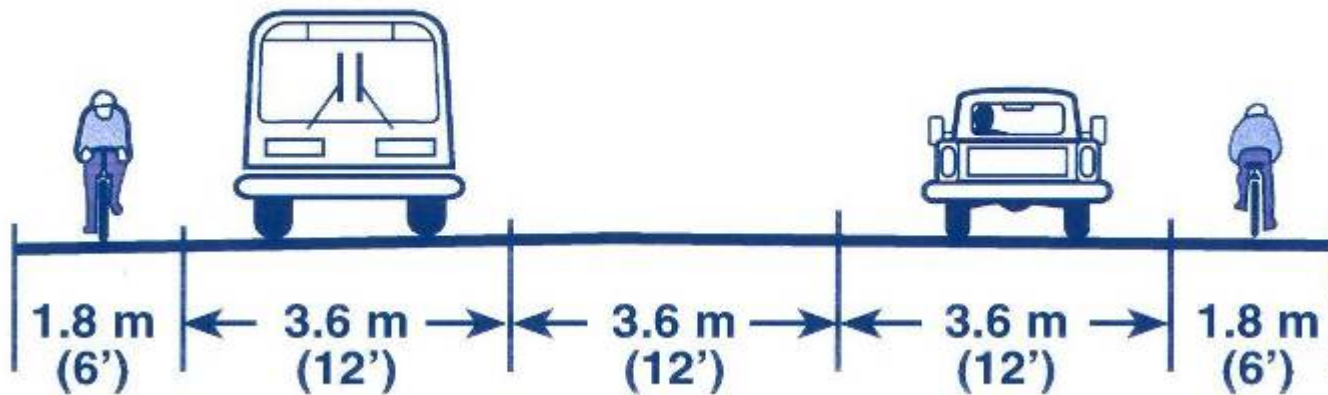
New Partners for Smart Growth

Los Angeles, February 10 2007

BEFORE:



AFTER:



“Classic Road Diet”

Two-way street: 4 travel lanes → 2 + CTL



Road Diets



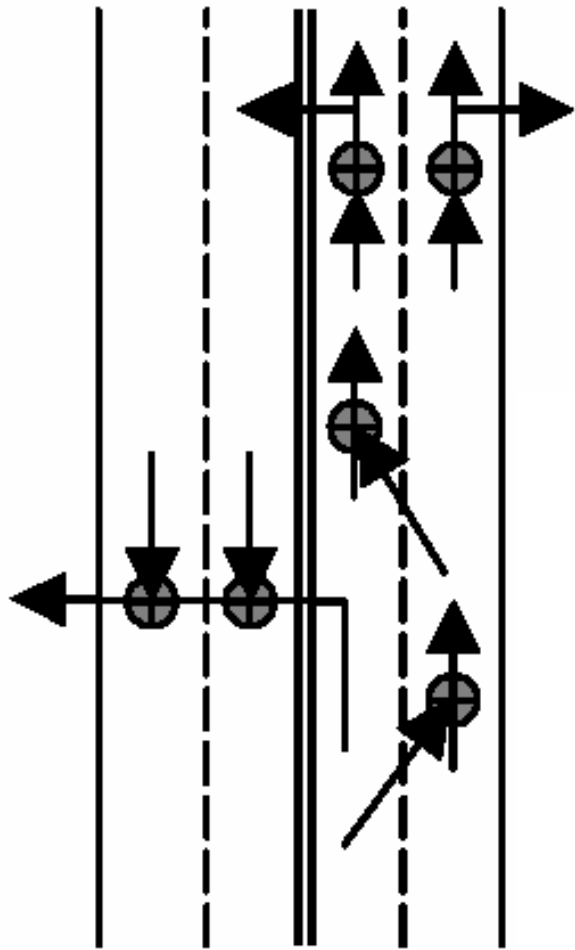
- Which road carries the most traffic?
- Which road has the higher speed?
 - ✓ With a 4-lane road a fast driver can pass others
 - ✓ With a 2-lane road the slower driver sets the speed
- Which road has the higher crash rate?
- Which is better for bicyclists, pedestrians, businesses?

