Chapter 4
Mobility

**Town of South Padre Island Comprehensive Plan**

Due to the uniqueness of this barrier island and its growing popularity as a place to live and visit, the term transportation conveys a different meaning. In light of new development and continuing growth in visitation, the plan for future mobility is of essential importance. In addition to improvements to the street system, there must be a renewed focus on walking, bicycling, and transit. The plan devotes increased attention to all modes of transport. A well-planned and designed transportation system will also contribute to the character of the Island and its quality of life.

**Purpose**

The purpose of this chapter is to plan for the short-term demands and long-range mobility needs of the Island. Its transportation system is unique and, thus, requires a different approach. While the street system will remain important, so is each of the other modes. Walking and bicycling deserve increased attention to establish them as a viable alternative to the vehicle. Coupled with a sound pedestrian system is a reliable, convenient, and highly accessible public transportation system. Complementary options include taxicabs, pedicabs, and water taxis. Therefore, the plan for enhanced mobility must balance all transportation modes.

This chapter includes the Town’s long-range plan for developing an efficient roadway network. This will be an increasingly important means of planning as development expands northward into the extraterritorial jurisdiction and to tie into the proposed second causeway. The plan will be a guide for securing rights-of-way and upgrading and extending the network of streets throughout the 20-year planning area. Transportation infrastructure must be planned well in advance of development to ensure orderly and timely improvements as the mobility and access needs continue to increase.
Mobility Issues

The following mobility issues need to be addressed:

1. **Improved causeway access to the Island**: In 2004, there were 7.8 million causeway crossings, which are projected to reach 9.8 million by the Year 2015 and 11.5 million by the Year 2025. This projection indicates an increase from 21,370 to 31,507 average crossings per day, which reflects a 147 percent increase. With the breach of the Queen Isabella Causeway in September 2001, the need for a second causeway became more apparent than ever. While the location of a new causeway is yet to be determined, there remains diligent study for environmental clearance. The location of the new causeway is critical to the future of the Town of South Padre Island. The only island location that will serve the current and future needs of the Town is north of the Convention Centre. From there, the location of the causeway should cross the Laguna Madre to Holly Beach on the mainland side, and tie into Farm Road 510 and Farm Road 106, giving direct access to Expressway 77/83 in San Benito and the Harlingen International Airport. The corridor should not be Highway 100 or Highway 48; both highways become frequently congested with traffic, which will create serious problems in the event of emergency evacuation of the island. The second causeway will provide congestion relief for the Queen Isabella Causeway, improve hurricane evacuation, and facilitate economic growth. Continuous planning and networking with other planning authorities is essential to mitigate the probable impacts of this project on the Island’s natural and built environments.

2. **Public Amenities**: Public way-finding signage needs to be installed to give directions for general destinations, goods, and services. Introducing shaded walkways, rest areas, benches, and public art will create an environment conducive to walking.

3. **Improved Local Transit Usage**: Since 1999, the average monthly ridership on The WAVE has increased 223 percent, from 5,514 to 12,314 riders, as displayed in Figure 4.1, Ridership on The WAVE; yet, there still remains a significant latent demand by of thousands of daily visitors. In addition, there are roughly 6,000 employees on the Island, many of whom commute daily from throughout the Valley. Seizing this demand as a means to reduce vehicle trips, congestion, and parking demands is an opportunity, as well as a challenge. Keeping pace with the vehicle and infrastructure needs and requisite funding will require added resources. Another opportunity exists to convey a fun, friendly

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1 Comprehensive Resort Market Analysis, THK Associates, Inc., September 20, 2005
and interesting image of the Island through the type of vehicles purchased and used (i.e. trolley buses or trolley look-alike buses, or double decker buses), and the construction and design of transit shelters.

![Figure 4.1, Ridership on The WAVE](image)

Source: Town of South Padre Island

4. **Enhanced Pedestrian Environment**: The volume of daily visitors heightens the importance of pedestrian mobility. The density of development and the proximity between many origins and destinations makes walking a viable option; however, for it to be an attractive option, pedestrian ways must be safe, convenient, and inviting. Overcoming challenges such as high-traffic streets, driveways, public streets, and a lack of sidewalks on the side streets, must become a priority.

