



# CHAPTER 12

## STRATEGIC PLAN FOR ACTIVE MOBILITY: PHASE 1 BICYCLE MOBILITY PLAN

The metropolitan area of the Coastal Bend is a place where walking and biking are integral to the community culture and represent viable, safe mobility and recreation options for residents and visitors of diverse abilities.

# CHAPTER 12

## strategic plan for active mobility phase: 1 - bicycle mobility plan

In accordance with the requirements of the Transportation Equity Act of the 21<sup>st</sup> Century (TEA-21), and its successor federal law, the Fixing America's Surface Transportation (FAST) Act, states and metropolitan planning organizations are required to address bicycle and pedestrian issues. Overall goal targets set by the US Department of Transportation include: (1) to double the percentage of trips made by foot and bicycle in the United States; and (2) to simultaneously reduce the number of injuries and fatalities suffered by bicyclists and pedestrians by ten percent.

Long-range transportation plans are required to comply with federal and state laws for regional and statewide planning, in order for the region to be eligible for federal transportation funding.

Transportation planning includes addressing the access and connectivity needs of bicyclists and pedestrians in order to aid in healthier lifestyles when traveling to work and non-work destinations - within and in close proximity to neighborhoods. Accommodating evolutionary (e-bikes) and revolutionary (e-scooters) changes in how people use these facilities is also necessary.

In 2015, to accommodate the increasing change in community interest and awareness of pedestrian and bicycle facilities, the Corpus Christi MPO, in partnership with its member organizations, led the creation of a Strategic Plan for Active Mobility to replace the previous (2005) bicycle and pedestrian plan. This plan answers three fundamental questions that guide capital roadway projects within the MPO planning area:

1. Where should bike facilities be installed to create a cohesive network that connects key destinations and accommodates a diversity of riders?
2. What type of facilities (e.g. on-street bike lanes, off-street cycle tracks, etc.) should be installed in which locations?
3. How, (i.e. to what standards) should those facilities be designed?

The Corpus Christi MPO's Bicycle Plan is intended to foster cycling as a meaningful transportation alternative for riders of diverse abilities. This plan was created to alleviate uncertainty about where to make investments in bicycle infrastructure and how to design and maintain that infrastructure. The bicycle mobility network described in this plan was developed for the bike-dependent commuter and casual recreational rider - not the high-speed sport cyclist. This infrastructure plan will also serve other micro-mobility vehicles, such as electric scooters.

Exhibit 12-1. Illustration of Vision, Goals, and Objectives

**Vision:** The metropolitan area of the Coastal Bend is a place where walking and biking are integral to the community culture and represent viable, safe mobility and recreation options for residents and visitors of diverse abilities.



### Visions, Goals, and Objectives

The first step toward advancing bicycle and pedestrian mobility as well as safety in the Corpus Christi MPO region is establishing a common vision or goal statement for non-motorized transportation, and defining a set of objects that can measure progress. These goals and objectives guide both the plan and its implementation. Exhibit 12-1 illustrates this process.

The Corpus Christi MPO region is a place where walking and biking are integral to the community culture and represent viable, safe travel and recreation options for residents and visitors of diverse abilities.

#### Goal 1: Develop a cohesive, strategic network of bicycle facilities that accommodates a diversity of riders.

- Objective 1.1: Provide bicycle facilities that are appropriate to street classification, traffic volume, and desired level of safety and service.
- Objective 1.2: Enhance connectivity between community activity centers.
- Objective 1.3: Minimize uncertainty about bicycle infrastructure design and cost by establish standards (by reference) for the design, construction, and maintenance of bicycle facilities.

#### Goal 2: Increase the percentage of trips of all types that are made by bicycle.

- Objective 2.1: Provide access for residents in project area to the bike mobility network within 2 miles of their homes.
- Objective 2.2: Increase the proportion of transit riders who access transit by bike.
- Objective 2.3: Increase the proportion of students arriving to school by bike.

#### Goal 3: Promote health and wellness through bicycling.

- Objective 3.1: Increase the proportion of community members who indicate that they ride a bicycle at least once per week.