Road Diets

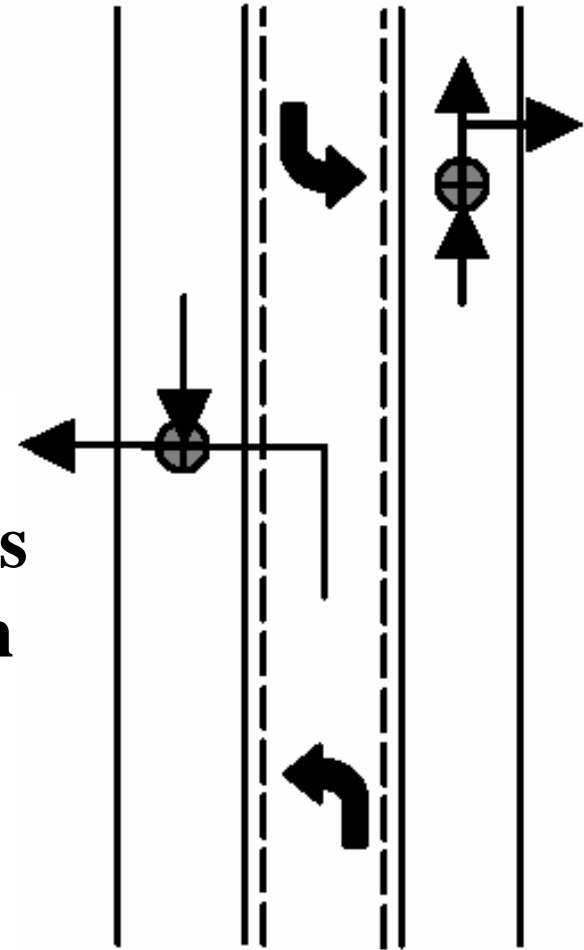
Safety & Traffic Operations

**Several studies have shown crash reduction:
From 7% (Zegeer et al) to 40 % (Iowa)**

Fewer midblock conflicts



Two types of crashes
can be avoided with
the 3-lane