5. **Safe and Efficient Traffic Movement**: Efficient traffic movement is essential to the economy and contributes to the experience of visitors and the quality of life of residents. The street system must be designed to effectively convey traffic on an ordinary day, as well as during peak periods. The traffic carrying capacity of each street must be preserved and/or enhanced for the system to operate efficiently. Because of the linear nature of the island and its natural constraints, relatively few options exist to expand the street system.
Goals and Recommendations

Access to the Island

4.A. Continue to be involved in the feasibility studies and in the planning process for the second causeway.

4.B. Continue to work to assure that the second causeway is located north of the Convention Centre and that it integrates into the local transportation system as seamlessly as possible.

4.C. Implement sensitive planning and stewardship of the causeway environs

4.D. Include pedestrian and bicycle access across any bridge(s)

4.E. Expand transit opportunities within the Valley, to and from the Island, to form a network of transit routes, focusing especially on connections with the area airports.

Recommended Actions

4.1. Appoint a liaison to the Cameron County Regional Mobility Authority (CCRMA) to regularly attend their board meetings.

4.2. Support regional planning and inter-agency cooperation to improve valley wide transportation to the island, access to the airport, and public education regarding such services.

4.3. Upon completion of the preliminary alternatives and environmental analyses² and again at the stage of the draft environmental impact statement (DEIS), contract a planning consultant to conduct an independent assessment of the analyses and findings and outline the probable impacts. The purpose of this evaluation is for continuous review and advanced planning commensurate with the recommendations of the causeway studies.

4.4. Develop and periodically review the Town and the RMA’s Thoroughfare Plan(s) and make amendments as the final alignment(s) is/are determined.

4.5. Prepare comments during the mandated public comment period for the draft environmental impact statement (DEIS).

4.6. Make definitive plans to meet with owners of property north of The SHORES Subdivision in an effort to educate them on the Goals of this plan, specifically in regards to the Town’s

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² This study, commissioned by the RMA, was commenced in January 2007.
Xeriscape promotes creative approaches to water conserving landscapes by helping people improve their landscapes and reduce the need for water, maintenance, and other resources.

**Thoroughfare Plan**, to see how the Town can assist in the design phase of the development process.

**Improved Pedestrian Friendliness**

4.F. Provide a safe and attractive environment for walking and bicycling

4.G. Encourage transportation forms other than the automobile

4.H. Develop walking and biking paths that are coordinated with existing businesses, residences, street infrastructure, and transit opportunities and that contribute to the character and identity of the Island and the individual corridors on which the paths are located.

**Recommended Actions**

4.7. Coordinate with TxDOT to request funding for the reconstruction/replacement of the sidewalks and landscaping on Padre Boulevard.

4.8. Prepare a landscape/hardscape design plan along each of the public rights-of-way. The plan should specify native plant materials, hardscape surface treatments, irrigation, pedestrian and street lighting, and signage.

4.9. Enhance existing bike lanes on major thoroughfares; promote bike use and add bicycle racks at beach access points and public facilities, and encourage businesses to do the same.

4.10. Develop a capital sidewalk improvement plan. The highest priority is Padre Boulevard followed by Gulf Boulevard and the east-west connectors planned for full median access. Laguna Boulevard would closely follow in priority. The remaining east-west streets are a secondary priority.

4.11. Consider a redesign of Gulf Boulevard to include, possibly, a serpentine alignment within the public right-of-way. The plan should consider the following: sidewalks, landscaping, signage, and trolley stops; parking on the west side of Gulf Boulevard; parallel parking in low-density areas; and diagonal parking in higher-density areas.
4.12. Coordinate with the Cameron County Regional Mobility Authority (CCRMA) and TxDOT to accommodate an eight-foot, barrier-separated walkway/bikeway on the second causeway.

4.13. Consider implementing traffic calming measures where needed.


4.15. Amend the subdivision regulations as follows:
   a. Require sidewalks on both sides of arterial and collector streets and one side of local streets. Consider the use of alternative materials that are sturdy yet pervious.
   b. In all new subdivisions, encourage pedestrian easements between properties that abut an open space, at the end of cul-de-sacs, and with streets greater than 600 ft in length.
   c. Develop right-of-way and pavement cross sections for all street types, including alternatives for Planned Development Districts (PDDs) and defined situations, i.e. changes in density, etc.
   d. Incorporate specifications for crosswalk improvements including pavement texturing and/or striping, signage and warning lights, pedestrian and bicycle actuated signals, and curb cuts and handicap accessible ramps.

4.16. Require sidewalks crossing driveway entrances to comply with accessibility standards. Furthermore, require that the sidewalk is constructed with a unique surface and/or color to alert motorists to the crossing and to serve as a design feature.

