

CITY OF ABILENE BICYCLE PLAN 2015



City Council
July 23, 2015
8:30 a.m.
City Hall, Council Chambers



Why are we here?

Americans want to walk and bike more

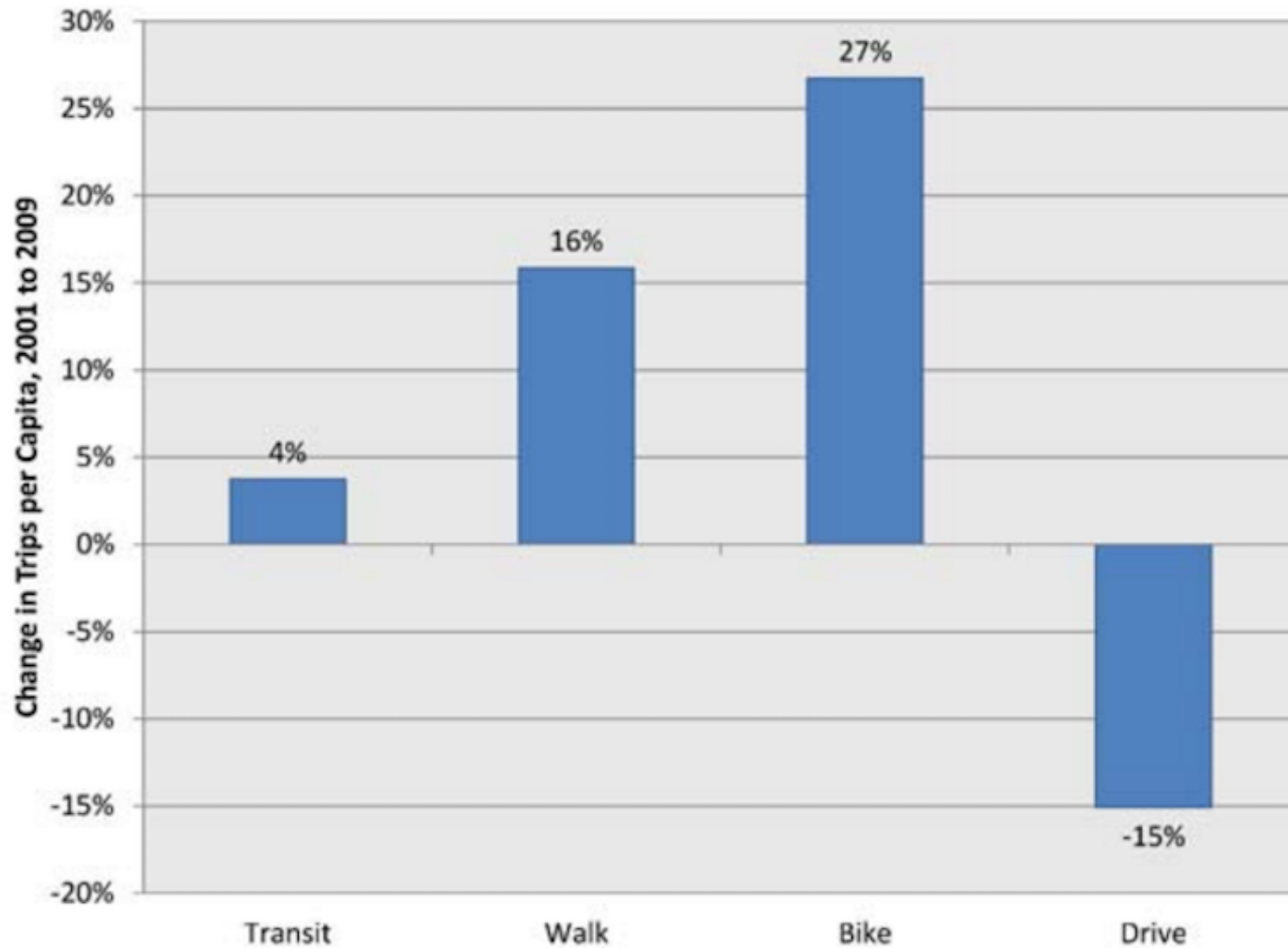
52% of Americans want to bike more than they do now.



55% of Americans would prefer to drive less and walk or bike more

Having a safe place to walk or bike is the number one reason they don't.

Figure 2. Change in Number of Trips per Capita among 16 to 34 year-olds, 2001 to 2009¹²



Source: US PIRG

National Bike Survey

- 34% of Americans rode a bicycle last year.
- 15% of Americans rode a bicycle for transportation in the past year.
- 46% say they would be more likely to ride a bicycle if motor vehicles and bicycles were physically separated

Many people can't or don't drive:

- 22% of Abilene residents are under 16 (25,937 children)



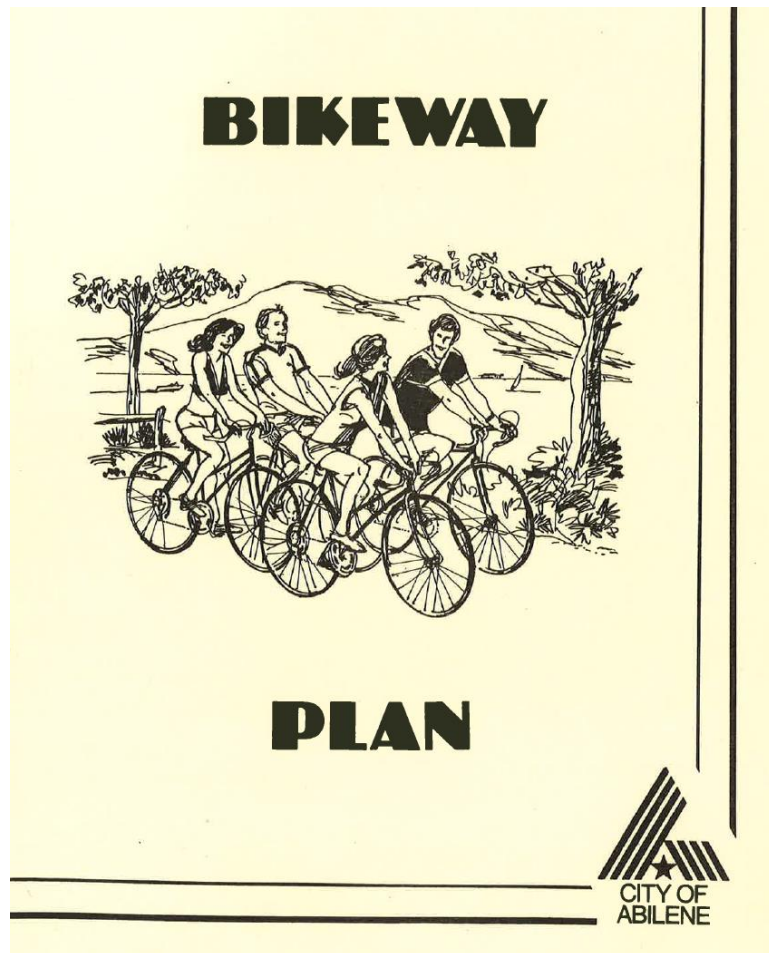
- Many low income families cannot afford automobiles.
 - In Abilene: 5% of work trips are by walking, bike, or transit (that's 1 out of every 20 trips)
 - In Abilene: 7% of households do not have a car (that's 1 out of every 14 homes)