configuration



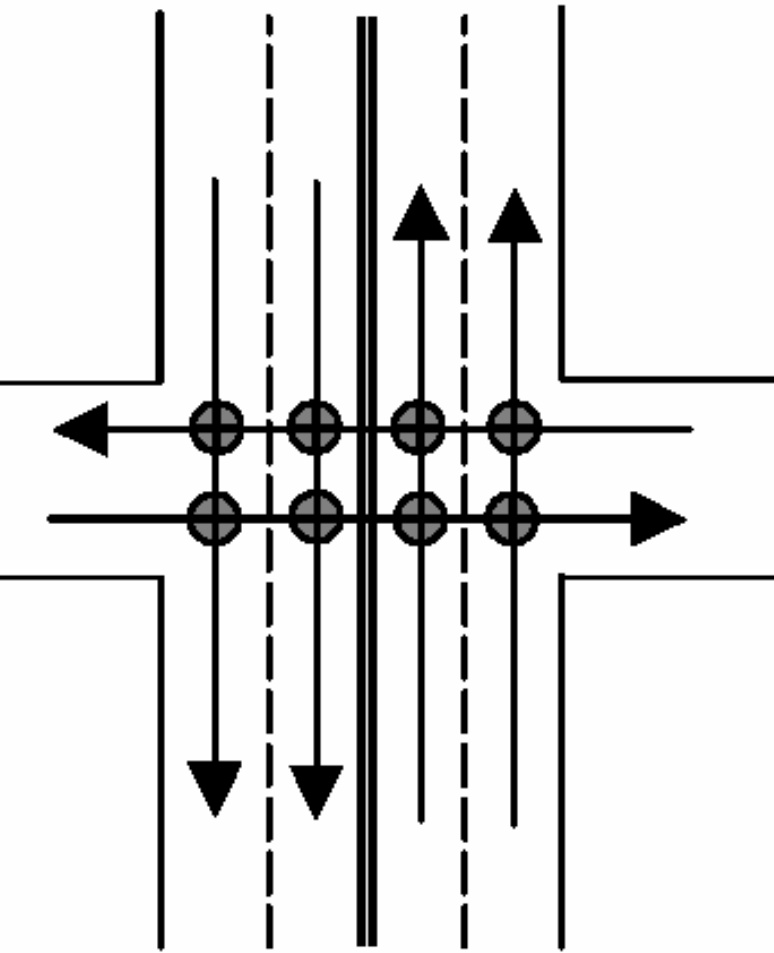
Four-lane undivided

Conflict Point

Three-lane



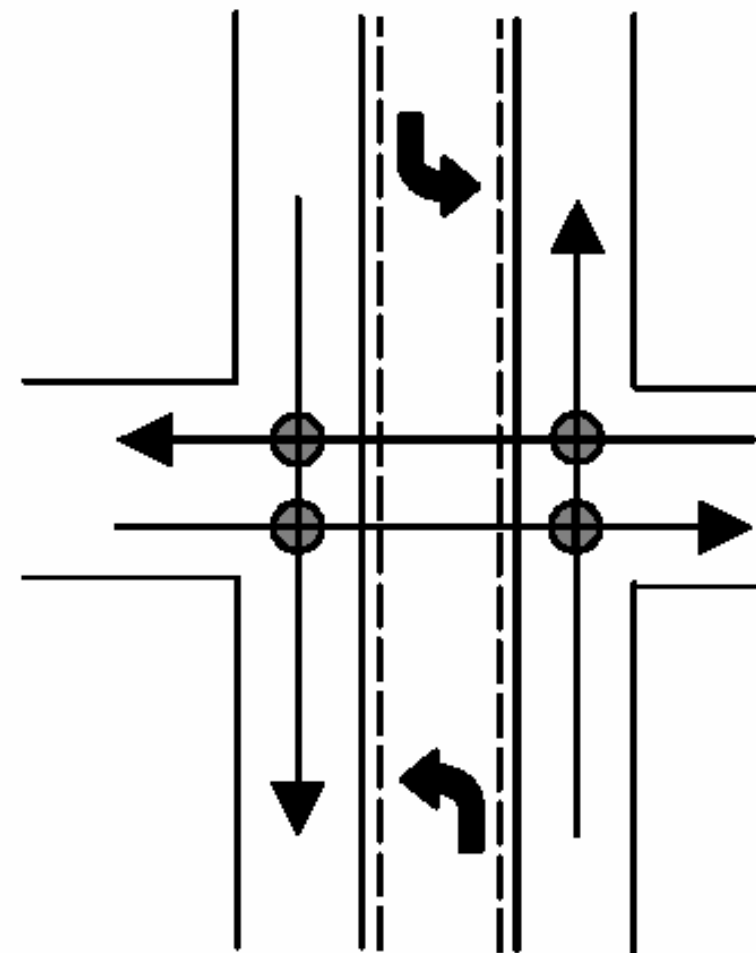
Fewer intersection conflicts



Four-lane undivided

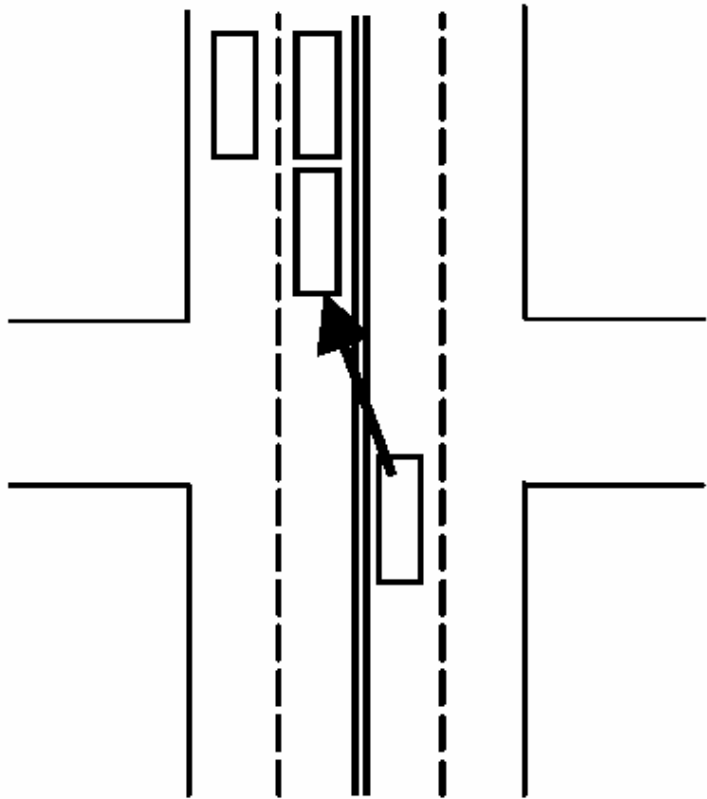


Conflict Point

