

Statewide Bicycle Planning Tool



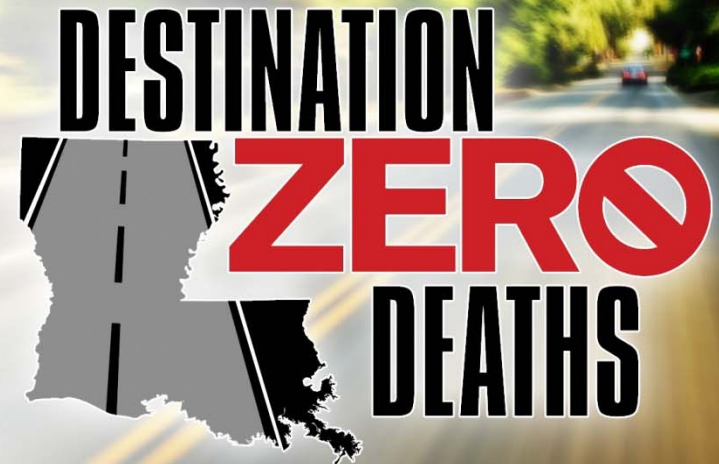
presented to

Statewide Traffic Engineers
Meeting

presented by



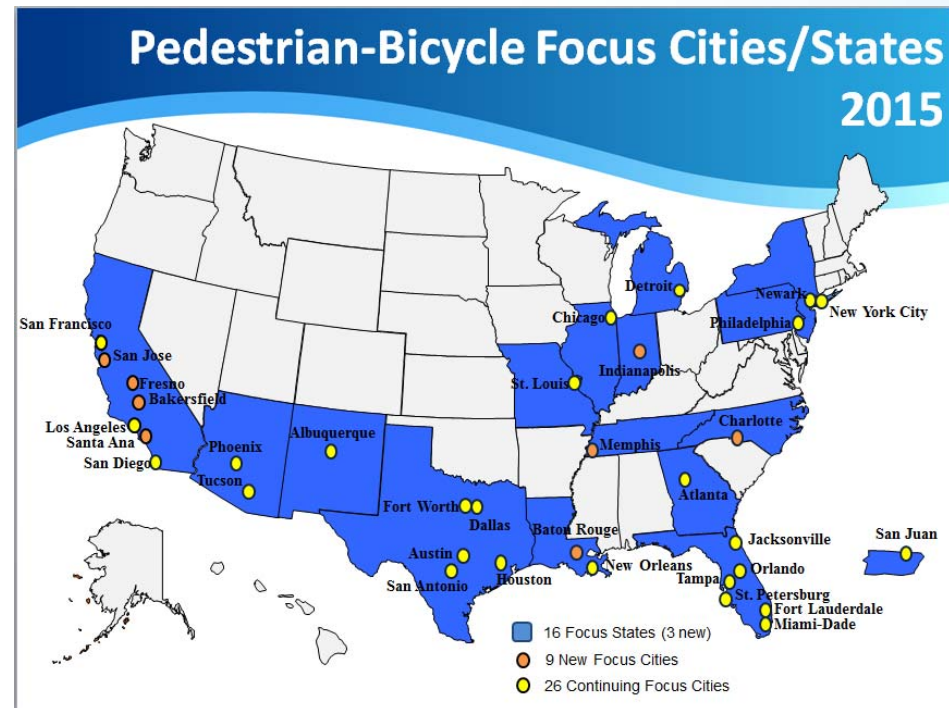
Jessica DeVille
Active Transportation EI



Background

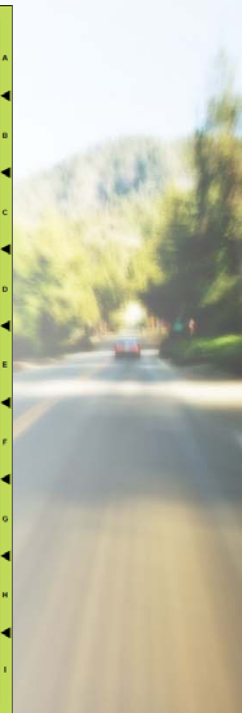
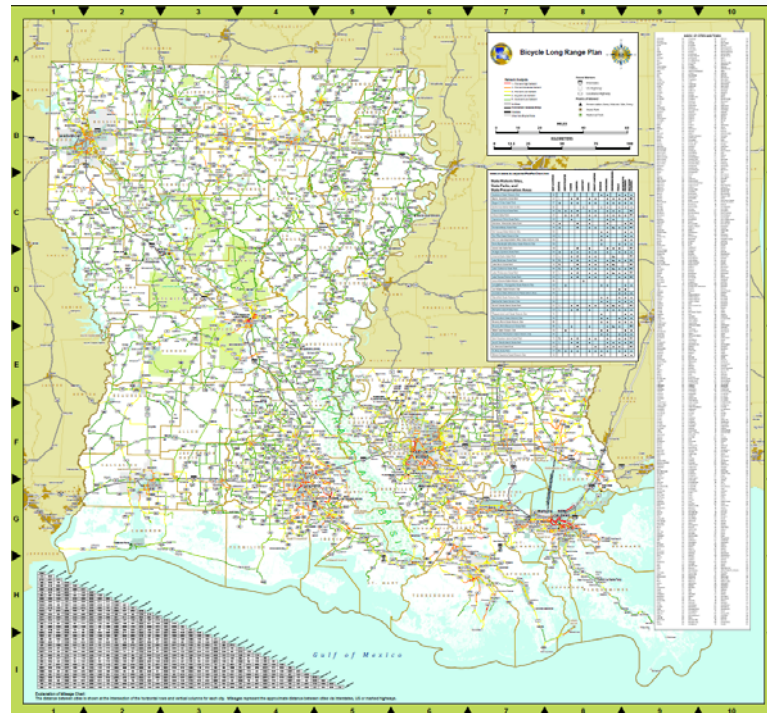
- FHWA Focus State
- Increasing number of bicyclists
 - » Avoid traffic
 - » Healthy/fit
 - » Save money
 - » Improve air quality
 - » Reduce congestion