4.17. Initiate plans to construct a boardwalk along the shoreline of Laguna Madre within the entertainment district. Connect it with a larger pedestrian network across the Island.

Expand Local Transit Services

4.I. Increase ridership on The WAVE by both residents and visitors
4.J. Expand public transportation options
4.K. Improve transit facilities
4.L. Identify potential funding sources
4.M. Improve regional coordination and communication among transit providers
4.N. Increase public awareness of transportation services
Recommended Actions

4.18. Seek coordinative opportunities for expanding the reach of The WAVE through increased interface with other transit providers and neighboring communities.

4.19. Devote increased attention to the regional transit coordination committee sponsored by TxDOT, including interlocal agreements and joint use arrangements with other providers. Seek shared services such as employee recruitment, training, and licensing programs; and vehicle procurement, transfers, and maintenance.

4.20. Investigate the feasibility of commuter routes from Brownsville and Harlingen-San Benito for employment transportation. Conduct an intercept survey to solicit information as to commuter trip purpose, origin and destination, and other factors. Utilize the survey to target the market area and potential users for use of a commuter service. Encourage employers to develop a rideshare program where employees are matched with one another to carpool to work.

4.21. Work with TxDOT to develop design standards and to determine possible sites to install bus pull-out bays (refer to Figure 4.2, Bay Design Alternatives) along Padre Boulevard. Mark transit stops as appropriate. Such improvements are also advisable along Gulf and Laguna Boulevards.

4.22. Improve transit stops by incorporating sidewalks, curb cuts, handicap accessible ramps, non-slip surfaces, marked signed and/or signaled crossings.

4.23. Explore the feasibility of a multi-use facility that may serve as a new transit vehicle storage facility for The WAVE and a public parking garage, along with mixed retail, office, and upper floor living uses. The facility may also serve as a center for taxicab, pedicab, and water ferry operators, a commuter service, and tour operators.

4.24. Solicit private enterprise to initiate
added public transportation services, with start-up funds, low-interest loans, and other financial incentives.

4.25. In order to continue to strive to improve the service, the following should be conducted on a yearly basis:
   a. Evaluate the performance of the fixed route and establish service standards;
   b. identify route modifications and new routes;
   c. identify infrastructure needs;
   d. research coordinative opportunities with other area providers;
   e. analyze commuting patterns and assess the feasibility of commuter routes;
   f. analyze fuel alternatives;
   g. recommend vehicle types and specifications; and
   h. recommend revenue options and funding strategies.

4.26. Solicit the involvement of the arts community in the design of custom transit shelters that relate to the identity of the Island.

4.27. Develop a shelter replacement program beginning on Padre Boulevard followed in priority by the stops with the highest use and public visibility.

4.28. Request businesses to participate in funding expanded transit services. As an incentive, offer parking credits to reduce the required parking commensurate with their employee and patron use.

4.29. Execute a marketing campaign to inform the public as to The WAVE and its schedule, the connection in Port Isabel, and future service expansions. Accommodate Island employees followed by daily visitors and tourists. The marketing should include a web-based campaign, transit kiosks, and way-finding signage for stop locations.

Efficient and well-managed traffic

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<th>GOALS</th>
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<td>4.O. Preserve the traffic carrying capacities of roadways by preventing encroachments on the public right-of-way and limiting the number of driveways.</td>
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<td>4.P. Ensure suitable street infrastructure commensurate with traffic demands and volumes</td>
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<td>4.Q. Plan in advance for an efficient street network</td>
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<td>4.R. Implement up-to-date transportation policies and standards</td>
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<td>4.S. Enhance street right-of-way appearance and contribution to Town character</td>
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**Recommended Actions**

4.30. Amend the subdivision regulations as follows:
   
a. Require private streets to conform to public street standards.
   
b. Allow varying local street widths in the Planned Development District (PDD), whereby the number of dwelling units and the average lot frontages determine the street right-of-way, pavement width, parking lanes, and sidewalks.
   
c. Incorporate the traffic impact report (TIR) provisions now located within the *Standards and Specifications for the Acceptance of Public Improvements*.
   
d. Require a general development plan for multi-phased development, which ensures compliance with the policies of this plan. Authorize the Town to develop small area street plans to allow staff to determine a street layout plan for areas warranting special study.
   
e. Require shared driveways and cross-access easements between abutting nonresidential and high-density residential properties.
   
f. Incorporate provisions for other types of plats as allowed by State law, including minor plats, replats, vacating plats, development plats, and amending plats, to offer streamlined review, which, in many cases, can be handled administratively.
   
g. Require gated communities to conform to the Town’s Thoroughfare Plan to assure any and all streets necessary to allow for multiple paths of travel, whether public or private, are kept open for the public’s use.
   