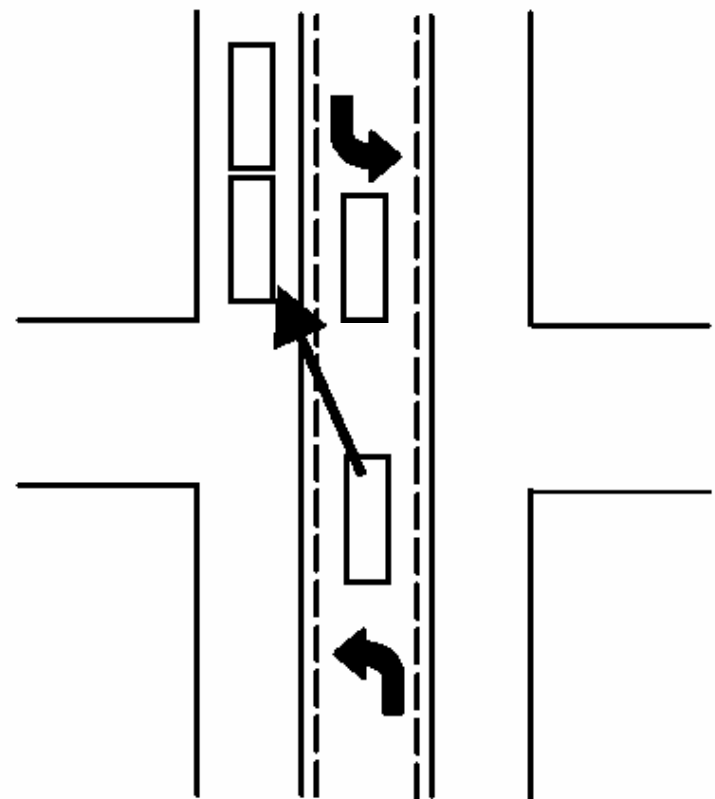


Three-lane

Better left-turn sight distance



Four-Lane Undivided
(Outside Lane Traffic Hidden)



Three-Lane
(No Outside Lane Traffic to Hide)



21'

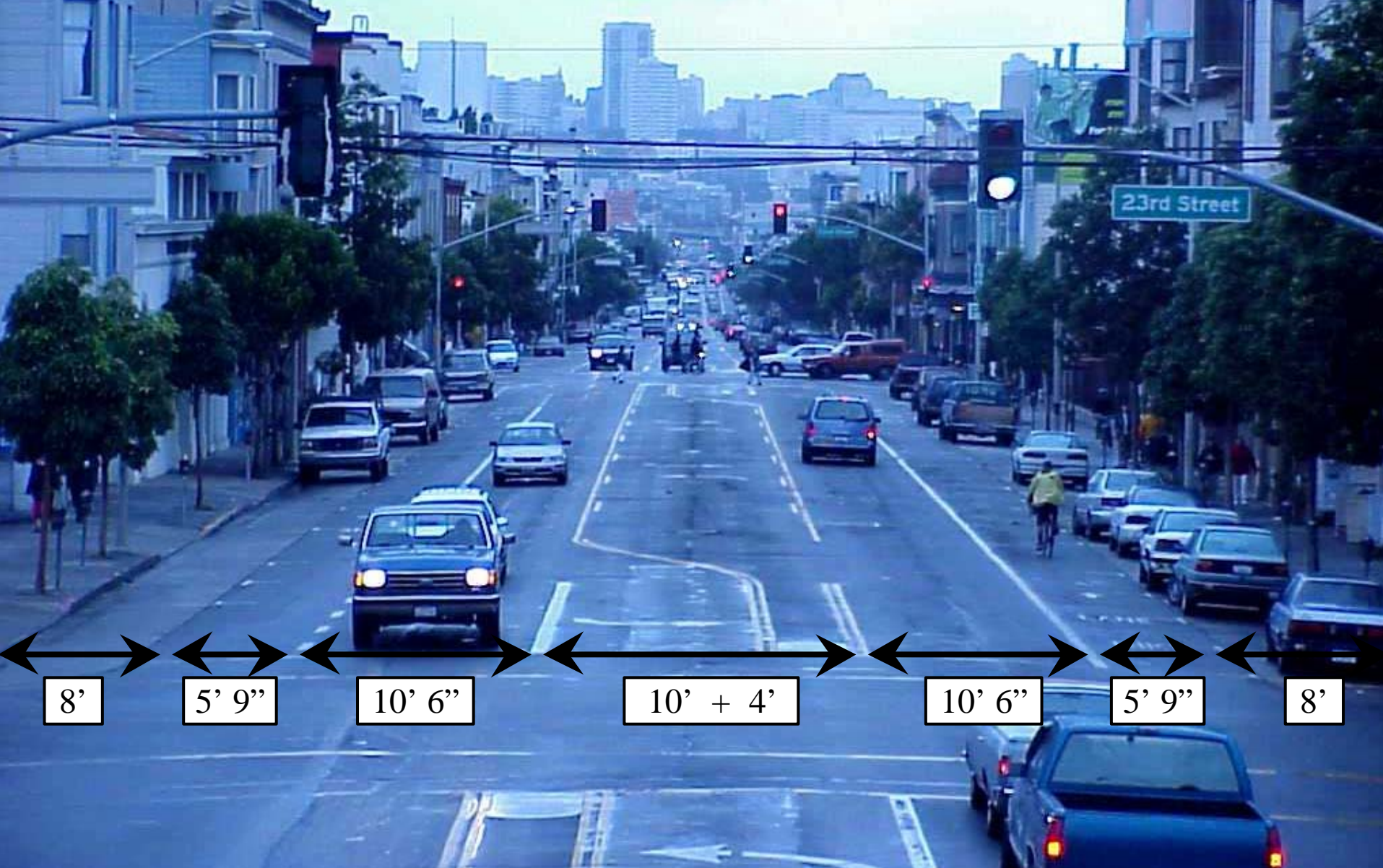
10' 3"