<http://datareports.lsu.edu/SHSPBikePed.aspx>



Bicycle Planning Tool

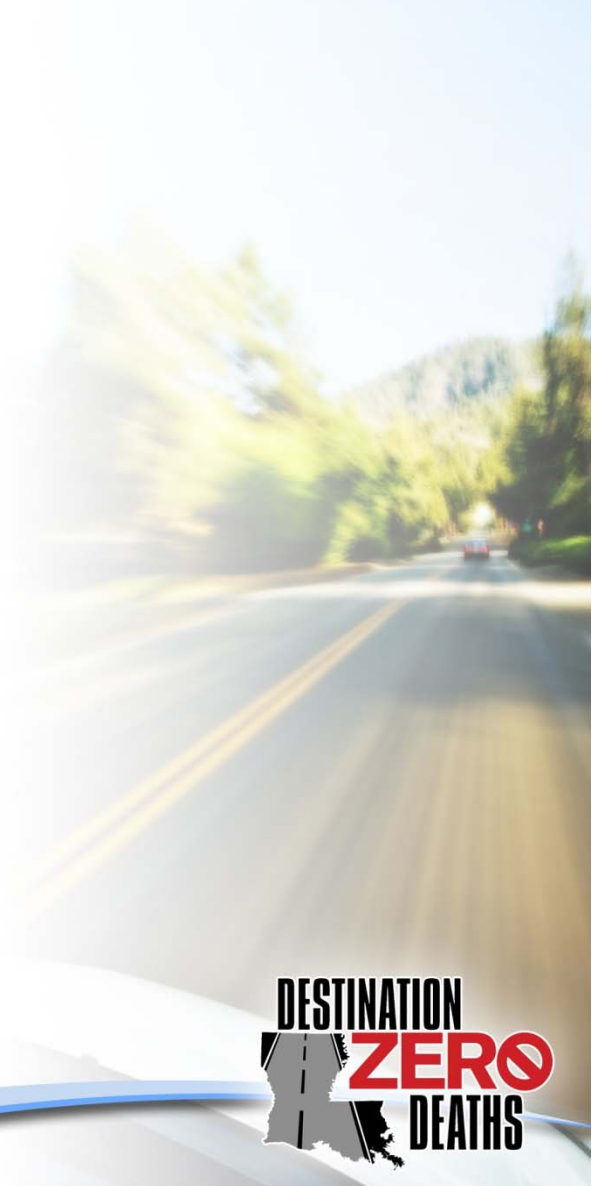
- Bicycle level of service (BLOS)
- Demand
- Safety
- Convenience
- Comfort
- Friendliness
- User stress
- Facility performance



Bicycle Level of Service Criteria

➤ Data from DOTD GIS 2014

- Pavement condition
- Pavement width
- Shoulder width
- Number of lanes
- Traffic volume
- Speed
- % heavy vehicles
- other



**DESTINATION
ZERO
DEATHS**

Demand on State Road Network Segments

Revealed Demand

- » Strava
- » Routes of statewide significance
- » Links to adjacent states-national routes and state connections
- » Preferred routes by cycling & advocacy groups