Safe Routes to School

According to the Federal Highway Administration:

- In 1969, over half of school children walked or biked to school
- By 2007, that was down to around 12%
- By 2012, the increased interest in walkability and walkable neighborhoods has turned that around and is up to 16% nationally
- 7-13% in AISD

City of Abilene's Existing Bike Plan (1983)



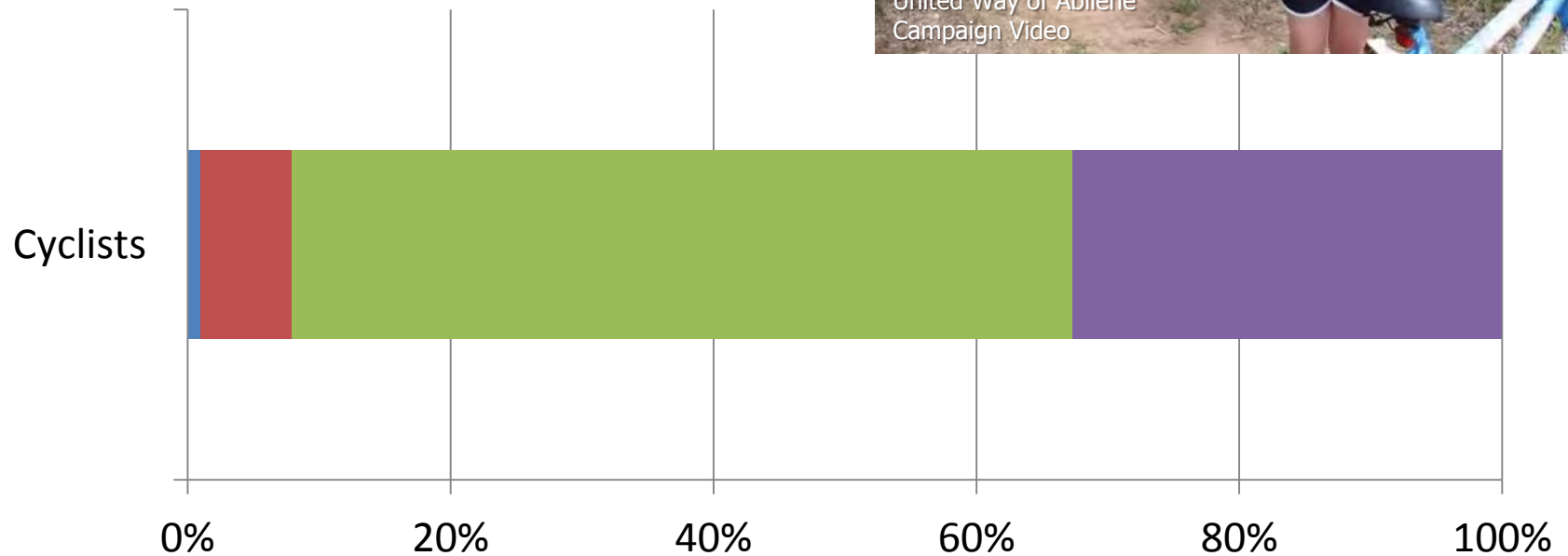
City of Abilene's Comprehensive Plan

- Guiding Principles:
 - ... attractive street corridors coupled with a community-wide pedestrian network.

- Strategies:
 - Create safe walking environments
 - “Accelerate development of bicycle facilities, with separate bike paths or bicycle lanes”

Who wants to bike?