10' 3"

21'

Total width = 62' 6"

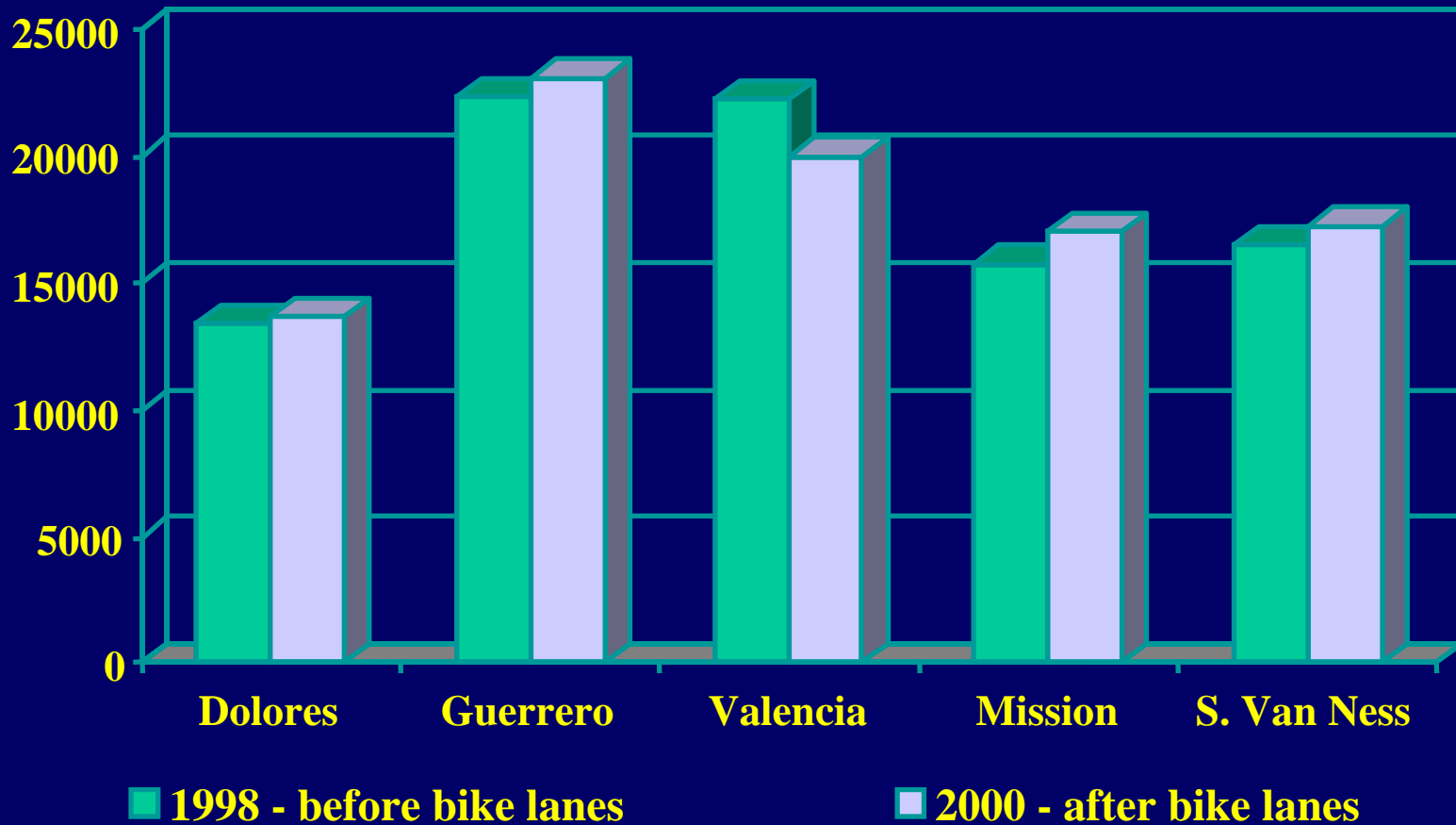
Valencia Street (SF) - before road diet



Valencia Street (SF) - after road diet

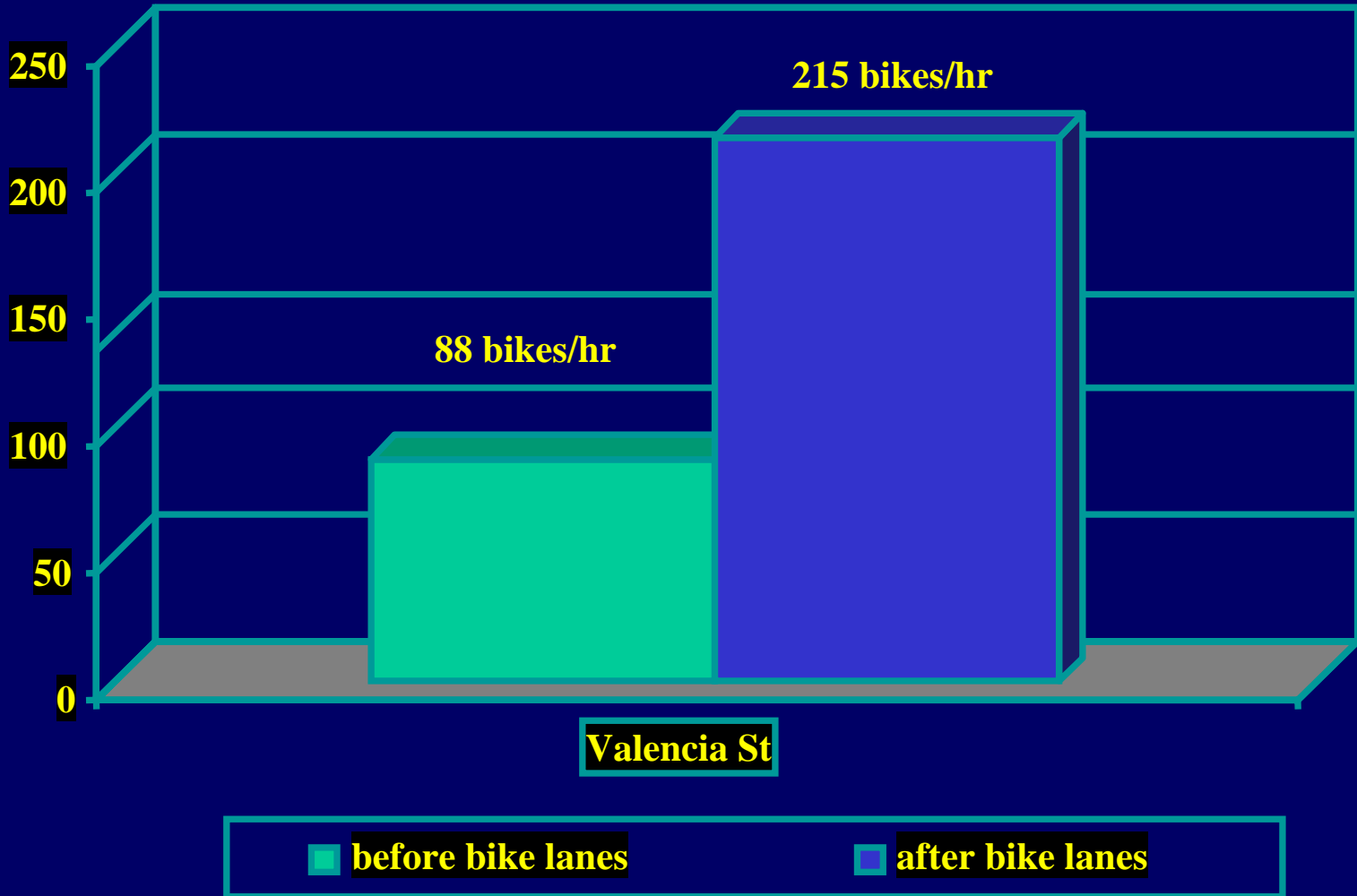
Mission District, San Francisco

North-South ADTs



Valencia Street Bicycle Volumes

PM peak hour counts



Road diets: reclaim street space for other uses



Not just for bike lanes

What are some benefits of road diets for pedestrians?

- Reduce crossing distance
- Eliminate or reduce “multiple threat” crash types
- Install medians or crossing island to break crossing into 2 simpler crossings
- Reduce top end travel speeds
- Add sidewalk buffer from travel lanes (parking or bike lane)
- Reclaim street space for “higher and better use” than moving peak hour traffic