4.31. Adopt driveway regulations to restrict their number, location, and spacing, street intersections, and median openings. The regulations should provide for parallel access roads and/or cross access easements as methods to minimize the number of driveways.
   
4.32. Coordinate with TxDOT to identify opportunities for consolidation of driveways and other means of access other than directly from Padre Boulevard. As displayed by *Figure 4.4, Access Consolidation*, vacating right-of-way may reduce the number of access points from three to one without affecting property ingress/egress.
   
4.33. Coordinate with TxDOT to put in signs, street lighting, and crosswalks where warranted as area travel volumes increase along Padre Boulevard.
   
4.34. Improve street lighting, especially along the side streets.
Street Closures / Cul-de-sacs

“Street Closures/ Cul-de-sacs” are neither good nor bad per se; however, location can transform each into real problems for residents. The Town’s policy regarding street closures should be a function of location, and the policy decision in each area should respond to clearly defined objectives.

Location, Location, Location

In evaluating the utility of street closures, the Town can be considered as two distinct areas: 1) residential / multi-family and 2) entertainment / commercial. The utility of street closures varies among these areas.

Residential Areas: Single and Multi-family

Closing east-west streets in the current residential areas presents various issues. These concerns include increased traffic flow on the adjacent and nearby through streets and possible taking or restricting of private property. The increased traffic will have an impact on property values. The closed streets might also be more attractive to pedestrians going to and from the beach, thus
increasing the pedestrian traffic on a closed street. The increased vehicle and pedestrian traffic could change the character of each neighborhood.

**Entertainment and Commercial Areas**

Closing streets in the entertainment and/or commercial areas may serve a legitimate business interest. The Town should consider first, the public health, safety and welfare and then the desires of the businesses in the area before deciding to close streets seasonally, by time of day, or for special events.

**Traffic and Access Management**

Essential to managing the efficiency of each of the three boulevards is preserving their traffic capacities. Even though these roadways are designed to carry a certain volume of traffic, there are situations that affect their efficiency including:

1. the number of driveways;
2. head-in parking resulting in vehicles using the public right-of-way to maneuver into and out of parking spaces;
3. lane width;
4. synchronization of signals, which will become important as signals are added;
5. number of cross street intersections;
6. allowance for deceleration/acceleration at major access points of ingress and egress, such as The Shores Development; and
7. the presence or nonexistence of a center turn lane or median.

Of relevance to this plan is the management of access along each of the boulevards. There are many examples of head-in parking being accessed by the public right-of-way. While these are required spaces, the Town needs to seek other ways to provide an equivalent number of spaces in a more efficient configuration, such as parallel or diagonal parking. There appears to be an opportunity to convert 90 degree head-in spaces to 60 degree diagonal parking, allowing an access aisle on site rather than using the street.

While the one block grid of cross streets maximizes access, it allows disruption of traffic flow on Padre Boulevard. Additionally there are a number of driveways accessing Padre Boulevard and Gulf Boulevard which impede traffic flow. One option is to terminate of some of the cross streets; distinct neighborhoods would form without having all
the cut-through traffic. The intersection with Padre Boulevard would then provide shared access to the two abutting properties (businesses), allowing the existing driveways to be closed. A solution for new development is shared driveways. Similarly, cross access between properties is also highly effective.

Access management will become increasingly essential as growth continues to occur. If implemented and properly utilized, access management will effectively manage congestion; protect the capacity
of future streets by controlling access at the time of development; and greatly limit the need for future costly right-of-way acquisition and street widening.

The following access management strategies may be used:

1. **Coordinate with TxDOT.** Access management along Padre Boulevard must involve TxDOT. Through coordinated efforts, such as the design and improvement of medians, access management may greatly improve the efficiency of this principal arterial roadway.

2. **Separate conflict points.** Driveways must be spaced such that they are a sufficient distance from the street intersections.

3. **Remove turning vehicles from through travel lanes.** Left and right turn lanes provide for the deceleration of turning vehicles. A portion of the shoulders along Padre Boulevard may be used for turn lanes at street intersections, as displayed in Figure 4.5, Parkway Turn Lane. Note, however, that this concept may not work if the shoulder of Padre Boulevard is converted to bike lanes, as they are along the southern portion of the Island.