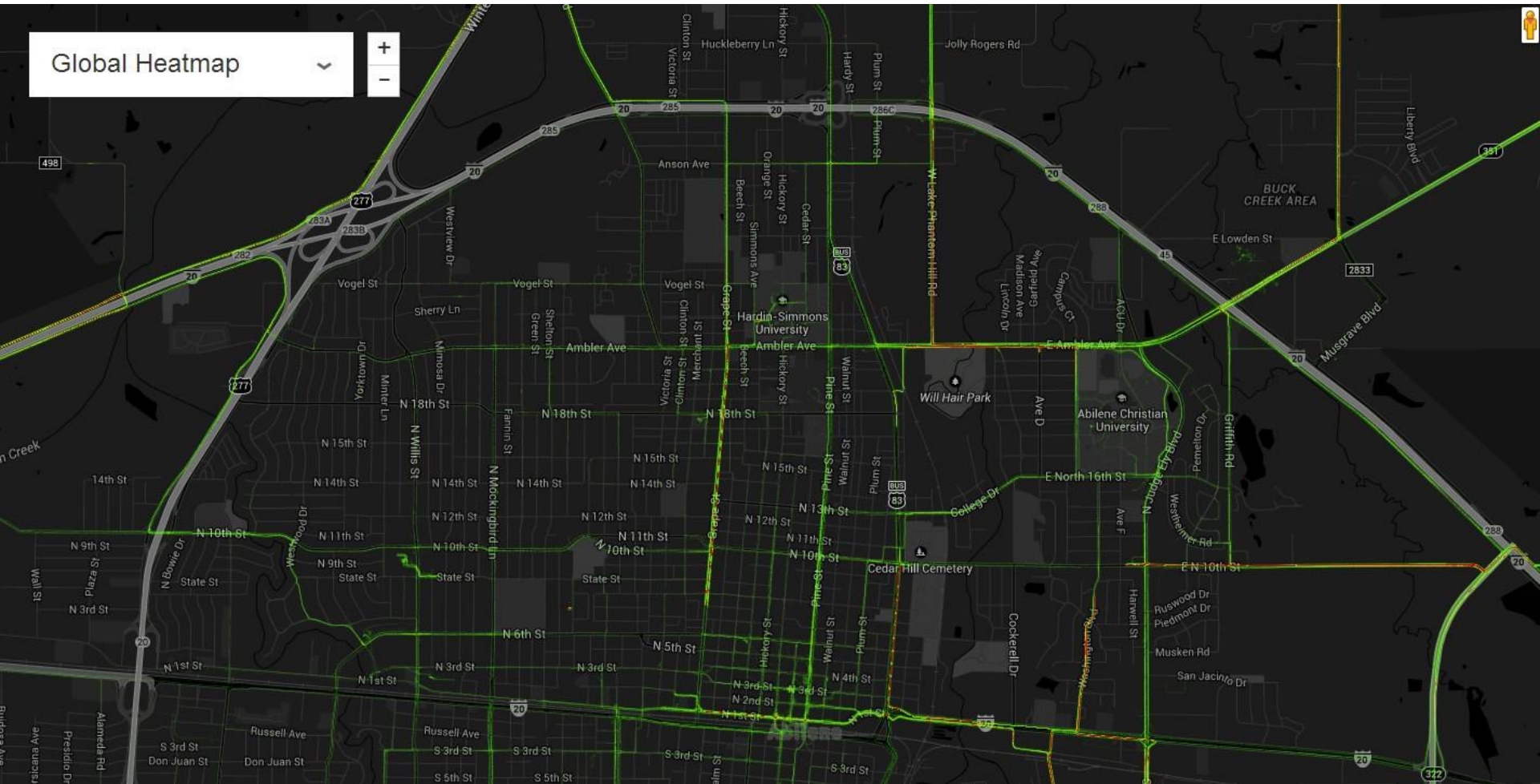
- Strong & Fearless (< 1%)
- Enthused & Confident (7%)
- Interested but Concerned (60%)
- No Way No How (33%)