Room for crossing island



Separation from traffic



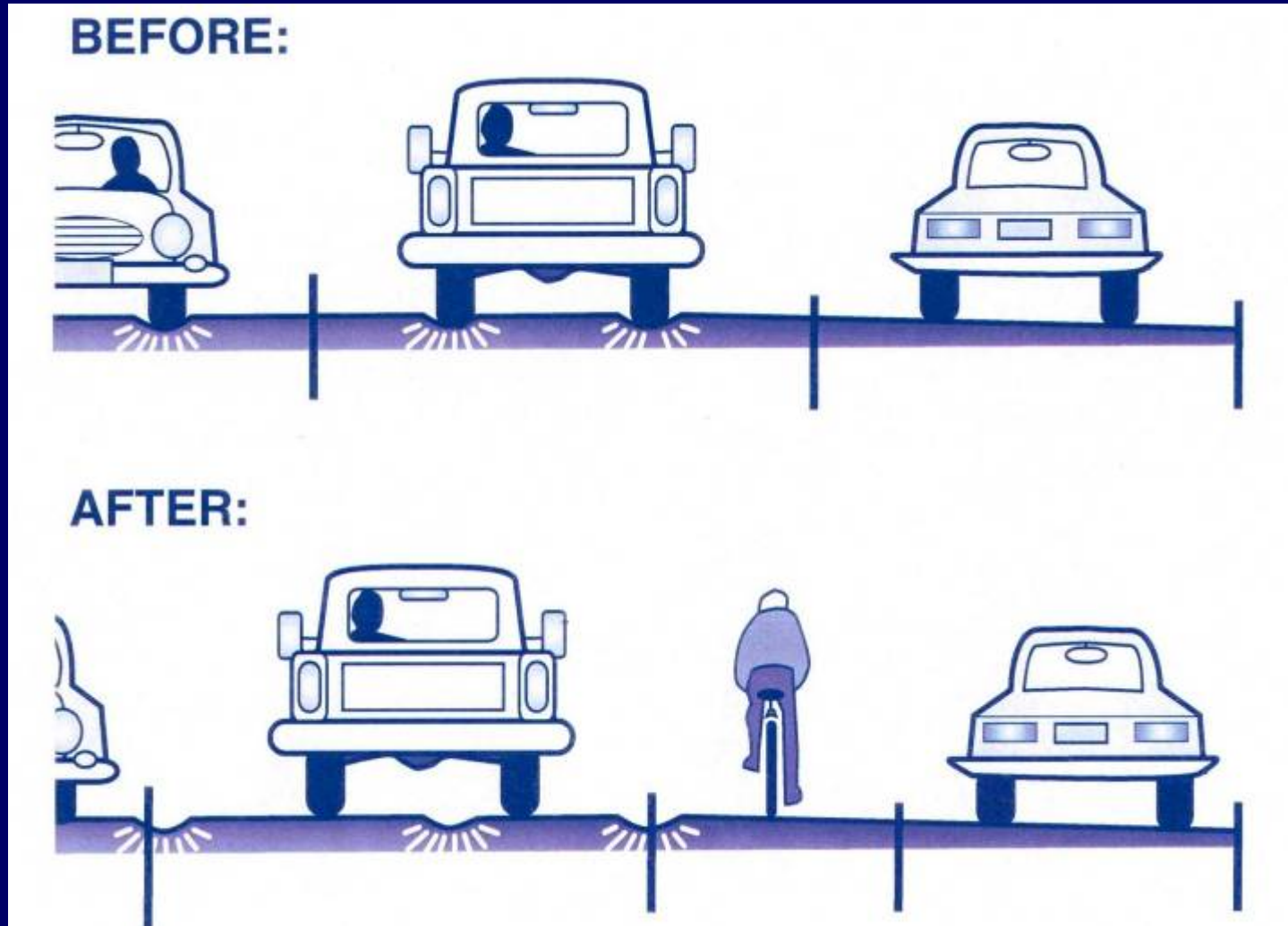
Salem OR



Old centerline

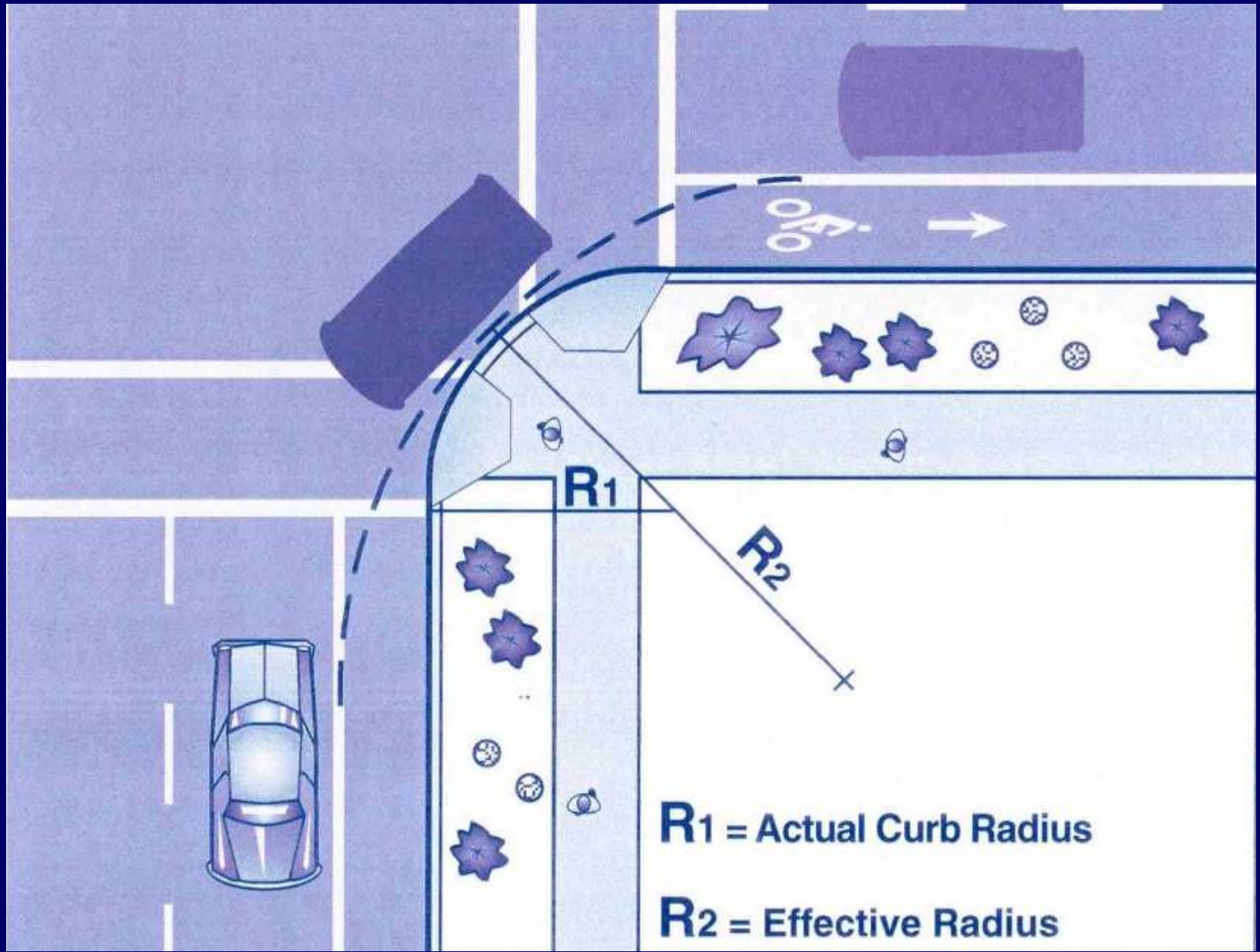
Reclaiming road space creates room for islands

Restriping benefits all users



Prolong pavement life (*motor vehicles no longer travel in the same well-worn ruts*)

Keep right-turn radius tight



Better sight distance



Easier to exit from driveways (*improved sight distance*)