- » Local & regional bike plans
 - » Existing facilities

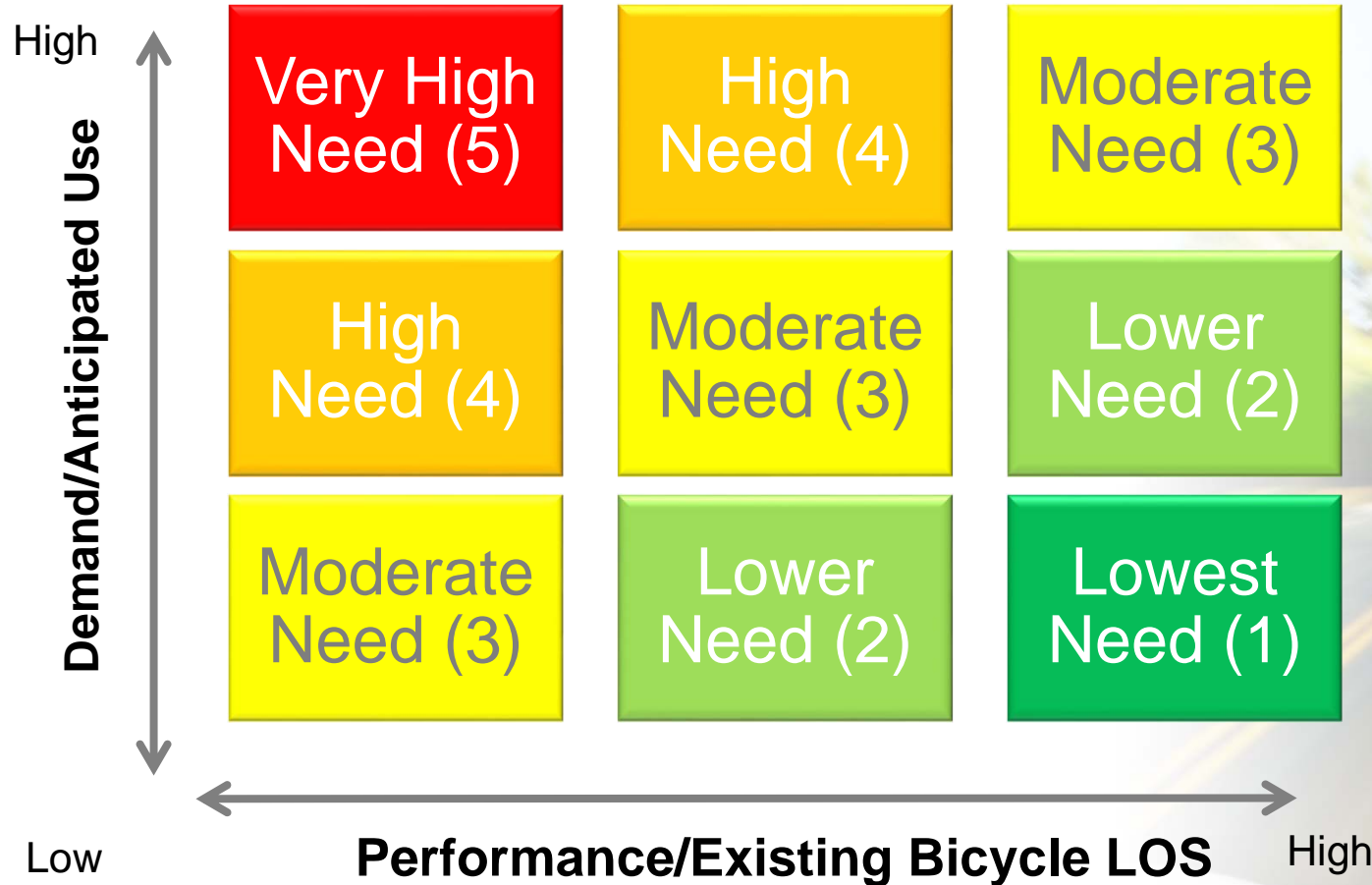
» Commute to work by bicycle

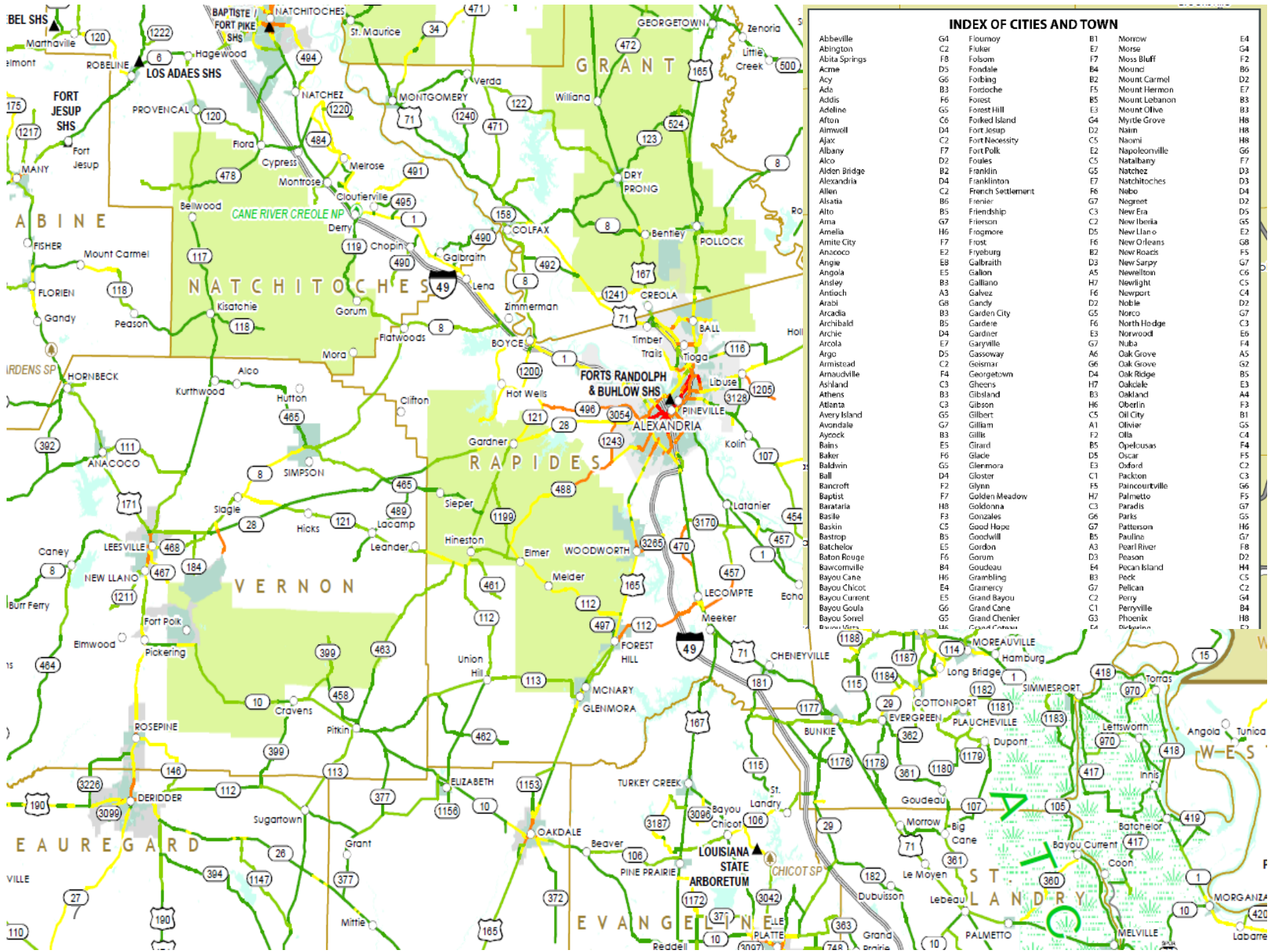
- » Population density
- » Intersection density
- » Zero-vehicle households
 - » Context
- » Community destinations

Derived Demand

Network Building

Prioritizing the Network





INDEX OF CITIES AND TOWN

Abbeville	G4	Flournoy	B1	Morrow	E4
Abington	C2	Fluker	E7	Morse	G4
Abita Springs	F8	Folsom	F7	Moss Bluff	F2
Acme	D5	Fondale	B4	Mound	B6
Acy	G6	Foibing	B2	Mount Carmel	D2
Ada	B3	Fordoche	F5	Mount Hermon	E7
Addis	F6	Forest Hill	E3	Mount Lebanon	B3
Adelphi	G5	Folked Island	G4	Mount Olive	B3
Aflon	C6	Fort Jesup	D2	Myrtle Grove	H8
Aimwell	D4	Fort Necessity	C5	Natchez	H8
Ajax	C2	Fort Polk	E2	Natchitoches	D3
Albany	F7	Foules	C5	Natalbany	F7
Alco	D2	Franklin	G5	Natchez	D3
Alden Bridge	B2	Franklinton	E7	Natchitoches	D3
Alexandria	D4	French Settlement	F6	Nibo	D4
Allen	C2	Frenier	G7	Nogret	D2
Alsatia	B6	Friendship	C3	New Era	D5
Alto	B5	Frierson	C2	New Iberia	G5
Ama	G7	Frogmore	D5	New Llano	E2
Amelia	H6	Frost	F6	New Orleans	G8
Amite City	F7	Fryeburg	B2	New Roads	F5
Anacoco	E2	Galbraith	D3	New Sarpy	G7
Angie	E8	Gallon	A5	Newellton	C6
Angola	E5	Galliano	H7	Newlight	C5
Ansley	B3	Galvez	F6	Newport	C4
Antioch	A3	Gandy	D2	Noble	D2
Arabi	G8	Garden City	G5	Norco	G7
Arcadia	B3	Gardere	F6	North Hodge	C3
Archibald	B5	Gardner	E3	Norwood	E6
Archie	D4	Garyville	A7	Nuba	F4
Arcola	E7	Gassoway	G6	Oak Grove	A5
Argo	D5	Geismar	C2	Oak Ridge	B5
Armistead	C2	Georgetown	H7	Oakdale	E3
Arnaudville	F4	Gheens	B3	Oakland	A4
Asiand	C3	Gibland	H3	Oberlin	F3
Athens	B3	Gibson	H6	Oil City	B1
Atlanta	G3	Gilbert	C5	Oliver	G5
Avery Island	C5	Gilliam	A1	Olla	C4
Averdale	G7	Gills	F2	Oyelousas	F4
Aycack	B3	Girard	B5	Oxford	F5
Bains	E5	Glacé	D5	Oxford	C2
Baker	F6	Glenmora	E3	Packton	C3
Baldwin	G5	Gloster	C1	Paincourtville	G6
Ball	D4	Glyn	F5	Palmetto	F5
Bancroft	F2	Golden Meadow	H7	Paradis	G7
Baptist	F7	Goldonna	C3	Paris	G5
Barataria	H8	Gonzales	G6	Patterson	H6
Basile	F3	Good Hope	G7	Pauline	G7
Baskin	C5	Goodwill	B5	Pearl River	F8
Bastrop	B5	Gordon	A3	Peason	D2
Batchelor	E5	Goudeau	E4	Pecan Island	H4
Baton Rouge	F6	Grambling	B3	Peck	C5
Bawcomville	B4	Gramercy	G7	Pelican	C2
Bayou Cane	H6	Grand Bayou	C2	Perry	G4
Bayou Chicot	E4	Grand Cane	G6	Perryville	B4
Bayou Current	E5	Grand Chenier	G3	Phoenix	H8
Bayou Goula	G6	Grand Coteau	E4	Pinebluff	F9
Bayou Sorrel	G5				
Bayou Vista	U6				