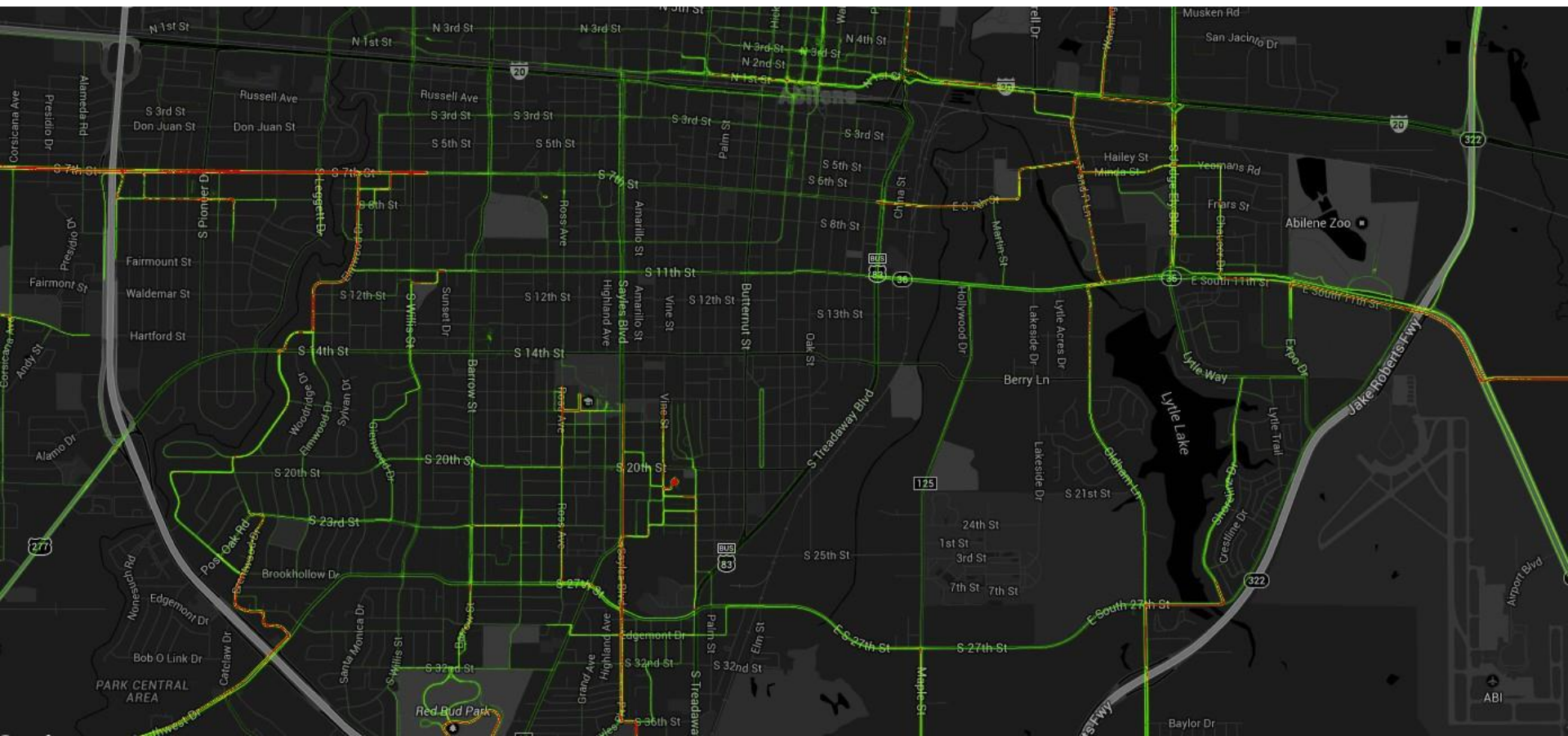


<p>Most, if not all, streets will be designed as "complete streets" to accommodate all street users, including bicycles. With few exceptions, all new streets and street reconstruction will accommodate all 3 types of cyclists. High cost.</p>	<p>Bicycle accommodations will be considered for all streets, but will be balanced vs need/costs to prioritize a limited number of streets to create a basic network throughout most parts of the City near neighborhoods, shopping, parks, and schools. Focus on these limited number of streets will be to accommodate all 3 types of bicyclists on most of the selected streets. Moderate cost.</p>	<p>While streets are primarily for cars, street design will accommodate bicycles in high priority locations such as near parks and Schools. Accommodations on select streets will be made for all cyclists, with a priority on advanced cyclists on major streets and basic/children cyclists on safe routes to schools. Low cost.</p>	<p>Recognizing that streets are mostly for cars, minimal accommodations will be made for bicycles on known routes to ensure that these routes present fewer obstacles for advanced cyclists. Little or no accommodation for basic or children cyclists. Limited cost</p>	<p>Streets are primarily for cars with little or no accommodation made for bicycles. Limited or no accommodations for advanced, basic, or children cyclists. Almost no cost.</p>
<p style="text-align: center;">Bike Friendly</p> <p style="text-align: center;">29</p>	<p style="text-align: center;">Bike Accommodating</p> <p style="text-align: center;">20</p>	<p style="text-align: center;">Bike Tolerant</p> <p style="text-align: center;">3</p>	<p style="text-align: center;">Bike Minimal</p> <p style="text-align: center;">0</p>	<p style="text-align: center;">Bike at your own risk</p> <p style="text-align: center;">0</p>

"Who do we want to be?"

Global Heatmap





Do Abilenians bike for transportation or just recreation?

- Over a 2 week period, CityLink counted 127 bikes on buses
- One month survey of how Love and Care Ministries clients arrive:
 - Walking, 922
 - Car, 500
 - Bus, 52
 - Bicycle, 18

Abilene Bicyclists



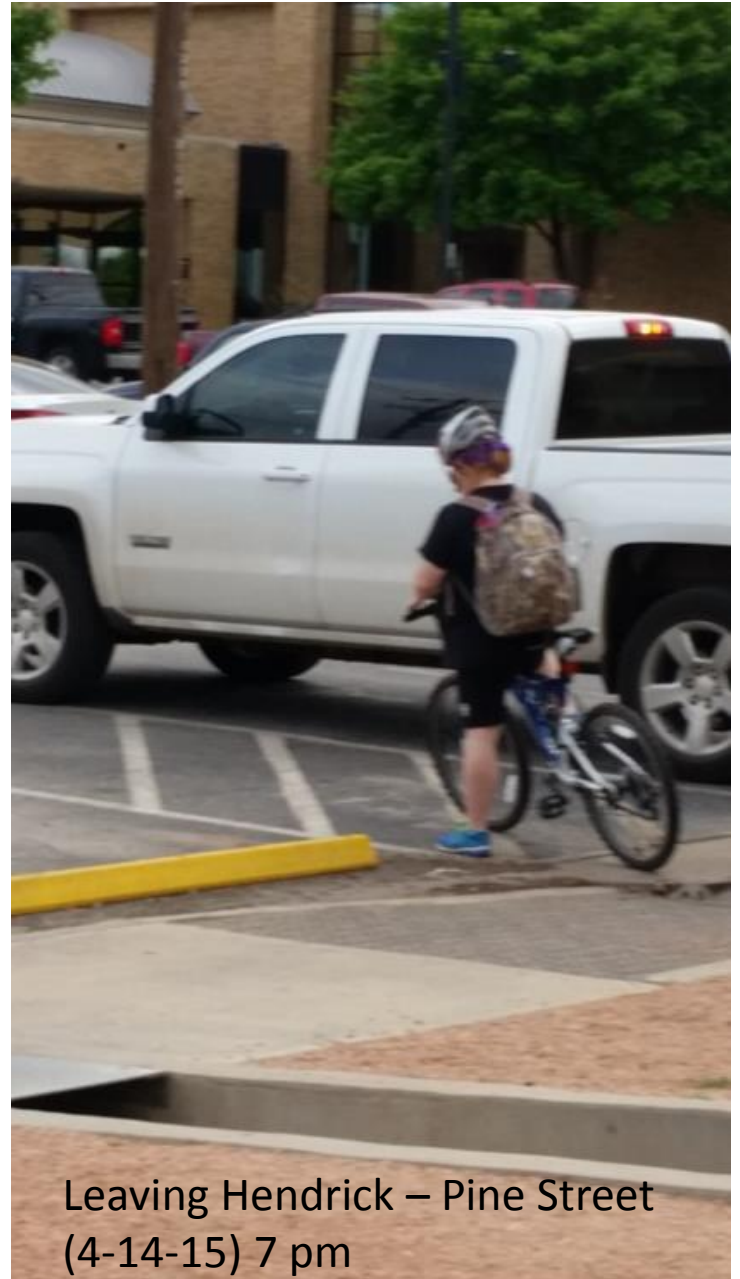
Barrow Street at 23rd (4-13-15) 8 am

SH 351 at I20 (4-21-15) 12:30 pm





Leaving First Financial Bank –
North 4th at Cypress (4-8-15) noon



Leaving Hendrick – Pine Street
(4-14-15) 7 pm



Butternut at S 1st (4-13-15)



North 1st at Pioneer (4-28-15) 7:30 pm



Pine at N 18th (5-14-15) 7:11 pm



Pine at N 5th (5-15-15) 3 pm



Amarillo at S 15th (5-15-15)