Restriping benefits transit



A buffer to trees

ROAD DIETS

Other configurations



On-street parking

Median

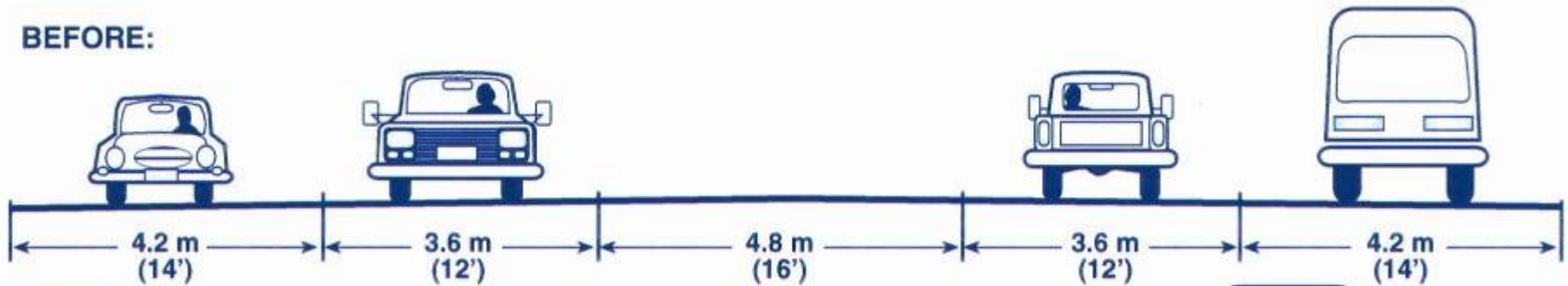
Bike lanes

Center turn-lane

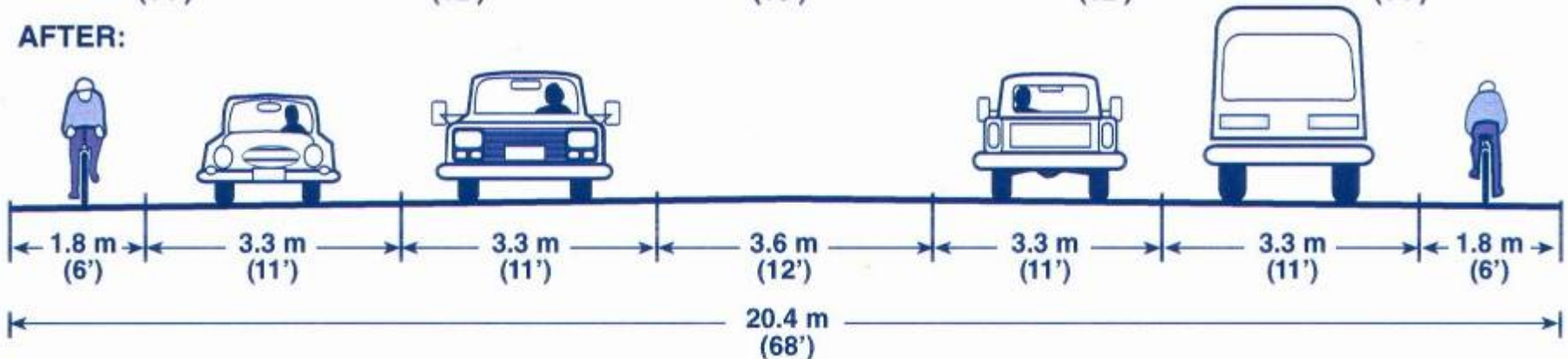
It's not one-size fits all: reclaimed road space creates room for many uses

NARROW TRAVEL LANES

BEFORE:



AFTER:



- @ 25 MPH: 10'-10.5' travel lanes
- @ 30-40 MPH: 11' travel lanes
- @ 45 MPH or more (*if high truck volumes*): 12' outside travel lane
 - *Dimensions acceptable to OR State Traffic Engineer*

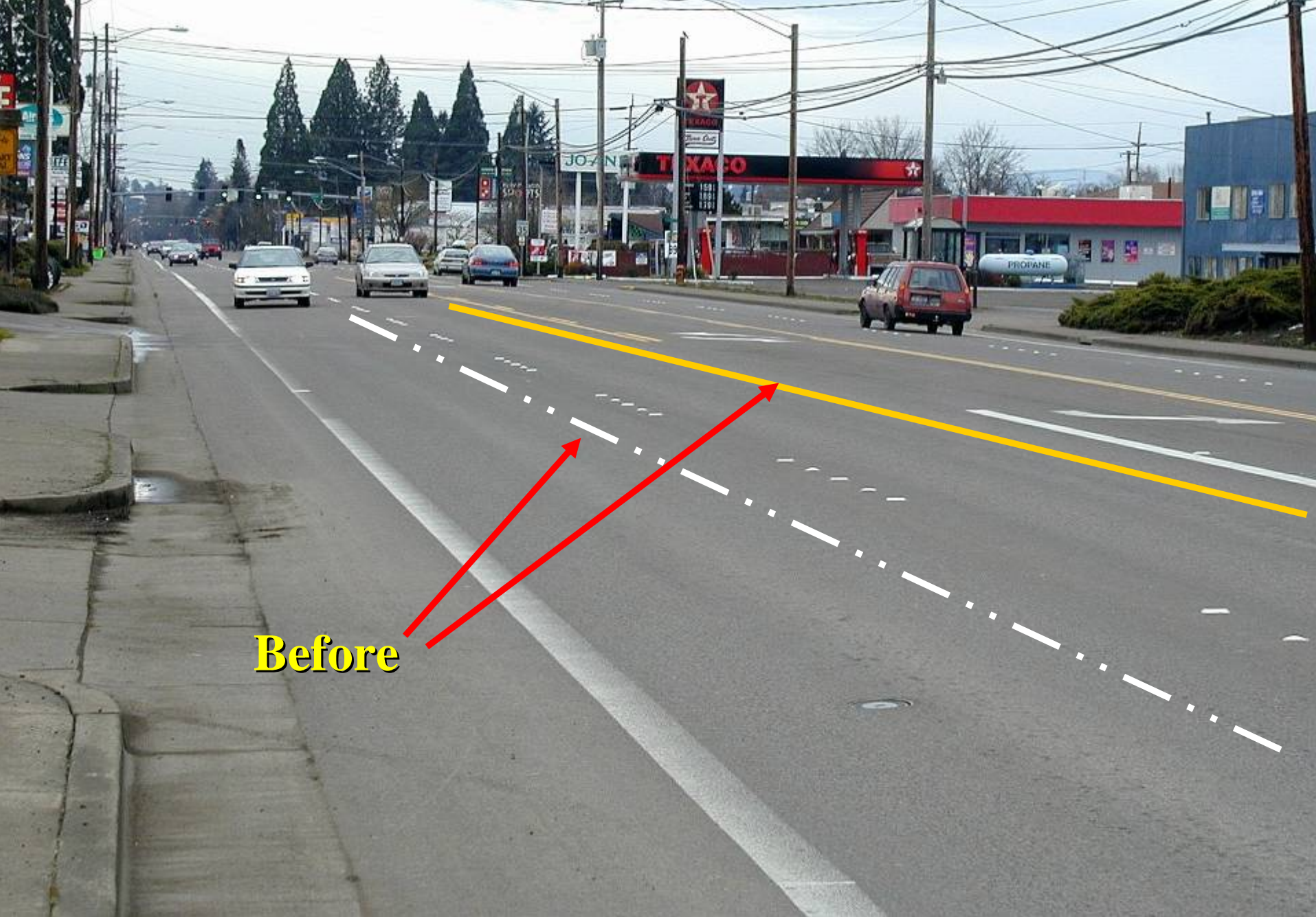
Potential



As is – pretty wide CTL



Restriped for bike lanes



Before

Unbalanced traffic flows



Old lane line

Take advantage of uneven a.m./p.m. peaks



This 5-lane Main Street was converted to...