#### Goal 4: Enhance safety for bicyclists.

- Objective 4.1: Decrease the total number of interactions between bikes and cars.
- Objective 4.2: Increase fixed/permanent messaging (signage) about safe bicycling within the project area.
- Objective 4.3: Increase the perception of rider safety among the public.

## Network Development Process

The bicycle mobility network is intended to foster cycling as a meaningful transportation alternative for riders of diverse abilities and to enhance access to essential goods and services for all residents of our community.

The Corpus Christi MPO staff and those of member government and partner agencies identified existing and future centers of community activity (places that shape daily travel) and defined the key connections (the network) between them. Exhibit 12-2 identifies the primary destinations used in the development of the bicycle network.

Exhibit 12-2. Table of Identified Primary Destinations

Primary Destinations	Description
Schools	Early childhood education and daycare centers, elementary/middle/high schools (public and private), higher education campuses
Low Income Housing	Section 8 or Housing Tax Credit properties
Transit	Bus stops, Bike Boardings and Transit stations
Food Markets	Grocery stores; bakeries; meat, fish, and produce markets; corner store markets
Recreation and Tourism	Hotels, fitness centers, senior centers, community centers, pools, movie theaters, museums
Parks	Larger than 2 acres
Civic Institutions	City Hall, post offices, public libraries, municipal courts, court houses

The team then created a “heat map” of the community, where the warmest colors represent the greatest concentration of primary destinations. The “heat map” is illustrated in Exhibit 12-6, at the end of this chapter. Connections between key locations were identified based on parameters that reflected community members' priorities as captured through stakeholder engagement activities, including:

1. Off-Road trail connections (existing or proposed) were prioritized over routes that followed the street network. Community members indicated the preference to cycle as far from vehicles as possible. Likewise, there are locations where off-road trails along stormwater easements or abandoned rail easements afford a much more direct connection between key destinations than existing roadways.
2. Neighborhood streets and minor collectors were prioritized over busier roadways. Community members expressed strong preference for a low-stress bike network on streets with low traffic volumes and speeds.
3. Streets that pass through areas that are on the edge of or adjacent to activity centers were prioritized over streets that run right through the heart of an activity center or through areas with a very low concentration of destinations. The confluence of traffic and land uses at the heart of the community activity centers could create unsafe conditions for cyclists.

Once a preliminary bicycle mobility network was established, each segment was reviewed using data collected through stakeholder participation. The type of infrastructure implemented on each segment of the network was determined to uphold the level of safety that the community seeks. This level of safety was based on primary and secondary data that was collected for every segment within the network as shown in Exhibit 12-3.

Exhibit 12-3. Table of Primary and Secondary Segment Data

Primary Segment Data	Daily traffic volumes for cars and trucks
	Posted speed
Secondary Segment Data	Right-of-way width
	Shoulder width and material
	Number of driveways
	Number of travel lanes
	Presence of curb and gutter
	Presence, type, and relative utilization of on-street parking

## Stakeholder Engagement

Analytical methods and results were vetted through a Project Steering Committee comprised of delegates from each of the local governments, agencies, and private entities that ultimately contributed to the completion of the bicycle plan.

A wide range of strategies was used to engage community members from the full spectrum of geographic, socioeconomic, demographic, and cultural perspectives. The project website, [www.coastalbendinmotion.org](http://www.coastalbendinmotion.org) provided three ways for participants to provide input, as shown in Exhibit 12-4:

Exhibit 12-4. Illustration of Stakeholder Engagement Options



**MAP IT!**  
A Web application that enabled individuals to show the planning team where they ride or would like to ride if conditions improved



**TRACK IT!**  
A downloadable smartphone application, Strava, allowed users to automatically record speed, distance, and other data every time they took a bike ride. The planning team used these data to prioritize potential routes in the new bike network



**ANSWER IT!**  
A very short on-line survey captured community members' priorities for cycling related safety and education programs, policies, and supporting facilities

Planning team members attended community events and regularly scheduled meetings for a diverse range of community groups. Interview protocols were developed using the on-line ANSWER IT! survey tool when initiating conversations with citizens at events about their level of interest and priorities for cycling facilities and programs. One-on-one interviews yielded information regarding bicycling habits, sentiments toward existing infrastructure, and ideas for improvement. Demographic questions were included to determine age, gender, student status, and zip code.