NETWORK ANALYSIS



Bicycle Long Range Plan






Network Analysis

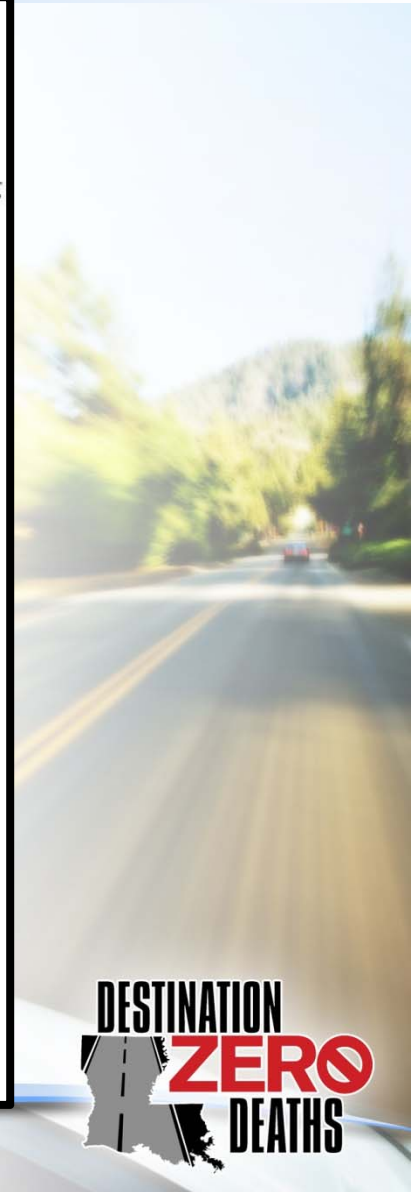
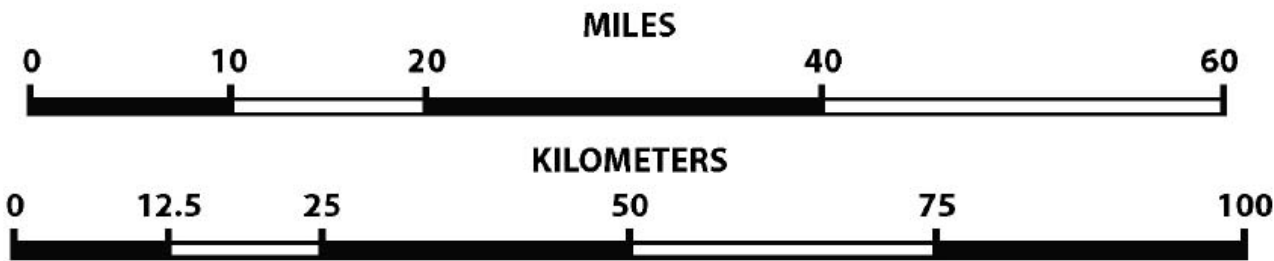
-  1 - Poor and High Demand
-  2 - Poor and Moderate Demand
-  3 - Poor and Low Demand
-  4 - Avg and Low Demand
-  5 - Good and Low Demand
-  No Bikes
-  Pontchartrain Causeway Bridge
-  Interstate
-  Other Non-Bicycle Route

Route Markers

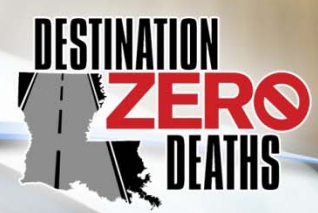
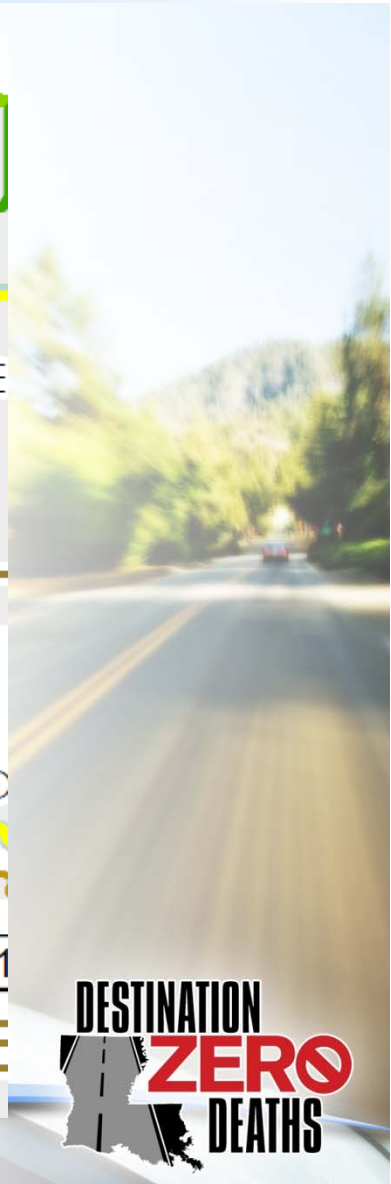
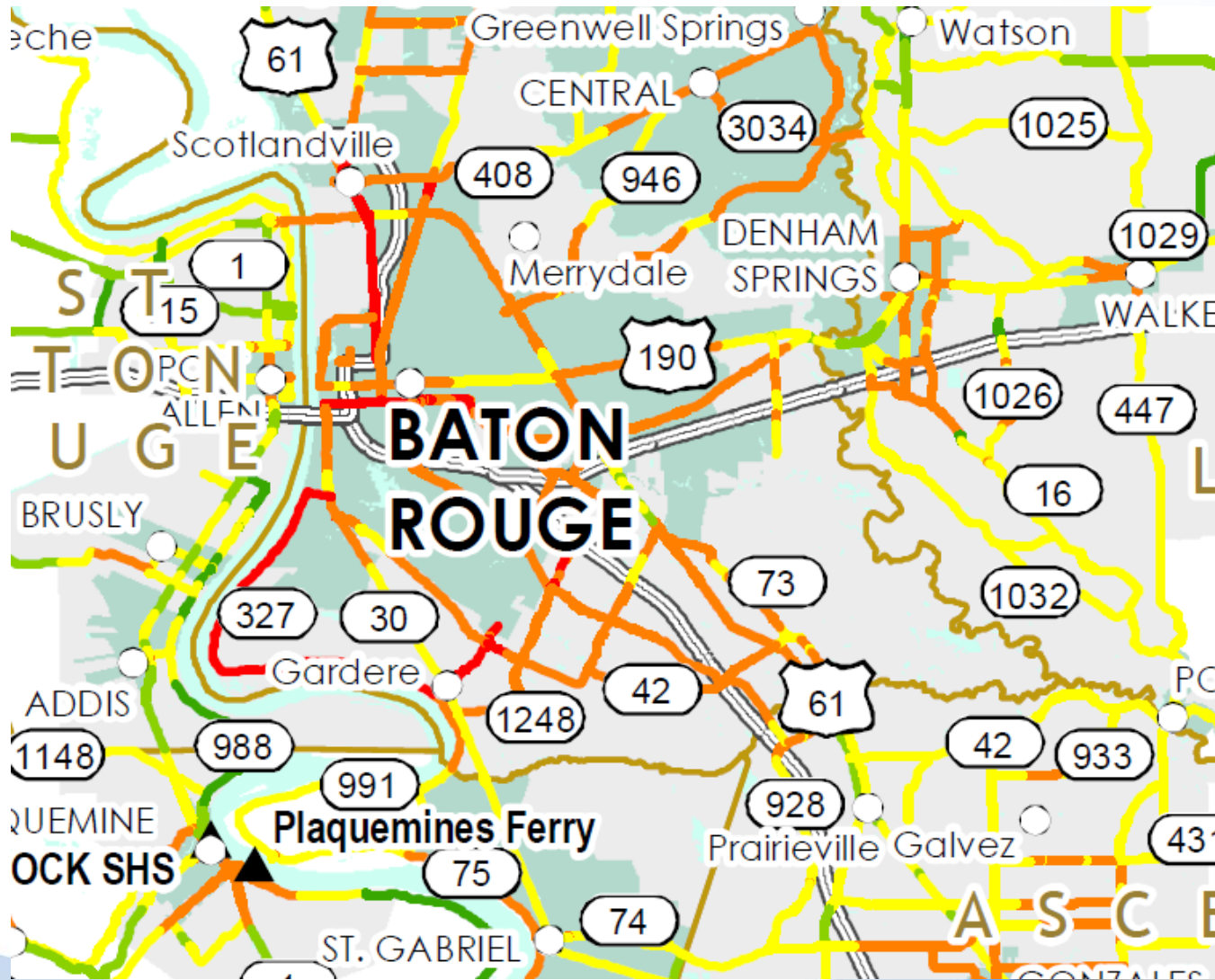
-  Interstate
-  US Highway
-  Louisiana Highway