Name 4 things that changed

Fewer travel lanes; added bike lanes; parallel to back-in diagonal parking on one side; new pavement

We don't like 5-lane streets;

What about 7-lane streets?







One-way streets

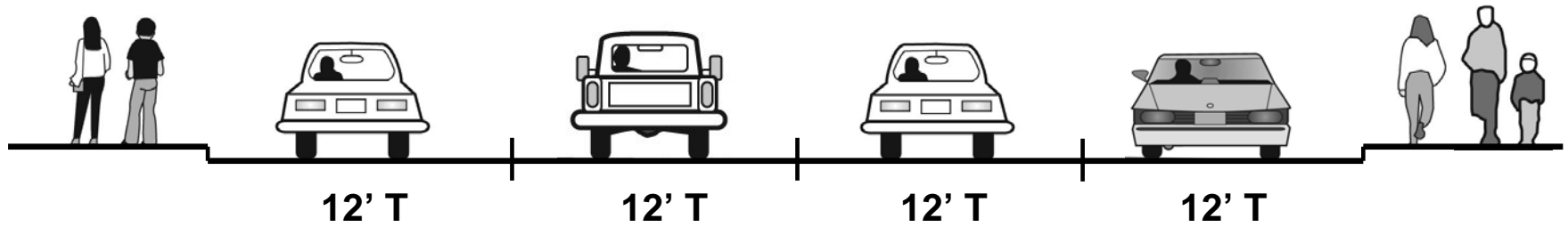
HUGE untapped potential



Is this street operating at capacity?

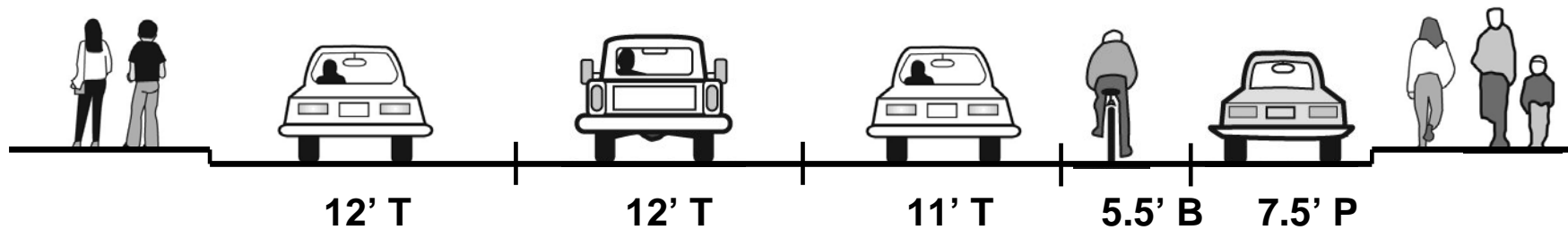


**This area was recaptured from a 4th travel lane;
the street took on a whole new life**

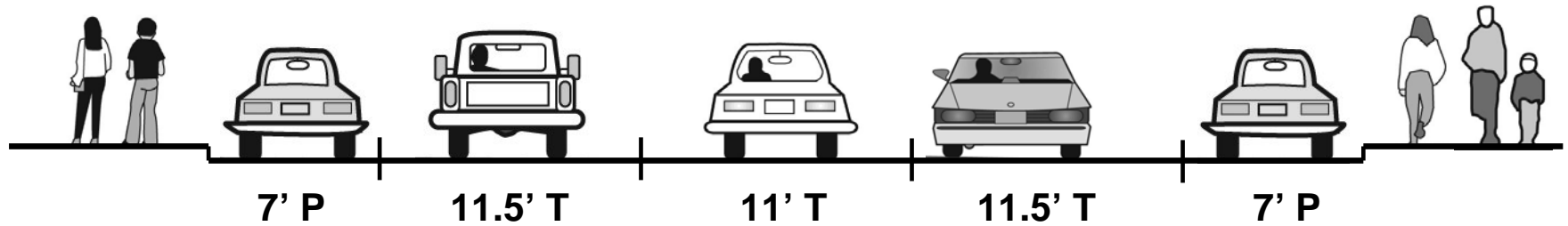


Typical one-way cross-section: Four 12' travel lanes

Why? Because the space was there

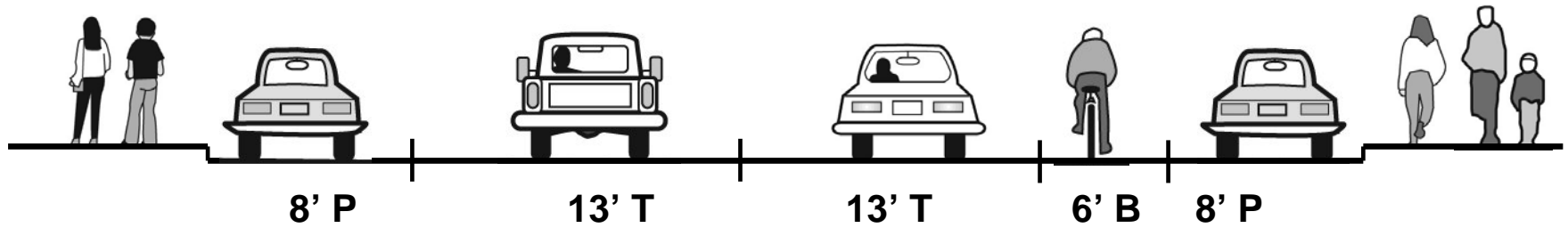


Possible scenario #1: Three travel lanes and...
Bike lane and parking on one side



Possible scenario #2: Three travel lanes and...

Parking on both sides



**Possible scenario #3: Two travel lanes and...
Bike lane and parking on both sides**

**Nor radical enough for you?
How about we reduce 2 travel lanes
to one bi-directional lane and two
bike lanes?**



Old Centerline

Single two-way travel lane with bike lanes



Old Centerline



Can't be done here?



US Example

Computer rendering



Reality check



Why quote Albert Einstein or Mahatma Gandhi, when you can quote yourself?

The best way to prove something can be done is to demonstrate it has been done.

Michael Ronkin