In addition to one-on-one interviews, focus groups with key stakeholder groups were conducted as a means of seeking input on the project. An example of information as shown in Exhibit 12-5, was collected during these interviews and focus groups provided guidance in the development of the Matrix of Best Practices.

Exhibit 12-5. Table example of Matrix of Best Practices

CAT	Sub CAT	Strategy	Case Study	Special Topics Narrative	Appendix	Lead Entity	Cost of Implementation **	Potential Partners	Priority
Infrastructure	Trip Support Facilities	Work with downtown business owners, hotels, and tourist destinations to implement a bike share program in the Corpus Christi Central Business District.	1	1		City of Corpus Christi Downtown Management District	High	Corpus Christi Convention and Visitors Bureau	Medium
		Acquire a fleet of shared bikes for use by municipal employees during the workday; facilitate, possibly through tax/street user fee incentives and/or collective purchasing, other large employers to do the same.				Municipal Purchasing Depts.	Low	Local cycling clubs; large local employers	Medium
		Establish a free or subsidized bike rack program to allow racks to be placed in public rights-of-way or within an easement at businesses that request bike parking.				Parks and Recreation Depts.	Low	Bay Area Smartgrowth Initiative; local cycling clubs; private industry	High
	Wayfinding	Expand bike accommodations on transit, namely augmenting bike rack capacity (potentially with vertical racks inside busses) to facilitate bike boardings and cycling as a means of accessing transit.	2			Corpus Christi Regional Transportation Authority	Low		High
		Work with RTA and other local partners to install public bicycle repair tool kiosks at transit stations or stops with high bike boardings or at other visible locations on key cycling routes; post contact information for cycling clubs and shops on kiosks.	3			Municipal Parks and Rec. Depts.	Low	Local cycling clubs	Low
		Undertake a design study to develop cohesive wayfinding and branding across the entire bike mobility network; ensure ample opportunity for input by staff from all 3 municipalities in the MPO.				Municipal Engineering Depts.	Medium	Municipal Parks and Rec. Depts.; MPO; Corpus Christi Chapter of the AIA	High
Education and Encouragement Programs	Cyclist Safety and Skills	Utilize design standards and consistency of sign type to create cohesion and a sense of place within individual districts or neighborhoods.				Municipal Engineering Depts.	Low	Municipal Parks and Rec. Depts.	High
		Provide infrastructure and wayfinding data to Google for online, searchable bicycle directions.				Municipal MIS Depts.	Low	MPO; County Health Districts	High
		Install and inventory/document location of wayfinding signage at all junctions between different bike facility types (e.g. where cycle track meets bike boulevard or off-road multi-use trail segment) along a given route.				Municipal Engineering Depts.	Medium	Municipal Parks and Rec. Depts.	High
		Capitalize on cost-effective opportunities for communicating bicycle safety messages, including wraps on municipal vehicles, PSAs, elementary school education workshops.				Municipal PIO, Police Depts., Parks and Rec. Depts.,	Low	Parent/Teacher Associations; Ride Kind Drive Kind	High
		Partner with local bike shops and/or cycling clubs to offer road bike safety education for adults, such as Cycling Savvy ( <a href="http://cyclingsavvy.org">http://cyclingsavvy.org</a> ) or the League of American Bicyclists' Traffic Skills 101; encourage one or more local cyclists to become accredited as an instructor through these programs.				Municipal Neighborhood Services Dept.	Low	Local bike shops; local cycling clubs	High
		Partner with local bike shops and/or cycling clubs to offer low- or no-cost bike maintenance courses; capitalize on the opportunity to include safety-related content.				Municipal Neighborhood Services Dept.	Low	Local bike shops; local cycling clubs	Medium
		Increase school district (public and private) representation in transportation planning and decision making by partnering with school district officials to formalize/designate safe routes to schools.	4			Municipal Engineering Depts.; TxDOT District;	Low	ISDs	Medium

The complete Strategic Plan for Active Mobility Phase 1: Bicycle Mobility Plan is available online at the [www.coastalbendinmotion.org](http://www.coastalbendinmotion.org) website as well as Appendix F.



Exhibit 12-6. Map of Concentration of Primary Destinations