Pine at North 21st (5-14-15) 7 pm



Bicycling to Work

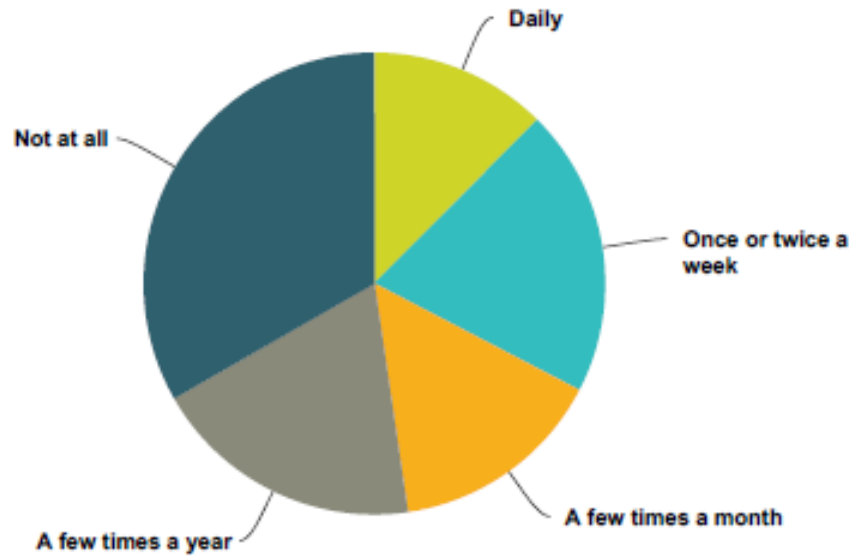
- While most bike trips are either school-related, for recreation, or for errands, according to the 2013 *American Community Survey* (US Census Bureau), approximately **160 Abilenians bike to work** as the principal means of travel.
- That doesn't even count those who bike to work occasionally.
- It also doesn't count those who might choose to bike to work more frequently with safer facilities.

Survey Results

- 632 responses!

Q1 How often do you bicycle in Abilene?

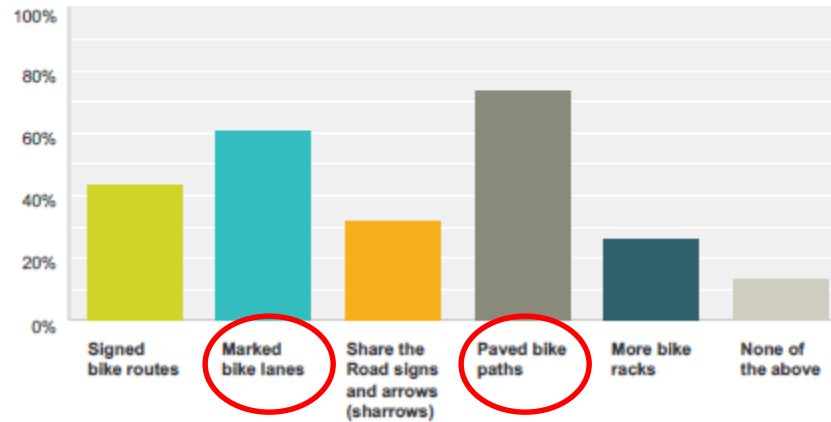
Answered: 625 Skipped: 7



Answer Choices	Responses	
Daily	12.48%	78
Once or twice a week	20.16%	126
A few times a month	15.04%	94
A few times a year	19.04%	119
Not at all	33.28%	208
Total		625

Q3 Which of the following would cause you to bike more?

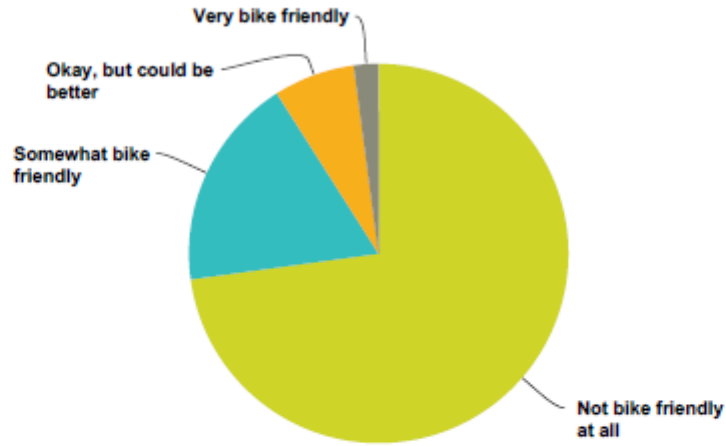
Answered: 625 Skipped: 7



Answer Choices	Responses	
Signed bike routes	43.52%	272
Marked bike lanes	60.96%	381
Share the Road signs and arrows (sharrows)	31.84%	199
Paved bike paths	73.28%	458
More bike racks	26.24%	164
None of the above	13.28%	83
Total Respondents: 625		

Q4 Are the streets in Abilene bike friendly?

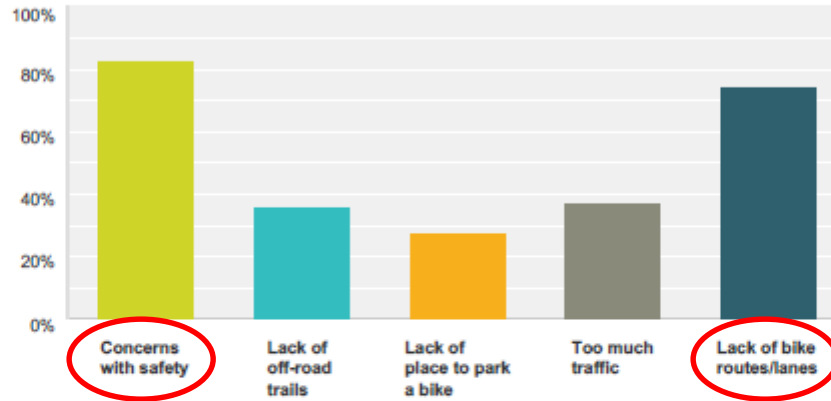
Answered: 622 Skipped: 10



Answer Choices	Responses	
Not bike friendly at all	72.83%	453
Somewhat bike friendly	18.17%	113
Okay, but could be better	6.91%	43
Very bike friendly	2.09%	13
Total		622

Q5 Why do you not bike more in Abilene (check all that apply)?