4. **Establish design standards.** Design standards should address the spacing of driveways, dimensions and radii, sight distance, and the length of turn lanes.

*Figure 4.5, Parkway Turn Lane*

*Source: Kendig Keast Collaborative*
5. Locate and design traffic signals to enhance traffic movement. As more signals are added along Padre Boulevard their spacing and synchronization will become essential.

6. For Commercial Properties, encourage shared driveways, unified site plans, and cross access easements. Joint use of driveways for commercial properties will reduce the number of access points along Padre and Gulf Boulevards, which will reduce congestion, improve travel safety, and delay costly improvements. Such driveway arrangements also encourage shared parking.

**Pedestrian and Bicycle Routes and Crossings**

As a resort and visitor destination, sidewalk and trail use is much higher on the Island than elsewhere. To meet the demands, a complete network of sidewalks and trails is needed. The network must link each of the major origins (neighborhoods, hotels/motels, condominiums, RV resorts, etc.) and destinations, such as shopping areas, the entertainment district, parks, and the convention center. Doing so will enable residents and guests to walk or bicycle rather than driving their vehicles.

A prioritized sidewalk and trail network includes:

1. Reconstruction of the sidewalks on both sides of Padre Boulevard. The minimum width should be eight feet and must comply with the Federal accessibility standards. The sidewalks should contribute to the design of the corridor and the alternatives for siting the sidewalks should improve pedestrian safety and increase landscaping.

2. Delineation of a combined eight-foot sidewalk/bikeway along Gulf Boulevard. Due to its proximity to the beach, individual sidewalks and bikeways may or may not be warranted; however, conveniently placed bike racks should be encouraged within all bicycle corridors. To minimize costs, this pedestrian/bicycle corridor can be within the existing 40 feet of paved surface. It must be clearly marked by pavement striping and signage and it must be separated somehow from the travel lanes.

3. Where there are beach accesses, a sidewalk needs to be installed on at least one of the side streets north or south of the beach access in order to connect the beach accesses to Padre Boulevard and eventually to Laguna Boulevard. The Town should base their decision for the sidewalk location on existing
conditions/businesses located along Padre Boulevard and the side streets.

4. Construction of sidewalks on one side of each of the local streets between Padre Boulevard and Laguna Boulevard.

Crosswalk Improvements

All crosswalks must be clearly delineated. Given the Island’s environment, thermal plastic striping or other durable and visible materials are recommended. Newly constructed streets and intersections should include crosswalks.

Thoroughfare Plan

The Town needs to develop and design a Thoroughfare Plan to ensure an orderly transportation system (not only streets, but also pedestrian ways and hike/bike trails) and to provide efficient traffic flow within the Town and the Town’s ETJ. Additionally, north and south primary arteries must be designed to accommodate traffic levels associated with seasonal high demands and potential evacuations due to hurricanes or other emergency situations. Multiple north/south streets need to be planned to address these needs, obviously, based upon geographic constraints.

The Thoroughfare Plan should be designed to reduce or eliminate sources of traffic restrictions encountered during normal scheduled maintenance and seasonal community activities. By keeping in mind the needs for multiple paths of travel, a well-designed street layout can be developed.
Street design should conform to State and local standards and be of proper design to allow the use of fire fighting vehicles, trash collection, and other traffic normally expected for the end use of the particular developed area.

Future large private developments should be encouraged to provide multiple access points to main arterial streets and to adhere to minimum street standards adopted by the Town of South Padre Island.

Future developments of any thoroughfare system should be designed to avoid any negative impact to sensitive wetlands or wildlife habitat. The system should include the recommendations of the Town of South Padre Island Comprehensive Plan relating to public areas, wherever possible and said Plan would be subject to approval of the South Padre Island Planning and Zoning Commission and final approval by the local elected officials.

**Parking Plan**

The parking demands within the Town are unique because of the cyclical nature of the economy, and to some extent, the type of development. This circumstance presents a challenge on occasions when the demand exceeds the available supply. There are also varying needs among different parkers depending on their trip purpose, destination, and duration. The Town needs to develop and implement a comprehensive parking program that meets the needs of both residents and visitors in order to manage the parking supply and demand while mitigating cumulative impacts. Ultimately, a well developed parking program will assure an adequate parking supply in appropriate and convenient locations.