Points of Interest

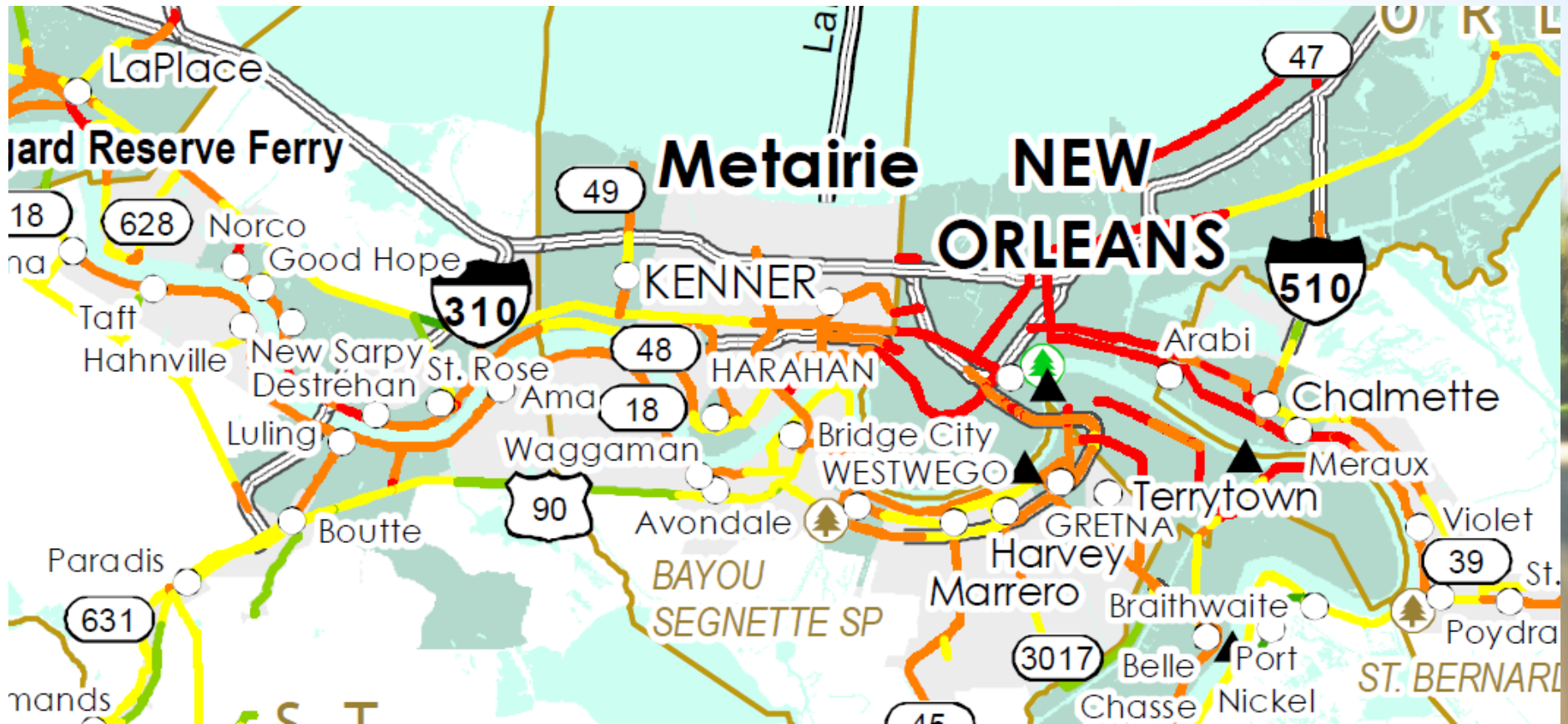
-  Preservation Area, Historic Site, Ferry
-  State Park
-  National Park



Focus Cities: Baton Rouge



Focus Cities: New Orleans



RECOMMENDED BIKE FACILITY



Bicycle Long Range Plan



Recommended Bike Facility

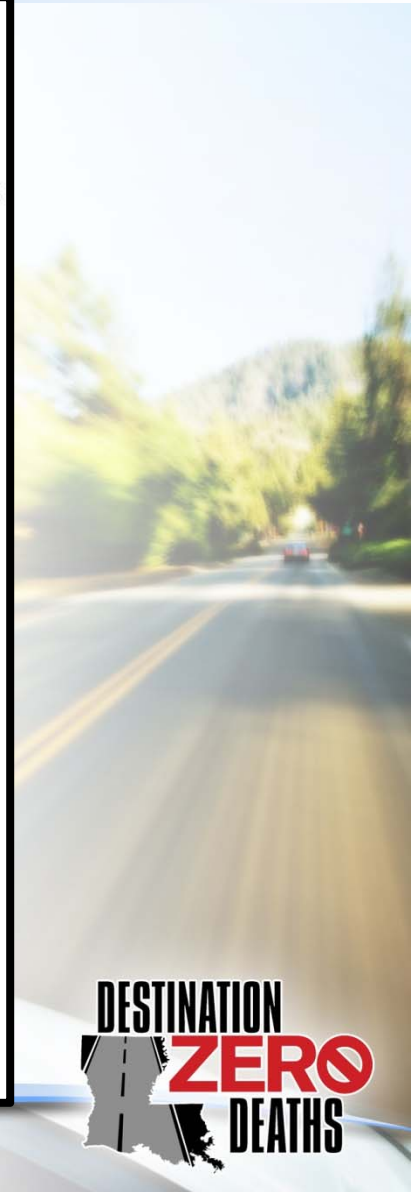
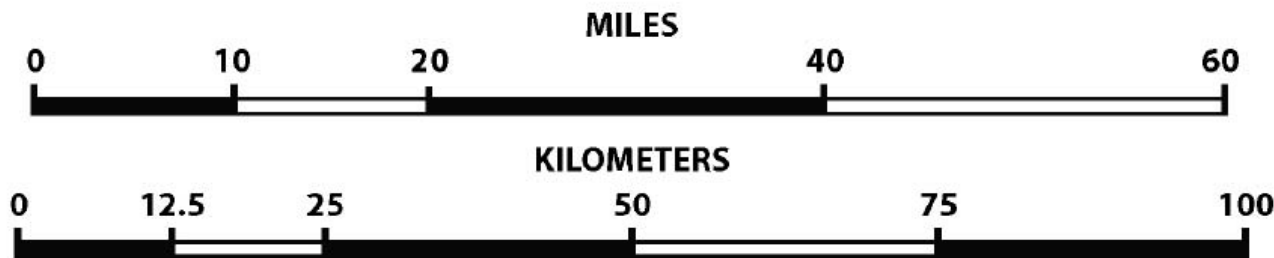
- Shared Lane (no special provisions)
- Marked Shared Lane
- Marked Shared Lane or Shoulder
- Paved Shoulder
- Bike Lane or Buffered Bike Lane
- Buffered or Separated Bike Lane
- Separated Bike Lane
- No Bikes
- Pontchartrain Causeway Bridge
- Interstate
- Other Non-Bicycle Route