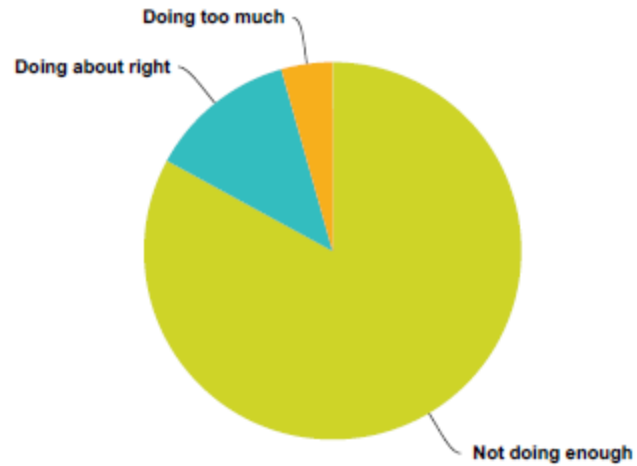
Answered: 593 Skipped: 39



Answer Choices	Responses
Concerns with safety	82.63% 490
Lack of off-road trails	35.75% 212
Lack of place to park a bike	27.49% 163
Too much traffic	37.10% 220
Lack of bike routes/lanes	74.54% 442
Total Respondents: 593	

Q7 How do you believe the City of Abilene is doing to improve conditions for bicycling?

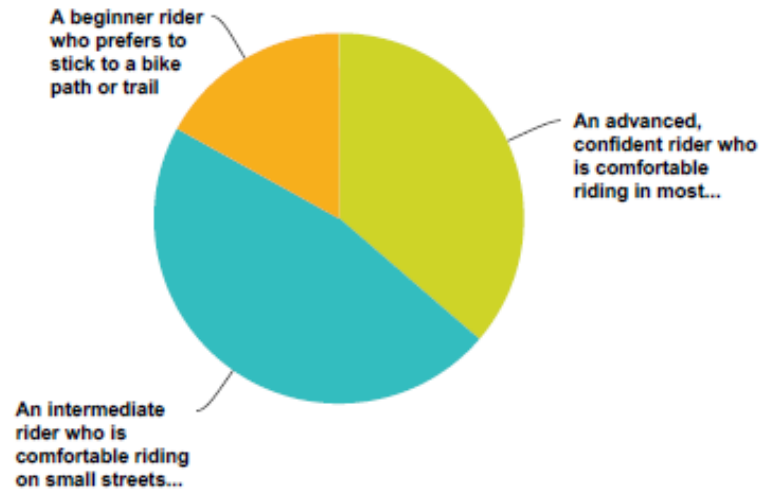
Answered: 616 Skipped: 16



Answer Choices	Responses	
Not doing enough	82.95%	511
Doing about right	12.66%	78
Doing too much	4.38%	27
Total		616

Q8 Which of these phrases best describes how comfortable you are riding a bike?

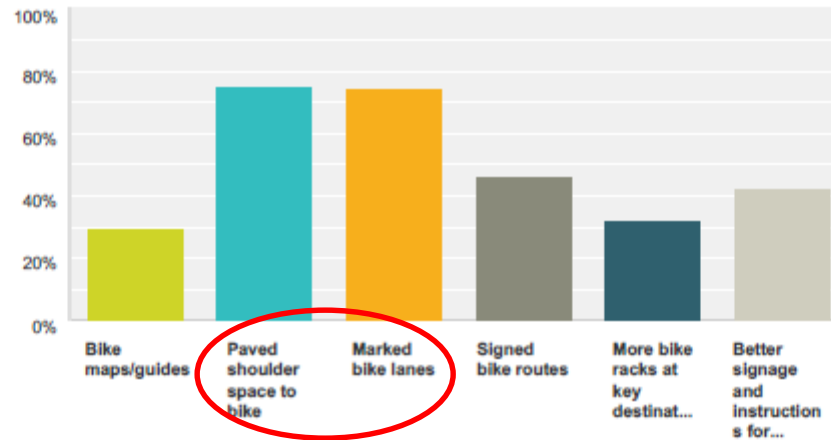
Answered: 614 Skipped: 18



Answer Choices	Responses
An advanced, confident rider who is comfortable riding in most traffic situations	36.32% 223
An intermediate rider who is comfortable riding on small streets or in light traffic	46.74% 287
A beginner rider who prefers to stick to a bike path or trail	16.94% 104
Total	614

Q11 What would make it easier to bike in Abilene?

Answered: 601 Skipped: 31



Answer Choices	Responses
Bike maps/guides	28.79% 173
Paved shoulder space to bike	75.21% 452
Marked bike lanes	74.54% 448
Signed bike routes	45.76% 275
More bike racks at key destinations	31.78% 191
Better signage and instructions for drivers	41.76% 251
Total Respondents: 601	

Types of Bicycle Facilities

Bicycle Routes



Bicycle Lanes



Standard Bike Lanes



Protected Bike Lanes

Bicycle Paths



Other Texas cities

- Peer Cities
 - 9 of 10 have adopted bike plans
 - 8 have existing paths (9 have plans for paths)
 - 5 have existing routes (8 have plans for routes)
 - 3 have existing lanes* (5 have plans for lanes)
- Texas Cities with over 100k population
 - 32 of 33 have adopted bike plans
 - 31 have existing paths (32 have plans for paths)
 - 27 have existing routes (29 have plans for routes)
 - 19 have existing lanes* (22 have plans for lanes)

Proposed Vision Statement

“Abilene will be a community where bicycling is a viable means of transportation with a comprehensive network of bicycle facilities”.

Goals

- Goal 1:** Develop a **well-connected bicycle network** that links a variety of destinations together into a cohesive transportation system.
- Goal 2:** **Educate users** of all transportation modes about bicycle safety, rights, and responsibilities.
- Goal 3:** Enhance the livability of the Abilene area by **improving transportation and recreation alternatives** and establishing Abilene as a bicycling destination.
- Goal 4:** **Reduce** the number and severity of vehicle-bicycle conflicts and **crashes**.

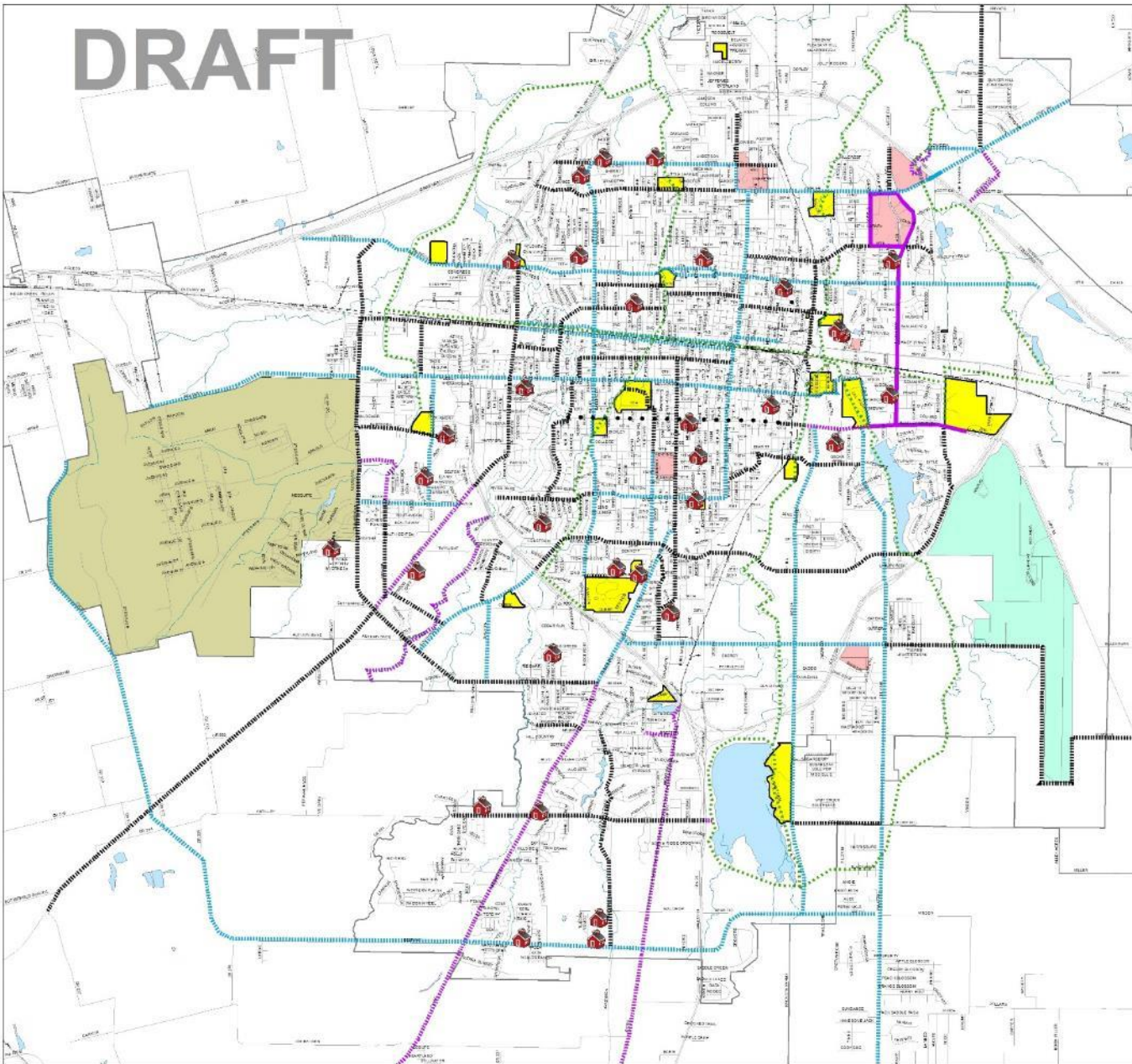
Objectives

- Each goal has a number of objectives designed to help accomplish the goal



Bicycle Master Plan

DRAFT



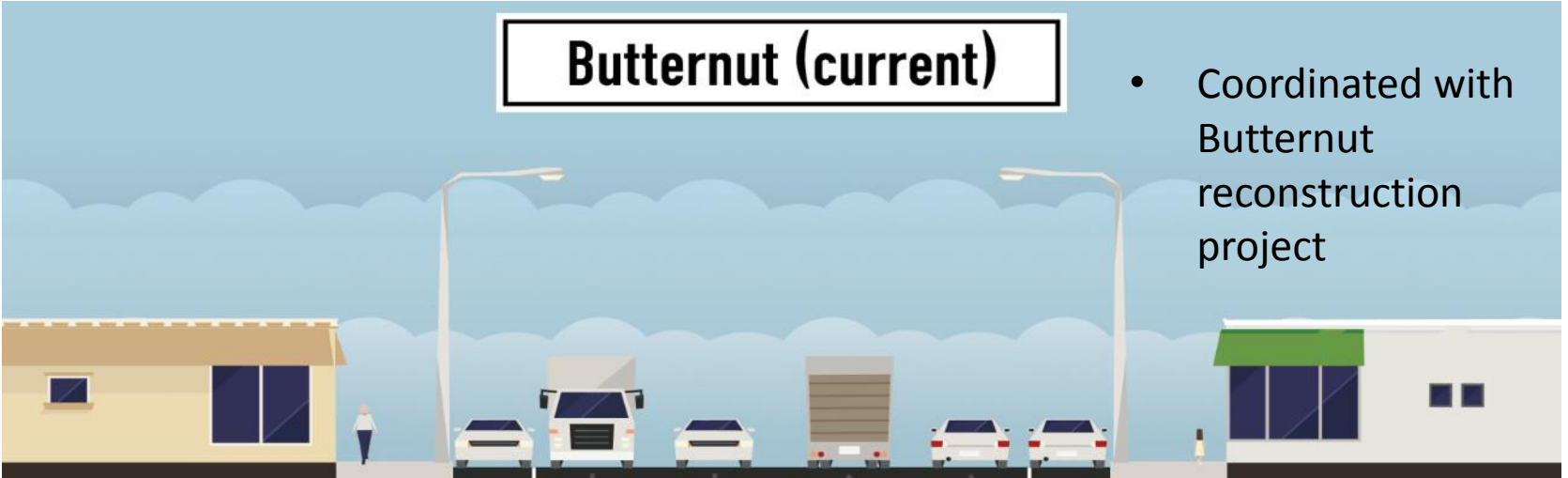
- ### Legend
- Current Bike Routes
 - - - Proposed Bike Routes
 - • • Funded Bike Routes
 - Current Bike Lanes
 - - - Proposed Bike Lanes
 - • • Funded Bike Lanes
 - Current Bike Paths
 - - - Proposed Bike Path
 - • • Funded Bike Paths
 - - - Trails Based Off Of Parks Master Plan
 - Railroad
 - 🏫 School
- ### LANDUSE
- ABILENE REGIONAL AIRPORT
 - DYESS AFB
 - UNIVERSITY/ COLLEGE DISTRICT
 - PARKS