Route Markers

- Interstate
- US Highway
- Louisiana Highway

Points of Interest

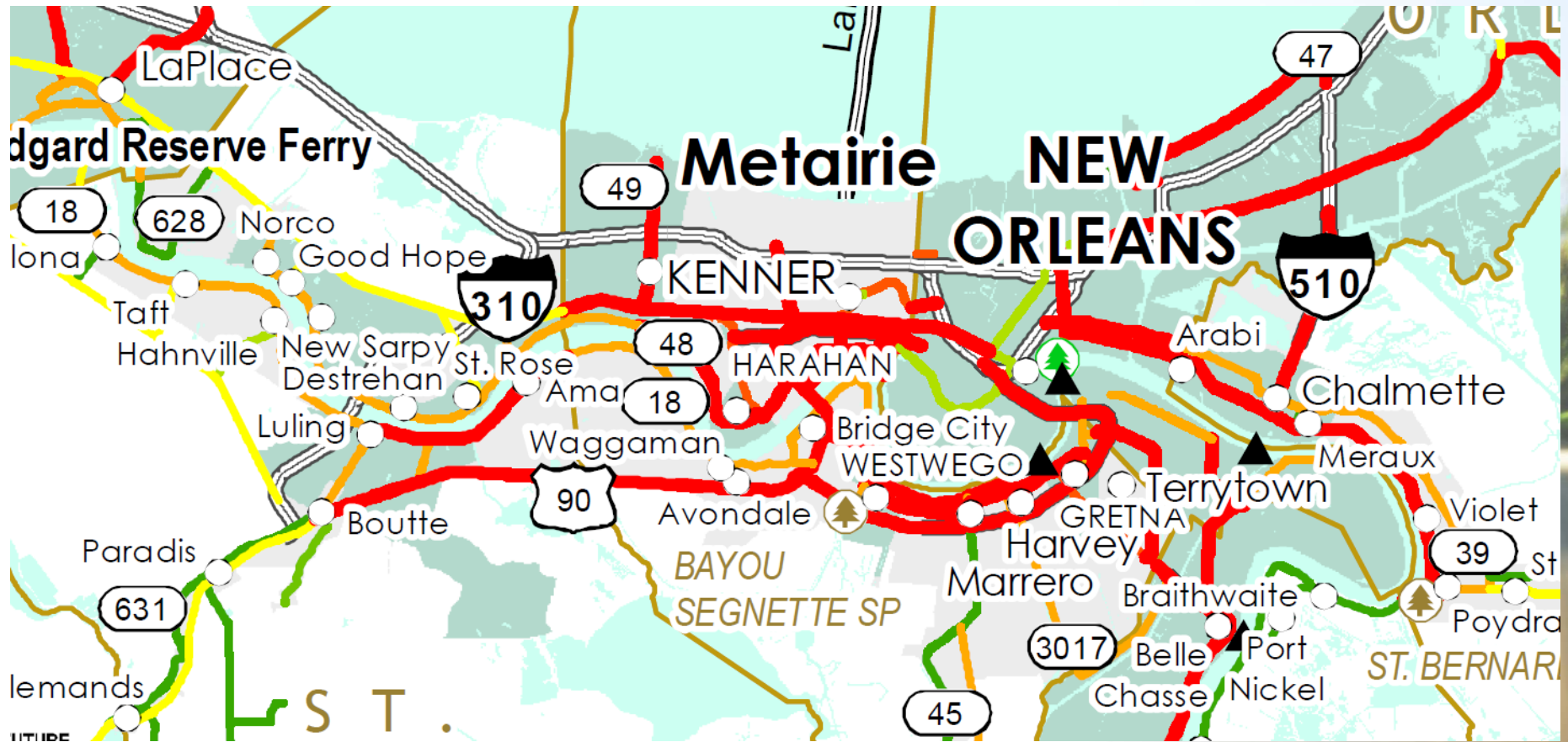
- Preservation Area, Historic Site, Ferry
- State Park
- National Park



LRBMS Bicycle Facility Categories

Context	Volume (ADT)	Posted Speed	Facility Type	Other Considerations
Rural	Under 3,000	55 MPH or lower	Shared Lane (no special provisions)	
		Over 55 MPH	Paved Shoulder	
	Over 3,000	ALL	Paved Shoulders	
Suburban or Urban	Under 3,000	25 MPH or lower	Shared Lane (no special provisions)	
		25-35 MPH	Marked Shared Lane	
	3,000-10,000	25-35 MPH	Bike Lane	Light Truck Traffic
	3,000-10,000	25-35 MPH	Buffered Bike Lane	Heavier Truck Traffic
	Over 10,000	35 MPH or higher	Separated Bike Lane	

Focus Cities: New Orleans



Complete Streets Design Guide

Complete Streets require an (x) in the column for bicycles and an (x) in the column for pedestrians. Complete Streets must accommodate bikes on the roadway, so although bikes may be accommodated by a sidepath, this does not substitute for an on roadway facility. On a roadway with ADT < 1,000 – Pedestrians, bicycles and vehicles can utilize the same travel lane. No special provisions are required to accommodate bikes and pedestrians. By nature of the low volume, this road is already considered complete.