Example: Butternut Corridor

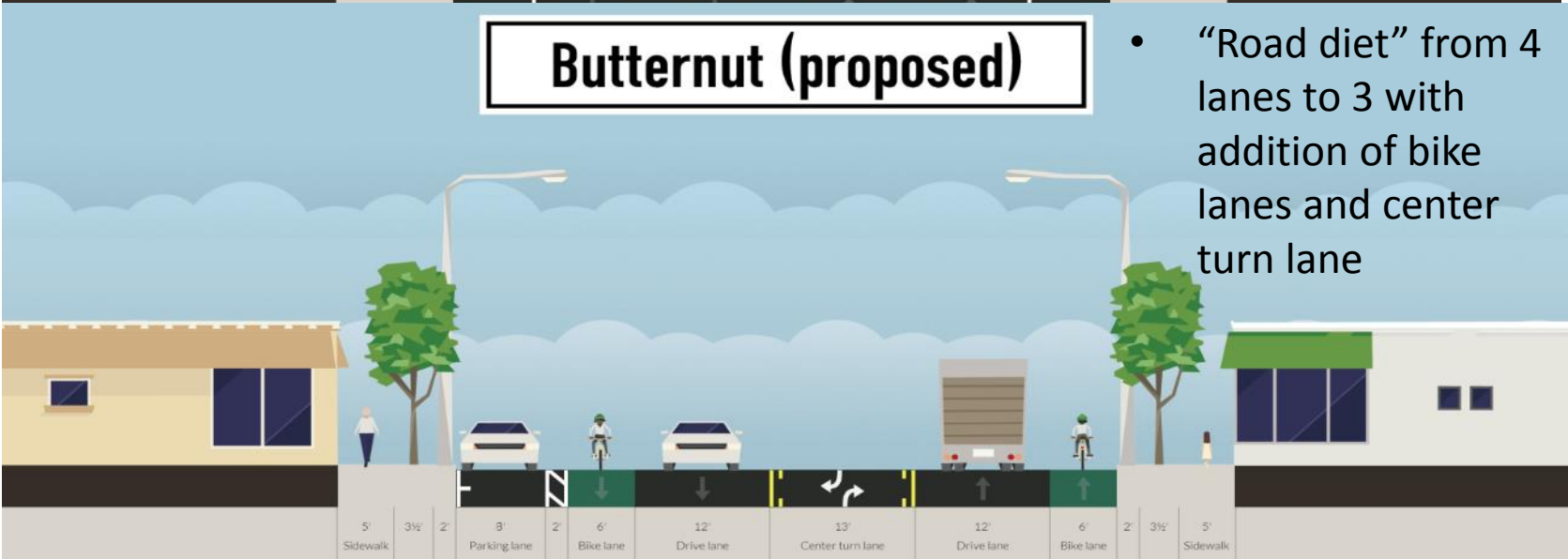
Butternut (current)

- Coordinated with Butternut reconstruction project



Butternut (proposed)

- “Road diet” from 4 lanes to 3 with addition of bike lanes and center turn lane



Bike Lane Studies

- Dedicated bike lanes with no parking can cut cycling injuries in half.
- Protected bike lanes – with actual barriers separating cyclists from traffic – really make a difference. The risk of injury drops for riders there by 90 percent.
 - American Journal of Public Health (Feb. 2012)

Bike Lane Studies

- Bike lanes prevent over-correction by drivers, reducing danger for both drivers and bicyclists even when sharing narrow roads.
 - 9 of 10 drivers veered too far into the adjacent lane to avoid a bicyclist where no striped lane was present
- Drivers and bicyclists were safer with a 10' travel lane and a 4' bike lane, compared to a 14' shared outer lane
- Safer bicyclist behavior occurred with a striped lane
- Bike lanes reinforce the concept that bicyclists are supposed to behave like other vehicles, and make life safer for everyone involved as a result.
 - *Operational and Safety Impacts When Retrofitting Bicycle Lanes*, Center for Transportation Research at The University of Texas at Austin (January 2006)

Narrow Traffic Lanes?

- “On suburban arterial straight sections away from a traffic signal, higher speeds should be expected with greater lane widths.”
 - Project: “Identify Design Factors That Affect Driver Speed and Behavior”, Texas Transportation Institute (2000)
 - Narrowing the traffic lane widths by adding a bike lane acts to slow speeding traffic, making streets safer for bicyclists, pedestrians, and drivers
 - Such narrowing of lanes on lower speed streets (or streets with speeding problems) benefits traffic safety even if no bicyclists use the facility

Narrow Traffic Lanes?

- A study in the City of Seattle (where they have done 24 road diets) showed the following results for a road diet:
 - **Speeding declined:** On a 30 mph street, those traveling over 40 mph (“top end speeders”) declined more than 80%
 - **Collisions declined:** Total collisions were down 14%, Injury collisions were down 33%
 - **Pedestrians safer:** Pedestrian collisions reduced by 80%

Fundamental Question?

- Do we want to accommodate bicyclists in street design, which is becoming the standard nationwide?
 - TxDOT's and FHWA policy is to accommodate bicyclists whenever possible
 - Hwy 351 project, which begins this year, will include bike lanes from I-20 to city limits
 - Adding bicycle facilities when a road is already being redesigned can often add minimal cost to a project