		Requirements Accommodations Meet (x)		Notes
		Bike	Pedestrian	
Accommodations	Sidewalk		X	
	Shoulder (4ft min paved)	X	X	
	Bike Lane	X		Raised objects shall not be used to separate bicycle lanes from adjacent travel lanes Shall be placed in both directions. Required paved shoulder width can be reduced by width of bike lane
	Cycle Track	X		Required paved shoulder width can be reduced by width of cycle track
	Sidepath		X	One way bike facility and 2 way pedestrian, and must be on both sides of the road. Two way bike facility is acceptable if all of the following is true; <ul style="list-style-type: none"> • most suitable on side path analysis chart • path is < ½ mile • path connects two other good, high quality trail sections that would otherwise could not be connected.
	Wider Outside Travel Lane (15 ft.)	X		

Element	Urban								Rural							
	Freeway/ Expressway	Preferred	N/A						N/A							
Complete Streets Widths and Offsets (ft.)	All Other Classifications	Acceptable	Sidewalk			Sidepath		Cycle Track Width		Bicycle Lane Width	Sidewalk		Sidepath	Cycle Track (One Way Only)		Bicycle Lane Width
		Offset of Sidewalk From Travel Lane	Usable Width	Width Adjacent to Curb	Usable Width	Offset of Sidepath From Travel Lane	Usable Width	Offset (From Through Lane)	Usable Width of Sidewalk		Offset of Sidewalk From Travel Lane	Usable Width		Offset of Cycle Track From Travel Lane		
	Preferred	≥ 8	5	7	10	5 ft. Landscaped buffer	5	5 ft. striped buffer	5	5	Clear zone	N/A	5	5 ft. striped buffer	5	
	Acceptable	2								8						

Approved *Staruccé P. Williams* *3-6-2017*
 Chief Engineer Date



Shared Roadways

- Paved shoulders
- Marked shared roads
- Other: signage, rumble strip placement, drainage gates, bridge rails, bridge expansion joints



Bike Lanes

- Standard bike lanes
- Buffered bike lanes



Separated Bike Lanes

- One-way separated bike lanes
- Two-way separated bike lanes
- Other: intersection details, colored pavement, concrete barriers, raised medians

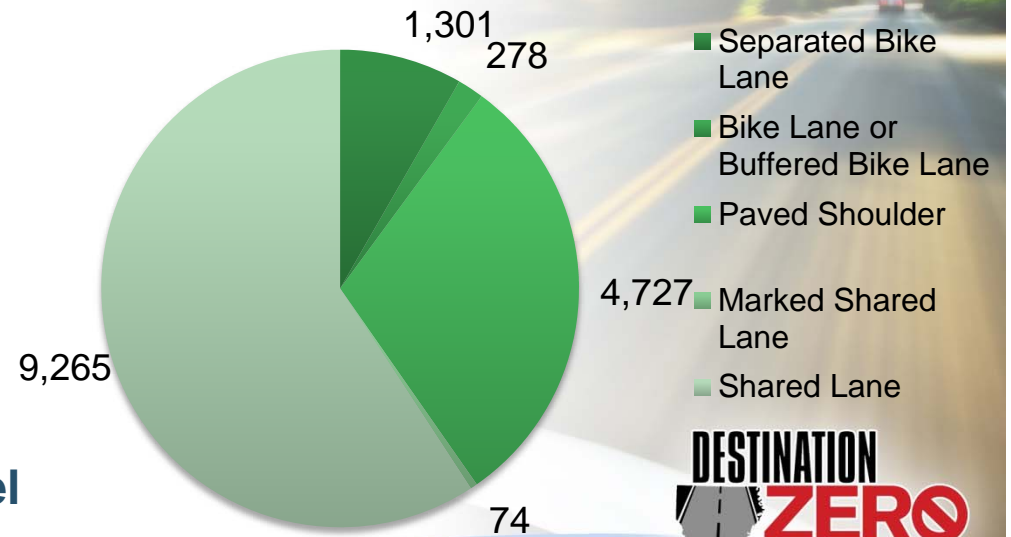
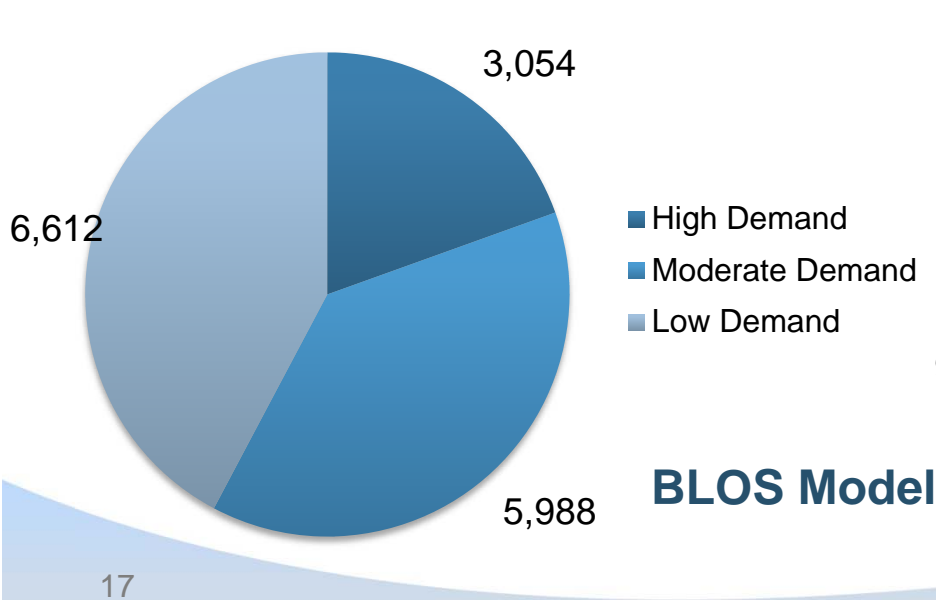
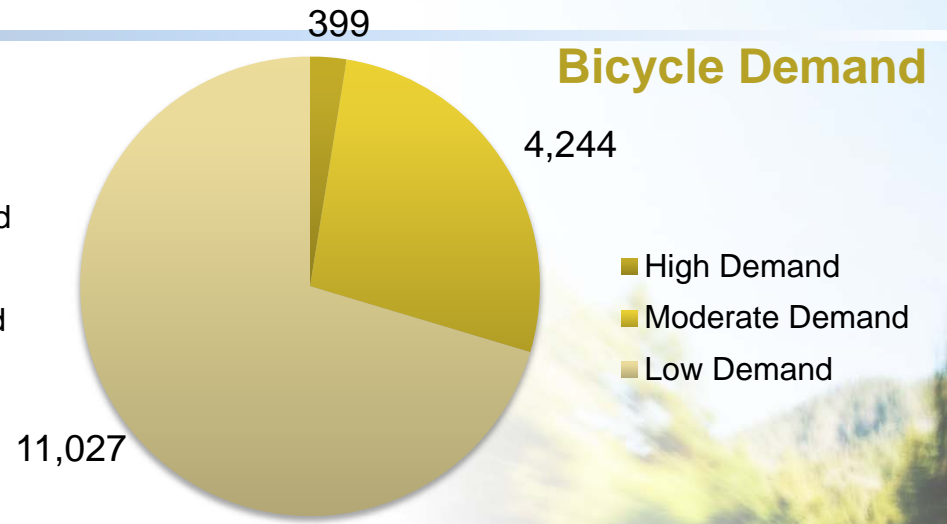
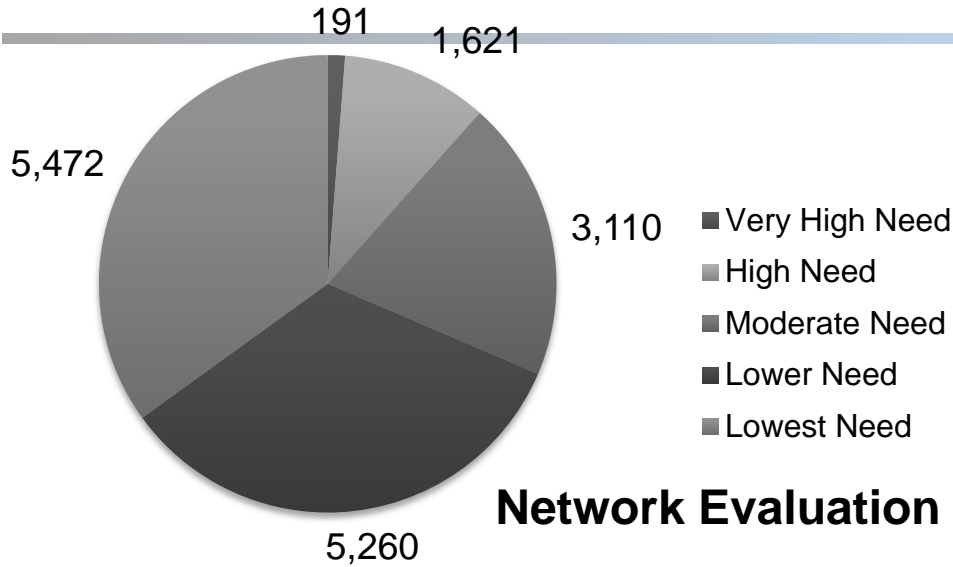


Shared Use Paths

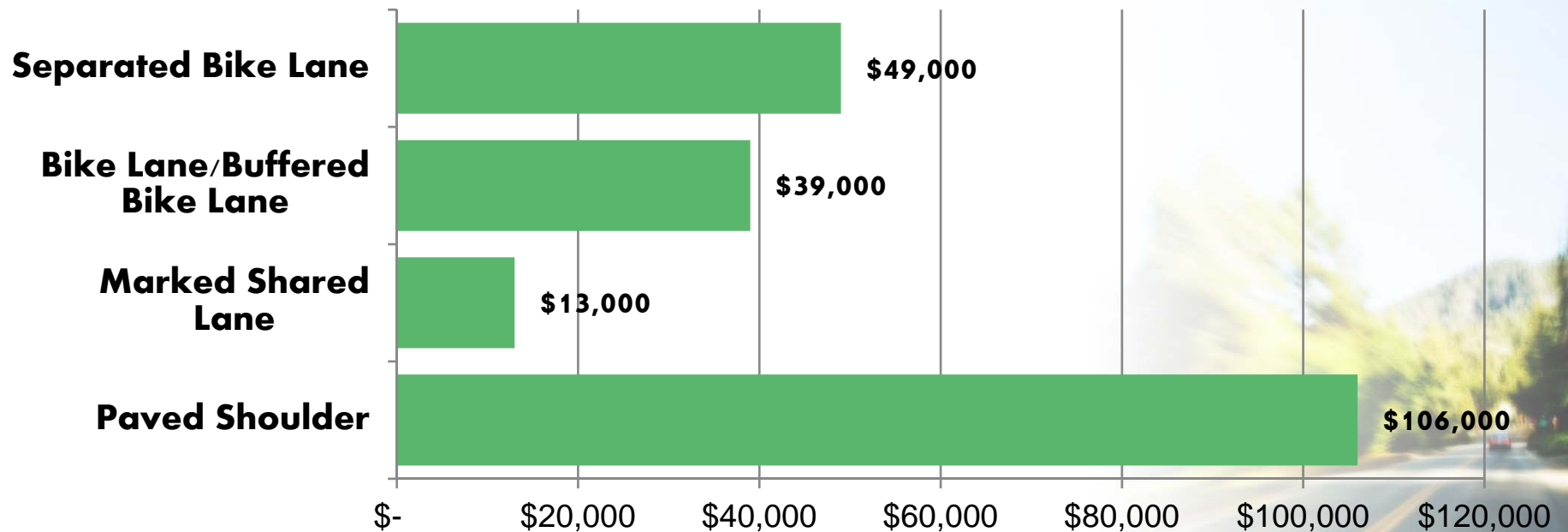
- Independent of roadway or adjacent to roadway

Sample Plan Development

Results- 15,654 mi network



Estimated Cost Per Mile



Separated Bike Lane	\$ 63,749,000
Bike Lane or Buffered Bike Lane	\$ 10,008,000
Paved Shoulder	\$ 501,062,000
Marked Shared Lane	\$ 962,000
Shared Lane	\$ -



Complete Streets Performance Measure

- **Priority 1 Routes estimate: 191 miles of separated bike lanes = \$9,359,000**

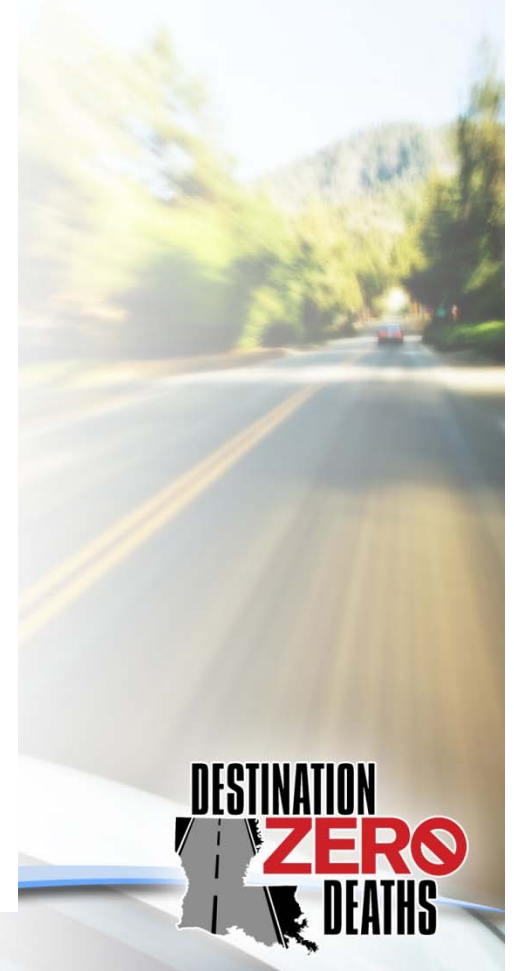
Objective 1.3: Accommodate bicyclists on Priority 1 routes as identified in the Statewide Bicycle Planning Tool through standalone or current programmed projects on an annual basis as available financial resources permit.

Performance Measures

and type of routes where improvements are made
and type of improvements that are implemented
of DOTD staff trained on Statewide Bicycle Planning Tool
of consultants & local governments trained on Statewide Bicycle Planning Tool

Strategies

- Strategy 1.3.1 Provide training on the use of the Statewide Bicycle Planning Tool in the Project Development Process.
- Strategy 1.3.2 Use the Statewide Bicycle Planning Tool in conjunction with DOTD's Priority Program to identify locations for bicycle improvements.
- Strategy 1.3.3 Identify appropriate countermeasures to reduce the number of fatalities and serious injuries on Priority 1 routes.
-



JESSICA DEVILLE
ACTIVE TRANSPORTATION EI
JESSICA.DEVILLE@LA.GOV
225-379-1844

THANK YOU

